MODERN RELOADING

Second Edition

by: *Richard Lee*

Cover shows the Collet Die and patent. When introduced it was quickly accepted by the serious rifle shooters. Their success has lead to them becoming very popular with all shooters. I used Collet Dies extensively for work on this edition. They are not only easy to use, but save time while producing the most accurate ammunition possible.

This book written by Richard Lee.

The type and layout are by Richard Lee using Microsoft Word 6 for Windows.

Photos are by Richard Lee, except as noted. Cartridge drawings by Pat Klessig, John Lee and Richard Lee.

Load data was assembled from that published by suppliers of the powder with their permission.

Load data was entered and proofed by Donald Dorn, Pat Klessig, Nancy Lee and John Lee.

The software for organizing and typesetting the data was written by Richard Lee and is available to primary powder suppliers.

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www.leeprecision.com

MODERN RELOADING

Second Edition

by: *Richard Lee*

Ammunition reloading for the shooter, hunter and professional reloader, with detailed loading techniques for quality and quantity production.

Extensive information about special methods and tools so anyone can load more accurate ammunition.

It covers reloading for rifles, handguns and shotguns, bullet casting, powder selection and measuring methods.

Includes much information that was previously unavailable from any source, along with must have charts.

Comprehensive load data, compiled from all major powder suppliers published information, sorted in logical cartridge, bullet weight, and velocity order.

The first book to print starting loads that are suitable for volume measuring.

NEW

Exclusive cast bullet loads with velocities and pressures so you can match the pressure to bullet strength.

Includes velocities for starting loads.

Data on many additional cartridges.

Exclusive pressure and velocity factors so you can easily calculate velocity and pressure for reduced loads.

Cartridge drawings with the year of introduction, usable case volume and primer type.

Expanded information on pressure and reduced charges.

Special thanks to the powder suppliers.

Without their help and co-operation this book would not have been possible.

Accurate Arms Company, Inc.

Alliant Powder

Hodgdon Powder Company, Inc.

IMR Powder Company

Nobel Sport - "Vectan" Brand

RAM Shot Powders - Western Powders, Inc.

Vihtavuori Oy - distributed by Kaltron Pettibone

Winchester / Olin Corp.

Thanks to my wife Molly and for all of her help and support—especially her frequent suggestion to "Remember, you are retired." A very special thanks to my daughters, Linda and Mary, and to my daughter in-law Nancy. They are highly intelligent ladies and wonderful mothers. I appreciate their help and advice more than words can express.

Preface

Wow! *Modern Reloading* has been a smashing success—over 120,000 copies sold. The old adage "If it's not broken don't fix it" should apply, but I felt compelled to improve on the book by including the latest and best information. The new load data is greatly expanded and includes velocities for the starting charges. Important new load data for cast bullets takes the "black magic" out of cast bullet loads.

I have neither the inclination nor talent to radically change the first part of the book. That information is accurate and timely so it remains mostly the same except for many additions and a few corrections. If you don't have the first edition of *Modern Reloading* don't worry, this book has all of the first edition and much more.

An unusual number of readers commented that normally they buy a reloading manual for the load data and don't bother reading the articles. However, they read every word in the original *Modern Reloading*. Even if you have the original book you will find it interesting to read the first part of this book and note where my opinions have changed. If you're like me, you may find some gems of information missed the first time around.

Like you, I learned new and interesting things in the last six years. That which I've learned related to reloading is included in this second edition of *Modern Reloading*. I underlined all the titles that are new so you won't have to search for them. Be sure to read the new Chapters 9 and 10. You will find them interesting and informative.

This book is a labor of love. I'm retired and receive no pay, salary nor royalty. This reduces your cost to buy it. My reward is the immeasurable pleasure sharing my thoughts with you. It's much like a conversation with a group of friends at the range or clubhouse and I get to do all the talking. The words come easy, the hard part is to be certain that you are never mislead by my prose. Thank you very much for sharing your time with me as you read this book.

Richard Lee

Foreword

Reloaders are the nicest people on the face of the earth. They share many common quality traits. They hate waste and can't bear to throw away a perfectly good cartridge case simply because it's empty. Besides, it's impolite to leave a mess for someone else to pick up. They enjoy working with their hands, like to shoot, love the great outdoors and expect that what they buy will work as advertised. An unusual amount of reloaders are doctors, lawyers and business people. Persons reload because they like it, not because they can't afford to buy factory made ammunition. I'm proud to be a member of the fraternity.

A lifetime involvement in the reloading business and shooting sports has allowed me to communicate with thousands of reloaders and shooters throughout the world. Perhaps I have spoken to, or written to you. If so, I am grateful for the pleasure. Not many persons have had such a specialized background. It gives me the unique advantage of knowing what you want and need to know about reloading, tools, procedures and load tables. To not share the benefits of my lifetime vocation and avocation would be a waste. I hate waste, so I wrote this book in my retirement

At Lee Precision, I had the time and means to evaluate the reloader's needs from every aspect. Wherever the need existed, I designed the best product for the job, at an affordable price. Good value for your buck. Lee products are the most imitated reloading products in the world. In some foreign countries, where my patents don't apply, there are exact copies of Lee equipment. An enterprising individual has even registered the trademark "LEE" in a South American country so he can sell imitation Lee products.

A few important comments before we get into the meat of this book. This book is directed at users or potential users of Lee equipment–people interested in better understanding the use of Lee tools. There is very little reference to other brands of tools and equipment. It is both inappropriate and unnecessary for me to explain reloading, with pictures or descriptions of other brands of reloading equipment. Experience with an earlier book, taught me that the vast majority of readers will be users of Lee products. Mention of other brands is sometimes necessary to emphasize dif-

ferences. An example is die adjustment. It could be dangerous if you use Lee rifle sizing die adjustment instructions with another brand. Always screw Lee rifle sizing dies in until they contact the shell holder and then one quarter to one third turn more. A different company instructs the die should be adjusted for the correct headspace and may not even contact the shell holder. Screwing the other brand dies in too far will create excessive headspace, which can be dangerous.

There are products that are made stronger and cost more than Lee products. There are no comparable products that work as well and cost less than Lee products. A perfect example is the CH Champ press. It was at least 20 times stronger than needed. So strong that we use one for product production in our plant and it has served well through the years. The CH Champ is well fitted with a fair finish. The only problem was the cost to produce was so high that it was priced into extinction. Every part of all Lee presses is a minimum of three times stronger than needed. With a modicum of care they will last a lifetime. The price advantage allows us to sell more in one month than the total of all CH Champ presses produced during the years they were in business. You see, it's not that we cannot build a press 20 times stronger than needed. It's because there are not enough customers who would buy such a press. That's why we make and sell what you need and want. This simple principle enabled us to become the world's largest supplier of reloading equipment.

We, at Lee Precision, do not have to answer to corporate headquarters about profit, loss, or design considerations. We answer only to you our customers. It is your calls, letters and most importantly, your vote of confidence when you purchase our products, that makes our decisions for us. We fully understand the most important ingredient to any business is the customer. Without customers no business is possible. Visit us at www.leeprecision.com. We have technicians to help and it is always possible to communicate directly with John Lee, President, Chief Executive Officer and major share holder of Lee Precision, Inc. The products we make are your best buy. If they could be made better we would, because we know you would buy it.

To my family

IMPORTANT NOTE

The underlined entries are new or changed from the original *Modern Reloading.*

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CHAPTER 1

21st Century Reloading

The Civil War ended in 1865. In 1870 Kaiser Willhelm, using Civil War tactics and Krupp breech loading cast steel cannons, defeated Napoleon's invincible army equipped with bronze muzzle loaded cannons. Horses, wagons and trains moved people. Breech loading arms and ammunition were rapidly becoming available and popular. Almost from the beginning, users reloaded their empty cases. We are now into our third century of ammunition reloading. It's noteworthy that we are actively reloading ammunition for some guns designed and made in the 19th century. Some are over 125 years old, from the horse and buggy era. Examples of old and still popular cartridges...

45-70 Government 1873
45 Colt 1873
38 Smith & Wesson 1877
30-30 Winchester 1895
38 Automatic 1900
38 Special 1902
9 mm Luger 1902
30-06 Springfield 1906
45 ACP 1911.

"Modern" cartridges are 50 years old...
270 Winchester 1925
257 Roberts (257 Rem) 1934
357 Magnum 1935
300 Weatherby Magnum 1944
222 Remington 1950
308 Winchester 1952
44 Magnum 1955

Firearms are a mature product and almost everything that can be done has been done, with the prominent exception of a caseless cartridge. It is not from the lack of trying. It seems it cannot be done economically. I bet we will still be shooting, well into the twenty-second century, with what Dr. Spock from Star Trek would refer to as, "a device to fire a projectile, with a chemical reaction."

Man is a toolmaker and tool user. To work with our hands and use fine tools to make something is natural, enjoyable and satisfying. Reloading satisfies that primitive urge, saves money, and enables the doer to produce a product that is superior to factory made. Try to think of any endeavor that enables you to make a commodity that is better than that which can be purchased, other than mom's cooking.

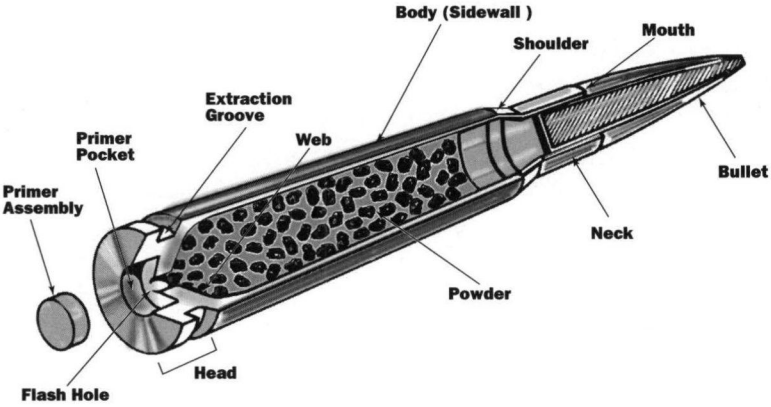


Figure 1 Cutaway of a Typical Rifle Cartridge.

Nothing you own, except perhaps your automobile, can compare to the awesome potential of a cartridge chambered in your favorite gun. An imperceptible movement of your finger against the trigger unleashes the explosive power with a bright flash and deafening roar. The bullet penetrates the target before you have recovered from the recoil.

Mentally examine a high powered cartridge. Visualize the power, complexity, precision and especially the mechanics. The primer ignites the powder. Fifty thousand pounds pressure per square inch, accelerates the bullet to 2000 miles per hour and starts it spinning at 200,000 revolutions per minute, all before it leaves the barrel of your rifle. The gunpowder and primer's energy are expended, half with the bullet and the rest as recoil. You still have the empty case, the most expensive part of a cartridge. You can't force yourself to throw it away and that is the reason you're reading this book. You will learn how to reload and how to create ammunition more accurate than the best money can buy. Handloaded ammunition is not only better than factory made; it costs 40 to 80 percent less.

Reloading or hand-loading your ammunition had early beginnings. Every muzzle loader is reloaded with the individual components before each firing. The invention of the cartridge made factory assembled ammunition possible. The first cartridges were no more

than a convenient package to hold the powder and bullet—nothing more than a paper container with a measured powder charge and a bullet. The shooter emptied the powder into the muzzle, rammed the bullet home and primed the nipple.

After the invention of the breech-loader, brass case, and suitable primers, rapid fire became possible. The most expensive cartridge part was the brass case. Only the military could afford such luxuries, so not every muzzle loader became instant scrap iron. Most wanted the latest, but few could afford the fancy breech loading repeaters and those that could were unwilling to throw the brass cases away.

The gun companies overcame those obstacles by supplying a set of reloading tools to accompany the gun. Most were simple hand-held multipurpose tools. A tool to remove the spent primer and install a new one. Usually the case was filled with black powder. A device to seat the bullet and crimp it in place. Some of these tools even included a mold to cast bullets.

Eventually, ammunition became very low priced and reloading lost its appeal. I suspect the many stories about blown up guns from the newfangled smokeless powder, which wasn't forgiving like the good old black powder, helped push reloading out of the mainstream. It never completely left the scene, but reloading was something done only by very few enthusiasts. The ammunition companies did all in their power to discourage reloading. They would not sell components to the hand-loader. This proved to be a big mistake.

After World War II, enterprising individuals like Ray Speer started making bullets for the hand-loader. Bruce Hodgdon sold war surplus gunpowder by the keg for $20. Fred Huntington made presses and dies to form bullet jackets from spent 22 rimfire cases. George Puth invented the Acme shot shell loader later taken over by MEC. I invented the Lee Loader. Lyman, Pacific, CH, Lachmiller, Redding, Bonanza, Bair, Hollywood, Herters, and many others, too numerous to mention, produced reloading equipment.

That short history takes you to today, where you have a selection of reloading tools and components as never before offered. Lee Precision continues to develop new products. They will make reload-

ing better than ever, with ever improving savings, greater precision and convenience, and more fun. Reloading tools are no longer considered a lifetime purchase. While you may never throw away any tool you own, you will find that it will be economical and fun to update to suit your needs as your interest in the hobby grows.

There is a genuine pleasure making and shooting your personalized ammunition. It is one of the few hobbies that satisfies the personal pleasure of working with precision tools and dies. This book shows you how to prepare the bullet for the speedy flight to the target, which normally will last only a fraction of a second. This is what reloading is all about—the most unusual pastime one can imagine.

Lucky for us reloading is allowed. We can best assure Second Amendment rights are secure, by encouraging others to become involved. Any venture that involves a large segment of the population remains legal regardless of the danger. Forty thousand plus automobile fatalities annually do not prompt law makers to ban the auto. While private flying has few, but well publicized accidents, it is almost regulated out of existence, because it only affects few voters. Get others involved to protect your right to shoot and reload.

Three Great Reasons to Reload Your Ammunition

Save Money

The savings are significant, 40 to 80% and more. Most reloaders invest the savings in more components so they can reload more and shoot more. With most Lee equipment, you save enough to pay for the tools in the first hour or two of serious reloading.

The cartridge case is the most expensive part of a cartridge. To throw it away is expensive and wasteful. Because you're reading this, I'll bet you have saved most of your empty cases. It simply goes against most people's nature to throw those empties away.

No one has ever excelled at anything without practice. Practice may not make perfect, but it sure helps. If you're interested in becoming a better shot, reloading is a necessity for all but the rich.

Accuracy

Perhaps you're already a crack shot. Then you've found out that putting every shot in the same hole can't be done. Even if you have the best gun money can buy, factory ammunition simply isn't good enough. There is no way ammunition can be factory produced to give the best accuracy in every gun under all circumstances. I don't know of a single serious competitor who uses factory ammunition. Just as a tailor-made suit fits better than one off the rack and custom handgun grips improve your scores, reloading your ammunition will give better accuracy. Lee Precision is the only company that guarantees it with every tool sold. It is a lot easier to load accurate ammunition than some of the scribes would have you believe. This book will show you how easy it is to load ammunition more accurate than you can buy. With some serious effort and the basic knowledge in these pages, you will improve the accuracy of your ammunition dramatically, and have fun doing it. This brings us to one of the best reasons for reloading your ammunition; the fun of doing it.

Fun

You are in for a huge surprise. After reloading your first batch of ammunition, there is an exciting anticipation about firing the first round you personally reloaded. The experience of shooting your first handmade ammunition is something you will never forget. Like your first kiss or whatever is noteworthy nowadays.

Reloading is a satisfying and enjoyable pastime. I'll always remember shooting my first reloads over 40 years ago. It was doubly exciting, as it was also the day of my first invention, the Lee Loader. I impatiently fired all of my reloads to have empty cases to reload. Reloading is a very enjoyable pastime. It perfectly complements the great shooting sport.

Reloading can be as simple or complicated as you desire. The Lee Loader is the least costly, under twenty dollars. No tool ever made gives you a better, more intimate feeling of total involvement with the reloading process. Or you can invest many hundreds of dollars. They all reload ammunition, but be cautioned that higher price does not necessarily mean better ammunition.

Selecting a Reloading Tool for Metallic Cartridges

Lee Loader

No remarks on reloading equipment would be complete without mention of the famous Lee Loader. Well over a million and a half have been sold worldwide. No other tool comes close to the popularity of this unique kit for reloading ammunition.

There are good reasons for the Lee Loader's early success. The Lee Loader provides everything you need to reload a single caliber except the components. Small enough to fit in your pocket, it will load a box of ammunition in less time than it takes to bolt a press to a reloading bench. It held the Guinness record for the world's smallest group for over seven years. When introduced in 1958 it cost only $9.95, while other reloading setups were over ten times as much. Considering a new car back then was less than $2,000 and the average home under $20,000, you can see the current $19.98 price of a Lee Loader is still a great bargain. I think John keeps the price so low as a sentimental favor to his dad.

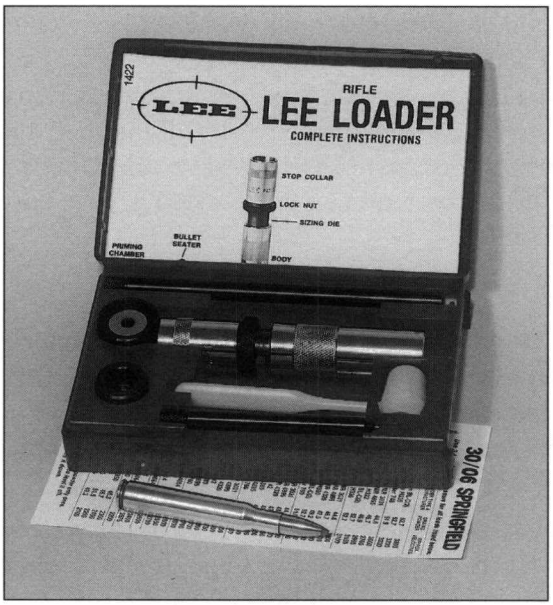


Figure 2 The Famous Lee Loader

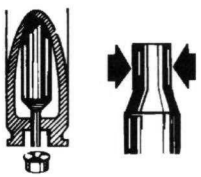
A good friend, the late Phil Pfeil, would ingratiate himself with Montana ranchers by loading their empties on the rear of his pickup truck using a Lee Loader. Another shooter was welcomed to hunt on an Indian Reservation by loading 30/30's on a tavern

bar. I could fill the rest of the book with stories about the Lee Loader, but the Lee Loader is no longer as popular. It's a bittersweet fact when the failing popularity is due to our highly successful reduction of the cost of our presses and dies.

The Lee Loader neck sizes only. This makes it undesirable for using in autoloaders and pumps. However, it is one of the reasons the ammunition is more accurate. A plastic mallet substitutes for a press. It is not slow as reported. I can and often have reloaded a round in 30 seconds. To this day no single station press can match that speed. I do sincerely recommend a Lee Loader if you're loading for a bolt action rifle in small quantities. It is a fun and educational tool to use.

This is part of the instructions accompanying the Lee Loader to show how simple and easy it is to reload.

RELOADING IS QUITE A SIMPLE PROCESS



1

Case is sized to original dimensions and the spent primer is removed



2

Install a new primer



3

Add a charge of powder



4

Seat a new bullet and crimp if desired

RIFLE
LEE LOADER
COMPLETE INSTRUCTIONS



LEE

Patent Number 3134293

GUARANTEE

LEE RELOADING PRODUCTS are guaranteed not to wear out or break from normal use for two full years or they will be repaired or replaced at no charge if returned to the factory. Any Lee product of current manufacture, regardless of age or condition, will be reconditioned to new, including a new guarantee, if returned to the factory with payment equal to half the current retail price.

1

Knock out the old primers. If your cases are not made in the USA, check to be sure they are not Berdan primed. Look inside the shell and you should see one flash hole. If there are two flash holes, you have Berdan cases and they cannot be loaded with this tool.



2

With a plastic mallet or piece of wood, drive the case into the tool flush with the end.



3

Insert a primer into the locating ring. Place the tool, with shell inside, on the priming chamber. Lightly tap on the priming rod several times until the primer is home.

NEVER TRY TO SEAT A PRIMER AFTER THE POWDER HAS BEEN ADDED.



4

Place the tool on the decapping chamber and tap the rod to free the case. **LEAVE THE CASE in this position for the next three steps.**



5

Add one [1] level measure of powder. **BE SURE YOU HAVE THE CORRECT MEASURE AND POWDER. SEE THE CHARGE TABLE.**



6

TO AVOID CONTACT with the primer and possible explosion, case must be free from die and resting in the decapping chamber.



7

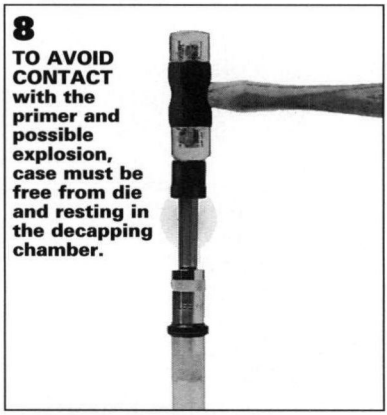
TO AVOID CONTACT with the primer and possible explosion, case must be free from die and resting in the decapping chamber.

Insert the bullet seater and tap until it contacts the stop collar. The stop collar is adjustable so you can seat the bullet as required.



8

TO AVOID CONTACT with the primer and possible explosion, case must be free from die and resting in the decapping chamber.



CRIMPING BULLETS

This is easily done in the opposite end of the loading tool. **BE SURE to protect the primer with the decapping chamber when tapping on the case end.** Use several light taps until the desired crimp is formed. Do not attempt to crimp bullets that do not have a crimping groove.

Reloading Presses

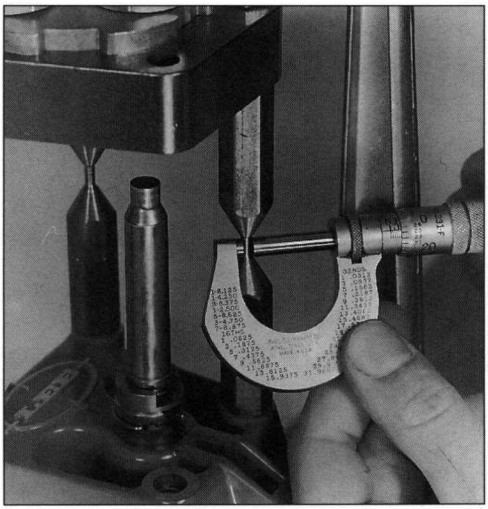


Figure 3 Reloading Doesn't Require Great Force.

Every currently produced reloading press will reload ammunition. Strength requirements are not great. Material, weight, fit and finish of the press has little relationship to the quality of ammunition produced. The competitive market place determines current reloading press selection. Poorly made, badly designed, and costly presses are left by the wayside. Companies such as Bair, Bonanza, Belding & Mull, Eagle, Herters, Herkner, Lachmiller, Ruhr-American, and Texan are brand names long gone.

More interesting are the discontinued models of presses by existing manufacturers. The following presses were introduced to the public with great fanfare and rave reviews by eager recipients of free samples: RCBS A-4, RCBS Junior, Reloader, Reloader 2, Reloader 3, Reloader 4, Green Machine and Big Max. The previous names are trademarks of RCBS or Alliant and are no longer in production. Dillon's discontinued list includes the 350, 350A, 350B, 450, 450A, 450B, 450JR, 550, 550A, RL1000, and the original Square Deal. There are many other discontinued models from contemporary manufacturers. They were not bad presses. They were well made and aggressively promoted. For certain, they had shortcomings. The biggest defect was; they did not offer that which the consumer wanted. That could be many things, but the most important was the greatest value for the dollar. We have a firm rule on any decision affecting design or sales policy. Never assume the customer is stupid. Customers recognize value. Any manufacturer who whines, "People don't realize how good our product is," does

not understand how smart shoppers are and their product is doomed to failure.

I take special delight in my part to end a trend of the manufacturers advertising how strong their presses are. Their claims were true. One particular press was 40 times stronger than need be to do the job. To point out how ridiculous it was, I turned down each of the support columns of a Lee Turret Press to 1/8 inch. I then sized a large magnum case with these skinny columns. A picture of this in all the shooting publications ended the "Mine is bigger than yours claims." The silly ads stopped.

In the Foreword, I explained there are stronger and costlier products than those made by Lee Precision. There are no comparable products that work as well and cost less than Lee products. This is especially true with reloading presses. All Lee presses including our lowest priced Reloader Press have compound linkage, primer catchers, baked on finish and a two-year guarantee. Most important, Lee guarantees satisfaction or your money back.

Reloader Press

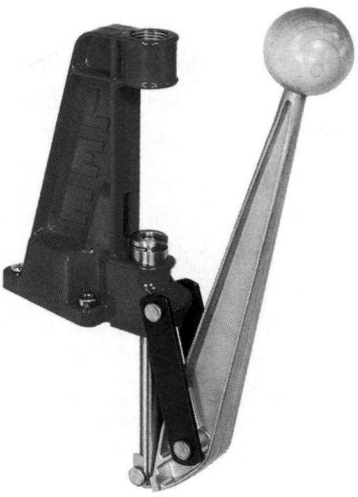


Figure 4 Good Press Need Not Be Expensive.

Don't spend much money on your first press. Even if you move up to a faster or more convenient press in the future, a basic single station press is always useful for other tasks. Use it to deprime before case cleaning, post size and crimp, bullet sizing, priming or bullet seating. Certainly the best value is the Lee Reloader Press. It is the lowest priced bench mounted press available today. Like all Lee presses, the Reloader Press has the compound linkage made famous by Fred Huntington. It makes sizing the largest magnum case very easy. A "C" frame design affords generous hand clearance. A built-in primer catcher and compact design makes this a true bargain. It's built very strong for all reloading needs, but can be abused to death by slamming the lever against the stop. Like all Lee products it's guaranteed for two years unconditionally. That means even if the user misuses it, it's

replaced free. Replacement is half price for tools more than two years old. Notice that even though the Reloader Press is our lowest priced press; it has a quality varnished hardwood knob on the end of the lever. The knob is ergonomically designed to feel good to the hand. In my opinion, bicycle handlebar grips are good for bicycles but tiring to use on a reloading press.

Hand Press

Another consideration for press selection is where you expect to reload. If you reload at the range or kitchen table, the Lee Hand Press can't be beat. When finished you can put it all away in a small drawer or box on the shelf. It's available in kit form at a very attractive price. For load development, a Hand Press, set of dies, assortment of powders, bullets, primers, powder measure and pleasant weather can make for a very enjoyable day at the range. Loading and firing a single case in groups of three, five, or ten shots is interesting and educational. It eliminates case variables and allows the gun to cool between shots.



Figure 5
Portable Reloadiing

Lee Breech Lock Challenger Press

For 24 years the Lee Challenger press reigned supreme over "O" frame presses. Three sets of manufacturing tooling wore out and before releasing the orders for the forth set John gave me an opportunity to design the next generation of the Challenger. He liked the concept of quick-change dies, but wanted something better than that offered by Hornady. I readily accepted the challenge.

The new Breech Lock Challenger utilizes many of the features John designed into the Classic Cast press. I copied them as they are beyond improvement. They include all steel linkage, Lever Prime System—LPS, and an adjustable length lever to make loading handgun cartridges faster. Also a fool proof spent primer-catching system. Capture every primer in a plastic tube with an end cap for easy emptying. If you desire, leave the cap off and route the primers directly into a waste container. The versatile quick change die system is unique in that it installs with 1/6 th turn and is locked in place with a

push button in one of the three positions. Should you not wish to use the quick-change feature, simply leave the supplied breech lock in place with the locking plunger engaged. The press frame is a high strength die cast aluminum alloy, which pound for pound is five times stronger than cast iron and unbreakable. Bolts with crown lock nuts replace toggle pins. The adjustable nuts eliminate all side play for the luxurious feel of a hand fitted press.

John has put together a special kit for our Fiftieth Anniversary. This kit and a set of dies are everything you need for a first-class setup. For casual shooters it is the only equipment they will need for the rest of their lives.

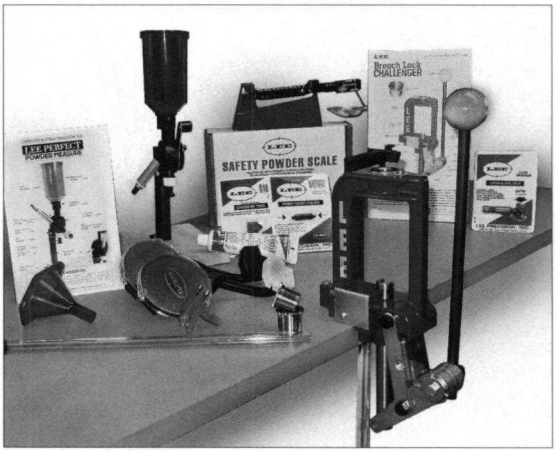


Figure 6 The Lee 50th Anniversary Kit

Lee Turret Press

The Lee Turret Press design is a direct result of the experience I had with my first reloading press. It was the Lyman All American. The All American was a handsome press purchased from Charles Lyman II at a trade show. He was a fine gentleman and gave me first-class treatment in my early business years. He sold some reloading equipment to me for my use at a business courtesy discount. The Lyman All American press was a good machine with a few minor problems. It was a little pricey, but full value for the money. I wanted our first press to be better than anything available and yet affordable. These were achievable attributes with innovative design and material utilization. My satisfaction with the Lyman press influenced my design decisions.

For the person who enjoys convenience and doesn't mind a little extra cost, my recommendation is the Lee Turret Press. It cost significantly less than most other brands of single station presses and does so much more. You can change calibers in seconds. Lee Pace Setter die boxes hold the turret with the dies installed. You have the option of loading using the batch method or semi-progressive method of reloading.

The Lee Turret Press is the parent of a family of fine tools. The Turret Press with auto-index is a fine machine for those who load up to 200 rounds a week. It's trouble free and there is no learning curve as with progressive presses.

If I could own but one press, the Lee Turret Press would be my choice. It's stronger than needed for any loading operations including bullet swaging. It's a press that's trouble free, durable and very convenient to use.



Figure 7 The Lee Turret Press. The most convenient press for multiple cartridges.

In truth the Lee Turret Press was not my first ambition. I really wanted a good progressive press for my personal use, because I used a lot of handgun ammunition. The Turret Press was designed with future upgrades in mind. At the time I deemed it too presumptuous to introduce a progressive press as our first press. Lee had become famous for the Lee Loader. We made no dies for presses. It was a giant undertaking for such a small company and without John's help I would never have taken the plunge.

Pro 1000

The Lee Pro 1000 is a true progressive press. Every pull of the lever produces a loaded round. Unique to this machine is that only three stations are needed to load a round, true KISS engineering—**K**eep **I**t **S**imple **S**tupid. Optional accessories include a case collator that fills all four case feed tubes in a few seconds. The latest "add on" is a bullet feeder. This automatically snatches a bullet from the bottom of a stack and moves it into the mouth of the die. It's done during the press stroke so it speeds production by 50 to 100%.

The Lee Pro 1000 is the most widely used progressive reloading press of all time. If you are a handgunner shooting large amounts of ammunition, the Pro 1000 is your first choice. Introduced in 1986 at $199.98. Virtually unchanged, it remained the same price for 16

years. Minor improvements include the case sensor to feed a primer only if a case is present, and an improved spent primer-catching system. The Pro Auto-Disk powder measure replaces the Deluxe Auto-Disk measure. It has a pull back chain, which helps reduce the chance of a double charge due to operator error.

The press is really a reloading system. It comes complete, ready to load one caliber. Changeover to another caliber is easy and requires only a few minutes. It uses the same turrets as the Lee Turret Press so you can leave your dies installed in the turret and change the whole turret. This is another original Lee innovation.

A very good feature of the Pro 1000 is the priming system. It takes less than a minute to refill the primer feeder. Dump the primers directly from the carton into the tray. Shake the tray side to side a few times and they are all turned upright.

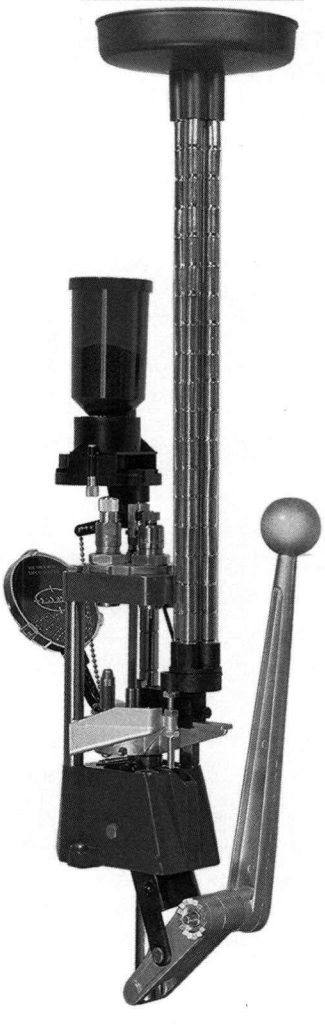


Figure 8 Lee Pro 1000. The most popular progressive press ever made

An extremely important feature to help guard against double charges is the automatic index feature. Lowering the ram moves the charged case to the next station automatically. The Pro Auto-Disk measure will not reset for another charge unless the ram is fully retracted. You can see how it's highly unlikely, but not impossible, for a case to be double charged. A press without both of these features is not as safe as a press with only one or the other. An engineer, from a national testing laboratory, told me they have many blown up guns from clients and the only common connection is the use of a particular reloading tool. He refused to say what brand, but assured me it was not a Lee product.

Load-Master

Lee introduced the Load-Master progressive press in 1992 as "The new standard to which all other presses will be compared." We spared nothing to make this the finest progressive press of all time. Tooling alone cost a quarter million dollars. Early pre-production samples loaded a million rounds. When finally introduced, it was an immediate success with thousands sold worldwide. Then the complaints started. We made many repairs and replaced parts, but we were unable to find the problem's source for several months. By then the damage had been done and this truly great press has not yet reached its full potential. The problem was due to the chrome plating on the ram. The pre-production samples were not plated. The hard chrome made the surface that clamps against the carrier too slippery. Rough handling would move the carrier and cause problems with alignment, priming and indexing. We corrected the problem with a knurl on the ends of the ram. We also updated all that we could of those in use. Slowly the press is becoming accepted as the premium press that it is.

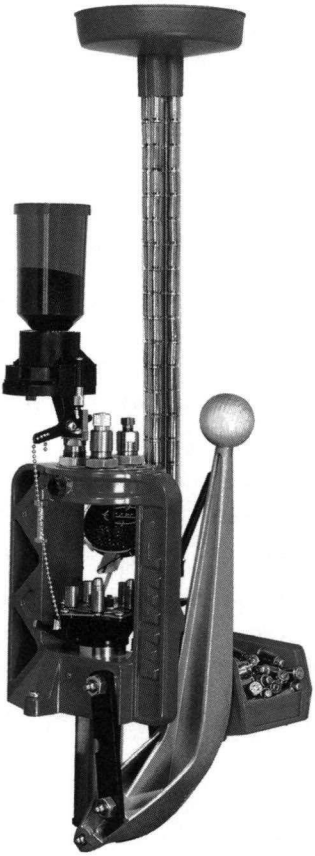


Figure 9 The Load-Master is for those who enjoy fine tools.

This is a tool anyone would be proud to own. Five stations provide an exclusive station for priming and an additional station for the carbide post sizing and factory crimp die. It is a smooth operating press for all calibers. The indexing is lightning fast and silky smooth. If you need to load great quantities of ammunition and enjoy quality tools, this is the press for you.

The Load-Master uses five hole interchangeable turrets. These are diamond turned to a precision fit and locked with a knurled

thumbscrew. It accepts the Lee Case Collator for high-speed case tube filling and the Lee Bullet Feeder. The Lee Load-Master comes completely set up for one caliber. It even includes a loaded round catcher. There is not a finer or faster press at any price.

Case Collator

The Lee Case Collator (pictured on top of the case feed tubes) fills all four tubes with cases in 10 seconds. Dump some cases into the unit and shake sideways. The cases fall into the tube right side up like water over a dam.

Lee Classic Cast Reloading Press

This was the first major product from Lee Precision that I had no part in the design. So it was fun evaluating the finished product and doing some second-guessing. I always resisted making a powerful heavy press, because I always preached reloading does not require much force.

John and his son Andy stopped by with the first production press. It is awesome! A massive cast iron frame with 12 square inches of guiding surface for the large 1⅛ inch ram is gross overkill. The lever is adjustable in both length and angle. Just like aircraft parts, bright zinc chromate rust proofs the large steel connecting links, joined toggles and lever clamps. It is equipped with the time proven automatic priming arm introduced by the old Pacific company many years ago. Change primer size by lifting the primer arm out and drop in the other. Primers are seated at the bottom of the stroke for best control. A plastic tube collects all the spent primers. You may remove the cap and deposit the primers directly into a waste container. The fit and finish of the steel parts is superb. It is a shock when you grab the handle to raise



Figure 10 The best cast iron press made.

and lower the ram. Because of the low mass hollow ram and lever, it moves smoothly and effortlessly. Pat Klessig, whom many of you know from customer assistance, helped design the Classic Cast press. Aptly described it with the comment, *"It feels like a Mack truck with power steering."*

The ram is free of any play and travels smoothly. The press is so solid that there is no need to preload the dies with 1/4 to 1/3 extra turn inward. Screw the sizing die in until it touches plus 1/12 turn. That is just 1/2 of a flat on the hex nut. When you size the case you can feel the die contact the shell holder and abruptly stop against the toggle stop. It is a good solid feeling. Not that mushy feel of the toggle over center common to many expensive presses. Most important, the toggle stop saves wear and tear on the press, dies and shell holder. All Lee presses incorporate this feature and it is being copied by other manufactures.

The top 1 3/4 inch of the ram is a separate piece. This intricately machined part holds the shell holder and the primer arm. It is rotatable to either side for right or left hand use. Normally, one would position the primer arm on the opposite side of the lever for ease of placing a primer into the seating stem. The primer arm must be on the right side when used with the automatic primer feeder. The primer feeder was not yet available for testing.

I found that the 12-inch lever may be shortened to almost half for many pistol cartridges. This reduces hand travel significantly. This feature works only if mounted on an open bench. A cabinet or drawer below the bench top would interfere with the end of the lever.

As expected, it worked very well with a quality feel. It is a good solid design. If there are any faults it may have too many features. I would be content with fewer features and a lower price. Most people don't need an ambidextrous press, adjustable lever, 1 1/4 inch steel die bushing with an "O" ring lock, and complete primer arm for small primers and another complete unit for large primers Other manufactures supply only the parts to change from small to large primers with a single arm. Only a curmudgeon would complain about the price as it is significantly less than other cast iron frame presses without the deluxe features.

No one needs such a fine press to reload ammunition, nor an expensive gun to shoot, but is sure is fun to own and use a quality gun and the

Lee Classic Cast reloading press. It is cast, machined and assembled entirely in the USA. The Lee Classic Cast press will soon be the best selling cast iron press.

Lee Classic Turret Press

Lee has long been the leader in turret presses. Our first press in 1984 was a turret press and continues to be a very good selling press. Original presses made by all other reloading companies have long since been discontinued.

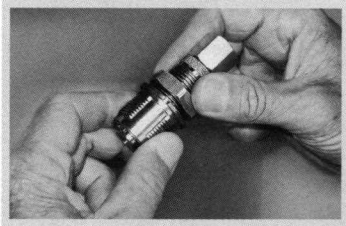
The Classic Cast press was so well received, that John introduced the Classic Turret Press. It incorporates the unique quality features of the Classic Cast Press and the convenience of the turret press into the best turret press ever made. Everything I have said about the Classic Cast single station press applies to this press as well. It is strictly top of the line. Now, if I could own but one press, the Lee Classic Turret Press would be my choice. It costs more, but the value is apparent. Twelve square inches of bearing guides the largest ram in the industry. Like the Classic Cast, the ram is drilled clean through to capture every primer in a PVC tube. The price is a fraction of other brands of cast iron presses and is the only one with automatic turret indexing See it in operation at www.leeprecision.com. Change dies instantly with the lift out turret. Once set you will never have to readjust your dies again. Extra turrets cost less than quick-change bushings for single station presses. For long rifle cartridges, the automatic indexing is easily deactivated by lifting the indexing rod from the all Nylon® indexer.



Figure 11
Lee Classic Turret Press

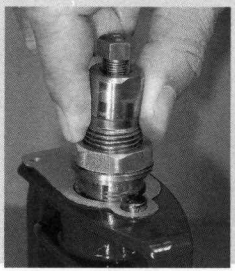
The following pages are excerpted from the Lee Breech Lock Challenger press instructions—best demonstrating the typical single station press using 7/8–14 dies.

Your press features the Lee Breech Lock Quick-Change Die Holders



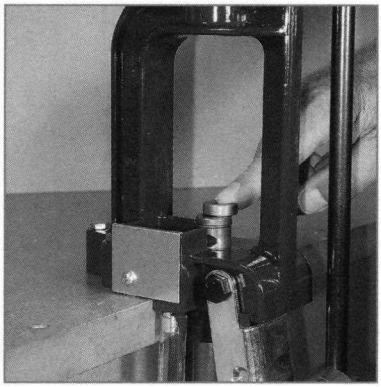
Thread your die into a quick-change holder and lightly snug the lock ring.

Once your dies are set you can instantly remove them and replace them to the exact same position. The Breech Lock includes a lock pin for initial die set up. If cost is more important than convenience, you can leave the quick lock bushing permanently installed and screw your dies in and out as in any conventional press.

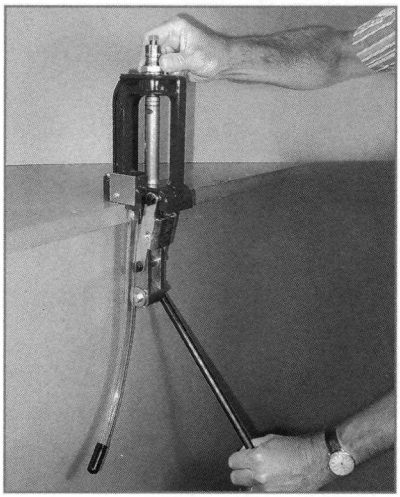


Insert the holder into the press so that the lock groove will line up when secured. Adjust your die in or out for proper operation.

CAUTION: WEAR SAFETY GLASSES

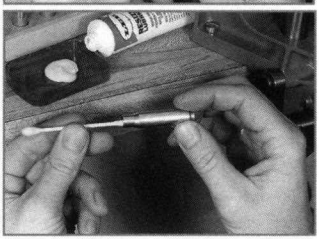


1 INSTALL SHELLHOLDER



2





INSTALL SIZING DIE While holding the handle against the stop, screw the die in until it touches the shell holder, then release pressure from the handle and screw the die in an additional ¼ to ½ of a turn maximum. Now while holding the die, tighten the lock ring. NOTE: Carbide dies should not be screwed in the additional ¼ to ½ turn.

3 PREPARE YOUR CASES

Inspect your cases while lubricating them. Discard all cases with split necks, indications of head separation or other defects. Wipe on a thin film of Lee Case Lubricant with your fingers. Fingers are the best way of lubing a case as any grit that could damage the die is wiped away. The case may be immediately sized or you can let the lube dry.

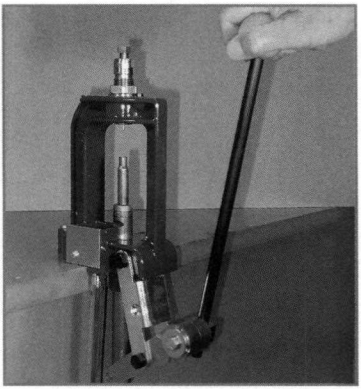
Carbide dies need no lubrication. **RIFLE DIES: Be sure to lube the inside of the case neck with a cotton swab.**

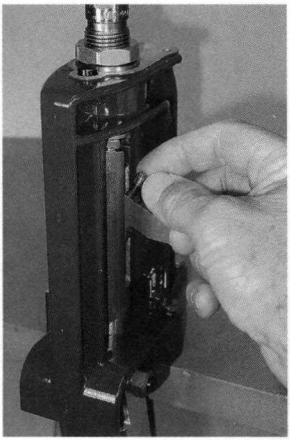
4

PLACE the lubricated case in the shell holder and raise the ram until the handle comes to a stop. Proceed to the priming operation.

Carbide dies need no lubrication

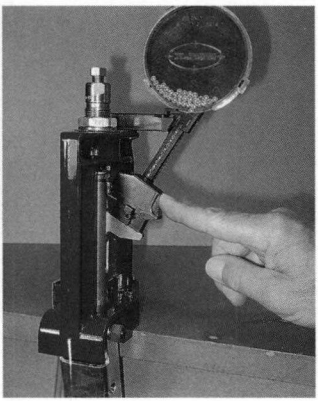
Primer arm must be in place to direct spent primers.





5

PRIME YOUR CASE with a priming tool. Follow the instructions included with the tool.





Optional **SAFETY PRIME** is safe with all brands of primers.

Auto Prime is hand held and requires special, but inexpensive shell holders. Safe only with CCI or Winchester brand primers.



THIS STEP IS OMITTED WITH MOST RIFLE 2-DIE SETS



6 **FLARE CASE MOUTH** for ease of bullet installation. Raise the ram to expand the case neck. To increase the flare, screw the die in deeper. Always adjust to provide the minimum flare needed to start the bullet. After proper adjustment, tighten the lock ring. Powder may be added through Lee Expanding Dies.

7 **CHARGE THE CASE**

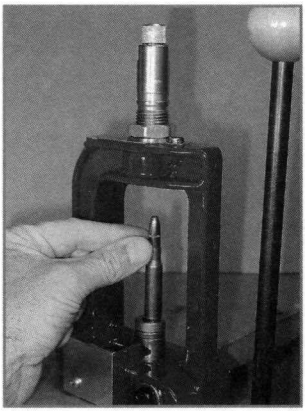
Regardless of how you charge the case, be absolutely certain you have the correct amount and type of powder for the bullet you have selected.

NEVER try to seat the primer deeper after the powder has been added.



8

SCREW the bullet seating die in until you feel it touch the case mouth. If no crimp is desired, back the die out ½ turn. If a crimp is desired, turn the die in ¼ turn.



9

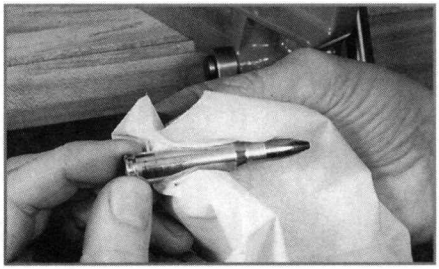
SEAT THE BULLET Place a bullet on the case mouth and guide it into the die. Raise the ram to the top and withdraw. The knurled adjusting screw controls the bullet seating depth. Adjust to suit. Usually, seating to the same depth as a factory round works fine. If you desire to crimp, be sure the bullet crimp groove is almost completely inside the case. Then screw the die in just enough to apply a good crimp. Attempts to apply excessive crimp will crush the case. For proper crimp, all cases must be trimmed to the same length. For best utility and accuracy, consider the Lee Factory Crimp Die. You will never crush a case; no crimp groove is required and trim length is not critical.



Lee Factory Crimp Die

10

IF LOADING maximum loads, it is a good practice to remove all traces of case lubricant with detergent and water. This will reduce pressure against the bolt.



CHAPTER 2

Some Common Terms

A cartridge is an assembled case, primer, powder and bullet.

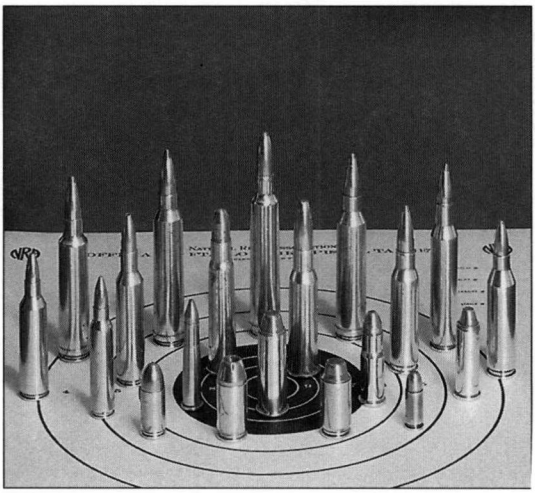


Figure 12 Assorted Cartridges.

Let's get some definitions straight. It galls most shooters when the television news or newspapers refer to a cartridge as a bullet. Most important, it's necessary there be complete understanding in the terms while you read this book.

The *case,* sometimes called a shell, is the container to hold the powder, primer and grasp a bullet in its neck. Brass is the most desirable material for cases. Aluminum cases are used only for cheap ammunition and cannot be reloaded. Steel cases were used in World War II when brass was scarce. Steel cases are reloadable.

The *bullet* is the projectile fired from the gun to the target. Sometimes our customers refer to the bullet as the head. This may be a colloquialism. Bullet is the preferred name. Most bullets are lead or lead alloys. Plain lead bullets will deposit lead in the bore of your gun, thus the phrase "lead the bore." Lubricating lead bullets eliminates or greatly reduces the leading. Use lubricated cast lead bullets for most handgun ammunition as pressures are low compared to rifle ammunition. They are economical and shoot well. A small copper cap, called a gas check, can be attached to the base of the bullet for higher pressure loads. High pressure loads require

stronger lead alloys. We will go into more detail in the cast bullet section. Use copper jacketed lead bullets for high pressure loads and hunting ammunition. The copper jacket allows much higher velocities with no leading of the barrel and expands properly for a clean kill. They do leave copper deposits, but at a much lower rate. Special purpose bullets, for thick skinned dangerous game, are made from solid copper or brass and appropriately called "solids." Because they are usually a very large caliber, expansion is not nearly as important as penetration.

The *primer* is that little round device in the head of the case. When struck by the firing pin, the primer sends flame into the case through the flash hole and ignites the gun powder. Because it must be sensitive to impact to function correctly, it is the most dangerous reloading component you must handle. It is small, and a single primer has limited capacity to inflict injury to you or anyone nearby. The potential for harm increases when you bunch several together in a priming tool. The section on priming explains this more fully.

Reloading Rifle Cases

To understand reloading better, let's go back to a millisecond after you squeezed the trigger on your last shot.

The sear lets the hammer slam the firing pin into the primer. This dents the primer cup, crushing the priming compound against the anvil exploding it, and moves the cartridge forward until stopped by the rim, belt or shoulder. The primer also sends flames through the flash hole to ignite the gunpowder. The burning powder builds pressure within the case. Due to bullet's inertia, tight fit and crimp, it doesn't begin to move instantly. After the chamber pressure builds to several hundred pounds, the bullet starts moving. The pressure rapidly builds to a few thousand pounds to bulge the case to the chamber walls forming a highly effective gas seal. The pressure pushes the primer out to contact the breech face. This is the headspace clearance, a maximum of .014 of an inch, usually less. The pressure rapidly builds, accelerating the bullet and stretches the case rearward to the breech, thus re-setting the primer. The bullet travels a short distance down the barrel, pressure peaks, then begins to drop. After the bullet exits the bore, the pressure drops to

one atmosphere. The case shrinks from the chamber walls, making it easy to extract from the chamber.

The case did not spring back to its original size. This is both good and bad. You now have a case fire-formed for a perfect fit to your gun's chamber. Unfortunately, chances are it may fit only your gun's chamber because chambers vary in size due to manufacturing tolerances. You must now make your first decision. Resize the entire case to reduce it to standard dimensions so it will freely fit in any standard chamber. Or you can size only the neck of the case small enough to hold a bullet firmly. The choice is easy.

Full length resize the case if you are:

1) Loading for an autoloader, slide or lever action.
2) Loading for a handgun.
3) Loading ammunition for more than one gun.
4) Loading for hunting.

Only neck size for best accuracy and case life if you are:

1) Loading for the same gun it was fired in and loading for bolt action or single shot rifle.
2) Or if you try the fired cases for a free fit in the gun, before reloading them.

A reason reloads are more accurate than factory ammunition is, you have fire formed cases that perfectly fit your rifle. No one else can supply these custom cases. Full length sizing negates the fire formed advantage.

Deluxe rifle dies offer choice of full length sizing or neck sizing.

After *Modern Reloading* detailed the important benefits of Collet Neck Sizing Dies, sales dramatically increased. They have become such an outstanding product that they earned a place on the cover. Many customers wanted the full length sizing die along with the collet neck sizing die. There are times full length sizing is needed and desirable—such as when reloading cases from a different gun or hunting ammunition. Purchase of the separate die from the factory is costly for you the customer and for Lee Precision. The cost of processing a special order for a single die eats up most of the

profit. Because the customer is most important, Lee introduced the Deluxe rifle die set. This is the record breaking Lee Collet Die set plus a full length sizing die for, at this writing, only $5 extra.

Deprime and Size

Most sizing dies also have a decapper with a small pin that passes through the flash hole to eject the spent primer. This is a clever combining of operations to save time and effort. You deprime and size the case simultaneously. Some brands of dies have frail decappers held by complex and expensive devices. Lee dies have a sturdy pin, of SAE 51000 steel, hardened, precisely ground and polished to a very fine finish. It would cost you $10 or more to have a local machine shop make just one of the same quality and precision. Because these pins are used in roller bearings by the millions, they are inexpensive. They are guaranteed unbreakable. An excellent example of how quality need not be expensive.

A quality die, such as Lee produces, will size the case .001 to .003 inch smaller than the smallest standard gun chamber. This insures your reloads will freely fit in any standard chamber without being excessively loose. Some die makers often use their die reamers long after they have worn too small to make the best dies. While the sized cases are well within the generous tolerance of standard ammunition, they are too small for best accuracy and long case life.

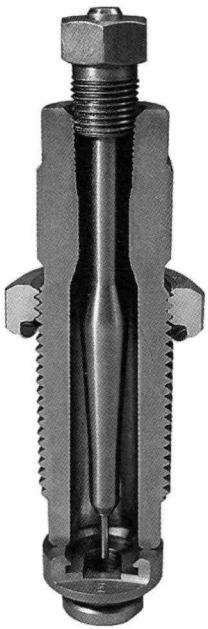


Figure 13 Cutaway of a Rifle Sizing Die with the new Easy X expander.

Expand the Neck

Another ingenious feature, is the addition of an enlarged portion on the depriming rod called the expander. The die sizes the case neck slightly too small while the expander is within the case. Withdrawing the expander from the case sizes the neck to a proper press fit of the bullet. The neck should be .001 inch smaller than the bullet.

Many years ago I had a box of defective bullets. The bases were .001 inch larger than the shank. They were long bullets so the base passed completely through the neck when properly seated. The slightly enlarged base expanded the neck enough so the bullets could be pushed into the case with light finger pressure.

That little tale was to impress upon you with the futility of trying to increase the bullet pull by making the expander smaller. If the neck is smaller than .001 inch under bullet diameter, the bullet will stretch the neck to .001 under bullet diameter. So the grip on the bullet will still only be .001 inch. The bullet is not a good tool for neck expanding. It is poor practice to leave the neck more than .001 inch under bullet diameter. An expander with a long surface makes the most accurate ammunition. The expanded portion of the neck, guides the expander through the rest of the neck, which keeps the neck true to the body.



Figure 14 Exaggeration of damage caused by spherical expander.

Avoid spherical expanders. They are designed to reduce the force required to expand the neck. They are detrimental to accuracy. By nature, a ball-like expander tends to wander to the weak side of the neck and knock the neck axis out of alignment with the body. To amplify the effect for demonstration proposes I pushed a 3/8 inch ball though a 30 caliber neck. The angled neck is obvious. No, a regular spherical expander will not knock the neck out of kilter a visible amount; but it will be misaligned a measurable amount.

Nothing is so good that it cannot be improved. John showed me his redesigned elevated neck expander. He calls it the

"EasyX Expander." It retains the unique long guided expanding accuracy of the old dies. Extraction is effortless even without lubrication. This is an important consideration. Lube inside the neck reduces the gripping friction. Consistent bullet grip insures better ignition and uniform pressures and velocities. I recently used these new dies to reload many 308 rounds for ballistic testing for this book. You can barely feel the expander being pulled through the case neck. They are a joy to use. An additional feature is the long tapered portion that enters the case first. This will reform dented squashed necks. It also expands the mouth of smaller calibers to a larger caliber such as converting a 35 Whelen from a 30/06 case. Replacement expanders are available and will fit all Lee bottle neck dies, regardless of their age.

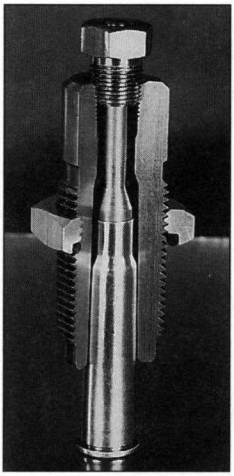


Figure 15 Expander being pulled from the neck.

A perfectly logical question is "Why was the neck sized undersize?"

The reason is: case neck thickness varies. With a bullet in place, the outside diameter of a thin walled case is smaller than one with thick walls. To firmly hold the bullet, with the thinnest case you are likely to come across, the neck must be sized small enough. Therefore, every case with a thicker neck is sized smaller than desirable.

When withdrawing the expander, it expands the neck to the correct size. The negative to this simple solution is the case neck is worked more. The excessive working of the metal causes it to harden and fatigue. The patented Lee Collet Die overcomes this fault.

Recall, a reason for handloads' superior accuracy is only you have fire-formed cases that perfectly fit your gun's chamber. The Lee Collet Die sizes only the case neck; without excessive working of the brass. This extends case life and reduces case stretching. The Lee Collet Die uses a different method to size the neck. A collet squeezes the case neck against a mandrel, of the proper diameter,



Figure 16 Robert Frey dramatically demonstrated the excellence of the Lee Collet Dies. In sanctioned competition, he set a world record for the smallest group at 1000 yards.

for the correct press fit with the bullet. The case neck is worked the absolute minimum, and made axially parallel to the case by the mandrel. Cases last 10 times longer than full length sized cases. The savings of the increased life of only 35 cases are greater than the cost of the dies. This is another reason Lee can guarantee accuracy and satisfaction. We are confident you will be delighted with your purchase.

Case Trimming

Cartridge cases get longer with use. The added length is due to several factors, some of which the reloader can control. Headspace is the amount of lengthwise free space of the cartridge in the chamber. Normally headspace is a maximum of .014 inch and the minimum is an interference fit. Half of the headspace tolerance is used on the cartridge and half in the chamber. These are the extremes for standard ammunition in any standard chamber. There are exceptions, but these are typical.

Recall, upon firing, the case swells to fit the gun's chamber perfectly. The firing pin slamming against the primer jams the case forward in the chamber. Internal pressure holds the case tightly in the chamber. If the pressure is high enough, and it normally is, the head of the case stretches rearward to contact the bolt face. This is

the main reason cases get longer. You can keep this to a minimum by sizing only the case neck, because you have perfectly fitted fire-formed cases and want to keep them that way. The headspace is now at the minimum and case stretching is limited in subsequent firings.

High pressure also causes the cases to stretch. The high pressure causes the brass metal to flow forward, lengthening the case, and thickening the neck portion. You can limit this by keeping your loads less than maximum. This is not the biggest cause of case stretching anyway—full length sizing is. That's why Lee dies size the very minimum that will allow a free fit in all standard chambers.

Full length sizing dies cause the case to grow in two ways. Squeezing the case to factory dimensions, causes the metal to move or more properly, to flow. The case thickens and some metal flows forward to make the case longer. You can easily demonstrate this by taking a case fired from your gun. Try it in the gun's chamber to see how it fits. Now full length size the case with the die adjusted one eighth turn short of touching the shell holder. Try the case in your gun's chamber. You'll find that you can no longer close the bolt or it will close with difficulty. You lengthened the case by sizing the diameter. The case metal must go someplace, because it can't be compressed; it is extruded lengthwise. You must adjust Lee full length sizing dies to touch the shell holder plus one quarter to one third turn more. The extra quarter or third turn is to remove all play or spring in the press.

The above is not true with all brands of dies. Always follow the instructions that come with the dies. Some manufacturers make dies that can push the shoulder back too much. You must adjust these dies for the proper headspace. This is a dangerous practice. Cartridges will not chamber if the die is adjusted out too far. If adjusted in too far they cause excessive headspace, shortened case life and increase the risk of head separation.

Dragging the expander through the case neck stretches the case. While this contributes slightly to case lengthening, the amount is insignificant. The Lee Collet Die eliminates these last two problems.

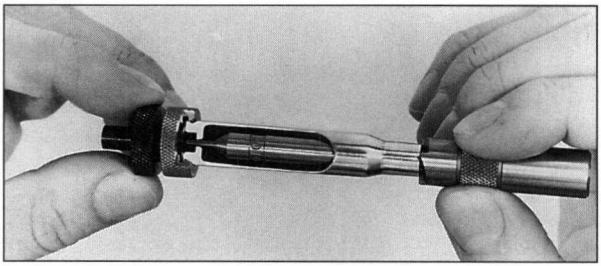


Figure 17 Lee Case Trimmer

Remember; Cases do get longer and must be trimmed or they will pinch the bullet at the end of the gun's chamber. This will cause higher and possibly dangerous pressures.

The easiest and fastest way to trim cases is with the Lee Case Trimmer. Notice how it passes through the flash hole and stops against the lock stud.

No case trimmer trims cases as accurately as the Lee Case Trimmer. The Lee Case Trimmer eliminates measuring or gauging, and every case is trimmed to the same and correct length. An important added benefit is the mouth is trimmed perfectly square to the case.

After trimming, the case mouth will have a very sharp edges on both inside and outside. There may even be a small burr. This must be removed with the Lee Chamfer Tool. It takes only one turn on the outside and another on the inside to finish the job. The split edge cutter is being copied and used on some very expensive equipment sold by competitors.

If you have to trim many cases, mount the Lee Case Trimmer Lock Stud in a power drill or electric screwdriver.

Another quick way to trim your cases is to mount the cutter in a drill press. Simply hand hold the case and let the pin stop against the drill press table. Do not press too hard as you can wear a dent in your drill press table and your cases will be trimmed too short.

The Zip Trim

The Zip Trim is one of the newer Lee products. By chance, on an infrequent visit to the plant, I stopped to talk to Pat Klessig, the engineer who did the cartridge drawings and some load data for this book. He was testing a prototype of a case trimmer for use in a reloading press. The device used the Yankee screwdriver principle

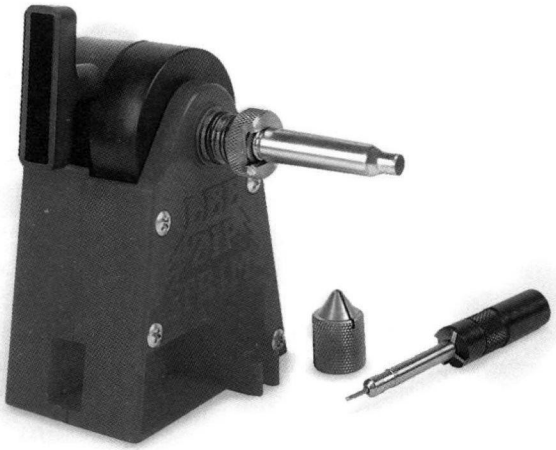


Figure 18 Zip Trim

to rotate the case trimmer. It was not going well, because the torque to pressure ratio was out of proportion. It required too much down pressure to rotate the cutter. The harder you pushed, the deeper the cutter would dig into the case mouth making it impossible to rotate.

I visited John in his office and told him I could design an economical mechanical trimmer using the same principle as a pull-cord to start small engines. You can develop considerable horsepower for a very short duration. It is exactly the kind of power needed. If you ever used one of those hand cranked trimming lathes, you'll understand why other manufacturers try to motorize them at great cost and less than satisfactory results. The Zip Trim, as I designed it, will develop a quarter horsepower for over ten revolutions. This is more than enough to trim the average case. No system can match the accuracy, ease and convenience of the Lee Zip Trim. The actual trimming takes less than a second. While the case is mounted in the Zip Trim lathe, you can quickly chamfer both the inside and the outside of the case.

The Zip Trim works with the shell holder supplied with the Lee Case Length Gauge. It works so much better with the Universal Chuck. It holds any case from the diminutive 25 ACP to the mon-

strous 460 Weatherby. The case is precisely centered with 3 moveable jaws and then firmly clamped against the lathe spindle for true dead length case trimming.

If you like good looking ammunition, you can quickly polish the case with fine steel wool, or Scotch Brite®. This is a better and safer method of case cleaning than the use of a case tumbler or vibrator.

If you use a case tumbler or vibrator, there are two areas of caution of which you should be aware. The first problem has been reported in magazine articles. Sometimes the media used to polish the cases becomes trapped inside the case. If you unknowingly load such a case it can be dangerous, because the reduced capacity increases the pressure. If you are already loading maximum loads your loads are then over maximum.

The other, more insidious problem, is lead poisoning. John's shooting companion was diagnosed as having elevated lead in his system. Because he not only shot a great deal at an indoor range, and reloaded lead bullets that he cast, it took considerable detective work to find the cause. John supplied him with a lead detection kit for use around his casting equipment and it showed very little. On a hunch, he tested around his case vibrator and found extreme amounts of lead. He said the worst offender is a sifter used to separate the media from the cases. Great clouds of dust are released. The lead comes from the priming compound. Primer manufacturers are trying to get the lead out, but the old stuff will be with us for years to come.

Priming

Primers are the most dangerous components you handle in the reloading process. For them to function they must be impact sensitive. For this reason give them plenty of respect. The carton they come in is the only safe storage container. Primers come in four sizes, large rifle and small rifle, large pistol and small pistol. Large and small refers to their diameter. The important difference between pistol and rifle types is the metal thickness. Rifle primers are thicker to contain higher pressure. Primers also come in stan-

dard and magnum. **The rule is always use standard unless the load data specifies magnum.**

Always seat primers flush or very slightly below the surface of the head. During the seating operation, the primer anvil imbeds into the priming compound, sort of priming the primer. If pushed in too far, the priming compound can be crushed, which will result in a misfire or hang fire. Be certain to seat the primer at least flush with the case head. Otherwise you have the potential for a slam fire. That is, when slamming the case into the chamber; the gun could fire. This is of greatest concern with auto-loaders and slide action guns.

Never try to seat the primer deeper after the powder has been added. Setting off the primer while seating it, is no big deal. I have done it many times. When the case is full of powder and the primer goes off, it's a whole new ball game. The case usually turns into shrapnel and the primer ejects at high velocity. Surprisingly, the bullet does not have very much energy. I should add, that the above observations of exploding cases were done under controlled conditions, with me on the other side of an oak door.

Never use a primer feeder that feeds from a tube. If one primer goes off they all explode. Those companies that make tube-fed priming devices, will tell you that the chances of an accident are slight. It does not make any difference if your chances are one in a billion. It is not worth the risk of being forever blind. Even the explosion shields, now provided on some equipment, cannot keep you completely safe. You still must fill the tube one at a time and then transfer the tube to the loading machine. What would happen if you should drop a tube full of primers to the concrete floor between your feet? You may not be blinded, but could be forever a soprano.

The safest way to seat primers is one at a time. Transfer the primers from the original container to the priming tool and push the primer into the primer pocket. Many billions of primers have been and will be seated that way. Fortunately, there is another faster and almost as safe method. At least your chances of injury are less than standing on a step ladder to paint the ceiling and a lot more fun.

The Lee Auto-Prime is by far the most popular hand held priming tool ever produced. There are some precautions you must observe.

***This Information Has Changed Since The First Edition Of* Modern Reloading.**

These sizes may be used with 100 primers in the tray.

All sizes of CCI brand primers

Winchester small pistol

Remington small pistol # 5½

Remington large pistol # 2½

Limit to Only 20 primers in the tray of these types:

Winchester Large Pistol

Winchester Magnum Pistol

Winchester Magnum Rifle

Only 10 primers should be loaded in the tray of

Winchester Large Rifle

DO NOT USE FEDERAL PRIMERS IN A LEE AUTO-PRIME!



Figure 19 Lee Auto-Prime

Any primer not listed above has not been tested so you must assume they are unsafe.

If a tray of those primers approved for 100 primers should go off; they will blow off the cover. Safety glasses will prevent any serious injury to the user. Other brands detonate with such force that it turns the tool into shrapnel. Federal brand primers are the most dangerous when used in the Lee tray fed priming systems. This is not to imply that they are inferior, they simply are dangerous when used in tray fed tools. Nor should you conclude Federal primers are more powerful. Tests

show Federal rifle and pistol primers have about the same energy as other brands. It's simply too darn dangerous to use Federal primers in the Lee tray fed priming tools.

John tested the RCBS Posi-Prime, and with a little misuse it exploded. It is not my intention to knock the competition's design. They copied the Lee Auto-Prime, so it's basically a good design. However, it's not foolproof. Someone can and will unwittingly use it wrong and it will explode. Use a little common sense. Handle the priming tool as a loaded gun. Do not point it at anyone and certainly not at your face.

CCI, a sister company of RCBS, sells primers in a plastic strip. This could be a priming breakthrough if CCI allows use with any brand of tool. If they only use it as a means to hold up the user for overpriced RCBS priming tools, it's doomed to failure.

Charging the Powder

Charging the case with gunpowder is one of the places you can get into trouble. Too much powder, the wrong kind of powder or the wrong weight bullet, can all lead to excessive pressure, meaning dangerous pressure. Surprisingly, under certain circumstances, too little powder may be dangerous.

It's appropriate to discuss gunpowder's characteristics here. While discussing gunpowder, we are only talking about smokeless powder, a propellant; as opposed to black powder, an explosive.

We are interested in the characteristics that affect our decisions on which powder to purchase for the task at hand. Available energy for most smokeless powders is similar for any given weight.

The main difference between powders is the speed at which the energy is released. This is called "quickness". Gunpowders burn at different rates. Quickness is controlled by at least four methods and often a combination of methods. First, some powders are simply faster burning than others. Second, smaller granules burn faster than larger chunks. Third, some powders have a deterrent coating to slow the burning rate. Fourth, gun powder burns from the surface only. Increasing the surface increases the burning rate. The most common example is Red Dot powder, which is a flake. Powders are also produced in tubular form for a more uniform

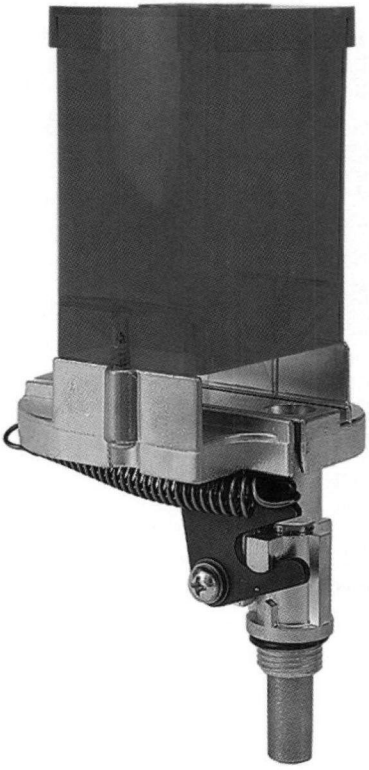


Figure 20 Auto-Disk Powder Measure

burning rate. The hole through the powder tube, gets larger as the powder burns. The increased internal surface compensates for the reduced outside diameter. This century old system works well.

It's obvious that too much powder will cause too much pressure and be dangerous. What is not so obvious, too little powder, of a very slow burning variety, can sometimes cause too much pressure. Do not become obsessed with worry about this rare phenomenon. The conditions are quite limited.

These are the conditions and they all must be present:

1.) It only happens with very slow burning powders—the kind normally used in small caliber large capacity cases.

2.) The reduced charge must be 25 to 35% under normal.

3.) Something special must happen about which no one knows the details for certain.

Conjecture includes:

a) Wave pulses.

b) The bullet starts then stops then builds excessive pressure to restart the bullet.

c) The powder wedges against the shoulder and compresses to form a stopper.

d) A small charge evenly distributed horizontally acts as a shaped charge and directs pressure to a small area on the top of the chamber.

Laboratories have been unsuccessful in replicating the event; so scientific study is not practical.

Mention of the phenomenon is to encourage you to avoid greatly reduced charges of very slow burning powders. If you want a light load, use a medium burning powder. For an ultra light load, use a very quick powder (see Reduced Charges for details). Be aware, when loading a very quick powder in a large case, a double, triple or other multiples of a charge are possible.

Invert each case before adding the powder to reduce the chance of a double charge.

It is always best to seat the bullet immediately after adding the powder. Some reloaders use a loading block. This is a block drilled to hold multiple cases for charging. Loading blocks can induce charging errors. If you charge all cases before proceeding to the next step, you could inadvertently add a second charge. If you choose to use a loading block, be sure to use a charge that fills more than half of the case. Then a second charge will overflow and the error will be obvious.

Selecting the best powder for the cartridge.

The load data section in this book makes powder selection very easy. The loads are sorted by bullet weight and velocity. The one at the top of the list, for any specified bullet, is the highest velocity and the one at the bottom being the lowest velocity. The loads at the top or near the top should be your first choice. All are acceptable. Factors for selecting any load may be as mundane as that's the only kind of powder available or it's the cheapest.

As a rule, a full case of the fastest powder that will yield maximum safe pressure gives the highest velocity. Simply stated, this means if you can find a powder that will fill the case, and pressures are near maximum safe pressure, you will get the highest possible velocity, as opposed to a powder that gives the same pressure and the charge partially fills the case. To observe it, look at the load data. Check the velocities for each of the listed maximum loads and the one with the highest velocity will most often be the powder charge that comes closest to filling the case. You can determine this by

comparing the starting charge volume to the useful case capacity below the cartridge drawing.

A good practice is to select a charge that fills more than half the case. Then you will overflow the case should you accidentally try to add a second charge. Highest velocity and maximum pressure are unlikely to be the most accurate. I prefer shooting starting loads, because guns maintain their accuracy longer, cases can be reloaded more times and usually groups are tighter. If you are punching holes in a paper target, you can display a small group with pride. There is little satisfaction in shooting a 10 inch group knowing the only advantage was the bullet's travel time was slightly less.

Powder selection and charge amount are other variables the handloader controls to make ammunition more accurate than the factory can economically produce. There are many individuals who have spent their entire working life producing ammunition. Those folks who make factory ammunition, know a lot more about what makes accurate ammunition than most handloaders combined. They experience more in a month than many hobby reloaders learn in a lifetime of reloading. They know how to make the most accurate ammunition, but they cannot afford to do it. They have certain constraints that limit the accuracy they can build into the cartridge.

Ammunition factory's most important limitation is cost. Let's face it; you would not be reading this book if it were not for the high price of store bought ammo. Consider the factory's decision on what powder to use. If 40 grains of one type of powder produces the specified velocity at safe pressure and 42 grains of another powder that gives slightly better accuracy, which powder do you think the money manager is going to insist upon? The accountant says 2 grains times 10,000,000 rounds equals 2,857 pounds. If they buy it at half what we pay, that's still lots of bucks in a highly competitive business. Even if the factory was willing to pay for the most accurate powder, they have other constraints with which we handloaders do not have to contend. When you buy a box of factory ammunition, you not only expect it to go bang, but it darn well better operate your autoloader if it is gas operated or blow back action. It makes no difference if the gun is 30 years old or fresh from your gun store. The cartridge must not only provide the SAMMI

specified velocity at a safe pressure, but the pressure curve must be suitable to operate the gas piston reliably and not excessively. It must do this in desert heat or arctic cold. We handloaders can tailor our loads to our guns and conditions.



Figure 21 Bullet Seating Die

Bullet Seating

Seating a bullet is usually the second last step in the reloading operation. A properly sized case neck will be .001 inch smaller than the bullet. A greater press fit will not result in a tighter bullet as the bullet itself sizes the case and the press fit will remain about .001 inch. Allowing the bullet to size the case results in excessive bullet run-out, because the bullet is a poor tool for case neck sizing.

You must decide how deep to seat the bullet. Consider the following factors while adjusting bullet depth.

The overall case length must be short enough to fit the gun's magazine and feed through the action.

Bullets seated deeper than normal will reduce case capacity and increase pressure. This is not too critical for large rifle cases, but extremely important for pistol loads. Good load data specifies bullet seating depth or overall case length. **Do not seat the bullet too deep. The Over All Length(OAL) must be at least as long as indicated in the load data for all maximum pressure loads.** Bullets may be seated deeper for reduced loads.

Bullet seating depth can affect feeding in auto-loaders because the bullet nose rides up the feeding ramp. Remember this when loading for your 45 ACP.

Seat bullets that have a crimp groove or cannelure so most of the groove is inside the case neck for a proper crimp. Follow the instructions included with your die set. My preferred method of

crimp adjustment is included in the seating die section for handgun cartridges.

Most rifle ammunition produces best accuracy with the bullet seated so it almost touches the rifling. Few people know the reason this works so well. It provides a uniform start pressure. Every one agrees; uniform bullet depth is most important. What works in one gun may not work in another. This is another variable you can experiment with—to custom tailor your ammunition to your gun for best accuracy.

Crimping

After seating the bullet you have the option of crimping it in place. Only lead bullets, or jacketed bullets with a crimp groove, can be crimped in place with standard dies. Crimping is normally done with the same die that seats the bullet. Follow the instructions supplied with your die set. Usually, the die is screwed in until it just touches the case mouth. Then an additional one-half turn in for a light crimp and one turn for a heavy crimp. Cases not trimmed to a uniform length, are impossible to crimp uniformly with regular dies. Excessive crimping ruins more ammunition than any other reason. The case either buckles or bulges and will not chamber. All of these problems are eliminated with the use of a Lee Factory Crimper, supplied with popular caliber Lee Pace Setter Rifle Dies and Deluxe Pistol Dies.

Ammunition loaded for hunting should always have the bullets crimped in place; as should ammunition used in tubular magazine and auto-loading rifles. Hunting, auto-loaders, pumps and tube fed guns require ammunition that will stand up to rough handling. Only firmly crimped ammunition is suitable. It could ruin your hunt if a bullet wedged in the throat or pushed back into the case.

Some rifle shooters believe best accuracy is achieved by not crimping the bullet. This is not without its problems. Usually the seated bullet must almost touch the rifling to provide uniform and sufficient start pressure. This requires careful checking of your gun's chamber and matching it to the bullet's ogive (the curve of the bullet's nose). The bullet seating die must be carefully adjusted and checked. An easy technique is to load a round with the bullet seated out too far. Then chamber the round so the rifling seats the

bullet the rest of the way. Now with careful checking, you can seat all of your bullets to the same depth. Be careful with this technique so you do not leave the bullet stuck in the rifling. Seating the bullet .015 to .030 away from the rifling works the best for me. There is no universal agreement on this.

Special and costly tools are available to measure both the point at which the rifling starts and the corresponding point on the bullet's ogive of the loaded round. The added cost of such devices is of little concern to those active in the bench rest sport. It represents but a small fraction of their equipment costs. You have a simpler solution.... the Lee Factory Crimp Die.

Factories cannot load ammunition to custom requirements, so they use a simple and highly effective alternative. They provide a uniform shot start pressure by firmly crimping the bullet in place. George Frost in his excellent book *Ammunition Making* states:

> *"A necessary control in all metallic ammunition is that of bullet pull. The amount of force needed to pull the bullet from or push the bullet into the case has an effect on ignition, velocity, pressure, and accuracy from the ballistic side. On the user's side, bullet pull also has to do with good functioning."*

He goes on to say,

> *"..,a .30 cal. bullet, diameter .3085 inch, bullet pull 100 lbs., starts to move as the chamber pressure moves past 1338 p.s.i."*

Center-fire ammunition that has a bullet fully seated, but not crimped, will never reach the 100 pound bullet pull. A firm crimp is essential for all but those custom made loads for a specific rifle, in which the rounds are fed singly with care.

Just remember, those folks at the ammunition factories, whose very survival depends upon a quality product, always apply a firm crimp. Sometimes they even glue the bullets in place.

Factory Crimp

Lee Precision includes a Factory Crimp Die with all popular rifle die sets. This tool duplicates the tight crimp found on most factory ammunition. It eliminates the factory advantage. It works so well that you can seat your bullet to any depth and it will form a canne-

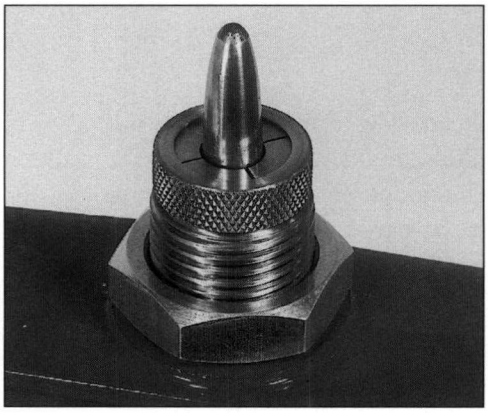


Figure 22 Factory Crimp Die

lure in your bullet. It improves accuracy and your ammunition will function better.

The Lee Factory Crimp die is a reloading tool milestone. It frightened the giant of the reloading industry, into spending more money on negative advertising than we spent on promoting it. Their tactic backfired and Lee Precision became the largest die maker in the world.

There are hundreds of thousands of factory crimp dies in use worldwide. We get unsolicited targets and letters from happy customers showing and explaining how their groups have improved. Annually, we make hundreds of custom factory crimpers. Gun writers and editors have come to realize that crimping can improve a load.

The Lee Factory Crimper will usually enable you to achieve better accuracy with less effort and waste of components developing the perfect load. Your ammunition will be less sensitive to variation such as powder type and charge, primers, case and temperature.

It improves accuracy and makes your ammunition resistant to rough handling such as imposed by the needs of a hunter. Your ammunition will be more factory-like. It cannot transform carelessly assembled cartridges from inferior components into bench rest record breaking, gold medal winning, trophy bagging cartridges.

Most important, it will never damage and render a cartridge useless, as a conventional roll crimper so often does.

Veral Smith of LBT Industries sent a letter and observed, "Mouths of fired factory crimped cases are too small for a bullet to enter."

He believes the reduced diameter guides the bullet into the bore for a more accurate start.

I sent a batch of cartridges to Hodgdon's ballistic lab for testing to test a theory about reduced charges. The results are detailed in Chapter 9. All were factory crimped. On a whim I included another batch with the exact charge and did not crimp them in place. They were maximum loads of Hodgdon's Varget. Both the crimped and uncrimped loads were very uniform in pressure and velocity—quality loads with a near ideal powder for the 308 Winchester with 150 grain bullet. The mean pressure was only 250 PSI more for the factory crimped round. This is an insignificant amount on a 54000 PSI load. The mean pressure deviation of the crimped rounds was less than one fourth of those without a crimp. Velocity difference was insignificant, but favored the crimped round by almost ½. Had the powder not been so well suited to the load, I suspect differences would have favored the crimped round even more.

Here's a good rule to follow.

If you full length size your ammunition, install a firm crimp. This will give you best accuracy and utility.

Crimp bullets in all revolver ammunition. It's necessary to keep the bullet in place. A revolver's recoil causes the bullets to move out, sort of an inertial bullet puller. A more important reason for a firm crimp is to supply enough resistance to get the powder well ignited before it starts to move. A uniform start pressure is even more important with handgun ammunition.

Auto-loaders, such as the 45 ACP, usually have very little crimp, hardly more than enough to push the flare back against the bullet. You simply cannot crimp a jacketed bullet with a conventional die if it does not have a crimp groove. At best, the crimp die included with most die sets; will do little more than iron out the mouth flare. This helps for smooth chambering.

Taper crimp dies have a crimp angle of 5 to 12 degrees. Taper crimp dies were developed to correct problems of poorly designed bullet seating dies. A taper crimp is normally unneeded if you use Lee dies. Use the taper crimp die after the bullet is seated. Seat the bullet with the seating die adjusted to produce no crimp. Then as a

separate operation, crimp the bullet in place with the taper crimp die. As usual, follow the instructions supplied with your die.

Bullets are held in place by the press fit and the crimp. All bullets should be a .001 inch press fit. Most bullets should also be crimped in place. If your cases have thin walls, the sizing die may not size the case small enough to hold the bullet. Either switch to thicker cases, or contact the die manufacturer. Undersize dies are available.

Step By Step Instructions

With most reloading equipment you buy you will get a set of instructions for their use. No manufacturer supplies better or more complete instructions than Lee. Each step of the process has a clear photo or drawing of the process. Whenever we receive a question about the use of a specific tool we include that information in the next printing of the instructions. Some products have been produced for over 40 years so you can be sure the instructions are very complete. Always read and follow the instructions.

Help is available on the Web at "www.leeprecision.com". Visit the Frequently Asked Questions pages.

You can also call 262.673.3075 and ask for technical assistance., or write Lee Precision Inc. 4275 Hwy. U Hartford, WI 53027

CHAPTER 3

Loading For Best Accuracy In Your Rifle

In the beginning of this book, I told you how easy it would be to load more accurate ammunition than the factory made variety. Below are the reasons you can reload more accurate ammunition:

1) Only you have fire formed cases that perfectly fit your rifle. No one else can supply these custom cases.
2) Powder type and charge can be varied for best accuracy in your rifle.
3) You can seat the bullet to the optimum depth for best accuracy.
4) You can precisely duplicate the factories best efforts for maximum accuracy including the factory style crimp.

There is no doubt the average person can, on their very first try, reload more accurate ammunition than they can buy. I have personally witnessed it many times and heard from hundreds of customers who have done it.

As stated previously, this is not because the ammunition manufacturer does not know how to make the most accurate ammunition. It is because they are under constraints from which the handloader is free. Factory ammunition must be completely interchangeable for every standard chamber even though the gun may be over 100 years old. Your reloads need fit only your gun. Your fired cases fit perfectly.

You can select the powder that best suits your gun. Lee load data helps greatly in your selection. This is discussed in detail later.

You can seat the bullet to a depth that suits your gun. Usually, a bullet that almost touches the rifling yields the best accuracy. This is not a fixed rule. There is still a little black magic in the art of reloading. It is just this uncertainty and hope that makes reloading and shooting such an intriguing hobby and sport.

Besides the above, uniformity is the keyword to the best accuracy. This applies to every facet of reloading. Strive to make every round

exactly the same as the last. I will list those things that serious reloaders do to get the best possible accuracy. I do not normally do all when reloading; as most of my ammunition requirements are not that stringent. I only mention them so that you can set your goals. Doing all of these things in no way guarantees that you will have the best possible ammunition. All too often, others and I have put our best efforts and components together for the ultimate rounds and inexplicably find our rejects shoot better groups.

Start with the case. Keep your cases in batches so that they all have the same head stamp and preferably all from the same manufacturing lot. You may even wish to weigh and sort them into batches of the same weight. This insures they will all have the same capacity.

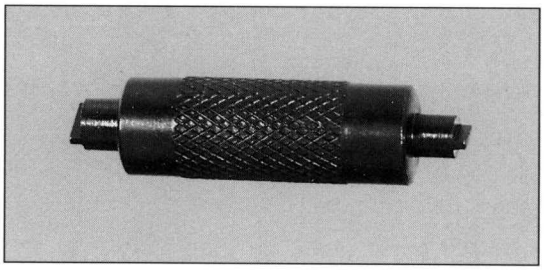


Figure 23 Primer Pocket Cleaner

Clean the primer pockets so the new primer will seat fully into the pocket and not against the fouling from the previous firing.

The Lee combination small and large primer pocket cleaner is as good as any, better than most and costs very little.

If you elect to clean your cases in a vibrator or tumbler, be sure to remove all the tumbling media from the case. Cleaning media left inside the case reduces the capacity and raises the pressure. It tends to accumulate with successive cleanings because it burns in place. I have never found any evidence that clean cases shoot one bit better than dirty cases. If you believe they do, you had best clean your cases, as you must have confidence in your ammunition for it to shoot well.

Trim your cases often. It not only improves accuracy, it is essential for safety. Cases trimmed to a uniform length with a square mouth, help in seating the bullet straight and make consistent crimps the

norm. This helps maintain a uniform start pressure. Remember, UNIFORMITY is the key to best accuracy.

Almost all case trimmers leave very sharp edges on the case mouth. Remove this with a chamfer tool. Always chamfer as little as possible. You do not want to chamfer so much that the end of the case becomes sharp, just enough to prevent the case from shaving the bullet.

It is possible to improve a flash hole with a tool called a "flash hole uniformer." It works through the case mouth to insure a round and uniform diameter flash hole and removes any burrs that may have been left inside the case from the flash hole piercing operation. The value of such a tool is debatable, as there usually is no burr inside the case and the piercing punch makes very uniform holes. This tool was invented by an enterprising individual and is now being copied by others in the industry who are great at merchandising but short on innovation.

The new Winchester lead free cases have a 9/64 inch (.141) flash hole. Until recently, flash holes had been 5/64 inch (.078) and a few pistol cases slightly smaller. Generally, larger flash holes cause higher pressures. Unless you are repriming these cases with Winchester lead free primers, it would be prudent to load these cases with lighter charges; certainly never more than the starting loads in this book.

The most important thing you can do to your fired case is, size it as little as possible. You have a case that fits your chamber perfectly. Keep it that way. Size the neck only enough to hold the bullet.

Many years ago, Rick Taylor called my office to ask if we would modify his $9.98 Lee Loader so that the neck would not size quite so much. I advised we would, but cautioned him that if modified, it may not hold the bullet securely with all brands of cases as some cases are thinner than others. He accepted that as his problem and we made the change.

Sometime later, he dropped me a note advising that he had established a world record for the smallest group at 1000 yards. He had used the modified Lee Loader to load the ammunition. His out-

standing accomplishment was listed in The *Guinness Book of Records* for over seven years.

For those of you not familiar with the Lee Loader, it is a simple hand tool that neck sizes only. I mention this to emphasize the importance of only neck sizing while pointing out expensive does not equate to best.

The object of a neck sizing tool is to size only the case mouth enough to hold the bullet for the next firing. The most important objective is to size the neck perfectly concentric to the case axis. This is to insure the bullet will be aligned with the bore as near perfect as possible. At first, this would seem quite easy, but consider these problems. Nothing in this world is perfect and brass cases are no exception. One side of the case neck is likely to be slightly thicker and/or harder than the other. When sized, the thin or softer side is sized more than the hard or thick side. This almost guarantees the neck will be off center to the axis of the case.

Some reloaders attempt to eliminate the lack of case neck uniformity, by either reaming the inside or turning the outside of the neck. A good job will make the neck thickness uniform, but not insure uniform hardness or strength. If you are going to ream or turn your case necks, there are tools to do the job. When selecting a tool, be sure it makes the neck uniform in thickness and not just thinner. Simply making the neck thinner does virtually nothing to make the case more accurate. It could make things worse. If sizing occurs on one side of the neck for whatever reason, the concentricity will be off by one half the amount the neck is sized. For example: A neck sized .010 inch could be off center .005 inch after sizing if all of the sizing happened on one side. Whereas a neck sized .002 inch could be off center only .001 inch maximum. You see the importance of sizing the neck the absolute minimum.

At present, Lee does not produce equipment to ream or turn case necks. Many years ago, we produced the patented Lee Target Model Loader. It sized the neck and reamed the inside of the case mouth perfectly concentric to the outside. It provided a perfect fit for the bullet. The weakness in the design was the neck had a slight taper. This was necessary to prevent the case from rotating while reaming the neck. In spite of this minor handicap, it produced some

very fine ammunition. We continue to get requests for it even though production ended many years ago and no more are available.

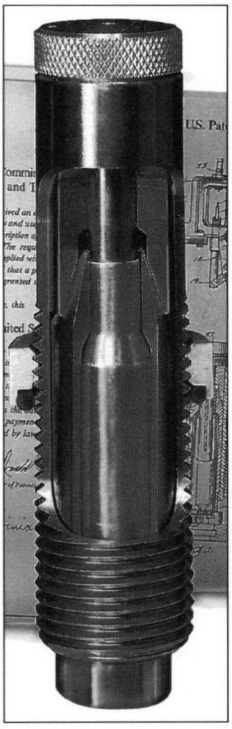


Figure 24 Cutaway of The Lee Collet Die

Another Lee neck sizing tool is the Lee Collet Die. For neck sizing, this is the last word in die perfection. It is very difficult to imagine a method that would do a better job.

The beauty of the Lee Collet Die is the method used to size the case mouth. A collet squeezes the neck against a mandrel. Correct mandrel size for each bullet diameter was determined by experimenting with cases of different hardness. The supplied sizes are what we found to be the best diameter for a proper press fit consistent with minimum bullet run-out. This is subject to the opinion of the reloader. If you desire a greater press fit, it is quite simple to polish an extra .001 inch off the mandrel. No more than a .001 inch should ever be removed. It is not possible to have more than .001 inch press fit. The bullet will simply expand the case mouth the same as a conventional expander. Because a bullet is a very poor expander, bullet run-out will be excessive. We are so confident the Lee Collet Die will allow you to shoot the smallest groups, that we guarantee it or your money back.

Another method, to have case necks axially parallel to the case, is to have a custom rifle chamber with an undersize portion in the neck area. The case necks must be turned for a close fit within the undersize chamber. With little room for neck expansion, little neck sizing is required. If sizing is minimized, then the sizing die will cause less misalignment, provided the die does not size more than the absolute minimum. At present, there are only two options for this type of sizing. One is custom made equipment and the other is the Lee Collet Die.

Custom undersize rifle chambers usually are so tight that only custom ammunition with necks thinned will chamber in the gun. If one day you elect to go to an undersize chamber, you must be sure that the case necks never get so thick that they pinch the bullet in the chamber. However, to maximize accuracy, you must maintain the very minimum clearance between neck and chamber or it will not be any better than a standard chamber. Cases fired from these target guns need only the slightest sizing to hold the bullet. Such ammunition requires the utmost in care, inspection and skill when reloading, plus endless testing and experimenting.

Bench rest competition is beyond the scope of this book. The previous paragraphs make you aware of some of the possibilities available to serious competitors. It is interesting to know how far it is possible to go and then you can decide how much is enough for personal needs or satisfaction. It certainly would be foolish to worry about tiny group sizes for an offhand shot at a charging bull elephant. Whereas it is comforting to know your gun groups well if you are holding on a trophy bighorn at 350 yards.

There is little more to say about cases except that they wear out. Do not expect them to last forever and anticipate that every case may have already been reloaded for the last time. A split neck or body is no big deal, but a split head is certain to damage your gun and possibly injure you. A split head is highly unlikely and would only occur with new cases. It would be a defect in manufacture.

Also dangerous is head separation. The only external evidence is a shiny ring just above the head, the junction above the solid head where the wall thins to the body. You can best detect this type of flaw by inserting a wire with a small right angle bend into the case mouth. By rubbing the wire against the inside case wall just above the head, you can feel a groove inside the case. If you can feel it, do not reload that case. Flatten them with a hammer, accumulate and sell them to a recycler. Better, trade them to a recycler for some good bullet casting lead. Even if you do not cast bullets, other reloaders will be all too happy to trade or buy it from you.

Bullet Seating for Accuracy

The most expensive bullet seating die can only seat the bullet. It cannot seat it straighter nor more concentric. A badly made or

poorly designed bullet seater may damage the bullet and may even damage the case.

It is futile to attempt to seat a bullet true to the case body if the case neck is not already axially true to the body. A properly sized and expanded case neck is only one or two thousandth of an inch smaller than the bullet. If sized smaller than that, then the bullet will size the neck so that it will still only have .001 inch press fit. As stated previously, the bullet is a very poor expander and it will expand the neck unevenly or crooked. Now in your mind's eye, imagine a bullet being pushed into a case neck that is .001 inch smaller than the bullet. As it enters the mouth, and if all the case stretch is on one side of the case mouth, an unlikely occurrence, the bullet would be only .0005 inch or one half of one thousandth of an inch off to one side. Now you tell me how a die with a bullet guide that must be .001 to .003 inch larger than the bullet, and if it is a sliding guide it must be .001 to .003 inch smaller than the die bore, can help the very slightest amount. Those that promote such dies are either intellectually challenged or morally handicapped.

A bullet seating die should have a seating stem that is free to float. All Lee seating dies have seating stems that float. The bullet seating die included with the Lee Collet die set has no crimp shoulder. This allows it to kiss the shell holder and every bullet is seated to precisely the same depth, regardless of give or spring in the press. This is referred to as dead length bullet seating. The Lee Factory Crimp Die is my choice for completing the round.

Wouldn't it be great to have a dead length bullet seating die and factory crimper combined in one die? This would provide best accuracy while eliminating an operation.

A quality bullet is essential for best accuracy.

The most important characteristic of a good target bullet is uniformity. The bullets should all weigh the same and be the same diameter. These attributes are easily checked. What is not so easy to check for is an out of balance bullet, usually caused by the jacket being thicker on one side. Lead is denser than copper. If the jacket wall is uneven from side to side, then the bullet's center of gyration is not the same as the physical center of the bullet.

An out of balance bullet will wobble to the target much the same as a washing machine with an out of balance load of clothes will walk around the laundry room. We are at the mercy of the bullet maker unless we make our own.

Fortunately, bullet makers strive very hard to make better bullets than their competitors. Most modern bullets are of quite good quality and adequate for all but the serious bench rest competitor. Understand we are only concerned about target accuracy. When expansion, weight retention and penetration are of primary concern, it is then best to match your bullet to your cartridge for the distance you anticipate. I am honest in admitting that the occasional reloader would be better off buying factory ammunition for hunting needs. After all, how many rounds does the average hunter need for a year's supply? The serious reloader would not even consider buying ammunition, because he knows he already has the best. Certainly, all who take the time to read this book are serious shooters and reloaders.

Point of Impact

Sight in your rifle with the same ammunition that you hunt with. The velocity differences between different batches of ammunition can be minuscule and yet the point of impact may be significant.

The most dramatic example of this was on my 100 yard range by a shooting friend, Marty Fisher. Marty came to sight in his Winchester model 100 in 308 Caliber. He hung two bull's-eye targets, one above the other. He then fired five rounds of 150 grain factory ammunition into about a three inch group nicely centered on the lower target. Then he fired five handloads with 180 grain bullets at the *same target*. All five grouped in about two and a half inches in the *top target*, fourteen inches above the original group. Marty was delighted. He thought his very first reloads shot faster than factory ammunition with a heavier bullet.

I knew that was not the case and hated to burst his bubble. Trajectory differences, due to velocity variations, are not significant at 100 yards. With most high velocity loads, a speed change of two hundred feet per second alters mid range trajectory a tenth of an inch. To be certain he had not simply aimed at the wrong targets; I repeated the test with the same results. The 180 grain bullet im-

pacted fourteen inches higher than the 150 grain bullet. The explanation is twofold.

The bullet weight and velocity affect the point of impact. Usually a heavier bullet is fired at a lower velocity. This means the bullet will be in the barrel for a longer time. The recoil of the gun causes the barrel to raise more before the bullet exits and will shoot higher. This condition is most pronounced in long barreled handguns. Even the firmness of your grip on the gun has an effect. While fourteen inches is highly unusual, expect different loads to have different impact points.

Barrel vibrations are a major cause of point of impact change. The bullet accelerating with 50,000 pounds per square inch pressure causes the barrel to vibrate. Should the bullet exit the muzzle at precisely the upward swing with one load and on the downward swing with another load, the point of impact will vary greatly. Barrels do not necessarily vibrate only up and down. Group stringing can be in any direction. Barrel bedding plays a key factor in barrel vibrations. For this reason, never rest your barrel on anything when shooting.

Knowing that barrel vibrations have such a significant bearing on accuracy enables handloaders to try to minimize the problem with a custom tailored load. The technique is to load and shoot five or ten round groups. Check the results and alter the charge up or down in small increments until the group gets smaller. At some point the group size will then get larger. By bracketing the best charges, you know what the best charge is for any given combination of components and bullet depth. Good record keeping is essential.

This procedure of developing an accurate load is one of the most enjoyable solo shooting pastimes. Seated at a shooting bench on a pleasant day, loading five rounds, then shooting five rounds, is a very pleasant pastime indeed.

CHAPTER 4



Figure 25 First perfect slowfire in the Milwaukee Center Fire League with my S&W K38.

Loading For Handguns

The principles are the same for reloading rifle or pistol ammunition. There are differences in the tools and techniques. Handgun ammunition cases are short and often straight sided as opposed to rifle cases that are usually bottle necked and longer. Most often handgunners use ammunition in much larger quantities, sometimes copious quantities. Most handgunners would agree that accuracy is desirable, quantity is necessary and quality is essential. The logic is, the competitive handgunner knows most ammunition in a quality gun shoots better than he can hold. Quantity is necessary for sufficient practice. Quality is essential to operate your gun with no jams or misfires. Nothing is more upsetting than to shoot a good score and lose points because of a jam or misfire. Whatever your needs, there is a suitable reloading tool. A higher priced tool usu-

ally loads more rounds per hour and is more convenient. For more on this see Chapter 1 about press Selection.

Case Sizing

Adjust carbide and steel sizing dies to just touch the shell plate or shell holder. If loading for a bottle neck cartridge, turn the die in an extra one quarter to one third turn. This removes all play and spring of the press to set back the case shoulder to the correct headspace. If using other than Lee dies, follow the instructions supplied with the dies.

An empty fired case enlarges to almost the size of the chamber. In the case of a revolver, it could be different sizes from the different chambers. The outside of the case must be full length sized so the loaded round will easily re-chamber and hold the bullet. When Lee started making dies in 1981, the vast majority of dies were steel. Today, the die material of choice is tungsten carbide. It's called carbide for short. A tungsten carbide die for the 9mm Luger offered by RCBS in 1986 cost over $70 and plain steel was $52. Lee carbide dies in 2002 lists at $30.98. The last time I checked, RCBS bare bones carbide dies are still one third more. Carbide dies will never wear out. They are so hard that diamond grit is used to grind and polish the dies. That's not the real reason carbide is preferred. Carbide dies usually eliminate the need to lubricate the cases. There are exceptions. If cases are excessively clean, some of the brass will rub off on the carbide. The dirt, soot, oxides and oil on the case keep the case from galling the carbide. None of the foreign matter on the brass case is hard enough to damage the carbide die. If you clean your cases in a vibrator with fresh media, you may need a slight amount of lube. Even a very light spray of furniture polish will work. Lubricating your cases with Lee Sizing Lube as it comes from the tube is gross overkill. Dilute it with 10 parts water or even better use rubbing alcohol. Apply this thin mixture with a spray bottle, available at most discount stores.

Tapered cases such as the 9mm and 30 M1 Carbine need some lube. Usually lubricating an occasional case will leave enough lube in the die for a few without lube.

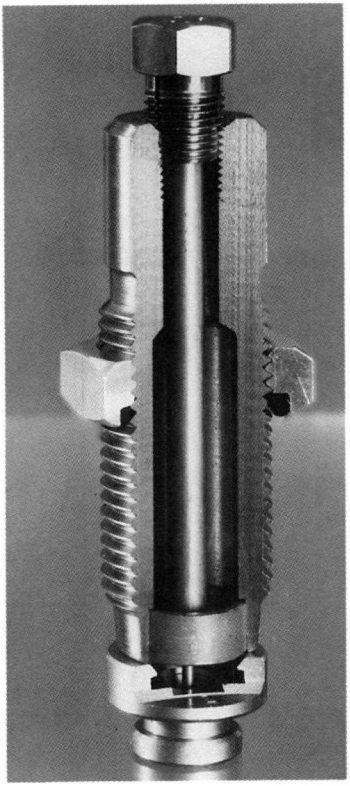


Figure 26 Cutaway of Carbide Sizing Die

Lee dies and most others also deprime the case at the same time it is sized. Because most handgun ammunitions have straight walls, the case has no room to hold the enlarged expander as with a bottle neck rifle case. Instead, expanding is done in the second die of a three die set.

It would be a disservice to you and unkind to Lee Precision Inc., if I did not point out some of the exclusive features only Lee offers and tell an interesting little story about the company.

As a competitive handgunner and volume reloader of handgun ammunition, I invested in a carbide die for my favorite caliber many years ago. The die was poorly designed and shoddily made. I will not mention the brand as it would serve no purpose. Being a journeyman tool and die maker, I reworked the die to suit my needs and standards. This little experience became very useful many years later. It greatly influenced the design of the first Lee die set. Nothing less than carbide is acceptable. Other criteria included a sturdy decapper, easy to adjust set and forget lock rings, a floating bullet seater, seating depth adjustable without tools and most important it had to be affordable.

The design was completed and a prototype tested before we found the carbide insert alone, would cost more than our target wholesale selling price. I am also a pilot, so I flew to a couple of carbide suppliers to find out what we could do to obtain a more affordable price. Face to face meetings are always more productive. Instead of talking to a pleasant salesperson on the phone, you get to talk to the manager or owner and eventually the shop superintendent who must oversee production. When both sides understand the needs

and production limitations, often slight modifications can be made to achieve the goal. A few compromises and an initial order of what I was afraid would be several years supply, brought the price into a reasonable area. Those early dies were far from the best, not near today's quality, but they sold like beer at the ball game in July.

About then, my son John returned to the family business after his higher education and some work experience at Milwaukee Electric Tool. The youthful, "I can do anything" attitude, allowed him to convince me he could grind carbide to the exacting tolerance and shape to make the best dies at an affordable price. After much sweat and toil, he eventually developed a system to grind the inside of the die to the shape of a perfect segment of a parabola. It is a perfect blend. To the naked eye it looks like straight surface. If measured, you will find it is larger at both ends. There is no straight section and the surface is a continuously changing radius. There is a large chamfer at the open end for easy location when used in progressive presses. This shape eliminates the objectionable ring formed by all other brands of carbide dies. John did this at a fraction of the cost of the carbide inserts previously used. More important, the carbide is ground after it's locked into the steel die body, so concentricity is perfect. Because of these features and innovation, Lee is the world's largest die maker and the cost of reloading decreased dramatically.

Case Trimming

If you are going to trim your cases, this is the time to do it. Lee makes a complete selection of case trimmers for all handgun calibers. This is a product I resisted producing, because it did not pass my test. I always ask myself, "Would I buy one?" I would not buy a case trimmer for handgun cartridges for normal use. I never shoot maximum loads in my handguns and I never shoot magnum calibers. My cases wear out before they need trimming.

Customers demanded we supply case trimmers for handgun calibers. It was easier and more profitable to supply them than trying to convince people they usually do not need them. It's quite unpleasant to hear faithful customers say their next purchase will be from another company because we cannot supply what they

want. Case trimmers sell very well, so I must be wrong. I am sure those that buy them are pleased, as it is a product about which we have few questions or complaints. If you shoot hot loads, it is prudent to check that the cases do not get too long. The bullet will be pinched in the end of the chamber and a maximum load will then be over maximum. Another good reason to trim handgun ammunition is to insure a uniform crimp.

Priming

Be certain to use only pistol primers for handgun cartridges. They are slightly shorter than rifle primers and made from thinner material because the pressures are considerably less and the force of the hammer fall is lighter. Pistol primers are either large or small. This refers to the diameter, small primers are .175 inch and large primers are .210 inch. Most handgun cases under 41 caliber use small pistol primers. The difference in size is readily apparent to the naked eye. ***Use magnum primers only when the load data specifies magnum primers.***

Volume requirements usually dictate the type of priming tool to use. Often a priming device is part of the reloading tool. Proper instructions accompany all Lee tools. If you load on a single station press, the first choice would be the Lee Auto-Prime. No matter what kind of tool you use, it is very important to seat the primer flush or slightly below the surface of the case head. Due to volume needs, and because most ammunition will shoot better than we can hold, few reloaders bother to clean the primer pockets. Should you find it desirable or necessary because primers are not seating fully, the Lee Primer Pocket Cleaner works very well and costs little.

Expanding and powder charging

The sizing operation made the case a little too small for a perfect press fit of the bullet. Not all cases have the same wall thickness. The thicker ones have too much press fit for the bullet after the sizing operation. Unless the case is both expanded and flared, the sharp end will shave lead from the bullet. The bullet can catch the mouth of an unflared case and collapse the case. All brands of dies provide an expanding die to enlarge the case neck .001 inch smaller than the bullet and flare the mouth for easy bullet entry.

This flare is removed when the bullet is crimped in place in the next operation.



Figure 27 Cutaway of Powder Through Expanding Die

At this point, similarity to other brands of dies ends. Lee dies precisely control the flare angle and length. They work well with lead or jacketed bullets. You do not need so called 'M' dies that control the expansion, because it is impossible to expand too much with the Lee expander. Lee dies have a patented moveable, hollow expander. The hole through the expander allows the powder to enter the case while it is being expanded. The case pushes the moveable expanding plug against the Auto-Disk powder measure to actuate the measure. Your case is expanded, flared and charged in one operation. Even if you do not use the Lee Auto-Disk powder measure, the case can still be charged through a funnel inserted into the top of the die. Is it any wonder Lee became the number one seller with all of these features **at a lower price?**

Bullet Seating and Crimping

The bullet seating die has a crimping shoulder that wedges the case mouth into the cannelure or crimping groove of the bullet. Often users have problems adjusting the crimp die properly. The following is a precise technique that I use. It is not the same as the instructions that come with the Lee die set, because the instructions must be brief for clarity.

With a properly sized and flared case in the shell holder, move the ram all the way up to the solid stop.

Screw the die in until you feel it stop against the mouth of the shell. Be sure to hold the lever down while doing this, otherwise the die will move the ram down.



Figure 28 Cutaway of Bullet Seating Die

The die is now a half turn from a light crimp and three-quater turn from a heavy crimp. ***Leave it where it is until the bullet seater is adjusted to the correct depth.***

Back out the bullet seating adjusting screw until you see some threads.

Now start a bullet into the case and raise the ram to seat the bullet. Chances are it will be too far out of the case. It does not make any difference, because it's not yet crimped.

Adjust the bullet seating screw in some more and retry until the mouth of the case is at the base end of the crimp groove.

Turn the entire die in 3/4 turn and crimp the case. The bullet will be moved into the case .055 and the crimp is completed.

The finished crimped case mouth should abut against the nose side of the cannelure.

I made the mistake of making the crimp shoulder a steeper angle as on other brands. A very steep crimp angle of 45 degrees makes uniform case length too critical. A case longer than the rest will bulge from the excessive pressure. Cases shorter are not crimped.

After analyzing the mechanics of the crimp process, it became apparent there is a logically correct crimp angle. The bullet's cannelure is about .055 inch long. The bullet moves into the case and the crimp is formed at the same time. A crimping shoulder longer than the cannelure width moves the case mouth into the cannelure and against the cannelure without fully crimping. Continued pressure will buckle the case. Attempting to initially leave the bullet farther out of the case causes the crimping shoulder to force the case mouth into the shank of the bullet below the cannelure. Continued pressure will buckle the case.

The proper angle is that angle that the case mouth must bend within the width of the bullet's cannelure.

The geometry is: the crimp angle equals the angle formed by the hypotenuse to the vertical side of a right triangle, using brass

thickness as the base and the cannelure width as the height. Therefore, the proper crimp angle is a simple trigonometric problem. The mathematical solution is a starting point. To find the correct crimp angle; we allow for variances in brass thickness, case length, bullet diameter, machining tolerance, shrink from heat treatment, mouth chamfer, spring back and some good old fashioned modify and test until it's right. The perfect angle is readily available by measuring that which is on every Lee die. It may vary with caliber. I have already said too much and will let the competition buy and measure some Lee dies to find the correct crimp angle. They have already incorporated many of the Lee die features in their products. Floating bullet seaters, "O" ring friction adjustment, decapper held with a collet, roll formed threads and hollow expanders are all Lee innovations. When we introduced dies in 1981 our ads said, "Someday All Dies Will Be Made Like This." It was very prophetic.

Lee Bullet Seating Dies greatly reduce the chance of a crimp bulge with our exclusive two angle crimp shoulder. One angle forms the crimp and the next lesser angle keeps the metal just below the crimp from bulging. It works so slick that sometimes reloaders do not believe the crimp has completely formed. They then adjust the die deeper for more crimp and bulge the case anyway.

You cannot run the loaded round into the sizing die because the bullet will be sized excessively. The bullet being softer than the brass will be loose in the case and cause very poor accuracy. There are two expensive brands of dies that do that and they ruin the ammunition while charging extra for the product.

The Lee bullet seating die has one additional exclusive feature. The end of the new die is .200 inch shorter and tapered 45 degrees. This modification allows the new automatic bullet feeder to be used.

Ammunition that must work.

Most of our shooting needs are not a matter of life or death. If you need dependable ammunition for self defense or law enforcement, buy factory ammunition. You do not need much and it will look better to a jury. Otherwise, some lawyer will claim you devised deadly ammunition to inflict terrible wounds. This is no criticism

of lawyers. That kind of courtroom tactic is only despicable if the lawyer is not your attorney.

Competitive shooters and hunters need ammunition that's dependable. The single operation in the reloading process that damages the most ammunition is the crimp operation. Attempting to crimp too much either buckles the case or forms a slight bulge just behind the crimp. Either way the round will not chamber.

The Lee Carbide Factory Crimp Die overcomes these problems. It cannot bulge the case and it post sizes the case just in case a oversize bullet or thick case wall makes the cartridge over maximum cartridge size. It requires an extra operation. If you are loading on the Lee Load-Master or four hole Turret Press, it's no problem, because there is a station for the Factory Crimp Die. This die allows unlimited crimp with never a chance of a bulged case because it will be ironed out as it is extracted. The carbide sizer is slightly under minimum chamber dimension, so the rounds will fit any standard chamber but will not squeeze the bullet within the case. It's priced so low that it's unlikely anyone else will produce one like it.

Deluxe Pistol Die Set with Two Carbide Dies

John added the Deluxe Pistol Die set to the 2002 catalog. When I saw it I could not believe the price. ***A four die set with two carbide dies for less*** than competitors charge for a carbide three die set without a powder through expanding die, shell holder, powder dipper and load data. The fourth die is the Carbide Factory Crimp Die. Even if you do not plan on using the factory crimper for all of your ammunition, it would be foolish to pass up the bargain. Old guys like me remember when movie theater tickets were a buck at the same time a carbide die set sold for $30. Carbide dies climbed to over $50 until Lee introduced them at bargain prices. Last time I looked, the price of a movie climbed to $10 and carbide die prices keep dropping.

These dies and the new four hole Turret Press are a powerful combination for ammunition that must work flawlessly.

Lee Bullet Feeder

Handgunners, like shotgunners, shoot humongous quantities of ammunition. Reloading becomes a necessity. We always look for ways to load more in less time.

The Lee Bullet Feeder is one of the handiest attachments for volume reloading. It is the most dependable and time saving attachment you can add to a progressive reloader. It works well because bullets are always new and uniform. It works more dependably than a case feeder because cases are normally used and often deformed. It works better than most primer feeders because bullets weigh a lot more than primers and a speck of powder will not jam things. The Lee Bullet Feeder accurately positions the bullet into the center of the seating die above the case. And it happens quick as a wink. With the multi-tube adapter, you can pre-load over a box of bullets at a time. It functions during the normal press stroke and reduces your cyclic rate by 50 to 100%, because you do not have to pause the stroke to manually place the bullet.



Figure 29 Automatic Bullet Feeder

CHAPTER 5

Priming

Primers are different for rifle and pistol and it is very important you select the correct one for your reloading. Never try to use rifle primers in handgun cartridges or visa versa. The results of such a switch will vary from unsatisfactory to dangerous. **Always use standard primers unless the load data specifies magnum primers.** Primers are either large or small and impossible to use one for the other. **Primers must be seated flush or slightly below the head of the cartridge—the primer must never protrude above the head.**

Strange accidents happen with primers because of misuse. When I was young and foolish, I laid a shotgun primer on my bench vise and smacked it with a claw hammer as I had often done with multiple caps from a toy cap pistol. Naturally, the primer exploded and left a ringing in my ears. It also left a metal fragment imbedded in my leather belt. Had the vise been lower, or I taller, it would have been both a painful and an embarrassing experience.

A reloader attempting to drive out a live primer with a Lee Loader decapper did it on his lap. The primer exploded and entered his leg to the bone. Curiosity prompted me to chronograph the velocity of a primer exiting the primer pocket. It checked an amazing 1412 fps! That's faster than a 22 rim fire and most handguns. It has to be the world's shortest gun as a primer pocket is only slightly more than an eighth of an inch deep.

Tony Sailer from CH Tool gave me some good advice about primers. I do not remember the exact quote but the gist of it was, "reloading is pretty safe, until you handle the primers in quantity." Tony, a commercial reloader, visits others in the business. He says look at the ceiling above any powered reloading machine and you will see holes above the priming station. Primers in a tube explode with great force and unpleasant regularity.

Jim Hulbert, now retired from MEC, told me that they tested shotshell primers in a seamless tube. When the bottom primer was in-

tentionally detonated, a 1x6 overhead looked as if it had been hit with a 12 gauge shotgun at close range.



Figure 30 Improved Priming Tool...Safe with any brand of primers

We hear about accidental discharges of primers with our tools. When used according to the instructions, the only damage is to the tool. That's because there are certain known brands and types of primers that are safer to use. They are listed at the end of this chapter. Lee tools such as the Ram Prime, the primer arm on the turret press and the Improved Priming tool, use primers singly and any brand of primers can be used.

To find out why some brands of primers explode violently, I talked to an expert; Dave Anderson now retired from CCI. He told me primers are charged with one of two types of priming compound. One is called "basic" and the other is "normal." The primers that use "basic compound" must not be used in Lee priming tools because an accidental discharge is very violent. The "normal compound" is less violent and causes little damage to the tool. The user is easily protected with safety glasses. It is important to use only brands and quantities of primers, as specified at the end of this chapter, in any tray type primer feeder. Never use any type of primer feeder where the primers must be stacked in a tube. If one goes off, they all explode. A single primer can put your eye out; imagine what a tube full could do.

Primer makers have been making changes to the compounds that affects their safety in priming tools. The tests at Lee Precision show the types and quantities that appear to offer reasonable safety. The results of these tests are at the end of this chapter. This is an area that seems to be constantly changing. So be sure to be kept informed. This book may be in your possession long after primers have changed.



Figure 31 This steel Explosion Shield was damaged by the blast of a tray full of Federal primers.

As I write this, the latest innovation is electrical discharged primers by Remington. It looks interesting and has the potential for better accuracy. Imagine this scenario. Aim at the target, pull the trigger, but the gun will not fire until your brain sensor fires the gun at the instant of the perfect hold. The mentality of trigger control is the greatest impediment to precision shooting. All innovations initially are a little pricey, but prices decrease with increased production and competition.

Some manufacturers have placed explosion shields around their tube type feeders, but you still have the hazard of handling the tube to fill it. Accidentally drop a tube full of primers to a concrete floor and you are going to have one heck of a bang. You don't save much time with an automatic primer feeder, if you have to put them in the tube one at a time. You will never see a primer tube on a Lee product.

Lee spends many hours on the phone and thousands of dollars advertising and advising customers that the only safe primers to use with the Lee tray primer feeders are CCI or certain Winchester types. We have been accused of playing favorites, taking handouts and simply being unreasonable. None of these are the case. We do not want anyone to get hurt.

We do not think that other brands are inferior or more powerful. They simply are not safe to use with the Lee Auto-Prime. What I

am saying is, if you do not take my advice and believe the instructions that come with the tool, you may get hurt. If it happens, it is no one's fault but your own. We care about your safety and want you to enjoy reloading. It's a very satisfying and enjoyable pastime.

Some shooters prefer Federal brand primers; just as some drivers prefer Ford or Chevrolet. Federal brand primers must not be used with any Lee tray-type primer feeding device. A single exception; a primer explosion guard is available for the Lee Load-Master. Should you use primers other than as recommended at the end of this chapter, be sure that you feed them one at a time. I have never found Federal primers to be better or worse than other brands. So I avoid them only because they are dangerous in automatic feeders.

The most important aspect about primers is not the brand, but the precision in which they are installed. Most precision shooters, in fact most reloaders, prefer the Lee hand held priming tools. The Lee Auto-Prime is by far the most popular priming tool ever made. You must learn to feel the primer bottom out and stop pushing. Excessive pressure will damage the priming propellant pellet and give erratic ignition. In the extreme cases, a crushed primer will cause misfires.

There are several reasons a quality priming tool is so very important. It begins with the primer manufacturing process itself. When you buy primers for metallic cartridges, the manufacturing process has not yet been completed. If you look closely at a primer, you will notice the anvil is not flush with the primer cup. The manufacturer has left it protruding ever so slightly, presumably so that when we seat the primer we will place a slight strain on the priming pellet. I suspect this is done to compensate for the pellet shrinkage during drying. You see, primers are so dangerous that they are manufactured with the priming mixture wet. They are not dried until they are packed in the shipping trays. That's why it's very important to fully seat the primer and force the anvil into the cup and gently compress the priming pellet. It is even more important that you do not place excessive pressure on the primer and crush the propellant. This is the reason you need some "feel" in the primer seating operation.

While on the subject, let's straighten out one of those often repeated errors about seating primers on your reloading press. Many manufacturers and gun writers caution you that seating primers on the press down stroke is not the best because you have so much mechanical advantage that you cannot feel the primer being seated. They are right about not being be able to feel the primer being seated, but the reason is wrong. The old style primer seating arm on most presses, other than Lee, seat the primer at the worst possible mechanical advantage, right in the middle of the stroke. This is where the press lever becomes a simple lever rather than a toggle. You have to push so hard that you cannot possibly have any feel. You will find those presses that prime near the end of the stroke, give you a much better feel of the primer entering the case and bottoming out.



Figure 32 Auto-Prime II on a Challenger Press

Many manufacturers now produce a priming tool that screws into the press in place of a die. These are generally referred to as ram priming tools. They provide excellent feel provided they are screwed into the press sufficiently to prevent it from toggling over center. If permitted to toggle over center, you can crush the primer without knowing it. The most advanced and convenient ram type tool is the Lee Auto-Prime II. The primers are fed from a tray for convenient and rapid priming. Unplated Winchester primers do not feed as well.

New primer information

The following information has changed since the first edition of *Modern Reloading.*

These sizes may be used with 100 primers in the tray.

All sizes of CCI brand primers

Winchester small pistol

Remington small pistol # 5½

Remington large pistol # 2½

Limit to only 20 primers in the tray of these types:

Winchester Large Pistol

Winchester Magnum Pistol

Winchester Magnum Rifle

Only 10 primers should be loaded in the tray of

Winchester Large Rifle

Do not use Federal primers in a Lee Auto-Prime!

Any primer not listed above has not been tested, so you must assume they are unsafe.

All primers must be kept in their original container until you use them.

Primers will change in the future because lead styphnate will be banned just as surely as lead has been banned from paint and gasoline. How this will affect their use with Lee tools is uncertain. You can be sure all involved will stay informed and advise you when information is available.

As a manufacturer, we are made aware of reloader's mistakes. Priming is an area that we see bent and broken tools for no good reason. The Lee Auto-Prime tool was originally designed to withstand over 2,000 pounds of pressure. This is many times stronger than needed to seat primers. We continued to have problems with breakage until the tool was beefed up to hold more than 3,500 pounds of force. Eventually, we converted to a solid steel connecting link. This made it unbreakable and increased our cost and price

to you. One wonders how well the ammunition loaded by these heavy handed persons performs.

I remember one six foot four 240-pound individual visiting my office complaining about misfires. He brought some samples of loaded ammunition. It was obvious the primers were mashed into the case. Trying to not put him on the defensive, I asked, "Did the primers require much pressure to seat?"

He unhesitatingly advised,

"They went in very easy, but it took both thumbs to completely close the lever."

Imagine the force exerted with both hands by a strong man against a toggle linkage. Tactfully as possible I explained that he should not close the lever fully. Stop pushing when resistance builds, the primer is seated and the extra pressure will crush the primer.

That's what we mean by "feeling the primer being seated." It is an unmistakable firm and solid stop. It requires considerable additional pressure to damage the primer. Learning to feel the primer bottom out with the Lee Auto-Prime is just as natural as frogs in a pond.

New Safety Primer with the Lever Prime System—LPS

I am proud to say that I had a part in the automatic priming system for this and other Lee presses. The new Safety Priming System is the first press mounted priming system that is foolproof. Never touch the primers from the box to the shell. Primers are automatically up righted like the Auto-Prime, but faster due to John's new textured tray bottom. Primers travel down a trough and user injected into the primer post. When the press nears the bottom of the stroke, the primer arm is levered into position to align with the shell perfectly. The Safety Prime inserts the primer into the shell while completely isolated from the primer feeder by distance and a lot of steel. Now any brand of primers may be used. Made from high strength unbreakable Nylon.®



CHAPTER 6

Measuring Gunpowder

Dispensing a proper and uniform charge of gunpowder is essential to the production of safe, accurate ammunition. Powder companies usually list loads by weight. Some powder companies are kind enough to show the amount of each powder dispensed by various bushings, charge bars, disks, rotors and dippers. They are in effect giving their tacit approval to measuring their powder by volume rather than weight providing you check the charges on a scale.

Most reloading manufacturers supply volume measuring devices with meaningless identifiers such as 1,2,3,12A, etc. These numbers do not specify the volume of the unit. They are only an identifier.

This lack of a standard is unfortunate. Lee Precision labels powder measure by their volume in cubic centimeters and the shot shell bushings in cubic inches.

Why are powder charges always stated by weight?

The reasons seemingly are good and valid as the internal ballistician uses weight in the formula to calculate the energy of the charge. I asked Marty Liggins, from Accurate Powder Company, if that's how he gets the starting point for new loads. He told me that it is possible to calculate the powder charge by formula, but it really is not necessary. When you work with gunpowder daily, it's quite easy to approximate a safe starting load. So the ballistician really does not need it for calculation.

So why are charges stated by weight?

There are variations in the powder density. Some batches of powder are more dense than others of the same brand and type. This is normal so long as it is within density tolerance. This means that one volume measure of powder may weigh more or weigh less than another batch of the same brand and type. Winchester, in their loading data book, states that acceptable tolerance is plus or minus .025 gram per cubic centimeter. If we work out the arithmetic for say a 50 grain charge of Winchester 748 powder, we find that the grain weight of the charge could vary by 1.3 grains over or under.

That's plus or minus 2.6%. You can see that by simply reducing your starting load by 5 or 10% you are in a safe range. *Note: Winchester cautions against reduction of some powder, cartridge and bullet combinations. We have marked those loads in our data section and left out the volume equivalent.*

Bob Hodgdon, of Hodgdon Powder Company, told me that powder quickness and density are equally important for a proper powder charge. And they work very hard at maintaining a proper relationship between the two. They feel a powder that may be on the dense side of the tolerance should then be on the slower side of the quickness tolerance. The logic being, the charge will be safe if either weighed or dispensed by volume. You see, if you weigh your charge, the pressure will be slightly on the low and safe side because the quickness is slower. If you use a volume measure, the charge weight would be greater than it should be according to the weight, and the pressure will be right where it belongs. I have no evidence that all powder manufacturers use this rationale. It would seem logical that they would, if only for product liability reasons. This little story clearly shows the powder manufacturer is keenly aware ammunition is loaded by volume. So they work at keeping it safe for us if we load by weight or volume.

So why are charges stated by weight?

The answer is simple. Powder scales are very accurate. Until Lee stated producing calibrated measures, the reloader had no precision, instrument to measure by volume. So it would have been pointless to list data by volume as there was no need to do so. Other brands of powder measures have meaningless graduations. They are merely reference number graduations. Once you establish the setting by trial and error, you then make a note of the setting for that can of powder. Should you ever wish to duplicate that load

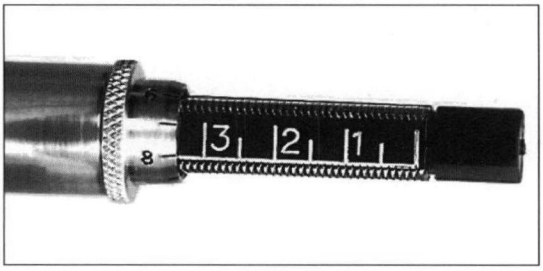


Figure 33 Micrometer adjustment for the Lee Perfect Powder Measure.

you would refer to your notes.

The Lee Perfect Powder Measure changed that. It is calibrated in cubic centimeters. There is no backlash nor any play in the adjuster. It is easily set to the nearest five thousandths of a cubic centimeter (.005 cc). *This is an extremely small volume. An adjustment this fine would not even register on most powder scales.*

Because the powder manufacturers try very hard to maintain quickness and density within reasonable tolerances, it is entirely practical to measure powder accurately without the aid of a scale. All you need is a reliable list showing the correct volume for a given charge and the means to meter that volume. This applies to all Lee powder measuring devices because they have a meaningful calibration. With any adjustable measure, it is prudent to double check it with a scale. It's always possible you did not adjust it correctly.

So let us hope all future load data will be presented in both weight and volume. It's the right thing to do.

An unfortunate misunderstanding.

For half a century many writers gave this advice: "Do not use a dipper to measure smokeless powder." This statement originated when smokeless powder was introduced to the handloader. It was true at the time because black powder was commonly loaded with a dipper. The only dippers available were black powder dippers. Using a dipper designed to measure black powder for smokeless powder would usually blow up a gun. Those dippers were calibrated in drams of black powder. This is completely explained in the shotshell section.

What the statement should be is, "Do not use a black powder dipper to measure smokeless powder."

The safest way to measure gunpowder is with a calibrated dipper.



Figure 34 Powder Measure Kit

Here are some impressive numbers to support that statement. Lee has sold and continues to sell many millions of dippers. In the 44 years of selling reloading tools with smokeless powder dippers, we have never heard of an accident because of an overcharge of the powder specified.

Dippers are inherently safe. They have a fixed capacity that cannot get out of adjustment. Lee dippers are made to exacting tolerances with regular inspections. Through experience, we found the best proportion for a precision dipper is the opening should be one half the depth. Even if you grossly misuse a dipper by heaping it, the charge will be only 7 to 12 percent too much. The percentage depends upon the powder type. If you started 10% under maximum, you are probably still safe with a modestly heaped charge.

Lee Powder Dippers, as are all Lee measuring disks or bushings, calibrated and marked with meaningful measurements.

I will never be able to figure out why other manufacturers continue to mark their bushings with numbers that have meanings only to themselves. Originally, I made the same mistake. My first dippers, beautifully machined from solid aluminum stock, were marked 12, 16 and 20 gauge. At the time, those were meaningful markings because we only produced the Lee Loader for shotgun shells. They looked pretty silly when sold with a 30/06 reloader.

Our next batch of 13 dippers were injection molded and the capacity was carefully marked in cubic inches. Because a cubic inch of gunpowder is quite a large amount, it was necessary to carry the markings 3 places to the right of the decimal point. This was not an entirely satisfactory solution.

We usually do not get a second chance in life, but I received an opportunity to design another set of dippers from scratch. This happened when I was forced out of a business that I had started and had to begin anew. That's why some early Lee tools had the name Lee Custom Engineering. Now, only Lee Precision Inc. is in existence.

The present dipper kit is calibrated in cubic centimeters. This seemingly creates a paradox, metric volume calibration for avoirdupois weight measurement. Of course, this is not the case. The cubic centimeter is simply a universal standard of measurement for

volume. The weight of the material that will fit into that volume depends upon the density of the material.

I remember the good old days, when Dean Grennell and I used to shoot on the back forty. It was early in Dean's writing career and early in my manufacturing career. Dean would get early production model guns for evaluation. (Talk about hog heaven.) We developed loads for the then new calibers such as the 221 Fireball, 350 Rem. Mag, 6.5 Rem. Mag, 256 Win and others. We always loaded by volume, using a Lee dipper kit. We would work up suitable loads by watching for signs of pressure and check velocity with my Herters' counter chronograph. Dean would then go home and weigh the charges on his scale to report to his readers how many grains of powder to use for the different bullet weights and the resulting velocities. This was done because charges in grains of powder are the accepted standard method of reporting load data. Yet, all test rounds were loaded by volume using dippers or combinations of dippers on the range. The point of this little anecdote is—we have a great deal of confidence in measuring powder with the Lee dippers.

Dean always felt no one could dip a charge quite as precisely as he. He would, and I have little doubt that he still does, use a special technique. He pushed the dipper bottom first into the powder and let the powder flow into the mouth of the dipper. Then strike it off with one of his business cards and consistently get charge uniformity of 1/10 grain.

Before leaving the subject of dippers, there is one very important added benefit to using a dipper for your loading. By using the same dipper for every bullet weight, and changing the powder to a proper quickness so pressures will remain in the safe range, you are maintaining the same loading density. If the load density is near the practical limit of the case capacity, the loads are less sensitive to slight variations and produce best accuracy with minimum effort.

Mechanical powder measures.

Volume measures are the tools of choice to measure powder for 99.99% of all ammunition. This includes cartridges produced by ammunition factories as well as the reloader.

Mechanical powder measures come in various sizes and shapes. They are generally broken down into two categories, fixed or adjustable cavities.

Fixed cavity measures are preferred for large volume reloading. The main advantage is they can never get out of adjustment. The big disadvantage, unless it's made by Lee, is the high cost of replacement bushings for different loads. The cost and inconvenience of buying and locating replacement bushings are enough to keep reloaders from trying a load that could be a better load, or worse, to try a load that should not be used. For these reasons, we have always supplied a complete set of bushings or disks with every measure we sell.

The Lee Load-All and Load-Fast comes with a charge bar and 24 replaceable bushings. Many will never be used, but at least you will have them if you ever need them. Lee bushings are molded from an engineering plastic. Molders use this term to describe a material that molds well to close tolerance. Every set is like the next as they all come from the same mold. After 44 years in the business, I have never seen a plastic powder bushing worn out, rusted or mismarked. It's an example of choosing the right material for the job.

Supplying a set of 24 bushings for the Load All is not without its problems. That's 24 relatively small loose parts that must be included with each tool. Our conscientious employees do a great job, but it is not without extra cost and effort. Even though we supply a box to keep them in, some users lose them and need replacements. I decided the next fixed cavity measure could be better and the Auto-Disk measure was the result.

Auto-Disk Powder Measure

The Auto-Disk Powder Measure is the state of the art fixed cavity powder measure. They are most popular mechanical powder measures ever made—a system that has no equal. Instead of a handful of loose bushings, the Auto-Disk Powder Measure comes with four disks and each disk has six cavities for a total of twenty-four. Each of the cavities in the disk gets progressively larger by only 7%. This is less than the density tolerance of some powders, so you have a relatively fine adjustment and nothing extra to buy. The

following explains very important features and significant advantages of the Auto-disk system.

The Auto-Disk Powder Measure is part of a system. Every Lee Pistol Die Set has a very special case mouth expander. It is free to travel, just a little over 3/8 of an inch within the die. It is hollow so the powder can pass through it. The Auto-Disk Powder Measure screws into the top of the expanding die and the drop tube fits into the end of the hollow expanding plug. The case, while being expanded, pushes the expander up and this in turn operates the powder measure through a bell crank. *Voilà;* automatic case charging and mouth expanding simultaneously.

The Auto-Disk powder measure was a major breakthrough. A patent was granted in record time of 90 days. Not a single reference was cited. Tony Sailer of CH Tool called with his congratulations. He said that he had tried for years to develop such a device, but was unsuccessful. The compliment was appreciated, because no one knows more about the history of reloading than Tony. He delights in pointing out that many of my products had similar counterparts years ago. Telling me, "Dick, there is nothing new under the sun." In case you are wondering about all the other brands of case operated powder measures and dies, they all have paid to use my patents. Some reluctantly and only after considerable legal expense.

Pro Auto-Disk Powder Measure

While developing the drum type Perfect Powder Measure, we recognized some of the features were applicable to the Auto-Disk Measure. Using that technology and some of the parts, we made the Pro Auto-Disk Powder Measure. An elastomer wiper virtually eliminates powder leakage. A shut off valve and removable hopper makes it a joy to use.



Figure 35 Pro Auto-Disk Powder Measure

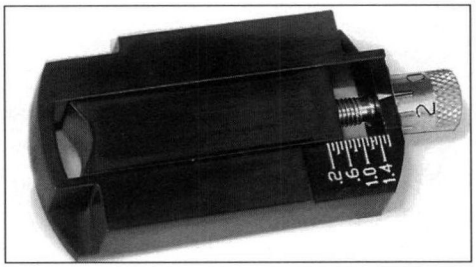


Figure 36 Adjustable Charge Bar for the Lee Auto-Disk Powder Measure.

It's the best and now included with our progressive presses, the Pro 1000 and the Load-Master.

There is a desire for loads that fall between the available cavities of the Auto-Disk Powder Measure. At least two other companies made after market accessories to replace the disk. We have no problem with folks making our equipment more useful. It does bother us that the customer has to pay a high price for a shortcoming of our product.

The Lee Adjustable charge bar is a better solution. It has a micrometer adjustment that reads in cubic centimeters and will not get out of adjustment. Like anything adjustable, it can be set incorrectly. For safety's sake, check your charge with a scale.

Flake powders meter poorly and give inconsistent charges in small cavities. **Do not use flake powder in any cavity under .4 cc.**

Drum type measures.

For years and years I have wanted to make a drum type measure. I felt as unfulfilled as Romeo in a convent. Every other reloading company makes a drum measure, but they all leave so much to be desired. I could not think of a way to overcome all the problems. It was not until son, John, took over most of my day-to-day duties running Lee Precision that I had the time to solve the problems of a drum measure.

Most drum type measures have these or at least some of these problems:

- drum binding
- erratic charges
- powder cutting which leads to inconsistent charges
- bridging
- meaningless calibration
- limited range
- losing adjustment
- inconvenient to change powder
- no stand or costly stand
- and all are expensive.

Perfect Powder Measure

Understanding the problems made it quite easy to solve most of them, but at great cost. The problem was to do it at a price anyone could afford. The common mistake most reloading manufacturers make is avoiding the use of plastic. There is a mentality that would have you believe plastic is useless. That kind of thinking would have everything from telephones to toilet seats made from Swedish tool steel. They think the customer is not smart enough to recognize that for some applications the proper plastic is the best choice. We selected nylon because of its toughness and natural lubricity. The up front mold cost is very high. Considering that everyone in the sales chain often makes more on a product than the manufacturer, you can see it was quite a gamble for a new product.



Figure 37 Prefect Powder Measure

After we completed testing the first pre-production sample from the mold, the gamble turned out to be a sure thing. I never used a measure that was as accurate or convenient. It is the smoothest operating, most versatile measure made. What is more important, it is

also the least expensive. My comment to John, after testing it was, "It's perfect," thus the name, Lee Perfect Powder Measure. Once again it disproves the old saw, "You get what you pay for." Sometimes you get a lot less than you paid for, or in the case of the Perfect Powder Measure you get a genuine bargain.

The Lee Perfect Powder Measure solved all the problems of conventional measures plus one more; it is convertible to automatic operation for progressive reloading.

Just after introduction of the Perfect Powder measure, Larry Potterfield from Midway Arms called. He advised that they like to give their customers more than just the color and manufacturer's propaganda when asked about a product. They frequently test products for information to pass on to their customers. When they compared the Perfect Powder Measure with the most expensive bench rest powder measure, the Lee won hands down. Larry advised that they found it desirable to coat the inside of the metering chamber with Midway Mica to significantly reduce charge variation. Extended use gives the same results. The graphite from the powder coats the parts. The powdered mica eliminates the need for break in and it's handy to have around.

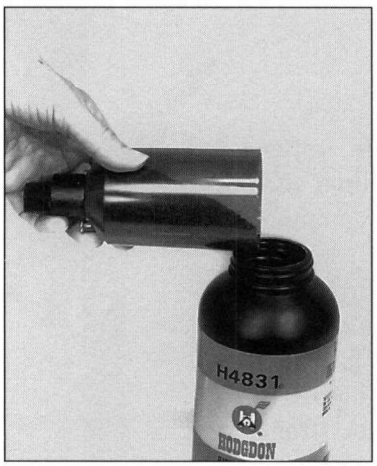


Figure 38 Always empty your powder measure into the original container when finished reloading.

There is one thing you can do to make the measure slightly better with certain powders. Sometimes a granule or two of powder does not empty from the metering tube. There is a stop to limit drum travel so the measure works in an automatic mode in conjunction with the Lee Universal Charging Die. The stop does not allow the drum to approach dead center. By cutting the stop away to allow the metering tube to point straight up, all the powder empties every time. You can do this with a sharp knife, hack saw blade or hand

grinding tool. This modification makes the measure unusable in the automatic mode.

Powder Scales

While I cannot prove it, I think powder scales have caused more mishaps than they have prevented. A misread or incorrectly set scale or a scale with hidden damage can and have resulted in dangerous and harmful reloads. People judge a scale's quality by its sensitivity and accuracy, both of which can degrade with age, use and abuse. Powder scales are excessively sensitive and accurate beyond need, including the Lee Safety Scale.

The above is possibly an over reaction to all I have read through the years about powder scales, written by well-meaning but misinformed writers. No, I do not hate scales. In fact, I hold a patent on a powder scale for which I used to receive a generous royalty. We proffer that it is the best powder scale. Presumptuous as that may be, it is necessary to use superlatives to sell a product. It is not without supportive evidence that the Lee powder scale is more accurate and sensitive than other brands. The fact remains, it is better than it need be for safe and accurate reloading.

Lee Safety Scale has a phenolic beam. Like a glass thermometer, if it is not broken it is still accurate.

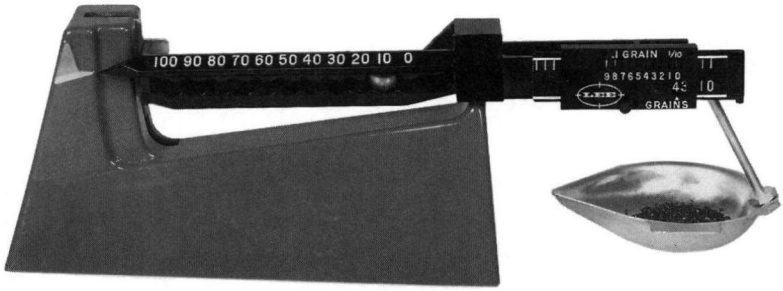


Figure 39 Lee Safety Scale for measuring gunpowder.

What about hidden damage to your scale? For some reason certain products are expected to be lifetime purchases. Binoculars, grandfather clocks, wrenches, most hand tools, guns, dies and a powder scale are all in the once in a lifetime purchase category. The list used to include things that are now disposable items such as

watches, clocks, radios and even cameras. The point is, having a powder scale around for a lifetime will at sometime subject it to an abnormal abuse. You would be surprised at what an eight year old boy can do to a scale while dad is not around. If the cat knocks it off the shelf, you cannot be 100% certain your better half will tell you. For these reasons, I invented a scale that almost eliminates the possibility of hidden damage. The Lee Safety Scale has a phenolic beam. This is the same material as used on kitchen counter tops. It's tough and it will not bend very far without breaking. The idea for our scale is, if it's not broken it is still accurate. Just like a glass thermometer.

The Lee Safety Scale, will register the weight of your name written on a piece of paper with a soft lead pencil. There is no evidence that powder charges checked with this degree of accuracy will perform better. The exact opposite is true. Most precision shooting is not done with weighed charges, but with volume measured charges. Most shooting records are held with ammunition loaded by volume charging. With minuscule exceptions, all commercially loaded ammunition is loaded with powder charges measured by volume.

Misreading or incorrectly setting a scale is always a possibility. We have tried to minimize this by making the graduations big. Ten grain adjustments require a poise movement of more than a quarter inch and it is impossible to position the poise part way. Some brands have poise movement of only .05 inch and the poise can be accidentally moved only part way. Another reason we call it the Lee Safety Scale.

Grains, Granules, and Cubic Centimeters.

The grain, as used to measure gunpowder, should not be confused with a granule or kernel of gunpowder.

A grain was so named because it was the weight measure equal to a plump grain of wheat. The grain is the same in the avoirdupois troy and apothecary's system of weights. Reloaders in America use avoirdupois in which 7,000 grains equal one pound. This is part of the English system of weights and measures.

The basic premise of the metric system was to have a standard of measurement that would always be with us. Originally a meter was

1/10,000,000 the distance from the equator to the pole as measured through Paris. Currently it is 1/1,299,792,458 of the distance light travels in a vacuum in 1 second. Much harder to remember than, "A pint's a pound the world around."

The metric system is a base ten system and makes mathematical calculations very easy. The scientific community embraced the system because of the huge numbers in most calculations involving chemistry and physics.

Most shooters have a familiarity with the metric system because of its use in firearms. A 6mm bullet is .243 in. or 243 caliber. The 7.62 NATO is a 308 Winchester. The 7mm and .284 bullets are identical. Most European cartridges are specified by bullet diameter and case length in millimeters; 7 x 57 Mauser, 8 x 57 Mauser, 7.62 x 39 Russian, 6.5 x 55 Swedish Mauser, are some common examples.

A meter is 39.37 inches. There are 100 centimeters to a meter so a centimeter = .3937 inches. See how easy it is to divide by 100. Just move the decimal 2 places, a place for each zero. Centi means 100 and milli means 1000. There are 1000 millimeters to a meter. Therefore each millimeter = .03937 inch.

If you remember that 39.37 inches is one meter; then it becomes quite easy to remember;
39.37" = 1 meter
.3937" = 1 centimeter = 1/100 meter
.03937" = 1 millimeter = 1/10 centimeter
Remember 39.37 or thirty nine thirty seven.

Interestingly, a centimeter does not seem to be nearly as popular a unit as the millimeter or else the 10 mm Auto would be called the 1 centimeter Auto or centimeter Auto. Try the 8 x 57 Mauser as the .8 x 5.7 centimeters or 8 millimeter x 5 centimeters 7 millimeters or .008 x .0057 meters.

This fun with metrics may make you wonder why a 10 mm bullet is .400 instead of .3937. For the same reason, a 30 caliber bullet is .308. Bullets fit the grooves not the bore.

It helps to have a mental image of a unit of measure. A meter is a yard plus 3 3/8 inches, 3' 3 3/8". Think of a centimeter as a 10 mm bullet and a millimeter is slightly thicker than the wire of a regular size paper clip.

A liter is 1000 cubic centimeters and holds 1 kilo of water. A cubic centimeter of water weighs one gram. (1/1000 of a kilo) Grams x 15.432 = grains. Grains divided by 15.432 = grams. Notice that a grain is a very tiny amount. There are 7000 grains to a pound and 437.5 grains to an ounce.

CHAPTER 7

Gunpowder Safety

With a little common sense, gunpowder is safe to handle. It is a propellant, not an explosive. It is highly flammable. Once ignited, it needs no oxygen to continue to burn, so it is impossible to extinguish by smothering it. Only a fool would smoke while reloading. Do not store large quantities. Do not assume that it cannot explode, because it can. Shock or impact can set it off. Conversations with folks from the powder companies confirm that accidents with gun powder do occur, but it is usually the results of some stupid series of events—such as shooting into a can of powder, or a fire where too many pounds of powder are stored. These incidents give reloading a bad name and are preventable with just a little common sense. Eventually you are going to accumulate a quantity of powder. The suggestions below are excerpted from the Sporting Arms and Ammunition Manufacturers' Institute, Inc. (SAAMI) smokeless recommendations.

Store in a cool dry place.

Do not store smokeless powder in the same area with solvents, flammable gases, or highly combustible materials.

Store only in Department of Transportation approved containers. These are the containers the powder came in.

Do not smoke in areas where powder is stored or used.

Do not subject storage cabinets to close confinement.

Storage cabinets should be constructed of insulating materials and with weak walls, seams, or joints to provide an easy means of self-venting.

Do not keep old or salvaged powders.

Obey all regulations regarding quantity and methods of storing. Do not keep all of your powders in one place. If you can, maintain separate storage locations. Many small containers are safer than one or more large containers.

Keep your storage area clean.

Most importantly, **keep gunpowder and primers away from children,** just as you would your guns and ammunition. I learned very early in life that ammunition can be dangerous. I found a live 22 long rifle rimfire. Showing off with other 8 year olds, I threw the cartridge to the pavement to show how it would not explode. I was wrong, it went off with a bang that sent everyone running. No injuries except to my status and pride.

The greatest danger of gunpowder concerning reloading, is using too much of the wrong kind. This can be fatal! Use reliable load data and follow the instructions exactly. **Check and recheck and check it again.**

Look at the load data for your favorite cartridge. Check a maximum velocity load with a given bullet weight. Observe that when you change to a lighter bullet, with the same powder, more powder is allowed and the pressure remains nearly the same. The velocity is higher. Conversely, if you change to a heavier bullet, you must reduce the powder charge to maintain safe pressure, or use a slower burning powder. Usually, the most accurate and highest velocity load for every bullet weight is a charge that fills or nearly fills the case and produces a high safe pressure. A safe rule to follow is...a lighter bullet may be substituded which will result in higher velocity and lower pressure. Never substitute a heavier bullet as the pressure will be greater.

It is perfectly acceptable to use one powder with a variety of bullet weights provided the charge is adjusted to suit. You do reach a point of diminishing returns if the powder is of the wrong burning rate. To get a better picture of this, examine a charge table. Notice when a slight decrease in bullet weight needs a large increase in powder charge, you can be sure the powder is too slow and you would do better with a quicker powder. The opposite is equally true. If a slight increase in either bullet weight or powder charge greatly increases the pressure, chances are the powder is too quick for the cartridge and bullet weight selected.

IMR Powder Company used to list charges for each of their powders for every bullet weight. That data showed that they all generate nearly the same maximum pressure. While the pressure for a small charge of quick powder and a large charge of slow powder

can be the same, the velocity of the bullet will not. The reason is the pressure curve is significantly different. The peak pressure of a quick powder in a large case and a small bore will be so short that it will not have enough duration to get the bullet up to a useful velocity.

Consider the significance of a small charge of a powder that is too fast. Say it takes only 5 grains of powder to generate 50,000 PSI for a safe but low velocity load. And it would require a 50 grain charge of the proper powder, that is slower, to produce the same pressure. You can see that if pressure increase had a percentage relationship to the charge, a one grain difference in a five grain charge is 20% or 10,000 PSI while one grain in 50 is only 2% or 1,000 PSI.

Notice I said "if" pressure had a direct percentage relationship. It does not, except within the limited confines of the same cartridge, same powder, same primer and same bullet. During analyses of thousands of loads in my database, it became obvious that you cannot interpolate load data apart from the single exception above. In addition, you must have at least two reference points of pressure and velocity. At this writing only *Hodgdon Data Manual 27* lists pressure and velocity for STARTING and NEVER EXCEED loads for some loads.

Below are some of the extremes I found about how much a one percent powder reduction caused on pressure and velocity. Remember this is a 1% reduction. Therefore, if the charge is 25 grains then the charge reduction of only 1/4 grain produces the following results.

Extreme Effects of a One Percent Charge Reduction

Velocity

Least effect 0.03%

Greatest 3.34%

Pressure

Least effect 0.1%

Greatest 13.1%

Suppose you, without any solid evidence, decide that an extra grain charge is safe. And by unfortunate chance select the cartridge, powder and bullet combination that decreases pressure by the 13.1% for a 1% charge reduction. I guarantee that the pressure will increase more than the 13.1% if the charge is increased 1 grain. If you are talking about a grain on a 24 grain load that's a 4.2% charge increase. Each one percent increase is compounded. Calculations would look like this:

Pressure		Percent + 1		New PSI
36200	x	1.131	=	40942
40942	x	1.131	=	46306
46306	x	1.131	=	52372
52372	x	1.131	=	59232

This is the 4% increase and does not include the .2%. of the 4.2% increase. Certainly it would put the pressure above 60,000 Copper Units of Pressure (CUP.) The maximum pressure for this caliber is 40,000 CUP.

I thought the 13.1% load was suspicious, so I checked with the powder supplier. They confirmed the numbers are correct. There are other loads of close to 9% pressure reduction for 1% charge reduction. These are the aberrations that emphasize the dangers of interpolation without sufficient data.

Near the peak working pressures, small increases in powder charges sometimes increase the pressure disproportionately. Just as smokeless powders in small quantities burn slowly, confined smokeless powders burn much faster. Carried to the extreme, they cease to burn progressively and they detonate. Therefore, that one grain error with a fast powder would probably produce significantly more pressure than a proof load. While a one grain increase with the correct powder may be enough to start to show signs of excessive pressure, it is unlikely your gun will suddenly disintegrate.

Use the starting loads. No one would ever consider always running an engine wide open nor should you always use maximum loads. A starting load, which is usually a 10% reduction in charge, reduces the pressure a greater amount and velocity a lesser amount.

That is the velocity reduction of the maximum load fired from your gun, not the listed velocity. Most listed velocities are from a 24 inch and sometimes longer barrel. Starting loads are consistently more accurate. Starting loads reduce wear on the gun and lengthen case life by a greater amount than the 10% reduction in charge. Never, never use a heavier bullet than that which is specified. Feel free to substitute a slightly lighter bullet. The velocity will remain about the same and the pressure will be lower. The above conditions apply to full loads with normal working pressures. Reduced charges are explained later.

A poor powder choice can easily be spotted from charge tables that list pressures with several variables of charge and bullet weights. If the charges or pressures vary widely with small changes in any component, chances are it is the wrong quickness. An even better clue to help find the best powder, is to look for maximum velocity for any bullet weight. This assumes all the listed loads are safe. You will usually find the maximum velocity loads are the least affected by charge or component variations. This is very important because variations are inevitable. That's why a load less sensitive to variations has the best chance of being the most accurate.

It is even easier to select the best load with the load data listed in this book. Besides the usual information, we have also listed the volume of the powder charge. This is not available from any other source. The volume listing is not only useful for setting your powder measure or selecting the right dipper, but it gives you a good idea of what percentage of the case will be filled. The load data pages list the useful volume of each cartridge. Compare that number with the volume listing of the charge. Remember a full case, or nearly full, most likely gives the highest velocity and best accuracy, provided pressures are adequate.

Reduced Charges

It is often desirable to shoot reduced charges. Cast bullets in most large capacity cases require the charges be reduced to prevent leading. You can use your big game rifle for smaller game by loading a light bullet ahead of a smaller charge. Ultra light charges make little noise and almost no recoil. You can practice with your deer rifle in your basement without upsetting your neighbors.

Substitute a single buckshot for an expensive jacketed bullet and your practice shooting becomes very economical.

The possible combinations are extensive. Chapter 10 covers load reduction in great detail. It is a must read as this is new material that has never before been published. Reduced charges are an area of load development that is very low risk with one rule. **Never greatly reduce powder charges of very slow burning powders in large cases** (see Chapter 2 Charging the Powder). There is no hard and fast rule. Primarily you want to avoid much empty space in a large case while using very slow powders. A very conservative guideline would be to limit charge reduction to 20% for the slowest powder on the Burning Rate Chart. The next slowest may be reduced by 21%. Continue this trend of 1% steps to a limit of 50% reduction for the remainder. The only exception is for greatly reduced squib loads. Load squib loads with a very fast but extremely light load. One or two grains of Bullseye has a surprising amount of energy in a rifle case with a light bullet or single ball.

In the early seventies, a prominent reloading company published a cast bullet manual. Most of the new listed loads used very fast powders. I suspect the author was trying to avoid using greatly reduced charges of very slow powders. I tried them and the results were dismal. To find out why, we conducted some bullet recovery tests in our swimming pool.

Son John, fourteen at the time, did not have to be asked twice to shoot the 30/06 straight down into the water from the diving board. He also recovered them from the pool bottom. Bullets fired into water at low velocity remained in excellent condition. Watching from the side I could see the bullets slowed after traveling a short distance in the water.

I reloaded with a variety of loads on site and recorded the results. The results were so dramatic I photographed the bullets and shared the information with Colonel Harrison from the American Rifleman. He agreed with the evidence and used the pictures in an article about cast bullets. The next two pictures are worth 2,000 words.

This bullet recovered from water was loaded ahead of 12.5 grains of Red Dot, a very fast powder. Notice the surface of the shank was washed away and no rifling is evident. The gas even attacked the bottom of the grease grooves. The nose is intact which indicates low velocity even though **the pressure was more than the bullet could withstand.**

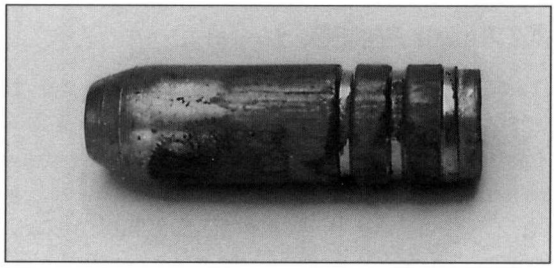


Figure 40 Cast bullet shows rifling stripped.

The bullet in this picture is in good condition. Rifling from the two groove Springfield is prominent. Almost no signs of gas cutting are present. Velocity was higher as evidenced by the nose damage. Subsequent tests with even greater charges showed greater nose damage and yet the shank remained in good condition.

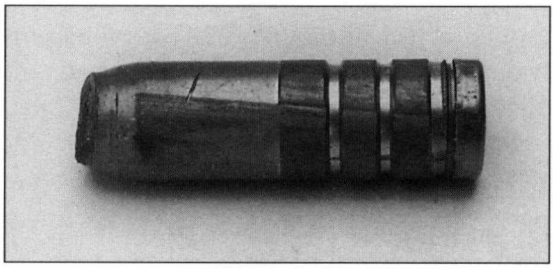


Figure 41 Rifling in good condition at higher velocity.

These photos clearly show a larger charge of a slower powder accelerates the bullet at a survivable rate. The benefits are higher velocity and greater accuracy.

It took 30 years for me to fully comprehend that which the photos clearly show. The custom of relating bullet hardness to velocity prevented me from thinking clearly. Velocity is only tenuously related to pressure. I felt that chamber pressure must be less than the bullet strength for a cast bullet to shoot accurately. Hardness, as measured with the Brinell Harness test is closely related to pressure, but it must be converted to PSI to be useful. Chapter 10 explains it in detail—and shows how to find the pressures for reduced loads. You will enjoy reading about this exciting discovery.

CHAPTER 8

All About Pressure

It is an extremely uncomfortable feeling to fire a round that may be unsafe. I will forever remember testing a 22-250 custom-made gun. The loads were near the 4,000 fps range when I noticed a gray streak trailing the bullet. That's lead leaking from the bullet due to air friction and high rotation. The case extracted easily and the primer looked okay. I thought a slight powder increase would cause the bullet to explode in mid air. It's something I have read about, but never witnessed. Curiosity motivated me to foolishly load a slightly heavier charge. I had second thoughts about the safety of that round. Not thinking about my hand, I ducked under the heavy shooting bench, reached up and fired the round into the ground ahead of the bench. That bullet exploded all right; on the windshield of my new Barracuda. I had parked the car at the base of the hill under my shooting bench. Only a tiny jacket fragment was found inside the car. The insurance agent thought the story was very funny as he rejected my claim for a new windshield.

Pressure is good. Without pressure there would be nothing to push the bullet out of the barrel. Too much pressure and something will break. A perfect pressure curve is a rapid increase to maximum safe pressure, maintaining that pressure until the bullet is near the muzzle, then drop to one atmosphere just before bullet exits. This would provide maximum velocity with zero muzzle blast. Unfortunately, this is an impossible situation. *Exit pressure for a 30/06 is about 8,000 PSI and the peak pressure is within a couple inches of the case mouth.*[*]

We all know the story of how the fabled Kentucky rifle could shoot farther because the long barrel gave the bullet a longer time to accelerate. Anything good carried to an extreme, becomes not so good. At some point, the barrel's excess length slows the bullet, because the powder cannot burn fast enough to keep up to the accelerating bullet. Experimenters have tried various schemes to improve the pressure curve.

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[*] Hodgdon Data Manual # 27 page 5-1

A duplex charge is a concoction of fast and slow burning powders in an attempt to sustain peak pressure longer. It does not work, so do not try it. It's very unpredictable and extremely dangerous. **Never mix powders.**

Early in the 20th century, a German gunsmith made a tapered bore, with the muzzle smaller than the breech. He used a special bullet that could be squeezed smaller as it moved down the tapered bore. It was an attempt to maintain peak pressure for a longer period. It did not work.

Nineteenth century science fiction writer, Jules Verne, envisioned a cannon to shoot a space capsule to the moon using a large cannon loaded with guncotton. As the capsule moved up the barrel, auxiliary charges were set off to maintain the pressure and acceleration. I would gladly pay to get a ride in space, but never volunteer to be a human cannon ball.

The schemes above are mentioned to point out that almost everything's been tried. Ammunition making is a well-developed art and there is little room for improvement. Stick to proven loads. There is a wealth of excellent load data available. This is not an area that experts can improve upon so there is little chance for amateurs to succeed.

A good load will rapidly build to maximum safe pressure, then gradually drop as the bullet moves down the barrel. Pressure is at maximum while the bullet is surprisingly close to the case. Maintaining peak pressure, only slightly longer, greatly increases the velocity. The only control we have over this is in the selection of the best powder for the job.

Most reloaders have no means to check the pressure curve directly. However, it is quite easy to select the best available pressure curve by selecting the load that produces the highest velocity. We have made the selection process easier by listing the loads in order of velocity. While this makes it is easy to pick out the fastest load, there is no guarantee it is the most accurate.

Our litigious society has made every manufacturer very wary about product liability. I have noticed that published loads became more conservative with each passing year until recently. Competition reversed the trend. The Finish powder company Vihtavuori Oy intro-

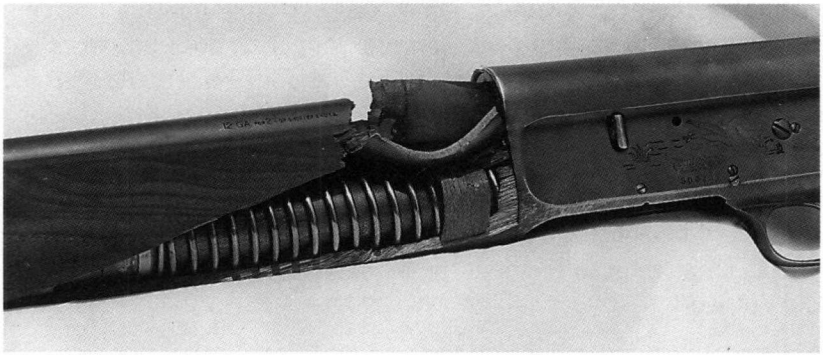


Figure 42 A double charge caused minor injuries to the shooter.

duced their line of powders with load recommendations showing consistently higher velocities. Sales exploded, and I suspect so did some guns. They have since reduced their recommendation for some calibers, more in line with what we have been seeing elsewhere. It appears their success prompted some of our domestic powder suppliers to swing away from ever lighter charges. Newest data from most powder suppliers is becoming more realistic. This means there is less fudge factor and maximum loads must never be exceeded.

In a frank discussion with a major powder supplier, I asked if load data that they published ever caused an accident. He confirmed that under extreme circumstances it had, but the damage was limited to the gun and not the shooter. Lest the previous revelation lull you into a false sense of security, I must tell you about a tragic loading accident where the shooter was not injured.

A first time reloader, loaded some ammunition for a lever action gun. A powder of the incorrect quickness was used in a quantity that amounted to a double charge. When he fired the first round, the gun exploded. A part of the gun penetrated the chest of a young spectator, resulting in his death. The shooter was physically uninjured, but certainly mentally scarred for life. Do not take a chance. While accidents are rare, they are usually avoidable.

What are the causes of excessive pressure?

Temperature affects pressures. A load that you developed in winter may be way too hot next summer.

Primer type affects pressure. The rule is: Use regular primers unless the load data calls for magnum primers.

Powder position within the case has an effect. With less than a full case of powder it makes a difference if the gun is pointed up, down or level.

Powder orientation within the case has an effect. Accurate Powder Company supplied this information. It seems that some shooters were experiencing hot loads from what should have been quite safe. With much detective work, they found the problem occurred only when loading at the bench and immediately firing the round. Ammunition loaded away from the range worked fine. They discovered that the normal jostling of travel reduced the pressure to correct levels. Accurate recommends that ammunition loaded at the shooting bench be rolled back and forth a couple of times to rearrange the powder granules.

The gun itself can cause greater pressure. This changes with the amount of use the gun has received. A new gun will often cause higher pressure because the tool marks create added friction to the bullet. Gun bores are smoothed with use. Used long enough, the hot gas will erode the bore near the chamber, to produce more freebore. Freebore is the distance the bullet moves before it engages the rifling. A common practice for large capacity cases such as 300 Weatherby is to bore out the rifling ahead of the chamber. This permits the bullet to get a running start before engaging the rifling, which keeps pressure safe. An opposite condition is more likely if the gun has had many high pressure loads through it. The end of the chamber can become heat crazed. Tiny cracks form, which when magnified appear as a dried out mud flat. These cracks cause extra grip on the bullet which in turn requires more pressure to get the bullet moving. This can increase the pressure significantly. Acquire the habit of checking the primer for signs of pressure. It could save your day.

Cases that are too long will pinch the bullet and cause excessive pressure. Just because the cartridge easily enters the chamber it does not mean the case is not too long. The clearance created by the crimp allows the case to chamber. However, when the bullet tries to open the case mouth it cannot, because the mouth is beyond

the end of the chamber into the start of the bore. **Be sure to trim your cases.**

The main and obvious reason some rounds are excessively hot, is the use of too much powder. There is the mentality that assumes if the load data lists 43 grains as maximum for the case and bullet combination, 44 grains can't hurt, 45 will be better and 50 grains ought to make it a real banger.

Quite frankly, there are serious reloaders who try hotter loads. Experienced shooters, writers and I experiment with slightly heavier loads. All are serious knowledgeable shooters and reloaders using guns of known quality, often custom made. We readily recognize signs of excessive pressure. Most importantly, we start with a known safe load and gradually increase the charge by small increments, shoot and observe. We are fully aware that a load which may be perfectly safe in a particular gun at certain temperatures, could be dangerous in another gun or under other conditions. Remember, should you elect to increase your loads beyond the suggested charges, you are in dangerous territory and totally on your own. The benefits are minuscule as compared to the risks.

Bullet depth is another factor. Load data usually states bullet depth or cartridge length. Normally bullets that are seated deeper reduce case capacity which in turn increases pressure. This may be a popular rule of thumb, but I doubt that it applies universally because of a test I conducted in 1966.

While doing of some load development for the 7.62 Russian, I noticed that pressures seemed to lower as the charge increased. I thought it might be due to compression of the powder. Even though the gun was in excellent condition, I felt more comfortable experimenting with a good old government issue 03 Springfield bought for around $17 through the NRA. Case capacity is similar to the 7.62 Russian.

Below are my notes on the test results.

Recommended load for the 30/06 using 3031 with 110 grain bullet is 52 grains. Tests indicate that this is a proper and reasonable load. Increasing the load above that amount had the following effects:

54 grains increased the head diameter 0.001 inch.

56 grains increased the head diameter an additional 0.0005 inch.

57 grains expanded the primer pocket, embossed the case head with the bolt face and the bolt opened hard.

The next test, the load was kept at 57 grains (last load listed above which blew the primer out) with a new case and the bullet was pushed into the case to compress the powder.

This load had no indications of excessive pressure.

58.5 grains with the bullet compressing the powder still indicated no excessive pressure.

59.5 grains with the powder compressed cause the head to enlarge 0.001 the same as 54 grains did with air space in the case.

The cause of the above is only an opinion. It would appear that the compression of the powder makes ignition more difficult thereby causing the powder to act as a slower powder and permitting a 10% increase in the charge.

Should you be tempted to do similar tests, the safe way to do it is by resting the rifle in an old tire. Insert the butt of the stock into the tire between the beads and rest the barrel on the tire. Attach a lanyard to the trigger so you can set it off from a safe area, preferably from behind a sturdy wall.

The lower pressure may be partially due to the bullet being seated deeper, which increases the freebore. However, a 110 grain bullet in a 30/06 already has much freebore. The reduced case capacity would most likely negate any advantage of freebore.

I wrote to Dr. Brownell, noted ballistician and writer, in hopes that he would either confirm my theory or offer an explanation. As I recall he thanked me for the information and published it in one of his many writings without comment.

This is an additional and interesting observation to the above test. Back in 1966 the Dupont Powder Company recommended 52 grains of IMR 3031 in a 30/06 with 110 grain bullet seated 0.230 inch into the neck. This was supposed to produce 49400 pounds per square inch. Checking the latest IMR data, the recommended

charge is 56 grains of 3031. That is a full four grains more than the old data and the chamber pressure are listed at 49,300 copper units of pressure. I feel completely confident that both entries are correct. The difference is the powder itself. For those of you who have old powder, I would suggest that this is ample reason to use load data published around the time the powder was manufactured. At the very least, start with a load 10% under maximum and work up in five uniform increments. That is, divide the 10% reduction by 5 and use the results for each increment. Example: A 5 grain reduction would suggest working up 1 grain at a time.

Signs of Excessive Pressure

Most load data is accompanied with a caution similar to this:

Start with a charge 10% under maximum and work up 0.5 grain at a time. Watching for signs of excessive pressure, then back down 1 full grain. Then things start to get blurred.

What are the signs of excessive pressure?

1. **If the report is louder and the recoil greater than normal it is your first indication.** For many relatively low pressure loads this will be your only sign, as the remaining signs apply only to modern high pressure cartridges.
2. **Difficult extraction is a good indication that pressures are too high.** A well oiled chamber or resizing lube on the case can cause difficult extraction at safe pressures. It is always best to clean the lube from the chamber before using your gun after cleaning and oiling.
3. **Make it a practice to examine the primers of your fired cases. An early indicator of high pressure, is well-flattened primers with almost all the corner radius gone. Primers that extrude around the firing pin may also be an indication the load is getting into the danger zone.** Primer observations must be tempered with the knowledge that some primers may be made from a softer, thus weaker, alloy. These then give the appearance of near dangerous levels of pressure while the load is quite acceptable. Excessively large firing pin holes in the gun's breech will permit the primer to flow into the opening

and give a false concern. Observe how the primers of factory loaded rounds look and let that be your guide.

4. **Head enlargement is an excellent indicator.** The problem is that you must carefully check the head before firing and then again after firing. This is a technique that has little value to the average reloader. However, it is invaluable for the wildcat experimenter.
5. **The condition of the head itself tells a lot.** Use a loop and good light. Look closely to see if you can see tool marks from the bolt face embossed into the head. Check to see if that portion where the bolt is milled out for the ejector to pass can be seen embossed on the cartridge. These are sure signs that pressure is on the hot side.
6. **Loose primers are a positive sign of excessive pressure.** If this occurs, reduce the charge at least 15% and pull the bullets on the rest of your ammunition.
7. **The next pressure level causes gun damage and possible injury to the shooter.**

It must be emphasized that these signs will not manifest themselves in old and low pressure rounds. These are signs of pressure in the plus 60,000 pound range. If you are loading for a gun designed to operate at 15,000 pounds pressure range, you will most likely never find a loose primer because the gun would have blown up and spread the primer and gun parts over a wide area.

There is one primer indicator that is frequently confused as a sign of excessive pressure, when actually it is a sign of reduced pressure. A



Figure 43 Primer 1 is a light load. Number 2 is a normal NEVER EXCEED load. Number 3 is a hot load. Can you see the difference?

primer that protrudes, indicates the load is so light that the case was not stretched back to the breech face.

This is not as little pressure as it may seem. A .223 case about ½ inch from the head measures 0.024 inch thick. If we multiply this by the circumference, we find that the cross-sectional metal area is .027 square inches. Referring to the *Machinery's Handbook*; the average minimum tensile strength of cartridge brass is 85,000 pounds. 85,000 times 0.027 is 2,307 pounds pull to stretch the brass head to the bolt face after it has been driven forward by the firing pin.

If you are wondering why the case does not simply push back to the bolt face and reseat the primer, it is because it is tightly clamped against the chamber wall by the internal pressure.

Now that we know that 2,307 pounds is the minimum force needed to stretch the case, let's calculate how that relates to pounds per square inch. The inside diameter of the case is only 0.324 inch in diameter and that is only 0.082 of a square inch. Therefore, if we divide the 2,307 pounds by 0.082 of a square inch, we find it will require at least 28,134 pounds per square inch to push the cartridge head against the bolt face. Because 85,000 pounds is the minimum tensile strength of cartridge brass, most likely the average case is stronger and it would hold more pressure before stretching the case head to the breech.

Twenty-eight thousand pounds per square inch is not to be taken lightly. You sure would not want to try to hold it back with your thumb over the muzzle. That's twice the pressure of most handgun loads and three times the pressure of many shotshell loads.

One beautiful sunny day many years ago, I repeatedly loaded a 35 Remington case with an exceedingly light load to see just how far the primer would back out of the case. After each firing, the primer continued to extend just a little more than the last. It reached a point that the primer stopped its rearward travel when the primer extended a full 1/16 inch. I suspect that was where the firing pin could no longer drive the case deeper into the chamber. I could have carried the experiment further by making a longer firing pin, but that is not something one does on a beautiful sunny day in Wisconsin.

That particular case was flattened with a hammer as the headspace was now 1/16 inch instead of the normal maximum 0.014. A full load in that case could have caused the head to separate.

Measuring Pressure

The Sporting Arms and Ammunition Manufactures' Institute, Inc. (SAMMI) established standards for arms and ammunition. It is not a government agency, simply industry cooperating to insure American made ammunition and guns have uniform critical dimensions and pressures specification. In Europe the Commission International Permanente (CIP) performs a similar function. As far as I can ascertain, the standards are usually very close to SAMMI's. We handloaders always try to remain on the safe side of the recommended pressures.

Presently there are four principle methods of measuring breech pressure. The oldest is the copper crusher system. This involves having a test barrel with a hole into the chamber. The hole is fitted with a piston. A small copper cylinder rests on top of the piston and below the anvil. When the gun is fired, the expanding gas pushes against the copper cylinder and crushes it against an anvil. The ballistician measures the new length of the copper cylinder and looks on a table to determine the pressure. This used to be listed as the Pressure per Square Inch (PSI). Now it's called Copper Units of Pressure (CUP). For lower pressure loads Lead Units of Pressure is used. The technique is similar to the CUP system except lead is used.

Technology advanced to an electronic system using a piezoelectric transducer. The transducer is mounted flush in the chamber. The pressure squeezes the transducer which generates an electric charge. The amount of charge is converted to PSI. Perhaps the first time anyone tried this they may have been a little surprised that the PSI results were not the same as those produced by the copper crusher system.

It became obvious that calling the results PSI for both systems would lead to confusion. The simple solution was to call all results from the copper crusher system Copper Unit of Pressure (CUP). The actual pressures are identical, but the numbers are different, sort of like measuring your height in inches or meters. You remain

the same height but the numbers are different. To add to the confusion it varies from cartridge to cartridge. Most of the time high pressure cartridges have a higher PSI maximum than the CUP number. Often it is the opposite for lower pressure loads—but not always.

The European system also uses a transducer or crusher and is basically the same as SAMMI except they use the metric system. It is listed as (CIP). Maximum pressures do not exactly coincide with SAMMI pressures. All CIP information is converted to the English system in this book.

A strain gauge can be attached to almost any gun for electronic reading of the results. This system, like the PSI system requires calibration with test ammunition.

Testing Ammunition

The modern chronographs are easy to use and affordable. I have checked the velocity of many rounds for almost 40 years. The velocity information is interesting as is the uniformity of velocity. Because of my participation in the pressure and velocity tests for this book (I loaded the ammunition), I learned a little about pressure testing. We share common interests so I'm sure you will find these tidbits of interest. George Weber of Hodgdon described the test procedures and explained the results.

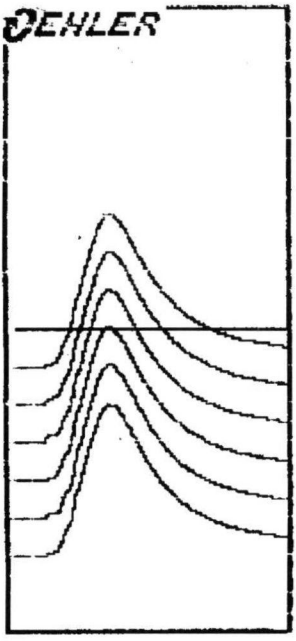
For the test, new unfired cases are used. This is necessary for uniformity. Ten of the empty cases are supplied for calibration of the test equipment. A minimum of five rounds is fired for each charge tested. The mean or average of the 5 rounds is the published results. Ten or twenty rounds give better results. Most important to us is the pressure and velocity. The actual test results are printed automatically by the Oehler System 82. A typical report is shown on the next page. Most is self explanatory and George Weber answered my questions about some of the not so obvious meanings. Any errors in the explanation are mine not his.

Pressure and Velocity Testing Printout

OEHLER System 82 10/12/28-02:07p SlowFire Mode

2-Charge Amp, Transducer PC/Psi = 0.1150, Psi/Volt = 10000

02:07p Comment:
Lot Number: Next Prompt #2:
Loader Number: Next Prompt #3:
Next Prompt #1:
Ammo test for John Lee:Lee Precision.
308 Win.:R-P cases,CCI 200 primer,150gr.SP bullet.
47grs.VARGET.
Shot @ 68 deg.F,28% humidity,29.41"Hg.



Round	3500 10000 1-P-MaxA	1-T-Pk-A	0 10.000 1--Vel/T_
1	3646	-324	0F_
2	55111	288	2791f_
3	54574	300	2806_
4	54574	292	2828_
5	54525	304	2837_
6	54525	288	2835_
7	53646	288	2823S
5 Valid Rounds			
Mean	54369	294	2826
Std Dev	405	7	12
Max	54574	304	2837
Min	53646	288	2806
Range	928	16	31
Mean+3S	55583	316	2863
Mean-3S	53155	273	2788

02:31p Comment: BBL.#6-2-98,xdcr#2528.

The horizontal line on the graph shows the pressure applied to the case to expand it to the chamber walls and relates to Round 1. The top trace on the graph is round 2— a fouling shot not included in the averages. Next to the Round column is the Pressure column in PSI. The next column is Time to Peak in Milliseconds. On the graph this is the high point in the trace. The peak pressure occurs while the bullet is still quite close to the cartridge. It varies by caliber. Large bores have the peak pressure while the bullet is very close to the cartridge. Small bores peak a little farther away. The last column is Velocity in Feet per Second.

Notice the first little squiggle near the left edge of the trace. That's the pressure build up to start the bullet. Each succeeding trace represents the rounds 3 through 7. These are the rounds from which the results are compiled.

Below the remark "5 valid rounds" is a breakdown of the results. The mean or average is what is published and usually rounded to the nearest one hundred for the pressure. Standard Deviation, Maximum, Minimum, and Range are the titles. The range is important as a small number indicates a uniform or quality load. Pressure uniformity is desirable but not paramount. Thousand of pounds of pressure variations often cause only a few fps velocity change. Sometimes ammunition may be very accurate and not have uniform pressure. That is not to say uniform is unimportant it simply is not all important.

A Little Information Can Be Dangerous!

If you comprehend all the above, you may have the feeling of understanding the process and are now able to maximize the velocity of your loads based on the listed pressures. Load data with listed pressures often show NEVER EXCEED loads with pressures less than other loads on the same page. There are good reasons the powder supplier list these as maximum loads. They should never be exceeded. The first and most obvious reason is maximum pressure numbers vary with the measuring system. The systems are CUP, PSI and CIP. As previously mentioned, the measurement systems have different numbers even though the pressures are the

same...just as your weight remains the same whether stated in pounds or kilograms.

Ah, but you insist, some loads with the same UNITS have higher pressures than the load I'm using. Therefore, a little extra powder should give higher velocity with complete safety. Don't do it. An excerpt from *Hodgon's Data Manual #27,* explains why very well.

> *A significant factor regarding peak pressure is that seemingly minor variations in the powder charge, primer and bullet can cause pressure to vary slightly from one shot to the next. Where one shot might produce 48,000 CUP, the next might peak out at 47,000, and the third shot might hit 51,000 CUP. So where the maximum operating pressure for the 30-06 is 50,000 CUP, handloads should be maintained at an average that is less than the maximum. This generally explains why load data for any given powder and bullet that is listed at, say, 48,000 CUP, simply because lab tests show that some shots will exceed the average by 2,000 CUP.*

This suggests that NEVER EXCEED loads with powders that list the highest pressure have the most uniform pressures. *Hodgon's Data Manual #27* confirms this conclusion. However, this may not be true if the load is compressed. There may be insufficient case capacity to load to the maximum.

CHAPTER 9

The Latest Information On Pressure.

Presently there are over 26,000 loads in our database. Bullet manufacturers generate additional vast amounts of data. Consider that each of the listed loads are the results of very carefully loading into a minimum of five new cases, preferably ten, and firing them in a pressure gun. The results are then recorded, averaged and analyzed. Only if pressure, velocity and uniformity are within desired limits is the load listed in a manual. Usually the process is repeated for a reduced or starting charge. Many, many loads are unacceptable and useless. You can see a great deal of time and effort, at great expense, is needed to supply load data to customers. We are the customers and we pay for this service when we buy components, especially gunpowder. It is well worth the added cost because good information is essential to produce safe quality reloads.

Load data is becoming more precise with each generation of new information. It's becoming more inflexible and exacting. Not only is the powder type, exact charge, and overall cartridge length listed for each bullet weight, but the brand, shape and type of bullet are listed. Often, even the primer type and brand are given.

There are good and logical reasons for this additional information. By being specific about the bullet, the powder manufacturer can supply the maximum safe load yielding the highest velocity. Most importantly, the manufacturer is reasonably certain you the customer will be safe and satisfied. In the past, often the powder company listed only loads that produced safe ammunition with any bullet of the same weight. By publishing data for the bullet that created the highest pressure they could feel comfortable even if the user substituted another bullet, the customer would be safe. Three things changed that thinking.

1) The Barnes X bullet is harder and causes greater pressure than copper jacketed lead core bullets. Note: Recently Barnes introduced X bullets with a proprietary coating called XLC. They claim it reduces pressure by more than 10%. In a conversation with the folks at Barnes they indicated that it has the greatest effect on long bullets. They

suggested for best results use data that specifies Barnes X bullets. Barnes also publish a loading manual.

2) The extreme expansion (XTP and Gold Dot) handgun bullets have a large and deep nose cavity that makes them longer than a regular bullet of the same weight. This requires deeper seating depth resulting in higher pressure. Seating depth is very critical for handgun ammunition because of the small cases and large bores. Visualize seating a bullet 1/16" deeper in the 45 ACP and 270 Winchester. The useable volume of a 270 is 4.238 cc and the 45 ACP is 1.14 cc. Seating bullets 1/16" deeper in the 270 reduces the volume 0.06 cc and 0.16 cc for the 45 ACP. That's a hardly noticeable reduction of 1.7% for the 270 and a whopping 14% for the 45 ACP. This large volume reduction has an equally large effect on pressure that is made more critical because the maximum pressure for a 45 ACP is almost 1/3 of a 270 Winchester.

3) In 1996, for the first time, reloaders had access to load data from all powder suppliers listed in velocity order in *Modern Reloading.* Suddenly it became obvious which powders produced the highest velocity. The powder suppliers want to show the maximum velocity because velocity sells.

We Need Even More Information for Cast Bullet Rifle Loads.

With all of this information something is lacking. Velocity is not everything. Accuracy, reduced loads and cast bullet loads are important to most handloaders and to me. Quality rifle ammunition with cast bullets is usually accomplished by trial and error, an unsatisfactory condition. We cannot expect powder companies to supply load data for every cast bullet weight and strength. The old teachings of match your hardness to velocity is not valid. Even if it were, reduced velocities for most modern loads are usually too hot for the bullets we cast. With that introduction I will share with you in considerable detail, an entirely new way to calculate reduced pressures and velocities. The detail is necessary for the interested and the men from Missouri.

Finally, A Way To Mine All Of That Useful Load Data.

For over forty years I have pondered the hidden treasures in all the load data provided by powder manufacturers and suppliers. The lack of pressure information for reduced charges made it difficult to do any serious analysis. Hodgdon and Vihtavuori Oy powder companies were kind enough to supply load data complete with pressures for reduced loads. However, we were not granted permission to publish pressures for Vihtavuori powders in this manual. Hodgdon also includes pressures for reduced loads in their elegant *Hodgdon Powder Number 27 Data Book.* This made it possible to do some serious analysis of the data. Below are printouts that present an overall picture of the effect of a 1% charge reduction calculated on the maximum charge as compared to the starting charge. The process is complicated, but very fast with a program I wrote for my computer. The results are printed below.

Velocity & Pressure Factors For Each 1% Charge Reduction

Powder	Velocity		Pressure		Average		
	Greatest	Least	Greatest	Least	Velocity	Press	Samples
BL-C(2)	2.10%	.47%	5.18%	.45%	.99%	.50%	186
CLAYS	.86%	.69%	2.78%	1.42%	.78%	2.23%	6
H1000	2.13%	.58%	4.93%	.88%	1.06%	2.43%	52
H110	1.85%	.39%	8.65%	.62%	.99%	3.49%	53
H322	2.13%	.56%	5.80%	.56%	.98%	2.46%	103
H335	1.90%	.48%	5.54%	.40%	.98%	2.44%	178
H380	1.59%	.29%	3.41%	.42%	.87%	1.91%	152
H414	2.93%	.19%	13.10%	.45%	.89%	2.23%	184
H4198	1.74%	.45%	5.75%	.53%	.92%	2.60%	94
H4227	2.97%	.49%	5.66%	.26%	1.07%	2.38%	61
H4350	2.54%	.60%	6.83%	.59%	.94%	2.43%	149
H4831	3.40%	.39%	8.18%	.60%	1.05%	2.52%	114
H4895	1.74%	.41%	5.12%	.46%	.89%	2.23%	247
H870	2.36%	.67%	6.32%	1.08%	1.34%	3.27%	15
HP-38	1.17%	.56%	2.58%	.87%	.91%	1.76%	28
HS-6	1.76%	.63%	3.45%	.83%	1.01%	2.20%	40
HS-7	1.17%	.92%	2.75%	1.77%	1.02%	2.24%	8
TITEGROUP	.94%	.57%	3.79%	1.15%	.75%	2.00%	18
UNIVERSAL1	.11%	.55%	3.83%	1.18%	.89%	2.58%	25
VARGET	1.32%	.46%	3.67%	.51%	.81%	1.93%	192
AVERAGE	1.89%	.52%	5.37%	.75%	.96%	2.39%	1905
EXTREME	3.40%	.19%	13.10%	.26%			

Velocity & Pressure Factors For Each 1% Charge Reduction

Powder	Velocity		Pressure		Average		
	Greatest	Least	Greatest	Least	Velocity	Press	Samples
v-20N29	1.42%	.84%	5.13%	2.23%	1.11%	3.00%	10
v-24N41	1.42%	.81%	4.36%	.92%	1.06%	2.51%	13
v-3N37	1.16%	.03%	3.08%	.10%	.71%	2.08%	44
v-N105	1.32%	.63%	3.92%	1.83%	.85%	2.62%	15
v-N110	1.38%	.06%	6.11%	.83%	.96%	3.11%	29
V-N110	.93%	.61%	3.28%	1.41%	.73%	2.04%	11
v-N120	1.56%	.69%	4.02%	1.20%	.98%	2.67%	45
v-N130	1.59%	.68%	4.40%	1.69%	.98%	2.81%	51
v-N133	1.59%	.67%	4.72%	1.82%	1.03%	2.92%	57
v-N135	1.46%	.13%	5.72%	.41%	.98%	2.94%	71
v-N140	1.37%	.34%	5.41%	1.13%	.99%	2.88%	80
v-N150	1.29%	.59%	4.02%	.96%	.95%	2.71%	65
v-N160	1.52%	.68%	4.49%	1.35%	1.03%	2.70%	79
v-N165	2.31%	.52%	6.05%	.84%	1.00%	2.52%	55
v-N170	1.47%	.64%	3.88%	1.14%	.91%	2.11%	24
v-N320	.75%	.08%	2.32%	.28%	.54%	1.73%	4
v-N340	1.23%	.38%	2.77%	1.68%	.72%	2.25%	20
v-N350	1.05%	.53%	3.09%	1.36%	.74%	2.06%	48
v-N540	1.29%	.80%	3.79%	1.20%	1.07%	2.71%	37
v-N550	1.43%	.84%	4.12%	1.91%	1.10%	2.89%	34
v-N560	1.51%	.54%	5.07%	1.08%	1.00%	2.43%	51
AVERAGE	1.37%	.55%	4.16%	1.23%	.93%	2.52%	843
EXTREME	2.31%	.03%	6.11%	.10%			

Compressed loads, target loads and starting loads that are not at least one grain less than maximum loads have been omitted.

At first glance it's just many numbers. Certain facts become evident when the data is analyzed. Most obvious is that there is no factor that can be used to calculate pressure or velocity for all ammunition. However, there seems to be what you could use as a rule of thumb relationship between velocity, pressure and reduction of charges for many loads. Look at the Average Velocity and Pressure (lower right on the charts above). Note that the 1% charge reduction usually reduces velocity less than 1%. While a 1% charge reduction results in about 2.5% in pressure reduction.

On the average, this teaches that even a slightly reduced charge greatly reduces pressure. Clearly, STARTING LOADS that often are 10% less than the NEVER EXCEED loads, save wear on the equipment. This also accounts for the increased accuracy often experi-

enced with a reduced load.

Reduced pressures reduce stress on the barrel, action, and the magnitude of the barrel vibrations. It is important to note that the average percentages are grossly incorrect when you look at the extremes. One has to think that the extremes are loads developed for powders unsuitable for the cartridge and bullet weight. When the average pressure reduction for a 1% powder reduction is 2.5%, a 13% pressure reduction for a 1% powder reduction appears abnormal and possibly dangerous. Dangerous, only if exceeded, because the 13% would then be an increase rather than a reduction of pressure. It would seem appropriate for those who develop loads to adapt a profile with parameters that include pressure reduction ratios. However, it may be my lack of complete understanding of the problem that causes unwarranted concern.

For these tables, I programmed the computer to find the reduction of velocity and pressure in increments of 1% charge reduction. It was necessary to assume that the reduction from the NEVER EXCEED to the STARTING CHARGE causes a uniform percentage reduction in the velocity and pressure. I had no proof that is actually the case.

It occurred to me that if my percentage assumption is correct for loads between NEVER EXCEED and STARTING CHARGE, that it may work for even further reduced charges. You could then calculate the pressures and velocities of other charges, provided the factor used is limited to a specific cartridge, powder, and bullet. For example: If a 1% powder reduction reduces the pressure 2.5% and velocity 0.9% then the next 1% powder reduction would also reduce the pressure and velocity 2.5% and 0.9% respectively. This repetition should hold true for some practical usable total reduction. I modified the program to solve for 1/2 grain increments instead of solving for 1% reductions.

To test my theory, I loaded a series of rounds starting at the published maximum of 45.5 grains and the starting load of 43 grains. The 2.5 grain difference was used for the steps down to a one third total reduction. Each round was carefully loaded and every charge weighted to the nearest 1/10 grain and every round had a factory crimp. They where tested in Hodgon's ballistic laboratory. The test results are printed below.

Grains	Velocity		Pressure	
Powder	Projected	Actual	Projected	Actual
45.5	**2837**	**2837**	**54383**	**54383**
43.0	**2702**	**2702**	**47000**	**47000**
40.5	2573	2556	40628	39286
38.0	2450	2403	35116	33924
35.5	2334	2266	30352	29452
33.0	2223	2137	26234	26454
30.5	2117	1968	22675	22645

The data in bold, represent the charge, velocity and pressure normally available to me in data supplied by Hodgdon and Vihtavuori. They are not the actual pressures and velocities supplied. They are the pressures and velocities from the test loads. This eliminates the expected difference in powder, cases, primers, bullets, seating depth, and crimp in my loads as those tested for Hodgdon's and Vihtavuori's manuals. These loads were tested in PSI whereas the loads in the manual were CUP and CIP. PSI maximum for the 308 Winchester is 62,000, and CUP is 52,000.

Notice the actual velocities tend to drift uniformly downward to only 149 fps less than projected velocities. While the actual pressure is virtually identical to the projected pressure. I was dumbfounded! Was this just a lucky fluke? These results were especially encouraging in view of a comment to John when he arranged for the test. The representative from Hodgdon remarked that H4895 is not the first choice for the bullet I selected. Of course that's the reason I selected H4895. While it is not the best powder for the bullet weight, it is one that I would select for a reduced charge.

Subsequent tests with powders better suited and less suitable convinced me all but the most obviously inappropriate powders work with this system. H-Varget is the powder Hodgdon suggested for the 308 Winchester with a 150 grain bullet. Forty-seven grains is the NEVER EXCEED charge. Testing my formula with only 31.5 grains, an enormous one third reduction, projected a pressure of 21,850 PSI and the actual mean pressure was 21,732 PSI. Again that's virtually perfect. The worst one tested, at a one third reduc-

tion, was only 10% off on the pressure and velocity. This leads me to believe that a third reduction is not necessarily the limit.

My limited testing does not prove a theory. Perhaps even a thousand tests would not prove it. However, I am convinced the pressure and velocity factors for even unsuitable powders are still sufficiently accurate for our purposes. To enhance reliability, I elected to use only those powders that are close to being ideal for the cast bullet section. I have programmed the computer so that it creates the charge table using the following criteria:

1) No highly compressed loads, because compressing powder changes the burning rate.
2) No loads are reduced by more than one half. Loads reduced by more than a third are marked with an asterisk to indicate information may be less reliable because of the great reduction.
3) Omit loads where the STARTING LOAD is too close to the NEVER EXCEED load. Samples that are farther apart should make the factors more accurate. Like judging a book by the first paragraph as compared to reading the first chapter. These simple precautions insure that inappropriate powders are eliminated.

The Importance Of This Information

Reloaders finally have a method to calculate pressure and velocity for most reduced rifle charges. While reduced velocity information is nice to know, reduced pressure information is essential for loading cast bullets in rifles.

Cast bullets in rifles are extremely accurate provided chamber pressure does not exceed the ultimate compressive strength of the bullet.

The next chapter will show you how to calculate pressure and precisely measure the ultimate compressive strength of the bullet. The process is straightforward and simple. It does require a low cost strength tester that is usable in all reloading presses, and a pocket microscope.

CHAPTER 10

Matching Bullet Metal to Chamber Pressure.

This chapter describes an exciting new and better way to get excellent results with cast rifle bullets. For the first time ever you can quickly approximate a suitable load for any powder that lists a PRESSURE FACTOR in this book. Before the details, a little background is needed to better understand the problem and appreciate the revolutionary solution to the cast bullet load puzzle. It's not necessary to understand the formulas and still grasp the beautifully simple concept. It clearly explains the relationship of chamber pressure to bullet metal strength.

Much cast bullet rifle shooting has been by trial and error. Those with tenacity and determination have become quite accomplished and talented cast bullet shooters. They have developed pet loads that perform surprisingly well, often as good and sometimes better than jacketed bullets. This proves cast bullets can provide quality ammunition at very low cost and you can have a lot of fun making the bullets. Often, the only advice the neophyte is given about cast bullet hardness is, "The bullet must be hard enough to reduce leading and maintain accuracy." I have accepted that as enough information to satisfy my needs through the years. It never presented much of a challenge to get some very good results with cast bullets for my handguns. Except for an occasional wager back on my rifle range, all of my competitive shooting has been both trap and handguns with light target loads. Bullet metal for this type of shooting is not very critical. Bullet quality is far more important. Uniform, well filled out, round and the proper size have a greater impact on accuracy.

Traditionally, velocity has been used as a guide for load selection because it is usually a known. Pressure for reduced loads, until this book, was unavailable to the average shooter. Velocity by itself, is not good enough to use as a gauge for how hard the bullet must be, because velocity can vary greatly with equal pressures.

A 30/06 example:
30 grains of IMR 4227 drives a 150 grain bullet 2,310 fps
56 grains of IMR 4064 drives a 150 grain bullet 2,885 fps
Both have the same peak pressure of 50,000 PSI. Yet velocity differs 540 fps. That's over 23% more velocity with the same 50,000 PSI. As previously discussed, this is because the peak pressure is sustained for a longer time with the slower burning powder. If a peak pressure could be sustained during the entire ride through the barrel, with no atmosphere the bullet would likely reach escape velocity and enter earth orbit, at about 37,000 fps or 25,000 miles per hour. Yet the bullet would only be subjected to 50,000 PSI, the same pressure that 30 grains of IMR 4227 propels at a mere 2,310 fps.

Pressure Not Velocity Dictates Bullet Strength.

John and I conducted a cast bullet recovery test in the swimming pool years ago (see Chapter 7). These tests clearly demonstrated velocity is not a proper gauge of how strong a cast bullet need be. This enlightenment sat dormant for decades until I started writing this book.

How Much Chamber Pressure Is Too Much?

When you think about it, it's obvious that the chamber pressure cannot exceed the ultimate compressive strength of a bullet by a great amount. Sort of like using an over-ripe peeled banana as a stopper for a fire hose. If we measure the ultimate compressive strength of the bullet in pounds per square inch (PSI), we will know how much chamber pressure in PSI the bullet can tolerate.

Based on tests John and I conducted, we found peak chamber pressure should be about 10% less than the ultimate compressive strength of the bullet. Below is an interesting story of how we came to that conclusion.

There is a relationship between hardness and tensile strength for most metals. Compressive strength and tensile strength are usually the same value or nearly the same for most metals. Therefore hardness, tensile strength and compressive strength are related. Usually tensile and compressive strength is stated in pounds per square inch (PSI). It is important to understand that compressive and ten-

sile strength is the amount of stress a material can bear without permanent deformation. This information applies only to metals. An example would be when you stretch a long thin wire slightly and then release it. It returns to the same length. If you stretch it too far it will remain stretched, because you applied more stress than the tensile strength of the material—you exceeded the yield point. If the wire broke when you stretched it, then you exceeded the ultimate tensile strength. The same applies to compressive strength. You may have noticed when you size cast bullets some are larger than others. This is due to the spring-back of the lead alloy. A stronger bullet will be larger than a weaker bullet. Now lets examine how hardness comes into play.

Brinell hardness test

A Brinell Hardness Tester works by pressing a hard ball into the sample being tested with a precise force in kilograms. The diameter of the impression is used to calculate the hardness of the sample with this formula from *Machinery's Handbook.*

$$BHN = \frac{load\text{-}on\text{-}ball\text{-}in\text{-}kilograms}{surface\text{-}area\text{-}of\text{-}indentation\text{-}in\text{-}sq.\text{-}mm} = \frac{P}{\frac{\pi \times D}{2}\left(D - \sqrt{D_2 - d_2}\right)}$$

The test really measures the ultimate compressive strength of the sample in kilograms per square millimeter. Because the test permanently deforms the sample, this is the ultimate compressive strength. The clever Swedish metallurgist Johan August Brinell invented the system over a century ago. Appropriately the results are called the Brinell Hardness Number (BHN). If you multiply the BHN by 1422 you then have Pressure per Square Inch (PSI). This is the same unit of measure used for chamber pressure. Well, not exactly the same, because of the way chamber pressure measurements have evolved over the last century. But it is close enough for our needs.

If you stayed with me this long, you probably already figured out it is a little silly to use Brinell Hardness and the metric system, so we can convert it to the English system. We can easily do the same test

in pounds and inches. The results will be in PSI and all we need do is match our results to a load with 10% less pressure.

Testing Bullet Strength.

Brinell Hardness Testers are not readily available and expensive. Commercial models are around $1,000. To my knowledge there are no economical Brinell Hardness Testers currently available. Lead Bullet Technology used to offer one at a reasonable price, however it is no longer available. There is a SAECO Lead Hardness Tester for about $140. It is calibrated in arbitrary SAECO units of 1 to 10. This is useful only if used to measure relative hardness and provides no absolute method to convert the results to PSI. If you know the BHN of your bullets, multiply the BHN by 1,422 to find the ultimate compressive strength in PSI. Likewise the PSI can be converted to BHN by dividing PSI by 1,422.

To find the ultimate compressive strength of your bullet apply pressure until it deforms. The pressure applied and the deformed area measured in square inches is mathematically converted to pressure per one square inch. For example...if only 0.01 square inch can support 100 pounds then a full inch can support 10,000 pounds (100/.01 = 10,000). We do not have to use 1/100 of an inch; a smaller sample works equally well.

Below is the same formula used for Brinell Hardness Numbers, except pounds are substituted for kilograms and inches for millimeters. That makes the results in Pound per Square Inch (PSI). By using a small steel ball and pressing it into your bullet with a known amount of pounds we can calculate how many PSI your bullet can tolerate.

$$PSI = \frac{load\ in\ pounds}{surface\ area\ square\ inches} = \frac{P}{\frac{\pi \times D}{2}\left(D - \sqrt{D_2 - d_2}\right)} = \frac{100}{.01} = 10{,}000$$

D = Diameter of ball d = diameter of impression π = 3.1416

This part of the formula $\frac{\pi \times D}{2}\left(D - \sqrt{D_2 - d_2}\right)$ converts the diameter of impression to spherical surface area. Impressions that do not exceed a diameter one half the ball diameter and are at least one fourth ball diameter give the best results. Yes, it's still too compli-

cated for the average shooter. These formulas are supplied for those who want to check my work and possibly add to it. The actual process is simple and straightforward. Brinell hardness, tensile and compressive strength are totally irrelevant. All we need to know is the Ultimate Compressive Strength of the alloy. Any load that produces pressure significantly less than the ultimate compressive strength of the bullet will shoot reasonably well.

Accuracy improves as chamber pressure approaches 90% of the ultimate compressive strength. Of course the bullet must be lubricated with a quality lube, such as the Lee Alox. Gas checks are also required for the higher pressures; this includes most rifle bullets.

In conclusion:

The only important attribute we need know about our cast bullets is the Maximum Pressure they will tolerate.

It's easy to check by testing a small area to find how much pressure it takes to permanently deform it. The load in pounds divided by area in inches equals the Ultimate Compressive Strength in Pounds Per Square Inch.

Chamber pressure must be less than the Ultimate Compressive Strength of the bullet.

The chart on the next page lists the Maximum Chamber Pressure for any cast bullet with a known Ultimate Compressive Strength in Pounds Per Square Inch.

Testing was done with rifle ammunition, but should also work for handguns.

It's a Simple Two Step Process

1) Finding the Ultimate Compressive Strength of a bullet is very simple and easy. Slowly press a 5/32 inch steel ball into the bullet with 60 pounds of force and hold it for 30 seconds. Then measure the size of the indent to the nearest thousandth of an inch.

2) Select a load with pressure equal to or less than the maximum pressure listed in the fourth column in the next table.

Brinell Hardness & Maximum Pressure Chart

Use a slow even pressure and hold for 30 seconds.

Select a load with a chamber pressure that does not exceed the Maximum Pressure in the fourth column.

LOAD 60 POUNDS 5/32" BALL

Indent	——BULLET—— Hardness	Strength	Pressure	Indent	——BULLET—— Hardness	Strength	Pressure
Dia.	BHN	PSI	MAX PSI	Dia.	BHN	PSI	MAX PSI
.038	36.6	52111	46900	.059	14.9	21134	19021
.039	34.8	49432	44489	.060	14.3	20407	18367
.040	33.0	46951	42256	.061	13.9	19716	17745
.041	31.4	44650	40185	.062	13.4	19058	17152
.042	29.9	42511	38260	.063	13.0	18431	16588
.043	28.5	40519	36461	.064	12.5	17833	16050
.044	27.2	38662	34796	.065	12.1	17262	15536
.045	26.0	36927	33234	.066	11.8	16717	15046
.046	24.8	35304	31713	.067	11.4	16196	14511
.047	23.8	33783	30405	.068	11.0	15698	14128
.048	22.7	32356	29120	.069	10.7	15221	13699
.049	21.8	31016	27914	.070	10.4	14765	13288
.050	20.9	29755	26719	.071	10.1	14327	12895
.051	20.1	28567	25710	.072	9.8	13908	12517
.052	19.3	27447	24703	.073	9.5	13505	12155
.053	18.6	26390	23751	.074	9.2	13119	11801
.054	17.9	25391	22852	.075	9.0	12748	11473
.055	17.2	24446	22002	.076	8.7	12391	11152
.056	16.6	23552	21196	.077	8.5	12048	10844
.057	16.0	22703	20433	.078	8.2	11718	10541
.058	15.4	21898	19109	.079	8.0	11401	10261

The Brinell Hardness Number is for those who may know, or wish to know the BHN .

Bullet PSI strength is reference only.

Lead that indents to .094 diameter or larger should be suitable for black powder guns.

Testing Your Bullet.

You may have already figured out how to push a 5/32 inch ball into a bullet on a bathroom scale. I tried it that way, but found the results uneven and not reliable.

John made a spring loaded indenter for me to use in my reloading press. I hurriedly tried it. Then I checked the indent and found it to be 0.071 inch diameter. The results are very repeatable. Calculation shows it has an ultimate compressive strength of 14,327 PSI. I knew it would be foolish to shoot this rifle bullet in even a relatively light 35,000 PSI load. Suddenly, I felt cast bullet making is a science not black magic. It was a good feeling and I hope you will enjoy the experience.

Note: A Lee Bullet Tester with an Indenter and Pocket Microscope should be available shortly after this book is published—priced about the same as a set of dies.

The ball indenter must be pressed into a flat spot on the bullet. It is necessary to file a flat on the nose or shank of the bullet. Do not test on the base of the bullet, because that is the metal that shrank into the base from the sprue plate while cooling. It may be porous.

Measuring the diameter of a tiny indent to the nearest 1/1000 of an inch is difficult. Fortunately, it becomes quite easy if you use the tool a professional would use, a Machinist's Pocket Microscope. It is 20 power, five element ground glass lenses and reticule scale graduated in 0.002 inch increments. When you look at the impression it fills much of the view and the scale is superimposed on the impression. It's very apparent if the edge of the impression is on a graduation or between graduations. Therefore it is easy to measure the impression to the nearest 0.001 inch.

The 20 power microscope, like all such instruments, gives an inverted image. This is no problem because a circle upside down still looks like a circle. However, it requires a little getting used to because movements are reversed. The great magnification mandates the microscope be rested on the object you are checking or else you cannot hold it steady enough. The bullet is too small so clamp it in a small drill press vise, flush with the top of the jaws. Any vise or locking pliers will work. It is necessary to position the microscope's zero at the edge of the impression. The impression looks

like a large shiny silver bowl. If you hold the base of the microscope between your thumb and forefinger while resting them on the vise, you will find it can be easily positioned. Use your other hand to steady it to your eye. Tilt the microscope to focus.

How well does the system work?

Adhering to the reloader's time honored tradition of using factory ammunition as the standard, John fired a box of name brand ammunition in five round groups. Factory ammunition produced an average 100 yard group of 3.45". About what you would expect from a two groove Springfield rifle with factory ammunition.

The test bullets where cast from linotype with an ultimate compressive strength of 26,326 PSI. Below are the test results of five shot groups.

Pressure	**Velocity**	**Group size**
17,981	2073	2.61
20,652	2174	2.00
22,648	2245	1.75
24,838	2317	1.64 (4 shots in .65 group)
26,326 (This is the ultimate compressive strength of the bullet)*		
27,240	2392	3.30
*50,000 **	*2790*	*3.45 (Factory ammunition)*

** = Reference only*

Notice how the group size continued to improve until the load pressure became greater than the ultimate compressive strength of the bullet. Then it suddenly doubled in size. Yet it remained smaller than the factory ammunition. Additional tests using monotype metal with pressures around 33,000 PSI and velocity over 2,500 fps supported these results. Multiple caliber testing confirmed the theory. Heat treated bullets may be able to handle up 44,000 PSI. A light bullet should reach close to 3,000 fps with that much pressure. The best accuracy appears to be when the chamber pressure is close to, but does not exceed, the ultimate compressive strength of the bullet.

It is important to realize that the calculated pressures and velocities have the following built in errors.

- The raw data is from ballistic tests using jacketed bullets.
- Raw data may have been rounded.
- Results vary with bullets, primer brands, cases, seating depth, powder lots and guns.

Fortunately these errors are not necessarily cumulative. Some cancel others. To insure good results on your first try, start 5 or 10% under the projected best load and work up to the best accuracy load. Usually three shot groups are good enough to quickly work up to a good load. Five or ten shot groups are best for fine tuning your load.

Why This System Works So Well

The fact that the most accurate loads are achieved with pressure 10% below the ultimate compressive strength of the bullet is significant. It suggests that chamber pressure should be greater than or within the elastic limit and less than the ultimate compressive strength. Elastic limit, is the maximum pressure the bullet tolerates and returns to its original size after the pressure is removed. It would appear that pushing the bullet hard enough to slightly deform the bullet temporarily or permanently improves accuracy. This could be because it is expanded into the bore for a better seal, but not so much pressure that it wedges tightly in the bore to cause leading.

It makes good sense that there is a relationship between bullet strength and chamber pressure. Undoubtedly there are bullet casters who have realized this for years. This book, for the first time, brings it all together. You can easily check the strength of your bullet and for the first time select a load with the correct pressure.

(A personal aside. This was exciting and interesting testing. Much more testing would have been done except I can no longer shoot high recoil guns due to eye problems. It is fortunate that John could find the time to do the shooting. He is an excellent shot with all firearms. After the first tests he returned the targets to me, with the assurance that he saw the muzzle flash in the scope—something

I taught him as boy to avoid flinching. He started making and shooting cast bullets at a very young age. So young that if a parent allowed his child do the same today he would probably be put in prison.)

Reduced Pressures Are Listed For Some Popular Rifle Cartridges In The Next Pages.

The compilation of this information would have been impossible without the cooperation of Hodgdon Powder Co. Hodgdon supplied not only the raw database for the loads listed in their impressive load manual and the free mini manuals, but also did pressure tests to substantiate my reduced pressure and velocity factors. (See the chapter on pressures.) They have my sincerest thanks and appreciation for their help. Without it this new simple way of selecting the best load to match the bullet would have been impossible. The other powder suppliers advised that reduced pressures are unavailable or did not want pressures published. Until they become available this information is limited to Hodgdon powders.

This unique listing shows pressure and velocity for each powder in declining increments. This enables you to select a charge so the pressure is correct for the strength of your bullet.

This new load data section was specially compiled so you can match the load to the strength of your bullet. **See page 134.** It is important to remember that these numbers are calculated from loads tested by the powder supplier with jacketed bullets. Because you will be using cast bullets, different components and guns, it's likely the pressure and velocity will be different from the listed information. To avoid disappointing results always start 5 or 10% lower than the bullet's Maximum Pressure indicates. A bullet that is too strong usually will shoot well. A bullet that is too weak may shoot so poorly that it may miss the target completely and lead the bore.

Notice I referred to the bullet as being weak or strong rather than soft or hard. The strength of the bullet is easily and precisely measured in PSI. Hardness numbers are related to strength mathematically in an inconvenient form. Because we work with chamber

pressure in PSI, it is appropriate to eliminate confusing references of the metric BHN numbers and state bullet strength in PSI.

Had it been customary to refer to bullet strength in PSI, I'll bet we would have long ago recognized the relationship of bullet strength to chamber pressure—rather than the incorrect hardness to velocity relationship.

Cast Bullet Load Data

The close to 3,000 cast bullet loads on the next 15 pages are not counted in the over 26,000 loads noted on the cover. Most interesting about these cast bullet loads, is that they partially cover only three cartridges. These three are very popular, 30-30, 308 and 30-06. Some of you sharp eyed observers will note the last category on page 155 say "continued on next page." I eliminated the last 50 loads because of space limitations. Many more were eliminated by selecting only those most likely to perform the best.

The above explanation will help you understand why cast load data may never be presented in such detail again. However, the Pressure and Velocity Factors included in the load data enable you to quickly calculate a load for any cast bullet. Complete details on page 157.

30-30 WINCHESTER Cast Bullet Loads

Useful case capacity 2.45 cc

100 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
37.0	2.39	2600	33000
36.0	2.32	2550	31000
35.0	2.26	2500	29100
34.0	2.19	2450	27300
33.0	2.13	2410	25600
32.0	2.06	2370	24000
31.0	2.00	2320	22600
30.0	1.93	2280	21200
29.0	1.87	2240	19900
28.0	1.81	2200	18700
27.0	1.74	2160	17500
26.0	1.68	2120	16400
25.0	*1.61*	*2080*	*15400*
24.0	*1.55*	*2040*	*14500*
23.0	*1.48*	*2000*	*13600*
22.0	*1.42*	*1960*	*12800*
21.0	*1.35*	*1930*	*12000*

100 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
37.0	2.39	2570	31800
36.0	2.32	2530	30000
35.0	2.26	2490	28200
34.0	2.19	2450	26500
33.0	2.13	2400	25000
32.0	2.06	2360	23500
31.0	2.00	2320	22100
30.0	1.93	2280	20800
29.0	1.87	2250	19600
28.0	1.81	2210	18400
27.0	1.74	2170	17300
26.0	1.68	2130	16300
25.0	*1.61*	*2100*	*15300*
24.0	*1.55*	*2060*	*14400*
23.0	*1.48*	*2030*	*13600*
22.0	*1.42*	*1990*	*12800*
21.0	*1.35*	*1960*	*12000*
* *20.0*	*1.29*	*1930*	*11300*

110 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
37.0	2.39	2620	35800
36.0	2.32	2550	33700
35.0	2.26	2490	31800
34.0	2.19	2420	30000
33.0	2.13	2360	28300
32.0	2.06	2300	26700
31.0	2.00	2250	25200
30.0	1.93	2190	23800
29.0	1.87	2130	22400
28.0	1.81	2080	21200
27.0	1.74	2030	20000
26.0	1.68	1980	18800
25.0	*1.61*	*1930*	*17800*

Continued next column

Continued

110 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
24.0	*1.55*	*1880*	*16800*
23.0	*1.48*	*1830*	*15800*
22.0	*1.42*	*1790*	*14900*
21.0	*1.35*	*1740*	*14100*
* *20.0*	*1.29*	*1700*	*13300*
* *19.0*	*1.23*	*1650*	*12500*
* *18.0*	*1.16*	*1610*	*11800*

110 Grain Bullet
H4198 Powder
Burning Rate 55

Grains	Vol.CC	Vel	Pressure
24.0	1.80	2270	33500
23.0	1.73	2190	30000
22.0	1.65	2110	26800
21.0	1.58	2030	23900
20.0	1.50	1950	21400
19.0	1.43	1880	19100
18.0	1.35	1810	17100
* 17.0	1.28	1740	15300
* *16.0*	*1.20*	*1680*	*13600*
* *15.0*	*1.13*	*1610*	*12200*
* *14.0*	*1.05*	*1550*	*10900*

115 Grain Bullet
VEC TU2000 Powder
Burning Rate 0

Grains	Vol.CC	Vel	Pressure
17.0	1.30	1790	18700
* 16.0	1.22	1740	17900
* 15.0	1.14	1690	17100
* 14.0	1.07	1640	16400
* 13.0	.99	1590	15700
* *12.0*	*.91*	*1540*	*15000*
* *11.0*	*.84*	*1490*	*14400*
* *10.0*	*.76*	*1450*	*13800*
* *9.0*	*.69*	*1410*	*13200*

125 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
37.0	2.39	2500	37100
36.0	2.32	2370	35100
35.0	2.26	2240	33300
34.0	2.19	2120	31600
33.0	2.13	2010	29900
32.0	2.06	1910	28400
31.0	2.00	1800	26900
30.0	1.93	1710	25500
29.0	1.87	1620	24100
28.0	1.81	1530	22900
27.0	1.74	1450	21700
26.0	1.68	1370	20600
25.0	*1.61*	*1300*	*19500*
24.0	*1.55*	*1230*	*18500*
23.0	*1.48*	*1170*	*17500*

Continued next column

Continued

125 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
22.0	*1.42*	*1100*	*16600*
21.0	*1.35*	*1050*	*15700*
* *20.0*	*1.29*	*990*	*14900*
* *19.0*	*1.23*	*940*	*14100*
* *18.0*	*1.16*	*890*	*13400*

125 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
37.0	2.39	2470	35700
36.0	2.32	2340	33200
35.0	2.26	2220	30800
34.0	2.19	2110	28600
33.0	2.13	2000	26500
32.0	2.06	1890	24600
31.0	2.00	1800	22900
30.0	1.93	1700	21200
29.0	1.87	1610	19700
28.0	1.81	1530	18300
27.0	1.74	1450	17000
26.0	1.68	1380	15800
25.0	*1.61*	*1300*	*14700*
24.0	*1.55*	*1240*	*13600*
23.0	*1.48*	*1170*	*12600*
22.0	*1.42*	*1110*	*11700*

130 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
36.0	2.32	2400	34100
35.0	2.26	2350	32800
34.0	2.19	2300	31500
33.0	2.13	2260	30300
32.0	2.06	2210	29100
31.0	2.00	2170	27900
30.0	1.93	2120	26800
29.0	1.87	2080	25800
28.0	1.81	2040	24800
27.0	1.74	2000	23800
26.0	1.68	1960	22800
25.0	1.61	1920	21900
24.0	*1.55*	*1880*	*21100*
23.0	*1.48*	*1840*	*20300*
22.0	*1.42*	*1810*	*19500*
21.0	*1.35*	*1770*	*18700*
* *20.0*	*1.29*	*1730*	*18000*
* *19.0*	*1.23*	*1700*	*17300*
* *18.0*	*1.16*	*1670*	*16600*

130 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
33.0	2.13	2350	35900
32.0	2.06	2280	33700
31.0	2.00	2210	31500
30.0	1.93	2140	29500
29.0	1.87	2070	27700
28.0	1.81	2010	25900
27.0	1.74	1950	24300
26.0	1.68	1890	22700
25.0	1.61	1830	21300
24.0	1.55	1770	19900
23.0	1.48	1720	18700
22.0	*1.42*	*1660*	*17500*
21.0	*1.35*	*1610*	*16400*
* *20.0*	*1.29*	*1560*	*15400*
* *19.0*	*1.23*	*1520*	*14400*
* *18.0*	*1.16*	*1470*	*13500*
* *17.0*	*1.10*	*1420*	*12600*
* *16.0*	*1.03*	*1380*	*11800*

130 Grain Bullet
H4198 Powder
Burning Rate 55

Grains	Vol.CC	Vel	Pressure
23.0	1.73	2110	34100
22.0	1.65	2030	30500
21.0	1.58	1950	27400
20.0	1.50	1880	24500
19.0	1.43	1810	21900
18.0	1.35	1740	19700
* 17.0	1.28	1670	17600
* *16.0*	*1.20*	*1610*	*15800*
* *15.0*	*1.13*	*1550*	*14100*
* *14.0*	*1.05*	*1490*	*12600*
* *13.0*	*.98*	*1430*	*11300*

150 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
36.0	2.32	2270	33600
35.0	2.26	2180	30000
34.0	2.19	2100	26900
33.0	2.13	2020	24100
32.0	2.06	1940	21600
31.0	2.00	1870	19300
30.0	1.93	1800	17300
29.0	1.87	1730	15500
28.0	1.81	1670	13900
27.0	1.74	1600	12400
26.0	1.68	1540	11100

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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30-30 WINCHESTER Cast Bullet Loads

150 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
32.0	2.06	2240	37300
31.0	2.00	2180	34800
30.0	1.93	2110	32400
29.0	1.87	2050	30200
28.0	1.81	1990	28100
27.0	1.74	1940	26200
26.0	1.68	1880	24500
25.0	1.61	1830	22800
24.0	1.55	1770	21200
23.0	1.48	1720	19800
22.0	1.42	1670	18500
21.0	*1.35*	*1630*	*17200*
* *20.0*	*1.29*	*1580*	*16000*
* *19.0*	*1.23*	*1530*	*14900*
* *18.0*	*1.16*	*1490*	*13900*
* *17.0*	*1.10*	*1450*	*13000*
* *16.0*	*1.03*	*1410*	*12100*

150 Grain Bullet
H4198 Powder
Burning Rate 55

Grains	Vol.CC	Vel	Pressure
23.0	1.73	2030	35700
22.0	1.65	1950	31300
21.0	1.58	1870	27500
20.0	1.50	1800	24100
19.0	1.43	1730	21200
18.0	1.35	1660	18600
* 17.0	1.28	1600	16300
* 16.0	1.20	1530	14300
* *15.0*	*1.13*	*1470*	*12600*
* *14.0*	*1.05*	*1420*	*11000*

150 Grain Bullet
VEC TU2000 Powder
Burning Rate 0

Grains	Vol.CC	Vel	Pressure
19.0	1.45	1780	24700
18.0	1.37	1710	21800
17.0	1.30	1630	19200
* 16.0	1.22	1560	17000
* 15.0	1.14	1490	15000
* 14.0	1.07	1430	13200
* *13.0*	*.99*	*1370*	*11700*

170 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
36.0	2.38	2080	37800
35.0	2.31	1920	34500
34.0	2.25	1780	31500
33.0	2.18	1640	28800
32.0	2.12	1510	26300
31.0	2.05	1400	24000
30.0	1.98	1290	21900
29.0	1.92	1190	20000

Continued next column

Continued

170 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
28.0	1.85	1100	18300
27.0	1.78	1010	16700
26.0	1.72	930	15300
25.0	1.65	860	13900
24.0	*1.59*	*800*	*12700*
23.0	*1.52*	*730*	*11600*

170 Grain Bullet
VEC SP7 Powder
Burning Rate 0

Grains	Vol.CC	Vel	Pressure
33.0	2.17	2180	36200
32.0	2.11	2120	34800
31.0	2.04	2070	33300
30.0	1.97	2020	32000
29.0	1.91	1970	30700
28.0	1.84	1930	29400
27.0	1.78	1880	28200
26.0	1.71	1830	27100
25.0	1.64	1790	26000
24.0	1.58	1740	24900
23.0	1.51	1700	23900
22.0	*1.45*	*1660*	*22900*
21.0	*1.38*	*1620*	*22000*
20.0	*1.32*	*1580*	*21100*
* *19.0*	*1.25*	*1540*	*20200*
* *18.0*	*1.18*	*1510*	*19400*
* *17.0*	*1.12*	*1470*	*18600*
* *16.0*	*1.05*	*1430*	*17800*

170 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
35.0	2.26	2170	36000
34.0	2.19	2120	33900
33.0	2.13	2070	31800
32.0	2.06	2020	29900
31.0	2.00	1970	28100
30.0	1.93	1930	26400
29.0	1.87	1880	24800
28.0	1.81	1840	23300
27.0	1.74	1790	21900
26.0	1.68	1750	20600
25.0	1.61	1710	19300
24.0	1.55	1670	18200
23.0	*1.48*	*1630*	*17100*
22.0	*1.42*	*1590*	*16000*
21.0	*1.35*	*1550*	*15100*
* *20.0*	*1.29*	*1510*	*14200*
* *19.0*	*1.23*	*1480*	*13300*
* *18.0*	*1.16*	*1440*	*12500*
* *17.0*	*1.10*	*1410*	*11700*

170 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
32.0	2.34	2110	38200
31.0	2.27	2060	36200
30.0	2.19	2000	34300
29.0	2.12	1950	32500
28.0	2.05	1900	30800
27.0	1.97	1850	29200
26.0	1.90	1800	27600
25.0	1.83	1750	26200
24.0	1.75	1700	24800
23.0	1.68	1660	23500
22.0	1.61	1620	22200
21.0	*1.54*	*1570*	*21100*
20.0	*1.46*	*1530*	*20000*
19.0	*1.39*	*1490*	*18900*
18.0	*1.32*	*1450*	*17900*
* *17.0*	*1.24*	*1410*	*17000*
* *16.0*	*1.17*	*1380*	*16100*

170 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
29.0	2.11	2040	34800
28.0	2.04	1970	32300
27.0	1.97	1910	30000
26.0	1.89	1850	27900
25.0	1.82	1790	25900
24.0	1.75	1740	24100
23.0	1.67	1680	22400
22.0	1.60	1630	20800
21.0	1.53	1580	19300
20.0	*1.46*	*1530*	*17900*
19.0	*1.38*	*1480*	*16600*
18.0	*1.31*	*1430*	*15400*
* *17.0*	*1.24*	*1390*	*14300*
* *16.0*	*1.16*	*1340*	*13300*
* *15.0*	*1.09*	*1300*	*12400*

170 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
29.0	1.87	2010	35900
28.0	1.81	1960	33300
27.0	1.74	1910	30900
26.0	1.68	1860	28600
25.0	1.61	1810	26600
24.0	1.55	1770	24700
23.0	1.48	1720	22900
22.0	1.42	1680	21200
21.0	1.35	1640	19700
* *20.0*	*1.29*	*1600*	*18300*
* *19.0*	*1.23*	*1560*	*17000*
* *18.0*	*1.16*	*1520*	*15700*
* *17.0*	*1.10*	*1480*	*14600*
* *16.0*	*1.03*	*1440*	*13600*
* *15.0*	*.97*	*1410*	*12600*

170 Grain Bullet
H4198 Powder
Burning Rate 55

Grains	Vol.CC	Vel	Pressure
21.0	1.58	1800	31500
20.0	1.50	1720	28900
19.0	1.43	1650	26400
18.0	1.35	1580	24200
* 17.0	1.28	1510	22100
* 16.0	1.20	1450	20200
* 15.0	1.13	1390	18500
* *14.0*	*1.05*	*1330*	*17000*
* *13.0*	*.98*	*1270*	*15500*
* *12.0*	*.90*	*1220*	*14200*
* *11.0*	*.83*	*1170*	*13000*

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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308 WINCHESTER Cast Bullet Loads

Useful case capacity 3.43 cc

110 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
46.0	2.97	2910	45900
45.0	2.90	2860	43800
44.0	2.84	2800	41700
43.0	2.77	2750	39700
42.0	2.71	2700	37900
41.0	2.64	2650	36100
40.0	2.58	2600	34400
39.0	2.52	2550	32800
38.0	2.45	2500	31200
37.0	2.39	2450	29800
36.0	2.32	2400	28400
35.0	2.26	2360	27000
34.0	*2.19*	*2310*	*25800*
33.0	*2.13*	*2270*	*24600*
32.0	*2.06*	*2230*	*23400*
31.0	*2.00*	*2180*	*22300*
30.0	*1.93*	*2140*	*21300*
29.0	*1.87*	*2100*	*20300*
* *28.0*	*1.81*	*2060*	*19300*
* *27.0*	*1.74*	*2020*	*18400*
* *26.0*	*1.68*	*1980*	*17500*
* *25.0*	*1.61*	*1950*	*16700*

110 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
36.0	2.32	2550	47100
35.0	2.26	2500	46100
34.0	2.19	2460	45100
33.0	2.13	2410	44200
32.0	2.06	2360	43300
31.0	*2.00*	*2320*	*42400*
30.0	*1.93*	*2270*	*41500*
29.0	*1.87*	*2230*	*40600*
* *28.0*	*1.81*	*2190*	*39800*
* *27.0*	*1.74*	*2150*	*38900*
* *26.0*	*1.68*	*2110*	*38100*
* *25.0*	*1.61*	*2070*	*37300*
* *24.0*	*1.55*	*2030*	*36600*
* *23.0*	*1.48*	*1990*	*35800*

110 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
40.0	2.90	2890	46300
39.0	2.83	2840	43800
38.0	2.75	2800	41300
37.0	2.68	2750	39000
36.0	2.61	2710	36800
35.0	2.54	2660	34800
34.0	2.46	2620	32800
33.0	2.39	2580	31000
32.0	2.32	2540	29300
31.0	2.25	2500	27600
30.0	2.17	2460	26100
29.0	*2.10*	*2420*	*24600*

Continued next column

Continued

110 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
28.0	*2.03*	*2380*	*23300*
27.0	*1.96*	*2340*	*22000*
26.0	*1.88*	*2300*	*20700*
* *25.0*	*1.81*	*2260*	*19600*
* *24.0*	*1.74*	*2230*	*18500*
* *23.0*	*1.67*	*2190*	*17500*
* *22.0*	*1.59*	*2160*	*16500*

125 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2850	44700
43.0	2.77	2800	42000
42.0	2.71	2750	39400
41.0	2.64	2700	37000
40.0	2.58	2650	34800
39.0	2.52	2600	32700
38.0	2.45	2550	30700
37.0	2.39	2500	28800
36.0	2.32	2450	27100
35.0	2.26	2410	25400
34.0	2.19	2360	23900
33.0	2.13	2320	22400
32.0	2.06	2270	21100
31.0	*2.00*	*2230*	*19800*
30.0	*1.93*	*2190*	*18600*
29.0	*1.87*	*2150*	*17400*
* *28.0*	*1.81*	*2110*	*16400*
* *27.0*	*1.74*	*2070*	*15400*
* *26.0*	*1.68*	*2030*	*14500*
* *25.0*	*1.61*	*1990*	*13600*
* *24.0*	*1.55*	*1950*	*12700*
* *23.0*	*1.48*	*1910*	*12000*

125 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
50.0	3.22	2950	46600
49.0	3.16	2900	44700
48.0	3.10	2840	42800
47.0	3.03	2790	41000
46.0	2.97	2740	39300
45.0	2.90	2690	37600
44.0	2.84	2640	36100
43.0	2.77	2590	34600
42.0	2.71	2540	33100
41.0	2.64	2490	31700
40.0	2.58	2440	30400
39.0	2.52	2400	29100
38.0	2.45	2350	27900
37.0	2.39	2310	26700
36.0	2.32	2260	25600
35.0	2.26	2220	24500
34.0	*2.19*	*2180*	*23500*
33.0	*2.13*	*2140*	*22500*
32.0	*2.06*	*2100*	*21600*

Continued next column

Continued

125 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
31.0	*2.00*	*2060*	*20700*
30.0	*1.93*	*2020*	*19800*
29.0	*1.87*	*1980*	*19000*
* *28.0*	*1.81*	*1940*	*18200*
* *27.0*	*1.74*	*1910*	*17400*
* *26.0*	*1.68*	*1870*	*16700*
* *25.0*	*1.61*	*1840*	*16000*

125 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
40.0	2.90	2730	46200
39.0	2.83	2670	43700
38.0	2.75	2610	41300
37.0	2.68	2560	39000
36.0	2.61	2500	36900
35.0	2.54	2450	34900
34.0	2.46	2390	33000
33.0	2.39	2340	31200
32.0	2.32	2290	29400
31.0	2.25	2240	27800
30.0	2.17	2190	26300
29.0	*2.10*	*2140*	*24900*
28.0	*2.03*	*2090*	*23500*
27.0	*1.96*	*2050*	*22200*
26.0	*1.88*	*2000*	*21000*
* *25.0*	*1.81*	*1960*	*19800*
* *24.0*	*1.74*	*1920*	*18800*
* *23.0*	*1.67*	*1870*	*17700*
* *22.0*	*1.59*	*1830*	*16800*

125 Grain Bullet
H4198 Powder
Burning Rate 55

Grains	Vol.CC	Vel	Pressure
27.0	2.03	2490	46800
26.0	*1.95*	*2460*	*46000*
25.0	*1.88*	*2420*	*45100*
* *24.0*	*1.80*	*2390*	*44200*
* *23.0*	*1.73*	*2350*	*43400*
* *22.0*	*1.65*	*2320*	*42600*
* *21.0*	*1.58*	*2280*	*41800*
* *20.0*	*1.50*	*2250*	*41000*
* *19.0*	*1.43*	*2220*	*40200*

130 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
46.0	2.97	2780	46200
45.0	2.90	2730	44100
44.0	2.84	2670	42200
43.0	2.77	2620	40300
42.0	2.71	2570	38500
41.0	2.64	2530	36800
40.0	2.58	2480	35200

Continued next column

Continued

130 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
39.0	2.52	2430	33600
38.0	2.45	2380	32100
37.0	2.39	2340	30700
36.0	2.32	2290	29300
35.0	2.26	2250	28000
34.0	*2.19*	*2210*	*26800*
33.0	*2.13*	*2170*	*25600*
32.0	*2.06*	*2120*	*24500*
31.0	*2.00*	*2080*	*23400*
30.0	*1.93*	*2040*	*22300*
29.0	*1.87*	*2010*	*21300*
* *28.0*	*1.81*	*1970*	*20400*
* *27.0*	*1.74*	*1930*	*19500*
* *26.0*	*1.68*	*1890*	*18600*
* *25.0*	*1.61*	*1860*	*17800*

130 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
42.0	2.71	2730	45000
41.0	2.64	2670	42000
40.0	2.58	2610	39200
39.0	2.52	2550	36500
38.0	2.45	2490	34100
37.0	2.39	2440	31800
36.0	2.32	2390	29700
35.0	2.26	2330	27700
34.0	2.19	2280	25900
33.0	2.13	2230	24100
32.0	2.06	2180	22500
31.0	2.00	2130	21000
30.0	*1.93*	*2090*	*19600*
29.0	*1.87*	*2040*	*18300*
* *28.0*	*1.81*	*2000*	*17100*
* *27.0*	*1.74*	*1950*	*16000*
* *26.0*	*1.68*	*1910*	*14900*
* *25.0*	*1.61*	*1870*	*13900*
* *24.0*	*1.55*	*1830*	*13000*
* *23.0*	*1.48*	*1790*	*12100*
* *22.0*	*1.42*	*1750*	*11300*

130 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
39.0	2.83	2670	46100
38.0	2.75	2610	43300
37.0	2.68	2560	40600
36.0	2.61	2500	38200
35.0	2.54	2440	35800
34.0	2.46	2390	33600
33.0	2.39	2340	31600
32.0	2.32	2280	29600
31.0	2.25	2230	27800
30.0	2.17	2180	26100
29.0	2.10	2140	24500
28.0	*2.03*	*2090*	*23000*

Continued next column

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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308 WINCHESTER Cast Bullet Loads

Continued

130 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
27.0	*1.96*	*2040*	*21600*
26.0	*1.88*	*2000*	*20300*
* *25.0*	*1.81*	*1950*	*19000*
* *24.0*	*1.74*	*1910*	*17900*
* *23.0*	*1.67*	*1870*	*16800*
* *22.0*	*1.59*	*1830*	*15800*
* *21.0*	*1.52*	*1790*	*14800*

130 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
48.0	3.17	2700	46500
47.0	3.11	2650	44100
46.0	3.04	2600	41800
45.0	2.97	2550	39600
44.0	2.91	2500	37500
43.0	2.84	2450	35600
42.0	2.78	2410	33700
41.0	2.71	2360	32000
40.0	2.64	2320	30300
39.0	2.58	2270	28700
38.0	2.51	2230	27200
37.0	2.45	2190	25800
36.0	2.38	2150	24500
35.0	2.31	2110	23200
34.0	*2.25*	*2070*	*22000*
33.0	*2.18*	*2030*	*20900*
32.0	*2.12*	*1990*	*19800*
31.0	*2.05*	*1950*	*18700*
30.0	*1.98*	*1910*	*17800*
29.0	*1.92*	*1880*	*16800*
28.0	*1.85*	*1840*	*16000*
* *27.0*	*1.78*	*1810*	*15100*
* *26.0*	*1.72*	*1770*	*14300*
* *25.0*	*1.65*	*1740*	*13600*

140 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
43.0	2.77	2670	45800
42.0	2.71	2610	43300
41.0	2.64	2560	40800
40.0	2.58	2520	38600
39.0	2.52	2470	36400
38.0	2.45	2420	34400
37.0	2.39	2380	32500
36.0	2.32	2330	30700
35.0	2.26	2290	28900
34.0	2.19	2240	27300
33.0	2.13	2200	25800
32.0	2.06	2160	24400
31.0	*2.00*	*2120*	*23000*
30.0	*1.93*	*2080*	*21700*
29.0	*1.87*	*2040*	*20500*
* *28.0*	*1.81*	*2000*	*19400*
* *27.0*	*1.74*	*1960*	*18300*

Continued next column

Continued

140 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
* *26.0*	*1.68*	*1920*	*17300*
* *25.0*	*1.61*	*1890*	*16300*
* *24.0*	*1.55*	*1850*	*15400*
* *23.0*	*1.48*	*1810*	*14500*

140 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
42.0	3.07	2660	44800
41.0	3.00	2610	42300
40.0	2.92	2560	39900
39.0	2.85	2510	37700
38.0	2.78	2470	35600
37.0	2.70	2420	33600
36.0	2.63	2370	31700
35.0	2.56	2330	29900
34.0	2.49	2290	28200
33.0	2.41	2240	26600
32.0	2.34	2200	25100
31.0	*2.27*	*2160*	*23700*
30.0	*2.19*	*2120*	*22400*
29.0	*2.12*	*2080*	*21100*
28.0	*2.05*	*2040*	*19900*
27.0	*1.97*	*2000*	*18800*
26.0	*1.90*	*1960*	*17800*
* *25.0*	*1.83*	*1920*	*16800*
* *24.0*	*1.75*	*1890*	*15800*
* *23.0*	*1.68*	*1850*	*14900*

140 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
41.0	2.98	2660	43800
40.0	2.91	2600	40400
39.0	2.84	2550	37200
38.0	2.77	2490	34300
37.0	2.69	2440	31700
36.0	2.62	2390	29200
35.0	2.55	2340	26900
34.0	2.48	2290	24900
33.0	2.40	2240	22900
32.0	2.33	2190	21100
31.0	2.26	2140	19500
30.0	2.18	2100	18000
29.0	*2.11*	*2050*	*16600*
28.0	*2.04*	*2010*	*15300*
27.0	*1.97*	*1970*	*14100*
26.0	*1.89*	*1920*	*13000*
* *25.0*	*1.62*	*1880*	*12000*
* *24.0*	*1.75*	*1840*	*11100*

150 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
42.0	3.07	2670	46700
41.0	3.00	2620	44400
40.0	2.92	2570	42300
39.0	2.85	2520	40200
38.0	2.78	2480	38300
37.0	2.70	2430	36400
36.0	2.63	2380	34600
35.0	2.56	2340	32900
34.0	2.49	2290	31300
33.0	2.41	2250	29800
32.0	2.34	2210	28400
31.0	*2.27*	*2170*	*27000*
30.0	*2.19*	*2130*	*25700*
29.0	*2.12*	*2090*	*24400*
28.0	*2.05*	*2050*	*23200*
27.0	*1.97*	*2010*	*22100*
26.0	*1.90*	*1970*	*21000*
* *25.0*	*1.83*	*1930*	*20000*
* *24.0*	*1.75*	*1900*	*19000*
* *23.0*	*1.68*	*1860*	*18100*

150 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2630	44600
43.0	2.77	2580	41400
42.0	2.71	2530	38500
41.0	2.64	2480	35800
40.0	2.58	2430	33300
39.0	2.52	2390	31000
38.0	2.45	2340	28800
37.0	2.39	2300	26800
36.0	2.32	2250	24900
35.0	2.26	2210	23200
34.0	2.19	2170	21500
33.0	2.13	2130	20000
32.0	2.06	2090	18600
31.0	*2.00*	*2050*	*17300*
30.0	*1.93*	*2010*	*16100*
29.0	*1.87*	*1970*	*15000*
* *28.0*	*1.81*	*1930*	*13900*
* *27.0*	*1.74*	*1890*	*12900*
* *26.0*	*1.68*	*1860*	*12000*
* *25.0*	*1.61*	*1820*	*11200*

150 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
39.0	2.52	2500	44900
38.0	2.45	2440	42300
37.0	2.39	2390	39700
36.0	2.32	2340	37400
35.0	2.26	2280	35200
34.0	2.19	2230	33100
33.0	2.13	2190	31100
32.0	2.06	2140	29300

Continued next column

Continued

150 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
31.0	2.00	2090	27500
30.0	1.93	2050	25900
29.0	*1.87*	*2000*	*24300*
* *28.0*	*1.81*	*1960*	*22900*
* *27.0*	*1.74*	*1910*	*21500*
* *26.0*	*1.68*	*1870*	*20300*
* *25.0*	*1.61*	*1830*	*19100*
* *24.0*	*1.55*	*1790*	*17900*
* *23.0*	*1.48*	*1750*	*16900*
* *22.0*	*1.42*	*1710*	*15900*
* *21.0*	*1.35*	*1680*	*14900*

150 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
46.0	3.04	2510	45000
45.0	2.97	2460	42900
44.0	2.91	2410	40900
43.0	2.84	2370	39000
42.0	2.78	2320	37100
41.0	2.71	2280	35400
40.0	2.64	2230	33700
39.0	2.58	2190	32100
38.0	2.51	2150	30600
37.0	2.45	2110	29200
36.0	2.38	2070	27800
35.0	2.31	2030	26500
34.0	2.25	1990	25300
33.0	*2.18*	*1950*	*24100*
32.0	*2.12*	*1920*	*23000*
31.0	*2.05*	*1880*	*21900*
30.0	*1.98*	*1840*	*20800*
29.0	*1.92*	*1810*	*19900*
28.0	*1.85*	*1770*	*18900*
* *27.0*	*1.78*	*1740*	*18000*
* *26.0*	*1.72*	*1710*	*17200*
* *25.0*	*1.65*	*1680*	*16400*

150 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
37.0	2.68	2530	46600
36.0	2.61	2470	42800
35.0	2.54	2420	39300
34.0	2.46	2370	36100
33.0	2.39	2310	33100
32.0	2.32	2260	30400
31.0	2.25	2210	27900
30.0	2.17	2170	25700
29.0	2.10	2120	23600
28.0	2.03	2070	21600
27.0	1.96	2030	19900
26.0	*1.88*	*1980*	*18200*
* *25.0*	*1.81*	*1940*	*16800*
* *24.0*	*1.74*	*1900*	*15400*
* *23.0*	*1.67*	*1860*	*14100*

Continued next column

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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308 WINCHESTER Cast Bullet Loads

Continued

150 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
* *22.0*	*1.59*	*1810*	*13000*
* *21.0*	*1.52*	*1770*	*11900*

150 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
46.0	3.34	2460	42800
45.0	3.26	2410	41000
44.0	3.19	2360	39300
43.0	3.12	2320	37700
42.0	3.05	2270	36200
41.0	2.97	2230	34700
40.0	2.90	2190	33300
39.0	2.83	2150	31900
38.0	2.76	2110	30600
37.0	2.68	2070	29400
36.0	2.61	2030	28200
35.0	2.54	1990	27000
34.0	2.47	1950	25900
33.0	2.39	1910	24900
32.0	2.32	1880	23900
31.0	*2.25*	*1840*	*22900*
30.0	*2.18*	*1810*	*21900*
29.0	*2.10*	*1770*	*21000*
28.0	*2.03*	*1740*	*20200*
27.0	*1.96*	*1710*	*19400*
26.0	*1.89*	*1670*	*18600*
* *25.0*	*1.81*	*1640*	*17800*
* *24.0*	*1.74*	*1610*	*17100*
* *23.0*	*1.67*	*1580*	*16400*

150 Grain Bullet
H450 Powder
Burning Rate 92

Grains	Vol.CC	Vel	Pressure
50.0	3.27	2390	45900
49.0	3.20	2350	43400
48.0	3.13	2300	41000
47.0	3.07	2260	38800
46.0	3.00	2220	36700
45.0	2.94	2180	34700
44.0	2.87	2140	32800
43.0	2.81	2100	31000
42.0	2.74	2070	29300
41.0	2.68	2030	27700
40.0	2.61	1990	26200
39.0	2.55	1960	24700
38.0	2.48	1920	23400
37.0	2.42	1890	22100
36.0	2.35	1850	20900
35.0	2.29	1820	19700
34.0	*2.22*	*1790*	*18700*
33.0	*2.15*	*1760*	*17600*
32.0	*2.09*	*1720*	*16700*
31.0	*2.02*	*1690*	*15800*
30.0	*1.96*	*1660*	*14900*
29.0	*1.89*	*1630*	*14100*

Continued next column

Continued

150 Grain Bullet
H450 Powder
Burning Rate 92

Grains	Vol.CC	Vel	Pressure
* *28.0*	*1.83*	*1600*	*13300*
* *27.0*	*1.76*	*1570*	*12600*
* *26.0*	*1.70*	*1550*	*11900*

155 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
43.0	3.14	2700	46400
42.0	3.07	2650	43700
41.0	3.00	2600	41200
40.0	2.92	2550	38800
39.0	2.85	2500	36500
38.0	2.78	2450	34400
37.0	2.70	2410	32400
36.0	2.63	2360	30500
35.0	2.56	2320	28800
34.0	2.49	2280	27100
33.0	2.41	2230	25500
32.0	2.34	2190	24100
31.0	*2.27*	*2150*	*22700*
30.0	*2.19*	*2110*	*21400*
29.0	*2.12*	*2070*	*20100*
28.0	*2.05*	*2030*	*18900*
27.0	*1.97*	*1990*	*17800*
26.0	*1.90*	*1960*	*16800*
* *25.0*	*1.83*	*1920*	*15800*
* *24.0*	*1.75*	*1880*	*14900*
* *23.0*	*1.68*	*1850*	*14100*

155 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
41.0	2.98	2570	44800
40.0	2.91	2510	42300
39.0	2.84	2460	40000
38.0	2.77	2400	37800
37.0	2.69	2350	35800
36.0	2.62	2300	33800
35.0	2.55	2240	32000
34.0	2.48	2190	30200
33.0	2.40	2150	28600
32.0	2.33	2100	27000
31.0	2.26	2050	25500
30.0	*2.18*	*2010*	*24100*
29.0	*2.11*	*1960*	*22800*
28.0	*2.04*	*1920*	*21600*
27.0	*1.97*	*1880*	*20400*
26.0	*1.89*	*1830*	*19300*
* *25.0*	*1.82*	*1790*	*18200*
* *24.0*	*1.75*	*1750*	*17200*
* *23.0*	*1.67*	*1710*	*16300*
* *22.0*	*1.60*	*1680*	*15400*

155 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
45.0	2.90	2710	44700
44.0	2.84	2650	40700
43.0	2.77	2600	37100
42.0	2.71	2550	33800
41.0	2.64	2510	30800
40.0	2.58	2460	28100
39.0	2.52	2410	25600
38.0	2.45	2370	23300
37.0	2.39	2320	21200
36.0	2.32	2280	19300
35.0	2.26	2230	17600
34.0	2.19	2190	16000
33.0	2.13	2150	14600
32.0	2.06	2110	13300
31.0	*2.00*	*2070*	*12100*
30.0	*1.93*	*2030*	*11000*

155 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
36.0	2.61	2420	45700
35.0	2.54	2370	43400
34.0	2.46	2320	41200
33.0	2.39	2260	39200
32.0	2.32	2210	37200
31.0	2.25	2160	35400
30.0	2.17	2120	33600
29.0	2.10	2070	32000
28.0	2.03	2020	30400
27.0	*1.96*	*1980*	*28900*
26.0	*1.88*	*1930*	*27400*
* *25.0*	*1.81*	*1890*	*26100*
* *24.0*	*1.74*	*1850*	*24800*
* *23.0*	*1.67*	*1810*	*23500*
* *22.0*	*1.59*	*1770*	*22400*
* *21.0*	*1.52*	*1730*	*21300*
* *20.0*	*1.45*	*1690*	*20200*

165 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
41.0	3.00	2490	46100
40.0	2.92	2440	43700
39.0	2.85	2390	41500
38.0	2.78	2340	39300
37.0	2.70	2290	37300
36.0	2.63	2240	35300
35.0	2.56	2190	33500
34.0	2.49	2150	31800
33.0	2.41	2100	30100
32.0	2.34	2060	28500
31.0	2.27	2010	27100
30.0	*2.19*	*1970*	*25700*
29.0	*2.12*	*1930*	*24300*
28.0	*2.05*	*1890*	*23100*
27.0	*1.97*	*1850*	*21900*

Continued next column

Continued

165 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
26.0	*1.90*	*1810*	*20700*
* *25.0*	*1.83*	*1770*	*19700*
* *24.0*	*1.75*	*1730*	*18600*
* *23.0*	*1.68*	*1700*	*17700*
* *22.0*	*1.61*	*1660*	*16700*

165 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2560	45000
43.0	2.77	2510	41500
42.0	2.71	2460	38400
41.0	2.64	2420	35500
40.0	2.58	2370	32800
39.0	2.52	2330	30300
38.0	2.45	2280	28000
37.0	2.39	2240	25900
36.0	2.32	2200	23900
35.0	2.26	2150	22100
34.0	2.19	2110	20400
33.0	2.13	2070	18900
32.0	2.06	2030	17400
31.0	*2.00*	*2000*	*16100*
30.0	*1.93*	*1960*	*14900*
29.0	*1.87*	*1920*	*13800*
* *28.0*	*1.81*	*1880*	*12700*
* *27.0*	*1.74*	*1850*	*11700*

165 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
44.0	2.91	2380	45900
43.0	2.84	2340	44500
42.0	2.78	2310	43100
41.0	2.71	2270	41800
40.0	2.64	2230	40500
39.0	2.58	2200	39300
38.0	2.51	2170	38100
37.0	2.45	2130	37000
36.0	2.38	2100	35800
35.0	2.31	2060	34800
34.0	*2.25*	*2030*	*33700*
33.0	*2.18*	*2000*	*32700*
32.0	*2.12*	*1970*	*31700*
31.0	*2.05*	*1940*	*30700*
30.0	*1.98*	*1910*	*29800*
29.0	*1.92*	*1880*	*28900*
28.0	*1.85*	*1850*	*28000*
* *27.0*	*1.78*	*1820*	*27200*
* *26.0*	*1.72*	*1790*	*26400*
* *25.0*	*1.65*	*1760*	*25600*

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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308 WINCHESTER Cast Bullet Loads

165 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
35.0	2.26	2230	46500
34.0	2.19	2180	45000
33.0	2.13	2130	43600
32.0	2.06	2090	42200
31.0	2.00	2040	40800
30.0	1.93	1990	39500
29.0	1.87	1950	38200
* 28.0	1.81	1910	37000
*27.0	1.74	1860	35800
*26.0	1.68	1620	34600
*25.0	1.61	1780	33500
*24.0	1.55	1740	32400
*23.0	1.48	1710	31400
*22.0	1.42	1670	30400
*21.0	1.35	1630	29400
*20.0	1.29	1590	28500

165 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
35.0	2.54	2290	44600
34.0	2.46	2230	42100
33.0	2.39	2170	39600
32.0	2.32	2120	37400
31.0	2.25	2060	35200
30.0	2.17	2010	33200
29.0	2.10	1960	31300
28.0	2.03	1910	29500
27.0	1.96	1860	27800
26.0	1.88	1820	26200
*25.0	1.81	1770	24700
*24.0	1.74	1730	23300
*23.0	1.67	1680	22000
*22.0	1.59	1640	20700
*21.0	1.52	1600	19500
*20.0	1.45	1560	18400
*19.0	1.38	1520	17300

165 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
46.0	3.34	2440	43600
45.0	3.26	2400	42200
44.0	3.19	2350	40800
43.0	3.12	2310	39400
42.0	3.05	2260	38100
41.0	2.97	2220	36900
40.0	2.90	2180	35700
39.0	2.83	2140	34500
38.0	2.76	2100	33400
37.0	2.68	2060	32300
36.0	2.61	2020	31200
35.0	2.54	1980	30200
34.0	2.47	1940	29200
33.0	2.39	1910	28300
32.0	2.32	1870	27300

Continued next column

Continued

165 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
*31.0	2.25	1840	26400
*30.0	2.18	1800	25600
*29.0	2.10	1770	24700
*28.0	2.03	1730	23900
*27.0	1.96	1700	23100
*26.0	1.89	1670	22400
* 25.0	1.81	1640	21600
* 24.0	1.74	1610	20900
* 23.0	1.67	1580	20200

165 Grain Bullet
H450 Powder
Burning Rate 92

Grains	Vol.CC	Vel	Pressure
49.0	3.20	2310	45900
48.0	3.13	2260	44200
47.0	3.07	2220	42400
46.0	3.00	2180	40800
45.0	2.94	2140	39200
44.0	2.87	2100	37700
43.0	2.81	2060	36200
42.0	2.74	2020	34800
41.0	2.68	1980	33400
40.0	2.61	1940	32100
39.0	2.55	1910	30900
38.0	2.48	1870	29700
37.0	2.42	1830	28500
36.0	2.35	1800	27400
35.0	2.29	1770	26300
34.0	2.22	1730	25300
*33.0	2.15	1700	24300
*32.0	2.09	1670	23400
*31.0	2.02	1640	22500
*30.0	1.96	1600	21600
*29.0	1.89	1570	20700
* 28.0	1.83	1540	19900
* 27.0	1.76	1520	19100
* 26.0	1.70	1490	18400
* 25.0	1.63	1460	17700
* 24.0	1.57	1430	17000

168 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2600	47000
43.0	2.77	2550	43300
42.0	2.71	2500	40000
41.0	2.64	2460	36900
40.0	2.58	2410	34000
39.0	2.52	2360	31400
38.0	2.45	2320	28900
37.0	2.39	2280	26700
36.0	2.32	2230	24600
35.0	2.26	2190	22700
34.0	2.19	2150	21000
33.0	2.13	2110	19300
32.0	2.06	2070	17800

Continued next column

Continued

168 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
*31.0	2.00	2030	16400
*30.0	1.93	1990	15200
*29.0	1.87	1950	14000
* 28.0	1.81	1920	12900
* 27.0	1.74	1880	11900

168 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
41.0	3.00	2450	46700
40.0	2.92	2400	44300
39.0	2.85	2350	42100
38.0	2.78	2300	40000
37.0	2.70	2250	38000
36.0	2.63	2200	36100
35.0	2.56	2150	34300
34.0	2.49	2110	32600
33.0	2.41	2060	30900
32.0	2.34	2020	29400
31.0	2.27	1980	27900
*30.0	2.19	1930	26500
*29.0	2.12	1890	25200
*28.0	2.05	1850	23900
*27.0	1.97	1810	22700
*26.0	1.90	1770	21600
* 25.0	1.83	1740	20500
* 24.0	1.75	1700	19500
* 23.0	1.68	1660	18500
* 22.0	1.61	1630	17600

168 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
39.0	2.52	2460	45000
38.0	2.45	2410	41100
37.0	2.39	2350	37600
36.0	2.32	2300	34400
35.0	2.26	2250	31400
34.0	2.19	2200	28700
33.0	2.13	2150	26300
32.0	2.06	2100	24000
31.0	2.00	2060	22000
30.0	1.93	2010	20100
29.0	1.87	1960	18400
* 28.0	1.81	1920	16800
*27.0	1.74	1880	15400
* 26.0	1.68	1840	14100
* 25.0	1.61	1800	12900
* 24.0	1.55	1760	11800

175 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
43.0	2.77	2530	46700
42.0	2.71	2470	43000
41.0	2.64	2420	39600
40.0	2.58	2370	36400
39.0	2.52	2310	33500
38.0	2.45	2260	30800
37.0	2.39	2210	28400
36.0	2.32	2160	26100
35.0	2.26	2120	24000
34.0	2.19	2070	22100
33.0	2.13	2020	20400
32.0	2.06	1980	18700
31.0	2.00	1940	17200
*30.0	1.93	1890	15900
*29.0	1.87	1850	14600
* 28.0	1.81	1810	13400
* 27.0	1.74	1770	12400
* 26.0	1.68	1730	11400

175 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
40.0	2.92	2400	46500
39.0	2.85	2350	44500
38.0	2.78	2300	42600
37.0	2.70	2250	40800
36.0	2.63	2200	39000
35.0	2.56	2150	37300
34.0	2.49	2100	35700
33.0	2.41	2050	34200
32.0	2.34	2010	32700
31.0	2.27	1960	31300
30.0	2.19	1920	30000
*29.0	2.12	1880	28700
*28.0	2.05	1830	27500
*27.0	1.97	1790	26300
*26.0	1.90	1750	25200
* 25.0	1.83	1710	24100
* 24.0	1.75	1680	23000
* 23.0	1.68	1640	22000
* 22.0	1.61	1600	21100

175 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
40.0	2.91	2500	46600
39.0	2.84	2450	42900
38.0	2.77	2400	39400
37.0	2.69	2350	36300
36.0	2.62	2300	33400
35.0	2.55	2250	30700
34.0	2.48	2200	28200
33.0	2.40	2160	26000
32.0	2.33	2110	23900
31.0	2.26	2070	22000
30.0	2.18	2030	20200

Continued next column

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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308 WINCHESTER Cast Bullet Loads

Continued

175 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
29.0	2.11	1980	18600
28.0	*2.04*	*1940*	*17100*
27.0	*1.97*	*1900*	*15700*
26.0	*1.89*	*1860*	*14500*
* *25.0*	*1.82*	*1620*	*13300*
* *24.0*	*1.75*	*1790*	*12200*
* *23.0*	*1.67*	*1750*	*11300*

175 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
45.0	2.97	2430	44700
44.0	2.91	2390	41600
43.0	2.84	2340	38700
42.0	2.78	2300	35900
41.0	2.71	2250	33400
40.0	2.64	2210	31100
39.0	2.58	2170	28900
38.0	2.51	2130	26900
37.0	2.45	2090	25000
36.0	2.38	2050	23300
35.0	2.31	2010	21600
34.0	2.25	1970	20100
33.0	2.18	1930	18700
32.0	*2.12*	*1900*	*17400*
31.0	*2.05*	*1860*	*16200*
30.0	*1.98*	*1830*	*15100*
29.0	*1.92*	*1790*	*14000*
28.0	*1.85*	*1760*	*13000*
* *27.0*	*1.78*	*1720*	*12100*
* *26.0*	*1.72*	*1690*	*11300*

175 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
38.0	2.45	2400	46300
37.0	2.39	2350	42800
36.0	2.32	2290	39600
35.0	2.26	2240	36700
34.0	2.19	2190	33900
33.0	2.13	2140	31400
32.0	2.06	2090	29100
31.0	2.00	2050	26900
30.0	1.93	2000	24900
29.0	1.87	1950	23000
* 28.0	1.81	1910	21300
* *27.0*	*1.74*	*1870*	*19700*
* *26.0*	*1.68*	*1820*	*18300*
* *25.0*	*1.61*	*1780*	*16900*
* *24.0*	*1.55*	*1740*	*15600*
* *23.0*	*1.48*	*1700*	*14500*
* *22.0*	*1.42*	*1660*	*13400*
* *21.0*	*1.35*	*1630*	*12400*
* *20.0*	*1.29*	*1590*	*11500*

180 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
40.0	2.92	2390	46900
39.0	2.85	2340	44800
38.0	2.78	2290	42700
37.0	2.70	2240	40800
36.0	2.63	2190	39000
35.0	2.56	2140	37200
34.0	2.49	2100	35500
33.0	2.41	2050	33900
32.0	2.34	2010	32400
31.0	2.27	1970	30900
30.0	2.19	1920	29500
29.0	*2.12*	*1880*	*26200*
28.0	*2.05*	*1840*	*26900*
27.0	*1.97*	*1800*	*25700*
26.0	*1.90*	*1760*	*24500*
* *25.0*	*1.83*	*1730*	*23400*
* *24.0*	*1.75*	*1690*	*22300*
* *23.0*	*1.68*	*1650*	*21300*
* *22.0*	*1.61*	*1620*	*20300*

180 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
41.0	2.64	2390	45500
40.0	2.58	2340	43100
39.0	2.52	2290	40800
38.0	2.45	2240	38700
37.0	2.39	2190	36600
36.0	2.32	2150	34700
35.0	2.26	2100	32800
34.0	2.19	2060	31100
33.0	2.13	2010	29400
32.0	2.06	1970	27900
31.0	2.00	1930	26400
30.0	*1.93*	*1890*	*25000*
29.0	*1.87*	*1850*	*23700*
* *28.0*	*1.81*	*1810*	*22400*
* *27.0*	*1.74*	*1770*	*21200*
* *26.0*	*1.68*	*1730*	*20100*
* *25.0*	*1.61*	*1700*	*19100*
* *24.0*	*1.55*	*1660*	*18000*
* *23.0*	*1.48*	*1630*	*17100*
* *22.0*	*1.42*	*1590*	*16200*

180 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
42.0	2.90	2360	47000
41.0	2.83	2310	44800
40.0	2.76	2260	42700
39.0	2.69	2210	40700
38.0	2.63	2160	38800
37.0	2.56	2120	37000
36.0	2.49	2070	35200
35.0	2.42	2030	33600
34.0	2.35	1990	32000

Continued next column

Continued

180 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
33.0	2.28	1940	30500
32.0	2.21	1900	29100
31.0	*2.14*	*1860*	*27700*
30.0	*2.07*	*1820*	*26400*
29.0	*2.00*	*1780*	*25100*
28.0	*1.93*	*1750*	*24000*
27.0	*1.87*	*1710*	*22800*
* *26.0*	*1.80*	*1670*	*21800*
* *25.0*	*1.73*	*1640*	*20700*
* *24.0*	*1.66*	*1600*	*19800*
* *23.0*	*1.59*	*1570*	*18800*

180 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
45.0	2.97	2380	44700
44.0	2.91	2340	42200
43.0	2.84	2300	39800
42.0	2.78	2250	37500
41.0	2.71	2210	35300
40.0	2.64	2170	33300
39.0	2.58	2130	31400
38.0	2.51	2090	29600
37.0	2.45	2050	27900
36.0	2.38	2010	26300
35.0	2.31	1970	24800
34.0	2.25	1940	23400
33.0	2.18	1900	22100
32.0	*2.12*	*1860*	*20800*
31.0	*2.05*	*1830*	*19600*
30.0	*1.98*	*1790*	*18500*
29.0	*1.92*	*1760*	*17400*
28.0	*1.85*	*1730*	*16400*
* *27.0*	*1.78*	*1700*	*15500*
* *26.0*	*1.72*	*1660*	*14600*
* *25.0*	*1.65*	*1630*	*13800*
* *24.0*	*1.59*	*1600*	*13000*

180 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
37.0	2.39	2310	46100
36.0	2.32	2260	43300
35.0	2.26	2210	40700
34.0	2.19	2160	38200
33.0	2.13	2110	35900
32.0	2.06	2070	33800
31.0	2.00	2020	31800
30.0	1.93	1980	29800
29.0	1.87	1930	28100
* 28.0	1.81	1890	26400
* *27.0*	*1.74*	*1850*	*24800*
* *26.0*	*1.68*	*1810*	*23300*
* *25.0*	*1.61*	*1770*	*21900*
* *24.0*	*1.55*	*1730*	*20600*
* *23.0*	*1.48*	*1690*	*19300*

Continued next column

Continued

180 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
* *22.0*	*1.42*	*1650*	*18200*
* *21.0*	*1.35*	*1620*	*17100*
* *20.0*	*1.29*	*1580*	*16100*

180 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
45.0	3.26	2370	44900
44.0	3.19	2320	42400
43.0	3.12	2280	40200
42.0	3.05	2230	38000
41.0	2.97	2190	36000
40.0	2.90	2150	34000
39.0	2.83	2110	32200
38.0	2.76	2070	30500
37.0	2.68	2030	28900
36.0	2.61	1990	27300
35.0	2.54	1950	25800
34.0	2.47	1920	24500
33.0	2.39	1880	23200
32.0	2.32	1840	21900
31.0	*2.25*	*1810*	*20700*
30.0	*2.18*	*1770*	*19600*
29.0	*2.10*	*1740*	*18600*
28.0	*2.03*	*1710*	*17600*
27.0	*1.96*	*1680*	*16600*
26.0	*1.89*	*1640*	*15700*
* *25.0*	*1.81*	*1610*	*14900*
* *24.0*	*1.74*	*1580*	*14100*
* *23.0*	*1.67*	*1550*	*13300*

180 Grain Bullet
H322 Powder
Burning Rate 61

Grains	Vol.CC	Vel	Pressure
34.0	2.46	2210	46000
33.0	2.39	2160	43100
32.0	2.32	2100	40400
31.0	2.25	2050	37900
30.0	2.17	2000	35500
29.0	2.10	1950	33300
28.0	2.03	1900	31200
27.0	1.96	1850	29200
26.0	1.88	1810	27400
* 25.0	1.81	1760	25700
* *24.0*	*1.74*	*1720*	*24000*
* *23.0*	*1.67*	*1670*	*22500*
* *22.0*	*1.59*	*1630*	*21100*
* *21.0*	*1.52*	*1590*	*19800*
* *20.0*	*1.45*	*1550*	*18500*
* *19.0*	*1.38*	*1510*	*17400*
* *18.0*	*1.30*	*1480*	*16300*

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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308 WINCHESTER Cast Bullet Loads

180 Grain Bullet
H450 Powder
Burning Rate 92

Grains	Vol.CC	Vel	Pressure
47.0	3.07	2220	45700
46.0	3.00	2180	42100
45.0	2.94	2130	38800
44.0	2.87	2090	35700
43.0	2.81	2050	32900
42.0	2.74	2020	30300
41.0	2.68	1980	27900
40.0	2.61	1940	25700
39.0	2.55	1900	23700
38.0	2.48	1870	21800
37.0	2.42	1830	20100
36.0	2.35	1800	18500
35.0	2.29	1760	17100
34.0	2.22	1730	15700
33.0	2.15	1700	14500
32.0	*2.09*	*1670*	*13400*
31.0	*2.02*	*1630*	*12300*
30.0	*1.96*	*1600*	*11300*

190 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
33.0	2.41	1980	46500
32.0	2.34	1930	45500
31.0	2.27	1890	44500
30.0	2.19	1850	43600
29.0	*2.12*	*1810*	*42700*
28.0	*2.05*	*1770*	*41800*
27.0	*1.97*	*1730*	*41000*
26.0	*1.90*	*1690*	*40100*
* *25.0*	*1.83*	*1650*	*39300*
* *24.0*	*1.75*	*1620*	*38500*
* *23.0*	*1.68*	*1580*	*37700*
* *22.0*	*1.61*	*1540*	*36900*
* *21.0*	*1.54*	*1510*	*36100*

190 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
38.0	2.77	2300	45000
37.0	2.69	2250	42100
36.0	2.62	2200	39300
35.0	2.55	2150	36700
34.0	2.48	2100	34300
33.0	2.40	2050	32100
32.0	2.33	2010	30000
31.0	2.26	1960	28000
30.0	2.18	1920	26200
29.0	2.11	1870	24500
28.0	2.04	1830	22900
27.0	*1.97*	*1790*	*21400*
26.0	*1.89*	*1750*	*20000*
* *25.0*	*1.82*	*1710*	*18700*
* *24.0*	*1.75*	*1670*	*17400*
* *23.0*	*1.67*	*1640*	*16300*
* *22.0*	*1.60*	*1600*	*15200*

Continued next column

Continued

190 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
* *21.0*	*1.53*	*1570*	*14200*
* *20.0*	*1.46*	*1530*	*13300*

190 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
43.0	2.84	2270	45600
42.0	2.78	2230	43400
41.0	2.71	2190	41300
40.0	2.64	2150	39400
39.0	2.58	2110	37500
38.0	2.51	2070	35700
37.0	2.45	2030	34000
36.0	2.38	1990	32400
35.0	2.31	1950	30900
34.0	2.25	1910	29400
33.0	2.18	1880	28000
32.0	2.12	1840	26700
31.0	*2.05*	*1810*	*25400*
30.0	*1.98*	*1770*	*24200*
29.0	*1.92*	*1740*	*23100*
28.0	*1.85*	*1710*	*22000*
* *27.0*	*1.78*	*1670*	*21000*
* *26.0*	*1.72*	*1640*	*20000*
* *25.0*	*1.65*	*1610*	*19000*
* *24.0*	*1.59*	*1580*	*18100*
* *23.0*	*1.52*	*1550*	*17300*

190 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
37.0	2.39	2290	46700
36.0	2.32	2240	43200
35.0	2.26	2190	39800
34.0	2.19	2140	36800
33.0	2.13	2100	34000
32.0	2.06	2050	31400
31.0	2.00	2010	29000
30.0	1.93	1960	26700
29.0	1.87	1920	24700
* 28.0	1.81	1880	22800
* 27.0	1.74	1840	21000
* *26.0*	*1.68*	*1800*	*19400*
* *25.0*	*1.61*	*1760*	*17900*
* *24.0*	*1.55*	*1720*	*16600*
* *23.0*	*1.48*	*1680*	*15300*
* *22.0*	*1.42*	*1640*	*14100*
* *21.0*	*1.35*	*1610*	*13000*
* *20.0*	*1.29*	*1570*	*12000*
* *19.0*	*1.23*	*1540*	*11100*

200 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
42.0	2.90	2310	47000
41.0	2.83	2260	43200
40.0	2.76	2210	39700
39.0	2.69	2160	36500
38.0	2.63	2120	33500
37.0	2.56	2070	30800
36.0	2.49	2020	28300
35.0	2.42	1980	26000
34.0	2.35	1940	23900
33.0	2.28	1900	22000
32.0	2.21	1850	20200
31.0	2.14	1810	18600
30.0	2.07	1770	17100
29.0	*2.00*	*1740*	*15700*
28.0	*1.93*	*1700*	*14400*
27.0	*1.87*	*1660*	*13200*
* *26.0*	*1.80*	*1620*	*12200*
* *25.0*	*1.73*	*1590*	*11200*

200 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
37.0	2.70	2190	46500
36.0	2.63	2140	44200
35.0	2.56	2100	42000
34.0	2.49	2050	40000
33.0	2.41	2010	38000
32.0	2.34	1970	36200
31.0	2.27	1920	34400
30.0	2.19	1880	32700
29.0	2.12	1840	31100
28.0	2.05	1800	29600
27.0	*1.97*	*1760*	*28100*
26.0	*1.90*	*1730*	*26800*
* *25.0*	*1.83*	*1690*	*25500*
* *24.0*	*1.75*	*1650*	*24200*
* *23.0*	*1.68*	*1620*	*23000*
* *22.0*	*1.61*	*1580*	*21900*
* *21.0*	*1.54*	*1550*	*20800*
* *20.0*	*1.46*	*1520*	*19800*

200 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
36.0	2.62	2160	45700
35.0	2.55	2120	43400
34.0	2.48	2070	41200
33.0	2.40	2030	39200
32.0	2.33	1990	37200
31.0	2.26	1940	35400
30.0	2.18	1900	33600
29.0	2.11	1860	32000
28.0	2.04	1820	30400
27.0	*1.97*	*1790*	*28900*
26.0	*1.89*	*1750*	*27400*
* *25.0*	*1.82*	*1710*	*26100*

Continued next column

Continued

200 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
* *24.0*	*1.75*	*1680*	*24800*
* *23.0*	*1.67*	*1640*	*23500*
* *22.0*	*1.60*	*1610*	*22400*
* *21.0*	*1.53*	*1570*	*21300*
* *20.0*	*1.46*	*1540*	*20200*

200 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
36.0	2.32	2210	45900
35.0	2.26	2160	42500
34.0	2.19	2110	39400
33.0	2.13	2070	36500
32.0	2.06	2020	33800
31.0	2.00	1970	31300
30.0	1.93	1930	29000
29.0	1.87	1880	26800
* 28.0	1.81	1840	24900
* 27.0	1.74	1800	23000
* *26.0*	*1.68*	*1760*	*21300*
* *25.0*	*1.61*	*1720*	*19700*
* *24.0*	*1.55*	*1680*	*18300*
* *23.0*	*1.48*	*1640*	*16900*
* *22.0*	*1.42*	*1600*	*15700*
* *21.0*	*1.35*	*1570*	*14500*
* *20.0*	*1.29*	*1530*	*13500*
* *19.0*	*1.23*	*1500*	*12500*

200 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
42.0	2.78	2240	43800
41.0	2.71	2190	40600
40.0	2.64	2140	37700
39.0	2.58	2100	34900
38.0	2.51	2050	32300
37.0	2.45	2010	30000
36.0	2.38	1960	27800
35.0	2.31	1920	25700
34.0	2.25	1880	23900
33.0	2.18	1840	22100
32.0	2.12	1800	20500
31.0	2.05	1760	19000
30.0	1.98	1720	17600
29.0	*1.92*	*1690*	*16300*
28.0	*1.85*	*1650*	*15100*
* *27.0*	*1.78*	*1610*	*14000*
* *26.0*	*1.72*	*1580*	*13000*
* *25.0*	*1.65*	*1540*	*12000*
* *24.0*	*1.59*	*1510*	*11100*

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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308 WINCHESTER Cast Bullet Loads

200 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
43.0	3.12	2220	47000
42.0	3.05	2170	45200
41.0	2.97	2120	43400
40.0	2.90	2080	41800
39.0	2.83	2030	40200
38.0	2.76	1980	38600
37.0	2.68	1940	37200
36.0	2.61	1900	35700
35.0	2.54	1850	34400
34.0	2.47	1810	33100
33.0	2.39	1770	31800
32.0	2.32	1730	30600
31.0	2.25	1690	29400
30.0	*2.18*	*1660*	*28300*
29.0	*2.10*	*1620*	*27200*
28.0	*2.03*	*1580*	*26100*
27.0	*1.96*	*1550*	*25100*
26.0	*1.89*	*1510*	*24200*
* *25.0*	*1.81*	*1480*	*23300*
* *24.0*	*1.74*	*1450*	*22400*
* *23.0*	*1.67*	*1420*	*21500*
* *22.0*	*1.60*	*1380*	*20700*

200 Grain Bullet
H450 Powder
Burning Rate 92

Grains	Vol.CC	Vel	Pressure
45.0	2.94	2070	47100
44.0	2.87	2030	45800
43.0	2.81	1990	44500
42.0	2.74	1950	43300
41.0	2.68	1920	42100
40.0	2.61	1880	41000
39.0	2.55	1840	39900
38.0	2.48	1810	38800
37.0	2.42	1770	37700
36.0	2.35	1740	36700
35.0	2.29	1710	35700
34.0	2.22	1670	34700
33.0	2.15	1640	33800
32.0	2.09	1610	32800
31.0	*2.02*	*1580*	*31900*
30.0	*1.96*	*1550*	*31100*
29.0	*1.89*	*1520*	*30200*
* *28.0*	*1.83*	*1490*	*29400*
* *27.0*	*1.76*	*1460*	*28600*
* *26.0*	*1.70*	*1440*	*27800*
* *25.0*	*1.63*	*1410*	*27000*
* *24.0*	*1.57*	*1380*	*26300*
* *23.0*	*1.50*	*1350*	*25600*

225 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
41.0	2.97	2120	46100
40.0	2.90	2070	44500
39.0	2.83	2020	43000
38.0	2.76	1980	41600
37.0	2.68	1930	40200
36.0	2.61	1890	38800
35.0	2.54	1850	37500
34.0	2.47	1810	36200
33.0	2.39	1770	35000
32.0	2.32	1730	33800
31.0	2.25	1690	32700
30.0	*2.18*	*1650*	*31600*
29.0	*2.10*	*1620*	*30500*
28.0	*2.03*	*1580*	*29500*
27.0	*1.96*	*1540*	*28500*
26.0	*1.89*	*1510*	*27500*
* *25.0*	*1.81*	*1480*	*26600*
* *24.0*	*1.74*	*1440*	*25700*
* *23.0*	*1.67*	*1410*	*24800*
* *22.0*	*1.60*	*1380*	*24000*

225 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
41.0	2.71	2140	43800
40.0	2.64	2100	40600
39.0	2.58	2050	37700
38.0	2.51	2000	34900
37.0	2.45	1960	32300
36.0	2.38	1920	30000
35.0	2.31	1880	27800
34.0	2.25	1830	25700
33.0	2.18	1790	23900
32.0	2.12	1760	22100
31.0	2.05	1720	20500
30.0	1.98	1680	19000
29.0	*1.92*	*1640*	*17600*
28.0	*1.85*	*1610*	*16300*
* *27.0*	*1.78*	*1570*	*15100*
* *26.0*	*1.72*	*1540*	*14000*
* *25.0*	*1.65*	*1500*	*13000*
* *24.0*	*1.59*	*1470*	*12000*
* *23.0*	*1.52*	*1440*	*11100*

225 Grain Bullet
H4831 Powder
Burning Rate 95

Grains	Vol.CC	Vel	Pressure
45.0	3.26	2190	45500
44.0	3.19	2140	41500
43.0	3.12	2100	37900
42.0	3.04	2050	34600
41.0	2.97	2010	31600
40.0	2.90	1960	28900
39.0	2.83	1920	26400
38.0	2.75	1880	24100
37.0	2.68	1840	22000

Continued next column

Continued

225 Grain Bullet
H4831 Powder
Burning Rate 95

Grains	Vol.CC	Vel	Pressure
36.0	2.61	1800	20100
35.0	2.54	1760	18400
34.0	2.46	1720	16800
33.0	2.39	1690	15300
32.0	2.32	1650	14000
31.0	*2.25*	*1620*	*12800*
30.0	*2.17*	*1580*	*11700*

225 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
40.0	2.76	2140	45300
39.0	2.69	2090	42100
38.0	2.63	2050	39100
37.0	2.56	2000	36300
36.0	2.49	1960	33800
35.0	2.42	1920	31400
34.0	2.35	1870	29200
33.0	2.28	1830	27100
32.0	2.21	1790	25200
31.0	2.14	1750	23400
30.0	2.07	1720	21800
29.0	2.00	1680	20200
28.0	*1.93*	*1640*	*18800*
27.0	*1.87*	*1610*	*17500*
* *26.0*	*1.80*	*1570*	*16200*
* *25.0*	*1.73*	*1540*	*15100*
* *24.0*	*1.66*	*1500*	*14000*
* *23.0*	*1.59*	*1470*	*13000*
* *22.0*	*1.52*	*1440*	*12100*
* *21.0*	*1.45*	*1410*	*11300*

225 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
33.0	2.13	1970	46100
32.0	2.06	1920	43700
31.0	2.00	1870	41500
30.0	1.93	1830	39400
29.0	1.87	1780	37400
* 28.0	1.81	1730	35500
* 27.0	1.74	1690	33600
* 26.0	1.68	1650	31900
* *25.0*	*1.61*	*1610*	*30300*
* *24.0*	*1.55*	*1570*	*28700*
* *23.0*	*1.48*	*1530*	*27300*
* *22.0*	*1.42*	*1490*	*25900*
* *21.0*	*1.35*	*1450*	*24600*
* *20.0*	*1.29*	*1410*	*23300*
* *19.0*	*1.23*	*1380*	*22100*
* *18.0*	*1.16*	*1340*	*21000*

225 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
34.0	2.48	2060	42900
33.0	2.40	2010	38900
32.0	2.33	1960	35200
31.0	2.26	1910	31900
30.0	2.18	1860	28900
29.0	2.11	1810	26200
28.0	2.04	1770	23700
27.0	1.97	1720	21500
26.0	1.89	1680	19500
* 25.0	1.82	1640	17700
* *24.0*	*1.75*	*1600*	*16000*
* *23.0*	*1.67*	*1560*	*14500*
* *22.0*	*1.60*	*1520*	*13100*
* *21.0*	*1.53*	*1480*	*11900*

225 Grain Bullet
H450 Powder
Burning Rate 92

Grains	Vol.CC	Vel	Pressure
47.0	3.07	2160	46600
46.0	3.00	2120	42900
45.0	2.94	2080	39600
44.0	2.87	2040	36500
43.0	2.81	2000	33600
42.0	2.74	1960	31000
41.0	2.68	1920	28600
40.0	2.61	1890	26300
39.0	2.55	1850	24300
38.0	2.48	1810	22400
37.0	2.42	1780	20600
36.0	2.35	1740	19000
35.0	2.29	1710	17500
34.0	2.22	1680	16100
33.0	2.15	1650	14900
32.0	2.09	1610	13700
31.0	*2.02*	*1580*	*12600*
30.0	*1.96*	*1550*	*11700*

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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30-06 SPRINGFIELD Cast Bullet Loads

Useful case capacity 4.38 cc

110 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
49.0	3.58	3110	46700
48.0	3.51	3070	45700
47.0	3.44	3040	44700
46.0	3.36	3010	43700
45.0	3.29	2980	42700
44.0	3.22	2950	41800
43.0	3.14	2910	40900
42.0	3.07	2880	40000
41.0	3.00	2850	39100
40.0	2.92	2820	38300
39.0	*2.85*	*2790*	*37400*
38.0	*2.78*	*2760*	*36600*
37.0	*2.70*	*2740*	*35800*
36.0	*2.63*	*2710*	*35000*
35.0	*2.56*	*2680*	*34300*
34.0	*2.49*	*2650*	*33500*
33.0	*2.41*	*2620*	*32800*
* *32.0*	*2.34*	*2590*	*32100*
* *31.0*	*2.27*	*2570*	*31400*
* *30.0*	*2.19*	*2540*	*30700*
* *29.0*	*2.12*	*2510*	*30000*

110 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
51.0	3.71	3150	46800
50.0	3.64	3110	45000
49.0	3.57	3070	43300
48.0	3.49	3020	41600
47.0	3.42	2980	40000
46.0	3.35	2940	38500
45.0	3.28	2900	37000
44.0	3.20	2860	35600
43.0	3.13	2820	34200
42.0	3.06	2780	32900
41.0	2.98	2740	31700
40.0	2.91	2700	30500
39.0	2.84	2660	29300
38.0	2.77	2630	28200
37.0	*2.69*	*2590*	*27100*
36.0	*2.62*	*2550*	*26000*
35.0	*2.55*	*2520*	*25100*
34.0	*2.48*	*2480*	*24100*
33.0	*2.40*	*2450*	*23200*
* *32.0*	*2.33*	*2410*	*22300*
* *31.0*	*2.26*	*2380*	*21400*
* *30.0*	*2.18*	*2350*	*20600*
* *29.0*	*2.11*	*2320*	*19800*
* *28.0*	*2.04*	*2280*	*19100*

110 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
56.0	3.61	3200	46700
55.0	3.55	3150	45000
54.0	3.48	3110	43400

Continued next column

Continued

110 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
53.0	3.42	3060	41900
52.0	3.35	3020	40400
51.0	3.29	2970	39000
50.0	3.22	2930	37600
49.0	3.16	2890	36200
48.0	3.10	2840	34900
47.0	3.03	2800	33700
46.0	2.97	2760	32500
45.0	2.90	2720	31300
44.0	2.84	2680	30200
43.0	2.77	2640	29200
42.0	2.71	2600	28100
41.0	2.64	2560	27100
40.0	2.58	2530	26100
39.0	*2.52*	*2490*	*25200*
38.0	*2.45*	*2450*	*24300*
37.0	*2.39*	*2420*	*23400*
* *36.0*	*2.32*	*2380*	*22600*
* *35.0*	*2.26*	*2350*	*21800*
* *34.0*	*2.19*	*2310*	*21000*
* *33.0*	*2.13*	*2280*	*20300*
* *32.0*	*2.06*	*2250*	*19600*
* *31.0*	*2.00*	*2210*	*18900*
* *30.0*	*1.93*	*2180*	*16200*
* *29.0*	*1.87*	*2150*	*17500*

110 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2960	46800
43.0	2.77	2930	45900
42.0	2.71	2900	45100
41.0	2.64	2870	44300
40.0	2.58	2840	43500
39.0	2.52	2800	42700
38.0	2.45	2770	41900
37.0	2.39	2740	41200
* *36.0*	*2.32*	*2710*	*40400*
* *35.0*	*2.26*	*2680*	*39700*
* *34.0*	*2.19*	*2650*	*39000*
* *33.0*	*2.13*	*2620*	*38300*
* *32.0*	*2.06*	*2590*	*37600*
* *31.0*	*2.00*	*2570*	*36900*
* *30.0*	*1.93*	*2540*	*36200*
* *29.0*	*1.87*	*2510*	*35600*
* *28.0*	*1.81*	*2480*	*34900*
* *27.0*	*1.74*	*2460*	*34300*

110 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
57.0	3.77	3040	47000
56.0	3.70	3000	45500
55.0	3.64	2960	44100
54.0	3.57	2930	42700
53.0	3.50	2890	41300

Continued next column

Continued

110 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
52.0	3.44	2850	40000
51.0	3.37	2810	38700
50.0	3.31	2780	37400
49.0	3.24	2740	36200
48.0	3.17	2710	35100
47.0	3.11	2670	34000
46.0	3.04	2640	32900
45.0	2.97	2600	31800
44.0	2.91	2570	30800
43.0	2.84	2530	29800
42.0	2.78	2500	28800
41.0	*2.71*	*2470*	*27900*
40.0	*2.64*	*2440*	*27000*
39.0	*2.58*	*2410*	*26200*
38.0	*2.51*	*2370*	*25300*
37.0	*2.45*	*2340*	*24500*
36.0	*2.38*	*2310*	*23700*
* *35.0*	*2.31*	*2280*	*23000*
* *34.0*	*2.25*	*2250*	*22200*
* *33.0*	*2.18*	*2230*	*21500*
* *32.0*	*2.12*	*2200*	*20800*
* *31.0*	*2.05*	*2170*	*20200*

125 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
53.0	3.42	3120	45600
52.0	3.35	3090	43700
51.0	3.29	3060	41800
50.0	3.22	3040	40000
49.0	3.16	3010	38300
48.0	3.10	2980	36700
47.0	3.03	2960	35100
46.0	2.97	2930	33600
45.0	2.90	2910	32200
44.0	2.84	2880	30800
43.0	2.77	2860	29500
42.0	2.71	2830	28300
41.0	2.64	2810	27000
40.0	2.58	2790	25900
39.0	*2.52*	*2760*	*24800*
38.0	*2.45*	*2740*	*23700*
37.0	*2.39*	*2710*	*22700*
* *36.0*	*2.32*	*2690*	*21800*
* *35.0*	*2.26*	*2670*	*20800*
* *34.0*	*2.19*	*2640*	*19900*
* *33.0*	*2.13*	*2620*	*19100*
* *32.0*	*2.06*	*2600*	*18300*
* *31.0*	*2.00*	*2580*	*17500*
* *30.0*	*1.93*	*2560*	*16800*
* *29.0*	*1.87*	*2530*	*16000*

125 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
46.0	3.35	2890	46700
45.0	3.28	2850	45300
44.0	3.20	2810	44000
43.0	3.13	2770	42600
42.0	3.06	2730	41300
41.0	2.98	2690	40100
40.0	2.91	2660	38900
39.0	2.84	2620	37700
38.0	2.77	2580	36600
37.0	2.69	2540	35500
36.0	2.62	2510	34400
35.0	*2.55*	*2470*	*33400*
34.0	*2.48*	*2440*	*32400*
33.0	*2.40*	*2400*	*31400*
* *32.0*	*2.33*	*2370*	*30400*
* *31.0*	*2.26*	*2340*	*29500*
* *30.0*	*2.18*	*2300*	*28600*
* *29.0*	*2.11*	*2270*	*27800*
* *28.0*	*2.04*	*2240*	*26900*
* *27.0*	*1.97*	*2210*	*26100*
* *26.0*	*1.89*	*2170*	*25300*

125 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
45.0	2.90	2910	46300
44.0	2.84	2870	45000
43.0	2.77	2840	43800
42.0	2.71	2810	42600
41.0	2.64	2770	41500
40.0	2.58	2740	40300
39.0	2.52	2710	39300
38.0	2.45	2680	38200
37.0	2.39	2650	37200
* 36.0	2.32	2620	36200
* *35.0*	*2.26*	*2590*	*35200*
* *34.0*	*2.19*	*2560*	*34200*
* *33.0*	*2.13*	*2530*	*33300*
* *32.0*	*2.06*	*2500*	*32400*
* *31.0*	*2.00*	*2470*	*31500*
* *30.0*	*1.93*	*2440*	*30700*
* *29.0*	*1.87*	*2410*	*29900*
* *28.0*	*1.81*	*2380*	*29100*
* *27.0*	*1.74*	*2360*	*28300*
* *26.0*	*1.68*	*2330*	*27500*

125 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
56.0	3.70	2910	47100
55.0	3.64	2870	45800
54.0	3.57	2830	44600
53.0	3.50	2790	43400
52.0	3.44	2760	42300
51.0	3.37	2720	41200
50.0	3.31	2680	40100

Continued next column

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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30-06 SPRINGFIELD Cast Bullet Loads

Continued

125 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
49.0	3.24	2650	39000
48.0	3.17	2610	38000
47.0	3.11	2570	37000
46.0	3.04	2540	36000
45.0	2.97	2510	35100
44.0	2.91	2470	34100
43.0	2.84	2440	33200
42.0	2.78	2410	32400
41.0	*2.71*	*2370*	*31500*
40.0	*2.64*	*2340*	*30700*
39.0	*2.58*	*2310*	*29900*
38.0	*2.51*	*2280*	*29100*
37.0	*2.45*	*2250*	*28300*
36.0	*2.38*	*2220*	*27500*
* *35.0*	*2.31*	*2190*	*26800*
* *34.0*	*2.25*	*2160*	*26100*
* *33.0*	*2.18*	*2130*	*25400*
* *32.0*	*2.12*	*2100*	*24700*
* *31.0*	*2.05*	*2070*	*24100*

Continued

130 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2740	40900
43.0	2.77	2700	39400
42.0	2.71	2660	38000
41.0	2.64	2620	36600
40.0	2.58	2590	35300
39.0	2.52	2550	34000
38.0	2.45	2510	32700
37.0	2.39	2470	31600
* 36.0	2.32	2440	30400
* *35.0*	*2.26*	*2400*	*29300*
* *34.0*	*2.19*	*2370*	*26200*
* *33.0*	*2.13*	*2330*	*27200*
* *32.0*	*2.06*	*2300*	*26200*
* *31.0*	*2.00*	*2260*	*25200*
* *30.0*	*1.93*	*2230*	*24300*
* *29.0*	*1.87*	*2200*	*23400*
* *28.0*	*1.81*	*2160*	*22600*
* *27.0*	*1.74*	*2130*	*21700*
* *26.0*	*1.68*	*2100*	*20900*

Continued

130 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
43.0	3.14	2760	40100
42.0	3.07	2730	38700
41.0	3.00	2690	37400
40.0	2.92	2660	36100
39.0	2.85	2620	34800
38.0	2.78	2590	33600
37.0	2.70	2560	32500
36.0	2.63	2530	31300
35.0	*2.56*	*2490*	*30300*
34.0	*2.49*	*2460*	*29200*
33.0	*2.41*	*2430*	*26200*
* *32.0*	*2.34*	*2400*	*27200*
* *31.0*	*2.27*	*2370*	*26300*
* *30.0*	*2.19*	*2340*	*25400*
* *29.0*	*2.12*	*2310*	*24500*
* *28.0*	*2.05*	*2280*	*23600*
* *27.0*	*1.97*	*2250*	*22800*
* *26.0*	*1.90*	*2220*	*22000*

Continued

130 Grain Bullet
v-N540 Powder
Burning Rate 77

Grains	Vol.CC	Vel	Pressure
49.0	3.44	2720	33900
48.0	3.37	2680	32300
47.0	3.30	2640	30800
46.0	3.23	2600	29400
45.0	3.16	2560	28000
44.0	3.09	2520	26700
43.0	3.01	2480	25500
42.0	2.94	2440	24300
41.0	2.87	2400	23200
40.0	2.80	2360	22100
39.0	2.73	2330	21100
38.0	*2.66*	*2290*	*20100*
37.0	*2.59*	*2260*	*19200*
36.0	*2.52*	*2220*	*18300*
35.0	*2.45*	*2190*	*17500*
34.0	*2.38*	*2150*	*16700*
* *33.0*	*2.31*	*2120*	*15900*
* *32.0*	*2.24*	*2090*	*15100*
* *31.0*	*2.17*	*2060*	*14400*
* *30.0*	*2.10*	*2020*	*13800*
* *29.0*	*2.03*	*1990*	*13100*
* *28.0*	*1.96*	*1960*	*12500*

130 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
53.0	3.42	2980	46000
52.0	3.35	2940	43900
51.0	3.29	2900	41900
50.0	3.22	2860	40000
49.0	3.16	2820	38200
48.0	3.10	2790	36500
47.0	3.03	2750	34900
46.0	2.97	2720	33300
45.0	2.90	2680	31800
44.0	2.84	2640	30300
43.0	2.77	2610	29000
42.0	2.71	2580	27700
41.0	2.64	2540	26400
40.0	2.58	2510	25200
39.0	2.52	2480	24100
38.0	*2.45*	*2440*	*23000*
37.0	*2.39*	*2410*	*22000*
* *36.0*	*2.32*	*2380*	*21000*
* *35.0*	*2.26*	*2350*	*20000*
* *34.0*	*2.19*	*2320*	*19100*
* *33.0*	*2.13*	*2290*	*16200*
* *32.0*	*2.06*	*2260*	*17400*
* *31.0*	*2.00*	*2230*	*16600*
* *30.0*	*1.93*	*2200*	*15900*
* *29.0*	*1.87*	*2170*	*15200*
* *28.0*	*1.81*	*2140*	*14500*

130 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
54.0	3.57	2770	45900
53.0	3.50	2730	44500
52.0	3.44	2680	43200
51.0	3.37	2640	41900
50.0	3.31	2600	40600
49.0	3.24	2560	39400
48.0	3.17	2510	38200
47.0	3.11	2470	37100
46.0	3.04	2430	36000
45.0	2.97	2400	34900
44.0	2.91	2360	33900
43.0	2.84	2320	32900
42.0	2.78	2280	31900
41.0	*2.71*	*2240*	*30900*
40.0	*2.64*	*2210*	*30000*
39.0	*2.58*	*2170*	*29100*
38.0	*2.51*	*2140*	*26200*
37.0	*2.45*	*2100*	*27400*
36.0	*2.38*	*2070*	*26600*
* *35.0*	*2.31*	*2040*	*25800*
* *34.0*	*2.25*	*2000*	*25000*
* *33.0*	*2.18*	*1970*	*24300*
* *32.0*	*2.12*	*1940*	*23500*
* *31.0*	*2.05*	*1910*	*22800*
* *30.0*	*1.98*	*1880*	*22200*

130 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
48.0	3.49	2930	46300
47.0	3.42	2890	44700
46.0	3.35	2850	43200
45.0	3.28	2810	41700
44.0	3.20	2770	40300
43.0	3.13	2730	38900
42.0	3.06	2690	37600
41.0	2.98	2650	36300
40.0	2.91	2610	35100
39.0	2.84	2580	33900
38.0	2.77	2540	32700
37.0	2.69	2510	31600
36.0	2.62	2470	30500
35.0	*2.55*	*2440*	*29500*
34.0	*2.48*	*2400*	*28500*
33.0	*2.40*	*2370*	*27500*
* *32.0*	*2.33*	*2340*	*26500*
* *31.0*	*2.26*	*2300*	*25600*
* *30.0*	*2.18*	*2270*	*24800*
* *29.0*	*2.11*	*2240*	*23900*
* *28.0*	*2.04*	*2210*	*23100*
* *27.0*	*1.97*	*2180*	*22300*
* *26.0*	*1.89*	*2150*	*21500*

130 Grain Bullet
v-N150 Powder
Burning Rate 85

Grains	Vol.CC	Vel	Pressure
56.0	4.18	2960	44800
55.0	4.10	2910	42200
54.0	4.03	2860	39800
53.0	3.95	2810	37500
52.0	3.88	2760	35300
51.0	3.80	2710	33300
50.0	3.73	2670	31400
49.0	3.66	2620	29600
48.0	3.58	2580	27900
47.0	3.51	2530	26300
46.0	3.43	2490	24800
45.0	3.36	2450	23400
44.0	3.28	2400	22000
43.0	3.21	2360	20700
42.0	3.13	2320	19600
41.0	3.06	2280	18400
40.0	2.98	2240	17400
39.0	2.91	2200	16400
38.0	*2.83*	*2170*	*15400*
37.0	*2.76*	*2130*	*14600*
36.0	*2.69*	*2090*	*13700*
35.0	*2.61*	*2060*	*12900*
34.0	*2.54*	*2020*	*12200*
33.0	*2.46*	*1990*	*11500*

130 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
47.0	3.03	2870	45800
46.0	2.97	2830	44100
45.0	2.90	2780	42500

Continued next column

130 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
47.0	3.44	2900	46200
46.0	3.36	2870	44600
45.0	3.29	2830	43000
44.0	3.22	2800	41600

Continued next column

130 Grain Bullet
v-N540 Powder
Burning Rate 77

Grains	Vol.CC	Vel	Pressure
56.0	3.93	3030	47100
55.0	3.86	2980	45000
54.0	3.79	2940	42900
53.0	3.72	2890	40900
52.0	3.65	2850	39000
51.0	3.58	2800	37200
50.0	3.51	2760	35500

Continued next column

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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30-06 SPRINGFIELD Cast Bullet Loads

130 Grain Bullet
v-N140 Powder
Burning Rate 78

Grains	Vol.CC	Vel	Pressure
54.0	3.96	2980	46100
53.0	3.88	2940	44100
52.0	3.81	2910	42100
51.0	3.74	2870	40300
50.0	3.66	2830	38600
49.0	3.59	2800	36900
48.0	3.52	2760	35300
47.0	3.45	2720	33700
46.0	3.37	2690	32300
45.0	3.30	2660	30900
44.0	3.23	2620	29500
43.0	3.15	2590	28200
42.0	3.08	2550	27000
41.0	3.01	2520	25800
40.0	2.93	2490	24700
39.0	2.86	2460	23600
38.0	2.79	2430	22600
37.0	*2.71*	*2390*	*21600*
36.0	*2.64*	*2360*	*20700*
35.0	*2.57*	*2330*	*19800*
34.0	*2.49*	*2300*	*18900*
33.0	*2.42*	*2270*	*18100*
* *32.0*	*2.35*	*2240*	*17300*
* *31.0*	*2.27*	*2220*	*16500*
* *30.0*	*2.20*	*2190*	*15800*
* *29.0*	*2.13*	*2160*	*15100*
* *28.0*	*2.05*	*2130*	*14500*
* *27.0*	*1.98*	*2100*	*13800*

130 Grain Bullet
v-N135 Powder
Burning Rate 71

Grains	Vol.CC	Vel	Pressure
50.0	3.88	2910	45600
49.0	3.81	2870	43300
48.0	3.73	2840	41100
47.0	3.65	2810	39000
46.0	3.57	2770	37000
45.0	3.50	2740	35200
44.0	3.42	2710	33400
43.0	3.34	2670	31700
42.0	3.26	2640	30100
41.0	3.19	2610	28500
40.0	3.11	2580	27100
39.0	3.03	2550	25700
38.0	2.95	2520	24400
37.0	2.87	2490	23200
36.0	2.80	2460	22000
35.0	2.72	2430	20900
34.0	*2.64*	*2400*	*19800*
33.0	*2.56*	*2370*	*18800*
32.0	*2.49*	*2340*	*17900*
31.0	*2.41*	*2320*	*16900*
* *30.0*	*2.33*	*2290*	*16100*
* *29.0*	*2.25*	*2260*	*15300*
* *28.0*	*2.18*	*2230*	*14500*
* *27.0*	*2.10*	*2210*	*13800*
* *26.0*	*2.02*	*2180*	*13100*
* *25.0*	*1.94*	*2160*	*12400*

150 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
52.0	3.59	2760	47200
51.0	3.52	2730	46200
50.0	3.45	2700	45100
49.0	3.39	2670	44200
48.0	3.32	2630	43200
47.0	3.25	2600	42300
46.0	3.18	2570	41300
45.0	3.11	2540	40400
44.0	3.04	2510	39500
43.0	2.97	2480	38700
42.0	2.90	2450	37800
41.0	2.83	2420	37000
40.0	2.76	2390	36200
39.0	*2.69*	*2360*	*35400*
38.0	*2.63*	*2340*	*34600*
37.0	*2.56*	*2310*	*33900*
36.0	*2.49*	*2280*	*33100*
35.0	*2.42*	*2250*	*32400*
* *34.0*	*2.35*	*2230*	*31700*
* *33.0*	*2.28*	*2200*	*31000*
* *32.0*	*2.21*	*2170*	*30300*
* *31.0*	*2.14*	*2150*	*29700*
* *30.0*	*2.07*	*2120*	*29000*
* *29.0*	*2.00*	*2100*	*28400*

150 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
53.0	3.50	2710	47100
52.0	3.44	2680	45700
51.0	3.37	2640	44400
50.0	3.31	2600	43000
49.0	3.24	2570	41800
48.0	3.17	2530	40500
47.0	3.11	2500	39300
46.0	3.04	2460	38100
45.0	2.97	2430	37000
44.0	2.91	2390	35900
43.0	2.84	2360	34800
42.0	2.78	2330	33800
41.0	2.71	2300	32700
40.0	2.64	2270	31800
39.0	*2.58*	*2230*	*30800*
38.0	*2.51*	*2200*	*29900*
37.0	*2.45*	*2170*	*29000*
36.0	*2.38*	*2140*	*28100*
* *35.0*	*2.31*	*2110*	*27300*
* *34.0*	*2.25*	*2080*	*26500*
* *33.0*	*2.18*	*2060*	*25700*
* *32.0*	*2.12*	*2030*	*24900*
* *31.0*	*2.05*	*2000*	*24200*
* *30.0*	*1.98*	*1970*	*23400*
* *29.0*	*1.92*	*1940*	*22700*

150 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2660	46300
43.0	2.77	2620	44800
42.0	2.71	2580	43300
41.0	2.64	2540	42000
40.0	2.58	2510	40600
39.0	2.52	2470	39300
38.0	2.45	2430	38100
37.0	2.39	2390	36800
* 36.0	2.32	2360	35700
* 35.0	2.26	2320	34500
* *34.0*	*2.19*	*2290*	*33400*
* *33.0*	*2.13*	*2250*	*32300*
* *32.0*	*2.06*	*2220*	*31300*
* *31.0*	*2.00*	*2190*	*30300*
* *30.0*	*1.93*	*2150*	*29300*
* *29.0*	*1.87*	*2120*	*28400*
* *28.0*	*1.81*	*2090*	*27500*
* *27.0*	*1.74*	*2060*	*26600*
* *26.0*	*1.68*	*2030*	*25800*
* *25.0*	*1.61*	*2000*	*24900*

150 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
39.0	2.84	2580	47100
38.0	2.77	2550	46300
37.0	2.69	2520	45400
36.0	2.62	2490	44700
35.0	2.55	2460	43900
34.0	2.48	2440	43100
33.0	*2.40*	*2410*	*42300*
* *32.0*	*2.33*	*2380*	*41600*
* *31.0*	*2.26*	*2350*	*40900*
* *30.0*	*2.18*	*2320*	*40200*
* *29.0*	*2.11*	*2300*	*39500*
* *28.0*	*2.04*	*2270*	*38800*
* *27.0*	*1.97*	*2240*	*38100*
* *26.0*	*1.89*	*2220*	*37400*
* *25.0*	*1.62*	*2190*	*36800*

150 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
45.0	3.29	2730	47100
44.0	3.22	2690	45300
43.0	3.14	2650	43500
42.0	3.07	2610	41700
41.0	3.00	2570	40100
40.0	2.92	2530	38500
39.0	2.85	2500	37000
38.0	2.78	2460	35500
37.0	2.70	2430	34100
36.0	2.63	2390	32700
35.0	2.56	2360	31400
34.0	2.49	2320	30200
33.0	*2.41*	*2290*	*29000*

Continued next column

Continued

150 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
* *32.0*	*2.34*	*2250*	*27800*
* *31.0*	*2.27*	*2220*	*26700*
* *30.0*	*2.19*	*2190*	*25700*
* *29.0*	*2.12*	*2160*	*24600*
* *28.0*	*2.05*	*2130*	*23700*
* *27.0*	*1.97*	*2100*	*22700*
* *26.0*	*1.90*	*2070*	*21800*
* *25.0*	*1.83*	*2040*	*21000*

150 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
48.0	3.10	2720	45800
47.0	3.03	2680	43900
46.0	2.97	2650	42200
45.0	2.90	2610	40500
44.0	2.84	2570	38900
43.0	2.77	2540	37400
42.0	2.71	2500	35900
41.0	2.64	2460	34500
40.0	2.58	2430	33100
39.0	2.52	2400	31800
38.0	2.45	2360	30500
37.0	2.39	2330	29300
* 36.0	2.32	2300	28200
* *35.0*	*2.26*	*2260*	*27000*
* *34.0*	*2.19*	*2230*	*26000*
* *33.0*	*2.13*	*2200*	*24900*
* *32.0*	*2.06*	*2170*	*24000*
* *31.0*	*2.00*	*2140*	*23000*
* *30.0*	*1.93*	*2110*	*22100*
* *29.0*	*1.87*	*2080*	*21200*
* *28.0*	*1.81*	*2050*	*20400*
* *27.0*	*1.74*	*2020*	*19600*
* *26.0*	*1.68*	*1990*	*18800*

155 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
52.0	3.59	2750	46700
51.0	3.52	2720	45400
50.0	3.45	2690	44100
49.0	3.39	2650	42800
48.0	3.32	2620	41600
47.0	3.25	2590	40400
46.0	3.18	2550	39200
45.0	3.11	2520	38100
44.0	3.04	2490	37000
43.0	2.97	2460	35900
42.0	2.90	2430	34900
41.0	2.83	2400	33900
40.0	2.76	2370	32900
39.0	*2.69*	*2340*	*31900*
38.0	*2.63*	*2310*	*31000*
37.0	*2.56*	*2280*	*30100*
36.0	*2.49*	*2250*	*29300*

Continued next column

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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30-06 SPRINGFIELD Cast Bullet Loads

Continued

155 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
35.0	*2.42*	*2220*	*28400*
* *34.0*	*2.35*	*2200*	*27600*
* *33.0*	*2.28*	*2170*	*26800*
* *32.0*	*2.21*	*2140*	*26000*
* *31.0*	*2.14*	*2110*	*25300*
* *30.0*	*2.07*	*2090*	*24500*
* *29.0*	*2.00*	*2060*	*23800*

155 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
53.0	3.50	2700	46300
52.0	3.44	2660	45100
51.0	3.37	2630	44000
50.0	3.31	2590	42900
49.0	3.24	2560	41800
48.0	3.17	2530	40700
47.0	3.11	2490	39700
46.0	3.04	2460	38700
45.0	2.97	2430	37700
44.0	2.91	2400	36800
43.0	2.84	2370	35800
42.0	2.78	2340	34900
41.0	2.71	2310	34000
40.0	2.64	2280	33200
39.0	*2.58*	*2250*	*32300*
38.0	*2.51*	*2220*	*31500*
37.0	*2.45*	*2190*	*30700*
36.0	*2.38*	*2160*	*29900*
* *35.0*	*2.31*	*2130*	*29200*
* *34.0*	*2.25*	*2100*	*28400*
* *33.0*	*2.18*	*2080*	*27700*
* *32.0*	*2.12*	*2050*	*27000*
* *31.0*	*2.05*	*2020*	*26300*
* *30.0*	*1.98*	*2000*	*25700*
* *29.0*	*1.52*	*1970*	*25000*

155 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2670	46000
43.0	2.77	2640	44500
42.0	2.71	2600	43100
41.0	2.64	2570	41700
40.0	2.58	2540	40400
39.0	2.52	2500	39100
38.0	2.45	2470	37900
37.0	2.39	2440	36700
* 36.0	2.32	2410	35500
* 35.0	2.26	2380	34400
* *34.0*	*2.19*	*2350*	*33300*
* *33.0*	*2.13*	*2320*	*32200*
* *32.0*	*2.06*	*2290*	*31200*
* *31.0*	*2.00*	*2260*	*30200*
* *30.0*	*1.93*	*2230*	*29200*
* *29.0*	*1.87*	*2200*	*28300*

Continued next column

Continued

155 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
* *28.0*	*1.81*	*2170*	*27400*
* *27.0*	*1.74*	*2140*	*26500*
* *26.0*	*1.68*	*2120*	*25700*
* *25.0*	*1.61*	*2090*	*24900*

155 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
43.0	3.13	2650	46500
42.0	3.06	2620	45600
41.0	2.98	2590	44700
40.0	2.91	2560	43800
39.0	2.84	2530	42900
38.0	2.77	2500	42000
37.0	2.69	2470	41200
36.0	2.62	2440	40400
35.0	2.55	2410	39500
34.0	2.48	2380	38800
33.0	*2.40*	*2350*	*38000*
* *32.0*	*2.33*	*2320*	*37200*
* *31.0*	*2.26*	*2290*	*36500*
* *30.0*	*2.18*	*2270*	*35700*
* *29.0*	*2.11*	*2240*	*35000*
* *28.0*	*2.04*	*2210*	*34300*
* *27.0*	*1.97*	*2190*	*33600*
* *26.0*	*1.89*	*2160*	*32900*
* *25.0*	*1.62*	*2130*	*32300*

155 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
49.0	3.16	2720	46600
48.0	3.10	2690	44900
47.0	3.03	2650	43400
46.0	2.97	2620	41900
45.0	2.90	2580	40400
44.0	2.84	2550	39000
43.0	2.77	2510	37700
42.0	2.71	2480	36400
41.0	2.64	2450	35100
40.0	2.58	2420	33900
39.0	2.52	2380	32700
38.0	2.45	2350	31600
37.0	2.39	2320	30500
* 36.0	2.32	2290	29400
* *35.0*	*2.26*	*2260*	*28400*
* *34.0*	*2.19*	*2230*	*27400*
* *33.0*	*2.13*	*2200*	*26500*
* *32.0*	*2.06*	*2170*	*25500*
* *31.0*	*2.00*	*2140*	*24600*
* *30.0*	*1.93*	*2110*	*23800*
* *29.0*	*1.87*	*2090*	*23000*
* *28.0*	*1.81*	*2060*	*22200*
* *27.0*	*1.74*	*2030*	*21400*
* *26.0*	*1.68*	*2010*	*20700*

165 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
53.0	3.84	2680	46100
52.0	3.77	2640	44200
51.0	3.70	2600	42400
50.0	3.63	2560	40600
49.0	3.55	2520	39000
48.0	3.48	2480	37400
47.0	3.41	2440	35800
46.0	3.34	2400	34300
45.0	3.26	2370	32900
44.0	3.19	2330	31600
43.0	3.12	2290	30300
42.0	3.05	2260	29000
41.0	2.97	2220	27800
40.0	2.90	2190	26700
39.0	*2.83*	*2160*	*25600*
38.0	*2.76*	*2120*	*24500*
37.0	*2.68*	*2090*	*23500*
36.0	*2.61*	*2060*	*22600*
35.0	*2.54*	*2030*	*21600*
34.0	*2.47*	*2000*	*20800*
33.0	*2.39*	*1970*	*19900*
* *32.0*	*2.32*	*1940*	*19100*
* *31.0*	*2.25*	*1910*	*18300*
* *30.0*	*2.18*	*1880*	*17500*
* *29.0*	*2.10*	*1850*	*16800*

165 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
49.0	3.39	2590	46800
48.0	3.32	2550	45300
47.0	3.25	2510	43900
46.0	3.18	2480	42400
45.0	3.11	2440	41100
44.0	3.04	2410	39700
43.0	2.97	2370	38400
42.0	2.90	2340	37200
41.0	2.83	2300	36000
40.0	2.76	2270	34800
39.0	2.69	2240	33700
38.0	2.63	2200	32600
37.0	*2.56*	*2170*	*31500*
36.0	*2.49*	*2140*	*30500*
35.0	*2.42*	*2110*	*29500*
* *34.0*	*2.35*	*2080*	*28600*
* *33.0*	*2.28*	*2050*	*27600*
* *32.0*	*2.21*	*2020*	*26700*
* *31.0*	*2.14*	*1990*	*25900*
* *30.0*	*2.07*	*1960*	*25000*
* *29.0*	*2.00*	*1930*	*24200*
* *28.0*	*1.93*	*1900*	*23400*

165 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
48.0	3.17	2570	45800
47.0	3.11	2540	44400
46.0	3.04	2510	43100
45.0	2.97	2470	41700
44.0	2.91	2440	40500
43.0	2.84	2410	39200
42.0	2.78	2380	38000
41.0	2.71	2350	36900
40.0	2.64	2320	35700
39.0	2.58	2290	34600
38.0	2.51	2260	33600
37.0	*2.45*	*2230*	*32600*
36.0	*2.38*	*2200*	*31600*
* *35.0*	*2.31*	*2170*	*30600*
* *34.0*	*2.25*	*2140*	*29700*
* *33.0*	*2.18*	*2110*	*28800*
* *32.0*	*2.12*	*2090*	*27900*
* *31.0*	*2.05*	*2060*	*27000*
* *30.0*	*1.98*	*2030*	*26200*
* *29.0*	*1.92*	*2010*	*25400*
* *28.0*	*1.85*	*1980*	*24600*

165 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
43.0	3.14	2570	47100
42.0	3.07	2530	45600
41.0	3.00	2490	44200
40.0	2.92	2450	42800
39.0	2.85	2410	41500
38.0	2.78	2380	40200
37.0	2.70	2340	38900
36.0	2.63	2310	37700
35.0	2.56	2270	36600
34.0	2.49	2240	35400
33.0	*2.41*	*2210*	*34300*
* *32.0*	*2.34*	*2170*	*33300*
* *31.0*	*2.27*	*2140*	*32200*
* *30.0*	*2.19*	*2110*	*31200*
* *29.0*	*2.12*	*2080*	*30200*
* *28.0*	*2.05*	*2050*	*29300*
* *27.0*	*1.97*	*2010*	*28400*
* *26.0*	*1.90*	*1980*	*27500*
* *25.0*	*1.83*	*1950*	*26700*

165 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2530	45800
43.0	2.77	2500	44100
42.0	2.71	2460	42500
41.0	2.64	2430	40900
40.0	2.58	2390	39400
39.0	2.52	2360	37900
38.0	2.45	2320	36500
37.0	2.39	2290	35100

Continued next column

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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30-06 SPRINGFIELD Cast Bullet Loads

Continued

165 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
* 36.0	2.32	2260	33800
* 35.0	2.26	2220	32600
* 34.0	2.19	2190	31400
* *33.0*	*2.13*	*2160*	*30200*
* *32.0*	*2.06*	*2130*	*29100*
* *31.0*	*2.00*	*2100*	*28000*
* *30.0*	*1.93*	*2070*	*27000*
* *29.0*	*1.87*	*2040*	*26000*
* *28.0*	*1.81*	*2010*	*25000*
* *27.0*	*1.74*	*1980*	*24100*
* *26.0*	*1.68*	*1950*	*23200*
* *25.0*	*1.61*	*1920*	*22300*

165 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
41.0	2.98	2530	45600
40.0	2.91	2500	43900
39.0	2.84	2460	42200
38.0	2.77	2430	40600
37.0	2.69	2390	39000
36.0	2.62	2360	37500
35.0	2.55	2330	36100
34.0	2.48	2290	34700
33.0	2.40	2260	33400
* 32.0	2.33	2230	32100
* *31.0*	*2.26*	*2200*	*30900*
* *30.0*	*2.18*	*2170*	*29700*
* *29.0*	*2.11*	*2130*	*28500*
* *28.0*	*2.04*	*2100*	*27400*
* *27.0*	*1.97*	*2070*	*26400*
* *26.0*	*1.89*	*2040*	*25400*
* *25.0*	*1.62*	*2020*	*24400*
* *24.0*	*1.75*	*1990*	*23500*
* *23.0*	*1.67*	*1960*	*22600*

165 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
42.0	2.71	2510	46200
41.0	2.64	2470	44000
40.0	2.58	2420	41800
39.0	2.52	2380	39800
38.0	2.45	2340	37900
37.0	2.39	2300	36100
* 36.0	2.32	2260	34300
* 35.0	2.26	2220	32700
* 34.0	2.19	2180	31100
* 33.0	2.13	2140	29600
* 32.0	2.06	2100	28200
* *31.0*	*2.00*	*2060*	*26800*
* *30.0*	*1.93*	*2030*	*25500*
* *29.0*	*1.87*	*1990*	*24300*
* *28.0*	*1.81*	*1960*	*23100*
* *27.0*	*1.74*	*1920*	*22000*
* *26.0*	*1.68*	*1890*	*20900*

168 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
54.0	3.92	2650	46400
53.0	3.84	2600	44400
52.0	3.77	2550	42500
51.0	3.70	2510	40700
50.0	3.63	2460	39000
49.0	3.55	2420	37300
48.0	3.48	2370	35700
47.0	3.41	2330	34200
46.0	3.34	2290	32700
45.0	3.26	2250	31300
44.0	3.19	2210	30000
43.0	3.12	2170	28700
42.0	3.05	2130	27500
41.0	2.97	2090	26300
40.0	2.90	2050	25200
39.0	*2.83*	*2020*	*24100*
38.0	*2.76*	*1980*	*23100*
37.0	*2.68*	*1950*	*22100*
36.0	*2.61*	*1910*	*21200*
35.0	*2.54*	*1880*	*20300*
34.0	*2.47*	*1840*	*19400*
33.0	*2.39*	*1810*	*18600*
* *32.0*	*2.32*	*1780*	*17800*
* *31.0*	*2.25*	*1750*	*17000*
* *30.0*	*2.18*	*1710*	*16300*
* *29.0*	*2.10*	*1680*	*15600*

168 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
47.0	3.25	2500	46100
46.0	3.18	2470	44800
45.0	3.11	2430	43600
44.0	3.04	2400	42500
43.0	2.97	2370	41300
42.0	2.90	2330	40200
41.0	2.83	2300	39100
40.0	2.76	2270	38100
39.0	2.69	2240	37100
38.0	2.63	2210	36100
37.0	*2.56*	*2180*	*35100*
36.0	*2.49*	*2140*	*34200*
35.0	*2.42*	*2110*	*33300*
* *34.0*	*2.35*	*2090*	*32400*
* *33.0*	*2.28*	*2060*	*31500*
* *32.0*	*2.21*	*2030*	*30600*
* *31.0*	*2.14*	*2000*	*29800*
* *30.0*	*2.07*	*1970*	*29000*
* *29.0*	*2.00*	*1940*	*26200*
* *28.0*	*1.93*	*1920*	*27500*

168 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
44.0	3.22	2590	45400
43.0	3.14	2550	43600
42.0	3.07	2510	41900
41.0	3.00	2470	40200
40.0	2.92	2430	38600
39.0	2.85	2390	37100
38.0	2.78	2360	35600
37.0	2.70	2320	34200
36.0	2.63	2290	32800
35.0	2.56	2250	31500
34.0	2.49	2220	30300
33.0	*2.41*	*2180*	*29100*
* *32.0*	*2.34*	*2150*	*27900*
* *31.0*	*2.27*	*2120*	*26800*
* *30.0*	*2.19*	*2080*	*25700*
* *29.0*	*2.12*	*2050*	*24700*
* *28.0*	*2.05*	*2020*	*23700*
* *27.0*	*1.97*	*1990*	*22800*
* *26.0*	*1.90*	*1960*	*21900*
* *25.0*	*1.83*	*1930*	*21000*

168 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
41.0	2.98	2480	45400
40.0	2.91	2440	43500
39.0	2.84	2400	41600
38.0	2.77	2350	39900
37.0	2.69	2310	38200
36.0	2.62	2270	36600
35.0	2.55	2230	35000
34.0	2.48	2190	33600
33.0	2.40	2150	32200
* 32.0	2.33	2120	30800
* *31.0*	*2.26*	*2080*	*29500*
* *30.0*	*2.18*	*2040*	*28300*
* *29.0*	*2.11*	*2000*	*27100*
* *28.0*	*2.04*	*1970*	*25900*
* *27.0*	*1.97*	*1930*	*24800*
* *26.0*	*1.89*	*1900*	*23800*
* *25.0*	*1.62*	*1870*	*22800*
* *24.0*	*1.75*	*1830*	*21800*
* *23.0*	*1.67*	*1800*	*20900*

168 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
46.0	2.97	2550	46900
45.0	2.90	2510	44800
44.0	2.84	2470	42800
43.0	2.77	2430	40900
42.0	2.71	2400	39000
41.0	2.64	2360	37300
40.0	2.58	2320	35600
39.0	2.52	2280	34000
38.0	2.45	2250	32500

Continued next column

Continued

168 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
37.0	2.39	2210	31000
* 36.0	2.32	2180	29600
* 35.0	2.26	2140	28300
* 34.0	2.19	2110	27000
* *33.0*	*2.13*	*2070*	*25800*
* *32.0*	*2.06*	*2040*	*24700*
* *31.0*	*2.00*	*2010*	*23600*
* *30.0*	*1.93*	*1980*	*22500*
* *29.0*	*1.87*	*1940*	*21500*
* *28.0*	*1.81*	*1910*	*20500*
* *27.0*	*1.74*	*1880*	*19600*
* *26.0*	*1.68*	*1850*	*18700*
* *25.0*	*1.61*	*1820*	*17900*

168 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
41.0	2.64	2420	45600
40.0	2.58	2380	43500
39.0	2.52	2340	41500
38.0	2.45	2300	39500
37.0	2.39	2260	37700
* 36.0	2.32	2220	35900
* 35.0	2.26	2180	34200
* 34.0	2.19	2150	32600
* 33.0	2.13	2110	31100
* 32.0	2.06	2070	29700
* 31.0	2.00	2040	28300
* *30.0*	*1.93*	*2000*	*26900*
* *29.0*	*1.87*	*1970*	*25700*
* *28.0*	*1.81*	*1940*	*24500*
* *27.0*	*1.74*	*1900*	*23300*
* *26.0*	*1.68*	*1870*	*22200*
* *25.0*	*1.61*	*1840*	*21200*
* *24.0*	*1.55*	*1810*	*20200*
* *23.0*	*1.48*	*1780*	*19300*

180 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
52.0	3.77	2540	45400
51.0	3.70	2500	43200
50.0	3.63	2460	41200
49.0	3.55	2420	39200
48.0	3.48	2370	37400
47.0	3.41	2330	35600
46.0	3.34	2290	34000
45.0	3.26	2250	32300
44.0	3.19	2210	30800
43.0	3.12	2180	29400
42.0	3.05	2140	28000
41.0	2.97	2100	26700
40.0	2.90	2070	25400
39.0	2.83	2030	24200
38.0	*2.76*	*2000*	*23100*
37.0	*2.68*	*1960*	*22000*

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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30-06 SPRINGFIELD Cast Bullet Loads

180 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
50.0	3.31	2530	47000
49.0	3.24	2490	45200
48.0	3.17	2450	43500
47.0	3.11	2420	41800
46.0	3.04	2380	40200
45.0	2.97	2340	38600
44.0	2.91	2310	37100
43.0	2.84	2280	35700
42.0	2.78	2240	34300
41.0	2.71	2210	33000
40.0	2.64	2180	31700
39.0	2.58	2140	30500
38.0	2.51	2110	29300
37.0	2.45	2080	28200
36.0	*2.38*	*2050*	*27100*
* *35.0*	*2.31*	*2020*	*26000*
* *34.0*	*2.25*	*1990*	*25000*
* *33.0*	*2.18*	*1960*	*24100*
* *32.0*	*2.12*	*1930*	*23100*
* *31.0*	*2.05*	*1900*	*22200*
* *30.0*	*1.98*	*1870*	*21400*
* *29.0*	*1.92*	*1850*	*20500*
* *28.0*	*1.85*	*1620*	*19700*
* *27.0*	*1.78*	*1790*	*19000*

180 Grain Bullet
RELODER22 Powder
Burning Rate 99

Grains	Vol.CC	Vel	Pressure
58.0	4.04	2630	45100
57.0	3.97	2580	42300
56.0	3.90	2540	39600
55.0	3.83	2500	37100
54.0	3.76	2460	34700
53.0	3.69	2430	32500
52.0	3.62	2390	30400
51.0	3.55	2350	28500
50.0	3.49	2310	26700
49.0	3.42	2280	25000
48.0	3.35	2240	23400
47.0	3.28	2210	21900
46.0	3.21	2170	20500
45.0	3.14	2140	19200
44.0	3.07	2100	18000
43.0	3.00	2070	16800
42.0	2.93	2040	15800
41.0	2.86	2000	14800
40.0	2.79	1970	13800
39.0	*2.72*	*1940*	*12900*
38.0	*2.65*	*1910*	*12100*
37.0	*2.58*	*1880*	*11300*

180 Grain Bullet
H4831 Powder
Burning Rate 95

Grains	Vol.CC	Vel	Pressure
57.0	4.13	2570	47000
56.0	4.06	2530	45200
55.0	3.99	2490	43400
54.0	3.91	2450	41600
53.0	3.84	2400	40000
52.0	3.77	2360	38400
51.0	3.70	2320	36900
50.0	3.63	2280	35400
49.0	3.55	2250	34000
48.0	3.48	2210	32600
47.0	3.41	2170	31300
46.0	3.33	2130	30100
45.0	3.26	2100	28900
44.0	3.19	2060	27700
43.0	3.12	2030	26600
42.0	3.04	1990	25500
41.0	2.97	1960	24500
40.0	2.90	1930	23600
39.0	*2.83*	*1890*	*22600*
38.0	*2.75*	*1860*	*21700*
37.0	*2.68*	*1830*	*20800*
36.0	*2.61*	*1800*	*20000*
35.0	*2.54*	*1770*	*19200*
34.0	*2.46*	*1740*	*18400*
33.0	*2.39*	*1710*	*17700*
* *32.0*	*2.32*	*1680*	*17000*
* *31.0*	*2.25*	*1650*	*16300*
* *30.0*	*2.17*	*1620*	*15700*
* *29.0*	*2.10*	*1600*	*15100*

180 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
47.0	3.25	2450	46000
46.0	3.18	2420	44200
45.0	3.11	2380	42500
44.0	3.04	2350	40800
43.0	2.97	2310	39200
42.0	2.90	2280	37700
41.0	2.83	2250	36200
40.0	2.76	2210	34800
39.0	2.69	2180	33400
38.0	2.63	2150	32100
37.0	2.56	2120	30900
36.0	2.49	2090	29700
35.0	*2.42*	*2060*	*28500*
* *34.0*	*2.35*	*2030*	*27400*
* *33.0*	*2.28*	*2000*	*26300*
* *32.0*	*2.21*	*1970*	*25300*
* *31.0*	*2.14*	*1940*	*24300*
* *30.0*	*2.07*	*1910*	*23400*
* *29.0*	*2.00*	*1880*	*22500*
* *28.0*	*1.93*	*1850*	*21600*
* *27.0*	*1.87*	*1830*	*20700*
* *26.0*	*1.80*	*1800*	*19900*

180 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
41.0	2.98	2430	45700
40.0	2.91	2390	43500
39.0	2.84	2350	41400
38.0	2.77	2310	39400
37.0	2.69	2270	37500
36.0	2.62	2230	35700
35.0	2.55	2200	34000
34.0	2.48	2160	32300
33.0	2.40	2130	30800
* 32.0	2.33	2090	29300
* 31.0	2.26	2060	27900
* *30.0*	*2.18*	*2020*	*26500*
* *29.0*	*2.11*	*1990*	*25200*
* *28.0*	*2.04*	*1960*	*24000*
* *27.0*	*1.97*	*1920*	*22900*
* *26.0*	*1.89*	*1890*	*21800*
* *25.0*	*1.82*	*1860*	*20700*
* *24.0*	*1.75*	*1830*	*19700*
* *23.0*	*1.67*	*1800*	*18800*
* *22.0*	*1.60*	*1770*	*17900*

180 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
44.0	2.84	2450	47000
43.0	2.77	2420	44900
42.0	2.71	2380	43000
41.0	2.64	2340	41000
40.0	2.58	2310	39200
39.0	2.52	2270	37500
38.0	2.45	2230	35800
37.0	2.39	2200	34200
* 36.0	2.32	2170	32700
* 35.0	2.26	2130	31200
* 34.0	2.19	2100	29900
* 33.0	2.13	2070	28500
* *32.0*	*2.06*	*2030*	*27300*
* *31.0*	*2.00*	*2000*	*26000*
* *30.0*	*1.93*	*1970*	*24900*
* *29.0*	*1.87*	*1940*	*23800*
* *28.0*	*1.81*	*1910*	*22700*
* *27.0*	*1.74*	*1880*	*21700*
* *26.0*	*1.68*	*1850*	*20800*
* *25.0*	*1.61*	*1820*	*19800*
* *24.0*	*1.55*	*1800*	*18900*

180 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
40.0	2.58	2380	46400
39.0	2.52	2340	44600
38.0	2.45	2300	42800
37.0	2.39	2260	41100
* 36.0	2.32	2230	39500
* 35.0	2.26	2190	38000
* 34.0	2.19	2150	36500

Continued next column

Continued

180 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
* 33.0	2.13	2120	35000
* 32.0	2.06	2080	33700
* 31.0	2.00	2050	32300
* *30.0*	*1.93*	*2020*	*31100*
* *29.0*	*1.87*	*1980*	*29800*
* *28.0*	*1.81*	*1950*	*28700*
* *27.0*	*1.74*	*1920*	*27500*
* *26.0*	*1.68*	*1890*	*26400*
* *25.0*	*1.61*	*1860*	*25400*
* *24.0*	*1.55*	*1830*	*24400*
* *23.0*	*1.48*	*1800*	*23400*
* *22.0*	*1.42*	*1770*	*22500*

190 Grain Bullet
H4350 Powder
Burning Rate 88

Grains	Vol.CC	Vel	Pressure
50.0	3.63	2410	45500
49.0	3.55	2370	43800
48.0	3.48	2330	42100
47.0	3.41	2290	40400
46.0	3.34	2250	38800
45.0	3.26	2210	37300
44.0	3.19	2170	35800
43.0	3.12	2140	34400
42.0	3.05	2100	33100
41.0	2.97	2070	31800
40.0	2.90	2030	30600
39.0	2.83	2000	29400
38.0	2.76	1960	28200
37.0	*2.68*	*1930*	*27100*
36.0	*2.61*	*1900*	*26000*
35.0	*2.54*	*1860*	*25000*
34.0	*2.47*	*1830*	*24000*
33.0	*2.39*	*1800*	*23100*
* *32.0*	*2.32*	*1770*	*22200*
* *31.0*	*2.25*	*1740*	*21300*
* *30.0*	*2.18*	*1710*	*20500*
* *29.0*	*2.10*	*1680*	*19700*
* *28.0*	*2.03*	*1650*	*18900*

190 Grain Bullet
H4831 Powder
Burning Rate 95

Grains	Vol.CC	Vel	Pressure
53.0	3.84	2370	46300
52.0	3.77	2330	44800
51.0	3.70	2300	43300
50.0	3.63	2260	41900
49.0	3.55	2230	40500
48.0	3.48	2190	39200
47.0	3.41	2160	37900
46.0	3.33	2130	36700
45.0	3.26	2100	35500
44.0	3.19	2070	34300
43.0	3.12	2030	33200
42.0	3.04	2000	32100
41.0	2.97	1970	31000

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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30-06 SPRINGFIELD Cast Bullet Loads

190 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
48.0	3.17	2400	46800
47.0	3.11	2350	44600
46.0	3.04	2310	42500
45.0	2.97	2260	40600
44.0	2.91	2220	38700
43.0	2.84	2180	36900
42.0	2.78	2130	35200
41.0	2.71	2090	33500
40.0	2.64	2050	32000
39.0	2.58	2010	30500
38.0	2.51	1980	29100
37.0	2.45	1940	27700
36.0	2.38	1900	26400
* *35.0*	*2.31*	*1870*	*25200*
* *34.0*	*2.25*	*1830*	*24000*
* *33.0*	*2.18*	*1790*	*22900*
* *32.0*	*2.12*	*1760*	*21800*
* *31.0*	*2.05*	*1730*	*20800*
* *30.0*	*1.98*	*1690*	*19800*
* *29.0*	*1.92*	*1660*	*18900*
* *28.0*	*1.85*	*1630*	*18000*
* *27.0*	*1.78*	*1600*	*17200*
* *26.0*	*1.72*	*1570*	*16400*

190 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
45.0	3.11	2290	45400
44.0	3.04	2250	43700
43.0	2.97	2210	42000
42.0	2.90	2170	40400
41.0	2.83	2140	38900
40.0	2.76	2100	37400
39.0	2.69	2070	36000
38.0	2.63	2030	34600
37.0	2.56	2000	33300
36.0	2.49	1960	32000
35.0	2.42	1930	30800
* *34.0*	*2.35*	*1900*	*29600*
* *33.0*	*2.28*	*1870*	*28500*
* *32.0*	*2.21*	*1830*	*27400*
* *31.0*	*2.14*	*1800*	*26400*
* *30.0*	*2.07*	*1770*	*25400*
* *29.0*	*2.00*	*1740*	*24400*
* *28.0*	*1.93*	*1710*	*23500*
* *27.0*	*1.87*	*1690*	*22600*
* *26.0*	*1.80*	*1660*	*21700*
* *25.0*	*1.73*	*1630*	*20900*

190 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
39.0	2.84	2320	46500
38.0	2.77	2290	45000
37.0	2.69	2260	43600
36.0	2.62	2230	42200

Continued next column

Continued

190 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
35.0	2.55	2200	40800
34.0	2.48	2170	39500
33.0	2.40	2140	38200
* 32.0	2.33	2110	37000
* 31.0	2.26	2080	35800
* *30.0*	*2.18*	*2060*	*34600*
* *29.0*	*2.11*	*2030*	*33500*
* *28.0*	*2.04*	*2000*	*32400*
* *27.0*	*1.97*	*1980*	*31400*
* *26.0*	*1.89*	*1950*	*30300*
* *25.0*	*1.62*	*1930*	*29400*
* *24.0*	*1.75*	*1900*	*28400*
* *23.0*	*1.67*	*1880*	*27500*
* *22.0*	*1.60*	*1850*	*26600*

190 Grain Bullet
BL-C(2) Powder
Burning Rate 65

Grains	Vol.CC	Vel	Pressure
43.0	2.77	2310	47000
42.0	2.71	2270	44600
41.0	2.64	2220	42200
40.0	2.58	2170	40000
39.0	2.52	2130	37900
38.0	2.45	2090	36000
37.0	2.39	2040	34100
* 36.0	2.32	2000	32300
* 35.0	2.26	1960	30600
* 34.0	2.19	1920	29000
* 33.0	2.13	1880	27500
* 32.0	2.06	1840	26000
* *31.0*	*2.00*	*1810*	*24700*
* *30.0*	*1.93*	*1770*	*23400*
* *29.0*	*1.87*	*1730*	*22200*
* *28.0*	*1.81*	*1700*	*21000*
* *27.0*	*1.74*	*1660*	*19900*
* *26.0*	*1.68*	*1630*	*18900*
* *25.0*	*1.61*	*1600*	*17900*
* *24.0*	*1.55*	*1570*	*16900*
* *23.0*	*1.48*	*1530*	*16100*

190 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
39.0	2.52	2220	46100
38.0	2.45	2180	44000
37.0	2.39	2130	42000
* 36.0	2.32	2090	40100
* 35.0	2.26	2050	38300
* 34.0	2.19	2010	36500
* 33.0	2.13	1960	34900
* 32.0	2.06	1920	33300
* 31.0	2.00	1890	31800
* 30.0	1.93	1850	30300
* *29.0*	*1.87*	*1810*	*29000*
* *28.0*	*1.81*	*1770*	*27600*
* *27.0*	*1.74*	*1740*	*26400*

Continued next column

Continued

190 Grain Bullet
H335 Powder
Burning Rate 67

Grains	Vol.CC	Vel	Pressure
* *26.0*	*1.68*	*1700*	*25200*
* *25.0*	*1.61*	*1670*	*24000*
* *24.0*	*1.55*	*1630*	*23000*
* *23.0*	*1.48*	*1600*	*21900*
* *22.0*	*1.42*	*1570*	*20900*
* *21.0*	*1.35*	*1530*	*20000*

200 Grain Bullet
H414 Powder
Burning Rate 83

Grains	Vol.CC	Vel	Pressure
46.0	3.04	2310	47000
45.0	2.97	2280	45300
44.0	2.91	2240	43600
43.0	2.84	2200	42000
42.0	2.78	2170	40500
41.0	2.71	2130	39000
40.0	2.64	2100	37600
39.0	2.58	2060	36200
38.0	2.51	2030	34800
37.0	2.45	2000	33600
36.0	2.38	1970	32300
* 35.0	2.31	1930	31100
* *34.0*	*2.25*	*1900*	*30000*
* *33.0*	*2.18*	*1870*	*28900*
* *32.0*	*2.12*	*1840*	*27800*
* *31.0*	*2.05*	*1810*	*26800*
* *30.0*	*1.98*	*1780*	*25800*
* *29.0*	*1.92*	*1750*	*24900*
* *28.0*	*1.85*	*1730*	*23900*
* *27.0*	*1.78*	*1700*	*23100*
* *26.0*	*1.72*	*1670*	*22200*
* *25.0*	*1.65*	*1640*	*21400*

200 Grain Bullet
H1000 Powder
Burning Rate 104

Grains	Vol.CC	Vel	Pressure
58.0	4.14	2380	46300
57.0	4.06	2340	44200
56.0	3.99	2300	42200
55.0	3.92	2270	40300
54.0	3.85	2230	38500
53.0	3.78	2190	36700
52.0	3.71	2150	35100
51.0	3.64	2120	33500
50.0	3.57	2080	32000
49.0	3.49	2040	30500
48.0	3.42	2010	29100
47.0	3.35	1980	27800
46.0	3.28	1940	26500
45.0	3.21	1910	25300
44.0	3.14	1880	24200
43.0	3.07	1850	23100
42.0	2.99	1810	22000
41.0	2.92	1780	21000
40.0	*2.85*	*1750*	*20100*
39.0	*2.78*	*1720*	*19200*

200 Grain Bullet
H-VARGET Powder
Burning Rate 64

Grains	Vol.CC	Vel	Pressure
38.0	2.78	2190	45900
37.0	2.70	2150	44300
36.0	2.63	2110	42800
35.0	2.56	2080	41400
34.0	2.49	2040	39900
33.0	2.41	2000	38600
* 32.0	2.34	1970	37300
* 31.0	2.27	1930	36000
* *30.0*	*2.19*	*1900*	*34800*
* *29.0*	*2.12*	*1870*	*33600*
* *28.0*	*2.05*	*1830*	*32400*
* *27.0*	*1.97*	*1800*	*31300*
* *26.0*	*1.90*	*1770*	*30300*
* *25.0*	*1.83*	*1740*	*29200*
* *24.0*	*1.75*	*1710*	*28200*
* *23.0*	*1.68*	*1680*	*27300*
* *22.0*	*1.61*	*1650*	*26400*

200 Grain Bullet
H4895 Powder
Burning Rate 68

Grains	Vol.CC	Vel	Pressure
38.0	2.77	2210	46800
37.0	2.69	2170	44900
36.0	2.62	2130	43000
35.0	2.55	2100	41300
34.0	2.48	2060	39600
33.0	2.40	2030	37900
* 32.0	2.33	1990	36400
* 31.0	2.26	1960	34900
* 30.0	2.18	1930	33400
* 29.0	2.11	1900	32000
* *28.0*	*2.04*	*1860*	*30700*
* *27.0*	*1.97*	*1830*	*29500*
* *26.0*	*1.89*	*1800*	*28200*
* *25.0*	*1.82*	*1770*	*27100*
* *24.0*	*1.75*	*1740*	*26000*
* *23.0*	*1.67*	*1710*	*24900*
* *22.0*	*1.60*	*1680*	*23900*
* *21.0*	*1.53*	*1660*	*22900*

200 Grain Bullet
H380 Powder
Burning Rate 81

Grains	Vol.CC	Vel	Pressure
42.0	2.90	2150	45900
41.0	2.83	2120	43900
40.0	2.76	2080	42100
39.0	2.69	2040	40300
38.0	2.63	2010	38600
37.0	2.56	1970	36900
36.0	2.49	1940	35400
35.0	2.42	1900	33900
* 34.0	2.35	1870	32400
* 33.0	2.28	1840	31100
* 32.0	2.21	1800	29700
* *31.0*	*2.14*	*1770*	*28500*
* *30.0*	*2.07*	*1740*	*27300*

Continued next column

All pressures are in Pounds per Square Inch (PSI).
* = An accidental double charge is possible with these loads. Invert case before charging.
Italics = Calculated pressures may be less accurate due to the large reduction.
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Powder Burning Rate Chart

1	v-N310	33	ACCUR #7	62	v-N135
2	BULLSEYE	33	HS7	63	IMR4064
3	TITEWAD	34	SOLO 1500	64	A-XMR-4064
4	SOLO 1000	35	v-N350	65	ACCUR 2520
5	ACCUR #2	36	BLUE DOT	66	IMR4320
5	AMER-SELECT	37	ACCUR #9	67	v-N540
5	TITEGROUP	38	HERC 2400	68	v-N140
6	RED DOT	39	v-N110	69	ACCUR 2700
7	CLAYS	40	H110	70	RELODER15
8	v-N320	41	WIN 296	71	H380
9	ROYAL SCOT	42	SR4759	72	WIN 760
10	HP38	43	v-N120	73	H414
11	WIN 231	44	H4227	74	v-N550
12	IMR 700X	44	IMR4227	75	v-N150
13	wSUPER-TAR	45	v-N130	76	A-XMR-4350
14	International	46	ACCUR 1680	77	IMR4350
15	GREEN DOT	47	NORMA 200	78	H4350
16	v-N330	48	v-N133	79	ACCUR 2495BR
17	IMR PB	49	H4198	80	RELODER19
18	ACCUR #5	49	IMR4198	80	H450
19	PEARL SCOT	50	A-XMR-2015	80	v-N160
20	wSUPER-LIT	51	RELODER 7	81	v-N560
21	UNIVERSAL	52	IMR3031	82	IMR4831
22	UNIQUE	53	NORMA 201	83	H4831
23	SR7625	54	H322	84	A-XMR-3100
24	wSUPER-FLD	55	ACCUR 2230	85	v-N165
25	HS6	56	H-VARGET	86	RELODER22
26	v-N340	56	WIN 748	87	IMR7828
27	WIN 540	57	BL-C(2)	88	ACCUR 8700
28	HERCO	58	ACCUR 2460	89	v-N170
29	SR4756	59	H335	90	H1000
30	SOLO 1250	60	H4895	91	H870
31	v-3N37	61	RELODER12	92	H 50 BMG
32	IMR 800X	62	IMR4895		

This is not a complete listing of all powders in our load data section. Some are omitted because the relative burning rate is unknown. Duplicate numbers indicate the exact position is uncertain.

Your Favorite Cartridge Not Listed In The Previous Pages?

Sorry, space limitation simply does not allow listing all the possible loads. Don't despair. This book includes enough information so you can quickly and easily calculate pressure for most cartridges. It is simple and fast. Because you are reducing the powder charge there is little danger except for excessive reduction of very slow powders. (See Chapter 2). There are no fixed guidlines for reduction of the slow burning powders. I feel comfortable with these rules:

1) Do not reduce a charge more than 50% except for squib loads.

2) The slowest burning powder should not be reduced more than 20%. Each preceding powder may be reduced 1% more. Example: 20%, 21%, 22%, 23%, 24%, etc.

It's unlikely you will ever need or desire, to reduce a charge more than 50% unless you use a fast powder for ultra-light (squib) loads.

How You Can Use This New Information for Cast Bullets

Now check load data page, in the next section of this book, for your favorite rifle. Notice the last columns look like this:

NEVER EXCEED	VELOCITY fps	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
55.0	3125	51000	PSI	**3.125**	.9850	.9605
62.0	3099	49500	PSI	**3.125**	....	....

The numbers in the right two columns are the factors for a one grain charge reduction. Four dots indicate no factors are available. Multiply the Pressure for the NEVER EXCEED load by the four place decimal under [Pressr], called Pressure Factor; the result is the pressure for a load 1 grain less than the NEVER EXCEED load. For load reduction of more than 1 grain, simply multiply the product (your last answer) by the factor again. Do this as many times as required to get the desired pressure. Do not reduce the charge by more than one half—much less for slow burning powders.

From the preceeding charge table sample we know 55 Grains of Powder will create 51,000 PSI.
To find PSI for 54 grains
mutiply the Pressure Factor .9605 times 51,000.

The calculations below show you must repeat the process 14 times to reduce the pressure to 29,009 PSI.

Grains	PressFactor	PSI	
54	.9605 x 51000	= 48985	← Pressure for one grain reduction.
53	.9605 x 48985	= 47050	
52	.9605 x 47050	= 45192	
51	.9605 x 45192	= 43407	
50	.9605 x 43407	= 41692	
49	.9605 x 41692	= 40046	
48	.9605 x 40046	= 38464	
47	.9605 x 38464	= 36944	
46	.9605 x 36944	= 35485	
45	.9605 x 35485	= 34083	
44	.9605 x 34083	= 32737	
43	.9605 x 32737	= 31444	
42	.9605 x 31444	= 30202	
41	.9605 x 30202	= 29009	

Repeat as often as needed until you get a pressure suitable for the strength of your bullet. That is the Maximum PSI (MAX PSI) column on page 134. Do not violate rules 1 and 2 on page 157.

When using any simple calculator, enter the pressure factor first. This automatically becomes the constant. Be sure to enter the decimal point in front of listed factor because every factor is less than one.

Hit the multiplication [x] key.
Now enter the Pressure for the NEVER EXCEED load.
Hit the equals [=] key as many as many times as needed for the desired pressure. **Each time you hit the equals [=] key the powder charge is reduced by 1 grain and your answer is the new pressure.**

Remember each time you strike the equals [=] key it is a 1 grain powder reduction. Therefore you must count the key strokes. Subtract this from the maximum charge for your reduced charge. An

easier way is to count backward in 1 grain increments and stop when you get to the desired pressure.

Do the same to find the velocity for your new charge. Enter the Velocity Factor first then the multiplication [x] key. Now enter the Velocity for the NEVER EXCEED load. Hit the equals [=] key once for each one grain powder reduction. You can check the accuracy of the velocity factor when you get to the velocity of the START GRAINS provided the START GRAINS and NEVER EXCEED grains are whole numbers. Any slight difference is due to the round off. The velocity and pressure factors are rounded off to four places. The computer generated numbers are eight places. The differences are insignificant.

This is an excellent chance to use that spreadsheet program that came with your computer. Formulas are entered only once, then use the Fill Down in the Edit pull down window. The Formula View would look like this:

30/06 Springfield	
150 Grain bullet	
H-XAMPL Powder	
Charge	Pressure
55	51000
=A5-1	=0.9605*B5
=A6-1	=0.9605*B6
=A7-1	=0.9605*B7
=A8-1	=0.9605*B8
=A9-1	=0.9605*B9
=A10-1	=0.9605*B10
=A11-1	=0.9605*B11
=A12-1	=0.9605*B12
=A13-1	=0.9605*B13
=A14-1	=0.9605*B14
=A15-1	=0.9605*B15
=A16-1	=0.9605*B16
=A17-1	=0.9605*B17
=A18-1	=0.9605*B18

CHAPTER 11

Bullet Casting

Operating a miniature foundry, best describes bullet casting. You melt a lead alloy and pour it into precision molds. It solidifies within seconds. Force the sprue plate aside to cut off the sprue. Then open the mold to release shiny silver colored bullets. Surprisingly, the part line, where the two mold halves join, is nearly invisible, a tribute to the skill of the mold maker.

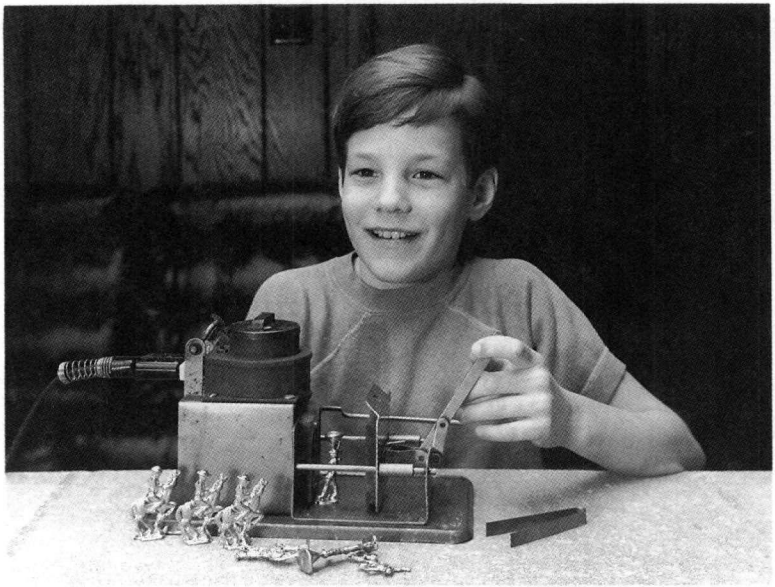


Figure 44 Son Robert Lee pretending he is making toy soldiers with his uncle Bob's Gilbert Toymaker (circa 1928). Picture 30 years old for casting ad.

Not too many years ago, before our excessively protective society, good young boys were entrusted with equipment to make toy soldiers using molten metal. Dad probably had as much fun as the boy. If you were burned a little, it was just part of growing up. It's almost impossible to believe that was the case when you look at modern toys, which must be well rounded, soft, and too big to swallow. If you are old enough to remember, there is no need to tell you it was fun. If you have not experienced it, you owe it to yourself to try it. You may feel you are too old to cast toy soldiers,

so have some fun casting your bullets and save much money while doing it.

Bullet casting equipment need not cost very much. A heat source, a pot to melt the lead, ladle, mold, stick and a rag to drop the soft bullets on, is all that's needed. Cost can be less than 30 dollars. With the minimum equipment, the quality of your bullets will be every bit as good as bullets made with the most elaborate (spelled e-x-p-e-n-s-i-v-e) equipment available. My advice would be to buy a ten pound Lee Production Pot with the bottom pour spout. Use at least a two cavity mold. Buy a Lee Lead Ladle to stir and skim the molten metal. Do not get one of those ladles with the pour spout on the side. They were designed to pressure cast by holding the spout to the sprue plate then tipping the mold and ladle to the vertical position. This helps if you are using old fashion iron molds, which are difficult to break in. When used with modern aluminum molds, a hot spot forms where the molten metal hits the side during the tilting process. The hot spot is the last portion of the bullet to solidify and causes a hollow due to metal shrinkage and makes an out of balance bullet. Continued use of a pour spout type ladle will damage the mold.

Hazards of Lead

Lead poisoning is a danger to anyone working with lead for an extended period. Lead poisoning is cumulative in the body. The body can get rid of lead only very slowly—much slower than accumulation by continued exposure. The good news is; simple precautions and common sense can reduce your risk to less than that of other hazards, such as taking a bath. Astronaut, now retired senator, John Glenn was one of many persons seriously injured in a bathtub. The only person I know that suffered from lead poisoning was my Uncle Ted who was exposed while developing a new storage battery some 80 years ago.

Never eat after handling lead, without first washing your hands.

Melt lead in a ventilated area.

Be extremely careful with the material you skim off your molten lead. Most of this is lead oxide, which is most toxic and easily

inhaled. Do not accumulate this poison in your work area. Dispose of it after every casting session.

Keep your work area clean.

I hope you are now sufficiently frightened to be wary of lead poisoning so you will establish good casting habits. But not so scared that you miss the pleasure of making your bullets. I have been doing it for almost 50 years with no ill effects.

If you do not normally wear glasses, be sure to use safety or shooting glasses. This goes for all phases of reloading and shooting. Gloves and a long sleeve shirt are recommended. A splash of 700 degree molten lead can cause a nasty and painful burn.

It may seem superfluous to give these next cautions, but they can and do happen all to frequently. **Be very careful to not let a live round or primer find its way into the pot. It does happen. Never get the slightest trace of moisture into your molten metal. It will explode with an unbelievable violence. A metallurgist told me the amount of energy released is greater than just that of the water turning into steam.** He was uncertain why it is so.

Lead Alloys

The late Len Weber introduced me to bullet casting in 1953. He supervised reloading for the Glendale, Wisconsin police department. Good advice he gave me was to use any lead you can get your hands on and harder metal makes better bullets. He had a simple test for hardness. Using a ball peen-hammer, he would smack the lead in question with the ball end of the hammer. By observing the size of the indentation, he could estimate the relative hardness and sort into batches. It was then quite simple to alloy for best results. I doubt he ever heard of the Brinell hardness test, which uses a similar but very precise system. His system worked very well. He was a thoroughly practical man and a great friend.

Dean Grennell, respected gun writer, and expert reloader, has more than once told me about his pot luck alloy. Dean, roughly quoted would say, "If it looks plumbous, I'm apt to make bullets out of it." Dean would be first to qualify the statement with advice that lack of bullet hardness may limit velocity.

You have probably guessed that my personal bullet alloy is not a scientific blend of precise amounts of virgin lead, tin and antimony. I, like most other bullet casters, have learned by experience what works. The most important property of an alloy is the hardness or strength. Stronger bullets are usually better than weaker bullets. There is no lead alloy hard enough to damage the bore of your gun.

Very low velocity mid range target loads are more accurate with a softer or weaker alloy. The weak alloy allows the base of the bullet to expand and seal the bore just like a hollow base bullet. As mentioned in the preface, this is one of the things I learned in the last six years. There is an ideal alloy strength for every load. Even more useful; there is a load for every bullet strength and you can find it in this book. Now you can make bullets from any alloy, check the strength and select a load that is sure to work well. This is completely explained in the previous chapter.

Sources of Metal



Figure 45 The stuff bullets are made from.

Most reloaders are quite thrifty by nature, and usually pretty good scroungers. There are other good sources of lead at bargain prices. Wheel weights make great bullets. Check where you buy your tires. Usually they will have a good supply of used wheel weights at the right price. Avoid shiny wheel weights as they may contain zinc. Check with the local shooting range. Those bullets can be recycled forever. Frequently range bullets have many 22 rimfire bullets and soft cores from jacketed bullets so the metal may be on the

soft side. Son John tells me the range lead from the Hartford Conservation Club was analyzed and it contained no tin. Some tin is needed to make casting easier.

If you're willing to buy larger quantities, most salvage yards are happy to sell to a retail customer rather than sell to the smelter at wholesale. Keep your eyes open for linotype metal, it is a hard alloy of lead, antimony and tin. You can recognize it by its shape. Linotype metal is usually cast in 25 pound ingots, about 2 feet long. It makes the best looking bullets and works well for high pressure rifle loads. Straight typemetal is too hard for lighter loads. I usually blend it with other scrap lead for most of my shooting.

All bullet metal should have a little tin. Tin's most important attribute is its ability to make the alloy fill the mold better by reducing the surface tension of the alloy. Tin not only makes lead cast better, it makes it harder. Tin is a very soft metal. When alloyed with copper, another relatively soft metal, it makes bronze, which was the hardest metal available during the Bronze Age. Soldiers armed with bronze swords and bronze armor ruled the world until steel was discovered. The most ready source of tin is solder, which is available at every hardware store, but it is expensive. If you go to the salvage yard looking for tin, ask for "block tin". They'll know exactly what you mean. This is usually salvaged from beer coolers. It will look and feel like lead tubing. It's expensive, but it is pure tin, not a 40 to 60% alloy with lead as is solder. Solder used to sweat copper water pipes is mostly tin. Check the label to find the alloy. Pewter is also high in tin content. It's just not likely you'll find any at a bargain price.

Don't try to salvage lead from old storage batteries. Most of the lead is lead oxide that you can't easily reduce to lead. All new batteries have calcium added to make them maintenance free. This creates additional hazards of which I know nothing, but understand it is bad.

Muzzle loading guns require very soft bullets. They must be cast from pure lead. A simple test is to scratch the lead with your thumb nail. If you can easily scratch it, you can use it for your muzzle loader. Most hardware stores sell pure lead in the plumbing supply department. Old roof flashing, cable sheathing and lead

pipe usually are pure lead. If in doubt, try scratching it with your thumbnail.

The other metal used to make lead hard is antimony. It has a melting point of 1,167 degrees Fahrenheit. Much hotter than you should heat lead. Molten lead will dissolve antimony much the same way you would dissolve a hard candy in your mouth. Large pieces take considerable time to dissolve. Because antimony is usually not available to most of us in its pure form, it's not important to worry about how to alloy it anyway. The best source of antimony is that which is already alloyed, such as type metal or wheel weights.

A problem contaminant is zinc. Even a very small trace of zinc in your alloy can ruin its castability. Zinc increases the surface tension of lead causing the metal to try to ball up. This keeps it from filling into the corners of your mold and you don't get those nice sharp edges on your bullets. If you ever get a batch of metal that just won't make good bullets, you can be reasonably sure it has been contaminated with zinc. You can try to blend it away with other batches of alloy but you may waste more metal because only one part of zinc in 10,000 parts of alloy is enough to cause problems.

There are companies that sell bullet casting alloys. Your local reloading dealer may offer it for sale. The only company that I am aware of that offers bullet casting alloys for mail order sales is: Midway USA in Columbia, Mo. They have a toll free number 1-800-243-3220 and a web site www.midwayusa.com. Midway is a reliable company owned by Larry Potterfield who is a fine gentleman.

To sum up the important points:

- Bullet strength must be matched to breech pressure for best results.
- Use pure lead for black powder guns.
- Lead with 1% tin for target handgun loads.
- Lead plus some wheel weights for high pressure handguns.

- Wheel weights for very light rifle loads.
- Linotype for high pressure rifle loads.

These are rough guidelines. For high pressure ammunition the only way to insure good results is to measure the strength of the bullet and match it to loads with appropriate pressures. This is covered in chapters 9 and 10.

- Tin makes your bullet alloy more castable and harder, but it is expensive. Some tin, at least 1% is desirable.
- Antimony makes bullets even harder, costs less than tin and is best acquired in type metal or wheel weights.
- Zinc is bad! One part of zinc in 10,000 parts of lead alloy will ruin its castability.

Just a few words about molds before we begin. As I told you in the beginning, this book will mostly refer to Lee products because we believe those which we manufacture are the best buy for the money. We also have the same belief about molds. Most users must also believe it because we sell more molds than all the other manufacturers combined. Unfortunately, many bullet shapes and calibers are not available from Lee Precision. This forces the customer to buy another brand. The cast iron molds made by others, are machined with a different process. The mold halves are moved into a rotating cutter called a cherry. The mold halves must be frequently opened to clear the chips and remove the part line burr. The quality of the mold depends upon the skill of the machine operator, condition of the cutter and the rigidity of the equipment. A good mold is usually produced. Size and finish will change as the cutter wears.

One evening, I was mulling over the characteristics of aluminum. The heat transfer rate is very high. Aluminum instantly surface oxidizes to form a protective film against further oxidation. This aluminum oxide is the same material of which grinding wheels are made. In its natural form it is called, ruby or sapphire depending on color and purity. Aluminum is easily machined. Even more important, aluminum weighs only one third that of iron. This was especially important to me at the time. I had recently helped the Glendale Police department cast bullets with a ten cavity Hensly Gibbs mold. That is a real load.

With all of this going for it, aluminum seemed a natural for a bullet mold. I quickly produced the first crude aluminum mold in my basement workshop. To my delight, it produced good bullets with less effort than I experienced with all commercial brands.

I used locating pins as with conventional molds. The locating holes soon elongated and the mold was useless. To overcome this obstacle a mold with perimeter alignment using "v" ribs and grooves was invented and a patent issued.

There are many good molds made from iron. These require a little different care and the instructions from the manufacturer must be followed to the letter. The biggest weakness with iron molds is the propensity to rust. I always stored them with a bullet in the cavity in hopes they would not rust. Unfortunately, they did finally succumb to rust and are now useless. The problem is; you just hate to oil the mold because the next casting session will require starting from scratch. The mold has to be "broken in" again.

Lee molds are all lathe bored. The mold halves are securely clamped together and rotated in a lathe type of machine. The cavity is completely machined with a series of drills, cutters and boring tools. There may be as many as six different tools working sequentially to make a single cavity. The benefits are many. The mold is perfectly round with an almost invisible part line. Size is easily adjusted for tool wear and the quality is unsurpassed. The process sounds complicated and is complicated. However, it happens very fast. The entire operation usually takes only 30 to 50 seconds per cavity.

The downside is the equipment and setup are costly and time consuming. It is very expensive to produce a single mold. In spite of this, some customers are so totally satisfied with Lee molds that they demand special custom made designs.

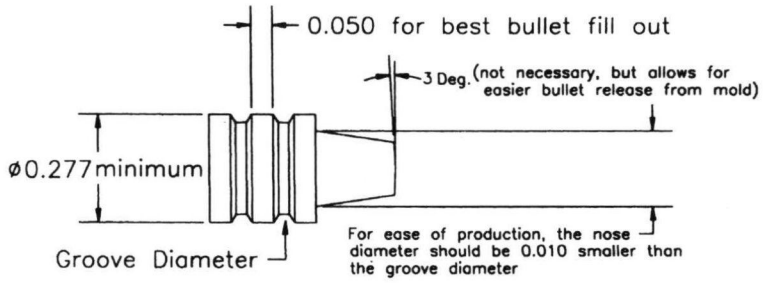
For these few who know what they want, we offer custom molds at the regular price plus a one time hundred dollar setup charge. We do not encourage custom work as it returns little or no profit, especially if problems are encountered. It is not unusual to waste several mold blocks setting up a job. The scrapped blocks are collected in a 55 gallon drum for sale to a recycler. You can imagine my feelings walking past this scrap barrel knowing that if they

were all good they would be worth twenty to fifty dollars each rather than 20 some odd cents per pound as scrap.

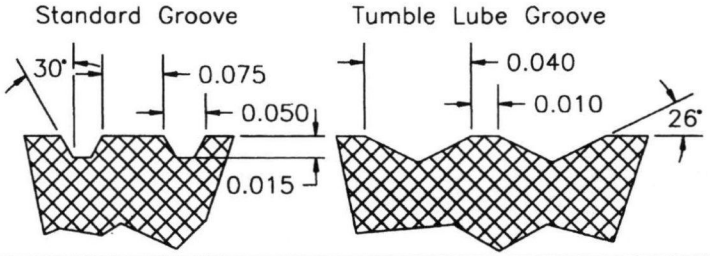
The next page has the information needed to design a bullet that can be made with our exclusive process. The drawings were supplied by Larry Weinman. He improved upon the drawing we offered.

Design Your Own Bullet.

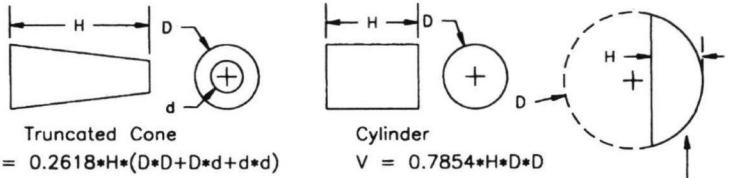
Custom Bullet Mold Design Assistance Sheet
Some Basic Limitations Of Our Manufacturing Process



Use of our common forms will allow faster turnaround



Some helpful formulas to calculate bullet size and weight



Lead = 0.4096Lb/cu.in., 95/5 Lead/Tin = 0.397Lb/cu.in., Linotype = 0.381 lb/cu in.

The weight calculation is for your reference only. We will make the mold to your dimensions – not the weight. We guarantee your stated size –0.000" +0.003".

Lee Precision, Inc.
4275 Highway U
Hartford WI 53027

Setting up for Bullet Casting

A sturdy table or workbench, glasses or safety glasses in a ventilated area, with an easily accessible electric outlet are the minimum safe working necessities. Gloves and a long sleeve shirt are desirable.

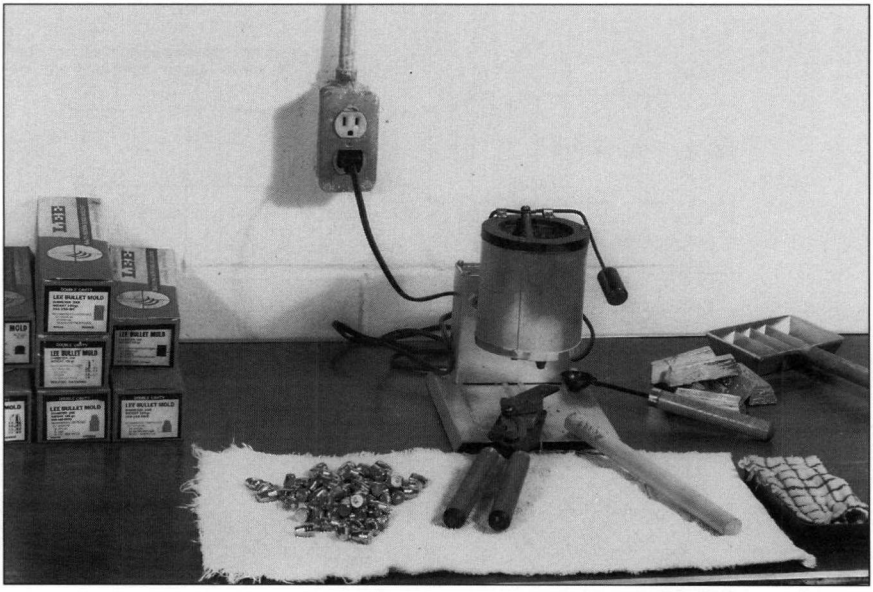


Figure 46 Your bullet casting setup should look something like this.

Natural fiber clothing is best as most synthetic fabrics melt when splashed with molten metal. Besides the above; you should have an ingot mold, bullet lube, lead ladle, ¾ to 1 inch by a foot long hardwood dowel, another rag and a shallow pan.

Place your melter back from the front edge of bench 12 to 14 inches. This gives you a work area between you and the melter to empty your mold. Lay a cloth on the bench to cushion the bullets dropped from the mold, as they are still very soft. An old terry cloth towel is ideal.

Fill your melter with alloy and turn it to number 7 heat if it is a Lee melter. This setting will permit the melter to operate full blast until the metal has all melted. While waiting for your metal to melt, use

this time to clean your brand new mold of cutting fluids left from the manufacturing process.

Dip a cotton swab in solvent and clean only the cavities. Any solvent seems to work. Mineral spirits, white gas, alcohol, spot remover, lighter fluid or even detergent will do the job nicely. Do not clean the sprue plate or other steel parts. Let the rust proofing oil cook onto them. It provides a rust resistant coating—sort of like seasoning a cast iron frying pan. This cleaning operation need be done the first time only. Place your mold on top of the melter and let it dry and preheat. Do not let the wood handles touch the melter as they will char.

Neatly fold a rag into a pad about 4 x 6 inches. Completely soak it with water and lay it in a shallow pan. Use this to cool your mold when it starts getting too hot for efficient casting.

By now your metal should have melted. However, you are not quite ready to start casting. It is assumed you are using a Lee aluminum mold and it must be lubricated or it will not only cast poor bullets, but it can be irreparably damaged. The mold should be hot from the preheating. If not, dip a corner of the mold in the molten metal for 20 seconds to heat it up. Now lubricate the mold with a small sliver of Lee Alox Beeswax Bullet Lube. Touch the "V" ribs, cross pin, and sprue plate bushing with the Alox lube. Do not let any lube get into the cavities or your cleaning job will have been wasted and it becomes 10 times harder to clean bullet lube from the cavities.

What ever you do, do not skip the lubing operation. Hot aluminum gets sticky. The mold halves won't close properly and your bullets will be out of round. The lube you put on the sprue plate bushing slowly works between the sprue plate

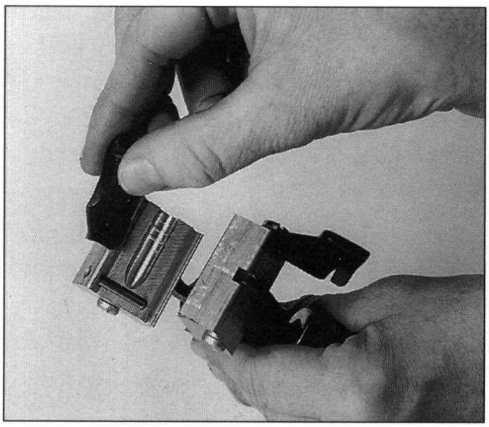


Figure 47 Be sure to lube your mold.

and mold blocks to keep them from galling and it helps prevent the bullet from finning on the base.

The mold should also have a light coating of soot from a match flame. A butane lighter works better. Do not use a candle as it deposits an oily coating, which gasses off when it contacts the hot alloy. This keeps the mold from filling properly.

One last and very important operation before we start casting. The alloy must be fluxed. You will notice a gray scum floating on the top. This is not waste. Most of it is your costly alloys. What happens is; the alloys tend to ball up into very tiny spheres. They do not want to join because of the surface tension. The flux breaks the barrier and the metals alloy. Many fluxes are available, but most are very corrosive to steel and they will badly rust your melter. Bees wax or Lee Stick Bullet Lube works just fine as a flux and is not corrosive.

Place a lump about the size of a large pea into the pot and stir with your lead ladle. The smoke can be burned off with a match—it may produce a large flame. A properly fluxed pot of alloy will have nothing but some dark gray powder floating on the top. Skim this off and discard it. Do not let it accumulate as it can cause lead poisoning.

Now you are ready to start casting. Quickly fill all the cavities leaving a generous amount of lead mounded on the sprue plate. This is to maintain a molten puddle to feed the bullet as it shrinks from cooling. When the puddle starts to harden, open the sprue plate with a sharp rap with the wood dowel. If you are using a Lee six cavity mold, open the mold with the sprue plate lever. In either case, immediately open the mold and let the bullets fall on the soft cloth. This is important as the bullets are still very soft as they are still close to the melting temperature.

Most likely the bullets will stick in the mold. Use your wood dowel to tap the bolt on the mold clamp pivot. This should free the bullets. If you did everything correctly, you will have beautiful shiny bullets, completely filled out with sharp edges. This will also be highly unusual. Under the best of conditions it will take 2 or 3 tries to produce good bullets.

After each cast, quickly close the mold and immediately refill. If you are using the Lee six cavity mold, be sure to close the sprue plate lever completely. The first few degrees of opening angle depend upon the lever to cam against the mold block to break the sprues.

If you have not done everything exactly as instructed and you do not have a good alloy, good bullets may not be produced for many tries. This can be very discouraging. It is far better to spend your time up front preparing the mold, enabling you to get good bullets very quickly. The mold preparation is a one time chore. With a mold that has been "broken in," good bullets come very quickly.

Bullet casting problems.

The best way to avoid problems is to read and follow the instructions. The following are common problems we are most often asked to solve. If you know what kind of problems to expect the chances of having them are greatly reduced.

Out of round bullets, because the mold halves were not lined up, is the number one problem. It should not be. The reason is aluminum becomes very sticky when it gets hot. The "V" ribs will not slide into the groove unless they have been lubricated. Lubricate the mold and you will not have the number one problem. It is explained four times in the instructions and yet it remains the biggest problem.

Another big reason for out of round bullets is a splash of lead between mold halves. Dropping bad bullets from the mold directly into the pot causes this problem. Remove any lead from the mold by picking it off with a small knife blade.

Sprue plate galling on the mold top is another problem solved simply by lubricating the sprue plate bushing with bullet lube.

The mold does not fill out.

This can be caused by a variety of things. The mold or alloy may not be hot enough. The mold may not have been cleaned adequately and smoked or your alloy may be bad. You will have to search out the reasons and eliminate them with the proper corrective action. If you suspect your alloy is bad. Try the alloy it another mold of known quality. If the alloy is no good it will make bad bullets. Reread the previous com-

ments about bullet alloy to see if perhaps you can determine the problem.

Here is a last resort to try to make a mold fill. Use a propane torch and play the flame directly into the cavity to burn out any trace of oil and condition the surface. Be careful to not melt the aluminum. When the soot burns off the smoking operation, chances are it is hot enough.

I do not know what happens to the mold surface that changes it from new to broken in. A mold that is properly broken in and cared for is a joy to use. I have tried to artificially break in molds by baking them in a hot oven, acid, drain cleaner, silicone and other coatings. Nothing seems to work as well as simply using it. If you have a good mold that works well, good advice is, never lend it to anyone.

When a mold gets too hot it not only slows the casting process, but the bullets come out of the mold with a frosted appearance. I have never found this to adversely affect the quality of the bullet and it may make a better surface to which the lubricant can adhere. In my opinion the frosted bullets are no problem, but the slower rate of production is a problem.

The solution is simple. When the mold gets too hot, cool it. That's the reason for the wet pad in a shallow pan. With bullets in the cavities lay the mold on the wet pad for just a second or two. The water turns to steam and takes many B.T.U.'s with it. As you get into it, you will find touching to the wet pad becomes part of your rhythm. Depending upon how hot your metal is and the size of your bullets, you will quickly learn to touch the pad every second to tenth cast. **It is extremely important to never let any water get into your molten alloy as it will explode.** The reason this method is so safe is any water that touches the mold turns to steam instantly. If not, your mold is too cool.

One last problem that comes up quite often is a dull spot on the side of the bullet. This is usually caused by casting with one of those ladles with a pour spout on the side. The user tips the mold against the spout and then tips the assembly letting the metal pressure feed into the mold. The problem is the molten alloy fills the mold by bouncing off one surface of the cavity. This superheats a

spot in the cavity and is the last part of the bullet to solidify. All shrink is at that hot spot and you get an out of balance bullet. The shrinkage must be from the base of the bullet so the metal heaped on the sprue plate can make up the shrink.

This is a good time to explain a little more about sprue plates. This clever way of closing off the end of the mold is a more complicated device than first meets the eye. It is full of paradoxes. One would think that the tiniest possible through hole would make the best bullet because there would be only the smallest of nib to cut off. The problem is, when the hole gets too small the mold simply does not want to fill. Even if it does fill, the metal above the plate will not feed through the hole to take care of the cooling shrink.

A large sprue hole makes the best bullets. However, if the hole gets too big it becomes difficult to cut the sprue and the base of the bullet becomes uneven. The optimum hole size varies not only with the material from which the sprue plate is made, but also the thickness of the material, angle of chamfer, temperature and alloy. We have experimented with a large variety of sizes and found that which works the best overall. That is the size supplied on our molds.

When we first started producing aluminum molds, it was mandatory to submit a sample to the American Rifleman for testing before they accepted advertising. The late Col. Harrison from the staff of the American Rifleman, was a noted expert on all phases of reloading and especially cast bullets. He called after testing the sample and said the mold would not fill properly. I asked if he had followed the instructions and smoked it. He asked, "Smoked it?" Then apologized for not having read the instructions. The next day he called and said that it was the best casting mold he had ever used. He was so impressed with the aluminum mold that he took it a step farther and had an aluminum sprue plate made for it. It impressed him enough to do a separate article on the benefits of aluminum sprue plates verses steel sprue plates. It was because of his article that we produced our commercial quality 6 cavity mold with an anodized aluminum sprue plate. It works very well.

The only molds that I have ever seen which can compare to Lee molds, as to casting ease, are the aluminum ones made by Veral

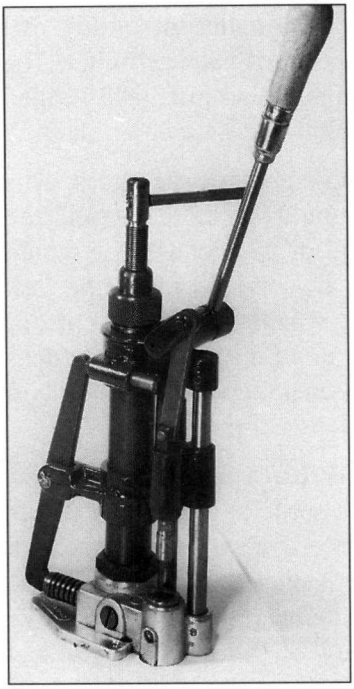


Figure 48 Star lubricator and sizer. Bullets are pushed through the die and drop out of the bottom.

Smith of LBT industries. The sprue plate is very thin steel with a ridge to stiffen the plate and form a dam for the alloy. This combined with a rough surface between the mold halves and crude sprue plate hold down makes it look cheap, but it works very well. The rough surface at the part line makes a great vent and we do the same on some of the Lee molds with good results. That thin sprue plate works fine. I suspect the thin plate has a low capacity for heat as does the thicker aluminum we use on our six cavity molds. The sample I tested made attractive bullets right from the start. I think most LBT customers are pleased with the molds. Limited production keeps the price a little steep.

Bullet Lubricating and Sizing

All lead bullets must be lubricated. They must be sized only if they are too big. Bullets can be enlarged by squeezing the length, or "bumping", if they are too small. This is the long and short of it.

First, let's look at bullet sizing. Bullets do not require sizing if they are made correctly in the first place. One of life's great frustrations is to receive a mold from a customer. The customer complains, "The sizing die barely touches the bullet." Then requests we replace it with a larger one. The customer had a perfect mold and wants it replaced with an imperfect mold so that it will produce imperfect bullets. They will need sizing to make them not quite as good as the bullets from his original mold. We oblige the customer and throw the perfect mold away, as a used mold cannot be sold.

The mold maker must have some tolerance to make the mold. With great pride, we at Lee Precision make molds with less tolerance than any other manufacturer. Our tolerance is smaller than the combined variances you can expect from the shrink difference of various alloys, alloy temperature and mold temperature. We can no more make every mold exact to the nearest 0.0001 of an inch than you can consistently put every bullet in the same hole at 200 yards. No other manufacturer will tell you what their tolerance is. Our bullets are not only guaranteed round to within 0.001 inch, but they also will be the stated size minus nothing, plus 0.003 inch. The tolerance is reversed for bullets intended to be used with black powder guns. The reason is an oversize bullet can more easily become stuck in the bore when loading from the muzzle. Too small is better than too big with black powder guns.

A bullet, to shoot accurately, must fill the bore to both seal the high pressure gas pushing it out of the gun and engage the rifling to impart spin. A bullet that is too small will do neither of the above.

The problem of excessively large bullets is not exactly what one would expect. The oversize bullet does not present itself as a hazard that will raise pressures so much that the gun will explode. Basic engineering calculations assure us that the pressures needed to push a bullet into the bore and size it to bore diameter is approximately a few hundred pounds. That's a very small percentage of the peak pressure available.

The real problem is that an oversize bullet will enlarge the case too much to chamber in the gun. If forced into the chamber, the case will pinch the bullet. This raises the start pressure to an unacceptable level and will disrupt the pressure curve. An already hot load becomes a dangerously hot load. Of course, if you have been prudent in your load selection initially, the extra pressure, instead of moving into the dangerous area would only be near the high cautious side.

Cast bullets vary in size from the mold tolerance, alloy, casting temperature and molder's technique. Most cast bullets need to be sized to fit the bore. What not everyone agrees upon is, which is the best way to size the bullet. Let's look at the options.

The first option is to let the gun bore size the bullet. The bullet does not know the difference if it is being squeezed down to size by a bullet sizing die or the taper leading from the chamber to the bore. Some proponents of this suggest that letting the gun size the bullet softens the lead less than a sizing die because is happens so fast. This is another advantage, because soft bullets tend to lead the bore more than hard bullets. Most guns shoot smaller groups with slightly larger bullets. The most convincing argument in favor of shooting as cast bullets is; it saves an operation.

The single problem with letting the gun size the bullet is with bullets that are excessively large. Oversize bullets loaded in cases that have thick walls may be too large to freely chamber in your gun. If you are loading straight sided handgun ammunition the loaded round can be sized with a Lee Carbide Factory Crimp Die. This die sizes the loaded round and can install a firmer crimp than is possible with a conventional bullet seating die. The downside is it requires an extra operation.

The second option is to use a combination lubricator and sizer. This is a rather expensive device that sizes the bullet by pushing the bullet into a die and then injects lube into the grease grooves. Most models, other than the Star, require the bullet then be forced out of the die by the reverse stroke. This is not so bad except that it requires you handle each bullet twice, put it in and take it out. Every time you change nose shape or diameter, you must buy a rather costly die and or nose punch.

I have sized and lubricated many thousands of bullets with a Lyman lubricator and sizer and it worked well. The bullets come out of the die sized with lube in all the grooves. Unfortunately, the lube is only in the grooves and none on the outside diameter where it is most needed. These tools have an irritating defect. The lube is under pressure and shuts off with a piston under the bullet. The bullet moves the plunger out of the way to expose the holes or undercut in the die so the lube will squirt into the lube grooves. All too often, the lube leaks between the bullet base and shut off plunger and it gets messy. This irritation can be avoided by drilling a hole lengthwise through the shutoff plunger. The lube will then harmlessly vent out of the bottom. Do not make the hole too big. A 3/16 hole will work for most 30 and larger calibers.

While the latter is only an irritation, there are some more serious drawbacks to combination lubricator sizers. Pushing the bullet through by the nose requires a closely fitted nose punch for every bullet shape and caliber. The accuracy of the sizer is dependent upon the alignment of the die and punch with the press. Because all the dimensions are cumulative, there is a possibility for considerable error. This offset between punch and die can be sufficient to size the bullet off center and make bad bullets out of good ones. Some sort of floating bullet punch would make the machine a hundred percent better.



Figure 49 Lee Sizer mounted on a Reloader press.

When using a combination lubricator and sizer, you can do a big favor for your local indoor shooting range. Lube only the end groove if you are shooting light loads. Reduced charges require very little lube. The excess simply messes up the range.

The last entrant to the bullet sizing derby was invented by Lee customers and it is rapidly becoming the most popular method by far. Years back, when the only product of Lee Precision was bullet molds and melters, we felt that there was a need for an economical method of lubricating and sizing bullets. If the only way to lube bullets was an expensive combination lubricator and sizer, it would be very difficult getting people interested in bullet casting. Our lubricator and sizer consisted of a stick of lube, pan, lube cutter and a

bullet sizer and punch. The bullets were stood upright in the pan and melted lube is poured around the bullets. The bullets were cut free of the lube with the cutter and then pounded through the sizer nose first with a punch and mallet. The quality of bullets were second to none. The process was slow and messy.

Users continued to send sketches of how they modified the sizing die to fit their reloading presses. One even suggested a container to catch the bullets as they are pushed through the die. It was not until Ed Harris, noted and respected writer and shooter, told me about an excellent Alox bullet lubricant that it all came together. I made the drawings for the punch and die. Son John designed a storage and shipping box that doubled as a container to catch the bullets after sizing. It became the most popular sizer made.

The Lee sizer is popular not only because it is low priced and fast, but it makes the best bullets. Bullets are pushed through nose first with a flat punch. No special punches are needed. The bullet is guided into a long tapered opening by a floating punch mounted into the ram of the press. They are sized with minimum distortion and maximum precision. The best part is that the complete kit, with enough lube for thousands of bullets, costs less than only the die for the expensive combination lubricator sizers.

Lubricating the bullets

Lead bullets must be lubricated or they will lead the bore so badly as to make accuracy impossible and gun cleaning a nightmare. There are many ways to lubricate bullets. You may have noticed that even 22 rimfire ammunition has a waxy coating. Many formulas have been tried with varying success. Some commercial lead bullets have an inferior coating

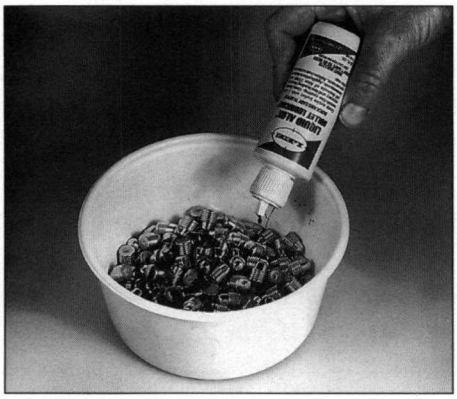


Figure 50 Tumble lubing bullets.

with resulting poor performance.

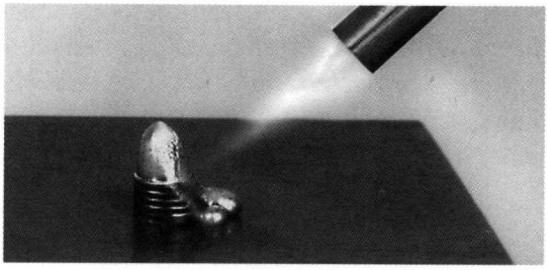


Figure 51 The bullet melts and the Alox lube clings to the hot bullet.

The method of applying the lube has varied. A lifetime ago, when I started casting bullets, the accepted best method was to make a bullet with one to a few grooves in the shank. Fill the grooves with lube. The grooves act as a reservoir to supply lube during the trip down the bore. This method remains popular today. Exotic new lube formulas are continually being concocted and tested by experimenters everywhere.

It was one such experiment by Ed Harris with a liquefied Alox that proved to be unusually successful. Ed was delighted with the results and offered it to one of the other big reloading tool companies. They were not interested. I suspect they recognized that if this brown magic liquid got into the hands of bullet casters, not too many expensive lubricators and sizes could be sold.

Ed Harris called to see if we were interested in the Alox lube. His call could not have been more timely. I had been working trying to develop such a lube with little success. I was using concoctions containing Teflon trying to make it stick by etching the bullets. My experiments were going nowhere. I could not come up with a single lube that would work as well as the old standard Alox beeswax mix.

Dennis Marshall, contributing editor for the American Rifleman, taught me a clever method to test the effectiveness of a lubricant. The test consisted of weighing the barrel of a 45 automatic. Then firing 25 rounds of the ammunition to be tested. Lightly clean the barrel to remove loose fouling and weigh again. The difference in weight is the amount of lead deposited in the bore.

Test results appeared to be in error with my first batch of bullets treated with the liquid Alox. The barrel surprisingly weighed less after firing the 25 rounds with the liquid Alox. I checked the scale and my previous test results. Everything checked. The liquid Alox

bullets not only did not lead the bore under the same conditions, they removed some of the leading I had not been able to scrape out with the bronze cleaning brush. This stuff was good! We wasted no time getting it to market. It was the perfect complement to our customer invented lubricating and sizing kit.

The lubricated bullets perform beautifully with little or no leading. The great thing about the lube is that it is on the outside of the bullet, exactly where needed. It dries to a soft varnish like finish and adheres almost as well. The lube thrives on heat. You can melt the bullet and the lube continues to stick to the bullet like tar to your shoes on a hot summer's day.

Gas Checks

Gas checks, as we know them today, are small precisely made copper cups that fit on the base of the bullet. Hornady Bullet Company makes all gas checks and are resold under different brand names. Gas checks are a method of enhancing bullet performance by sealing the base of the bullet against gas blow-by and shielding the lead from the high temperatures generated by the gunpowder. It has been a generally accepted practice to use a gas check on bullets above 1,400 fps. I suspect pressure not velocity may be a better guide. However I can only speculate that pressures above 25,000 PSI may do best with a gas check.

Many materials besides copper have been used as gas checks. Wax wads, zinc rings, Dacron, corn meal, kapok, and I have even tried the fluff from a milkweed pod with a fair amount of success. The copper gas check has become the most popular by far. They are low cost and readily available. Gas checks have an internal ridge that crimps onto the bullet base when the bullet is sized. Follow the instructions with your tool. The Lee sizer works the best because the gas check is pushed home and crimped automatically. It eliminates the need for a separate seating operation.

CHAPTER 12

Reloading Shotgun Shells

Shot shell reloading is similar to metallic cartridge reloading. The hull must be deprimed, reprimed and charged. A wad is inserted, the shot charge is added and then the shell is crimped. However, there are many aspects of shot shell reloading totally unlike metallic cartridge reloading.

The shell or hull or case, as commonly called, is usually plastic or paper. Pressures generally are modest compared to most rifle ammunition, usually only 8,000 to 11,000 pounds per square inch. Rifle cartridges can go over 60,000 pounds per square inch. This doesn't mean we can be any less careful in reloading shotshells because shotguns are working at maximum safe design pressure. The results of an overload can be every bit as dangerous as a rifle overload.

Shells

Shotshells have been made from metals such as brass and zinc. The lifetime metal cases used a cardboard disk in the mouth to retain the shot. This over the shot wad was held in place with brittle glue called waterglass. Before the invention of the star crimp, all paper shotgun shells were closed with an over the shot wad held in place with a roll crimp. Nowadays, we only see a roll crimp on slug loads. That's changing with new slugs for handloaders. (See Slug Loading at the end of this chapter)

Shotgun shells come in many colors, paper and different plastics, high and low brass, and some with no brass. Trap and skeet shells are the best shells for reloading. They reload easier and last longer than other hulls. A desirable feature is they usually have the greatest internal capacity and are usable for trap, field, magnum and slug loads. The length of the brass head has no effect. Its only function is sales appeal. I strongly suggest using trap and skeet shells for all of your shotshell reloading. Other types of cases can be loaded. If you have a supply use them, they work well but won't last as long and the crimp may not be as neat.

Wads

The use of a wad to separate the powder from the shot has little parallel in metallic reloading. While grease wads, gas checks, and fillers may sometimes be used for metallic reloading, the reasons are entirely different. The shotshell wad separates the powder from the shot. Its most important function is to seal the hot expanding gas behind the shot. Otherwise, most of the gas would blow through the shot. The seal on most modern wads is like a pump washer. They have a cup like bottom with a thin skirt to seal the gas.

Another function of the wad is to provide a cushion to absorb some of the shock of acceleration. Wads usually have a honeycombed or collapsible portion between the shot cup and the gas seal. Years ago felt wads cushioned the shot and filled the case.

Modern wads also have a shot cup. This helps protect the shot from damage during its high speed trip down the bore. When using steel shot, the cup helps protect the bore from the shot. Wads for steel shot are not the same as those for lead shot and visa versa. The shot cup is always split in several places. The resulting petals catch the wind and open up like a daisy. This slows the wad very quickly and lets the shot spread to a useful pattern.

Select wads not only by gauge, but also by length. A shotshell must be filled the exact amount to leave just enough tube to form a crimp. If filled too full, you won't be able to crimp the shell, or the crimp will bulge open in storage. Shells not filled enough will crimp too deeply and allow the shot to spill out of the opening. To make matters even more complicated, shells vary in internal capacity. Charges vary in volume and shot charges vary according to the weight you select to suit your needs. Shells have different internal depths and wall thickness.

It's not as bad as I made it sound. Ninety percent of all shotshell loading is for target shooting. Trap and skeet shells, are by design very reloadable. Wads are readily available for all usual combinations of loads. It is important to select the correct ones. Usually information, printed on the wad package, shows the cases and shot weights and wad type to use. Because wads have a portion that is collapsible, a slightly long wad can be compressed when loading.

This makes wad length selection considerably easier. For much of your loading just two sizes of wads will normally suffice.

Primers

Shotshell primers have evolved into a complex, dependable, and inexpensive igniter. All American made shotshells use "battery cup primers". Within the battery cup is a metal anvil centrally positioned to pinch the primer pellet when the firing pin strikes. The flanged end of the battery cup accepts the cup like container, which contains the priming pellet. Most primers have a seal over the flash hole to keep the gunpowder from entering. Otherwise, the fine powders filter into the battery cup and give the appearance of excessive pressure.

All major brands of shotshell primers are top quality. There are some subtle differences that can be used to an advantage. CCI primers usually are slightly larger in diameter. This makes them desirable for loading well-used cases, which tend to have enlarged primer holes. Federal brand primers usually have a little more power. Load data acknowledges this. Loads with all components identical, except for the primer, will usually suggest a slightly reduced powder charge when using Federal primers. A rule of thumb would be, "It is safe to substitute another brand of primers in place of Federal, because pressures will be less."

With the above rule in mind, it is easy to see how load data supplied with Lee shotshell loaders is not dangerous with a variety of components. The listed loads assume the user will be using components that will cause the highest pressure. The recommended powder charge is correct for those components that produce the highest pressures. Any change of components will give lower and safe pressures. Therefore, component substitution will produce lower pressure and velocity and a tighter pattern. Not a bad trade.

Shot

Select shot charges, first by weight and then by size. The smaller the shot number is, the larger the size becomes. They ran out of numbers for the larger sizes and substitute letters such as BB, BBB, T and TT. I have no idea why there is no "A" or what happened with "C" through "S". My shooting has been mostly limited to #8

for trap shooting. Next larger is the buckshot. This comes in 0, 00, 000 and 0000 sizes.

It is most important to use the correct weight of shot for the load selected. Too much shot will raise pressures to the danger point. The shot charge is the stopper in the tube that confines the gunpowder to get it burning properly. A shotshell loaded with a slow burning gunpowder and a wad without shot, often doesn't have enough power to blow the wad out of the barrel. The gunpowder stops burning before the wad clears the bore. The opposite is equally true. Too much shot will cause the powder to burn faster because the shot can't accelerate fast enough to lower the pressure. The higher pressure increases the temperature and the powder burns faster. Compare it to a car trying to push a dump truck. It can be done on a level surface. It won't go faster with a running start.

Another characteristic of shot is its hardness. Chilled shot is hard shot. When lead is alloyed with antimony and quickly cooled, or chilled, it becomes harder than if cooled slowly. Hardness of the shot is desirable. Harder shot deforms less and gives better patterns. Some shot is copper plated to make it even harder. Now anything can be taken to an extreme and shot is no exception. Years ago someone tried steel ball bearings and found that the pattern didn't improve and it raised heck with the barrel. That's why modern steel shot is annealed to make it just as soft as possible. Most shooters feel steel shot is still too hard. More than one gun has been ruined with steel shot. Let's hope we never see the day that lead shot is outlawed.

When loading shotshells, shot is always measured by volume. Yet, all load data is given in weight, namely ounces. A normal physical property of little round shot spheres is, an equal volume of smaller spheres will weigh more than larger spheres. This means that a one ounce shot bushing will hold a greater weight of number 9 shot than number 2 shot. We, at Lee Precision, solve this conundrum by calibrating our bushings using number 6 shot. This is sort of the mid-point of the average shot used by most shooters. The single exception is the 1 1/8 ounce bushing. It is calibrated with number 8 shot. The logic behind this is, trap rules limit the charge to 1 1/8 oz. of shot no larger than 7 ½. This makes your loads legal should you ever be challenged.

An interesting observation about shot is the price. You'll find shot bagged in a nice heavy cloth bag costs less than an equal weight of lead in a hardware store. Next time you pick up a bag of shot at your favorite sporting goods store, thank the shopkeeper for helping keep your price of shooting down. It is a good bargain.

Drams Equivalent

Units of measure always seem to have an interesting little story of how they started. A yard was from the king's nose to the end of his outstretched arm and most certainly a foot must have been equal to the king's. Gauge is the shotgun's bore diameter that is equal to the number of equally sized lead balls that would total to one pound. In other words, a 12 gauge is the same diameter of a lead ball that weighs 1/12 of a pound. A 20 gauge is the same diameter of a lead ball that weights 1/20 of a pound.

A dram is a contraction of the word drachm, pronounced dram. *Webster's Dictionary* says it is a unit of weight in Apothecaries and Troy and sometimes Avoirdupois. Referring to *Machinery's Handbook*, there are 8 drachms to one Apothecaries' ounce or 480 grains. However there are 16 drachms to one Avoirdupois ounce, 437.5 grains. Interestingly, a grain is a grain if you measure in Apothecaries', Avoirdupois or Troy. The grain is the least common denominator of all the above weighing systems.

Whatever measuring system is used, we continue to tie our present day calibration of shotshells' energy to the days of black powder. A 12 gauge 1 1/8 oz. 2 ¾ dram equivalent 2 ¾ inch shell means that the shot charge is 1 1/8 ounce. The velocity is equal to the same weight of shot in front of 2 ¾ drams of black powder. The 2 ¾ inch refers to the open length of the shot shell. It so happens that the standard mean velocity would be 1,145 feet per second for the above shell. A 1 1/8 oz. 3 dram load would have a velocity of 1,200 feet per second. As the variation can be plus or minus 40 feet per second, it's apparent that a 2 ¾ dram load can be faster than a 3 dram load and still be within tolerance. I mention the last to simply point out that we shouldn't become carried away seeking perfection. If you get a load that you can consistently break targets with, don't worry if the velocity varies from the standard. Velocity

of factory ammunition varies. Yours may also vary and still be very good ammunition.

Loading Shotgun Shells

Assuming you have now gathered all of your components to load your shotshells, lets get started. Sort your empty cases by brand and type. Trying to load shotshells of different types is asking for trouble. Not only is the internal capacity different, but the construction is different. Load data is not the same for all cases. Cases with a paper or fiber base wad require more powder for the same velocity. Inversely, a charge suitable for a shell with a fiber base wad will be dangerous in a one piece plastic case.

Almost without exception, shotshell reloading is done on a machine that does all the operations. Unlike metallic reloading, there is no die changing and almost no adjustments. Always follow the instructions that come with the machine. The Lee Load-All is a typical shotshell loader. We will use the actual instruction sheet to show the various steps.

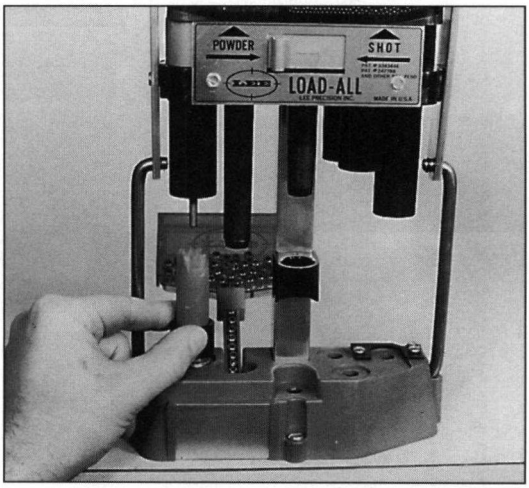


Figure 52 Lee Loadall

Your Lee Load-All II is factory set and requires no adjustment

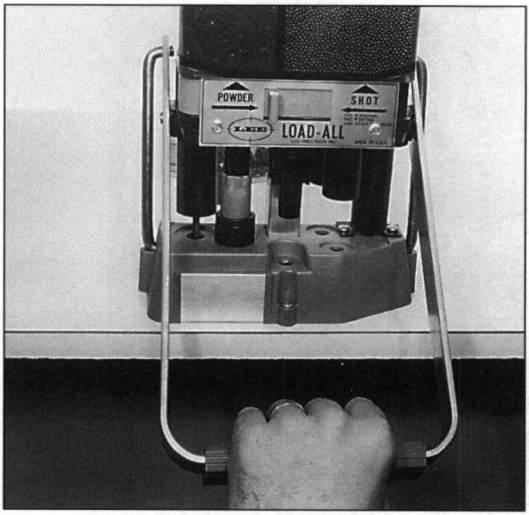
STATION 1

Slip the sizing die, **grooved end up, over the shell.** Place the shell in STATION 1 and pull down the handle. This will full length size and deprime the shell.



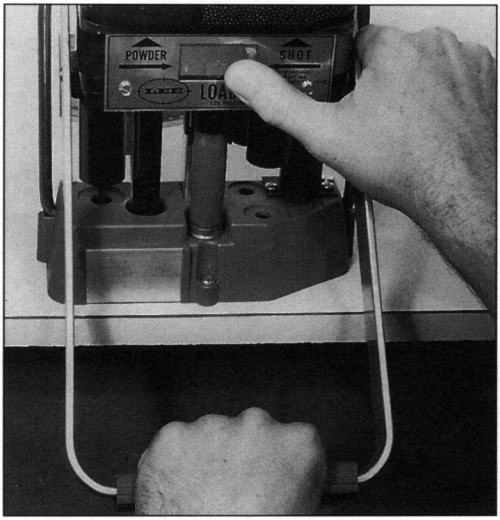
STATION 2

Place a primer in the priming pocket at STATION 2.
Move the shell onto STATION 2; pull down the handle. The sizing die will automatically be pushed off at this station. Remove it completely from the shell.



STATION 3

Slip the shell into the wad guide at STATION 3.

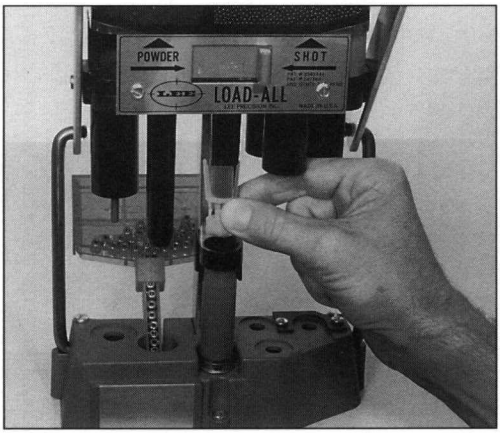


STATION 3a

Lower the handle and slide charge bar to the right. This adds the powder.

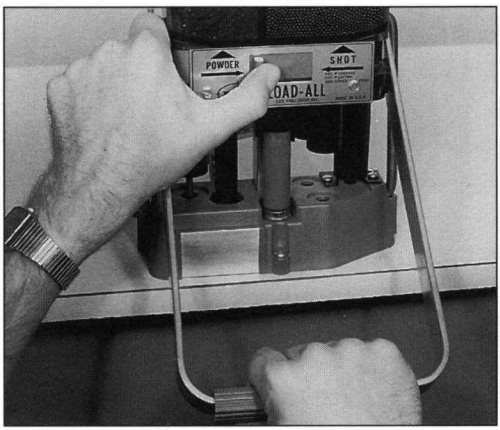
STATION 3b

Raise the handle, insert the proper wad and lower the handle until it stops.

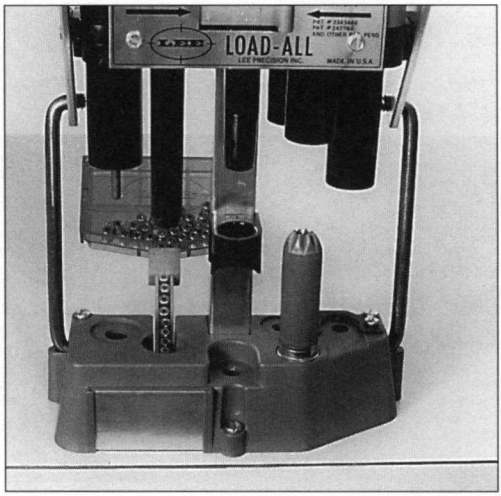


STATION 3c

Slide the charge bar to the left to add the shot. Raise the handle.



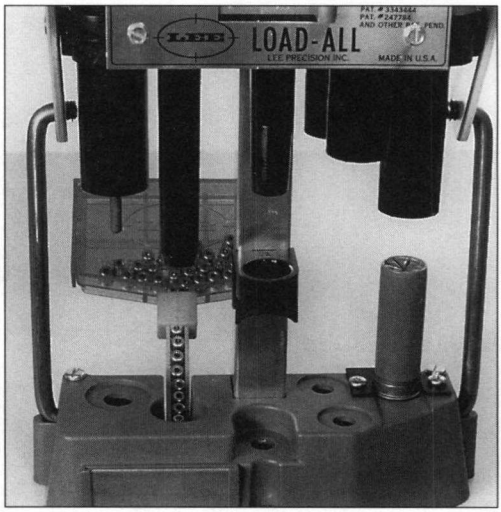
STATION 4



Place the shell under the proper crimp starter. Keep an inward fold of the shell mouth toward the front for proper alignment with the segmented starter. Depress the handle to a full stop. Some shells may require a 2-second pause to set the plastic.

NOTE The 8 segment crimp starter is in the front on the 12 GAUGE only. the other gauges have the 6 segment starter in the front. Be sure you select the correct one.

STATION 5



Immediately move the shell into the shell holder at STATION 5 and complete the crimp. You should have a perfectly crimped shell with a nice, tapered end.

IMPORTANT

A good crimp can only be obtained if the wad is the correct length. After the shot is added, there should be about 1/2" of shell above the shot on a 12 gauge, about 7/16" for the 20 gauge, and just slightly more for the 16 gauge. If the crimp is too deep with a hole in the center, use a longer wad. Mashed in crimp or crushed cases indicate the wad should be shorter.

Remember always follow the instructions supplied with your reloading machine.

Reloading shotshells saves money and is a rewarding pastime. Factory ammunition is usually good quality and we reloaders can normally only strive to match the quality at substantial savings. There are exceptions. Sometimes, we may want to make loads not otherwise available, such as reduced loads for junior training or spreader loads for a larger pattern in a tight choke. However, we mainly load shotshells for the savings and the fun of doing it.

Good components assembled correctly make good reloads. There is no reason your reloads can't be every bit as good as factory ammunition. After all, the same components are available to the reloader that the factory uses. For optimum results, follow the published load data exactly.

A frayed split shotshell won't have as tight a crimp as a once fired case. It will be safe but may have less velocity. Use them for practice. Don't be surprised if they break more targets. It has been my experience that most shooters tend to shoot loads hotter than needed. A little velocity loss usually results in a tighter pattern and less recoil. Now that you are a reloader, you have the luxury of experimenting to find out for yourself how much the variables really do affect performance. Most important, you can now afford to shoot more and improve with practice.

Reloading Steel Shot

Because steel is lighter than lead, it is necessary to use a larger size shot to obtain similar exterior ballistics. We experimented with steel shot long before it was considered for environmental reasons. Tom Kissel, a friend and shooting companion, bought several bags of assorted sizes of steel shot of the type used for shot blasting. Anyone who knows anything about shot blasting will tell you that stuff is hard, very hard. The big attraction to steel shot was its price. I don't remember the numbers, but if steel would work we could have saved much money in a year's shooting.

Being quite young and totally ignorant on the subject, we rushed in with great enthusiasm. We were smart enough to start with light loads and work up. These were the days of the Lee Loader for shotgun shells. Any of you old enough to remember, it was a port-

able hand tool. We tried a single shell and immediately tested it on a clay target. We would shoot and check the bore. After gingerly testing several loads, we were convinced that the power piston shot cup was protecting the bore from any damage as we could see no scratches. Well, we loaded and shot and changed shot size and powder charges and shot some more. It wasn't until we got home and cleaned the guns that we discovered the shot cup hadn't protected the bore as we thought. The bore, just in front of the chamber had multiple scratches and there were several farther down the bore.

In spite of the damage to the guns, we were encouraged enough to buy even larger sizes of shot for further testing. Finally, we determined our steel shot experiments would never produce ammunition as good as lead shot.

Modern steel shot is still many times harder than the hardest available lead shot. An equal charge by weight of steel shot will require more space in the shell. The space is available, but it comes at the expense of the wad cushion. This makes shot loads more sensitive to charge variations and powder types. The gun companies are going to have to provide longer chambers or larger bores to enable the shooter to approximate lead ballistics with steel shot. Perhaps steel shot loads should be labeled "ounces equivalent" when referring to the steel as a replacement for the lead. See how these standards start?

Components for steel shot are becoming available for the reloader. First and foremost, follow the instructions that accompany the components you buy. The problem of steel being lighter than lead cannot be completely solved if we limit ourselves to guns and ammunition designed for lead shot.

Always follow the instructions supplied by the makers of the components you buy. The Lee Load-All loads steel shot very nicely. Because steel shot fills the case more than lead, it may be necessary to raise the case while seating the wad. A couple of steel washers taped in place to the base in the wad seating station works well. If more height under the wad guide is needed, raise the wad guide to the position for 3 inch shells.

Shotgun Slugs

New techniques make shotgun slug reloading extremely attractive. Savings are huge and the resulting ammunition is better than produced by the factory.

Previously, slug loads were reloaded with the old fashioned roll crimp. Tools used to apply the roll crimp are hard to find and use. The roll crimp provided the shot start pressure for uniform ignition and velocities. Old style slugs need a sturdy nitro card wad under the slug to prevent the cushion wad from wedging into the base of the slug. At least one factory load uses a plastic insert to fill and support the wad.

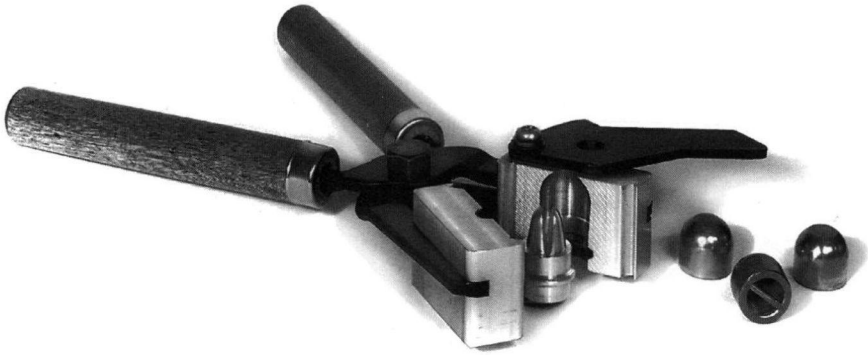


Figure 53 The new Lee Drive Key slug mold and slugs saves 70 to 80% over factory slug loads.

All of these problems are overcome with the new Lee Drive Key slug. The slug is slightly smaller in diameter to fit inside a standard shot cup wad—the type used for trap and skeet shooting. A support rib keeps the wad from wedging into the base of the slug. When fired, the wad bulges around the rib and locks to the slug while within the bore. The wad separates when it leaves the muzzle. If fired from a slug gun, the rifling engages the wad petals and insures the slug rotates for stability. The wad petals protect the bore from the lead slug. This eliminates lead fouling.

Accurate Powder Co. and Hodgdon Powder Co. did a great deal of testing to develop useful loads. These loads are for use only with

the modern star crimp and should not be used with rolled crimped rounds. The load data is included with the slug mold.

Consider these advantages. Slugs are easily and quickly cast from scrap lead. Use standard wads and very reloadable trap cases. Any shotshell reloading tool works fine. Simply substitute the slug for the shot and use the correct powder charge. Be certain you follow the load data supplied with the mold.

CHAPTER 13

Muzzle Loaders

About 35 years ago a sudden and unusually strong interest in black powder shooting erupted. I, like many shooters became fascinated with the replicas of the old guns and acquired several. What most impressed me was the size of the bullets and the unexpected power of the guns. The standard issue 58 caliber Mini bullet is 500 grains in weight. That's well over an ounce and larger in diameter than a 50 caliber machine-gun bullet.

Many years later while visiting some of the Civil War sites such as Gettysburg, Antitum, Vicksburg and Bull Run/Manassas the comprehension of the slaughter was depressing. Seeing the small size battlefields with little or no cover helped me understand how catastrophic the war was. I thought how fortunate my advanced bullet designs for the black powder guns were not available. The carnage would have been even worse. Thankfully, war and crime with reloads and black powder guns are almost nonexistent.

This chapter is not intended to be a treatise on loading and shooting black powder guns. Others are far more qualified to write about that. Follow the instructions with the guns and molds. Below is good information on making the bullets and the reasons for the bullet designs.

Bullet Selection

Round Balls

Did you ever see a square ball? Ball rounds would make sense. I suspect "Round balls" may be used to reassure customers the bullets that come from their molds are supposed to be round. Some cast balls are not very round. "Round ball" most likely is used to differentiate them from Minie ball, which is a real misnomer.

Making a mold for a perfectly round ball is quite difficult. Most molds are made with a tool or tools that can pass through the fill opening in the end of the mold. If you do that with a round ball mold it makes a very large opening, which leaves either a nib or flat on the ball. Such is not the case with Lee truly round ball

molds. The process we developed years ago cannot be done with cast iron molds. The aluminum mold is machined nearly to size near the center of a much larger block. Then a carbide ball is placed inside the mold and squeezed with many tons of pressure. This makes the cavity perfectly round and mirror smooth. The sprue end of the mold is then cut off to provide a small opening for filling. A conventional sprue plate is attached. When you open the sprue, the sharp edge of the mold cuts the sprue and makes the sprue side of the ball almost as round as any part of the ball. Only on the smallest balls can you notice a sizable flat spot.



Figure 54 Traditional Minie Bullet

Minie Bullet

Originally muzzle loaders were loaded with a ball or patched ball. A piece of cloth is placed over the muzzle and the ball is pushed into the bore a short distance. Excess cloth is then trimmed with a knife. The cloth patch seals the bore and wipes it during insertion. Only natural fiber such as cotton and linen are used for patches. Cloth patches are commercially available.

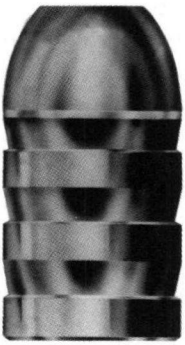


Figure 55 Improved Minie

In the nineteenth century French military officer C. E. Minie invented the Minie ball. The traditional Minie was the predominate rifle projectile used in the Civil War. When fired, the hollow base expands into grooves to seal the bore. The advantage was, the bullet could be smaller in diameter for easy loading and still shoot well.

Improved Minie

Seeking better accuracy I tried modifying the Minie by increasing the length of the shank for more bearing surface and changing the nose. It helped, but the greatest help was to make them available in sizes that best fit the bore. These are called oversize, but actually they are the best size for most guns. As the bore becomes fouled loading is harder. I found that if the bullets were lubricated with Lee Liquid Alox and allowed to dry, powder fouling was greatly reduced. This enables

you to shoot more rounds between cleanings. The prelubed bullets are more convenient to use. The improved accuracy is satisfying.



Figure 56 Modern Minie

Modern Minie

My continuing quest for a better bullet resulted in what I call the Modern Minie. The first experimental design had many small lube grooves and a round nose. Accuracy was poor. As so often happens in my life, I received a timely letter from a customer that helped solve the problem. He included some high speed photos of the shock waves on different bullet nose shapes. The angled nose seemed to wedge the air away from the bullet. The angled nose immediately improved the accuracy. So we modified the angle slightly and test fired for group size. We continued to change and shoot until the group started to enlarge. Then we know we went too far and used the angle that gave the best accuracy. Each test required a new mold. Bullets had to be cast and fired and it was very time consuming. The result was worth the effort. It optimized the design. An additional feature of the Modern Minie is the clean holes in the target.

R-E-A-L Bullet

Black powder shooting is fun and is popular with hunters. Quality black powder guns and bullets are very accurate. My only complaint would be the need of prompt cleaning of the gun after each shooting session and sometimes during the session. After firing a few rounds, the black powder fouls the bore and loading becomes difficult. Cleaning is necessary to resume shooting. A good lubricant improves accuracy and delays the fouling buildup. While cleaning cannot be avoided when shooting black powder, cleaning during a shooting session spoiled my fun. I would have to go back to the house, get a bucket of hot soapy water, remove the nipple and scrub out the bore with a ramrod and tight fitting patch with the breech end in the bucket. Oil it up and go back to my range a quarter mile away. Again serendipity pleasantly surprised me. It was not my intention to make a bullet that would clean the fouling from the bore. The REAL bullet eliminates build up of fouling by

scraping it clean with each loading. It is a very important improvement. The self cleaning feature alone is sufficient reason for its existence. The REAL bullet solved my problem of having to clean the gun during a shooting session. It has two other important features, outstanding accuracy and an excellent hunting bullet.

REAL stands for Rifling Engraved At Loading. I was searching for the ever elusive accuracy. Some old muzzle loading Shuetzen rifles were fitted with a false muzzle. The gun maker started with a barrel longer than needed so he could cut off a short length and use it for the false muzzle. It was perfectly aligned to the end of the muzzle with dowel pins. The false muzzle was attached for loading and removed before firing. The bullet entered the false muzzle and engraved the lands into the bullet before entering the rifle. This not only engraved the rifling into the bullet but protected the muzzle end from ramrod damage. The rifles had superb accuracy. Undoubtedly, the quality of the gun with set triggers and fine sights all contributed to its accuracy. You would have to be a dedicated shooter to pay for such a fine gun.



Figure 57 REAL Bullet

The idea of engraving the rifling into the bullet as you load the gun appealed to me. You cannot push a large caliber bullet, big enough to fit the grooves, into the bore with hand pressure. My idea was to reduce the contact area of the bullet to just four bands. Each of the bands from the base forward is successively larger. The base band enters the bore freely. The next is slightly larger to engage the rifling and act as a guide to straighten the bullet. The next two bands are even larger. The bottom sides of the bands have a shallow taper, the same as a lathe center, to guide and force the bullet centrally.

The REAL bullet works best when lubricated with Liquid Alox. The lube dries and clings tenaciously. You can shoot all day without cleaning the fouling from the bore. The REAL bullet is very accurate and because the bullet expands well, it is extremely effective for hunting.

More than one hunter informed me about a problem with most commercially available flat based bullets. The deep wide lube grooves are detrimental. The grooves crush rather than expanding the nose on impact. This wastes the bullet's energy as it usually passes through the game. This is not the case with the REAL bullet because the grooves are relatively shallow and the bullet expands well.



Figure 58 Conical Bullet

Conical Revolver Bullets

Many years ago when Ruger introduced their Cap and Ball revolvers called the "Old Army." Ruger was kind enough to send one for testing. It was a fine example of industry working together for everyone's benefit. This was one of my favorite projects as I enjoy shooting handguns. The project did not take very long. Experience and working with a fine American made firearm made it easy to develop a quality bullet. As I recall, the first design and sample worked perfectly.

I remember hanging a target on an old scrap barrel behind the shop. First I fired a gun load of round balls to get an idea of how well it grouped. Then I fired a cylinder full of the new conical bullets. The conical bullets made a tighter group and shot much higher, higher than I would ever imagine. The reason was the round ball is much lighter than the conical. The ball is short and light so you can pack more powder in the cylinder. Therefore, the ball has greater velocity and less time in the barrel. The conical is in the barrel longer and recoils more, so the muzzle jumped higher. That 44 really does kick. Another reminder that those old guns, which fortunately the media tend to consider as relatively harmless, pack quite a wallop.

Normally round balls and conical bullets in the revolver chambers are be covered with grease. This prevents the high pressure gas and flames from setting off the other chambers of the cylinder. I designed a conical bullet with a base that slips into the chamber. The next band is a light press fit and the nose is a tight press fit. With grease in both grooves it is not possible that any fire can get to the gun powder. I could not make it happen nor have I ever heard of it

happening to any of our customers. It is the only conical you may load without grease over the bullet nose.

Casting bullets for muzzle loaders

Use pure lead for black powder projectiles. This is necessary for ease of loading and more important for obturation on firing. If a bullet is not dead soft it can become stuck part way down the barrel while loading. A soft bullet allows the pressure to upset the base and mash it into the rifling. The lead is soft enough if it is easily scratched with your thumbnail.

Pure lead is more difficult to cast. It reluctantly fills the mold unless the lead is quite hot. Not so difficult that you should be afraid to try. Remember that it used to be done over a campfire or hot stove with molds not nearly as easy to use as Lee aluminum molds. When the molten lead has a purple haze on top it is hot enough. The mold must be hot. This is not a problem with the large bullets. Due to the quantity of lead in each cast, the mold quickly gets very hot. With the smaller bullets and balls it is desirable to dip a corner of the mold in the molten lead for 20 or 30 seconds before starting. It is very important to heap the lead on the sprue plate to reduce the porosity in the nose.

All Lee hollow base bullet molds have our patented core pin. It makes casting hollow base and hollow point bullets almost as fast as regular bullets. It is very important to keep the shank of the core pin lubricated with Alox bullet lube. Do not get any lube on the portion of the core pin that forms the hollow base or inside the cavity.

Lubricating black powder bullets

Almost everything you can think of has been used to lubricate bullets. Examples are bear, goose, pork, beef, axle, water pump, lithium, greases and Crisco. Many formulas and commercial concoctions are available. It's an area where people try to be creative. I have received many samples from friends and customers. With so many options that apparently work, it seems to me the first consideration for a bullet lube would be, how convenient it is to use.

Tumble lubing with Lee Liquid Alox is my first choice. It is easy to apply and dries to a varnish like finish. The odor is slightly objectionable. The next choice is Lee Resizing Lube. This is a very versatile lubricant intended primarily for industrial use in deep drawing operations such as automobile manufacture. At least one maker of 22 rim fire ammunition uses it to lube their bullets. It dries to a hard waxy finish that looks and feels like paraffin. It has little odor and is pleasant to handle. It costs more and is not as good as the Alox.

Shooting Muzzle Loaders

First and foremost shooting muzzle loaders is fun. It also affords the shooter a little insight of how it was during the pioneering days during the settlement of America. Two things impressed me most about muzzle loading, the surprising power of the guns and chore of cleaning. Had I been an early settler, I would have given some serious consideration before firing my front loader. Cleaning the gun would add to what surely was a long and hard day.

I have loaded and fired most muzzle loaders including a flintlock. The latter is the ultimate test for flinching. There is a noticeable delay from the time you pull the trigger and the gun discharges. Most distracting is the flash and smoke from the pan while waiting for the charge to ignite.

My muzzle loading shooting was mostly as a student and experimenter, never as a competitor. Those who compete in any sport usually develop the best skills and techniques. They are always happy to help a fellow shooter so don't be afraid to ask questions. Any advice you can get from a winner is usually the best.

Congratulations

You certainly did not need all the information in this book to load accurate and safe ammunition. Reloading is not difficult nor complicated. Now that you have read it, I bet you are happy you did. You now know things that have never been published before. You have a right to feel good, perhaps even feel a little smug with your newfound knowledge. You will never again be happy with load data not listed in velocity order. Data without Pressure and Velocity Factors will seem incomplete. You know how, why and when to select tools, components, and loads for the best ammunition. Cast bullet loads are no longer a mystery. Hopefully, many of you will expand upon my work and share your discoveries with the rest of us.

Table Of Contents For Load Data, Charts And Information In The Next Part Of This Book Is Near The End.

The remainder and largest part of this book contains a great collection of tables, charts drawings and load data. The time and effort to prepare this information is staggering. This edition John Lee, Nancy Lee, Pat Klessig, and Donald Dorn entered and checked all the load data from all the powder suppliers. My special thanks to the powder suppliers for their help and cooperation.

At the end of the book, just ahead of the Table of Contents, you will find all the tables frequently used. Take a look at them now. Even if they presently are unimportant to you, one day you will remember seeing the helpful information for a future reloading project.

Load data for individual cartridges are listed in order of bullet diameter and energy. This makes it easy to locate the data you are seeking by flipping through the pages.

WARNING:

I find the warnings accompanying the simplest products are exceedingly long and infer the user is moron. I have too much respect for you to state the obvious. Therefore, the following warnings are in the shortest form I can write. They are short and important. Read them and if you want more contact any of the component suppliers for a lengthy version. I think every powder supplier will agree with these warnings.

You Are Responsible For The Safety Of Your Reloads.

Always use the STARTING LOADS.

Work up to NEVER EXCEED loads in 5 increments.

Use standard primers for all powders except Winchester 296 use magnum primers.

Use only approved primers in tray type feeders (see page 85).

Do not stack primers in a tube.

Do not use pointed bullets in tubular magazines.

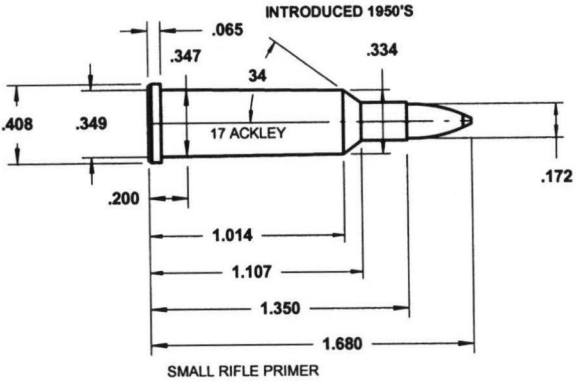
Do not smoke while reloading.

The following charts are the most comprehensive in the world. John Lee has spent over two years overseeing and preparing the data and drawings.

To maximize the value of the charts, be sure to read "How To Read The Load Data." This advice is most important and bears rereading often—it is easy to find at the end of this book.

Go to it now and read it!

17 ACKLEY BEE



Useful case capacity 1.00 cc

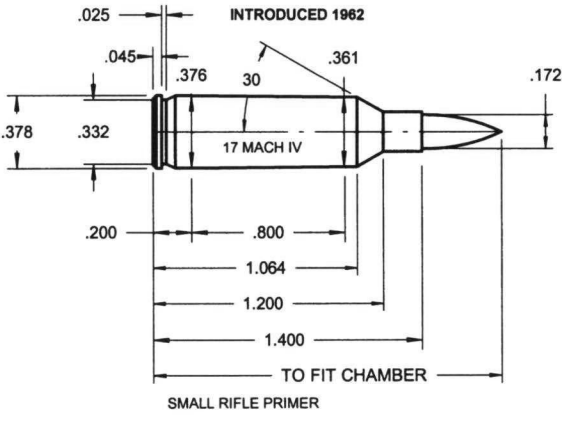
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
25 Grain Jacketed Bullet									
H4198	**12.5**	**.94**	**.88**	**NA**	**2976**	13.5c	3365	45300 CUP	**1.650**
BL-C(2)	**16.0c**	**1.03**	**1.02**	**1.0**	**3100**	17.0c	3294	39300 CUP	**1.650**
H335	**16.0c**	**1.03**	**1.02**	**1.0**	**3080**	17.0c	3288	39600 CUP	**1.650**
H4227	**10.0**	**.77**	**.76**	**.7**	**2910**	11.0	3131	45300 CUP	**1.650**

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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17 MACH IV



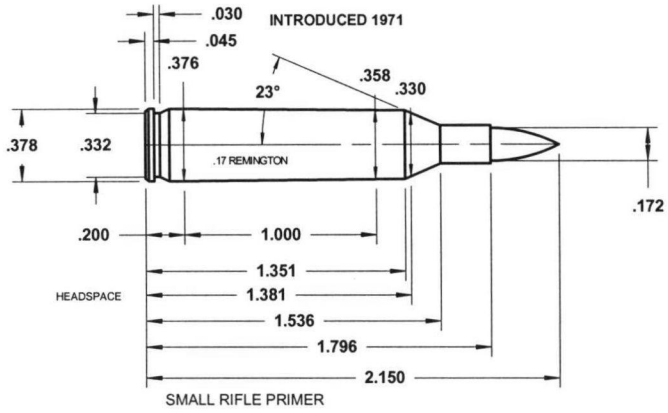
Useful case capacity 1.43 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
25 Grain Jacketed Bullet									
ACCUR 2460	18.5	1.21	1.18	NA	3417	20.5	3883	51600 CUP	1.770
ACCUR 2230	18.3	1.20	1.18	NA	3398	20.3	3861	52000 CUP	1.770
A-XMR-2015	16.7	1.22	1.18	NA	3388	18.5	3850	50200 CUP	1.770
ACCUR 2520	18.5	1.26	1.26	NA	3316	20.5	3768	45200 CUP	1.770
H335	19.0	1.23	1.18	NA	3508	20.0	3680	48800 CUP	1.770
BL-C(2)	19.0	1.23	1.18	NA	3502	20.0	3674	48000 CUP	1.770
H4198	15.0	1.13	1.09	1.0	3377	16.0	3576	49800 CUP	1.770

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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17 REMINGTON



Useful case capacity 1.72 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
25 Grain Jacketed Bullet										
H-VARGET	22.0	1.61	DBLD	1.6	3759	24.5c	4123	50800	CUP	2.150
ACCUR 2700	25.7c	1.76	DBLD	1.6	3838	27.0c	4083	49900	CUP	2.170
A-XMR-2495	20.7	1.55	DBLD	NA	3569	23.0c	4056	51100	CUP	2.170
BL-C(2)	22.5	1.45	1.36	1.3	3872	24.0	4051	49000	CUP	2.150
A-XMR-4064	21.6	1.63	DBLD	1.6	3560	24.0c	4045	50100	CUP	2.170
v-N135	20.1	1.56	DBLD	NA	3597	22.8c	4035	NA	NA	2.146
H4895	21.0	1.53	1.46	1.3	3760	23.0	4033	48500	CUP	2.150
IMR3031	19.9	1.52	1.46	1.3	3615	22.5	4015	51700	CUP	2.100
IMR4064	21.7	1.61	DBLD	1.6	3640	24.0c	4005	50700	CUP	2.100
IMR4895	20.9	1.52	1.46	1.3	3597	23.5	3995	51400	CUP	2.100
H414	25.0	1.65	DBLD	1.6	3748	27.0c	3989	48300	CUP	2.150
ACCUR 2520	20.4	1.39	1.36	1.3	3496	22.7	3973	51600	CUP	2.170
ACCUR 2460	19.8	1.30	1.26	1.3	3489	22.0	3965	49600	CUP	2.170
IMR4320	22.3	1.60	DBLD	1.6	3569	25.0c	3965	51300	CUP	2.100
H335	19.5	1.26	1.26	NA	3811	21.0	3963	51300	CUP	2.150
H380	24.5	1.69	DBLD	1.6	3756	26.0c	3950	46100	CUP	2.150
H322	19.5	1.41	1.36	1.3	3656	21.8	3921	49700	CUP	2.150
RELODER15	20.8	1.47	1.46	1.3	3594	22.8	3915	50200	CUP	2.140
A-XMR-2015	18.0	1.31	1.26	1.3	3442	20.0	3911	48400	CUP	2.170
ACCUR 2230	19.4	1.27	1.26	NA	3412	21.5	3877	47900	CUP	2.170

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 02-19-2003 Lee Precision Inc. Hartford, Wi. 53027**

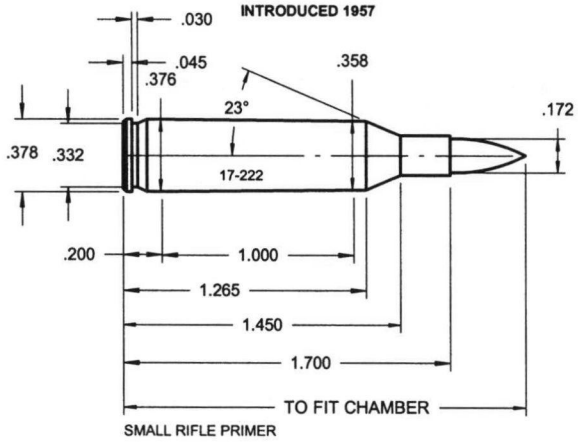
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL
25 Grain Jacketed Bullet (Continued)										
IMR4198	17.5	1.39	1.36	1.3	3492	19.5	3840	51000	CUP	2.100
H450	24.2	1.58	DBLD	NA	3384	27.5c	3794	NA	NA	2.100
RELODER12	19.9	1.38	1.36	1.3	3441	21.8	3750	50100	CUP	2.140
IMR4227	15.0	1.15	1.09	1.0	3303	16.5	3600	50500	CUP	2.100
SR4759	14.6	1.45	1.36	1.3	3217	16.0	3505	50100	CUP	2.100
IMR4350	24.5c	1.80	DBLD	1.6	3470	24.5c	3470	39000	CUP	2.100
IMR4831	25.0c	1.84	DBLD	1.6	3330	25.0c	3330	33500	CUP	2.100
30 Grain Jacketed Bullet										
H414	24.0	1.59	DBLD	1.6	3487	27.0c	3839	50300	CUP	2.150
H-VARGET	20.0	1.46	1.46	1.3	3405	22.5	3742	49700	CUP	2.150
H4895	20.0	1.46	1.46	1.3	3495	22.0	3696	49900	CUP	2.150
H380	22.0	1.52	1.46	1.3	3378	24.5	3648	50500	CUP	2.150
H322	18.0	1.30	1.26	1.3	3311	20.0	3594	49800	CUP	2.150

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17-222



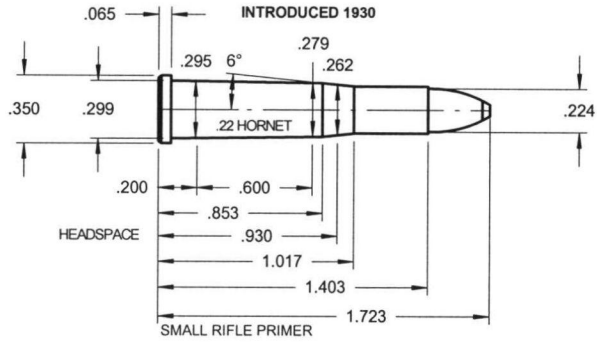
Useful case capacity 1.70 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
25 Grain Jacketed Bullet										
BL-C(2)	20.0	1.29	1.26	1.3	3546	21.3	3755	49400	CUP	2.070
H335	20.0	1.29	1.26	1.3	3565	21.0	3740	49400	CUP	2.070
H380	22.0	1.52	1.46	1.3	3452	23.5	3655	46400	CUP	2.070
H4895	19.5	1.42	1.36	1.3	3476	20.5	3646	48000	CUP	2.070
H4198	16.2	1.22	1.18	NA	3400	17.2	3601	49800	CUP	2.070

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22 HORNET



Useful case capacity 0.79 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
35 Grain Jacketed Bullet										
H110	11.0	.72	.71	.7	2805	12.3c	3060	41400	CUP	1.725
H4227	10.5c	.81	.76	.7	2223	11.6c	2896	42500	CUP	1.725
ACCUR 1680	12.1c	.79	.76	.7	2516	13.5c	2860	41900	CUP	1.775
H4198	10.5	.79	.76	.7	2223	11.5c	2420	26300	CUP	1.725
40 Grain Bullet										
RELODER 7	11.0c	.80	.76	.7	2265	11.0c	2265	19800	CUP	1.710
HERC 2400	6.9	.51	.49	.5	2085	7.5	2250	41000	CUP	1.710
40 Grain Jacketed Bullet										
H110	10.0	.66	.66	NA	2569	11.2	2795	41800	CUP	1.725
ACCUR 1680	12.6c	.83	.82	NA	2451	14.0c	2785	43000	CUP	1.715
v-N110	7.8	.65	.61	NA	2296	9.5c	2585	NA	NA	1.713
H4227	9.0	.69	.66	NA	2421	10.2	2567	43000	CUP	1.725
VEC SP3	9.6	.65	.61	NA	2431	10.0	2496	33468	CIP	1.700
H4198	10.5	.79	.76	.7	2253	11.5c	2488	32800	CUP	1.725
ACC XMP5744	8.7	.65	.61	NA	1943	9.7	2208	43000	CUP	1.715
A-XMR-2015	11.3c	.82	.82	NA	1762	12.5c	2002	26900	CUP	1.715
44 Grain Lead Bullet										
ACCUR 1680	10.4	.68	.66	NA	2069	11.5	2351	31100	CUP	1.665
A-XMR-2015	11.3c	.82	.82	NA	1801	12.5c	2047	29700	CUP	1.665
ACC XMP5744	8.1	.61	.61	NA	1797	9.0	2042	37500	CUP	1.665

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
44 Grain Lead Bullet (Continued)									
A NITRO100	2.7	.36	.34	NA	1349	3.0	1533	32600 CUP	1.665
45 Grain Bullet									
WIN 680	11.0	.72	.71	.7	2469	11.6	2590	40000 CUP	1.710
IMR4227	11.2c	.86	.82	NA	2444	11.5c	2515	38900 CUP	1.720
RELODER 7	10.6	.77	.76	.7	2170	10.6	2170	20300 CUP	1.710
HERC 2400	6.5	.48	.46	NA	1913	7.1	2065	41300 CUP	1.710
IMR4198	10.5c	.83	.82	NA	2010	10.5c	2010	20100 CUP	1.720
SR4759	8.0c	.79	.76	.7	2000	8.0c	2000	24700 CUP	1.710
IMR4895	12.0c	.87	.82	NA	1735	12.0c	1735	15500 CUP	1.720
IMR3031	11.0c	.84	.82	NA	1675	11.0c	1675	14100 CUP	1.720
IMR4320	12.0c	.86	.82	NA	1650	12.0c	1650	14900 CUP	1.720
IMR4064	11.0c	.82	.82	.7	1545	11.0c	1545	13100 CUP	1.720
IMR4350	11.5c	.85	.82	NA	1280	11.5c	1280	11700 CUP	1.720
IMR4831	11.5c	.85	.82	NA	1085	11.5c	1085	10700 CUP	1.720
45 Grain Jacketed Bullet									
VEC SP3	9.3	.63	.61	NA	2267	10.8	2621	39738 CIP	1.713
H110	9.0	.59	.57	NA	2342	10.4	2574	43000 CUP	1.750
ACCUR 1680	11.1	.73	.71	.7	2194	12.3c	2493	40700 CUP	1.720
H4227	8.5	.65	.61	NA	2312	9.8	2484	42000 CUP	1.750
H4198	10.5	.79	.76	.7	2239	11.5c	2400	32000 CUP	1.750
v-N110	7.2	.60	.57	NA	2107	8.8	2371	NA NA	1.713
A-XMR-2015	11.3c	.82	.82	NA	1829	12.5c	2078	32100 CUP	1.720
45 Grain Lead Bullet									
VEC BA9	3.1	.28	.27	NA	1404	3.4	1516	28461 CIP	1.700
45 Grain Barnes X Bullet									
H110	9.0	.59	.57	NA	2323	9.9	2503	40400 CUP	1.850
H4198	10.5	.79	.76	.7	2217	11.5c	2390	36900 CUP	1.850
H4227	8.5	.65	.61	NA	2198	9.8	2346	42700 CUP	1.850
50 Grain Bullet									
RELODER 7	10.5	.76	.76	.7	2115	10.5	2115	21500 CUP	1.710
HERC 2400	6.4	.47	.46	NA	1786	7.0	1945	41700 CUP	1.710
50 Grain Jacketed Bullet									
H110	9.0	.59	.57	NA	2249	10.0	2422	42300 CUP	1.850
ACCUR 1680	10.4	.68	.66	NA	2105	11.5	2392	42400 CUP	1.780
H4198	10.5	.79	.76	.7	2102	11.5c	2296	34100 CUP	1.850
H4227	8.4	.65	.61	NA	2131	9.4	2256	41800 CUP	1.850
v-N120	9.3	.72	.71	.7	1961	10.7c	2237	NA NA	1.713

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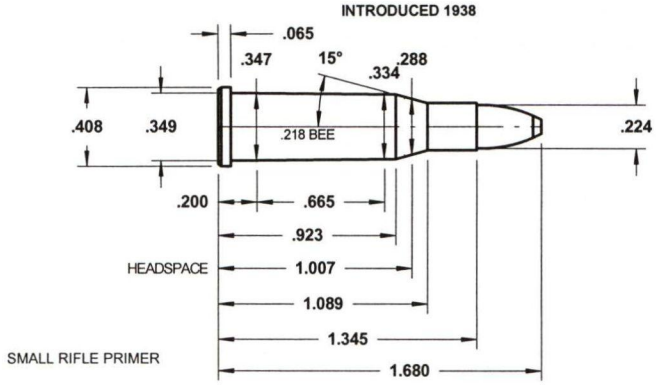
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
50 Grain Jacketed Bullet (Continued)									
v-N110	7.1	.59	.57	NA	1962	8.3	2203	NA NA	1.713
A-XMR-2015	10.8	.79	.76	.7	1780	12.0c	2023	35000 CUP	1.780
ACC XMP5744	8.1	.61	.61	NA	1717	9.0	1951	42400 CUP	1.780
53 Grain Barnes X Bullet									
H4198	10.0	.75	.71	.7	1987	11.0c	2165	40600 CUP	1.850
H110	8.0	.52	.49	.5	1943	9.0	2159	41000 CUP	1.850
H4227	8.0	.62	.61	NA	1887	8.7	2062	43000 CUP	1.850
55 Grain Jacketed Bullet									
H4198	10.0	.75	.71	.7	1955	11.5c	2273	41000 CUP	1.850
v-N120	8.8	.68	.66	NA	1840	10.3c	2142	NA NA	1.713
H4227	8.0	.62	.61	NA	1915	9.0	2095	43000 CUP	1.850
v-N110	6.2	.52	.49	.5	1809	7.7	2046	NA NA	1.713

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218 BEE



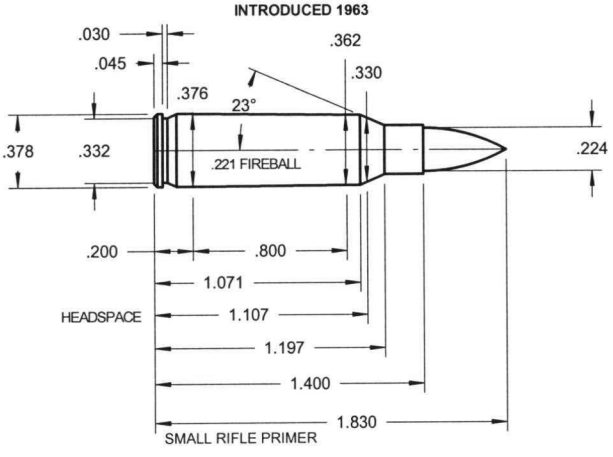
Useful case capacity 1.00 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
35 Grain Jacketed Bullet										
ACCUR 1680	13.5	.88	.88	NA	2632	15.0	2992	40000	CUP	1.680
40 Grain Jacketed Bullet										
ACCUR 1680	13.5	.88	.88	NA	2463	15.0	2799	34700	CUP	1.760
H4198	12.3	.92	.88	NA	2489	14.0c	2792	NA	NA	1.615
H4227	10.6	.81	.76	.7	2461	12.0	2760	NA	NA	1.615
44 Grain Lead Bullet										
ACCUR 1680	9.9	.65	.61	NA	1976	11.0	2246	30100	CUP	1.615
45 Grain Jacketed Bullet										
H4198	12.3	.92	.88	NA	2479	14.0c	2779	NA	NA	1.640
ACCUR 1680	12.6	.83	.82	NA	2350	14.0	2670	39800	CUP	1.610
H110	7.9	.52	.49	.5	2045	9.0	2294	NA	NA	1.640
46 Grain Jacketed Bullet										
ACCUR 1680	12.6	.83	.82	NA	2339	14.0	2658	38600	CUP	1.670
50 Grain Jacketed Bullet										
H4198	11.9	.89	.88	NA	2302	13.5c	2582	NA	NA	1.625
ACCUR 1680	11.7	.77	.76	.7	2165	13.0	2460	36600	CUP	1.780
H4227	9.7	.74	.71	.7	2153	11.0	2414	NA	NA	1.625
55 Grain Jacketed Bullet										
H4198	11.9	.89	.88	NA	2290	13.5c	2567	NA	NA	1.680

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221 FIREBALL



Useful case capacity 1.43 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
35 Grain Jacketed Bullet										
H LIL GUN	14.0	.95	.95	NA	3354	16.0	3535	49900	CUP	1.745
ACCUR 1680	16.8	1.10	1.09	1.0	3092	18.7	3514	51700	CUP	1.775
H4198	18.0	1.35	1.26	1.3	3056	20.0c	3423	44700	CUP	1.745
H4227	14.8	1.14	1.09	1.0	3110	16.5	3403	50600	CUP	1.745
40 Grain Jacketed Bullet										
ACCUR 1680	18.4	1.21	1.18	NA	3152	20.5	3582	51700	CUP	1.900
A-XMR-2015	18.0	1.31	1.26	1.3	2760	20.0c	3137	35700	CUP	1.900
H4227	15.5	1.19	1.18	NA	2925	17.0	3033	NA	NA	1.830
ACCUR 2230	18.9	1.24	1.18	NA	2649	21.0	3011	38300	CUP	1.900
H110	13.0	.85	.82	NA	2714	14.0	2933	NA	NA	1.830
HERC 2400	15.3	1.13	1.09	1.0	2649	15.5	2700	46500	CUP	1.800
45 Grain Jacketed Bullet										
ACCUR 1680	16.5	1.08	1.02	1.0	2593	18.3	2947	49500	CUP	1.765
A-XMR-2015	18.0	1.31	1.26	1.3	2420	20.0c	2750	47100	CUP	1.765
ACCUR 2230	18.9	1.24	1.18	NA	2393	21.0	2719	49500	CUP	1.765
H110	13.0	.85	.82	NA	2553	14.0	2714	NA	NA	1.840
H4227	15.0	1.15	1.09	1.0	2592	16.0	2697	NA	NA	1.840
H4198	16.0	1.20	1.18	NA	2451	17.0	2632	NA	NA	1.840
IMR4198	17.7	1.40	1.36	1.3	2575	17.7	2575	44500	CUP	1.800
IMR4227	13.1	1.01	.95	1.0	2260	14.9	2535	52000	CUP	1.800

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
45 Grain Jacketed Bullet (Continued)									
IMR 800X	8.3	.89	.88	NA	2134	9.4	2370	51600 CUP	1.800
SR4759	13.2	1.31	1.26	1.3	2235	13.2	2235	36200 CUP	1.800
SR4756	7.3	.80	.76	.7	1877	8.3	2105	52000 CUP	1.800
IMR4895	18.6	1.35	1.26	1.3	2055	18.6	2055	28600 CUP	1.800
IMR3031	17.8	1.36	1.36	1.3	2015	17.8	2015	26800 CUP	1.800
SR7625	6.9	.72	.71	.7	1809	7.8	2010	51700 CUP	1.800
IMR PB	7.1	.85	.82	NA	1808	7.8	1990	50600 CUP	1.800
IMR 700X	5.7	.77	.76	.7	1739	6.5	1950	51800 CUP	1.800
50 Grain Jacketed Bullet									
ACCUR 1680	16.0	1.05	1.02	1.0	2475	17.8	2813	51500 CUP	1.825
ACCUR 2230	18.9	1.24	1.18	NA	2352	21.0	2673	49500 CUP	1.825
H4227	15.0	1.15	1.09	1.0	2582	16.0	2672	NA NA	1.850
A-XMR-2015	17.6	1.28	1.26	NA	2327	19.5	2644	45600 CUP	1.825
H110	12.5	.82	.82	.7	2466	13.5	2637	NA NA	1.850
H4198	15.5	1.16	1.09	1.0	2412	16.5	2539	NA NA	1.850
HERC 2400	13.8	1.02	1.02	1.0	2410	13.8	2410	43500 CUP	1.825
IMR4227	13.1	1.01	.95	1.0	2152	14.7	2390	51400 CUP	1.800
IMR4198	16.7	1.32	1.26	1.3	2380	16.7	2380	44000 CUP	1.825
IMR 800X	8.1	.86	.82	NA	2038	9.1	2265	51700 CUP	1.825
SR4759	12.7	1.26	1.26	NA	2105	12.7	2105	38000 CUP	1.825
IMR4895	18.1	1.32	1.26	1.3	1995	18.1	1995	29900 CUP	1.825
IMR3031	17.3	1.32	1.26	1.3	1960	17.3	1960	28200 CUP	1.825
SR4756	6.9	.76	.76	.7	1733	7.7	1925	51200 CUP	1.825
SR7625	6.2	.65	.61	NA	1650	7.1	1850	52000 CUP	1.825
IMR PB	6.3	.76	.76	.7	1637	7.1	1835	51800 CUP	1.825
IMR4064	17.5	1.30	1.26	1.3	1835	17.5	1835	27500 CUP	1.825
53 Grain Jacketed Bullet									
H110	12.0	.79	.76	.7	2492	13.0	2619	NA NA	1.840
H4227	15.0	1.15	1.09	1.0	2449	16.0	2603	NA NA	1.840
H4198	15.5	1.16	1.09	1.0	2343	16.5	2537	NA NA	1.840
HERC 2400	13.5	1.00	.95	1.0	2320	13.5	2320	43600 CUP	1.825
55 Grain Jacketed Bullet									
ACCUR 1680	15.3	1.00	.95	1.0	2380	17.0	2700	52000 CUP	1.850
A-XMR-2015	17.1	1.25	1.18	NA	2268	19.0	2577	48700 CUP	1.850
ACCUR 2230	18.0	1.18	1.18	NA	2245	20.0	2551	51600 CUP	1.850
H4227	14.5	1.12	1.09	1.0	2418	15.5	2503	NA NA	1.830
H4198	15.0	1.13	1.09	1.0	2261	16.0	2441	NA NA	1.830

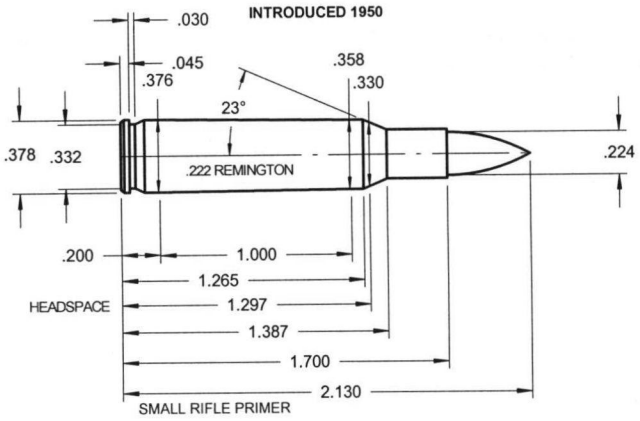
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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
55 Grain Jacketed Bullet (Continued)									
IMR4198	16.3	1.29	1.26	1.3	2315	16.4	2315	45900 CUP	1.825
IMR4227	12.7	.98	.95	NA	2084	14.4	2315	51700 CUP	1.825
IMR 800X	8.0	.86	.82	NA	1940	8.9	2135	50700 CUP	1.825
SR4759	12.2	1.21	1.18	NA	2000	12.2	2000	37700 CUP	1.825
IMR4895	17.5	1.27	1.26	NA	1905	17.5	1905	28700 CUP	1.825
IMR3031	16.8	1.28	1.26	NA	1900	16.8	1900	28000 CUP	1.825
SR4756	6.4	.70	.66	.7	1611	7.2	1790	51600 CUP	1.825
60 Grain Jacketed Bullet									
H4227	14.0	1.08	1.02	1.0	2328	15.0	2414	NA NA	1.840
H4198	15.0	1.13	1.09	1.0	2251	16.0	2399	NA NA	1.840
IMR4227	13.3	1.03	1.02	1.0	2064	15.1	2315	51800 CUP	1.825
RELODER 7	18.1	1.32	1.26	1.3	2250	18.1	2250	34000 CUP	1.825
HERC 2400	13.1	.98	.95	NA	2179	13.3	2200	46300 CUP	1.825
IMR4198	15.7	1.24	1.18	NA	2145	15.7	2145	37100 CUP	1.825
IMR 800X	7.6	.81	.76	.7	1806	8.6	2025	52000 CUP	1.825
SR4759	11.7	1.16	1.09	1.0	1915	11.7	1915	38000 CUP	1.825
IMR4895	16.8	1.22	1.18	NA	1845	16.8	1845	28400 CUP	1.825
IMR3031	16.1	1.23	1.18	NA	1770	16.1	1770	23600 CUP	1.825
SR4756	6.6	.72	.71	.7	1586	7.3	1745	50900 CUP	1.825
IMR4064	16.3	1.21	1.18	NA	1710	16.3	1710	22800 CUP	1.825
IMR PB	6.0	.72	.71	.7	1516	6.7	1685	51200 CUP	1.825
SR7625	5.9	.62	.61	NA	1494	6.7	1675	51900 CUP	1.825
IMR 700X	5.3	.71	.71	.7	1486	5.9	1635	50800 CUP	1.825
63 Grain Jacketed Bullet									
H4227	13.5	1.04	1.02	1.0	2195	15.0	2414	NA NA	1.810
H4198	14.4	1.08	1.02	1.0	2180	16.0	2399	NA NA	1.810
70 Grain Jacketed Bullet									
IMR4198	14.7	1.16	1.09	1.0	2045	14.7	2045	43200 CUP	1.740
IMR4227	11.1	.85	.82	NA	1814	12.5	2015	51500 CUP	1.740
IMR 800X	7.0	.74	.71	.7	1596	7.9	1790	52000 CUP	1.740
IMR4895	15.5	1.13	1.09	1.0	1725	15.5	1725	29100 CUP	1.740
SR4759	10.8	1.07	1.02	1.0	1715	10.8	1715	37900 CUP	1.740
IMR3031	14.7	1.12	1.09	1.0	1685	14.7	1685	25900 CUP	1.740
SR4756	6.3	.69	.66	NA	1436	7.0	1580	51100 CUP	1.740
IMR4064	15.0	1.12	1.09	1.0	1575	15.0	1575	24200 CUP	1.740
SR7625	5.6	.59	.57	.5	1360	6.3	1510	51500 CUP	1.740
IMR PB	5.5	.67	.66	NA	1342	6.2	1490	51300 CUP	1.740

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Useful case capacity 1.68 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
35 Grain Jacketed Bullet												
H322	23.5c	1.70	DBLD	1.6	3316	25.2c	3591	49565	PSI	2.025	....	....
H4198	20.5	1.54	1.46	NA	3366	22.0	3591	47065	PSI	2.025	.9575	.8924
H4227	15.0	1.15	1.09	1.0	3095	17.2	3342	46739	PSI	2.025	.9660	.9465
40 Grain Jacketed Bullet												
ACCUR 2230	24.3	1.60	DBLD	1.6	3251	27.0c	3695	47100	PSI	2.140	....	....
ACCUR 1680	19.8	1.30	1.26	1.3	3168	22.0	3601	49400	PSI	2.140	....	....
ACCUR 2460	24.3	1.59	DBLD	1.6	3149	27.0c	3579	46400	PSI	2.140	....	....
A-XMR-2015	21.6	1.58	DBLD	NA	3124	24.0c	3550	48000	PSI	2.140	....	....
v-N133	22.9c	1.76	DBLD	1.6	3229	25.2c	3517	NA	NA	2.047	....	....
H4198	19.5	1.46	1.46	1.3	3201	21.4	3480	49674	PSI	2.125	.9572	.8716
v-N130	21.6	1.63	DBLD	1.6	3191	23.2c	3435	NA	NA	2.067	....	....
44 Grain Lead Bullet												
ACC XMP5744	12.0	.90	.88	NA	2161	12.0	2161	21700	PSI	1.930	....	....
45 Grain Jacketed Bullet												
ACCUR 2230	24.3	1.60	DBLD	1.6	3033	27.0c	3447	47400	PSI	2.065	....	....
ACCUR 2460	24.3	1.59	DBLD	1.6	2996	27.0c	3405	45900	PSI	2.065	....	....
A-XMR-2015	22.1	1.61	DBLD	1.6	2978	24.5c	3384	49300	PSI	2.065	....	....
v-N130	21.8	1.64	DBLD	1.6	3120	23.2c	3340	NA	NA	2.110	....	....
v-N133	22.7c	1.75	DBLD	1.6	3094	24.2c	3331	NA	NA	2.087	....	....
IMR4198	19.8	1.57	DBLD	NA	3072	21.5c	3315	45000	CUP	2.130	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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222 REMINGTON (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
45 Grain Jacketed Bullet (Continued)												
H4198	18.9	1.42	1.36	1.3	3011	21.0	3315	48696	PSI	2.130	.9553	.8695
ACCUR 1680	18.9	1.24	1.18	NA	2901	21.0	3297	48500	PSI	2.065	....	....
RELODER12	24.4	1.68	DBLD	1.6	3197	25.0c	3290	46200	PSI	2.090	....	....
v-N120	19.3	1.50	1.46	1.3	3035	20.7	3257	NA	NA	2.100	....	....
H335	21.5	1.39	1.36	1.3	2956	24.0	3252	50217	PSI	2.130	.9625	.9100
RELODER 7	18.8	1.37	1.36	1.3	3075	19.8	3225	47500	PSI	2.090	....	....
WIN 748	25.5	1.67	DBLD	1.6	3210	25.5	3210	41000	CUP	2.040	....	....
46 Grain Jacketed Bullet												
WIN 748	25.3	1.66	DBLD	1.6	3125	25.3	3125	38000	CUP	2.040	....	....
50 Grain Jacketed Bullet												
VEC SP7	23.1	1.52	1.46	1.3	2867	26.2c	3317	41998	CIP	2.130	....	....
ACCUR 2230	22.1	1.45	1.36	1.3	2840	24.5	3227	48200	PSI	2.150	....	....
v-N133	22.2c	1.71	DBLD	1.6	2969	24.0c	3215	NA	NA	2.118	....	....
A-XMR-2015	21.2	1.55	DBLD	NA	2823	23.5c	3208	45800	PSI	2.150	....	....
ACCUR 2460	22.1	1.45	1.36	1.3	2820	24.5	3204	46000	PSI	2.150	....	....
VEC TU2000	19.3	1.47	1.46	1.3	3022	20.4	3182	40639	CIP	2.130	....	....
H4198	18.5	1.39	1.36	1.3	2890	20.5	3160	48043	PSI	2.130	.9565	.8771
v-N130	20.5	1.55	DBLD	NA	2918	22.1	3142	NA	NA	2.118	....	....
IMR4198	19.1	1.51	1.46	1.3	2928	20.5	3130	44500	CUP	2.130	....	....
RELODER12	24.0	1.66	DBLD	1.6	3120	24.0	3120	44300	PSI	2.130	....	....
H335	21.3	1.37	1.36	1.3	2861	23.6	3120	49674	PSI	2.130	.9629	.9133
RELODER 7	19.0	1.38	1.36	1.3	2970	20.0	3115	47400	PSI	2.130	....	....
H-VARGET	23.0	1.68	DBLD	1.6	2885	25.0c	3114	44130	PSI	2.130	....	....
v-N120	18.7	1.45	1.36	1.3	2873	20.0	3090	NA	NA	2.118	....	....
VEC SP9	23.9	1.63	DBLD	1.6	2966	24.7c	3087	33396	CIP	2.130	....	....
IMR4895	25.0c	1.82	DBLD	1.6	3085	25.0c	3085	43100	CUP	2.130	....	....
ACCUR 2520	22.5	1.54	1.46	NA	2711	25.0c	3081	38300	PSI	2.150	....	....
H322	20.2	1.46	1.46	1.3	2826	22.2	3079	46957	PSI	2.130	.9578	.8780
52 Grain Jacketed Bullet												
WIN 748	22.6	1.48	1.46	1.3	2815	22.6	2815	34500	CUP	2.040	....	....
53 Grain Jacketed Bullet												
A-XMR-2015	21.1	1.54	DBLD	NA	2811	23.5c	3194	50000	PSI	2.190	....	....
ACCUR 2230	22.1	1.45	1.36	1.3	2746	24.5	3120	46400	PSI	2.190	....	....
VEC TU2000	18.8	1.43	1.36	1.3	2864	20.1	3120	43019	CIP	2.130	.9367	.8247
ACCUR 2460	22.1	1.45	1.36	1.3	2738	24.5	3111	45500	PSI	2.190	....	....
H-VARGET	23.0	1.68	DBLD	1.6	2869	25.0c	3097	46413	PSI	2.140	....	....
ACCUR 2520	22.5	1.54	1.46	NA	2712	25.0c	3082	40900	PSI	2.190	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
53 Grain Jacketed Bullet (Continued)												
A-XMR-2495	21.6	1.62	DBLD	1.6	2702	24.0c	3071	46300	PSI	2.190	....	....
H4895	20.0	1.46	1.46	1.3	2585	23.5c	3043	45217	PSI	2.140	....	....
H4198	17.5	1.31	1.26	1.3	2800	19.5	3038	49457	PSI	2.140	.9598	.8807
H335	20.5	1.32	1.26	1.3	2748	23.0	3006	50000	PSI	2.140	.9646	.9056
H322	19.3	1.40	1.36	1.3	2732	21.5	3005	50000	PSI	2.140	.9578	.8820
BL-C(2)	22.0	1.42	1.36	1.3	2639	24.5	2967	45761	PSI	2.140	.9542	.8649
55 Grain Jacketed Bullet												
VEC TU2000	18.0	1.37	1.36	1.3	2850	20.1	3166	45718	CIP	2.130	....	....
RELODER15	21.0	1.48	1.46	1.3	2730	24.3c	3120	47900	PSI	2.130	....	....
ACCUR 2230	22.1	1.45	1.36	1.3	2733	24.5	3106	46200	PSI	2.155	....	....
H-VARGET	23.0	1.68	DBLD	1.6	2867	25.0c	3095	46739	PSI	2.130	....	....
ACCUR 2460	22.1	1.45	1.36	1.3	2720	24.5	3091	45000	PSI	2.155	....	....
IMR4895	22.5	1.64	DBLD	1.6	2805	25.0c	3085	45900	CUP	2.130	....	....
v-N133	21.7	1.67	DBLD	1.6	2857	23.4c	3066	NA	NA	2.134	....	....
A-XMR-2015	20.3	1.48	1.46	1.3	2681	22.5	3047	46100	PSI	2.155	....	....
H335	20.5	1.32	1.26	1.3	2776	23.0	3037	49565	PSI	2.130	.9646	.9027
v-N130	20.0	1.51	1.46	1.3	2803	21.4	3025	NA	NA	2.118	....	....
H4895	20.0	1.46	1.46	1.3	2569	23.5c	3023	43370	PSI	2.130	....	....
H4198	17.5	1.31	1.26	1.3	2742	19.5	3017	49239	PSI	2.130	.9533	.8587
VEC SP10	21.6	1.44	1.36	1.3	2861	22.7	2995	NA	NA	2.130	....	....
IMR4198	19.4	1.54	1.46	NA	2906	20.0	2990	42600	CUP	2.130	....	....
IMR4320	24.3c	1.74	DBLD	1.6	2846	25.5c	2985	43500	CUP	2.130	....	....
VEC SP9	23.1	1.58	DBLD	NA	2897	23.9	2979	35022	CIP	2.130	....	....
ACCUR 2520	22.1	1.51	1.46	1.3	2607	24.5	2962	36300	PSI	2.155	....	....
v-N120	18.0	1.40	1.36	1.3	2736	19.6	2956	NA	NA	2.134	....	....
H322	19.0	1.38	1.36	1.3	2654	21.2	2953	49022	PSI	2.130	.9523	.8507
v-N135	22.6c	1.76	DBLD	1.6	2840	23.3c	2949	NA	NA	2.134	....	....
IMR3031	23.0c	1.75	DBLD	1.6	2945	23.0c	2945	38300	CUP	2.130	....	....
60 Grain Jacketed Bullet												
ACCUR 2230	21.6	1.42	1.36	1.3	2592	24.0	2945	48100	PSI	2.200	....	....
A-XMR-2015	20.0	1.46	1.46	1.3	2588	22.2	2941	47800	PSI	2.200	....	....
ACCUR 2460	21.5	1.41	1.36	1.3	2586	23.9	2939	46100	PSI	2.200	....	....
ACCUR 2520	22.1	1.51	1.46	1.3	2583	24.5	2935	43900	PSI	2.200	....	....
A-XMR-2495	21.2	1.59	DBLD	1.6	2582	23.5c	2934	49400	PSI	2.200	....	....
v-N133	20.8	1.60	DBLD	1.6	2690	22.6c	2928	NA	NA	2.126	....	....
RELODER15	21.3	1.50	1.46	1.3	2779	22.5	2915	47500	PSI	2.130	....	....
v-N130	19.2	1.45	1.36	1.3	2640	21.1	2877	NA	NA	2.118	....	....

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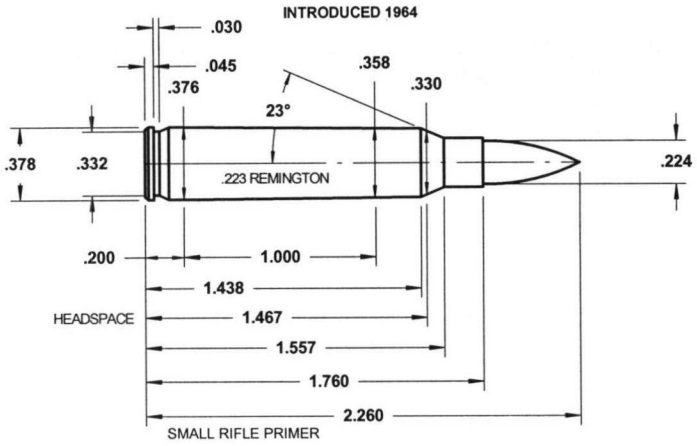
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
60 Grain Jacketed Bullet (Continued)											
v-N135	21.6	1.68	DBLD	1.6	2744	23.5c	2847	NA NA	2.126	....	....
ACCUR 1680	17.1	1.12	1.09	1.0	2467	19.0	2803	50000 PSI	2.200	....	....
v-N120	17.1	1.33	1.26	1.3	2556	18.9	2789	NA NA	2.126	....	....
63 Grain Jacketed Bullet											
H4895	20.0	1.46	1.46	1.3	2537	23.5c	2965	49457 PSI	2.125	....	....
H-VARGET	22.0	1.61	DBLD	1.6	2718	24.0c	2935	47609 PSI	2.125	....	....
BL-C(2)	22.0	1.42	1.36	1.3	2626	24.2	2864	46957 PSI	2.125	.9611	.8799
H335	19.8	1.28	1.26	NA	2672	22.0	2830	49674 PSI	2.125	.9744	.9174
H4198	16.9	1.27	1.26	NA	2597	18.8	2793	47609 PSI	2.125	.9620	.9046
H322	18.6	1.35	1.26	1.3	2531	20.7	2780	48261 PSI	2.125	.9562	.8757
69 Grain Jacketed Bullet											
v-N140	22.2	1.63	DBLD	1.6	2554	23.7c	2748	NA NA	2.126	....	....
v-N135	20.2	1.57	DBLD	NA	2533	22.1c	2728	NA NA	2.126	....	....
v-N133	19.5	1.50	1.46	1.3	2519	21.0	2690	NA NA	2.126	....	....
v-N130	18.1	1.36	1.36	1.3	2456	19.5	2641	NA NA	2.126	....	....
70 Grain Jacketed Bullet											
H380	21.0	1.45	1.36	1.3	2428	23.0	2646	49239 PSI	2.040	....	....
BL-C(2)	19.5	1.26	1.26	NA	2377	21.0	2623	48587 PSI	2.040	.9364	.7969
H335	19.0	1.23	1.18	NA	2359	20.5	2577	48043 PSI	2.040	.9428	.7996
H4895	19.0	1.38	1.36	1.3	2328	20.5	2573	49674 PSI	2.040	.9352	.7753
H4350	21.5	1.56	DBLD	NA	2220	23.5c	2472	40435 PSI	2.040	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Useful case capacity 1.87 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
35 Grain Jacketed Bullet												
ACCUR 2230	26.5	1.74	DBLD	1.6	3587	29.5c	3945	47300	PSI	2.130	....	....
A-XMR-2015	23.4	1.71	DBLD	1.6	3466	26.0c	3814	52400	PSI	2.130	....	....
ACCUR 1680	19.3	1.26	1.26	NA	3342	21.5	3677	51100	PSI	2.130	....	....
ACC XMP5744	20.0	1.50	1.46	1.3	3372	22.0	3675	52900	PSI	2.130	....	....
40 Grain Jacketed Bullet												
A-XMR-2015	23.8	1.74	DBLD	1.6	3404	26.5c	3746	51900	CUP	2.260	....	....
v-N130	24.4	1.84	DBLD	1.6	3399	26.3c	3685	NA	NA	2.075	....	....
ACCUR 2460	25.2	1.65	DBLD	1.6	3340	28.0	3675	51000	CUP	2.260	....	....
H-VARGET	25.0	1.83	DBLD	1.6	3307	28.0c	3674	49923	PSI	2.280	....	....
ACCUR 2230	24.7	1.62	DBLD	1.6	3307	27.5	3639	50800	CUP	2.260	....	....
v-N120	22.4	1.74	DBLD	1.6	3402	24.0	3638	NA	NA	2.075	....	....
ACCUR 1680	20.2	1.32	1.26	1.3	3304	22.5	3636	49000	CUP	2.260	....	....
v-N133	25.0c	1.92	DBLD	1.9	3382	26.8c	3615	NA	NA	2.075	....	....
BL-C(2)	26.5	1.71	DBLD	1.6	3379	28.5	3612	48019	PSI	2.280	.9675	.8830
H4198	20.5	1.54	1.46	NA	3304	22.5	3601	52462	PSI	2.280	.9581	.7699
H322	23.5	1.70	DBLD	1.6	3311	25.5	3574	50769	PSI	2.280	.9626	.8490
H4895	25.0	1.82	DBLD	1.6	3279	27.5c	3573	47067	PSI	2.280	....	....
H335	26.0	1.68	DBLD	1.6	3341	28.0	3572	47173	PSI	2.280	.9672	.8782
ACCUR 2520	25.6	1.75	DBLD	1.6	3208	28.5c	3530	41900	CUP	2.260	....	....
A-XMR-2495	23.8	1.78	DBLD	1.6	3191	26.5c	3511	44400	CUP	2.260	....	....

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c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED	FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
40 Grain Jacketed Bullet (Continued)											
ACC XMP5744	19.3	1.45	1.36	1.3	3190	21.5	3509	54000 PSI	2.260	....	....
44 Grain Lead Bullet											
ACC XMP5744	11.0	.83	.82	NA	1978	11.0	1978	14800 PSI	2.040	....	....
45 Grain Jacketed Bullet											
RELODER15	25.8	1.82	DBLD	1.6	3303	28.5c	3635	53500 PSI	2.210	....	....
v-N133	24.9c	1.92	DBLD	1.9	3300	27.0c	3563	NA NA	2.126	....	....
BL-C(2)	26.5	1.71	DBLD	1.6	3329	28.5	3559	50769 PSI	2.240	.9673	.8660
A-XMR-2015	23.4	1.71	DBLD	1.6	3223	26.0c	3546	49100 CUP	2.115	....	....
v-N130	23.5	1.77	DBLD	1.6	3253	25.6c	3510	NA NA	2.126	....	....
H-VARGET	25.0	1.83	DBLD	1.6	3131	28.0c	3477	46221 PSI	2.240	....	....
ACCUR 2460	24.8	1.63	DBLD	1.6	3160	27.5	3476	49300 CUP	2.115	....	....
H4198	20.0	1.50	1.46	1.3	3186	22.0	3472	51933 PSI	2.240	.9582	.7659
v-N120	21.7	1.68	DBLD	1.6	3206	23.5	3461	NA NA	2.126	....	....
ACCUR 2230	24.3	1.60	DBLD	1.6	3141	27.0	3456	50500 CUP	2.115	....	....
H335	24.0	1.55	DBLD	NA	3201	26.2	3456	53942 PSI	2.240	.9659	.9106
H4895	25.0	1.82	DBLD	1.6	3170	27.5c	3454	45904 PSI	2.240	....	....
A-XMR-2495	23.9	1.79	DBLD	1.6	3122	26.5c	3435	47000 CUP	2.115	....	....
ACCUR 2520	25.7	1.75	DBLD	1.6	3112	28.5c	3424	42000 CUP	2.115	....	....
H322	23.0	1.67	DBLD	1.6	3172	25.0	3424	50135 PSI	2.240	.9626	.8715
v-N135	25.5c	1.98	DBLD	1.9	3238	26.9c	3396	NA NA	2.126	....	....
RELODER 7	19.8	1.44	1.36	1.3	3097	21.8	3375	53200 PSI	2.210	....	....
IMR4198	20.0	1.59	DBLD	1.6	3083	22.0	3360	50300 CUP	2.190	....	....
50 Grain Jacketed Bullet											
H4895	25.0	1.82	DBLD	1.6	3182	27.5c	3468	54260 PSI	2.210	....	....
BL-C(2)	26.0	1.68	DBLD	1.6	3206	28.0	3428	49817 PSI	2.210	.9668	.8521
v-N133	24.6c	1.89	DBLD	1.9	3210	26.2c	3399	NA NA	2.244	....	....
H335	24.0	1.55	DBLD	NA	3144	26.0	3393	54683 PSI	2.210	.9626	.9120
A-XMR-2015	23.0	1.68	DBLD	1.6	3078	25.5	3387	46400 CUP	2.235	....	....
H-VARGET	26.5c	1.94	DBLD	1.9	3256	27.5c	3383	47385 PSI	2.210	....	....
v-N130	23.0	1.73	DBLD	1.6	3121	24.9c	3369	NA NA	2.244	....	....
RELODER15	27.7c	1.95	DBLD	1.9	3324	28.0c	3356	49000 PSI	2.250	....	....
ACCUR 2520	25.7	1.75	DBLD	1.6	3042	28.5c	3346	42200 CUP	2.235	....	....
ACCUR 2230	23.4	1.54	1.46	NA	3038	26.0	3342	49800 CUP	2.235	....	....
v-N135	25.0c	1.94	DBLD	1.9	3148	26.5c	3333	NA NA	2.244	....	....
ACCUR 2460	23.4	1.54	1.46	NA	3026	26.0	3329	47100 CUP	2.235	....	....
v-N120	21.2	1.65	DBLD	1.6	3042	23.2	3314	NA NA	2.244	....	....
H322	22.0	1.59	DBLD	1.6	3059	24.0	3301	52144 PSI	2.210	.9624	.8604

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
50 Grain Jacketed Bullet (Continued)												
A-XMR-2495	23.9	1.79	DBLD	1.6	2983	26.5c	3282	44400	CUP	2.235	....	....
VEC TU2000	22.4	1.71	DBLD	1.6	3127	23.1	3278	47721	CIP	2.260	....	....
IMR4198	19.4	1.54	1.46	NA	2916	22.0	3270	51900	CUP	2.260	....	....
IMR4895	24.8	1.81	DBLD	1.6	3088	26.5c	3270	48800	CUP	2.260	....	....
IMR3031	25.5c	1.94	DBLD	1.9	3225	25.5c	3225	45300	CUP	2.260	....	....
H4198	19.5	1.46	1.46	1.3	2958	21.5	3223	48548	PSI	2.210	.9579	.8402
WIN 748	26.0	1.70	DBLD	1.6	3200	26.0	3200	40000	CUP	2.165	....	....
IMR4320	26.1	1.87	DBLD	1.6	3051	27.5c	3200	48300	CUP	2.260	....	....
RELODER 7	19.6	1.43	1.36	1.3	2933	21.5	3195	53000	PSI	2.250	....	....
ACC XMP5744	18.5	1.39	1.36	1.3	2891	20.5	3181	52200	PSI	2.235	....	....
52 Grain Jacketed Bullet												
RELODER15	25.8	1.82	DBLD	1.6	3157	28.3c	3440	53100	PSI	2.250	....	....
ACCUR 2520	25.2	1.72	DBLD	1.6	3058	28.0c	3364	50000	PSI	2.250	....	....
ACCUR 2230	22.0	1.45	1.36	1.3	3048	24.5	3354	55000	PSI	2.250	....	....
v-N135	24.3c	1.89	DBLD	1.9	3036	27.0c	3340	NA	NA	2.244	....	....
ACCUR 2460	22.8	1.50	1.46	1.3	3031	25.3	3334	55000	PSI	2.250	....	....
v-N133	23.5	1.81	DBLD	1.6	3047	25.8c	3320	NA	NA	2.244	....	....
A-XMR-2015	21.2	1.55	DBLD	NA	3010	23.6	3311	54500	PSI	2.250	....	....
v-N130	21.5	1.62	DBLD	1.6	2982	24.0	3281	NA	NA	2.244	....	....
VEC SP10	23.9	1.60	DBLD	1.6	2972	26.2	3241	45036	CIP	2.260	.9628	.9078
RELODER 7	19.0	1.38	1.36	1.3	2905	20.9	3165	53300	PSI	2.250	....	....
WIN 748	25.5	1.67	DBLD	1.6	3160	25.5	3160	40500	CUP	2.165	....	....
52 Grain Lead Bullet												
ACC XMP5744	12.0	.90	.88	NA	2078	12.0	2078	19500	PSI	2.045	....	....
53 Grain Jacketed Bullet												
H-VARGET	24.0	1.75	DBLD	1.6	3051	27.0c	3389	50663	PSI	2.200	....	....
H4895	25.0	1.82	DBLD	1.6	3164	27.0c	3383	51404	PSI	2.200	....	....
BL-C(2)	26.0	1.68	DBLD	1.6	3113	28.0	3328	50346	PSI	2.200	.9674	.8769
H335	24.0	1.55	DBLD	NA	3058	26.0	3300	55000	PSI	2.200	.9628	.9209
A-XMR-2015	22.1	1.61	DBLD	1.6	2971	24.5	3268	47800	CUP	2.225	....	....
A-XMR-2495	23.4	1.75	DBLD	1.6	2969	26.0c	3266	48800	CUP	2.225	....	....
ACCUR 2230	23.4	1.54	1.46	NA	2956	26.0	3252	49900	CUP	2.225	....	....
ACCUR 2520	24.8	1.69	DBLD	1.6	2941	27.5c	3235	43200	CUP	2.225	....	....
ACCUR 2460	23.0	1.51	1.46	1.3	2940	25.5	3234	47300	CUP	2.225	....	....
WIN 748	26.0	1.70	DBLD	1.6	3200	26.0	3200	43500	CUP	2.165	....	....
H4198	19.5	1.46	1.46	1.3	2926	21.5	3188	49394	PSI	2.200	.9583	.8558
H322	21.5	1.56	DBLD	NA	2921	23.5	3183	51721	PSI	2.200	.9581	.8953

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
53 Grain Jacketed Bullet (Continued)									
H380	28.5c	1.97	DBLD	1.9	3133	28.5c 3133	39346 PSI	2.165	---- ----
H414	28.5c	1.88	DBLD	1.9	3131	28.5c 3131	40615 PSI	2.165	---- ----
55 Grain Jacketed Bullet									
RELODER15	25.3	1.79	DBLD	1.6	3081	28.0c 3390	53600 PSI	2.215	---- ----
H-VARGET	25.5	1.86	DBLD	1.6	3165	27.5c 3384	52567 PSI	2.200	---- ----
H4895	25.0	1.82	DBLD	1.6	3191	26.0c 3315	51827 PSI	2.200	---- ----
BL-C(2)	25.5	1.64	DBLD	1.6	3099	27.5 3313	51298 PSI	2.200	.9674 .8758
A-XMR-2015	22.5	1.64	DBLD	1.6	2982	25.0 3281	49800 CUP	2.230	---- ----
A-XMR-2495	23.6	1.77	DBLD	1.6	2973	26.2c 3271	51100 CUP	2.230	---- ----
v-N135	24.3c	1.89	DBLD	1.9	2999	26.8c 3268	NA NA	2.244	---- ----
v-N133	22.9	1.76	DBLD	1.6	2966	25.3c 3232	NA NA	2.244	---- ----
ACCUR 2460	23.9	1.57	DBLD	NA	2937	26.5 3231	49200 CUP	2.230	---- ----
ACCUR 2520	24.8	1.69	DBLD	1.6	2931	27.5c 3224	43300 CUP	2.230	---- ----
v-N130	22.1	1.67	DBLD	1.6	2982	24.1 3219	NA NA	2.244	---- ----
ACCUR 2230	23.4	1.54	1.46	NA	2923	26.0 3216	50300 CUP	2.230	---- ----
H335	23.0	1.48	1.46	1.3	2940	25.3 3203	52144 PSI	2.200	.9635 .9210
WIN 748	26.2	1.72	DBLD	1.6	3170	26.2 3170	41000 CUP	2.165	---- ----
VEC SP10	25.9	1.73	DBLD	1.6	3120	26.5 3166	45341 CIP	2.260	---- ----
IMR3031	22.5	1.71	DBLD	1.6	2877	25.0c 3165	50900 CUP	2.260	---- ----
H4198	19.0	1.43	1.36	1.3	2863	21.0 3150	50346 PSI	2.200	.9536 .8550
VEC SP9	27.0	1.84	DBLD	1.6	3081	27.8c 3140	43861 CIP	2.260	---- ----
v-N120	19.6	1.52	1.46	1.3	2767	22.5 3133	NA NA	2.244	---- ----
H414	28.5c	1.88	DBLD	1.9	3123	28.5c 3123	43154 PSI	2.165	---- ----
IMR4895	23.3	1.70	DBLD	1.6	2836	26.0c 3120	51100 CUP	2.260	---- ----
H322	21.0	1.52	1.46	1.3	2850	23.0 3106	51721 PSI	2.200	.9578 .8885
60 Grain Jacketed Bullet									
RELODER15	24.2	1.71	DBLD	1.6	2973	26.5c 3240	53000 PSI	2.250	---- ----
ACCUR 2520	24.8	1.69	DBLD	1.6	2867	27.5c 3154	45600 CUP	2.235	---- ----
A-XMR-2015	21.6	1.58	DBLD	NA	2842	24.0 3127	49100 CUP	2.235	---- ----
ACCUR 2230	22.1	1.45	1.36	1.3	2806	24.5 3087	49200 CUP	2.235	---- ----
v-N133	22.4	1.72	DBLD	1.6	2797	25.0c 3077	NA NA	2.244	---- ----
ACCUR 2460	22.7	1.49	1.46	1.3	2795	25.2 3075	49400 CUP	2.235	---- ----
v-N135	23.9	1.86	DBLD	1.6	2848	25.9c 3074	NA NA	2.244	---- ----
v-N130	21.4	1.61	DBLD	1.6	2785	23.7 3064	NA NA	2.244	---- ----
A-XMR-2495	22.2	1.66	DBLD	1.6	2768	24.7 3046	46300 CUP	2.235	---- ----
62 Grain Jacketed Bullet									
ACCUR 2520	23.4	1.60	DBLD	1.6	2819	26.0 3101	55000 PSI	2.250	---- ----

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
62 Grain Jacketed Bullet (Continued)											
ACCUR 2460	21.9	1.44	1.36	1.3	2779	24.3	3058	55000 PSI	2.250	....	....
ACCUR 2230	21.3	1.40	1.36	1.3	2765	23.7	3043	54600 PSI	2.250	....	....
A-XMR-2015	20.2	1.47	1.46	1.3	2756	22.5	3032	55000 PSI	2.250	....	....
WIN 748	25.1	1.64	DBLD	1.6	2929	25.5	2985	49200 PSI	2.260	....	....
63 Grain Jacketed Bullet											
H-VARGET	24.5	1.79	DBLD	1.6	2992	26.4c	3199	53625 PSI	2.200	....	....
H4895	23.5	1.71	DBLD	1.6	2852	25.5	3078	52885 PSI	2.200	.9626	.9306
BL-C(2)	24.0	1.55	DBLD	NA	2830	26.0	3054	48971 PSI	2.200	.9628	.8891
H335	22.5	1.45	1.36	1.3	2773	25.0	3051	52885 PSI	2.200	.9623	.9237
H414	28.0	1.85	DBLD	1.6	3045	28.0	3045	45798 PSI	2.165	....	....
H380	28.0c	1.93	DBLD	1.9	2983	28.0c	2983	40615 PSI	2.165	....	....
64 Grain Jacketed Bullet											
ACCUR 2520	23.4	1.60	DBLD	1.6	2799	26.0	3079	55000 PSI	2.250	....	....
ACCUR 2460	21.6	1.42	1.36	1.3	2711	24.0	2982	53100 PSI	2.250	....	....
ACCUR 2230	21.1	1.39	1.36	1.3	2706	23.4	2976	54300 PSI	2.250	....	....
A-XMR-2015	19.8	1.45	1.36	1.3	2703	22.0	2973	55000 PSI	2.250	....	....
68 Grain Jacketed Bullet											
RELODER15	23.5	1.66	DBLD	1.6	2807	25.6	3030	52800 PSI	2.260	....	....
69 Grain Jacketed Bullet											
ACCUR 2520	24.3	1.66	DBLD	1.6	2766	27.0	3044	48200 CUP	2.250	....	....
ACCUR 2460	22.2	1.46	1.46	1.3	2719	24.7	2991	51800 CUP	2.250	....	....
v-N540	24.9	1.75	DBLD	1.6	2743	27.3c	2989	NA	NA	2.244	....	....
A-XMR-2495	22.5	1.68	DBLD	1.6	2694	25.0c	2964	49800 CUP	2.250	....	....
ACCUR 2230	22.1	1.45	1.36	1.3	2661	24.5	2929	51300 CUP	2.250	....	....
v-N140	23.6	1.73	DBLD	1.6	2632	26.4c	2923	NA	NA	2.244	....	....
A-XMR-2015	20.7	1.51	1.46	1.3	2652	23.0	2917	48400 CUP	2.250	....	....
v-N135	22.3	1.73	DBLD	1.6	2634	24.7c	2897	NA	NA	2.244	....	....
WIN 748	23.0	1.51	1.46	1.3	2711	24.5	2870	51500 PSI	2.260	....	....
v-N133	20.5	1.58	DBLD	NA	2546	23.0	2828	NA	NA	2.244	....	....
70 Grain Jacketed Bullet											
H-VARGET	23.5	1.72	DBLD	1.6	2749	26.0c	3024	51192 PSI	2.200	....	....
H4895	23.0	1.67	DBLD	1.6	2777	25.0	2997	53413 PSI	2.200	.9625	.8944
H322	19.0	1.38	1.36	1.3	2518	23.0	2962	54154 PSI	2.200	.9603	.9251
BL-C(2)	24.5	1.58	DBLD	NA	2737	26.5	2954	53731 PSI	2.200	.9622	.9060
ACCUR 2520	23.4	1.60	DBLD	1.6	2682	26.0	2951	53200 PSI	2.250	....	....
ACCUR 2460	22.0	1.44	1.36	1.3	2662	24.5	2930	54900 PSI	2.250	....	....
ACCUR 2230	20.9	1.37	1.36	1.3	2624	23.2	2886	54700 PSI	2.250	....	....

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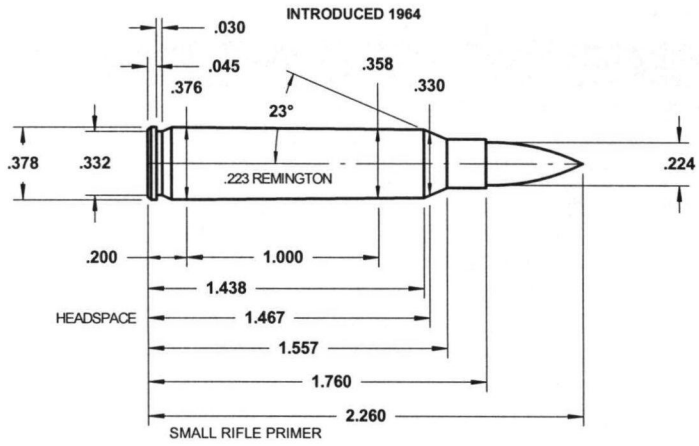
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
70 Grain Jacketed Bullet (Continued)											
H335	21.0	1.35	1.26	1.3	2582	23.5	2867	50663 PSI	2.200	.9589	.8770
A-XMR-2015	18.9	1.38	1.36	1.3	2607	21.0	2867	54200 PSI	2.250	....	....
75 Grain Jacketed Bullet											
ACCUR 2520	22.9	1.56	DBLD	NA	2658	25.5	2924	51800 CUP	2.255	....	....
H-VARGET	22.5	1.64	DBLD	1.6	2642	25.0	2907	51192 PSI	2.250	.9625	.9321
H4895	22.5	1.64	DBLD	1.6	2691	24.5	2905	52885 PSI	2.250	.9622	.8933
RELODER15	22.6	1.59	DBLD	1.6	2657	24.9	2895	53400 PSI	2.260	....	....
BL-C(2)	23.0	1.48	1.46	1.3	2549	26.0	2858	52356 PSI	2.250	.9626	.9299
ACCUR 2460	22.0	1.44	1.36	1.3	2589	24.5	2849	49700 CUP	2.255	....	....
ACCUR 2230	21.6	1.42	1.36	1.3	2585	24.0	2845	50800 CUP	2.255	....	....
H335	21.0	1.35	1.26	1.3	2583	23.0	2814	52885 PSI	2.250	.9577	.9089
v-N540	23.5	1.65	DBLD	1.6	2577	25.9	2808	NA NA	2.260	....	....
H322	20.0	1.45	1.36	1.3	2556	22.0	2785	50875 PSI	2.250	.9580	.9199
v-N140	22.7	1.66	DBLD	1.6	2524	25.3	2776	NA NA	2.260	....	....
A-XMR-2015	19.3	1.41	1.36	1.3	2519	21.5	2771	51800 CUP	2.255	....	....
v-N135	20.9	1.62	DBLD	1.6	2458	23.5	2730	NA NA	2.260	....	....
80 Grain Jacketed Bullet											
H-VARGET	22.0	1.61	DBLD	1.6	2559	25.0	2869	54471 PSI	2.550	.9625	.9215
H4895	21.5	1.57	DBLD	NA	2567	24.0	2825	52885 PSI	2.550	.9625	.9155
A-XMR-2495	21.2	1.59	DBLD	1.6	2535	23.5	2788	51600 CUP	2.450	....	....
BL-C(2)	23.0	1.48	1.46	1.3	2516	25.5	2768	52250 PSI	2.550	.9622	.9163
H322	20.0	1.45	1.36	1.3	2518	22.0	2744	51827 PSI	2.550	.9581	.9114
H335	20.0	1.29	1.26	1.3	2470	22.5	2744	52885 PSI	2.550	.9589	.9119
ACCUR 2520	22.3	1.52	1.46	1.3	2491	24.8	2741	55000 PSI	2.340	....	....
ACCUR 2230	20.2	1.33	1.26	1.3	2420	22.5	2662	54600 PSI	2.340	....	....
ACCUR 2460	20.7	1.36	1.36	1.3	2413	23.0	2655	53600 PSI	2.340	....	....
A-XMR-2015	18.7	1.37	1.36	1.3	2393	20.8	2633	54400 PSI	2.340	....	....

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223 HANDGUN LOADS



Useful case capacity 1.87 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
40 Grain Jacketed Bullet											
H335	26.0	1.68	DBLD	1.6	2931	28.0	3231	47173 PSI	2.280	.9523	.8782
H322	23.5	1.70	DBLD	1.6	2783	25.5	3087	50769 PSI	2.280	.9496	.8490
H-VARGET	25.0	1.83	DBLD	1.6	2609	28.0c	3069	49923 PSI	2.280	....	....
H4895	25.0	1.82	DBLD	1.6	2628	27.5c	3060	47067 PSI	2.280	....	....
H4198	20.5	1.54	1.46	NA	2755	22.5	3014	52462 PSI	2.280	.9560	.7699
BL-C(2)	26.5	1.71	DBLD	1.6	2696	28.5	2910	48019 PSI	2.280	.9625	.8830
45 Grain Jacketed Bullet											
A-XMR-2015	23.4	1.71	DBLD	1.6	2840	26.0c	3227	49100 CUP	2.115	....	....
ACCUR 2460	24.8	1.63	DBLD	1.6	2814	27.5	3198	49300 CUP	2.115	....	....
ACCUR 2230	24.3	1.60	DBLD	1.6	2798	27.0	3180	50500 CUP	2.115	....	....
ACCUR 2520	23.9	1.63	DBLD	1.6	2712	28.5c	3082	42000 CUP	2.115	....	....
ACCUR 1680	18.5	1.21	1.18	NA	2673	20.5	3038	48200 CUP	2.115	....	....
A-XMR-2495	24.8	1.86	DBLD	1.6	2660	26.5c	3023	47000 CUP	2.115	....	....
H4895	25.0	1.82	DBLD	1.6	2603	27.5c	3017	45904 PSI	2.240	....	....
H-VARGET	25.0	1.83	DBLD	1.6	2550	28.0c	3010	46221 PSI	2.240	....	....
H322	23.0	1.67	DBLD	1.6	2635	25.0	2926	50135 PSI	2.240	.9489	.8715
BL-C(2)	26.5	1.71	DBLD	1.6	2644	28.5	2915	50769 PSI	2.240	.9525	.8660
H335	24.0	1.55	DBLD	NA	2667	26.2	2877	53942 PSI	2.240	.9659	.9106
H4198	20.0	1.50	1.46	1.3	2617	22.0	2847	51933 PSI	2.240	.9585	.7659
50 Grain Jacketed Bullet											
A-XMR-2015	23.0	1.68	DBLD	1.6	2712	25.5	3082	46400 CUP	2.235	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
50 Grain Jacketed Bullet (Continued)											
ACCUR 2520	25.7	1.75	DBLD	1.6	2709	28.5c	3078	42200 CUP	2.235	....	....
ACCUR 2230	23.4	1.54	1.46	NA	2706	26.0	3075	49800 CUP	2.235	....	....
ACCUR 2460	23.4	1.54	1.46	NA	2695	26.0	3063	47100 CUP	2.235	....	....
H4895	25.0	1.82	DBLD	1.6	2658	27.5c	3024	54260 PSI	2.210	....	....
H-VARGET	26.5c	1.94	DBLD	1.9	2842	27.5c	2959	47385 PSI	2.210	....	....
ACCUR 1680	18.5	1.21	1.18	NA	2547	20.5	2894	47900 CUP	2.235	....	....
A-XMR-2495	23.9	1.79	DBLD	1.6	2541	26.5c	2888	44400 CUP	2.235	....	....
BL-C(2)	26.0	1.68	DBLD	1.6	2569	28.0	2851	49817 PSI	2.210	.9490	.8521
H335	24.0	1.55	DBLD	NA	2538	26.0	2834	54683 PSI	2.210	.9460	.9120
H4198	19.5	1.46	1.46	1.3	2429	21.5	2824	48548 PSI	2.210	.9271	.8402
H322	22.0	1.59	DBLD	1.6	2460	24.0	2740	52144 PSI	2.210	.9475	.8604
53 Grain Jacketed Bullet											
ACCUR 2230	23.4	1.54	1.46	NA	2633	26.0	2992	49900 CUP	2.225	....	....
ACCUR 2520	24.8	1.69	DBLD	1.6	2619	27.5c	2976	43200 CUP	2.225	....	....
ACCUR 2460	23.0	1.51	1.46	1.3	2618	25.5	2975	47300 CUP	2.225	....	....
A-XMR-2015	22.1	1.61	DBLD	1.6	2617	24.5	2974	47800 CUP	2.225	....	....
H4895	25.0	1.82	DBLD	1.6	2660	27.0c	2965	51404 PSI	2.200	....	....
BL-C(2)	26.0	1.68	DBLD	1.6	2562	28.0	2914	50346 PSI	2.200	.9377	.8769
H335	24.0	1.55	DBLD	NA	2539	26.0	2880	55000 PSI	2.200	.9389	.9209
A-XMR-2495	23.4	1.75	DBLD	1.6	2530	26.0c	2875	48800 CUP	2.225	....	....
H4198	19.5	1.46	1.46	1.3	2650	21.5	2846	49394 PSI	2.200	.9649	.8558
H-VARGET	24.0	1.75	DBLD	1.6	2449	27.0c	2833	50663 PSI	2.200	....	....
ACCUR 1680	18.0	1.18	1.18	NA	2467	20.0	2803	49600 CUP	2.225	....	....
H322	21.5	1.56	DBLD	NA	2527	23.5	2707	51721 PSI	2.200	.9660	.8953
55 Grain Jacketed Bullet											
A-XMR-2015	22.5	1.64	DBLD	1.6	2628	25.0	2986	49800 CUP	2.230	....	....
ACCUR 2460	23.9	1.57	DBLD	NA	2616	26.5	2973	49200 CUP	2.230	....	....
H-VARGET	25.5	1.86	DBLD	1.6	2697	27.5c	2972	52567 PSI	2.200	....	....
ACCUR 2520	24.8	1.69	DBLD	1.6	2610	27.5c	2966	43300 CUP	2.230	....	....
ACCUR 2230	23.4	1.54	1.46	NA	2604	26.0	2959	50300 CUP	2.230	....	....
H4895	25.0	1.82	DBLD	1.6	2721	26.0c	2880	51827 PSI	2.200	....	....
A-XMR-2495	23.6	1.77	DBLD	1.6	2530	26.2c	2875	51100 CUP	2.230	....	....
BL-C(2)	25.5	1.64	DBLD	1.6	2558	27.5	2816	51298 PSI	2.200	.9532	.8758
ACCUR 1680	18.5	1.21	1.18	NA	2475	20.5	2815	50000 CUP	2.230	....	....
H335	23.0	1.48	1.46	1.3	2463	25.3	2799	52144 PSI	2.200	.9457	.9210
H4198	19.0	1.43	1.36	1.3	2400	21.0	2719	50346 PSI	2.200	.9396	.8550
H322	21.0	1.52	1.46	1.3	2439	23.0	2638	51721 PSI	2.200	.9615	.8885

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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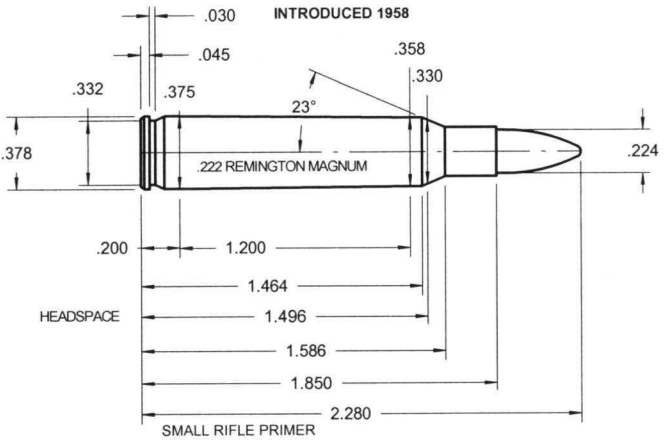
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
60 Grain Jacketed Bullet											
ACCUR 2520	24.8	1.69	DBLD	1.6	2554	27.5c	2902	45600 CUP	2.235	....	....
A-XMR-2015	21.6	1.58	DBLD	NA	2532	24.0	2877	49100 CUP	2.235	....	....
ACCUR 2230	22.1	1.45	1.36	1.3	2497	24.5	2838	49200 CUP	2.235	....	....
ACCUR 2460	22.7	1.49	1.46	1.3	2490	25.2	2829	49400 CUP	2.235	....	....
A-XMR-2495	22.2	1.66	DBLD	1.6	2359	24.7	2681	46300 CUP	2.235	....	....
63 Grain Jacketed Bullet											
H-VARGET	24.5	1.79	DBLD	1.6	2566	26.4c	2809	53625 PSI	2.200	....	....
H4895	23.5	1.71	DBLD	1.6	2434	25.5	2800	52885 PSI	2.200	.9324	.9306
H335	22.5	1.45	1.36	1.3	2390	25.0	2724	52885 PSI	2.200	.9489	.9237
BL-C(2)	24.0	1.55	DBLD	NA	2347	26.0	2630	48971 PSI	2.200	.9445	.8891
H4198	18.0	1.35	1.26	1.3	2294	20.0	2572	47173 PSI	2.200	.9441	.8680
H322	20.0	1.45	1.36	1.3	2240	22.0	2482	51192 PSI	2.200	.9499	.8872

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222 REMINGTON MAGNUM



Useful case capacity 1.89 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
40 Grain Jacketed Bullet											
BL-C(2)	27.5	1.77	DBLD	1.6	3513	30.0c	3818	52151 PSI	2.145	....	....
H335	27.5	1.77	DBLD	1.6	3532	30.0c	3803	50667 PSI	2.145	....	....
H4198	23.0	1.73	DBLD	1.6	3592	24.5	3760	52045 PSI	2.145	.9697	.9491
ACCUR 2460	26.1	1.71	DBLD	1.6	3219	29.0c	3659	44400 PSI	2.345	....	....
ACCUR 2230	25.6	1.68	DBLD	1.6	3195	28.5	3631	46900 PSI	2.345	....	....
A-XMR-2015	23.9	1.74	DBLD	1.6	3194	26.5c	3630	48500 PSI	2.345	....	....
H322	25.0	1.81	DBLD	1.6	3318	27.0c	3622	51303 PSI	2.145	....	....
ACCUR 2520	26.1	1.78	DBLD	1.6	3075	29.0c	3495	36600 PSI	2.345	....	....
45 Grain Jacketed Bullet											
BL-C(2)	26.0	1.68	DBLD	1.6	3302	28.0	3664	53105 PSI	2.220	.9495	.8547
H335	26.0	1.68	DBLD	1.6	3343	28.0	3647	52575 PSI	2.220	.9577	.8730
H4198	22.0	1.65	DBLD	1.6	3392	24.0	3641	53211 PSI	2.220	.9655	.9190
ACCUR 2460	26.4	1.73	DBLD	1.6	3150	29.3c	3579	49400 PSI	2.220	....	....
ACCUR 2230	25.8	1.70	DBLD	1.6	3122	28.7	3548	47500 PSI	2.220	....	....
H322	24.5	1.78	DBLD	1.6	3159	26.5c	3532	53317 PSI	2.220	....	....
A-XMR-2015	24.3	1.77	DBLD	1.6	3098	27.0c	3521	47200 PSI	2.220	....	....
ACCUR 2520	26.1	1.78	DBLD	1.6	3057	29.0c	3474	43900 PSI	2.220	....	....
H4895	26.5c	1.93	DBLD	1.9	3314	29.0c	3442	52681 PSI	2.220	....	....
IMR4895	25.1	1.83	DBLD	1.6	3113	28.0c	3425	49000 CUP	2.280	....	....
IMR4198	20.2	1.60	DBLD	1.3	3050	23.0	3420	50000 CUP	2.280	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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222 REMINGTON MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....												
45 Grain Jacketed Bullet (Continued)												
RELODER 7	21.8	1.58	DBLD	1.6	3242	23.0	3400	46500	CUP	2.280	....	....
IMR3031	26.5c	2.02	DBLD	1.9	3375	26.5c	3375	43800	CUP	2.280	....	....
50 Grain Jacketed Bullet												
H335	25.0	1.61	DBLD	1.6	3232	27.0	3476	51091	PSI	2.305	.9643	.9268
v-N133	25.9c	1.99	DBLD	1.9	3206	27.3c	3465	NA	NA	2.264	....	....
ACCUR 2230	25.4	1.67	DBLD	1.6	3047	28.2	3462	51700	PSI	2.320	....	....
ACCUR 2460	25.5	1.67	DBLD	1.6	3032	28.3	3445	50600	PSI	2.320	....	....
VEC SP10	24.7	1.65	DBLD	1.6	3189	27.0	3438	43657	CIP	2.280	.9677	.9309
BL-C(2)	25.0	1.61	DBLD	1.6	3212	27.0	3433	50137	PSI	2.305	.9671	.9010
ACCUR 2520	26.1	1.78	DBLD	1.6	2994	29.0c	3402	46900	PSI	2.320	....	....
A-XMR-2015	23.9	1.74	DBLD	1.6	2991	26.5c	3399	49100	PSI	2.320	....	....
H322	24.0	1.74	DBLD	1.6	3128	26.0	3385	52257	PSI	2.305	.9614	.8791
H4198	21.5	1.61	DBLD	1.6	3147	23.5	3379	48123	PSI	2.305	.9651	.9339
v-N120	21.9	1.70	DBLD	1.6	3117	23.5	3360	NA	NA	2.264	....	....
IMR3031	23.3	1.78	DBLD	1.6	3045	26.0c	3350	49000	CUP	2.280	....	....
IMR4064	24.1	1.80	DBLD	1.6	2989	27.0c	3320	49300	CUP	2.280	....	....
IMR4895	24.0	1.75	DBLD	1.6	2980	27.0c	3310	49500	CUP	2.280	....	....
H4895	26.0c	1.89	DBLD	1.9	3166	28.5c	3306	48653	PSI	2.305	....	....
IMR4320	24.3	1.74	DBLD	1.6	2935	27.5c	3260	49700	CUP	2.280	....	....
IMR4198	19.1	1.51	1.46	1.3	2931	21.5	3255	49500	CUP	2.280	....	....
RELODER 7	21.8	1.59	DBLD	1.6	3158	22.5	3250	45400	CUP	2.280	....	....
WIN 748	27.2	1.78	DBLD	1.6	3220	27.2	3220	43000	CUP	2.220	....	....
52 Grain Jacketed Bullet												
ACCUR 2460	25.5	1.67	DBLD	1.6	2982	28.3	3389	50000	PSI	2.295	....	....
ACCUR 2230	24.9	1.64	DBLD	1.6	2981	27.7	3388	52400	PSI	2.295	....	....
A-XMR-2015	23.2	1.69	DBLD	1.6	2942	25.8	3343	49900	PSI	2.295	....	....
VEC TU2000	21.9	1.67	DBLD	1.6	3280	21.9	3280	46996	CIP	2.280	....	....
WIN 748	26.3	1.72	DBLD	1.6	3178	27.2	3270	45500	CUP	2.220	....	....
53 Grain Jacketed Bullet												
H335	25.0	1.61	DBLD	1.6	3089	27.0	3340	50455	PSI	2.275	.9617	.9167
BL-C(2)	25.0	1.61	DBLD	1.6	3074	27.0	3313	50667	PSI	2.275	.9631	.9033
H322	24.0	1.74	DBLD	1.6	3014	25.0	3285	52787	PSI	2.275	....	....
H4198	21.0	1.58	DBLD	NA	3076	23.0	3282	48653	PSI	2.275	.9682	.9147
H4895	25.5	1.86	DBLD	1.6	3137	28.0c	3272	51409	PSI	2.275	....	....
WIN 748	26.3	1.72	DBLD	1.6	3178	27.2	3270	45500	CUP	2.220	....	....
H380	29.5c	2.04	DBLD	1.9	3121	30.0c	3181	47381	PSI	2.220	....	....
H414	31.0c	2.05	DBLD	1.9	3155	31.0c	3155	43247	PSI	2.220	....	....

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c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
53 Grain Jacketed Bullet (Continued)										
RELODER 7	21.8	1.58	DBLD	NA	3090	22.0	3120 44500 CUP	2.280	....	....
55 Grain Jacketed Bullet										
v-N133	25.2c	1.94	DBLD	1.9	3060	26.4c	3306 NA NA	2.283	....	....
VEC SP10	24.7	1.65	DBLD	1.6	3143	26.2	3297 46487 CIP	2.280	.9682	.9164
H335	24.0	1.55	DBLD	NA	3086	26.0	3294 50985 PSI	2.325	.9682	.9096
ACCUR 2460	24.9	1.63	DBLD	1.6	2896	27.7	3291 50900 PSI	2.310	....	....
v-N135	25.9c	2.01	DBLD	1.9	3068	27.8c	3287 NA NA	2.283	....	....
ACCUR 2520	25.8	1.76	DBLD	1.6	2884	28.7c	3277 46800 PSI	2.310	....	....
VEC TU5000	24.1	1.74	DBLD	1.6	3025	25.2	3274 49042 CIP	2.280	....	....
H4895	25.5	1.86	DBLD	1.6	3121	28.0c	3257 51833 PSI	2.325	....	....
ACCUR 2230	24.3	1.60	DBLD	1.6	2861	27.0	3251 49200 PSI	2.310	....	....
BL-C(2)	24.5	1.58	DBLD	NA	3021	26.5	3240 49607 PSI	2.325	.9655	.9011
H4198	21.0	1.58	DBLD	NA	3024	23.0	3222 49077 PSI	2.325	.9686	.9036
A-XMR-2015	23.0	1.68	DBLD	1.6	2833	25.5	3219 47200 PSI	2.310	....	....
WIN 748	27.0	1.77	DBLD	1.6	3215	27.0	3215 44000 CUP	2.220	....	....
IMR3031	22.5	1.71	DBLD	1.6	2867	25.5c	3215 49900 CUP	2.280	....	....
H414	28.5	1.88	DBLD	1.9	2968	31.0c	3209 47275 PSI	2.325	....	....
v-N120	21.5	1.67	DBLD	1.6	2964	23.0	3207 NA NA	2.283	....	....
H322	22.5	1.63	DBLD	1.6	2867	24.5	3191 52257 PSI	2.325	.9478	.8604
IMR4064	23.3	1.74	DBLD	1.6	2836	26.5c	3180 50000 CUP	2.280	....	....
H380	28.5c	1.97	DBLD	1.9	2952	31.0c	3136 47593 PSI	2.325	....	....
IMR4895	23.1	1.68	DBLD	1.6	2805	26.0c	3115 49600 CUP	2.280	....	....
RELODER 7	21.0	1.53	1.46	NA	2984	22.0	3100 46000 CUP	2.280	....	....
IMR4320	23.7	1.69	DBLD	1.6	2760	27.0c	3095 50200 CUP	2.280	....	....
IMR4198	18.0	1.43	1.36	1.3	2756	20.5	3090 50000 CUP	2.280	....	....
60 Grain Jacketed Bullet										
v-N133	24.5	1.89	DBLD	1.9	2920	25.9c	3162 NA NA	2.280	....	....
ACCUR 2520	24.9	1.70	DBLD	1.6	2772	27.7	3150 48800 PSI	2.330	....	....
ACCUR 2460	24.0	1.57	DBLD	NA	2752	26.7	3127 49100 PSI	2.330	....	....
v-N135	25.3c	1.97	DBLD	1.9	2937	27.0c	3124 NA NA	2.280	....	....
ACCUR 2230	23.4	1.54	1.46	NA	2717	26.0	3088 49300 PSI	2.330	....	....
A-XMR-2015	22.1	1.61	DBLD	1.6	2716	24.5	3086 48800 PSI	2.330	....	....
VEC TU2000	20.1	1.53	1.46	NA	2887	21.3	3022 43643 CIP	2.280	....	....
63 Grain Jacketed Bullet										
H414	27.5	1.82	DBLD	1.6	2786	30.0c	3085 48123 PSI	2.280	....	....
BL-C(2)	24.0	1.55	DBLD	NA	2913	26.0	3078 52575 PSI	2.280	.9730	.8935
A-XMR-2015	22.3	1.63	DBLD	1.6	2700	24.8	3068 50300 PSI	2.280	....	....

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c = Compressed charge

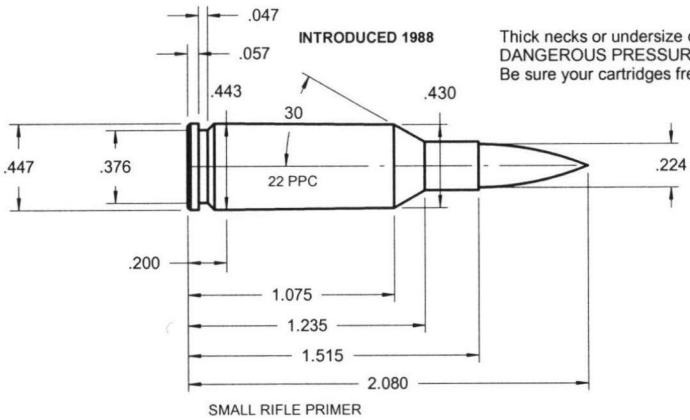
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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
63 Grain Jacketed Bullet (Continued)											
H335	23.5	1.52	1.46	1.3	2910	25.5	3057	52045 PSI	2.280	.9758	.9183
H4895	24.5	1.78	DBLD	1.6	2869	26.5c	3046	51303 PSI	2.280	....	....
H4198	18.5	1.39	1.36	1.3	2845	20.5	3019	50667 PSI	2.280	.9705	.9171
ACCUR 2520	24.3	1.66	DBLD	1.6	2646	27.0	3007	45600 PSI	2.280	....	....
ACCUR 2460	23.0	1.51	1.46	1.3	2644	25.5	3005	47000 PSI	2.280	....	....
H380	27.5c	1.90	DBLD	1.9	2839	30.0c	2977	47911 PSI	2.280	....	....
ACCUR 2230	22.5	1.48	1.46	1.3	2606	25.0	2961	48700 PSI	2.280	....	....
H322	21.5	1.56	DBLD	NA	2763	23.5	2934	51833 PSI	2.280	.9704	.8827
69 Grain Jacketed Bullet											
v-N135	23.5	1.83	DBLD	1.6	2747	25.3c	2953	NA	NA	2.283	....	....
v-N133	22.8	1.76	DBLD	1.6	2703	24.4	2911	NA	NA	2.283	....	....
70 Grain Jacketed Bullet											
H414	26.9	1.78	DBLD	1.6	2679	29.0c	2864	50243 PSI	2.220	....	....
H380	26.3	1.82	DBLD	1.6	2655	28.0c	2811	49713 PSI	2.220	....	....
H4895	21.6	1.58	DBLD	NA	2484	24.5	2785	52787 PSI	2.220	....	....
H322	20.5	1.48	1.46	1.3	2527	22.5	2753	51303 PSI	2.220	....	....
H335	21.3	1.37	1.36	1.3	2518	23.5	2744	51515 PSI	2.220	....	....
BL-C(2)	22.5	1.45	1.36	1.3	2582	24.0	2734	49713 PSI	2.220	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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22 PPC



Thick necks or undersize chambers cause DANGEROUS PRESSURES.
Be sure your cartridges freely chamber.

Useful case capacity 1.94 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
40 Grain Jacketed Bullet											
ACCUR 2460	27.6	1.81	DBLD	1.6	3414	30.7c	3880	54000 PSI	2.000	....	....
ACCUR 2230	27.2	1.79	DBLD	1.6	3408	30.2c	3873	55400 PSI	2.000	....	....
ACCUR 2520	26.1	1.78	DBLD	1.6	3156	29.0c	3587	39500 PSI	2.000	....	....
H-VARGET	27.5c	2.01	DBLD	1.9	3314	29.5c	3560	52881 PSI	2.065	....	....
A-XMR-2495	25.2	1.89	DBLD	1.6	3100	28.0c	3523	40500 PSI	2.000	....	....
45 Grain Jacketed Bullet											
ACCUR 2460	26.7	1.75	DBLD	1.6	3259	29.7c	3703	51100 PSI	1.890	....	....
ACCUR 2230	26.3	1.73	DBLD	1.6	3255	29.2	3699	54500 PSI	1.890	....	....
A-XMR-2015	23.9	1.74	DBLD	1.6	3160	26.5	3591	51600 PSI	1.890	....	....
A-XMR-2495	25.2	1.89	DBLD	1.6	3153	28.0c	3583	48300 PSI	1.890	....	....
ACCUR 2520	26.1	1.78	DBLD	1.6	3129	29.0c	3556	43600 PSI	1.890	....	....
50 Grain Jacketed Bullet											
ACCUR 2230	26.1	1.71	DBLD	1.6	3183	29.0	3617	54600 PSI	2.000	....	....
ACCUR 2460	26.1	1.71	DBLD	1.6	3148	29.0	3577	54800 PSI	2.000	....	....
A-XMR-2495	25.2	1.89	DBLD	1.6	3083	28.0c	3503	53800 PSI	2.000	....	....
ACCUR 2520	26.1	1.78	DBLD	1.6	3050	29.0c	3466	48000 PSI	2.000	....	....
A-XMR-2015	23.4	1.71	DBLD	1.6	3047	26.0	3462	51300 PSI	2.000	....	....
H335	26.0	1.68	DBLD	1.6	3183	28.0	3418	57857 PSI	2.065	.9649	.9044
H-VARGET	27.5c	2.01	DBLD	1.9	3205	29.5c	3408	55774 PSI	2.065	....	....
H322	25.0	1.81	DBLD	1.6	3204	26.0	3385	55542 PSI	2.065	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

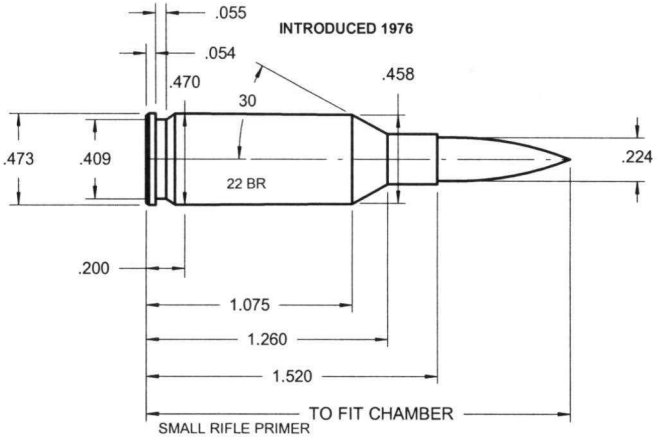
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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
50 Grain Jacketed Bullet (Continued)											
H4895	26.0	1.89	DBLD	1.9	2989	28.0c	3347	53807 PSI	2.065	....	....
BL-C(2)	29.0	1.87	DBLD	1.6	3210	30.5c	3316	54385 PSI	2.065	....	....
52 Grain Jacketed Bullet											
v-N135	25.1c	1.95	DBLD	1.9	3130	27.8c	3443	NA NA	2.024	....	....
v-N133	23.1	1.78	DBLD	1.6	3086	25.8c	3386	NA NA	2.024	....	....
v-N130	21.8	1.64	DBLD	1.6	3027	24.3	3335	NA NA	2.024	....	....
v-N120	21.9	1.70	DBLD	1.6	3171	22.7	3254	NA NA	2.024	....	....
53 Grain Jacketed Bullet											
ACCUR 2460	26.1	1.71	DBLD	1.6	3107	29.0	3531	53200 PSI	1.975	....	....
A-XMR-2495	25.2	1.89	DBLD	1.9	3084	28.0c	3504	57200 PSI	1.975	....	....
ACCUR 2230	25.7	1.69	DBLD	1.6	3078	28.5	3498	53000 PSI	1.975	....	....
ACCUR 2520	26.1	1.78	DBLD	1.6	3019	29.0c	3431	47700 PSI	1.975	....	....
A-XMR-2015	23.0	1.68	DBLD	1.6	2969	25.5	3374	51900 PSI	1.975	....	....
H-VARGET	26.5	1.94	DBLD	1.9	3179	28.5c	3363	56584 PSI	2.065	....	....
H335	25.5	1.64	DBLD	1.6	3107	27.5	3344	56699 PSI	2.065	.9641	.9313
H322	24.0	1.74	DBLD	1.6	3046	26.0	3333	56121 PSI	2.065	.9558	.9059
H4895	26.0	1.89	DBLD	1.9	3079	28.0c	3321	56699 PSI	2.065	....	....
BL-C(2)	29.0	1.87	DBLD	1.6	3152	30.5c	3288	55542 PSI	2.065	....	....
55 Grain Jacketed Bullet											
v-N135	25.5c	1.98	DBLD	1.9	3091	28.3c	3435	NA NA	2.039	....	....
A-XMR-2495	24.8	1.86	DBLD	1.6	3010	27.6c	3421	56400 PSI	1.960	....	....
ACCUR 2230	25.2	1.66	DBLD	1.6	2996	28.0	3404	55300 PSI	1.960	....	....
ACCUR 2520	26.1	1.78	DBLD	1.6	2962	29.0c	3366	50900 PSI	1.960	....	....
ACCUR 2460	25.2	1.65	DBLD	1.6	2960	28.0	3364	51200 PSI	1.960	....	....
H4895	26.0	1.89	DBLD	1.9	3047	28.0c	3346	57857 PSI	2.050	....	....
H-VARGET	26.5	1.94	DBLD	1.9	3147	28.5c	3317	55311 PSI	2.050	....	....
H322	24.0	1.74	DBLD	1.6	3052	26.0	3306	57857 PSI	2.050	.9605	.9099
BL-C(2)	28.5	1.84	DBLD	1.6	3091	30.0	3285	57857 PSI	2.050	....	....
A-XMR-2015	22.5	1.64	DBLD	1.6	2885	25.0	3278	53200 PSI	1.960	....	....
v-N133	22.8	1.76	DBLD	1.6	2996	25.4c	3232	NA NA	2.039	....	....
H335	24.5	1.58	DBLD	NA	2951	26.5	3216	54964 PSI	2.050	.9582	.9154
v-N130	21.8	1.64	DBLD	1.6	2946	24.3	3202	NA NA	2.039	....	....
60 Grain Jacketed Bullet											
ACCUR 2460	25.2	1.65	DBLD	1.6	2948	28.0	3350	56200 PSI	1.985	....	....
ACCUR 2520	26.1	1.78	DBLD	1.6	2944	29.0c	3345	54300 PSI	1.985	....	....
ACCUR 2230	24.8	1.63	DBLD	1.6	2920	27.5	3318	54600 PSI	1.985	....	....
A-XMR-2495	23.9	1.79	DBLD	1.6	2878	26.5c	3270	56400 PSI	1.985	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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22 BR REMINGTON



Useful case capacity 2.18 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
40 Grain Jacketed Bullet										
ACCUR 2460	31.0	2.03	DBLD	1.9	3596	34.5c 4087	53800 PSI	2.065	....	....
ACCUR 2230	30.6	2.01	DBLD	1.9	3575	34.0c 4063	52800 PSI	2.065	....	....
ACCUR 2520	31.0	2.12	DBLD	1.9	3524	34.5c 4005	51700 PSI	2.065	....	....
A-XMR-2015	27.9	2.04	DBLD	1.9	3512	31.0c 3992	57400 PSI	2.065	....	....
A-XMR-2495	29.2c	2.19	DBLD	1.9	3424	32.5c 3892	48100 PSI	2.065	....	....
ACC XMP5744	23.8	1.79	DBLD	1.6	3381	26.5 3843	55500 PSI	2.065	....	....
H-VARGET	31.5c	2.30	DBLD	2.2	3558	33.5c 3788	53539 PSI	2.090	....	....
ACCUR 2700	31.9c	2.18	DBLD	1.9	3169	35.5c 3602	40500 PSI	2.065	....	....
45 Grain Jacketed Bullet										
ACCUR 2460	30.6	2.01	DBLD	1.9	3443	34.0c 3913	57600 PSI	1.895	....	....
ACCUR 2520	30.9	2.11	DBLD	1.9	3428	34.3c 3896	55300 PSI	1.895	....	....
ACCUR 2230	30.2	1.98	DBLD	1.9	3417	33.5c 3883	57400 PSI	1.895	....	....
A-XMR-2015	27.5	2.01	DBLD	1.9	3356	30.5c 3814	57000 PSI	1.895	....	....
H4895	30.0c	2.18	DBLD	1.9	3429	32.5c 3768	60308 PSI	1.945	....	....
H335	31.0	2.00	DBLD	1.9	3441	33.0 3759	59816 PSI	1.945	.9569	.9207
BL-C(2)	34.0c	2.19	DBLD	1.9	3369	36.0c 3746	59077 PSI	1.945	....	....
H322	29.0	2.10	DBLD	1.9	3409	31.5c 3741	60800 PSI	1.945	....	....
A-XMR-2495	29.3c	2.19	DBLD	1.9	3281	32.5c 3728	48100 PSI	1.895	....	....
H-VARGET	31.5c	2.30	DBLD	2.2	3502	33.5c 3693	53662 PSI	1.945	....	....
ACCUR 2700	33.7c	2.31	DBLD	2.2	3359	35.5c 3573	46700 PSI	1.895	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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22 BR REMINGTON (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
50 Grain Jacketed Bullet											
ACCUR 2230	30.0	1.97	DBLD	1.9	3313	33.3c	3765	56000 PSI	2.000	....	....
ACCUR 2460	30.2	1.98	DBLD	1.9	3311	33.5c	3762	54900 PSI	2.000	....	....
ACCUR 2520	30.3	2.07	DBLD	1.9	3301	33.7c	3751	54900 PSI	2.000	....	....
A-XMR-2015	27.5	2.01	DBLD	1.9	3282	30.5c	3729	55900 PSI	2.000	....	....
BL-C(2)	33.5	2.16	DBLD	1.9	3440	35.5c	3649	60308 PSI	1.945	....	....
H322	28.0	2.03	DBLD	1.9	3292	30.5c	3637	61539 PSI	1.945	....	....
H335	30.0	1.94	DBLD	1.9	3419	32.0	3628	60062 PSI	1.945	.9711	.9121
H-VARGET	31.5c	2.30	DBLD	2.2	3426	33.5c	3624	54893 PSI	1.945	....	....
H4895	29.5	2.15	DBLD	1.9	3404	32.0c	3606	59077 PSI	1.945	....	....
ACC XMP5744	23.4	1.76	DBLD	1.6	3135	26.0	3563	58700 PSI	2.000	....	....
A-XMR-2495	28.8	2.16	DBLD	1.9	3132	32.0c	3559	45400 PSI	2.000	....	....
ACCUR 2700	33.3c	2.28	DBLD	2.2	3267	35.0c	3476	46900 PSI	2.000	....	....
53 Grain Jacketed Bullet											
ACCUR 2460	29.5	1.94	DBLD	1.9	3215	32.8	3653	57300 PSI	1.985	....	....
H-VARGET	31.0c	2.27	DBLD	2.2	3425	33.0c	3638	62893 PSI	2.065	....	....
ACCUR 2520	29.5	2.01	DBLD	1.9	3186	32.8c	3620	56400 PSI	1.985	....	....
ACCUR 2230	29.0	1.91	DBLD	1.9	3183	32.2	3617	57900 PSI	1.985	....	....
BL-C(2)	32.5	2.10	DBLD	1.9	3403	35.0c	3592	60062 PSI	2.065	....	....
H335	29.5	1.90	DBLD	1.6	3371	31.5	3587	60554 PSI	2.065	.9695	.9062
A-XMR-2015	26.6	1.94	DBLD	1.9	3150	29.5	3579	56600 PSI	1.985	....	....
H4895	29.5	2.15	DBLD	1.9	3377	31.5c	3566	60308 PSI	2.065	....	....
H322	28.0	2.03	DBLD	1.9	3270	30.0	3544	59569 PSI	2.065	.9606	.8861
A-XMR-2495	28.4	2.13	DBLD	1.9	3116	31.5c	3541	52400 PSI	1.985	....	....
ACC XMP5744	22.5	1.69	DBLD	1.6	3030	25.0	3443	60000 PSI	1.985	....	....
ACCUR 2700	33.3c	2.28	DBLD	2.2	3111	35.0c	3310	46600 PSI	1.985	....	....
55 Grain Jacketed Bullet											
ACCUR 2460	29.3	1.92	DBLD	1.9	3172	32.5	3605	59900 PSI	1.970	....	....
ACCUR 2520	29.4	2.01	DBLD	1.9	3159	32.7c	3590	57400 PSI	1.970	....	....
ACCUR 2230	28.8	1.89	DBLD	1.6	3138	32.0	3566	55700 PSI	1.970	....	....
BL-C(2)	32.5	2.10	DBLD	1.9	3329	34.5c	3531	59323 PSI	2.050	....	....
H-VARGET	30.0c	2.19	DBLD	1.9	3308	32.5c	3530	60677 PSI	2.050	....	....
A-XMR-2015	26.1	1.91	DBLD	1.9	3071	29.0	3490	56500 PSI	1.970	....	....
H335	29.5	1.90	DBLD	1.6	3269	31.5	3489	61293 PSI	2.050	.9677	.9051
H4895	29.0	2.11	DBLD	1.9	3212	31.0c	3478	60800 PSI	2.050	....	....
A-XMR-2495	27.9	2.09	DBLD	1.9	3033	31.0c	3447	49600 PSI	1.970	....	....
H322	28.0	2.03	DBLD	1.9	3219	30.0	3439	60062 PSI	2.050	.9675	.9054
ACCUR 2700	32.3c	2.21	DBLD	2.2	3156	34.0c	3357	47600 PSI	1.970	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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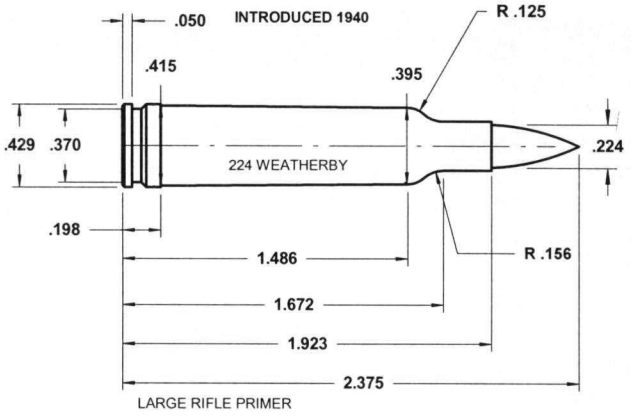
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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
55 Grain Jacketed Bullet (Continued)											
ACC XMP5744	22.0	1.65	DBLD	1.6	2935	24.5	3335	56300 PSI	1.970	....	....
60 Grain Jacketed Bullet											
ACCUR 2460	28.5	1.87	DBLD	1.6	3040	31.7	3455	56900 PSI	1.990	....	....
A-XMR-4064	29.2c	2.20	DBLD	2.2	3028	32.5c	3441	55500 PSI	1.990	....	....
A-XMR-2495	27.9	2.09	DBLD	1.9	3021	31.0c	3433	56700 PSI	1.990	....	....
ACCUR 2230	28.1	1.85	DBLD	1.6	3005	31.2	3415	55700 PSI	1.990	....	....
ACCUR 2520	28.4	1.94	DBLD	1.9	2995	31.5	3403	56000 PSI	1.990	....	....
A-XMR-2015	25.7	1.88	DBLD	1.6	2965	28.5	3369	55800 PSI	1.990	....	....
ACCUR 2700	32.3c	2.21	DBLD	2.2	3122	34.0c	3321	51900 PSI	1.990	....	....
ACC XMP5744	21.6	1.62	DBLD	1.6	2826	24.0	3211	56000 PSI	1.990	....	....
63 Grain Jacketed Bullet											
H-VARGET	28.5	2.08	DBLD	1.9	3134	30.5c	3307	60677 PSI	2.015	....	....
BL-C(2)	31.0	2.00	DBLD	1.9	3049	33.0	3298	59569 PSI	2.015	.9615	.9114
H335	26.5	1.71	DBLD	1.6	3032	29.0	3290	61416 PSI	2.015	.9677	.9280
H4895	26.0	1.89	DBLD	1.9	2994	28.0	3146	60800 PSI	2.015	.9757	.9177
H322	24.0	1.74	DBLD	1.6	2962	26.5	3120	60062 PSI	2.015	.9795	.9309
70 Grain Jacketed Bullet											
H-VARGET	26.0	1.90	DBLD	1.9	2858	28.0	3035	60923 PSI	1.900	.9705	.9320
BL-C(2)	26.5	1.71	DBLD	1.6	2811	28.5	3009	60923 PSI	1.900	.9665	.9123
H335	24.0	1.55	DBLD	NA	2740	26.0	2959	61416 PSI	1.900	.9624	.9131
H322	22.0	1.60	DBLD	1.6	2696	24.0	2889	61416 PSI	1.900	.9657	.8953
H4895	23.0	1.67	DBLD	1.6	2707	24.5	2845	61539 PSI	1.900	.9673	.8818

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c = Compressed charge

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224 WEATHERBY



Useful case capacity 2.35 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
45 Grain Jacketed Bullet										
H335	29.5	1.90	DBLD	1.6	3447	32.0	3865	NA	NA	2.375
H4895	29.5	2.15	DBLD	1.9	3419	32.0	3861	NA	NA	2.375
BL-C(2)	29.5	1.90	DBLD	1.6	3457	32.0	3808	NA	NA	2.375
H380	32.0	2.21	DBLD	2.2	3425	35.0c	3731	NA	NA	2.375
H414	34.5	2.28	DBLD	2.2	3420	36.5c	3631	NA	NA	2.375
50 Grain Jacketed Bullet										
BL-C(2)	29.0	1.87	DBLD	1.6	3427	31.5	3723	NA	NA	2.375
H380	31.0	2.14	DBLD	1.9	3232	34.0	3705	NA	NA	2.375
H4895	28.5	2.07	DBLD	1.9	3199	31.0	3648	NA	NA	2.375
ACCUR 2460	29.3	1.92	DBLD	1.9	3191	32.5	3626	51500	PSI	2.375
H335	28.5	1.84	DBLD	1.6	3298	31.0	3607	NA	NA	2.375
H414	34.0	2.25	DBLD	2.2	3415	36.0c	3602	NA	NA	2.375
A-XMR-2015	27.5	2.01	DBLD	1.9	3139	30.5	3567	50900	PSI	2.375
ACCUR 2230	28.4	1.87	DBLD	1.6	3129	31.5	3556	52700	PSI	2.375
ACCUR 2520	29.7	2.03	DBLD	1.9	3060	33.0	3477	45400	PSI	2.375
A-XMR-2495	28.8	2.16	DBLD	1.9	2981	32.0c	3387	41800	PSI	2.375
53 Grain Jacketed Bullet										
H414	33.5	2.21	DBLD	2.2	3352	35.5	3525	NA	NA	2.310
H4895	27.5	2.00	DBLD	1.9	3032	30.0	3522	NA	NA	2.310
BL-C(2)	26.5	1.71	DBLD	1.6	2945	29.0	3493	NA	NA	2.310

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

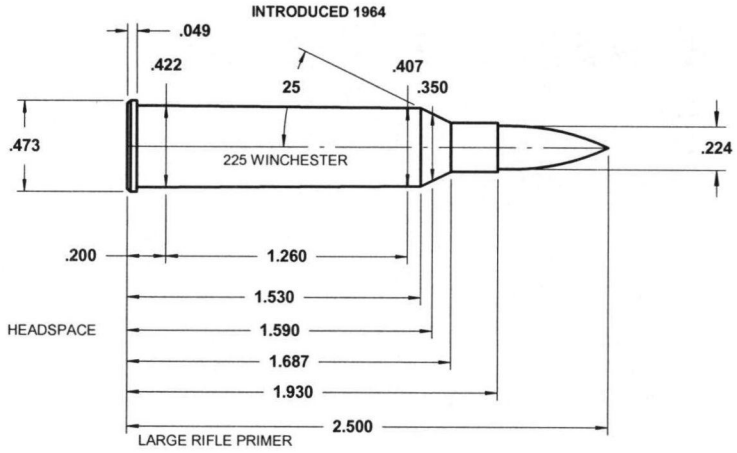
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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
53 Grain Jacketed Bullet (Continued)										
H380	29.5	2.04	DBLD	1.9	3111	32.0	3482	NA	NA	2.310
H335	26.0	1.68	DBLD	1.6	2894	28.5	3462	NA	NA	2.310
55 Grain Jacketed Bullet										
H4895	27.5	2.00	DBLD	1.9	2971	30.0	3503	NA	NA	2.375
H414	33.0	2.18	DBLD	1.9	3242	35.0	3497	NA	NA	2.375
H380	29.5	2.04	DBLD	1.9	3045	32.0	3461	NA	NA	2.375
ACCUR 2460	28.8	1.89	DBLD	1.6	3016	32.0	3427	50000	PSI	2.370
A-XMR-2015	27.0	1.97	DBLD	1.9	3015	30.0	3426	52400	PSI	2.370
ACCUR 2230	28.4	1.87	DBLD	1.6	3005	31.5	3415	51100	PSI	2.370
ACCUR 2520	29.7	2.03	DBLD	1.9	2988	33.0	3395	48900	PSI	2.370
A-XMR-2495	28.8	2.16	DBLD	1.9	2964	32.0c	3368	47900	PSI	2.370
H335	27.5	1.77	DBLD	1.6	3033	29.0	3367	NA	NA	2.375
BL-C(2)	26.5	1.71	DBLD	1.6	2910	28.0	3341	NA	NA	2.375
H4350	32.0	2.32	DBLD	2.2	2879	34.0c	3240	NA	NA	2.375
H4831	31.5	2.28	DBLD	2.2	2834	34.0c	3200	NA	NA	2.375
60 Grain Jacketed Bullet										
ACCUR 2460	28.8	1.89	DBLD	1.6	2963	32.0	3367	54700	PSI	2.375
ACCUR 2230	28.4	1.87	DBLD	1.6	2920	31.5	3318	53500	PSI	2.375
ACCUR 2520	29.7	2.03	DBLD	1.9	2917	33.0	3315	50900	PSI	2.375
A-XMR-2015	26.6	1.94	DBLD	1.9	2910	29.5	3307	54000	PSI	2.375
A-XMR-2495	28.8	2.16	DBLD	1.9	2904	32.0c	3300	51000	PSI	2.375
H380	28.5	1.97	DBLD	1.9	2931	31.0	3281	NA	NA	2.375
H414	31.0	2.05	DBLD	1.9	2958	33.0	3245	NA	NA	2.375
H4350	31.0	2.25	DBLD	2.2	2832	34.0c	3240	NA	NA	2.375
H4895	26.0	1.89	DBLD	1.6	2792	28.0	3205	NA	NA	2.375
BL-C(2)	26.0	1.68	DBLD	1.6	2894	28.0	3178	NA	NA	2.375
H335	26.0	1.68	DBLD	1.6	2873	28.0	3147	NA	NA	2.375
H4831	31.0	2.25	DBLD	2.2	2781	33.5c	3041	NA	NA	2.375
70 Grain Jacketed Bullet										
H414	29.0	1.92	DBLD	1.9	2847	31.0	2969	NA	NA	2.310
H380	27.0	1.87	DBLD	1.6	2804	29.0	2914	NA	NA	2.310
H4350	30.0	2.18	DBLD	1.9	2644	32.0	2777	NA	NA	2.310
H4831	30.0	2.17	DBLD	1.9	2395	32.0	2486	NA	NA	2.310

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

225 WINCHESTER



Useful case capacity 2.63 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
40 Grain Jacketed Bullet											
ACCUR 2460	31.0	2.03	DBLD	1.9	3544	34.5	4028	58100 PSI	2.495	....	....
BL-C(2)	33.0	2.13	DBLD	1.9	3725	36.0	4020	59039 PSI	2.370	.9748	.9807
ACCUR 2520	31.5	2.15	DBLD	1.9	3532	35.0	4014	56700 PSI	2.495	....	....
A-XMR-2495	30.6	2.29	DBLD	2.2	3519	34.0	3999	57200 PSI	2.495	....	....
ACCUR 2230	30.6	2.01	DBLD	1.9	3508	34.0	3987	57200 PSI	2.495	....	....
A-XMR-2015	28.7	2.10	DBLD	1.9	3490	32.0	3966	57800 PSI	2.495	....	....
H322	28.0	2.03	DBLD	1.9	3541	31.0	3896	59759 PSI	2.370	.9686	.9272
H414	36.0	2.38	DBLD	2.2	3548	39.0	3829	51959 PSI	2.370	.9751	.9079
H4895	31.5	2.29	DBLD	2.2	3564	34.0	3811	57839 PSI	2.370	.9737	.9244
ACCUR 2700	34.2	2.34	DBLD	2.2	3285	38.0	3733	46900 PSI	2.495	....	....
45 Grain Jacketed Bullet											
BL-C(2)	32.0	2.06	DBLD	1.9	3569	35.0	3890	56759 PSI	2.425	.9717	.9657
H380	34.0	2.35	DBLD	2.2	3473	37.0	3749	56759 PSI	2.425	.9748	.9702
H4895	31.0	2.26	DBLD	2.2	3495	33.5	3736	59159 PSI	2.425	.9738	.9161
H414	35.5	2.35	DBLD	2.2	3425	38.5	3696	54479 PSI	2.425	.9748	.9457
H322	27.0	1.96	DBLD	1.9	3350	30.0	3685	59999 PSI	2.425	.9687	.9004
46 Grain Jacketed Bullet											
WIN 760	35.4	2.36	DBLD	2.2	3513	37.0	3650	46000 CUP	2.500	....	....
50 Grain Bullet											
RELODER 7	22.0	1.60	DBLD	1.3	3130	22.0	3130	44000 CUP	2.450	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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225 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
50 Grain Jacketed Bullet											
BL-C(2)	32.0	2.06	DBLD	1.9	3459	35.0	3768	59159 PSI	2.400	.9719	.9569
H4895	31.0	2.26	DBLD	2.2	3416	34.0	3722	58079 PSI	2.400	.9717	.9258
H335	31.5	2.03	DBLD	1.9	3415	34.5	3721	58919 PSI	2.400	.9720	.9567
H414	35.5	2.35	DBLD	2.2	3429	38.5	3702	57119 PSI	2.400	.9748	.9468
H380	33.0	2.28	DBLD	2.2	3390	36.0	3659	56759 PSI	2.400	.9747	.9791
A-XMR-2495	28.6	2.14	DBLD	1.9	3218	31.8	3657	57400 PSI	2.400	....	....
A-XMR-2015	27.9	2.04	DBLD	1.9	3206	31.0	3643	57200 PSI	2.400	....	....
ACCUR 2520	30.0	2.05	DBLD	1.9	3206	33.3	3643	57800 PSI	2.400	....	....
ACCUR 2460	29.3	1.92	DBLD	1.9	3200	32.5	3636	56100 PSI	2.400	....	....
ACCUR 2230	28.8	1.89	DBLD	1.9	3191	32.0	3626	57300 PSI	2.400	....	....
WIN 760	32.3	2.15	DBLD	1.9	3245	36.0	3570	49000 CUP	2.500	....	....
ACCUR 2700	35.6	2.44	DBLD	2.2	3348	37.5	3562	51500 PSI	2.400	....	....
H322	26.0	1.88	DBLD	1.9	3091	29.0	3401	58679 PSI	2.400	.9685	.9153
52 Grain Jacketed Bullet											
H335	31.5	2.03	DBLD	1.9	3426	34.0	3662	59999 PSI	2.500	.9737	.9378
H414	35.5	2.35	DBLD	2.2	3393	38.5	3662	59519 PSI	2.500	.9747	.9414
BL-C(2)	31.5	2.03	DBLD	1.9	3420	34.0	3656	60119 PSI	2.500	.9738	.9425
H380	32.5	2.25	DBLD	2.2	3313	35.0	3542	59519 PSI	2.500	.9736	.9410
H4895	29.5	2.15	DBLD	1.9	3208	32.0	3463	59519 PSI	2.500	.9697	.8913
H322	26.0	1.88	DBLD	1.9	3059	28.5	3333	57599 PSI	2.500	.9662	.9222
53 Grain Jacketed Bullet											
A-XMR-2495	28.4	2.13	DBLD	1.9	3197	31.6	3633	60700 PSI	2.415	....	....
A-XMR-2015	27.7	2.02	DBLD	1.9	3148	30.8	3577	58400 PSI	2.415	....	....
ACCUR 2520	29.8	2.03	DBLD	1.9	3130	33.1	3557	58100 PSI	2.415	....	....
ACCUR 2460	29.1	1.91	DBLD	1.9	3115	32.3	3540	56800 PSI	2.415	....	....
ACCUR 2230	28.6	1.88	DBLD	1.6	3088	31.8	3509	55800 PSI	2.415	....	....
ACCUR 2700	35.6	2.44	DBLD	2.2	3264	37.5	3472	51600 PSI	2.415	....	....
55 Grain Bullet											
H4831	37.0c	2.68	DBLD	2.5	3112	37.0c	3112	47399 PSI	2.450	....	....
RELODER 7	21.8	1.58	DBLD	NA	3046	22.0	3075	44500 CUP	2.450	....	....
55 Grain Jacketed Bullet											
BL-C(2)	31.5	2.03	DBLD	1.9	3407	34.0	3643	59279 PSI	2.420	.9734	.9478
H335	31.0	2.00	DBLD	1.9	3368	33.5	3601	58439 PSI	2.420	.9735	.9479
H414	35.0	2.31	DBLD	2.2	3331	38.0	3596	57119 PSI	2.420	.9748	.9405
ACCUR 2460	29.5	1.94	DBLD	1.9	3111	32.8	3535	57600 PSI	2.425	....	....
ACCUR 2230	29.3	1.93	DBLD	1.9	3098	32.6	3520	57000 PSI	2.425	....	....
ACCUR 2520	29.9	2.04	DBLD	1.9	3096	33.2	3518	57600 PSI	2.425	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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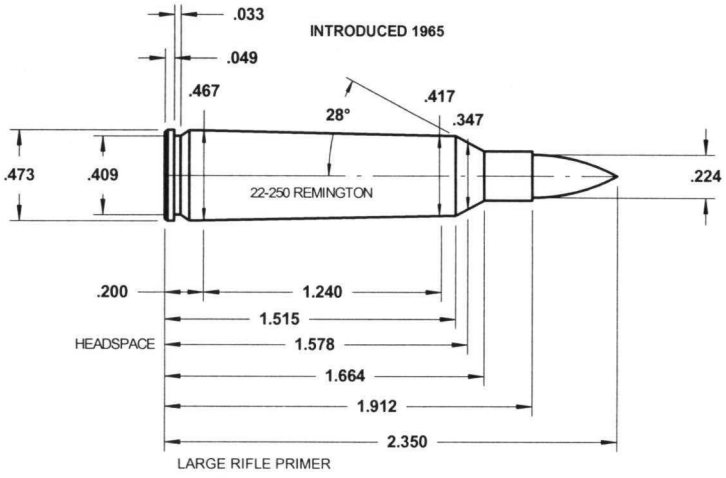
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
55 Grain Jacketed Bullet (Continued)											
A-XMR-2495	28.1	2.10	DBLD	1.9	3089	31.2	3510	57900 PSI	2.425	----	----
A-XMR-2015	27.5	2.01	DBLD	1.9	3076	30.5	3495	58500 PSI	2.425	----	----
H380	32.5	2.25	DBLD	2.2	3267	35.0	3493	56279 PSI	2.420	.9734	.9677
WIN 760	32.6	2.17	DBLD	1.9	3255	35.2	3480	47500 CUP	2.500	----	----
H4895	29.5	2.15	DBLD	1.9	3221	32.0	3476	57599 PSI	2.420	.9698	.8913
ACCUR 2700	35.2	2.41	DBLD	2.2	3227	37.0	3433	51700 PSI	2.425	----	----
H322	25.5	1.85	DBLD	1.6	3013	28.0	3283	58679 PSI	2.420	.9661	.9097
H4350	35.0	2.54	DBLD	2.5	3041	37.0c	3189	55199 PSI	2.420	----	----
60 Grain Jacketed Bullet											
BL-C(2)	30.5	1.97	DBLD	1.9	3176	33.0	3428	58439 PSI	2.410	.9699	.9689
A-XMR-2495	27.9	2.09	DBLD	1.9	3003	31.0	3413	59000 PSI	2.425	----	----
ACCUR 2520	29.3	2.00	DBLD	1.9	3000	32.5	3409	59600 PSI	2.425	----	----
H414	34.0	2.25	DBLD	2.2	3158	37.0	3408	58919 PSI	2.410	.9747	.9308
H335	30.0	1.93	DBLD	1.9	3154	32.5	3404	57599 PSI	2.410	.9700	.9710
ACCUR 2460	28.8	1.89	DBLD	1.6	2989	32.0	3397	56400 PSI	2.425	----	----
H4895	29.0	2.11	DBLD	1.9	3117	32.0	3396	58799 PSI	2.410	.9719	.9589
H380	32.0	2.21	DBLD	2.2	3108	35.0	3387	58199 PSI	2.410	.9719	.9753
A-XMR-2015	27.0	1.97	DBLD	1.9	2966	30.0	3370	58700 PSI	2.425	----	----
ACCUR 2230	28.1	1.85	DBLD	1.6	2966	31.2	3370	58100 PSI	2.425	----	----
ACCUR 2700	34.7	2.38	DBLD	2.2	3131	36.5	3331	51000 PSI	2.425	----	----
H4350	34.0	2.47	DBLD	2.2	2946	36.0	3120	53279 PSI	2.410	----	----
70 Grain Jacketed Bullet											
H4350	32.0	2.32	DBLD	2.2	2707	35.0	2949	57359 PSI	2.310	.9716	.9352
H414	31.5	2.08	DBLD	1.9	2776	33.5	2940	56639 PSI	2.310	.9719	.8983

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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22-250 REMINGTON



Useful case capacity 2.75 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
40 Grain Jacketed Bullet											
A-XMR-2495	34.2	2.56	DBLD	2.5	3696	38.0c	4200	62600 PSI	2.405	....	....
ACCUR 2460	33.7	2.21	DBLD	2.2	3663	37.5	4163	60500 PSI	2.405	....	....
H-VARGET	37.5	2.74	DBLD	2.5	3942	39.5c	4135	62670 PSI	2.350	....	....
ACCUR 2700	39.1	2.68	DBLD	2.5	3576	43.5c	4064	58400 PSI	2.405	....	....
H4895	34.0	2.48	DBLD	2.2	3762	37.0	4060	59726 PSI	2.350	.9750	.9653
ACCUR 2230	33.3	2.19	DBLD	1.9	3560	37.0	4045	60000 PSI	2.260	....	....
ACCUR 2520	34.7	2.37	DBLD	2.2	3555	38.5	4040	58500 PSI	2.260	....	....
A-XMR-4064	35.5	2.68	DBLD	2.5	3526	39.5c	4007	54800 PSI	2.260	....	....
A-XMR-2015	31.1	2.27	DBLD	2.2	3494	34.5	3971	57600 PSI	2.260	....	....
H414	38.0	2.51	DBLD	2.5	3679	41.0	3933	57764 PSI	2.350	.9779	.9438
H380	38.0	2.63	DBLD	2.5	3605	41.0c	3855	48075 PSI	2.350	....	....
A-XMR-4350	36.0	2.66	DBLD	2.5	3081	40.0c	3501	38900 PSI	2.260	....	....
A-XMR-3100	36.0	2.69	DBLD	2.5	2688	40.0c	3055	28400 PSI	2.260	....	....
45 Grain Jacketed Bullet											
v-N140	36.6	2.68	DBLD	2.5	3576	40.1c	3941	NA NA	2.319	....	....
ACCUR 2700	40.4c	2.77	DBLD	2.5	3660	42.5c	3894	60400 PSI	2.305	....	....
A-XMR-4064	35.1	2.65	DBLD	2.5	3426	39.0c	3894	56100 PSI	2.300	....	....
v-N135	33.6	2.61	DBLD	2.5	3564	37.5c	3885	NA NA	2.319	....	....
v-N130	31.3	2.36	DBLD	2.2	3580	34.5	3884	NA NA	2.319	....	....
ACCUR 2520	33.8	2.31	DBLD	2.2	3412	37.5	3877	58800 PSI	2.305	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
45 Grain Jacketed Bullet (Continued)											
ACCUR 2230	32.0	2.10	DBLD	1.9	3410	35.5	3875	59700 PSI	2.305	....	....
ACCUR 2460	32.4	2.13	DBLD	1.9	3392	36.0	3854	58800 PSI	2.305	....	....
A-XMR-2015	29.7	2.17	DBLD	1.9	3354	33.0	3811	58500 PSI	2.305	....	....
RELODER12	27.9	1.93	DBLD	1.9	3077	35.5	3760	59400 PSI	2.300	....	....
A-XMR-4350	36.0	2.66	DBLD	2.5	3103	40.0c	3526	45500 PSI	2.305	....	....
A-XMR-3100	36.0	2.69	DBLD	2.5	2732	40.0c	3104	33900 PSI	2.305	....	....
45 Grain Barnes X Bullet											
BL-C(2)	32.0	2.06	DBLD	1.9	3604	35.0	3928	60217 PSI	2.340	.9716	.9538
H-VARGET	35.0	2.56	DBLD	2.5	3632	38.0c	3921	60340 PSI	2.340	.9747	.9778
H4895	34.0	2.48	DBLD	2.2	3630	37.0	3918	60217 PSI	2.340	.9748	.9876
H335	31.5	2.03	DBLD	1.9	3587	34.5	3908	59481 PSI	2.340	.9717	.9486
H414	38.0	2.51	DBLD	2.5	3647	41.0	3899	58377 PSI	2.340	.9781	.9452
H380	38.0	2.63	DBLD	2.5	3592	41.0c	3839	53349 PSI	2.340	....	....
H322	31.0	2.25	DBLD	2.2	3490	32.5	3720	59481 PSI	2.340	....	....
46 Grain Jacketed Bullet											
WIN 760	39.0	2.60	DBLD	2.5	3670	41.0	3850	49000 CUP	2.315	....	....
WIN 748	34.3	2.25	DBLD	2.2	3568	36.8	3815	50000 CUP	2.315	....	....
50 Grain Jacketed Bullet											
RELODER15	29.5	2.08	DBLD	1.9	3145	38.1	3916	60300 PSI	2.350	....	....
H-VARGET	34.5	2.52	DBLD	2.5	3553	37.5	3834	61811 PSI	2.350	.9748	.9528
ACCUR 2460	32.9	2.16	DBLD	1.9	3371	36.5	3831	61900 PSI	2.350	....	....
H4895	33.5	2.44	DBLD	2.2	3546	36.5	3827	61566 PSI	2.350	.9750	.9556
ACCUR 2520	33.3	2.27	DBLD	2.2	3361	37.0	3819	63100 PSI	2.350	....	....
ACCUR 2230	32.4	2.13	DBLD	1.9	3344	36.0	3800	61400 PSI	2.350	....	....
A-XMR-2015	30.6	2.23	DBLD	2.2	3335	34.0	3790	60700 PSI	2.350	....	....
IMR3031	31.0	2.36	DBLD	2.2	3407	35.0	3785	52700 CUP	2.350	....	....
A-XMR-4064	34.2	2.58	DBLD	2.5	3346	38.0c	3769	63100 PSI	2.350	....	....
H414	37.0	2.45	DBLD	2.2	3522	40.0	3765	59604 PSI	2.350	.9778	.9480
IMR4895	31.9	2.32	DBLD	2.2	3381	36.0	3755	52700 CUP	2.350	....	....
H335	31.5	2.03	DBLD	1.9	3519	34.5	3753	59726 PSI	2.350	.9788	.9697
IMR4064	31.3	2.33	DBLD	2.2	3403	35.0	3745	52100 CUP	2.350	....	....
H380	38.0	2.63	DBLD	2.5	3562	41.0c	3742	55557 PSI	2.350	....	....
BL-C(2)	31.5	2.03	DBLD	1.9	3506	34.5	3740	59358 PSI	2.350	.9788	.9658
IMR4320	32.6	2.33	DBLD	2.2	3299	37.0	3700	53000 CUP	2.350	....	....
WIN 760	37.4	2.49	DBLD	2.2	3528	39.5	3700	49200 CUP	2.315	....	....
ACCUR 2700	39.0	2.67	DBLD	2.5	3461	41.0c	3682	56000 PSI	2.350	....	....
WIN 748	32.6	2.14	DBLD	1.9	3424	35.0	3660	50000 CUP	2.315	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
50 Grain Jacketed Bullet (Continued)											
H322	30.0	2.17	DBLD	1.9	3427	32.0	3628	61689 PSI	2.350	.9721	.9584
v-N140	32.1	2.35	DBLD	2.2	3133	37.2	3588	NA NA	2.346	....	....
v-N150	33.0	2.46	DBLD	2.2	3135	38.3c	3584	NA NA	2.346	....	....
H4350	39.0c	2.83	DBLD	2.8	3410	42.0c	3579	59972 PSI	2.350	....	....
v-N135	30.3	2.35	DBLD	2.2	3161	34.4	3579	NA NA	2.346	....	....
RELODER12	27.2	1.88	DBLD	1.6	2926	34.3	3575	58900 PSI	2.350	....	....
IMR4198	25.1	1.99	DBLD	1.9	3179	28.5	3565	53000 CUP	2.350	....	....
IMR4350	39.7c	2.92	DBLD	2.8	3531	40.0c	3565	47000 CUP	2.350	....	....
H450	40.0	2.61	DBLD	2.5	3386	43.0c	3552	55679 PSI	2.315	....	....
A-XMR-4350	36.0	2.66	DBLD	2.5	3107	40.0c	3531	49200 PSI	2.350	....	....
v-N130	27.6	2.08	DBLD	1.9	3070	31.6	3522	NA NA	2.346	....	....
H4831	39.0c	2.83	DBLD	2.8	3301	42.0c	3473	50283 PSI	2.315	....	....
VEC SP10	27.8	1.86	DBLD	1.6	3245	30.9	3427	40188 CIP	2.350	.9824	.9469
VEC TU2000	27.0	2.06	DBLD	1.9	3366	28.1	3425	41146 CIP	2.350	....	....
IMR4831	40.0c	2.94	DBLD	2.8	3390	40.0c	3390	41600 CUP	2.350	....	....
VEC TU5000	34.0	2.45	DBLD	2.2	3287	35.2	3389	35558 CIP	2.350	....	....
SR4759	20.4	2.03	DBLD	1.9	2886	23.0	3205	52500 CUP	2.350	....	....
A-XMR-3100	36.0	2.69	DBLD	2.5	2789	40.0c	3169	37100 PSI	2.350	....	....
IMR4227	20.3	1.56	DBLD	NA	2993	21.5	3140	49300 CUP	2.350	....	....
52 Grain A-MAX											
H-VARGET	34.0	2.49	DBLD	2.5	3573	36.0	3784	61321 PSI	2.350	....	....
H4895	32.5	2.37	DBLD	2.2	3456	35.5	3729	60830 PSI	2.350	.9751	.9638
H380	38.0	2.63	DBLD	2.5	3477	41.0c	3717	57151 PSI	2.350	....	....
BL-C(2)	31.0	2.00	DBLD	1.9	3461	34.0	3702	60953 PSI	2.350	.9778	.9646
H414	37.0	2.45	DBLD	2.2	3454	40.0	3692	59972 PSI	2.350	.9780	.9506
H335	31.0	2.00	DBLD	1.9	3421	33.5	3657	60340 PSI	2.350	.9735	.9493
H4350	39.0c	2.83	DBLD	2.8	3391	41.0c	3557	60585 PSI	2.350	....	....
H322	29.0	2.10	DBLD	1.9	3379	31.0	3498	58868 PSI	2.350	.9831	.9736
52 Grain Jacketed Bullet											
WIN 760	38.6	2.57	DBLD	2.5	3595	38.6	3595	46500 CUP	2.350	....	....
53 Grain Jacketed Bullet											
A-XMR-4064	33.7	2.54	DBLD	2.5	3314	37.5c	3767	64400 PSI	2.380	....	....
A-XMR-2015	30.2	2.20	DBLD	2.2	3220	33.5	3659	61200 PSI	2.380	....	....
ACCUR 2460	31.5	2.07	DBLD	1.9	3194	35.0	3629	58600 PSI	2.380	....	....
ACCUR 2700	39.0	2.67	DBLD	2.5	3404	41.0c	3621	59300 PSI	2.380	....	....
ACCUR 2520	32.0	2.18	DBLD	2.2	3167	35.5	3599	56400 PSI	2.380	....	....
WIN 760	38.6	2.57	DBLD	2.5	3595	38.6	3595	46500 CUP	2.315	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
53 Grain Jacketed Bullet (Continued)										
ACCUR 2230	30.6	2.01	DBLD	1.9	3154	34.0 3584	59200 PSI	2.380	....	....
H450	40.0	2.61	DBLD	2.5	3358	43.0c 3559	58377 PSI	2.315	....	....
A-XMR-4350	36.0	2.66	DBLD	2.5	3084	40.0c 3505	51600 PSI	2.380	....	....
H4831	39.0c	2.83	DBLD	2.8	3237	42.0c 3486	52245 PSI	2.315	....	....
A-XMR-3100	36.0	2.69	DBLD	2.5	2739	40.0c 3112	37900 PSI	2.380	....	....
55 Grain Jacketed Bullet										
H380	38.0	2.63	DBLD	2.5	3473	41.0c 3713	62179 PSI	2.350	....	....
A-XMR-4064	33.3	2.51	DBLD	2.5	3236	37.0c 3678	59500 PSI	2.370	....	....
WIN 760	37.1	2.47	DBLD	2.2	3503	39.0 3675	49000 CUP	2.315	....	....
ACCUR 2460	32.4	2.13	DBLD	1.9	3230	36.0 3670	62300 PSI	2.370	....	....
H4895	32.5	2.37	DBLD	2.2	3399	35.5 3670	60462 PSI	2.350	.9746	.9700
H-VARGET	34.0	2.49	DBLD	2.2	3427	36.5 3664	61811 PSI	2.350	.9738	.9650
ACCUR 2700	38.0	2.60	DBLD	2.5	3436	40.0 3655	60700 PSI	2.370	....	....
IMR4895	31.2	2.27	DBLD	2.2	3251	35.5 3645	53000 CUP	2.350	....	....
IMR3031	29.9	2.28	DBLD	2.2	3246	34.0 3640	53000 CUP	2.350	....	....
RELODER15	34.0	2.40	DBLD	2.2	3490	35.3 3625	59400 PSI	2.350	....	....
IMR4064	31.5	2.35	DBLD	2.2	3264	35.5 3625	52500 CUP	2.350	....	....
ACCUR 2230	31.5	2.07	DBLD	1.9	3176	35.0 3609	59700 PSI	2.370	....	....
BL-C(2)	31.0	2.00	DBLD	1.9	3309	34.0 3606	60830 PSI	2.350	.9717	.9594
ACCUR 2520	32.4	2.21	DBLD	2.2	3172	36.0 3605	59700 PSI	2.370	....	....
A-XMR-2015	29.7	2.17	DBLD	1.9	3166	33.0 3598	59600 PSI	2.370	....	....
H335	30.5	1.97	DBLD	1.9	3400	33.0 3589	62670 PSI	2.350	.9784	.9453
H414	36.0	2.38	DBLD	2.2	3319	39.0 3582	57274 PSI	2.350	.9748	.9513
IMR4320	32.6	2.33	DBLD	2.2	3249	36.0 3540	51500 CUP	2.350	....	....
RELODER19	43.0c	3.04	DBLD	2.8	3540	43.0c 3540	51700 PSI	2.350	....	....
H450	39.5	2.58	DBLD	2.5	3321	42.5c 3521	58377 PSI	2.315	.9808	.9637
v-N150	34.4	2.57	DBLD	2.5	3189	38.1c 3521	NA NA	2.346	....	....
WIN 748	32.8	2.15	DBLD	1.9	3305	34.8 3500	49500 CUP	2.315	....	....
IMR4350	38.6c	2.84	DBLD	2.8	3429	39.5c 3495	47700 CUP	2.350	....	....
H4350	37.0	2.68	DBLD	2.5	3296	39.0c 3490	58623 PSI	2.350	....	....
v-N140	33.5	2.46	DBLD	2.2	3185	36.5 3483	NA NA	2.346	....	....
H322	28.0	2.03	DBLD	1.9	3339	30.0 3480	61075 PSI	2.350	.9793	.9632
H4831	39.0c	2.83	DBLD	2.8	3184	42.0c 3472	53349 PSI	2.315	....	....
A-XMR-4350	36.0	2.66	DBLD	2.5	3050	40.0c 3466	51500 PSI	2.370	....	....
v-N135	31.0	2.41	DBLD	2.2	3145	34.4 3460	NA NA	2.346	....	....
RELODER12	32.2	2.22	DBLD	2.2	3328	33.3 3425	59200 PSI	2.350	....	....
VEC SP10	27.8	1.86	DBLD	1.6	3186	30.9 3379	45863 CIP	2.350	.9811	.9222

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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22-250 REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
55 Grain Jacketed Bullet (Continued)											
IMR4198	24.6	1.95	DBLD	1.9	3039	27.5	3375	52200 CUP	2.350	....	....
VEC TU5000	33.6	2.42	DBLD	2.2	3264	34.7	3363	38214 CIP	2.350	....	....
VEC TU2000	27.5	2.10	DBLD	1.9	3340	27.5	3340	43018 CIP	2.350	....	....
IMR4831	39.5c	2.90	DBLD	2.8	3320	39.5c	3320	42500 CUP	2.350	....	....
SR4759	19.4	1.92	DBLD	1.9	2764	22.0	3100	53000 CUP	2.350	....	....
A-XMR-3100	36.0	2.69	DBLD	2.5	2699	40.0c	3067	37400 PSI	2.370	....	....
IMR4227	19.2	1.47	1.46	1.3	2728	21.5	3030	52300 CUP	2.350	....	....
60 Grain Jacketed Bullet											
ACCUR 2520	32.4	2.21	DBLD	2.2	3091	36.0	3512	62300 PSI	2.400	....	....
RELODER19	40.6c	2.86	DBLD	2.8	3477	41.0c	3510	57800 PSI	2.350	....	....
A-XMR-4064	32.4	2.45	DBLD	2.2	3086	36.0	3507	58700 PSI	2.400	....	....
ACCUR 2460	31.5	2.07	DBLD	1.9	3079	35.0	3499	60100 PSI	2.400	....	....
A-XMR-2015	29.7	2.17	DBLD	1.9	3077	33.0	3497	61500 PSI	2.400	....	....
RELODER15	33.4	2.36	DBLD	2.2	3355	34.7	3485	59400 PSI	2.350	....	....
ACCUR 2700	36.1	2.47	DBLD	2.2	3269	38.0	3478	61100 PSI	2.400	....	....
ACCUR 2230	30.6	2.01	DBLD	1.9	3014	34.0	3425	57600 PSI	2.400	....	....
A-XMR-4350	36.0	2.66	DBLD	2.5	2988	40.0c	3395	53200 PSI	2.400	....	....
v-N150	32.2	2.40	DBLD	2.2	2977	36.5	3318	NA NA	2.346	....	....
v-N140	31.7	2.32	DBLD	2.2	2994	35.3	3314	NA NA	2.346	....	....
VEC TU5000	33.2	2.39	DBLD	2.2	3301	33.2	3301	42597 CIP	2.350	....	....
RELODER12	25.9	1.79	DBLD	1.6	2718	32.5	3290	58500 PSI	2.350	....	....
A-XMR-3100	36.0	2.69	DBLD	2.5	2623	40.0c	2981	37500 PSI	2.400	....	....
63 Grain Jacketed Bullet											
H4895	31.5	2.29	DBLD	2.2	3317	34.0	3486	61811 PSI	2.350	.9802	.9748
H414	35.0	2.31	DBLD	2.2	3262	38.0	3432	57764 PSI	2.350	.9830	.9716
H-VARGET	29.5	2.16	DBLD	1.9	3039	34.0	3426	61811 PSI	2.350	.9736	.9473
H380	36.0	2.49	DBLD	2.2	3266	38.5	3419	62792 PSI	2.350	.9817	.9630
ACCUR 2700	35.6	2.44	DBLD	2.2	3199	37.5	3408	60900 PSI	2.325	....	....
A-XMR-4350	36.0	2.66	DBLD	2.5	2997	40.0c	3406	58200 PSI	2.325	....	....
H4350	36.0	2.61	DBLD	2.5	3233	38.0c	3391	58868 PSI	2.350	....	....
A-XMR-4064	31.0	2.34	DBLD	2.2	2983	34.5	3390	59000 PSI	2.325	....	....
A-XMR-2015	28.8	2.10	DBLD	1.9	2959	32.0	3363	60700 PSI	2.325	....	....
ACCUR 2230	29.7	1.95	DBLD	1.9	2934	33.0	3334	59200 PSI	2.325	....	....
ACCUR 2520	30.6	2.09	DBLD	1.9	2932	34.0	3332	58300 PSI	2.325	....	....
ACCUR 2460	29.7	1.95	DBLD	1.9	2912	33.0	3309	57400 PSI	2.325	....	....
A-XMR-3100	36.0	2.69	DBLD	2.5	2648	40.0c	3009	39700 PSI	2.325	....	....
64 Grain Jacketed Bullet											
H4895	31.5	2.29	DBLD	2.2	3261	34.0	3486	61811 PSI	2.315	....	....

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c = Compressed charge

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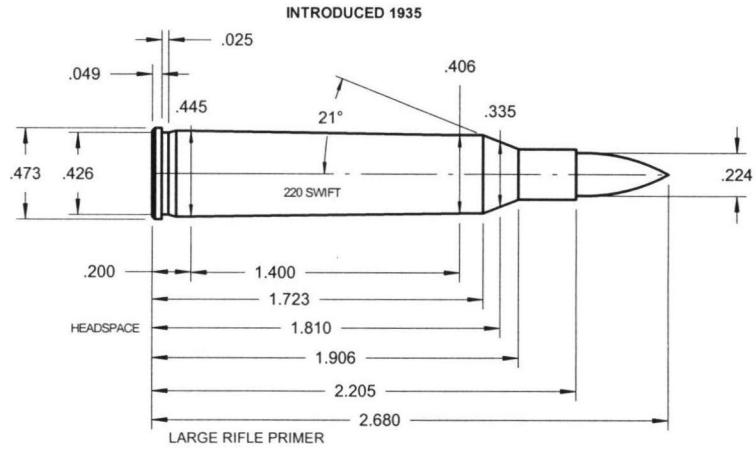
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
64 Grain Jacketed Bullet (Continued)												
H4831	38.0c	2.75	DBLD	2.5	3169	41.0c	3441	58991	PSI	2.315	....	....
H450	38.5	2.51	DBLD	2.5	3229	41.5	3397	58868	PSI	2.315	.9832	.9633
69 Grain Jacketed Bullet												
v-N560	34.4	2.37	DBLD	2.2	2748	42.9c	3310	NA	NA	2.346	....	....
v-N550	30.8	2.13	DBLD	1.9	2794	37.2	3303	NA	NA	2.346	....	....
v-N160	36.7	2.69	DBLD	2.5	2747	40.7c	3239	NA	NA	2.346	....	....
v-N540	28.4	1.99	DBLD	1.9	2729	34.6	3225	NA	NA	2.346	....	....
v-N150	30.6	2.28	DBLD	2.2	2697	35.0	3157	NA	NA	2.346	....	....
v-N140	29.8	2.18	DBLD	1.9	2649	33.8	3134	NA	NA	2.346	....	....
70 Grain Jacketed Bullet												
A-XMR-4350	34.2	2.53	DBLD	2.5	2855	38.0c	3244	59500	PSI	2.325	....	....
A-XMR-4064	29.0	2.19	DBLD	1.9	2833	32.2	3220	64500	PSI	2.325	....	....
H4895	28.0	2.04	DBLD	1.9	2877	31.5	3196	62179	PSI	2.330	.9702	.9540
H-VARGET	29.5	2.16	DBLD	1.9	2961	32.0	3196	61689	PSI	2.330	.9702	.9539
H4831	35.0	2.54	DBLD	2.5	2955	38.0c	3189	61689	PSI	2.330	.9751	.9417
H1000	36.0	2.57	DBLD	2.5	3039	38.0	3187	58255	PSI	2.330	....	....
H380	33.0	2.28	DBLD	2.2	2985	35.0	3161	63160	PSI	2.330	.9715	.9368
ACCUR 2520	29.3	2.00	DBLD	1.9	2767	32.5	3144	61000	PSI	2.325	....	....
H4350	34.0	2.47	DBLD	2.2	2955	36.0	3129	60830	PSI	2.330	....	....
A-XMR-2015	27.0	1.97	DBLD	1.9	2751	30.0	3126	58900	PSI	2.325	....	....
ACCUR 2700	32.8	2.25	DBLD	2.2	2934	34.5	3121	58900	PSI	2.325	....	....
H450	36.0	2.35	DBLD	2.2	2952	39.0	3118	58868	PSI	2.315	.9821	.9355
H414	31.0	2.05	DBLD	1.9	2860	34.0	3117	60585	PSI	2.330	.9719	.9473
ACCUR 2230	27.9	1.83	DBLD	1.6	2720	31.0	3091	58400	PSI	2.325	....	....
ACCUR 2460	27.9	1.83	DBLD	1.6	2708	31.0	3077	57500	PSI	2.325	....	....
A-XMR-3100	34.2	2.56	DBLD	2.5	2593	38.0c	2947	45700	PSI	2.325	....	....
80 Grain Jacketed Bullet												
A-XMR-4350	33.3	2.46	DBLD	2.2	2783	37.0	3163	59900	PSI	2.610	....	....
A-XMR-4064	29.2	2.20	DBLD	1.9	2662	32.5	3026	62000	PSI	2.610	....	....
ACCUR 2700	32.3	2.21	DBLD	2.2	2804	34.0	2983	58600	PSI	2.610	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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220 SWIFT



Useful case capacity 3.18 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
40 Grain Jacketed Bullet											
ACCUR 2520	37.8	2.58	DBLD	2.5	4069	42.0	4477	63500 PSI	2.680	....	....
ACCUR 2700	42.3	2.90	DBLD	2.8	4012	47.0c	4414	61000 PSI	2.680	....	....
A-XMR-2495	36.0	2.69	DBLD	2.5	4008	40.0	4409	59500 PSI	2.680	....	....
A-XMR-2015	34.6	2.53	DBLD	2.5	3995	38.5	4395	61800 PSI	2.680	....	....
H414	42.5	2.81	DBLD	2.8	3903	46.0	4213	61155 PSI	2.680	.9783	.9647
H335	37.0	2.39	DBLD	2.2	3889	40.0	4158	62932 PSI	2.680	.9781	.9421
H4895	37.0	2.69	DBLD	2.5	3860	40.0	4126	61629 PSI	2.680	.9780	.9268
H380	40.5	2.80	DBLD	2.5	3821	44.0	4124	59258 PSI	2.680	.9783	.9666
H-VARGET	38.0	2.78	DBLD	2.5	3884	40.5	4113	59021 PSI	2.680	.9774	10000
A-XMR-4064	35.1	2.65	DBLD	2.5	3692	39.0	4061	49200 CUP	2.680	....	....
A-XMR-4350	39.6	2.93	DBLD	2.8	3679	44.0c	4047	48700 PSI	2.680	....	....
H4831	42.0	3.04	DBLD	2.8	3355	46.5c	3690	47762 PSI	2.650	....	....
A-XMR-3100	39.6	2.96	DBLD	2.8	3324	44.0c	3656	36000 PSI	2.680	....	....
45 Grain Jacketed Bullet											
H414	41.5	2.74	DBLD	2.5	3799	45.0	4100	61273 PSI	2.680	.9784	.9831
H380	40.5	2.80	DBLD	2.5	3744	44.0	4041	62103 PSI	2.680	.9784	.9387
RELODER15	36.8	2.60	DBLD	2.5	3787	39.0	4010	50300 CUP	2.645	....	....
H4895	36.5	2.66	DBLD	2.5	3701	39.5	3996	61747 PSI	2.680	.9747	.9033
H335	36.5	2.35	DBLD	2.2	3748	39.0	3969	60681 PSI	2.680	.9774	.9539
RELODER12	34.7	2.40	DBLD	2.2	3585	36.6	3760	50100 CUP	2.645	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
45 Grain Jacketed Bullet (Continued)											
H450	40.5	2.64	DBLD	2.5	3479	44.0	3755	58903 PSI	2.650	.9786	.8896
H4831	42.0	3.04	DBLD	2.8	3346	46.5c	3681	50370 PSI	2.650	....	....
50 Grain Jacketed Bullet											
ACCUR 2700	42.8	2.93	DBLD	2.8	3847	45.0	4035	62500 PSI	2.700	....	....
H380	40.0	2.76	DBLD	2.5	3658	43.5	3947	63762 PSI	2.680	.9784	.9279
A-XMR-4350	39.6	2.93	DBLD	2.8	3582	44.0c	3940	56700 PSI	2.700	....	....
v-N140	38.6	2.83	DBLD	2.8	3900	38.6	3900	NA NA	2.677	....	....
IMR4064	35.8	2.66	DBLD	2.5	3574	39.5	3895	52500 CUP	2.680	....	....
A-XMR-2495	33.8	2.53	DBLD	2.5	3536	37.5	3891	58500 PSI	2.700	....	....
BL-C(2)	35.0	2.26	DBLD	2.2	3601	38.0	3888	60444 PSI	2.680	.9747	.9237
H335	35.0	2.26	DBLD	2.2	3576	38.0	3860	61629 PSI	2.680	.9747	.9357
RELODER15	36.8	2.60	DBLD	2.5	3670	38.6	3850	49800 CUP	2.660	....	....
IMR3031	34.7	2.64	DBLD	2.5	3563	37.5	3845	51400 CUP	2.680	....	....
A-XMR-4064	35.1	2.65	DBLD	2.5	3493	39.0	3843	51000 CUP	2.700	....	....
H4895	35.0	2.55	DBLD	2.5	3559	38.0	3840	60681 PSI	2.680	.9750	.9133
H414	40.5	2.68	DBLD	2.5	3545	44.0	3826	58784 PSI	2.680	.9784	.9781
IMR4895	35.1	2.56	DBLD	2.5	3493	38.5	3805	52100 CUP	2.680	....	....
IMR4320	35.9	2.57	DBLD	2.5	3445	40.0	3790	53000 CUP	2.680	....	....
H-VARGET	34.5	2.52	DBLD	2.5	3629	36.0	3770	59495 PSI	2.680	....	....
IMR4350	42.1	3.09	DBLD	2.8	3634	43.5c	3740	49100 CUP	2.680	....	....
H450	40.0	2.61	DBLD	2.5	3430	43.5	3703	59495 PSI	2.650	.9784	.8961
IMR4198	28.7	2.27	DBLD	2.2	3350	32.0	3685	53000 CUP	2.680	....	....
RELODER19	41.5	2.93	DBLD	2.8	3447	44.0	3650	50400 CUP	2.660	....	....
H4831	42.0	3.04	DBLD	2.8	3315	46.5c	3647	54873 PSI	2.650	....	....
A-XMR-3100	39.6	2.96	DBLD	2.8	3262	44.0c	3589	45100 PSI	2.700	....	....
IMR4831	43.5c	3.20	DBLD	3.1	3560	43.5c	3560	41700 CUP	2.680	....	....
SR4759	22.9	2.27	DBLD	2.2	3041	25.5	3345	53000 CUP	2.680	....	....
IMR4227	22.2	1.71	DBLD	1.6	3024	24.5	3295	52500 CUP	2.680	....	....
55 Grain Jacketed Bullet											
A-XMR-4350	39.6	2.93	DBLD	2.8	3541	44.0c	3896	59300 PSI	2.680	....	....
H380	39.0	2.69	DBLD	2.5	3558	42.5	3839	63169 PSI	2.680	.9786	.9582
H414	40.5	2.68	DBLD	2.5	3552	44.0	3833	63643 PSI	2.680	.9783	.9644
ACCUR 2700	41.3	2.83	DBLD	2.8	3654	43.5	3832	57000 PSI	2.680	....	....
A-XMR-2495	32.4	2.42	DBLD	2.2	3475	36.0	3823	63200 PSI	2.680	....	....
RELODER15	35.8	2.52	DBLD	2.5	3564	38.0	3775	50500 CUP	2.630	....	....
v-N160	43.1	3.16	DBLD	3.1	3707	43.1	3707	NA NA	2.677	....	....
H4895	34.0	2.48	DBLD	2.2	3427	37.0	3698	61629 PSI	2.680	.9748	.9593

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
55 Grain Jacketed Bullet (Continued)											
H335	34.0	2.19	DBLD	2.2	3491	36.0	3696	59732 PSI	2.680	....	....
BL-C(2)	34.0	2.19	DBLD	2.2	3477	36.0	3682	59140 PSI	2.680	....	....
H-VARGET	34.0	2.49	DBLD	2.5	3442	36.0	3645	61510 PSI	2.680	....	....
H450	41.0	2.68	DBLD	2.5	3426	43.5	3627	60444 PSI	2.650	.9774	.8964
H4350	39.0	2.83	DBLD	2.8	3386	42.0	3619	60206 PSI	2.680	.9782	.9386
H4831	41.5	3.01	DBLD	2.8	3287	46.0c	3616	55229 PSI	2.680	.9790	.9477
RELODER19	41.3	2.92	DBLD	2.8	3409	43.9	3610	50500 CUP	2.630	....	....
A-XMR-3100	39.6	2.96	DBLD	2.8	3262	44.0c	3588	49000 PSI	2.680	....	....
A-XMR-4064	33.3	2.51	DBLD	2.5	3241	37.0	3566	52200 CUP	2.680	....	....
v-N140	32.6	2.39	DBLD	2.2	2898	37.0	3250	NA NA	2.677	....	....
60 Grain Jacketed Bullet											
A-XMR-4350	39.6	2.93	DBLD	2.8	3472	44.0c	3820	63800 PSI	2.700	....	....
H414	38.5	2.54	DBLD	2.5	3425	41.7	3647	60918 PSI	2.680	.9806	.9519
ACCUR 2700	39.9	2.73	DBLD	2.5	3391	42.0	3607	59700 PSI	2.700	....	....
A-XMR-2495	31.1	2.33	DBLD	2.2	3273	34.5	3601	60000 PSI	2.680	....	....
H4831	41.5	3.01	DBLD	2.8	3260	46.0c	3586	61629 PSI	2.680	.9789	.9283
RELODER19	40.5	2.86	DBLD	2.8	3376	43.0	3575	50400 CUP	2.680	....	....
RELODER22	40.9	2.85	DBLD	2.8	3398	43.0	3565	49900 CUP	2.680	....	....
IMR4831	38.1	2.80	DBLD	2.8	3231	42.5	3555	53000 CUP	2.680	....	....
RELODER15	33.8	2.38	DBLD	2.2	3343	35.8	3540	50400 CUP	2.680	....	....
A-XMR-3100	39.6	2.96	DBLD	2.8	3206	44.0c	3528	50900 PSI	2.700	....	....
H450	39.5	2.58	DBLD	2.5	3253	43.0	3510	60325 PSI	2.650	.9784	.9185
IMR4064	32.3	2.40	DBLD	2.2	3217	35.5	3505	52300 CUP	2.680	....	....
IMR4350	35.4	2.60	DBLD	2.5	3181	39.5	3500	53000 CUP	2.680	....	....
IMR4320	32.8	2.35	DBLD	2.2	3163	36.5	3480	52800 CUP	2.680	....	....
IMR4895	30.9	2.25	DBLD	2.2	3154	34.5	3470	53000 CUP	2.680	....	....
IMR3031	30.9	2.35	DBLD	2.2	3184	34.0	3470	52300 CUP	2.680	....	....
H380	35.0	2.42	DBLD	2.2	3188	38.0	3413	61510 PSI	2.680	.9773	.9493
H4895	30.5	2.22	DBLD	2.2	3165	33.5	3401	58784 PSI	2.680	.9761	.9246
IMR4198	25.9	2.05	DBLD	1.9	2996	28.5	3265	52200 CUP	2.680	....	....
H870	49.0c	3.36	NA	3.1	3035	49.0c	3035	42666 PSI	2.650	....	....
IMR4227	21.1	1.62	DBLD	1.6	2727	23.5	3000	53000 CUP	2.680	....	....
SR4759	21.3	2.11	DBLD	1.9	2735	23.5	2980	52500 CUP	2.680	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

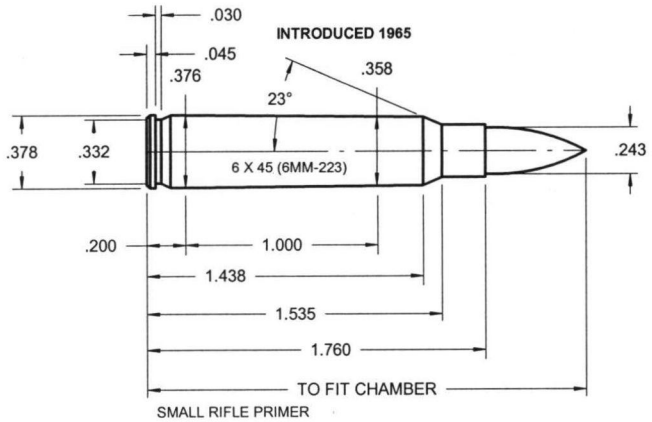
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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
63 Grain Jacketed Bullet											
ACCUR 2700	39.0	2.67	DBLD	2.5	3544	41.0	3717	63400 PSI	2.660	....	....
A-XMR-4350	37.4	2.77	DBLD	2.5	3314	41.5	3646	58600 PSI	2.660	....	....
H414	38.5	2.54	DBLD	2.5	3330	42.0	3595	61747 PSI	2.680	.9784	.9553
H4831	41.5	3.01	DBLD	2.8	3260	46.0c	3586	61629 PSI	2.680	....	....
A-XMR-3100	39.6	2.96	DBLD	2.8	3256	44.0c	3582	56300 PSI	2.660	....	....
H380	38.0	2.63	DBLD	2.5	3349	41.0	3580	61510 PSI	2.680	.9779	.9599
H4895	32.5	2.37	DBLD	2.2	3228	35.5	3484	60444 PSI	2.680	.9748	.9283
H4350	37.0	2.68	DBLD	2.5	3312	39.0	3474	61629 PSI	2.680	....	....
H-VARGET	32.0	2.34	DBLD	2.2	3218	34.0	3407	58429 PSI	2.680	.9721	.9252
70 Grain Jacketed Bullet											
A-XMR-4350	37.4	2.77	DBLD	2.5	3169	41.5	3486	64200 PSI	2.660	....	....
ACCUR 2700	37.1	2.54	DBLD	2.5	3275	39.0	3435	64000 PSI	2.660	....	....
A-XMR-3100	39.6	2.96	DBLD	2.8	3101	44.0c	3412	59000 PSI	2.660	....	....
H4831	37.0	2.68	DBLD	2.5	2995	42.0	3359	62340 PSI	2.680	.9773	.9727
H1000	42.0	2.99	DBLD	2.8	3162	44.0	3317	59495 PSI	2.680	....	....
H4350	36.0	2.61	DBLD	2.5	3159	38.0	3313	60681 PSI	2.680	....	....
H450	38.0	2.48	DBLD	2.2	3001	42.0	3301	59614 PSI	2.650	.9764	.9588
H-VARGET	31.0	2.27	DBLD	2.2	3066	33.0	3247	59140 PSI	2.680	.9716	.9653
H414	34.0	2.25	DBLD	2.2	2916	37.0	3148	59614 PSI	2.680	.9747	.9578

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

6x45mm or 6mm-223



Useful case capacity 1.87 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
60 Grain Jacketed Bullet									
BL-C(2)	28.0	1.81	DBLD	1.6	2925	30.0c	3156	50000 CUP	2.260
H4895	25.5	1.86	DBLD	1.6	2872	27.5c	3102	48500 CUP	2.260
H322	23.0	1.67	DBLD	1.6	2849	25.0	3097	47000 CUP	2.260
H4198	19.5	1.46	1.46	1.3	2617	21.5	2956	50000 CUP	2.260
70 Grain Jacketed Bullet									
H335	25.5	1.64	DBLD	1.6	2845	27.5	3066	50000 CUP	2.260
BL-C(2)	27.5	1.77	DBLD	1.6	2844	29.5c	3038	48500 CUP	2.260
H4895	25.5	1.86	DBLD	1.6	2809	27.5c	3034	49500 CUP	2.260
H322	23.0	1.67	DBLD	1.6	2758	25.0	2985	47500 CUP	2.260
H4198	19.0	1.43	1.36	1.3	2515	21.0	2773	50000 CUP	2.260
75 Grain Jacketed Bullet									
H4895	25.0	1.82	DBLD	1.6	2704	27.0c	2952	48000 CUP	2.260
H322	23.0	1.67	DBLD	1.6	2774	24.0	2860	47500 CUP	2.260
H335	24.0	1.55	DBLD	NA	2660	26.0	2860	48500 CUP	2.260
BL-C(2)	27.0	1.74	DBLD	1.6	2726	29.0c	2832	47000 CUP	2.260
H4198	18.5	1.39	1.36	1.3	2297	19.5	2480	49000 CUP	2.260
80 Grain Jacketed Bullet									
H4895	25.0	1.82	DBLD	1.6	2704	27.0c	2904	48500 CUP	2.350
H335	24.0	1.55	DBLD	NA	2656	26.0	2862	49500 CUP	2.350
BL-C(2)	25.5	1.64	DBLD	1.6	2649	27.5	2846	49000 CUP	2.350

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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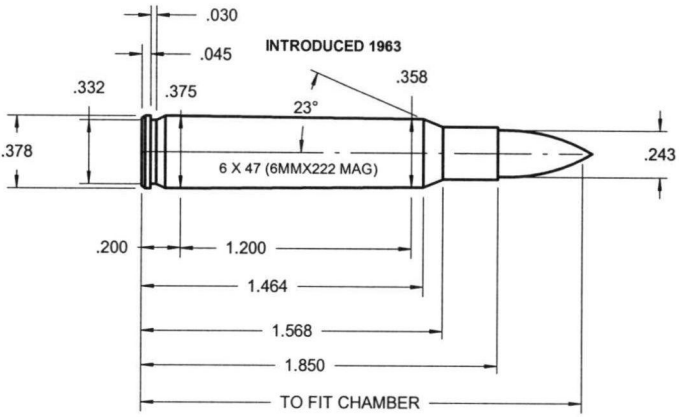
6x45mm or 6mm-223 (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
80 Grain Jacketed Bullet (Continued)									
H322	21.5	1.56	DBLD	NA	2503	23.5	2783	47500 CUP	2.350
H4198	17.5	1.31	1.26	1.3	2286	19.0	2440	47000 CUP	2.350
85 Grain Jacketed Bullet									
H335	23.5	1.52	1.46	1.3	2587	25.5	2818	49500 CUP	2.350
BL-C(2)	25.5	1.64	DBLD	1.6	2566	27.5	2811	49500 CUP	2.350
H4895	24.0	1.75	DBLD	1.6	2559	26.0c	2786	49000 CUP	2.350
H322	21.5	1.56	DBLD	NA	2480	23.5	2695	49000 CUP	2.350
H4198	17.5	1.31	1.26	1.3	2230	19.0	2440	48000 CUP	2.350
90 Grain Jacketed Bullet									
BL-C(2)	25.0	1.61	DBLD	1.6	2523	27.0	2744	50000 CUP	2.350
H335	22.5	1.45	1.36	1.3	2442	25.0	2731	49500 CUP	2.350
H4895	23.5	1.71	DBLD	1.6	2509	25.5	2721	50000 CUP	2.350
H322	20.5	1.49	1.46	1.3	2391	22.5	2531	49500 CUP	2.350
H4198	17.5	1.31	1.26	1.3	2189	19.0	2350	49000 CUP	2.350
100 Grain Jacketed Bullet									
BL-C(2)	24.5	1.58	DBLD	NA	2404	26.5	2619	50000 CUP	2.340
H4895	22.0	1.60	DBLD	1.6	2414	24.0	2616	50000 CUP	2.340
H380	26.0	1.80	DBLD	1.6	2397	28.0c	2506	47000 CUP	2.340
H414	26.0	1.72	DBLD	1.6	2310	28.0	2484	43500 CUP	2.340
H335	21.5	1.39	1.36	1.3	2305	23.0	2443	50000 CUP	2.340

CAUTION: With **NEVER EXCEED LOADS** maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6x47mm or 6mm-222 REM MAG



Useful case capacity 1.89 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL
60 Grain Jacketed Bullet								
BL-C(2)	28.5	1.84	DBLD	1.6	3024	30.5c 3233	45300 CUP	2.400
H322	26.0	1.88	DBLD	1.9	3014	28.0c 3222	44500 CUP	2.400
H335	28.0	1.81	DBLD	1.6	2995	30.0c 3202	45100 CUP	2.400
H4198	22.0	1.65	DBLD	1.6	2937	24.0 3170	49800 CUP	2.400
H4895	26.0c	1.89	DBLD	1.9	2843	28.5c 3098	43100 CUP	2.400
70 Grain Jacketed Bullet								
H322	26.0	1.88	DBLD	1.9	2915	28.0c 3116	49800 CUP	2.445
BL-C(2)	28.0	1.81	DBLD	1.6	2853	30.0c 3050	48000 CUP	2.445
H335	27.5	1.77	DBLD	1.6	2833	29.5c 3029	47200 CUP	2.445
H4198	21.0	1.58	DBLD	NA	2702	23.0 2944	49400 CUP	2.445
H4895	26.0c	1.89	DBLD	1.9	2727	28.0c 2915	44700 CUP	2.445
75 Grain Jacketed Bullet								
BL-C(2)	27.5	1.77	DBLD	1.6	2804	29.5c 2997	47400 CUP	2.445
H322	24.0	1.74	DBLD	1.6	2740	26.0 2958	48400 CUP	2.445
H335	27.0	1.74	DBLD	1.6	2762	29.0 2953	46900 CUP	2.445
H4895	25.5	1.86	DBLD	1.6	2723	27.5c 2911	47500 CUP	2.445
H4198	20.5	1.54	1.46	NA	2617	22.5 2852	48900 CUP	2.445
80 Grain Jacketed Bullet								
BL-C(2)	27.0	1.74	DBLD	1.6	2745	29.0 2935	48500 CUP	2.440
H335	26.5	1.71	DBLD	1.6	2721	28.5 2909	48200 CUP	2.440

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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6x47mm or 6mm-222 REM MAG (Continued)

....STARTING LOADS....

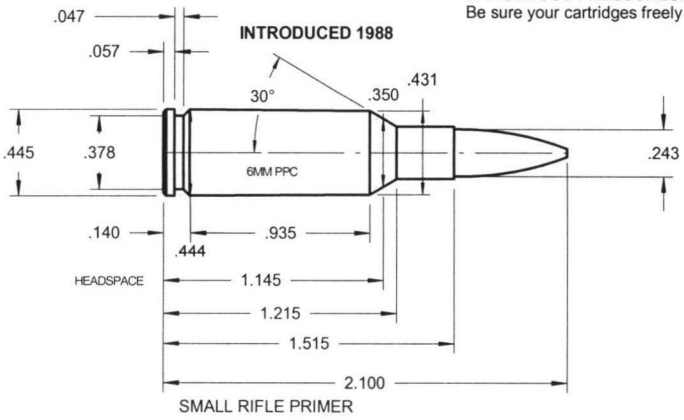
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
80 Grain Jacketed Bullet (Continued)									
H4895	25.0	1.82	DBLD	1.6	2675	27.0c	2860	49800 CUP	2.440
H322	23.5	1.70	DBLD	1.6	2602	25.5	2808	48000 CUP	2.440
H4198	20.0	1.50	1.46	1.3	2478	22.0	2700	46900 CUP	2.440
85 Grain Jacketed Bullet									
BL-C(2)	26.0	1.68	DBLD	1.6	2662	28.0	2847	50300 CUP	2.440
H335	25.5	1.64	DBLD	1.6	2616	27.5	2797	48900 CUP	2.440
H322	23.0	1.67	DBLD	1.6	2513	25.0	2713	48000 CUP	2.440
H4895	24.0	1.75	DBLD	1.6	2512	26.0c	2712	49400 CUP	2.440
H4198	19.5	1.46	1.46	1.3	2359	21.5	2571	46900 CUP	2.440

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6mm PPC

Thick necks or undersize chambers cause DANGEROUS PRESSURES.
Be sure your cartridges freely chamber.



Useful case capacity 1.99 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
60 Grain Jacketed Bullet												
H4895	27.0	1.97	DBLD	1.9	2913	29.0c	3218	56121	PSI	2.080	....	....
H335	26.0	1.68	DBLD	1.6	2891	28.0	3201	56699	PSI	2.080	.9503	.9604
ACCUR 2460	27.0	1.77	DBLD	1.6	2816	30.0	3200	48800	PSI	2.050	....	....
ACCUR 2230	26.6	1.75	DBLD	1.6	2794	29.5	3175	49500	PSI	2.050	....	....
A-XMR-2495	25.7	1.92	DBLD	1.9	2794	28.5c	3175	50000	PSI	2.050	....	....
H322	26.0	1.88	DBLD	1.6	3090	27.0	3165	54385	PSI	2.080	....	....
A-XMR-2015	24.5	1.79	DBLD	1.6	2783	27.2	3163	49200	PSI	2.050	....	....
H-VARGET	27.0	1.97	DBLD	1.9	2901	29.0c	3076	51030	PSI	2.080	....	....
BL-C(2)	30.0	1.93	DBLD	1.9	2959	31.5c	3041	53807	PSI	2.080	....	....
68 Grain Jacketed Bullet												
v-N133	25.1	1.93	DBLD	1.9	2752	28.1c	3113	NA	NA	2.110	....	....
v-N130	23.4	1.76	DBLD	1.6	2761	25.9	3040	NA	NA	2.110	....	....
70 Grain Jacketed Bullet												
VEC SP10	27.0	1.80	DBLD	1.6	2982	29.3	3176	45718	CIP	2.110	.9727	.8987
VEC SP7	30.1	1.98	DBLD	1.9	3068	30.9c	3136	38853	CIP	2.110	....	....
VEC TU2000	23.5	1.79	DBLD	1.6	2953	25.0	3127	49985	CIP	2.110	.9630	.9017
VEC SP9	29.3c	2.00	DBLD	1.9	3081	30.1c	3120	39753	CIP	2.110	....	....
H322	25.0	1.81	DBLD	1.6	2967	26.5	3068	57857	PSI	2.100	.9782	.9528
v-N133	24.5	1.89	DBLD	1.6	2705	27.6c	3063	NA	NA	2.110	....	....
v-N130	22.6	1.70	DBLD	1.6	2686	26.0	3058	NA	NA	2.110	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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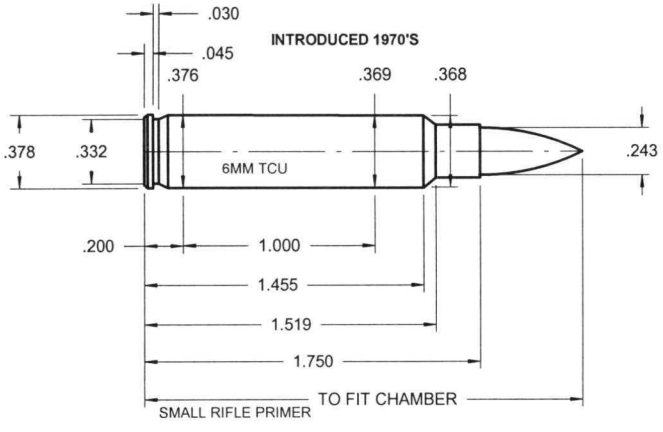
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
70 Grain Jacketed Bullet (Continued)											
H4895	26.0	1.89	DBLD	1.9	2714	28.0c	3034	53807 PSI	2.100	....	....
H-VARGET	27.0	1.97	DBLD	1.9	2845	29.0c	3034	55542 PSI	2.100	....	....
H335	25.0	1.61	DBLD	1.6	2846	27.5	3033	56121 PSI	2.100	.9747	.9618
A-XMR-2495	25.7	1.92	DBLD	1.9	2658	28.5c	3021	48700 PSI	2.080	....	....
BL-C(2)	29.0	1.87	DBLD	1.6	2812	31.0c	3012	54964 PSI	2.100	.9666	.9459
ACCUR 2460	26.6	1.74	DBLD	1.6	2623	29.5	2981	46600 PSI	2.080	....	....
A-XMR-2015	24.3	1.77	DBLD	1.6	2602	27.0	2957	46000 PSI	2.080	....	....
v-N120	21.5	1.67	DBLD	1.6	2653	23.9	2956	NA NA	2.110	....	....
75 Grain Jacketed Bullet											
H335	24.5	1.58	DBLD	NA	2712	27.0	2990	56699 PSI	2.115	.9615	.9579
H4895	25.5	1.86	DBLD	1.6	2740	27.5c	2981	56121 PSI	2.115	.9585	.9471
BL-C(2)	28.5	1.84	DBLD	1.6	2788	30.5	2974	55311 PSI	2.115	.9685	.9529
H322	24.5	1.78	DBLD	1.6	2809	26.0	2974	57278 PSI	2.115	.9625	.9384
H-VARGET	26.0	1.90	DBLD	1.9	2737	28.0c	2906	54385 PSI	2.115	....	....
H4198	20.0	1.50	1.46	1.3	2661	21.0	2780	56699 PSI	2.115	....	....
80 Grain Jacketed Bullet											
BL-C(2)	28.0	1.81	DBLD	1.6	2748	30.0	2904	54964 PSI	2.115	.9728	.9459
H4895	25.0	1.82	DBLD	1.6	2641	27.0	2904	54964 PSI	2.115	.9536	.9222
H322	23.5	1.70	DBLD	1.6	2658	25.5	2866	54964 PSI	2.115	.9628	.9403
H-VARGET	26.0	1.90	DBLD	1.9	2689	28.0c	2843	51377 PSI	2.115	....	....
H335	24.0	1.55	DBLD	NA	2650	26.0	2822	56121 PSI	2.115	.9687	.9306
85 Grain Jacketed Bullet											
H-VARGET	26.0	1.90	DBLD	1.9	2671	28.0c	2848	57857 PSI	2.080	....	....
BL-C(2)	27.0	1.74	DBLD	1.6	2639	29.0	2818	55542 PSI	2.080	.9674	.9465
H322	23.0	1.67	DBLD	1.6	2571	25.0	2794	56699 PSI	2.080	.9595	.9475
H4895	24.0	1.75	DBLD	1.6	2540	26.0	2782	55542 PSI	2.080	.9552	.9298
H335	23.5	1.52	1.46	1.3	2560	25.0	2739	54964 PSI	2.080	.9560	.9285
90 Grain Jacketed Bullet											
BL-C(2)	26.8	1.73	DBLD	1.6	2578	28.5	2730	54964 PSI	2.000	....	....
H4895	23.5	1.71	DBLD	1.6	2519	25.5	2719	56121 PSI	2.000	....	....
H322	22.4	1.62	DBLD	1.6	2486	24.5	2709	56699 PSI	2.000	....	....
H335	22.8	1.47	1.46	1.3	2514	24.5	2688	55542 PSI	2.000	....	....
100 Grain Jacketed Bullet											
BL-C(2)	26.1	1.68	DBLD	1.6	2434	28.0	2602	55542 PSI	2.000	....	....
H4895	21.5	1.56	DBLD	NA	2300	24.0	2554	57857 PSI	2.000	....	....
H335	22.4	1.44	1.36	1.3	2365	24.0	2529	55542 PSI	2.000	....	....
H322	21.0	1.52	1.46	1.3	2289	23.0	2494	56699 PSI	2.000	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6mm TCU



Useful case capacity 2.01 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
60 Grain Jacketed Bullet										
A-XMR-2015	25.2	1.84	DBLD	1.6	2515	28.0c	2858	47400	PSI	2.320
ACCUR 2460	26.1	1.71	DBLD	1.6	2417	29.0	2747	45900	PSI	2.320
ACCUR 2230	25.7	1.69	DBLD	1.6	2411	28.5	2740	45200	PSI	2.320
ACCUR 2520	26.1	1.78	DBLD	1.6	2378	29.0	2702	42000	PSI	2.320
A-XMR-2495	24.3	1.82	DBLD	1.6	2196	27.0c	2495	37100	PSI	2.320
70 Grain Jacketed Bullet										
H335	27.5	1.77	DBLD	1.6	2703	30.0	2917	NA	NA	2.375
H4895	27.5	2.00	DBLD	1.9	2709	29.5c	2896	NA	NA	2.375
H322	26.5	1.92	DBLD	1.9	2674	28.5c	2859	NA	NA	2.375
A-XMR-2015	24.3	1.77	DBLD	1.6	2335	27.0	2653	45800	PSI	2.390
ACCUR 2460	25.7	1.69	DBLD	1.6	2325	28.5	2642	46600	PSI	2.390
ACCUR 2520	26.1	1.78	DBLD	1.6	2285	29.0	2597	43000	PSI	2.390
ACCUR 2230	24.8	1.63	DBLD	1.6	2277	27.5	2588	45900	PSI	2.390
A-XMR-2495	24.3	1.82	DBLD	1.6	2185	27.0c	2483	40300	PSI	2.390
75 Grain Jacketed Bullet										
BL-C(2)	28.5	1.84	DBLD	1.6	2694	30.5	2880	NA	NA	2.480
H335	27.0	1.74	DBLD	1.6	2634	29.5	2844	NA	NA	2.480
H4895	27.0	1.97	DBLD	1.9	2636	29.0c	2819	NA	NA	2.480
H322	26.0	1.88	DBLD	1.6	2627	28.0c	2808	NA	NA	2.480
80 Grain Jacketed Bullet										
H335	26.5	1.71	DBLD	1.6	2518	29.0	2744	NA	NA	2.410

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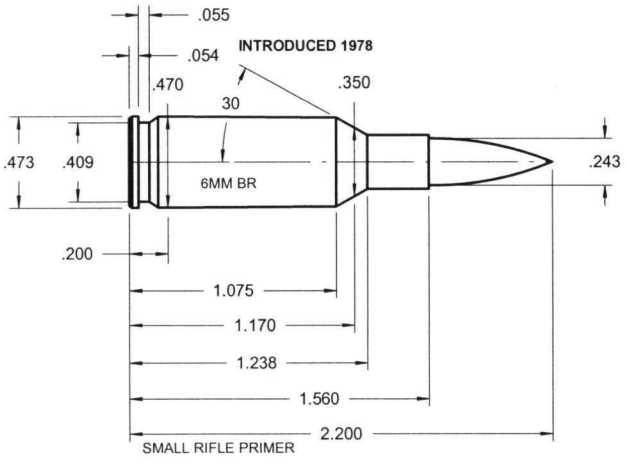
6mm TCU (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
80 Grain Jacketed Bullet (Continued)										
H4895	26.0	1.89	DBLD	1.9	2513	28.5c	2739	NA	NA	2.410
BL-C(2)	27.5	1.77	DBLD	1.6	2533	30.0	2734	NA	NA	2.410
H322	25.0	1.81	DBLD	1.6	2504	27.5	2728	NA	NA	2.410
A-XMR-2015	23.4	1.71	DBLD	1.6	2236	26.0	2541	47600	PSI	2.380
ACCUR 2460	24.8	1.63	DBLD	1.6	2223	27.5	2526	46900	PSI	2.380
ACCUR 2230	24.3	1.60	DBLD	1.6	2218	27.0	2521	48500	PSI	2.380
ACCUR 2520	25.2	1.72	DBLD	1.6	2202	28.0	2502	47100	PSI	2.380
A-XMR-2495	24.3	1.82	DBLD	1.6	2180	27.0c	2477	47900	PSI	2.380
85 Grain Jacketed Bullet										
H335	26.0	1.68	DBLD	1.6	2502	28.0	2674	NA	NA	2.500
BL-C(2)	27.0	1.74	DBLD	1.6	2494	29.0	2666	NA	NA	2.500
H4895	25.5	1.86	DBLD	1.6	2478	27.5	2649	NA	NA	2.500
H322	24.5	1.78	DBLD	1.6	2450	26.5	2644	NA	NA	2.500
ACCUR 2520	24.3	1.66	DBLD	1.6	2182	27.0	2480	48700	PSI	2.390
A-XMR-2015	22.5	1.64	DBLD	1.6	2160	25.0	2455	47200	PSI	2.390
ACCUR 2460	23.7	1.55	DBLD	NA	2153	26.3	2447	49400	PSI	2.390
ACCUR 2230	23.0	1.51	1.46	1.3	2119	25.5	2408	48200	PSI	2.390
A-XMR-2495	23.4	1.75	DBLD	1.6	2119	26.0	2408	48600	PSI	2.390
90 Grain Jacketed Bullet										
BL-C(2)	26.5	1.71	DBLD	1.6	2429	28.5	2597	NA	NA	2.580
H335	25.5	1.64	DBLD	1.6	2421	27.5	2588	NA	NA	2.580
H4895	25.0	1.82	DBLD	1.6	2374	27.0	2538	NA	NA	2.580
H322	24.0	1.74	DBLD	1.6	2323	26.0	2507	NA	NA	2.580
100 Grain Jacketed Bullet										
BL-C(2)	25.0	1.61	DBLD	1.6	2331	27.0	2492	NA	NA	2.500
H335	24.0	1.55	DBLD	NA	2306	26.0	2489	NA	NA	2.500
H4895	24.0	1.75	DBLD	1.6	2235	26.0	2412	NA	NA	2.500
H322	23.0	1.67	DBLD	1.6	2221	25.0	2398	NA	NA	2.500
A-XMR-2015	21.2	1.55	DBLD	NA	2008	23.5	2282	50000	PSI	2.520
A-XMR-2495	22.1	1.65	DBLD	1.6	1985	24.5	2256	49800	PSI	2.520
ACCUR 2520	22.5	1.54	1.46	NA	1984	25.0	2254	48500	PSI	2.520
ACCUR 2460	22.1	1.45	1.36	1.3	1964	24.5	2232	47500	PSI	2.520
ACCUR 2230	21.6	1.42	1.36	1.3	1952	24.0	2218	50000	PSI	2.520

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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6mm BR REMINGTON



Useful case capacity 2.18 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
60 Grain Jacketed Bullet											
H322	30.0	2.17	DBLD	1.9	3281	32.0c	3481	51404 PSI	2.080	....	....
H-VARGET	31.0c	2.27	DBLD	2.2	3161	34.0c	3442	50365 PSI	2.080	....	....
H335	30.0	1.93	DBLD	1.9	3184	32.0	3411	50885 PSI	2.080	.9663	.9202
H4895	31.0c	2.26	DBLD	2.2	3177	33.0c	3384	48808 PSI	2.080	....	....
BL-C(2)	34.0c	2.19	DBLD	1.9	3154	36.0c	3375	49327 PSI	2.080	....	....
ACCUR 2460	31.1	2.04	DBLD	1.9	2865	34.5c	3152	51600 PSI	2.125	....	....
A-XMR-2015	27.5	2.01	DBLD	1.9	2840	30.5c	3125	52700 PSI	2.125	....	....
ACCUR 2520	31.5	2.15	DBLD	1.9	2833	35.0c	3116	50500 PSI	2.125	....	....
ACCUR 2230	30.2	1.98	DBLD	1.9	2796	33.5c	3076	49400 PSI	2.125	....	....
A-XMR-2495	29.7c	2.22	DBLD	2.2	2773	33.0c	3051	46700 PSI	2.125	....	....
ACCUR 2700	33.3c	2.28	DBLD	2.2	2659	35.0c	2788	37900 PSI	2.125	....	....
70 Grain Jacketed Bullet											
H-VARGET	31.0c	2.27	DBLD	2.2	3101	34.0c	3342	51300 PSI	2.100	....	....
BL-C(2)	33.0	2.13	DBLD	1.9	3118	35.0c	3289	49846 PSI	2.100	....	....
H335	29.0	1.87	DBLD	1.6	3050	31.0	3287	48808 PSI	2.100	.9633	.9565
H322	28.0	2.03	DBLD	1.9	2976	30.0	3200	48808 PSI	2.100	.9645	.9074
H4895	29.0	2.11	DBLD	1.9	2895	31.0c	3188	48808 PSI	2.100	....	....
ACCUR 2520	30.6	2.09	DBLD	1.9	2685	34.0c	2955	51900 PSI	2.170	....	....
A-XMR-2015	27.5	2.01	DBLD	1.9	2684	30.5c	2953	52900 PSI	2.170	....	....
ACCUR 2460	29.7	1.95	DBLD	1.9	2680	33.0	2948	51600 PSI	2.170	....	....

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c = Compressed charge

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6mm BR REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
					....STARTING LOADS....						
70 Grain Jacketed Bullet (Continued)											
A-XMR-2495	28.4	2.13	DBLD	1.9	2668	31.5c	2936	50500 PSI	2.170	....	....
ACCUR 2230	29.3	1.93	DBLD	1.9	2662	32.5	2930	52500 PSI	2.170	....	....
ACCUR 2700	33.3c	2.28	DBLD	2.2	2530	35.0c	2654	37900 PSI	2.170	....	....
75 Grain Jacketed Bullet											
H-VARGET	30.5c	2.23	DBLD	2.2	3057	32.5c	3239	51923 PSI	2.115	....	....
H4895	28.5	2.07	DBLD	1.9	2980	30.5c	3129	48808 PSI	2.115	....	....
BL-C(2)	31.0	2.00	DBLD	1.9	2883	33.0	3113	47769 PSI	2.115	.9623	.9113
H335	28.0	1.81	DBLD	1.6	2928	30.0	3103	48808 PSI	2.115	.9711	.9565
H322	26.0	1.88	DBLD	1.9	2756	28.0	3096	48808 PSI	2.115	.9436	.8885
80 Grain Jacketed Bullet											
H-VARGET	30.5c	2.23	DBLD	2.2	2999	32.5c	3159	52650 PSI	2.115	....	....
H4895	28.0	2.04	DBLD	1.9	2945	30.0c	3100	48808 PSI	2.115	.9750	.9271
H335	28.0	1.81	DBLD	1.6	2957	30.0	3090	49846 PSI	2.115	.9783	.9353
BL-C(2)	31.0	2.00	DBLD	1.9	2894	33.0	3089	49327 PSI	2.115	.9678	.9459
H322	26.0	1.88	DBLD	1.9	2787	28.0	3005	48808 PSI	2.115	.9631	.9144
ACCUR 2460	28.8	1.89	DBLD	1.9	2556	32.0	2812	51200 PSI	2.120	....	....
ACCUR 2520	29.7	2.03	DBLD	1.9	2554	33.0c	2809	51200 PSI	2.120	....	....
A-XMR-2495	27.0	2.02	DBLD	1.9	2516	30.0c	2768	53400 PSI	2.120	....	....
A-XMR-2015	26.1	1.91	DBLD	1.9	2490	29.0	2740	50200 PSI	2.120	....	....
ACCUR 2230	27.9	1.83	DBLD	1.6	2484	31.0	2733	49700 PSI	2.120	....	....
ACCUR 2700	33.3c	2.28	DBLD	2.2	2517	35.0c	2640	46700 PSI	2.120	....	....
85 Grain Jacketed Bullet											
H-VARGET	29.0	2.12	DBLD	1.9	2840	31.0c	3007	52754 PSI	2.115	....	....
BL-C(2)	29.0	1.87	DBLD	1.6	2821	31.0	2947	50365 PSI	2.115	.9781	.9416
H335	24.5	1.58	DBLD	NA	2600	26.5	2809	50885 PSI	2.115	.9619	.9147
H4895	24.5	1.78	DBLD	1.6	2590	26.5	2770	51404 PSI	2.115	.9669	.8773
H322	22.0	1.59	DBLD	1.6	2472	24.0	2632	48808 PSI	2.115	.9690	.9271
87 Grain Jacketed Bullet											
ACCUR 2700	33.3c	2.28	DBLD	2.2	2507	35.0c	2630	53000 PSI	2.225	....	....
ACCUR 2520	27.0	1.84	DBLD	1.6	2366	30.0	2603	51800 PSI	2.225	....	....
A-XMR-2495	25.2	1.89	DBLD	1.9	2362	28.0	2599	51200 PSI	2.225	....	....
ACCUR 2460	26.6	1.74	DBLD	1.6	2360	29.5	2597	50700 PSI	2.225	....	....
A-XMR-2015	24.3	1.77	DBLD	1.6	2336	27.0	2570	52000 PSI	2.225	....	....
ACCUR 2230	26.1	1.71	DBLD	1.6	2336	29.0	2570	50500 PSI	2.225	....	....
90 Grain Jacketed Bullet											
BL-C(2)	29.0	1.87	DBLD	1.6	2738	31.0	2921	50677 PSI	2.115	.9682	.9496
H-VARGET	27.5	2.01	DBLD	1.9	2674	30.2c	2886	49327 PSI	2.115	....	....

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c = Compressed charge

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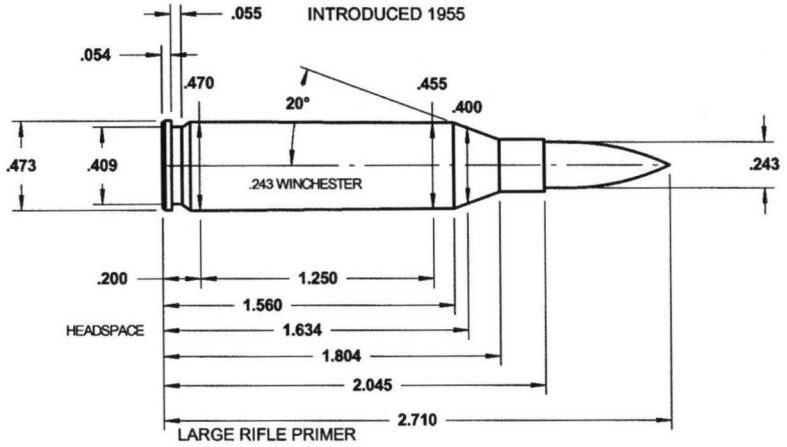
6mm BR REMINGTON (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
90 Grain Jacketed Bullet (Continued)											
H4895	24.5	1.78	DBLD	1.6	2560	27.0	2743	49846 PSI	2.115	.9729	.9334
H335	24.0	1.55	DBLD	NA	2432	26.0	2688	50885 PSI	2.115	.9511	.8830
H322	22.0	1.59	DBLD	1.6	2423	24.0	2607	49846 PSI	2.115	.9640	.9197
100 Grain Jacketed Bullet											
H-VARGET	26.0	1.90	DBLD	1.9	2491	28.0	2649	50781 PSI	2.150	.9697	.9377
H4895	24.5	1.78	DBLD	1.6	2423	27.0	2603	50885 PSI	2.150	.9719	.9447
BL-C(2)	27.0	1.74	DBLD	1.6	2379	29.0	2599	48808 PSI	2.150	.9565	.9396
H335	24.0	1.55	DBLD	NA	2339	26.0	2537	51923 PSI	2.150	.9602	.9274
H322	22.0	1.59	DBLD	1.6	2275	23.5	2519	51923 PSI	2.150	.9344	.8903
ACCUR 2230	25.2	1.66	DBLD	1.6	2201	28.0	2422	52400 PSI	2.210	....	....
ACCUR 2520	25.7	1.75	DBLD	1.6	2195	28.5	2415	52000 PSI	2.210	....	....
ACCUR 2460	25.2	1.65	DBLD	1.6	2191	28.0	2410	50900 PSI	2.210	....	....
ACCUR 2700	30.4	2.08	DBLD	1.9	2270	32.0c	2381	50100 PSI	2.210	....	....
A-XMR-2495	23.4	1.75	DBLD	1.6	2161	26.0	2378	54000 PSI	2.210	....	....
A-XMR-2015	22.5	1.64	DBLD	1.6	2137	25.0	2351	51900 PSI	2.210	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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243 WINCHESTER



Useful case capacity 3.42 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL	1 Grain Factor Veloc	Pressr
55 Grain Jacketed Bullet												
H4895	40.0	2.91	DBLD	2.8	3638	44.5	4058	56885 PSI		2.650	.9761	.9273
BL-C(2)	43.0	2.77	DBLD	2.8	3779	47.0	4025	57000 PSI		2.650	.9845	.9637
H380	46.0	3.18	DBLD	3.1	3704	51.0c	4010	56192 PSI		2.650	.9841	.9643
H-VARGET	41.0	3.00	DBLD	2.8	3776	45.0	4000	57692 PSI		2.650	.9858	.9574
H414	45.0	2.97	DBLD	2.8	3611	50.0	3950	59538 PSI		2.650	.9823	.9377
WIN 760	45.0	3.00	DBLD	2.8	3611	50.0	3950	51600 CUP		2.650	.9823	.9377
ACCUR 2520	39.1	2.67	DBLD	2.5	3418	43.5	3885	48500 CUP		2.605	....	....
IMR4895	40.0	2.91	DBLD	2.8	3599	44.0	3877	50200 CUP		2.650	.9817	.9570
IMR4320	40.0	2.86	DBLD	2.8	3603	45.5	3876	49800 CUP		2.650	.9867	.9956
IMR4064	39.5	2.94	DBLD	2.8	3554	44.0	3875	51200 CUP		2.650	.9809	.9534
ACCUR 2460	38.7	2.54	DBLD	2.5	3406	43.0	3871	48000 CUP		2.605	....	....
IMR3031	37.0	2.82	DBLD	2.8	3520	40.5	3864	50900 CUP		2.650	.9738	.9220
IMR 4007 SSC	45.6	3.31	NA	3.1	3515	48.5c	3834	48300 CUP		2.650	.9705	.9273
ACCUR 2700	43.6	2.99	DBLD	2.8	3364	48.5	3823	50100 CUP		2.605	....	....
BENCHMARK	39.0	2.79	DBLD	2.8	3575	41.5	3815	57808 PSI		2.650	.9742	.9372
ACCUR 2230	37.3	2.45	DBLD	2.2	3350	41.5	3807	47200 CUP		2.605	....	....
A-XMR-2015	35.1	2.56	DBLD	2.5	3283	39.0	3731	48600 CUP		2.605	....	....
58 Grain Jacketed Bullet												
H380	46.0	3.18	DBLD	3.1	3721	49.5	3874	58846 PSI		2.600	.9884	.9799
H4895	40.0	2.91	DBLD	2.8	3643	43.0	3851	57577 PSI		2.600	.9815	.9538
IMR4320	40.5	2.90	DBLD	2.8	3448	44.8	3822	50100 CUP		2.600	.9763	.9588

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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243 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
58 Grain Jacketed Bullet (Continued)											
IMR4895	40.5	2.95	DBLD	2.8	3551	44.7	3819	50000 CUP	2.600	.9829	.9610
IMR3031	36.5	2.78	DBLD	2.8	3467	41.0	3815	50500 CUP	2.600	.9789	.9532
H335	39.5	2.55	DBLD	2.5	3714	41.5	3812	58385 PSI	2.600	....	....
H414	46.0	3.04	DBLD	2.8	3633	49.0	3806	56654 PSI	2.600	.9845	.9612
WIN 760	46.0	3.06	DBLD	2.8	3633	49.0	3806	49000 CUP	2.600	.9845	.9618
IMR 4007 SSC	46.0	3.33	NA	3.1	3550	49.0c	3794	49200 CUP	2.600	.9781	.9546
H-VARGET	41.0	3.00	DBLD	2.8	3617	44.0	3790	57462 PSI	2.600	.9844	.9653
IMR4064	39.6	2.95	DBLD	2.8	3388	44.0	3780	50200 CUP	2.600	.9754	.9464
BENCHMARK	35.0	2.50	DBLD	2.5	3417	37.5	3607	57692 PSI	2.600	.9786	.9309
60 Grain Jacketed Bullet											
H-VARGET	40.0	2.92	DBLD	2.8	3671	42.7	3816	58154 PSI	2.600	.9857	.9620
H4895	38.0	2.77	DBLD	2.5	3521	42.0	3812	58385 PSI	2.600	.9804	.9459
IMR4895	39.6	2.88	DBLD	2.8	3464	43.3	3785	50800 CUP	2.600	.9765	.9589
H380	43.0	2.97	DBLD	2.8	3514	48.0	3781	54692 PSI	2.600	.9854	.9612
IMR4064	40.0	2.98	DBLD	2.8	3476	43.8	3766	50400 CUP	2.600	.9791	.9626
IMR 4007 SSC	45.7	3.31	NA	3.1	3544	48.5c	3752	51300 CUP	2.600	.9798	.9611
H414	43.0	2.84	DBLD	2.8	3423	47.5	3724	57231 PSI	2.600	.9815	.9457
WIN 760	43.0	2.86	DBLD	2.8	3423	47.5	3724	49600 CUP	2.600	.9815	.9457
H335	35.0	2.26	DBLD	2.2	3445	39.0	3717	58038 PSI	2.600	.9812	.9525
IMR4320	40.0	2.86	DBLD	2.8	3431	44.4	3716	50500 CUP	2.600	.9822	.9615
IMR3031	36.8	2.80	DBLD	2.8	3448	40.5	3714	50500 CUP	2.600	.9802	.9575
BENCHMARK	38.5	2.75	DBLD	2.5	3587	41.2	3713	58500 PSI	2.600	.9874	.9723
ACCUR 2230	38.0	2.50	DBLD	2.5	3478	40.0	3700	50800 CUP	2.580	....	....
ACCUR 2460	38.0	2.49	DBLD	2.5	3466	40.0	3687	50500 CUP	2.580	....	....
A-XMR-2015	34.2	2.50	DBLD	2.5	3244	38.0	3686	50600 CUP	2.580	....	....
A-XMR-4064	38.7	2.92	DBLD	2.8	3241	43.0	3684	49300 CUP	2.580	....	....
A-XMR-2495	36.0	2.69	DBLD	2.5	3232	40.0	3673	51500 CUP	2.580	....	....
ACCUR 2700	41.9	2.87	DBLD	2.8	3225	46.5	3665	50800 CUP	2.580	....	....
A-XMR-4350	43.2	3.20	DBLD	3.1	3196	48.0c	3632	48300 CUP	2.580	....	....
ACCUR 2520	38.0	2.59	DBLD	2.5	3376	40.0	3591	49900 CUP	2.580	....	....
RELODER12	36.0	2.49	DBLD	2.5	3258	38.5	3450	56400 PSI	2.550	....	....
65 Grain Jacketed Bullet											
H414	45.0	2.97	DBLD	2.8	3521	48.0	3746	57000 PSI	2.600	.9795	.9428
WIN 760	45.0	3.00	DBLD	2.8	3521	48.0	3746	49400 CUP	2.600	.9795	.9428
IMR4064	40.0	2.98	DBLD	2.8	3415	43.4	3698	50000 CUP	2.600	.9770	.9566
H-VARGET	38.0	2.78	DBLD	2.8	3494	41.0	3682	57231 PSI	2.600	.9827	.9543
H4895	38.0	2.77	DBLD	2.5	3522	41.0	3677	56769 PSI	2.600	.9859	.9671
IMR4320	40.5	2.90	DBLD	2.8	3448	43.9	3670	49500 CUP	2.600	.9817	.9647

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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243 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
65 Grain Jacketed Bullet (Continued)											
IMR4895	38.5	2.80	DBLD	2.8	3392	42.7	3664	50600 CUP	2.600	.9819	.9582
IMR 4007 SSC	44.6	3.23	DBLD	3.1	3391	47.4c	3646	51000 CUP	2.600	.9745	.9502
H380	42.0	2.90	DBLD	2.8	3448	45.0	3627	57692 PSI	2.600	.9832	.9669
IMR3031	36.5	2.78	DBLD	2.8	3397	39.8	3624	50200 CUP	2.600	.9804	.9595
BL-C(2)	39.0	2.52	DBLD	2.5	3493	42.0	3612	57115 PSI	2.600	.9890	.9850
BENCHMARK	37.0	2.64	DBLD	2.5	3417	40.0	3598	58385 PSI	2.600	.9827	.9566
70 Grain Jacketed Bullet											
H-VARGET	38.0	2.78	DBLD	2.8	3433	40.5	3574	57808 PSI	2.625	.9842	.9622
H414	42.0	2.78	DBLD	2.8	3314	46.0	3568	57462 PSI	2.625	.9817	.9560
WIN 760	42.0	2.80	DBLD	2.8	3314	46.0	3568	49800 CUP	2.625	.9817	.9560
H380	42.0	2.90	DBLD	2.8	3349	46.0	3567	56423 PSI	2.625	.9844	.9678
IMR4895	38.5	2.80	DBLD	2.8	3349	42.6	3558	50000 CUP	2.625	.9854	.9709
IMR4064	38.5	2.87	DBLD	2.8	3316	42.5	3541	50000 CUP	2.625	.9838	.9669
IMR4320	38.5	2.76	DBLD	2.5	3325	42.5	3541	50300 CUP	2.625	.9843	.9660
A-XMR-4350	43.2	3.20	DBLD	3.1	3107	48.0c	3531	47600 CUP	2.650	....	....
IMR 4007 SSC	43.7	3.17	DBLD	3.1	3320	46.5	3515	50900 CUP	2.625	.9798	.9660
ACCUR 2700	40.5	2.77	DBLD	2.8	3078	45.0	3498	50100 CUP	2.650	....	....
BENCHMARK	36.5	2.61	DBLD	2.5	3128	39.3	3491	58038 PSI	2.625	.9614	.9618
A-XMR-2495	35.1	2.63	DBLD	2.5	3070	39.0	3489	49900 CUP	2.650	....	....
IMR3031	35.5	2.71	DBLD	2.5	3218	39.0	3485	51100 CUP	2.625	.9775	.9423
A-XMR-4064	37.8	2.85	DBLD	2.8	3061	42.0	3479	48400 CUP	2.650	....	....
H4895	36.0	2.62	DBLD	2.5	3286	39.5	3477	56769 PSI	2.625	.9840	.9603
v-N160	46.1	3.38	NA	3.4	3004	51.3c	3451	NA	NA	2.638	....	....
ACCUR 2460	37.1	2.43	DBLD	2.2	3234	39.0	3440	50400 CUP	2.650	....	....
ACCUR 2230	36.6	2.40	DBLD	2.2	3224	38.5	3430	50200 CUP	2.650	....	....
A-XMR-2015	32.9	2.40	DBLD	2.2	2988	36.5	3395	46800 CUP	2.650	....	....
v-N140	38.7	2.84	DBLD	2.8	3003	43.2	3389	NA	NA	2.638	....	....
v-N150	39.7	2.96	DBLD	2.8	3019	44.1	3384	NA	NA	2.638	....	....
BL-C(2)	35.0	2.26	DBLD	2.2	3228	39.0	3384	58154 PSI	2.625	.9883	.9874
ACCUR 2520	37.1	2.53	DBLD	2.5	3163	39.0	3365	48200 CUP	2.650	....	....
v-N135	36.4	2.83	DBLD	2.8	2957	40.5	3310	NA	NA	2.638	....	....
v-N133	33.4	2.57	DBLD	2.5	3084	36.8	3219	NA	NA	2.638	....	....
75 Grain Jacketed Bullet											
WIN 760	42.0	2.80	DBLD	2.8	3203	46.0	3447	50100 CUP	2.640	.9819	.9517
H414	42.0	2.78	DBLD	2.8	3203	46.0	3447	57808 PSI	2.640	.9819	.9517
IMR4895	37.5	2.73	DBLD	2.5	3198	41.7	3423	50400 CUP	2.640	.9839	.9692
IMR4320	37.7	2.70	DBLD	2.5	3180	41.5	3420	50600 CUP	2.640	.9809	.9610
IMR4064	37.5	2.79	DBLD	2.8	3183	41.2	3419	50300 CUP	2.640	.9809	.9603

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243 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....											
75 Grain Jacketed Bullet (Continued)											
H-VARGET	36.0	2.63	DBLD	2.5	3246	38.5	3408	58269 PSI	2.640	.9806	.9549
H380	40.0	2.76	DBLD	2.5	3127	44.5	3393	56077 PSI	2.640	.9819	.9717
IMR 4007 SSC	42.3	3.07	DBLD	2.8	3198	45.0	3391	51100 CUP	2.640	.9784	.9595
H4895	34.0	2.48	DBLD	2.2	3101	38.0	3354	57000 PSI	2.640	.9807	.9539
VEC TU5000	40.1	2.89	DBLD	2.8	3248	40.9	3323	46270 CUPe	2.650	----	----
IMR3031	33.2	2.53	DBLD	2.5	3061	36.7	3298	49800 CUP	2.640	.9788	.9511
VEC TU7000	44.0	3.10	DBLD	3.1	3228	44.8	3294	45341 CUPe	2.650	----	----
BL-C(2)	34.0	2.19	DBLD	2.2	3041	37.5	3185	56769 PSI	2.640	.9870	.9754
RELODER12	31.2	2.16	DBLD	1.9	2895	34.0	3125	57500 PSI	2.550	----	----
80 Grain Jacketed Bullet											
ACC MAG PRO	48.3	3.20	DBLD	3.1	3168	53.7c	3510	60600 PSI	2.700	.9812	.9487
WIN 760	42.0	2.80	DBLD	2.8	3249	45.0	3404	50100 CUP	2.635	.9844	.9741
H414	42.0	2.78	DBLD	2.8	3249	45.0	3404	57808 PSI	2.635	.9844	.9741
H-VARGET	36.0	2.63	DBLD	2.5	3193	38.5	3355	58038 PSI	2.635	.9802	.9598
IMR4320	37.0	2.65	DBLD	2.5	3132	40.5	3339	50600 CUP	2.635	.9820	.9608
IMR4064	37.5	2.79	DBLD	2.8	3141	41.0	3320	50800 CUP	2.635	.9843	.9660
IMR 4007 SSC	40.0	2.90	DBLD	2.8	2990	45.0	3319	50400 CUP	2.600	.9794	.9558
A-XMR-4350	39.6	2.93	DBLD	2.8	2918	44.0	3316	47900 CUP	2.700	----	----
H4895	35.0	2.55	DBLD	2.5	3123	38.0	3307	57808 PSI	2.635	.9809	.9705
IMR4895	36.5	2.66	DBLD	2.5	3094	40.2	3290	50300 CUP	2.635	.9836	.9603
A-XMR-3100	42.3	3.16	DBLD	3.1	2878	47.0c	3271	49000 CUP	2.700	----	----
RELODER19	40.9	2.88	DBLD	2.8	3030	44.5	3270	57500 PSI	2.685	----	----
WIN MAG RIFLE	45.9	3.29	DBLD	3.1	3158	47.5	3250	54700 PSI	2.540	----	----
BL-C(2)	35.0	2.26	DBLD	2.2	3083	38.5	3242	58385 PSI	2.635	.9857	.9797
ACCUR 2700	39.9	2.73	DBLD	2.5	3039	42.0	3233	50400 CUP	2.700	----	----
A-XMR-2495	32.4	2.42	DBLD	2.2	2842	36.0	3230	50900 CUP	2.700	----	----
H380	38.0	2.63	DBLD	2.5	3047	41.2	3223	58038 PSI	2.635	.9827	.9638
v-N160	43.6	3.20	DBLD	3.1	2869	48.6c	3222	NA NA	2.638	----	----
A-XMR-4064	33.3	2.51	DBLD	2.5	2810	37.0	3194	50400 CUP	2.700	----	----
85 Grain Jacketed Bullet											
A-XMR-4350	39.6	2.93	DBLD	2.8	2899	44.0	3294	49800 CUP	2.660	----	----
ACCUR 2700	39.0	2.67	DBLD	2.5	2952	41.0	3140	49200 CUP	2.660	----	----
A-XMR-4064	34.2	2.58	DBLD	2.5	2763	38.0	3140	49000 CUP	2.660	----	----
A-XMR-3100	41.4	3.10	DBLD	3.1	2756	46.0c	3132	46800 CUP	2.660	----	----
A-XMR-2495	31.5	2.36	DBLD	2.2	2703	35.0	3072	48700 CUP	2.660	----	----
85 Grain Barnes X Bullet											
WIN 760	42.0	2.80	DBLD	2.8	3048	45.0	3306	50200 CUP	2.560	.9730	.9378
IMR4350	43.0	3.16	DBLD	3.1	2959	47.0c	3229	50100 CUP	2.560	.9783	.9569

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c = Compressed charge

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243 WINCHESTER (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
85 Grain Barnes X Bullet (Continued)											
H4350	42.0	3.05	DBLD	2.8	2967	45.5	3214	57231 PSI	2.560	.9775	.9384
H-VARGET	35.0	2.56	DBLD	2.5	3019	38.0	3212	58154 PSI	2.560	.9793	.9572
H4895	35.0	2.55	DBLD	2.5	3015	38.0	3186	57577 PSI	2.560	.9816	.9669
IMR4831	44.2	3.25	DBLD	3.1	2886	48.5c	3183	49200 CUP	2.560	.9774	.9569
IMR4895	36.5	2.66	DBLD	2.5	2949	40.6	3182	50000 CUP	2.560	.9816	.9639
IMR4064	36.5	2.72	DBLD	2.5	2974	40.0	3168	50400 CUP	2.560	.9821	.9588
IMR4320	36.5	2.61	DBLD	2.5	3011	39.9	3159	49500 CUP	2.560	.9858	.9736
H380	40.0	2.76	DBLD	2.5	2967	43.0	3134	56308 PSI	2.560	.9821	.9617
87 Grain Jacketed Bullet											
VEC TU5000	39.8	2.87	DBLD	2.8	3163	40.6	3245	49492 CUPe	2.650	....	....
VEC TU7000	43.7	3.08	DBLD	3.1	3196	44.4	3205	49623 CUPe	2.650	....	....
v-N560	43.2	2.98	DBLD	2.8	2890	48.0	3149	NA NA	2.677	....	....
v-N160	41.9	3.08	DBLD	3.1	2744	46.6	3084	NA NA	2.677	....	....
v-N140	34.2	2.51	DBLD	2.5	2738	38.3	2974	NA NA	2.677	....	....
v-N150	33.7	2.51	DBLD	2.5	2757	37.9	2947	NA NA	2.677	....	....
90 Grain Jacketed Bullet											
H4831	45.0	3.26	DBLD	3.1	3010	48.0c	3203	58615 PSI	2.625	.9793	.9511
H414	41.0	2.71	DBLD	2.5	3024	43.5	3185	57231 PSI	2.625	.9796	.9497
H4350	42.0	3.05	DBLD	2.8	3039	44.5	3185	58385 PSI	2.625	....	....
WIN 760	41.0	2.73	DBLD	2.5	3024	43.5	3185	49600 CUP	2.625	.9796	.9497
v-N550	30.6	2.12	DBLD	1.9	2595	39.0	3146	NA NA	2.689	....	....
IMR7828	45.0	3.26	DBLD	3.1	2950	48.0c	3130	50600 CUP	2.625	.9806	.9694
v-N160	31.1	2.28	DBLD	2.2	2605	40.9	3127	NA NA	2.689	....	....
H4895	34.0	2.48	DBLD	2.2	2967	36.5	3114	58615 PSI	2.625	.9809	.9518
H-VARGET	34.0	2.49	DBLD	2.5	2964	36.5	3106	58154 PSI	2.625	.9813	.9540
IMR4350	39.5	2.90	DBLD	2.8	2856	43.0	3096	50800 CUP	2.625	.9773	.9516
IMR 4007 SSC	39.0	2.83	DBLD	2.8	2917	41.5	3062	49900 CUP	2.625	.9808	.9705
H380	38.0	2.63	DBLD	2.5	2892	40.5	3060	57115 PSI	2.625	.9775	.9461
IMR4831	40.5	2.98	DBLD	2.8	2858	43.9	3050	50700 CUP	2.625	.9809	.9572
IMR4895	33.5	2.44	DBLD	2.2	2815	36.9	3033	50200 CUP	2.625	.9783	.9475
IMR4064	33.5	2.50	DBLD	2.5	2796	37.0	3020	50200 CUP	2.625	.9783	.9477
v-N150	28.9	2.15	DBLD	1.9	2592	32.8	2907	NA NA	2.689	....	....
95 Grain Jacketed Bullet											
H414	39.0	2.58	DBLD	2.5	2933	42.0	3138	58500 PSI	2.650	.9776	.9524
WIN 760	39.0	2.60	DBLD	2.5	2933	42.0	3138	50700 CUP	2.650	.9776	.9524
H4350	39.0	2.83	DBLD	2.8	2917	42.0	3087	58269 PSI	2.650	.9814	.9680
H1000	45.0	3.21	DBLD	3.1	2946	48.0c	3077	57692 PSI	2.650	.9856	.9648
H4831	42.0	3.04	DBLD	2.8	2930	44.5	3052	58500 PSI	2.650	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
95 Grain Jacketed Bullet (Continued)												
A-XMR-4350	36.0	2.66	DBLD	2.5	2680	40.0	3046	50700	CUP	2.700	....	....
IMR7828	41.5	3.01	DBLD	2.8	2780	45.8	3030	50600	CUP	2.650	.9802	.9592
A-XMR-3100	39.6	2.96	DBLD	2.8	2649	44.0	3010	49300	CUP	2.700	....	....
H-VARGET	33.0	2.41	DBLD	2.2	2870	35.0	2996	57923	PSI	2.650	.9790	.9468
IMR4350	38.0	2.79	DBLD	2.8	2792	41.8	2993	50200	CUP	2.650	.9818	.9613
H4895	33.0	2.40	DBLD	2.2	2865	35.0	2990	58500	PSI	2.650	.9787	.9421
IMR4831	39.5	2.90	DBLD	2.8	2793	42.8	2985	50200	CUP	2.650	.9801	.9602
IMR4064	33.0	2.46	DBLD	2.2	2745	36.5	2967	51100	CUP	2.650	.9782	.9550
IMR 4007 SSC	37.0	2.68	DBLD	2.5	2822	39.5	2937	49600	CUP	2.650	.9843	.9712
H380	36.0	2.49	DBLD	2.5	2779	38.0	2922	56654	PSI	2.650	....	....
ACCUR 2700	37.1	2.54	DBLD	2.5	2740	39.0	2915	49700	CUP	2.700	....	....
IMR4895	32.0	2.33	DBLD	2.2	2687	35.5	2908	50400	CUP	2.650	.9775	.9480
A-XMR-2495	29.7	2.22	DBLD	2.2	2535	33.0	2881	51400	CUP	2.700	....	....
A-XMR-4064	30.6	2.31	DBLD	2.2	2499	34.0	2840	49900	CUP	2.700	....	....
95 Grain Barnes X Bullet												
v-N560	27.5	1.90	DBLD	1.9	2171	37.6	2727	NA	NA	2.709	....	....
100 Grain Jacketed Bullet												
v-N550	32.8	2.27	DBLD	2.2	2566	42.0	3199	NA	NA	2.689	....	....
ACC MAG PRO	42.8	2.84	DBLD	2.8	2838	47.5	3107	59800	PSI	2.675	.9808	.9526
v-N160	35.9	2.64	DBLD	2.5	2654	42.8	3084	NA	NA	2.689	....	....
VEC TU7000	41.7	2.94	DBLD	2.8	2969	42.4	3025	49666	CUPe	2.650	....	....
IMR7828	42.5	3.08	DBLD	3.1	2796	46.0	3009	51100	CUP	2.650	.9791	.9563
WIN MAG RIFLE	42.5	3.05	DBLD	2.8	2860	44.7	3000	55500	PSI	2.650	....	....
H1000	44.0	3.14	DBLD	3.1	2876	47.0	3000	57462	PSI	2.650	.9860	.9718
A-XMR-4350	35.1	2.60	DBLD	2.5	2623	39.0	2981	51800	CUP	2.700	....	....
H4350	37.0	2.68	DBLD	2.5	2806	40.0	2973	58846	PSI	2.650	.9809	.9599
A-XMR-3100	38.7	2.89	DBLD	2.8	2610	43.0	2966	51900	CUP	2.700	....	....
H414	37.0	2.45	DBLD	2.2	2800	40.0	2963	58385	PSI	2.650	.9815	.9581
WIN 760	37.0	2.46	DBLD	2.2	2800	40.0	2963	50600	CUP	2.650	.9815	.9581
v-N560	41.3	2.85	DBLD	2.8	2697	45.7	2962	NA	NA	2.650	....	....
IMR4350	38.5	2.83	DBLD	2.8	2760	42.0	2958	50100	CUP	2.650	.9802	.9572
RELODER22	38.3	2.67	DBLD	2.5	2734	41.7	2950	57500	PSI	2.700	....	....
IMR4831	39.2	2.88	DBLD	2.8	2733	43.0	2947	50800	CUP	2.650	.9805	.9600
v-N165	44.0	3.13	DBLD	3.1	2647	49.3c	2932	NA	NA	2.650	....	....
RELODER19	37.9	2.68	DBLD	2.5	2710	41.0	2925	57100	PSI	2.700	....	....
H4831	39.0	2.83	DBLD	2.8	2761	42.0	2924	57808	PSI	2.650	.9808	.9605
IMR 4007 SSC	37.2	2.70	DBLD	2.5	2784	39.5	2905	50400	CUP	2.650	.9815	.9701
IMR4064	33.0	2.46	DBLD	2.2	2672	36.5	2902	51100	CUP	2.650	.9765	.9468

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243 WINCHESTER (Continued)

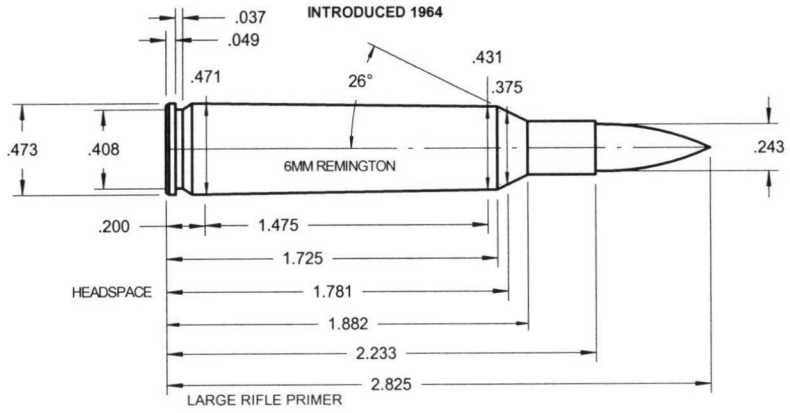
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED	FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
105 Grain Jacketed Bullet											
v-N165	42.2	3.00	DBLD	2.8	2635	48.5c	3012	NA NA	2.689	....	....
H RETUMBO	46.0	3.32	NA	3.1	2772	49.0c	2986	57346 PSI	2.760	.9757	.9617
H1000	43.0	3.07	DBLD	2.8	2798	46.0	2930	57923 PSI	2.760	.9845	.9671
v-N550	34.6	2.40	DBLD	2.2	2579	40.4	2923	NA NA	2.689	....	....
IMR7828	40.6	2.94	DBLD	2.8	2721	44.0	2894	50300 CUP	2.760	.9822	.9646
WIN MAG RIFLE	40.8	2.93	DBLD	2.8	2704	43.7	2890	56500 PSI	2.650	....	....
IMR4831	38.0	2.79	DBLD	2.8	2661	41.5	2870	50800 CUP	2.760	.9788	.9579
IMR4350	36.7	2.70	DBLD	2.5	2648	40.2	2870	50800 CUP	2.760	.9772	.9535
H414	36.0	2.38	DBLD	2.2	2692	39.0	2862	57808 PSI	2.760	.9799	.9554
WIN 760	36.0	2.40	DBLD	2.2	2692	39.0	2862	50100 CUP	2.760	.9799	.9554
H4831	38.0	2.75	DBLD	2.5	2687	41.0	2846	57923 PSI	2.760	.9809	.9563
H4350	35.0	2.54	DBLD	2.5	2663	37.5	2799	57115 PSI	2.760	.9802	.9566
IMR 4007 SSC	35.7	2.59	DBLD	2.5	2665	38.0	2797	49800 CUP	2.760	.9789	.9438
H-VARGET	31.0	2.27	DBLD	2.2	2631	33.0	2769	58615 PSI	2.760	.9746	.9474
H4895	30.5	2.22	DBLD	2.2	2619	32.5	2724	57808 PSI	2.760	.9802	.9467
v-N560	35.2	2.43	DBLD	2.2	2486	38.8	2719	NA NA	2.670	....	....
107 Grain Jacketed Bullet											
H RETUMBO	46.0	3.32	NA	3.1	2785	49.0c	2974	55962 PSI	2.850	.9783	.9592
H1000	43.0	3.07	DBLD	2.8	2787	46.0	2918	57808 PSI	2.850	.9848	.9626
IMR7828	40.0	2.90	DBLD	2.8	2675	43.5	2878	50100 CUP	2.850	.9793	.9572
IMR4350	36.5	2.68	DBLD	2.5	2661	39.8	2853	50600 CUP	2.850	.9791	.9457
IMR4831	37.5	2.76	DBLD	2.5	2662	40.9	2844	50400 CUP	2.850	.9806	.9602
H4831	38.0	2.75	DBLD	2.5	2787	41.0	2835	57808 PSI	2.850	.9945	.9554
H414	35.0	2.31	DBLD	2.2	2664	38.0	2809	57115 PSI	2.850	.9824	.9571
WIN 760	35.0	2.33	DBLD	2.2	2664	38.0	2809	49500 CUP	2.850	.9824	.9571
IMR 4007 SSC	36.0	2.61	DBLD	2.5	2707	38.0	2807	50700 CUP	2.850	....	....
H4350	35.0	2.54	DBLD	2.5	2671	37.5	2800	57923 PSI	2.850	.9814	.9408
H-VARGET	31.0	2.27	DBLD	2.2	2630	33.0	2749	58154 PSI	2.850	.9784	.9481
H4895	30.5	2.22	DBLD	2.2	2613	32.5	2719	57577 PSI	2.850	.9804	.9590
H380	33.0	2.28	DBLD	2.2	2570	34.8	2682	57808 PSI	2.850	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6mm & 244 REMINGTON



Useful case capacity 3.48 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
55 Grain Jacketed Bullet											
H4895	41.0	2.98	DBLD	2.8	3740	45.5	4115	62875 PSI	2.800	.9790	.9587
H380	48.0	3.32	NA	3.1	3720	53.0c	4054	60250 PSI	2.800	....	....
H-VARGET	42.0	3.07	DBLD	2.8	3684	46.0	4014	62125 PSI	2.800	.9787	.9559
BL-C(2)	43.0	2.77	DBLD	2.5	3669	47.0	3999	62250 PSI	2.800	.9788	.9640
H414	46.0	3.04	DBLD	2.8	3611	51.0	3973	62375 PSI	2.800	.9809	.9435
A-XMR-2495	40.0	2.99	DBLD	2.8	3563	44.5	3920	49000 CUP	2.765	....	....
ACCUR 2700	45.1	3.09	DBLD	2.8	3526	50.5	3915	50800 CUP	2.765	....	....
A-XMR-2015	36.9	2.69	DBLD	2.5	3540	41.0	3895	47300 CUP	2.765	....	....
A-XMR-4350	45.9	3.40	NA	3.1	3414	51.0c	3756	46000 CUP	2.765	....	....
60 Grain Jacketed Bullet											
A-XMR-4064	40.9	3.09	DBLD	2.8	3546	45.5	3901	63600 PSI	2.750	....	....
H4895	40.0	2.91	DBLD	2.8	3536	44.0	3854	62125 PSI	2.700	.9787	.9460
BL-C(2)	41.0	2.64	DBLD	2.5	3475	45.5	3823	62500 PSI	2.700	.9789	.9594
RELODER15	39.8	2.81	DBLD	2.8	3505	43.6	3820	62700 PSI	2.760	....	....
A-XMR-2495	39.6	2.96	DBLD	2.8	3449	44.0	3794	63300 PSI	2.750	....	....
A-XMR-2015	37.9	2.77	DBLD	2.5	3427	42.1	3769	63200 PSI	2.750	....	....
H414	45.0	2.97	DBLD	2.8	3455	49.5	3764	62125 PSI	2.700	.9813	.9371
H380	44.0	3.04	DBLD	2.8	3389	49.5	3763	61750 PSI	2.700	.9812	.9455
ACCUR 2700	45.5	3.12	DBLD	3.1	3402	50.5	3744	60300 PSI	2.750	....	....
H-VARGET	38.0	2.78	DBLD	2.5	3384	42.0	3722	63125 PSI	2.700	.9763	.9264

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6mm & 244 REMINGTON (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
60 Grain Jacketed Bullet (Continued)										
RELODER12	38.1	2.63	DBLD	2.5	3363	41.8 3665	62800 PSI	2.760	....	....
A-XMR-4350	45.0	3.33	NA	3.1	3203	50.0c 3524	48300 PSI	2.750	....	....
H450	47.0	3.07	DBLD	2.8	3261	51.0 3519	58125 PSI	2.730	.9812	.9341
65 Grain Jacketed Bullet										
H414	46.5	3.07	DBLD	2.8	3543	49.5 3752	61875 PSI	2.825	.9812	.9593
A-XMR-4064	40.9	3.09	DBLD	2.8	3397	45.5 3739	61500 PSI	2.775	....	....
H-VARGET	40.0	2.92	DBLD	2.8	3429	44.0 3737	62500 PSI	2.825	.9787	.9556
H4895	38.5	2.80	DBLD	2.5	3380	42.7 3718	63000 PSI	2.825	.9777	.9548
H4350	48.0c	3.48	NA	3.4	3477	51.5c 3717	62000 PSI	2.825	....	....
ACCUR 2520	38.7	2.64	DBLD	2.5	3355	43.0 3690	64000 PSI	2.775	....	....
A-XMR-2015	36.0	2.63	DBLD	2.5	3344	40.0 3679	63100 PSI	2.775	....	....
H380	44.0	3.04	DBLD	2.8	3398	47.0 3599	62125 PSI	2.825	.9811	.9580
BL-C(2)	39.5	2.55	DBLD	2.5	3351	42.3 3582	62000 PSI	2.825	.9766	.9519
H4831	51.0c	3.70	NA	3.4	3440	53.0c 3574	57875 PSI	2.825	....	....
70 Grain Jacketed Bullet										
A-XMR-4064	40.0	3.02	DBLD	2.8	3342	44.5 3677	63200 PSI	2.775	....	....
H4350	46.0	3.34	NA	3.1	3338	50.5c 3638	61875 PSI	2.810	....	....
H414	44.0	2.91	DBLD	2.8	3336	48.5 3636	62625 PSI	2.810	.9809	.9538
H4895	38.0	2.77	DBLD	2.5	3262	42.0 3588	61875 PSI	2.810	.9764	.9342
ACCUR 2700	44.1	3.02	DBLD	2.8	3249	49.0 3574	62500 PSI	2.775	....	....
A-XMR-2495	37.8	2.83	DBLD	2.8	3243	42.0 3568	61800 PSI	2.775	....	....
H-VARGET	38.0	2.78	DBLD	2.5	3227	42.0 3550	62500 PSI	2.810	.9765	.9428
H380	42.0	2.90	DBLD	2.8	3211	46.5 3533	62500 PSI	2.810	.9791	.9563
v-N160	47.3	3.47	NA	3.4	3200	52.4c 3520	NA NA	2.811	....	....
A-XMR-2015	36.7	2.68	DBLD	2.5	3182	40.8 3501	61500 PSI	2.775	....	....
A-XMR-4350	45.0	3.33	NA	3.1	3116	50.0c 3428	51900 PSI	2.775	....	....
BL-C(2)	38.0	2.45	DBLD	2.2	3108	42.0 3419	60000 PSI	2.730	.9766	.9862
v-N140	39.6	2.90	DBLD	2.8	3120	43.3 3399	NA NA	2.811	....	....
v-N150	39.1	2.92	DBLD	2.8	3069	43.4 3376	NA NA	2.811	....	....
H450	47.0	3.07	DBLD	2.8	3120	51.0 3368	59750 PSI	2.730	.9811	.9756
H4831	46.0	3.33	NA	3.1	3076	50.0c 3321	56750 PSI	2.730	....	....
v-N135	36.6	2.84	DBLD	2.8	3047	40.4 3320	NA NA	2.811	....	....
75 Grain Jacketed Bullet										
H414	43.0	2.84	DBLD	2.8	3225	47.5 3514	63000 PSI	2.825	.9809	.9520
H4350	44.0	3.19	DBLD	3.1	3183	49.0c 3502	62875 PSI	2.825	....	....
IMR3031	35.6	2.72	DBLD	2.5	3112	40.5 3490	52000 CUP	2.740	....	....
H4831	48.0c	3.48	NA	3.4	3293	51.0c 3488	58875 PSI	2.825	....	....

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
75 Grain Jacketed Bullet (Continued)											
IMR4064	36.9	2.75	DBLD	2.5	3133	41.5	3480	51400 CUP	2.740	....	....
BL-C(2)	38.0	2.45	DBLD	2.2	3151	42.0	3467	60500 PSI	2.730	.9763	.9847
IMR4350	41.7	3.07	DBLD	2.8	3140	46.5	3455	51000 CUP	2.740	....	....
IMR4831	43.3	3.19	DBLD	3.1	3106	48.5c	3450	51200 CUP	2.740	....	....
IMR4320	37.4	2.68	DBLD	2.5	3054	42.5	3425	52000 CUP	2.740	....	....
RELODER15	37.3	2.63	DBLD	2.5	3160	40.6	3410	62300 PSI	2.790	....	....
H-VARGET	37.0	2.70	DBLD	2.5	3086	41.0	3395	61250 PSI	2.825	.9765	.9645
H4895	36.0	2.62	DBLD	2.5	3084	40.0	3393	61375 PSI	2.825	.9764	.9529
H380	40.0	2.76	DBLD	2.5	3060	44.5	3366	63250 PSI	2.825	.9791	.9507
IMR4895	34.3	2.50	DBLD	2.2	3001	39.0	3365	52000 CUP	2.740	....	....
RELODER12	35.9	2.48	DBLD	2.2	3094	39.0	3340	62200 PSI	2.790	....	....
H450	44.0	2.87	DBLD	2.8	3040	48.0	3281	58750 PSI	2.730	.9811	.9276
IMR4198	28.6	2.27	DBLD	2.2	2859	32.0	3175	51200 CUP	2.740	....	....
80 Grain Jacketed Bullet											
A-XMR-4064	39.1	2.95	DBLD	2.8	3168	43.5	3485	63900 PSI	2.825	....	....
RELODER22	48.3	3.37	NA	3.1	3258	51.5c	3450	61000 PSI	2.790	....	....
RELODER19	45.9	3.24	DBLD	3.1	3213	49.5c	3435	61700 PSI	2.790	....	....
ACCUR 2700	43.2	2.96	DBLD	2.8	3105	48.0	3416	62900 PSI	2.825	....	....
A-XMR-4350	44.6	3.30	NA	3.1	3096	49.5c	3406	61800 PSI	2.825	....	....
H414	42.0	2.78	DBLD	2.5	3073	46.5	3381	61625 PSI	2.775	.9789	.9546
H-VARGET	37.0	2.70	DBLD	2.5	3072	41.0	3379	63250 PSI	2.775	.9764	.9534
H4831	48.0c	3.48	NA	3.4	3171	51.0c	3358	61750 PSI	2.775	....	....
RELODER15	36.8	2.60	DBLD	2.5	3065	40.5	3340	63000 PSI	2.790	....	....
H4350	44.0	3.19	DBLD	3.1	3151	47.0	3337	60875 PSI	2.775	.9809	.9534
IMR4350	40.5	2.98	DBLD	2.8	2952	46.0	3310	52000 CUP	2.790	....	....
H4895	36.0	2.62	DBLD	2.5	3035	39.5	3307	61750 PSI	2.775	.9756	.9572
IMR4831	48.0c	3.53	NA	3.4	3300	48.0c	3300	21900 CUP	2.790	....	....
IMR4064	36.1	2.69	DBLD	2.5	2939	41.0	3295	52000 CUP	2.790	....	....
A-XMR-2495	36.0	2.69	DBLD	2.5	2981	40.0	3280	58800 PSI	2.825	....	....
A-XMR-2015	34.9	2.55	DBLD	2.5	2977	38.8	3276	65000 PSI	2.825	....	....
IMR3031	34.8	2.65	DBLD	2.5	2920	39.5	3275	52000 CUP	2.790	....	....
BL-C(2)	35.0	2.26	DBLD	2.2	3016	38.0	3255	58125 PSI	2.730	.9747	.9526
H450	44.0	2.87	DBLD	2.8	3010	48.0	3249	59000 PSI	2.730	.9809	.9747
H380	40.0	2.76	DBLD	2.5	2979	44.0	3247	61875 PSI	2.775	.9788	.9499
v-N160	44.1	3.24	DBLD	3.1	2949	48.9c	3245	NA NA	2.815	....	....
RELODER12	34.9	2.41	DBLD	2.2	2970	38.0	3205	62300 PSI	2.790	....	....
WIN 760	35.9	2.39	DBLD	2.2	2738	42.8	3190	54500 PSI	2.825	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

6mm & 244 REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED	FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
80 Grain Jacketed Bullet (Continued)											
A-XMR-3100	45.9	3.43	NA	3.4	2896	51.0c	3186	49400 PSI	2.825	....	....
IMR4320	35.2	2.52	DBLD	2.5	2836	40.0	3180	52000 CUP	2.790	....	....
IMR4895	32.6	2.37	DBLD	2.2	2796	36.5	3105	51300 CUP	2.790	....	....
WIN MAG RIFLE	45.8	3.29	DBLD	3.1	2961	48.0	3105	48000 PSI	2.825	....	....
v-N140	35.5	2.60	DBLD	2.5	2833	39.2	3087	NA NA	2.815	....	....
85 Grain Jacketed Bullet											
H414	41.0	2.71	DBLD	2.5	3032	45.0	3304	61875 PSI	2.825	.9786	.9682
H4831	44.0	3.19	DBLD	3.1	2963	49.5c	3291	62625 PSI	2.825	....	....
H4350	41.0	2.97	DBLD	2.8	2948	46.0	3275	62000 PSI	2.825	.9791	.9540
H-VARGET	35.0	2.56	DBLD	2.5	2941	39.0	3235	62375 PSI	2.825	.9765	.9527
H450	44.0	2.87	DBLD	2.8	2991	48.0	3229	60000 PSI	2.730	.9809	.9734
H4895	35.0	2.55	DBLD	2.5	2966	38.0	3201	62500 PSI	2.825	.9748	.9546
BL-C(2)	35.0	2.26	DBLD	2.2	2983	37.0	3129	61500 PSI	2.730	....	....
H380	38.0	2.63	DBLD	2.5	2841	42.0	3126	62375 PSI	2.825	.9765	.9509
87 Grain Jacketed Bullet											
A-XMR-4064	37.8	2.85	DBLD	2.8	2976	42.0	3275	60600 PSI	2.810	....	....
A-XMR-4350	43.7	3.23	DBLD	3.1	2974	48.5c	3272	62000 PSI	2.810	....	....
ACCUR 2700	41.9	2.87	DBLD	2.8	2946	46.5	3241	59800 PSI	2.810	....	....
H4350	41.0	2.97	DBLD	2.8	2945	45.5	3240	62375 PSI	2.825	.9791	.9572
H414	40.0	2.64	DBLD	2.5	2951	44.0	3216	62125 PSI	2.825	.9786	.9599
H4831	43.5	3.15	DBLD	3.1	2948	48.0c	3213	62375 PSI	2.825	.9809	.9572
A-XMR-3100	45.9	3.43	NA	3.4	2918	51.0c	3210	56700 PSI	2.810	....	....
H-VARGET	35.5	2.60	DBLD	2.5	2941	38.5	3174	61875 PSI	2.825	.9748	.9564
H4895	33.7	2.45	DBLD	2.2	2874	37.4	3162	62125 PSI	2.825	.9746	.9449
v-N160	44.4	3.26	DBLD	3.1	2854	49.1c	3140	NA NA	2.815	....	....
A-XMR-2495	35.1	2.63	DBLD	2.5	2838	39.0	3122	59000 PSI	2.810	....	....
A-XMR-2015	34.7	2.53	DBLD	2.5	2836	38.5	3120	61700 PSI	2.810	....	....
H380	39.0	2.69	DBLD	2.5	2939	41.6	3112	61875 PSI	2.825	.9781	.9549
v-N165	47.5	3.38	NA	3.1	2827	52.7c	3110	NA NA	2.815	....	....
v-N140	34.5	2.53	DBLD	2.5	2677	38.0	2917	NA NA	2.815	....	....
v-N150	33.9	2.53	DBLD	2.5	2657	37.3	2894	NA NA	2.815	....	....
90 Grain Jacketed Bullet											
H450	43.5	2.84	DBLD	2.8	2899	47.5	3129	58750 PSI	2.730	.9811	.9470
H335	33.0	2.13	DBLD	1.9	2777	36.0	2997	61500 PSI	2.730	.9751	.9061
BL-C(2)	32.0	2.06	DBLD	1.9	2735	35.0	2980	57000 PSI	2.730	.9716	.9344
90 Grain Barnes X Bullet											
H1000	48.0	3.42	NA	3.4	3010	50.0c	3127	61875 PSI	2.775	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
90 Grain Barnes X Bullet (Continued)											
H4350	40.0	2.90	DBLD	2.8	2864	43.0	3062	63125 PSI	2.775	.9782	.9715
H4831	43.0	3.12	DBLD	3.1	2914	45.0	3027	62250 PSI	2.775	....	....
H414	40.0	2.64	DBLD	2.5	2827	43.0	3022	61375 PSI	2.775	.9782	.9669
H-VARGET	33.0	2.41	DBLD	2.2	2685	36.5	2954	62250 PSI	2.775	.9732	.9525
H4895	33.0	2.40	DBLD	2.2	2721	36.0	2937	62500 PSI	2.775	.9747	.9612
H380	37.0	2.56	DBLD	2.5	2675	40.5	2915	61875 PSI	2.775	.9756	.9612
95 Grain Jacketed Bullet											
A-XMR-4064	36.9	2.78	DBLD	2.5	2868	41.0	3156	61300 PSI	2.895	....	....
H4831	45.0	3.26	DBLD	3.1	2895	48.7c	3125	62750 PSI	2.825	....	....
H414	41.0	2.71	DBLD	2.5	2915	44.0	3117	62125 PSI	2.825	.9780	.9386
H4350	42.0	3.05	DBLD	2.8	2903	45.0	3103	62125 PSI	2.825	.9782	.9477
H1000	50.0c	3.56	NA	3.4	2984	52.0c	3094	57375 PSI	2.825	....	....
H-VARGET	34.0	2.49	DBLD	2.2	2776	37.0	2996	62000 PSI	2.825	.9750	.9353
100 Grain Jacketed Bullet											
RELODER22	43.9	3.06	DBLD	2.8	2970	48.0	3205	62500 PSI	2.800	....	....
RELODER19	42.1	2.97	DBLD	2.8	2914	46.0	3145	62500 PSI	2.800	....	....
IMR4831	40.0	2.94	DBLD	2.8	2760	45.5	3095	52000 CUP	2.735	....	....
H1000	47.0	3.35	NA	3.1	2909	50.0c	3080	62750 PSI	2.775	....	....
A-XMR-4064	36.0	2.72	DBLD	2.5	2790	40.0	3070	61300 PSI	2.825	....	....
H450	43.5	2.84	DBLD	2.8	2836	47.5	3061	62000 PSI	2.730	.9811	.9380
ACCUR 2700	41.0	2.81	DBLD	2.8	2780	45.5	3059	61400 PSI	2.825	....	....
IMR4350	38.3	2.81	DBLD	2.8	2725	43.5	3055	52000 CUP	2.735	....	....
H4831	43.0	3.12	DBLD	3.1	2845	46.0	3042	63375 PSI	2.775	.9779	.9860
A-XMR-4350	41.0	3.03	DBLD	2.8	2763	45.6	3041	61000 PSI	2.825	....	....
IMR7828	45.8	3.32	NA	3.1	2898	48.0c	3040	48000 CUP	2.735	....	....
H4350	39.0	2.83	DBLD	2.8	2779	42.5	2999	62625 PSI	2.775	.9784	.9572
H414	39.0	2.58	DBLD	2.5	2798	42.0	2991	63500 PSI	2.775	.9782	.9894
A-XMR-3100	43.2	3.23	DBLD	3.1	2710	48.0c	2981	55300 PSI	2.825	....	....
WIN MAG RIFLE	39.1	2.81	DBLD	2.8	2564	46.1	2960	53900 PSI	2.825	....	....
IMR4064	34.1	2.54	DBLD	2.5	2677	38.0	2945	51000 CUP	2.735	....	....
v-N165	43.4	3.09	DBLD	2.8	2672	48.1	2940	NA NA	2.815	....	....
H-VARGET	32.0	2.34	DBLD	2.2	2640	36.0	2933	62750 PSI	2.775	.9739	.9328
v-N160	41.7	3.06	DBLD	2.8	2685	45.8	2927	NA NA	2.815	....	....
IMR3031	32.1	2.45	DBLD	2.2	2609	36.5	2925	52000 CUP	2.735	....	....
A-XMR-2015	32.9	2.40	DBLD	2.2	2633	36.5	2896	63300 PSI	2.825	....	....
H4895	33.0	2.40	DBLD	2.2	2729	35.0	2889	61750 PSI	2.775	.9717	.9330
IMR4895	31.5	2.29	DBLD	2.2	2593	35.5	2880	51600 CUP	2.735	....	....

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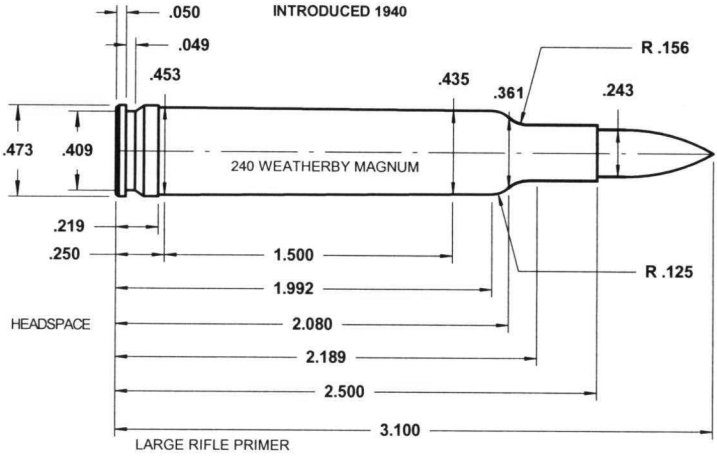
6mm & 244 REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
100 Grain Jacketed Bullet (Continued)											
IMR4320	33.0	2.36	DBLD	2.2	2588	37.0	2875	51300 CUP	2.735	....	....
105 Grain Jacketed Bullet											
H1000	49.0c	3.49	NA	3.4	2897	51.0c	3010	58500 PSI	2.825	....	....
H4831	43.0	3.12	DBLD	3.1	2781	46.5	3002	62875 PSI	2.825	.9786	.9529
H4350	40.0	2.90	DBLD	2.8	2794	43.2	2987	62625 PSI	2.825	.9794	.9568
H414	39.0	2.58	DBLD	2.5	2778	42.0	2970	62250 PSI	2.825	.9779	.9522
A-XMR-4064	35.1	2.65	DBLD	2.5	2699	39.0	2969	63700 PSI	2.825	....	....
ACCUR 2700	40.1	2.75	DBLD	2.5	2690	44.5	2960	60900 PSI	2.825	....	....
H450	41.5	2.71	DBLD	2.5	2711	45.0	2927	58625 PSI	2.730	.9783	.9528
A-XMR-4350	39.6	2.93	DBLD	2.8	2647	44.0	2912	59200 PSI	2.825	....	....
v-N165	42.3	3.01	DBLD	2.8	2650	46.5	2887	NA NA	2.815	....	....
H-VARGET	33.0	2.41	DBLD	2.2	2693	35.5	2879	62375 PSI	2.825	.9734	.9501
A-XMR-3100	42.3	3.16	DBLD	3.1	2582	47.0c	2840	51400 PSI	2.825	....	....
107 Grain Jacketed Bullet											
H1000	47.0	3.35	NA	3.1	2870	49.5c	3011	61875 PSI	2.950	....	....
H4831	43.0	3.12	DBLD	3.1	2795	46.0	2988	63000 PSI	2.950	.9780	.9572
H414	39.0	2.58	DBLD	2.5	2752	42.0	2942	63250 PSI	2.950	.9780	.9624
H4350	39.0	2.83	DBLD	2.8	2718	42.0	2906	61750 PSI	2.950	.9781	.9443
H-VARGET	31.5	2.30	DBLD	2.2	2569	35.5	2854	62750 PSI	2.950	.9740	.9247
115 Grain Jacketed Bullet											
A-XMR-3100	42.3	3.16	DBLD	3.1	2584	47.0c	2844	60200 PSI	2.825	....	....
A-XMR-4350	39.6	2.93	DBLD	2.8	2581	44.0	2839	62500 PSI	2.825	....	....
H1000	43.0	3.07	DBLD	2.8	2662	45.5	2793	62000 PSI	2.825	....	....
H4831	39.0	2.83	DBLD	2.8	2583	42.0	2761	62250 PSI	2.825	.9782	.9581
H4350	36.0	2.61	DBLD	2.5	2498	39.0	2696	62125 PSI	2.825	.9748	.9544
ACCUR 8700	45.9	3.16	DBLD	3.1	2306	51.0c	2537	40600 PSI	2.825	....	....

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240 WEATHERBY MAGNUM



Useful case capacity 3.90 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
60 Grain Jacketed Bullet										
H414	47.5	3.14	DBLD	3.1	3403	54.0	3817	NA	NA	3.060
H380	44.9	3.10	DBLD	2.8	3365	51.0	3775	NA	NA	3.060
H4895	41.4	3.01	DBLD	2.8	3140	47.0	3521	NA	NA	3.060
H4831	50.2	3.64	NA	3.4	3110	57.0c	3488	NA	NA	3.060
70 Grain Jacketed Bullet										
IMR7828	56.0c	4.06	NA	4.0	3505	56.0c	3505	47500	CUP	3.063
75 Grain Jacketed Bullet										
v-N550	46.6	3.23	DBLD	3.1	3177	52.7	3684	NA	NA	3.075
v-N160	48.9	3.59	NA	3.4	3115	54.7c	3628	NA	NA	3.075
v-N150	42.1	3.14	DBLD	3.1	3081	49.3	3569	NA	NA	3.075
H414	46.6	3.08	DBLD	2.8	3170	53.0	3555	NA	NA	3.075
H380	43.1	2.98	DBLD	2.8	3149	49.0	3531	NA	NA	3.075
H4831	49.3	3.57	NA	3.4	3079	56.0c	3453	NA	NA	3.075
H4895	40.5	2.95	DBLD	2.8	3072	46.0	3445	NA	NA	3.075
77 Grain Jacketed Bullet										
v-N550	46.8	3.24	DBLD	3.1	3138	52.3	3629	NA	NA	3.075
v-N160	48.9	3.59	NA	3.4	3112	54.5c	3593	NA	NA	3.075
v-N150	43.1	3.22	DBLD	3.1	3058	49.1	3543	NA	NA	3.075
80 Grain Jacketed Bullet										
A-XMR-3100	50.8	3.80	NA	3.7	3120	56.5c	3570	67000	PSI	3.100

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c = Compressed charge

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240 WEATHERBY MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
					....STARTING LOADS....					
80 Grain Jacketed Bullet (Continued)										
H414	45.8	3.02	DBLD	2.8	3134	52.0	3514	NA	NA	3.060
H4831	49.3	3.57	NA	3.4	3104	56.0c	3481	NA	NA	3.060
A-XMR-4350	45.9	3.40	NA	3.1	3062	51.0	3480	65200	PSI	3.100
H380	42.2	2.92	DBLD	2.8	3077	48.0	3451	NA	NA	3.060
H4895	38.7	2.82	DBLD	2.8	2995	44.0	3359	NA	NA	3.060
H1000	57.0c	4.06	NA	4.0	2008	59.0c	3207	NA	NA	3.060
ACCUR 8700	56.7	3.90	NA	3.7	2727	63.0c	3099	46100	PSI	3.100
85 Grain Jacketed Bullet										
H4831	49.3	3.57	NA	3.4	3085	56.0c	3460	NA	NA	3.060
H414	44.9	2.97	DBLD	2.8	3041	51.0	3409	NA	NA	3.060
H380	41.4	2.86	DBLD	2.8	2982	47.0	3344	NA	NA	3.060
H1000	51.9	3.70	NA	3.4	2824	59.0c	3167	NA	NA	3.060
87 Grain Jacketed Bullet										
A-XMR-3100	50.0	3.74	NA	3.7	3032	55.5c	3446	64900	PSI	3.100
A-XMR-4350	45.0	3.33	NA	3.1	2968	50.0	3373	65200	PSI	3.100
IMR7828	51.1	3.70	NA	3.4	3173	54.5c	3360	50700	CUP	3.063
ACCUR 8700	56.7	3.90	NA	3.7	2717	63.0c	3088	49300	PSI	3.100
90 Grain Jacketed Bullet										
v-N165	50.0	3.56	NA	3.4	2902	57.7c	3422	NA	NA	3.075
H4831	48.4	3.51	NA	3.4	3027	55.0c	3394	NA	NA	3.060
v-N160	46.0	3.38	NA	3.1	2882	53.1	3363	NA	NA	3.075
v-N550	42.3	2.93	DBLD	2.8	2889	50.2	3360	NA	NA	3.075
H414	43.1	2.85	DBLD	2.8	2949	49.0	3307	NA	NA	3.060
H380	40.5	2.80	DBLD	2.5	2932	46.0	3287	NA	NA	3.060
H1000	57.0c	4.06	NA	4.0	3051	59.0c	3140	NA	NA	3.060
95 Grain Jacketed Bullet										
A-XMR-3100	48.2	3.61	NA	3.4	2871	53.5c	3262	62300	PSI	3.065
A-XMR-4350	44.1	3.26	DBLD	3.1	2852	49.0	3241	65500	PSI	3.065
ACCUR 8700	55.8	3.84	NA	3.7	2648	62.0c	3009	50300	PSI	3.065
100 Grain Jacketed Bullet										
v-N165	49.1	3.50	NA	3.4	2765	56.1c	3264	NA	NA	3.075
IMR7828	48.9	3.54	NA	3.4	2973	53.5	3240	52000	CUP	3.063
v-N550	42.1	2.91	DBLD	2.8	2751	49.2	3205	NA	NA	3.075
H4831	46.6	3.38	NA	3.1	2856	53.0	3202	NA	NA	3.060
A-XMR-3100	46.8	3.50	NA	3.4	2798	52.0	3179	63600	PSI	3.095
v-N160	44.1	3.24	DBLD	3.1	2775	50.8	3166	NA	NA	3.075
A-XMR-4350	43.2	3.20	DBLD	3.1	2762	48.0	3139	63600	PSI	3.095

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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240 WEATHERBY MAGNUM (Continued)

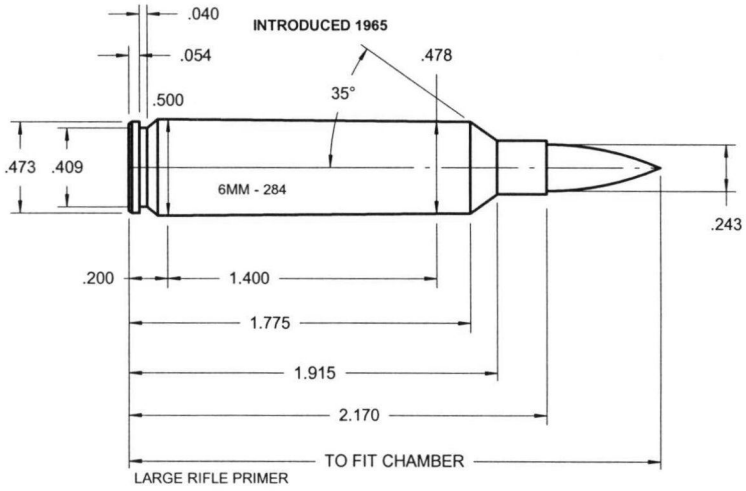
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED	FPS	Press Units		Min. OAL
100 Grain Jacketed Bullet (Continued)										
H1000	51.9	3.70	NA	3.4	2784	59.0c	3122	NA	NA	3.060
H414	41.4	2.73	DBLD	2.5	2747	47.0	3080	NA	NA	3.060
ACCUR 8700	55.8	3.84	NA	3.7	2680	62.0c	3045	56100	PSI	3.095
H380	38.7	2.68	DBLD	2.5	2684	44.0	3010	NA	NA	3.060
105 Grain Jacketed Bullet										
v-N165	47.5	3.38	NA	3.1	2746	55.8c	3215	NA	NA	3.063
v-N560	46.3	3.19	DBLD	3.1	2767	54.0	3192	NA	NA	3.063
v-N160	38.9	2.86	DBLD	2.8	2575	49.4	3107	NA	NA	3.063
115 Grain Jacketed Bullet										
H1000	51.0	3.64	NA	3.4	2734	58.0c	3066	NA	NA	3.050
H870	48.4	3.32	NA	3.1	2568	55.0	2880	NA	NA	3.050
H4831	40.5	2.93	DBLD	2.8	2479	46.0	2779	NA	NA	3.050

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6mm-284



Useful case capacity 3.97 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
60 Grain Jacketed Bullet									
H4831	54.0	3.91	NA	3.7	3562	58.0c	3807	51800 CUP	2.765
H414	49.0	3.24	DBLD	3.1	3646	51.0	3788	48500 CUP	2.765
H380	46.0	3.18	DBLD	3.1	3489	50.0	3765	51300 CUP	2.765
70 Grain Jacketed Bullet									
H4831	52.0	3.77	NA	3.7	3519	56.0c	3762	51800 CUP	2.765
H450	52.0	3.40	NA	3.1	3441	56.0	3679	50700 CUP	2.765
H414	47.0	3.11	DBLD	3.1	3396	51.0	3667	51800 CUP	2.765
H380	42.0	2.90	DBLD	2.8	3122	46.0	3402	50200 CUP	2.765
75 Grain Jacketed Bullet									
H4831	52.0	3.77	NA	3.7	3519	55.0c	3691	50200 CUP	2.795
H414	47.0	3.11	DBLD	3.1	3388	49.0	3519	48500 CUP	2.795
H380	42.0	2.90	DBLD	2.8	3097	46.0	3375	50200 CUP	2.795
80 Grain Jacketed Bullet									
H4831	51.0	3.70	NA	3.4	3445	55.0c	3683	51300 CUP	2.795
H414	45.0	2.97	DBLD	2.8	3286	48.0	3480	50700 CUP	2.795
H870	60.0c	4.12	NA	4.0	3281	60.0c	3281	40800 CUP	2.795
85 Grain Jacketed Bullet									
H4831	49.0	3.55	NA	3.4	3216	53.0	3471	51800 CUP	2.795
H414	44.0	2.91	DBLD	2.8	3145	48.0	3394	51800 CUP	2.795
90 Grain Jacketed Bullet									
H4831	49.0	3.55	NA	3.4	3191	52.0	3380	50700 CUP	2.795

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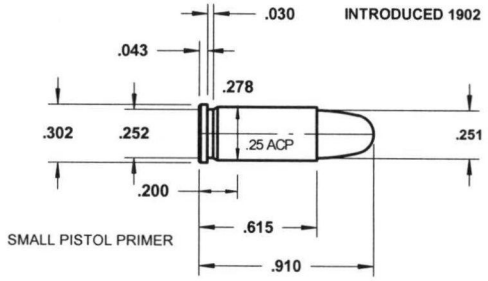
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
90 Grain Jacketed Bullet (Continued)									
H1000	54.0	3.85	NA	3.7	3160	57.0c	3314	47000 CUP	2.795
H870	60.0c	4.12	NA	4.0	3249	60.0c	3249	41400 CUP	2.795
100 Grain Jacketed Bullet									
H1000	52.0	3.71	NA	3.7	3078	55.0	3229	48400 CUP	2.795
H4831	46.0	3.33	NA	3.1	3029	49.0	3207	49100 CUP	2.795
H870	59.0c	4.05	NA	4.0	3174	59.0c	3174	42400 CUP	2.795
115 Grain Jacketed Bullet									
H870	54.0	3.70	NA	3.4	2822	56.0	2932	47400 CUP	2.765
H1000	48.0	3.42	NA	3.4	2737	51.0	2898	49400 CUP	2.765
H4831	43.0	3.12	DBLD	3.1	2708	45.0	2813	48500 CUP	2.765

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25 AUTOMATIC



Useful case capacity 0.29 cc

....STARTING LOADS....

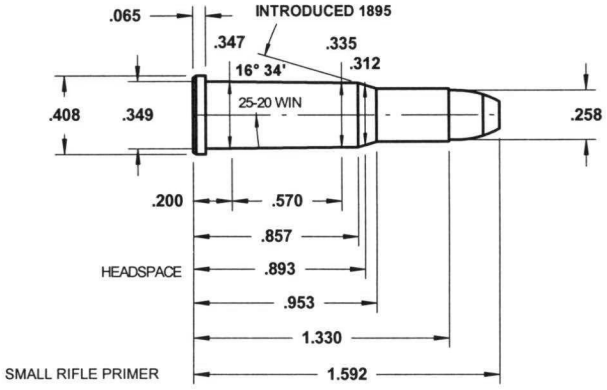
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
35 Grain XTP									
TITEGROUP	1.5	.13	.12	NA	865	1.7	970	17300 CUP	0.860
HP38	1.6	.15	.15	NA	867	1.8	963	17900 CUP	0.860
UNIVERSAL	1.5	.16	.15	NA	822	1.7	922	16200 CUP	0.860
50 Grain Bullet									
GREEN DOT	1.4	.18	.18	.17	785	1.4	785	15400 PSI	0.875
BULLSEYE	1.3	.14	NA	NA	760	1.3	760	15000 PSI	0.875
RED DOT	1.1	.16	.15	NA	740	1.1	740	15500 PSI	0.875
HERCO	1.7	.19	.18	.17	735	1.7	735	15600 PSI	0.875
ACCUR #2	1.4	.12	.12	NA	640	1.6	717	13900 CUP	0.900
50 Grain Jacketed Bullet									
v-N310	0.9	.11	NA	NA	671	1.1	804	NA NA	0.906
HP38	1.3	.12	.12	NA	697	1.5	788	17900 CUP	0.900
UNIQUE	1.7	.19	.18	.17	760	1.7	760	14800 PSI	0.875
TITEGROUP	1.1	.09	NA	NA	652	1.3	752	17200 CUP	0.900
UNIVERSAL	1.2	.13	.12	NA	657	1.4	751	16600 CUP	0.900

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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25-20 WINCHESTER

Use only in guns that are safe with smokeless powder.



Useful case capacity 1.06 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
60 Grain Jacketed Bullet										
WIN 680	12.3	.81	.76	.7	2193	13.0	2300	26000	CUP	1.590
ACCUR 1680	12.6	.83	.82	NA	1979	14.0	2249	25800	CUP	1.592
H4198	12.0	.90	.88	NA	1814	14.2c	2101	25800	CUP	1.600
H4227	9.6	.74	.71	.7	1854	10.2	1962	26700	CUP	1.600
ACCUR #9	7.7	.51	.49	.5	1726	8.5	1961	27700	CUP	1.592
A-XMR-2015	14.4	1.05	1.02	1.0	1721	16.0c	1956	25100	CUP	1.592
ACC XMP5744	10.3	.77	.76	.7	1719	11.4	1953	26200	CUP	1.592
H110	8.5	.56	.53	.5	1831	9.3	1931	26600	CUP	1.600
H322	14.0	1.01	.95	1.0	1799	15.0c	1900	25700	CUP	1.600
HS7	6.5	.44	.43	NA	1622	7.0	1724	27100	CUP	1.600
65 Grain Lead Bullet										
ACCUR 1680	12.0	.79	.76	.7	1818	13.3	2138	28000	CUP	1.592
A-XMR-2015	13.5	.99	.95	NA	1670	15.0c	1898	24600	CUP	1.592
ACC XMP5744	9.9	.74	.71	.7	1649	11.0	1874	26400	CUP	1.592
ACCUR #9	7.2	.47	.46	NA	1606	8.0	1825	26500	CUP	1.592
70 Grain Jacketed Bullet										
v-N110	8.7	.73	.71	.7	1784	9.9	2000	NA	NA	1.591
71 Grain Lead Bullet										
HS7	4.8	.33	.32	.3	1202	5.8	1465	22800	CUP	1.545
HS6	4.3	.31	.30	.3	1206	5.3	1428	21900	CUP	1.545

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25-20 WINCHESTER (Continued)

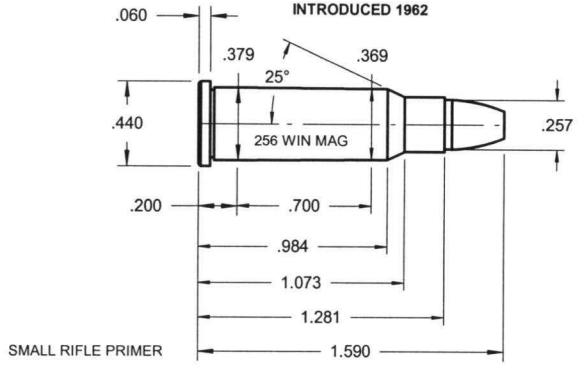
Use only in guns that are safe with smokeless powder.

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
71 Grain Lead Bullet (Continued)									
H4227	6.0	.46	.46	NA	1146	7.0	1346	18200 CUP	1.545
75 Grain Jacketed Bullet									
ACCUR 1680	11.3	.74	.71	.7	1745	12.5	1983	27600 CUP	1.585
H4198	10.5	.79	.76	.7	1530	12.8	1877	27300 CUP	1.575
ACC XMP5744	10.1	.76	.76	.7	1628	11.2	1850	28000 CUP	1.585
A-XMR-2015	13.1	.96	.95	NA	1624	14.5c	1846	25700 CUP	1.585
H4227	8.3	.64	.61	NA	1521	9.3	1741	27900 CUP	1.575
ACCUR #9	7.2	.47	.46	NA	1510	8.0	1716	27100 CUP	1.585
H322	12.0	.87	.82	NA	1523	13.5	1702	26700 CUP	1.575
H110	7.4	.49	.49	NA	1513	8.4	1691	28000 CUP	1.575
85 Grain Lead Bullet									
HS7	4.5	.31	.30	.3	1085	5.8	1407	26200 CUP	1.600
HS6	4.5	.32	.32	.3	1261	5.3	1391	25300 CUP	1.600
H4227	6.0	.46	.46	NA	1129	7.0	1317	20500 CUP	1.600
86 Grain Bullet									
HS6	4.8	.34	.34	.3	1214	5.5	1362	NA NA	1.590
86 Grain Jacketed Bullet									
WIN 680	11.0	.72	.71	.7	1800	11.0	1800	23500 CUP	1.590
H4198	10.5	.79	.76	.7	1535	11.5	1673	26500 CUP	1.600
H4227	8.0	.62	.61	NA	1445	8.6	1545	27600 CUP	1.600
H322	11.3	.82	.82	.7	1358	12.0	1517	26300 CUP	1.600
H110	7.0	.46	.46	NA	1405	7.5	1502	27100 CUP	1.600
RELODER 7	11.5	.84	.82	NA	1460	11.5	1460	15000 CUP	1.590
HERC 2400	8.0	.59	.57	NA	1340	8.0	1340	18300 CUP	1.590
86 Grain Lead Bullet									
WIN 680	10.7	.70	.66	.7	1841	11.1	1895	25500 CUP	1.590
90 Grain Lead Bullet									
A-XMR-2015	11.7	.85	.82	NA	1559	13.0	1772	28000 CUP	1.615
ACCUR 1680	9.6	.63	.61	NA	1552	10.7	1764	23800 CUP	1.615
ACC XMP5744	9.0	.68	.66	NA	1474	10.0	1675	27400 CUP	1.615
ACCUR #9	6.6	.43	.43	NA	1429	7.3	1624	27000 CUP	1.615

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256 WINCHESTER MAG



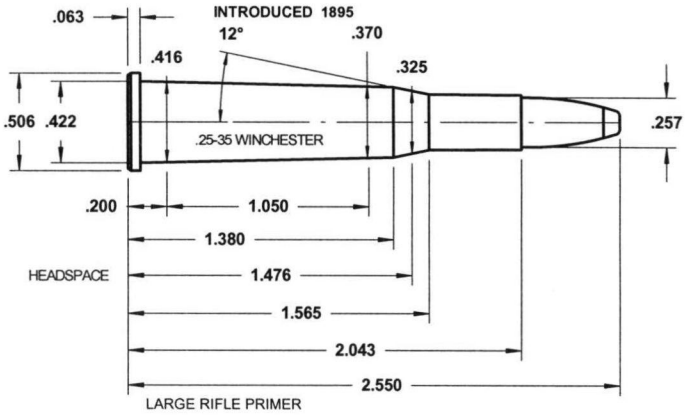
Useful case capacity 1.17 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
60 Grain Jacketed Bullet										
H4198	15.8c	1.19	1.18	NA	2491	18.0c	2794	NA	NA	1.560
ACCUR 1680	16.2	1.06	1.02	1.0	2423	18.0c	2753	40900	CUP	1.580
H110	12.3	.81	.76	.7	2429	14.0	2724	NA	NA	1.560
A-XMR-2015	18.0c	1.31	1.26	1.3	2138	20.0c	2430	30600	CUP	1.580
H4227	14.1	1.08	1.02	1.0	2128	16.0c	2386	NA	NA	1.560
65 Grain Lead Bullet										
ACCUR 1680	13.5	.88	.88	NA	2034	15.0	2311	29300	CUP	1.585
A-XMR-2015	16.2c	1.18	1.18	NA	1952	18.0c	2218	27000	CUP	1.585
75 Grain Jacketed Bullet										
A-XMR-2015	18.0c	1.31	1.26	1.3	2133	20.0c	2424	36100	CUP	1.575
ACCUR 1680	14.9	.98	.95	NA	2120	16.5	2409	37400	CUP	1.575
H4198	14.1	1.06	1.02	1.0	2076	16.0c	2327	NA	NA	1.540
H110	13.2	.87	.82	NA	1943	15.0	2180	NA	NA	1.740
H4227	13.2	1.02	1.02	1.0	1891	15.0	2120	NA	NA	1.740
87 Grain Jacketed Bullet										
H4198	13.2	.99	.95	NA	1955	15.0	2192	NA	NA	1.775
H110	11.9	.78	.76	.7	1827	13.5	2049	NA	NA	1.825
H4227	12.3	.95	.95	NA	1820	14.0	2040	NA	NA	1.825

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25-35 WINCHESTER



Useful case capacity 2.14 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
60 Grain Jacketed Bullet										
ACCUR 2520	28.8	1.97	DBLD	1.9	2674	32.0c	3039	35000	CUP	2.300
A-XMR-2495	27.5	2.06	DBLD	1.9	2487	30.5c	2826	29800	CUP	2.300
H335	27.0	1.74	DBLD	1.6	2469	30.0	2792	NA	NA	2.305
BL-C(2)	27.0	1.74	DBLD	1.6	2457	30.0	2786	NA	NA	2.305
H4895	27.0	1.97	DBLD	1.9	2479	30.0c	2729	NA	NA	2.305
ACCUR 2700	30.4	2.08	DBLD	1.9	2559	32.0c	2722	33800	CUP	2.300
H4198	22.0	1.65	DBLD	1.6	2494	24.0	2717	NA	NA	2.305
A-XMR-4350	27.0	2.00	DBLD	1.9	1930	30.0c	2193	22300	CUP	2.300
70 Grain Jacketed Bullet										
v-N120	20.7	1.60	DBLD	1.6	2632	23.5	2950	NA	NA	2.305
75 Grain Jacketed Bullet										
ACCUR 2520	26.1	1.78	DBLD	1.6	2372	29.0	2696	33400	CUP	2.310
A-XMR-2495	26.1	1.95	DBLD	1.9	2346	29.0c	2666	32900	CUP	2.310
ACCUR 2700	30.4	2.08	DBLD	1.9	2486	32.0c	2645	37000	CUP	2.310
A-XMR-4350	27.0	2.00	DBLD	1.9	1932	30.0c	2195	27500	CUP	2.310
86 Grain Jacketed Bullet										
v-N120	20.0	1.55	DBLD	NA	2310	22.7	2590	NA	NA	2.519
87 Grain Jacketed Bullet										
H4895	26.2	1.91	DBLD	1.9	2439	29.0	2683	NA	NA	2.300
H335	26.2	1.69	DBLD	1.6	2435	29.0	2679	NA	NA	2.300

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c = Compressed charge
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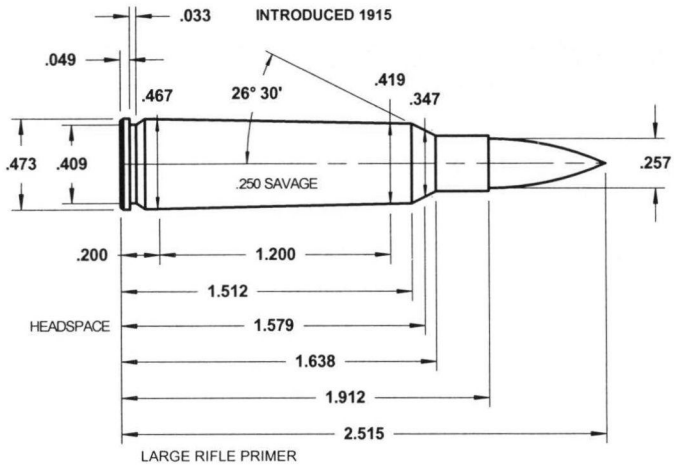
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
87 Grain Jacketed Bullet (Continued)										
BL-C(2)	26.2	1.69	DBLD	1.6	2424	29.0	2666	NA	NA	2.300
H4198	19.9	1.49	1.46	1.3	2216	22.0	2437	NA	NA	2.300
93 Grain Jacketed Bullet										
v-N110	13.5	1.12	1.09	1.0	1961	15.3	2200	NA	NA	2.500
100 Grain Jacketed Bullet										
H4895	25.3	1.84	DBLD	1.6	2169	28.0	2386	NA	NA	2.300
H335	25.3	1.63	DBLD	1.6	2163	28.0	2380	NA	NA	2.300
BL-C(2)	25.3	1.63	DBLD	1.6	2149	28.0	2364	NA	NA	2.300
H4198	19.0	1.42	1.36	1.3	1947	21.0	2142	NA	NA	2.300
117 Grain Jacketed Bullet										
v-N140	23.9	1.75	DBLD	1.6	2105	27.2	2360	NA	NA	2.600
ACCUR 2520	22.5	1.54	1.46	NA	1952	25.0	2218	33900	CUP	2.545
H4895	24.0	1.75	DBLD	1.6	1993	27.0	2207	NA	NA	2.600
WIN 760	26.9	1.79	DBLD	1.6	2077	28.5	2200	34500	CUP	2.300
H335	24.0	1.55	DBLD	NA	1974	27.0	2199	NA	NA	2.600
BL-C(2)	24.0	1.55	DBLD	NA	1969	27.0	2188	NA	NA	2.600
A-XMR-4350	27.0	2.00	DBLD	1.9	1925	30.0c	2187	33600	CUP	2.545
A-XMR-2495	22.5	1.68	DBLD	1.6	1919	25.0	2181	32300	CUP	2.545
ACCUR 2700	25.7	1.76	DBLD	1.6	1987	27.0	2114	37000	CUP	2.545
H4198	18.0	1.35	1.26	1.3	1819	20.0	2014	NA	NA	2.600

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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250 SAVAGE



Useful case capacity 2.80 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
60 Grain Jacketed Bullet										
H4895	37.0	2.69	DBLD	2.5	3409	40.0c	3667	NA	NA	2.185
H322	33.0	2.39	DBLD	2.2	3405	36.0	3647	NA	NA	2.185
BL-C(2)	38.0	2.45	DBLD	2.2	3329	40.0	3626	NA	NA	2.185
H335	37.0	2.39	DBLD	2.2	3306	39.0	3609	NA	NA	2.185
H414	42.0	2.78	DBLD	2.5	3459	44.0c	3565	NA	NA	2.185
H380	41.0c	2.83	DBLD	2.8	3406	43.0c	3533	NA	NA	2.185
H4198	30.0	2.25	DBLD	2.2	3202	33.0	3515	NA	NA	2.185
WIN 748	39.9	2.61	DBLD	2.5	3404	40.8	3470	40500	CUP	2.320
H4350	39.0c	2.83	DBLD	2.8	3210	42.0c	3394	NA	NA	2.185
WIN 760	44.0c	2.93	DBLD	2.8	3330	44.0c	3330	39000	CUP	2.320
75 Grain Jacketed Bullet										
H414	42.0	2.78	DBLD	2.5	3247	44.0c	3460	NA	NA	2.450
H380	40.0	2.76	DBLD	2.5	3169	42.0c	3393	NA	NA	2.450
H4895	35.0	2.55	DBLD	2.5	3212	38.0	3380	NA	NA	2.450
RELODER15	34.7	2.45	DBLD	2.2	3074	38.3	3350	43700	CUP	2.400
BL-C(2)	36.0	2.32	DBLD	2.2	3155	38.0	3299	NA	NA	2.450
H335	35.0	2.26	DBLD	2.2	3136	37.0	3258	NA	NA	2.450
RELODER12	34.2	2.36	DBLD	2.2	2954	37.8	3250	43800	CUP	2.400
H4350	39.0c	2.83	DBLD	2.8	3080	42.0c	3222	NA	NA	2.450
H322	31.0	2.25	DBLD	2.2	3031	34.0	3194	NA	NA	2.450

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
75 Grain Jacketed Bullet (Continued)										
ACCUR 2460	30.6	2.01	DBLD	1.9	2798	34.0	3179	44300	CUP	2.465
A-XMR-4064	32.4	2.45	DBLD	2.2	2789	36.0	3170	41500	CUP	2.465
A-XMR-2495	30.6	2.29	DBLD	2.2	2789	34.0	3169	42600	CUP	2.465
H4198	27.0	2.03	DBLD	1.9	2872	30.0	3169	NA	NA	2.450
ACCUR 2520	30.6	2.09	DBLD	1.9	2746	34.0	3121	41300	CUP	2.465
A-XMR-2015	28.4	2.07	DBLD	1.9	2741	31.5	3115	41400	CUP	2.465
ACCUR 2230	30.2	1.98	DBLD	1.9	2740	33.5	3114	43800	CUP	2.465
ACCUR 2700	35.6	2.44	DBLD	2.2	2859	37.5	3041	43100	CUP	2.465
A-XMR-4350	36.9	2.73	DBLD	2.5	2670	41.0c	3034	43600	CUP	2.465
A-XMR-3100	36.9	2.76	DBLD	2.5	2407	41.0c	2735	36500	CUP	2.465
87 Grain Jacketed Bullet										
H414	40.0	2.64	DBLD	2.5	3138	42.0	3297	NA	NA	2.450
H380	39.0	2.69	DBLD	2.5	3114	41.0c	3210	NA	NA	2.450
H4895	34.0	2.48	DBLD	2.2	3031	37.0	3208	NA	NA	2.450
RELODER15	32.5	2.30	DBLD	2.2	2850	36.0	3135	43800	CUP	2.450
BL-C(2)	34.0	2.19	DBLD	1.9	2956	36.0	3114	NA	NA	2.450
IMR4064	31.2	2.33	DBLD	2.2	2742	35.5	3075	45000	CUP	2.515
H335	33.0	2.13	DBLD	1.9	2918	35.0	3075	NA	NA	2.450
H4350	38.0	2.76	DBLD	2.5	2816	41.0c	3063	NA	NA	2.450
IMR3031	30.5	2.32	DBLD	2.2	2777	34.0	3055	44200	CUP	2.515
H322	29.0	2.10	DBLD	1.9	2763	32.0	3044	NA	NA	2.450
IMR4895	30.4	2.22	DBLD	2.2	2675	34.5	3000	44900	CUP	2.515
WIN 760	36.0	2.39	DBLD	2.2	2739	39.5	2985	43500	CUP	2.320
IMR4320	31.2	2.24	DBLD	2.2	2654	35.5	2975	45000	CUP	2.515
RELODER19	37.9	2.68	DBLD	2.5	2750	41.0c	2940	42800	CUP	2.450
WIN 748	34.8	2.28	DBLD	2.2	2857	36.0	2940	41000	CUP	2.320
IMR4350	39.0c	2.87	DBLD	2.8	2905	39.0c	2905	39500	CUP	2.515
IMR4198	24.8	1.96	DBLD	1.9	2613	27.5	2875	43900	CUP	2.515
IMR4831	39.0c	2.87	DBLD	2.8	2740	39.0c	2740	35400	CUP	2.515
IMR4227	18.9	1.45	1.36	1.3	2292	21.5	2570	45000	CUP	2.515
SR4759	18.2	1.80	DBLD	1.6	2264	20.5	2515	44700	CUP	2.515
90 Grain Jacketed Bullet										
H414	37.8	2.50	DBLD	2.2	2997	42.0	3297	NA	NA	2.320
H380	36.9	2.55	DBLD	2.5	2918	41.0c	3210	NA	NA	2.320
H4895	33.3	2.42	DBLD	2.2	2916	37.0	3208	NA	NA	2.320
BL-C(2)	32.4	2.09	DBLD	1.9	2831	36.0	3114	NA	NA	2.320
H335	31.5	2.03	DBLD	1.9	2795	35.0	3075	NA	NA	2.320

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
					....STARTING LOADS....					
90 Grain Jacketed Bullet (Continued)										
H4350	36.9	2.68	DBLD	2.5	2784	41.0c	3063	NA	NA	2.320
H322	28.8	2.09	DBLD	1.9	2766	32.0	3044	NA	NA	2.320
A-XMR-4064	31.5	2.38	DBLD	2.2	2637	35.0	2997	42400	CUP	2.460
A-XMR-2495	29.3	2.19	DBLD	1.9	2598	32.5	2952	42500	CUP	2.460
A-XMR-4350	36.0	2.66	DBLD	2.5	2579	40.0c	2931	44800	CUP	2.460
A-XMR-2015	27.5	2.01	DBLD	1.9	2578	30.5	2929	41400	CUP	2.460
ACCUR 2230	28.8	1.89	DBLD	1.6	2556	32.0	2905	41000	CUP	2.460
ACCUR 2520	29.3	2.00	DBLD	1.9	2554	32.5	2902	41200	CUP	2.460
ACCUR 2460	28.8	1.89	DBLD	1.6	2549	32.0	2897	41200	CUP	2.460
H450	37.8	2.47	DBLD	2.2	2597	42.0	2857	NA	NA	2.320
ACCUR 2700	34.2	2.34	DBLD	2.2	2680	36.0	2851	43800	CUP	2.460
A-XMR-3100	36.9	2.76	DBLD	2.5	2403	41.0c	2731	41900	CUP	2.460
90 Grain Lead Bullet										
ACC XMP5744	15.0	1.13	1.09	1.0	1929	19.0	2291	30600	CUP	2.230
100 Grain Jacketed Bullet										
H414	38.0	2.51	DBLD	2.5	2911	40.0	3102	NA	NA	2.500
H380	36.0	2.49	DBLD	2.2	2901	38.0	2998	NA	NA	2.500
H4895	32.0	2.33	DBLD	2.2	2686	35.0	2988	NA	NA	2.500
H335	32.0	2.06	DBLD	1.9	2804	34.0	2921	NA	NA	2.500
BL-C(2)	32.0	2.06	DBLD	1.9	2770	34.0	2900	NA	NA	2.500
H4831	41.0c	2.97	DBLD	2.8	2717	42.0c	2890	NA	NA	2.500
H4350	38.0	2.76	DBLD	2.5	2778	40.0c	2881	NA	NA	2.500
IMR4064	31.0	2.31	DBLD	2.2	2613	34.5	2875	44100	CUP	2.515
IMR3031	29.4	2.24	DBLD	2.2	2580	33.0	2865	44500	CUP	2.515
A-XMR-4064	31.5	2.38	DBLD	2.2	2520	35.0	2864	41500	CUP	2.500
RELODER19	36.5	2.58	DBLD	2.5	2620	40.0c	2855	43400	CUP	2.500
IMR4895	29.9	2.18	DBLD	1.9	2536	34.0	2845	45000	CUP	2.515
WIN 748	32.3	2.12	DBLD	1.9	2587	35.5	2820	43500	CUP	2.320
WIN 760	36.6	2.44	DBLD	2.2	2662	38.8	2820	42000	CUP	2.320
A-XMR-2015	27.0	1.97	DBLD	1.9	2457	30.0	2792	43100	CUP	2.500
IMR4320	30.4	2.17	DBLD	1.9	2484	34.5	2785	45000	CUP	2.515
A-XMR-4350	35.1	2.60	DBLD	2.5	2447	39.0c	2781	42500	CUP	2.500
IMR4350	36.8	2.71	DBLD	2.5	2676	38.5c	2780	41400	CUP	2.515
A-XMR-2495	28.8	2.16	DBLD	1.9	2435	32.0	2767	43600	CUP	2.500
ACCUR 2520	28.8	1.97	DBLD	1.9	2429	32.0	2760	42300	CUP	2.500
H450	36.0	2.35	DBLD	2.2	2479	40.0	2727	NA	NA	2.320
ACCUR 2700	33.3	2.28	DBLD	2.2	2549	35.0	2712	42000	CUP	2.500

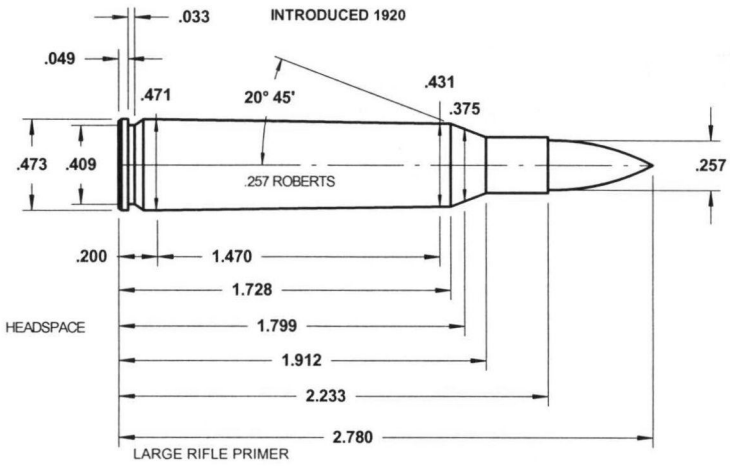
CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet (Continued)										
H322	26.0	1.88	DBLD	1.6	2488	29.0	2709	NA	NA	2.500
ACCUR 2460	27.9	1.83	DBLD	1.6	2365	31.0	2687	38700	CUP	2.500
IMR4198	23.8	1.88	DBLD	1.6	2394	27.0	2685	45000	CUP	2.515
A-XMR-3100	36.9	2.76	DBLD	2.5	2347	41.0c	2667	40600	CUP	2.500
ACCUR 2230	27.0	1.77	DBLD	1.6	2343	30.0	2662	40400	CUP	2.500
IMR4831	38.5c	2.83	DBLD	2.8	2615	38.5c	2615	37000	CUP	2.515
IMR4227	19.3	1.48	1.46	1.3	2205	21.0	2380	43100	CUP	2.515
SR4759	18.1	1.80	DBLD	1.6	2101	20.0	2290	43700	CUP	2.515
105 Grain Lead Bullet										
ACC XMP5744	15.0	1.13	1.09	1.0	1840	19.0	2204	32900	CUP	2.325
117 Grain Jacketed Bullet										
H4831	41.0c	2.97	DBLD	2.8	2604	42.0c	2789	NA	NA	2.510
H414	35.0	2.31	DBLD	2.2	2494	37.0	2719	NA	NA	2.510
H380	33.0	2.28	DBLD	2.2	2562	35.0	2718	NA	NA	2.510
H4350	36.0	2.61	DBLD	2.5	2545	38.0	2654	NA	NA	2.510
A-XMR-3100	36.9	2.76	DBLD	2.5	2334	41.0c	2652	43700	CUP	2.515
A-XMR-4350	33.3	2.46	DBLD	2.2	2311	37.0	2626	42300	CUP	2.515
A-XMR-4064	28.8	2.17	DBLD	1.9	2289	32.0	2602	42000	CUP	2.515
A-XMR-2015	25.7	1.88	DBLD	1.6	2262	28.5	2571	45000	CUP	2.515
A-XMR-2495	27.0	2.02	DBLD	1.9	2259	30.0	2567	45000	CUP	2.515
ACCUR 2520	27.0	1.84	DBLD	1.6	2225	30.0	2528	44300	CUP	2.515
H450	35.6	2.32	DBLD	2.2	2287	39.5	2516	NA	NA	2.320
ACCUR 2230	26.1	1.71	DBLD	1.6	2208	29.0	2509	43000	CUP	2.515
ACCUR 2460	26.6	1.74	DBLD	1.6	2198	29.5	2498	40800	CUP	2.515
ACCUR 2700	31.4	2.15	DBLD	1.9	2340	33.0	2489	41100	CUP	2.515
120 Grain Jacketed Bullet										
RELODER22	36.3	2.53	DBLD	2.5	2459	40.0	2680	43600	CUP	2.510
H4350	36.0	2.61	DBLD	2.5	2545	38.0	2654	NA	NA	2.510
125 Grain Jacketed Bullet										
H4831	39.0c	2.83	DBLD	2.8	2530	41.0c	2736	NA	NA	2.510
H414	34.0	2.25	DBLD	2.2	2458	36.0	2672	NA	NA	2.510
H380	32.0	2.21	DBLD	2.2	2482	34.0	2660	NA	NA	2.510
H4350	35.0	2.54	DBLD	2.5	2494	37.0	2619	NA	NA	2.510

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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257 REMINGTON ROBERTS



Useful case capacity 3.45 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
60 Grain Jacketed Bullet											
H335	44.0	2.84	DBLD	2.8	3467	48.0	3885	53824 PSI	2.535	.9720	.8922
BL-C(2)	44.0	2.84	DBLD	2.8	3469	48.0	3834	53244 PSI	2.535	.9752	.8991
H414	49.5	3.27	DBLD	3.1	3566	54.0c	3818	50808 PSI	2.535	....	....
H4895	42.0	3.06	DBLD	2.8	3376	46.0	3805	52200 PSI	2.535	.9705	.9497
H380	45.0	3.11	DBLD	3.1	3497	49.0	3752	53592 PSI	2.535	.9826	.9585
H4350	48.0c	3.48	NA	3.4	3290	51.0c	3612	51852 PSI	2.535	....	....
H4831	49.0c	3.55	NA	3.4	2847	53.0c	3382	38976 PSI	2.535	....	....
75 Grain Jacketed Bullet											
H380	44.0	3.04	DBLD	2.8	3258	48.0	3563	52896 PSI	2.795	.9778	.9542
H4895	40.5	2.95	DBLD	2.8	3201	44.0	3561	54868 PSI	2.795	.9699	.9161
H414	48.0	3.17	DBLD	3.1	3343	52.0	3555	52548 PSI	2.795	.9849	.9519
H335	42.0	2.71	DBLD	2.5	3161	46.0	3548	52200 PSI	2.795	....	....
BL-C(2)	42.0	2.71	DBLD	2.5	3094	46.0	3531	54172 PSI	2.795	.9675	.9084
H-VARGET	37.0	2.70	DBLD	2.5	3155	41.0	3453	50692 PSI	2.795	.9777	.9440
H4350	47.0	3.41	NA	3.4	3129	50.0c	3422	51040 PSI	2.795	....	....
RELODER15	38.8	2.74	DBLD	2.5	3124	41.8	3340	42700 CUP	2.775	....	....
H4831	49.0c	3.55	NA	3.4	2886	53.0c	3307	43500 PSI	2.795	....	....
A-XMR-4064	38.1	2.88	DBLD	2.8	2904	42.3	3300	47000 PSI	2.745	....	....
A-XMR-4350	42.3	3.13	DBLD	3.1	2866	47.0c	3257	43600 PSI	2.745	....	....
ACCUR 2700	43.7	2.99	DBLD	2.8	3048	46.0	3243	44800 PSI	2.745	....	....

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c = Compressed charge

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257 REMINGTON ROBERTS (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
					....STARTING LOADS....						
75 Grain Jacketed Bullet (Continued)											
ACCUR 2520	35.6	2.43	DBLD	2.2	2789	39.5	3169	42100 PSI	2.745	....	....
A-XMR-3100	45.9	3.43	NA	3.4	2783	51.0c	3163	38100 PSI	2.745	....	....
RELODER12	36.1	2.49	DBLD	2.5	2956	39.0	3160	42800 CUP	2.775	....	....
85 Grain Barnes X Bullet											
A-XMR-4350	41.4	3.06	DBLD	2.8	2728	46.0	3100	44500 PSI	2.770	....	....
ACCUR 2700	40.9	2.80	DBLD	2.8	2868	43.0	3051	44100 PSI	2.770	....	....
A-XMR-4064	36.4	2.75	DBLD	2.5	2677	40.5	3043	45800 PSI	2.770	....	....
A-XMR-3100	44.1	3.30	DBLD	3.1	2667	49.0c	3031	39900 PSI	2.770	....	....
ACCUR 2520	33.8	2.31	DBLD	2.2	2622	37.5	2980	44000 PSI	2.770	....	....
87 Grain Jacketed Bullet											
RELODER15	37.6	2.65	DBLD	2.5	2951	41.0	3185	43200 CUP	2.775	....	....
RELODER12	33.4	2.31	DBLD	2.2	2688	36.5	2930	43300 CUP	2.775	....	....
90 Grain Jacketed Bullet											
H4895	38.5	2.80	DBLD	2.8	2954	42.0	3372	55216 PSI	2.775	.9628	.9053
H414	46.0	3.04	DBLD	2.8	3107	50.0	3368	51504 PSI	2.775	.9799	.9409
H380	43.0	2.97	DBLD	2.8	3083	47.0	3364	52664 PSI	2.775	.9786	.9590
H335	39.0	2.52	DBLD	2.5	2951	43.0	3300	51504 PSI	2.775	.9725	.9111
H-VARGET	36.0	2.63	DBLD	2.5	2990	40.0	3269	52084 PSI	2.775	.9780	.9482
H4831	48.0c	3.48	NA	3.4	2786	52.0c	3236	45820 PSI	2.775	....	....
BL-C(2)	40.0	2.58	DBLD	2.5	2864	43.5	3231	52200 PSI	2.775	.9663	.8957
H450	48.0	3.13	DBLD	3.1	2732	50.0	3146	48372 PSI	2.620	....	....
A-XMR-4064	36.4	2.75	DBLD	2.5	2694	40.5	3062	46200 PSI	2.735	....	....
A-XMR-3100	45.0	3.37	NA	3.1	2689	50.0c	3056	44000 PSI	2.735	....	....
H4350	44.0	3.19	DBLD	3.1	2890	46.0	3040	50692 PSI	2.775	....	....
A-XMR-4350	40.5	3.00	DBLD	2.8	2641	45.0	3001	42100 PSI	2.735	....	....
ACCUR 2700	39.9	2.73	DBLD	2.5	2810	42.0	2989	42700 PSI	2.735	....	....
ACCUR 2520	33.3	2.27	DBLD	2.2	2593	37.0	2947	43500 PSI	2.735	....	....
90 Grain Lead Bullet											
ACC XMP5744	17.0	1.28	1.26	NA	1851	22.0	2275	21300 PSI	2.625	....	....
100 Grain Jacketed Bullet											
H380	40.5	2.80	DBLD	2.8	2868	44.0	3108	54056 PSI	2.770	.9773	.9420
H414	44.0	2.91	DBLD	2.8	2919	45.0	3098	51620 PSI	2.770	....	....
H335	36.0	2.32	DBLD	2.2	2776	39.0	3042	55448 PSI	2.770	.9701	.9198
H4831	45.0	3.26	DBLD	3.1	2660	49.0c	3010	51156 PSI	2.770	....	....
H4895	35.0	2.55	DBLD	2.5	2661	38.0	2990	53476 PSI	2.770	.9619	.8723
H-VARGET	34.0	2.49	DBLD	2.5	2724	38.0	2981	52084 PSI	2.770	.9777	.9356
H4350	43.0	3.12	DBLD	3.1	2833	45.0	2970	52664 PSI	2.770	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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257 REMINGTON ROBERTS (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
	....STARTING LOADS....										
100 Grain Jacketed Bullet (Continued)											
BL-C(2)	36.0	2.32	DBLD	2.2	2692	39.0	2958	52664 PSI	2.770	.9690	.8936
IMR4831	41.6	3.06	DBLD	2.8	2657	46.5	2950	44300 CUP	2.775	....	....
H450	44.0	2.87	DBLD	2.8	2702	46.5	2946	48140 PSI	2.700	....	....
IMR4064	34.9	2.60	DBLD	2.5	2627	39.5	2945	44800 CUP	2.775	....	....
IMR3031	37.7	2.87	DBLD	2.8	2907	38.0	2935	44400 CUP	2.775	....	....
RELODER19	41.1	2.90	DBLD	2.8	2714	44.7	2930	43100 CUP	2.775	....	....
IMR4350	39.5	2.90	DBLD	2.8	2637	44.5	2930	44600 CUP	2.775	....	....
IMR4227	21.1	1.63	DBLD	1.6	2662	23.5	2930	44000 CUP	2.775	....	....
A-XMR-4350	40.1	2.97	DBLD	2.8	2550	44.5	2898	44100 PSI	2.785	....	....
A-XMR-4064	34.9	2.63	DBLD	2.5	2534	38.8	2880	47000 PSI	2.785	....	....
A-XMR-3100	44.1	3.30	DBLD	3.1	2520	49.0c	2864	39900 PSI	2.785	....	....
IMR4320	33.9	2.43	DBLD	2.2	2551	38.5	2860	45000 CUP	2.775	....	....
ACCUR 2700	39.0	2.67	DBLD	2.5	2683	41.0	2854	44000 PSI	2.785	....	....
IMR4895	32.1	2.34	DBLD	2.2	2541	36.5	2850	45000 CUP	2.775	....	....
ACCUR 2520	31.5	2.15	DBLD	1.9	2416	35.0	2745	43400 PSI	2.785	....	....
IMR4198	26.8	2.13	DBLD	1.9	2426	30.5	2720	45000 CUP	2.775	....	....
SR4759	19.4	1.92	DBLD	1.9	2064	22.0	2315	45000 CUP	2.775	....	....
100 Grain Lead Bullet											
ACCUR 8700	47.7	3.28	DBLD	3.1	2174	53.0c	2471	32200 PSI	2.660	....	....
ACC XMP5744	17.0	1.28	1.26	NA	1756	24.0	2301	27800 PSI	2.705	....	....
100 Grain Barnes X Bullet											
A-XMR-4064	34.2	2.58	DBLD	2.5	2460	38.0	2796	45800 PSI	2.760	....	....
A-XMR-4350	36.9	2.73	DBLD	2.5	2410	41.0	2739	42700 PSI	2.760	....	....
A-XMR-3100	41.4	3.10	DBLD	3.1	2381	46.0	2706	37800 PSI	2.760	....	....
ACCUR 2700	37.1	2.54	DBLD	2.5	2522	39.0	2683	42700 PSI	2.760	....	....
ACCUR 2520	30.6	2.09	DBLD	1.9	2324	34.0	2641	42700 PSI	2.760	....	....
117 Grain Jacketed Bullet											
H4350	41.0	2.97	DBLD	2.8	2660	43.0	2777	51504 PSI	2.990	....	....
H4831	43.0	3.12	DBLD	3.1	2479	46.0	2760	53360 PSI	2.990	.9647	.8710
H380	37.0	2.56	DBLD	2.5	2567	40.0	2754	53244 PSI	2.990	.9766	.9520
A-XMR-3100	43.2	3.23	DBLD	3.1	2408	48.0c	2736	43700 PSI	2.775	....	....
H414	39.5	2.61	DBLD	2.5	2574	43.0	2720	51272 PSI	2.990	.9842	.9431
H4895	33.0	2.40	DBLD	2.2	2433	36.0	2702	52316 PSI	2.990	.9656	.8844
H-VARGET	31.0	2.27	DBLD	2.2	2462	35.0	2701	52084 PSI	2.990	.9770	.9349
A-XMR-4350	38.7	2.86	DBLD	2.8	2376	43.0	2700	44100 PSI	2.775	....	....
BL-C(2)	33.0	2.13	DBLD	1.9	2402	36.0	2673	54636 PSI	2.990	.9647	.8935
ACCUR 2700	37.1	2.54	DBLD	2.5	2462	39.0	2619	43200 PSI	2.775	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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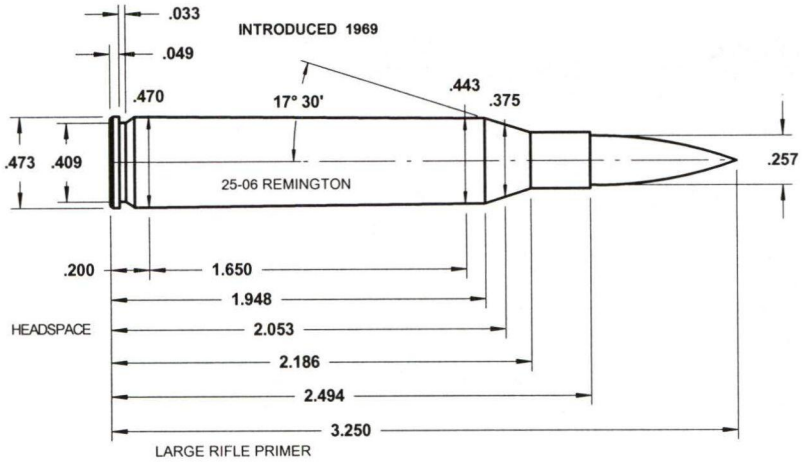
257 REMINGTON ROBERTS (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
117 Grain Jacketed Bullet (Continued)										
ACCUR 2520	30.6	2.09	DBLD	1.9	2248	34.0	2555 42700 PSI	2.775	....	....
A-XMR-4064	31.5	2.38	DBLD	2.2	2235	35.0	2540 46500 PSI	2.775	....	....
120 Grain Jacketed Bullet										
IMR4831	38.7	2.85	DBLD	2.8	2506	44.0	2810 45000 CUP	2.775	....	....
RELODER22	40.5	2.82	DBLD	2.8	2581	44.0	2785 43000 CUP	2.775	....	....
IMR4350	36.5	2.68	DBLD	2.5	2480	41.5	2780 45000 CUP	2.775	....	....
H4350	41.0	2.97	DBLD	2.8	2660	43.0	2777 51504 PSI	2.700	....	....
H4831	43.0	3.12	DBLD	3.1	2479	46.0	2760 53360 PSI	2.700	.9647	.8710
H380	37.0	2.56	DBLD	2.5	2567	40.0	2754 53244 PSI	2.700	.9766	.9520
IMR7828	42.4	3.07	DBLD	2.8	2495	47.0	2745 43900 CUP	2.775	....	....
H414	39.5	2.61	DBLD	2.5	2574	43.0	2720 51272 PSI	2.700	....	....
H450	43.0	2.81	DBLD	2.8	2394	45.5	2706 47212 PSI	2.700	....	....
H4895	33.0	2.40	DBLD	2.2	2433	36.0	2702 52316 PSI	2.700	.9656	.8844
IMR4064	31.9	2.38	DBLD	2.2	2450	35.5	2695 44000 CUP	2.775	....	....
BL-C(2)	33.0	2.13	DBLD	1.9	2402	36.0	2673 54636 PSI	2.700	.9647	.8935
IMR3031	29.6	2.25	DBLD	2.2	2395	33.0	2635 44200 CUP	2.775	....	....
IMR4895	29.5	2.15	DBLD	1.9	2332	33.5	2615 45000 CUP	2.775	....	....
IMR4320	30.5	2.18	DBLD	1.9	2332	34.5	2615 44800 CUP	2.775	....	....
IMR4198	24.2	1.92	DBLD	1.9	2176	27.5	2440 45000 CUP	2.775	....	....
IMR4227	21.8	1.68	DBLD	1.6	2159	22.0	2180 44400 CUP	2.775	....	....
SR4759	18.0	1.79	DBLD	1.6	1891	20.5	2120 45000 CUP	2.775	....	....
125 Grain Jacketed Bullet										
H414	40.0	2.64	DBLD	2.5	2539	42.0	2681 53128 PSI	2.700	....	....
H4350	41.0	2.97	DBLD	2.8	2540	43.0	2680 54056 PSI	2.700	....	....
H4831	43.0	3.12	DBLD	3.1	2508	45.0	2677 53592 PSI	2.700	....	....
H380	37.0	2.56	DBLD	2.5	2557	39.0	2670 54172 PSI	2.700	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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25-06 REMINGTON



Useful case capacity 4.15 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
75 Grain Jacketed Bullet											
A-XMR-4350	53.1	3.93	NA	3.7	3326	59.0c	3780	61400 PSI	3.065	....	....
ACCUR 2700	47.7	3.27	DBLD	3.1	3302	53.0	3753	62500 PSI	3.065	....	....
H4350	54.0	3.92	NA	3.7	3460	58.5c	3700	60504 PSI	3.100	....	....
H-VARGET	46.0	3.36	NA	3.1	3454	49.7	3660	60860 PSI	3.100	.9843	.9563
H4895	45.0	3.28	DBLD	3.1	3474	48.5	3642	60385 PSI	3.100	.9866	.9660
H414	51.0	3.37	NA	3.1	3471	55.0	3626	59553 PSI	3.100	.9892	.9708
H4831	58.0c	4.20	NA	4.0	3393	62.0c	3599	58602 PSI	3.100	....	....
A-XMR-3100	54.0	4.04	NA	4.0	3154	60.0c	3585	57900 PSI	3.065	....	....
RELODER12	44.4	3.07	DBLD	2.8	3349	48.0	3580	59900 PSI	3.090	....	....
H450	52.5	3.43	NA	3.4	3245	57.0	3502	57889 PSI	3.010	.9831	.9134
H380	47.0	3.25	DBLD	3.1	3331	51.0	3494	59315 PSI	3.100	.9881	.9745
H1000	58.0	4.14	NA	4.0	3135	62.0c	3339	47547 PSI	3.100	....	....
85 Grain Jacketed Bullet											
H4831	54.0	3.91	NA	3.7	3302	58.0c	3473	61455 PSI	3.230	....	....
H-VARGET	43.0	3.14	DBLD	3.1	3271	46.5	3449	60504 PSI	3.230	.9850	.9654
H4350	49.0	3.55	NA	3.4	3255	53.0	3445	60266 PSI	3.230	.9860	.9674
H414	48.0	3.17	DBLD	3.1	3248	52.0	3443	60147 PSI	3.230	.9856	.9711
H1000	58.0	4.14	NA	4.0	3218	62.0c	3442	57175 PSI	3.230	....	....
H4895	41.0	2.98	DBLD	2.8	3176	44.5	3369	61336 PSI	3.230	.9832	.9592
H380	45.0	3.11	DBLD	3.1	3130	49.0	3321	60860 PSI	3.230	.9853	.9612

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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25-06 REMINGTON (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
87 Grain Jacketed Bullet												
ACC MAG PRO	56.3	3.73	NA	3.7	3261	62.5	3573	60900	PSI	3.100	.9853	.9662
IMR4831	52.7	3.87	NA	3.7	3205	59.0c	3560	52200	CUP	3.100	....	....
RELODER19	53.1	3.75	NA	3.7	3297	57.3	3525	59800	PSI	3.090	....	....
IMR3031	42.2	3.22	DBLD	3.1	3121	48.0	3500	53000	CUP	3.100	....	....
IMR4064	44.4	3.31	NA	3.1	3181	49.5	3500	52000	CUP	3.100	....	....
IMR4350	50.1	3.68	NA	3.4	3177	56.0	3495	61930	PSI	3.100	....	....
v-N165	50.4	3.59	NA	3.4	2977	60.7c	3433	NA	NA	3.122	....	....
RELODER15	42.9	3.03	DBLD	2.8	3143	47.2	3425	61000	PSI	3.090	....	....
H4831	56.0	4.06	NA	4.0	3232	60.0c	3421	60028	PSI	3.115	....	....
IMR4320	43.1	3.09	DBLD	2.8	3042	49.0	3410	53000	CUP	3.100	....	....
H4350	50.0	3.63	NA	3.4	3234	54.5	3409	60385	PSI	3.115	.9885	.9763
IMR4895	40.5	2.95	DBLD	2.8	3028	46.0	3395	53000	CUP	3.100	....	....
H-VARGET	43.0	3.14	DBLD	3.1	3231	46.0	3382	60028	PSI	3.115	.9849	.9615
H4895	43.0	3.13	DBLD	3.1	3243	45.5	3364	61336	PSI	3.115	....	....
v-N160	45.0	3.30	NA	3.1	2904	54.6	3338	NA	NA	3.122	....	....
H414	47.0	3.11	DBLD	3.1	3138	50.5	3327	60742	PSI	3.115	.9833	.9569
H1000	58.0	4.14	NA	4.0	3176	62.0c	3296	51945	PSI	3.115	....	....
RELODER12	41.5	2.87	DBLD	2.8	3077	44.5	3290	59500	PSI	3.090	....	....
v-N150	35.1	2.62	DBLD	2.5	2755	44.7	3207	NA	NA	3.122	....	....
v-N140	32.6	2.39	DBLD	2.2	2709	42.1	3145	NA	NA	3.122	....	....
IMR4198	32.6	2.58	DBLD	2.5	2796	37.0	3135	53000	CUP	3.100	....	....
SR4759	29.0	2.88	DBLD	2.8	2693	32.0	2935	51500	CUP	3.100	....	....
IMR4227	27.5	2.12	DBLD	1.9	2632	30.5	2895	51700	CUP	3.100	....	....
90 Grain Jacketed Bullet												
H4831	54.0	3.91	NA	3.7	3212	58.0c	3481	59909	PSI	3.100	....	....
A-XMR-4350	48.6	3.60	NA	3.4	3055	54.0	3472	62900	PSI	3.075	....	....
ACCUR 2700	45.0	3.08	DBLD	2.8	3006	50.0	3416	62500	PSI	3.075	....	....
H380	45.0	3.11	DBLD	3.1	3161	49.0	3411	59434	PSI	3.010	.9811	.9766
H4350	49.0	3.55	NA	3.4	3191	53.0	3370	60266	PSI	3.100	.9863	.9651
A-XMR-3100	50.9	3.81	NA	3.7	2965	56.5c	3370	59700	PSI	3.075	....	....
WIN MAG RIFLE	58.1c	4.17	NA	4.0	3340	58.1c	3340	52700	PSI	3.100	....	....
H1000	58.0	4.14	NA	4.0	3142	62.0c	3330	56462	PSI	3.100	....	....
H414	47.0	3.11	DBLD	3.1	3135	51.0	3315	59672	PSI	3.100	.9862	.9692
H-VARGET	42.0	3.07	DBLD	2.8	3165	45.0	3312	59909	PSI	3.100	.9848	.9629
H4895	41.0	2.98	DBLD	2.8	3128	44.0	3257	60623	PSI	3.100	.9868	.9527
H870	60.0	4.12	NA	4.0	2992	65.0c	3230	55630	PSI	3.010	....	....
H450	50.5	3.30	DBLD	3.1	2904	55.0	3134	56938	PSI	3.010	.9833	.9681

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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25-06 REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
					....STARTING LOADS....						
100 Grain Jacketed Bullet											
RELODER22	50.7	3.54	NA	3.4	3078	55.9	3355	61100 PSI	3.200	....	....
IMR4831	49.3	3.62	NA	3.4	2974	56.0	3335	53000 CUP	3.090	....	....
RELODER19	49.4	3.48	NA	3.4	3047	54.3	3320	61000 PSI	3.200	....	....
IMR4350	47.2	3.47	NA	3.4	2934	53.5	3290	52900 CUP	3.090	....	....
A-XMR-3100	49.5	3.70	NA	3.4	2889	55.0	3283	63000 PSI	3.190	....	....
VEC TU7000	50.6	3.56	NA	3.4	3215	51.7	3281	54354 CIP	3.250	....	....
WIN MAG RIFLE	57.9c	4.16	NA	4.0	3280	58.1c	3280	55600 PSI	3.100	....	....
A-XMR-4350	46.8	3.46	NA	3.4	2880	52.0	3273	62200 PSI	3.190	....	....
IMR4064	42.0	3.13	DBLD	3.1	2889	47.5	3240	52800 CUP	3.090	....	....
v-N560	45.0	3.11	DBLD	3.1	2780	55.2	3240	NA NA	3.197	....	....
H870	60.0	4.12	NA	4.0	2997	65.0c	3235	55630 PSI	3.010	....	....
IMR3031	40.0	3.05	DBLD	2.8	2867	45.5	3215	53000 CUP	3.090	....	....
ACCUR 2700	43.2	2.96	DBLD	2.8	2827	48.0	3213	63000 PSI	3.190	....	....
H1000	56.0	3.99	NA	3.7	3055	59.7c	3212	60266 PSI	3.200	....	....
v-N165	51.1	3.64	NA	3.4	2915	58.6c	3212	NA NA	3.197	....	....
VEC TU5000	44.4	3.20	DBLD	3.1	3156	45.5	3209	52975 CIP	3.250	....	....
v-N170	50.2	3.58	NA	3.4	2727	62.3c	3192	NA NA	3.197	....	....
RELODER15	40.8	2.88	DBLD	2.8	2928	44.9	3190	61000 PSI	3.200	....	....
H4831	51.0	3.70	NA	3.4	3025	54.3	3172	61098 PSI	3.200	.9855	.9720
v-N160	48.8	3.58	NA	3.4	2888	54.8	3170	NA NA	3.197	....	....
H4350	47.0	3.41	NA	3.4	3038	50.0	3155	61217 PSI	3.200	.9874	.9755
H450	49.0	3.20	DBLD	3.1	2904	53.0	3134	56938 PSI	3.010	.9811	.9069
IMR4320	40.5	2.90	DBLD	2.8	2813	45.5	3125	52400 CUP	3.090	....	....
H-VARGET	41.0	3.00	DBLD	2.8	2974	44.0	3125	61098 PSI	3.200	.9835	.9608
IMR4895	38.3	2.79	DBLD	2.5	2800	43.0	3110	52400 CUP	3.090	....	....
H4895	40.0	2.91	DBLD	2.8	2921	43.0	3072	60623 PSI	3.200	.9836	.9534
H414	42.0	2.78	DBLD	2.5	2843	47.0	3059	60266 PSI	3.200	.9854	.9747
v-N150	39.7	2.96	DBLD	2.8	2809	45.8	3051	NA NA	3.197	....	....
v-N140	38.4	2.81	DBLD	2.8	2768	44.5	3033	NA NA	3.197	....	....
IMR4198	31.8	2.52	DBLD	2.5	2590	36.0	2905	52800 CUP	3.090	....	....
ACCUR 8700	58.5	4.02	NA	4.0	2501	65.0c	2843	44800 PSI	3.190	....	....
SR4759	26.9	2.67	DBLD	2.5	2418	30.0	2660	52100 CUP	3.090	....	....
IMR4227	26.0	2.00	DBLD	1.9	2358	29.5	2645	52900 CUP	3.090	....	....
100 Grain Lead Bullet											
ACCUR 8700	48.6	3.34	NA	3.1	2124	54.0	2414	29500 PSI	2.950	....	....
ACC XMP5744	19.8	1.49	1.46	1.3	1823	22.0	2072	24000 PSI	2.950	....	....
115 Grain Jacketed Bullet											
A-XMR-3100	47.5	3.55	NA	3.4	2691	52.8	3059	61400 PSI	3.195	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
115 Grain Jacketed Bullet (Continued)											
A-XMR-4350	44.5	3.29	DBLD	3.1	2686	49.5	3053	60600 PSI	3.195	....	....
IMR7828	54.0	3.91	NA	3.7	2954	55.5	3040	57000 PSI	3.175	....	....
IMR4831	46.8	3.44	NA	3.4	2807	50.7	3030	60000 PSI	3.175	....	....
IMR4350	45.8	3.36	NA	3.1	2833	48.7	3000	59000 PSI	3.175	....	....
ACCUR 2700	41.1	2.81	DBLD	2.8	2595	45.7	2949	60500 PSI	3.195	....	....
ACCUR 8700	57.6	3.96	NA	3.7	2466	64.0c	2803	46900 PSI	3.195	....	....
115 Grain Barnes X Bullet											
IMR7828	50.1	3.63	NA	3.4	2818	51.5	2900	57000 PSI	3.175	....	....
IMR4350	41.9	3.08	DBLD	2.8	2650	45.3	2860	60000 PSI	3.175	....	....
IMR4831	42.7	3.14	DBLD	3.1	2622	46.2	2830	60000 PSI	3.175	....	....
117 Grain Jacketed Bullet											
H1000	55.0	3.92	NA	3.7	2936	58.5c	3046	60623 PSI	3.165	.9897	.9781
H870	59.0	4.05	NA	4.0	2809	64.0c	3032	52777 PSI	3.010	....	....
H450	48.0	3.13	DBLD	3.1	2762	52.0	2981	57532 PSI	3.010	.9811	.9401
H4831	48.0	3.48	NA	3.4	2748	52.0	2937	60504 PSI	3.165	.9836	.9587
H4350	44.0	3.19	DBLD	3.1	2737	47.7	2923	60385 PSI	3.165	.9823	.9637
H-VARGET	37.0	2.70	DBLD	2.5	2637	41.0	2838	59553 PSI	3.165	.9817	.9620
H4895	37.0	2.69	DBLD	2.5	2641	40.0	2797	60147 PSI	3.165	.9808	.9581
120 Grain Jacketed Bullet											
IMR7828	48.6	3.52	NA	3.4	2769	55.0	3105	52800 CUP	3.100	....	....
RELODER22	48.2	3.36	NA	3.1	2854	52.5	3080	60400 PSI	3.225	....	....
WIN MAG RIFLE	50.1	3.60	NA	3.4	2831	54.3	3055	60100 PSI	3.200	....	....
ACC MAG PRO	48.6	3.22	DBLD	3.1	2777	54.0	3039	61600 PSI	3.200	.9835	.9614
VEC TU7000	50.2	3.54	NA	3.4	3038	50.2	3038	55283 CIP	3.250	....	....
RELODER19	46.4	3.27	DBLD	3.1	2803	50.5	3025	60400 PSI	3.225	....	....
H870	59.0	4.05	NA	4.0	2802	64.0c	3024	57057 PSI	3.010	....	....
H450	46.0	3.00	DBLD	2.8	2775	50.0	2995	57175 PSI	3.010	.9809	.9340
A-XMR-3100	46.8	3.50	NA	3.4	2620	52.0	2978	61200 PSI	3.120	....	....
IMR4350	43.9	3.23	DBLD	3.1	2708	48.5	2950	51500 CUP	3.100	....	....
IMR4831	44.8	3.30	DBLD	3.1	2677	50.0	2945	52000 CUP	3.100	....	....
A-XMR-4350	44.1	3.26	DBLD	3.1	2588	49.0	2942	60600 PSI	3.120	....	....
VEC TU5000	44.0	3.17	DBLD	3.1	2861	45.1	2927	52351 CIP	3.250	....	....
v-N560	39.4	2.72	DBLD	2.5	2440	49.8	2912	NA NA	3.157	....	....
H1000	52.0	3.71	NA	3.7	2772	55.5	2902	60147 PSI	3.150	.9869	.9664
ACCUR 2700	40.5	2.77	DBLD	2.5	2545	45.0	2893	62800 PSI	3.120	....	....
IMR4064	38.8	2.89	DBLD	2.8	2598	43.5	2885	52300 CUP	3.100	....	....
v-N170	45.1	3.22	DBLD	3.1	2491	55.2	2859	NA NA	3.157	....	....

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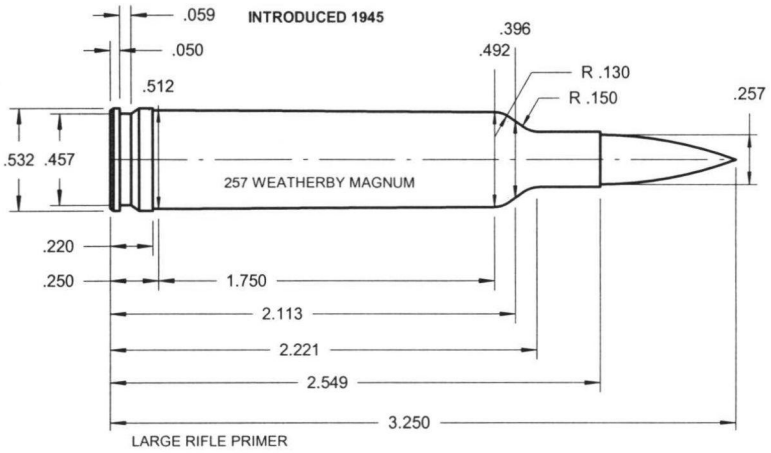
25-06 REMINGTON (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
120 Grain Jacketed Bullet (Continued)												
H4831	48.0	3.48	NA	3.4	2705	51.5	2856	60860	PSI	3.150	.9847	.9687
IMR4320	38.8	2.78	DBLD	2.5	2590	43.0	2850	51700	CUP	3.100	....	....
H4350	44.0	3.19	DBLD	3.1	2643	47.5	2816	60504	PSI	3.150	.9820	.9523
IMR4895	35.9	2.61	DBLD	2.5	2526	40.5	2805	52600	CUP	3.100	....	....
IMR3031	36.3	2.77	DBLD	2.5	2545	40.5	2800	52000	CUP	3.100	....	....
v-N165	37.5	2.67	DBLD	2.5	2399	48.1	2790	NA	NA	3.157	....	....
v-N160	34.6	2.54	DBLD	2.5	2328	45.2	2762	NA	NA	3.157	....	....
H-VARGET	38.0	2.78	DBLD	2.5	2584	41.0	2755	61692	PSI	3.150	.9787	.9543
ACCUR 8700	57.6	3.96	NA	3.7	2396	64.0c	2723	44500	PSI	3.120	....	....
H4895	37.0	2.69	DBLD	2.5	2541	40.0	2694	61455	PSI	3.150	.9807	.9576
IMR4198	30.9	2.44	DBLD	2.2	2400	34.0	2615	51400	CUP	3.100	....	....
v-N150	26.7	1.99	DBLD	1.9	2106	35.6	2539	NA	NA	3.157	....	....
IMR4227	24.6	1.89	DBLD	1.6	2114	28.0	2370	53000	CUP	3.100	....	....
SR4759	24.7	2.45	DBLD	2.2	2104	27.5	2315	52000	CUP	3.100	....	....
125 Grain Jacketed Bullet												
H870	58.0	3.98	NA	3.7	2771	64.0c	3020	59791	PSI	3.010	....	....
H4831	45.0	3.26	DBLD	3.1	2566	49.0	2770	58721	PSI	3.010	.9809	.9462

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**

257 WEATHERBY MAGNUM



Useful case capacity 5.51 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
75 Grain Bullet											
RELODER22	77.0	5.37	2 SCOOPS	2.5	3900	77.0	3900	53000 PSI	3.075	....	....
RELODER19	73.3	5.17	2 SCOOPS	2.5	3895	73.3	3895	52900 PSI	3.075	....	....
75 Grain Jacketed Bullet											
H4831	67.0	4.86	2 SCOOPS	2.2	3565	73.0	3849	65368 PSI	3.140	.9873	.9025
H4350	62.0	4.50	NA	4.3	3541	65.0	3714	63651 PSI	3.140	....	....
H870	75.5	5.18	2 SCOOPS	2.5	3389	82.0c	3658	59113 PSI	3.140	....	....
H1000	76.0	5.42	2 SCOOPS	2.5	3180	81.0c	3368	46849 PSI	3.140	....	....
85 Grain Barnes X Bullet											
A-XMR-4350	61.8	4.57	NA	4.3	3490	65.0	3713	62000 PSI	3.150	....	....
A-XMR-3100	66.5	4.97	2 SCOOPS	2.2	3435	70.0	3654	61200 PSI	3.150	....	....
ACCUR 8700	85.5c	5.88	2 SCOOPS	2.8	3318	90.0c	3530	51500 PSI	3.150	....	....
87 Grain Bullet											
RELODER22	73.0	5.09	2 SCOOPS	2.5	3675	73.0	3675	52700 PSI	3.150	....	....
RELODER19	68.4	4.83	2 SCOOPS	2.2	3650	68.4	3650	53000 PSI	3.150	....	....
87 Grain Jacketed Bullet											
H4831	66.0	4.78	2 SCOOPS	2.2	3440	72.0	3713	63651 PSI	3.185	.9874	.9157
H870	75.5	5.18	2 SCOOPS	2.5	3372	82.0c	3640	59972 PSI	3.185	....	....
H4350	60.0	4.35	NA	4.3	3385	63.0	3550	61076 PSI	3.185	....	....
H1000	75.0	5.35	2 SCOOPS	2.5	3124	80.0c	3308	49547 PSI	3.185	....	....
100 Grain Bullet											
RELODER22	69.0	4.81	2 SCOOPS	2.2	3460	69.0	3460	52400 PSI	3.170	....	....

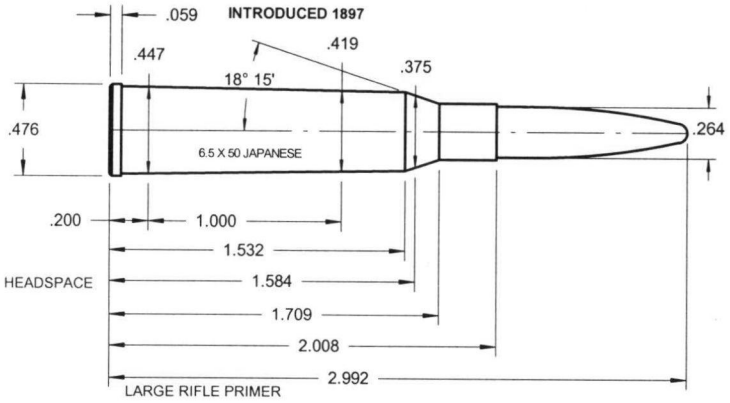
CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

257 WEATHERBY MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
100 Grain Bullet (Continued)											
RELODER19	64.5	4.55	NA	4.3	3420	64.5	3420	52700 PSI	3.170	....	....
100 Grain Jacketed Bullet											
A-XMR-4350	59.4	4.40	NA	4.3	3301	62.5	3512	61100 PSI	3.180	....	....
H870	73.5	5.04	2 SCOOPS	2.5	3208	80.0	3463	65000 PSI	3.185	.9883	.9323
A-XMR-3100	65.6	4.91	2 SCOOPS	2.2	3253	69.0	3461	58500 PSI	3.180	....	....
H4831	62.5	4.53	NA	4.3	3183	68.0	3436	64142 PSI	3.185	.9862	.9135
ACCUR 8700	85.5c	5.88	2 SCOOPS	2.8	3173	90.0c	3375	58000 PSI	3.180	....	....
H1000	65.0	4.63	2 SCOOPS	2.2	3104	71.0	3351	57519 PSI	3.185	.9874	.9613
H4350	59.0	4.28	NA	4.0	3164	62.0	3319	62793 PSI	3.185	....	....
115 Grain Bullet											
RELODER22	64.5	4.50	NA	4.3	3200	64.5	3200	52700 PSI	3.170	....	....
RELODER19	61.3	4.33	NA	4.3	3175	61.3	3175	53000 PSI	3.170	....	....
115 Grain Jacketed Bullet											
ACCUR 8700	81.7c	5.62	2 SCOOPS	2.8	3130	86.0c	3330	55300 PSI	3.255	....	....
A-XMR-3100	63.7	4.76	2 SCOOPS	2.2	3086	67.0	3283	61100 PSI	3.255	....	....
A-XMR-4350	56.1	4.15	NA	4.0	3051	59.0	3246	59600 PSI	3.255	....	....
117 Grain Jacketed Bullet											
H870	70.0	4.80	2 SCOOPS	2.2	3090	76.0	3336	65736 PSI	3.185	.9873	.9167
H4831	61.5	4.46	NA	4.3	3070	66.0	3282	64387 PSI	3.185	.9853	.8946
H1000	64.0	4.56	NA	4.3	3022	69.0	3231	62302 PSI	3.185	.9866	.9654
H4350	56.0	4.06	NA	4.0	2941	60.0	3144	62057 PSI	3.185	.9834	.9184
120 Grain Bullet											
RELODER22	62.7	4.37	NA	4.3	3140	62.7	3140	52900 PSI	3.170	....	....
RELODER19	59.7	4.21	NA	4.0	3100	59.7	3100	53000 PSI	3.170	....	....
120 Grain Jacketed Bullet											
ACCUR 8700	80.8c	5.56	2 SCOOPS	2.5	3067	85.0c	3263	55600 PSI	3.215	....	....
H870	69.0	4.73	2 SCOOPS	2.2	2973	76.0	3240	65246 PSI	3.150	.9877	.9435
H1000	63.0	4.49	NA	4.3	3022	68.0	3231	62302 PSI	3.150	.9866	.9654
H4831	61.5	4.46	NA	4.3	3070	65.0	3220	63161 PSI	3.150	....	....
A-XMR-3100	62.7	4.69	2 SCOOPS	2.2	3018	66.0	3211	61100 PSI	3.215	....	....
A-XMR-4350	56.1	4.15	NA	4.0	2999	59.0	3190	60100 PSI	3.215	....	....

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c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

6.5mm ARISAKA



Useful case capacity 2.66 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
85 Grain Jacketed Bullet									
ACCUR 2700	34.2	2.34	DBLD	2.2	2557	36.0	2720	33600 PSI	2.625
A-XMR-2495	32.3	2.42	DBLD	2.2	2524	34.0	2685	28900 PSI	2.625
A-XMR-4350	36.0c	2.66	DBLD	2.5	2347	40.0c	2667	31300 PSI	2.625
A-XMR-3100	36.0c	2.69	DBLD	2.5	2116	40.0c	2405	24000 PSI	2.625
100 Grain Jacketed Bullet									
H4895	35.0	2.55	DBLD	2.5	2408	37.0c	2717	NA NA	2.700
H380	39.0c	2.69	DBLD	2.5	2449	42.0c	2686	NA NA	2.700
H335	36.0	2.32	DBLD	2.2	2514	38.0	2670	NA NA	2.700
BL-C(2)	36.0	2.32	DBLD	2.2	2502	38.0	2642	NA NA	2.700
A-XMR-2495	31.4	2.35	DBLD	2.2	2470	33.0	2628	34900 PSI	2.700
A-XMR-4350	35.1	2.60	DBLD	2.5	2311	39.0c	2626	37200 PSI	2.700
ACCUR 2700	33.3	2.28	DBLD	2.2	2421	35.0	2576	36300 PSI	2.700
H450	36.1	2.36	DBLD	2.2	2186	41.0c	2451	NA NA	2.902
H4831	39.0c	2.83	DBLD	2.8	2350	41.0c	2424	NA NA	2.700
A-XMR-3100	36.0c	2.69	DBLD	2.5	2109	40.0c	2397	27600 PSI	2.700
120 Grain Jacketed Bullet									
H335	35.0	2.26	DBLD	2.2	2441	37.0	2597	NA NA	2.920
H380	38.0	2.63	DBLD	2.5	2424	41.0c	2595	NA NA	2.920
BL-C(2)	35.0	2.26	DBLD	2.2	2439	37.0	2566	NA NA	2.920
H4895	33.0	2.40	DBLD	2.2	2368	35.0	2505	NA NA	2.920

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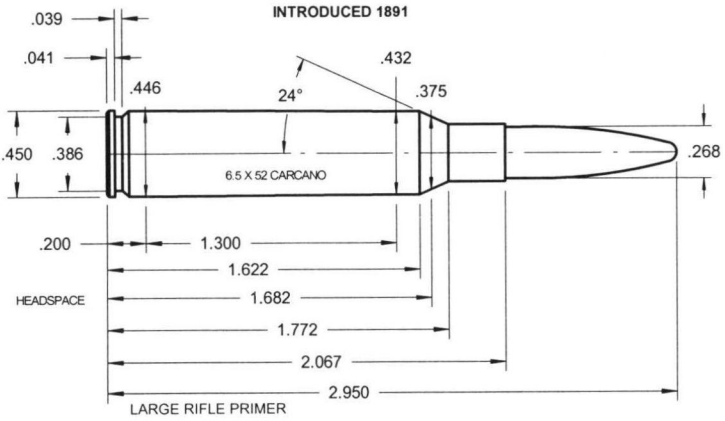
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6.5mm ARISAKA (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
....STARTING LOADS....									
120 Grain Jacketed Bullet (Continued)									
H4831	39.0c	2.83	DBLD	2.8	2300	41.0c	2429	NA	2.920
H450	36.1	2.36	DBLD	2.2	2143	41.0c	2404	NA	2.902
129 Grain Jacketed Bullet									
A-XMR-4350	32.4	2.40	DBLD	2.2	2062	36.0c	2343	37800 PSI	2.770
A-XMR-2495	28.5	2.13	DBLD	1.9	2138	30.0	2274	37700 PSI	2.770
ACCUR 2700	31.4	2.15	DBLD	1.9	2131	33.0	2267	38100 PSI	2.770
A-XMR-3100	34.2	2.56	DBLD	2.5	1953	38.0c	2219	31500 PSI	2.770
140 Grain Jacketed Bullet									
H335	33.0	2.13	DBLD	1.9	2219	35.0	2414	NA	2.920
H4895	32.0	2.33	DBLD	2.2	2186	34.0	2407	NA	2.920
H380	36.0	2.49	DBLD	2.2	2249	39.0c	2396	NA	2.920
H4831	38.0c	2.75	DBLD	2.5	2222	41.0c	2392	NA	2.920
BL-C(2)	33.0	2.13	DBLD	1.9	2191	35.0	2388	NA	2.920
H450	35.2	2.30	DBLD	2.2	2105	40.0	2360	NA	2.902
A-XMR-4350	31.5	2.33	DBLD	2.2	1980	35.0	2250	36300 PSI	2.850
A-XMR-3100	34.2	2.56	DBLD	2.5	1973	38.0c	2242	36300 PSI	2.850
ACCUR 2700	30.4	2.08	DBLD	1.9	2045	32.0	2176	36800 PSI	2.850
A-XMR-2495	26.6	1.99	DBLD	1.9	2035	28.0	2165	35900 PSI	2.850
ACCUR 8700	38.7	2.66	DBLD	2.5	1596	43.0c	1814	26400 PSI	2.850
160 Grain Jacketed Bullet									
H450	33.4	2.18	DBLD	1.9	2142	38.0	2403	NA	2.902
H4831	36.0	2.61	DBLD	2.5	2201	38.0c	2393	NA	2.855
H380	33.0	2.28	DBLD	2.2	2214	35.0	2366	NA	2.855
H335	31.0	2.00	DBLD	1.9	2090	33.0	2341	NA	2.855
BL-C(2)	31.0	2.00	DBLD	1.9	2081	33.0	2337	NA	2.855
H4895	30.0	2.18	DBLD	1.9	2118	32.0	2334	NA	2.855
A-XMR-3100	34.2	2.56	DBLD	2.5	1897	38.0c	2156	36600 PSI	2.795
A-XMR-4350	30.6	2.26	DBLD	2.2	1865	34.0	2119	35900 PSI	2.795
A-XMR-2495	28.5	2.13	DBLD	1.9	1983	30.0	2110	38700 PSI	2.795
ACCUR 2700	30.4	2.08	DBLD	1.9	1938	32.0	2062	37800 PSI	2.795
ACCUR 8700	38.7	2.66	DBLD	2.5	1566	43.0c	1779	27800 PSI	2.795

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**

6.5mm ITALIAN CARCANO



Useful case capacity 3.05 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
H450	38.7	2.53	DBLD	2.5	2206	44.0	2474	NA	NA	2.890
H380	34.0	2.35	DBLD	2.2	2317	36.0	2451	NA	NA	2.835
H4831	40.0	2.90	DBLD	2.8	2189	43.0c	2414	NA	NA	2.835
H4895	31.0	2.26	DBLD	2.2	2204	33.0	2394	NA	NA	2.835
H335	31.0	2.00	DBLD	1.9	2181	33.0	2369	NA	NA	2.835
BL-C(2)	31.0	2.00	DBLD	1.9	2170	33.0	2357	NA	NA	2.835
120 Grain Jacketed Bullet										
H450	36.1	2.36	DBLD	2.2	2026	41.0	2272	NA	NA	2.890
H4831	38.0	2.75	DBLD	2.5	2019	41.0	2224	NA	NA	2.835
BL-C(2)	29.0	1.87	DBLD	1.6	2019	31.0	2207	NA	NA	2.835
H335	29.0	1.87	DBLD	1.6	2021	31.0	2204	NA	NA	2.835
H380	30.0	2.07	DBLD	1.9	1997	33.0	2192	NA	NA	2.835
H4895	28.0	2.04	DBLD	1.9	1959	30.0	2147	NA	NA	2.835
140 Grain Jacketed Bullet										
H4831	37.0	2.68	DBLD	2.5	1919	40.0	2192	NA	NA	2.900
H450	34.3	2.24	DBLD	2.2	1921	39.0	2154	NA	NA	2.890
H380	29.0	2.00	DBLD	1.9	1923	32.0	2127	NA	NA	2.900
H335	28.0	1.81	DBLD	1.6	1967	30.0	2109	NA	NA	2.900
BL-C(2)	28.0	1.81	DBLD	1.6	1960	30.0	2097	NA	NA	2.900
H4895	28.0	2.04	DBLD	1.9	1904	30.0	2089	NA	NA	2.900

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6.5mm ITALIAN CARCANO (Continued)

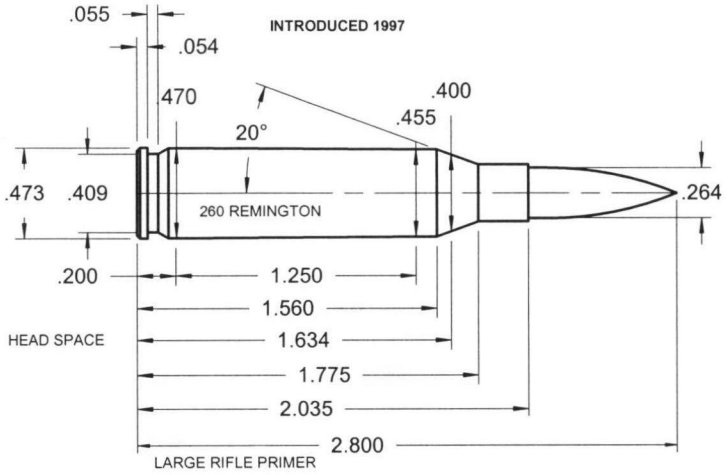
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
160 Grain Jacketed Bullet										
H4831	37.0	2.68	DBLD	2.5	1891	39.0	2086	NA	NA	2.935
H335	27.0	1.74	DBLD	1.6	1824	30.0	2060	NA	NA	2.935
BL-C(2)	27.0	1.74	DBLD	1.6	1830	30.0	2047	NA	NA	2.935
H380	28.0	1.93	DBLD	1.9	1797	31.0	2009	NA	NA	2.935
H4895	27.0	1.97	DBLD	1.9	1804	30.0	1992	NA	NA	2.935
165 Grain Jacketed Bullet										
H4831	34.3	2.49	DBLD	2.2	1860	39.0	2086	41363	CUP	2.890
H335	26.4	1.70	DBLD	1.6	1837	30.0	2060	41363	CUP	2.890
BL-C(2)	26.4	1.70	DBLD	1.6	1825	30.0	2047	41363	CUP	2.890
H450	33.4	2.18	DBLD	1.9	1793	38.0	2011	41363	CUP	2.890
H380	27.3	1.89	DBLD	1.6	1791	31.0	2009	41363	CUP	2.890
H4895	26.4	1.92	DBLD	1.9	1776	30.0	1992	41363	CUP	2.890

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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260 REMINGTON



Useful case capacity 3.32 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
85 Grain Jacketed Bullet											
A-XMR-4064	39.6	2.99	DBLD	2.8	2947	44.0	3349	58700 PSI	2.670	....	....
ACCUR 2700	43.2	2.96	DBLD	2.8	2939	48.0	3340	58700 PSI	2.670	....	....
RELODER15	39.4	2.78	DBLD	2.5	2958	44.5	3285	59600 PSI	2.710	....	....
A-XMR-4350	43.2	3.20	DBLD	3.1	2837	48.0c	3224	51100 PSI	2.670	....	....
ACC XMP5744	29.7	2.23	DBLD	2.2	2828	33.0	3214	57800 PSI	2.670	....	....
RELODER19	43.2	3.05	DBLD	2.8	2854	49.2c	3200	60200 PSI	2.710	....	....
95 Grain Jacketed Bullet											
H414	46.0	3.04	DBLD	2.8	3136	49.0	3313	58600 PSI	2.780	.9817	.9529
H4350	47.0c	3.41	NA	3.4	3135	49.7c	3284	58100 PSI	2.780	....	....
H380	44.0	3.04	DBLD	2.8	3088	47.0	3262	59500 PSI	2.780	.9819	.9518
H-VARGET	39.0	2.85	DBLD	2.8	3070	42.0	3244	58500 PSI	2.780	.9818	.9503
BL-C(2)	41.0	2.64	DBLD	2.5	3093	43.5	3236	58300 PSI	2.780	.9819	.9546
H4895	38.0	2.77	DBLD	2.5	3069	40.8	3225	58500 PSI	2.780	.9823	.9542
H335	34.5	2.23	DBLD	2.2	2968	38.3	3114	58000 PSI	2.780	.9875	.9894
100 Grain Jacketed Bullet											
A-XMR-4350	43.2	3.20	DBLD	3.1	2845	48.0c	3234	58700 PSI	2.765	....	....
RELODER19	44.1	3.11	DBLD	3.1	2890	49.0c	3180	58700 PSI	2.710	....	....
RELODER15	38.6	2.73	DBLD	2.5	2879	43.0	3168	58800 PSI	2.710	....	....
IMR4831	42.1	3.10	DBLD	2.8	2872	46.5c	3130	58300 PSI	2.700	....	....
ACCUR 2700	40.5	2.77	DBLD	2.5	2746	45.0	3121	58900 PSI	2.765	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
100 Grain Jacketed Bullet (Continued)											
IMR4350	41.3	3.04	DBLD	2.8	2890	45.0	3120	57500 PSI	2.700	....	....
IMR4064	36.6	2.73	DBLD	2.5	2895	39.5	3095	57000 PSI	2.700	....	....
v-N140	33.8	2.48	DBLD	2.2	2718	39.6	3083	NA NA	2.657	....	....
A-XMR-4064	36.9	2.78	DBLD	2.5	2713	41.0	3083	56900 PSI	2.765	....	....
A-XMR-3100	45.0c	3.37	NA	3.1	2698	50.0c	3066	52800 PSI	2.765	....	....
v-N540	35.3	2.48	DBLD	2.2	2735	40.8	3061	NA NA	2.657	....	....
IMR4895	35.0	2.55	DBLD	2.5	2821	38.0	3045	57300 PSI	2.700	....	....
IMR4320	35.9	2.57	DBLD	2.5	2816	39.0	3040	57300 PSI	2.700	....	....
v-N150	33.9	2.53	DBLD	2.5	2680	39.9	3035	NA NA	2.657	....	....
IMR7828	48.5c	3.52	NA	3.4	2996	49.0c	3025	53300 PSI	2.700	....	....
IMR3031	32.8	2.50	DBLD	2.2	2775	35.5	2995	57100 PSI	2.700	....	....
100 Grain Barnes X Bullet											
A-XMR-4350	43.2	3.20	DBLD	3.1	2840	48.0c	3228	59500 PSI	2.750	....	....
A-XMR-3100	45.0c	3.37	NA	3.1	2744	50.0c	3119	57200 PSI	2.750	....	....
H414	43.0	2.84	DBLD	2.8	2929	46.0	3101	58000 PSI	2.750	.9812	.9554
A-XMR-4064	37.3	2.82	DBLD	2.8	2719	41.5	3090	57200 PSI	2.750	....	....
H4350	42.0	3.05	DBLD	2.8	2946	45.0	3077	58200 PSI	2.750	.9856	.9687
H4831	46.0c	3.33	NA	3.1	2925	48.8c	3055	58600 PSI	2.750	....	....
H-VARGET	36.5	2.67	DBLD	2.5	2861	39.5	3027	58900 PSI	2.750	.9812	.9593
H380	41.0	2.83	DBLD	2.8	2860	43.5	3004	58200 PSI	2.750	.9806	.9559
BL-C(2)	37.0	2.39	DBLD	2.2	2804	40.5	3002	59100 PSI	2.750	.9808	.9571
ACCUR 2700	38.5	2.64	DBLD	2.5	2635	42.8	2995	56500 PSI	2.750	....	....
H4895	35.0	2.55	DBLD	2.5	2810	38.0	2974	58800 PSI	2.750	.9813	.9554
107 Grain Jacketed Bullet											
A-XMR-4350	43.2	3.20	DBLD	3.1	2797	48.0c	3179	58900 PSI	2.800	....	....
H4350	46.0c	3.34	NA	3.1	2997	49.0c	3164	58700 PSI	2.780	....	....
H414	43.5	2.88	DBLD	2.8	2917	46.5	3151	58100 PSI	2.780	.9748	.9311
H-VARGET	38.5	2.81	DBLD	2.8	2947	41.5	3125	58700 PSI	2.780	.9808	.9467
H380	43.0	2.97	DBLD	2.8	2908	46.0	3107	58200 PSI	2.780	.9780	.9410
BL-C(2)	40.0	2.58	DBLD	2.5	2951	42.7	3097	57800 PSI	2.780	.9823	.9505
ACCUR 2700	41.4	2.83	DBLD	2.8	2722	46.0	3094	58200 PSI	2.800	....	....
A-XMR-4064	37.8	2.85	DBLD	2.8	2716	42.0	3087	58100 PSI	2.800	....	....
H4895	38.0	2.77	DBLD	2.5	2950	40.7	3074	58000 PSI	2.780	.9849	.9597
H4831	50.0c	3.62	NA	3.4	2963	51.0c	3027	54000 PSI	2.780	....	....
H335	37.0	2.39	DBLD	2.2	2862	39.2	3014	58400 PSI	2.780	....	....
ACC XMP5744	27.9	2.10	DBLD	1.9	2527	31.0	2872	55400 PSI	2.800	....	....
A-XMR-3100	43.2	3.23	DBLD	3.1	2525	48.0c	2870	45700 PSI	2.800	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

260 REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
108 Grain Jacketed Bullet											
v-N160	39.4	2.89	DBLD	2.8	2654	44.8	3034	NA NA	2.795	....	....
v-N540	34.8	2.44	DBLD	2.2	2628	39.6	2963	NA NA	2.795	....	....
v-N150	33.6	2.51	DBLD	2.5	2590	38.9	2922	NA NA	2.795	....	....
120 Grain Jacketed Bullet											
H414	42.5	2.81	DBLD	2.8	2802	45.5	2968	58624 PSI	2.780	.9812	.9546
H4350	43.5	3.15	DBLD	3.1	2814	46.5c	2960	58200 PSI	2.780	....	....
H4831	47.0c	3.41	NA	3.4	2812	50.0c	2954	59200 PSI	2.780	....	....
A-XMR-4350	40.0	2.96	DBLD	2.8	2594	44.5	2948	60000 PSI	2.800	....	....
IMR7828	42.9	3.11	DBLD	3.1	2657	47.0c	2895	57800 PSI	2.780	....	....
IMR4350	39.1	2.88	DBLD	2.8	2648	43.0	2885	58000 PSI	2.780	....	....
IMR4831	39.8	2.92	DBLD	2.8	2623	44.0	2885	58400 PSI	2.780	....	....
H-VARGET	36.0	2.63	DBLD	2.5	2716	39.0	2877	58300 PSI	2.780	.9809	.9520
A-XMR-3100	42.7	3.19	DBLD	3.1	2507	47.5c	2849	53700 PSI	2.710	....	....
H380	40.0	2.76	DBLD	2.5	2686	43.0	2844	58100 PSI	2.780	.9812	.9606
BL-C(2)	37.0	2.39	DBLD	2.2	2686	40.0	2840	58900 PSI	2.780	.9817	.9642
v-N160	36.3	2.66	DBLD	2.5	2459	42.9	2832	NA NA	2.795	....	....
v-N550	34.8	2.41	DBLD	2.2	2510	40.5	2826	NA NA	2.795	....	....
H4895	35.0	2.55	DBLD	2.5	2664	38.0	2813	58900 PSI	2.780	.9819	.9587
H1000	49.0c	3.49	NA	3.4	2710	51.0c	2810	49300 PSI	2.780	....	....
ACCUR 2700	37.8	2.59	DBLD	2.5	2468	42.0	2805	58700 PSI	2.800	....	....
IMR4064	33.9	2.52	DBLD	2.5	2599	37.0	2805	57700 PSI	2.780	....	....
IMR4320	33.9	2.43	DBLD	2.2	2550	37.5	2805	58400 PSI	2.780	....	....
v-N540	32.8	2.30	DBLD	2.2	2444	38.0	2788	NA NA	2.795	....	....
IMR4895	33.3	2.42	DBLD	2.2	2566	36.0	2770	57100 PSI	2.780	....	....
A-XMR-4064	34.2	2.58	DBLD	2.5	2427	38.0	2758	58200 PSI	2.800	....	....
H335	34.0	2.19	DBLD	1.9	2613	36.7	2755	58600 PSI	2.780	.9806	.9540
IMR3031	31.2	2.37	DBLD	2.2	2520	34.0	2720	57600 PSI	2.780	....	....
120 Grain Barnes X Bullet											
A-XMR-4350	39.6	2.93	DBLD	2.8	2543	44.0	2890	60000 PSI	2.750	....	....
A-XMR-3100	41.0	3.07	DBLD	2.8	2462	45.5c	2798	57300 PSI	2.750	....	....
ACCUR 2700	37.8	2.59	DBLD	2.5	2410	42.0	2739	57200 PSI	2.750	....	....
A-XMR-4064	33.3	2.51	DBLD	2.5	2368	37.0	2692	58500 PSI	2.750	....	....
125 Grain Jacketed Bullet											
A-XMR-4350	40.5	3.00	DBLD	2.8	2584	45.0c	2937	60000 PSI	2.780	....	....
A-XMR-3100	43.2	3.23	DBLD	3.1	2563	48.0c	2913	58700 PSI	2.780	....	....
H4350	41.0	2.97	DBLD	2.8	2714	44.3	2867	57900 PSI	2.780	.9836	.9617
H4831	45.0	3.26	DBLD	3.1	2725	48.0c	2862	58000 PSI	2.780	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
125 Grain Jacketed Bullet (Continued)											
H414	40.0	2.64	DBLD	2.5	2691	43.0	2852	58100 PSI	2.780	.9807	.9543
H1000	48.0c	3.42	NA	3.4	2685	51.0c	2821	53300 PSI	2.780	....	....
H380	39.0	2.69	DBLD	2.5	2641	42.0	2806	58900 PSI	2.780	.9800	.9488
H-VARGET	34.5	2.52	DBLD	2.5	2624	37.5	2785	58400 PSI	2.780	.9801	.9571
ACCUR 2700	37.8	2.59	DBLD	2.5	2439	42.0	2772	56700 PSI	2.780	....	....
A-XMR-4064	34.6	2.61	DBLD	2.5	2430	38.5	2762	59000 PSI	2.780	....	....
BL-C(2)	36.5	2.35	DBLD	2.2	2623	38.5	2746	58200 PSI	2.780	....	....
H4895	34.0	2.48	DBLD	2.2	2623	37.0	2743	58900 PSI	2.780	.9852	.9733
129 Grain Jacketed Bullet											
A-XMR-3100	42.3	3.16	DBLD	3.1	2547	47.0c	2895	56600 PSI	2.780	....	....
RELODER19	39.5	2.79	DBLD	2.5	2530	46.0	2890	61500 PSI	2.750	....	....
A-XMR-4350	39.6	2.93	DBLD	2.8	2493	44.0	2833	58400 PSI	2.780	....	....
IMR4831	38.9	2.86	DBLD	2.8	2556	43.0	2785	58300 PSI	2.780	....	....
IMR7828	41.5	3.01	DBLD	2.8	2571	45.0	2775	57200 PSI	2.780	....	....
IMR4350	38.2	2.81	DBLD	2.8	2561	41.5	2765	57300 PSI	2.780	....	....
RELODER15	33.7	2.38	DBLD	2.2	2397	39.0	2740	61100 PSI	2.750	....	....
IMR4895	33.2	2.41	DBLD	2.2	2501	36.5	2725	58100 PSI	2.780	....	....
IMR4064	33.1	2.46	DBLD	2.2	2468	36.5	2690	58300 PSI	2.780	....	....
ACCUR 2700	36.9	2.53	DBLD	2.5	2366	41.0	2689	57100 PSI	2.780	....	....
A-XMR-4064	34.2	2.58	DBLD	2.5	2362	38.0	2685	59100 PSI	2.780	....	....
IMR4320	32.9	2.35	DBLD	2.2	2440	36.5	2685	58600 PSI	2.780	....	....
130 Grain Barnes X Bullet											
A-XMR-3100	39.1	2.92	DBLD	2.8	2324	43.5	2642	57500 PSI	2.750	....	....
A-XMR-4350	36.4	2.69	DBLD	2.5	2323	40.5	2640	58600 PSI	2.750	....	....
ACCUR 2700	36.0	2.46	DBLD	2.2	2264	40.0	2573	58100 PSI	2.750	....	....
A-XMR-4064	31.2	2.35	DBLD	2.2	2170	34.7	2467	59200 PSI	2.750	....	....
139 Grain Jacketed Bullet											
v-N560	38.0	2.62	DBLD	2.5	2274	43.8	2654	NA NA	2.795	....	....
v-N550	31.3	2.17	DBLD	1.9	2228	37.7	2595	NA NA	2.795	....	....
v-N160	33.9	2.49	DBLD	2.2	2243	40.2	2566	NA NA	2.795	....	....
140 Grain Jacketed Bullet											
IMR7828	43.4	3.15	DBLD	3.1	2553	47.0c	2755	57200 PSI	2.780	....	....
H1000	48.0c	3.42	NA	3.4	2619	50.5c	2730	57000 PSI	2.780	....	....
IMR4350	39.8	2.93	DBLD	2.8	2539	43.0	2715	57000 PSI	2.780	....	....
IMR4831	40.8	3.00	DBLD	2.8	2539	44.0	2715	57000 PSI	2.780	....	....
RELODER19	39.0	2.75	DBLD	2.5	2376	44.8	2690	60700 PSI	2.750	....	....
H4831	43.0	3.12	DBLD	3.1	2568	45.7	2686	59000 PSI	2.780	.9836	.9611

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

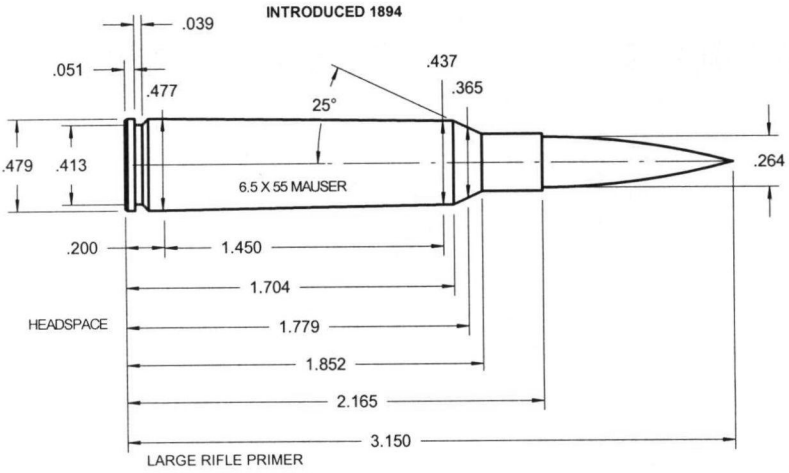
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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
140 Grain Jacketed Bullet (Continued)											
A-XMR-3100	40.5	3.03	DBLD	2.8	2362	45.0c	2685	59700 PSI	2.750	....	....
H4350	39.0	2.83	DBLD	2.8	2530	42.0	2677	58800 PSI	2.780	.9812	.9592
A-XMR-4350	36.9	2.73	DBLD	2.5	2348	41.0	2669	59600 PSI	2.750	....	....
H414	38.0	2.51	DBLD	2.5	2496	41.0	2656	58800 PSI	2.780	.9796	.9518
IMR4064	33.4	2.49	DBLD	2.2	2446	36.0	2615	56900 PSI	2.780	....	....
RELODER15	33.0	2.33	DBLD	2.2	2305	38.0	2610	60800 PSI	2.750	....	....
IMR4895	32.5	2.37	DBLD	2.2	2413	35.5	2605	57600 PSI	2.780	....	....
IMR4320	33.0	2.36	DBLD	2.2	2409	36.0	2600	57600 PSI	2.780	....	....
H380	37.0	2.56	DBLD	2.5	2434	40.0	2594	58900 PSI	2.780	.9791	.9544
H-VARGET	34.0	2.49	DBLD	2.2	2469	36.0	2578	59400 PSI	2.780	....	....
BL-C(2)	34.0	2.19	DBLD	1.9	2412	36.6	2557	59000 PSI	2.780	.9777	.9582
ACCUR 2700	35.1	2.40	DBLD	2.2	2242	39.0	2548	58600 PSI	2.750	....	....
H4895	32.0	2.33	DBLD	2.2	2367	34.3	2517	58400 PSI	2.780	.9733	.9388
IMR3031	30.5	2.33	DBLD	2.2	2365	32.5	2505	56200 PSI	2.780	....	....
142 Grain Jacketed Bullet											
H4831	45.0	3.26	DBLD	3.1	2601	48.0c	2747	58700 PSI	2.780	....	....
A-XMR-4350	38.7	2.86	DBLD	2.8	2414	43.0	2744	57500 PSI	2.800	....	....
H4350	41.5	3.01	DBLD	2.8	2590	44.5	2735	58000 PSI	2.780	.9820	.9524
H414	41.0	2.71	DBLD	2.5	2588	43.5	2734	58800 PSI	2.780	.9783	.9402
A-XMR-3100	41.4	3.10	DBLD	2.8	2354	46.0c	2676	54600 PSI	2.800	....	....
H-VARGET	35.0	2.56	DBLD	2.5	2541	37.5	2645	59100 PSI	2.780	.9841	.9645
ACCUR 2700	36.9	2.53	DBLD	2.5	2323	41.0	2640	58800 PSI	2.800	....	....
H380	39.0	2.69	DBLD	2.5	2490	41.5	2636	58300 PSI	2.780	.9775	.9412
H4895	34.0	2.48	DBLD	2.2	2486	36.2	2597	58200 PSI	2.780	.9801	.9501
A-XMR-4064	33.7	2.54	DBLD	2.5	2259	37.5	2568	57200 PSI	2.800	....	....
155 Grain Jacketed Bullet											
v-N165	37.1	2.64	DBLD	2.5	2177	43.3	2551	NA	NA	2.736	....	....
v-N560	34.1	2.35	DBLD	2.2	2105	41.6	2482	NA	NA	2.736	....	....
v-N160	31.5	2.31	DBLD	2.2	2132	36.8	2402	NA	NA	2.736	....	....
160 Grain Jacketed Bullet											
H1000	48.0c	3.42	NA	3.4	2498	50.0c	2595	56400 PSI	2.860	....	....
IMR7828	40.9	2.96	DBLD	2.8	2367	45.0	2580	58100 PSI	2.800	....	....
H4831	43.0	3.12	DBLD	3.1	2419	46.0c	2540	58100 PSI	2.860	.9840	.9569
H4350	40.0	2.90	DBLD	2.8	2417	43.0	2538	58200 PSI	2.860	.9838	.9638
IMR4350	37.3	2.74	DBLD	2.5	2335	40.5	2520	57400 PSI	2.800	....	....
IMR4831	38.3	2.82	DBLD	2.8	2335	41.5	2520	57200 PSI	2.800	....	....
H414	39.0	2.58	DBLD	2.5	2365	42.0	2514	58800 PSI	2.860	.9799	.9549

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6.5x55 SWEDISH MAUSER



Useful case capacity 3.68 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
70 Grain Jacketed Bullet												
v-N150	47.5	3.54	NA	3.4	3416	47.5	3416	NA	NA	3.025	....	....
77 Grain Jacketed Bullet												
v-N140	39.7	2.91	DBLD	2.8	3032	45.1	3400	NA	NA	2.620	....	....
v-N133	37.3	2.87	DBLD	2.8	3014	42.4	3380	NA	NA	2.620	....	....
v-N135	38.8	3.02	DBLD	2.8	3014	44.1	3380	NA	NA	2.620	....	....
80 Grain Jacketed Bullet												
v-N140	39.1	2.86	DBLD	2.8	2925	44.4	3280	NA	NA	2.620	....	....
85 Grain Jacketed Bullet												
H4895	40.0	2.91	DBLD	2.8	3031	44.0	3370	50002	PSI	2.800	.9737	.9359
H-VARGET	40.0	2.92	DBLD	2.8	3128	44.0	3350	46898	PSI	2.800	.9831	.9645
IMR4064	42.3	3.15	DBLD	3.1	3045	47.0	3350	45000	CUP	2.800	....	....
IMR4895	40.6	2.95	DBLD	2.8	2974	46.0	3335	45900	CUP	2.800	....	....
H335	40.0	2.58	DBLD	2.5	3023	44.5	3314	50113	PSI	2.800	.9799	.9553
IMR3031	38.3	2.92	DBLD	2.8	2952	43.5	3310	46000	CUP	2.800	....	....
H4350	47.0	3.41	NA	3.4	2909	52.0c	3283	46676	PSI	2.800	....	....
H414	45.0	2.97	DBLD	2.8	3071	50.0	3265	45346	PSI	2.800	.9878	.9721
BL-C(2)	43.0	2.77	DBLD	2.5	2931	47.5	3261	49337	PSI	2.800	.9766	.9382
IMR4320	40.8	2.92	DBLD	2.8	2963	45.5	3260	45100	CUP	2.800	....	....
A-XMR-4064	40.9	3.09	DBLD	2.8	2866	45.5	3257	41700	CUP	2.850	....	....
v-N150	40.6	3.03	DBLD	2.8	2900	46.1	3252	NA	NA	2.800	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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6.5x55 SWEDISH MAUSER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
85 Grain Jacketed Bullet (Continued)											
H380	43.0	2.97	DBLD	2.8	2932	48.0	3231	47563 PSI	2.800	.9808	.9511
IMR4350	47.2	3.47	NA	3.4	3021	51.0c	3230	43700 CUP	2.800	....	....
VEC SP9	40.1	2.74	DBLD	2.5	3117	40.1	3117	42090 CIP	3.150	....	....
100 Grain Jacketed Bullet											
H414	44.5	2.94	DBLD	2.8	2879	49.5	3183	50335 PSI	2.850	.9801	.9572
H-VARGET	38.0	2.78	DBLD	2.5	2892	42.0	3177	50778 PSI	2.850	.9768	.9531
H4350	45.0	3.26	DBLD	3.1	2724	50.0	3172	51000 PSI	2.850	.9700	.9265
ACCUR 2700	45.6	3.12	DBLD	3.1	2907	48.0	3093	50100 PSI	2.975	....	....
H380	43.0	2.97	DBLD	2.8	2845	48.0	3092	47674 PSI	2.850	.9836	.9651
H450	46.9	3.06	DBLD	2.8	2847	51.0	3073	NA NA	3.025	....	....
A-XMR-4064	39.6	2.99	DBLD	2.8	2692	44.0	3060	41700 CUP	2.975	....	....
v-N550	42.6	2.95	DBLD	2.8	2784	46.0	3051	NA NA	2.850	....	....
H4895	37.0	2.69	DBLD	2.5	2820	41.0	3033	51000 PSI	2.850	.9818	.9583
v-N160	47.3	3.47	NA	3.4	2785	50.6c	3001	NA NA	2.850	....	....
H335	37.0	2.39	DBLD	2.2	2686	41.0	2991	51000 PSI	2.850	.9736	.9425
v-N540	39.7	2.78	DBLD	2.5	2696	43.4	2971	NA NA	2.850	....	....
ACCUR 2520	36.9	2.52	DBLD	2.5	2609	41.0	2965	47900 PSI	2.975	....	....
BL-C(2)	39.5	2.55	DBLD	2.5	2734	43.8	2948	50113 PSI	2.850	.9825	.9657
A-XMR-4350	43.2	3.20	DBLD	3.1	2578	48.0	2929	41900 PSI	2.975	....	....
v-N150	40.6	3.03	DBLD	2.8	2727	43.4	2920	NA NA	2.850	....	....
v-N140	40.0	2.93	DBLD	2.8	2748	42.3	2916	NA NA	2.850	....	....
A-XMR-2495	33.3	2.49	DBLD	2.2	2550	37.0	2898	50300 PSI	2.975	....	....
H4831	46.0	3.33	NA	3.1	2552	51.0c	2883	41576 PSI	2.850	.9759	.9419
A-XMR-3100	44.1	3.30	DBLD	3.1	2397	49.0	2724	34100 PSI	2.975	....	....
108 Grain Jacketed Bullet											
v-N560	48.1	3.32	NA	3.1	2774	51.6	3012	NA NA	3.071	....	....
v-N165	48.7	3.47	NA	3.4	2823	51.2	3000	NA NA	3.071	....	....
v-N550	41.0	2.84	DBLD	2.8	2720	44.4	2993	NA NA	3.071	....	....
v-N160	47.0	3.45	NA	3.4	2785	49.3	2963	NA NA	3.071	....	....
v-N150	39.5	2.95	DBLD	2.8	2724	42.1	2890	NA NA	3.071	....	....
v-N540	37.5	2.63	DBLD	2.5	2611	40.8	2870	NA NA	3.071	....	....
v-N140	36.6	2.68	DBLD	2.5	2524	39.8	2780	NA NA	3.071	....	....
120 Grain Jacketed Bullet											
H450	46.0	3.00	DBLD	2.8	2730	50.0	2946	NA NA	3.025	....	....
v-N550	39.5	2.73	DBLD	2.5	2544	43.4	2830	NA NA	3.024	....	....
v-N160	44.7	3.28	DBLD	3.1	2607	48.4	2823	NA NA	3.024	....	....
H-VARGET	35.0	2.56	DBLD	2.5	2579	39.0	2812	50224 PSI	3.000	.9787	.9493

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6.5x55 SWEDISH MAUSER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
120 Grain Jacketed Bullet (Continued)											
H4831	44.5	3.23	DBLD	3.1	2528	49.5	2802	50889 PSI	3.000	.9797	.9536
v-N560	46.8	3.23	DBLD	3.1	2599	49.3	2801	NA NA	3.024	....	....
H4350	41.5	3.01	DBLD	2.8	2545	46.0	2792	50778 PSI	3.000	.9797	.9525
H1000	50.1	3.57	NA	3.4	2683	52.0c	2787	NA NA	3.025	....	....
H380	40.0	2.76	DBLD	2.5	2555	44.3	2784	51000 PSI	3.000	.9802	.9577
H414	40.0	2.64	DBLD	2.5	2528	44.5	2783	51000 PSI	3.000	.9788	.9528
v-N540	36.6	2.57	DBLD	2.5	2470	40.6	2726	NA NA	3.024	....	....
H4895	34.0	2.48	DBLD	2.2	2571	37.8	2715	51000 PSI	3.000	.9858	.9824
v-N150	36.3	2.71	DBLD	2.5	2389	40.5	2648	NA NA	3.024	....	....
v-N140	34.8	2.55	DBLD	2.5	2346	39.4	2619	NA NA	3.024	....	....
VEC SP7	36.3	2.39	DBLD	2.2	2592	36.3	2592	37736 CIP	3.150	....	....
123 Grain Jacketed Bullet											
v-N550	37.2	2.58	DBLD	2.5	2513	43.5	2887	NA NA	3.150	....	....
v-N150	37.1	2.77	DBLD	2.5	2553	41.3	2782	NA NA	3.150	....	....
v-N160	42.4	3.11	DBLD	3.1	2592	45.1	2756	NA NA	3.150	....	....
v-N540	36.6	2.57	DBLD	2.5	2305	41.8	2680	NA NA	3.150	....	....
v-N140	34.7	2.54	DBLD	2.5	2292	40.3	2657	NA NA	3.150	....	....
129 Grain Jacketed Bullet											
H450	45.1	2.94	DBLD	2.8	2683	49.0	2896	NA NA	3.025	....	....
RELODER19	43.7	3.08	DBLD	2.8	2584	48.0	2815	44500 CUP	2.935	....	....
A-XMR-4350	41.4	3.06	DBLD	2.8	2423	46.0	2753	50300 PSI	3.025	....	....
A-XMR-4064	37.3	2.82	DBLD	2.8	2409	41.5	2738	45400 CUP	3.025	....	....
A-XMR-3100	44.1	3.30	DBLD	3.1	2394	49.0	2721	47500 PSI	3.025	....	....
H1000	50.1	3.57	NA	3.4	2606	52.0c	2707	NA NA	3.025	....	....
H4350	40.0	2.90	DBLD	2.8	2430	45.5	2703	50446 PSI	2.935	.9808	.9539
H4831	44.0	3.19	DBLD	3.1	2449	48.5	2689	49891 PSI	2.935	.9794	.9493
H414	39.5	2.61	DBLD	2.5	2460	43.5	2677	50667 PSI	2.935	.9790	.9543
H-VARGET	34.0	2.49	DBLD	2.2	2472	37.5	2664	51000 PSI	2.935	.9787	.9390
ACCUR 2700	40.9	2.80	DBLD	2.5	2496	43.0	2655	50300 PSI	3.025	....	....
H380	38.5	2.66	DBLD	2.5	2440	42.5	2654	50446 PSI	2.935	.9791	.9585
RELODER15	35.4	2.50	DBLD	2.2	2404	38.8	2620	44400 CUP	2.935	....	....
H4895	33.0	2.40	DBLD	2.2	2373	36.3	2561	50557 PSI	2.935	.9769	.9478
ACCUR 2520	33.8	2.31	DBLD	2.2	2251	37.5	2558	49200 PSI	3.025	....	....
A-XMR-2495	32.4	2.42	DBLD	2.2	2223	36.0	2526	46100 PSI	3.025	....	....
RELODER12	33.5	2.31	DBLD	2.2	2262	36.7	2465	44400 CUP	2.935	....	....
RELODER 7	24.0	1.74	DBLD	1.6	1993	25.8	2130	43600 CUP	2.935	....	....
130 Grain Jacketed Bullet											
v-N560	45.3	3.13	DBLD	3.1	2523	49.3	2784	NA NA	3.150	....	....

....STARTING LOADS....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6.5x55 SWEDISH MAUSER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....												
130 Grain Jacketed Bullet (Continued)												
v-N550	37.9	2.62	DBLD	2.5	2401	42.2	2684	NA	NA	3.150	....	....
v-N160	41.7	3.06	DBLD	2.8	2391	46.1	2654	NA	NA	3.150	....	....
v-N540	34.5	2.42	DBLD	2.2	2353	38.8	2602	NA	NA	3.150	....	....
v-N140	33.7	2.47	DBLD	2.2	2286	38.0	2537	NA	NA	3.150	....	....
v-N150	33.7	2.51	DBLD	2.5	2263	38.6	2526	NA	NA	3.150	....	....
139 Grain Jacketed Bullet												
v-N560	43.1	2.97	DBLD	2.8	2409	46.8	2648	NA	NA	3.126	....	....
v-N165	44.4	3.16	DBLD	3.1	2395	48.5	2628	NA	NA	3.126	....	....
v-N160	41.1	3.02	DBLD	2.8	2359	44.4	2570	NA	NA	3.126	....	....
v-N550	36.7	2.54	DBLD	2.5	2269	40.0	2510	NA	NA	3.126	....	....
v-N150	31.9	2.38	DBLD	2.2	2100	36.9	2357	NA	NA	3.126	....	....
140 Grain Jacketed Bullet												
H450	44.2	2.88	DBLD	2.8	2591	48.0	2797	NA	NA	3.025	....	....
RELODER22	43.9	3.06	DBLD	2.8	2478	48.1	2700	44400	CUP	3.000	....	....
v-N560	44.1	3.04	DBLD	2.8	2450	47.5	2677	NA	NA	3.091	....	....
H1000	46.5	3.32	NA	3.1	2423	51.5	2651	51000	PSI	3.030	.9820	.9605
RELODER19	42.3	2.99	DBLD	2.8	2455	46.0	2650	44000	CUP	3.000	....	....
v-N165	45.0	3.20	DBLD	3.1	2408	49.0	2641	NA	NA	3.091	....	....
A-XMR-4350	40.5	3.00	DBLD	2.8	2314	45.0	2629	48100	PSI	3.000	....	....
H4350	39.5	2.86	DBLD	2.8	2418	44.0	2617	50667	PSI	3.030	.9824	.9632
v-N160	42.2	3.10	DBLD	2.8	2392	45.6	2602	NA	NA	3.091	....	....
IMR7828	42.7	3.10	DBLD	2.8	2363	47.5	2600	45000	CUP	3.000	....	....
H4831	42.5	3.08	DBLD	2.8	2382	47.0	2586	50667	PSI	3.030	.9818	.9604
ACCUR 2700	39.9	2.73	DBLD	2.5	2416	42.0	2570	50400	PSI	3.000	....	....
A-XMR-4064	36.0	2.72	DBLD	2.5	2260	40.0	2569	42600	CUP	3.000	....	....
H414	37.5	2.48	DBLD	2.2	2393	41.5	2565	50557	PSI	3.030	.9827	.9678
v-N550	37.1	2.57	DBLD	2.5	2292	40.7	2540	NA	NA	3.091	....	....
IMR4831	38.4	2.83	DBLD	2.8	2256	43.5	2530	45800	CUP	3.000	....	....
H-VARGET	32.5	2.38	DBLD	2.2	2312	36.0	2528	51000	PSI	3.030	.9747	.9432
IMR4350	37.9	2.79	DBLD	2.5	2273	42.5	2525	45400	CUP	3.000	....	....
A-XMR-3100	42.3	3.16	DBLD	3.1	2221	47.0	2524	41400	PSI	3.000	....	....
H380	36.5	2.52	DBLD	2.5	2316	40.5	2520	50002	PSI	3.030	.9791	.9556
ACCUR 2520	33.3	2.27	DBLD	2.2	2202	37.0	2502	50400	PSI	3.000	....	....
H4895	32.5	2.37	DBLD	2.2	2305	35.8	2493	50667	PSI	3.030	.9764	.9464
RELODER15	33.5	2.37	DBLD	2.2	2298	36.6	2480	44200	CUP	3.000	....	....
IMR4064	33.3	2.48	DBLD	2.2	2220	37.5	2465	45600	CUP	3.000	....	....
IMR4320	33.4	2.39	DBLD	2.2	2220	37.5	2465	45500	CUP	3.000	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6.5x55 SWEDISH MAUSER (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
140 Grain Jacketed Bullet (Continued)											
A-XMR-2495	30.6	2.29	DBLD	2.2	2146	34.0	2439	49500 PSI	3.000	....	....
IMR4895	32.8	2.39	DBLD	2.2	2209	36.5	2430	45000 CUP	3.000	....	....
v-N150	33.1	2.47	DBLD	2.2	2173	37.8	2413	NA NA	3.091	....	....
WIN 760	36.3	2.42	DBLD	2.2	2228	39.6	2405	44100 CUP	3.100	....	....
WIN MAG RIFLE	41.3	2.97	DBLD	2.8	2228	44.7	2405	43800 CUP	3.100	....	....
RELODER12	31.8	2.20	DBLD	1.9	2198	35.0	2395	44500 CUP	3.000	....	....
IMR3031	30.5	2.32	DBLD	2.2	2100	34.5	2355	45800 CUP	3.000	....	....
ACCUR 8700	47.7	3.28	DBLD	3.1	1930	53.0	2193	32600 PSI	3.000	....	....
140 Grain Lead Bullet											
A-XMR-4350	39.6	2.93	DBLD	2.8	2218	44.0	2521	43500 PSI	3.020	....	....
ACCUR 2700	39.0	2.67	DBLD	2.5	2358	41.0	2509	46100 PSI	3.020	....	....
A-XMR-4064	34.2	2.58	DBLD	2.5	2192	38.0	2492	40500 CUP	3.020	....	....
A-XMR-3100	42.3	3.16	DBLD	3.1	2179	47.0	2476	40200 PSI	3.020	....	....
ACC XMP5744	26.1	1.96	DBLD	1.9	2086	29.0	2371	49900 PSI	3.020	....	....
A-XMR-2495	29.7	2.22	DBLD	2.2	2083	33.0	2367	44800 PSI	3.020	....	....
ACCUR 2520	30.6	2.09	DBLD	1.9	2079	34.0	2362	44600 PSI	3.020	....	....
ACCUR 8700	47.7	3.28	DBLD	3.1	1932	53.0	2196	32600 PSI	3.020	....	....
144 Grain Jacketed Bullet											
v-N560	43.2	2.98	DBLD	2.8	2379	47.5	2648	NA NA	3.113	....	....
v-N165	42.4	3.02	DBLD	2.8	2398	46.0	2543	NA NA	3.113	....	....
v-N170	46.0	3.28	DBLD	3.1	2228	51.1	2526	NA NA	3.113	....	....
v-N160	41.4	3.04	DBLD	2.8	2385	44.1	2523	NA NA	3.113	....	....
v-N150	32.1	2.39	DBLD	2.2	2198	34.6	2339	NA NA	3.113	....	....
150 Grain Jacketed Bullet											
H450	42.3	2.76	DBLD	2.5	2450	46.0	2644	NA NA	3.025	....	....
H4831	43.3	3.14	DBLD	3.1	2473	46.0	2619	NA NA	3.025	....	....
H4350	41.4	3.00	DBLD	2.8	2472	44.0	2618	NA NA	3.025	....	....
H1000	48.2	3.44	NA	3.4	2432	50.0	2527	NA NA	3.025	....	....
155 Grain Jacketed Bullet											
A-XMR-4350	38.2	2.83	DBLD	2.8	2235	42.5	2540	51200 PSI	3.090	....	....
A-XMR-3100	41.4	3.10	DBLD	2.8	2234	46.0	2539	51100 PSI	3.090	....	....
v-N560	39.7	2.74	DBLD	2.5	2187	44.0	2452	NA NA	3.110	....	....
v-N160	39.1	2.87	DBLD	2.8	2186	43.5	2429	NA NA	3.110	....	....
v-N170	42.7	3.05	DBLD	2.8	2086	49.3	2425	NA NA	3.110	....	....
v-N165	40.9	2.91	DBLD	2.8	2151	46.1	2417	NA NA	3.110	....	....
ACCUR 8700	47.7	3.28	DBLD	3.1	2123	53.0	2413	42700 PSI	3.090	....	....
A-XMR-4064	33.7	2.54	DBLD	2.5	2101	37.5	2388	49900 PSI	3.090	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6.5x55 SWEDISH MAUSER (Continued)

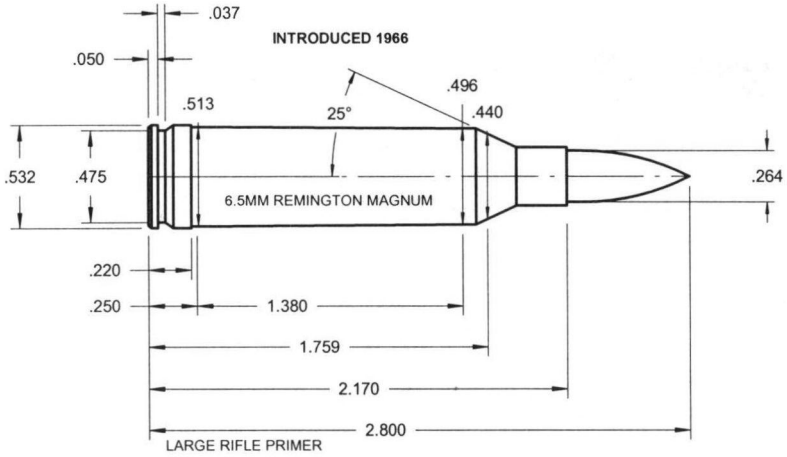
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
155 Grain Jacketed Bullet (Continued)												
v-N550	35.2	2.44	DBLD	2.2	2160	39.2	2386	NA	NA	3.110	....	....
ACCUR 2700	34.2	2.34	DBLD	2.2	2090	38.0	2375	49200	PSI	3.090	....	....
v-N150	31.2	2.33	DBLD	2.2	2047	35.0	2246	NA	NA	3.110	....	....
160 Grain Jacketed Bullet												
A-XMR-4350	39.6	2.93	DBLD	2.8	2246	44.0	2553	50300	PSI	2.970	....	....
RELODER22	43.2	3.01	DBLD	2.8	2348	47.0	2535	44000	CUP	2.975	....	....
H4831	44.0	3.19	DBLD	3.1	2327	48.0	2524	51000	PSI	3.000	.9797	.9445
H450	41.4	2.70	DBLD	2.5	2333	45.0	2518	NA	NA	3.025	....	....
H1000	45.0	3.21	DBLD	3.1	2265	50.0	2517	50224	PSI	3.000	.9791	.9497
v-N160	42.3	3.10	DBLD	2.8	2370	44.9	2510	NA	NA	3.035	....	....
RELODER19	41.1	2.90	DBLD	2.8	2294	45.0	2500	44300	CUP	2.975	....	....
A-XMR-3100	41.4	3.10	DBLD	2.8	2155	46.0	2449	43200	PSI	2.970	....	....
H4350	40.0	2.90	DBLD	2.8	2317	43.0	2445	49780	PSI	3.000	.9823	.9525
A-XMR-4064	35.1	2.65	DBLD	2.5	2133	39.0	2424	51100	PSI	2.970	....	....
H414	38.5	2.54	DBLD	2.5	2262	41.0	2383	49559	PSI	3.000	.9791	.9410
ACCUR 2700	35.1	2.40	DBLD	2.2	2075	39.0	2358	46900	PSI	2.970	....	....
H-VARGET	32.5	2.38	DBLD	2.2	2173	36.0	2354	50557	PSI	3.000	.9773	.9507
v-N140	34.7	2.55	DBLD	2.5	2220	36.9	2350	NA	NA	3.035	....	....
RELODER15	32.8	2.31	DBLD	2.2	2154	35.6	2325	44000	CUP	2.975	....	....
WIN MAG RIFLE	41.2	2.96	DBLD	2.8	2160	44.5	2310	43700	CUP	3.100	....	....
WIN 760	37.1	2.47	DBLD	2.2	2137	40.0	2285	43700	CUP	3.100	....	....
RELODER12	32.2	2.23	DBLD	2.2	2061	35.2	2225	44200	CUP	2.975	....	....
RELODER 7	23.0	1.67	DBLD	1.6	1798	25.0	1940	44000	CUP	2.975	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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6.5 REMINGTON MAGNUM



Useful case capacity 4.28 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
85 Grain Jacketed Bullet											
A-XMR-4350	56.7	4.20	NA	4.0	3337	63.0c	3792	63900 PSI	2.740	....	....
H414	55.0	3.64	NA	3.4	3451	60.0	3755	63406 PSI	2.800	.9832	.9620
H380	52.5	3.63	NA	3.4	3339	57.0	3681	61934 PSI	2.800	.9784	.9568
H4895	47.0	3.42	NA	3.4	3322	51.0	3613	60830 PSI	2.800	.9791	.9417
ACCUR 2700	55.1	3.77	NA	3.7	3358	58.0	3572	55600 PSI	2.740	....	....
H4831	56.0	4.06	NA	4.0	3201	61.0c	3570	57274 PSI	2.800	....	....
H4350	54.0	3.92	NA	3.7	3220	57.0	3564	62179 PSI	2.800	....	....
A-XMR-3100	57.6c	4.31	NA	4.3	3032	64.0c	3446	47200 PSI	2.740	....	....
100 Grain Jacketed Bullet											
A-XMR-4350	54.9	4.06	NA	4.0	3121	61.0c	3547	60700 PSI	2.800	....	....
H4895	46.0	3.35	NA	3.1	3186	50.0	3475	64019 PSI	2.940	.9786	.9505
H414	51.5	3.40	NA	3.1	3168	56.0	3466	64509 PSI	2.940	.9802	.9630
H380	50.0	3.45	NA	3.4	3111	54.0	3459	64755 PSI	2.940	.9737	.9410
H4831	55.0	3.99	NA	3.7	3071	60.0c	3416	58991 PSI	2.940	....	....
ACCUR 2700	52.3	3.58	NA	3.4	3168	55.0	3370	57900 PSI	2.800	....	....
A-XMR-3100	56.3	4.21	NA	4.0	2947	62.5c	3349	50800 PSI	2.800	....	....
H4350	51.0	3.70	NA	3.4	3071	55.0	3327	63406 PSI	2.940	.9801	.9605
120 Grain Jacketed Bullet											
H4831	54.0	3.91	NA	3.7	2985	59.0c	3286	62547 PSI	2.790	.9808	.9646
H414	47.0	3.11	DBLD	3.1	2792	51.0	3099	63406 PSI	2.790	.9742	.9425

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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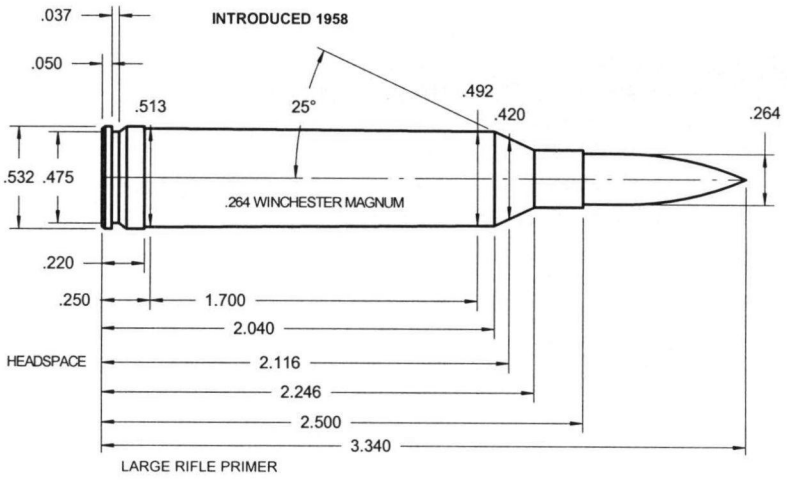
6.5 REMINGTON MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
120 Grain Jacketed Bullet (Continued)											
H4895	42.5	3.09	DBLD	2.8	2872	46.0	3081	62425 PSI	2.790	.9802	.9466
H4350	49.0	3.55	NA	3.4	2780	52.0	3080	62792 PSI	2.790	....	....
H380	45.0	3.11	DBLD	3.1	2843	49.0	3059	62425 PSI	2.790	.9819	.9745
129 Grain Jacketed Bullet											
H4831	53.5	3.88	NA	3.7	2854	58.0	3155	62302 PSI	3.040	.9780	.9493
A-XMR-4350	50.4	3.73	NA	3.7	2759	56.0	3135	60400 PSI	2.800	....	....
A-XMR-3100	54.0	4.04	NA	4.0	2737	60.0c	3110	56700 PSI	2.800	....	....
ACCUR 2700	48.9	3.35	NA	3.1	2826	51.5	3006	59300 PSI	2.800	....	....
H4350	47.0	3.41	NA	3.4	2709	51.0	2994	62179 PSI	3.040	.9754	.9506
H414	46.0	3.04	DBLD	2.8	2673	50.0	2954	62915 PSI	3.040	.9754	.9338
H380	43.5	3.01	DBLD	2.8	2636	47.0	2950	62915 PSI	3.040	.9683	.9663
H4895	40.5	2.95	DBLD	2.8	2709	44.0	2936	61198 PSI	3.040	.9774	.9361
140 Grain Jacketed Bullet											
H4831	49.5	3.59	NA	3.4	2708	54.0	2943	63038 PSI	2.790	.9817	.9680
H4350	45.0	3.26	DBLD	3.1	2514	49.0	2780	62792 PSI	2.790	.9752	.9517
H4895	38.5	2.80	DBLD	2.5	2569	42.0	2752	60340 PSI	2.790	.9806	.9673
H414	42.0	2.78	DBLD	2.5	2502	46.0	2743	62670 PSI	2.790	.9771	.9418
H380	40.5	2.80	DBLD	2.5	2475	44.0	2666	62792 PSI	2.790	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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264 WINCHESTER MAGNUM



Useful case capacity 5.29 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
77 Grain Jacketed Bullet									
H4831	67.0	4.86	2 SCOOPS	2.2	3310	73.0	3899 62341 PSI	3.160	.9730 .9388
H414	57.0	3.77	NA	3.7	3431	62.0	3780 59259 PSI	3.160	.9807 .9544
H380	55.0	3.80	NA	3.7	3347	59.0	3779 59496 PSI	3.160	.9700 .9564
H4895	50.5	3.68	NA	3.4	3249	55.0	3712 62459 PSI	3.160	.9710 .9353
H870	80.0c	5.49	2 SCOOPS	2.5	3568	80.0c	3568 52030 PSI	3.160	....
85 Grain Jacketed Bullet									
H4831	67.0	4.86	2 SCOOPS	2.2	3531	73.0	3812 64119 PSI	3.100	.9873 .9469
v-N160	59.0	4.33	NA	4.3	3364	67.1	3773 NA NA	3.098	....
H4350	59.0	4.28	NA	4.0	3565	61.0	3669 62104 PSI	3.100	....
H414	57.0	3.77	NA	3.7	3365	62.0	3633 61867 PSI	3.100	.9848 .9491
H4895	50.5	3.68	NA	3.4	3359	55.0	3625 62696 PSI	3.100	.9832 .9628
H380	54.5	3.77	NA	3.7	3411	58.0	3612 59970 PSI	3.100	.9838 .9615
H870	80.0c	5.49	2 SCOOPS	2.5	3557	80.0c	3557 55467 PSI	3.100	....
v-N140	50.5	3.70	NA	3.4	3160	57.4	3543 NA NA	3.098	....
H1000	74.0	5.28	2 SCOOPS	2.5	3318	78.0c	3480 56889 PSI	3.100	....
100 Grain Jacketed Bullet									
H4831	65.5	4.75	2 SCOOPS	2.2	3409	71.0	3680 63881 PSI	3.230	.9862 .9712
H450	64.5	4.21	NA	4.0	3192	70.0	3642 60681 PSI	3.160	.9763 .9802
H4350	56.0	4.06	NA	4.0	3403	59.0	3570 62341 PSI	3.230	....
A-XMR-4350	60.0	4.44	NA	4.3	3202	67.0	3523 62900 PSI	3.220	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

264 WINCHESTER MAGNUM (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
100 Grain Jacketed Bullet (Continued)										
A-XMR-3100	65.5	4.90	2 SCOOPS	2.2	3185	72.0c 3471	61900 PSI	3.220	....	....
H1000	72.0	5.13	2 SCOOPS	2.5	3237	77.0c 3428	56296 PSI	3.230	....	....
H4895	49.0	3.57	NA	3.4	3155	53.0 3405	64237 PSI	3.230	.9811	.9498
H414	54.0	3.57	NA	3.4	3140	59.0 3389	62341 PSI	3.230	.9849	.9693
IMR4350	52.9	3.89	NA	3.7	3018	60.0 3385	53900 CUP	3.100	....	....
H380	51.5	3.56	NA	3.4	3126	56.0 3374	60444 PSI	3.230	.9832	.9682
IMR4831	54.5	4.01	NA	4.0	3025	61.5 3360	53600 CUP	3.100	....	....
IMR4320	47.5	3.40	NA	3.1	2965	54.0 3325	54000 CUP	3.100	....	....
H870	78.0c	5.35	2 SCOOPS	2.5	3325	78.0c 3325	53096 PSI	3.230	....	....
IMR4895	45.5	3.31	NA	3.1	2939	51.5 3295	53800 CUP	3.100	....	....
IMR4064	46.3	3.45	NA	3.4	2954	51.5 3250	52900 CUP	3.100	....	....
IMR3031	42.2	3.22	DBLD	3.1	2809	48.0 3150	54000 CUP	3.100	....	....
ACCUR 8700	74.7	5.14	2 SCOOPS	2.5	2732	83.0c 3105	40800 PSI	3.220	....	....
IMR4198	38.4	3.04	DBLD	2.8	2764	43.5 3100	53900 CUP	3.100	....	....
SR4759	32.2	3.20	DBLD	3.1	2536	36.5 2845	53900 CUP	3.100	....	....
IMR4227	32.4	2.49	DBLD	2.2	2553	36.5 2835	53600 CUP	3.100	....	....
120 Grain Jacketed Bullet										
H450	61.5	4.02	NA	4.0	3015	66.5 3391	61748 PSI	3.160	.9766	.9837
H870	67.8	4.65	2 SCOOPS	2.2	3051	76.0 3389	63170 PSI	3.160	....	....
H4831	60.0	4.35	NA	4.3	3121	65.0 3369	61748 PSI	3.300	.9847	.9728
H4350	54.0	3.92	NA	3.7	3042	57.0 3190	62696 PSI	3.300	....	....
H1000	67.0	4.78	2 SCOOPS	2.2	2979	72.0 3185	58074 PSI	3.300	.9866	.9787
125 Grain Jacketed Bullet										
ACCUR 8700	67.8	4.66	2 SCOOPS	2.2	2802	77.0c 3142	64000 PSI	3.265	....	....
A-XMR-3100	53.3	3.99	NA	3.7	2668	58.0 2880	61300 PSI	3.265	....	....
A-XMR-4350	50.0	3.70	NA	3.4	2659	54.0 2843	60800 PSI	3.265	....	....
129 Grain Jacketed Bullet										
H4831	62.0	4.49	NA	4.3	3057	65.0 3206	59970 PSI	3.290	....	....
H1000	67.0	4.78	2 SCOOPS	2.2	3010	71.0 3187	59733 PSI	3.290	....	....
H4350	53.0	3.84	NA	3.7	3029	56.0 3177	61393 PSI	3.290	....	....
H870	73.6	5.05	2 SCOOPS	2.5	3051	76.0 3170	58193 PSI	3.290	....	....
RELODER19	52.3	3.69	NA	3.4	2844	57.0 3070	51800 CUP	3.270	....	....
140 Grain Jacketed Bullet										
H870	64.0	4.39	NA	4.3	2794	73.0 3163	64237 PSI	3.260	....	....
H450	58.0	3.79	NA	3.7	2792	63.0 3119	61156 PSI	3.160	.9780	.9856
IMR7828	57.6	4.18	NA	4.0	2805	65.0 3115	53600 CUP	3.230	....	....
ACC MAG PRO	58.7	3.89	NA	3.7	2821	65.2 3079	64000 PSI	3.325	.9866	.9663

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

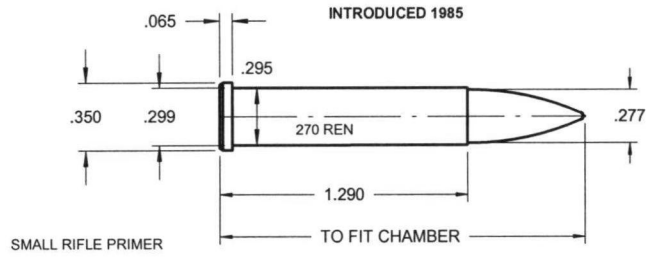
264 WINCHESTER MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
					....STARTING LOADS....						
140 Grain Jacketed Bullet (Continued)											
H4831	56.0	4.06	NA	4.0	2840	61.0	3065	61630 PSI	3.260	.9850	.9804
H1000	63.0	4.49	NA	4.3	2824	68.0	3019	61037 PSI	3.260	.9867	.9755
v-N140	42.1	3.08	DBLD	2.8	2691	47.8	3018	NA NA	3.256	....	....
v-N160	50.2	3.69	NA	3.4	2666	57.1	2990	NA NA	3.255	....	....
H4350	50.0	3.63	NA	3.4	2800	53.0	2965	63289 PSI	3.260	.9811	.9332
RELODER22	52.8	3.68	NA	3.4	2768	57.0	2960	51300 CUP	3.340	....	....
RELODER19	51.4	3.63	NA	3.4	2729	56.0	2945	51800 CUP	3.340	....	....
ACCUR 8700	64.7	4.45	NA	4.3	2643	72.0	2908	62700 PSI	3.265	....	....
IMR4831	48.3	3.55	NA	3.4	2588	54.5	2875	53600 CUP	3.230	....	....
IMR4350	46.5	3.41	NA	3.4	2541	52.5	2850	53700 CUP	3.230	....	....
IMR4320	41.9	3.00	DBLD	2.8	2448	47.5	2745	53900 CUP	3.230	....	....
A-XMR-4350	46.6	3.45	NA	3.4	2446	53.0	2743	64000 PSI	3.265	....	....
A-XMR-3100	51.2	3.83	NA	3.7	2505	56.0	2729	61600 PSI	3.265	....	....
IMR4895	40.3	2.94	DBLD	2.8	2444	45.5	2715	53600 CUP	3.230	....	....
IMR4064	40.8	3.04	DBLD	2.8	2440	46.0	2710	53600 CUP	3.230	....	....
IMR3031	38.9	2.97	DBLD	2.8	2377	44.0	2665	53700 CUP	3.230	....	....
IMR4198	34.8	2.75	DBLD	2.5	2301	39.5	2580	54000 CUP	3.230	....	....
IMR4227	30.4	2.33	DBLD	2.2	2158	34.5	2420	54000 CUP	3.230	....	....
SR4759	29.9	2.97	DBLD	2.8	2139	34.0	2400	54000 CUP	3.230	....	....
150 Grain Jacketed Bullet											
H1000	62.0	4.42	NA	4.3	2790	66.0	2922	59852 PSI	3.160	.9885	.9716
160 Grain Jacketed Bullet											
H4831	52.5	3.81	NA	3.7	2674	57.0	2886	62104 PSI	3.350	.9832	.9624
H870	63.0	4.32	NA	4.3	2658	68.0	2868	60800 PSI	3.350	....	....
H1000	61.0	4.35	NA	4.3	2701	65.0	2860	59141 PSI	3.350	.9858	.9668
H450	53.5	3.49	NA	3.4	2432	58.0	2852	61274 PSI	3.160	.9651	.9594
RELODER22	52.3	3.64	NA	3.4	2576	57.0	2780	51800 CUP	3.315	....	....
v-N160	49.5	3.64	NA	3.4	2399	56.3	2690	NA NA	3.255	....	....
H4350	47.0	3.41	NA	3.4	2536	50.0	2686	60681 PSI	3.350	.9812	.9353
165 Grain Jacketed Bullet											
H1000	60.0	4.28	NA	4.0	2611	63.0	2844	62222 PSI	3.160	....	....
H4831	51.0	3.70	NA	3.4	2575	55.0	2830	60919 PSI	3.160	.9766	.9694
H870	63.0	4.32	NA	4.3	2630	66.0	2809	60444 PSI	3.160	....	....
H4350	46.0	3.34	NA	3.1	2489	48.0	2626	60326 PSI	3.160	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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270 R.E.N.



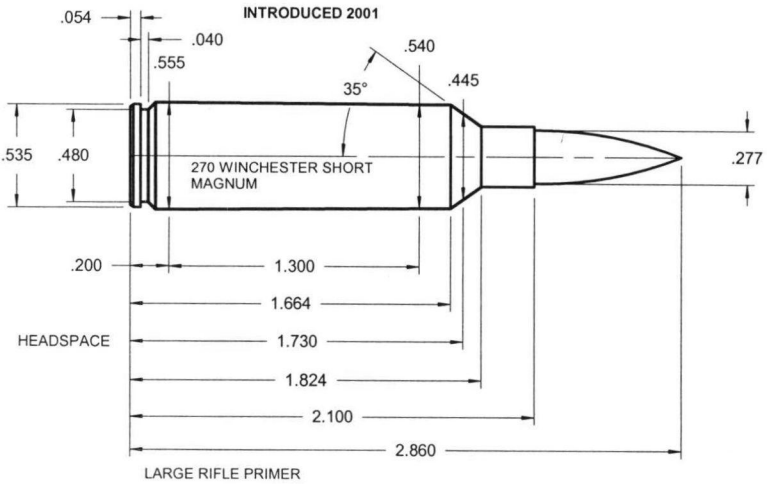
Useful case capacity 0.91 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
90 Grain Jacketed Bullet										
ACCUR #9	10.0	.66	.66	NA	1716	11.1	1888	47200	PSI	1.950
ACCUR 1680	13.1	.86	.82	NA	1646	14.5c	1811	38900	PSI	1.950
ACCUR #7	7.4	.48	.46	NA	1499	8.2	1650	47300	PSI	1.950
H110	9.5	.62	.61	NA	1475	10.5	1622	NA	NA	1.900
H4227	8.5	.65	.61	NA	1430	9.5	1589	NA	NA	1.900
100 Grain Jacketed Bullet										
ACCUR 1680	13.1	.86	.82	NA	1650	14.5c	1815	47900	PSI	1.935
ACCUR #9	9.7	.64	.61	NA	1635	10.8	1799	48400	PSI	1.935
ACCUR #7	7.4	.48	.46	NA	1414	8.2	1556	50300	PSI	1.935
H110	9.0	.59	.57	NA	1301	10.0	1431	NA	NA	1.790
H4227	8.0	.62	.61	NA	1265	9.0	1404	NA	NA	1.790
110 Grain Jacketed Bullet										
ACCUR 1680	12.6	.83	.82	NA	1522	14.0c	1675	36000	PSI	2.050
ACCUR #9	9.2	.60	.57	NA	1513	10.2	1666	48100	PSI	2.050
ACCUR #7	7.2	.47	.46	NA	1340	8.0	1474	49700	PSI	2.050
H110	8.8	.58	.57	.5	1291	9.8	1419	NA	NA	1.900
H4227	7.8	.60	.57	NA	1245	8.7	1370	NA	NA	1.900

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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270 WINCHESTER SHORT MAGNUM



Useful case capacity 4.91 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
90 Grain Jacketed Bullet											
H414	64.0	4.23	NA	4.0	3609	68.0	3789	63400 PSI	2.700	.9880	.9642
H-VARGET	57.0	4.17	NA	4.0	3610	60.5	3734	62800 PSI	2.700	.9904	.9756
H4350	64.0	4.64	2 SCOOPS	2.2	3568	67.5	3733	62800 PSI	2.700	....	....
H380	62.0	4.28	NA	4.0	3561	65.5	3711	62900 PSI	2.700	....	....
H4831	69.0c	5.00	2 SCOOPS	2.2	3525	73.0c	3703	63400 PSI	2.700	....	....
H4895	53.0	3.86	NA	3.7	3508	56.5	3690	62500 PSI	2.700	.9855	.9535
100 Grain Jacketed Bullet											
H414	62.0	4.10	NA	4.0	3451	65.0	3613	63000 PSI	2.700	....	....
H4350	62.0	4.50	NA	4.3	3458	65.5	3585	62900 PSI	2.700	....	....
H-VARGET	55.0	4.02	NA	4.0	3416	58.5	3573	63300 PSI	2.700	.9874	.9641
H4831	67.0	4.86	2 SCOOPS	2.2	3352	71.0c	3542	62700 PSI	2.700	....	....
H380	60.0	4.15	NA	4.0	3361	63.5	3518	62600 PSI	2.700	....	....
H4895	51.0	3.71	NA	3.7	3338	54.5	3505	62500 PSI	2.700	.9863	.9550
110 Grain Jacketed Bullet											
H4350	59.0	4.28	NA	4.0	3287	63.0	3436	63200 PSI	2.800	.9891	.9698
H414	59.0	3.90	NA	3.7	3283	62.5	3435	62800 PSI	2.800	....	....
H-VARGET	53.0	3.87	NA	3.7	3276	56.0	3406	63200 PSI	2.800	....	....
H4831	64.0	4.64	2 SCOOPS	2.2	3265	67.5	3404	63000 PSI	2.800	....	....
H1000	71.0c	5.06	2 SCOOPS	2.5	3279	73.0c	3360	60400 PSI	2.800	....	....
H380	55.0	3.80	NA	3.7	3173	59.0	3327	62900 PSI	2.800	.9881	.9727

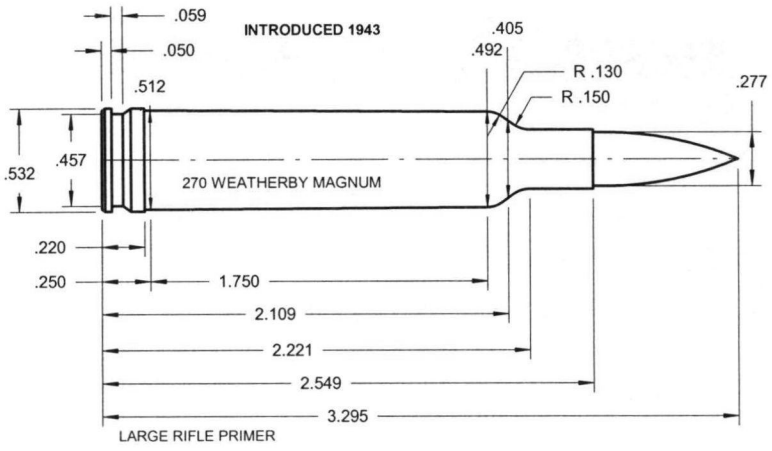
CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

270 WINCHESTER SHORT MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
120 Grain Barnes X Bullet											
H414	58.0	3.83	NA	3.7	3158	61.5	3309	63300 PSI	2.775	.9866	.9685
H1000	69.0c	4.92	2 SCOOPS	2.2	3176	72.5c	3292	63100 PSI	2.775	....	....
H4350	57.0	4.13	NA	4.0	3120	60.5	3267	63200 PSI	2.775	.9870	.9655
H4831	62.0	4.49	NA	4.3	3120	65.5	3257	63200 PSI	2.775	....	....
H-VARGET	51.0	3.73	NA	3.7	3079	53.5	3222	63100 PSI	2.775	....	....
130 Grain Jacketed Bullet											
H414	57.0	3.77	NA	3.7	3065	61.0	3235	62700 PSI	2.730	.9866	.9625
H4831	63.0	4.57	NA	4.3	3085	67.0	3228	63400 PSI	2.730	.9887	.9707
H4350	57.0	4.13	NA	4.0	3093	60.5	3226	63500 PSI	2.730	.9880	.9677
H380	56.0	3.87	NA	3.7	3032	59.5	3174	63200 PSI	2.730	.9869	.9665
H-VARGET	51.0	3.73	NA	3.7	3040	54.0	3169	63200 PSI	2.730	....	....
H1000	71.0c	5.06	2 SCOOPS	2.5	3100	73.0c	3168	58700 PSI	2.730	....	....
135 Grain Jacketed Bullet											
H4350	58.0	4.21	NA	4.0	3093	61.5	3211	63100 PSI	2.840	.9893	.9714
H414	57.0	3.77	NA	3.7	3041	61.0	3208	63200 PSI	2.840	.9866	.9614
H1000	69.0c	4.92	2 SCOOPS	2.2	3056	73.0c	3205	62600 PSI	2.840	....	....
H4831	62.0	4.49	NA	4.3	3056	65.5	3192	62900 PSI	2.840	....	....
H-VARGET	51.0	3.73	NA	3.7	3000	54.0	3134	63000 PSI	2.840	....	....
H380	55.0	3.80	NA	3.7	2943	58.0	3116	63000 PSI	2.840	....	....
140 Grain Jacketed Bullet											
H1000	66.0	4.71	2 SCOOPS	2.2	2984	70.0c	3137	63500 PSI	2.800	....	....
H4350	54.0	3.92	NA	3.7	2928	58.0	3087	63100 PSI	2.800	.9869	.9640
H4831	59.0	4.28	NA	4.0	2974	62.5	3085	63000 PSI	2.800	....	....
H414	55.0	3.64	NA	3.4	2932	58.0	3068	62600 PSI	2.800	....	....
150 Grain Jacketed Bullet											
H1000	64.0	4.56	NA	4.3	2864	67.5	3001	62800 PSI	2.740	....	....
H414	54.0	3.57	NA	3.4	2845	57.5	2991	63200 PSI	2.740	.9858	.9631
H4350	53.0	3.84	NA	3.7	2846	56.5	2978	63000 PSI	2.740	.9870	.9649
H4831	56.0	4.06	NA	4.0	2804	60.0	2962	63100 PSI	2.740	.9863	.9640
160 Grain Jacketed Bullet											
H1000	63.0	4.49	NA	4.3	2802	66.5	2913	63200 PSI	2.740	....	....
H4831	57.0	4.13	NA	4.0	2784	60.0	2877	63300 PSI	2.740	....	....
H414	52.0	3.44	NA	3.4	2718	55.5	2844	63100 PSI	2.740	.9870	.9669
H4350	52.0	3.77	NA	3.7	2735	55.0	2834	62600 PSI	2.740	....	....
180 Grain Jacketed Bullet											
H1000	59.0	4.21	NA	4.0	2590	63.0	2718	62800 PSI	2.700	.9881	.9718
H4831	53.0	3.84	NA	3.7	2561	56.0	2667	62800 PSI	2.700	....	....

CAUTION: With **NEVER EXCEED LOADS** maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. **NA** = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

270 WEATHERBY MAGNUM



Useful case capacity 5.24 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
90 Grain Jacketed Bullet										
H450	69.5	4.54	NA	4.3	3389	79.0	3799	NA	NA	3.160
H4895	63.0	4.59	2 SCOOPS	2.2	3444	67.0	3647	NA	NA	3.150
H4350	66.0	4.79	2 SCOOPS	2.2	3429	70.0	3631	NA	NA	3.150
H4831	72.0	5.22	2 SCOOPS	2.5	3364	78.0c	3631	NA	NA	3.150
H414	65.0	4.30	NA	4.0	3458	68.0	3592	NA	NA	3.150
H1000	78.0c	5.56	2 SCOOPS	2.5	3147	81.0c	3269	NA	NA	3.150
100 Grain Jacketed Bullet										
RELODER22	69.5	4.85	2 SCOOPS	2.2	3365	79.0c	3775	53000	CUP	3.160
RELODER19	67.1	4.74	2 SCOOPS	2.2	3317	76.8c	3755	53400	CUP	3.160
v-N550	64.7	4.48	NA	4.3	3300	72.4	3720	NA	NA	3.110
v-N165	76.7c	5.46	2 SCOOPS	2.5	3343	83.6c	3707	NA	NA	3.110
H450	68.6	4.48	NA	4.3	3286	78.0	3685	NA	NA	3.160
v-N160	69.3	5.09	2 SCOOPS	2.5	3343	75.5c	3681	NA	NA	3.110
H4831	74.0c	5.36	2 SCOOPS	2.5	3529	77.0c	3666	NA	NA	3.250
IMR7828	76.0c	5.51	2 SCOOPS	2.5	3542	78.5c	3645	48200	CUP	3.250
H4895	63.0	4.59	2 SCOOPS	2.2	3429	66.0	3597	NA	NA	3.250
H4350	65.0	4.71	2 SCOOPS	2.2	3314	69.0	3509	NA	NA	3.250
H414	65.0	4.30	NA	4.0	3321	68.0	3450	NA	NA	3.250
H1000	77.0c	5.49	2 SCOOPS	2.5	3134	81.0c	3287	NA	NA	3.250
110 Grain Jacketed Bullet										
H450	66.9	4.37	NA	4.3	3158	76.0	3541	NA	NA	3.160

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c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain Jacketed Bullet (Continued)										
A-XMR-4350	59.9	4.43	NA	4.3	3116	69.0	3528	65900	PSI	3.285
H4831	73.0c	5.29	2 SCOOPS	2.5	3352	76.0c	3482	NA	NA	3.290
H4350	64.0	4.64	2 SCOOPS	2.2	3284	68.0	3477	NA	NA	3.290
A-XMR-3100	62.2	4.65	2 SCOOPS	2.2	2878	75.0c	3386	69000	PSI	3.285
H414	63.0	4.16	NA	4.0	3179	66.0	3334	NA	NA	3.290
H1000	76.0c	5.42	2 SCOOPS	2.5	3061	81.0c	3242	NA	NA	3.290
ACCUR 8700	89.0c	6.12	2 SCOOPS	2.8	3217	89.0c	3217	47900	PSI	3.285
H870	71.3	4.89	2 SCOOPS	2.2	2854	81.0c	3200	NA	NA	3.290
130 Grain Jacketed Bullet										
IMR7828	66.9	4.85	2 SCOOPS	2.2	3121	76.0c	3500	53000	CUP	3.250
RELODER22	64.3	4.48	NA	4.3	3003	73.8	3400	53500	CUP	3.260
RELODER19	61.5	4.34	NA	4.3	2950	70.5	3340	53500	CUP	3.260
v-N560	71.0	4.90	2 SCOOPS	2.2	3027	77.5c	3320	NA	NA	3.236
v-N160	64.5	4.73	2 SCOOPS	2.2	2991	71.8c	3314	NA	NA	3.236
v-N165	69.3	4.93	2 SCOOPS	2.2	2961	76.7c	3301	NA	NA	3.236
H4350	62.0	4.50	NA	4.3	3080	66.0	3262	NA	NA	3.250
H1000	76.0c	5.42	2 SCOOPS	2.5	3077	81.0c	3259	NA	NA	3.250
H870	70.4	4.83	2 SCOOPS	2.2	2866	80.0c	3214	NA	NA	3.250
H4831	67.0	4.86	2 SCOOPS	2.2	3085	70.0	3205	NA	NA	3.250
H450	60.7	3.97	NA	3.7	2804	69.0	3144	NA	NA	3.160
130 Grain Barnes X Bullet										
A-XMR-3100	61.9	4.63	2 SCOOPS	2.2	2892	72.5c	3338	67000	PSI	3.295
A-XMR-4350	60.0	4.44	NA	4.3	2961	66.0	3227	62900	PSI	3.295
ACCUR 8700	88.0c	6.05	2 SCOOPS	2.8	3189	88.0c	3189	55000	PSI	3.295
135 Grain Jacketed Bullet										
v-N560	69.9	4.82	2 SCOOPS	2.2	3047	74.7	3340	NA	NA	3.268
v-N165	69.3	4.93	2 SCOOPS	2.2	2925	72.8	3264	NA	NA	3.268
v-N160	63.6	4.67	2 SCOOPS	2.2	2886	68.8	3186	NA	NA	3.268
140 Grain Jacketed Bullet										
IMR7828	64.7	4.69	2 SCOOPS	2.2	2965	73.5c	3325	53000	CUP	3.295
RELODER22	61.9	4.31	NA	4.3	2897	71.0	3280	53500	CUP	3.275
A-XMR-3100	59.2	4.43	NA	4.3	2782	70.5c	3242	68100	PSI	3.295
RELODER19	59.4	4.19	NA	4.0	2862	68.1	3240	53500	CUP	3.275
H1000	75.0c	5.35	2 SCOOPS	2.5	2970	80.0c	3145	NA	NA	3.280
H4350	60.0	4.35	NA	4.3	2965	64.0	3140	NA	NA	3.280
A-XMR-4350	56.1	4.15	NA	4.0	2797	64.0	3137	65300	PSI	3.295
ACCUR 8700	88.0c	6.05	2 SCOOPS	2.8	3135	88.0c	3135	54500	PSI	3.295

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2 SCOOPS = Use TWO dippers of powder in each round.

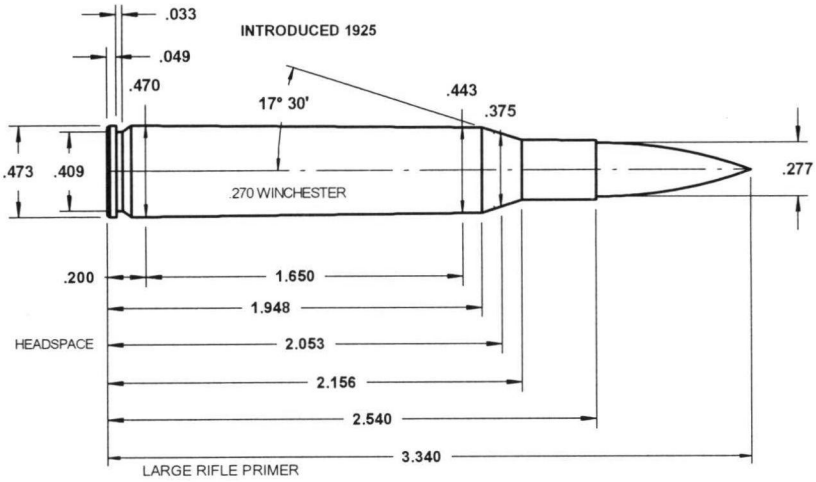
270 WEATHERBY MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
140 Grain Jacketed Bullet (Continued)										
H4831	65.0	4.71	2 SCOOPS	2.2	2995	68.0	3112	NA	NA	3.280
H450	59.8	3.91	NA	3.7	2734	68.0	3066	NA	NA	3.160
H870	69.5	4.77	2 SCOOPS	2.2	2578	79.0c	2890	NA	NA	3.280
150 Grain Jacketed Bullet										
IMR7828	62.6	4.54	NA	4.3	2840	72.0	3215	53600	CUP	3.295
A-XMR-3100	58.2	4.35	NA	4.3	2687	70.0c	3161	68800	PSI	3.295
v-N170	71.1	5.07	2 SCOOPS	2.5	2797	79.6c	3156	NA	NA	3.248
ACCUR 8700	87.2c	6.00	2 SCOOPS	2.8	3125	88.0c	3155	57700	PSI	3.295
v-N560	66.2	4.57	NA	4.3	2867	71.5	3150	NA	NA	3.248
RELODER22	60.0	4.18	NA	4.0	2778	68.8	3145	53500	CUP	3.285
H1000	75.0c	5.35	2 SCOOPS	2.5	2986	79.0c	3132	NA	NA	3.250
v-N165	64.8	4.61	2 SCOOPS	2.2	2781	73.0	3123	NA	NA	3.248
A-XMR-4350	53.8	3.98	NA	3.7	2654	64.0	3091	68000	PSI	3.295
RELODER19	56.1	3.96	NA	3.7	2716	64.4	3075	53500	CUP	3.285
H4831	65.0	4.71	2 SCOOPS	2.2	2943	68.0	3057	NA	NA	3.250
H4350	60.0	4.35	NA	4.3	2847	63.0	2986	NA	NA	3.250
H870	69.5	4.77	2 SCOOPS	2.2	2625	79.0c	2943	NA	NA	3.250
H450	59.8	3.91	NA	3.7	2587	68.0	2902	NA	NA	3.160
160 Grain Jacketed Bullet										
H1000	74.0c	5.28	2 SCOOPS	2.5	2909	78.0c	3051	NA	NA	3.250
H4831	62.0	4.49	NA	4.3	2765	65.0	2901	NA	NA	3.250
H870	68.6	4.71	2 SCOOPS	2.2	2584	78.0c	2899	NA	NA	3.250
H450	57.2	3.74	NA	3.7	2559	65.0	2870	NA	NA	3.160
H4350	58.0	4.21	NA	4.0	2610	61.0	2738	NA	NA	3.250
180 Grain Jacketed Bullet										
H1000	66.0	4.71	2 SCOOPS	2.2	2543	75.0c	2852	NA	NA	3.160
H870	66.9	4.59	2 SCOOPS	2.2	2505	76.0	2808	NA	NA	3.160
H4831	55.4	4.02	NA	4.0	2381	63.0	2669	NA	NA	3.160

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

270 WINCHESTER



Useful case capacity 4.24 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
90 Grain Jacketed Bullet											
H4350	58.0	4.21	NA	4.0	3402	62.0c	3603	62250 PSI	3.200	....	....
H-VARGET	51.0	3.73	NA	3.7	3363	55.0	3596	64250 PSI	3.200	.9835	.9726
H4895	50.0	3.64	NA	3.4	3394	53.0	3595	63000 PSI	3.200	.9809	.9845
H414	55.0	3.64	NA	3.4	3354	59.0	3585	63375 PSI	3.200	.9834	.9552
A-XMR-4350	54.9	4.06	NA	4.0	3167	61.0c	3484	49900 CUP	3.090	....	....
BL-C(2)	49.0	3.16	DBLD	3.1	3282	52.0	3475	62625 PSI	3.200	.9809	.9677
H380	53.0	3.66	NA	3.4	3269	56.3	3462	63625 PSI	3.200	.9829	.9672
H335	46.0	2.97	DBLD	2.8	3266	49.0	3459	63625 PSI	3.200	.9809	.9675
A-XMR-4064	47.7	3.60	NA	3.4	3140	53.0	3455	49600 CUP	3.090	....	....
ACCUR 2700	54.2	3.71	NA	3.7	3291	57.0	3452	52000 CUP	3.090	....	....
H450	61.0	3.98	NA	3.7	3194	66.0c	3448	62000 PSI	3.065	....	....
H4831	59.0c	4.28	NA	4.0	3073	64.0c	3317	52500 PSI	3.065	....	....
ACC XMP5744	36.0	2.71	DBLD	2.5	2973	40.0	3271	54500 PSI	3.090	....	....
A-XMR-3100	54.9	4.11	NA	4.0	2840	61.0c	3125	44100 CUP	3.090	....	....
100 Grain Jacketed Bullet											
RELODER19	59.2	4.18	NA	4.0	3284	64.0c	3510	61800 PSI	3.150	....	....
RELODER15	49.6	3.50	NA	3.4	3210	53.8	3465	62000 PSI	3.150	....	....
H4350	56.0	4.06	NA	4.0	3212	59.4c	3401	62750 PSI	3.145	....	....
H4895	47.0	3.42	NA	3.4	3212	50.0	3401	62750 PSI	3.145	.9812	.9783
IMR4064	46.7	3.48	NA	3.4	3090	52.0	3400	50900 CUP	3.075	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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270 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
					....STARTING LOADS....						
100 Grain Jacketed Bullet (Continued)											
H-VARGET	48.0	3.51	NA	3.4	3148	52.0	3397	62750 PSI	3.145	.9811	.9698
H414	53.0	3.50	NA	3.4	3225	56.0	3383	63375 PSI	3.145	....	....
A-XMR-4350	54.0	4.00	NA	3.7	3050	60.0c	3356	48700 CUP	3.175	....	....
RELODER12	48.6	3.36	NA	3.1	3138	52.5	3355	61800 PSI	3.150	....	....
IMR4320	45.8	3.28	DBLD	3.1	3036	51.0	3340	51000 CUP	3.075	....	....
ACCUR 2700	53.2	3.64	NA	3.4	3184	56.0	3340	52000 CUP	3.175	....	....
v-N160	56.8	4.17	NA	4.0	3036	63.1c	3340	NA NA	3.150	....	....
A-XMR-4064	46.8	3.53	NA	3.4	3035	52.0	3339	50800 PSI	3.175	....	....
WIN 760	53.4	3.56	NA	3.4	3180	56.0	3335	48000 CUP	3.065	....	....
IMR4831	53.1	3.90	NA	3.7	2993	59.5c	3325	51300 CUP	3.075	....	....
IMR3031	43.3	3.30	DBLD	3.1	2989	48.5	3320	51300 CUP	3.075	....	....
H450	58.0	3.79	NA	3.7	3071	63.0	3314	62375 PSI	3.065	.9848	.9856
IMR4895	43.1	3.14	DBLD	3.1	2952	49.0	3310	52000 CUP	3.075	....	....
IMR4350	51.1	3.76	NA	3.7	2971	57.5	3300	51500 CUP	3.075	....	....
IMR7828	53.7	3.89	NA	3.7	2943	61.0c	3300	52000 CUP	3.075	....	....
v-N165	58.2	4.14	NA	4.0	2997	64.8c	3297	NA NA	3.150	....	....
H380	50.0	3.45	NA	3.4	3062	53.7	3274	62875 PSI	3.145	.9821	.9773
BL-C(2)	45.0	2.90	DBLD	2.8	3091	47.3	3243	63125 PSI	3.145	....	....
H335	41.0	2.64	DBLD	2.5	3008	43.5	3185	62750 PSI	3.145	.9775	.9598
v-N150	45.5	3.39	NA	3.1	2890	49.8	3150	NA NA	3.150	....	....
WIN MAG RIFLE	59.5c	4.27	NA	4.0	3120	59.5c	3120	45500 PSI	3.100	....	....
ACC XMP5744	36.0	2.71	DBLD	2.5	2825	40.0	3108	54800 PSI	3.175	....	....
A-XMR-3100	54.9	4.11	NA	4.0	2818	61.0c	3100	44200 CUP	3.175	....	....
IMR4198	34.1	2.70	DBLD	2.5	2772	38.0	3050	51000 CUP	3.075	....	....
SR4759	30.5	3.03	DBLD	2.8	2720	30.5	2720	41200 CUP	3.075	....	....
IMR4227	25.8	1.98	DBLD	1.9	2371	30.0	2710	51400 CUP	3.075	....	....
110 Grain Jacketed Bullet											
H450	58.0	3.79	NA	3.7	3073	63.0	3317	63500 PSI	3.065	.9849	.9699
A-XMR-4350	53.0	3.92	NA	3.7	3000	59.0c	3300	52000 CUP	3.240	....	....
H4350	54.0	3.92	NA	3.7	3115	57.0	3267	62625 PSI	3.250	....	....
H-VARGET	43.0	3.14	DBLD	3.1	2896	48.7	3248	63500 PSI	3.250	.9801	.9755
H414	51.0	3.37	NA	3.1	3032	55.0	3241	63375 PSI	3.250	.9834	.9624
ACCUR 2700	52.3	3.58	NA	3.4	3081	55.0	3232	52000 CUP	3.240	....	....
H4895	45.0	3.28	DBLD	3.1	3065	47.5	3215	63500 PSI	3.250	....	....
H4831	58.0	4.20	NA	4.0	3035	62.0c	3214	60250 PSI	3.250	....	....
A-XMR-4064	45.9	3.46	NA	3.4	2906	51.0	3197	49000 CUP	3.240	....	....
A-XMR-3100	54.9	4.11	NA	4.0	2843	61.0c	3128	47200 CUP	3.240	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
110 Grain Jacketed Bullet (Continued)											
H380	48.0	3.32	NA	3.1	2894	52.0	3124	63125 PSI	3.250	.9812	.9769
BL-C(2)	45.0	2.90	DBLD	2.8	2945	47.5	3089	62750 PSI	3.250	....	....
H335	42.0	2.71	DBLD	2.5	2882	45.0	3081	63500 PSI	3.250	.9779	.9730
120 Grain Barnes X Bullet											
H4831	58.0	4.20	NA	4.0	2939	62.0c	3112	64000 PSI	3.270	....	....
H4350	51.0	3.70	NA	3.4	2870	55.0	3069	64000 PSI	3.270	.9832	.9666
H414	49.0	3.24	DBLD	3.1	2795	53.0	3017	63875 PSI	3.270	.9812	.9583
H-VARGET	44.0	3.22	DBLD	3.1	2842	47.0	3010	63750 PSI	3.270	.9809	.9683
H380	46.0	3.18	DBLD	3.1	2787	49.5	2980	63750 PSI	3.270	.9809	.9536
H4895	42.0	3.06	DBLD	2.8	2760	45.0	2950	63000 PSI	3.270	.9781	.9629
130 Grain Jacketed Bullet											
ACC MAG PRO	58.5	3.88	NA	3.7	2919	65.0c	3234	63200 PSI	3.250	....	....
RELODER22	55.8	3.89	NA	3.7	2956	60.0	3160	61500 PSI	3.250	....	....
H450	55.0	3.59	NA	3.4	2918	60.0	3150	60875 PSI	3.065	.9848	.9817
IMR7828	52.8	3.83	NA	3.7	2800	60.0c	3140	52000 CUP	3.250	....	....
RELODER19	53.4	3.77	NA	3.7	2909	57.5	3110	61600 PSI	3.250	....	....
IMR4831	50.5	3.71	NA	3.7	2773	56.5	3080	51200 CUP	3.250	....	....
A-XMR-3100	54.9	4.11	NA	4.0	2786	61.0c	3065	51500 CUP	3.330	....	....
IMR4350	47.4	3.48	NA	3.4	2656	55.0	3035	51100 CUP	3.250	....	....
v-N560	54.9	3.79	NA	3.7	2808	59.7	3034	NA NA	3.228	....	....
IMR4064	42.9	3.20	DBLD	3.1	2728	48.0	3030	51200 CUP	3.250	....	....
H1000	61.0c	4.35	NA	4.3	2900	64.0c	3025	60125 PSI	3.280	....	....
VEC TU5000	50.2	3.61	NA	3.4	2927	51.2	3025	47896 CIP	3.340	....	....
A-XMR-4350	49.5	3.66	NA	3.4	2745	55.0	3020	52000 CUP	3.330	....	....
H4831	56.0	4.06	NA	4.0	2824	60.0c	3019	63750 PSI	3.280	....	....
H4350	51.0	3.70	NA	3.4	2844	54.3	3012	63125 PSI	3.280	.9826	.9669
H414	50.0	3.31	NA	3.1	2809	53.5	3003	63500 PSI	3.280	.9811	.9641
WIN MAG RIFLE	58.9	4.23	NA	4.0	3000	58.9	3000	53500 PSI	3.300	....	....
WIN 760	48.1	3.20	DBLD	3.1	2770	52.0	2990	49500 CUP	3.100	....	....
v-N165	53.8	3.83	NA	3.7	2732	59.3	2976	NA NA	3.268	....	....
v-N160	51.6	3.79	NA	3.7	2777	55.5	2969	NA NA	3.228	....	....
ACCUR 2700	49.4	3.38	NA	3.1	2816	52.0	2954	52000 CUP	3.330	....	....
IMR3031	40.3	3.07	DBLD	2.8	2652	45.5	2945	51700 CUP	3.250	....	....
IMR4895	40.5	2.95	DBLD	2.8	2627	46.0	2945	52000 CUP	3.250	....	....
H-VARGET	43.0	3.14	DBLD	3.1	2741	46.0	2931	62000 PSI	3.280	.9778	.9601
H4895	42.0	3.06	DBLD	2.8	2734	45.0	2922	63750 PSI	3.280	.9782	.9570
A-XMR-4064	43.2	3.26	DBLD	3.1	2655	48.0	2920	51200 PSI	3.330	....	....

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c = Compressed charge

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
130 Grain Jacketed Bullet (Continued)											
H380	47.0	3.25	DBLD	3.1	2724	49.8	2884	63750 PSI	3.280	....	....
IMR4320	40.5	2.90	DBLD	2.8	2593	45.5	2880	51400 CUP	3.250	....	....
RELODER12	43.8	3.03	DBLD	2.8	2655	47.5	2865	62000 PSI	3.250	....	....
RELODER15	43.9	3.10	DBLD	2.8	2657	47.3	2840	61600 PSI	3.250	....	....
RELODER15	43.9	3.10	DBLD	2.8	2657	47.3	2840	61600 PSI	3.250	....	....
IMR4198	31.9	2.52	DBLD	2.5	2418	35.5	2660	51000 CUP	3.250	....	....
IMR4227	26.8	2.06	DBLD	1.9	2193	30.0	2435	51200 CUP	3.250	....	....
SR4759	24.5	2.44	DBLD	2.2	2035	27.5	2260	51300 CUP	3.250	....	....
130 Grain Barnes X Bullet											
A-XMR-4350	52.2	3.86	NA	3.7	2790	58.0c	3070	52000 CUP	3.330	....	....
A-XMR-3100	54.9	4.11	NA	4.0	2703	61.0c	2973	48500 CUP	3.330	....	....
ACCUR 2700	50.4	3.45	NA	3.4	2804	53.0	2941	51700 CUP	3.330	....	....
A-XMR-4064	44.1	3.33	NA	3.1	2641	49.0	2906	49800 CUP	3.330	....	....
135 Grain Jacketed Bullet											
H1000	61.0c	4.35	NA	4.3	2926	63.0c	3011	59500 PSI	3.340	....	....
H4831	55.0	3.99	NA	3.7	2788	59.5c	3010	63750 PSI	3.340	....	....
H4350	50.0	3.63	NA	3.4	2801	53.5	2994	63375 PSI	3.340	.9809	.9628
H414	47.0	3.11	DBLD	3.1	2748	50.0	2910	63125 PSI	3.340	.9809	.9651
H-VARGET	41.0	3.00	DBLD	2.8	2662	45.0	2902	62750 PSI	3.340	.9786	.9495
H4895	41.0	2.98	DBLD	2.8	2693	44.0	2879	63250 PSI	3.340	.9778	.9566
H380	44.0	3.04	DBLD	2.8	2647	47.0	2803	63125 PSI	3.340	.9812	.9522
140 Grain Winchester Fail Safe											
A-XMR-3100	52.2	3.90	NA	3.7	2692	58.0c	2962	51100 CUP	3.225	....	....
A-XMR-4350	46.8	3.46	NA	3.4	2676	52.0	2944	52000 CUP	3.225	....	....
ACCUR 2700	45.0	3.08	DBLD	2.8	2584	50.0	2844	51700 CUP	3.225	....	....
WIN MAG RIFLE	56.7	4.07	NA	4.0	2805	56.7	2805	54300 PSI	3.340	....	....
140 Grain Jacketed Bullet											
A-XMR-4350	50.4	3.73	NA	3.7	2716	56.0	2988	52000 CUP	3.330	....	....
IMR4831	50.7	3.73	NA	3.7	2761	55.0	2980	62000 PSI	3.252	....	....
H1000	59.0	4.21	NA	4.0	2813	63.0c	2979	63500 PSI	3.280	....	....
A-XMR-3100	54.0	4.04	NA	4.0	2692	60.0c	2962	49300 CUP	3.330	....	....
H450	54.0	3.53	NA	3.4	2768	58.0	2960	62625 PSI	3.065	.9832	.9831
RELODER22	57.8	4.03	NA	4.0	2820	60.0	2930	59400 PSI	3.280	....	....
WIN MAG RIFLE	57.0	4.09	NA	4.0	2902	57.6	2930	57800 PSI	3.300	....	....
RELODER19	53.0	3.74	NA	3.7	2722	57.0	2910	61500 PSI	3.280	....	....
H380	46.0	3.18	DBLD	3.1	2695	50.0	2909	64250 PSI	3.065	.9811	.9784
ACCUR 2700	49.4	3.38	NA	3.1	2759	52.0	2893	51600 CUP	3.330	....	....

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c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
140 Grain Jacketed Bullet (Continued)											
H4831	54.0	3.91	NA	3.7	2702	58.0	2888	62625 PSI	3.280	.9835	.9675
H4350	49.0	3.55	NA	3.4	2711	52.0	2870	63000 PSI	3.280	.9811	.9594
IMR7828	56.5	4.10	NA	4.0	2860	56.5	2860	55000 PSI	3.252	....	....
H414	46.0	3.04	DBLD	2.8	2634	48.9	2788	62250 PSI	3.280	.9807	.9499
H-VARGET	41.0	3.00	DBLD	2.8	2618	43.7	2772	63125 PSI	3.280	.9790	.9526
RELODER15	43.6	3.08	DBLD	2.8	2591	47.0	2770	61600 PSI	3.280	....	....
H4895	40.0	2.91	DBLD	2.8	2614	42.6	2768	63250 PSI	3.280	.9782	.9583
RELODER12	43.2	2.98	DBLD	2.8	2521	46.2	2695	61200 PSI	3.280	....	....
ACCUR 8700	57.6	3.96	NA	3.7	2230	64.0c	2453	43700 CUP	3.330	....	....
150 Grain Jacketed Bullet											
RELODER22	54.1	3.77	NA	3.7	2815	58.5	3010	61800 PSI	3.320	....	....
ACC MAG PRO	55.4	3.67	NA	3.4	2725	61.5	3000	63600 PSI	3.250	.9844	.9641
IMR7828	52.9	3.84	NA	3.7	2713	59.0c	2985	51000 CUP	3.250	....	....
RELODER19	51.7	3.65	NA	3.4	2755	55.5	2945	61400 PSI	3.320	....	....
IMR4831	49.0	3.60	NA	3.4	2630	55.0	2920	51400 CUP	3.250	....	....
IMR4350	47.3	3.47	NA	3.4	2605	53.5	2920	51800 CUP	3.250	....	....
A-XMR-3100	52.2	3.90	NA	3.7	2632	58.0c	2894	52000 CUP	3.300	....	....
A-XMR-4350	47.0	3.48	NA	3.4	2593	53.0	2880	52000 CUP	3.300	....	....
H450	53.5	3.49	NA	3.4	2690	57.5	2876	62750 PSI	3.065	.9834	.9878
WIN MAG RIFLE	56.5	4.06	NA	4.0	2796	57.5	2850	58200 PSI	3.300	....	....
H1000	55.0	3.92	NA	3.7	2648	59.0	2831	63750 PSI	3.285	.9835	.9687
v-N560	50.9	3.51	NA	3.4	2602	55.5	2808	NA NA	3.228	....	....
H4831	52.0	3.77	NA	3.7	2623	55.7	2804	64000 PSI	3.285	.9821	.9732
IMR4064	41.5	3.09	DBLD	2.8	2470	47.0	2770	51800 CUP	3.250	....	....
VEC TU5000	47.8	3.44	NA	3.4	2759	47.8	2759	46633 CIP	3.340	....	....
ACCUR 2700	47.5	3.25	DBLD	3.1	2610	50.0	2738	52000 CUP	3.300	....	....
WIN 760	46.2	3.08	DBLD	2.8	2573	49.0	2725	48500 CUP	3.100	....	....
H4350	46.0	3.34	NA	3.1	2572	49.0	2724	63750 PSI	3.285	.9812	.9475
IMR4895	38.7	2.82	DBLD	2.8	2421	44.0	2715	52000 CUP	3.250	....	....
H414	45.0	2.97	DBLD	2.8	2555	48.0	2706	64000 PSI	3.285	.9808	.9579
IMR4320	39.9	2.86	DBLD	2.8	2454	44.5	2700	51000 CUP	3.250	....	....
IMR3031	37.1	2.83	DBLD	2.8	2399	42.0	2690	51800 CUP	3.250	....	....
v-N165	47.9	3.41	NA	3.4	2410	53.2	2651	NA NA	3.228	....	....
v-N160	44.1	3.24	DBLD	3.1	2397	49.4	2604	NA NA	3.228	....	....
ACCUR 8700	56.7	3.90	NA	3.7	2302	63.0c	2532	47200 CUP	3.300	....	....
ACC XMP5744	30.6	2.30	DBLD	2.2	2275	34.0	2503	54600 PSI	3.300	....	....
IMR4198	30.5	2.41	DBLD	2.2	2195	34.5	2460	51800 CUP	3.250	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

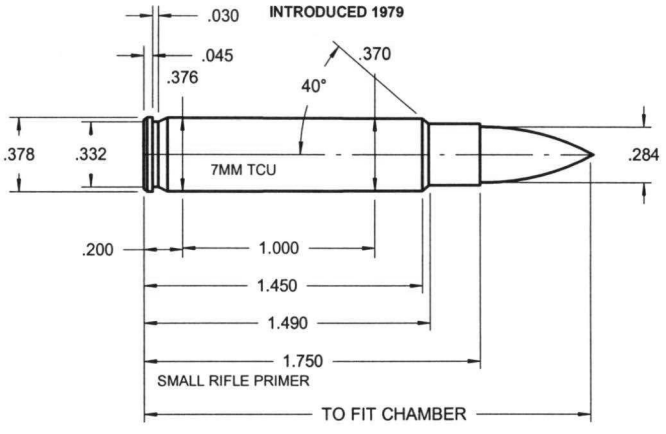
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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
150 Grain Jacketed Bullet (Continued)											
IMR4227	26.0	2.00	DBLD	1.9	2014	29.0	2215	51000 CUP	3.250	....	....
SR4759	23.1	2.29	DBLD	2.2	1841	26.0	2045	51600 CUP	3.250	....	....
150 Grain Lead Bullet											
ACCUR 8700	54.0	3.72	NA	3.7	2158	60.0	2374	42200 CUP	3.250	....	....
ACC XMP5744	18.0	1.35	1.26	1.3	1581	26.0	2125	31100 CUP	3.250	....	....
160 Grain Jacketed Bullet											
H450	53.0	3.46	NA	3.4	2681	57.0	2866	63250 PSI	3.065	.9834	.9775
H414	45.0	2.97	DBLD	2.8	2623	48.0	2777	63000 PSI	3.065	.9813	.9572
A-XMR-3100	52.2	3.90	NA	3.7	2523	58.0c	2775	52000 CUP	3.335	....	....
H1000	55.0	3.92	NA	3.7	2586	59.0	2765	63625 PSI	3.340	.9833	.9653
A-XMR-4350	47.2	3.49	NA	3.4	2458	52.5	2705	52000 CUP	3.335	....	....
H4831	50.0	3.62	NA	3.4	2501	54.0	2673	63125 PSI	3.340	.9835	.9606
VEC TU5000	47.8	3.44	NA	3.4	2657	47.8	2657	47170 CIP	3.340	....	....
H380	44.0	3.04	DBLD	2.8	2499	47.0	2646	64000 PSI	3.065	.9809	.9827
H4350	46.0	3.34	NA	3.1	2499	49.0	2646	63875 PSI	3.340	.9809	.9485
v-N165	47.8	3.40	NA	3.1	2395	53.1	2635	NA NA	3.331	....	....
ACCUR 2700	47.5	3.25	DBLD	3.1	2507	50.0	2630	52000 CUP	3.335	....	....
v-N160	46.6	3.42	NA	3.4	2393	51.0	2608	NA NA	3.331	....	....
ACCUR 8700	57.6	3.96	NA	3.7	2208	64.0c	2429	44900 CUP	3.335	....	....
180 Grain Jacketed Bullet											
H870	60.0	4.12	NA	4.0	2471	62.0c	2543	56250 PSI	3.065	....	....
H1000	50.0	3.56	NA	3.4	2376	54.0	2540	63250 PSI	3.300	.9834	.9716
H4831	47.0	3.41	NA	3.4	2339	50.5	2501	63875 PSI	3.300	.9809	.9704
H4350	46.0	3.34	NA	3.1	2298	48.0	2387	62625 PSI	3.065	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7mm TCU



Useful case capacity 2.01 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL
100 Grain Jacketed Bullet										
v-N133	27.3c	2.10	DBLD	1.9	2308	30.2c	2539	NA	NA	2.461
v-N130	25.0	1.89	DBLD	1.9	2267	27.7c	2470	NA	NA	2.461
v-N120	22.8	1.77	DBLD	1.6	2219	25.3	2441	NA	NA	2.461
ACCUR 1680	25.2	1.65	DBLD	1.6	2143	28.0	2435	47800	PSI	2.430
ACC XMP5744	20.7	1.56	DBLD	NA	2041	23.0	2320	47700	PSI	2.430
ACCUR 2230	27.0	1.77	DBLD	1.6	2040	30.0	2245	37400	PSI	2.430
ACCUR 2460	27.0	1.77	DBLD	1.6	2025	30.0	2228	36000	PSI	2.430
H4198	22.0	1.65	DBLD	1.6	2016	24.0	2176	NA	NA	2.475
H322	25.0	1.81	DBLD	1.6	2088	26.0	2169	NA	NA	2.475
A-XMR-2015	25.2	1.84	DBLD	1.6	1940	28.0c	2135	32200	PSI	2.430
BL-C(2)	27.0	1.74	DBLD	1.6	2019	28.0	2098	NA	NA	2.475
H335	26.0	1.68	DBLD	1.6	1999	27.0	2077	NA	NA	2.475
H4895	25.0	1.82	DBLD	1.6	1994	26.0	2071	NA	NA	2.475
ACCUR 2520	25.2	1.72	DBLD	1.6	1844	28.0	2029	25900	PSI	2.430
H4227	17.0	1.31	1.26	1.3	1810	19.0	2011	NA	NA	2.475
A-XMR-2495	24.3	1.82	DBLD	1.6	1686	27.0c	1854	22300	PSI	2.430
120 Grain Jacketed Bullet										
v-N133	25.0	1.92	DBLD	1.9	2091	27.9c	2300	NA	NA	2.500
ACCUR 1680	23.9	1.57	DBLD	NA	2023	26.5	2226	48000	PSI	2.545
v-N130	22.4	1.69	DBLD	1.6	2007	24.9	2208	NA	NA	2.500

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
120 Grain Jacketed Bullet (Continued)									
ACCUR 2460	27.0	1.77	DBLD	1.6	1977	30.0	2175	42200 PSI	2.545
ACCUR 2230	26.6	1.75	DBLD	1.6	1976	29.5	2173	42600 PSI	2.545
v-N120	20.4	1.58	DBLD	NA	1973	22.4	2149	NA NA	2.500
A-XMR-2015	25.2	1.84	DBLD	1.6	1942	28.0c	2137	39700 PSI	2.545
H322	24.0	1.74	DBLD	1.6	1961	26.0	2117	NA NA	2.410
ACC XMP5744	19.8	1.49	1.46	1.3	1900	22.0	2090	45000 PSI	2.545
H4198	21.0	1.58	DBLD	NA	1904	23.0	2075	NA NA	2.410
BL-C(2)	26.0	1.68	DBLD	1.6	1915	28.0	2047	NA NA	2.410
H335	25.0	1.61	DBLD	1.6	1904	27.0	2035	NA NA	2.410
H4895	24.0	1.75	DBLD	1.6	1872	26.0	2020	NA NA	2.410
ACCUR 2520	25.2	1.72	DBLD	1.6	1794	28.0	1974	27700 PSI	2.545
H4227	16.0	1.23	1.18	NA	1723	18.0	1914	NA NA	2.410
A-XMR-2495	24.3	1.82	DBLD	1.6	1723	27.0c	1896	27800 PSI	2.545
130 Grain Jacketed Bullet									
ACCUR 2230	26.6	1.75	DBLD	1.6	1959	29.5	2155	45200 PSI	2.510
ACCUR 2460	27.0	1.77	DBLD	1.6	1950	30.0	2145	43600 PSI	2.510
A-XMR-2015	25.2	1.84	DBLD	1.6	1939	28.0c	2134	47400 PSI	2.510
v-N133	22.5	1.73	DBLD	1.6	1888	25.0	2077	NA NA	2.559
ACCUR 1680	22.5	1.47	1.46	1.3	1873	25.0	2060	48200 PSI	2.510
v-N130	21.6	1.63	DBLD	1.6	1867	23.9	2054	NA NA	2.559
ACCUR 2520	25.7	1.75	DBLD	1.6	1840	28.5	2025	35300 PSI	2.510
H4895	24.0	1.75	DBLD	1.6	1859	26.0	2007	NA NA	2.465
H322	23.0	1.67	DBLD	1.6	1841	25.0	1988	NA NA	2.465
BL-C(2)	25.0	1.61	DBLD	1.6	1844	27.0	1972	NA NA	2.465
H335	24.0	1.55	DBLD	NA	1820	26.0	1964	NA NA	2.465
v-N120	19.1	1.48	1.46	1.3	1777	21.3	1955	NA NA	2.559
A-XMR-2495	24.3	1.82	DBLD	1.6	1773	27.0c	1950	36500 PSI	2.510
H4198	20.0	1.50	1.46	1.3	1776	22.0	1935	NA NA	2.465
ACC XMP5744	18.4	1.38	1.36	1.3	1758	20.5	1934	44500 PSI	2.510
H4227	15.0	1.15	1.09	1.0	1494	17.0	1675	NA NA	2.465
139 Grain Jacketed Bullet									
H4895	23.0	1.67	DBLD	1.6	1854	25.0	2001	NA NA	2.625
BL-C(2)	25.0	1.61	DBLD	1.6	1851	27.0	1979	NA NA	2.625
H335	24.0	1.55	DBLD	NA	1804	26.0	1946	NA NA	2.625
H322	22.0	1.59	DBLD	1.6	1796	24.0	1938	NA NA	2.625
H4198	19.0	1.43	1.36	1.3	1730	21.0	1904	NA NA	2.625
H4227	14.5	1.12	1.09	1.0	1458	16.5	1635	NA NA	2.625

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-25-2003 Lee Precision Inc. Hartford, Wi. 53027

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
140 Grain Jacketed Bullet										
ACCUR 2460	26.1	1.71	DBLD	1.6	1917	29.0	2109	47700	PSI	2.540
ACCUR 2230	25.7	1.69	DBLD	1.6	1911	28.5	2102	47700	PSI	2.540
A-XMR-2015	24.3	1.77	DBLD	1.6	1871	27.0	2058	46400	PSI	2.540
ACCUR 1680	22.1	1.45	1.36	1.3	1826	24.5	2010	49200	PSI	2.540
ACCUR 2520	24.8	1.69	DBLD	1.6	1774	27.5	1952	36500	PSI	2.540
ACC XMP5744	18.4	1.38	1.36	1.3	1762	20.5	1938	47600	PSI	2.540
A-XMR-2495	23.9	1.79	DBLD	1.6	1705	26.5	1876	38800	PSI	2.540
145 Grain Lead Bullet										
ACCUR 2460	25.7	1.69	DBLD	1.6	1893	28.5	2083	45300	PSI	2.500
ACCUR 2230	25.2	1.66	DBLD	1.6	1870	28.0	2057	47000	PSI	2.500
ACCUR 2520	25.7	1.75	DBLD	1.6	1849	28.5	2034	41600	PSI	2.500
A-XMR-2015	23.4	1.71	DBLD	1.6	1796	26.0	1976	41800	PSI	2.500
ACCUR 1680	20.3	1.33	1.26	1.3	1729	22.5	1903	40700	PSI	2.500
ACC XMP5744	18.0	1.35	1.26	1.3	1701	20.0	1871	42800	PSI	2.500
A-XMR-2495	24.3	1.82	DBLD	1.6	1687	27.0c	1855	33100	PSI	2.500
150 Grain Jacketed Bullet										
ACCUR 2460	25.2	1.65	DBLD	1.6	1829	28.0	2013	47700	PSI	2.575
ACCUR 2230	24.8	1.63	DBLD	1.6	1815	27.5	1997	47400	PSI	2.575
A-XMR-2015	23.4	1.71	DBLD	1.6	1793	26.0	1973	47800	PSI	2.575
v-N133	21.3	1.64	DBLD	1.6	1787	23.6	1965	NA	NA	2.559
v-N135	22.2	1.72	DBLD	1.6	1781	24.8	1959	NA	NA	2.559
v-N130	20.2	1.52	1.46	1.3	1748	22.4	1923	NA	NA	2.559
BL-C(2)	24.0	1.55	DBLD	NA	1759	26.0	1899	NA	NA	2.630
ACCUR 2520	24.8	1.69	DBLD	1.6	1723	27.5	1897	40700	PSI	2.575
H335	23.0	1.48	1.46	1.3	1746	25.0	1885	NA	NA	2.630
H4895	22.0	1.60	DBLD	1.6	1736	24.0	1874	NA	NA	2.630
H322	21.5	1.56	DBLD	NA	1706	23.5	1859	NA	NA	2.630
v-N120	18.1	1.40	1.36	1.3	1676	20.0	1844	NA	NA	2.559
H4198	18.5	1.39	1.36	1.3	1669	20.5	1835	NA	NA	2.630
ACCUR 1680	19.8	1.30	1.26	1.3	1652	22.0	1817	48100	PSI	2.575
A-XMR-2495	23.0	1.72	DBLD	1.6	1636	25.5	1800	38500	PSI	2.575
ACC XMP5744	17.1	1.28	1.26	NA	1610	19.0	1772	45700	PSI	2.575
H4227	14.0	1.08	1.02	1.0	1424	16.0	1597	NA	NA	2.630
160 Grain Jacketed Bullet										
v-N540	22.8	1.60	DBLD	1.6	1784	25.2	1962	NA	NA	2.598
v-N135	22.4	1.74	DBLD	1.6	1735	24.9	1909	NA	NA	2.598
v-N133	20.2	1.56	DBLD	NA	1668	22.4	1834	NA	NA	2.598

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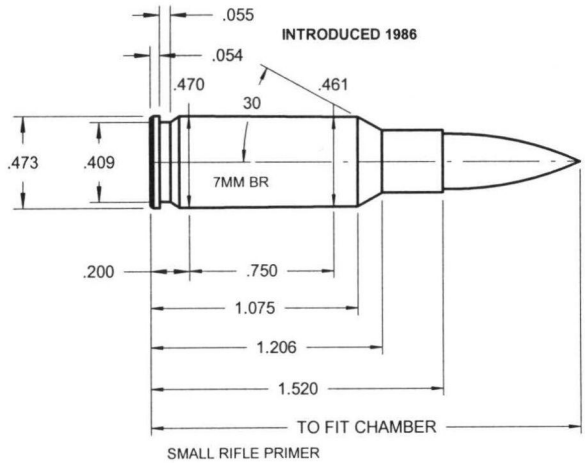
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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL
....STARTING LOADS....										
160 Grain Jacketed Bullet (Continued)										
v-N130	19.4	1.46	1.46	1.3	1649	21.7	1831	NA	NA	2.598
v-N120	17.3	1.34	1.26	1.3	1584	19.3	1742	NA	NA	2.598
162 Grain Jacketed Bullet										
A-XMR-2015	23.4	1.71	DBLD	1.6	1795	26.0	1975	46200	PSI	2 640
ACCUR 2230	24.3	1.60	DBLD	1.6	1786	27.0	1964	50300	PSI	2.640
ACCUR 2460	24.8	1.63	DBLD	1.6	1781	27.5	1959	47300	PSI	2.640
ACCUR 2520	24.8	1.69	DBLD	1.6	1710	27.5	1882	39600	PSI	2.640
ACCUR 1680	20.3	1.33	1.26	1.3	1687	22.5	1855	48300	PSI	2.640
H4895	21.0	1.53	1.46	1.3	1647	23.0	1795	NA	NA	2.675
H322	20.0	1.45	1.36	1.3	1644	22.0	1792	NA	NA	2.675
H335	22.0	1.42	1.36	1.3	1645	24.0	1776	NA	NA	2.675
BL-C(2)	22.0	1.42	1.36	1.3	1620	24.0	1749	NA	NA	2.675
H4198	17.5	1.31	1.26	1.3	1572	19.5	1729	NA	NA	2.675
A-XMR-2495	23.0	1.72	DBLD	1.6	1553	25.5	1708	34400	PSI	2.640
ACC XMP5744	16.6	1.25	1.18	NA	1536	18.5	1690	45200	PSI	2.640
H4227	13.0	1.00	.95	1.0	1302	15.0	1474	NA	NA	2.675
175 Grain Jacketed Bullet										
A-XMR-2015	23.4	1.71	DBLD	1.6	1681	26.0	1849	46500	PSI	2.495
ACCUR 2460	24.3	1.59	DBLD	1.6	1638	27.0	1802	49900	PSI	2.495
ACCUR 2230	24.3	1.60	DBLD	1.6	1624	27.0	1787	49500	PSI	2.495
ACCUR 2520	24.8	1.69	DBLD	1.6	1609	27.5	1771	39200	PSI	2.495
ACCUR 1680	19.4	1.27	1.26	NA	1482	21.5	1629	48400	PSI	2.495
ACC XMP5744	16.2	1.22	1.18	NA	1476	18.0	1623	49300	PSI	2.495
A-XMR-2495	23.0	1.72	DBLD	1.6	1389	25.5	1528	26700	PSI	2.495

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7mm BR REMINGTON



Useful case capacity 2.18 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
v-N130	29.2c	2.20	DBLD	1.9	2499	32.4c	2749	NA	NA	2.205
v-N120	26.9	2.09	DBLD	1.9	2472	29.8c	2720	NA	NA	2.205
H322	28.0	2.03	DBLD	1.9	2321	30.0	2481	NA	NA	2.200
H335	30.0	1.93	DBLD	1.9	2323	32.0	2459	NA	NA	2.200
H4198	24.0	1.80	DBLD	1.6	2250	26.0	2429	NA	NA	2.200
H4895	29.0	2.11	DBLD	1.9	2293	31.0c	2428	NA	NA	2.200
BL-C(2)	30.0	1.93	DBLD	1.9	2259	32.0	2393	NA	NA	2.200
120 Grain Jacketed Bullet										
v-N130	26.9	2.03	DBLD	1.9	2338	29.9c	2572	NA	NA	2.228
v-N133	29.3c	2.26	DBLD	2.2	2300	32.6c	2530	NA	NA	2.228
A-XMR-2495	29.3c	2.19	DBLD	1.9	2213	32.5c	2434	41900	CUP	2.225
v-N120	24.8	1.92	DBLD	1.9	2179	27.8	2421	NA	NA	2.228
ACCUR 2520	28.8	1.97	DBLD	1.9	2179	32.0c	2397	43600	CUP	2.225
H335	29.0	1.87	DBLD	1.6	2243	31.0	2376	NA	NA	2.284
ACCUR 2460	28.4	1.86	DBLD	1.6	2158	31.5	2374	42900	CUP	2.225
A-XMR-2015	26.1	1.91	DBLD	1.9	2149	29.0	2364	41200	CUP	2.225
H4895	29.0	2.11	DBLD	1.9	2232	31.0c	2363	NA	NA	2.284
ACCUR 2230	27.9	1.83	DBLD	1.6	2145	31.0	2360	44300	CUP	2.225
BL-C(2)	30.0	1.93	DBLD	1.9	2212	32.0	2342	NA	NA	2.284
H322	27.0	1.96	DBLD	1.9	2173	29.0	2323	NA	NA	2.284

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7mm BR REMINGTON (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
120 Grain Jacketed Bullet (Continued)										
H4198	22.5	1.69	DBLD	1.6	2085	24.5	2250	NA	NA	2.284
130 Grain Jacketed Bullet										
H4895	28.0	2.04	DBLD	1.9	2097	30.0c	2241	NA	NA	2.235
H322	26.0	1.88	DBLD	1.9	2063	28.0	2206	NA	NA	2.235
BL-C(2)	29.0	1.87	DBLD	1.6	2004	31.5	2163	NA	NA	2.235
H335	28.0	1.81	DBLD	1.6	2001	30.0	2139	NA	NA	2.235
H4198	21.5	1.61	DBLD	1.6	1869	23.5	2036	NA	NA	2.235
139 Grain Jacketed Bullet										
A-XMR-2495	28.4	2.13	DBLD	1.9	2061	31.5c	2268	42200	CUP	2.305
ACCUR 2460	27.9	1.83	DBLD	1.6	2042	31.0	2247	45900	CUP	2.305
IMR3031	26.1	1.99	DBLD	1.9	2077	28.0	2220	49000	CUP	2.320
ACCUR 2520	27.9	1.90	DBLD	1.9	2011	31.0	2212	41700	CUP	2.305
A-XMR-2015	25.2	1.84	DBLD	1.6	1992	28.0	2191	40400	CUP	2.305
ACCUR 2230	27.0	1.77	DBLD	1.6	1989	30.0	2188	43900	CUP	2.305
IMR4895	26.4	1.92	DBLD	1.9	2000	29.0	2180	50200	CUP	2.320
IMR4198	21.8	1.73	DBLD	1.6	1987	24.0	2165	50400	CUP	2.320
BL-C(2)	28.5	1.84	DBLD	1.6	2004	30.5	2142	NA	NA	2.330
H4895	26.5	1.93	DBLD	1.9	1978	28.5	2115	NA	NA	2.330
H335	27.0	1.74	DBLD	1.6	1967	29.0	2103	NA	NA	2.330
H322	24.5	1.78	DBLD	1.6	1938	26.5	2092	NA	NA	2.330
IMR4064	28.5	2.12	DBLD	1.9	2080	28.5	2080	43600	CUP	2.320
H4198	21.0	1.58	DBLD	NA	1814	23.0	1977	NA	NA	2.330
140 Grain Jacketed Bullet										
v-N133	25.6	1.97	DBLD	1.9	2000	28.4c	2201	NA	NA	2.374
v-N130	24.4	1.84	DBLD	1.6	1991	26.7	2169	NA	NA	2.374
v-N120	22.1	1.71	DBLD	1.6	1927	24.4	2100	NA	NA	2.374
145 Grain Jacketed Bullet										
VEC SP10	27.0	1.80	DBLD	1.6	2185	27.8	2274	34731	CIP	2.375
VEC TU2000	23.1	1.76	DBLD	1.6	2224	23.1	2224	33803	CIP	2.375
145 Grain Lead Bullet										
ACC XMP5744	16.0	1.20	1.18	NA	1683	22.0	2177	42800	CUP	2.225
150 Grain Jacketed Bullet										
VEC SP10	26.5	1.77	DBLD	1.6	2254	27.5	2287	37475	CIP	2.375
A-XMR-2495	27.9	2.09	DBLD	1.9	2046	31.0c	2251	45100	CUP	2.255
VEC TU2000	22.7	1.73	DBLD	1.6	2149	23.5	2218	40900	CIP	2.375
ACCUR 2520	27.5	1.88	DBLD	1.6	1980	30.5	2178	43100	CUP	2.255
ACCUR 2460	26.6	1.74	DBLD	1.6	1955	29.5	2150	44100	CUP	2.255

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7mm BR REMINGTON (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
150 Grain Jacketed Bullet (Continued)										
A-XMR-2015	24.8	1.81	DBLD	1.6	1949	27.5	2144	41300	CUP	2.255
v-N135	26.1	2.03	DBLD	1.9	1957	28.8c	2133	NA	NA	2.374
ACCUR 2230	26.1	1.71	DBLD	1.6	1929	29.0	2123	43200	CUP	2.255
v-N133	24.7	1.90	DBLD	1.9	1914	27.3	2106	NA	NA	2.374
v-N130	23.3	1.76	DBLD	1.6	1929	25.3	2083	NA	NA	2.374
v-N120	21.6	1.68	DBLD	1.6	1864	23.8	2031	NA	NA	2.374
BL-C(2)	27.5	1.77	DBLD	1.6	1889	29.5	2019	NA	NA	2.265
H4895	26.0	1.89	DBLD	1.9	1860	28.0	1989	NA	NA	2.265
H335	26.0	1.68	DBLD	1.6	1856	28.0	1984	NA	NA	2.265
H322	24.0	1.74	DBLD	1.6	1830	26.0	1976	NA	NA	2.265
H4198	20.5	1.54	1.46	NA	1760	22.0	1882	NA	NA	2.265
160 Grain Jacketed Bullet										
v-N135	24.8	1.93	DBLD	1.9	1879	27.7	2067	NA	NA	2.350
v-N133	23.5	1.81	DBLD	1.6	1846	26.1	2031	NA	NA	2.350
IMR4198	19.8	1.57	DBLD	NA	1792	22.5	2010	52000	CUP	2.270
IMR3031	26.0	1.98	DBLD	1.9	2005	26.0	2005	42600	CUP	2.270
IMR4895	26.3	1.91	DBLD	1.9	1961	26.5	1980	46100	CUP	2.270
v-N130	21.6	1.63	DBLD	1.6	1795	23.9	1975	NA	NA	2.350
H4895	25.0	1.82	DBLD	1.6	1847	27.0	1975	NA	NA	2.235
BL-C(2)	26.0	1.68	DBLD	1.6	1790	28.0	1913	NA	NA	2.235
IMR4064	26.0	1.94	DBLD	1.9	1905	26.0	1905	41100	CUP	2.270
v-N120	19.9	1.54	DBLD	NA	1746	21.9	1903	NA	NA	2.350
H335	25.0	1.61	DBLD	1.6	1772	27.0	1894	NA	NA	2.235
H322	23.0	1.67	DBLD	1.6	1740	25.0	1878	NA	NA	2.235
H4198	20.0	1.50	1.46	1.3	1656	22.0	1805	NA	NA	2.235
162 Grain Jacketed Bullet										
IMR3031	26.0	1.98	DBLD	1.9	2015	26.0	2015	44000	CUP	2.375
IMR4895	25.7	1.87	DBLD	1.6	1921	27.0	2015	48000	CUP	2.375
H4895	23.8	1.73	DBLD	1.6	1761	27.0	1975	NA	NA	2.375
BL-C(2)	24.6	1.59	DBLD	1.6	1706	28.0	1913	NA	NA	2.375
H335	23.8	1.53	1.46	NA	1689	27.0	1894	NA	NA	2.375
H322	22.0	1.60	DBLD	1.6	1675	25.0	1878	NA	NA	2.375
IMR4064	26.0	1.94	DBLD	1.9	1870	26.0	1870	38600	CUP	2.375
H4198	19.4	1.45	1.36	1.3	1609	22.0	1805	NA	NA	2.375

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7mm BR REMINGTON (Continued)

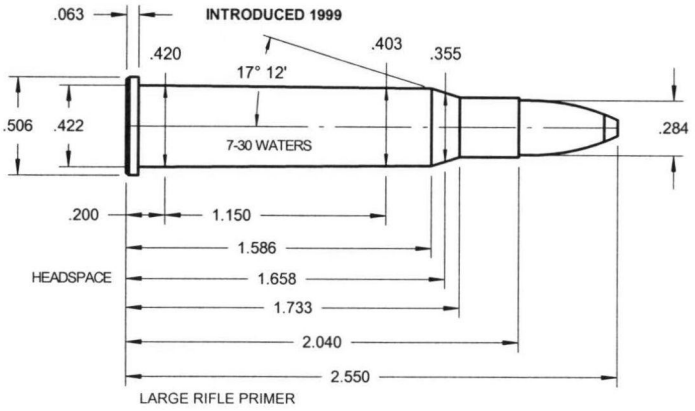
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
168 Grain Jacketed Bullet										
ACCUR 2520	27.0	1.84	DBLD	1.6	1888	30.0	2077	44600	CUP	2.310
ACCUR 2460	25.7	1.69	DBLD	1.6	1834	28.5	2018	45000	CUP	2.310
ACCUR 2230	25.2	1.66	DBLD	1.6	1804	28.0	1984	43600	CUP	2.310
A-XMR-2495	25.7	1.92	DBLD	1.9	1802	28.5	1982	39600	CUP	2.310
A-XMR-2015	23.4	1.71	DBLD	1.6	1781	26.0	1959	41100	CUP	2.310
BL-C(2)	24.2	1.56	DBLD	NA	1672	27.5	1874	NA	NA	2.375
H335	23.3	1.50	1.46	1.3	1665	26.5	1867	NA	NA	2.375
H322	21.1	1.53	1.46	NA	1642	24.0	1841	NA	NA	2.375
H4198	18.5	1.39	1.36	1.3	1604	21.0	1799	NA	NA	2.375
168 Grain Lead Bullet										
ACC XMP5744	15.0	1.13	1.09	1.0	1543	21.0	2035	45600	CUP	2.225
175 Grain Jacketed Bullet										
H335	22.4	1.45	1.36	1.3	1552	25.5	1740	NA	NA	2.375
BL-C(2)	23.3	1.50	1.46	1.3	1550	26.5	1738	NA	NA	2.375
H4895	21.6	1.57	DBLD	NA	1546	24.5	1733	NA	NA	2.375
H322	20.2	1.47	1.46	1.3	1527	23.0	1713	NA	NA	2.375
H4198	17.6	1.32	1.26	1.3	1501	20.0	1684	NA	NA	2.375

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7-30 WATERS



Useful case capacity 2.55 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
ACCUR 2230	34.2	2.25	DBLD	2.2	2393	38.0	2719	37800	CUP	2.665
A-XMR-2495	35.1c	2.63	DBLD	2.5	2391	39.0c	2717	32700	CUP	2.665
A-XMR-2015	34.2	2.50	DBLD	2.2	2377	36.0c	2701	37600	CUP	2.665
ACCUR 2460	34.2	2.24	DBLD	2.2	2349	38.0	2669	37900	CUP	2.665
ACCUR 2520	35.1	2.40	DBLD	2.2	2326	39.0c	2643	36300	CUP	2.665
ACCUR 2700	37.8c	2.59	DBLD	2.5	2167	42.0c	2462	37900	CUP	2.665
120 Grain Jacketed Bullet										
H414	40.0c	2.64	DBLD	2.5	2620	42.0c	2757	NA	NA	2.500
H380	39.0c	2.69	DBLD	2.5	2605	41.0c	2735	NA	NA	2.500
ACCUR 2520	33.3	2.27	DBLD	2.2	2406	37.0	2734	39400	CUP	2.530
H4895	31.0	2.26	DBLD	2.2	2537	34.0	2733	NA	NA	2.500
RELODER15	32.8	2.31	DBLD	2.2	2477	36.3c	2725	39000	CUP	2.640
A-XMR-4064	34.2c	2.58	DBLD	2.5	2398	38.0c	2725	38200	CUP	2.530
H4350	39.0c	2.83	DBLD	2.8	2601	41.0c	2724	NA	NA	2.500
BL-C(2)	35.0	2.26	DBLD	2.2	2501	37.0	2701	NA	NA	2.500
A-XMR-2495	37.0c	2.77	DBLD	2.5	2696	37.0c	2696	35100	CUP	2.530
A-XMR-2015	30.9	2.26	DBLD	2.2	2537	33.0	2687	37600	CUP	2.530
H322	29.0	2.10	DBLD	1.9	2558	32.0	2687	NA	NA	2.500
H335	32.0	2.06	DBLD	1.9	2469	34.0	2683	NA	NA	2.500
ACCUR 2230	30.8	2.03	DBLD	1.9	2428	34.0	2646	38800	CUP	2.530

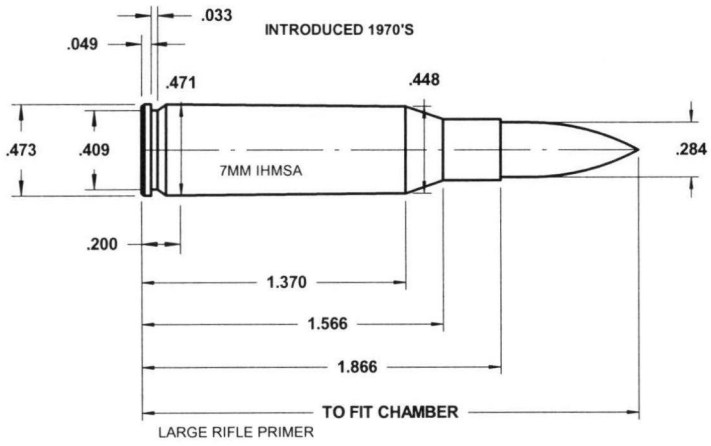
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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
120 Grain Jacketed Bullet (Continued)										
RELODER12	33.2	2.29	DBLD	2.2	2427	36.5	2645	38700	CUP	2.640
ACCUR 2460	33.4	2.19	DBLD	1.9	2564	34.0	2614	35800	CUP	2.530
H4831	39.0c	2.83	DBLD	2.8	2411	41.0c	2561	NA	NA	2.500
ACCUR 2700	38.3c	2.62	DBLD	2.5	2474	39.5c	2546	36300	CUP	2.530
RELODER 7	24.9	1.81	DBLD	1.6	2267	27.3	2470	38600	CUP	2.640
139 Grain Jacketed Bullet										
ACCUR 2460	30.9	2.03	DBLD	1.9	2316	34.5	2548	39300	CUP	2.530
ACCUR 2230	29.9	1.97	DBLD	1.9	2267	34.0	2542	40000	CUP	2.665
RELODER15	31.5	2.22	DBLD	2.2	2331	34.7	2540	38800	CUP	2.650
A-XMR-4064	31.9	2.41	DBLD	2.2	2228	35.5c	2532	39800	CUP	2.530
A-XMR-2495	32.8	2.45	DBLD	2.2	2326	35.5c	2511	38100	CUP	2.530
ACCUR 2520	33.7	2.30	DBLD	2.2	2426	34.5	2472	36000	CUP	2.530
H4895	29.0	2.11	DBLD	1.9	2310	31.0	2458	NA	NA	2.252
H414	36.0	2.38	DBLD	2.2	2239	38.0	2442	NA	NA	2.252
H335	30.0	1.93	DBLD	1.9	2280	32.0	2430	NA	NA	2.252
ACCUR 2700	35.0	2.40	DBLD	2.2	2243	38.0c	2422	38200	CUP	2.530
H4350	36.0c	2.61	DBLD	2.5	2262	38.0c	2418	NA	NA	2.252
RELODER12	30.5	2.11	DBLD	1.9	2186	33.8	2405	39000	CUP	2.650
A-XMR-2015	28.1	2.05	DBLD	1.9	2184	31.0	2403	38900	CUP	2.665
H380	34.0	2.35	DBLD	2.2	2188	36.0	2396	NA	NA	2.252
H4831	37.0c	2.68	DBLD	2.5	2240	39.0c	2384	NA	NA	2.252
BL-C(2)	33.0	2.13	DBLD	1.9	2221	35.0	2373	NA	NA	2.252
H322	27.0	1.96	DBLD	1.9	2209	29.0	2342	NA	NA	2.252
154 Grain Jacketed Bullet										
H414	35.0	2.31	DBLD	2.2	2170	37.0	2347	NA	NA	2.730
BL-C(2)	31.0	2.00	DBLD	1.9	2129	33.0	2320	NA	NA	2.730
H380	33.0	2.28	DBLD	2.2	2144	35.0	2310	NA	NA	2.730
H4350	35.0	2.54	DBLD	2.5	2151	37.0c	2308	NA	NA	2.730
H335	27.0	1.74	DBLD	1.6	2134	29.0	2300	NA	NA	2.730
H4895	28.0	2.04	DBLD	1.9	2098	30.0	2253	NA	NA	2.730
H4831	35.0	2.54	DBLD	2.5	2037	37.0c	2161	NA	NA	2.730

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7mm IHMSA



Useful case capacity 2.98 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
H414	42.0	2.78	DBLD	2.5	2352	45.0	2515	NA	NA	2.650
H4198	31.0	2.33	DBLD	2.2	2374	33.0	2514	NA	NA	2.650
H380	40.0	2.76	DBLD	2.5	2336	43.0	2498	NA	NA	2.650
H4895	36.0	2.62	DBLD	2.5	2381	38.0	2498	NA	NA	2.650
H4350	42.0c	3.05	DBLD	2.8	2367	44.0c	2483	NA	NA	2.650
H322	34.0	2.46	DBLD	2.2	2344	36.0	2482	NA	NA	2.650
H335	36.0	2.32	DBLD	2.2	2354	38.0	2469	NA	NA	2.650
BL-C(2)	37.0	2.39	DBLD	2.2	2330	39.0	2444	NA	NA	2.650
H4831	42.0c	3.04	DBLD	2.8	2240	44.0c	2349	NA	NA	2.650
120 Grain Jacketed Bullet										
ACCUR 2460	35.1	2.30	DBLD	2.2	2277	39.0	2505	49200	PSI	2.575
A-XMR-2015	32.4	2.37	DBLD	2.2	2275	36.0	2503	52300	PSI	2.575
ACCUR 2520	36.0	2.46	DBLD	2.2	2275	40.0	2503	48700	PSI	2.575
ACCUR 2230	34.2	2.25	DBLD	2.2	2240	38.0	2464	46500	PSI	2.575
A-XMR-2495	35.1	2.63	DBLD	2.5	2236	39.0	2459	48000	PSI	2.575
H4350	42.0c	3.05	DBLD	2.8	2318	44.0c	2431	NA	NA	2.700
H414	41.0	2.71	DBLD	2.5	2258	44.0	2414	NA	NA	2.700
H4895	35.0	2.55	DBLD	2.5	2276	37.0	2387	NA	NA	2.700
H4198	30.0	2.25	DBLD	2.2	2239	32.0	2371	NA	NA	2.700
H380	39.0	2.69	DBLD	2.5	2215	42.0	2367	NA	NA	2.700

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
120 Grain Jacketed Bullet (Continued)										
ACCUR 2700	41.8	2.86	DBLD	2.8	2243	44.0c	2353	43700	PSI	2.575
H322	33.0	2.39	DBLD	2.2	2209	35.0	2339	NA	NA	2.700
BL-C(2)	36.0	2.32	DBLD	2.2	2210	38.0	2318	NA	NA	2.700
H335	35.0	2.26	DBLD	2.2	2201	37.0	2309	NA	NA	2.700
H4831	42.0c	3.04	DBLD	2.8	2188	44.0c	2295	NA	NA	2.700
130 Grain Jacketed Bullet										
H4350	41.0	2.97	DBLD	2.8	2277	43.0c	2388	NA	NA	2.730
H414	40.0	2.64	DBLD	2.5	2183	43.0	2334	NA	NA	2.730
H4198	29.0	2.18	DBLD	1.9	2179	31.0	2307	NA	NA	2.730
H4895	34.0	2.48	DBLD	2.2	2170	36.0	2298	NA	NA	2.730
H322	32.0	2.32	DBLD	2.2	2169	34.0	2297	NA	NA	2.730
H380	38.0	2.63	DBLD	2.5	2144	41.0	2293	NA	NA	2.730
BL-C(2)	35.0	2.26	DBLD	2.2	2165	37.0	2271	NA	NA	2.730
H4831	42.0c	3.04	DBLD	2.8	2158	44.0c	2264	NA	NA	2.730
H335	34.0	2.19	DBLD	1.9	2120	36.0	2245	NA	NA	2.730
139 Grain Jacketed Bullet										
ACCUR 2460	33.3	2.18	DBLD	1.9	2135	37.0	2348	52000	PSI	2.765
A-XMR-2495	33.3	2.49	DBLD	2.2	2127	37.0	2340	49800	PSI	2.765
ACCUR 2520	33.8	2.31	DBLD	2.2	2122	37.5	2335	51500	PSI	2.765
ACCUR 2230	32.9	2.16	DBLD	1.9	2114	36.5	2325	49900	PSI	2.765
A-XMR-2015	30.6	2.23	DBLD	2.2	2089	34.0	2298	50000	PSI	2.765
ACCUR 2700	39.4	2.70	DBLD	2.5	2178	41.5	2284	50500	PSI	2.765
145 Grain Jacketed Bullet										
H4350	40.0	2.90	DBLD	2.8	2163	42.0c	2269	NA	NA	2.750
H414	39.0	2.58	DBLD	2.5	2101	42.0	2246	NA	NA	2.750
H322	31.0	2.25	DBLD	2.2	2094	33.0	2217	NA	NA	2.750
H4895	33.0	2.40	DBLD	2.2	2089	35.0	2212	NA	NA	2.750
H380	37.0	2.56	DBLD	2.5	2066	40.0	2209	NA	NA	2.750
H335	33.0	2.13	DBLD	1.9	2079	35.0	2202	NA	NA	2.750
BL-C(2)	34.0	2.19	DBLD	1.9	2078	36.0	2201	NA	NA	2.750
H4198	28.0	2.10	DBLD	1.9	2051	30.0	2193	NA	NA	2.750
H4831	41.0	2.97	DBLD	2.8	2068	43.0c	2169	NA	NA	2.750
150 Grain Jacketed Bullet										
ACCUR 2700	39.4	2.70	DBLD	2.5	2144	41.5	2249	49900	PSI	2.650
ACCUR 2460	32.4	2.13	DBLD	1.9	2043	36.0	2248	51700	PSI	2.650
ACCUR 2230	32.0	2.10	DBLD	1.9	2040	35.5	2245	50100	PSI	2.650
A-XMR-2015	29.7	2.17	DBLD	1.9	2009	33.0	2210	51000	PSI	2.650

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
150 Grain Jacketed Bullet (Continued)									
ACCUR 2520	32.4	2.21	DBLD	2.2	2006	36.0	2207	49500 PSI	2.650
A-XMR-2495	31.5	2.36	DBLD	2.2	1999	35.0	2199	48900 PSI	2.650
154 Grain Jacketed Bullet									
H4831	41.0	2.97	DBLD	2.8	2119	43.0c	2223	NA NA	2.750
H4350	39.0	2.83	DBLD	2.8	2107	41.0	2210	NA NA	2.750
H4895	32.0	2.33	DBLD	2.2	2044	34.0	2165	NA NA	2.750
H380	36.0	2.49	DBLD	2.2	1994	39.0	2151	NA NA	2.750
H335	32.0	2.06	DBLD	1.9	2026	34.0	2145	NA NA	2.750
BL-C(2)	33.0	2.13	DBLD	1.9	2022	35.0	2141	NA NA	2.750
H322	30.0	2.17	DBLD	1.9	2020	32.0	2139	NA NA	2.750
H414	38.0	2.51	DBLD	2.5	2000	41.0	2138	NA NA	2.750
H4198	27.0	2.03	DBLD	1.9	1993	29.0	2130	NA NA	2.750
160 Grain Jacketed Bullet									
H4350	38.0	2.76	DBLD	2.5	2042	40.5	2163	NA NA	2.760
H4831	41.0	2.97	DBLD	2.8	2056	43.0c	2156	NA NA	2.760
H414	37.5	2.48	DBLD	2.2	2003	40.5	2141	NA NA	2.760
BL-C(2)	32.5	2.10	DBLD	1.9	1992	34.5	2109	NA NA	2.760
H4895	31.5	2.29	DBLD	2.2	1989	33.5	2106	NA NA	2.760
H380	35.5	2.45	DBLD	2.2	1929	38.5	2083	NA NA	2.760
H4198	26.5	1.99	DBLD	1.9	1938	28.5	2072	NA NA	2.760
H335	31.5	2.03	DBLD	1.9	1955	33.5	2070	NA NA	2.760
H322	29.5	2.14	DBLD	1.9	1953	31.5	2068	NA NA	2.760
168 Grain Jacketed Bullet									
H4350	37.0	2.68	DBLD	2.5	2014	40.0	2152	NA NA	2.770
ACCUR 2520	32.0	2.18	DBLD	1.9	1938	35.5	2132	50000 PSI	2.650
ACCUR 2700	37.5	2.57	DBLD	2.5	2027	39.5	2126	51000 PSI	2.650
ACCUR 2460	31.5	2.07	DBLD	1.9	1929	35.0	2123	48200 PSI	2.650
H414	37.0	2.45	DBLD	2.2	1980	40.0	2117	NA NA	2.770
A-XMR-2495	31.5	2.36	DBLD	2.2	1921	35.0	2114	46900 PSI	2.650
H4831	40.0	2.90	DBLD	2.8	2008	42.0c	2106	NA NA	2.770
ACCUR 2230	31.1	2.04	DBLD	1.9	1909	34.5	2100	49500 PSI	2.650
A-XMR-2015	29.3	2.14	DBLD	1.9	1903	32.5	2094	50100 PSI	2.650
BL-C(2)	32.0	2.06	DBLD	1.9	1972	34.0	2088	NA NA	2.770
H380	35.0	2.42	DBLD	2.2	1923	38.0	2076	NA NA	2.770
H4895	31.0	2.26	DBLD	2.2	1959	33.0	2075	NA NA	2.770
H322	29.0	2.10	DBLD	1.9	1933	31.0	2047	NA NA	2.770
H4198	26.0	1.95	DBLD	1.9	1911	28.0	2042	NA NA	2.770

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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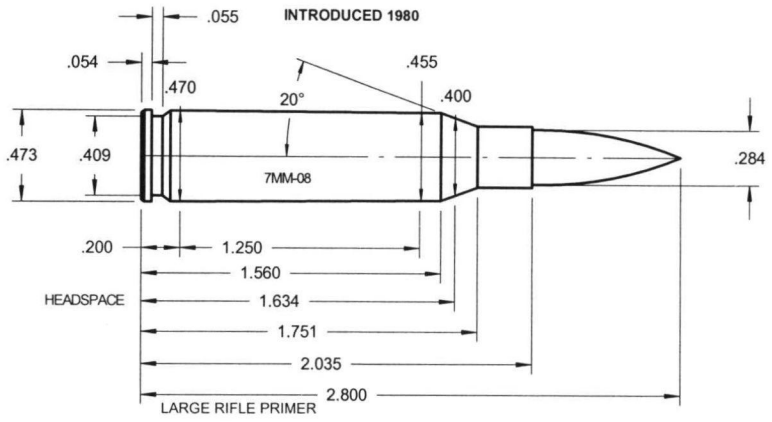
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
168 Grain Jacketed Bullet (Continued)										
H335	31.0	2.00	DBLD	1.9	1928	33.0	2041	NA	NA	2.770
175 Grain Jacketed Bullet										
H4831	39.0	2.83	DBLD	2.8	1996	41.0	2094	NA	NA	2.800
ACCUR 2520	31.5	2.15	DBLD	1.9	1887	35.0	2076	51100	PSI	2.700
A-XMR-2495	30.6	2.29	DBLD	2.2	1878	34.0	2066	51000	PSI	2.700
H4350	36.0	2.61	DBLD	2.5	1896	39.5	2066	NA	NA	2.800
ACCUR 2700	37.1	2.54	DBLD	2.5	1967	39.0	2063	50100	PSI	2.700
A-XMR-2015	28.8	2.10	DBLD	1.9	1870	32.0	2057	51600	PSI	2.700
H414	36.0	2.38	DBLD	2.2	1894	39.0	2044	NA	NA	2.800
ACCUR 2230	30.6	2.01	DBLD	1.9	1842	34.0	2027	47800	PSI	2.700
ACCUR 2460	30.6	2.01	DBLD	1.9	1840	34.0	2025	48000	PSI	2.700
H380	34.0	2.35	DBLD	2.2	1851	37.0	1998	NA	NA	2.800
H4895	30.0	2.18	DBLD	1.9	1876	32.0	1987	NA	NA	2.800
BL-C(2)	31.0	2.00	DBLD	1.9	1810	33.0	1917	NA	NA	2.800
H335	30.0	1.93	DBLD	1.9	1807	32.0	1913	NA	NA	2.800
H322	28.0	2.03	DBLD	1.9	1782	30.0	1905	NA	NA	2.800
H4198	25.0	1.88	DBLD	1.6	1758	27.0	1880	NA	NA	2.800

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7mm-08 REMINGTON



Useful case capacity 3.32 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED	FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
100 Grain Jacketed Bullet												
v-N150	44.4	3.31	NA	3.1	2918	49.4c	3222	NA	NA	2.717	....	....
v-N135	41.4	3.22	DBLD	3.1	2878	45.6c	3186	NA	NA	2.717	....	....
v-N140	42.4	3.11	DBLD	3.1	2878	47.2c	3186	NA	NA	2.717	....	....
ACCUR 2460	38.7	2.54	DBLD	2.5	2790	43.0	3171	49500	CUP	2.665	....	....
A-XMR-4064	41.4	3.12	DBLD	3.1	2786	46.0c	3166	46500	CUP	2.665	....	....
ACCUR 2520	40.1	2.74	DBLD	2.5	2782	44.5	3161	48400	CUP	2.665	....	....
ACCUR 2230	38.3	2.52	DBLD	2.5	2780	42.5	3159	49800	CUP	2.665	....	....
v-N133	39.0	3.00	DBLD	2.8	2908	43.2c	3133	NA	NA	2.717	....	....
A-XMR-2015	36.5	2.66	DBLD	2.5	2749	40.5	3124	48500	CUP	2.665	....	....
A-XMR-2495	38.3	2.87	DBLD	2.8	2739	42.5	3113	48500	CUP	2.665	....	....
v-N130	37.1	2.80	DBLD	2.5	2854	40.8	3100	NA	NA	2.717	....	....
ACCUR 2700	45.6	3.12	DBLD	3.1	2859	48.0	3041	50700	CUP	2.665	....	....
100 Grain Barnes X Bullet												
H4895	41.0	2.98	DBLD	2.8	3016	45.0	3286	58537	PSI	2.650	.9788	.9521
H-VARGET	42.0	3.07	DBLD	2.8	3036	45.7c	3277	58185	PSI	2.650	.9795	.9486
BL-C(2)	43.0	2.77	DBLD	2.5	2993	46.5	3231	58654	PSI	2.650	.9782	.9679
H380	47.0	3.25	DBLD	3.1	3052	49.0c	3171	54313	PSI	2.650	....	....
H414	47.0	3.11	DBLD	3.1	3010	49.5	3157	58771	PSI	2.650	....	....
H335	39.0	2.52	DBLD	2.5	2977	41.2	3123	58302	PSI	2.650	....	....
H322	37.5	2.72	DBLD	2.5	2933	40.0	3105	57481	PSI	2.650	.9777	.9248

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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7mm-08 REMINGTON (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
115 Grain Jacketed Bullet											
BL-C(2)	45.0	2.90	DBLD	2.8	3040	48.0	3219	58537 PSI	2.655	.9811	.9531
H-VARGET	43.0	3.14	DBLD	3.1	3008	46.3c	3216	58771 PSI	2.655	....	....
H4895	42.0	3.06	DBLD	2.8	2967	45.0	3172	58537 PSI	2.655	.9782	.9472
H335	39.0	2.52	DBLD	2.5	2868	42.0	3067	58771 PSI	2.655	.9779	.9452
H414	46.5	3.07	DBLD	2.8	2891	49.5	3062	56190 PSI	2.655	.9812	.9526
H322	39.0	2.83	DBLD	2.8	2911	41.0	3053	58419 PSI	2.655	....	....
H380	47.0	3.25	DBLD	3.1	2932	49.0c	3046	52437 PSI	2.655	....	....
120 Grain Jacketed Bullet											
H-VARGET	42.5	3.11	DBLD	3.1	2943	45.0	3117	58537 PSI	2.800	....	....
BL-C(2)	43.5	2.81	DBLD	2.8	2936	46.5	3109	58771 PSI	2.800	.9812	.9384
H4895	41.0	2.98	DBLD	2.8	2914	43.7	3085	58302 PSI	2.800	.9790	.9412
RELODER15	41.6	2.94	DBLD	2.8	2817	45.5	3070	58700 PSI	2.750	....	....
H4350	48.0c	3.48	NA	3.4	2925	50.0c	3039	52319 PSI	2.800	....	....
H414	46.5	3.07	DBLD	2.8	2882	49.0	3023	55838 PSI	2.800	....	....
WIN 760	45.5	3.03	DBLD	2.8	2851	48.0	2990	56600 PSI	2.800	....	....
H335	39.5	2.55	DBLD	2.5	2818	42.0	2984	57950 PSI	2.800	.9775	.9380
H380	46.0	3.18	DBLD	3.1	2866	48.0	2977	50912 PSI	2.800	....	....
v-N150	42.2	3.15	DBLD	3.1	2684	46.9c	2966	NA	NA	2.740	....	....
A-XMR-4064	38.7	2.92	DBLD	2.8	2603	43.0	2958	48100 CUP	2.765	....	....
RELODER12	41.5	2.87	DBLD	2.8	2734	45.2	2950	58400 PSI	2.750	....	....
v-N140	41.1	3.01	DBLD	2.8	2648	45.4c	2943	NA	NA	2.740	....	....
A-XMR-2495	36.0	2.69	DBLD	2.5	2577	40.0	2928	49000 CUP	2.765	....	....
ACCUR 2460	36.6	2.40	DBLD	2.2	2571	40.7	2922	48800 CUP	2.765	....	....
v-N135	38.7	3.01	DBLD	2.8	2619	42.7c	2894	NA	NA	2.740	....	....
A-XMR-2015	34.4	2.51	DBLD	2.5	2541	38.2	2887	49000 CUP	2.765	....	....
ACCUR 2230	36.3	2.38	DBLD	2.2	2541	40.3	2887	48900 CUP	2.765	....	....
ACCUR 2520	37.3	2.55	DBLD	2.5	2529	41.4	2874	47700 CUP	2.765	....	....
ACCUR 2700	44.2	3.03	DBLD	2.8	2699	46.5	2871	49200 CUP	2.765	....	....
130 Grain Jacketed Bullet											
H-VARGET	40.0	2.92	DBLD	2.8	2783	43.5	3004	58771 PSI	2.800	.9783	.9598
H4350	47.0c	3.41	NA	3.4	2832	50.0c	2998	55604 PSI	2.800	....	....
BL-C(2)	41.5	2.68	DBLD	2.5	2823	44.2	2989	58419 PSI	2.800	.9791	.9552
H4895	39.5	2.88	DBLD	2.8	2792	42.0	2957	58888 PSI	2.800	.9775	.9443
H380	45.0	3.11	DBLD	3.1	2824	47.0	2934	53610 PSI	2.800	....	....
H414	44.0	2.91	DBLD	2.8	2762	47.0	2925	58654 PSI	2.800	.9809	.9352
A-XMR-4064	38.2	2.88	DBLD	2.8	2502	42.5	2844	51200 CUP	2.770	....	....
A-XMR-4350	42.8	3.17	DBLD	3.1	2497	47.5c	2838	48600 CUP	2.770	....	....

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7mm-08 REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
					....STARTING LOADS....						
130 Grain Jacketed Bullet (Continued)											
ACCUR 2460	35.8	2.35	DBLD	2.2	2482	39.8	2821	52000 CUP	2.770	....	....
H335	37.0	2.39	DBLD	2.2	2678	39.0	2809	58067 PSI	2.800	....	....
ACCUR 2230	35.4	2.33	DBLD	2.2	2468	39.3	2804	51800 CUP	2.770	....	....
A-XMR-2015	33.8	2.47	DBLD	2.2	2457	37.6	2792	52000 CUP	2.770	....	....
H450	46.7	3.05	DBLD	2.8	2529	52.0c	2781	NA NA	2.600	....	....
A-XMR-2495	35.1	2.63	DBLD	2.5	2446	39.0	2779	49800 CUP	2.770	....	....
ACCUR 2700	42.8	2.93	DBLD	2.8	2612	45.0	2779	50500 CUP	2.770	....	....
ACCUR 2520	35.6	2.43	DBLD	2.2	2423	39.6	2753	51400 CUP	2.770	....	....
139 Grain Jacketed Bullet											
H4350	47.0c	3.41	NA	3.4	2744	50.0c	2906	55721 PSI	2.800	....	....
H-VARGET	40.5	2.96	DBLD	2.8	2691	43.5	2877	58654 PSI	2.800	.9781	.9633
BL-C(2)	41.0	2.64	DBLD	2.5	2647	44.7	2857	58537 PSI	2.800	.9795	.9495
H4895	39.0	2.84	DBLD	2.8	2647	42.5	2857	58888 PSI	2.800	.9786	.9535
RELODER19	48.2c	3.40	NA	3.1	2665	52.0c	2850	57900 PSI	2.800	....	....
IMR4064	37.9	2.82	DBLD	2.8	2553	42.5	2835	51300 CUP	2.800	....	....
RELODER15	39.1	2.76	DBLD	2.5	2597	43.0	2830	59000 PSI	2.800	....	....
IMR3031	35.7	2.72	DBLD	2.5	2524	40.5	2830	51900 CUP	2.800	....	....
H414	45.5	3.01	DBLD	2.8	2731	47.0	2810	51733 PSI	2.800	....	....
H380	44.0	3.04	DBLD	2.8	2651	47.0	2807	54900 PSI	2.800	.9811	.9630
IMR4320	37.7	2.70	DBLD	2.5	2569	41.5	2800	50400 CUP	2.800	....	....
IMR4895	36.3	2.65	DBLD	2.5	2535	40.5	2790	51000 CUP	2.800	....	....
IMR4350	46.0c	3.38	NA	3.1	2750	46.0c	2750	44200 CUP	2.800	....	....
RELODER12	38.7	2.67	DBLD	2.5	2510	42.5	2735	59000 PSI	2.800	....	....
H335	37.5	2.42	DBLD	2.2	2578	40.0	2730	57950 PSI	2.800	.9771	.9434
WIN 760	45.4	3.02	DBLD	2.8	2725	45.4	2725	50800 PSI	2.800	....	....
IMR4831	46.0c	3.38	NA	3.1	2645	46.0c	2645	38800 CUP	2.800	....	....
140 Grain Jacketed Bullet											
H4350	45.0	3.26	DBLD	3.1	2709	48.0c	2868	58419 PSI	2.750	....	....
H-VARGET	39.5	2.89	DBLD	2.8	2661	42.2	2819	58419 PSI	2.750	.9790	.9528
A-XMR-4350	42.8	3.17	DBLD	3.1	2467	47.5c	2803	49800 CUP	2.800	....	....
BL-C(2)	40.0	2.58	DBLD	2.5	2640	42.5	2796	58302 PSI	2.750	.9772	.9593
H414	43.5	2.88	DBLD	2.8	2660	46.0	2791	58067 PSI	2.750	....	....
H380	43.0	2.97	DBLD	2.8	2621	45.7	2775	57950 PSI	2.750	.9791	.9596
A-XMR-4064	37.8	2.85	DBLD	2.8	2442	42.0	2775	49700 CUP	2.800	....	....
H4895	38.0	2.77	DBLD	2.5	2615	40.5	2769	58302 PSI	2.750	.9771	.9349
ACCUR 2460	36.0	2.36	DBLD	2.2	2436	40.0	2768	51900 CUP	2.800	....	....
H450	46.7	3.05	DBLD	2.8	2481	52.0c	2729	NA NA	2.650	....	....

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c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
140 Grain Jacketed Bullet (Continued)												
ACCUR 2230	35.1	2.31	DBLD	2.2	2386	39.0	2711	49600	CUP	2.800	....	....
A-XMR-2495	34.7	2.60	DBLD	2.5	2379	38.5	2703	49200	CUP	2.800	....	....
ACCUR 2520	35.6	2.43	DBLD	2.2	2376	39.5	2700	50800	CUP	2.800	....	....
ACCUR 2700	42.3	2.90	DBLD	2.8	2538	44.5	2700	49500	CUP	2.800	....	....
A-XMR-2015	33.3	2.43	DBLD	2.2	2375	37.0	2699	49300	CUP	2.800	....	....
H4831	44.9	3.25	DBLD	3.1	2429	50.0c	2672	NA	NA	2.650	....	....
v-N140	38.5	2.82	DBLD	2.8	2407	42.7	2657	NA	NA	2.740	....	....
v-N150	39.2	2.92	DBLD	2.8	2419	43.6	2651	NA	NA	2.740	....	....
H335	35.5	2.29	DBLD	2.2	2524	37.5	2647	58419	PSI	2.750	....	....
145 Grain Jacketed Bullet												
VEC TU5000	38.7	2.79	DBLD	2.5	2626	42.6	2861	50348	CIP	2.800	....	....
H4350	45.0	3.26	DBLD	3.1	2645	48.0c	2801	58419	PSI	2.730	....	....
H414	43.0	2.84	DBLD	2.8	2609	46.0	2788	58067	PSI	2.730	.9782	.9407
RELODER19	44.9	3.17	DBLD	3.1	2556	49.3c	2785	58900	PSI	2.800	....	....
H-VARGET	39.0	2.85	DBLD	2.8	2592	41.5	2745	58888	PSI	2.730	.9771	.9673
H4895	38.5	2.80	DBLD	2.5	2576	41.0	2728	58419	PSI	2.730	.9775	.9551
H380	43.0	2.97	DBLD	2.8	2589	45.5	2716	58537	PSI	2.730	....	....
RELODER15	37.3	2.63	DBLD	2.5	2478	41.0	2700	59000	PSI	2.800	....	....
BL-C(2)	39.0	2.52	DBLD	2.5	2543	41.7	2693	58185	PSI	2.730	.9790	.9378
RELODER12	36.0	2.49	DBLD	2.2	2367	39.6	2580	59000	PSI	2.800	....	....
145 Grain Lead Bullet												
ACC XMP5744	20.0	1.50	1.46	1.3	1849	27.0	2294	41900	CUP	2.670	....	....
150 Grain Jacketed Bullet												
H4350	45.0	3.26	DBLD	3.1	2640	48.5c	2823	59006	PSI	2.800	....	....
H414	44.0	2.91	DBLD	2.8	2647	46.5	2776	58654	PSI	2.800	....	....
RELODER19	44.8	3.16	DBLD	3.1	2533	49.0c	2760	58700	PSI	2.800	....	....
H380	42.0	2.90	DBLD	2.8	2546	45.5	2748	58537	PSI	2.800	.9782	.9584
VEC TU5000	40.9	2.94	DBLD	2.8	2661	41.7	2736	48940	CIP	2.800	....	....
A-XMR-4350	41.9	3.10	DBLD	2.8	2403	46.5c	2731	51100	CUP	2.800	....	....
H-VARGET	38.5	2.81	DBLD	2.8	2554	41.3	2731	58654	PSI	2.800	.9761	.9428
H4895	37.0	2.69	DBLD	2.5	2499	40.5	2723	58654	PSI	2.800	.9757	.9597
H450	44.9	2.93	DBLD	2.8	2453	50.0	2699	NA	NA	2.600	....	....
BL-C(2)	39.0	2.52	DBLD	2.5	2549	41.5	2699	58185	PSI	2.800	.9772	.9445
H4831	44.0	3.19	DBLD	3.1	2441	49.0c	2686	NA	NA	2.600	....	....
RELODER15	37.5	2.65	DBLD	2.5	2487	40.9	2685	58600	PSI	2.800	....	....
A-XMR-4064	36.9	2.78	DBLD	2.5	2346	41.0	2667	49800	CUP	2.800	....	....
WIN 760	45.6	3.04	DBLD	2.8	2645	45.6	2645	49900	PSI	2.800	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
150 Grain Jacketed Bullet (Continued)									
ACCUR 2700	41.3	2.83	DBLD	2.8	2477	43.5	2635 51900 CUP	2.800	....
ACCUR 2460	34.5	2.26	DBLD	2.2	2310	38.3	2625 50200 CUP	2.800	....
ACCUR 2230	34.2	2.25	DBLD	2.2	2306	38.0	2620 51000 CUP	2.800	....
ACCUR 2520	35.1	2.40	DBLD	2.2	2299	39.0	2612 51600 CUP	2.800	....
A-XMR-2495	33.6	2.51	DBLD	2.5	2293	37.3	2606 50300 CUP	2.800	....
H335	35.0	2.26	DBLD	2.2	2436	37.5	2605 58537 PSI	2.800	.9732 .9569
RELODER12	36.8	2.54	DBLD	2.5	2400	40.1	2590 58500 PSI	2.800	....
A-XMR-2015	32.4	2.37	DBLD	2.2	2269	36.0	2578 50300 CUP	2.800	....
154 Grain Jacketed Bullet									
H4350	45.0	3.26	DBLD	3.1	2590	48.0c	2743 58888 PSI	2.800	....
H414	43.0	2.84	DBLD	2.8	2554	46.0	2731 58185 PSI	2.800	.9778 .9400
H-VARGET	38.5	2.81	DBLD	2.8	2494	41.2	2666 59006 PSI	2.800	.9756 .9525
H380	41.5	2.87	DBLD	2.8	2481	44.0	2627 58185 PSI	2.800	.9774 .9392
H4831	48.0c	3.48	NA	3.4	2551	49.5c	2625 52202 PSI	2.800	....
H4895	37.0	2.69	DBLD	2.5	2448	39.5	2592 58537 PSI	2.800	.9774 .9526
BL-C(2)	38.0	2.45	DBLD	2.2	2424	40.5	2566 58067 PSI	2.800	.9776 .9256
H335	35.0	2.26	DBLD	2.2	2344	37.5	2506 57481 PSI	2.800	.9737 .9375
160 Grain Winchester Fail Safe									
WIN 760	37.8	2.52	DBLD	2.5	2335	41.0	2520 58200 PSI	2.800	....
160 Grain Jacketed Bullet									
H414	42.5	2.81	DBLD	2.8	2511	45.5	2684 58185 PSI	2.800	.9782 .9557
RELODER19	46.2	3.26	DBLD	3.1	2551	48.5c	2675 56400 PSI	2.800	....
v-N160	45.8c	3.36	NA	3.1	2448	50.2c	2667 NA NA	2.795	....
H4350	43.0	3.12	DBLD	3.1	2493	46.0c	2665 58771 PSI	2.800	.9781 .9540
A-XMR-4350	41.4	3.06	DBLD	2.8	2314	46.0c	2630 49400 CUP	2.800	....
H4831	47.5c	3.44	NA	3.4	2529	49.5c	2627 55721 PSI	2.800	....
RELODER15	36.8	2.60	DBLD	2.5	2404	40.5	2620 59000 PSI	2.800	....
H380	40.5	2.80	DBLD	2.5	2424	43.0	2566 58302 PSI	2.800	.9776 .9420
H-VARGET	36.5	2.67	DBLD	2.5	2420	39.0	2562 58537 PSI	2.800	.9773 .9457
A-XMR-4064	36.0	2.72	DBLD	2.5	2246	40.0	2553 51700 CUP	2.800	....
RELODER12	36.5	2.52	DBLD	2.5	2326	40.0	2535 58900 PSI	2.800	....
BL-C(2)	37.0	2.39	DBLD	2.2	2392	39.5	2533 58302 PSI	2.800	.9772 .9516
H4895	35.0	2.55	DBLD	2.5	2322	38.5	2530 58654 PSI	2.800	.9757 .9666
v-N140	36.5	2.68	DBLD	2.5	2267	40.3	2470 NA NA	2.795	....
H335	34.0	2.19	DBLD	1.9	2309	36.5	2468 58537 PSI	2.800	.9738 .9518
ACCUR 2700	39.9	2.73	DBLD	2.5	2311	42.0	2458 45600 CUP	2.800	....
ACCUR 2520	34.2	2.33	DBLD	2.2	2160	38.0	2455 48500 CUP	2.800	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7mm-08 REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
160 Grain Jacketed Bullet (Continued)											
ACCUR 2460	33.3	2.18	DBLD	1.9	2158	37.0	2452	48500 CUP	2.800	....	....
A-XMR-3100	42.3	3.16	DBLD	3.1	2158	47.0c	2452	43400 CUP	2.800	....	....
v-N150	36.8	2.75	DBLD	2.5	2228	40.7	2451	NA NA	2.795	....	....
A-XMR-2495	32.4	2.42	DBLD	2.2	2156	36.0	2450	49900 CUP	2.800	....	....
A-XMR-2015	31.5	2.30	DBLD	2.2	2147	35.0	2440	48500 CUP	2.800	....	....
ACCUR 2230	32.9	2.16	DBLD	1.9	2143	36.5	2435	47300 CUP	2.800	....	....
162 Grain Jacketed Bullet											
H4350	45.0	3.26	DBLD	3.1	2562	48.0c	2714	58419 PSI	2.875	....	....
VEC TU5000	39.8	2.87	DBLD	2.8	2595	40.6	2648	49594 CIP	2.800	....	....
H-VARGET	38.5	2.81	DBLD	2.8	2497	41.0	2644	58419 PSI	2.875	.9775	.9465
H414	43.0	2.84	DBLD	2.8	2533	45.0	2632	52202 PSI	2.875	....	....
IMR4320	35.5	2.54	DBLD	2.5	2363	40.0	2625	51500 CUP	2.800	....	....
WIN 760	39.7	2.65	DBLD	2.5	2413	43.0	2605	58100 PSI	2.800	....	....
H4895	37.0	2.69	DBLD	2.5	2455	39.5	2600	58419 PSI	2.875	.9774	.9491
IMR4895	33.9	2.47	DBLD	2.2	2314	38.5	2595	52000 CUP	2.800	....	....
H380	42.5	2.94	DBLD	2.8	2517	44.0	2590	53727 PSI	2.875	....	....
IMR3031	34.0	2.59	DBLD	2.5	2349	38.0	2585	51100 CUP	2.800	....	....
H335	36.5	2.35	DBLD	2.2	2488	38.2	2585	58771 PSI	2.875	....	....
H450	44.0	2.87	DBLD	2.8	2332	49.0	2565	NA NA	2.600	....	....
H4831	47.5c	3.44	NA	3.4	2507	48.5c	2555	49738 PSI	2.875	....	....
IMR4064	38.4	2.86	DBLD	2.8	2487	39.0	2535	46500 CUP	2.800	....	....
BL-C(2)	35.0	2.26	DBLD	2.2	2245	39.0	2470	NA NA	2.600	....	....
168 Grain Jacketed Bullet											
H414	44.0	2.91	DBLD	2.8	2546	46.5	2670	58419 PSI	2.800	....	....
H4350	44.5	3.23	DBLD	3.1	2490	47.2c	2637	58654 PSI	2.800	....	....
A-XMR-4350	41.4	3.06	DBLD	2.8	2284	46.0c	2596	50400 CUP	2.800	....	....
IMR4320	35.3	2.53	DBLD	2.5	2310	40.0	2590	51800 CUP	2.800	....	....
H380	42.0	2.90	DBLD	2.8	2423	44.5	2565	58537 PSI	2.800	....	....
H4831	47.0c	3.41	NA	3.4	2450	49.0c	2545	52788 PSI	2.800	....	....
H-VARGET	37.5	2.74	DBLD	2.5	2399	40.0	2540	58771 PSI	2.800	.9772	.9546
IMR4895	33.8	2.46	DBLD	2.2	2282	38.0	2535	51400 CUP	2.800	....	....
v-N550	37.4	2.59	DBLD	2.5	2283	42.0	2534	NA NA	2.795	....	....
IMR3031	33.5	2.55	DBLD	2.5	2308	37.0	2515	50500 CUP	2.800	....	....
v-N160	42.9	3.15	DBLD	3.1	2295	47.0c	2507	NA NA	2.795	....	....
H4895	36.5	2.66	DBLD	2.5	2364	39.0	2504	58302 PSI	2.800	.9770	.9645
A-XMR-2495	34.2	2.56	DBLD	2.5	2202	38.0	2502	52000 CUP	2.800	....	....
BL-C(2)	38.0	2.45	DBLD	2.2	2353	40.5	2492	58067 PSI	2.800	.9771	.9426

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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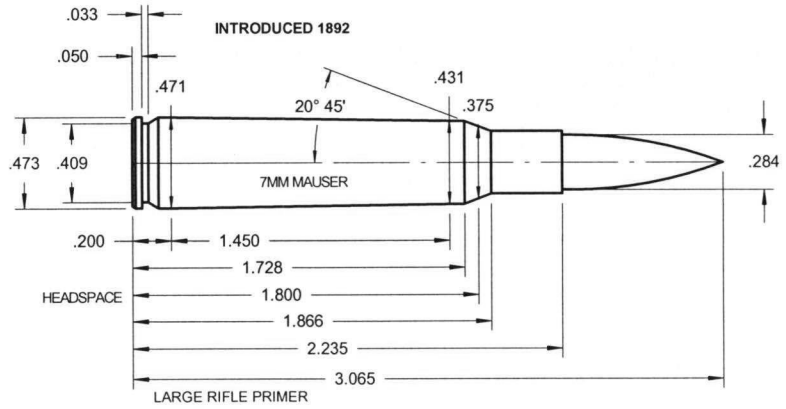
7mm-08 REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
					....STARTING LOADS....						
168 Grain Jacketed Bullet (Continued)											
IMR4064	37.8	2.82	DBLD	2.8	2451	38.0	2475	46000 CUP	2.800	....	....
ACCUR 2460	33.3	2.18	DBLD	1.9	2159	37.0	2453	50100 CUP	2.800	....	....
ACCUR 2700	39.9	2.73	DBLD	2.5	2157	42.0	2451	47300 CUP	2.800	....	....
A-XMR-4064	35.5	2.68	DBLD	2.5	2153	39.5	2447	48600 CUP	2.800	....	....
H450	42.2	2.75	DBLD	2.5	2223	47.0	2446	NA NA	2.600	....	....
H335	35.0	2.26	DBLD	2.2	2308	37.0	2421	58185 PSI	2.800	....	....
A-XMR-2015	31.5	2.30	DBLD	2.2	2127	35.0	2417	49300 CUP	2.800	....	....
ACCUR 2230	33.3	2.19	DBLD	1.9	2123	37.0	2413	49500 CUP	2.800	....	....
ACCUR 2520	33.3	2.27	DBLD	2.2	2116	37.0	2404	49400 CUP	2.800	....	....
168 Grain Lead Bullet											
ACC XMP5744	20.0	1.50	1.46	1.3	1757	27.0	2174	44500 CUP	2.735	....	....
175 Grain Jacketed Bullet											
H4831	47.0c	3.41	NA	3.4	2422	49.0c	2516	57950 PSI	2.800	....	....
WIN 760	39.2	2.61	DBLD	2.5	2330	42.6	2515	58300 PSI	2.800	....	....
A-XMR-4350	41.0	3.03	DBLD	2.8	2201	45.5c	2501	49400 CUP	2.795	....	....
H414	40.5	2.68	DBLD	2.5	2356	43.0	2495	58771 PSI	2.800	.9773	.9193
H4350	42.0	3.05	DBLD	2.8	2330	45.0	2491	58537 PSI	2.800	.9780	.9434
H380	40.0	2.76	DBLD	2.5	2280	42.7	2415	58537 PSI	2.800	.9789	.9672
ACCUR 2700	39.9	2.73	DBLD	2.5	2244	42.0	2387	47400 CUP	2.795	....	....
ACCUR 2230	33.3	2.19	DBLD	1.9	2088	37.0	2373	49600 CUP	2.795	....	....
A-XMR-4064	35.5	2.68	DBLD	2.5	2083	39.5	2368	47800 CUP	2.795	....	....
ACCUR 2460	33.3	2.18	DBLD	1.9	2082	37.0	2366	49800 CUP	2.795	....	....
ACCUR 2520	34.2	2.33	DBLD	2.2	2080	38.0	2364	51200 CUP	2.795	....	....
A-XMR-2495	34.2	2.56	DBLD	2.5	2072	38.0	2354	47900 CUP	2.795	....	....
H4895	35.0	2.55	DBLD	2.5	2202	37.5	2354	58302 PSI	2.800	.9736	.9568
ACCUR 8700	42.3	2.91	DBLD	2.8	2070	47.0	2352	42600 CUP	2.795	....	....
H-VARGET	35.0	2.56	DBLD	2.5	2193	37.5	2344	58067 PSI	2.800	.9738	.9488
A-XMR-2015	31.5	2.30	DBLD	2.2	2038	35.0	2316	47700 CUP	2.795	....	....
BL-C(2)	35.0	2.26	DBLD	2.2	2191	37.0	2298	58067 PSI	2.800	....	....
v-N160	39.4	2.89	DBLD	2.8	2099	43.1	2297	NA NA	2.795	....	....
H335	34.0	2.19	DBLD	1.9	2149	36.0	2276	58419 PSI	2.800	....	....
195 Grain Jacketed Bullet											
H4350	34.1	2.47	DBLD	2.2	1972	38.0	2169	NA NA	2.700	....	....
H414	34.1	2.25	DBLD	2.2	1961	38.0	2157	NA NA	2.700	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7x57 MAUSER



Useful case capacity 3.68 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
100 Grain Jacketed Bullet											
H414	50.0	3.31	NA	3.1	3086	54.0	3299	51443 PSI	2.900	.9834	.9538
H-VARGET	45.0	3.29	DBLD	3.1	3069	48.0	3250	50557 PSI	2.900	.9813	.9730
H380	50.0	3.45	NA	3.4	3077	52.5	3228	50446 PSI	2.900	....	....
H4895	44.0	3.20	DBLD	3.1	3088	46.0	3208	50335 PSI	2.900	....	....
BL-C(2)	46.0	2.97	DBLD	2.8	3056	48.5	3205	50889 PSI	2.900	....	....
H4350	51.0c	3.70	NA	3.4	2989	54.0c	3166	45678 PSI	2.900	....	....
H450	52.0	3.40	NA	3.1	2660	55.0	2940	38139 PSI	2.940	....	....
H4831	51.0c	3.70	NA	3.4	2688	54.0c	2886	37252 PSI	2.940	....	....
110 Grain Jacketed Bullet											
H414	50.0	3.31	NA	3.1	2901	53.5	3101	48893 PSI	2.980	.9813	.9496
H380	49.0	3.39	NA	3.1	2914	52.0	3085	50224 PSI	2.980	.9812	.9673
H-VARGET	41.0	3.00	DBLD	2.8	2801	45.5	3081	51000 PSI	2.980	.9790	.9742
H4895	43.0	3.13	DBLD	3.1	2879	46.0	3078	49891 PSI	2.980	.9781	.9583
H4350	51.0c	3.70	NA	3.4	2876	54.0c	3046	46454 PSI	2.980	....	....
120 Grain Jacketed Bullet											
RELODER19	45.5	3.22	DBLD	3.1	2601	54.0c	3030	48000 PSI	2.965	....	....
RELODER15	41.3	2.92	DBLD	2.8	2775	45.0	2995	48900 PSI	2.965	....	....
H-VARGET	41.0	3.00	DBLD	2.8	2786	44.0	2979	51000 PSI	3.000	.9779	.9678
H4350	48.0	3.48	NA	3.4	2781	51.0c	2945	50778 PSI	3.000	.9812	.9583
H414	48.0	3.17	DBLD	3.1	2774	51.0	2938	50557 PSI	3.000	.9812	.9394

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c = Compressed charge

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....												
120 Grain Jacketed Bullet (Continued)												
ACCUR 2700	45.2	3.09	DBLD	3.1	2658	50.0	2924	44800	CUP	2.900	....	....
H450	51.9	3.39	NA	3.4	2757	55.0	2919	47563	PSI	2.940	....	....
A-XMR-2495	42.1	3.15	DBLD	3.1	2810	44.0	2919	42300	CUP	2.900	....	....
RELODER12	39.5	2.73	DBLD	2.5	2682	43.0	2895	48900	PSI	2.965	....	....
A-XMR-4350	45.9	3.40	NA	3.4	2541	51.0c	2887	40400	CUP	2.900	....	....
v-N150	42.4	3.16	DBLD	3.1	2644	46.6	2881	NA	NA	3.012	....	....
v-N140	42.0	3.08	DBLD	3.1	2637	46.1	2874	NA	NA	3.012	....	....
H380	44.5	3.07	DBLD	3.1	2701	47.5	2860	51000	PSI	3.000	.9809	.9545
H4895	40.0	2.91	DBLD	2.8	2726	42.0	2859	50335	PSI	3.000	....	....
A-XMR-4064	39.1	2.95	DBLD	2.8	2498	43.5	2838	44400	CUP	2.900	....	....
v-N135	39.4	3.06	DBLD	2.8	2546	43.4	2825	NA	NA	3.012	....	....
H4831	50.0	3.62	NA	3.4	2648	52.5c	2777	45235	PSI	3.000	....	....
A-XMR-3100	45.9	3.43	NA	3.4	2263	51.0c	2572	34000	CUP	2.900	....	....
125 Grain Jacketed Bullet												
WIN 760	45.3	3.02	DBLD	2.8	2699	48.7	2885	43500	CUP	2.940	....	....
130 Grain Jacketed Bullet												
H4350	47.0	3.41	NA	3.4	2689	50.0	2848	51000	PSI	2.800	.9809	.9584
H-VARGET	39.0	2.85	DBLD	2.8	2619	42.0	2800	50667	PSI	2.800	.9781	.9597
H380	43.0	2.97	DBLD	2.8	2565	46.5	2769	51000	PSI	2.800	.9784	.9710
H4831	50.0	3.62	NA	3.4	2646	53.0c	2763	48783	PSI	2.940	....	....
IMR4831	44.0	3.23	DBLD	3.1	2452	50.0	2750	46000	CUP	2.965	....	....
IMR4350	41.8	3.07	DBLD	3.1	2440	47.0	2710	45500	CUP	2.965	....	....
H4895	38.0	2.77	DBLD	2.5	2530	41.0	2704	51000	PSI	2.800	.9778	.9592
IMR4064	37.0	2.75	DBLD	2.5	2432	41.0	2675	44900	CUP	2.965	....	....
IMR3031	33.8	2.58	DBLD	2.5	2377	38.0	2640	45500	CUP	2.965	....	....
IMR4895	32.6	2.37	DBLD	2.2	2287	36.5	2540	45300	CUP	2.965	....	....
IMR4198	26.0	2.06	DBLD	1.9	2150	29.0	2365	45100	CUP	2.965	....	....
IMR4227	20.6	1.58	DBLD	NA	1909	22.5	2080	44300	CUP	2.965	....	....
SR4759	20.7	2.05	DBLD	1.9	1832	23.5	2055	46000	CUP	2.965	....	....
139 Grain Jacketed Bullet												
RELODER19	47.4	3.35	NA	3.1	2627	51.8	2835	49000	PSI	3.015	....	....
RELODER22	52.2	3.64	NA	3.4	2737	53.0c	2790	45600	PSI	3.015	....	....
RELODER15	38.5	2.72	DBLD	2.5	2526	41.5	2700	48400	PSI	3.015	....	....
RELODER12	37.2	2.57	DBLD	2.5	2464	40.5	2660	48800	PSI	3.015	....	....
140 Grain Jacketed Bullet												
A-XMR-4350	47.0	3.48	NA	3.4	2628	51.0c	2836	43900	CUP	3.025	....	....
A-XMR-2495	39.2	2.93	DBLD	2.8	2567	42.0	2745	43400	CUP	3.025	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
140 Grain Jacketed Bullet (Continued)											
ACCUR 2700	44.9	3.08	DBLD	3.1	2614	47.5	2742	42800 CUP	3.025	....	....
H4831	47.0	3.41	NA	3.4	2592	49.5	2719	51000 PSI	3.000	....	....
H414	44.0	2.91	DBLD	2.8	2563	47.0	2715	51000 PSI	3.000	.9809	.9577
A-XMR-4064	37.8	2.85	DBLD	2.8	2361	42.0	2683	45200 CUP	3.025	....	....
H4350	43.0	3.12	DBLD	3.1	2485	46.5	2682	51000 PSI	3.000	.9784	.9636
H380	41.0	2.83	DBLD	2.8	2445	44.0	2614	51000 PSI	3.000	.9779	.9663
v-N150	39.8	2.97	DBLD	2.8	2384	43.6	2598	NA	NA 3.051	....	....
v-N140	38.2	2.80	DBLD	2.8	2336	42.5	2569	NA	NA 3.051	....	....
A-XMR-3100	45.9	3.43	NA	3.4	2254	51.0c	2561	34200 CUP	3.025	....	....
H4895	35.0	2.55	DBLD	2.5	2366	37.5	2530	50778 PSI	3.000	.9734	.9454
H-VARGET	35.0	2.56	DBLD	2.5	2353	37.7	2516	51000 PSI	3.000	.9752	.9565
145 Grain Jacketed Bullet											
VEC TU5000	40.1	2.89	DBLD	2.8	2434	44.0	2723	42816 CIP	3.060	.9716	.9122
RELODER22	44.7	3.12	DBLD	3.1	2520	48.8	2720	49000 PSI	3.040	....	....
RELODER19	43.5	3.07	DBLD	3.1	2483	47.3	2680	48800 PSI	3.040	....	....
IMR4350	41.4	3.04	DBLD	2.8	2363	47.0	2650	46000 CUP	3.065	....	....
IMR4831	42.2	3.10	DBLD	3.1	2341	48.0	2625	46000 CUP	3.065	....	....
IMR4064	35.7	2.66	DBLD	2.5	2301	40.0	2555	45300 CUP	3.065	....	....
RELODER15	35.6	2.52	DBLD	2.5	2385	38.5	2550	48500 PSI	3.040	....	....
IMR3031	33.4	2.55	DBLD	2.5	2256	38.0	2530	46000 CUP	3.065	....	....
RELODER12	34.0	2.35	DBLD	2.2	2335	37.0	2520	48800 PSI	3.040	....	....
IMR4895	30.8	2.24	DBLD	2.2	2207	35.0	2475	46000 CUP	3.065	....	....
IMR4320	32.3	2.31	DBLD	2.2	2150	36.0	2365	45100 CUP	3.065	....	....
IMR4198	25.6	2.03	DBLD	1.9	2016	29.0	2260	45800 CUP	3.065	....	....
IMR4227	20.5	1.58	DBLD	NA	1689	22.5	1840	44400 CUP	3.065	....	....
SR4759	20.6	2.05	DBLD	1.9	1669	23.0	1835	45100 CUP	3.065	....	....
145 Grain Lead Bullet											
ACC XMP5744	18.0	1.35	1.26	1.3	1661	27.0	2238	33300 CUP	2.955	....	....
150 Grain Jacketed Bullet											
A-XMR-4350	45.1	3.34	NA	3.1	2522	49.0	2722	44000 CUP	3.060	....	....
WIN 760	43.3	2.88	DBLD	2.8	2488	46.5	2660	43500 CUP	2.940	....	....
ACCUR 2700	43.1	2.95	DBLD	2.8	2480	46.0	2626	43200 CUP	3.060	....	....
A-XMR-3100	45.9	3.43	NA	3.4	2271	51.0c	2581	38200 CUP	3.060	....	....
A-XMR-2495	36.5	2.73	DBLD	2.5	2366	40.0	2578	44400 CUP	3.060	....	....
H4831	45.0	3.26	DBLD	3.1	2401	48.0	2542	51000 PSI	3.000	.9809	.9678
H414	42.0	2.78	DBLD	2.8	2391	44.5	2532	50335 PSI	3.000	....	....
A-XMR-4064	36.0	2.72	DBLD	2.5	2216	40.0	2519	42200 CUP	3.060	....	....

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c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
150 Grain Jacketed Bullet (Continued)											
H4350	41.0	2.97	DBLD	2.8	2350	44.0	2513	50446 PSI	3.000	.9780	.9483
H380	39.0	2.69	DBLD	2.5	2297	42.0	2455	51000 PSI	3.000	.9781	.9561
H4895	34.0	2.48	DBLD	2.2	2250	36.0	2383	51000 PSI	3.000	....	....
H-VARGET	34.0	2.49	DBLD	2.2	2240	36.0	2372	50557 PSI	3.000	....	....
160 Grain Jacketed Bullet											
RELODER22	46.5	3.24	DBLD	3.1	2516	50.0	2690	48300 PSI	3.040	....	....
RELODER19	48.3	3.41	NA	3.4	2640	49.0	2665	45500 PSI	3.040	....	....
A-XMR-4350	43.1	3.19	DBLD	3.1	2384	48.0	2623	45100 CUP	3.020	....	....
A-XMR-3100	45.9	3.43	NA	3.4	2238	51.0c	2543	39000 CUP	3.020	....	....
VEC TU5000	39.8	2.87	DBLD	2.8	2343	42.4	2543	41364 CIP	3.060	.9687	.9098
IMR4831	42.2	3.10	DBLD	2.8	2287	47.5	2540	45600 CUP	3.065	....	....
v-N160	45.1	3.31	NA	3.1	2330	49.4	2539	NA NA	3.051	....	....
IMR4350	39.8	2.92	DBLD	2.8	2238	45.0	2510	45800 CUP	3.065	....	....
VEC SP7	40.1	2.64	DBLD	2.5	2365	43.2	2497	45036 CIP	3.060	.9824	.9519
IMR4064	35.2	2.62	DBLD	2.5	2212	40.0	2480	46000 CUP	3.065	....	....
IMR3031	33.6	2.56	DBLD	2.5	2167	38.0	2430	45800 CUP	3.065	....	....
A-XMR-2495	33.4	2.50	DBLD	2.2	2158	38.0	2420	46000 CUP	3.020	....	....
H4831	43.0	3.12	DBLD	3.1	2258	46.0	2415	50667 PSI	3.000	.9777	.9684
v-N150	37.5	2.80	DBLD	2.5	2216	41.4	2415	NA NA	3.051	....	....
A-XMR-4064	35.1	2.65	DBLD	2.5	2117	39.0	2406	43600 CUP	3.020	....	....
H414	40.0	2.64	DBLD	2.5	2271	42.5	2405	50335 PSI	3.000	.9772	.9525
ACCUR 2700	40.9	2.80	DBLD	2.5	2255	43.0	2399	39700 CUP	3.020	....	....
H4350	40.0	2.90	DBLD	2.8	2265	42.5	2399	50335 PSI	3.000	.9772	.9703
WIN MAG RIFLE	41.8	3.00	DBLD	2.8	2194	45.2	2345	48500 PSI	3.060	....	....
IMR4895	30.9	2.25	DBLD	2.2	2074	35.0	2325	45800 CUP	3.065	....	....
H380	37.0	2.56	DBLD	2.5	2171	39.5	2299	51000 PSI	3.000	.9771	.9532
IMR4320	32.2	2.31	DBLD	2.2	2086	36.0	2295	45200 CUP	3.065	....	....
H-VARGET	33.0	2.41	DBLD	2.2	2136	35.0	2261	50889 PSI	3.000	.9719	.9463
H4895	33.0	2.40	DBLD	2.2	2161	34.5	2245	49559 PSI	3.000	....	....
IMR4198	25.7	2.03	DBLD	1.9	1940	28.5	2135	44900 CUP	3.065	....	....
IMR4227	19.8	1.52	1.46	1.3	1686	22.5	1890	46000 CUP	3.065	....	....
SR4759	19.9	1.98	DBLD	1.9	1671	22.5	1855	45700 CUP	3.065	....	....
168 Grain Jacketed Bullet											
H1000	49.0	3.49	NA	3.4	2346	52.0c	2485	51000 PSI	3.000	.9808	.9608
H-VARGET	34.5	2.52	DBLD	2.5	2227	37.5	2404	50446 PSI	3.000	.9746	.9299
H4831	43.0	3.12	DBLD	3.1	2238	46.0	2393	48672 PSI	3.000	.9776	.9539
H414	40.0	2.64	DBLD	2.5	2245	42.5	2378	49891 PSI	3.000	.9769	.9606

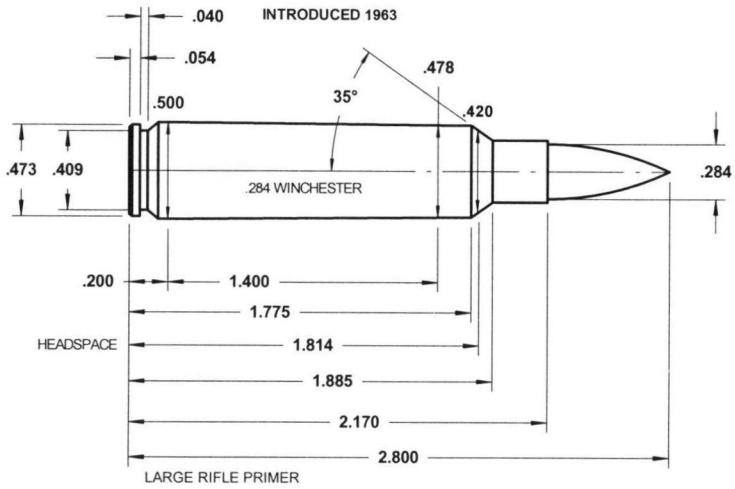
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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
168 Grain Jacketed Bullet (Continued)											
H4350	40.0	2.90	DBLD	2.8	2245	42.5	2378	48893 PSI	3.000	.9769	.9656
H380	37.0	2.56	DBLD	2.5	2145	39.5	2272	49337 PSI	3.000	.9771	.9447
H4895	33.0	2.40	DBLD	2.2	2128	34.5	2211	47230 PSI	3.000	----	----
168 Grain Lead Bullet											
VEC TU2000	20.1	1.53	1.46	NA	1647	21.6	1772	24557 CIP	3.060	----	----
175 Grain Jacketed Bullet											
VEC TU5000	39.8	2.87	DBLD	2.8	2303	42.4	2543	48200 CIP	3.060	.9626	.8819
A-XMR-4350	42.3	3.13	DBLD	3.1	2279	47.0	2507	45000 CUP	3.040	----	----
A-XMR-3100	45.0	3.37	NA	3.1	2149	50.0c	2442	38400 CUP	3.040	----	----
ACCUR 2700	39.1	2.68	DBLD	2.5	2203	43.0	2401	44500 CUP	3.040	----	----
WIN 760	40.0	2.67	DBLD	2.5	2202	44.0	2400	44500 CUP	3.060	----	----
v-N165	44.6	3.18	DBLD	3.1	2144	49.5	2359	NA NA	3.031	----	----
A-XMR-4064	35.1	2.65	DBLD	2.5	2060	39.0	2342	45400 CUP	3.040	----	----
v-N160	40.6	2.98	DBLD	2.8	2069	45.9	2320	NA NA	3.031	----	----
A-XMR-2495	33.9	2.54	DBLD	2.5	2073	38.0	2302	45400 CUP	3.040	----	----
H1000	42.0	2.99	DBLD	2.8	2115	44.5	2239	50446 PSI	3.025	----	----
H4831	37.0	2.68	DBLD	2.5	2058	40.0	2201	50667 PSI	3.025	.9776	.9668
H-VARGET	31.0	2.27	DBLD	2.2	1961	35.0	2178	50446 PSI	3.025	.9741	.9311
H4350	35.0	2.54	DBLD	2.5	2058	37.0	2159	48117 PSI	3.025	----	----
H414	35.0	2.31	DBLD	2.2	2020	37.0	2119	49337 PSI	3.025	----	----

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c = Compressed charge
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284 WINCHESTER



Useful case capacity 3.97 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
A-XMR-4350	51.8	3.83	NA	3.7	2942	56.5c	3175	53800	PSI	2.800
H4350	55.0c	3.99	NA	3.7	3050	57.0c	3169	NA	NA	2.800
H4895	45.0	3.28	DBLD	3.1	2980	48.0	3156	NA	NA	2.800
H414	54.0	3.57	NA	3.4	2993	56.0	3110	NA	NA	2.800
H4831	56.0c	4.06	NA	4.0	2946	59.0c	3090	NA	NA	2.800
H335	45.0	2.90	DBLD	2.8	2959	47.0	3074	NA	NA	2.800
H380	50.0	3.45	NA	3.4	2955	52.0	3070	NA	NA	2.800
BL-C(2)	45.0	2.90	DBLD	2.8	2945	47.0	3060	NA	NA	2.800
ACCUR 2700	49.0	3.35	NA	3.1	2962	50.5	3048	50800	PSI	2.800
A-XMR-3100	59.0c	4.41	NA	4.3	2975	59.0c	2975	45700	PSI	2.800
110 Grain Jacketed Bullet										
H4350	57.0c	4.13	NA	4.0	3169	57.0c	3169	47000	CUP	2.765
H335	51.0	3.29	DBLD	3.1	3159	51.0	3159	47000	CUP	2.765
120 Grain Jacketed Bullet										
RELODER19	55.6	3.93	NA	3.7	3025	60.5c	3265	53600	PSI	2.800
RELODER15	46.7	3.30	DBLD	3.1	2969	51.5	3235	54300	PSI	2.800
H4895	43.0	3.13	DBLD	3.1	2849	47.0	3104	NA	NA	2.800
H4350	53.0	3.84	NA	3.7	2946	56.0c	3090	NA	NA	2.800
H4831	54.0	3.91	NA	3.7	2813	59.0c	3036	NA	NA	2.800
H380	47.0	3.25	DBLD	3.1	2801	51.0	3023	NA	NA	2.800

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284 WINCHESTER (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
120 Grain Jacketed Bullet (Continued)									
A-XMR-4350	49.5	3.66	NA	3.4	2724	54.5c	2968	54300 PSI	2.800
A-XMR-3100	53.8c	4.03	NA	4.0	2698	59.0c	2940	54000 PSI	2.800
BL-C(2)	44.0	2.84	DBLD	2.8	2718	48.0	2934	NA NA	2.800
H335	43.0	2.77	DBLD	2.5	2682	47.0	2922	NA NA	2.800
ACCUR 2700	46.7	3.20	DBLD	3.1	2703	48.5	2808	51200 PSI	2.800
125 Grain Jacketed Bullet									
WIN 760	54.2	3.61	NA	3.4	3032	57.0	3180	50000 CUP	2.765
WIN 748	48.3	3.16	DBLD	3.1	2932	50.8	3075	50000 CUP	2.765
130 Grain Jacketed Bullet									
IMR4350	50.5	3.71	NA	3.7	2818	57.0c	3130	53600 CUP	2.800
IMR4831	55.4c	4.07	NA	4.0	2928	59.0c	3100	50600 CUP	2.800
IMR4064	44.0	3.28	DBLD	3.1	2752	50.0	3085	54000 CUP	2.800
IMR3031	42.2	3.22	DBLD	3.1	2725	48.0	3055	54000 CUP	2.800
H4350	52.0	3.77	NA	3.7	2888	55.0c	3030	NA NA	2.800
BL-C(2)	45.0	2.90	DBLD	2.8	2791	49.0	3013	45800 CUP	2.800
H4831	53.0	3.84	NA	3.7	2764	58.0c	3013	NA NA	2.800
H414	50.5	3.34	NA	3.1	2758	55.0	2976	NA NA	2.800
H380	45.0	3.11	DBLD	3.1	2753	49.0	2971	NA NA	2.800
H450	57.0	3.72	NA	3.7	2913	57.0	2913	46200 CUP	2.765
IMR4895	40.5	2.95	DBLD	2.8	2640	45.0	2905	52800 CUP	2.800
H4895	42.5	3.09	DBLD	2.8	2682	46.0	2894	NA NA	2.800
IMR4320	41.8	2.99	DBLD	2.8	2653	46.0	2890	52300 CUP	2.800
H335	43.0	2.77	DBLD	2.5	2638	47.0	2875	NA NA	2.800
IMR4198	34.5	2.73	DBLD	2.5	2547	38.0	2775	52400 CUP	2.800
IMR4227	27.3	2.10	DBLD	1.9	2258	30.0	2460	52300 CUP	2.800
SR4759	27.5	2.73	DBLD	2.5	2246	30.0	2425	51900 CUP	2.800
139 Grain Jacketed Bullet									
RELODER19	52.5	3.71	NA	3.7	2849	57.0c	3075	53500 PSI	2.800
RELODER22	58.5c	4.08	NA	4.0	3030	58.5c	3030	49000 PSI	2.800
RELODER15	43.2	3.05	DBLD	2.8	2705	48.0	2975	54700 PSI	2.800
A-XMR-4350	49.1	3.63	NA	3.4	2610	54.0c	2845	54200 PSI	2.800
A-XMR-3100	54.9c	4.10	NA	4.0	2652	59.0c	2835	53000 PSI	2.800
ACCUR 2700	46.3	3.17	DBLD	3.1	2604	47.0	2629	50000 PSI	2.800
140 Grain Jacketed Bullet									
H4350	51.0	3.70	NA	3.4	2792	54.0	2957	NA NA	2.800
H4831	53.0	3.84	NA	3.7	2711	58.0c	2954	NA NA	2.800
BL-C(2)	48.0	3.10	DBLD	2.8	2914	48.0	2914	47400 CUP	2.765

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL
140 Grain Jacketed Bullet (Continued)								
H450	57.0	3.72	NA	3.7	2894	57.0 2894	47400 CUP	2.765
H335	42.0	2.71	DBLD	2.5	2634	46.0 2869	NA NA	2.800
H380	44.0	3.04	DBLD	2.8	2646	48.0 2856	NA NA	2.800
H4895	41.5	3.02	DBLD	2.8	2637	45.0 2847	NA NA	2.800
145 Grain Jacketed Bullet								
RELODER19	51.7	3.65	NA	3.4	2776	55.0 2940	52400 PSI	2.795
RELODER22	55.0	3.83	NA	3.7	2900	55.0 2900	49200 PSI	2.795
RELODER15	41.8	2.95	DBLD	2.8	2570	46.7 2855	55100 PSI	2.795
150 Grain Jacketed Bullet								
RELODER19	50.7	3.58	NA	3.4	2724	55.0 2940	53500 PSI	2.800
H4831	53.0	3.84	NA	3.7	2707	57.0c 2893	NA NA	2.800
WIN 760	52.4	3.49	NA	3.4	2809	54.0 2890	49000 CUP	2.765
H4350	50.0	3.63	NA	3.4	2710	53.0 2869	NA NA	2.800
RELODER22	55.0	3.83	NA	3.7	2840	55.0 2840	46300 PSI	2.800
H414	49.0	3.24	DBLD	3.1	2625	53.0 2833	NA NA	2.800
WIN 748	47.0	3.08	DBLD	2.8	2692	48.5 2770	49000 CUP	2.765
A-XMR-4350	48.0	3.55	NA	3.4	2560	52.0 2764	53400 PSI	2.800
A-XMR-3100	53.6c	4.01	NA	4.0	2601	57.0c 2754	52400 PSI	2.800
ACCUR 2700	44.1	3.02	DBLD	2.8	2486	45.0 2534	50300 PSI	2.800
160 Grain Jacketed Bullet								
RELODER19	48.7	3.44	NA	3.4	2623	54.0 2885	54600 PSI	2.800
H4831	57.0c	4.13	NA	4.0	2803	57.0c 2803	47000 CUP	2.765
H414	50.0	3.31	NA	3.1	2794	50.0 2794	47000 CUP	2.765
H450	56.0	3.66	NA	3.4	2793	56.0 2793	45400 CUP	2.765
IMR4064	41.6	3.10	DBLD	2.8	2461	47.0 2760	53700 CUP	2.800
BL-C(2)	46.5	3.00	DBLD	2.8	2754	46.5 2754	47000 CUP	2.765
H4350	52.0	3.77	NA	3.7	2754	52.0 2754	47000 CUP	2.765
IMR4350	51.8	3.81	NA	3.7	2720	52.0 2720	47700 CUP	2.800
H335	44.0	2.84	DBLD	2.8	2686	44.0 2686	47000 CUP	2.765
RELODER22	52.0	3.62	NA	3.4	2680	52.0 2680	42700 PSI	2.800
H380	46.0	3.18	DBLD	3.1	2675	46.0 2675	47000 CUP	2.765
IMR3031	40.6	3.09	DBLD	2.8	2418	45.0 2660	52700 CUP	2.800
H4895	42.0	3.06	DBLD	2.8	2641	42.0 2641	47000 CUP	2.765
IMR4320	38.4	2.75	DBLD	2.5	2349	43.5 2635	53900 CUP	2.800
IMR4831	52.0	3.82	NA	3.7	2635	52.0 2635	43800 CUP	2.800
IMR4895	36.4	2.65	DBLD	2.5	2326	41.0 2584	53500 CUP	2.800
H870	63.0c	4.32	NA	4.3	2560	63.0c 2560	47000 CUP	2.765

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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....STARTING LOADS....

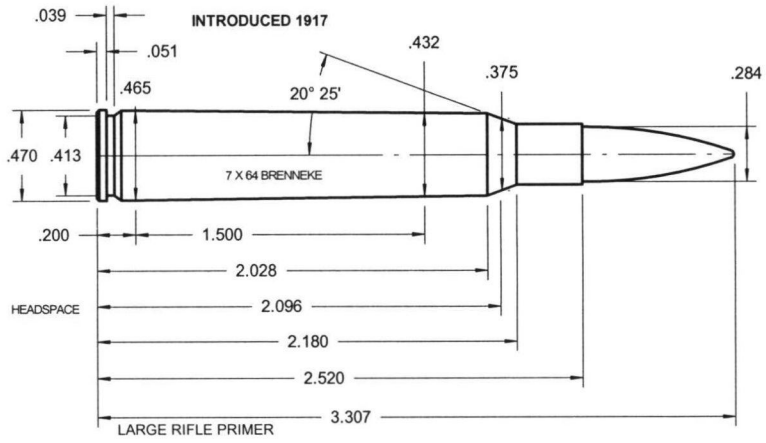
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
160 Grain Jacketed Bullet (Continued)										
IMR4198	31.2	2.47	DBLD	2.2	2239	34.5	2440	52500	CUP	2.800
IMR4227	25.5	1.96	DBLD	1.9	1992	28.0	2170	52200	CUP	2.800
SR4759	24.4	2.43	DBLD	2.2	1895	27.5	2105	53500	CUP	2.800
162 Grain Jacketed Bullet										
H4831	51.5	3.73	NA	3.7	2548	57.0c	2803	NA	NA	2.905
H414	46.0	3.04	DBLD	2.8	2588	50.0	2794	NA	NA	2.905
BL-C(2)	43.0	2.77	DBLD	2.5	2552	46.5	2754	47000	CUP	2.905
H4350	49.0	3.55	NA	3.4	2601	52.0	2754	NA	NA	2.905
H335	41.0	2.64	DBLD	2.5	2512	44.0	2686	NA	NA	2.905
H380	41.5	2.87	DBLD	2.8	2432	46.0	2675	NA	NA	2.905
H4895	38.5	2.80	DBLD	2.5	2447	42.0	2641	NA	NA	2.905
H870	55.4	3.80	NA	3.7	2283	63.0c	2560	NA	NA	2.905
168 Grain Jacketed Bullet										
H4350	48.0	3.48	NA	3.4	2542	51.0	2692	NA	NA	2.800
H4831	50.0	3.62	NA	3.4	2516	54.0	2690	NA	NA	2.800
H414	43.0	2.84	DBLD	2.8	2334	47.0	2543	NA	NA	2.800
175 Grain Jacketed Bullet										
H450	54.5	3.56	NA	3.4	2679	54.5	2679	46800	CUP	2.765
H4831	49.5	3.59	NA	3.4	2436	54.0	2630	NA	NA	2.905
H4350	47.0	3.41	NA	3.4	2452	50.0	2597	NA	NA	2.905
H380	40.5	2.80	DBLD	2.5	2317	45.0	2549	NA	NA	2.905
WIN 760	45.9	3.05	DBLD	2.8	2358	49.6	2545	53300	PSI	2.900
H870	55.4	3.80	NA	3.7	2254	63.0c	2528	NA	NA	2.905
H4895	37.0	2.69	DBLD	2.5	2357	40.0	2520	NA	NA	2.905
H414	43.0	2.84	DBLD	2.8	2300	47.0	2506	NA	NA	2.905
BL-C(2)	36.0	2.32	DBLD	2.2	2277	39.0	2457	47400	CUP	2.905
H335	35.0	2.26	DBLD	2.2	2232	38.0	2409	NA	NA	2.905
195 Grain Jacketed Bullet										
H4831	47.0	3.41	NA	3.4	2280	50.0	2414	NA	NA	2.905
H4350	43.0	3.12	DBLD	3.1	2226	46.0	2380	NA	NA	2.905
H414	43.0	2.84	DBLD	2.8	2242	45.0	2330	NA	NA	2.905
H870	59.0c	4.05	NA	4.0	2254	61.0c	2320	NA	NA	2.905

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7x64 BRENNEKE

These are reduced 280 Remington loads.



Useful case capacity 4.36 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
79 Grain Jacketed Bullet										
v-N120	41.7	3.24	DBLD	3.1	3445	41.7	3445	NA	NA	2.969
100 Grain Jacketed Bullet										
H-VARGET	45.6	3.33	NA	3.1	3242	48.7	3433	48300	CUP	3.180
H4895	44.6	3.25	DBLD	3.1	3197	48.0	3418	49000	CUP	3.180
BL-C(2)	46.5	3.00	DBLD	2.8	3159	50.3	3409	48300	CUP	3.180
H414	51.3	3.39	NA	3.1	3206	54.6	3395	47100	CUP	3.180
H4350	53.2	3.86	NA	3.7	3161	57.5	3379	49200	CUP	3.180
H380	49.4	3.41	NA	3.4	3180	52.7	3368	47800	CUP	3.180
A-XMR-4350	50.4	3.73	NA	3.7	2918	56.0	3316	55800	PSI	3.150
H4831	56.0	4.06	NA	4.0	3084	59.8	3266	46000	CUP	3.180
ACCUR 2700	50.5	3.46	NA	3.4	3057	53.2	3252	53100	PSI	3.150
H450	55.1	3.60	NA	3.4	3111	57.9	3218	47000	CUP	3.150
115 Grain Jacketed Bullet										
H4350	51.3	3.72	NA	3.7	2996	55.6	3234	48100	CUP	3.180
H414	49.4	3.27	DBLD	3.1	2986	53.2	3192	47400	CUP	3.180
H4831	55.1	3.99	NA	3.7	3013	58.9	3190	47300	CUP	3.180
H4895	43.7	3.18	DBLD	3.1	2998	46.5	3175	48300	CUP	3.180
H-VARGET	43.7	3.19	DBLD	3.1	2993	46.5	3170	47700	CUP	3.180
BL-C(2)	42.7	2.76	DBLD	2.5	2888	46.5	3118	48400	CUP	3.180
H380	45.6	3.15	DBLD	3.1	2863	49.4	3090	48600	CUP	3.180

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7x64 BRENNEKE (Continued)

These are reduced 280 Remington loads.

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
120 Grain Jacketed Bullet									
v-N160	59.9c	4.40	NA	4.3	3232	59.9c	3232	NA NA	3.260
v-N140	51.1	3.75	NA	3.7	3182	51.1	3182	NA NA	3.260
WIN 760	49.1	3.27	DBLD	3.1	2895	53.5	3125	57500 PSI	3.330
RELODER19	50.5	3.57	NA	3.4	2886	55.1	3115	57600 PSI	3.310
A-XMR-4350	48.7	3.61	NA	3.4	2739	54.1	3112	57700 PSI	3.200
H450	53.2	3.47	NA	3.4	2958	57.0	3090	47000 CUP	3.150
RELODER15	42.1	2.97	DBLD	2.8	2840	45.6	3065	57200 PSI	3.310
WIN MAG RIFLE	57.4	4.12	NA	4.0	3045	57.4	3045	50100 PSI	3.330
A-XMR-3100	54.1	4.05	NA	4.0	2844	57.0	3025	53300 PSI	3.200
ACCUR 2700	47.4	3.25	DBLD	3.1	2821	49.9	3001	57000 PSI	3.200
RELODER12	40.8	2.82	DBLD	2.8	2739	44.7	2985	48249 CUP	3.310
120 Grain Barnes X Bullet									
H4350	49.4	3.58	NA	3.4	2913	53.2	3114	48400 CUP	3.200
H4831	55.1	3.99	NA	3.7	2939	58.9	3112	48600 CUP	3.200
H414	48.4	3.20	DBLD	3.1	2914	51.8	3085	48100 CUP	3.200
H-VARGET	41.8	3.06	DBLD	2.8	2836	44.8	3032	47600 CUP	3.200
H4895	41.8	3.04	DBLD	2.8	2852	44.6	3020	48300 CUP	3.200
H380	44.6	3.09	DBLD	2.8	2735	48.4	2952	48700 CUP	3.200
BL-C(2)	39.9	2.57	DBLD	2.5	2643	44.2	2908	48000 CUP	3.200
123 Grain Jacketed Bullet									
v-N140	50.9	3.73	NA	3.7	3117	50.9	3117	NA NA	3.165
v-N160	59.4	4.36	NA	4.3	3068	59.4	3068	NA NA	3.165
125 Grain Jacketed Bullet									
IMR4831	50.2	3.69	NA	3.4	2778	57.0	3115	50000 CUP	3.250
IMR4064	42.1	3.13	DBLD	3.1	2751	47.5	3055	49700 CUP	3.250
IMR4350	48.6	3.57	NA	3.4	2804	53.7	3055	48600 CUP	3.250
IMR3031	40.2	3.06	DBLD	2.8	2705	44.6	2975	48900 CUP	3.250
IMR4320	39.0	2.79	DBLD	2.5	2568	44.2	2880	49900 CUP	3.250
130 Grain Jacketed Bullet									
H450	52.2	3.41	NA	3.4	2910	56.0	3046	49000 CUP	3.150
H1000	57.0	4.06	NA	4.0	2788	59.8	2982	48400 CUP	3.150
130 Grain Barnes X Bullet									
H4831	53.2	3.86	NA	3.7	2861	56.0	3001	48900 CUP	3.230
H4350	47.5	3.44	NA	3.4	2775	50.5	2939	48000 CUP	3.230
H-VARGET	39.9	2.92	DBLD	2.8	2678	43.2	2890	48000 CUP	3.230
H414	44.6	2.95	DBLD	2.8	2699	48.0	2885	48100 CUP	3.230
H4895	39.9	2.90	DBLD	2.8	2695	43.0	2881	48600 CUP	3.230

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

7x64 BRENNEKE (Continued)

These are reduced 280 Remington loads.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
130 Grain Barnes X Bullet (Continued)									
H380	43.7	3.02	DBLD	2.8	2621	47.0	2802	48200 CUP	3.230
139 Grain Jacketed Bullet									
RELODER22	51.9	3.62	NA	3.4	2779	56.5	3000	57500 PSI	3.320
RELODER19	49.3	3.48	NA	3.4	2726	54.1	2970	58000 PSI	3.320
v-N140	48.6	3.56	NA	3.4	2887	48.6	2887	NA NA	3.307
RELODER15	40.4	2.85	DBLD	2.8	2650	44.2	2860	57700 PSI	3.320
VEC TU5000	47.8	3.44	NA	3.4	2641	49.4	2772	39129 CIP	3.320
140 Grain Jacketed Bullet									
IMR4831	46.3	3.40	NA	3.1	2634	53.7	3010	51000 CUP	3.230
IMR4350	43.6	3.20	DBLD	3.1	2604	50.8	2975	51300 CUP	3.230
H450	51.3	3.35	NA	3.1	2756	54.1	2949	50000 CUP	3.150
H4831	51.3	3.72	NA	3.7	2711	55.6	2927	48500 CUP	3.230
H4350	47.5	3.44	NA	3.4	2730	50.8	2918	48500 CUP	3.230
IMR4064	38.6	2.88	DBLD	2.8	2541	44.6	2905	50900 CUP	3.230
H1000	56.0	4.00	NA	3.7	2698	58.9	2890	49000 CUP	3.150
H414	44.6	2.95	DBLD	2.8	2657	48.4	2867	47900 CUP	3.230
IMR3031	35.8	2.73	DBLD	2.5	2479	42.3	2860	51900 CUP	3.230
H-VARGET	39.9	2.92	DBLD	2.8	2630	43.2	2838	48100 CUP	3.230
H4895	39.9	2.90	DBLD	2.8	2647	42.9	2830	48400 CUP	3.230
IMR4895	35.2	2.57	DBLD	2.5	2431	41.3	2805	51600 CUP	3.230
IMR4320	34.6	2.47	DBLD	2.2	2410	40.8	2780	52000 CUP	3.230
140 Grain Barnes X Bullet									
A-XMR-3100	48.7	3.65	NA	3.4	2498	54.1	2839	56800 PSI	3.310
A-XMR-4350	43.6	3.23	DBLD	3.1	2443	48.4	2776	55900 PSI	3.310
ACCUR 2700	43.8	3.00	DBLD	2.8	2547	46.1	2710	55300 PSI	3.310
145 Grain Jacketed Bullet									
A-XMR-3100	50.4	3.77	NA	3.7	2580	56.0	2932	59000 PSI	3.250
WIN MAG RIFLE	56.6	4.07	NA	4.0	2902	57.4	2930	53500 PSI	3.150
RELODER22	48.4	3.38	NA	3.1	2630	53.2	2865	58000 PSI	3.320
A-XMR-4350	45.3	3.35	NA	3.1	2519	50.3	2862	59800 PSI	3.250
RELODER19	46.0	3.25	DBLD	3.1	2584	50.3	2815	57800 PSI	3.320
VEC TU5000	47.1	3.39	NA	3.1	2641	48.6	2779	43686 CIP	3.320
H4831	45.6	3.31	NA	3.1	2503	50.3	2727	50000 CUP	3.160
H4350	42.7	3.10	DBLD	2.8	2514	46.4	2714	49900 CUP	3.160
ACCUR 2700	43.3	2.97	DBLD	2.8	2546	45.6	2709	57000 PSI	3.250
H-VARGET	37.0	2.71	DBLD	2.5	2468	40.8	2690	48000 CUP	3.160
150 Grain Jacketed Bullet									
IMR4831	47.7	3.50	NA	3.4	2612	54.1	2930	50000 CUP	3.325

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c = Compressed charge

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7x64 BRENNEKE (Continued)

These are reduced 280 Remington loads.

	....STARTING LOADS....									
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
150 Grain Jacketed Bullet (Continued)										
IMR4350	46.0	3.38	NA	3.1	2582	52.2	2895	50000	CUP	3.325
H450	48.4	3.16	DBLD	3.1	2644	51.3	2829	50000	CUP	3.150
IMR4064	40.1	2.99	DBLD	2.8	2506	45.6	2810	50000	CUP	3.325
H1000	53.2	3.79	NA	3.7	2647	57.0	2797	49300	CUP	3.300
IMR3031	39.0	2.97	DBLD	2.8	2495	43.2	2745	48800	CUP	3.325
H4831	47.5	3.44	NA	3.4	2534	51.0	2709	49500	CUP	3.300
H4350	43.7	3.17	DBLD	3.1	2526	47.2	2700	49300	CUP	3.300
154 Grain Jacketed Bullet										
IMR4831	43.7	3.22	DBLD	3.1	2496	51.3	2880	51600	CUP	3.320
IMR4350	41.7	3.07	DBLD	2.8	2452	48.9	2830	51600	CUP	3.320
A-XMR-4350	46.2	3.42	NA	3.4	2486	51.3	2825	59600	PSI	3.330
A-XMR-3100	49.6	3.71	NA	3.7	2457	55.1	2792	54500	PSI	3.330
IMR4064	36.6	2.73	DBLD	2.5	2384	42.7	2725	51400	CUP	3.320
ACCUR 2700	44.3	3.03	DBLD	2.8	2555	46.5	2718	60000	PSI	3.330
IMR3031	35.2	2.68	DBLD	2.5	2366	40.8	2705	51100	CUP	3.320
IMR4895	34.9	2.54	DBLD	2.5	2326	40.8	2685	51500	CUP	3.320
IMR4320	34.8	2.49	DBLD	2.2	2327	40.4	2660	51100	CUP	3.320
155 Grain Jacketed Bullet										
v-N160	58.0	4.26	NA	4.0	2887	58.0	2887	NA	NA	3.299
160 Grain Jacketed Bullet										
v-N160	57.3	4.21	NA	4.0	2904	57.3	2904	NA	NA	3.307
RELODER22	48.2	3.36	NA	3.1	2564	52.9	2795	58000	PSI	3.325
WIN MAG RIFLE	51.0	3.67	NA	3.4	2614	54.9	2795	56800	PSI	3.150
A-XMR-3100	49.2	3.68	NA	3.4	2442	54.6	2775	56100	PSI	3.300
RELODER19	46.1	3.25	DBLD	3.1	2524	50.7	2750	58100	PSI	3.325
A-XMR-4350	44.5	3.29	DBLD	3.1	2413	49.4	2742	58200	PSI	3.300
H450	49.4	3.23	DBLD	3.1	2615	51.3	2720	49000	CUP	3.150
H1000	54.1	3.86	NA	3.7	2517	57.9	2714	47500	CUP	3.240
VEC TU5000	45.5	3.28	DBLD	3.1	2507	47.8	2667	44978	CIP	3.150
ACCUR 2700	43.8	3.00	DBLD	2.8	2503	46.1	2663	60000	PSI	3.300
H4831	48.4	3.51	NA	3.4	2464	52.2	2660	49500	CUP	3.240
162 Grain A-MAX										
H1000	53.2	3.79	NA	3.7	2535	57.0	2711	47200	CUP	3.330
H414	40.8	2.70	DBLD	2.5	2400	45.1	2669	49900	CUP	3.330
H4831	48.4	3.51	NA	3.4	2517	51.8	2644	49300	CUP	3.330
H4350	43.7	3.17	DBLD	3.1	2468	47.0	2614	49900	CUP	3.330
H-VARGET	37.0	2.71	DBLD	2.5	2443	39.9	2573	49500	CUP	3.330

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c = Compressed charge

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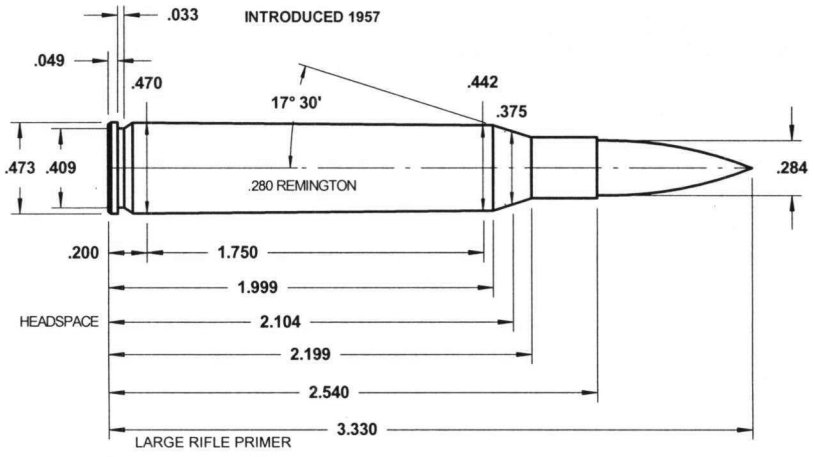
7x64 BRENNEKE (Continued)

These are reduced 280 Remington loads.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
....STARTING LOADS....									
162 Grain A-MAX (Continued)									
H4895	36.1	2.63	DBLD	2.5	2396	39.4	2567	50000 CUP	3.330
165 Grain Jacketed Bullet									
IMR4831	46.4	3.41	NA	3.4	2475	52.7	2775	50000 CUP	3.325
IMR4350	45.1	3.31	NA	3.1	2476	50.8	2750	49600 CUP	3.325
IMR4064	39.8	2.97	DBLD	2.8	2400	44.2	2640	48800 CUP	3.325
IMR3031	37.4	2.85	DBLD	2.8	2354	42.3	2615	49700 CUP	3.325
IMR4320	36.9	2.64	DBLD	2.5	2274	41.8	2550	49900 CUP	3.325
168 Grain Jacketed Bullet									
A-XMR-3100	48.7	3.65	NA	3.4	2396	54.1	2723	56300 PSI	3.300
H1000	53.2	3.79	NA	3.7	2506	57.0	2700	49300 CUP	3.330
A-XMR-4350	44.1	3.26	DBLD	3.1	2350	48.9	2670	57400 PSI	3.300
H4831	48.4	3.51	NA	3.4	2462	51.8	2605	49200 CUP	3.330
H870	54.1	3.71	NA	3.7	2415	57.9	2588	46500 CUP	3.150
H4350	43.7	3.17	DBLD	3.1	2422	47.5	2586	49400 CUP	3.330
ACCUR 2700	43.3	2.97	DBLD	2.8	2422	45.6	2577	55100 PSI	3.300
H-VARGET	38.0	2.78	DBLD	2.5	2424	40.1	2523	49900 CUP	3.330
168 Grain Lead Bullet									
VEC TU2000	20.1	1.53	1.46	1.3	1581	23.9	1818	27053 CIP	3.150
170 Grain Jacketed Bullet									
v-N160	56.5	4.15	NA	4.0	2822	56.5	2822	NA NA	3.307
172 Grain Jacketed Bullet									
VEC TU7000	50.2	3.54	NA	3.4	2428	51.7	2520	42177 CIP	3.260
VEC TU5000	44.8	3.23	DBLD	3.1	2408	47.1	2503	42786 CIP	3.260
175 Grain Jacketed Bullet									
v-N160	56.8	4.17	NA	4.0	2756	56.8	2756	NA NA	3.260
A-XMR-3100	48.7	3.65	NA	3.4	2359	54.1	2681	58900 PSI	3.300
IMR4831	41.0	3.01	DBLD	2.8	2297	48.4	2650	52000 CUP	3.310
IMR4350	39.4	2.90	DBLD	2.8	2275	46.5	2625	52000 CUP	3.310
VEC TU7000	52.5	3.70	NA	3.4	2612	52.5	2612	45863 CIP	3.260
VEC TU5000	48.6	3.50	NA	3.4	2598	48.6	2598	46037 CIP	3.260
A-XMR-4350	44.1	3.26	DBLD	3.1	2273	48.9	2583	55300 PSI	3.300
H1000	51.3	3.66	NA	3.4	2502	54.1	2583	49600 CUP	3.300
H870	54.1	3.71	NA	3.7	2403	57.9	2538	48000 CUP	3.150
IMR4064	35.0	2.61	DBLD	2.5	2197	41.3	2535	52000 CUP	3.310

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 12-18-2002 Lee Precision Inc. Hartford, Wi. 53027

7mm EXPRESS (280 Remington)



Useful case capacity 4.39 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
100 Grain Jacketed Bullet											
H-VARGET	48.0	3.51	NA	3.4	3242	51.3	3433	57960 PSI	3.180	.9827	.9613
H4895	47.0	3.42	NA	3.4	3197	50.5	3418	58800 PSI	3.180	.9812	.9621
BL-C(2)	49.0	3.16	DBLD	3.1	3159	53.0	3409	57960 PSI	3.180	.9812	.9639
H414	54.0	3.57	NA	3.4	3206	57.5	3395	56520 PSI	3.180	.9836	.9684
H4350	56.0	4.06	NA	4.0	3161	60.5	3379	59040 PSI	3.180	.9853	.9624
H380	52.0	3.59	NA	3.4	3180	55.5	3368	57360 PSI	3.180	.9838	.9650
A-XMR-4350	53.1	3.93	NA	3.7	2918	59.0	3316	55800 PSI	3.150	....	....
H4831	59.0	4.28	NA	4.0	3084	63.0c	3266	55200 PSI	3.180	....	....
ACCUR 2700	53.2	3.64	NA	3.4	3057	56.0	3252	53100 PSI	3.150	....	....
H450	58.0	3.79	NA	3.7	3111	61.0	3218	56400 PSI	3.150	....	....
A-XMR-3100	54.0	4.04	NA	4.0	2665	60.0c	3028	44900 PSI	3.150	....	....
115 Grain Jacketed Bullet											
H4350	54.0	3.92	NA	3.7	2996	58.5	3234	57720 PSI	3.180	.9832	.9608
H414	52.0	3.44	NA	3.4	2986	56.0	3192	56880 PSI	3.180	.9836	.9602
H4831	58.0	4.20	NA	4.0	3013	62.0c	3190	56760 PSI	3.180	....	....
H4895	46.0	3.35	NA	3.1	2998	49.0	3175	57960 PSI	3.180	.9809	.9590
H-VARGET	46.0	3.36	NA	3.1	2993	49.0	3170	57240 PSI	3.180	.9812	.9697
BL-C(2)	45.0	2.90	DBLD	2.8	2888	49.0	3118	58080 PSI	3.180	.9812	.9669
H380	48.0	3.32	NA	3.1	2863	52.0	3090	58320 PSI	3.180	.9809	.9653
120 Grain Jacketed Bullet											
WIN 760	51.7	3.44	NA	3.4	2895	56.3	3125	57500 PSI	3.330	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7mm EXPRESS (280 Remington) (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Velocity	1 Grain Factor Pressr
					....STARTING LOADS....						
120 Grain Jacketed Bullet (Continued)											
RELODER19	53.2	3.75	NA	3.7	2886	58.0	3115	57600 PSI	3.310	....	....
A-XMR-4350	51.3	3.80	NA	3.7	2739	57.0	3112	57700 PSI	3.200	....	....
H450	56.0	3.66	NA	3.4	2958	60.0	3090	56400 PSI	3.150	.9892	.9780
RELODER15	44.3	3.13	DBLD	3.1	2840	48.0	3065	57200 PSI	3.310	....	....
WIN MAG RIFLE	60.4	4.34	NA	4.3	3045	60.4	3045	50100 PSI	3.330	....	....
A-XMR-3100	57.0	4.26	NA	4.0	2844	60.0c	3025	53300 PSI	3.200	....	....
ACCUR 2700	49.9	3.42	NA	3.4	2821	52.5	3001	57000 PSI	3.200	....	....
RELODER12	43.0	2.97	DBLD	2.8	2739	47.1	2985	57900 CUP	3.310	....	....
H1000	60.0	4.28	NA	4.0	2749	63.0c	2894	55800 PSI	3.150	....	....
H870	63.0	4.32	NA	4.3	2690	65.0c	2744	55200 PSI	3.150	....	....
120 Grain Barnes X Bullet											
H4350	52.0	3.77	NA	3.7	2913	56.0	3114	58080 PSI	3.200	.9834	.9582
H4831	58.0	4.20	NA	4.0	2939	62.0c	3112	58320 PSI	3.200	....	....
H414	51.0	3.37	NA	3.1	2914	54.5	3085	57720 PSI	3.200	.9838	.9646
H-VARGET	44.0	3.22	DBLD	3.1	2836	47.2	3032	57120 PSI	3.200	.9794	.9595
H4895	44.0	3.20	DBLD	3.1	2852	47.0	3020	57960 PSI	3.200	.9812	.9701
H380	47.0	3.25	DBLD	3.1	2735	51.0	2952	58440 PSI	3.200	.9811	.9585
BL-C(2)	42.0	2.71	DBLD	2.5	2643	46.5	2908	57600 PSI	3.200	.9791	.9554
125 Grain Jacketed Bullet											
IMR4831	52.8	3.88	NA	3.7	2778	60.0c	3115	50000 CUP	3.250	....	....
IMR4064	44.3	3.30	DBLD	3.1	2751	50.0	3055	49700 CUP	3.250	....	....
IMR4350	51.2	3.76	NA	3.7	2804	56.5	3055	48600 CUP	3.250	....	....
IMR3031	42.3	3.22	DBLD	3.1	2705	47.0	2975	48900 CUP	3.250	....	....
IMR4320	41.0	2.94	DBLD	2.8	2568	46.5	2880	49900 CUP	3.250	....	....
IMR4895	39.4	2.87	DBLD	2.8	2585	44.0	2845	49100 CUP	3.250	....	....
IMR4198	31.7	2.51	DBLD	2.5	2390	36.0	2680	50000 CUP	3.250	....	....
SR4759	26.6	2.64	DBLD	2.5	2201	30.0	2445	49700 CUP	3.250	....	....
IMR4227	25.9	1.99	DBLD	1.9	2179	28.5	2375	48400 CUP	3.250	....	....
130 Grain Jacketed Bullet											
H450	55.0	3.59	NA	3.4	2910	59.0	3046	58800 PSI	3.150	.9886	.9735
H1000	60.0	4.28	NA	4.0	2788	63.0c	2982	58080 PSI	3.150	....	....
H870	63.0	4.32	NA	4.3	2678	65.0c	2709	56400 PSI	3.150	....	....
130 Grain Barnes X Bullet											
H4831	56.0	4.06	NA	4.0	2861	59.0	3001	58680 PSI	3.230	....	....
H4350	50.0	3.63	NA	3.4	2775	53.2	2939	57600 PSI	3.230	.9824	.9669
H-VARGET	42.0	3.07	DBLD	2.8	2678	45.5	2890	57600 PSI	3.230	.9784	.9632
H414	47.0	3.11	DBLD	3.1	2699	50.5	2885	57720 PSI	3.230	.9813	.9607
H4895	42.0	3.06	DBLD	2.8	2695	45.3	2881	58320 PSI	3.230	.9799	.9595

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

7mm EXPRESS (280 Remington) (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
130 Grain Barnes X Bullet (Continued)											
H380	46.0	3.18	DBLD	3.1	2621	49.5	2802	57840 PSI	3.230	.9812	.9562
BL-C(2)	40.0	2.58	DBLD	2.5	2563	43.0	2741	57960 PSI	3.230	.9776	.9809
139 Grain Jacketed Bullet											
RELODER22	54.6	3.81	NA	3.7	2779	59.5	3000	57500 PSI	3.320	....	....
RELODER19	51.9	3.66	NA	3.4	2726	57.0	2970	58000 PSI	3.320	....	....
RELODER15	42.6	3.00	DBLD	2.8	2650	46.5	2860	57700 PSI	3.320	....	....
RELODER12	33.9	2.34	DBLD	2.2	2168	44.0	2700	57100 CUP	3.320	....	....
140 Grain Jacketed Bullet											
IMR4831	48.7	3.58	NA	3.4	2634	56.5	3010	51000 CUP	3.230	....	....
IMR4350	45.9	3.37	NA	3.1	2604	53.5	2975	51300 CUP	3.230	....	....
H450	54.0	3.53	NA	3.4	2756	57.0	2949	60000 PSI	3.150	....	....
H4831	54.0	3.91	NA	3.7	2711	58.5	2927	58200 PSI	3.230	.9831	.9633
H4350	50.0	3.63	NA	3.4	2730	53.5	2918	58200 PSI	3.230	.9811	.9590
IMR4064	40.6	3.03	DBLD	2.8	2541	47.0	2905	50900 CUP	3.230	....	....
H1000	59.0	4.21	NA	4.0	2698	62.0c	2890	58800 PSI	3.150	....	....
H414	47.0	3.11	DBLD	3.1	2657	51.0	2867	57480 PSI	3.230	.9812	.9665
IMR3031	37.7	2.87	DBLD	2.8	2479	44.5	2860	51900 CUP	3.230	....	....
H-VARGET	42.0	3.07	DBLD	2.8	2630	45.5	2838	57720 PSI	3.230	.9784	.9581
H4895	42.0	3.06	DBLD	2.8	2647	45.2	2830	58080 PSI	3.230	.9793	.9651
IMR4895	37.1	2.70	DBLD	2.5	2431	43.5	2805	51600 CUP	3.230	....	....
IMR4320	36.4	2.61	DBLD	2.5	2410	43.0	2780	52000 CUP	3.230	....	....
H870	62.0	4.25	NA	4.0	2659	65.0c	2720	57600 PSI	3.150	....	....
140 Grain Barnes X Bullet											
A-XMR-3100	51.3	3.84	NA	3.7	2498	57.0	2839	56800 PSI	3.310	....	....
A-XMR-4350	45.9	3.40	NA	3.1	2443	51.0	2776	55900 PSI	3.310	....	....
ACCUR 2700	46.1	3.16	DBLD	3.1	2547	48.5	2710	55300 PSI	3.310	....	....
145 Grain Jacketed Bullet											
A-XMR-3100	53.1	3.97	NA	3.7	2580	59.0c	2932	59000 PSI	3.250	....	....
WIN MAG RIFLE	59.6	4.28	NA	4.0	2902	60.4	2930	53500 PSI	3.150	....	....
VEC TU5000	49.1	3.54	NA	3.4	2828	50.2	2874	47242 CIP	3.330	....	....
RELODER22	51.0	3.55	NA	3.4	2630	56.0	2865	58000 PSI	3.320	....	....
A-XMR-4350	47.7	3.53	NA	3.4	2519	53.0	2862	59800 PSI	3.250	....	....
RELODER19	48.4	3.42	NA	3.4	2584	53.0	2815	57800 PSI	3.320	....	....
H4831	48.0	3.48	NA	3.4	2503	53.0	2727	60000 PSI	3.160	.9831	.9873
H4350	45.0	3.26	DBLD	3.1	2514	48.8	2714	59880 PSI	3.160	.9801	.9703
ACCUR 2700	45.6	3.12	DBLD	3.1	2546	48.0	2709	57000 PSI	3.250	....	....
H-VARGET	39.0	2.85	DBLD	2.8	2468	43.0	2690	57600 PSI	3.160	.9787	.9834
H414	43.0	2.84	DBLD	2.8	2445	46.5	2639	58680 PSI	3.160	.9784	.9747

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c = Compressed charge

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7mm EXPRESS (280 Remington) (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
145 Grain Jacketed Bullet (Continued)											
RELODER15	39.8	2.81	DBLD	2.8	2436	43.0	2630	57100 PSI	3.320	....	....
H4895	38.0	2.77	DBLD	2.5	2428	41.0	2596	58080 PSI	3.160	.9779	.9673
RELODER12	32.5	2.24	DBLD	2.2	2052	42.5	2580	57600 CUP	3.320	....	....
150 Grain Jacketed Bullet											
IMR4831	50.2	3.69	NA	3.4	2612	57.0	2930	50000 CUP	3.325	....	....
IMR4350	48.4	3.56	NA	3.4	2582	55.0	2895	50000 CUP	3.325	....	....
H450	51.0	3.33	NA	3.1	2644	54.0	2829	60000 PSI	3.150	....	....
IMR4064	42.2	3.15	DBLD	3.1	2506	48.0	2810	50000 CUP	3.325	....	....
H1000	56.0	3.99	NA	3.7	2647	60.0	2797	59160 PSI	3.300	.9863	.9692
IMR3031	41.0	3.13	DBLD	3.1	2495	45.5	2745	48800 CUP	3.325	....	....
H4831	50.0	3.62	NA	3.4	2534	53.7	2709	59400 PSI	3.300	.9820	.9752
H4350	46.0	3.34	NA	3.1	2526	49.7	2700	59160 PSI	3.300	.9821	.9607
IMR4320	39.2	2.80	DBLD	2.5	2367	44.5	2655	50000 CUP	3.325	....	....
H414	43.0	2.84	DBLD	2.8	2423	47.3	2640	59280 PSI	3.300	.9802	.9603
IMR4895	37.9	2.76	DBLD	2.5	2372	42.5	2635	49300 CUP	3.325	....	....
H-VARGET	39.0	2.85	DBLD	2.8	2442	42.0	2611	59760 PSI	3.300	.9777	.9596
H4895	38.0	2.77	DBLD	2.5	2398	41.5	2588	60000 PSI	3.300	.9784	.9623
H870	57.0	3.91	NA	3.7	2440	61.0	2568	55800 PSI	3.150	.9872	.9778
IMR4198	30.9	2.44	DBLD	2.2	2137	34.5	2375	49200 CUP	3.325	....	....
SR4759	26.0	2.58	DBLD	2.5	1961	29.5	2200	50000 CUP	3.325	....	....
IMR4227	24.4	1.88	DBLD	1.6	1904	27.5	2115	49500 CUP	3.325	....	....
154 Grain Jacketed Bullet											
IMR4831	46.0	3.38	NA	3.1	2496	54.0	2880	51600 CUP	3.320	....	....
IMR4350	43.9	3.23	DBLD	3.1	2452	51.5	2830	51600 CUP	3.320	....	....
A-XMR-4350	48.6	3.60	NA	3.4	2486	54.0	2825	59600 PSI	3.330	....	....
A-XMR-3100	52.2	3.90	NA	3.7	2457	58.0	2792	54500 PSI	3.330	....	....
IMR4064	38.5	2.87	DBLD	2.8	2384	45.0	2725	51400 CUP	3.320	....	....
ACCUR 2700	46.6	3.19	DBLD	3.1	2555	49.0	2718	60000 PSI	3.330	....	....
IMR3031	37.0	2.82	DBLD	2.8	2366	43.0	2705	51100 CUP	3.320	....	....
IMR4895	36.7	2.67	DBLD	2.5	2326	43.0	2685	51500 CUP	3.320	....	....
IMR4320	36.6	2.62	DBLD	2.5	2327	42.5	2660	51100 CUP	3.320	....	....
160 Grain Jacketed Bullet											
RELODER22	50.7	3.53	NA	3.4	2564	55.7	2795	58000 PSI	3.325	....	....
WIN MAG RIFLE	53.7	3.86	NA	3.7	2614	57.8	2795	56800 PSI	3.150	....	....
A-XMR-3100	51.8	3.87	NA	3.7	2442	57.5	2775	56100 PSI	3.300	....	....
RELODER19	48.5	3.43	NA	3.4	2524	53.4	2750	58100 PSI	3.325	....	....
VEC TU5000	46.3	3.33	NA	3.1	2628	48.1	2746	49114 CIP	3.330	....	....
VEC TU7000	51.7	3.64	NA	3.4	2664	52.8	2743	47997 CIP	3.330	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7mm EXPRESS (280 Remington) (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
160 Grain Jacketed Bullet (Continued)										
A-XMR-4350	46.8	3.46	NA	3.4	2413	52.0 2742	58200 PSI	3.300	....	....
H450	52.0	3.40	NA	3.1	2615	54.0 2720	58800 PSI	3.150	....	....
H1000	57.0	4.06	NA	4.0	2517	61.0 2714	57000 PSI	3.240	.9813	.9621
ACCUR 2700	46.1	3.16	DBLD	3.1	2503	48.5 2663	60000 PSI	3.300	....	....
H4831	51.0	3.70	NA	3.4	2464	55.0 2660	59400 PSI	3.240	.9811	.9517
H4350	46.0	3.34	NA	3.1	2441	49.5 2610	58680 PSI	3.240	.9809	.9502
H414	43.0	2.84	DBLD	2.8	2348	47.5 2558	59640 PSI	3.240	.9809	.9545
H-VARGET	39.0	2.85	DBLD	2.8	2384	42.5 2555	59160 PSI	3.240	.9804	.9617
VEC SP9	40.9	2.79	DBLD	2.5	2257	44.8 2552	50580 CIP	3.330	.9689	.9289
H870	57.0	3.91	NA	3.7	2376	61.0 2543	55200 PSI	3.150	.9831	.9833
H4895	38.0	2.77	DBLD	2.5	2341	41.5 2535	59400 PSI	3.240	.9775	.9429
VEC SP7	40.9	2.69	DBLD	2.5	2228	45.5 2474	46284 CIP	3.330	.9774	.9389
162 Grain A-MAX										
H1000	56.0	3.99	NA	3.7	2535	60.0 2711	56640 PSI	3.330	.9832	.9613
H414	43.0	2.84	DBLD	2.8	2400	47.5 2669	59880 PSI	3.330	.9766	.9594
H4831	51.0	3.70	NA	3.4	2517	54.5 2644	59160 PSI	3.330	.9861	.9687
H4350	46.0	3.34	NA	3.1	2468	49.5 2614	59880 PSI	3.330	.9836	.9539
H-VARGET	39.0	2.85	DBLD	2.8	2443	42.0 2573	59400 PSI	3.330	.9830	.9622
H4895	38.0	2.77	DBLD	2.5	2396	41.5 2567	60000 PSI	3.330	.9802	.9566
165 Grain Jacketed Bullet										
IMR4831	48.8	3.59	NA	3.4	2475	55.5 2775	50000 CUP	3.325	....	....
IMR4350	47.5	3.49	NA	3.4	2476	53.5 2750	49600 CUP	3.325	....	....
IMR4064	41.9	3.12	DBLD	3.1	2400	46.5 2640	48800 CUP	3.325	....	....
IMR3031	39.4	3.00	DBLD	2.8	2354	44.5 2615	49700 CUP	3.325	....	....
IMR4320	38.8	2.78	DBLD	2.5	2274	44.0 2550	49900 CUP	3.325	....	....
IMR4895	37.4	2.72	DBLD	2.5	2273	42.0 2525	49400 CUP	3.325	....	....
IMR4198	29.8	2.36	DBLD	2.2	2066	33.5 2295	49400 CUP	3.325	....	....
SR4759	25.5	2.53	DBLD	2.5	1918	29.0 2150	50000 CUP	3.325	....	....
IMR4227	23.8	1.83	DBLD	1.6	1828	27.0 2050	50000 CUP	3.325	....	....
168 Grain Jacketed Bullet										
A-XMR-3100	51.3	3.84	NA	3.7	2396	57.0 2723	56300 PSI	3.300	....	....
H1000	56.0	3.99	NA	3.7	2506	60.0 2700	59160 PSI	3.330	.9814	.9455
A-XMR-4350	46.4	3.43	NA	3.4	2350	51.5 2670	57400 PSI	3.300	....	....
H4831	51.0	3.70	NA	3.4	2462	54.5 2605	59040 PSI	3.330	.9838	.9584
H870	57.0	3.91	NA	3.7	2415	61.0 2588	55800 PSI	3.150	.9829	.9863
H4350	46.0	3.34	NA	3.1	2422	50.0 2586	59280 PSI	3.330	.9837	.9562
ACCUR 2700	45.6	3.12	DBLD	3.1	2422	48.0 2577	55100 PSI	3.300	....	....
H-VARGET	40.0	2.92	DBLD	2.8	2424	42.2 2523	59880 PSI	3.330	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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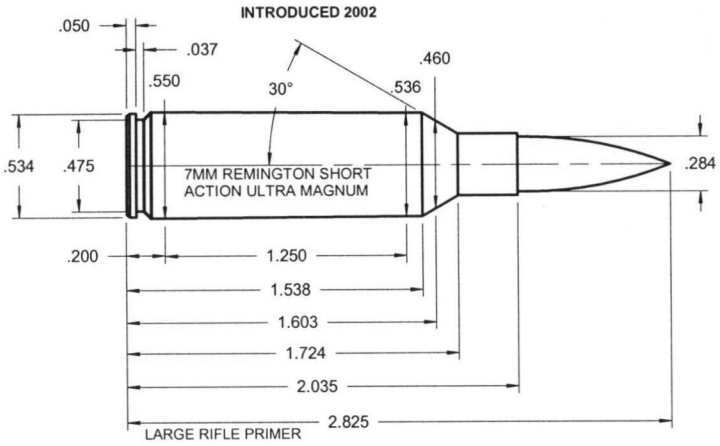
7mm EXPRESS (280 Remington) (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
168 Grain Jacketed Bullet (Continued)											
H4895	38.0	2.77	DBLD	2.5	2329	41.2	2468	59520 PSI	3.330	.9819	.9761
175 Grain Jacketed Bullet											
A-XMR-3100	51.3	3.84	NA	3.7	2359	57.0	2681	58900 PSI	3.300	....	....
VEC TU5000	46.3	3.33	NA	3.1	2575	47.8	2661	49448 CIP	3.330	....	....
VEC TU7000	51.2	3.61	NA	3.4	2654	51.2	2654	46879 CIP	3.330	....	....
IMR4831	43.2	3.17	DBLD	3.1	2297	51.0	2650	52000 CUP	3.310	....	....
IMR4350	41.5	3.05	DBLD	2.8	2275	49.0	2625	52000 CUP	3.310	....	....
A-XMR-4350	46.4	3.43	NA	3.4	2273	51.5	2583	55300 PSI	3.300	....	....
H1000	54.0	3.85	NA	3.7	2502	57.0	2583	59520 PSI	3.300	....	....
H870	57.0	3.91	NA	3.7	2403	61.0	2538	57600 PSI	3.150	.9863	.9867
IMR4064	36.8	2.74	DBLD	2.5	2197	43.5	2535	52000 CUP	3.310	....	....
IMR4320	35.2	2.52	DBLD	2.5	2171	41.5	2505	51900 CUP	3.310	....	....
IMR4895	35.7	2.60	DBLD	2.5	2187	41.5	2500	51100 CUP	3.310	....	....
H4831	48.0	3.48	NA	3.4	2362	51.0	2477	59760 PSI	3.300	.9843	.9625
IMR3031	35.1	2.68	DBLD	2.5	2174	40.5	2460	50700 CUP	3.310	....	....
H4350	44.0	3.19	DBLD	3.1	2343	46.5	2447	59160 PSI	3.300	....	....
ACCUR 2700	43.7	2.99	DBLD	2.8	2282	46.0	2428	53400 PSI	3.300	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7MM REM SHORT ACTION ULTRA MAG



Useful case capacity 4.67 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
100 Grain Jacketed Bullet											
H414	62.0	4.10	NA	4.0	3472	66.0	3656	62700 PSI	2.700	.9873	.9579
H4895	53.0	3.86	NA	3.7	3450	57.0	3631	62800 PSI	2.700	.9874	.9625
H-VARGET	56.0	4.09	NA	4.0	3418	60.0	3626	63000 PSI	2.700	.9852	.9559
H4350	63.0	4.57	NA	4.3	3424	66.5c	3622	63100 PSI	2.700	....	....
H380	60.0	4.15	NA	4.0	3403	64.0	3613	62900 PSI	2.700	.9852	.9535
110 Grain Jacketed Bullet											
H414	62.0	4.10	NA	4.0	3381	65.5	3578	63200 PSI	2.730	....	....
H-VARGET	54.0	3.95	NA	3.7	3295	59.0	3513	63200 PSI	2.730	.9872	.9636
H4350	61.0	4.42	NA	4.3	3263	65.0c	3499	62600 PSI	2.730	....	....
H4895	53.0	3.86	NA	3.7	3351	56.5	3494	62700 PSI	2.730	.9881	.9653
H380	59.0	4.08	NA	4.0	3263	63.0	3492	62900 PSI	2.730	.9833	.9493
115 Grain Jacketed Bullet											
H414	59.0	3.90	NA	3.7	3235	63.0	3437	63200 PSI	2.650	.9849	.9510
H4350	60.0	4.35	NA	4.3	3196	64.0	3413	63200 PSI	2.650	.9837	.9483
H-VARGET	54.0	3.95	NA	3.7	3234	58.0	3402	62800 PSI	2.650	.9875	.9643
H4831	65.0c	4.71	2 SCOOPS	2.2	3212	68.0c	3342	61400 PSI	2.650	....	....
H4895	51.0	3.71	NA	3.7	3211	54.0	3336	62400 PSI	2.650	....	....
H380	56.0	3.87	NA	3.7	3159	59.5	3329	62600 PSI	2.650	.9853	.9571
120 Grain Barnes X Bullet											
H414	58.0	3.83	NA	3.7	3128	62.0	3349	62900 PSI	2.700	.9831	.9517
H4350	59.0	4.28	NA	4.0	3149	63.0	3330	63500 PSI	2.700	.9862	.9621

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

7MM REM SHORT ACTION ULTRA MAG (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
120 Grain Barnes X Bullet (Continued)										
H-VARGET	53.0	3.87	NA	3.7	3153	56.5	3298	63200 PSI	2.700	.9872 .9655
H4831	64.0	4.64	2 SCOOPS	2.2	3128	67.5c	3281	62800 PSI	2.700	....
H380	56.0	3.87	NA	3.7	3073	59.5	3254	62500 PSI	2.700	.9838 .9550
130 Grain Jacketed Bullet										
H414	57.0	3.77	NA	3.7	3105	60.0	3230	62600 PSI	2.800	....
H4350	57.0	4.13	NA	4.0	3060	60.5	3222	62600 PSI	2.800	.9855 .9571
H4831	61.0	4.42	NA	4.3	3017	65.0c	3192	62600 PSI	2.800	....
H-VARGET	51.0	3.73	NA	3.7	3057	54.0	3190	62900 PSI	2.800	....
H380	54.0	3.73	NA	3.7	2992	57.5	3148	62500 PSI	2.800	.9857 .9586
140 Grain Jacketed Bullet										
H414	57.0	3.77	NA	3.7	2982	60.0	3153	52900 PSI	2.825	....
H4350	56.0	4.06	NA	4.0	2910	60.0	3122	63200 PSI	2.825	.9825 .9459
H4831	61.0	4.42	NA	4.3	2928	64.5c	3099	63100 PSI	2.825	....
H380	54.0	3.73	NA	3.7	2869	57.5	3069	62600 PSI	2.825	.9809 .9431
H-VARGET	50.0	3.65	NA	3.4	2945	53.5	3068	62300 PSI	2.825	.9881 .9725
145 Grain Jacketed Bullet										
H414	55.0	3.64	NA	3.4	2885	58.5	3095	62800 PSI	2.750	.9802 .9527
H4831	59.0	4.28	NA	4.0	2909	63.0	3094	63100 PSI	2.750	.9845 .9542
H4350	55.0	3.99	NA	3.7	2943	58.5	3093	62800 PSI	2.750	.9860 .9578
H-VARGET	49.0	3.58	NA	3.4	2865	52.5	2999	63400 PSI	2.750	.9870 .9657
H380	53.0	3.66	NA	3.4	2849	56.0	2971	63200 PSI	2.750	....
150 Grain Jacketed Bullet										
H414	54.0	3.57	NA	3.4	2885	57.0	3018	63100 PSI	2.825	....
H4831	58.0	4.20	NA	4.0	2823	61.5	2987	63000 PSI	2.825	.9840 .9508
H4350	53.5	3.88	NA	3.7	2837	57.0	2984	62800 PSI	2.825	.9857 .9552
H1000	66.0c	4.71	2 SCOOPS	2.2	2873	68.0c	2967	59300 PSI	2.825	....
H380	50.0	3.45	NA	3.4	2714	53.5	2893	62600 PSI	2.825	.9819 .9525
154 Grain Jacketed Bullet										
H414	54.0	3.57	NA	3.4	2845	57.5	2971	63200 PSI	2.800	.9878 .9680
H1000	65.0	4.63	2 SCOOPS	2.2	2866	68.0c	2960	61900 PSI	2.800	....
H4831	58.0	4.20	NA	4.0	2824	61.5	2947	62700 PSI	2.800	.9881 .9633
H4350	53.0	3.84	NA	3.7	2805	56.5	2947	62900 PSI	2.800	.9860 .9599
H380	50.0	3.45	NA	3.4	2736	53.5	2855	62800 PSI	2.800	.9880 .9707
160 Grain Jacketed Bullet										
H1000	63.0	4.49	NA	4.3	2772	67.0c	2931	63300 PSI	2.825	....
H4350	53.0	3.84	NA	3.7	2774	56.5	2914	63100 PSI	2.825	.9859 .9625
H414	53.0	3.50	NA	3.4	2786	56.0	2905	62700 PSI	2.825	....
H4831	57.0	4.13	NA	4.0	2730	60.5	2900	62600 PSI	2.825	.9830 .9576

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c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

7MM REM SHORT ACTION ULTRA MAG (Continued)

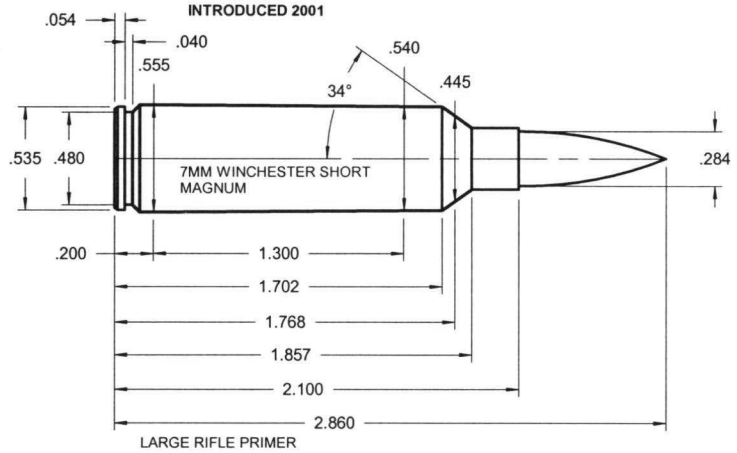
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
160 Grain Jacketed Bullet (Continued)											
H380	50.0	3.45	NA	3.4	2669	53.5	2824	62700 PSI	2.825	.9842	.9572
162 Grain Jacketed Bullet											
H1000	64.0	4.56	NA	4.3	2793	67.0c	2902	60900 PSI	2.825	....	....
H414	53.0	3.50	NA	3.4	2785	56.0	2901	62800 PSI	2.825	....	....
H4831	56.5	4.10	NA	4.0	2751	60.0	2887	63100 PSI	2.825	.9863	.9620
H4350	52.0	3.77	NA	3.7	2760	55.5	2879	62500 PSI	2.825	.9881	.9626
H380	50.0	3.45	NA	3.4	2676	53.0	2814	63000 PSI	2.825	.9832	.9557
168 Grain Jacketed Bullet											
H1000	64.0	4.56	NA	4.3	2770	67.0c	2874	61200 PSI	2.825	....	....
H414	53.0	3.50	NA	3.4	2722	56.0	2871	63000 PSI	2.825	....	....
H4350	51.0	3.70	NA	3.4	2666	56.0	2855	62900 PSI	2.825	.9863	.9619
H4831	56.0	4.06	NA	4.0	2682	60.5	2848	62800 PSI	2.825	.9867	.9606
H380	50.0	3.45	NA	3.4	2623	53.3	2771	63100 PSI	2.825	.9833	.9528
175 Grain Jacketed Bullet											
H1000	61.0	4.35	NA	4.3	2658	65.5c	2817	62800 PSI	2.825	.9870	.9690
H414	51.0	3.37	NA	3.1	2640	54.5	2778	63200 PSI	2.825	.9855	.9611
H4350	50.0	3.63	NA	3.4	2619	54.5	2775	63100 PSI	2.825	.9872	.9656
H4831	54.0	3.91	NA	3.7	2627	58.0	2760	62900 PSI	2.825	.9878	.9639

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7mm WINCHESTER SHORT MAGNUM



Useful case capacity 5.02 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
100 Grain Barnes X Bullet											
H4350	65.0	4.71	2 SCOOPS	2.2	3388	70.0c	3647	63200 PSI	2.725	....	....
H414	63.0	4.16	NA	4.0	3408	68.0	3628	61900 PSI	2.725	.9875	.9694
H380	62.0	4.28	NA	4.0	3390	66.0	3591	62700 PSI	2.725	.9858	.9633
H4895	54.0	3.93	NA	3.7	3442	57.5	3590	62500 PSI	2.725	.9881	.9696
H-VARGET	56.0	4.09	NA	4.0	3392	60.5	3588	62400 PSI	2.725	.9876	.9687
H4831	70.0c	5.07	2 SCOOPS	2.5	3367	74.0c	3546	60600 PSI	2.725	....	....
110 Grain Jacketed Bullet											
H4350	65.0	4.71	2 SCOOPS	2.2	3323	70.0c	3553	63300 PSI	2.830	....	....
H414	63.0	4.16	NA	4.0	3366	67.8	3543	63500 PSI	2.830	.9895	.9727
H4831	68.0	4.93	2 SCOOPS	2.2	3225	73.0c	3465	62600 PSI	2.830	....	....
H380	62.0	4.28	NA	4.0	3301	66.0	3464	62900 PSI	2.830	.9881	.9630
H-VARGET	56.0	4.09	NA	4.0	3320	60.0	3458	62500 PSI	2.830	.9898	.9738
H4895	53.0	3.86	NA	3.7	3229	57.0	3417	62300 PSI	2.830	.9860	.9581
115 Grain Jacketed Bullet											
H4350	62.0	4.50	NA	4.3	3278	66.5	3441	63500 PSI	2.770	.9892	.9740
H414	60.0	3.97	NA	3.7	3228	64.5	3385	62300 PSI	2.770	.9896	.9727
H4831	65.0	4.71	2 SCOOPS	2.2	3179	70.0c	3372	62900 PSI	2.770	....	....
H-VARGET	54.0	3.95	NA	3.7	3220	57.5	3360	63800 PSI	2.770	.9880	.9683
H4895	51.0	3.71	NA	3.7	3143	55.0	3309	62700 PSI	2.770	.9872	.9665
H380	57.0	3.94	NA	3.7	3168	61.5	3304	61900 PSI	2.770	.9906	.9837
120 Grain Jacketed Bullet											
H4350	61.0	4.42	NA	4.3	3206	65.5	3387	63500 PSI	2.825	.9879	.9678

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c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

7mm WINCHESTER SHORT MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
120 Grain Jacketed Bullet (Continued)											
H414	60.0	3.97	NA	3.7	3202	64.0	3371	63000 PSI	2.825	.9874	.9671
H4831	65.0	4.71	2 SCOOPS	2.2	3159	69.5c	3335	63400 PSI	2.825	.9879	.9693
H-VARGET	53.0	3.87	NA	3.7	3155	57.0	3311	63500 PSI	2.825	.9881	.9704
H380	57.0	3.94	NA	3.7	3074	61.5	3285	63300 PSI	2.825	.9853	.9585
H4895	50.0	3.64	NA	3.4	3059	54.0	3262	62500 PSI	2.825	.9839	.9532
130 Grain Jacketed Bullet											
H4350	57.0	4.13	NA	4.0	3048	61.0	3213	62800 PSI	2.860	.9870	.9651
H1000	67.0	4.78	2 SCOOPS	2.2	3018	72.0c	3208	61600 PSI	2.860	....	....
H4831	62.0	4.49	NA	4.3	3041	66.0	3202	63200 PSI	2.860	.9870	.9659
H414	56.0	3.70	NA	3.4	3025	60.3	3184	62400 PSI	2.860	.9880	.9715
H-VARGET	51.5	3.76	NA	3.7	3029	55.2	3183	64000 PSI	2.860	.9868	.9655
H380	55.0	3.80	NA	3.7	2993	59.0	3142	63000 PSI	2.860	.9878	.9723
H4895	49.0	3.57	NA	3.4	2969	53.0	3136	63000 PSI	2.860	.9863	.9644
140 Grain Jacketed Bullet											
H4350	58.0	4.21	NA	4.0	2979	61.5	3133	61900 PSI	2.850	.9857	.9602
H414	57.0	3.77	NA	3.7	2983	60.8	3130	62600 PSI	2.850	.9874	.9697
H4831	62.0	4.49	NA	4.3	2957	66.0	3116	62000 PSI	2.850	.9869	.9643
H1000	69.0	4.92	2 SCOOPS	2.2	2995	72.0c	3091	59000 PSI	2.850	....	....
H-VARGET	51.0	3.73	NA	3.7	2909	54.5	3063	62600 PSI	2.850	.9855	.9592
H380	55.0	3.80	NA	3.7	2890	59.0	3062	63300 PSI	2.850	.9856	.9602
H4895	49.0	3.57	NA	3.4	2873	52.3	3024	63000 PSI	2.850	.9844	.9549
145 Grain Jacketed Bullet											
H1000	65.0	4.63	2 SCOOPS	2.2	2904	70.0	3082	62900 PSI	2.860	.9883	.9699
H4831	59.0	4.28	NA	4.0	2890	63.0	3044	63400 PSI	2.860	.9870	.9686
H4350	55.0	3.99	NA	3.7	2898	58.7	3040	62600 PSI	2.860	.9872	.9689
H414	54.0	3.57	NA	3.4	2847	58.0	3005	62200 PSI	2.860	.9867	.9693
H-VARGET	50.0	3.65	NA	3.4	2872	53.3	3001	64000 PSI	2.860	.9869	.9660
H380	53.0	3.66	NA	3.4	2826	57.0	2970	62800 PSI	2.860	.9877	.9730
H4895	47.0	3.42	NA	3.4	2779	50.5	2922	62300 PSI	2.860	.9859	.9655
150 Grain Jacketed Bullet											
H4350	59.0	4.28	NA	4.0	2923	63.0	3080	62900 PSI	2.840	.9870	.9651
H4831	63.0	4.57	NA	4.3	2902	67.3	3066	62500 PSI	2.840	.9874	.9653
H1000	68.0	4.85	2 SCOOPS	2.2	2899	72.0c	3031	58600 PSI	2.840	....	....
H414	56.0	3.70	NA	3.4	2886	59.7	3013	61800 PSI	2.840	.9884	.9718
H-VARGET	51.0	3.73	NA	3.7	2852	55.0	3000	63400 PSI	2.840	.9873	.9681
H380	55.5	3.84	NA	3.7	2816	59.5	2991	63400 PSI	2.840	.9850	.9598
H4895	48.0	3.49	NA	3.4	2782	51.5	2930	62300 PSI	2.840	.9853	.9600
154 Grain Jacketed Bullet											
H1000	64.0	4.56	NA	4.3	2831	68.5	2975	62500 PSI	2.860	.9890	.9724

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2 SCOOPS = Use TWO dippers of powder in each round.

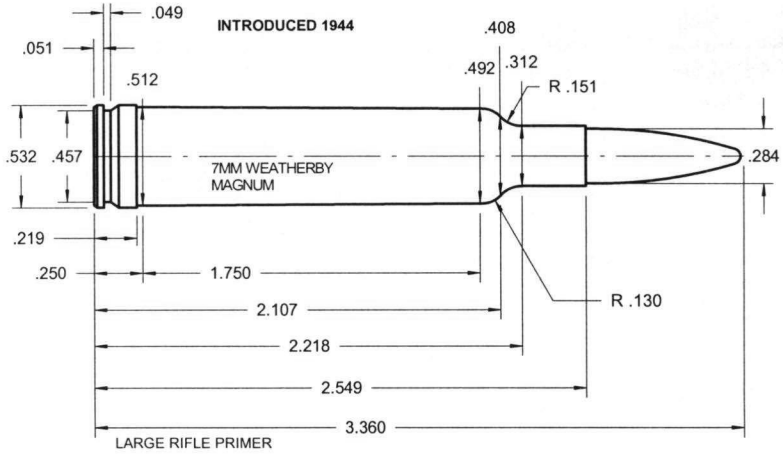
7mm WINCHESTER SHORT MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
154 Grain Jacketed Bullet (Continued)										
H4831	58.0	4.20	NA	4.0	2779	62.5	2942	62900 PSI	2.860	.9873 .9671
H414	54.0	3.57	NA	3.4	2762	58.5	2924	63600 PSI	2.860	.9874 .9721
H4350	54.0	3.92	NA	3.7	2775	57.7	2920	62600 PSI	2.860	.9863 .9632
H-VARGET	48.0	3.51	NA	3.4	2705	52.0	2854	62800 PSI	2.860	.9867 .9674
H380	52.0	3.59	NA	3.4	2714	55.6	2834	63100 PSI	2.860	.9880 .9707
H4895	46.0	3.35	NA	3.1	2658	49.5	2799	63000 PSI	2.860	.9853 .9629
160 Grain Jacketed Bullet										
H1000	65.0	4.63	2 SCOOPS	2.2	2801	69.5	2956	62800 PSI	2.850	.9881 .9682
H4831	59.0	4.28	NA	4.0	2757	63.5	2921	62600 PSI	2.850	.9874 .9685
H4350	56.0	4.06	NA	4.0	2782	59.5	2918	62200 PSI	2.850	.9863 .9635
H414	55.0	3.64	NA	3.4	2743	58.7	2904	63100 PSI	2.850	.9845 .9602
H380	53.0	3.66	NA	3.4	2665	57.0	2832	61900 PSI	2.850	.9850 .9610
H-VARGET	48.0	3.51	NA	3.4	2676	51.3	2823	62100 PSI	2.850	.9838 .9590
H4895	46.0	3.35	NA	3.1	2614	49.0	2762	62600 PSI	2.850	.9820 .9430
162 Grain Jacketed Bullet										
H1000	64.0	4.56	NA	4.3	2816	69.0	2969	63400 PSI	2.860	.9895 .9741
H4831	58.0	4.20	NA	4.0	2772	62.0	2915	62800 PSI	2.860	.9876 .9696
H4350	54.0	3.92	NA	3.7	2759	58.0	2909	62900 PSI	2.860	.9867 .9612
H414	54.0	3.57	NA	3.4	2762	57.5	2892	63200 PSI	2.860	.9870 .9695
H-VARGET	48.0	3.51	NA	3.4	2691	51.5	2830	62900 PSI	2.860	.9857 .9619
H380	52.0	3.59	NA	3.4	2700	56.0	2824	63200 PSI	2.860	.9887 .9689
H4895	46.0	3.35	NA	3.1	2645	49.0	2773	62700 PSI	2.860	.9841 .9561
168 Grain Jacketed Bullet										
H1000	65.0	4.63	2 SCOOPS	2.2	2759	69.0	2907	61600 PSI	2.850	.9870 .9676
H4831	59.0	4.28	NA	4.0	2759	63.0	2892	63400 PSI	2.850	.9884 .9703
H4350	55.0	3.99	NA	3.7	2747	58.5	2865	62300 PSI	2.850	.9880 .9695
H414	53.0	3.50	NA	3.4	2685	57.0	2834	62800 PSI	2.850	.9867 .9661
H-VARGET	48.0	3.51	NA	3.4	2666	51.0	2788	63200 PSI	2.850	.9851 .9553
H380	52.0	3.59	NA	3.4	2654	55.5	2781	63000 PSI	2.850	.9869 .9649
H4895	46.0	3.35	NA	3.1	2615	48.7	2732	62600 PSI	2.850	....
175 Grain Jacketed Bullet										
H1000	58.0	4.14	NA	4.0	2635	62.0	2764	63100 PSI	2.760	.9881 .9732
H4831	54.0	3.91	NA	3.7	2618	57.5	2733	63900 PSI	2.760	.9877 .9732
H4350	49.0	3.55	NA	3.4	2545	52.5	2672	62200 PSI	2.760	.9860 .9680
H414	48.0	3.17	DBLD	3.1	2475	52.0	2636	61300 PSI	2.760	.9843 .9647

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7mm WEATHERBY MAGNUM



Useful case capacity 5.24 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
v-N560	74.7	5.15	2 SCOOPS	2.5	3442	81.9c	3839	NA	NA	3.209
v-N160	71.3	5.23	2 SCOOPS	2.5	3402	78.7c	3770	NA	NA	3.209
H4831	75.0c	5.44	2 SCOOPS	2.5	3340	78.0c	3529	NA	NA	3.360
H4350	68.0	4.93	2 SCOOPS	2.2	3134	72.0	3477	NA	NA	3.360
H1000	77.0c	5.49	2 SCOOPS	2.5	3266	80.0c	3414	NA	NA	3.360
H414	65.0	4.30	NA	4.0	3060	68.0	3303	NA	NA	3.360
H870	72.2	4.95	2 SCOOPS	2.2	2810	82.0c	3151	NA	NA	3.360
120 Grain Jacketed Bullet										
v-N560	72.0	4.97	2 SCOOPS	2.2	3212	78.3c	3540	NA	NA	3.248
v-N165	73.5	5.23	2 SCOOPS	2.5	3192	80.3c	3517	NA	NA	3.248
RELODER19	67.5	4.77	2 SCOOPS	2.2	3217	74.0	3505	52100	CUP	3.200
A-XMR-4350	63.9	4.73	2 SCOOPS	2.2	3066	71.0c	3484	63300	PSI	3.285
A-XMR-3100	68.4	5.12	2 SCOOPS	2.5	3060	76.0c	3477	59100	PSI	3.285
H4831	74.0c	5.36	2 SCOOPS	2.5	3281	77.0c	3475	NA	NA	3.360
v-N160	67.7	4.97	2 SCOOPS	2.2	3150	74.6c	3468	NA	NA	3.248
H450	74.0	4.83	2 SCOOPS	2.2	3289	77.0	3461	NA	NA	3.360
H4350	67.0	4.86	2 SCOOPS	2.2	3083	71.0	3434	NA	NA	3.360
RELODER15	55.5	3.92	NA	3.7	3092	61.3	3370	52500	CUP	3.200
H1000	77.0c	5.49	2 SCOOPS	2.5	3239	80.0c	3369	NA	NA	3.360
H414	64.0	4.23	NA	4.0	2967	67.0	3225	NA	NA	3.360
H870	72.2	4.95	2 SCOOPS	2.2	2752	82.0c	3085	NA	NA	3.360

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7mm WEATHERBY MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
120 Grain Jacketed Bullet (Continued)										
ACCUR 8700	77.4c	5.33	2 SCOOPS	2.5	2704	86.0c	3073	42100	PSI	3.285
120 Grain Barnes X Bullet										
A-XMR-3100	68.4	5.12	2 SCOOPS	2.5	3054	76.0c	3470	62200	PSI	3.310
A-XMR-4350	62.1	4.60	2 SCOOPS	2.2	3010	69.0	3420	62800	PSI	3.310
ACCUR 8700	76.5c	5.26	2 SCOOPS	2.5	2686	85.0c	3052	43800	PSI	3.310
130 Grain Jacketed Bullet										
H4350	66.0	4.79	2 SCOOPS	2.2	3029	70.0	3292	NA	NA	3.360
H4831	70.0	5.07	2 SCOOPS	2.5	3097	73.0c	3263	NA	NA	3.360
H870	72.2	4.95	2 SCOOPS	2.2	2880	82.0c	3230	NA	NA	3.360
H450	70.0	4.57	NA	4.3	3066	73.0	3202	NA	NA	3.360
H1000	76.0c	5.42	2 SCOOPS	2.5	3019	79.0c	3194	NA	NA	3.360
139 Grain Jacketed Bullet										
RELODER22	68.0	4.74	2 SCOOPS	2.2	3078	74.8	3355	52300	CUP	3.280
RELODER19	64.2	4.53	NA	4.3	3043	70.9	3315	52500	CUP	3.280
A-XMR-3100	66.6	4.98	2 SCOOPS	2.2	2915	74.0c	3313	62000	PSI	3.340
A-XMR-4350	62.1	4.60	2 SCOOPS	2.2	2898	69.0	3293	62400	PSI	3.340
ACCUR 8700	73.8	5.08	2 SCOOPS	2.5	2578	82.0c	2929	41200	PSI	3.340
140 Grain Jacketed Bullet										
H1000	75.0c	5.35	2 SCOOPS	2.5	3120	79.0c	3273	49900	CUP	3.250
H4831	69.0	5.00	2 SCOOPS	2.2	3047	74.0c	3258	54000	CUP	3.250
H4350	64.0	4.64	2 SCOOPS	2.2	3038	68.5	3248	54000	CUP	3.250
140 Grain Barnes X Bullet										
A-XMR-3100	64.8	4.85	2 SCOOPS	2.2	2828	72.0c	3214	60900	PSI	3.345
A-XMR-4350	59.4	4.40	NA	4.3	2782	66.0	3161	62800	PSI	3.345
ACCUR 8700	73.8	5.08	2 SCOOPS	2.5	2571	82.0c	2922	44300	PSI	3.345
145 Grain Jacketed Bullet										
RELODER22	65.5	4.57	NA	4.3	2977	72.4	3245	52500	CUP	3.240
RELODER19	61.9	4.37	NA	4.3	2905	68.0	3165	52200	CUP	3.240
150 Grain Jacketed Bullet										
H1000	75.0c	5.35	2 SCOOPS	2.5	3073	79.0c	3223	52200	CUP	3.250
RELODER22	65.3	4.55	NA	4.3	2955	72.0	3220	52400	CUP	3.250
A-XMR-3100	64.8	4.85	2 SCOOPS	2.2	2815	72.0c	3199	63200	PSI	3.350
H4350	64.0	4.64	2 SCOOPS	2.2	3003	68.0	3180	54000	CUP	3.250
H4831	68.0	4.93	2 SCOOPS	2.2	2976	72.0	3152	53500	CUP	3.250
RELODER19	60.9	4.30	NA	4.0	2886	67.3	3145	52500	CUP	3.250
H450	67.0	4.38	NA	4.3	2929	70.0	3092	NA	NA	3.360
A-XMR-4350	58.5	4.33	NA	4.3	2719	65.0	3090	62700	PSI	3.350
H870	71.3	4.89	2 SCOOPS	2.2	2682	81.0c	3008	NA	NA	3.360

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7mm WEATHERBY MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
150 Grain Jacketed Bullet (Continued)									
ACCUR 8700	73.8	5.08	2 SCOOPS	2.5	2554	82.0c	2902	43200 PSI	3.350
160 Grain Jacketed Bullet									
RELODER22	64.0	4.46	NA	4.3	2854	70.7	3110	52500 CUP	3.240
A-XMR-3100	63.5	4.75	2 SCOOPS	2.2	2733	70.5c	3106	61400 PSI	3.355
RELODER19	58.9	4.16	NA	4.0	2794	64.8	3045	52300 CUP	3.240
v-N560	63.9	4.41	NA	4.3	2762	69.9	3041	NA NA	3.248
A-XMR-4350	58.5	4.33	NA	4.3	2674	65.0	3039	63100 PSI	3.355
v-N165	66.2	4.71	2 SCOOPS	2.2	2749	72.4	3031	NA NA	3.248
v-N160	61.1	4.48	NA	4.3	2717	67.8	2992	NA NA	3.248
ACCUR 8700	72.9	5.02	2 SCOOPS	2.5	2545	81.0c	2892	45000 PSI	3.355
160 Grain Barnes X Bullet									
A-XMR-3100	63.9	4.78	2 SCOOPS	2.2	2688	71.0c	3055	63000 PSI	3.340
H1000	71.0	5.06	2 SCOOPS	2.5	2855	75.0c	2994	50800 CUP	3.250
H4831	66.0	4.78	2 SCOOPS	2.2	2806	70.0	2971	53900 CUP	3.250
A-XMR-4350	57.6	4.26	NA	4.0	2602	64.0	2957	62300 PSI	3.340
H4350	61.0	4.42	NA	4.3	2786	65.0	2950	53900 CUP	3.250
ACCUR 8700	72.9	5.02	2 SCOOPS	2.5	2450	81.0c	2784	43200 PSI	3.340
162 Grain Jacketed Bullet									
H450	70.0	4.57	NA	4.3	3014	73.0	3171	NA NA	3.360
H4831	69.0	5.00	2 SCOOPS	2.2	2964	72.0	3119	NA NA	3.360
H1000	75.0c	5.35	2 SCOOPS	2.5	2969	77.0c	3082	NA NA	3.360
H4350	61.0	4.42	NA	4.3	2830	65.0	3013	NA NA	3.360
H870	70.4	4.83	2 SCOOPS	2.2	2633	80.0c	2952	NA NA	3.360
168 Grain Jacketed Bullet									
H1000	75.0c	5.35	2 SCOOPS	2.5	2998	77.0c	3169	NA NA	3.360
H450	69.0	4.51	NA	4.3	3002	72.0	3150	NA NA	3.360
H4831	69.0	5.00	2 SCOOPS	2.2	3019	72.0	3143	NA NA	3.360
H870	70.4	4.83	2 SCOOPS	2.2	2702	80.0c	3030	NA NA	3.360
v-N560	62.6	4.32	NA	4.3	2680	68.1	2982	NA NA	3.209
H4350	60.0	4.35	NA	4.3	2772	64.0	2932	NA NA	3.360
v-N165	65.2	4.64	2 SCOOPS	2.2	2687	69.6	2913	NA NA	3.209
v-N160	60.2	4.42	NA	4.3	2664	65.3	2884	NA NA	3.209
175 Grain Jacketed Bullet									
H1000	70.0	4.99	2 SCOOPS	2.2	2854	74.7c	3022	54000 CUP	3.350
A-XMR-3100	62.1	4.65	2 SCOOPS	2.2	2619	69.0	2976	63700 PSI	3.360
RELODER22	61.0	4.25	NA	4.0	2721	67.4	2965	52500 CUP	3.245
H450	67.0	4.38	NA	4.3	2802	70.0	2925	NA NA	3.360
H4350	60.0	4.35	NA	4.3	2737	63.7	2899	53600 CUP	3.350

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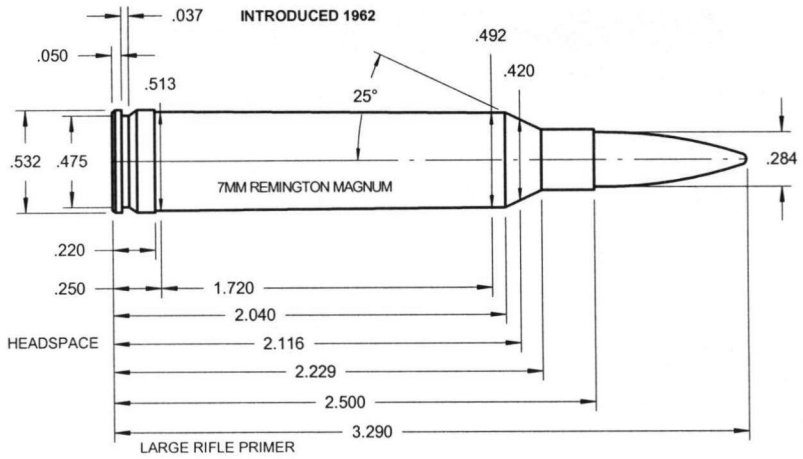
7mm WEATHERBY MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
175 Grain Jacketed Bullet (Continued)									
H4831	63.0	4.57	NA	4.3	2708	67.5	2895	53400 CUP	3.350
A-XMR-4350	56.7	4.20	NA	4.0	2547	63.0	2894	61200 PSI	3.360
RELODER19	55.1	3.89	NA	3.7	2615	60.5	2850	52200 CUP	3.245
H870	78.0c	5.35	2 SCOOPS	2.5	2789	80.0c	2843	44300 CUP	3.350
ACCUR 8700	72.0	4.95	2 SCOOPS	2.2	2442	80.0c	2775	42700 PSI	3.360
195 Grain Jacketed Bullet									
H1000	68.0	4.85	2 SCOOPS	2.2	2550	70.0	2804	NA NA	3.360
H870	70.0	4.80	2 SCOOPS	2.2	2551	75.0	2770	NA NA	3.360
H4831	62.0	4.49	NA	4.3	2498	66.0	2710	NA NA	3.360

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c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

7mm REMINGTON MAGNUM



Useful case capacity 5.27 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
v-N160	68.5	5.03	2 SCOOPS	2.5	3263	75.0c	3570	NA	NA	3.189
v-N560	66.2	4.57	NA	4.3	3121	77.4c	3536	NA	NA	3.189
H414	60.0	3.97	NA	3.7	3211	66.0	3499	49100	CUP	3.150
H4831	71.0	5.15	2 SCOOPS	2.5	3336	75.0c	3499	50300	CUP	3.150
H4350	65.0	4.71	2 SCOOPS	2.2	3299	69.0	3494	49600	CUP	3.150
H-VARGET	53.0	3.87	NA	3.7	3170	59.0	3487	49800	CUP	3.150
110 Grain Jacketed Bullet										
H414	62.0	4.10	NA	4.0	3237	65.5	3395	50400	CUP	3.250
H4831	68.0	4.93	2 SCOOPS	2.2	3150	73.0c	3367	49700	CUP	3.250
H4350	65.0	4.71	2 SCOOPS	2.2	3200	68.5	3357	49500	CUP	3.250
H-VARGET	54.0	3.95	NA	3.7	3109	58.5	3356	50300	CUP	3.250
115 Grain Jacketed Bullet										
A-XMR-3100	65.3	4.88	2 SCOOPS	2.2	2964	72.5c	3368	58800	PSI	3.280
A-XMR-4350	60.3	4.46	NA	4.3	2944	67.0	3345	60300	PSI	3.280
ACCUR 2700	59.4	4.07	NA	4.0	3047	62.5	3241	58700	PSI	3.280
A-XMR-4064	49.0	3.70	NA	3.4	2816	54.5	3200	58700	PSI	3.280
ACCUR 8700	71.0	4.88	2 SCOOPS	2.2	2563	79.0c	2913	39100	PSI	3.280
120 Grain Jacketed Bullet										
RELODER22	66.9	4.66	2 SCOOPS	2.2	3233	73.0	3490	58600	PSI	3.275
RELODER19	63.2	4.46	NA	4.3	3210	69.0	3465	58600	PSI	3.275
IMR4831	61.0	4.48	NA	4.3	3003	68.5	3335	51400	CUP	3.290

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

7mm REMINGTON MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
			....STARTING LOADS....						
120 Grain Jacketed Bullet (Continued)									
A-XMR-3100	64.2	4.80	2 SCOOPS	2.2	2926	71.3c	3325	59900 PSI	3.260
v-N560	63.1	4.35	NA	4.3	2944	73.6	3312	NA NA	3.268
IMR4350	57.9	4.25	NA	4.0	2971	65.0	3300	51400 CUP	3.290
v-N165	69.2	4.93	2 SCOOPS	2.2	2984	76.3c	3298	NA NA	3.268
v-N160	65.1	4.78	2 SCOOPS	2.2	3006	71.5	3295	NA NA	3.268
RELODER12	53.6	3.70	NA	3.4	3034	58.0	3275	58100 PSI	3.275
H414	61.0	4.03	NA	4.0	3109	64.5	3261	50700 CUP	3.230
IMR4064	49.6	3.70	NA	3.4	2921	55.5	3245	51200 CUP	3.290
H4831	65.0	4.71	2 SCOOPS	2.2	3085	68.5	3236	50600 CUP	3.230
H4350	62.0	4.50	NA	4.3	3076	65.0	3226	50100 CUP	3.230
H-VARGET	53.0	3.87	NA	3.7	3010	57.0	3218	50900 CUP	3.230
IMR4895	48.0	3.49	NA	3.4	2867	54.5	3215	52000 CUP	3.290
A-XMR-4350	56.7	4.20	NA	4.0	2829	63.0	3215	57800 PSI	3.260
RELODER15	50.6	3.58	NA	3.4	2965	55.0	3200	58300 PSI	3.275
IMR4320	49.4	3.54	NA	3.4	2867	55.5	3185	51400 CUP	3.290
IMR3031	46.9	3.58	NA	3.4	2863	52.5	3180	51200 CUP	3.290
ACCUR 2700	58.4	4.00	NA	3.7	2984	61.5	3174	58700 PSI	3.260
A-XMR-4064	48.6	3.67	NA	3.4	2780	54.0	3159	60700 PSI	3.260
ACCUR 8700	71.1	4.89	2 SCOOPS	2.2	2624	79.0c	2982	46000 PSI	3.260
IMR4198	39.5	3.13	DBLD	3.1	2709	44.0	2980	51000 CUP	3.290
IMR4227	33.0	2.54	DBLD	2.5	2435	37.0	2705	51300 CUP	3.290
SR4759	32.2	3.20	DBLD	3.1	2404	36.5	2695	51900 CUP	3.290
130 Grain Jacketed Bullet									
H1000	74.4c	5.30	2 SCOOPS	2.5	3098	78.0c	3250	48000 CUP	3.185
A-XMR-3100	61.0	4.56	NA	4.3	2776	67.8	3155	59000 PSI	3.245
A-XMR-4350	55.8	4.13	NA	4.0	2735	62.0	3108	58400 PSI	3.245
H4350	58.0	4.21	NA	4.0	2911	61.5	3082	50800 CUP	3.185
H414	59.0	3.90	NA	3.7	2977	61.0	3064	49400 CUP	3.185
H4831	63.0	4.57	NA	4.3	2909	66.0	3051	50200 CUP	3.185
ACCUR 8700	71.1	4.89	2 SCOOPS	2.2	2658	79.0c	3020	45900 PSI	3.245
H-VARGET	51.0	3.73	NA	3.7	2832	54.0	2998	49400 CUP	3.185
ACCUR 2700	57.0	3.90	NA	3.7	2817	60.0	2997	57200 PSI	3.245
A-XMR-4064	46.3	3.49	NA	3.4	2633	51.5	2992	60700 PSI	3.245
139 Grain Jacketed Bullet									
RELODER22	64.8	4.52	NA	4.3	3082	70.0	3295	58000 PSI	3.275
RELODER19	62.4	4.40	NA	4.3	3020	67.5	3260	58100 PSI	3.275
RELODER15	50.6	3.57	NA	3.4	2817	55.6	3070	59000 PSI	3.275
RELODER12	51.9	3.58	NA	3.4	2785	57.0	3035	59000 PSI	3.275

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c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

7mm REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
140 Grain Jacketed Bullet									
ACC MAG PRO	66.3	4.40	NA	4.3	2952	73.7	3220	60300 PSI	3.280
H870	77.2c	5.30	2 SCOOPS	2.5	3093	79.0c	3153	46800 CUP	3.185
A-XMR-3100	61.2	4.58	2 SCOOPS	2.2	2721	68.0	3092	58200 PSI	3.270
H1000	67.0	4.78	2 SCOOPS	2.2	2922	70.0	3036	50600 CUP	3.250
A-XMR-4350	54.9	4.06	NA	4.0	2665	61.0	3028	54900 PSI	3.270
ACCUR 2700	56.5	3.87	NA	3.7	2815	59.5	2995	55200 PSI	3.270
H414	58.0	3.83	NA	3.7	2856	60.2	2967	49300 CUP	3.250
H4831	61.0	4.42	NA	4.3	2813	64.0	2950	50200 CUP	3.250
A-XMR-4064	47.7	3.60	NA	3.4	2584	53.0	2937	58900 PSI	3.270
H4350	56.0	4.06	NA	4.0	2790	59.0	2927	50000 CUP	3.250
ACCUR 8700	72.0	4.95	2 SCOOPS	2.2	2444	80.0c	2777	41500 PSI	3.270
140 Grain Barnes X Bullet									
IMR7828	66.9	4.85	2 SCOOPS	2.2	2900	72.3	3100	58000 PSI	3.270
IMR4350	60.4	4.44	NA	4.3	2862	65.3	3060	58000 PSI	3.270
IMR4831	63.7	4.69	2 SCOOPS	2.2	2926	66.5	3040	56000 PSI	3.270
145 Grain Jacketed Bullet									
RELODER22	59.1	4.12	NA	4.0	2918	64.5	3150	58600 PSI	3.280
VEC TU7000	62.2	4.38	NA	4.3	2977	64.8	3093	49216 CIP	3.290
RELODER19	56.7	4.00	NA	3.7	2863	61.7	3090	58400 PSI	3.280
v-N560	58.6	4.04	NA	4.0	2788	65.2	3054	NA NA	3.268
VEC TU5000	54.4	3.92	NA	3.7	2884	57.1	3025	49579 CIP	3.290
v-N165	61.4	4.37	NA	4.3	2712	67.7	2960	NA NA	3.268
v-N160	56.2	4.13	NA	4.0	2655	62.6	2901	NA NA	3.268
RELODER15	43.4	3.07	DBLD	2.8	2552	47.5	2780	58700 PSI	3.280
RELODER12	43.7	3.02	DBLD	2.8	2537	48.0	2765	58900 PSI	3.280
145 Grain Lead Bullet									
ACC XMP5744	20.0	1.50	1.46	1.3	1638	33.0	2333	35000 PSI	3.005
150 Grain Jacketed Bullet									
A-XMR-3100	59.4	4.44	NA	4.3	2643	66.0	3003	60200 PSI	3.280
H4831	59.0	4.28	NA	4.0	2847	62.0	2986	51100 CUP	3.270
IMR7828	54.8	3.98	NA	3.7	2510	67.1	2980	56000 PSI	3.270
A-XMR-4350	54.9	4.06	NA	4.0	2612	61.0	2968	61000 PSI	3.280
H870	80.0c	5.49	2 SCOOPS	2.5	2960	80.0c	2960	43600 CUP	3.270
ACCUR 8700	71.1	4.89	2 SCOOPS	2.2	2597	79.0c	2951	50900 PSI	3.280
IMR4831	49.8	3.66	NA	3.4	2429	62.0	2940	57000 PSI	3.270
H1000	65.0	4.63	2 SCOOPS	2.2	2826	68.0	2936	49900 CUP	3.270
IMR4064	47.9	3.57	NA	3.4	2642	54.0	2935	51600 CUP	3.290
IMR4350	48.0	3.53	NA	3.4	2466	58.8	2930	56000 PSI	3.270

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c = Compressed charge Copyright 01-22-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

7mm REMINGTON MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
				....STARTING LOADS....						
150 Grain Jacketed Bullet (Continued)										
ACCUR 2700	54.6	3.74	NA	3.7	2726	57.5	2900	59600	PSI	3.280
IMR4320	48.2	3.45	NA	3.4	2607	54.0	2895	51300	CUP	3.290
IMR4895	46.2	3.36	NA	3.1	2593	52.0	2880	51500	CUP	3.290
H4350	55.0	3.99	NA	3.7	2752	57.0	2859	50100	CUP	3.270
IMR3031	44.9	3.42	NA	3.4	2541	51.0	2850	52000	CUP	3.290
A-XMR-4064	46.3	3.49	NA	3.4	2471	51.5	2808	59600	PSI	3.280
IMR4198	37.8	3.00	DBLD	2.8	2412	43.0	2705	52000	CUP	3.290
160 Grain Jacketed Bullet										
RELODER22	59.5	4.15	NA	4.0	2849	65.0	3075	58600	PSI	3.285
RELODER 25	62.9	4.45	NA	4.3	2833	68.0	3028	58000	PSI	3.285
RELODER19	56.9	4.02	NA	4.0	2798	62.0	3020	58500	PSI	3.285
IMR7828	62.2	4.51	NA	4.3	2776	66.0	2940	57000	PSI	3.290
VEC TU8000	64.8	4.56	NA	4.3	2861	66.0	2936	47649	CIP	3.290
ACCUR 8700	71.1	4.89	2 SCOOPS	2.2	2581	79.0c	2933	53800	PSI	3.280
ACC MAG PRO	59.3	3.93	NA	3.7	2756	65.9	2932	60600	PSI	3.225
H870	80.0c	5.49	2 SCOOPS	2.5	2914	80.0c	2914	45500	CUP	3.290
IMR4350	55.3	4.06	NA	4.0	2720	58.7	2880	57000	PSI	3.290
IMR4831	57.7	4.24	NA	4.0	2753	60.2	2860	56000	PSI	3.290
A-XMR-3100	57.2	4.28	NA	4.0	2512	63.5	2855	59000	PSI	3.280
H1000	63.0	4.49	NA	4.3	2707	66.0	2839	49600	CUP	3.290
v-N560	53.0	3.66	NA	3.4	2605	58.8	2821	NA	NA	3.228
H4831	58.0	4.20	NA	4.0	2709	60.0	2787	49800	CUP	3.290
ACCUR 2700	54.6	3.74	NA	3.7	2614	57.5	2781	58500	PSI	3.280
VEC TU7000	57.4	4.04	NA	4.0	2740	58.6	2776	42540	CIP	3.290
A-XMR-4350	51.3	3.80	NA	3.7	2436	57.0	2768	58300	PSI	3.280
H4350	53.0	3.84	NA	3.7	2617	55.5	2745	49800	CUP	3.290
v-N165	55.1	3.92	NA	3.7	2517	60.7	2707	NA	NA	3.228
A-XMR-4064	44.5	3.36	NA	3.1	2347	49.5	2667	59600	PSI	3.280
v-N160	51.3	3.77	NA	3.7	2465	56.3	2645	NA	NA	3.228
162 Grain Jacketed Bullet										
H450	58.6	3.82	NA	3.7	2777	64.0	2997	50000	CUP	3.185
H1000	67.0	4.78	2 SCOOPS	2.2	2796	70.0	2905	49600	CUP	3.290
H870	80.0c	5.49	2 SCOOPS	2.5	2883	80.0c	2883	43300	CUP	3.290
H4831	60.0	4.35	NA	4.3	2711	64.0	2871	49800	CUP	3.290
H4350	55.0	3.99	NA	3.7	2668	58.0	2799	49400	CUP	3.290
168 Grain Jacketed Bullet										
H1000	63.4	4.52	NA	4.3	2688	72.0	3015	52000	CUP	3.185
H870	71.5	4.90	2 SCOOPS	2.2	2771	77.0c	2963	49300	CUP	3.185

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2 SCOOPS = Use TWO dippers of powder in each round.

7mm REMINGTON MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
			....STARTING LOADS....						
168 Grain Jacketed Bullet (Continued)									
ACCUR 8700	70.2	4.83	2 SCOOPS	2.2	2520	78.0c	2864	50700 PSI	3.280
v-N560	55.1	3.80	NA	3.7	2468	63.9	2788	NA NA	3.287
A-XMR-4350	52.2	3.86	NA	3.7	2448	58.0	2782	61000 PSI	3.280
A-XMR-3100	55.8	4.17	NA	4.0	2442	62.0	2775	57900 PSI	3.280
H450	55.0	3.59	NA	3.4	2487	62.0	2762	51600 CUP	3.185
ACCUR 2700	53.2	3.64	NA	3.4	2550	56.0	2713	58400 PSI	3.280
v-N170	62.0	4.42	NA	4.3	2434	70.1	2709	NA NA	3.287
v-N165	55.2	3.93	NA	3.7	2423	64.8	2691	NA NA	3.287
H4350	50.7	3.68	NA	3.4	2406	57.0	2672	51400 CUP	3.185
A-XMR-4064	45.0	3.40	NA	3.1	2322	50.0	2631	58500 PSI	3.280
168 Grain Lead Bullet									
ACC XMP5744	20.0	1.50	1.46	1.3	1559	30.0	2053	32500 PSI	3.180
170 Grain Jacketed Bullet									
H870	80.0c	5.49	2 SCOOPS	2.5	2828	80.0c	2828	42900 CUP	3.270
H1000	69.0	4.92	2 SCOOPS	2.2	2727	71.0	2806	49400 CUP	3.270
H4831	63.0	4.57	NA	4.3	2727	65.0	2806	48900 CUP	3.270
H4350	58.0	4.21	NA	4.0	2689	60.0	2767	48500 CUP	3.270
173 Grain Jacketed Bullet									
VEC TU8000	62.7	4.41	NA	4.3	2714	66.4	2874	50073 CIP	3.290
175 Grain Jacketed Bullet									
IMR7828	58.1	4.21	NA	4.0	2595	66.0	2910	52000 CUP	3.290
RELODER22	56.3	3.93	NA	3.7	2686	61.3	2900	58400 PSI	3.285
RELODER 25	60.8	4.30	NA	4.0	2661	65.8	2873	58100 PSI	3.285
ACC MAG PRO	59.4	3.94	NA	3.7	2640	66.0	2854	61300 PSI	3.280
VEC TU8000	64.0	4.51	NA	4.3	2753	65.6	2792	45254 CIP	3.290
IMR4831	55.4	4.07	NA	4.0	2487	63.0	2790	52000 CUP	3.290
H870	76.1	5.22	2 SCOOPS	2.5	2756	77.0c	2782	46300 CUP	3.290
IMR4350	52.6	3.86	NA	3.7	2465	59.5	2765	51800 CUP	3.290
ACCUR 8700	67.5	4.64	2 SCOOPS	2.2	2424	75.0	2754	51800 PSI	3.275
VEC TU7000	55.6	3.92	NA	3.7	2418	59.4	2723	45326 CIP	3.290
A-XMR-3100	54.5	4.08	NA	4.0	2376	60.5	2700	59700 PSI	3.275
H1000	61.0	4.35	NA	4.3	2566	64.5	2692	50400 CUP	3.290
v-N560	48.9	3.37	NA	3.1	2299	59.0	2666	NA NA	3.287
IMR4320	44.4	3.18	DBLD	3.1	2377	50.5	2665	52000 CUP	3.290
H4831	55.0	3.99	NA	3.7	2536	58.0	2660	50200 CUP	3.290
A-XMR-4350	50.4	3.73	NA	3.7	2335	56.0	2653	58700 PSI	3.280
IMR4064	45.3	3.38	NA	3.1	2381	51.0	2645	51500 CUP	3.290
IMR4895	44.0	3.20	DBLD	3.1	2358	50.0	2645	52000 CUP	3.290

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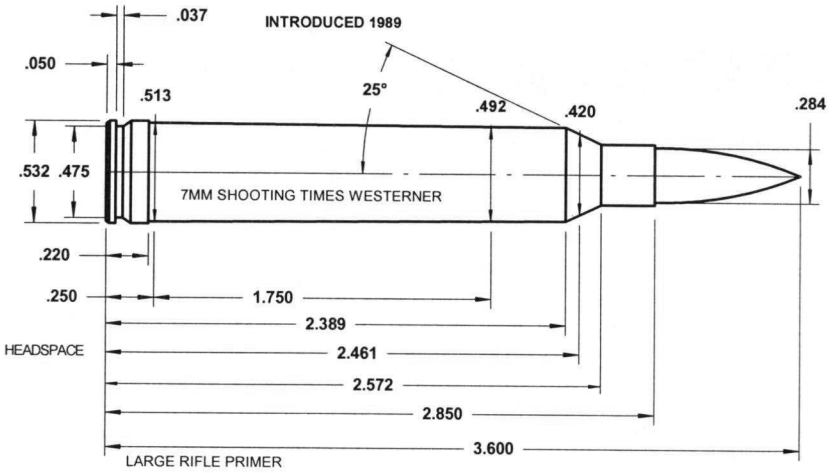
7mm REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
175 Grain Jacketed Bullet (Continued)									
v-N170	55.4	3.95	NA	3.7	2346	66.4	2619	NA NA	3.287
H4350	51.0	3.70	NA	3.4	2471	54.0	2617	51400 CUP	3.290
ACCUR 2700	50.4	3.45	NA	3.4	2426	53.0	2581	59800 PSI	3.275
v-N165	46.7	3.33	NA	3.1	2239	58.8	2575	NA NA	3.287
IMR3031	42.9	3.27	DBLD	3.1	2323	47.5	2555	50700 CUP	3.290
A-XMR-4064	43.2	3.26	DBLD	3.1	2202	48.0	2502	59300 PSI	3.275
IMR4198	36.5	2.89	DBLD	2.8	2176	41.5	2440	52000 CUP	3.290
IMR4227	31.4	2.41	DBLD	2.2	1998	35.5	2240	51800 CUP	3.290
SR4759	30.4	3.02	DBLD	2.8	1999	34.0	2220	51200 CUP	3.290
195 Grain Barnes X Bullet									
ACCUR 8700	69.3	4.77	2 SCOOPS	2.2	2383	77.0c	2708	51600 PSI	3.275
A-XMR-3100	52.7	3.94	NA	3.7	2233	58.5	2538	59800 PSI	3.275
A-XMR-4350	47.3	3.50	NA	3.4	2147	52.6	2440	56500 PSI	3.275
ACCUR 2700	48.5	3.32	NA	3.1	2263	51.0	2407	58400 PSI	3.275
A-XMR-4064	41.8	3.16	DBLD	3.1	2053	46.5	2333	60600 PSI	3.275

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2 SCOOPS = Use TWO dippers of powder in each round.

7mm Shooting Times Westerner



Useful case capacity 6.02 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
120 Grain Jacketed Bullet											
H1000	82.0	5.85	2 SCOOPS	2.8	3247	86.0c	3405	62353 PSI	3.585	....	....
H4350	69.0	5.00	2 SCOOPS	2.2	3193	73.0	3350	62955 PSI	3.585	....	....
H4831	75.0	5.44	2 SCOOPS	2.5	3222	78.5	3348	62473 PSI	3.585	....	....
120 Grain Barnes X Bullet											
IMR7828	72.8	5.27	2 SCOOPS	2.5	3207	80.0	3495	62900 PSI	3.580	....	....
IMR4350	66.3	4.87	2 SCOOPS	2.2	3175	73.0	3460	63000 PSI	3.580	....	....
IMR4831	66.8	4.91	2 SCOOPS	2.2	3131	74.0	3445	63400 PSI	3.580	....	....
ACCUR 8700	85.5	5.88	2 SCOOPS	2.8	2978	95.0c	3384	61000 PSI	3.615	....	....
A-XMR-3100	67.5	5.05	2 SCOOPS	2.5	2894	75.0	3289	60000 PSI	3.615	....	....
139 Grain Jacketed Bullet											
H1000	81.0	5.78	2 SCOOPS	2.8	3131	85.5c	3284	62955 PSI	3.585	....	....
H4350	69.0	5.00	2 SCOOPS	2.2	3093	71.0	3183	62955 PSI	3.585	....	....
H4831	72.0	5.22	2 SCOOPS	2.5	3004	76.5	3181	62473 PSI	3.585	.9873	.9659
140 Grain Jacketed Bullet											
IMR7828	73.2	5.31	2 SCOOPS	2.5	3090	79.5	3335	62100 PSI	3.580	....	....
IMR4350	65.2	4.79	2 SCOOPS	2.2	3015	71.5	3285	62700 PSI	3.580	....	....
IMR4831	67.7	4.98	2 SCOOPS	2.2	3044	74.0	3285	62500 PSI	3.580	....	....
140 Grain Barnes X Bullet											
ACCUR 8700	84.6	5.82	2 SCOOPS	2.8	2876	94.0c	3268	64700 PSI	3.615	....	....
A-XMR-3100	65.7	4.91	2 SCOOPS	2.2	2776	73.0	3155	62400 PSI	3.615	....	....
145 Grain Jacketed Bullet											
H1000	74.0	5.28	2 SCOOPS	2.5	3003	77.0	3120	62714 PSI	3.565	....	....

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c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

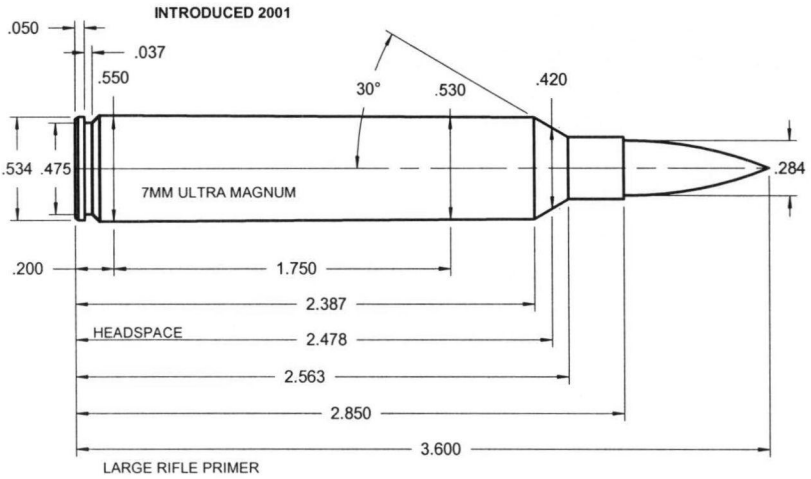
7mm Shooting Times Westerner (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED	FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
145 Grain Jacketed Bullet (Continued)											
H4831	68.0	4.93	2 SCOOPS	2.2	2892	72.0	3063	62955 PSI	3.565	....	....
150 Grain Jacketed Bullet											
RELODER22	77.6	5.41	2 SCOOPS	2.5	3207	80.0	3300	59000 PSI	3.590	....	....
ACCUR 8700	84.6	5.82	2 SCOOPS	2.8	2845	94.0c	3233	64400 PSI	3.640	....	....
IMR7828	71.5	5.18	2 SCOOPS	2.5	2984	77.0	3190	61600 PSI	3.580	....	....
IMR4350	62.0	4.56	NA	4.3	2881	67.5	3110	62300 PSI	3.580	....	....
IMR4831	64.4	4.74	2 SCOOPS	2.2	2909	69.5	3110	61700 PSI	3.580	....	....
A-XMR-3100	65.7	4.91	2 SCOOPS	2.2	2736	73.0	3109	64400 PSI	3.640	....	....
150 Grain Barnes X Bullet											
H870	86.5	5.93	2 SCOOPS	2.8	2971	88.0c	3028	57418 PSI	3.585	....	....
H 50 BMG	80.0	5.56	2 SCOOPS	2.5	2886	84.0	3027	62714 PSI	3.585	....	....
H1000	70.0	4.99	2 SCOOPS	2.2	2898	72.5	2982	62714 PSI	3.585	....	....
H4831	66.0	4.78	2 SCOOPS	2.2	2840	68.0	2923	62714 PSI	3.585	....	....
160 Grain Jacketed Bullet											
RELODER 25	72.5	5.13	2 SCOOPS	2.5	3058	79.0	3300	62300 PSI	3.600	....	....
ACCUR 8700	83.7	5.76	2 SCOOPS	2.8	2796	93.0c	3177	62600 PSI	3.645	....	....
IMR7828	69.8	5.06	2 SCOOPS	2.5	2881	76.0	3110	62300 PSI	3.600	....	....
H870	87.0	5.97	2 SCOOPS	2.8	3010	90.0c	3097	55492 PSI	3.565	....	....
H1000	76.0	5.42	2 SCOOPS	2.5	2913	80.7	3084	61992 PSI	3.565	.9880	.9685
A-XMR-3100	65.7	4.91	2 SCOOPS	2.2	2707	73.0	3076	64600 PSI	3.645	....	....
H4831	70.0	5.07	2 SCOOPS	2.5	2895	74.0	3037	62955 PSI	3.565	....	....
IMR4831	62.8	4.62	2 SCOOPS	2.2	2788	68.5	3010	62400 PSI	3.600	....	....
IMR4350	61.4	4.51	NA	4.3	2775	66.5	2995	62000 PSI	3.600	....	....
H 50 BMG	88.0c	6.11	2 SCOOPS	2.8	2914	90.0c	2970	56094 PSI	3.565	....	....
160 Grain Barnes X Bullet											
ACCUR 8700	83.7	5.76	2 SCOOPS	2.8	2746	93.0c	3120	61300 PSI	3.655	....	....
A-XMR-3100	64.8	4.85	2 SCOOPS	2.2	2607	72.0	2963	62500 PSI	3.655	....	....
175 Grain Jacketed Bullet											
RELODER 25	70.0	4.95	2 SCOOPS	2.2	2846	78.0	3131	63700 PSI	3.600	....	....
H870	86.0	5.90	2 SCOOPS	2.8	2972	89.0c	3059	62353 PSI	3.585	....	....
ACCUR 8700	83.7	5.76	2 SCOOPS	2.8	2681	93.0c	3047	60500 PSI	3.640	....	....
H 50 BMG	85.0	5.90	2 SCOOPS	2.8	2862	89.0c	2973	62955 PSI	3.585	....	....
H1000	70.0	4.99	2 SCOOPS	2.2	2807	74.0	2944	62473 PSI	3.585	....	....
A-XMR-3100	66.6	4.98	2 SCOOPS	2.2	2559	74.0	2908	57800 PSI	3.640	....	....
195 Grain Jacketed Bullet											
H870	85.0	5.83	2 SCOOPS	2.8	2839	88.0c	2921	62473 PSI	3.585	....	....
H 50 BMG	84.0	5.83	2 SCOOPS	2.8	2746	88.0c	2880	63075 PSI	3.585	....	....

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c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

7mm ULTRA MAG



Useful case capacity 7.14 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
100 Grain Jacketed Bullet											
H4350	82.0	5.95	2 SCOOPS	2.8	3618	87.0	3804	63300 PSI	3.500	.9901	.9740
H4831	90.0	6.52	2 SCOOPS	3.1	3579	95.0	3754	62800 PSI	3.500	....	....
H1000	98.0	6.99	2 SCOOPS	3.4	3541	104.0c	3750	62700 PSI	3.500	....	....
110 Grain Jacketed Bullet											
H1000	96.0	6.84	2 SCOOPS	3.4	3471	102.0c	3676	62600 PSI	3.500	....	....
H4350	82.0	5.95	2 SCOOPS	2.8	3503	86.0	3675	63200 PSI	3.500	....	....
H4831	88.0	6.38	2 SCOOPS	3.1	3449	93.5	3652	63000 PSI	3.500	.9896	.9707
115 Grain Jacketed Bullet											
H4350	82.0	5.95	2 SCOOPS	2.8	3458	85.5	3592	63400 PSI	3.500	....	....
H1000	95.0	6.77	2 SCOOPS	3.1	3389	101.0c	3589	63100 PSI	3.500	.9905	.9759
H4831	87.0	6.31	2 SCOOPS	3.1	3398	91.5	3565	62800 PSI	3.500	....	....
120 Grain Jacketed Bullet											
ACCUR 8700	98.1	6.75	2 SCOOPS	3.1	3320	109.0c	3652	62200 PSI	3.595	....	....
A-XMR-3100	79.2	5.92	2 SCOOPS	2.8	3284	88.0	3612	63600 PSI	3.595	....	....
H1000	94.0	6.70	2 SCOOPS	3.1	3373	99.5	3572	63100 PSI	3.600	....	....
H4350	81.0	5.87	2 SCOOPS	2.8	3485	83.0	3552	62900 PSI	3.600	....	....
H4831	85.0	6.16	2 SCOOPS	2.8	3339	90.0	3536	63000 PSI	3.600	....	....
120 Grain Barnes X Bullet											
ACCUR 8700	98.1	6.75	2 SCOOPS	3.1	3345	109.0c	3680	63600 PSI	3.595	....	....
A-XMR-3100	78.8	5.89	2 SCOOPS	2.8	3305	87.5	3637	64700 PSI	3.595	....	....
130 Grain Barnes X Bullet											
H870	104.0	7.13	2 SCOOPS	3.4	3368	107.0c	3466	59000 PSI	3.560	....	....

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c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

7mm ULTRA MAG (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED FPS	Velocity Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....										
130 Grain Barnes X Bullet (Continued)										
H1000	90.0	6.42	2 SCOOPS	3.1	3239	95.5 3430	62900 PSI	3.560	.9897	.9717
H 50 BMG	102.0	7.08	2 SCOOPS	3.4	3254	107.0c3413	62300 PSI	3.560	....	....
H4831	83.0	6.02	2 SCOOPS	2.8	3222	88.0 3412	63100 PSI	3.560	.9887	.9750
139 Grain Jacketed Bullet										
ACCUR 8700	95.4	6.56	2 SCOOPS	3.1	3183	106.0c3502	62900 PSI	3.595	....	....
A-XMR-3100	77.4	5.79	2 SCOOPS	2.8	3136	86.0 3450	64200 PSI	3.595	....	....
ACC XMP5744	53.1	3.99	NA	3.7	2949	59.0 3245	64400 PSI	3.595	....	....
ACC XMP5744	42.0	3.16	DBLD	3.1	2562	42.0 2562	35400 PSI	3.595	....	....
140 Grain Jacketed Bullet										
ACCUR 8700	92.7	6.38	2 SCOOPS	3.1	3158	103.0 3474	64000 PSI	3.595	....	....
A-XMR-3100	74.3	5.56	2 SCOOPS	2.5	3087	82.5 3396	63700 PSI	3.595	....	....
ACC XMP5744	52.2	3.92	NA	3.7	2914	58.0 3205	62400 PSI	3.595	....	....
140 Grain Barnes X Bullet										
ACCUR 8700	94.5	6.50	2 SCOOPS	3.1	3170	105.0c3487	64400 PSI	3.595	....	....
A-XMR-3100	75.6	5.65	2 SCOOPS	2.8	3102	84.0 3413	64500 PSI	3.595	....	....
H870	102.0	7.00	2 SCOOPS	3.4	3223	106.0c3349	60300 PSI	3.560	....	....
H4831	82.0	5.94	2 SCOOPS	2.8	3096	87.0 3279	63100 PSI	3.560	.9887	.9771
H1000	90.0	6.42	2 SCOOPS	3.1	3124	95.0 3277	62700 PSI	3.560	....	....
H 50 BMG	101.0	7.01	2 SCOOPS	3.4	3089	107.0c3271	62400 PSI	3.560	....	....
ACC XMP5744	51.3	3.85	NA	3.7	2808	57.0 3089	62800 PSI	3.595	....	....
ACC XMP5744	43.0	3.23	DBLD	3.1	2544	43.0 2544	39900 PSI	3.595	....	....
145 Grain Jacketed Bullet										
H870	103.0	7.07	2 SCOOPS	3.4	3237	106.0c3331	59400 PSI	3.580	....	....
H1000	91.0	6.49	2 SCOOPS	3.1	3146	97.0 3331	63300 PSI	3.580	.9904	.9777
H 50 BMG	101.0	7.01	2 SCOOPS	3.4	3134	107.0c3319	63600 PSI	3.580	....	....
H4831	83.0	6.02	2 SCOOPS	2.8	3119	88.0 3302	63400 PSI	3.580	.9886	.9734
145 Grain Lead Bullet										
ACC XMP5744	30.0	2.25	DBLD	2.2	1894	36.0 2228	23800 PSI	3.500	....	....
150 Grain Jacketed Bullet										
ACCUR 8700	93.6	6.44	2 SCOOPS	3.1	3090	104.0c3400	62500 PSI	3.595	....	....
H870	100.0	6.86	2 SCOOPS	3.4	3195	105.0c3352	63400 PSI	3.600	....	....
A-XMR-3100	74.2	5.55	2 SCOOPS	2.5	3027	82.4 3330	64400 PSI	3.595	....	....
H1000	87.0	6.20	2 SCOOPS	2.8	3079	92.0 3230	63100 PSI	3.600	....	....
H 50 BMG	97.0	6.74	2 SCOOPS	3.1	3043	103.0c3222	63200 PSI	3.600	.9905	.9771
H4831	82.0	5.94	2 SCOOPS	2.8	3127	84.0 3187	63100 PSI	3.600	....	....
ACC XMP5744	50.4	3.79	NA	3.7	2761	56.0 3038	62500 PSI	3.595	....	....
ACC XMP5744	43.0	3.23	DBLD	3.1	2506	43.0 2506	40600 PSI	3.595	....	....
154 Grain Jacketed Bullet										
H870	95.0	6.52	2 SCOOPS	3.1	3118	100.0 3270	63300 PSI	3.630	....	....

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7mm ULTRA MAG (Continued)

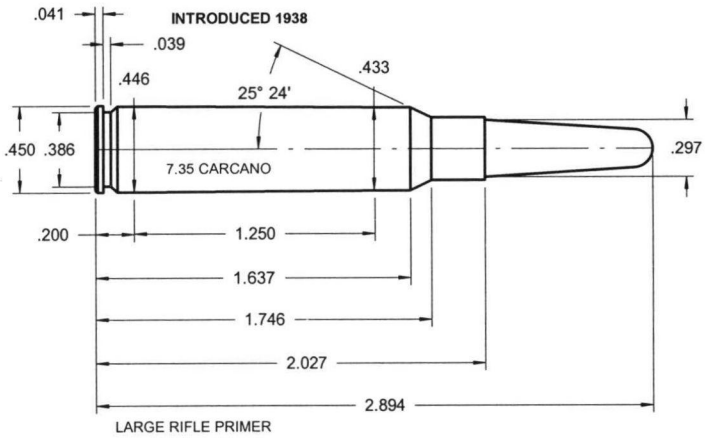
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
154 Grain Jacketed Bullet (Continued)											
H1000	85.0	6.06	2 SCOOPS	2.8	3015	90.0	3192	63300 PSI	3.630	....	....
H 50 BMG	94.0	6.53	2 SCOOPS	3.1	2993	100.0	3170	63100 PSI	3.630	.9906	.9768
160 Grain Jacketed Bullet											
ACCUR 8700	90.0	6.19	2 SCOOPS	2.8	2955	100.0	3251	60900 PSI	3.595	....	....
H870	95.0	6.52	2 SCOOPS	3.1	3064	100.0	3214	63100 PSI	3.600	....	....
A-XMR-3100	72.0	5.39	2 SCOOPS	2.5	2911	80.0	3202	63500 PSI	3.595	....	....
H1000	85.0	6.06	2 SCOOPS	2.8	2962	91.0	3167	63500 PSI	3.600	.9888	.9807
H 50 BMG	94.0	6.53	2 SCOOPS	3.1	2969	100.0	3144	63400 PSI	3.600	.9905	.9784
ACC XMP5744	50.4	3.79	NA	3.7	2696	56.0	2966	62500 PSI	3.595	....	....
ACC XMP5744	45.0	3.38	NA	3.1	2529	45.0	2529	42500 PSI	3.595	....	....
160 Grain Barnes X Bullet											
ACCUR 8700	91.8	6.32	2 SCOOPS	3.1	2963	102.0	3260	64000 PSI	3.595	....	....
A-XMR-3100	68.4	5.12	2 SCOOPS	2.5	2791	76.0	3071	63100 PSI	3.595	....	....
ACC XMP5744	35.0	2.63	DBLD	2.5	1974	47.0	2529	46200 PSI	3.595	....	....
162 Grain Jacketed Bullet											
H870	97.0	6.65	2 SCOOPS	3.1	3058	102.0	3207	63400 PSI	3.650	....	....
H1000	84.0	5.99	2 SCOOPS	2.8	2953	89.0	3127	62500 PSI	3.650	....	....
H 50 BMG	94.0	6.53	2 SCOOPS	3.1	2945	100.0	3119	62600 PSI	3.650	.9904	.9816
168 Grain Jacketed Bullet											
H870	95.0	6.52	2 SCOOPS	3.1	3034	100.0	3182	63500 PSI	3.650	....	....
H 50 BMG	94.0	6.53	2 SCOOPS	3.1	2944	100.0	3118	63400 PSI	3.650	.9906	.9784
H1000	85.0	6.06	2 SCOOPS	2.8	2943	90.0	3116	63500 PSI	3.650	....	....
168 Grain Lead Bullet											
ACC XMP5744	31.0	2.33	DBLD	2.2	1805	40.0	2248	28800 PSI	3.260	....	....
175 Grain Jacketed Bullet											
ACCUR 8700	88.2	6.07	2 SCOOPS	2.8	2847	98.0	3132	61400 PSI	3.595	....	....
H870	94.0	6.45	2 SCOOPS	3.1	2949	99.0	3093	62500 PSI	3.600	....	....
A-XMR-3100	69.3	5.18	2 SCOOPS	2.5	2765	77.0	3043	65200 PSI	3.595	....	....
H1000	82.0	5.85	2 SCOOPS	2.8	2853	87.0	3021	63500 PSI	3.600	.9886	.9776
H 50 BMG	91.0	6.32	2 SCOOPS	3.1	2878	96.0	3019	63100 PSI	3.600	....	....
ACC XMP5744	50.4	3.79	NA	3.7	2594	56.0	2854	63300 PSI	3.595	....	....

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2 SCOOPS = Use TWO dippers of powder in each round.

7.35mm ITALIAN CARCANO

LOADS REDUCED FROM SIMILAR CARTRIDGE.



Useful case capacity 3.07 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
100 Grain Jacketed Bullet									
A-XMR-2015	32.3	2.35	DBLD	2.2	2550	33.0	2599	35112 PSI	2.893
ACCUR 2230	33.9	2.22	DBLD	2.2	2554	34.3	2579	34760 PSI	2.893
ACCUR 2460	34.3	2.25	DBLD	2.2	2542	34.3	2542	32736 PSI	2.893
A-XMR-2495	32.5	2.43	DBLD	2.2	2420	32.5	2420	30624 PSI	2.893
ACCUR 2520	33.4	2.28	DBLD	2.2	2419	33.4	2419	26928 PSI	2.893
A-XMR-4064	35.2	2.66	DBLD	2.5	2379	35.2	2379	27808 PSI	2.893
ACCUR 2700	35.2	2.41	DBLD	2.2	2321	35.2	2321	27016 PSI	2.893
110 Grain Jacketed Bullet									
A-XMR-2015	29.7	2.17	DBLD	1.9	2346	31.2	2460	35992 PSI	2.893
A-XMR-4064	32.3	2.44	DBLD	2.2	2306	34.3	2442	36432 PSI	2.893
A-XMR-2495	30.9	2.31	DBLD	2.2	2324	32.5	2437	36080 PSI	2.893
ACCUR 2460	32.5	2.13	DBLD	1.9	2430	32.5	2430	32912 PSI	2.893
ACCUR 2520	33.4	2.28	DBLD	2.2	2428	33.4	2428	31416 PSI	2.893
H335	33.4	2.15	DBLD	1.9	2423	33.4	2423	30184 PSI	2.893
ACCUR 2230	31.6	2.08	DBLD	1.9	2401	31.6	2401	32560 PSI	2.893
H4895	32.5	2.37	DBLD	2.2	2352	32.5	2352	27368 PSI	2.893
H-VARGET	33.4	2.44	DBLD	2.2	2322	33.4	2322	28072 PSI	2.893
ACCUR 2700	35.2	2.41	DBLD	2.2	2297	35.2	2297	29304 PSI	2.893
BL-C(2)	34.3	2.21	DBLD	2.2	2280	34.3	2280	22352 PSI	2.893
H4198	22.4	1.68	DBLD	1.6	2175	22.4	2175	31592 PSI	2.893

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7.35mm ITALIAN CARCANO (Continued)

LOADS REDUCED FROM SIMILAR CARTRIDGE.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
125 Grain Jacketed Bullet									
A-XMR-4064	32.9	2.48	DBLD	2.5	2240	33.4	2283	34848 PSI	2.893
130 Grain Jacketed Bullet									
H-VARGET	31.6	2.31	DBLD	2.2	2253	31.6	2253	31416 PSI	2.893
H4895	30.8	2.24	DBLD	2.2	2241	30.8	2241	31064 PSI	2.893
BL-C(2)	33.0	2.13	DBLD	1.9	2233	33.0	2233	28864 PSI	2.893
H335	29.9	1.93	DBLD	1.9	2187	29.9	2187	30536 PSI	2.893
H4198	21.5	1.61	DBLD	1.6	2017	21.5	2017	32032 PSI	2.893
150 Grain Jacketed Bullet									
H4895	29.9	2.18	DBLD	1.9	2158	29.9	2158	32256 PSI	2.893
BL-C(2)	32.5	2.10	DBLD	1.9	2129	32.5	2129	29832 PSI	2.893
H-VARGET	30.3	2.21	DBLD	2.2	2121	30.3	2121	31856 PSI	2.893
ACCUR 2520	29.4	2.01	DBLD	1.9	2099	29.4	2099	34144 PSI	2.893
H335	29.0	1.87	DBLD	1.6	2084	29.0	2084	31856 PSI	2.893
ACCUR 2460	27.7	1.82	DBLD	1.6	2009	28.6	2067	35376 PSI	2.893
ACCUR 2230	26.3	1.72	DBLD	1.6	1938	27.8	2052	36344 PSI	2.893
ACCUR 2700	32.3	2.21	DBLD	2.2	2026	32.6	2045	34584 PSI	2.893
A-XMR-4064	27.9	2.11	DBLD	1.9	1951	29.0	2027	35640 PSI	2.893
A-XMR-2495	25.7	1.93	DBLD	1.9	1935	26.8	2011	35728 PSI	2.893
A-XMR-2015	25.5	1.86	DBLD	1.6	1979	25.5	1979	33792 PSI	2.893
H4198	21.1	1.58	DBLD	NA	1905	21.1	1905	32384 PSI	2.893
152 Grain Lead Bullet									
ACC XMP5744	19.7	1.48	1.46	1.3	1907	19.8	1907	34408 PSI	2.893
ACCUR 2700	29.0	1.99	DBLD	1.9	1853	29.0	1853	33088 PSI	2.893
A-XMR-2495	25.0	1.87	DBLD	1.6	1850	25.0	1850	24992 PSI	2.893
ACCUR 2520	24.2	1.65	DBLD	1.6	1809	24.2	1809	22616 PSI	2.893
ACCUR 2460	23.8	1.56	DBLD	NA	1800	23.8	1800	23232 PSI	2.893
A-XMR-2015	22.4	1.64	DBLD	1.6	1794	22.4	1794	24376 PSI	2.893
ACCUR 2230	22.8	1.50	1.46	1.3	1781	22.8	1781	24464 PSI	2.893
170 Grain Jacketed Bullet									
A-XMR-2015	21.1	1.54	1.46	NA	1835	23.7	2038	38600 PSI	2.893
BL-C(2)	31.6	2.04	DBLD	1.9	2011	31.6	2011	30536 PSI	2.893
H-VARGET	29.0	2.12	DBLD	1.9	1957	29.0	1957	32120 PSI	2.893
H4895	26.8	1.95	DBLD	1.9	1930	26.8	1930	30976 PSI	2.893
ACCUR 2520	27.7	1.89	DBLD	1.9	1922	27.7	1922	33792 PSI	2.893
ACCUR 2230	24.6	1.61	DBLD	1.6	1794	26.4	1918	36900 PSI	2.893
ACCUR 2460	25.9	1.70	DBLD	1.6	1876	26.5	1912	35112 PSI	2.893
ACCUR 2700	30.3	2.07	DBLD	1.9	1858	30.8	1894	34936 PSI	2.893

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7.35mm ITALIAN CARCANO (Continued)

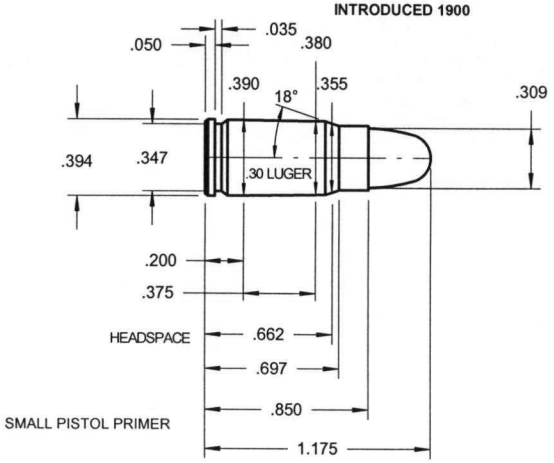
LOADS REDUCED FROM SIMILAR CARTRIDGE.

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
170 Grain Jacketed Bullet (Continued)									
A-XMR-2495	25.1	1.88	DBLD	1.6	1837	25.9	1891	35376 PSI	2.893
H335	26.8	1.73	DBLD	1.6	1883	26.8	1883	31944 PSI	2.893
A-XMR-4064	25.8	1.95	DBLD	1.9	1769	26.4	1803	35112 PSI	2.893
H4198	19.8	1.49	1.46	1.3	1732	19.8	1732	28688 PSI	2.893
173 Grain Lead Bullet									
ACCUR 2520	25.0	1.71	DBLD	1.6	1853	25.0	1853	25784 PSI	2.893
A-XMR-4064	26.4	1.99	DBLD	1.9	1824	26.4	1824	25168 PSI	2.893
ACCUR 2460	24.2	1.59	DBLD	1.6	1821	24.2	1821	24904 PSI	2.893
A-XMR-2495	24.2	1.81	DBLD	1.6	1817	24.2	1817	30888 PSI	2.893
ACCUR 2700	29.0	1.99	DBLD	1.9	1805	29.0	1805	28864 PSI	2.893
A-XMR-2015	22.8	1.66	DBLD	1.6	1795	22.8	1795	25520 PSI	2.893
ACCUR 2230	22.8	1.50	1.46	1.3	1734	22.8	1734	24112 PSI	2.893
190 Grain Lead Bullet									
ACCUR 2520	25.0	1.71	DBLD	1.6	1852	25.0	1852	31944 PSI	2.893
A-XMR-2015	22.0	1.61	DBLD	1.6	1836	22.0	1836	31240 PSI	2.893
ACCUR 2460	23.8	1.56	DBLD	NA	1831	23.8	1831	33000 PSI	2.893
ACCUR 2230	22.8	1.50	1.46	1.3	1801	22.8	1801	32736 PSI	2.893
ACC XMP5744	19.3	1.45	1.36	1.3	1763	19.3	1763	31064 PSI	2.893
A-XMR-2495	24.2	1.81	DBLD	1.6	1751	24.2	1751	26928 PSI	2.893

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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30 LUGER



Useful case capacity 0.71 cc

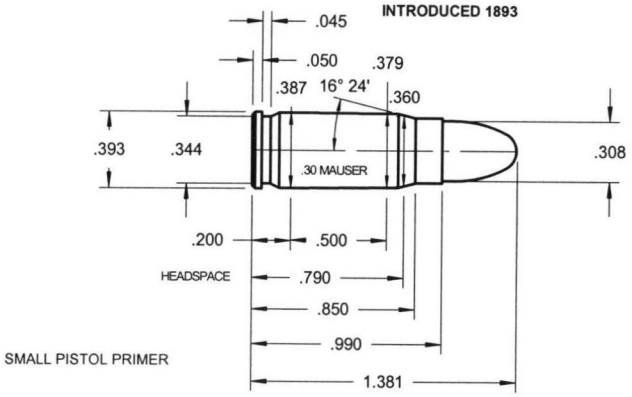
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
86 Grain Jacketed Bullet										
ACCUR #7	6.8	.44	.43	NA	1247	7.6	1417	26800	CUP	1.175
ACCUR #5	5.6	.35	.34	.3	1240	6.2	1409	28000	CUP	1.175
ACCUR #2	4.1	.34	.34	.3	1158	4.5	1316	27900	CUP	1.175
93 Grain Jacketed Bullet										
ACCUR #7	6.5	.42	.40	NA	1177	7.2	1338	26400	CUP	1.170
ACCUR #5	5.2	.32	.32	.3	1145	5.8	1301	26300	CUP	1.170
ACCUR #2	4.1	.34	.34	.3	1106	4.5	1257	28000	CUP	1.170
v-N340	3.9	.42	.40	NA	990	4.9	1198	NA	NA	1.169
WIN 231	4.1	.38	.37	NA	1055	4.2	1085	25500	CUP	1.170
93 Grain Lead Bullet										
HP38	3.4	.31	.30	.3	960	3.9	1070	NA	NA	1.130
100 Grain Jacketed Bullet										
ACCUR #7	6.2	.40	.40	NA	1139	6.9	1294	26200	CUP	1.180
ACCUR #5	5.0	.31	.30	.3	1126	5.5	1280	26700	CUP	1.180
ACCUR #2	3.9	.33	.32	.3	1085	4.3	1233	26600	CUP	1.180

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30 MAUSER



Useful case capacity 0.86 cc

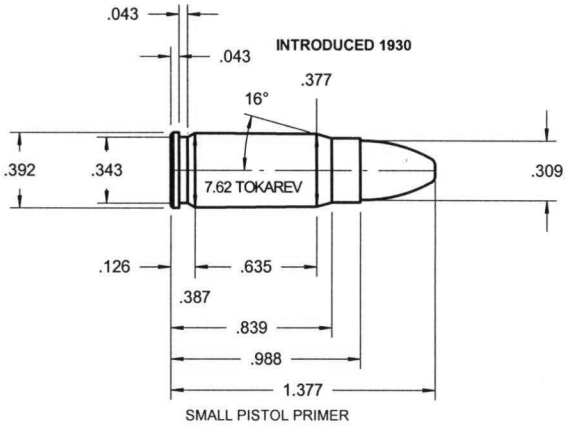
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
86 Grain Jacketed Bullet										
ACCUR #7	6.9	.45	.43	NA	1250	7.7	1421	24400	CUP	1.325
ACCUR #5	5.7	.36	.34	NA	1219	6.3	1385	24600	CUP	1.325
ACCUR #2	4.2	.35	.34	.3	1170	4.7	1330	25100	CUP	1.325
93 Grain Jacketed Bullet										
ACCUR #7	6.8	.44	.43	NA	1199	7.5	1363	24800	CUP	1.325
ACCUR #5	5.6	.35	.34	.3	1182	6.2	1343	25400	CUP	1.325
ACCUR #2	4.2	.35	.34	.3	1113	4.7	1265	25000	CUP	1.325
BULLSEYE	3.2	.34	.34	.3	1046	3.6	1173	NA	NA	1.130
WIN 231	3.9	.36	.34	NA	1015	4.2	1085	25500	CUP	1.130
HP38	3.4	.32	.32	.3	954	3.9	1070	NA	NA	1.130
100 Grain Jacketed Bullet										
ACCUR #7	6.5	.42	.40	NA	1146	7.2	1302	24300	CUP	1.325
ACCUR #5	5.2	.32	.32	.3	1116	5.8	1268	24700	CUP	1.325
ACCUR #2	4.0	.34	.34	.3	1056	4.4	1200	25100	CUP	1.325

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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7.62mm TOKAREV



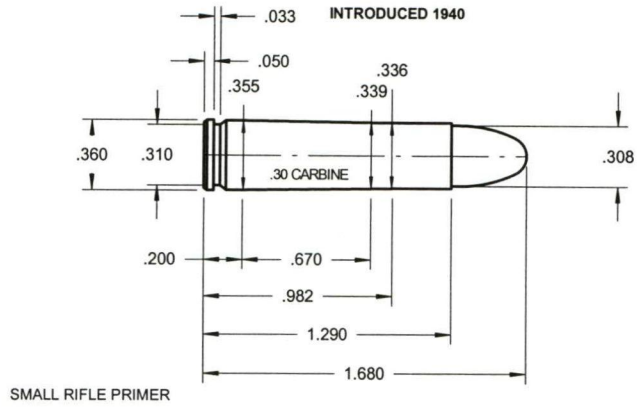
Useful case capacity 0.87 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
85 Grain Jacketed Bullet									
ACCUR #9	11.8	.78	.76	.7	1682	13.1	1927	41000 CUP	1.316
ACCUR #7	9.2	.60	.57	NA	1560	10.2	1773	41000 CUP	1.316
ACCUR #5	6.6	.41	.40	NA	1554	8.5	1766	40400 CUP	1.316
86 Grain Jacketed Bullet									
ACCUR #9	12.1	.79	.76	.7	1683	13.5c	1913	41800 CUP	1.316
ACCUR #7	9.3	.61	.61	NA	1521	10.3	1729	41200 CUP	1.316
ACCUR #5	7.6	.47	.46	NA	1510	8.5	1717	41000 CUP	1.316
93 Grain Jacketed Bullet									
ACCUR #9	11.1	.73	.71	.7	1565	12.3	1779	41000 CUP	1.316
ACCUR #5	7.6	.47	.46	NA	1477	8.5	1679	40900 CUP	1.325
ACCUR #7	9.0	.59	.57	.5	1472	10.0	1673	41200 CUP	1.316
ACCUR #2	5.4	.45	.43	NA	1443	6.0	1640	41700 CUP	1.316
100 Grain Jacketed Bullet									
ACCUR #9	10.8	.71	.71	.7	1541	12.0	1752	40800 CUP	1.300
ACCUR #7	8.5	.56	.53	.5	1452	9.5	1651	41500 CUP	1.300
ACCUR #5	7.2	.45	.43	NA	1430	8.0	1625	41500 CUP	1.325
110 Grain Jacketed Bullet									
ACCUR #9	10.5	.69	.66	NA	1485	11.7	1688	41800 CUP	1.300
ACCUR #7	8.5	.56	.53	.5	1425	9.5	1620	42000 CUP	1.300
ACCUR #5	7.2	.45	.43	NA	1381	8.0	1570	41700 CUP	1.300

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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30 M1 CARBINE



Useful case capacity 1.00 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL
85 Grain Jacketed Bullet								
H110	16.5c	1.08	1.02	1.0	2293	17.5c 2458	34800 CUP	1.625
H4227	14.5c	1.12	1.09	1.0	2059	15.5c 2181	30700 CUP	1.625
100 Grain Jacketed Bullet								
H110	14.5	.95	.95	NA	2075	15.5c 2202	36100 CUP	1.625
v-N110	13.2c	1.10	1.09	1.0	1948	14.5c 2123	NA NA	1.673
H4227	13.0	1.00	.95	1.0	1841	14.5c 2026	33600 CUP	1.625
ACCUR #9	12.0	.79	.76	.7	1773	13.3 2015	39000 CUP	1.675
IMR4227	14.1c	1.08	1.02	1.0	1788	16.0c 2005	40000 CUP	1.760
ACC XMP5744	13.5c	1.01	.95	1.0	1624	15.0c 1846	35300 CUP	1.675
ACCUR 1680	15.3	1.00	.95	1.0	1621	17.0c 1842	24200 CUP	1.675
HERC 2400	12.3	.91	.88	NA	1815	12.3 1815	34500 CUP	1.625
SR4759	11.0c	1.09	1.09	1.0	1575	11.0c 1575	23700 CUP	1.760
IMR4198	14.5c	1.15	1.09	1.0	1530	14.5c 1530	20700 CUP	1.760
110 Grain Jacketed Bullet								
H110	14.0	.92	.88	NA	2006	15.0 2106	36500 CUP	1.680
H4227	13.0	1.00	.95	1.0	1821	14.5c 2003	38800 CUP	1.680
WIN 296	NA	NA	NA	NA	NA	15.0c 1980	36000 CUP	1.625
WIN 680	15.0	.98	.95	NA	1860	16.0c 1970	37500 CUP	1.625
v-N110	11.9	.99	.95	1.0	1719	13.3c 1909	NA NA	1.673
IMR4227	13.2c	1.02	1.02	1.0	1694	15.0c 1900	40000 CUP	1.680
ACCUR #9	11.3	.74	.71	.7	1666	12.6 1893	39800 CUP	1.670

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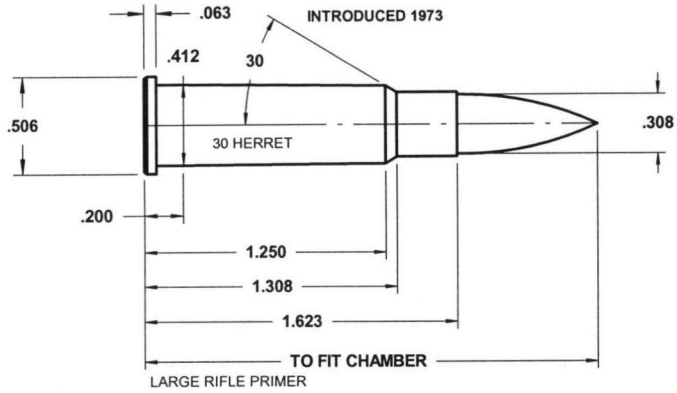
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain Jacketed Bullet (Continued)										
ACC XMP5744	13.0	.98	.95	NA	1572	14.5c	1787	38500	CUP	1.670
ACCUR 1680	14.4	.94	.88	NA	1553	16.0c	1765	26800	CUP	1.670
SR4759	11.0c	1.09	1.09	1.0	1545	11.0c	1545	26100	CUP	1.680
IMR4198	14.5c	1.15	1.09	1.0	1495	14.5c	1495	20900	CUP	1.680
112 Grain Lead Bullet										
HERC 2400	10.2	.75	.71	.7	1575	10.3	1590	35700	CUP	1.625
115 Grain Lead Bullet										
H4227	11.4	.88	.88	NA	1639	13.0	1837	NA	NA	1.625
H110	11.4	.75	.71	.7	1408	13.0	1580	NA	NA	1.625
HS7	7.2	.49	.49	NA	1089	8.2	1221	NA	NA	1.625
HS6	6.6	.47	.46	NA	1061	7.5	1189	NA	NA	1.625
125 Grain Lead Bullet										
ACCUR #9	9.9	.65	.61	NA	1557	11.0	1769	36400	CUP	1.705
ACCUR 1680	13.5	.88	.88	NA	1545	15.0	1756	33600	CUP	1.705
ACC XMP5744	12.1	.91	.88	NA	1506	13.5c	1711	39000	CUP	1.705
130 Grain Lead Bullet										
H110	10.1	.66	.66	NA	1564	11.5	1753	NA	NA	1.625
H4227	10.1	.78	.76	.7	1470	11.5	1649	NA	NA	1.625
HS7	6.2	.42	.40	NA	1065	7.0	1194	NA	NA	1.625
HS6	5.7	.41	.40	NA	992	6.5	1113	NA	NA	1.625

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30 HERRET



Useful case capacity 1.97 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain Jacketed Bullet										
H110	20.0	1.31	1.26	1.3	2151	22.0	2344	NA	NA	2.320
H4227	20.0	1.54	1.46	NA	2130	22.0	2321	NA	NA	2.320
IMR4198	21.5	1.70	DBLD	1.6	1971	24.3	2210	44600	CUP	2.020
IMR3031	28.0c	2.13	DBLD	1.9	2070	28.0c	2070	36000	CUP	2.020
IMR4227	16.6	1.28	1.26	NA	1815	18.8	2035	44600	CUP	2.020
125 Grain Jacketed Bullet										
H110	17.0	1.11	1.09	1.0	1779	19.0	1976	NA	NA	2.320
H4227	17.0	1.31	1.26	1.3	1765	19.0	1960	NA	NA	2.320
130 Grain Jacketed Bullet										
A-XMR-2015	27.0c	1.97	DBLD	1.9	1962	30.0c	2159	38500	PSI	2.295
ACCUR 2460	29.3	1.92	DBLD	1.9	1932	32.5c	2126	38700	PSI	2.295
ACCUR 2230	28.8	1.89	DBLD	1.9	1931	32.0c	2125	39000	PSI	2.295
IMR4198	20.0	1.58	DBLD	NA	1814	22.5	2015	44400	CUP	2.175
H110	17.0	1.11	1.09	1.0	1779	19.0	1976	NA	NA	2.320
H4227	17.0	1.31	1.26	1.3	1765	19.0	1960	NA	NA	2.320
IMR4227	15.8	1.22	1.18	NA	1681	18.0	1885	44800	CUP	2.175
IMR3031	26.0c	1.98	DBLD	1.9	1875	26.0c	1875	36300	CUP	2.175

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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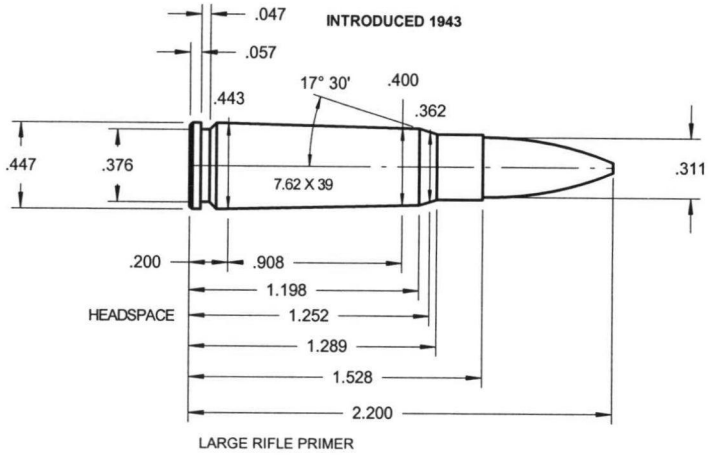
30 HERRET (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
150 Grain Jacketed Bullet									
ACCUR 2460	27.5	1.80	DBLD	1.6	1799	30.5c	1979	40600 PSI	2.385
ACCUR 2230	27.0	1.77	DBLD	1.6	1782	30.0c	1960	39400 PSI	2.385
A-XMR-2015	24.8	1.81	DBLD	1.6	1771	27.5c	1947	37800 PSI	2.385
IMR4198	19.0	1.50	1.46	1.3	1684	21.3	1870	44200 CUP	2.300
IMR4895	26.2	1.90	DBLD	1.9	1793	27.0	1845	40700 CUP	2.300
H110	16.0	1.05	1.02	1.0	1624	18.0	1804	NA NA	2.320
H4198	19.0	1.43	1.36	1.3	1572	22.0	1797	NA NA	2.320
IMR3031	25.2	1.92	DBLD	1.9	1785	25.2	1785	36700 CUP	2.300
H4227	16.0	1.23	1.18	NA	1578	18.0	1752	NA NA	2.320
H322	23.0	1.67	DBLD	1.6	1592	24.0	1654	NA NA	2.320
165 Grain Jacketed Bullet									
A-XMR-2015	23.4	1.71	DBLD	1.6	1686	26.0	1854	40900 PSI	2.490
ACCUR 2460	25.2	1.65	DBLD	1.6	1665	28.0	1831	39600 PSI	2.490
ACCUR 2230	24.8	1.63	DBLD	1.6	1632	27.5	1796	39700 PSI	2.490
170 Grain Jacketed Bullet									
IMR4895	24.9	1.81	DBLD	1.6	1661	26.0	1725	41200 CUP	2.165
IMR3031	24.5	1.87	DBLD	1.6	1690	24.5	1690	37800 CUP	2.165
IMR4198	17.0	1.34	1.26	1.3	1489	19.2	1670	44600 CUP	2.165

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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7.62x39 RUSSIAN



Useful case capacity 2.03 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
100 Grain Jacketed Bullet												
ACCUR 1680	25.7	1.68	DBLD	1.6	2325	28.5	2642	47100	CUP	1.950	....	....
ACC XMP5744	20.7	1.56	DBLD	NA	2089	23.0	2374	48000	CUP	1.950	....	....
A-XMR-2015	25.7	1.88	DBLD	1.6	1994	28.5c	2266	39400	CUP	1.950	....	....
HERC 2400	14.6	1.08	1.02	1.0	1998	16.5	2240	44900	PSI	1.830	....	....
ACCUR 2230	26.6	1.75	DBLD	1.6	1959	29.5	2226	42400	CUP	1.950	....	....
ACCUR 2460	26.6	1.74	DBLD	1.6	1922	29.5	2184	42600	CUP	1.950	....	....
110 Grain Jacketed Bullet												
ACCUR 1680	24.8	1.62	DBLD	1.6	2241	27.5	2547	48300	CUP	2.115	....	....
RELODER 7	26.5	1.93	DBLD	1.9	2330	26.5	2330	38300	PSI	2.055	....	....
ACC XMP5744	20.3	1.53	1.46	1.3	2018	22.5	2294	48900	CUP	2.115	....	....
A-XMR-2015	25.7	1.88	DBLD	1.6	1998	28.5c	2271	41500	CUP	2.115	....	....
ACCUR 2230	26.6	1.75	DBLD	1.6	1958	29.5	2225	46000	CUP	2.115	....	....
ACCUR 2460	26.6	1.74	DBLD	1.6	1931	29.5	2194	45400	CUP	2.115	....	....
HERC 2400	15.7	1.17	1.09	1.0	2075	16.0	2115	44800	PSI	2.055	....	....
123 Grain Jacketed Bullet												
v-N130	24.4	1.84	DBLD	1.6	2080	27.3c	2359	NA	NA	2.063	....	....
RELODER 7	24.9	1.82	DBLD	1.6	2286	25.5	2330	45000	PSI	2.155	....	....
v-N120	22.0	1.71	DBLD	1.6	1975	25.7	2306	NA	NA	2.063	....	....
ACC XMP5744	19.8	1.49	1.46	1.3	1975	22.0	2245	48900	CUP	2.175	....	....
HERC 2400	15.0	1.11	1.09	1.0	1879	15.3	1915	44900	PSI	2.155	....	....
125 Grain Jacketed Bullet												
H335	30.0	1.93	DBLD	1.9	2219	31.5	2408	36810	PSI	2.150	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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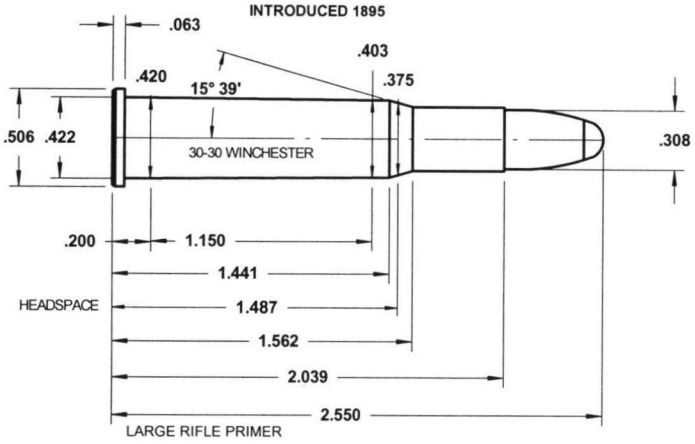
7.62x39 RUSSIAN (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
125 Grain Jacketed Bullet (Continued)											
H4198	24.5	1.84	DBLD	1.6	2190	26.5	2378	36360 PSI	2.150	.9592	.9201
ACCUR 1680	23.0	1.51	1.46	1.3	2084	25.5	2368	48500 CUP	2.195	....	....
BL-C(2)	30.0	1.93	DBLD	1.9	2155	31.5	2349	34920 PSI	2.150	....	....
H322	28.0	2.03	DBLD	1.9	2210	29.0c	2323	31860 PSI	2.150	....	....
A-XMR-2015	25.7	1.88	DBLD	1.6	2032	28.5c	2309	47700 CUP	2.195	....	....
v-N120	21.9	1.70	DBLD	1.6	2018	25.6	2306	NA NA	2.063	....	....
IMR4198	24.0	1.90	DBLD	1.9	2250	24.0	2250	42500 CUP	2.180	....	....
H4895	28.0c	2.04	DBLD	1.9	2171	29.0c	2249	30240 PSI	2.150	....	....
ACCUR 2230	26.6	1.75	DBLD	1.6	1943	29.5	2208	49800 CUP	2.195	....	....
ACCUR 2460	26.6	1.74	DBLD	1.6	1915	29.5	2176	46600 CUP	2.195	....	....
ACC XMP5744	19.3	1.45	1.36	1.3	1887	21.5	2145	48100 CUP	2.195	....	....
IMR4227	18.5	1.42	1.36	1.3	1995	18.5	1995	44100 CUP	2.180	....	....
130 Grain Jacketed Bullet											
ACCUR 1680	22.5	1.47	1.46	1.3	2020	25.0	2296	47900 CUP	2.180	....	....
A-XMR-2015	25.2	1.84	DBLD	1.6	1947	28.0c	2213	45300 CUP	2.180	....	....
ACCUR 2460	26.1	1.71	DBLD	1.6	1866	29.0	2120	47000 CUP	2.180	....	....
ACCUR 2230	25.2	1.66	DBLD	1.6	1843	28.0	2094	47000 CUP	2.180	....	....
ACC XMP5744	18.4	1.38	1.36	1.3	1804	20.5	2051	45500 CUP	2.180	....	....
150 Grain Jacketed Bullet											
H322	27.0	1.96	DBLD	1.9	2084	28.5c	2192	36360 PSI	2.220	....	....
H4895	27.0	1.97	DBLD	1.9	2080	28.0c	2154	35370 PSI	2.220	....	....
RELODER 7	24.5	1.78	DBLD	1.6	2125	24.8	2145	44600 PSI	2.000	....	....
H335	27.0	1.74	DBLD	1.6	2055	29.0	2132	38250 PSI	2.220	.9815	.9204
H4198	22.5	1.69	DBLD	1.6	1947	24.5	2122	35820 PSI	2.220	.9576	.9188
BL-C(2)	27.0	1.74	DBLD	1.6	1904	29.5	2090	36360 PSI	2.220	.9632	.9289
A-XMR-2015	23.4	1.71	DBLD	1.6	1823	26.0	2072	46500 CUP	2.180	....	....
IMR4198	22.5	1.78	DBLD	1.6	2070	22.5	2070	43600 CUP	2.210	....	....
ACCUR 1680	20.3	1.33	1.26	1.3	1808	22.5	2055	49000 CUP	2.180	....	....
ACCUR 2230	24.3	1.60	DBLD	1.6	1739	27.0	1976	49500 CUP	2.180	....	....
ACCUR 2460	24.3	1.59	DBLD	1.6	1721	27.0	1956	47600 CUP	2.180	....	....
ACC XMP5744	17.5	1.32	1.26	1.3	1672	19.5	1900	46400 CUP	2.180	....	....
IMR4227	15.8	1.22	1.18	NA	1681	18.0	1885	44400 CUP	2.210	....	....
HERC 2400	14.5	1.07	1.02	1.0	1766	14.8	1800	45000 PSI	2.000	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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30-30 WINCHESTER



Useful case capacity 2.45 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
93 Grain Jacketed Bullet											
v-N120	28.6	2.22	DBLD	2.2	2726	31.3	2970	NA NA	2.345	....	....
100 Grain Jacketed Bullet											
A-XMR-2015	33.8c	2.47	DBLD	2.2	2534	37.5c	2879	39900 PSI	2.345	....	....
ACCUR 2230	35.1	2.31	DBLD	2.2	2514	39.0c	2857	39500 PSI	2.345	....	....
H4198	31.0	2.33	DBLD	2.2	2602	33.0c	2837	35811 PSI	2.480	....	....
ACCUR 2460	35.1	2.30	DBLD	2.2	2478	39.0c	2816	37200 PSI	2.345	....	....
A-XMR-2495	33.3c	2.49	DBLD	2.2	2359	37.0c	2681	34800 PSI	2.345	....	....
ACCUR 2520	34.2	2.33	DBLD	2.2	2358	38.0c	2680	30600 PSI	2.345	....	....
H4895	34.0c	2.48	DBLD	2.2	2439	37.0c	2652	33158 PSI	2.480	....	....
H335	35.0	2.26	DBLD	2.2	2502	38.0c	2644	35147 PSI	2.480	.9816	.9387
A-XMR-4064	36.0c	2.72	DBLD	2.5	2318	40.0c	2635	31600 PSI	2.345	....	....
H322	33.0	2.39	DBLD	2.2	2494	35.0c	2633	33158 PSI	2.480	....	....
BL-C(2)	35.0	2.26	DBLD	2.2	2488	38.0c	2619	33821 PSI	2.480	.9831	.9410
H380	39.0c	2.69	DBLD	2.5	2169	41.0c	2571	33821 PSI	2.480	....	....
ACCUR 2700	38.0c	2.60	DBLD	2.5	2417	40.0c	2571	30700 PSI	2.345	....	....
H414	39.0c	2.58	DBLD	2.5	2041	41.0c	2453	29842 PSI	2.480	....	....
H4350	38.0c	2.76	DBLD	2.5	1890	40.0c	2111	31500 PSI	2.480	....	....
H4227	15.0	1.15	1.09	1.0	1908	18.0	2077	29068 PSI	2.480	....	....
H4831	38.0c	2.75	DBLD	2.5	1866	40.0c	2062	28184 PSI	2.480	....	....
105 Grain Jacketed Bullet											
v-N133	32.6c	2.51	DBLD	2.5	2542	36.3c	2765	NA NA	2.539	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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30-30 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....											
105 Grain Jacketed Bullet (Continued)											
v-N130	29.4	2.22	DBLD	2.2	2433	32.5c	2668	NA	NA 2.539	....	....
v-N120	25.6	1.99	DBLD	1.9	2345	28.8	2605	NA	NA 2.539	....	....
110 Grain Jacketed Bullet											
A-XMR-2015	32.0	2.34	DBLD	2.2	2398	35.5c	2725	40900	PSI 2.440	....	....
A-XMR-4064	35.1c	2.65	DBLD	2.5	2380	39.0c	2705	41400	PSI 2.440	....	....
A-XMR-2495	33.3c	2.49	DBLD	2.5	2375	37.0c	2699	41000	PSI 2.440	....	....
ACCUR 2460	33.3	2.18	DBLD	2.2	2369	37.0	2692	37400	PSI 2.440	....	....
ACCUR 2520	34.2	2.33	DBLD	2.2	2366	38.0c	2689	35700	PSI 2.440	....	....
H335	35.0	2.26	DBLD	2.2	2487	38.0c	2684	37911	PSI 2.415	.9748	.9434
ACCUR 2230	32.4	2.13	DBLD	1.9	2340	36.0	2659	37000	PSI 2.440	....	....
H4895	34.0c	2.48	DBLD	2.2	2413	37.0c	2605	34374	PSI 2.415	....	....
WIN 748	36.8	2.41	DBLD	2.2	2595	36.8	2595	33000	CUP 2.480	....	....
H-VARGET	34.5c	2.52	DBLD	2.5	2360	38.0c	2572	35258	PSI 2.415	....	....
ACCUR 2700	38.0c	2.60	DBLD	2.5	2391	40.0c	2544	33300	PSI 2.440	....	....
BL-C(2)	36.0	2.32	DBLD	2.2	2340	39.0c	2526	28074	PSI 2.415	....	....
H4198	23.0	1.73	DBLD	1.6	2190	25.5	2409	39679	PSI 2.415	.9625	.8936
WIN 680	18.6	1.22	1.18	NA	2057	20.0	2200	36000	CUP 2.480	....	....
WIN 296	NA	NA	NA	NA	NA	18.7	2155	36000	CUP 2.480	....	....
115 Grain Lead Bullet											
VEC TU2000	17.0	1.30	1.26	1.3	1791	18.5	1873	19274	CIP 2.550	....	....
125 Grain Bullet											
H335	36.0	2.32	DBLD	2.2	2369	38.0c	2643	39126	PSI 2.480	....	....
H4895	35.0c	2.55	DBLD	2.5	2393	37.0c	2618	39789	PSI 2.480	....	....
BL-C(2)	36.0	2.32	DBLD	2.2	2343	38.0c	2606	38463	PSI 2.480	....	....
H380	37.0c	2.56	DBLD	2.5	2219	39.0c	2464	36474	PSI 2.480	....	....
H414	38.0c	2.51	DBLD	2.5	2077	40.0c	2323	34484	PSI 2.480	....	....
H4350	35.0c	2.54	DBLD	2.5	1935	38.0c	2054	34926	PSI 2.480	....	....
H4831	35.0c	2.54	DBLD	2.5	1936	38.0c	2031	33821	PSI 2.480	....	....
125 Grain Jacketed Bullet											
RELODER 7	29.4	2.14	DBLD	1.9	2580	30.0	2630	34100	CUP 2.470	....	....
RELODER12	34.3	2.37	DBLD	2.2	2390	37.0c	2555	39900	PSI 2.470	....	....
A-XMR-4064	34.2c	2.58	DBLD	2.5	2225	38.0c	2529	39600	PSI 2.430	....	....
130 Grain Jacketed Bullet											
H-VARGET	32.5	2.38	DBLD	2.2	2312	36.0c	2496	39458	PSI 2.540	....	....
H4895	31.5	2.29	DBLD	2.2	2256	35.0c	2482	39016	PSI 2.540	....	....
BL-C(2)	34.0	2.19	DBLD	2.2	2305	37.5	2473	36253	PSI 2.540	.9799	.9606
v-N133	29.5	2.27	DBLD	2.2	2238	32.8c	2467	NA	NA 2.547	....	....
v-N135	31.1	2.42	DBLD	2.2	2242	34.6c	2455	NA	NA 2.547	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
130 Grain Jacketed Bullet (Continued)												
H335	30.5	1.97	DBLD	1.9	2173	34.0	2423	38353	PSI	2.540	.9692	.9367
v-N130	27.3	2.06	DBLD	1.9	2196	30.5	2420	NA	NA	2.547	....	....
v-N120	24.7	1.92	DBLD	1.9	2149	27.6	2343	NA	NA	2.547	....	....
H4198	22.5	1.69	DBLD	1.6	2070	24.5	2234	40232	PSI	2.540	.9622	.8957
150 Grain Bullet												
H414	37.0	2.45	DBLD	2.2	2164	39.0c	2327	42221	PSI	2.480	....	....
H380	36.0c	2.49	DBLD	2.2	2019	38.0c	2304	41558	PSI	2.480	....	....
H4350	35.0c	2.54	DBLD	2.5	1904	38.0c	2041	39347	PSI	2.480	....	....
H4831	35.0c	2.54	DBLD	2.5	1801	38.0c	1965	34484	PSI	2.480	....	....
150 Grain Jacketed Bullet												
VEC SP7	37.0	2.43	DBLD	2.2	2461	37.0	2461	34833	CIP	2.550	....	....
RELODER15	32.8	2.31	DBLD	2.2	2248	36.0c	2450	40600	PSI	2.525	....	....
H4895	30.5	2.22	DBLD	2.2	2138	34.0c	2390	40563	PSI	2.550	....	....
BL-C(2)	33.0	2.13	DBLD	1.9	2021	37.0	2358	37468	PSI	2.550	.9622	.8955
H-VARGET	31.0	2.27	DBLD	2.2	2172	34.5c	2349	40011	PSI	2.550	....	....
ACCUR 2520	30.2	2.06	DBLD	1.9	2046	33.5	2325	38800	PSI	2.540	....	....
RELODER12	30.6	2.12	DBLD	1.9	2129	33.5	2320	40400	PSI	2.525	....	....
IMR4895	30.8	2.24	DBLD	2.2	2139	33.3	2310	40000	PSI	2.550	....	....
WIN 748	32.0	2.10	DBLD	1.9	2160	34.5	2310	36000	CUP	2.480	....	....
H335	29.7	1.92	DBLD	1.9	2097	33.0	2308	40011	PSI	2.550	.9712	.9321
IMR3031	29.5	2.25	DBLD	2.2	2193	31.1	2300	39000	PSI	2.550	....	....
IMR4064	31.1	2.32	DBLD	2.2	2131	33.7c	2300	40000	PSI	2.550	....	....
ACCUR 2460	29.3	1.92	DBLD	1.9	2015	32.5	2290	40200	PSI	2.540	....	....
ACCUR 2230	28.5	1.87	DBLD	1.6	2000	31.7	2273	41300	PSI	2.540	....	....
ACCUR 2700	35.2	2.41	DBLD	2.2	2129	37.0c	2265	39300	PSI	2.540	....	....
IMR4320	32.1	2.30	DBLD	2.2	2187	33.0	2250	38000	PSI	2.550	....	....
VEC TU5000	34.7c	2.50	DBLD	2.2	2188	35.8c	2247	29259	CIP	2.550	....	....
A-XMR-4064	29.7	2.24	DBLD	2.2	1975	33.0c	2245	40500	PSI	2.540	....	....
v-N140	31.5	2.31	DBLD	2.2	2011	34.7c	2240	NA	NA	2.539	....	....
A-XMR-2495	27.5	2.06	DBLD	1.9	1960	30.5	2227	40600	PSI	2.540	....	....
v-N135	29.4	2.28	DBLD	2.2	2000	32.4c	2193	NA	NA	2.539	....	....
A-XMR-2015	26.1	1.91	DBLD	1.9	1929	29.0	2192	38400	PSI	2.540	....	....
IMR4198	22.7	1.80	DBLD	1.6	2029	24.6	2190	40000	PSI	2.550	....	....
RELODER 7	27.2	1.98	DBLD	1.9	2169	27.5	2190	33800	CUP	2.525	....	....
v-N133	25.7	1.98	DBLD	1.9	1935	28.6	2115	NA	NA	2.539	....	....
H4198	21.6	1.62	DBLD	1.6	1918	24.0	2110	40674	PSI	2.550	.9610	.8776
v-N130	24.7	1.86	DBLD	1.6	1911	27.5	2103	NA	NA	2.539	....	....
WIN 760	35.9	2.39	DBLD	2.2	2090	35.9	2090	30000	CUP	2.480	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

30-30 WINCHESTER (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
150 Grain Jacketed Bullet (Continued)									
IMR4350	38.5c	2.83	DBLD	2.8	2080	38.5c 2080	29600 CUP	2.550	....
v-N120	21.9	1.70	DBLD	1.6	1824	24.2 1985	NA NA	2.539	....
IMR4831	38.5c	2.83	DBLD	2.8	1925	38.5c 1925	24100 CUP	2.550	....
IMR4227	17.8	1.37	1.36	1.3	1715	20.0 1905	37500 CUP	2.550	....
SR4759	17.5	1.74	DBLD	1.6	1673	19.5 1840	37300 CUP	2.550	....
150 Grain Lead Bullet									
VEC TU2000	18.5	1.41	1.36	1.3	1745	20.1 1870	27358 CIP	2.550	.9571 .8828
152 Grain Lead Bullet									
ACC XMP5744	14.0	1.05	1.02	1.0	1379	22.5 2112	39100 PSI	2.450	....
ACCUR 2700	32.3	2.21	DBLD	2.2	1933	34.0 2056	28100 PSI	2.450	....
A-XMR-2495	25.7	1.92	DBLD	1.9	1803	28.5 2049	28400 PSI	2.450	....
ACCUR 2520	24.8	1.69	DBLD	1.6	1764	27.5 2004	25700 PSI	2.450	....
ACCUR 2460	24.3	1.59	DBLD	1.6	1755	27.0 1994	26400 PSI	2.450	....
A-XMR-2015	23.0	1.68	DBLD	1.6	1749	25.5 1987	27700 PSI	2.450	....
ACCUR 2230	23.4	1.54	1.46	NA	1736	26.0 1973	27800 PSI	2.450	....
155 Grain Jacketed Bullet									
v-N140	29.1	2.13	DBLD	1.9	1955	31.9 2130	NA NA	2.480	....
170 Grain Bullet									
H414	35.0	2.31	DBLD	2.2	1926	37.0 2259	41337 PSI	2.480	....
H380	34.0	2.35	DBLD	2.2	2016	36.0c 2182	41558 PSI	2.480	....
H4350	35.0c	2.54	DBLD	2.5	1837	38.0c 2030	41005 PSI	2.480	....
H4831	35.0c	2.54	DBLD	2.5	1822	38.0c 1991	38463 PSI	2.480	....
H4227	15.0	1.15	1.09	1.0	1437	17.0 1655	36474 PSI	2.480	....
170 Grain Jacketed Bullet									
RELODER15	31.1	2.20	DBLD	2.2	2137	34.1 2330	40500 PSI	2.525	....
VEC SP7	29.3	1.93	DBLD	1.9	1988	34.0 2231	36517 CIP	2.550	.9757 .9590
BL-C(2)	32.5	2.10	DBLD	1.9	2048	36.0 2227	38353 PSI	2.550	.9761 .9396
H-VARGET	29.5	2.16	DBLD	1.9	1976	33.0 2168	40342 PSI	2.550	.9736 .9473
VEC TU5000	33.6	2.42	DBLD	2.2	2136	34.4c 2165	32322 CIP	2.550	....
RELODER12	29.5	2.04	DBLD	1.9	2001	32.0 2160	40100 PSI	2.525	....
WIN 748	29.7	1.95	DBLD	1.9	2007	32.0 2145	36000 CUP	2.480	....
H4895	27.5	2.00	DBLD	1.9	1943	30.5 2138	38905 PSI	2.550	.9685 .9288
IMR4895	29.1	2.12	DBLD	1.9	1974	31.5 2130	40000 PSI	2.545	....
ACCUR 2520	28.4	1.94	DBLD	1.9	1874	31.5 2129	38400 PSI	2.545	....
ACCUR 2230	27.0	1.77	DBLD	1.6	1869	30.0 2124	42000 PSI	2.545	....
IMR4064	29.2	2.18	DBLD	1.9	1964	31.6 2120	40000 PSI	2.545	....
ACCUR 2460	27.2	1.78	DBLD	1.6	1864	30.2 2118	39900 PSI	2.545	....
IMR3031	28.1	2.14	DBLD	1.9	2012	29.7 2110	39000 PSI	2.545	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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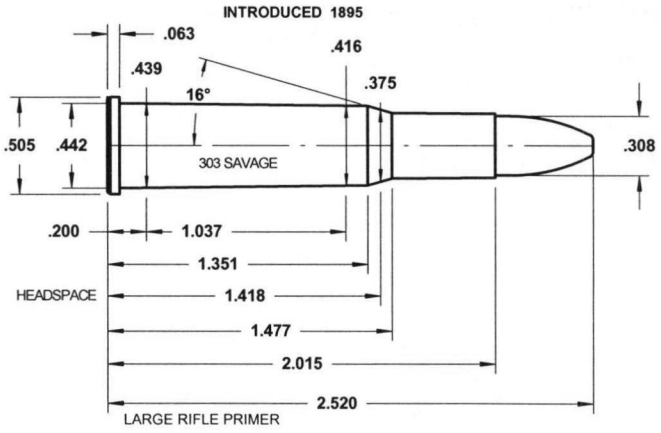
30-30 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
	....STARTING LOADS....										
170 Grain Jacketed Bullet (Continued)											
ACCUR 2700	33.3	2.28	DBLD	2.2	1972	35.0	2098	39700 PSI	2.545	....	....
A-XMR-2495	26.6	1.99	DBLD	1.9	1844	29.5	2095	40200 PSI	2.545	....	....
IMR4320	30.3	2.17	DBLD	1.9	1993	32.0	2090	39000 PSI	2.545	....	....
H335	27.5	1.77	DBLD	1.6	1934	30.5	2086	40121 PSI	2.550	.9748	.9279
A-XMR-2015	25.9	1.89	DBLD	1.9	1962	27.0	2038	38600 PSI	2.545	....	....
v-N140	28.2	2.07	DBLD	1.9	1803	31.7	2024	NA NA	2.539	....	....
IMR4198	21.8	1.73	DBLD	1.6	1872	23.6	2020	40000 PSI	2.545	....	....
v-N135	27.0	2.10	DBLD	1.9	1825	30.1	2015	NA NA	2.539	....	....
A-XMR-4064	27.0	2.04	DBLD	1.9	1757	30.0	1997	39900 PSI	2.545	....	....
WIN 760	33.6	2.24	DBLD	2.2	1975	33.6	1975	30000 CUP	2.480	....	....
v-N130	23.8	1.79	DBLD	1.6	1813	26.3	1974	NA NA	2.539	....	....
v-N133	25.2	1.94	DBLD	1.9	1799	27.6	1948	NA NA	2.539	....	....
IMR4350	36.5c	2.68	DBLD	2.5	1935	36.5c	1935	30200 CUP	2.520	....	....
H4198	20.5	1.54	1.46	NA	1760	22.5	1918	36032 PSI	2.550	.9577	.9151
RELODER 7	23.3	1.69	DBLD	1.6	1856	24.0	1910	34500 CUP	2.545	....	....
IMR4831	36.5c	2.68	DBLD	2.5	1795	36.5c	1795	25100 CUP	2.520	....	....
IMR4227	16.9	1.30	1.26	1.3	1482	19.0	1645	37700 CUP	2.520	....	....
SR4759	16.1	1.60	DBLD	1.6	1459	18.0	1605	37300 CUP	2.520	....	....
173 Grain Lead Bullet											
ACCUR 2520	25.7	1.75	DBLD	1.6	1807	28.5	2053	29300 PSI	2.550	....	....
ACC XMP5744	19.8	1.49	1.46	1.3	1791	22.0	2035	38000 PSI	2.550	....	....
A-XMR-4064	27.0	2.04	DBLD	1.9	1777	30.0	2020	28600 PSI	2.550	....	....
ACCUR 2460	24.8	1.63	DBLD	1.6	1775	27.5	2017	28300 PSI	2.550	....	....
A-XMR-2495	24.8	1.86	DBLD	1.6	1771	27.5	2013	35100 PSI	2.550	....	....
ACCUR 2700	31.4	2.15	DBLD	1.9	1879	33.0	1999	32800 PSI	2.550	....	....
A-XMR-2015	23.4	1.71	DBLD	1.6	1749	26.0	1988	29000 PSI	2.550	....	....
ACCUR 2230	23.4	1.54	1.46	NA	1720	26.0	1954	27400 PSI	2.550	....	....
190 Grain Lead Bullet											
ACCUR 2700	29.7	2.03	DBLD	1.9	1807	33.0	2053	37600 PSI	2.800	....	....
ACCUR 2520	25.6	1.75	DBLD	1.6	1805	28.5	2051	36300 PSI	2.800	....	....
A-XMR-2015	22.5	1.64	DBLD	1.6	1790	25.0	2034	35500 PSI	2.800	....	....
ACCUR 2460	24.3	1.59	DBLD	1.6	1785	27.0	2028	37500 PSI	2.800	....	....
ACCUR 2230	23.4	1.54	1.46	NA	1756	26.0	1995	37200 PSI	2.800	....	....
ACC XMP5744	20.0	1.50	1.46	1.3	1754	22.0	1953	35300 PSI	2.800	....	....
A-XMR-2495	24.7	1.85	DBLD	1.6	1707	27.5	1940	30600 PSI	2.800	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

303 SAVAGE

These are reduced 30-30 Winchester loads.



Useful case capacity 2.62 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain Jacketed Bullet										
A-XMR-2015	28.8	2.10	DBLD	1.9	2206	31.9	2507	34765	CUP	2.440
A-XMR-4064	31.6	2.38	DBLD	2.2	2190	35.1	2489	35190	CUP	2.440
A-XMR-2495	30.0	2.24	DBLD	2.2	2185	33.3	2483	34850	CUP	2.440
ACCUR 2460	30.0	1.97	DBLD	1.9	2179	33.3	2477	31790	CUP	2.440
ACCUR 2520	30.8	2.10	DBLD	1.9	2177	34.2	2474	30345	CUP	2.440
H335	31.5	2.03	DBLD	1.9	2288	34.2	2469	29155	CUP	2.415
ACCUR 2230	29.2	1.92	DBLD	1.9	2153	32.4	2446	31450	CUP	2.440
H4895	30.6	2.23	DBLD	2.2	2220	33.3	2397	26435	CUP	2.415
WIN 748	33.1	2.17	DBLD	1.9	2387	33.1	2387	28050	CUP	2.480
125 Grain Jacketed Bullet										
RELODER 7	26.5	1.93	DBLD	1.9	2374	27.0	2420	28985	CUP	2.470
RELODER12	30.8	2.13	DBLD	1.9	2199	33.3	2351	33915	CUP	2.470
A-XMR-4064	30.8	2.32	DBLD	2.2	2047	34.2	2327	33660	CUP	2.430
130 Grain Jacketed Bullet										
H-VARGET	29.2	2.14	DBLD	1.9	2127	32.4	2296	30345	CUP	2.540
H4895	28.3	2.06	DBLD	1.9	2076	31.5	2283	30005	CUP	2.540
BL-C(2)	30.6	1.97	DBLD	1.9	2121	33.7	2275	27880	CUP	2.540
v-N133	26.5	2.04	DBLD	1.9	2059	29.5	2270	NA	NA	2.547
v-N135	28.0	2.17	DBLD	1.9	2063	31.1	2259	NA	NA	2.547
H335	27.4	1.77	DBLD	1.6	1999	30.6	2229	29495	CUP	2.540

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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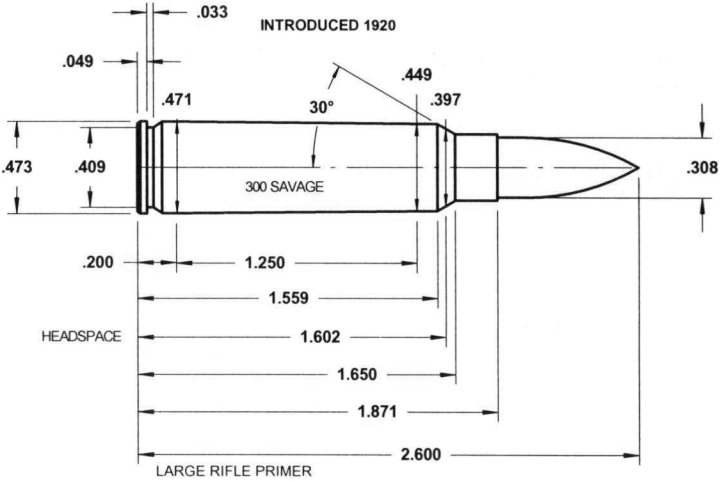
303 SAVAGE (Continued)

These are reduced 30-30 Winchester loads.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
130 Grain Jacketed Bullet (Continued)										
v-N130	24.6	1.85	DBLD	1.6	2020	27.4	2226	NA	NA	2.547
150 Grain Jacketed Bullet										
RELODER15	29.5	2.08	DBLD	1.9	2068	32.4	2254	34510	CUP	2.525
H4895	27.4	2.00	DBLD	1.9	1967	30.6	2199	31195	CUP	2.550
BL-C(2)	29.7	1.92	DBLD	1.9	1859	33.3	2169	28815	CUP	2.550
H-VARGET	27.9	2.04	DBLD	1.9	1998	31.0	2161	30770	CUP	2.550
152 Grain Lead Bullet										
ACC XMP5744	12.6	.95	.95	NA	1269	20.2	1943	33235	CUP	2.450
ACCUR 2700	29.1	1.99	DBLD	1.9	1778	30.6	1892	23885	CUP	2.450
A-XMR-2495	23.1	1.73	DBLD	1.6	1659	25.6	1885	24140	CUP	2.450
170 Grain Jacketed Bullet										
RELODER15	28.0	1.98	DBLD	1.9	1966	30.7	2144	34425	CUP	2.525
VEC SP7	26.4	1.73	DBLD	1.6	1829	30.6	2053	31039	CIP	2.550
BL-C(2)	29.2	1.89	DBLD	1.9	1884	32.4	2049	29495	CUP	2.550
173 Grain Lead Bullet										
ACCUR 2520	23.1	1.58	DBLD	NA	1662	25.6	1889	24905	CUP	2.550
ACC XMP5744	17.8	1.34	1.26	1.3	1648	19.8	1872	32300	CUP	2.550
A-XMR-4064	24.3	1.83	DBLD	1.6	1635	27.0	1858	24310	CUP	2.550
ACCUR 2460	22.3	1.46	1.46	1.3	1633	24.7	1856	24055	CUP	2.550
A-XMR-2495	22.3	1.67	DBLD	1.6	1629	24.7	1852	29835	CUP	2.550
ACCUR 2700	28.3	1.93	DBLD	1.9	1729	29.7	1839	27880	CUP	2.550
A-XMR-2015	21.1	1.54	1.46	NA	1609	23.4	1829	24650	CUP	2.550
ACCUR 2230	21.1	1.38	1.36	1.3	1582	23.4	1798	23290	CUP	2.550
190 Grain Lead Bullet										
ACCUR 2700	26.7	1.83	DBLD	1.6	1662	29.7	1889	31960	CUP	2.800
ACCUR 2520	23.0	1.57	DBLD	NA	1661	25.6	1887	30855	CUP	2.800
A-XMR-2015	20.2	1.48	1.46	1.3	1647	22.5	1871	30175	CUP	2.800
ACCUR 2460	21.9	1.43	1.36	1.3	1642	24.3	1866	31875	CUP	2.800
ACCUR 2230	21.1	1.38	1.36	1.3	1616	23.4	1835	31620	CUP	2.800
ACC XMP5744	18.0	1.35	1.26	1.3	1614	19.8	1797	30005	CUP	2.800

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

300 SAVAGE



Useful case capacity 3.18 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
v-N130	36.4	2.74	DBLD	2.5	2962	40.0	3268	NA	NA	2.461
v-N120	32.9	2.55	DBLD	2.5	2829	37.7	3232	NA	NA	2.461
v-N133	38.9	3.00	DBLD	2.8	2897	44.0c	3225	NA	NA	2.461
H4198	34.0	2.55	DBLD	2.5	2875	37.0	3103	NA	NA	2.475
H4895	41.0	2.98	DBLD	2.8	2862	43.0	3002	NA	NA	2.475
BL-C(2)	41.0	2.64	DBLD	2.5	2821	43.0	2959	NA	NA	2.475
H335	41.0	2.64	DBLD	2.5	2814	43.0	2952	NA	NA	2.475
110 Grain Jacketed Bullet										
H4198	34.0	2.55	DBLD	2.5	2760	37.0	2978	NA	NA	2.450
H335	39.0	2.52	DBLD	2.5	2705	43.0	2947	NA	NA	2.450
H4895	39.5	2.88	DBLD	2.8	2728	43.0	2944	NA	NA	2.450
BL-C(2)	39.5	2.55	DBLD	2.5	2724	43.0	2940	NA	NA	2.450
WIN 748	44.1	2.89	DBLD	2.8	2874	45.2	2930	41500	CUP	2.500
125 Grain Jacketed Bullet										
RELODER12	42.0	2.90	DBLD	2.8	2680	46.0	2920	44300	CUP	2.600
v-N133	38.4	2.96	DBLD	2.8	2645	41.8c	2900	NA	NA	2.579
v-N130	33.3	2.51	DBLD	2.5	2546	37.4	2830	NA	NA	2.579
v-N120	31.0	2.41	DBLD	2.2	2444	35.1	2744	NA	NA	2.579
130 Grain Jacketed Bullet										
H4198	33.0	2.48	DBLD	2.2	2629	36.0	2837	NA	NA	2.520
VEC TU2000	34.6	2.64	DBLD	2.5	2664	36.3	2795	42903	CIP	2.600

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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300 SAVAGE (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL
....STARTING LOADS....										
130 Grain Jacketed Bullet (Continued)										
H4895	39.5	2.88	DBLD	2.8	2500	43.0	2698	NA	NA	2.520
BL-C(2)	38.0	2.45	DBLD	2.2	2463	41.0	2634	NA	NA	2.520
H335	38.0	2.45	DBLD	2.2	2460	41.0	2631	NA	NA	2.520
150 Grain Winchester Fail Safe										
WIN 748	40.3	2.64	DBLD	2.5	2457	40.9	2505	42000	PSI	2.600
150 Grain Jacketed Bullet										
ACCUR 2520	39.6	2.71	DBLD	2.5	2586	42.5	2765	43400	CUP	2.600
A-XMR-2015	35.7	2.61	DBLD	2.5	2564	38.5	2742	43600	CUP	2.600
A-XMR-2495	42.0	3.14	DBLD	3.1	2733	42.0	2733	40000	CUP	2.600
ACCUR 2460	37.5	2.46	DBLD	2.2	2552	40.0	2702	43200	CUP	2.600
VEC SP9	40.1	2.74	DBLD	2.5	2543	43.2	2687	44761	CIP	2.600
ACCUR 2230	36.5	2.40	DBLD	2.2	2493	39.2	2665	43500	CUP	2.600
RELODER12	42.0	2.91	DBLD	2.8	2585	43.0	2635	41400	CUP	2.600
VEC SP7	41.7	2.74	DBLD	2.5	2500	44.0	2625	37983	CIP	2.600
WIN 748	41.5	2.72	DBLD	2.5	2575	42.0	2600	41000	CUP	2.500
v-N140	36.6	2.68	DBLD	2.5	2294	42.0	2598	NA	NA	2.421
WIN 760	43.9	2.92	DBLD	2.8	2483	45.5	2580	42000	CUP	2.500
IMR3031	35.0	2.67	DBLD	2.5	2363	38.5	2575	44500	CUP	2.600
BL-C(2)	36.0	2.32	DBLD	2.2	2385	39.0	2574	NA	NA	2.520
IMR4895	35.3	2.57	DBLD	2.5	2292	40.0	2570	45900	CUP	2.600
IMR4064	35.7	2.66	DBLD	2.5	2310	40.0	2565	45400	CUP	2.600
ACCUR 2700	41.5	2.84	DBLD	2.8	2420	44.0	2562	42900	CUP	2.600
IMR4320	36.5	2.61	DBLD	2.5	2279	41.5	2555	46000	CUP	2.600
H335	36.0	2.32	DBLD	2.2	2358	39.0	2545	NA	NA	2.520
v-N135	33.7	2.62	DBLD	2.5	2255	38.5	2529	NA	NA	2.421
VEC TU5000	40.4	2.91	DBLD	2.8	2441	41.4	2526	33919	CIP	2.600
v-N130	28.1	2.12	DBLD	1.9	2182	33.7	2460	NA	NA	2.421
A-XMR-4350	44.0c	3.26	DBLD	3.1	2418	44.0c	2418	35100	CUP	2.600
IMR4350	44.0c	3.23	DBLD	3.1	2415	44.0c	2415	39800	CUP	2.600
H4895	37.0	2.69	DBLD	2.5	2252	40.0	2408	NA	NA	2.520
IMR4198	27.5	2.18	DBLD	1.9	2192	30.0	2365	44100	CUP	2.600
IMR4831	44.0c	3.23	DBLD	3.1	2260	44.0c	2260	36200	CUP	2.600
IMR4227	21.7	1.67	DBLD	1.6	1913	24.0	2105	44800	CUP	2.600
SR4759	20.9	2.08	DBLD	1.9	1886	23.5	2095	45500	CUP	2.600
150 Grain Lead Bullet										
VEC TU2000	17.7	1.35	1.26	1.3	1483	19.3	1631	16197	CIP	2.600
165 Grain Winchester Fail Safe										
WIN 748	39.5	2.59	DBLD	2.5	2340	39.5	2340	39900	PSI	2.600

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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300 SAVAGE (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
165 Grain Jacketed Bullet										
A-XMR-2495	37.7	2.82	DBLD	2.8	2480	41.0	2676	44000	CUP	2.580
ACCUR 2520	38.8	2.65	DBLD	2.5	2454	42.0	2649	43800	CUP	2.580
ACCUR 2230	35.5	2.33	DBLD	2.2	2357	39.5	2593	45000	CUP	2.580
ACCUR 2460	36.6	2.40	DBLD	2.2	2401	40.0	2591	44200	CUP	2.580
v-N140	37.0	2.71	DBLD	2.5	2270	41.4	2572	NA	NA	2.598
A-XMR-2015	36.2	2.64	DBLD	2.5	2497	37.5	2569	41900	CUP	2.580
v-N135	35.5	2.76	DBLD	2.5	2267	39.0	2497	NA	NA	2.598
RELODER12	40.7	2.81	DBLD	2.8	2461	41.0	2485	40800	CUP	2.600
v-N133	33.0	2.54	DBLD	2.5	2198	37.3	2480	NA	NA	2.598
ACCUR 2700	40.4	2.77	DBLD	2.5	2258	43.5	2414	43600	CUP	2.580
A-XMR-4350	44.0c	3.26	DBLD	3.1	2351	44.0c	2351	36400	CUP	2.580
H4895	35.0	2.55	DBLD	2.5	2169	38.0	2341	NA	NA	2.600
BL-C(2)	34.0	2.19	DBLD	1.9	2084	37.0	2249	NA	NA	2.600
H335	34.0	2.19	DBLD	1.9	2076	37.0	2240	NA	NA	2.600
180 Grain Winchester Fail Safe										
WIN 748	35.2	2.31	DBLD	2.2	2157	38.8	2350	45600	PSI	2.600
180 Grain Jacketed Bullet										
ACCUR 2520	35.1	2.39	DBLD	2.2	2275	39.0	2503	45000	CUP	2.590
A-XMR-2495	37.9	2.84	DBLD	2.8	2423	39.0	2493	41600	CUP	2.590
A-XMR-2015	32.8	2.40	DBLD	2.2	2265	36.0	2468	44400	CUP	2.590
ACCUR 2460	37.2	2.44	DBLD	2.2	2405	37.5	2428	40800	CUP	2.590
ACCUR 2230	34.3	2.25	DBLD	2.2	2268	37.0	2425	43700	CUP	2.590
WIN 760	43.9	2.93	DBLD	2.8	2387	44.5	2410	41000	CUP	2.500
IMR4064	34.0	2.53	DBLD	2.5	2136	38.5	2395	45900	CUP	2.600
IMR3031	32.6	2.49	DBLD	2.2	2132	37.0	2390	45900	CUP	2.600
IMR4895	34.1	2.48	DBLD	2.2	2152	38.5	2390	45700	CUP	2.600
IMR4320	35.2	2.52	DBLD	2.5	2132	40.0	2390	46000	CUP	2.600
WIN 748	37.7	2.47	DBLD	2.2	2242	40.0	2375	43000	CUP	2.500
IMR4350	42.5	3.12	DBLD	3.1	2284	44.0c	2350	41900	CUP	2.600
ACCUR 2700	38.1	2.61	DBLD	2.5	2172	41.5	2344	44100	CUP	2.590
A-XMR-4350	43.0c	3.18	DBLD	3.1	2326	43.0c	2326	39800	CUP	2.590
IMR4831	44.0c	3.23	DBLD	3.1	2240	44.0c	2240	39300	CUP	2.600
IMR4198	26.4	2.09	DBLD	1.9	1991	29.5	2190	45200	CUP	2.600
H4895	34.0	2.48	DBLD	2.2	1974	37.0	2130	NA	NA	2.600
H335	32.0	2.06	DBLD	1.9	1903	35.0	2074	NA	NA	2.600
BL-C(2)	32.0	2.06	DBLD	1.9	1899	35.0	2069	NA	NA	2.600
IMR4227	20.8	1.60	DBLD	1.3	1750	23.0	1925	44800	CUP	2.600
SR4759	20.0	1.99	DBLD	1.9	1720	22.5	1910	45500	CUP	2.600

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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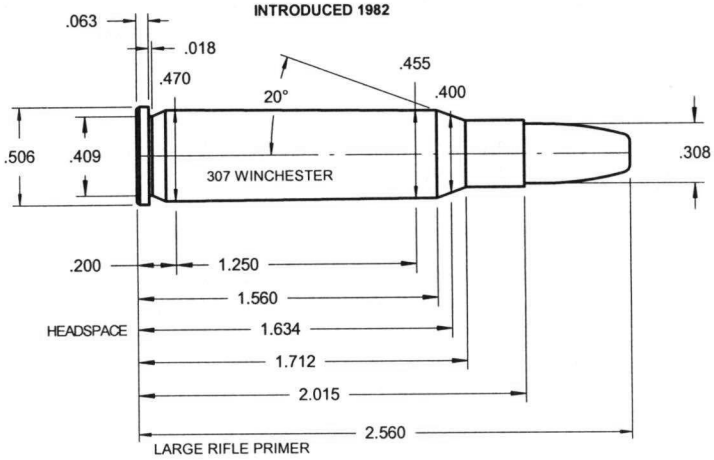
300 SAVAGE (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
185 Grain Jacketed Bullet										
v-N540	35.2	2.47	DBLD	2.2	2042	41.0	2359	NA	NA	2.598
v-N140	34.4	2.52	DBLD	2.5	2029	40.0	2343	NA	NA	2.598
v-N135	32.1	2.49	DBLD	2.2	2000	37.7	2310	NA	NA	2.598
200 Grain Jacketed Bullet										
v-N540	35.2	2.47	DBLD	2.2	2044	41.0	2358	NA	NA	2.598
v-N140	34.5	2.53	DBLD	2.5	2071	40.0	2342	NA	NA	2.598
v-N135	32.1	2.49	DBLD	2.2	2004	37.6	2308	NA	NA	2.598
H4895	32.0	2.33	DBLD	2.2	1917	35.0	2089	NA	NA	2.550
H335	31.0	2.00	DBLD	1.9	1879	34.0	2047	NA	NA	2.550

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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307 WINCHESTER



Useful case capacity 3.19 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain Jacketed Bullet										
H322	41.0	2.97	DBLD	2.8	2814	44.0c	3000	NA	NA	2.390
BL-C(2)	47.0	3.03	DBLD	2.8	2839	49.0	2950	NA	NA	2.390
H380	50.0c	3.45	NA	3.4	2747	52.0c	2939	NA	NA	2.390
H4895	42.0	3.06	DBLD	2.8	2724	45.0c	2930	NA	NA	2.390
H335	45.0	2.90	DBLD	2.8	2769	47.0	2899	NA	NA	2.390
H414	51.0c	3.37	NA	3.1	2688	53.0c	2828	NA	NA	2.390
H4350	47.0c	3.41	NA	3.4	2320	50.0c	2589	NA	NA	2.390
H4831	48.0c	3.48	NA	3.4	2340	50.0c	2451	NA	NA	2.390
125 Grain Jacketed Bullet										
H4895	40.0	2.91	DBLD	2.8	2540	43.0	2762	NA	NA	2.520
BL-C(2)	44.0	2.84	DBLD	2.8	2510	47.0	2732	NA	NA	2.520
H335	42.0	2.71	DBLD	2.5	2439	45.0	2695	NA	NA	2.520
H322	39.0	2.83	DBLD	2.8	2481	42.0	2669	NA	NA	2.520
H414	48.0	3.17	DBLD	3.1	2489	50.0c	2665	NA	NA	2.520
H380	47.0c	3.25	DBLD	3.1	2424	49.0c	2639	NA	NA	2.520
H4350	47.0c	3.41	NA	3.4	2380	50.0c	2522	NA	NA	2.520
H4831	48.0c	3.48	NA	3.4	2269	50.0c	2400	NA	NA	2.520
130 Grain Jacketed Bullet										
WIN 748	45.2	2.96	DBLD	2.8	2720	45.2	2720	38000	CUP	2.520
WIN 760	45.2	3.01	DBLD	2.8	2470	45.2	2470	33000	CUP	2.520
150 Grain Jacketed Bullet										
ACCUR 2520	39.6	2.70	DBLD	2.5	2370	44.0	2693	45500	CUP	2.530

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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c = Compressed charge

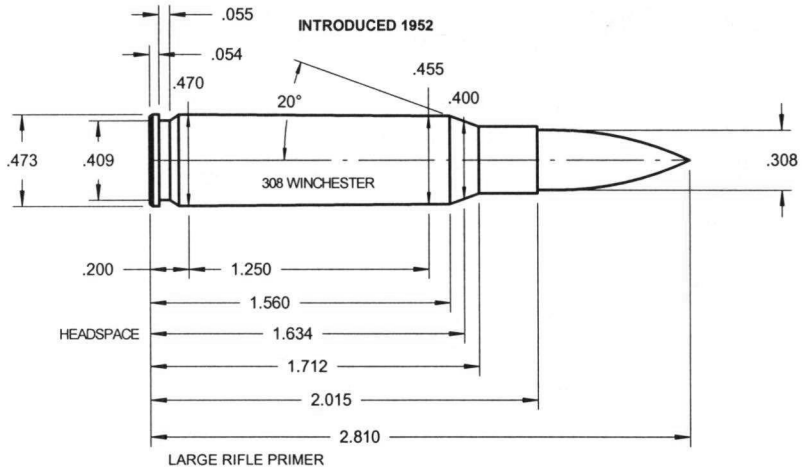
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307 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
					....STARTING LOADS....					
150 Grain Jacketed Bullet (Continued)										
A-XMR-2495	39.2	2.93	DBLD	2.8	2335	43.5c	2653	44400	CUP	2.530
A-XMR-2015	35.1	2.56	DBLD	2.5	2319	39.0	2635	45300	CUP	2.530
WIN 748	44.0	2.88	DBLD	2.8	2625	44.0	2625	44500	CUP	2.530
H4895	39.0	2.84	DBLD	2.8	2402	42.0	2604	NA	NA	2.520
ACCUR 2460	37.4	2.45	DBLD	2.2	2285	41.5	2597	43600	CUP	2.530
BL-C(2)	43.0	2.77	DBLD	2.5	2390	46.0	2593	NA	NA	2.520
ACCUR 2230	36.5	2.40	DBLD	2.2	2281	40.5	2592	45400	CUP	2.530
H335	41.0	2.64	DBLD	2.5	2377	44.0	2590	NA	NA	2.520
H414	47.0	3.11	DBLD	3.1	2347	49.0c	2562	NA	NA	2.520
H380	46.0	3.18	DBLD	3.1	2329	48.0c	2543	NA	NA	2.520
H322	38.0	2.75	DBLD	2.5	2319	41.0	2513	NA	NA	2.520
H4350	46.0c	3.34	NA	3.1	2292	48.0c	2453	NA	NA	2.520
H4831	47.0c	3.41	NA	3.4	2154	49.0c	2349	NA	NA	2.520
WIN 760	44.0	2.93	DBLD	2.8	2305	44.0	2305	34000	CUP	2.530
170 Grain Jacketed Bullet										
ACCUR 2520	38.3	2.61	DBLD	2.5	2262	42.5	2570	49300	CUP	2.530
BL-C(2)	41.0	2.64	DBLD	2.5	2351	44.0	2535	NA	NA	2.520
A-XMR-2495	37.4	2.80	DBLD	2.5	2213	41.5	2515	50100	CUP	2.530
H414	45.0	2.97	DBLD	2.8	2333	47.0	2513	NA	NA	2.520
A-XMR-2015	34.2	2.50	DBLD	2.2	2193	38.0	2492	48900	CUP	2.530
H4895	37.0	2.69	DBLD	2.5	2314	40.0	2474	NA	NA	2.520
ACCUR 2460	36.5	2.39	DBLD	2.2	2163	40.5	2458	48100	CUP	2.530
WIN 748	41.2	2.70	DBLD	2.5	2455	41.2	2455	44000	CUP	2.530
H335	38.0	2.45	DBLD	2.2	2282	41.0	2432	NA	NA	2.520
H380	44.0	3.04	DBLD	2.8	2279	46.0	2429	NA	NA	2.520
ACCUR 2230	35.1	2.31	DBLD	2.2	2129	39.0	2419	47000	CUP	2.530
H322	35.0	2.54	DBLD	2.5	2234	38.0	2418	NA	NA	2.520
H4350	45.0c	3.26	DBLD	3.1	2210	47.0c	2380	NA	NA	2.520
H4831	45.0c	3.26	DBLD	3.1	2161	47.0c	2290	NA	NA	2.520
WIN 760	41.2	2.74	DBLD	2.5	2260	41.2	2260	39000	CUP	2.530
180 Grain Jacketed Bullet										
BL-C(2)	40.0	2.58	DBLD	2.5	2290	43.0	2474	NA	NA	2.730
H414	44.0	2.91	DBLD	2.8	2323	46.0	2470	NA	NA	2.730
H380	43.0	2.97	DBLD	2.8	2311	45.0	2440	NA	NA	2.730
H335	37.0	2.39	DBLD	2.2	2231	40.0	2417	NA	NA	2.730
H4350	45.0c	3.26	DBLD	3.1	2290	47.0c	2416	NA	NA	2.730
H4895	36.0	2.62	DBLD	2.5	2227	39.0	2373	NA	NA	2.730
H322	34.0	2.46	DBLD	2.2	2169	37.0	2359	NA	NA	2.730

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

308 WINCHESTER



Useful case capacity 3.43 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
100 Grain Jacketed Bullet												
v-N135	41.4	3.22	DBLD	3.1	2932	46.8c	3287	NA	NA	2.638	....	....
v-N130	36.3	2.74	DBLD	2.5	2883	40.7	3202	NA	NA	2.638	....	....
H322	39.0	2.83	DBLD	2.8	2699	41.0	2831	40538	PSI	2.530	....	....
110 Grain Jacketed Bullet												
WIN 748	52.9c	3.47	NA	3.4	3269	53.2c	3300	46000	CUP	2.530	....	....
v-N133	43.2	3.33	NA	3.1	2946	47.6c	3210	NA	NA	2.657	....	....
ACCUR 2460	43.7	2.87	DBLD	2.8	2903	48.5	3193	49300	CUP	2.595	....	....
A-XMR-2015	40.5	2.96	DBLD	2.8	2899	45.0	3189	48100	CUP	2.595	....	....
ACCUR 2230	42.8	2.81	DBLD	2.8	2882	47.5	3171	49300	CUP	2.595	....	....
H380	49.0	3.39	NA	3.1	2914	53.0c	3145	55800	PSI	2.530	....	....
v-N130	39.9	3.01	DBLD	2.8	2859	44.1	3145	NA	NA	2.657	....	....
RELODER 7	41.2	3.00	DBLD	2.8	3042	42.5	3130	47200	CUP	2.600	....	....
IMR4895	45.6	3.32	NA	3.1	2928	49.0c	3130	49200	CUP	2.600	....	....
v-N120	36.3	2.82	DBLD	2.8	2815	40.0	3068	NA	NA	2.657	....	....
A-XMR-2495	42.3	3.17	DBLD	3.1	2747	47.0c	3022	42700	CUP	2.595	....	....
ACCUR 2520	42.8	2.92	DBLD	2.8	2745	47.5	3020	41500	CUP	2.595	....	....
IMR4198	34.5	2.73	DBLD	2.5	2740	38.5	3015	51100	CUP	2.600	....	....
IMR4320	45.6	3.26	DBLD	3.1	2815	49.0c	3010	49200	CUP	2.600	....	....
H414	54.0c	3.57	NA	3.4	2990	54.0c	2990	53654	PSI	2.530	....	....
IMR3031	45.0c	3.43	NA	3.4	2990	45.0c	2990	42200	CUP	2.600	....	....
IMR4064	47.0c	3.50	NA	3.4	2955	47.0c	2955	43300	CUP	2.600	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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308 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
110 Grain Jacketed Bullet (Continued)											
IMR4227	28.2	2.17	DBLD	1.9	2529	32.0	2835	51900 CUP	2.600	....	....
SR4759	27.5	2.73	DBLD	2.5	2440	31.0	2710	51600 CUP	2.600	....	....
IMR4350	47.0c	3.45	NA	3.4	2500	47.0c	2500	32000 CUP	2.600	....	....
IMR4831	47.0c	3.45	NA	3.4	2330	47.0c	2330	29200 CUP	2.600	....	....
110 Grain Barnes X Bullet											
BL-C(2)	48.0	3.10	DBLD	2.8	3028	52.0	3268	61285 PSI	2.800	.9809	.9529
H4895	45.0	3.28	DBLD	3.1	3010	49.0c	3249	59496 PSI	2.800	....	....
H-VARGET	48.0c	3.51	NA	3.4	3116	50.0c	3237	54965 PSI	2.800	....	....
H335	44.0	2.84	DBLD	2.8	2974	48.0	3210	60569 PSI	2.800	.9809	.9791
H4198	37.0	2.78	DBLD	2.5	2950	40.0	3143	60808 PSI	2.800	....	....
H322	42.0	3.04	DBLD	2.8	2988	45.0	3136	61762 PSI	2.800	.9839	.9442
123 Grain Jacketed Bullet											
v-N135	42.4	3.29	DBLD	3.1	2736	46.0c	2953	NA NA	2.634	....	....
v-N130	35.4	2.67	DBLD	2.5	2557	41.1	2923	NA NA	2.634	....	....
125 Grain Jacketed Bullet											
WIN 748	47.6	3.12	DBLD	3.1	2942	52.0	3175	50000 CUP	2.530	....	....
H-VARGET	48.0c	3.51	NA	3.4	3018	50.0c	3135	54488 PSI	2.700	....	....
H4895	45.0	3.28	DBLD	3.1	2897	49.0c	3127	57708 PSI	2.700	....	....
H335	44.0	2.84	DBLD	2.8	2854	48.0	3080	57469 PSI	2.700	.9812	.9392
v-N140	45.3	3.32	NA	3.1	2817	49.9c	3070	NA NA	2.756	....	....
BL-C(2)	48.0	3.10	DBLD	2.8	2843	52.0	3069	50792 PSI	2.700	.9812	.9581
H322	42.0	3.04	DBLD	2.8	2855	45.0	3052	61285 PSI	2.700	.9781	.9452
v-N135	42.8	3.33	NA	3.1	2797	47.2c	3048	NA NA	2.756	....	....
RELODER12	46.6	3.22	DBLD	3.1	2898	49.0	3040	57400 PSI	2.700	....	....
v-N133	41.1	3.16	DBLD	3.1	2806	44.9c	3028	NA NA	2.756	....	....
A-XMR-2015	39.2	2.86	DBLD	2.8	2743	43.5	3018	49700 CUP	2.780	....	....
ACCUR 2230	42.3	2.78	DBLD	2.5	2742	47.0	3017	49800 CUP	2.780	....	....
ACCUR 2460	42.3	2.77	DBLD	2.5	2739	47.0	3014	48600 CUP	2.780	....	....
H4198	36.0	2.70	DBLD	2.5	2841	39.5	2988	59377 PSI	2.700	.9856	.9812
v-N130	37.9	2.86	DBLD	2.8	2733	41.7	2977	NA NA	2.756	....	....
ACCUR 2520	42.8	2.92	DBLD	2.8	2685	47.5	2955	45100 CUP	2.780	....	....
A-XMR-2495	42.3	3.17	DBLD	3.1	2663	47.0c	2931	45200 CUP	2.780	....	....
RELODER 7	38.9	2.83	DBLD	2.8	2838	40.0	2920	47100 CUP	2.700	....	....
A-XMR-4064	41.4	3.12	DBLD	3.1	2589	46.0c	2849	39300 CUP	2.780	....	....
130 Grain Jacketed Bullet											
H-VARGET	47.0c	3.44	NA	3.4	2961	50.0c	3135	54488 PSI	2.615	....	....
H4895	45.0	3.28	DBLD	3.1	2871	49.0c	3099	59735 PSI	2.615	....	....
BL-C(2)	48.0	3.10	DBLD	2.8	2889	51.5	3089	59258 PSI	2.615	.9809	.9556

....STARTING LOADS....

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308 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....											
130 Grain Jacketed Bullet (Continued)											
H380	48.0	3.32	NA	3.1	2766	52.0c	2986	58662 PSI	2.530	....	....
H335	43.0	2.77	DBLD	2.5	2787	46.0	2980	59258 PSI	2.615	.9780	.9333
H322	40.0	2.90	DBLD	2.8	2735	43.0	2924	59377 PSI	2.615	.9778	.9388
H414	48.0	3.17	DBLD	3.1	2700	52.0c	2914	57588 PSI	2.530	.9811	.9479
v-N133	43.5	3.35	NA	3.1	2900	43.5	2900	NA NA	2.530	....	....
v-N135	40.3	3.13	DBLD	3.1	2594	45.1c	2881	NA NA	2.677	....	....
v-N140	42.9	3.14	DBLD	3.1	2637	47.2c	2874	NA NA	2.677	....	....
VEC SP9	46.3	3.16	DBLD	3.1	2871	46.3	2871	38824 CIP	2.600	....	....
v-N130	40.6	3.06	DBLD	2.8	2832	40.6	2832	NA NA	2.530	....	....
H4198	35.0	2.63	DBLD	2.5	2469	37.0	2590	59258 PSI	2.615	....	....
140 Grain Barnes X Bullet											
BL-C(2)	45.0	2.90	DBLD	2.8	2770	48.0	2934	61046 PSI	2.800	.9809	.9442
H-VARGET	44.0	3.22	DBLD	3.1	2765	47.0c	2929	59854 PSI	2.800	.9811	.9438
H4895	41.0	2.98	DBLD	2.8	2659	45.0	2897	60450 PSI	2.800	.9787	.9224
H335	40.0	2.58	DBLD	2.5	2647	42.5	2803	59258 PSI	2.800	.9772	.9464
150 Grain Winchester Fail Safe											
WIN 748	43.0	2.82	DBLD	2.8	2540	43.0	2540	45100 PSI	2.530	....	....
150 Grain Jacketed Bullet											
H-VARGET	44.0	3.22	DBLD	3.1	2773	47.0c	2937	59973 PSI	2.800	.9812	.9513
RELODER15	37.0	2.61	DBLD	2.5	2380	46.3	2880	57300 PSI	2.600	....	....
IMR4895	42.1	3.06	DBLD	2.8	2668	45.5	2880	59000 PSI	2.755	....	....
H380	47.0	3.25	DBLD	3.1	2664	51.0c	2876	61404 PSI	2.530	....	....
H4895	43.0	3.13	DBLD	3.1	2737	45.5	2870	60808 PSI	2.800	....	....
WIN 748	46.2	3.03	DBLD	2.8	2732	48.5	2865	48000 CUP	2.530	....	....
IMR4064	42.3	3.15	DBLD	3.1	2682	45.0	2840	58000 PSI	2.755	....	....
BL-C(2)	45.0	2.90	DBLD	2.8	2681	48.0	2839	59615 PSI	2.800	.9809	.9299
IMR4320	42.4	3.03	DBLD	2.8	2622	45.8	2830	59000 PSI	2.755	....	....
ACCUR 2520	41.9	2.86	DBLD	2.8	2554	46.5	2809	48700 CUP	2.745	....	....
A-XMR-2495	41.4	3.10	DBLD	2.8	2551	46.0c	2806	47900 CUP	2.745	....	....
v-N550	44.8	3.10	DBLD	2.8	2540	49.7c	2795	NA NA	2.795	....	....
H335	41.0	2.64	DBLD	2.5	2608	44.0	2787	61046 PSI	2.800	.9782	.9405
v-N150	42.5	3.17	DBLD	3.1	2515	47.0c	2767	NA NA	2.795	....	....
ACCUR 2460	40.5	2.66	DBLD	2.5	2513	45.0	2765	48500 CUP	2.745	....	....
A-XMR-2015	37.4	2.73	DBLD	2.5	2512	41.5	2764	49700 CUP	2.745	....	....
H414	47.0	3.11	DBLD	3.1	2557	51.0	2760	57231 PSI	2.530	.9809	.9529
A-XMR-4064	40.9	3.09	DBLD	2.8	2509	45.5c	2760	46500 CUP	2.745	....	....
RELODER12	42.8	2.96	DBLD	2.8	2627	45.0	2755	57400 PSI	2.600	....	....
IMR3031	40.7	3.10	DBLD	2.8	2647	42.5	2750	57000 PSI	2.755	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

308 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....												
150 Grain Jacketed Bullet (Continued)												
RELODER 7	36.1	2.63	DBLD	2.5	2698	37.0	2750	46900	CUP	2.600	....	....
v-N133	37.8	2.91	DBLD	2.8	2482	42.0	2730	NA	NA	2.756	....	....
ACCUR 2230	39.2	2.58	DBLD	2.5	2464	43.5	2712	48400	CUP	2.745	....	....
H322	37.0	2.68	DBLD	2.5	2528	40.0	2702	60212	PSI	2.800	.9781	.9183
WIN 760	50.1	3.34	NA	3.1	2700	50.1	2700	40500	CUP	2.530	....	....
v-N540	34.9	2.45	DBLD	2.2	2200	42.6	2613	NA	NA	2.795	....	....
VEC TU5000	45.1	3.25	DBLD	3.1	2608	45.1	2608	37010	CIP	2.600	....	....
IMR4198	31.7	2.51	DBLD	2.5	2336	35.5	2595	51300	CUP	2.700	....	....
v-N140	32.2	2.36	DBLD	2.2	2098	40.8	2564	NA	NA	2.795	....	....
v-N130	37.0	2.79	DBLD	2.5	2544	37.0	2544	NA	NA	2.600	....	....
H4831	46.0	3.33	NA	3.1	2339	50.0c	2525	44354	PSI	2.530	....	....
ACCUR 2700	43.7	2.99	DBLD	2.8	2278	48.5	2506	45900	CUP	2.745	....	....
H4350	44.0	3.19	DBLD	3.1	2364	47.0	2504	44592	PSI	2.530	.9809	.9590
H450	48.5	3.17	DBLD	3.1	2326	52.2	2487	51985	PSI	2.530	.9820	.9452
IMR4350	46.0	3.38	NA	3.1	2415	46.0	2415	36600	CUP	2.700	....	....
SR4759	24.4	2.43	DBLD	2.2	2094	27.5	2325	51500	CUP	2.700	....	....
IMR4831	46.0	3.38	NA	3.1	2265	46.0	2265	32600	CUP	2.700	....	....
IMR4227	23.3	1.79	DBLD	1.6	2055	26.0	2260	51100	CUP	2.700	....	....
HERC 2400	25.0	1.85	DBLD	1.6	2215	25.0	2215	36700	CUP	2.600	....	....
150 Grain Lead Bullet												
VEC TU2000	20.8	1.59	DBLD	1.3	1460	20.8	1460	10885	CIP	2.600	....	....
150 Grain Barnes X Bullet												
RELODER15	36.3	2.56	DBLD	2.5	2348	45.0	2815	56800	PSI	2.600	....	....
152 Grain Lead Bullet												
ACC XMP5744	23.5	1.77	DBLD	1.6	1970	27.0	2230	38500	CUP	2.530	....	....
155 Grain Jacketed Bullet												
H-VARGET	44.0	3.22	DBLD	3.1	2747	47.0c	2909	58900	PSI	2.775	.9813	.9421
H4895	43.0	3.13	DBLD	3.1	2687	46.0	2873	59258	PSI	2.775	.9778	.9454
BL-C(2)	45.0	2.90	DBLD	2.8	2708	48.0	2867	59138	PSI	2.775	.9809	.9110
v-N550	44.9	3.11	DBLD	3.1	2599	49.8c	2859	NA	NA	2.795	....	....
H414	48.0	3.17	DBLD	3.1	2637	51.0	2793	59854	PSI	2.775	.9809	.9309
H335	41.0	2.64	DBLD	2.5	2625	43.5	2779	59496	PSI	2.775	.9773	.9343
v-N150	42.6	3.18	DBLD	3.1	2540	46.6c	2760	NA	NA	2.795	....	....
v-N540	40.2	2.82	DBLD	2.8	2437	45.2	2722	NA	NA	2.795	....	....
H322	38.0	2.75	DBLD	2.5	2535	41.0	2710	58900	PSI	2.775	.9778	.9503
v-N140	36.7	2.69	DBLD	2.5	2275	43.4	2625	NA	NA	2.795	....	....
v-N135	34.4	2.67	DBLD	2.5	2266	40.7	2615	NA	NA	2.795	....	....
156 Grain Jacketed Bullet												
v-N150	43.6	3.25	DBLD	3.1	2519	48.3c	2771	NA	NA	2.685	....	....

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c = Compressed charge

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308 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....												
156 Grain Jacketed Bullet (Continued)												
v-N140	41.1	3.01	DBLD	2.8	2473	45.4	2695	NA	NA	2.685	....	....
v-N135	39.2	3.05	DBLD	2.8	2448	43.1	2667	NA	NA	2.685	....	....
165 Grain Winchester Fail Safe												
WIN 748	42.0	2.75	DBLD	2.5	2400	42.0	2400	43800	PSI	2.800	....	....
165 Grain Jacketed Bullet												
RELODER15	36.5	2.58	DBLD	2.5	2298	45.5	2780	57000	PSI	2.700	....	....
H-VARGET	42.0	3.07	DBLD	2.8	2545	46.0	2773	60212	PSI	2.750	.9789	.9481
BL-C(2)	44.0	2.84	DBLD	2.8	2560	47.5	2738	59258	PSI	2.750	.9809	.9241
H414	48.0	3.17	DBLD	3.1	2537	52.0c	2704	58662	PSI	2.750	.9842	.9697
H4895	41.0	2.98	DBLD	2.8	2544	43.5	2694	59615	PSI	2.750	.9773	.9017
v-N550	44.3	3.07	DBLD	2.8	2496	48.2	2694	NA	NA	2.795	....	....
v-N150	41.6	3.10	DBLD	2.8	2436	46.3c	2680	NA	NA	2.795	....	....
IMR4895	40.0	2.92	DBLD	2.8	2483	43.3	2680	59000	PSI	2.755	....	....
v-N140	40.6	2.98	DBLD	2.8	2425	44.9	2667	NA	NA	2.795	....	....
RELODER12	42.0	2.90	DBLD	2.8	2527	44.0	2650	57200	PSI	2.700	....	....
IMR4064	40.7	3.03	DBLD	2.8	2541	42.5	2640	57000	PSI	2.755	....	....
v-N135	38.8	3.01	DBLD	2.8	2411	42.7	2627	NA	NA	2.795	....	....
H335	39.0	2.52	DBLD	2.5	2439	42.0	2608	58542	PSI	2.750	.9779	.9677
v-N133	37.1	2.86	DBLD	2.8	2369	40.7	2582	NA	NA	2.795	....	....
H322	36.0	2.61	DBLD	2.5	2347	39.0	2534	56515	PSI	2.530	.9747	.9426
H4350	44.0	3.19	DBLD	3.1	2351	47.0	2490	45069	PSI	2.530	.9811	.9672
H4831	46.0	3.33	NA	3.1	2288	50.0c	2469	46500	PSI	2.530	....	....
H450	46.0	3.00	DBLD	2.8	2178	50.0	2350	47812	PSI	2.530	.9811	.9610
165 Grain Lead Bullet												
ACC XMP5744	24.3	1.83	DBLD	1.6	1968	27.0	2165	37200	CUP	2.700	....	....
165 Grain Barnes X Bullet												
RELODER15	34.9	2.47	DBLD	2.2	2211	43.5	2675	57000	PSI	2.750	....	....
IMR4895	40.4	2.94	DBLD	2.8	2455	43.7	2650	59000	PSI	2.800	....	....
IMR4064	40.0	2.98	DBLD	2.8	2455	42.5	2600	58000	PSI	2.800	....	....
IMR4320	40.4	2.90	DBLD	2.8	2455	43.0	2600	58000	PSI	2.800	....	....
167 Grain Jacketed Bullet												
v-N550	44.4	3.07	DBLD	2.8	2495	48.9	2719	NA	NA	2.795	....	....
v-N150	41.9	3.13	DBLD	3.1	2438	46.1c	2657	NA	NA	2.795	....	....
v-N540	39.8	2.79	DBLD	2.5	2420	43.9	2637	NA	NA	2.795	....	....
v-N140	40.0	2.93	DBLD	2.8	2389	44.0	2604	NA	NA	2.795	....	....
168 Grain Jacketed Bullet												
BL-C(2)	44.0	2.84	DBLD	2.8	2601	47.0	2754	59854	PSI	2.800	.9811	.9224
H-VARGET	42.0	3.07	DBLD	2.8	2506	46.0	2731	60331	PSI	2.800	.9786	.9499

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
168 Grain Jacketed Bullet (Continued)												
ACCUR 2520	40.5	2.76	DBLD	2.5	2464	45.0	2712	50200	CUP	2.800	....	....
H4895	41.0	2.98	DBLD	2.8	2553	43.5	2703	59019	PSI	2.800	.9774	.9025
v-N550	43.4	3.00	DBLD	2.8	2502	47.3	2700	NA	NA	2.795	....	....
RELODER15	34.6	2.44	DBLD	2.2	2223	42.8	2665	56600	PSI	2.700	....	....
A-XMR-2495	40.1	3.00	DBLD	2.8	2412	44.5	2654	47900	CUP	2.800	....	....
A-XMR-2015	36.0	2.63	DBLD	2.5	2402	40.0	2642	50500	CUP	2.800	....	....
H335	39.0	2.52	DBLD	2.5	2460	42.0	2631	58781	PSI	2.800	.9778	.9145
v-N540	38.9	2.73	DBLD	2.5	2319	44.6	2625	NA	NA	2.795	....	....
ACCUR 2230	37.8	2.48	DBLD	2.2	2372	42.0	2610	49500	CUP	2.800	....	....
v-N150	40.5	3.02	DBLD	2.8	2392	44.5	2607	NA	NA	2.795	....	....
RELODER12	41.0	2.83	DBLD	2.8	2483	43.0	2605	57200	PSI	2.700	....	....
ACCUR 2460	38.3	2.51	DBLD	2.5	2364	42.5	2601	48600	CUP	2.800	....	....
A-XMR-4064	38.7	2.92	DBLD	2.8	2337	43.0	2571	43000	CUP	2.800	....	....
v-N140	38.3	2.81	DBLD	2.8	2302	42.9	2556	NA	NA	2.795	....	....
170 Grain Jacketed Bullet												
v-N550	43.4	3.00	DBLD	2.8	2496	48.5	2772	NA	NA	2.795	....	....
v-N540	40.6	2.85	DBLD	2.8	2437	44.8	2656	NA	NA	2.795	....	....
v-N150	41.3	3.08	DBLD	2.8	2406	45.9	2647	NA	NA	2.795	....	....
v-N140	39.9	2.92	DBLD	2.8	2376	44.1	2614	NA	NA	2.795	....	....
v-N135	37.9	2.94	DBLD	2.8	2360	41.6	2572	NA	NA	2.795	....	....
175 Grain Jacketed Bullet												
BL-C(2)	43.0	2.77	DBLD	2.5	2531	46.0	2706	59973	PSI	2.800	.9779	.9202
H-VARGET	42.0	3.07	DBLD	2.8	2516	45.0	2690	57946	PSI	2.800	.9777	.9570
H4895	40.0	2.91	DBLD	2.8	2500	42.7	2647	58423	PSI	2.800	.9791	.9198
H414	46.0	3.04	DBLD	2.8	2482	49.0	2629	59735	PSI	2.800	.9809	.9299
A-XMR-4064	39.1	2.95	DBLD	2.8	2380	43.5	2618	59300	PSI	2.800	....	....
v-N550	41.7	2.89	DBLD	2.8	2389	45.8	2604	NA	NA	2.795	....	....
ACCUR 2520	37.8	2.58	DBLD	2.5	2360	42.0	2597	61000	PSI	2.800	....	....
H335	38.0	2.45	DBLD	2.2	2402	41.3	2592	59735	PSI	2.800	.9773	.9255
ACCUR 2700	42.3	2.90	DBLD	2.8	2355	47.0	2591	57800	PSI	2.800	....	....
A-XMR-2495	37.3	2.79	DBLD	2.5	2346	41.5	2582	58800	PSI	2.800	....	....
v-N540	39.4	2.76	DBLD	2.5	2346	43.1	2556	NA	NA	2.795	....	....
ACCUR 2230	36.0	2.37	DBLD	2.2	2319	40.0	2551	60000	PSI	2.800	....	....
ACCUR 2460	36.4	2.39	DBLD	2.2	2316	40.5	2548	58500	PSI	2.800	....	....
v-N150	39.0	2.91	DBLD	2.8	2292	43.7	2546	NA	NA	2.795	....	....
v-N140	37.3	2.73	DBLD	2.5	2248	41.4	2473	NA	NA	2.795	....	....

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308 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
180 Grain Winchester Fail Safe											
ACCUR 2520	37.3	2.55	DBLD	2.5	2292	41.5	2521	48600 CUP	2.715	....	....
RELODER15	33.3	2.35	DBLD	2.2	2065	41.5	2500	57000 PSI	2.750	....	....
ACCUR 2460	35.1	2.30	DBLD	2.2	2242	39.0	2467	50200 CUP	2.715	....	....
ACCUR 2700	40.9	2.80	DBLD	2.5	2221	45.5	2443	49200 CUP	2.715	....	....
ACCUR 2230	34.6	2.27	DBLD	2.2	2213	38.5	2434	49900 CUP	2.715	....	....
WIN 748	41.0	2.69	DBLD	2.5	2397	41.3	2420	54900 PSI	2.530	....	....
A-XMR-2495	32.4	2.42	DBLD	2.2	2035	36.0	2239	51000 CUP	2.715	....	....
180 Grain Jacketed Bullet											
H-VARGET	41.0	3.00	DBLD	2.8	2442	45.0	2661	59138 PSI	2.800	.9786	.9547
BL-C(2)	42.0	2.71	DBLD	2.5	2441	46.0	2660	59735 PSI	2.800	.9788	.9470
RELODER15	40.4	2.85	DBLD	2.8	2450	44.0	2645	57500 PSI	2.750	....	....
H380	43.0	2.97	DBLD	2.8	2408	47.0	2624	59854 PSI	2.530	.9788	.9529
ACCUR 2520	40.1	2.74	DBLD	2.5	2378	44.5	2616	49200 CUP	2.800	....	....
WIN 748	41.2	2.70	DBLD	2.5	2386	45.5	2600	50500 CUP	2.530	....	....
H4895	40.0	2.91	DBLD	2.8	2450	42.5	2595	59258 PSI	2.800	.9771	.9277
A-XMR-2495	38.7	2.90	DBLD	2.8	2356	43.0	2592	50800 CUP	2.800	....	....
IMR4064	38.5	2.87	DBLD	2.8	2323	43.5	2580	51700 CUP	2.725	....	....
H414	46.0	3.04	DBLD	2.8	2430	49.0	2573	56635 PSI	2.800	.9812	.9428
IMR3031	36.7	2.80	DBLD	2.5	2296	41.5	2550	51700 CUP	2.725	....	....
IMR4320	39.2	2.80	DBLD	2.5	2274	44.5	2550	52000 CUP	2.725	....	....
IMR4895	38.2	2.78	DBLD	2.5	2309	42.5	2540	50900 CUP	2.725	....	....
WIN 760	46.6	3.10	DBLD	2.8	2535	46.6	2535	43000 CUP	2.750	....	....
H335	38.0	2.45	DBLD	2.2	2364	41.0	2528	59019 PSI	2.800	.9779	.9399
v-N150	40.4	3.01	DBLD	2.8	2306	44.5	2513	NA NA	2.795	....	....
v-N140	38.5	2.82	DBLD	2.8	2251	42.8	2477	NA NA	2.795	....	....
ACCUR 2460	37.4	2.45	DBLD	2.2	2248	41.5	2474	49500 CUP	2.800	....	....
ACCUR 2700	42.3	2.90	DBLD	2.8	2245	47.0	2470	40000 CUP	2.800	....	....
A-XMR-4064	37.8	2.85	DBLD	2.8	2242	42.0	2466	43800 CUP	2.800	....	....
H4350	44.0	3.19	DBLD	3.1	2324	47.0	2460	50077 PSI	2.530	.9809	.9464
H4831	45.0	3.26	DBLD	3.1	2275	49.0c	2455	51508 PSI	2.530	....	....
ACCUR 2230	36.0	2.37	DBLD	2.2	2217	40.0	2439	48800 CUP	2.800	....	....
v-N135	36.3	2.82	DBLD	2.8	2209	40.4	2430	NA NA	2.795	....	....
H322	34.0	2.46	DBLD	2.2	2213	37.0	2388	55919 PSI	2.530	.9750	.9371
VEC SP7	42.4	2.79	DBLD	2.5	2297	44.0	2369	35602 CIP	2.750	....	....
IMR4350	46.0	3.38	NA	3.1	2365	46.0	2365	38900 CUP	2.725	....	....
IMR4198	29.7	2.35	DBLD	2.2	2117	33.5	2350	51600 CUP	2.725	....	....
H450	44.5	2.91	DBLD	2.8	2115	48.5	2282	51627 PSI	2.530	.9811	.9213
IMR4831	46.0	3.38	NA	3.1	2225	46.0	2225	36900 CUP	2.725	....	....

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
180 Grain Jacketed Bullet (Continued)												
IMR4227	23.8	1.83	DBLD	1.6	1882	27.0	2110	52000	CUP	2.725	....	....
SR4759	23.7	2.35	DBLD	2.2	1877	26.5	2085	51200	CUP	2.725	....	....
180 Grain Lead Bullet												
VEC TU2000	20.1	1.53	1.46	1.3	1558	20.1	1558	16691	CIP	2.750	....	....
180 Grain Barnes X Bullet												
v-N550	37.9	2.62	DBLD	2.5	2176	42.6	2417	NA	NA	2.795	....	....
v-N540	34.7	2.43	DBLD	2.2	2098	39.5	2353	NA	NA	2.795	....	....
185 Grain Jacketed Bullet												
v-N550	39.0	2.70	DBLD	2.5	2165	46.0	2499	NA	NA	2.795	....	....
v-N140	38.2	2.80	DBLD	2.5	2270	42.2	2474	NA	NA	2.795	....	....
v-N150	35.6	2.66	DBLD	2.5	2049	43.3	2433	NA	NA	2.795	....	....
v-N135	36.0	2.80	DBLD	2.5	2204	39.9	2425	NA	NA	2.795	....	....
v-N540	36.0	2.52	DBLD	2.5	2107	42.0	2408	NA	NA	2.795	....	....
190 Grain Jacketed Bullet												
BL-C(2)	42.0	2.71	DBLD	2.5	2402	44.5	2543	58065	PSI	2.740	....	....
H-VARGET	41.0	3.00	DBLD	2.8	2372	44.0	2536	58542	PSI	2.740	.9777	.9791
v-N550	40.9	2.83	DBLD	2.8	2287	45.6	2516	NA	NA	2.795	....	....
H4895	39.0	2.84	DBLD	2.8	2351	42.0	2514	59019	PSI	2.740	.9777	.9345
H414	45.0	2.97	DBLD	2.8	2364	48.0	2504	58065	PSI	2.740	.9809	.9526
v-N540	37.9	2.66	DBLD	2.5	2221	42.4	2467	NA	NA	2.795	....	....
H335	37.0	2.39	DBLD	2.2	2291	40.0	2449	59377	PSI	2.740	.9781	.9233
WIN 748	39.2	2.57	DBLD	2.5	2287	42.0	2445	49000	CUP	2.530	....	....
v-N150	38.6	2.88	DBLD	2.8	2221	42.5	2420	NA	NA	2.795	....	....
ACCUR 2520	37.4	2.55	DBLD	2.5	2198	41.5	2418	47100	CUP	2.800	....	....
A-XMR-4064	36.9	2.78	DBLD	2.5	2195	41.0	2415	44700	CUP	2.800	....	....
v-N140	37.5	2.75	DBLD	2.5	2195	41.6	2414	NA	NA	2.795	....	....
A-XMR-2495	36.0	2.69	DBLD	2.5	2177	40.0	2395	45300	CUP	2.800	....	....
ACCUR 2230	34.7	2.28	DBLD	2.2	2153	38.5	2368	47700	CUP	2.800	....	....
ACCUR 2460	35.1	2.30	DBLD	2.2	2152	39.0	2367	46400	CUP	2.800	....	....
ACCUR 2700	40.5	2.77	DBLD	2.5	2101	45.0	2312	46000	CUP	2.800	....	....
200 Grain Jacketed Bullet												
BL-C(2)	41.0	2.64	DBLD	2.5	2374	43.5	2514	59377	PSI	2.700	.9772	.9179
H380	41.5	2.87	DBLD	2.8	2287	45.0	2468	60569	PSI	2.530	.9782	.9190
H-VARGET	39.0	2.85	DBLD	2.8	2288	42.0	2441	59735	PSI	2.700	.9786	.9511
WIN 748	39.4	2.58	DBLD	2.5	2256	43.0	2435	50000	CUP	2.530	....	....
WIN 760	45.0	3.00	DBLD	2.8	2384	45.7	2430	46500	CUP	2.530	....	....
H4895	38.0	2.77	DBLD	2.5	2256	41.0	2403	58900	PSI	2.700	.9790	.9503
H335	37.0	2.39	DBLD	2.2	2266	39.5	2400	60092	PSI	2.700	.9772	.9261

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

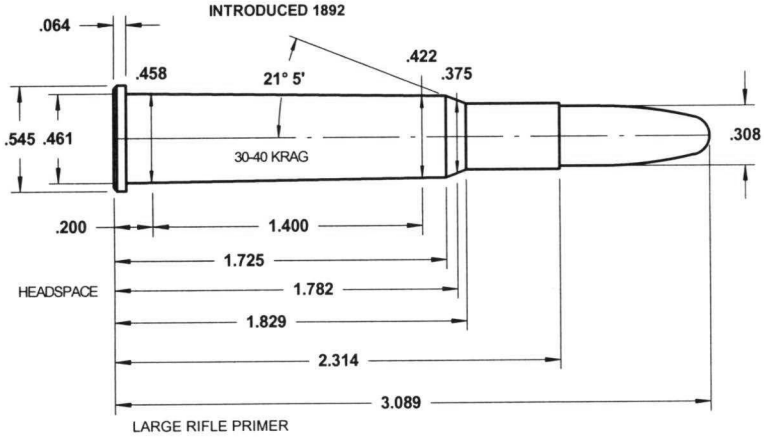
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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....											
200 Grain Jacketed Bullet (Continued)											
H414	41.5	2.74	DBLD	2.5	2216	45.0	2392	55085 PSI	2.530	.9783	.9267
H4350	43.0	3.12	DBLD	3.1	2221	46.0	2375	52819 PSI	2.530	.9778	.9617
H4831	44.0	3.19	DBLD	3.1	2188	48.0c	2361	53058 PSI	2.530	....	....
ACCUR 2520	36.3	2.48	DBLD	2.2	2108	40.3	2319	45500 CUP	2.800	....	....
A-XMR-2495	34.7	2.60	DBLD	2.5	2077	38.5	2286	47100 CUP	2.800	....	....
A-XMR-4064	36.0	2.72	DBLD	2.5	2077	40.0	2284	42800 CUP	2.800	....	....
ACCUR 2230	34.2	2.25	DBLD	2.2	2070	38.0	2277	46500 CUP	2.800	....	....
ACCUR 2460	34.2	2.24	DBLD	2.2	2056	38.0	2261	43900 CUP	2.800	....	....
v-N150	36.9	2.75	DBLD	2.5	2075	40.4	2260	NA	NA 2.795	....	....
v-N140	36.0	2.64	DBLD	2.5	2051	39.9	2256	NA	NA 2.795	....	....
ACCUR 2700	39.6	2.71	DBLD	2.5	2026	44.0	2229	46600 CUP	2.800	....	....
H450	44.0	2.87	DBLD	2.8	2033	48.0	2195	51150 PSI	2.530	.9809	.9727
220 Grain Jacketed Bullet											
A-XMR-2495	37.2	2.79	DBLD	2.5	2163	38.5	2226	47300 CUP	2.800	....	....
A-XMR-4064	35.1	2.65	DBLD	2.5	1925	39.0	2188	45100 CUP	2.800	....	....
ACCUR 2460	33.3	2.18	DBLD	1.9	1975	37.0	2172	46200 CUP	2.800	....	....
ACCUR 2700	37.8	2.59	DBLD	2.5	1962	42.0	2159	48300 CUP	2.800	....	....
ACCUR 2520	34.2	2.33	DBLD	2.2	1958	38.0	2154	44900 CUP	2.800	....	....
ACCUR 2230	32.4	2.13	DBLD	1.9	1945	36.0	2140	45300 CUP	2.800	....	....
225 Grain Jacketed Bullet											
H4350	43.0	3.12	DBLD	3.1	2216	46.0	2369	54727 PSI	2.530	.9777	.9662
H414	40.5	2.68	DBLD	2.5	2120	44.0	2289	55085 PSI	2.530	.9781	.9267
H4831	43.0	3.12	DBLD	3.1	2097	47.0	2286	54488 PSI	2.530	.9784	.9133
H380	39.5	2.73	DBLD	2.5	2117	43.0	2286	56396 PSI	2.530	.9782	.9293
BL-C(2)	35.0	2.26	DBLD	2.2	2076	38.0	2240	59854 PSI	2.530	.9748	.9490
H4895	34.0	2.48	DBLD	2.2	2060	37.0	2224	57708 PSI	2.530	.9748	.9061
H335	34.0	2.19	DBLD	1.9	2093	36.0	2216	58542 PSI	2.530	....	....
H450	44.0	2.87	DBLD	2.8	2040	48.0	2203	50554 PSI	2.530	.9807	.9217
250 Grain Jacketed Bullet											
H414	41.0	2.71	DBLD	2.5	2042	43.0	2142	58423 PSI	2.530	....	....
H4831	43.0	3.12	DBLD	3.1	2020	45.0	2099	56038 PSI	2.530	....	....
H380	40.0	2.76	DBLD	2.5	2048	41.0	2088	59854 PSI	2.530	....	....
H4350	41.0	2.97	DBLD	2.8	1986	43.0	2083	56158 PSI	2.530	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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30-40 KRAG



Useful case capacity 3.49 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
H322	39.0	2.83	DBLD	2.8	2659	43.0	2898	NA	NA	2.880
BL-C(2)	42.0	2.71	DBLD	2.5	2760	44.0	2894	NA	NA	2.880
H4198	30.0	2.25	DBLD	2.2	2574	34.0	2886	NA	NA	2.880
H335	42.0	2.71	DBLD	2.5	2747	44.0	2881	NA	NA	2.880
H4895	42.0	3.06	DBLD	2.8	2703	44.0	2835	NA	NA	2.880
H4350	48.0	3.48	NA	3.4	2353	51.0c	2492	NA	NA	2.880
H4227	13.0	1.00	.95	.7	1423	16.0	1706	NA	NA	2.880
110 Grain Bullet										
H4350	45.9	3.33	NA	3.1	2265	51.0c	2492	NA	NA	2.780
110 Grain Jacketed Bullet										
H322	39.0	2.83	DBLD	2.8	2608	43.0	2841	NA	NA	2.875
H4198	30.0	2.25	DBLD	2.2	2504	34.0	2807	NA	NA	2.875
H335	41.0	2.64	DBLD	2.5	2675	43.0	2806	NA	NA	2.875
H414	46.0	3.04	DBLD	2.8	2569	50.0	2773	NA	NA	2.875
130 Grain Jacketed Bullet										
H414	45.0	2.97	DBLD	2.8	2544	49.0	2746	NA	NA	2.865
H335	40.0	2.58	DBLD	2.5	2590	42.0	2717	NA	NA	2.865
H322	38.0	2.75	DBLD	2.5	2452	42.0	2698	NA	NA	2.865
H4198	29.0	2.18	DBLD	1.9	2288	33.0	2565	NA	NA	2.865
H4350	48.0	3.48	NA	3.4	2394	51.0c	2535	NA	NA	2.865
150 Grain Jacketed Bullet										
IMR4064	40.6	3.03	DBLD	2.8	2497	44.0	2695	39000	CUP	3.000

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c = Compressed charge

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
					....STARTING LOADS....					
150 Grain Jacketed Bullet (Continued)										
IMR3031	38.2	2.91	DBLD	2.8	2473	42.0	2695	39600	CUP	3.000
IMR4350	48.1c	3.54	NA	3.4	2590	48.5c	2615	36300	CUP	3.000
H4895	38.5	2.80	DBLD	2.5	2386	42.0	2575	NA	NA	3.090
A-XMR-4350	44.1	3.26	DBLD	3.1	2258	49.0c	2566	36800	CUP	3.045
H414	42.0	2.78	DBLD	2.5	2279	47.0	2531	NA	NA	3.090
H322	36.0	2.61	DBLD	2.5	2289	40.0	2518	NA	NA	3.090
H335	35.0	2.26	DBLD	2.2	2391	37.0	2508	NA	NA	3.090
BL-C(2)	35.0	2.26	DBLD	2.2	2375	37.0	2491	NA	NA	3.090
H380	40.5	2.80	DBLD	2.5	2306	44.0	2489	NA	NA	3.090
IMR4895	32.6	2.38	DBLD	2.2	2235	36.0	2435	39700	CUP	3.000
IMR4831	48.5c	3.56	NA	3.4	2430	48.5c	2430	29800	CUP	3.000
IMR4320	33.6	2.40	DBLD	2.2	2221	37.0	2420	39700	CUP	3.000
H4350	46.0	3.34	NA	3.1	2255	49.0c	2388	NA	NA	3.090
A-XMR-3100	45.0	3.37	NA	3.1	2083	50.0c	2367	34700	CUP	3.045
H4198	28.0	2.10	DBLD	1.9	2111	32.0	2366	NA	NA	3.090
IMR4198	28.3	2.25	DBLD	2.2	2224	30.0	2355	38100	CUP	3.000
H4831	45.0	3.26	DBLD	3.1	2137	49.0c	2306	NA	NA	3.090
IMR4227	22.4	1.73	DBLD	1.6	1993	23.5	2090	37700	CUP	3.000
SR4759	23.6	2.35	DBLD	2.2	2021	24.5	2080	37300	CUP	3.000
ACCUR 8700	47.7	3.28	DBLD	3.1	1615	53.0c	1835	29300	CUP	3.045
165 Grain Jacketed Bullet										
A-XMR-4350	42.8	3.17	DBLD	3.1	2190	47.5c	2489	36100	CUP	3.085
H322	35.0	2.54	DBLD	2.5	2183	39.0	2402	NA	NA	3.105
H335	35.0	2.26	DBLD	2.2	2298	36.0	2364	NA	NA	3.105
A-XMR-3100	45.0	3.37	NA	3.1	2079	50.0c	2363	35300	CUP	3.085
H4350	45.0	3.26	DBLD	3.1	2117	48.0	2242	NA	NA	3.105
H4831	44.0	3.19	DBLD	3.1	2016	48.0	2176	NA	NA	3.105
ACCUR 8700	47.7	3.28	DBLD	3.1	1641	53.0c	1865	32000	CUP	3.085
180 Grain Bullet										
H4831	43.2	3.13	DBLD	3.1	1978	48.0	2176	NA	NA	2.800
180 Grain Jacketed Bullet										
IMR4350	41.8	3.08	DBLD	2.8	2243	46.0	2445	38700	CUP	3.000
IMR4064	37.8	2.82	DBLD	2.8	2256	41.0	2435	39000	CUP	3.000
IMR4831	49.0c	3.60	NA	3.4	2425	49.0c	2425	35900	CUP	3.000
WIN 760	42.3	2.82	DBLD	2.8	2269	44.5	2380	37000	CUP	3.070
IMR3031	34.8	2.65	DBLD	2.5	2200	38.0	2375	39300	CUP	3.000
A-XMR-4350	41.4	3.06	DBLD	2.8	2077	46.0	2360	37200	CUP	3.090
A-XMR-3100	45.0	3.37	NA	3.1	2049	50.0c	2328	36700	CUP	3.090

CAUTION: With **NEVER EXCEED LOADS** maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

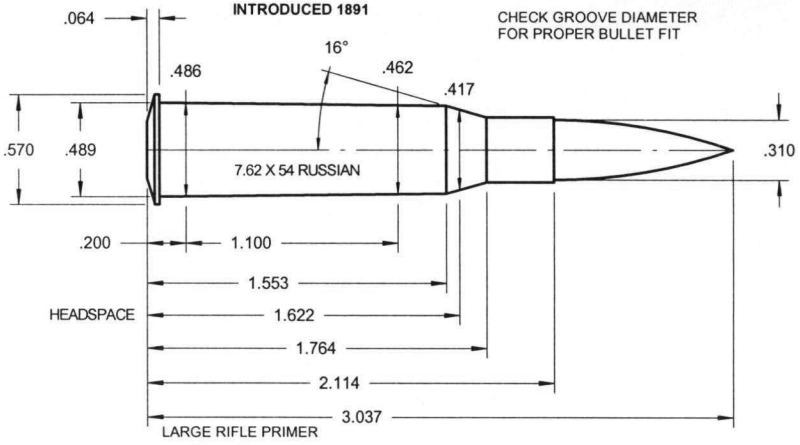
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
180 Grain Jacketed Bullet (Continued)										
H414	39.5	2.61	DBLD	2.5	2109	43.0	2276	NA	NA	3.090
IMR4895	32.9	2.40	DBLD	2.2	2123	35.5	2270	38800	CUP	3.000
H4895	35.0	2.55	DBLD	2.5	2098	38.0	2265	NA	NA	3.090
H322	33.0	2.39	DBLD	2.2	2026	37.0	2250	NA	NA	3.090
IMR4320	33.5	2.40	DBLD	2.2	2087	35.5	2210	38100	CUP	3.000
H380	37.0	2.56	DBLD	2.5	2040	40.0	2182	NA	NA	3.090
IMR4198	26.7	2.11	DBLD	1.9	1955	29.5	2150	39800	CUP	3.000
H4350	43.0	3.12	DBLD	3.1	1974	46.0	2110	NA	NA	3.090
H335	31.0	2.00	DBLD	1.9	1881	34.0	2049	NA	NA	3.090
BL-C(2)	30.5	1.97	DBLD	1.9	1858	33.0	2006	NA	NA	3.090
SR4759	22.1	2.19	DBLD	1.9	1798	24.0	1940	39100	CUP	3.000
IMR4227	21.9	1.68	DBLD	1.6	1811	23.0	1900	37800	CUP	3.000
ACCUR 8700	47.7	3.28	DBLD	3.1	1595	53.0c	1813	32300	CUP	3.090
200 Grain Jacketed Bullet										
H414	37.0	2.45	DBLD	2.2	2013	40.0	2151	NA	NA	3.090
H335	30.0	1.93	DBLD	1.9	1932	33.0	2106	NA	NA	3.090
H322	32.0	2.32	DBLD	2.2	1904	35.0	2075	NA	NA	3.090
H4350	42.0	3.05	DBLD	2.8	1924	44.0	2018	NA	NA	3.090
220 Grain Jacketed Bullet										
A-XMR-3100	43.2	3.23	DBLD	3.1	1908	48.0c	2168	39400	CUP	3.005
A-XMR-4350	38.7	2.86	DBLD	2.8	1852	43.0	2104	38200	CUP	3.005
WIN 760	40.5	2.70	DBLD	2.5	2070	40.5	2070	36000	CUP	3.000
H335	30.0	1.93	DBLD	1.9	1811	33.0	1974	NA	NA	3.080
H322	30.0	2.17	DBLD	1.9	1807	33.0	1969	NA	NA	3.080
H4350	40.0	2.90	DBLD	2.8	1857	42.0	1947	NA	NA	3.080
ACCUR 8700	47.7	3.28	DBLD	3.1	1534	53.0c	1743	34600	CUP	3.005

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7.62x54R RUSSIAN



Useful case capacity 3.59 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Factor Veloc	Pressr
110 Grain Jacketed Bullet												
BL-C(2)	56.0c	3.61	NA	3.4	3141	60.0c	3376	45900	PSI	2.715	....	....
H4895	51.0c	3.71	NA	3.7	3150	55.0c	3345	47094	PSI	2.715	....	....
H335	51.0	3.29	DBLD	3.1	3126	54.5	3332	49047	PSI	2.715	.9820	.9393
BENCHMARK	47.0	3.36	NA	3.1	3060	50.5c	3212	48721	PSI	2.715	.9863	.9654
H-VARGET	51.0c	3.73	NA	3.7	3016	55.0c	3200	43296	PSI	2.715	....	....
123 Grain Jacketed Bullet												
v-N135	46.9c	3.64	NA	3.4	2828	52.0c	3117	NA	NA	2.697	....	....
v-N133	46.1	3.55	NA	3.4	2894	50.5c	3104	NA	NA	2.697	....	....
v-N130	42.0	3.17	DBLD	3.1	2831	45.8	3058	NA	NA	2.697	....	....
125 Grain Jacketed Bullet												
BL-C(2)	56.0c	3.61	NA	3.4	3094	60.0c	3298	48938	PSI	2.715	....	....
H4895	50.0c	3.64	NA	3.4	3036	54.0c	3236	49589	PSI	2.715	....	....
H335	50.0	3.22	DBLD	3.1	2997	53.0	3193	48938	PSI	2.715	.9790	.9319
H-VARGET	51.0c	3.73	NA	3.7	2967	55.0c	3139	49589	PSI	2.715	....	....
125 Grain Lead Bullet												
ACC XMP5744	25.0	1.88	DBLD	1.6	2062	30.0	2354	29900	CUP	2.665	....	....
150 Grain Jacketed Bullet												
BL-C(2)	52.0	3.35	NA	3.1	2878	55.5	3027	50241	PSI	2.875	.9856	.9604
H-VARGET	47.0	3.44	NA	3.4	2721	50.5c	2985	50349	PSI	2.875	....	....
H4895	46.0	3.35	NA	3.1	2769	49.5c	2938	50241	PSI	2.875	.9832	.9450
H335	46.0	2.97	DBLD	2.8	2751	49.5	2918	49806	PSI	2.875	.9832	.9531

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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7.62x54R RUSSIAN (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
150 Grain Jacketed Bullet (Continued)									
v-N140	40.6	2.98	DBLD	2.8	2329	48.5 2792	NA NA	2.791	....
v-N135	37.9	2.94	DBLD	2.8	2284	46.4c 2753	NA NA	2.791	....
A-XMR-4350	48.6c	3.60	NA	3.4	2352	54.0c 2673	44100 CUP	2.850	....
v-N133	32.3	2.49	DBLD	2.2	2110	43.0 2667	NA NA	2.791	....
A-XMR-3100	49.5c	3.70	NA	3.4	2169	55.0c 2465	36000 CUP	2.850	....
ACCUR 8700	52.2c	3.59	NA	3.4	1670	58.0c 1898	24700 CUP	2.850	....
155 Grain Jacketed Bullet									
v-N150	44.5	3.32	NA	3.1	2526	50.6c 2861	NA NA	2.972	....
v-N140	42.2	3.09	DBLD	2.8	2451	48.7 2854	NA NA	2.972	....
v-N135	39.2	3.05	DBLD	2.8	2382	46.2 2795	NA NA	2.972	....
156 Grain Jacketed Bullet									
v-N150	46.6	3.48	NA	3.4	2529	51.4c 2810	NA NA	2.776	....
v-N140	44.2	3.24	DBLD	3.1	2485	49.2c 2773	NA NA	2.776	....
165 Grain Barnes X Bullet									
H4895	44.0	3.20	DBLD	3.1	2633	47.0 2761	49698 PSI	2.950	.9842 .9575
H4350	52.0c	3.77	NA	3.7	2608	55.0c 2740	45032 PSI	2.950	....
H-VARGET	45.0	3.29	DBLD	3.1	2581	48.3 2727	49915 PSI	2.950	.9835 .9571
H414	49.0	3.24	DBLD	3.1	2521	52.0 2669	44923 PSI	2.950	.9809 .9328
H380	47.0	3.25	DBLD	3.1	2499	50.0 2629	44272 PSI	2.950	.9830 .9583
167 Grain Jacketed Bullet									
v-N550	46.2	3.20	DBLD	3.1	2393	52.5c 2756	NA NA	2.953	....
v-N150	45.8	3.42	NA	3.4	2443	50.5c 2736	NA NA	2.953	....
v-N140	44.5	3.26	DBLD	3.1	2469	49.1c 2722	NA NA	2.953	....
v-N540	42.3	2.97	DBLD	2.8	2333	48.1 2663	NA NA	2.953	....
168 Grain Jacketed Bullet									
v-N550	47.4	3.28	DBLD	3.1	2431	53.3c 2773	NA NA	2.976	....
v-N540	43.6	3.06	DBLD	2.8	2370	49.7 2710	NA NA	2.976	....
v-N150	44.8	3.34	NA	3.1	2395	50.0c 2701	NA NA	2.976	....
v-N140	42.5	3.12	DBLD	3.1	2347	48.2 2653	NA NA	2.976	....
180 Grain Jacketed Bullet									
H4350	51.0c	3.70	NA	3.4	2493	55.0c 2692	48504 PSI	2.975	....
H414	49.0	3.24	DBLD	3.1	2478	52.0 2622	49481 PSI	2.975	.9811 .9460
H4895	42.0	3.06	DBLD	2.8	2482	45.4 2618	49698 PSI	2.975	.9842 .9673
H-VARGET	43.0	3.14	DBLD	3.1	2409	46.5 2575	49806 PSI	2.975	.9812 .9503
H380	47.0	3.25	DBLD	3.1	2430	50.0 2542	45575 PSI	2.975	.9852 .9689
A-XMR-4350	45.9	3.40	NA	3.1	2197	51.0c 2497	43000 CUP	2.900	....
H4831	51.0c	3.70	NA	3.4	2281	55.0c 2484	42536 PSI	2.975	....
A-XMR-3100	49.5c	3.70	NA	3.4	2162	55.0c 2457	42600 CUP	2.900	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7.62x54R RUSSIAN (Continued)

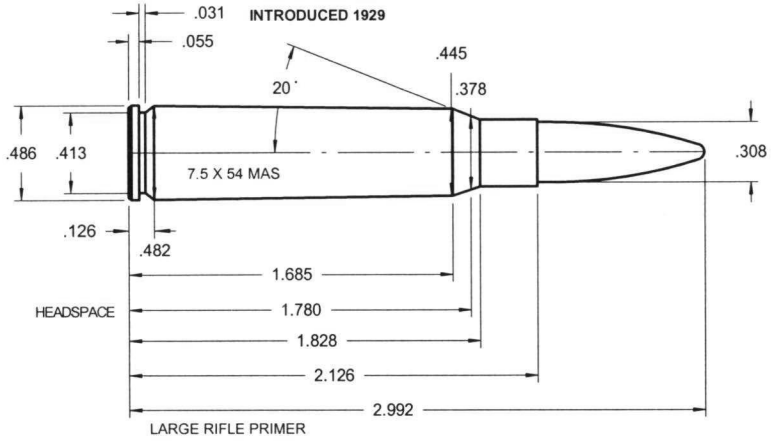
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
....STARTING LOADS....									
180 Grain Jacketed Bullet (Continued)									
ACCUR 8700	51.3	3.53	NA	3.4	1596	57.0c 1814	25300 CUP	2.900	---- ----
180 Grain Lead Bullet									
A-XMR-4350	45.0	3.33	NA	3.1	2146	50.0c 2439	40400 CUP	2.830	---- ----
A-XMR-3100	47.7	3.57	NA	3.4	2062	53.0c 2343	37100 CUP	2.830	---- ----
ACC XMP5744	25.2	1.89	DBLD	1.6	1873	28.0 2129	35200 CUP	2.830	---- ----
ACCUR 8700	49.5	3.41	NA	3.4	1601	55.0c 1819	26100 CUP	2.830	---- ----
185 Grain Jacketed Bullet									
v-N550	44.2	3.06	DBLD	2.8	2275	50.5 2632	NA	NA 2.953	---- ----
v-N140	38.3	2.81	DBLD	2.8	2215	45.3 2569	NA	NA 2.815	---- ----
v-N540	40.9	2.87	DBLD	2.8	2226	46.4 2539	NA	NA 2.953	---- ----
v-N135	40.0	3.11	DBLD	3.1	2252	44.5 2516	NA	NA 2.953	---- ----
v-N150	42.3	3.16	DBLD	3.1	2160	47.6 2466	NA	NA 2.756	---- ----
200 Grain Jacketed Bullet									
H4350	48.0	3.48	NA	3.4	2329	52.0c 2529	50458 PSI	2.950	---- ----
H414	48.0	3.17	DBLD	3.1	2396	51.0 2526	49372 PSI	2.950	.9826 .9619
v-N550	43.8	3.03	DBLD	2.8	2187	49.2 2500	NA	NA 3.035	---- ----
H4831	52.0c	3.77	NA	3.7	2348	55.0c 2468	49589 PSI	2.950	---- ----
H380	46.0	3.18	DBLD	3.1	2337	49.0 2432	50566 PSI	2.950	.9866 .9598
v-N150	40.4	3.01	DBLD	2.8	2118	46.4 2428	NA	NA 3.035	---- ----
v-N540	39.2	2.75	DBLD	2.5	2107	45.2 2422	NA	NA 3.035	---- ----
v-N140	38.6	2.83	DBLD	2.8	2083	45.2 2414	NA	NA 3.035	---- ----
H-VARGET	41.0	3.00	DBLD	2.8	2304	44.0 2412	49915 PSI	2.950	.9847 .9663
H4895	39.0	2.84	DBLD	2.8	2271	42.2 2411	50349 PSI	2.950	.9812 .9650
220 Grain Jacketed Bullet									
H414	47.0	3.11	DBLD	3.1	2296	49.5 2401	48287 PSI	2.830	---- ----
H4350	47.0	3.41	NA	3.4	2227	50.5c 2396	49806 PSI	2.830	---- ----
H4831	50.0c	3.62	NA	3.4	2209	54.0c 2381	49915 PSI	2.830	---- ----
v-N550	41.0	2.84	DBLD	2.8	2012	46.6 2332	NA	NA 3.035	---- ----
H380	43.0	2.97	DBLD	2.8	2145	46.0 2274	49806 PSI	2.830	.9805 .9504
H-VARGET	40.0	2.92	DBLD	2.8	2178	42.5 2269	49915 PSI	2.830	.9837 .9669
H4895	38.0	2.77	DBLD	2.5	2143	41.0 2263	50566 PSI	2.830	.9817 .9598
v-N540	37.9	2.66	DBLD	2.5	1968	42.8 2246	NA	NA 3.035	---- ----
v-N150	37.0	2.76	DBLD	2.5	1879	43.3 2221	NA	NA 3.035	---- ----

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7.5x54mm FRENCH MAS

These are loads from a similar cartridge.



Useful case capacity 3.68 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
H322	39.0	2.83	DBLD	2.8	2542	43.0	2898	NA	NA	2.683
BL-C(2)	38.7	2.50	DBLD	2.2	2582	44.0	2894	NA	NA	2.683
H4198	29.9	2.24	DBLD	2.2	2574	34.0	2886	NA	NA	2.683
H335	38.7	2.50	DBLD	2.2	2569	44.0	2881	NA	NA	2.683
H4895	38.7	2.82	DBLD	2.8	2529	44.0	2835	NA	NA	2.683
H4350	48.0	3.48	NA	3.4	2300	51.0c	2492	NA	NA	2.683
H4227	14.1	1.08	1.02	1.0	1521	16.0	1706	NA	NA	2.683
110 Grain Jacketed Bullet										
H322	37.8	2.74	DBLD	2.5	2534	43.0	2841	NA	NA	2.683
H4198	29.9	2.24	DBLD	2.2	2504	34.0	2807	NA	NA	2.683
H335	37.8	2.44	DBLD	2.2	2503	43.0	2806	NA	NA	2.683
H414	44.0	2.91	DBLD	2.8	2473	50.0	2773	NA	NA	2.683
H4350	44.9	3.25	DBLD	3.1	2222	51.0c	2492	NA	NA	2.683
130 Grain Jacketed Bullet										
H414	43.1	2.85	DBLD	2.8	2449	49.0	2746	NA	NA	2.703
H335	37.0	2.38	DBLD	2.2	2423	42.0	2717	NA	NA	2.703
H322	37.0	2.68	DBLD	2.5	2406	42.0	2698	NA	NA	2.703
H4198	29.0	2.18	DBLD	1.9	2288	33.0	2565	NA	NA	2.703
H4350	44.9	3.25	DBLD	3.1	2260	51.0c	2535	NA	NA	2.703
150 Grain Jacketed Bullet										
VEC TU5000	48.6	3.50	NA	3.4	2740	48.6	2740	39187	CIP	2.800

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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7.5x54mm FRENCH MAS (Continued)

These are loads from a similar cartridge.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
150 Grain Jacketed Bullet (Continued)										
IMR4064	39.7	2.96	DBLD	2.8	2450	44.0	2695	39000	CUP	2.903
IMR3031	37.3	2.84	DBLD	2.8	2427	42.0	2695	39600	CUP	2.903
IMR4350	47.0	3.46	NA	3.4	2541	48.5	2615	36300	CUP	2.903
H4895	37.0	2.69	DBLD	2.5	2297	42.0	2575	NA	NA	2.703
A-XMR-4350	44.1	3.26	DBLD	3.1	2258	49.0	2566	36800	CUP	2.948
H414	41.4	2.73	DBLD	2.5	2257	47.0	2531	NA	NA	2.703
H322	35.2	2.55	DBLD	2.5	2245	40.0	2518	NA	NA	2.703
H335	32.6	2.10	DBLD	1.9	2237	37.0	2508	NA	NA	2.703
BL-C(2)	32.6	2.10	DBLD	1.9	2221	37.0	2491	NA	NA	2.703
H380	38.7	2.68	DBLD	2.5	2220	44.0	2489	NA	NA	2.703
IMR4895	31.9	2.32	DBLD	2.2	2193	36.0	2435	39700	CUP	2.903
IMR4831	48.5	3.56	NA	3.4	2430	48.5	2430	29800	CUP	2.903
H4350	43.1	3.13	DBLD	3.1	2130	49.0	2388	NA	NA	2.703
A-XMR-3100	45.0	3.37	NA	3.1	2083	50.0c	2367	34700	CUP	2.948
H4198	28.2	2.11	DBLD	1.9	2111	32.0	2366	NA	NA	2.703
IMR4198	27.7	2.20	DBLD	1.9	2182	30.0	2355	38100	CUP	2.903
H4831	43.1	3.13	DBLD	3.1	2057	49.0	2306	NA	NA	2.703
IMR4227	21.9	1.69	DBLD	1.6	1955	23.5	2090	37700	CUP	2.903
SR4759	23.1	2.30	DBLD	2.2	1964	24.5	2080	37300	CUP	2.903
ACCUR 8700	47.7	3.28	DBLD	3.1	1615	53.0	1835	29300	CUP	2.948
165 Grain Jacketed Bullet										
A-XMR-4350	42.8	3.17	DBLD	3.1	2190	47.5	2489	36100	CUP	2.948
H322	34.3	2.49	DBLD	2.2	2141	39.0	2402	NA	NA	2.703
H335	31.7	2.04	DBLD	1.9	2109	36.0	2364	NA	NA	2.703
A-XMR-3100	45.0	3.37	NA	3.1	2079	50.0c	2363	35300	CUP	2.948
H4350	42.2	3.06	DBLD	2.8	1999	48.0	2242	NA	NA	2.703
H4831	44.0	3.19	DBLD	3.1	1967	48.0	2176	NA	NA	2.703
ACCUR 8700	47.7	3.28	DBLD	3.1	1641	53.0	1865	32000	CUP	2.948
165 Grain Lead Bullet										
ACC XMP5744	25.2	1.89	DBLD	1.6	1934	28.0	2198	38400	CUP	2.855
180 Grain Jacketed Bullet										
IMR4350	41.8	3.08	DBLD	2.8	2243	46.0	2445	38700	CUP	2.903
IMR4064	36.1	2.69	DBLD	2.5	2172	41.0	2435	NA	NA	2.903
IMR4831	48.0	3.53	NA	3.4	2379	49.0	2425	35900	CUP	2.903
WIN 760	42.3	2.82	DBLD	2.8	2269	44.5	2380	37000	CUP	2.703
IMR3031	34.0	2.59	DBLD	2.5	2158	38.0	2375	39300	CUP	2.903
A-XMR-4350	41.4	3.06	DBLD	2.8	2077	46.0	2360	37200	CUP	2.993

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7.5x54mm FRENCH MAS (Continued)

These are loads from a similar cartridge.

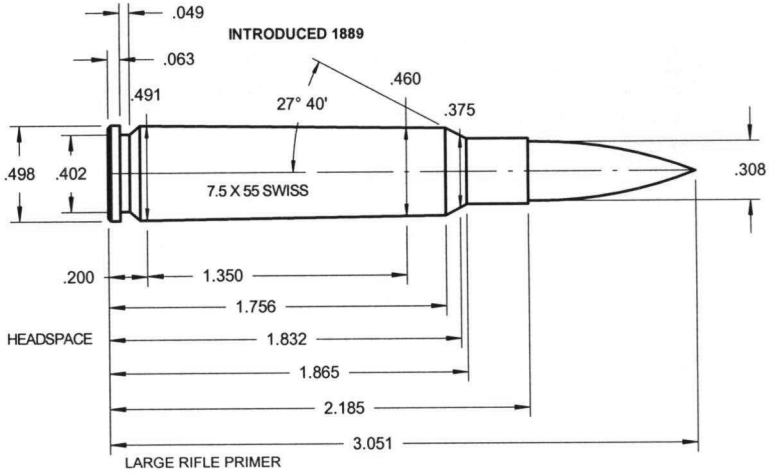
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
180 Grain Jacketed Bullet (Continued)										
A-XMR-3100	45.0	3.37	NA	3.1	2049	50.0c	2328	36700	CUP	2.993
H414	37.8	2.50	DBLD	2.2	2030	43.0	2276	NA	NA	2.703
IMR4895	32.2	2.34	DBLD	2.2	2083	35.5	2270	38800	CUP	2.903
H4895	33.4	2.43	DBLD	2.2	2019	38.0	2265	NA	NA	2.703
H322	32.6	2.36	DBLD	2.2	2007	37.0	2250	NA	NA	2.703
IMR4320	32.8	2.35	DBLD	2.2	2047	35.5	2210	38100	CUP	2.903
H380	35.2	2.43	DBLD	2.2	1945	40.0	2182	NA	NA	2.703
H4831	42.2	3.06	DBLD	2.8	1940	48.0	2176	NA	NA	2.703
IMR4198	26.1	2.07	DBLD	1.9	1918	29.5	2150	39800	CUP	2.903
H4350	40.5	2.94	DBLD	2.8	1882	46.0	2110	NA	NA	2.703
H335	29.9	1.93	DBLD	1.9	1827	34.0	2049	NA	NA	2.703
BL-C(2)	29.0	1.87	DBLD	1.6	1789	33.0	2006	NA	NA	2.703
SR4759	21.6	2.15	DBLD	1.9	1764	24.0	1940	39100	CUP	2.903
IMR4227	21.4	1.65	DBLD	1.6	1777	23.0	1900	37800	CUP	2.903
ACCUR 8700	47.7	3.28	DBLD	3.1	1595	53.0	1813	32300	CUP	2.993
180 Grain Lead Bullet										
A-XMR-4350	39.6	2.93	DBLD	2.8	2014	44.0	2289	34500	CUP	2.900
A-XMR-3100	43.2	3.23	DBLD	3.1	1971	48.0	2240	35700	CUP	2.900
ACC XMP5744	23.8	1.79	DBLD	1.6	1836	26.5	2086	36000	CUP	2.900
ACCUR 8700	47.7	3.28	DBLD	3.1	1610	53.0	1830	32000	CUP	2.900
200 Grain Jacketed Bullet										
H414	35.2	2.33	DBLD	2.2	1919	40.0	2151	NA	NA	2.803
H335	29.0	1.87	DBLD	1.6	1878	33.0	2106	NA	NA	2.803
H322	30.8	2.23	DBLD	2.2	1850	35.0	2075	NA	NA	2.803
H4350	38.7	2.81	DBLD	2.8	1800	44.0	2018	NA	NA	2.803
210 Grain Lead Bullet										
ACC XMP5744	22.5	1.69	DBLD	1.6	1646	25.0	1870	36800	CUP	2.925
220 Grain Jacketed Bullet										
A-XMR-3100	43.2	3.23	DBLD	3.1	1908	48.0	2168	39400	CUP	2.908
A-XMR-4350	38.7	2.86	DBLD	2.8	1852	43.0	2104	38200	CUP	2.908
WIN 760	39.6	2.64	DBLD	2.5	2031	40.5	2070	36000	CUP	2.903
H335	29.0	1.87	DBLD	1.6	1760	33.0	1974	NA	NA	2.903
H322	29.0	2.11	DBLD	1.9	1756	33.0	1969	NA	NA	2.903
H4350	37.0	2.68	DBLD	2.5	1737	42.0	1947	NA	NA	2.903
ACCUR 8700	47.7	3.28	DBLD	3.1	1534	53.0	1743	34600	CUP	2.908

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7.5x55mm SWISS

Do not use these loads in model 1889 Schmidt Rubin rifles.



Useful case capacity 3.90 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
125 Grain Jacketed Bullet										
H4350	47.0	3.41	NA	3.4	2631	51.0	2839	NA	NA	2.800
H414	46.0	3.04	DBLD	2.8	2723	48.0	2829	NA	NA	2.800
H4831	49.0	3.55	NA	3.4	2655	52.0	2811	NA	NA	2.800
H450	46.6	3.05	DBLD	2.8	2506	53.0	2809	NA	NA	3.001
H380	44.0	3.04	DBLD	2.8	2692	46.0	2797	NA	NA	2.800
H4895	41.0	2.98	DBLD	2.8	2634	43.0	2762	NA	NA	2.800
BL-C(2)	41.0	2.64	DBLD	2.5	2611	43.0	2739	NA	NA	2.800
H335	40.0	2.58	DBLD	2.5	2566	42.0	2692	NA	NA	2.800
150 Grain Jacketed Bullet										
H414	44.0	2.91	DBLD	2.8	2588	46.0	2689	NA	NA	2.790
H450	45.8	2.99	DBLD	2.8	2376	52.0	2664	NA	NA	3.001
H380	42.0	2.90	DBLD	2.8	2537	44.0	2661	NA	NA	2.790
H4831	47.0	3.41	NA	3.4	2463	51.0	2659	NA	NA	2.790
H4350	45.0	3.26	DBLD	3.1	2418	49.0	2610	NA	NA	2.790
H4895	40.0	2.91	DBLD	2.8	2458	42.0	2578	NA	NA	2.790
BL-C(2)	40.0	2.58	DBLD	2.5	2440	42.0	2559	NA	NA	2.790
H335	40.0	2.58	DBLD	2.5	2423	42.0	2541	NA	NA	2.790
168 Grain Jacketed Bullet										
H4831	45.0	3.26	DBLD	3.1	2389	49.0	2578	NA	NA	3.060
H450	43.1	2.82	DBLD	2.8	2273	49.0	2549	NA	NA	3.001

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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7.5x55mm SWISS (Continued)

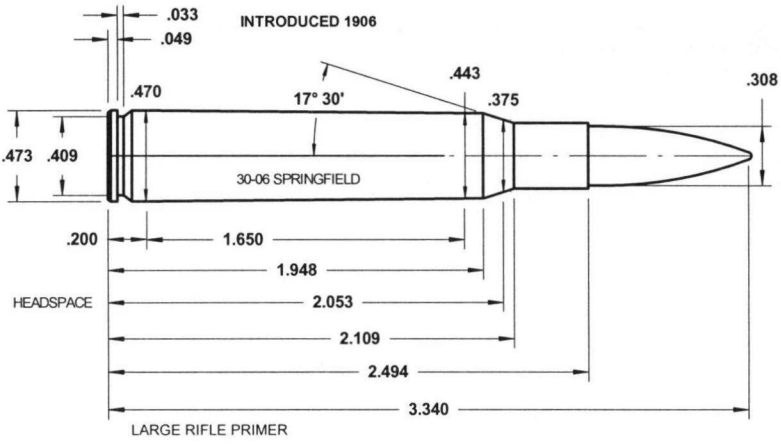
Do not use these loads in model 1889 Schmidt Rubin rifles.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
168 Grain Jacketed Bullet (Continued)										
H4350	44.0	3.19	DBLD	3.1	2338	48.0	2524	NA	NA	3.060
H414	42.0	2.78	DBLD	2.5	2402	44.0	2519	NA	NA	3.060
H380	41.0	2.83	DBLD	2.8	2385	43.0	2502	NA	NA	3.060
H4895	39.0	2.84	DBLD	2.8	2319	41.0	2432	NA	NA	3.060
BL-C(2)	39.0	2.52	DBLD	2.5	2292	41.0	2404	NA	NA	3.060
H335	39.0	2.52	DBLD	2.5	2287	41.0	2399	NA	NA	3.060
180 Grain Jacketed Bullet										
H4350	42.0	3.05	DBLD	2.8	2355	46.0	2566	NA	NA	2.900
H4831	43.0	3.12	DBLD	3.1	2224	47.0	2424	NA	NA	2.900
H450	41.4	2.70	DBLD	2.5	2148	47.0	2409	NA	NA	3.001
H414	40.0	2.64	DBLD	2.5	2245	42.0	2355	NA	NA	2.900
H380	38.0	2.63	DBLD	2.5	2215	40.0	2323	NA	NA	2.900
H4895	37.0	2.69	DBLD	2.5	2189	39.0	2296	NA	NA	2.900
BL-C(2)	37.0	2.39	DBLD	2.2	2178	39.0	2284	NA	NA	2.900
H335	37.0	2.39	DBLD	2.2	2158	39.0	2263	NA	NA	2.900

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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30-06 SPRINGFIELD



Useful case capacity 4.38 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
100 Grain Jacketed Bullet												
A-XMR-2495	52.2	3.91	NA	3.7	3135	58.0	3563	60000	PSI	2.600	....	....
A-XMR-2015	49.5	3.61	NA	3.4	3119	55.0	3544	58300	PSI	2.600	....	....
ACCUR 2230	51.3	3.37	NA	3.1	3058	57.0	3475	54900	PSI	2.600	....	....
v-N540	55.4	3.88	NA	3.7	3076	63.0c	3465	NA	NA	3.142	....	....
ACCUR 2460	51.8	3.40	NA	3.1	3045	57.5	3460	57800	PSI	2.600	....	....
ACCUR 2520	54.0	3.69	NA	3.4	3024	60.0	3436	60000	PSI	2.600	....	....
v-N140	54.0	3.96	NA	3.7	3034	61.1c	3418	NA	NA	3.142	....	....
v-N135	50.2	3.90	NA	3.7	3036	56.5c	3383	NA	NA	3.142	....	....
A-XMR-4064	53.1	4.01	NA	4.0	2945	59.0c	3347	60000	PSI	2.600	....	....
v-N133	47.4	3.65	NA	3.4	2986	53.9	3329	NA	NA	3.142	....	....
v-N130	39.8	3.00	DBLD	2.8	2846	48.6	3267	NA	NA	3.142	....	....
105 Grain Jacketed Bullet												
v-N140	53.4	3.91	NA	3.7	3058	59.1	3363	NA	NA	3.191	....	....
v-N135	49.8	3.87	NA	3.7	3045	55.1	3314	NA	NA	3.191	....	....
v-N133	46.6	3.59	NA	3.4	2999	51.2	3242	NA	NA	3.191	....	....
110 Grain Jacketed Bullet												
RELODER15	54.5	3.85	NA	3.7	3241	58.6	3465	58100	PSI	3.100	....	....
H-VARGET	55.0	4.02	NA	4.0	3308	59.0	3452	58200	PSI	3.170	.9895	.9782
A-XMR-2495	52.2	3.91	NA	3.7	3032	58.0	3446	59600	PSI	2.900	....	....
ACCUR 2520	54.0	3.69	NA	3.4	3024	60.0	3436	60000	PSI	2.900	....	....
H4895	51.0	3.71	NA	3.7	3155	57.0	3431	59160	PSI	3.170	.9861	.9617

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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30-06 SPRINGFIELD (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
110 Grain Jacketed Bullet (Continued)											
ACCUR 2460	52.7	3.46	NA	3.4	3010	58.5	3421	57000 PSI	2.900	....	....
A-XMR-4064	52.2	3.94	NA	3.7	2992	58.0	3401	55400 PSI	2.900	....	....
BL-C(2)	54.0	3.48	NA	3.4	3108	60.0	3396	54000 PSI	3.170	.9853	.9644
ACCUR 2230	51.3	3.37	NA	3.1	2979	57.0	3385	55700 PSI	2.900	....	....
A-XMR-2015	48.2	3.52	NA	3.4	2969	53.5	3374	56400 PSI	2.900	....	....
H335	50.0	3.22	DBLD	3.1	3168	55.5	3367	57720 PSI	3.170	.9890	.9819
IMR3031	51.1	3.90	NA	3.7	3088	56.0	3365	49300 CUP	3.130	....	....
IMR4064	52.8	3.94	NA	3.7	3047	58.0	3320	49400 CUP	3.130	....	....
v-N150	55.1	4.11	NA	4.0	2969	60.8c	3286	NA NA	2.913	....	....
ACCUR 2700	55.8	3.82	NA	3.7	2886	62.0	3280	53400 PSI	2.900	....	....
H414	57.0	3.77	NA	3.7	3044	62.5	3268	56280 PSI	3.170	.9870	.9679
IMR4895	49.4	3.60	NA	3.4	2996	54.5	3265	49300 CUP	3.130	....	....
IMR4320	52.7	3.77	NA	3.7	3016	57.5	3255	49100 CUP	3.130	....	....
WIN 748	50.5	3.30	NA	3.1	3109	52.7	3230	47000 CUP	2.970	....	....
v-N133	48.6	3.74	NA	3.7	2863	53.7	3224	NA NA	2.913	....	....
WIN 760	58.4	3.89	NA	3.7	3180	59.0	3210	45500 CUP	2.970	....	....
v-N140	52.2	3.83	NA	3.7	2890	57.7	3205	NA NA	2.913	....	....
v-N135	48.5	3.77	NA	3.7	2834	53.5	3164	NA NA	2.913	....	....
RELODER 7	43.1	3.14	DBLD	3.1	3027	45.0	3145	56400 PSI	3.100	....	....
H450	66.0	4.31	NA	4.3	3016	66.0	3016	52320 PSI	2.970	....	....
IMR4198	36.0	2.85	DBLD	2.8	2735	39.5	2980	49400 CUP	3.130	....	....
IMR4350	59.0	4.34	NA	4.3	2960	59.0	2960	36900 CUP	3.130	....	....
123 Grain Jacketed Bullet											
v-N150	55.4	4.13	NA	4.0	2882	60.3c	3195	NA NA	3.142	....	....
v-N540	53.9	3.78	NA	3.7	2826	59.1	3136	NA NA	3.142	....	....
v-N140	51.7	3.79	NA	3.7	2794	57.6	3116	NA NA	3.142	....	....
v-N135	49.2	3.82	NA	3.7	2792	53.7	3069	NA NA	3.142	....	....
v-N133	45.5	3.50	NA	3.4	2704	51.1	3019	NA NA	3.142	....	....
125 Grain Jacketed Bullet											
A-XMR-4064	51.3	3.87	NA	3.7	2891	57.0	3286	56400 PSI	3.310	....	....
RELODER15	52.4	3.70	NA	3.4	3034	56.8	3275	58500 PSI	3.120	....	....
BL-C(2)	53.0	3.42	NA	3.4	3117	58.7	3273	58440 PSI	3.150	.9914	.9574
H-VARGET	54.0	3.95	NA	3.7	3159	57.2	3267	59400 PSI	3.150	....	....
v-N540	53.9	3.78	NA	3.7	2887	60.3	3262	NA NA	3.307	....	....
H4895	48.0	3.49	NA	3.4	2977	53.7	3229	59160 PSI	3.150	.9858	.9698
H335	49.0	3.16	DBLD	3.1	3046	54.0	3228	59160 PSI	3.150	.9884	.9730
A-XMR-2495	48.6	3.64	NA	3.4	2834	54.0	3220	56700 PSI	3.150	....	....
ACCUR 2700	55.8	3.82	NA	3.7	2812	62.0	3195	56300 PSI	3.150	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

30-06 SPRINGFIELD (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
125 Grain Jacketed Bullet (Continued)												
A-XMR-2015	46.8	3.42	NA	3.4	2806	52.0	3189	56200	PSI	3.150	....	....
H414	57.0	3.77	NA	3.7	2952	62.5	3181	56040	PSI	3.150	.9865	.9736
ACCUR 2230	48.0	3.15	DBLD	3.1	2791	53.3	3172	58200	PSI	3.150	....	....
v-N150	53.1	3.96	NA	3.7	2895	58.8c	3169	NA	NA	3.307	....	....
v-N140	51.1	3.75	NA	3.7	2880	56.2	3142	NA	NA	3.307	....	....
ACCUR 2520	48.6	3.32	NA	3.1	2751	54.0	3126	55800	PSI	3.150	....	....
WIN 760	57.8	3.85	NA	3.7	3125	57.8	3125	45000	CUP	2.970	....	....
ACCUR 2460	48.2	3.16	DBLD	3.1	2750	53.5	3125	56300	PSI	3.150	....	....
v-N550	57.1	3.95	NA	3.7	2935	60.3	3116	NA	NA	3.307	....	....
v-N135	47.8	3.71	NA	3.7	2839	52.5	3067	NA	NA	3.307	....	....
WIN 748	49.9	3.27	DBLD	3.1	3002	51.0	3060	46000	CUP	2.970	....	....
RELODER19	65.5c	4.62	2 SCOOPS	2.2	2995	65.5c	2995	47300	PSI	3.120	....	....
RELODER 7	40.1	2.92	DBLD	2.8	2779	42.0	2915	56600	PSI	3.120	....	....
A-XMR-4350	54.0	4.00	NA	3.7	2545	60.0c	2892	39400	PSI	3.150	....	....
130 Grain Jacketed Bullet												
BL-C(2)	52.0	3.35	NA	3.1	2936	58.0	3179	57960	PSI	3.060	.9869	.9548
A-XMR-2495	47.7	3.57	NA	3.4	2790	53.0	3170	59800	PSI	3.150	....	....
A-XMR-4064	48.6	3.67	NA	3.4	2785	54.0	3165	57000	PSI	3.150	....	....
H335	48.0	3.10	DBLD	2.8	2912	53.5	3158	58320	PSI	3.060	.9853	.9635
H414	56.0	3.70	NA	3.4	2862	62.0	3157	58440	PSI	3.060	.9839	.9701
H-VARGET	49.0	3.58	NA	3.4	2979	53.5	3154	58080	PSI	3.060	.9874	.9654
H4895	48.0	3.49	NA	3.4	2927	53.1	3144	55320	PSI	3.060	.9860	.9658
A-XMR-2015	46.4	3.39	NA	3.1	2763	51.5	3140	55300	PSI	3.150	....	....
ACCUR 2700	54.9	3.76	NA	3.7	2750	61.0	3125	55500	PSI	3.150	....	....
ACCUR 2230	47.4	3.11	DBLD	3.1	2738	52.7	3111	57700	PSI	3.150	....	....
ACCUR 2520	48.6	3.32	NA	3.1	2732	54.0	3104	57900	PSI	3.150	....	....
v-N540	50.9	3.57	NA	3.4	2800	57.4	3097	NA	NA	0.000	....	....
ACCUR 2460	48.0	3.15	DBLD	3.1	2723	53.3	3094	57900	PSI	3.150	....	....
v-N150	52.8	3.94	NA	3.7	2800	58.0	3064	NA	NA	0.000	....	....
v-N140	49.1	3.60	NA	3.4	2800	56.0	3061	NA	NA	0.000	....	....
v-N135	46.0	3.57	NA	3.4	2772	51.9	2976	NA	NA	3.142	....	....
H450	64.0	4.18	NA	4.0	2906	64.0	2906	53160	PSI	2.970	....	....
A-XMR-4350	54.0	4.00	NA	3.7	2522	60.0c	2866	42400	PSI	3.150	....	....
H4831	61.5c	4.46	NA	4.3	2846	61.5c	2846	49440	PSI	2.970	....	....
150 Grain Jacketed Bullet												
H4350	56.0	4.06	NA	4.0	2792	62.0c	3068	58080	PSI	3.250	....	....
v-N550	54.2	3.75	NA	3.7	2688	59.7	3010	NA	NA	3.307	....	....
A-XMR-4064	47.2	3.56	NA	3.4	2648	52.5	3010	59800	PSI	3.250	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

30-06 SPRINGFIELD (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
150 Grain Jacketed Bullet (Continued)											
RELODER15	49.5	3.49	NA	3.4	2784	53.6	3005	58500 PSI	3.210	....	....
H380	53.0	3.66	NA	3.4	2798	59.0	3005	55080 PSI	3.250	.9881	.9781
H414	54.0	3.57	NA	3.4	2753	60.0	2992	58320 PSI	3.250	.9862	.9701
H335	47.0	3.03	DBLD	2.8	2785	51.5	2982	59040 PSI	3.250	.9850	.9680
H4895	46.0	3.35	NA	3.1	2806	51.0	2976	58200 PSI	3.250	.9883	.9825
H-VARGET	47.0	3.44	NA	3.4	2808	51.0	2975	60120 PSI	3.250	.9855	.9603
BL-C(2)	49.0	3.16	DBLD	3.1	2759	54.0	2962	58320 PSI	3.250	.9860	.9604
IMR4350	54.7	4.02	NA	4.0	2768	59.0	2960	57000 PSI	3.300	....	....
IMR4064	47.5	3.54	NA	3.4	2750	51.3	2940	57000 PSI	3.300	....	....
ACC MAG PRO	64.6	4.28	NA	4.0	2841	68.0c	2938	50100 PSI	3.290	....	....
VEC TU5000	50.9	3.66	NA	3.4	2772	52.5	2933	43788 CIP	3.330	....	....
ACCUR 2700	53.1	3.64	NA	3.4	2580	59.0	2932	54900 PSI	3.250	....	....
v-N540	45.3	3.18	DBLD	3.1	2403	53.5	2930	NA NA	3.028	....	....
A-XMR-2495	46.4	3.47	NA	3.4	2558	51.5	2907	58300 PSI	3.250	....	....
WIN 760	50.6	3.37	NA	3.1	2738	54.0	2900	48000 CUP	2.970	....	....
RELODER19	63.5c	4.48	NA	4.3	2895	63.5c	2895	50900 PSI	3.210	....	....
A-XMR-2015	43.2	3.15	DBLD	3.1	2535	48.0	2881	58400 PSI	3.250	....	....
IMR4895	45.4	3.30	NA	3.1	2694	49.0	2880	57000 PSI	3.300	....	....
v-N150	50.2	3.74	NA	3.7	2634	55.2	2877	NA NA	3.307	....	....
ACCUR 2520	46.1	3.15	DBLD	3.1	2526	51.2	2870	58200 PSI	3.250	....	....
ACCUR 2230	44.5	2.92	DBLD	2.8	2521	49.4	2865	57900 PSI	3.250	....	....
ACCUR 2460	44.6	2.93	DBLD	2.8	2519	49.5	2862	58500 PSI	3.250	....	....
IMR3031	44.7	3.41	NA	3.4	2590	49.5	2850	49800 CUP	3.200	....	....
IMR4320	45.9	3.29	DBLD	3.1	2567	51.0	2825	50000 CUP	3.200	....	....
A-XMR-4350	53.1	3.93	NA	3.7	2477	59.0	2815	50300 PSI	3.250	....	....
RELODER22	63.0c	4.39	NA	4.3	2815	63.0c	2815	46000 PSI	3.210	....	....
v-N140	43.7	3.20	DBLD	3.1	2402	51.2	2812	NA NA	3.028	....	....
WIN 748	47.0	3.08	DBLD	2.8	2757	48.0	2810	46000 CUP	2.970	....	....
RELODER 7	41.5	3.02	DBLD	2.8	2651	43.8	2780	57000 PSI	3.210	....	....
v-N135	40.1	3.12	DBLD	3.1	2333	47.7	2740	NA NA	3.028	....	....
IMR4831	59.0	4.34	NA	4.3	2715	59.0	2715	42900 CUP	3.200	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2297	59.0c	2610	41000 PSI	3.250	....	....
150 Grain Barnes X Bullet											
A-XMR-4064	46.3	3.49	NA	3.4	2608	51.5	2964	59800 PSI	3.285	....	....
RELODER19	60.3	4.26	NA	4.0	2840	63.0c	2950	56400 PSI	3.220	....	....
RELODER15	46.7	3.30	DBLD	3.1	2696	50.6	2910	58500 PSI	3.220	....	....
ACCUR 2700	51.3	3.51	NA	3.4	2544	57.0	2891	57900 PSI	3.285	....	....
A-XMR-4350	51.3	3.80	NA	3.7	2516	57.0	2859	54100 PSI	3.285	....	....

....STARTING LOADS....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
150 Grain Barnes X Bullet (Continued)											
RELODER22	62.0	4.32	NA	4.3	2845	62.0	2845	50600 PSI	3.220	----	----
A-XMR-2495	42.8	3.20	DBLD	3.1	2480	47.5	2818	59400 PSI	3.285	----	----
ACCUR 2520	45.0	3.07	DBLD	2.8	2479	50.0	2817	57800 PSI	3.285	----	----
A-XMR-2015	40.5	2.96	DBLD	2.8	2468	45.0	2805	58400 PSI	3.285	----	----
ACCUR 2460	43.5	2.85	DBLD	2.8	2462	48.5	2798	57100 PSI	3.285	----	----
ACCUR 2230	43.7	2.87	DBLD	2.8	2460	48.5	2796	56400 PSI	3.285	----	----
A-XMR-3100	53.1	3.97	NA	3.7	2353	59.0c	2674	46900 PSI	3.285	----	----
152 Grain Lead Bullet											
A-XMR-2015	36.0	2.63	DBLD	2.5	2308	40.0	2623	48300 PSI	3.035	----	----
ACCUR 2460	36.9	2.42	DBLD	2.2	2286	41.0	2598	50100 PSI	3.035	----	----
A-XMR-4064	41.4	3.12	DBLD	3.1	2286	46.0	2598	39500 PSI	3.035	----	----
ACCUR 2230	36.9	2.42	DBLD	2.2	2276	41.0	2586	46600 PSI	3.035	----	----
ACCUR 2520	37.8	2.58	DBLD	2.5	2272	42.0	2582	44300 PSI	3.035	----	----
ACCUR 2700	41.4	2.83	DBLD	2.8	2200	46.0	2500	42500 PSI	3.035	----	----
ACC XMP5744	30.2	2.27	DBLD	2.2	2157	33.5	2451	47100 PSI	3.035	----	----
A-XMR-2495	37.8	2.83	DBLD	2.8	2143	42.0	2435	31800 PSI	3.035	----	----
A-XMR-4350	45.9	3.40	NA	3.1	2138	51.0	2430	34100 PSI	3.035	----	----
A-XMR-3100	47.7	3.57	NA	3.4	1990	53.0	2261	27300 PSI	3.035	----	----
155 Grain Jacketed Bullet											
H4350	56.0	4.06	NA	4.0	2757	62.0c	3038	57000 PSI	3.225	----	----
H380	53.0	3.66	NA	3.4	2789	59.0	3009	57360 PSI	3.225	.9875	.9712
H-VARGET	48.0	3.51	NA	3.4	2822	50.7	2958	58560 PSI	3.225	----	----
H414	54.0	3.57	NA	3.4	2732	60.0	2956	55440 PSI	3.225	.9870	.9746
H335	47.0	3.03	DBLD	2.8	2776	51.5	2943	58560 PSI	3.225	.9870	.9682
H4895	46.0	3.35	NA	3.1	2752	51.0	2925	54720 PSI	3.225	.9879	.9799
BL-C(2)	49.0	3.16	DBLD	3.1	2723	54.0	2912	55560 PSI	3.225	.9868	.9653
v-N540	47.0	3.30	DBLD	3.1	2539	53.2	2907	NA	NA	3.307	----	----
v-N150	43.0	3.21	DBLD	3.1	2516	50.9	2831	NA	NA	3.307	----	----
v-N140	42.9	3.14	DBLD	3.1	2447	49.8	2789	NA	NA	3.307	----	----
156 Grain Jacketed Bullet											
v-N150	49.1	3.66	NA	3.4	2561	54.5	2831	NA	NA	3.169	----	----
v-N140	47.8	3.50	NA	3.4	2543	52.8	2818	NA	NA	3.169	----	----
v-N135	45.8	3.56	NA	3.4	2547	50.8	2792	NA	NA	3.169	----	----
165 Grain Jacketed Bullet											
H4350	53.0	3.84	NA	3.7	2678	59.0	2938	59280 PSI	3.300	.9847	.9589
H380	51.0	3.52	NA	3.4	2669	56.5	2892	60000 PSI	3.300	.9854	.9675
RELODER19	58.4	4.12	NA	4.0	2720	62.0	2880	56100 PSI	3.250	----	----
H414	51.0	3.37	NA	3.1	2678	56.5	2877	59640 PSI	3.300	.9870	.9694

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....											
165 Grain Jacketed Bullet (Continued)											
H-VARGET	47.0	3.44	NA	3.4	2726	50.5	2873	59640 PSI	3.300	.9850	.9689
RELODER15	46.0	3.25	DBLD	3.1	2609	49.8	2815	58500 PSI	3.250	....	....
BL-C(2)	46.0	2.97	DBLD	2.8	2608	51.0	2805	59760 PSI	3.300	.9856	.9628
H4895	43.0	3.13	DBLD	3.1	2607	47.5	2782	58800 PSI	3.300	.9858	.9617
v-N160	53.5	3.93	NA	3.7	2542	58.6	2770	NA NA	3.200	....	....
IMR4350	51.8	3.81	NA	3.7	2657	54.0	2760	55000 PSI	3.215	....	....
IMR4831	52.8	3.88	NA	3.7	2607	56.0	2760	56000 PSI	3.335	....	....
RELODER22	60.0	4.18	NA	4.0	2755	60.0	2755	51300 PSI	3.220	....	....
H335	42.0	2.71	DBLD	2.5	2515	47.0	2749	59160 PSI	3.300	.9822	.9518
IMR4064	44.0	3.28	DBLD	3.1	2562	47.5	2740	57000 PSI	3.215	....	....
IMR4895	42.6	3.10	DBLD	2.8	2526	46.0	2700	57000 PSI	3.215	....	....
WIN 760	54.1	3.60	NA	3.4	2664	54.6	2690	53300 PSI	3.300	....	....
RELODER 7	38.5	2.80	DBLD	2.5	2488	40.5	2610	56800 PSI	3.250	....	....
165 Grain Barnes X Bullet											
A-XMR-4064	46.3	3.49	NA	3.4	2487	51.5	2827	57900 PSI	3.245	....	....
A-XMR-4350	51.3	3.80	NA	3.7	2428	57.0	2759	56300 PSI	3.245	....	....
ACCUR 2700	48.6	3.33	NA	3.1	2382	54.0	2707	58500 PSI	3.245	....	....
ACCUR 2520	42.8	2.92	DBLD	2.8	2347	47.5	2667	60000 PSI	3.245	....	....
A-XMR-2495	41.0	3.07	DBLD	2.8	2328	45.5	2645	58500 PSI	3.245	....	....
A-XMR-2015	38.7	2.83	DBLD	2.8	2304	43.0	2618	58600 PSI	3.245	....	....
ACCUR 2460	40.5	2.66	DBLD	2.5	2272	45.0	2582	60000 PSI	3.245	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2268	59.0c	2577	46300 PSI	3.245	....	....
ACCUR 2230	39.6	2.60	DBLD	2.5	2237	44.0	2542	57800 PSI	3.245	....	....
167 Grain Jacketed Bullet											
v-N550	49.7	3.44	NA	3.4	2556	55.1	2806	NA NA	3.307	....	....
v-N540	45.4	3.18	DBLD	3.1	2413	52.0	2737	NA NA	3.307	....	....
v-N150	47.2	3.52	NA	3.4	2455	52.2	2694	NA NA	3.307	....	....
v-N140	45.5	3.34	NA	3.1	2418	50.2	2664	NA NA	3.307	....	....
v-N160	55.6	4.08	NA	4.0	2455	61.7c	2557	NA NA	3.307	....	....
168 Grain Jacketed Bullet											
H4350	55.0	3.99	NA	3.7	2695	59.0	2897	57720 PSI	3.230	.9821	.9572
H380	51.0	3.52	NA	3.4	2648	56.5	2859	59640 PSI	3.230	.9861	.9732
H-VARGET	47.0	3.44	NA	3.4	2710	50.5	2859	59040 PSI	3.230	.9847	.9603
H414	53.0	3.50	NA	3.4	2686	56.5	2839	59640 PSI	3.230	.9842	.9419
A-XMR-4350	53.1	3.93	NA	3.7	2486	59.0	2825	56200 PSI	3.295	....	....
v-N160	52.9	3.88	NA	3.7	2554	58.8	2810	NA NA	3.200	....	....
H4895	43.0	3.13	DBLD	3.1	2574	47.5	2789	60000 PSI	3.230	.9823	.9579
VEC TU5000	49.1	3.54	NA	3.4	2680	50.2	2782	46183 CIP	3.330	....	....

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30-06 SPRINGFIELD (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
					....STARTING LOADS....						
168 Grain Jacketed Bullet (Continued)											
BL-C(2)	46.0	2.97	DBLD	2.8	2555	51.0	2767	59040 PSI	3.230	.9841	.9551
ACCUR 2700	48.6	3.33	NA	3.1	2404	54.0	2732	57700 PSI	3.295	....	....
A-XMR-2015	41.0	2.99	DBLD	2.8	2385	45.5	2710	59000 PSI	3.295	....	....
A-XMR-2495	42.3	3.17	DBLD	3.1	2382	47.0	2707	57300 PSI	3.295	....	....
v-N140	43.0	3.15	DBLD	3.1	2445	47.8	2690	NA NA	3.200	....	....
ACCUR 2520	42.8	2.92	DBLD	2.8	2359	47.5	2681	58000 PSI	3.295	....	....
WIN 760	50.3	3.35	NA	3.1	2565	52.5	2665	47000 CUP	2.970	....	....
ACCUR 2230	41.4	2.72	DBLD	2.5	2343	46.0	2663	58800 PSI	3.295	....	....
ACCUR 2460	42.0	2.76	DBLD	2.5	2340	46.7	2659	58800 PSI	3.295	....	....
H335	42.0	2.71	DBLD	2.5	2459	46.5	2656	59400 PSI	3.230	.9831	.9532
v-N150	46.9	3.50	NA	3.4	2455	50.6	2625	NA NA	3.200	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2300	59.0c	2614	48800 PSI	3.295	....	....
170 Grain Jacketed Bullet											
v-N160	56.3	4.13	NA	4.0	2506	62.5c	2794	NA NA	3.307	....	....
v-N550	48.9	3.39	NA	3.1	2443	55.7	2758	NA NA	3.307	....	....
v-N540	45.7	3.20	DBLD	3.1	2390	51.5	2687	NA NA	3.307	....	....
v-N150	47.2	3.52	NA	3.4	2409	52.6	2668	NA NA	3.307	....	....
v-N140	44.9	3.29	DBLD	3.1	2348	50.0	2618	NA NA	3.307	....	....
175 Grain Jacketed Bullet											
A-XMR-4350	51.3	3.80	NA	3.7	2486	57.0	2825	56300 PSI	3.290	....	....
ACCUR 2700	48.6	3.33	NA	3.1	2429	54.0	2761	58200 PSI	3.290	....	....
A-XMR-2495	42.7	3.20	DBLD	3.1	2385	47.5	2711	56400 PSI	3.290	....	....
A-XMR-2015	40.0	2.92	DBLD	2.8	2359	44.5	2681	58800 PSI	3.290	....	....
ACCUR 2520	41.8	2.85	DBLD	2.8	2341	46.5	2661	57000 PSI	3.290	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2341	59.0c	2661	48800 PSI	3.290	....	....
ACCUR 2460	40.9	2.68	DBLD	2.5	2334	45.5	2653	58700 PSI	3.290	....	....
ACCUR 2230	39.6	2.60	DBLD	2.5	2323	44.0	2640	59500 PSI	3.290	....	....
180 Grain Winchester Fail Safe											
RELODER19	55.9	3.94	NA	3.7	2634	57.2	2685	55300 PSI	3.200	....	....
RELODER22	59.0	4.11	NA	4.0	2670	59.0	2670	52000 PSI	3.200	....	....
WIN 760	48.6	3.24	DBLD	3.1	2503	51.4	2625	57100 PSI	3.250	....	....
RELODER15	44.9	3.17	DBLD	3.1	2503	47.0	2600	56500 PSI	3.200	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2267	59.0c	2577	47600 CUP	3.115	....	....
A-XMR-4350	47.7	3.53	NA	3.4	2266	53.0	2575	48800 CUP	3.115	....	....
ACCUR 2700	46.8	3.20	DBLD	3.1	2262	52.0	2571	49100 CUP	3.115	....	....
ACCUR 2520	41.4	2.83	DBLD	2.8	2241	46.0	2547	48000 CUP	3.115	....	....
ACCUR 2460	39.1	2.56	DBLD	2.5	2200	43.5	2500	50000 CUP	3.115	....	....
ACCUR 2230	38.2	2.51	DBLD	2.5	2165	42.5	2461	49300 CUP	3.115	....	....

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30-06 SPRINGFIELD (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
					....STARTING LOADS....						
180 Grain Winchester Fail Safe (Continued)											
A-XMR-2495	39.1	2.93	DBLD	2.8	2156	43.5	2451	50000 CUP	3.115	....	....
A-XMR-2015	35.5	2.59	DBLD	2.5	2112	39.5	2400	50000 CUP	3.115	....	....
180 Grain Jacketed Bullet											
RELODER19	56.8	4.01	NA	4.0	2669	60.0	2800	57000 PSI	3.250	....	....
H4350	52.0	3.77	NA	3.7	2543	57.5	2798	59160 PSI	3.300	.9827	.9529
ACC MAG PRO	61.7	4.09	NA	4.0	2673	65.0	2763	51900 PSI	3.340	....	....
H414	50.0	3.31	NA	3.1	2528	55.5	2743	58440 PSI	3.300	.9852	.9613
A-XMR-4350	51.3	3.80	NA	3.7	2389	57.0	2715	56400 PSI	3.290	....	....
RELODER22	54.0	3.76	NA	3.7	2463	60.0	2710	51500 PSI	3.250	.9843	.9363
H4831	54.0	3.91	NA	3.7	2447	60.0	2710	53160 PSI	3.300	.9831	.9601
A-XMR-4064	43.6	3.29	DBLD	3.1	2379	48.5	2704	58300 PSI	3.290	....	....
WIN 760	48.7	3.24	DBLD	3.1	2526	52.5	2700	48500 CUP	2.970	....	....
H380	48.0	3.32	NA	3.1	2490	53.0	2682	58440 PSI	3.300	.9853	.9608
H-VARGET	44.0	3.22	DBLD	3.1	2533	47.0	2668	60000 PSI	3.300	.9826	.9428
RELODER15	44.6	3.15	DBLD	3.1	2464	48.3	2660	58500 PSI	3.250	....	....
ACCUR 2700	49.5	3.39	NA	3.1	2328	55.0	2646	56000 PSI	3.290	....	....
H4895	41.0	2.98	DBLD	2.8	2427	46.0	2638	58560 PSI	3.300	.9835	.9517
BL-C(2)	44.0	2.84	DBLD	2.8	2456	48.5	2634	57720 PSI	3.300	.9845	.9556
VEC TU7000	53.4	3.76	NA	3.7	2556	54.3	2625	43977 CIP	3.330	....	....
H335	42.0	2.71	DBLD	2.5	2455	46.0	2621	59040 PSI	3.300	.9838	.9606
VEC TU5000	48.6	3.50	NA	3.4	2589	49.7	2621	41858 CIP	3.330	....	....
v-N140	41.7	3.05	DBLD	2.8	2381	46.3	2620	NA	NA	3.200	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2298	59.0c	2611	53300 PSI	3.290	....	....
v-N160	52.3	3.84	NA	3.7	2394	57.6	2603	NA	NA	3.307	....	....
IMR4831	51.8	3.81	NA	3.7	2503	54.0	2600	55000 PSI	3.290	....	....
IMR4320	44.4	3.18	DBLD	3.1	2381	49.0	2595	49700 CUP	3.200	....	....
A-XMR-2495	41.0	3.07	DBLD	2.8	2284	45.5	2595	59500 PSI	3.290	....	....
IMR4350	49.1	3.61	NA	3.4	2423	53.0	2590	57000 PSI	3.340	....	....
A-XMR-2015	40.1	2.93	DBLD	2.8	2277	44.5	2588	59300 PSI	3.290	....	....
ACCUR 2520	42.1	2.87	DBLD	2.8	2275	46.8	2585	57000 PSI	3.290	....	....
ACCUR 2230	39.6	2.60	DBLD	2.5	2260	44.0	2568	60000 PSI	3.290	....	....
ACCUR 2460	41.2	2.70	DBLD	2.5	2255	45.8	2563	55800 PSI	3.290	....	....
IMR3031	40.2	3.06	DBLD	2.8	2309	44.5	2540	49800 CUP	3.200	....	....
WIN 748	42.1	2.76	DBLD	2.5	2435	44.0	2530	47000 CUP	2.970	....	....
IMR4895	39.1	2.85	DBLD	2.8	2291	43.5	2520	50000 CUP	3.200	....	....
RELODER 7	37.8	2.75	DBLD	2.5	2388	39.8	2505	56900 PSI	3.250	....	....
IMR4064	42.9	3.20	DBLD	3.1	2368	44.7	2460	55000 PSI	3.340	....	....
180 Grain Lead Bullet											
A-XMR-2015	36.0	2.63	DBLD	2.5	2174	40.0	2470	49600 PSI	3.015	....	....

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30-06 SPRINGFIELD (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....											
180 Grain Lead Bullet (Continued)											
A-XMR-2495	37.8	2.83	DBLD	2.8	2156	42.0	2450	42300 PSI	3.015	....	....
A-XMR-4064	40.5	3.06	DBLD	2.8	2148	45.0	2441	36000 PSI	3.015	....	....
A-XMR-4350	45.9	3.40	NA	3.1	2134	51.0	2425	37200 PSI	3.015	....	....
ACCUR 2230	36.9	2.42	DBLD	2.2	2131	41.0	2422	45600 PSI	3.015	....	....
ACCUR 2520	37.8	2.58	DBLD	2.5	2123	42.0	2412	43400 PSI	3.015	....	....
ACCUR 2460	36.9	2.42	DBLD	2.2	2117	41.0	2406	42800 PSI	3.015	....	....
ACCUR 2700	41.4	2.83	DBLD	2.8	2078	46.0	2361	38900 PSI	3.015	....	....
ACC XMP5744	28.8	2.16	DBLD	1.9	2057	32.0	2337	41100 PSI	3.015	....	....
A-XMR-3100	47.7	3.57	NA	3.4	2041	53.0	2319	31300 PSI	3.015	....	....
180 Grain Barnes X Bullet											
A-XMR-4350	50.0	3.70	NA	3.4	2357	55.5	2678	60000 PSI	3.320	....	....
A-XMR-4064	42.7	3.22	DBLD	3.1	2333	47.5	2652	59400 PSI	3.320	....	....
ACCUR 2700	48.6	3.33	NA	3.1	2329	54.0	2647	58800 PSI	3.320	....	....
v-N550	48.6	3.36	NA	3.1	2311	54.5	2596	NA NA	3.307	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2281	59.0c	2592	52400 PSI	3.320	....	....
ACCUR 2520	41.4	2.83	DBLD	2.8	2251	46.0	2558	58900 PSI	3.320	....	....
A-XMR-2495	40.5	3.03	DBLD	2.8	2238	45.0	2543	59300 PSI	3.320	....	....
ACCUR 2460	40.1	2.63	DBLD	2.5	2460	44.5	2521	59000 PSI	3.320	....	....
ACCUR 2230	39.2	2.58	DBLD	2.5	2179	43.5	2476	57900 PSI	3.320	....	....
A-XMR-2015	36.9	2.69	DBLD	2.5	2176	41.0	2473	58100 PSI	3.320	....	....
185 Grain Jacketed Bullet											
v-N550	46.7	3.23	DBLD	3.1	2369	51.1	2697	NA NA	3.189	....	....
v-N560	54.3	3.75	NA	3.7	2373	61.9	2673	NA NA	3.307	....	....
v-N160	49.7	3.65	NA	3.4	2415	53.8	2661	NA NA	3.189	....	....
v-N150	42.2	3.15	DBLD	3.1	2234	48.1	2562	NA NA	3.189	....	....
v-N540	44.1	3.09	DBLD	2.8	2255	48.8	2523	NA NA	3.307	....	....
190 Grain Jacketed Bullet											
RELODER22	57.2	3.99	NA	3.7	2627	60.0	2755	56600 PSI	3.300	....	....
RELODER19	53.9	3.81	NA	3.7	2544	58.0	2720	58100 PSI	3.300	....	....
v-N560	55.1	3.80	NA	3.7	2364	62.4	2706	NA NA	3.307	....	....
H4350	51.0	3.70	NA	3.4	2451	56.5	2692	59040 PSI	3.220	.9831	.9608
v-N550	47.4	3.28	DBLD	3.1	2323	53.8	2664	NA NA	3.307	....	....
A-XMR-4350	50.0	3.70	NA	3.4	2343	55.5	2663	60000 PSI	3.325	....	....
H414	48.0	3.17	DBLD	3.1	2398	53.0	2640	59400 PSI	3.220	.9809	.9534
A-XMR-4064	42.7	3.22	DBLD	3.1	2310	47.5	2626	59700 PSI	3.325	....	....
H-VARGET	43.5	3.18	DBLD	3.1	2450	46.5	2608	59640 PSI	3.220	.9795	.9439
v-N160	52.7	3.87	NA	3.7	2376	58.8	2608	NA NA	3.307	....	....
WIN 760	49.3	3.28	DBLD	3.1	2483	52.0	2605	47500 CUP	2.970	....	....

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
190 Grain Jacketed Bullet (Continued)											
RELODER15	43.7	3.08	DBLD	2.8	2409	47.3	2600	58500 PSI	3.300	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2265	59.0c	2574	53200 PSI	3.325	....	....
H380	47.0	3.25	DBLD	3.1	2369	51.5	2555	58440 PSI	3.220	.9832	.9620
VEC TU5000	46.3	3.33	NA	3.1	2461	47.8	2549	42293 CIP	3.330	....	....
ACCUR 2460	41.0	2.69	DBLD	2.5	2233	45.5	2537	58400 PSI	3.325	....	....
VEC TU7000	50.2	3.54	NA	3.4	2379	51.7	2530	43556 CIP	3.330	....	....
H4895	41.0	2.98	DBLD	2.8	2380	45.5	2525	57600 PSI	3.220	.9869	.9677
ACCUR 2700	46.8	3.20	DBLD	3.1	2217	52.0	2519	53700 PSI	3.325	....	....
v-N150	44.8	3.34	NA	3.1	2279	49.3	2517	NA NA	3.307	....	....
ACCUR 2520	41.0	2.80	DBLD	2.5	2212	45.5	2514	58400 PSI	3.325	....	....
BL-C(2)	43.0	2.77	DBLD	2.5	2312	47.0	2510	58320 PSI	3.220	.9797	.9477
A-XMR-2015	38.7	2.83	DBLD	2.8	2193	43.0	2492	60000 PSI	3.325	....	....
A-XMR-2495	39.6	2.96	DBLD	2.8	2193	44.0	2492	59100 PSI	3.325	....	....
ACCUR 2230	39.6	2.60	DBLD	2.5	2180	44.0	2477	56600 PSI	3.325	....	....
H335	40.0	2.58	DBLD	2.5	2271	44.0	2465	58080 PSI	3.220	.9796	.9547
200 Grain Jacketed Bullet											
RELODER22	54.0	3.76	NA	3.7	2483	58.4	2680	58400 PSI	3.300	....	....
ACC MAG PRO	58.9	3.91	NA	3.7	2562	62.0	2669	55400 PSI	3.340	....	....
IMR4831	52.3	3.84	NA	3.7	2418	58.0	2660	49900 CUP	3.340	....	....
IMR4350	49.6	3.65	NA	3.4	2395	55.0	2635	49900 CUP	3.340	....	....
RELODER19	51.5	3.64	NA	3.4	2436	55.8	2630	58500 PSI	3.300	....	....
H4831	54.0	3.91	NA	3.7	2436	57.5	2577	59280 PSI	3.230	.9839	.9624
A-XMR-4350	49.5	3.66	NA	3.4	2261	55.0	2569	58800 PSI	3.295	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2254	59.0c	2561	58900 PSI	3.295	....	....
H414	47.0	3.11	DBLD	3.1	2351	52.0	2551	58920 PSI	3.230	.9838	.9632
H4350	50.0	3.63	NA	3.4	2431	53.0	2544	58920 PSI	3.230	.9849	.9677
IMR4064	43.4	3.24	DBLD	3.1	2322	47.5	2530	49200 CUP	3.340	....	....
H1000	55.0	3.92	NA	3.7	2267	61.0	2510	53280 PSI	3.230	.9831	.9546
v-N160	52.1	3.82	NA	3.7	2309	57.6	2510	NA NA	3.307	....	....
RELODER15	42.5	3.00	DBLD	2.8	2321	46.0	2505	58500 PSI	3.300	....	....
H-VARGET	42.5	3.11	DBLD	3.1	2373	45.5	2501	59520 PSI	3.230	.9824	.9659
A-XMR-4064	41.4	3.12	DBLD	3.1	2178	46.0	2475	57300 PSI	3.295	....	....
WIN 760	47.9	3.19	DBLD	3.1	2424	49.0	2470	46000 CUP	2.970	....	....
IMR3031	40.3	3.07	DBLD	2.8	2248	44.5	2450	49700 CUP	3.340	....	....
IMR4895	38.9	2.83	DBLD	2.8	2243	43.0	2445	49700 CUP	3.340	....	....
IMR4320	42.4	3.04	DBLD	2.8	2265	46.0	2445	48800 CUP	3.340	....	....
ACCUR 2700	46.4	3.18	DBLD	3.1	2148	51.5	2441	53900 PSI	3.295	....	....
RELODER12	41.5	2.87	DBLD	2.8	2282	44.8	2440	58300 PSI	3.300	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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30-06 SPRINGFIELD (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
200 Grain Jacketed Bullet (Continued)											
WIN MAG RIFLE	55.7	4.00	NA	3.7	2435	55.7	2435	48200 PSI	3.200	....	....
ACCUR 2520	40.5	2.76	DBLD	2.5	2140	45.0	2432	58900 PSI	3.295	....	....
ACCUR 2460	40.1	2.63	DBLD	2.5	2138	44.5	2429	58500 PSI	3.295	....	....
H4895	39.0	2.84	DBLD	2.8	2246	43.5	2421	59040 PSI	3.230	.9833	.9587
H870	64.0c	4.39	NA	4.3	2401	64.0c	2401	49440 PSI	2.970	....	....
H380	44.0	3.04	DBLD	2.8	2231	48.0	2395	59520 PSI	3.230	.9825	.9576
ACCUR 2230	39.2	2.58	DBLD	2.5	2100	43.5	2386	57300 PSI	3.295	....	....
IMR7828	55.0	3.99	NA	3.7	2385	55.0	2385	44100 CUP	3.340	....	....
A-XMR-2495	38.7	2.90	DBLD	2.8	2094	43.0	2379	59900 PSI	3.295	....	....
v-N150	43.0	3.21	DBLD	3.1	2195	47.5	2374	NA	NA	3.307	....	....
A-XMR-2015	37.8	2.76	DBLD	2.5	2062	42.0	2343	54800 PSI	3.295	....	....
IMR4198	33.5	2.65	DBLD	2.5	2137	36.0	2285	48400 CUP	3.340	....	....
210 Grain Lead Bullet											
A-XMR-4350	45.9	3.40	NA	3.1	2093	51.0	2378	43600 PSI	3.195	....	....
A-XMR-4064	38.7	2.92	DBLD	2.8	2027	43.0	2304	43900 PSI	3.195	....	....
A-XMR-3100	47.7	3.57	NA	3.4	2028	53.0	2304	40000 PSI	3.195	....	....
A-XMR-2495	36.0	2.69	DBLD	2.5	1965	40.0	2233	44500 PSI	3.195	....	....
ACCUR 2520	36.0	2.46	DBLD	2.2	1964	40.0	2232	46600 PSI	3.195	....	....
ACCUR 2700	39.6	2.71	DBLD	2.5	1932	44.0	2196	42000 PSI	3.195	....	....
ACCUR 2460	34.7	2.28	DBLD	2.2	1928	38.5	2191	46300 PSI	3.195	....	....
A-XMR-2015	32.4	2.37	DBLD	2.2	1925	36.0	2188	49600 PSI	3.195	....	....
ACCUR 2230	34.2	2.25	DBLD	2.2	1924	38.0	2186	45400 PSI	3.195	....	....
220 Grain Jacketed Bullet											
v-N560	53.5	3.69	NA	3.4	2206	61.3	2517	NA	NA	3.307	....	....
IMR4831	50.9	3.74	NA	3.7	2285	56.0	2490	49500 CUP	3.185	....	....
IMR4350	48.1	3.54	NA	3.4	2245	53.5	2470	50000 CUP	3.185	....	....
A-XMR-3100	53.1	3.97	NA	3.7	2174	59.0c	2470	59900 PSI	3.200	....	....
A-XMR-4350	49.5	3.66	NA	3.4	2171	55.0	2467	59400 PSI	3.200	....	....
H4831	54.0	3.91	NA	3.7	2342	57.5	2458	58320 PSI	3.230	.9861	.9675
H4350	50.0	3.63	NA	3.4	2318	53.0	2435	59040 PSI	3.230	.9835	.9590
H1000	58.0	4.14	NA	4.0	2293	61.0	2412	52320 PSI	3.230	....	....
H414	47.0	3.11	DBLD	3.1	2215	52.0	2408	59400 PSI	3.230	.9833	.9534
H-VARGET	42.0	3.07	DBLD	2.8	2279	45.0	2382	59280 PSI	3.230	.9853	.9622
WIN MAG RIFLE	55.7	4.00	NA	3.7	2380	55.7	2380	51100 PSI	3.200	....	....
IMR4064	41.4	3.08	DBLD	2.8	2154	46.0	2370	50000 CUP	3.185	....	....
WIN 760	45.9	3.06	DBLD	2.8	2238	49.0	2370	48000 CUP	2.970	....	....
v-N160	50.7	3.72	NA	3.7	2144	56.0	2368	NA	NA	3.307	....	....
ACCUR 2700	44.6	3.05	DBLD	2.8	2048	49.5	2327	58200 PSI	3.200	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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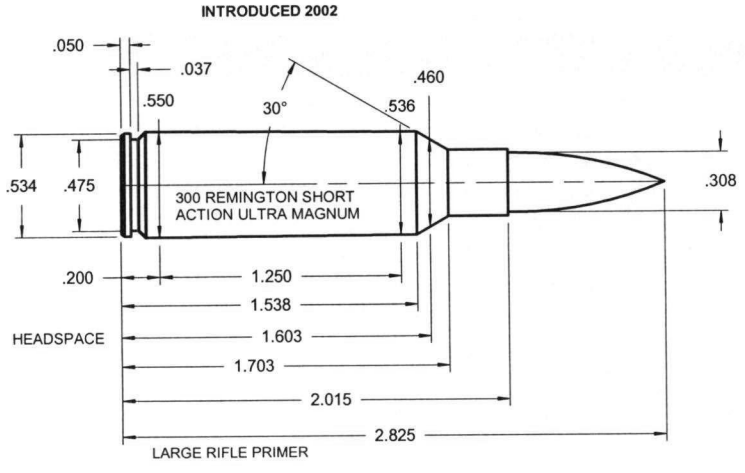
30-06 SPRINGFIELD (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....											
220 Grain Jacketed Bullet (Continued)											
A-XMR-4064	40.5	3.06	DBLD	2.8	2037	45.0	2315	57900 PSI	3.200	....	....
IMR3031	39.0	2.97	DBLD	2.8	2131	42.5	2300	49000 CUP	3.185	....	....
IMR4320	40.0	2.86	DBLD	2.8	2106	44.0	2295	49500 CUP	3.185	....	....
ACCUR 2520	39.6	2.70	DBLD	2.5	2013	44.0	2288	59000 PSI	3.200	....	....
IMR7828	55.0	3.99	NA	4.0	2285	55.0	2285	41900 CUP	3.185	....	....
ACCUR 2460	38.7	2.54	DBLD	2.5	1996	43.0	2268	58600 PSI	3.200	....	....
A-XMR-2015	37.8	2.76	DBLD	2.5	1983	42.0	2253	59500 PSI	3.200	....	....
ACCUR 2230	38.3	2.52	DBLD	2.5	1978	42.5	2248	58400 PSI	3.200	....	....
IMR4895	36.4	2.65	DBLD	2.5	2027	40.5	2230	50000 CUP	3.185	....	....
A-XMR-2495	38.3	2.87	DBLD	2.8	1955	42.5	2222	56900 PSI	3.200	....	....
ACCUR 8700	55.8	3.84	NA	3.7	1908	62.0	2168	38700 PSI	3.200	....	....
225 Grain Jacketed Bullet											
H4350	48.9	3.54	NA	3.4	2283	53.0	2464	58560 PSI	2.970	....	....
H414	46.4	3.07	DBLD	2.8	2243	50.0	2399	58200 PSI	2.970	....	....
H870	63.0	4.32	NA	4.3	2348	63.0	2348	50760 PSI	2.970	....	....
250 Grain Jacketed Bullet											
H1000	55.0	3.92	NA	3.7	2178	58.0	2281	59400 PSI	3.200	....	....
H4831	50.0	3.62	NA	3.4	2134	52.5	2237	59520 PSI	3.200	....	....
H4350	45.0	3.26	DBLD	3.1	2060	47.5	2156	58080 PSI	3.200	....	....
H870	61.0	4.18	NA	4.0	2117	61.0	2117	53640 PSI	2.970	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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300 REMINGTON SHORT ACTION U M



Useful case capacity 4.73 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
110 Grain Jacketed Bullet											
H4895	58.0	4.22	NA	4.0	3431	62.0	3663	63000 PSI	2.600	.9838	.9467
H-VARGET	60.5	4.42	NA	4.3	3391	64.5	3619	63200 PSI	2.600	.9838	.9483
H414	65.0	4.30	NA	4.0	3295	69.0	3508	54500 PSI	2.600	.9845	.9522
125 Grain Jacketed Bullet											
H4895	58.0	4.22	NA	4.0	3341	62.0	3557	64300 PSI	2.825	.9844	.9604
H-VARGET	60.0	4.39	NA	4.3	3297	64.0	3511	64200 PSI	2.825	.9844	.9519
H414	65.0	4.30	NA	4.0	3235	69.0	3426	57500 PSI	2.825	.9857	.9608
H4350	65.0	4.71	2 SCOOPS	2.2	3172	69.0c	3374	58300 PSI	2.825	----	----
130 Grain Jacketed Bullet											
H414	64.0	4.23	NA	4.0	3195	68.0	3392	61900 PSI	2.750	.9852	.9554
H4895	55.5	4.04	NA	4.0	3182	59.0	3360	62800 PSI	2.750	.9845	.9459
H4350	65.0	4.71	2 SCOOPS	2.2	3198	69.0c	3359	63500 PSI	2.750	----	----
H-VARGET	57.5	4.20	NA	4.0	3165	61.0	3330	62600 PSI	2.750	.9857	.9566
135 Grain Jacketed Bullet											
H4895	55.5	4.04	NA	4.0	3166	59.0	3340	62500 PSI	2.750	.9849	.9524
H414	63.0	4.16	NA	4.0	3133	67.3	3334	64000 PSI	2.750	.9857	.9558
H4350	63.0	4.57	NA	4.3	3090	67.0c	3283	63500 PSI	2.750	----	----
H-VARGET	56.5	4.13	NA	4.0	3079	60.0	3272	63100 PSI	2.750	.9829	.9462
140 Grain Barnes X Bullet											
H414	61.0	4.03	NA	4.0	3027	65.0	3224	59900 PSI	2.825	.9843	.9534
H4895	53.5	3.89	NA	3.7	3039	57.0	3212	62600 PSI	2.825	.9843	.9499

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

300 REMINGTON SHORT ACTION U M (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
140 Grain Barnes X Bullet (Continued)											
H4350	62.0	4.50	NA	4.3	3023	66.0c	3207	62000 PSI	2.825	....	....
H-VARGET	55.5	4.06	NA	4.0	3051	59.0	3203	62400 PSI	2.825	.9863	.9615
H380	60.0	4.15	NA	4.0	3010	64.0	3199	60600 PSI	2.825	.9848	.9583
150 Grain Jacketed Bullet											
H414	62.0	4.10	NA	4.0	3038	65.5	3201	62800 PSI	2.700	....	....
H-VARGET	55.0	4.02	NA	4.0	2967	59.0	3148	63200 PSI	2.700	.9854	.9556
H4350	62.0	4.50	NA	4.3	2985	65.5c	3147	62100 PSI	2.700	....	....
H4895	53.0	3.86	NA	3.7	3007	57.0	3147	62800 PSI	2.700	.9886	.9712
H380	59.0	4.08	NA	4.0	2946	63.0	3119	60700 PSI	2.700	.9859	.9583
155 Grain A-MAX											
H414	60.5	4.00	NA	3.7	2972	64.5	3163	63800 PSI	2.825	.9845	.9560
H4350	60.5	4.39	NA	4.3	2900	64.5	3112	63500 PSI	2.825	.9826	.9429
H380	59.0	4.08	NA	4.0	2918	63.0	3093	62800 PSI	2.825	.9856	.9612
H-VARGET	54.5	3.98	NA	3.7	2925	57.7	3082	63200 PSI	2.825	....	....
H4895	52.0	3.79	NA	3.7	2895	55.5	3064	61700 PSI	2.825	.9838	.9460
165 Grain Jacketed Bullet											
H414	59.0	3.90	NA	3.7	2849	63.0	3031	63600 PSI	2.825	.9847	.9536
H4350	59.0	4.28	NA	4.0	2797	63.0	2997	62900 PSI	2.825	.9827	.9452
H-VARGET	53.0	3.87	NA	3.7	2833	56.5	2967	63100 PSI	2.825	.9870	.9635
H380	57.0	3.94	NA	3.7	2828	61.0	2963	62600 PSI	2.825	.9886	.9717
H4895	50.5	3.68	NA	3.4	2827	54.0	2946	63000 PSI	2.825	.9883	.9694
168 Grain Jacketed Bullet											
H414	58.5	3.87	NA	3.7	2825	62.5	3016	62800 PSI	2.825	.9838	.9498
H4350	58.0	4.21	NA	4.0	2771	62.5	2985	63000 PSI	2.825	.9835	.9478
H-VARGET	53.5	3.91	NA	3.7	2835	56.5	2955	62700 PSI	2.825	....	....
H4831	64.0	4.64	2 SCOOPS	2.2	2801	68.0c	2950	62600 PSI	2.825	....	....
H4895	51.0	3.71	NA	3.7	2833	54.5	2948	63100 PSI	2.825	.9887	.9714
H380	57.0	3.94	NA	3.7	2802	60.0	2916	59400 PSI	2.825	....	....
175 Grain Jacketed Bullet											
H414	59.0	3.90	NA	3.7	2822	62.5	2979	63300 PSI	2.825	....	....
H4350	59.0	4.28	NA	4.0	2806	62.5	2945	62700 PSI	2.825	....	....
H4831	64.0	4.64	2 SCOOPS	2.2	2785	68.0c	2924	62600 PSI	2.825	....	....
H380	56.0	3.87	NA	3.7	2691	60.0	2885	61600 PSI	2.825	.9827	.9468
180 Grain Jacketed Bullet											
H414	57.0	3.77	NA	3.7	2784	60.5	2935	63400 PSI	2.825	.9850	.9577
H4350	58.0	4.21	NA	4.0	2772	61.6	2907	63500 PSI	2.825	.9867	.9638
H-VARGET	50.0	3.65	NA	3.4	2680	54.0	2842	63600 PSI	2.825	.9853	.9581
H4895	48.0	3.49	NA	3.4	2693	51.5	2823	64700 PSI	2.825	.9866	.9644

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

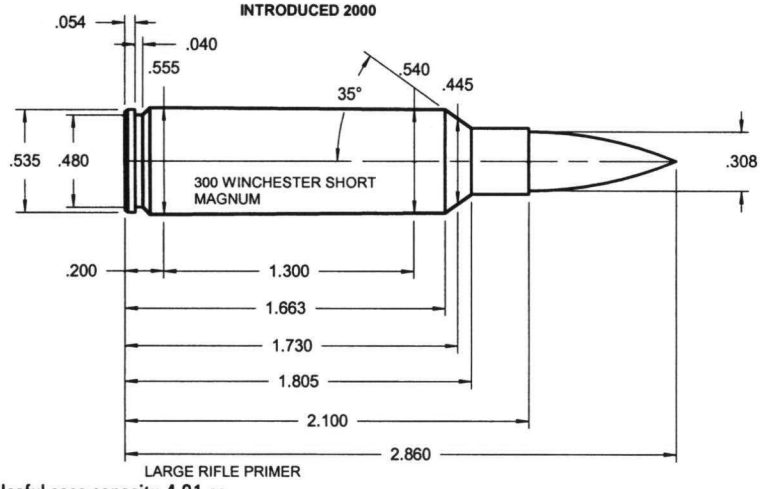
300 REMINGTON SHORT ACTION U M (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
190 Grain Jacketed Bullet											
H414	56.0	3.70	NA	3.4	2680	60.0	2856	62800 PSI	2.825	.9844	.9548
H4350	56.0	4.06	NA	4.0	2660	60.0	2836	62900 PSI	2.825	.9840	.9540
H4831	61.0	4.42	NA	4.3	2660	65.5c	2811	62800 PSI	2.825	.9878	.9669
200 Grain Jacketed Bullet											
H414	56.0	3.70	NA	3.4	2609	59.5	2788	64100 PSI	2.825	.9812	.9383
H4831	63.0	4.57	NA	4.3	2639	66.0c	2755	63300 PSI	2.825	....	....
H4350	56.0	4.06	NA	4.0	2584	59.5	2751	63200 PSI	2.825	.9823	.9437
220 Grain Jacketed Bullet											
H414	55.0	3.64	NA	3.4	2482	58.5	2625	64000 PSI	2.750	.9842	.9521
H4831	60.0	4.35	NA	4.3	2497	63.5	2614	63500 PSI	2.750	....	....
H4350	54.0	3.92	NA	3.7	2470	58.0	2608	63700 PSI	2.750	.9863	.9604

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**

300 WINCHESTER SHORT MAGNUM



Useful case capacity 4.91 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
110 Grain Jacketed Bullet										
H414	70.0	4.63	2 SCOOPS	2.2	3538	73.5	3692 62900 PSI	2.650	....	....
H4895	60.0	4.37	NA	4.3	3495	63.5	3647 63600 PSI	2.650	....	....
H4350	70.0c	5.08	2 SCOOPS	2.5	3437	74.5c	3646 63300 PSI	2.650	....	....
H-VARGET	62.0	4.53	NA	4.3	3454	66.0	3631 63200 PSI	2.650	.9876	.9628
H380	68.0	4.70	2 SCOOPS	2.2	3456	71.0c	3600 60200 PSI	2.650	....	....
125 Grain Jacketed Bullet										
H414	68.0	4.49	NA	4.3	3318	72.0	3540 63300 PSI	2.810	....	....
H380	68.0	4.70	2 SCOOPS	2.2	3346	71.0c	3493 62600 PSI	2.810	....	....
H4350	69.0c	5.00	2 SCOOPS	2.5	3332	73.0c	3481 63000 PSI	2.810	....	....
H-VARGET	61.0	4.46	NA	4.3	3312	65.0	3478 63100 PSI	2.810	.9879	.9649
H4895	58.0	4.22	NA	4.0	3314	61.0	3431 63000 PSI	2.810	....	....
130 Grain Jacketed Bullet										
H380	66.0	4.56	NA	4.3	3244	69.5	3497 63300 PSI	2.720	....	....
H414	66.0	4.36	NA	4.3	3237	70.0	3437 63700 PSI	2.720	....	....
H4350	67.0	4.86	2 SCOOPS	2.2	3237	71.0c	3393 63200 PSI	2.720	....	....
H-VARGET	60.0	4.39	NA	4.3	3269	63.5	3388 63500 PSI	2.720	....	....
H4895	56.0	4.08	NA	4.0	3213	58.5	3388 63000 PSI	2.720	....	....
140 Grain Barnes X Bullet										
H414	64.0	4.23	NA	4.0	3158	67.5	3328 63500 PSI	2.800	....	....
H4350	65.0	4.71	2 SCOOPS	2.2	3113	69.0c	3288 63100 PSI	2.800	....	....
H380	63.0	4.35	NA	4.3	3128	66.2	3276 63300 PSI	2.800	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 02-10-2004 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

300 WINCHESTER SHORT MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
140 Grain Barnes X Bullet (Continued)											
H-VARGET	56.0	4.09	NA	4.0	3086	60.0	3248	63200 PSI	2.800	.9872	.9650
H4895	52.0	3.79	NA	3.7	2998	56.0	3201	63400 PSI	2.800	.9836	.9503
150 Grain Jacketed Bullet											
A-XMR-4350	64.1	4.74	2 SCOOPS	2.2	2973	71.2c	3303	62000 PSI	2.760	----	----
ACCUR 2700	61.7	4.22	NA	4.0	2919	68.6	3243	60900 PSI	2.760	----	----
RELODER19	68.7	4.85	2 SCOOPS	2.2	3076	72.3c	3226	60200 PSI	2.760	----	----
ACC MAG PRO	72.5	4.81	2 SCOOPS	2.2	2929	80.5c	3222	54800 PSI	2.800	.9881	.9712
H414	62.0	4.10	NA	4.0	3025	66.0	3204	63300 PSI	2.780	.9856	.9584
H4350	63.0	4.57	NA	4.3	3040	67.0	3187	63200 PSI	2.780	.9884	.9689
H380	60.0	4.15	NA	4.0	2987	64.0	3141	63600 PSI	2.780	.9874	.9639
H-VARGET	55.0	4.02	NA	4.0	3008	58.5	3140	6300 PSI	2.780	.9880	1.874
H4895	51.0	3.71	NA	3.7	2919	54.5	3078	63100 PSI	2.780	.9849	.9534
150 Grain Barnes X Bullet											
ACC MAG PRO	72.5	4.81	2 SCOOPS	2.2	2946	80.5c	3313	60700 PSI	2.800	.9855	.9614
155 Grain A-MAX											
H414	63.0	4.16	NA	4.0	3023	66.5	3206	63100 PSI	2.860	----	----
H4350	63.0	4.57	NA	4.3	3014	66.5	3156	63200 PSI	2.860	----	----
H380	60.0	4.15	NA	4.0	2956	64.0	3117	63100 PSI	2.860	.9869	.9640
H-VARGET	55.0	4.02	NA	4.0	2963	58.5	3110	63600 PSI	2.860	.9863	.9583
H4895	52.0	3.79	NA	3.7	2935	55.0	3061	63600 PSI	2.860	----	----
165 Grain Jacketed Bullet											
A-XMR-4350	61.0	4.51	NA	4.3	2827	67.8c	3141	60800 PSI	2.760	----	----
RELODER19	66.7	4.71	2 SCOOPS	2.2	2956	70.0c	3100	60000 PSI	2.760	----	----
ACCUR 2700	59.2	4.05	NA	4.0	2777	65.8	3085	61300 PSI	2.760	----	----
H414	61.0	4.03	NA	4.0	2915	65.0	3069	63200 PSI	2.860	.9872	.9623
H4350	61.0	4.42	NA	4.3	2898	65.5	3047	63600 PSI	2.860	.9890	.9674
H380	59.0	4.08	NA	4.0	2854	63.0	3012	63600 PSI	2.860	.9868	.9648
H-VARGET	54.0	3.95	NA	3.7	2859	57.5	2987	63700 PSI	2.860	.9876	.9658
H4895	51.0	3.71	NA	3.7	2810	54.0	2929	63200 PSI	2.860	----	----
ACC XMP5744	27.5	2.07	DBLD	1.9	1864	30.5	2071	27900 PSI	2.760	----	----
165 Grain Barnes X Bullet											
RELODER19	64.6	4.56	NA	4.3	2900	69.5c	3100	61500 PSI	2.760	----	----
168 Grain Jacketed Bullet											
ACC MAG PRO	70.2	4.66	2 SCOOPS	2.2	2828	78.0c	3223	64800 PSI	2.800	.9834	.9581
H414	61.0	4.03	NA	4.0	2919	65.0	3074	63200 PSI	2.840	.9870	.9641
H4350	61.0	4.42	NA	4.3	2908	64.5	3034	63700 PSI	2.840	----	----
H4831	65.0	4.71	2 SCOOPS	2.2	2848	69.5c	3015	63200 PSI	2.840	.9873	.9633
H380	59.0	4.08	NA	4.0	2865	62.0	2985	63300 PSI	2.840	----	----

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 09-07-2005 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

300 WINCHESTER SHORT MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
175 Grain Jacketed Bullet											
H414	61.0	4.03	NA	4.0	2868	65.0	3032	63200 PSI	2.860	.9863	.9610
H4350	61.0	4.42	NA	4.3	2839	65.0	3009	63400 PSI	2.860	.9855	.9575
H4831	66.0	4.78	2 SCOOPS	2.2	2848	70.0c	2980	63100 PSI	2.860	.9888	.9676
H380	60.0	4.15	NA	4.0	2859	63.0	2954	63200 PSI	2.860	....	....
180 Grain A-MAX											
A-XMR-4350	58.2	4.31	NA	4.3	2690	64.7	2989	61300 PSI	2.760	....	....
ACCUR 2700	57.6	3.94	NA	3.7	2663	64.0	2959	60600 PSI	2.760	....	....
180 Grain Jacketed Bullet											
ACC MAG PRO	68.3	4.53	NA	4.3	2733	76.0c	3028	60000 PSI	2.800	.9867	.9568
A-XMR-4350	60.3	4.46	NA	4.3	2722	67.0c	3024	61300 PSI	2.760	....	....
ACCUR 2700	58.5	4.01	NA	4.0	2683	65.0	2981	61100 PSI	2.760	....	....
RELODER19	64.3	4.54	NA	4.3	2840	68.0	2978	60500 PSI	2.760	....	....
H414	59.0	3.90	NA	3.7	2801	62.5	2959	63000 PSI	2.860	....	....
H4350	60.0	4.35	NA	4.3	2799	64.0	2950	63900 PSI	2.860	.9870	.9662
H4831	65.5	4.75	2 SCOOPS	2.2	2775	70.0c	2929	64000 PSI	2.860	.9880	.9549
H380	57.0	3.94	NA	3.7	2718	61.0	2884	63400 PSI	2.860	.9853	.9593
190 Grain Jacketed Bullet											
H414	59.0	3.90	NA	3.7	2765	62.5	2896	63800 PSI	2.860	....	....
H4831	62.0	4.49	NA	4.3	2704	66.5	2858	63400 PSI	2.860	.9876	.9642
H4350	57.5	4.17	NA	4.0	2736	61.0	2853	63400 PSI	2.860	.9880	.9661
200 Grain Jacketed Bullet											
H414	58.0	3.83	NA	3.7	2678	61.0	2803	63200 PSI	2.790	....	....
H4831	63.0	4.57	NA	4.3	2678	66.5	2802	63700 PSI	2.790	....	....
H4350	58.0	4.21	NA	4.0	2666	62.0	2792	63200 PSI	2.790	.9887	.9659
ACCUR 2700	54.4	3.72	NA	3.7	2473	60.4	2748	61200 PSI	2.760	....	....
H1000	70.0c	4.99	2 SCOOPS	2.5	2660	72.0c	2737	57200 PSI	2.790	....	....
A-XMR-4350	53.8	3.98	NA	4.0	2460	59.8	2733	61400 PSI	2.760	....	....
220 Grain Jacketed Bullet											
H1000	69.0c	4.92	2 SCOOPS	2.2	2597	72.5c	2689	63000 PSI	2.830	....	....
H4831	60.0	4.35	NA	4.3	2520	64.3	2646	63500 PSI	2.830	.9888	.9696
H414	55.0	3.64	NA	3.4	2484	59.0	2624	63600 PSI	2.830	.9862	.9599
H4350	54.0	3.92	NA	3.7	2476	58.0	2602	63300 PSI	2.830	.9878	.9615

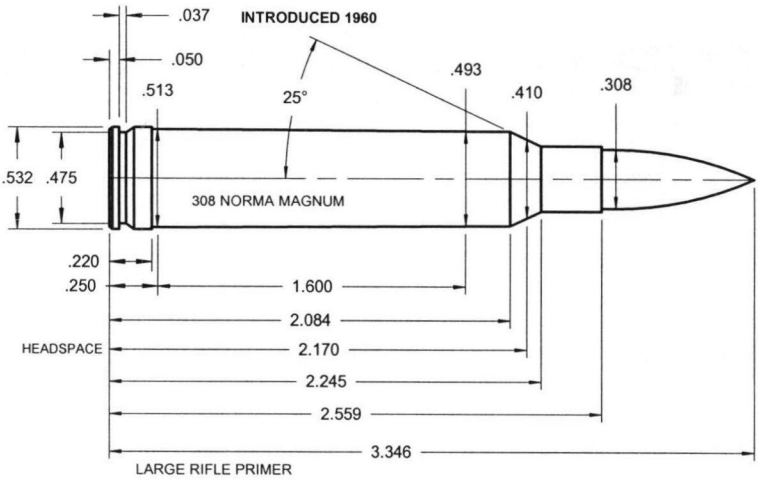
CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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2 SCOOPS = Use TWO dippers of powder in each round.

308 NORMA MAGNUM

These loads can be used in the .30-338 wildcat.



Useful case capacity 5.18 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
110 Grain Jacketed Bullet									
H414	68.0	4.49	NA	4.3	3508	74.0	3687 61629 PSI	3.160	.9918 .9780
H380	65.5	4.53	NA	4.3	3452	71.0	3609 60562 PSI	3.160	.9919 .9791
H4831	73.0c	5.29	2 SCOOPS	2.5	3229	80.0c	3563 59377 PSI	3.160	....
H4895	59.0	4.30	NA	4.0	3339	64.0	3554 62814 PSI	3.160	.9877 .9518
H4350	72.0c	5.22	2 SCOOPS	2.5	3202	77.0c	3506 60681 PSI	3.160	....
H870	85.0c	5.83	2 SCOOPS	2.8	3058	85.0c	3058 41955 PSI	3.160	....
130 Grain Jacketed Bullet									
H414	66.0	4.36	NA	4.3	3211	72.0	3449 61984 PSI	3.275	.9881 .9817
H380	64.5	4.46	NA	4.3	3263	70.0	3415 60325 PSI	3.275	.9917 .9938
H4895	59.0	4.30	NA	4.0	3166	64.0	3388 59851 PSI	3.275	.9863 .9665
H1000	80.0c	5.70	2 SCOOPS	2.8	3211	84.0c	3333 54992 PSI	3.275	....
H4831	73.0c	5.29	2 SCOOPS	2.5	3201	79.0c	3302 54399 PSI	3.275	....
H4350	71.0	5.15	2 SCOOPS	2.5	3139	74.0c	3292 60918 PSI	3.275	....
H870	85.0c	5.83	2 SCOOPS	2.8	2968	85.0c	2968 39822 PSI	3.275	....
150 Grain Jacketed Bullet									
H1000	79.0c	5.63	2 SCOOPS	2.8	3090	83.0c	3279 60206 PSI	3.300	....
H4831	70.0	5.07	2 SCOOPS	2.5	3157	76.0c	3258 61510 PSI	3.300	....
H414	62.5	4.13	NA	4.0	3007	68.0	3226 62103 PSI	3.300	.9872 .9816
H380	63.5	4.39	NA	4.3	3028	68.0	3221 62103 PSI	3.300	.9865 .9816
A-XMR-4350	64.4	4.77	2 SCOOPS	2.2	2819	71.5c	3203 58100 PSI	3.205	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

308 NORMA MAGNUM (Continued)

These loads can be used in the .30-338 wildcat.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
....STARTING LOADS....									
150 Grain Jacketed Bullet (Continued)									
H4895	57.0	4.15	NA	4.0	2940	62.0	3192 64829 PSI	3.300	.9836 .9485
H4350	69.0	5.00	2 SCOOPS	2.2	2914	73.0c	3188 60681 PSI	3.300	....
A-XMR-3100	68.4	5.12	2 SCOOPS	2.5	2768	76.0c	3145 57100 PSI	3.205	....
ACCUR 2700	63.2	4.33	NA	4.3	2949	66.5	3137 61800 PSI	3.205	....
H870	84.0c	5.76	2 SCOOPS	2.8	2953	84.0c	2953 46814 PSI	3.300	....
155 Grain Jacketed Bullet									
v-N160	72.5c	5.32	2 SCOOPS	2.5	3042	72.8c	3100 NA NA	3.248	....
168 Grain Jacketed Bullet									
H4831	69.0	5.00	2 SCOOPS	2.2	2944	75.0c	3140 61984 PSI	3.250	....
H1000	75.0c	5.35	2 SCOOPS	2.5	2939	79.0c	3123 61629 PSI	3.250	....
H4350	68.0	4.93	2 SCOOPS	2.2	2880	72.0c	3114 60444 PSI	3.250	....
H414	61.0	4.03	NA	4.0	2884	67.0	3087 63999 PSI	3.250	.9886 .9750
H380	62.0	4.28	NA	4.0	2995	67.0	3079 61747 PSI	3.250	.9945 .9922
A-XMR-3100	66.2	4.95	2 SCOOPS	2.2	2707	73.5c	3076 61300 PSI	3.265	....
H4895	56.0	4.08	NA	4.0	2859	61.0	3059 61747 PSI	3.250	.9865 .9845
A-XMR-4350	61.7	4.57	NA	4.3	2681	68.5	3047 61600 PSI	3.265	....
H870	84.0c	5.76	2 SCOOPS	2.8	2917	84.0c	2917 46103 PSI	3.250	....
ACCUR 8700	74.7	5.14	2 SCOOPS	2.5	2402	83.0c	2729 50100 PSI	3.265	....
180 Grain Jacketed Bullet									
v-N160	70.4	5.17	2 SCOOPS	2.5	3001	70.7c	3051 NA NA	3.307	....
H4831	67.0	4.86	2 SCOOPS	2.2	2865	73.0c	3022 61984 PSI	3.345	....
H4350	65.0	4.71	2 SCOOPS	2.2	2770	69.0	2999 62577 PSI	3.345	.9802 .9500
A-XMR-3100	65.3	4.88	2 SCOOPS	2.2	2608	72.5c	2964 61200 PSI	3.250	....
H1000	72.0	5.13	2 SCOOPS	2.5	2769	76.0c	2940 61510 PSI	3.345	....
A-XMR-4350	59.4	4.40	NA	4.3	2578	66.0	2929 59900 PSI	3.250	....
H414	58.0	3.83	NA	3.7	2772	63.0	2908 64355 PSI	3.345	.9904 .9856
H4895	54.0	3.93	NA	3.7	2732	59.0	2898 63288 PSI	3.345	.9881 .9797
H380	58.0	4.01	NA	4.0	2746	63.0	2847 60918 PSI	3.345	.9927 .9888
H870	82.0c	5.63	2 SCOOPS	2.8	2835	82.0c	2835 48473 PSI	3.345	....
ACCUR 8700	73.8	5.08	2 SCOOPS	2.5	2329	82.0c	2647 51100 PSI	3.250	....
190 Grain Jacketed Bullet									
A-XMR-3100	65.1	4.87	2 SCOOPS	2.2	2645	72.3c	3006 63500 PSI	3.300	....
H1000	70.0	4.99	2 SCOOPS	2.2	2711	74.0c	2891 60562 PSI	3.435	....
A-XMR-4350	58.5	4.33	NA	4.3	2541	65.0	2888 59100 PSI	3.300	....
ACCUR 8700	73.4	5.05	2 SCOOPS	2.5	2385	81.5c	2710 47600 PSI	3.300	....

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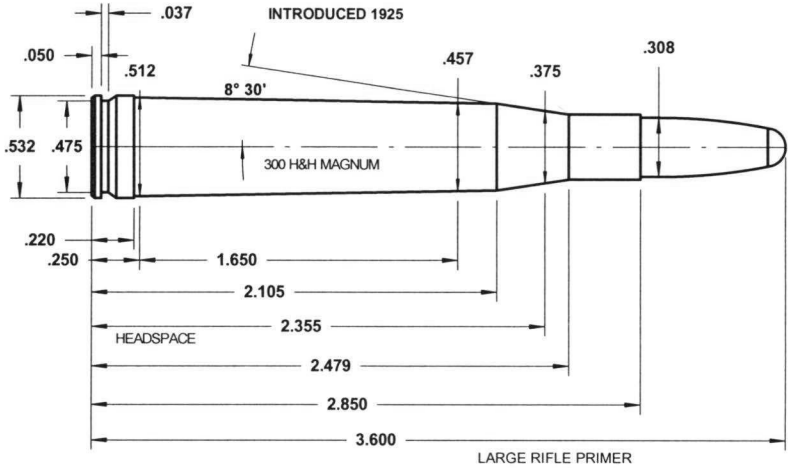
308 NORMA MAGNUM (Continued)

These loads can be used in the .30-338 wildcat.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
200 Grain Jacketed Bullet											
A-XMR-3100	63.9	4.78	2 SCOOPS	2.2	2570	71.0c	2921	62600 PSI	3.320	....	....
H4831	64.5	4.68	2 SCOOPS	2.2	2662	70.0	2889	62458 PSI	3.400	.9851	.9693
H1000	69.0	4.92	2 SCOOPS	2.2	2674	73.0c	2859	64592 PSI	3.400	....	....
H4350	63.0	4.57	NA	4.3	2740	67.0	2851	61747 PSI	3.400	.9902	.9624
A-XMR-4350	57.6	4.26	NA	4.0	2472	64.0	2811	62500 PSI	3.320	....	....
v-N160	66.1	4.85	2 SCOOPS	2.2	2795	66.4	2805	NA NA	3.307	....	....
H870	79.0c	5.42	2 SCOOPS	2.5	2702	79.0c	2702	48829 PSI	3.400	....	....
ACCUR 8700	72.0	4.95	2 SCOOPS	2.2	2250	80.0c	2557	43400 PSI	3.320	....	....
220 Grain Jacketed Bullet											
A-XMR-3100	63.0	4.71	2 SCOOPS	2.2	2407	70.0c	2735	61500 PSI	3.310	....	....
H4350	61.0	4.42	NA	4.3	2519	65.0	2707	62577 PSI	3.360	.9820	.9455
v-N160	64.8	4.76	2 SCOOPS	2.2	2685	65.1	2707	NA NA	3.358	....	....
H4831	63.0	4.57	NA	4.3	2437	68.0	2697	62458 PSI	3.360	.9800	.9583
H1000	66.0	4.71	2 SCOOPS	2.2	2449	70.0	2672	61629 PSI	3.360	.9784	.9698
A-XMR-4350	56.7	4.20	NA	4.0	2328	63.0	2646	61000 PSI	3.310	....	....
H870	78.0c	5.35	2 SCOOPS	2.5	2614	78.0c	2614	52147 PSI	3.360	....	....
ACCUR 8700	72.0	4.95	2 SCOOPS	2.2	2225	80.0c	2528	47400 PSI	3.310	....	....
250 Grain Jacketed Bullet											
H1000	64.0	4.56	NA	4.3	2392	68.0	2501	63406 PSI	3.360	.9888	.9650

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c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

300 Holland & Holland Magnum



Useful case capacity 5.33 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain Jacketed Bullet										
H4831	76.5c	5.55	2 SCOOPS	2.5	3346	83.0c	3611	NA	NA	3.450
H4350	69.0	5.00	2 SCOOPS	2.2	3385	73.0	3550	NA	NA	3.450
H414	64.5	4.26	NA	4.0	3274	70.0	3534	NA	NA	3.450
H450	69.0	4.51	NA	4.3	3258	75.0	3458	46500	CUP	3.420
125 Grain Jacketed Bullet										
v-N160	68.4	5.02	2 SCOOPS	2.5	3250	77.2c	3609	NA	NA	3.484
ACCUR 2700	64.2	4.39	NA	4.3	3125	72.5	3504	53700	CUP	3.585
A-XMR-4350	76.7c	5.68	2 SCOOPS	2.8	3418	78.0c	3484	48300	CUP	3.585
A-XMR-3100	70.2	5.25	2 SCOOPS	2.5	2814	78.0c	3198	43200	CUP	3.585
130 Grain Jacketed Bullet										
H4350	68.0	4.93	2 SCOOPS	2.2	3205	72.0	3394	NA	NA	3.440
VEC TU5000	65.9	4.75	2 SCOOPS	2.2	3296	67.9	3392	48926	CIP	3.420
H4831	75.0c	5.44	2 SCOOPS	2.5	3145	81.0c	3362	NA	NA	3.440
H414	62.0	4.10	NA	4.0	3088	67.0	3301	NA	NA	3.440
VEC TU7000	71.6	5.05	2 SCOOPS	2.5	3220	72.5	3251	48084	CIP	3.420
150 Grain Winchester Fail Safe										
WIN MAG RIFLE	66.0	4.74	2 SCOOPS	2.2	2686	72.4	2920	44500	CUP	3.590
150 Grain Jacketed Bullet										
A-XMR-4350	66.6	4.93	2 SCOOPS	2.2	2992	74.0c	3400	54000	CUP	3.600
H4831	72.0	5.22	2 SCOOPS	2.5	3070	78.0c	3313	NA	NA	3.560
ACCUR 2700	62.2	4.26	NA	4.0	2904	69.1	3300	54000	CUP	3.555

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c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

300 Holland & Holland Magnum (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
150 Grain Jacketed Bullet (Continued)										
RELODER19	67.9	4.79	2 SCOOPS	2.2	3005	75.0	3275	52500	CUP	3.570
RELODER15	57.7	4.08	NA	4.0	3001	63.8	3270	52500	CUP	3.570
H414	60.0	3.97	NA	3.7	3008	65.0	3247	NA	NA	3.560
IMR4350	64.7	4.76	2 SCOOPS	2.2	2894	73.0c	3215	53600	CUP	3.550
H4350	67.0	4.86	2 SCOOPS	2.2	3024	71.0	3202	NA	NA	3.560
IMR4831	67.6	4.97	2 SCOOPS	2.2	2881	75.5c	3200	53100	CUP	3.550
IMR4064	56.5	4.21	NA	4.0	2827	64.0	3170	53800	CUP	3.550
v-N160	66.6	4.89	2 SCOOPS	2.2	2806	75.2c	3117	NA	NA	3.583
H450	67.0	4.38	NA	4.3	2986	72.0	3110	45400	CUP	3.420
A-XMR-3100	68.8	5.15	2 SCOOPS	2.5	2735	76.5c	3109	48300	CUP	3.600
IMR3031	52.8	4.02	NA	4.0	2764	60.0	3100	54000	CUP	3.550
IMR4320	51.3	3.67	NA	3.4	2649	58.0	2970	53700	CUP	3.550
IMR4895	48.4	3.52	NA	3.4	2639	55.0	2960	54000	CUP	3.550
IMR4198	39.1	3.10	DBLD	2.8	2444	44.0	2715	53500	CUP	3.550
IMR4227	32.6	2.50	DBLD	2.2	2242	37.0	2515	54000	CUP	3.550
SR4759	35.5	3.52	NA	3.4	2211	40.0	2455	53600	CUP	3.550
155 Grain Jacketed Bullet										
v-N160	64.1	4.71	2 SCOOPS	2.2	2703	72.4	3002	NA	NA	3.583
165 Grain Winchester Fail Safe										
WIN MAG RIFLE	64.0	4.60	2 SCOOPS	2.2	2663	71.3	2895	47400	CUP	3.590
165 Grain Jacketed Bullet										
A-XMR-4350	63.9	4.73	2 SCOOPS	2.2	2827	71.0	3213	53000	CUP	3.520
H4350	66.0	4.79	2 SCOOPS	2.2	3046	69.0	3164	NA	NA	3.560
RELODER19	65.8	4.65	2 SCOOPS	2.2	2890	72.7	3150	52500	CUP	3.555
H450	68.7	4.49	NA	4.3	2940	73.0	3113	50500	CUP	3.500
A-XMR-3100	69.3	5.18	2 SCOOPS	2.5	2736	77.0c	3109	54000	CUP	3.520
H4831	71.0	5.15	2 SCOOPS	2.5	2871	77.0c	3099	NA	NA	3.560
RELODER15	55.1	3.89	NA	3.7	2813	60.9	3065	52500	CUP	3.555
H414	59.0	3.90	NA	3.7	2876	63.0	3046	NA	NA	3.560
ACCUR 2700	58.5	4.01	NA	4.0	2641	65.0	3001	52100	CUP	3.520
v-N160	62.2	4.56	NA	4.3	2614	70.2	2904	NA	NA	3.591
165 Grain Lead Bullet										
ACC XMP5744	27.5	2.07	DBLD	1.9	1924	35.0	2285	35700	CUP	3.430
165 Grain Barnes X Bullet										
A-XMR-4350	63.4	4.69	2 SCOOPS	2.2	2799	72.0c	3139	54000	CUP	3.600
A-XMR-3100	74.7c	5.59	2 SCOOPS	2.5	3000	78.0c	3117	49600	CUP	3.600
ACCUR 2700	61.0	4.17	NA	4.0	2774	68.0	3052	53000	CUP	3.600
168 Grain Jacketed Bullet										
VEC TU8000	71.0	5.00	2 SCOOPS	2.2	2966	71.0	2966	46067	CIP	3.600

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c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

300 Holland & Holland Magnum (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
....STARTING LOADS....									
168 Grain Jacketed Bullet (Continued)									
VEC TU7000	61.4	4.32	NA	4.3	2635	67.9	2900	52583 CIP	3.600
180 Grain Winchester Fail Safe									
WIN MAG RIFLE	68.4	4.92	2 SCOOPS	2.2	2766	70.0	2820	48600 CUP	3.590
180 Grain Jacketed Bullet									
A-XMR-4350	62.5	4.63	2 SCOOPS	2.2	2704	69.5	3073	54000 CUP	3.520
RELODER19	63.2	4.46	NA	4.3	2804	69.8	3055	52500 CUP	3.575
RELODER22	64.8	4.51	NA	4.3	2789	71.0	3040	52100 CUP	3.535
IMR4831	64.8	4.77	2 SCOOPS	2.2	2733	73.0c	3035	53500 CUP	3.520
IMR4350	60.7	4.46	NA	4.3	2666	69.0	2990	54000 CUP	3.520
A-XMR-3100	65.7	4.91	2 SCOOPS	2.2	2611	73.0c	2967	53800 CUP	3.600
ACCUR 2700	60.1	4.12	NA	4.0	2689	64.0	2892	54000 CUP	3.520
H414	56.1	3.71	NA	3.7	2757	59.0	2891	NA NA	3.500
IMR4064	53.4	3.98	NA	3.7	2588	60.0	2875	53400 CUP	3.520
v-N160	60.1	4.41	NA	4.3	2584	67.9	2871	NA NA	3.591
RELODER15	51.4	3.63	NA	3.4	2615	56.7	2850	52400 CUP	3.575
IMR3031	50.7	3.87	NA	3.7	2535	57.0	2815	53400 CUP	3.500
IMR4320	50.8	3.64	NA	3.4	2492	57.5	2795	53800 CUP	3.520
IMR4895	48.1	3.50	NA	3.4	2461	54.5	2760	53800 CUP	3.520
ACCUR 8700	76.5	5.26	2 SCOOPS	2.5	2420	85.0c	2604	43000 CUP	3.600
IMR4198	38.6	3.05	DBLD	2.8	2286	43.0	2515	53000 CUP	3.520
SR4759	33.4	3.32	NA	3.1	2077	38.0	2330	54000 CUP	3.520
IMR4227	31.7	2.44	DBLD	2.2	2051	36.0	2300	54000 CUP	3.520
190 Grain Lead Bullet									
ACC XMP5744	27.0	2.03	DBLD	1.9	1849	35.0	2197	36000 CUP	3.430
200 Grain Jacketed Bullet									
RELODER22	62.8	4.38	NA	4.3	2693	69.0	2935	52200 CUP	3.590
H4831	67.0	4.86	2 SCOOPS	2.2	2742	72.0	2932	NA NA	3.655
RELODER19	61.1	4.31	NA	4.3	2670	67.0	2910	52100 CUP	3.590
H4350	62.0	4.50	NA	4.3	2747	66.0	2909	NA NA	3.655
A-XMR-4350	58.9	4.36	NA	4.3	2502	65.5	2843	53200 CUP	3.525
A-XMR-3100	62.1	4.65	2 SCOOPS	2.2	2468	69.0	2805	53300 CUP	3.665
WIN MAG RIFLE	64.5	4.63	2 SCOOPS	2.2	2552	70.6	2780	52000 CUP	3.590
H870	73.0	5.01	2 SCOOPS	2.5	2479	83.0c	2779	NA NA	3.655
ACCUR 2700	54.0	3.70	NA	3.4	2426	60.0	2757	53700 CUP	3.665
RELODER15	50.2	3.54	NA	3.4	2501	55.0	2725	52100 CUP	3.590
H414	52.0	3.44	NA	3.4	2478	56.0	2649	NA NA	3.655
ACCUR 8700	73.8	5.08	2 SCOOPS	2.5	2318	82.0c	2634	49900 CUP	3.525
210 Grain Lead Bullet									
ACC XMP5744	26.5	1.99	DBLD	1.9	1748	35.0	2097	38000 CUP	3.445

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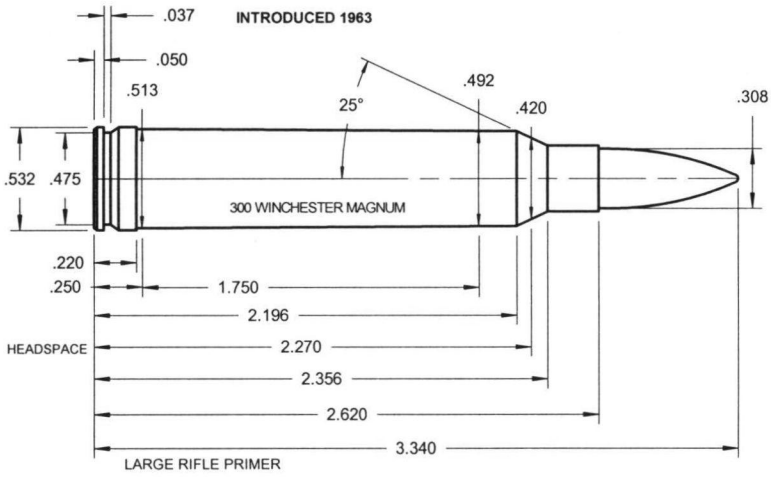
300 Holland & Holland Magnum (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
220 Grain Winchester Fail Safe										
WIN MAG RIFLE	61.8	4.44	NA	4.3	2404	67.0	2595	51500	CUP	3.590
220 Grain Jacketed Bullet										
VEC TU8000	64.0	4.51	NA	4.3	2568	69.4	2772	51509	CIP	3.580
A-XMR-3100	63.9	4.78	2 SCOOPS	2.2	2413	71.0	2743	53300	CUP	3.590
A-XMR-4350	60.5	4.48	NA	4.3	2409	67.2	2738	54000	CUP	3.590
H4350	60.0	4.35	NA	4.3	2565	64.0	2717	NA	NA	3.580
H4831	65.0	4.71	2 SCOOPS	2.2	2538	70.0	2714	NA	NA	3.580
IMR4831	59.0	4.33	NA	4.3	2417	67.0	2710	54000	CUP	3.575
H870	72.2	4.95	2 SCOOPS	2.2	2413	82.0c	2706	NA	NA	3.580
IMR4350	57.2	4.20	NA	4.0	2404	65.0	2695	54000	CUP	3.575
VEC TU7000	58.9	4.15	NA	4.0	2526	62.5	2674	50420	CIP	3.580
WIN MAG RIFLE	61.8	4.44	NA	4.3	2404	67.0	2595	51500	CUP	3.590
ACCUR 8700	76.5	5.26	2 SCOOPS	2.5	2262	85.0c	2571	44600	CUP	3.590
IMR4064	50.4	3.75	NA	3.7	2310	56.5	2565	53300	CUP	3.575
ACCUR 2700	52.2	3.57	NA	3.4	2255	58.0	2563	53300	CUP	3.590
v-N160	57.7	4.23	NA	4.0	2290	65.1	2543	NA	NA	3.579
IMR4320	48.4	3.47	NA	3.4	2268	54.0	2495	53000	CUP	3.575
IMR3031	52.5	4.00	NA	3.7	2485	52.5	2485	43300	CUP	3.575
IMR4895	45.9	3.34	NA	3.1	2220	51.5	2465	53300	CUP	3.575
IMR4198	37.9	3.01	DBLD	2.8	2036	42.0	2240	52600	CUP	3.575
SR4759	32.1	3.19	DBLD	3.1	1810	36.5	2030	54000	CUP	3.575
IMR4227	31.5	2.42	DBLD	2.2	1814	35.5	2015	53600	CUP	3.575
250 Grain Jacketed Bullet										
H870	75.0	5.14	2 SCOOPS	2.5	2494	79.0c	2616	NA	NA	3.580
H4831	63.0	4.57	NA	4.3	2421	67.0	2563	NA	NA	3.580
H4350	59.0	4.28	NA	4.0	2377	62.0	2493	NA	NA	3.580

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300 WINCHESTER MAGNUM



Useful case capacity 5.62 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
110 Grain Jacketed Bullet											
H4895	60.0	4.37	NA	4.3	3331	67.0	3665	60919 PSI	3.215	.9865	.9758
H-VARGET	67.0	4.90	2 SCOOPS	2.2	3391	72.5	3660	61274 PSI	3.215	.9863	.9666
ACCUR 2700	74.6	5.11	2 SCOOPS	2.5	3486	78.5	3656	64000 PSI	3.170	....	....
H4350	72.0	5.22	2 SCOOPS	2.5	3316	80.0c	3648	58548 PSI	3.215	....	....
H414	66.0	4.36	NA	4.3	3245	73.0	3570	58904 PSI	3.215	.9865	.9725
H380	66.0	4.56	NA	4.3	3222	73.0	3544	58074 PSI	3.215	.9865	.9752
A-XMR-4350	71.6	5.30	2 SCOOPS	2.5	3219	79.5c	3541	55600 PSI	3.170	....	....
H4831	79.0c	5.73	2 SCOOPS	2.8	3343	84.0c	3540	57363 PSI	3.215	....	....
BL-C(2)	56.0	3.61	NA	3.4	3271	61.0	3531	60919 PSI	3.300	.9849	.9676
ACCUR 2520	60.3	4.12	NA	4.0	3192	67.0	3512	58400 PSI	3.170	....	....
v-N160	76.5	5.62	2 SCOOPS	2.8	3232	83.3c	3489	55600 PSI	3.268	....	....
A-XMR-3100	73.8	5.52	2 SCOOPS	2.5	3108	82.0c	3419	51900 PSI	3.170	....	....
H1000	80.0c	5.70	2 SCOOPS	2.8	3203	85.0c	3392	49778 PSI	3.215	....	....
125 Grain Jacketed Bullet											
ACCUR 2700	70.8	4.85	2 SCOOPS	2.2	3316	74.5	3478	63100 PSI	3.250	....	....
A-XMR-4350	70.7	5.23	2 SCOOPS	2.5	3147	78.5c	3462	58200 PSI	3.250	....	....
A-XMR-3100	73.8	5.52	2 SCOOPS	2.5	3066	82.0c	3373	57500 PSI	3.250	....	....
ACCUR 2520	58.5	3.99	NA	3.7	3039	65.0	3343	61000 PSI	3.250	....	....
125 Grain Barnes X Bullet											
H-VARGET	65.0	4.75	2 SCOOPS	2.2	3238	70.0	3462	62459 PSI	3.275	.9868	.9705
H4831	75.0	5.44	2 SCOOPS	2.5	3258	80.0c	3450	61630 PSI	3.275	....	....

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2 SCOOPS = Use TWO dippers of powder in each round.

300 WINCHESTER MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
125 Grain Barnes X Bullet (Continued)											
H4350	68.0	4.93	2 SCOOPS	2.2	3202	73.0	3424	61156 PSI	3.275	.9867	.9777
H1000	80.0c	5.70	2 SCOOPS	2.8	3228	85.0c	3418	57719 PSI	3.275	....	....
H414	65.0	4.30	NA	4.0	3173	70.0	3392	61274 PSI	3.275	.9868	.9302
H4895	57.0	4.15	NA	4.0	3101	62.0	3347	60563 PSI	3.275	.9848	.9714
H380	62.0	4.28	NA	4.0	3022	68.5	3293	61393 PSI	3.275	.9868	.9735
130 Grain Jacketed Bullet											
H450	73.5	4.80	2 SCOOPS	2.2	3174	80.0	3426	56415 PSI	3.300	.9881	.9788
H-VARGET	64.0	4.68	2 SCOOPS	2.2	3179	68.5	3398	61748 PSI	3.300	.9853	.9708
ACCUR 2700	69.8	4.78	2 SCOOPS	2.2	3228	73.5	3386	63200 PSI	3.300	....	....
H4831	77.0	5.58	2 SCOOPS	2.5	3194	82.0c	3383	60800 PSI	3.300	....	....
A-XMR-3100	73.8	5.52	2 SCOOPS	2.5	3071	82.0c	3378	59500 PSI	3.300	....	....
A-XMR-4350	69.3	5.13	2 SCOOPS	2.5	3071	77.0c	3378	60000 PSI	3.300	....	....
H4350	70.0	5.08	2 SCOOPS	2.5	3218	74.0	3375	61156 PSI	3.300	....	....
H414	67.0	4.43	NA	4.3	3173	71.0	3360	61985 PSI	3.300	....	....
H4895	58.0	4.22	NA	4.0	3146	62.0	3331	62222 PSI	3.300	.9858	.9722
H1000	80.0c	5.70	2 SCOOPS	2.8	3106	85.0c	3289	53333 PSI	3.300	....	....
H380	64.0	4.42	NA	4.3	3071	68.5	3283	62341 PSI	3.300	.9854	.9739
v-N160	71.1	5.22	2 SCOOPS	2.5	2973	79.3c	3271	NA	NA	3.315	....	....
ACCUR 2520	56.7	3.87	NA	3.7	2943	63.0	3237	58800 PSI	3.300	....	....
150 Grain Winchester Fail Safe											
WIN MAG RIFLE	72.1	5.18	2 SCOOPS	2.5	2909	76.1	3095	53000 PSI	3.340	....	....
150 Grain Jacketed Bullet											
IMR4831	70.4	5.17	2 SCOOPS	2.5	3001	80.0c	3365	54000 CUP	3.340	....	....
IMR4350	67.0	4.92	2 SCOOPS	2.2	2974	76.0	3335	53900 CUP	3.340	....	....
RELODER22	76.0	5.30	2 SCOOPS	2.5	3063	81.5c	3275	60400 PSI	3.340	....	....
H1000	80.0c	5.70	2 SCOOPS	2.8	3074	85.0c	3255	61867 PSI	3.340	....	....
H450	72.0	4.70	2 SCOOPS	2.2	3014	78.0	3253	61393 PSI	3.300	.9874	.9836
IMR4064	58.0	4.32	NA	4.3	2889	65.5	3240	53700 CUP	3.340	....	....
IMR4895	57.4	4.18	NA	4.0	2945	64.0	3240	53000 CUP	3.340	....	....
IMR4320	58.8	4.21	NA	4.0	2880	66.5	3230	53700 CUP	3.340	....	....
RELODER19	70.8	5.00	2 SCOOPS	2.2	2988	76.7	3225	61000 PSI	3.340	....	....
H4831	73.0	5.29	2 SCOOPS	2.5	3029	78.0c	3207	62459 PSI	3.340	.9886	.9719
H4350	68.0	4.93	2 SCOOPS	2.2	3027	72.0	3205	62222 PSI	3.340	....	....
WIN MAG RIFLE	75.0	5.39	2 SCOOPS	2.5	3104	77.7	3205	55900 PSI	3.340	....	....
IMR3031	55.5	4.23	NA	4.0	2854	63.0	3200	53900 CUP	3.340	....	....
v-N165	75.3	5.36	2 SCOOPS	2.5	2898	83.2c	3196	NA	NA	3.339	....	....
RELODER15	60.3	4.26	NA	4.0	2946	65.3	3180	61000 PSI	3.340	....	....
ACCUR 2700	66.0	4.52	NA	4.3	3029	69.5	3177	62300 PSI	3.380	....	....

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300 WINCHESTER MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
150 Grain Jacketed Bullet (Continued)											
H414	62.0	4.10	NA	4.0	2886	68.0	3145	62222 PSI	3.340	.9857	.9831
A-XMR-4350	65.7	4.86	2 SCOOPS	2.2	2858	73.0	3144	59400 PSI	3.380	....	....
H4895	57.0	4.15	NA	4.0	2922	61.0	3124	62222 PSI	3.340	.9833	.9743
A-XMR-3100	68.4	5.12	2 SCOOPS	2.5	2825	76.0c	3108	58900 PSI	3.380	....	....
H-VARGET	56.0	4.09	NA	4.0	2907	60.0	3108	60919 PSI	3.340	.9834	.9580
v-N160	69.0	5.06	2 SCOOPS	2.5	2789	76.4	3097	NA NA	3.339	....	....
H870	82.0c	5.63	2 SCOOPS	2.8	2880	87.0c	3050	57126 PSI	3.300	....	....
H380	62.0	4.28	NA	4.0	2889	65.0	3031	61867 PSI	3.340	....	....
ACCUR 2520	52.2	3.56	NA	3.4	2689	58.0	2959	58500 PSI	3.380	....	....
IMR4198	43.4	3.44	NA	3.4	2610	49.0	2900	53600 CUP	3.340	....	....
SR4759	36.9	3.67	NA	3.4	2395	41.5	2660	53400 CUP	3.340	....	....
IMR4227	35.8	2.75	DBLD	2.5	2377	39.5	2590	52400 CUP	3.340	....	....
150 Grain Lead Bullet											
ACC XMP5744	25.0	1.88	DBLD	1.6	1760	35.0	2321	25100 CUP	3.150	....	....
150 Grain Barnes X Bullet											
A-XMR-4350	67.9	5.02	2 SCOOPS	2.5	3020	75.5	3323	53600 CUP	3.400	....	....
A-XMR-3100	72.0	5.39	2 SCOOPS	2.5	2999	80.0c	3299	52700 CUP	3.400	....	....
155 Grain Jacketed Bullet											
H4350	69.0	5.00	2 SCOOPS	2.2	3007	74.0	3215	62104 PSI	3.340	.9866	.9704
v-N165	72.4	5.15	2 SCOOPS	2.5	2844	81.9c	3189	NA NA	3.327	....	....
v-N560	69.1	4.77	2 SCOOPS	2.2	2889	77.2	3179	NA NA	3.327	....	....
H4831	74.0	5.36	2 SCOOPS	2.5	2989	79.0c	3166	61037 PSI	3.340	....	....
H1000	80.0c	5.70	2 SCOOPS	2.8	2984	85.0c	3160	56178 PSI	3.340	....	....
H414	67.0	4.43	NA	4.3	2981	71.5	3157	60800 PSI	3.340	.9875	.9689
v-N160	63.7	4.68	2 SCOOPS	2.2	2830	71.8	3143	NA NA	3.327	....	....
H-VARGET	55.0	4.02	NA	4.0	2863	59.7	3090	61630 PSI	3.340	.9839	.9575
H4895	55.0	4.00	NA	3.7	2879	59.0	3078	61867 PSI	3.340	.9834	.9565
H380	61.0	4.22	NA	4.0	2857	65.0	3025	61511 PSI	3.340	.9859	.9612
165 Grain Winchester Fail Safe											
WIN MAG RIFLE	71.7	5.15	2 SCOOPS	2.5	2908	75.4	3050	59200 PSI	3.340	....	....
165 Grain Jacketed Bullet											
RELODER 25	78.4	5.54	2 SCOOPS	2.5	3022	84.5c	3231	60700 PSI	3.340	....	....
H450	71.0	4.64	2 SCOOPS	2.2	2964	76.0	3169	62815 PSI	3.300	.9868	.9820
v-N160	73.8	5.41	2 SCOOPS	2.5	3150	74.1	3150	NA NA	3.280	....	....
RELODER22	73.5	5.13	2 SCOOPS	2.5	2933	79.4	3135	60800 PSI	3.340	....	....
H1000	79.0c	5.63	2 SCOOPS	2.8	2943	84.0c	3117	60800 PSI	3.340	....	....
IMR7828	74.0	5.36	2 SCOOPS	2.5	2937	78.8c	3110	60000 PSI	3.330	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

300 WINCHESTER MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....										
165 Grain Jacketed Bullet (Continued)										
IMR4831	67.4	4.95	2 SCOOPS	2.5	2872	73.0 3100	61000 PSI	3.330	....	....
v-N165	76.7	5.46	2 SCOOPS	2.5	3022	78.0 3080	NA NA	3.280	....	....
IMR4350	67.3	4.95	2 SCOOPS	2.2	2937	70.5 3080	59000 PSI	3.330	....	....
RELODER19	69.6	4.91	2 SCOOPS	2.2	2871	74.6 3070	60400 PSI	3.340	....	....
H4831	72.0	5.22	2 SCOOPS	2.5	2913	75.5 3055	61867 PSI	3.340	....	....
H4350	66.0	4.79	2 SCOOPS	2.2	2872	70.0 3042	61511 PSI	3.340	.9858	.9750
WIN MAG RIFLE	75.0	5.39	2 SCOOPS	2.5	2950	76.0 3010	53800 PSI	3.340	....	....
WIN 760	62.2	4.14	NA	4.0	2802	67.1 2995	60800 PSI	3.340	....	....
RELODER15	58.7	4.14	NA	4.0	2814	62.6 2980	60100 PSI	3.340	....	....
H4895	55.0	4.00	NA	4.0	2785	59.0 2977	62222 PSI	3.340	.9833	.9712
H-VARGET	54.0	3.95	NA	3.7	2757	58.5 2975	62696 PSI	3.340	.9831	.9594
H870	82.0c	5.63	2 SCOOPS	2.8	2806	87.0c 2971	60681 PSI	3.300	.9886	.9766
H414	61.0	4.03	NA	4.0	2803	65.0 2968	62696 PSI	3.340	.9859	.9784
H380	59.0	4.08	NA	4.0	2747	63.0 2909	62104 PSI	3.340	.9859	.9600
167 Grain Jacketed Bullet										
v-N165	73.5	5.23	2 SCOOPS	2.5	2808	79.9c 3031	NA NA	3.339	.9881	.9615
v-N160	69.0	5.06	2 SCOOPS	2.5	2793	74.5 2986	NA NA	3.339	.9880	.9553
168 Grain Jacketed Bullet										
A-XMR-3100	72.0	5.39	2 SCOOPS	2.5	2909	80.0c 3200	52600 CUP	3.475	....	....
A-XMR-4350	66.6	4.93	2 SCOOPS	2.2	2866	74.0 3153	50900 CUP	3.475	....	....
H1000	79.0c	5.63	2 SCOOPS	2.8	2937	84.0c 3110	60444 PSI	3.340	.9886	.9748
H4350	66.0	4.79	2 SCOOPS	2.2	2865	70.0 3034	60444 PSI	3.340	.9857	.9719
H4831	72.0	5.22	2 SCOOPS	2.5	2882	75.5 3023	60919 PSI	3.340	....	....
H414	64.0	4.23	NA	4.0	2846	68.0 3014	61274 PSI	3.340	.9859	.9680
H4895	55.0	4.00	NA	4.0	2785	59.0 2977	62696 PSI	3.340	.9833	.9750
H-VARGET	54.0	3.95	NA	3.7	2772	58.2 2964	62696 PSI	3.340	.9842	.9586
ACCUR 2700	63.7	4.36	NA	4.3	2821	67.0 2959	61900 PSI	3.475	....	....
H380	59.0	4.08	NA	4.0	2741	63.0 2903	62459 PSI	3.340	.9858	.9570
168 Grain Lead Bullet										
ACC XMP5744	26.0	1.95	DBLD	1.9	1728	35.0 2216	25000 CUP	3.315	....	....
180 Grain Winchester Fail Safe										
A-XMR-4350	58.5	4.33	NA	4.3	2620	65.0 2882	61900 PSI	3.340	....	....
RELODER22	76.0	5.30	2 SCOOPS	2.5	2870	76.0 2870	54500 PSI	3.340	....	....
RELODER19	72.3	5.10	2 SCOOPS	2.5	2850	72.3 2850	55700 PSI	3.340	....	....
A-XMR-3100	62.1	4.65	2 SCOOPS	2.2	2582	69.0 2840	60300 PSI	3.340	....	....
ACCUR 2700	58.5	4.01	NA	4.0	2544	65.0 2799	61700 PSI	3.340	....	....
ACCUR 8700	77.4	5.33	2 SCOOPS	2.5	2375	86.0c 2613	38500 PSI	3.340	....	....
180 Grain Jacketed Bullet										
RELODER 25	76.5	5.40	2 SCOOPS	2.5	2911	82.3c 3112	60600 PSI	3.340	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

300 WINCHESTER MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
					....STARTING LOADS....						
180 Grain Jacketed Bullet (Continued)											
H450	69.0	4.51	NA	4.3	2839	75.0	3064	61867 PSI	3.300	.9873	.9841
H1000	76.0	5.42	2 SCOOPS	2.5	2872	81.0c	3042	62696 PSI	3.285	....	....
RELODER22	71.8	5.01	2 SCOOPS	2.2	2834	76.9	3030	60300 PSI	3.340	....	....
IMR4064	55.2	4.11	NA	4.0	2671	62.5	2995	53800 CUP	3.340	....	....
RELODER19	66.8	4.71	2 SCOOPS	2.2	2770	72.3	2990	61000 PSI	3.340	....	....
H4831	69.0	5.00	2 SCOOPS	2.2	2828	73.0	2966	63052 PSI	3.285	....	....
WIN MAG RIFLE	69.1	4.96	2 SCOOPS	2.2	2768	74.0	2960	60300 PSI	3.200	....	....
IMR4895	52.5	3.82	NA	3.7	2632	59.5	2950	53900 CUP	3.250	....	....
IMR4831	65.4	4.81	2 SCOOPS	2.2	2766	69.7	2930	60000 PSI	3.340	....	....
IMR4350	63.6	4.68	2 SCOOPS	2.2	2766	67.8	2930	60000 PSI	3.340	....	....
IMR4320	53.5	3.83	NA	3.7	2605	60.5	2920	53700 CUP	3.250	....	....
H4350	63.0	4.57	NA	4.3	2756	67.0	2918	62933 PSI	3.285	.9858	.9668
H870	81.0	5.56	2 SCOOPS	2.5	2841	89.0c	2901	51319 PSI	3.285	....	....
IMR3031	51.8	3.94	NA	3.7	2585	58.5	2900	53700 CUP	3.250	....	....
A-XMR-3100	64.8	4.85	2 SCOOPS	2.2	2634	72.0	2899	58300 PSI	3.450	....	....
v-N165	70.7	5.03	2 SCOOPS	2.5	2659	77.6	2897	NA NA	3.339	....	....
A-XMR-4350	62.1	4.60	2 SCOOPS	2.2	2632	69.0	2894	62200 PSI	3.450	....	....
IMR7828	74.5	5.40	2 SCOOPS	2.5	2880	74.5	2880	56000 PSI	3.340	....	....
ACCUR 2700	62.7	4.29	NA	4.0	2745	66.0	2879	62800 PSI	3.450	....	....
v-N160	65.3	4.79	2 SCOOPS	2.2	2607	72.5	2867	NA NA	3.339	....	....
H414	58.0	3.83	NA	3.7	2686	62.0	2845	61985 PSI	3.285	.9858	.9798
ACCUR 8700	77.4	5.33	2 SCOOPS	2.5	2557	86.0c	2813	45100 PSI	3.450	....	....
IMR4198	41.4	3.28	DBLD	3.1	2399	47.0	2690	54000 CUP	3.250	....	....
185 Grain Jacketed Bullet											
v-N165	64.0	4.56	NA	4.3	2539	75.8	2959	NA NA	3.307	....	....
v-N560	63.7	4.40	NA	4.3	2609	72.7	2927	NA NA	3.307	....	....
v-N170	69.5	4.96	2 SCOOPS	2.2	2517	80.6c	2877	NA NA	3.307	....	....
190 Grain Jacketed Bullet											
H1000	76.0	5.42	2 SCOOPS	2.5	2824	81.0c	2990	62578 PSI	3.340	....	....
H450	70.0	4.57	NA	4.3	2840	73.0	2950	62815 PSI	3.300	....	....
v-N560	66.4	4.58	2 SCOOPS	2.2	2637	74.7	2930	NA NA	3.339	....	....
H870	80.0	5.49	2 SCOOPS	2.5	2788	89.0c	2929	49304 PSI	3.340	....	....
H4831	69.0	5.00	2 SCOOPS	2.2	2786	73.0	2923	63526 PSI	3.340	....	....
WIN MAG RIFLE	70.0	5.03	2 SCOOPS	2.5	2784	74.0	2920	59500 PSI	3.200	....	....
A-XMR-3100	66.6	4.98	2 SCOOPS	2.2	2639	74.0	2904	49800 PSI	3.450	....	....
A-XMR-4350	61.6	4.56	NA	4.3	2634	68.5	2898	50900 PSI	3.450	....	....
v-N165	68.7	4.89	2 SCOOPS	2.2	2614	76.7	2876	NA NA	3.339	....	....
H4350	63.0	4.57	NA	4.3	2704	67.0	2863	63289 PSI	3.340	.9857	.9665

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c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

300 WINCHESTER MAGNUM (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
190 Grain Jacketed Bullet (Continued)											
ACCUR 8700	77.4	5.33	2 SCOOPS	2.5	2557	86.0c	2813	49300 PSI	3.450	....	....
v-N170	67.1	4.79	2 SCOOPS	2.2	2481	77.3	2808	NA NA	3.339	....	....
ACCUR 2700	60.3	4.13	NA	4.0	2649	63.5	2778	60600 PSI	3.450	....	....
200 Grain Jacketed Bullet											
IMR7828	62.7	4.55	NA	4.3	2585	71.0	2900	53800 CUP	3.340	....	....
H450	66.0	4.31	NA	4.3	2682	72.0	2895	61511 PSI	3.300	.9874	.9743
H1000	74.0	5.28	2 SCOOPS	2.5	2723	79.0c	2883	62578 PSI	3.340	.9886	.9707
RELODER22	68.6	4.78	2 SCOOPS	2.2	2689	73.4	2875	60300 PSI	3.300	....	....
RELODER 25	75.1	5.31	2 SCOOPS	2.5	2722	78.0	2828	58500 PSI	3.308	....	....
H4831	67.0	4.86	2 SCOOPS	2.2	2642	72.0	2825	62933 PSI	3.340	.9867	.9759
RELODER19	63.5	4.48	NA	4.3	2629	68.0	2810	60300 PSI	3.340	....	....
A-XMR-3100	64.8	4.85	2 SCOOPS	2.2	2538	72.0	2793	48200 CUP	3.340	....	....
v-N560	60.2	4.15	NA	4.0	2427	70.2	2774	NA NA	3.339	....	....
A-XMR-4350	59.4	4.40	NA	4.3	2512	66.0	2764	49000 CUP	3.340	....	....
H4350	63.0	4.57	NA	4.3	2625	66.0	2753	61274 PSI	3.340	....	....
v-N165	63.3	4.51	NA	4.3	2432	73.1	2753	NA NA	3.339	....	....
WIN MAG RIFLE	65.9	4.73	2 SCOOPS	2.2	2622	69.0	2750	59000 PSI	3.200	....	....
v-N160	61.4	4.51	NA	4.3	2426	69.8	2720	NA NA	3.339	....	....
ACCUR 2700	58.9	4.03	NA	4.0	2571	62.0	2697	61800 PSI	3.340	....	....
v-N170	61.6	4.39	NA	4.3	2291	73.9	2694	NA NA	3.339	....	....
H870	85.0c	5.83	2 SCOOPS	2.8	2676	85.0c	2676	46104 PSI	3.340	....	....
ACCUR 8700	77.4	5.33	2 SCOOPS	2.5	2358	86.0c	2595	36400 CUP	3.340	....	....
200 Grain Barnes X Bullet											
RELODER 25	69.3	4.90	2 SCOOPS	2.2	2629	75.2	2837	61100 PSI	3.350	....	....
220 Grain Jacketed Bullet											
IMR7828	62.8	4.55	NA	4.3	2500	70.0	2750	53000 CUP	3.340	....	....
H1000	73.0	5.20	2 SCOOPS	2.5	2597	78.0	2750	61630 PSI	3.340	.9887	.9693
IMR4831	62.6	4.60	2 SCOOPS	2.2	2458	70.0	2730	53100 CUP	3.340	....	....
ACCUR 8700	77.4	5.33	2 SCOOPS	2.5	2449	86.0c	2694	53300 PSI	3.300	....	....
IMR4350	58.4	4.29	NA	4.0	2399	66.0	2690	53700 CUP	3.340	....	....
H4831	66.0	4.78	2 SCOOPS	2.2	2511	71.0	2685	62933 PSI	3.340	.9866	.9669
H870	86.0c	5.90	2 SCOOPS	2.8	2681	86.0c	2681	51081 PSI	3.340	....	....
WIN MAG RIFLE	64.2	4.61	2 SCOOPS	2.2	2517	68.2	2665	59800 PSI	3.200	....	....
H4350	61.0	4.42	NA	4.3	2476	65.0	2622	61985 PSI	3.340	.9856	.9689
A-XMR-4350	58.5	4.33	NA	4.3	2363	65.0	2600	61600 PSI	3.300	....	....
IMR4064	51.6	3.84	NA	3.7	2341	57.5	2575	53000 CUP	3.340	....	....
A-XMR-3100	60.3	4.51	NA	4.3	2327	67.0	2560	59800 PSI	3.300	....	....
v-N560	51.7	3.57	NA	3.4	2141	62.8	2543	NA NA	3.339	....	....

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c = Compressed charge
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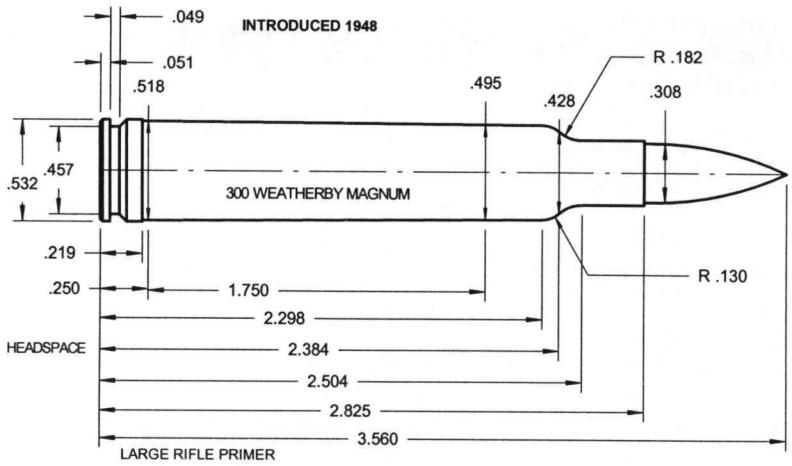
300 WINCHESTER MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
220 Grain Jacketed Bullet (Continued)											
IMR4895	47.5	3.46	NA	3.4	2273	53.5	2525	53500 CUP	3.340	....	....
IMR4320	48.2	3.45	NA	3.4	2269	54.0	2520	53200 CUP	3.340	....	....
IMR3031	46.2	3.52	NA	3.4	2234	52.5	2505	54000 CUP	3.340	....	....
v-N165	49.4	3.52	NA	3.4	2010	64.4	2503	NA NA	3.339	....	....
v-N170	55.6	3.97	NA	3.7	2163	65.7	2496	NA NA	3.339	....	....
ACCUR 2700	56.5	3.87	NA	3.7	2331	59.5	2445	56800 PSI	3.300	....	....
IMR4198	39.0	3.09	DBLD	2.8	2099	43.5	2310	53000 CUP	3.340	....	....
225 Grain Jacketed Bullet											
H4350	63.0	4.57	NA	4.3	2568	66.0	2694	64000 PSI	3.300	....	....
H4831	66.0	4.78	2 SCOOPS	2.2	2495	72.0	2693	62341 PSI	3.300	.9873	.9711
240 Grain Jacketed Bullet											
A-XMR-3100	62.5	4.67	2 SCOOPS	2.2	2379	69.5	2617	54100 CUP	3.145	....	....
ACCUR 8700	75.6	5.20	2 SCOOPS	2.5	2338	84.0c	2572	40500 CUP	3.145	....	....
A-XMR-4350	57.6	4.26	NA	4.0	2334	64.0	2567	53700 CUP	3.145	....	....
250 Grain Jacketed Bullet											
H870	82.0c	5.63	2 SCOOPS	2.8	2486	82.0c	2486	51437 PSI	3.340	....	....
H1000	65.0	4.63	2 SCOOPS	2.2	2324	70.0	2484	62459 PSI	3.340	.9868	.9815
H4350	61.0	4.42	NA	4.3	2346	64.0	2460	60207 PSI	3.300	....	....
H4831	60.0	4.35	NA	4.3	2299	64.0	2434	62578 PSI	3.340	.9857	.9795

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2 SCOOPS = Use TWO dippers of powder in each round.

300 WEATHERBY MAGNUM



Useful case capacity 6.40 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
110 Grain Jacketed Bullet											
H4895	70.0	5.10	2 SCOOPS	2.5	3506	76.0	3829	64410 PSI	3.390	.9854	.9575
H414	75.5	4.99	2 SCOOPS	2.2	3593	82.0	3787	61219 PSI	3.390	.9920	.9845
H4350	81.0	5.87	2 SCOOPS	2.8	3540	85.0	3779	62401 PSI	3.390	....	....
H450	83.0	5.42	2 SCOOPS	2.5	3562	90.0	3753	60037 PSI	3.390	.9926	.9752
H380	71.5	4.94	2 SCOOPS	2.2	3592	78.0	3752	60510 PSI	3.390	.9933	.9863
H4831	85.0	6.16	2 SCOOPS	2.8	3429	92.0c	3720	56965 PSI	3.390	....	....
125 Grain Jacketed Bullet											
A-XMR-4350	75.4	5.58	2 SCOOPS	2.5	3342	83.0	3642	63000 PSI	3.560	....	....
v-N160	80.3	5.89	2 SCOOPS	2.8	3179	88.8c	3612	NA NA	3.543	....	....
H4350	77.0	5.58	2 SCOOPS	2.5	3318	82.5	3547	62874 PSI	3.475	.9880	.9751
H4831	84.0	6.09	2 SCOOPS	2.8	3298	90.0c	3527	62756 PSI	3.475	....	....
H414	73.0	4.83	2 SCOOPS	2.2	3291	78.5	3518	63701 PSI	3.475	.9880	.9739
H-VARGET	65.0	4.75	2 SCOOPS	2.2	3386	69.0	3492	63465 PSI	3.475	.9923	.9798
H380	70.0	4.84	2 SCOOPS	2.2	3206	75.5	3428	62992 PSI	3.475	.9879	.9770
A-XMR-3100	76.5	5.72	2 SCOOPS	2.8	2985	85.0	3392	45500 PSI	3.560	....	....
H1000	90.0c	6.42	2 SCOOPS	3.1	2980	94.0c	3277	51528 PSI	3.475	....	....
ACCUR 8700	83.7	5.76	2 SCOOPS	2.8	2600	93.0	2954	33700 PSI	3.560	....	....
130 Grain Jacketed Bullet											
H4831	84.0	6.09	2 SCOOPS	2.8	3332	89.0c	3590	61928 PSI	3.390	....	....
H4350	78.0	5.66	2 SCOOPS	2.8	3394	81.0	3545	62756 PSI	3.390	....	....
H450	80.0	5.22	2 SCOOPS	2.5	3237	87.0	3536	61928 PSI	3.390	.9874	.9628

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300 WEATHERBY MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
130 Grain Jacketed Bullet (Continued)											
H414	73.0	4.83	2 SCOOPS	2.2	3244	79.0	3509	62401 PSI	3.390	.9870	.9755
H380	69.0	4.77	2 SCOOPS	2.2	3355	75.0	3501	62992 PSI	3.390	.9929	.9834
H4895	65.5	4.77	2 SCOOPS	2.2	3277	71.0	3478	64410 PSI	3.390	.9893	.9586
150 Grain Jacketed Bullet											
RELODER22	79.9	5.57	2 SCOOPS	2.5	3175	88.0	3460	53300 PSI	3.540	....	....
IMR7828	86.3	6.26	2 SCOOPS	3.1	3328	89.0c	3425	49900 CUP	3.560	....	....
RELODER19	76.1	5.37	2 SCOOPS	2.5	3127	82.5	3375	52500 PSI	3.540	....	....
H450	77.5	5.06	2 SCOOPS	2.5	3128	84.0	3350	62165 PSI	3.390	.9896	.9822
A-XMR-4350	71.1	5.26	2 SCOOPS	2.5	3030	79.0	3333	63600 PSI	3.535	....	....
A-XMR-3100	76.5	5.72	2 SCOOPS	2.8	2915	85.0	3313	57800 PSI	3.535	....	....
v-N165	82.0	5.84	2 SCOOPS	2.8	2967	90.8c	3301	NA	NA	3.547	....	....
v-N160	75.7	5.56	2 SCOOPS	2.5	2963	83.6	3281	NA	NA	3.547	....	....
RELODER15	63.7	4.50	NA	4.3	3016	69.5	3255	52800 PSI	3.540	....	....
ACCUR 8700	83.7	5.76	2 SCOOPS	2.8	2596	93.0	2950	43700 PSI	3.535	....	....
150 Grain Barnes X Bullet											
A-XMR-3100	80.5	6.02	2 SCOOPS	2.8	3154	85.0	3308	60400 PSI	3.560	....	....
A-XMR-4350	70.8	5.24	2 SCOOPS	2.5	3022	78.0	3293	63000 PSI	3.560	....	....
H1000	82.0	5.85	2 SCOOPS	2.8	3053	88.0	3264	63228 PSI	3.560	.9888	.9737
H4831	74.0	5.36	2 SCOOPS	2.5	2991	79.0	3168	63228 PSI	3.560	.9886	.9757
H4350	68.0	4.93	2 SCOOPS	2.2	2980	72.5	3156	63583 PSI	3.560	.9874	.9695
H-VARGET	59.0	4.31	NA	4.3	2977	63.0	3142	64174 PSI	3.560	.9867	.9686
H414	65.0	4.30	NA	4.0	2927	69.0	3099	63583 PSI	3.560	.9858	.9764
H4895	58.0	4.22	NA	4.0	2898	62.3	3098	63110 PSI	3.560	.9844	.9703
H380	63.0	4.35	NA	4.3	2841	67.0	3009	63819 PSI	3.560	.9856	.9824
ACCUR 8700	83.7	5.76	2 SCOOPS	2.8	2575	93.0	2926	44900 PSI	3.560	....	....
165 Grain Jacketed Bullet											
RELODER22	85.0	5.92	2 SCOOPS	2.8	3305	85.0	3305	53400 PSI	3.510	....	....
RELODER19	73.2	5.17	2 SCOOPS	2.5	2982	80.5	3250	53200 PSI	3.510	....	....
RELODER 25	88.0	6.22	2 SCOOPS	3.1	3183	90.0	3245	58500 PSI	3.510	....	....
A-XMR-3100	80.5	6.02	2 SCOOPS	2.8	3075	85.0	3225	60400 PSI	3.560	....	....
H1000	84.0	5.99	2 SCOOPS	2.8	3037	89.7	3216	64056 PSI	3.560	.9901	.9701
v-N165	80.9	5.76	2 SCOOPS	2.8	2823	89.6	3215	NA	NA	3.555	....	....
v-N160	74.8	5.49	2 SCOOPS	2.5	2818	82.9	3192	NA	NA	3.555	....	....
A-XMR-4350	72.0	5.33	2 SCOOPS	2.5	2960	77.0	3164	61200 PSI	3.560	....	....
H4831	75.0	5.44	2 SCOOPS	2.5	2940	80.2	3113	63819 PSI	3.560	.9891	.9712
H4350	69.0	5.00	2 SCOOPS	2.2	2875	74.0	3074	63938 PSI	3.560	.9867	.9655
RELODER15	59.6	4.21	NA	4.0	2835	65.0	3060	52800 PSI	3.510	....	....
H414	65.0	4.30	NA	4.0	2838	70.0	3034	63465 PSI	3.560	.9868	.9786

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300 WEATHERBY MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
165 Grain Jacketed Bullet (Continued)											
H4895	58.0	4.22	NA	4.0	2833	62.5	3028	64056 PSI	3.560	.9854	.9734
VEC TU8000	83.3	5.87	2 SCOOPS	2.8	2985	83.3	2985	39913 CIP	3.500	....	....
H380	63.0	4.35	NA	4.3	2760	67.5	2950	63465 PSI	3.560	.9854	.9676
ACCUR 8700	83.7	5.76	2 SCOOPS	2.8	2521	93.0	2865	43000 PSI	3.560	....	....
165 Grain Barnes X Bullet											
A-XMR-3100	76.3	5.71	2 SCOOPS	2.8	2939	85.0	3233	63700 PSI	3.555	....	....
RELODER 25	82.5	5.83	2 SCOOPS	2.8	3028	87.0	3176	60300 PSI	3.510	....	....
A-XMR-4350	69.6	5.15	2 SCOOPS	2.5	2910	76.5	3171	62900 PSI	3.555	....	....
ACCUR 8700	94.0c	6.47	2 SCOOPS	3.1	2860	94.0c	2860	44500 PSI	3.555	....	....
180 Grain Winchester Fail Safe											
H1000	78.0	5.56	2 SCOOPS	2.5	2938	83.0	3111	64528 PSI	3.560	.9887	.9738
A-XMR-4350	67.0	4.96	2 SCOOPS	2.2	2669	74.5	3034	60200 PSI	3.550	....	....
A-XMR-3100	72.0	5.39	2 SCOOPS	2.5	2666	80.0	3030	60400 PSI	3.550	....	....
H4831	74.0	5.36	2 SCOOPS	2.5	2845	79.0	3013	64528 PSI	3.560	.9887	.9833
H4350	67.0	4.86	2 SCOOPS	2.2	2782	72.0	2974	64528 PSI	3.560	.9867	.9684
ACCUR 8700	84.6	5.82	2 SCOOPS	2.8	2485	94.0c	2824	45100 PSI	3.550	....	....
180 Grain Jacketed Bullet											
IMR7828	79.3	5.75	2 SCOOPS	2.8	3002	86.0	3240	52500 CUP	3.560	....	....
RELODER 25	70.4	4.98	2 SCOOPS	2.2	2621	88.5	3172	60800 PSI	3.560	....	....
H1000	83.0	5.92	2 SCOOPS	2.8	2971	88.5	3151	63228 PSI	3.560	.9893	.9643
A-XMR-3100	72.9	5.46	2 SCOOPS	2.5	2824	82.0	3137	64300 PSI	3.560	....	....
v-N165	78.6	5.60	2 SCOOPS	2.5	2756	86.7	3081	NA	NA	3.555	....	....
RELODER19	69.3	4.90	2 SCOOPS	2.2	2817	76.5	3070	53400 PSI	3.530	....	....
A-XMR-4350	67.5	5.00	2 SCOOPS	2.2	2807	74.5	3059	63100 PSI	3.560	....	....
v-N160	72.7	5.34	2 SCOOPS	2.5	2735	80.0	3038	NA	NA	3.555	....	....
H450	70.0	4.57	NA	4.3	2714	76.0	2988	64174 PSI	3.390	.9840	.9511
H414	67.0	4.43	NA	4.3	2818	71.5	2984	62638 PSI	3.560	.9875	.9671
H870	92.0	6.31	2 SCOOPS	3.1	2949	92.0	2949	55665 PSI	3.390	....	....
H380	62.0	4.28	NA	4.0	2709	67.0	2896	63819 PSI	3.560	.9866	.9642
VEC TU8000	81.8	5.76	2 SCOOPS	2.8	2838	81.8	2838	40639 CIP	3.500	....	....
ACCUR 8700	83.7	5.76	2 SCOOPS	2.8	2495	93.0	2835	45200 PSI	3.560	....	....
180 Grain Barnes X Bullet											
A-XMR-3100	73.3	5.48	2 SCOOPS	2.5	2802	83.0	3142	64800 PSI	3.560	....	....
A-XMR-4350	68.0	5.03	2 SCOOPS	2.5	2809	73.5	3003	61800 PSI	3.560	....	....
ACCUR 8700	84.6	5.82	2 SCOOPS	2.8	2520	94.0c	2864	48900 PSI	3.560	....	....
190 Grain Jacketed Bullet											
H1000	81.0	5.78	2 SCOOPS	2.8	2848	86.0	3052	62756 PSI	3.390	.9863	.9734
H870	90.1	6.18	2 SCOOPS	2.8	2982	92.0	3040	58383 PSI	3.390	....	....

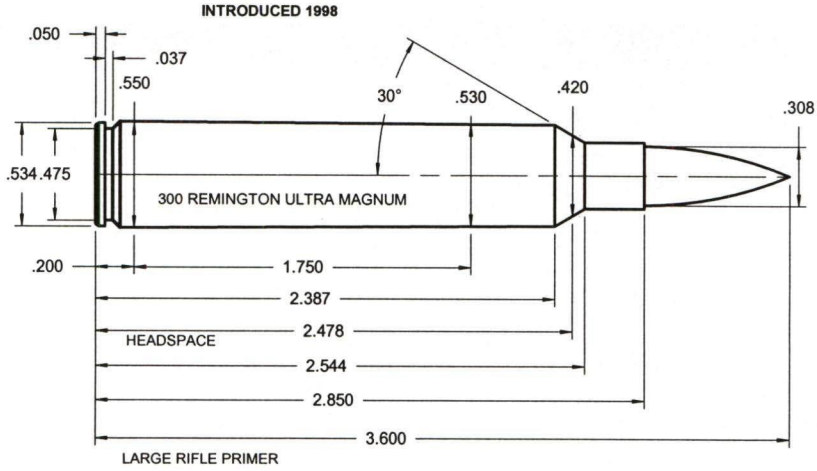
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300 WEATHERBY MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
....STARTING LOADS....											
190 Grain Jacketed Bullet (Continued)											
H4831	74.0	5.36	2 SCOOPS	2.5	2792	78.0	2924	62519 PSI	3.390	....	....
H450	72.0	4.70	2 SCOOPS	2.2	2711	74.0	2860	60510 PSI	3.390	....	....
200 Grain Jacketed Bullet											
H870	88.5	6.07	2 SCOOPS	2.8	2978	92.0	3094	59447 PSI	3.390	....	....
IMR7828	79.4	5.76	2 SCOOPS	2.8	2950	83.0	3065	50600 CUP	3.560	....	....
A-XMR-3100	71.7	5.36	2 SCOOPS	2.5	2715	80.0	2987	63800 PSI	3.555	....	....
RELODER22	71.2	4.96	2 SCOOPS	2.2	2726	78.0	2970	53000 PSI	3.550	....	....
H1000	79.0	5.63	2 SCOOPS	2.8	2771	85.0	2963	63110 PSI	3.510	.9890	.9653
v-N560	72.6	5.01	2 SCOOPS	2.2	2694	79.8	2961	NA NA	3.555	....	....
RELODER19	67.2	4.74	2 SCOOPS	2.2	2711	74.0	2955	53300 PSI	3.550	....	....
A-XMR-4350	64.2	4.75	2 SCOOPS	2.2	2624	73.0	2942	65000 PSI	3.555	....	....
RELODER 25	67.5	4.77	2 SCOOPS	2.2	2452	83.2	2940	59700 PSI	3.560	....	....
v-N170	70.0	4.99	2 SCOOPS	2.2	2566	85.0	2920	NA NA	3.555	....	....
v-N165	70.7	5.03	2 SCOOPS	2.5	2612	80.8	2914	NA NA	3.555	....	....
H4831	72.0	5.22	2 SCOOPS	2.5	2684	77.5	2869	62519 PSI	3.510	.9879	.9698
H4350	66.0	4.79	2 SCOOPS	2.2	2681	71.0	2866	64174 PSI	3.510	.9868	.9665
ACCUR 8700	93.0	6.40	2 SCOOPS	3.1	2787	93.0	2787	47500 PSI	3.555	....	....
VEC TU8000	80.2	5.65	2 SCOOPS	2.8	2756	80.2	2756	42090 CIP	3.500	....	....
H450	64.5	4.21	NA	4.0	2512	70.0	2744	62519 PSI	3.390	.9840	.9487
220 Grain Jacketed Bullet											
IMR7828	74.8	5.42	2 SCOOPS	2.5	2724	81.0	2940	52400 CUP	3.560	....	....
H1000	77.0	5.49	2 SCOOPS	2.5	2650	82.5	2833	63110 PSI	3.565	.9879	.9698
A-XMR-3100	68.9	5.16	2 SCOOPS	2.5	2554	77.0	2810	63900 PSI	3.530	....	....
RELODER 25	65.0	4.59	2 SCOOPS	2.2	2322	81.6	2809	60800 PSI	3.535	....	....
H4831	71.0	5.15	2 SCOOPS	2.5	2612	75.7	2766	64410 PSI	3.565	.9878	.9699
ACCUR 8700	83.7	5.76	2 SCOOPS	2.8	2430	93.0	2761	49700 PSI	3.530	....	....
H4350	66.0	4.79	2 SCOOPS	2.2	2573	70.0	2725	63583 PSI	3.565	.9856	.9611
A-XMR-4350	63.1	4.67	2 SCOOPS	2.2	2505	69.0	2703	62500 PSI	3.530	....	....
225 Grain Jacketed Bullet											
H870	84.7	5.81	2 SCOOPS	2.8	2786	92.0	3008	62165 PSI	3.390	....	....
H1000	74.0	5.28	2 SCOOPS	2.5	2661	80.0	2717	62165 PSI	3.390	.9964	.9835
H4831	70.0	5.07	2 SCOOPS	2.5	2586	74.0	2707	61456 PSI	3.390	....	....
250 Grain Jacketed Bullet											
H1000	71.0	5.06	2 SCOOPS	2.5	2426	77.0	2571	63819 PSI	3.390	.9903	.9806
H4831	67.0	4.86	2 SCOOPS	2.2	2331	71.0	2507	61692 PSI	3.390	....	....

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300 REMINGTON ULTRA MAGNUM



INCLUDES LIGHT XMP5744 LOADS

Useful case capacity 7.16 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
125 Grain Jacketed Bullet									
A-XMR-4350	87.9	6.51	2 SCOOPS	3.1	3514	95.0	3757	61800 PSI	3.600
A-XMR-3100	91.9	6.88	2 SCOOPS	3.4	3479	98.5c	3719	61300 PSI	3.600
A-XMR-4064	76.8	5.80	2 SCOOPS	2.8	3421	83.0	3657	61800 PSI	3.600
ACCUR 2700	76.8	5.26	2 SCOOPS	2.5	3397	83.0	3633	61800 PSI	3.600
ACC XMP5744	61.1	4.59	2 SCOOPS	2.2	3284	67.0	3578	62700 PSI	3.600
ACCUR 8700	115.5c	7.95	2 SCOOPS	3.7	3445	115.5c	3445	52400 PSI	3.600
ACC XMP5744	45.0	3.38	NA	3.1	2660	45.0	2660	28400 PSI	3.600
150 Grain Jacketed Bullet									
RELODER22	84.4	5.88	2 SCOOPS	2.8	3127	94.0	3440	63700 PSI	3.570
150 Grain Barnes X Bullet									
ACCUR 8700	106.9c	7.35	2 SCOOPS	3.4	3263	114.0c	3456	61000 PSI	3.600
A-XMR-4350	79.7	5.90	2 SCOOPS	2.8	3205	85.0	3394	61000 PSI	3.600
A-XMR-3100	86.4	6.47	2 SCOOPS	3.1	3284	89.0	3380	58900 PSI	3.600
A-XMR-4064	69.3	5.23	2 SCOOPS	2.5	3076	74.0	3258	61100 PSI	3.600
ACCUR 2700	71.0	4.86	2 SCOOPS	2.2	3098	75.0	3250	60400 PSI	3.600
ACC XMP5744	56.8	4.27	NA	4.0	2979	62.0	3216	62400 PSI	3.600
ACC XMP5744	40.0	3.01	DBLD	2.8	2340	40.0	2340	29000 PSI	3.600
165 Grain Jacketed Bullet									
ACC MAG PRO	86.9	5.76	2 SCOOPS	2.8	3115	96.5	3402	63700 PSI	3.600
RELODER 25	88.3	6.24	2 SCOOPS	3.1	3090	98.0	3400	63500 PSI	3.590
ACCUR 8700	106.5c	7.33	2 SCOOPS	3.4	3181	113.0c	3369	60700 PSI	3.550

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300 REMINGTON ULTRA MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
165 Grain Jacketed Bullet (Continued)									
RELODER22	87.0	6.06	2 SCOOPS	2.8	3105	93.5	3320	61500 PSI	3.500
A-XMR-3100	82.0	6.13	2 SCOOPS	2.8	3076	88.0	3288	61400 PSI	3.550
IMR7828	86.9	6.30	2 SCOOPS	3.1	3108	91.2	3260	60000 PSI	3.550
IMR4350	76.6	5.63	2 SCOOPS	2.8	3011	83.0	3250	62000 PSI	3.550
IMR4831	78.9	5.80	2 SCOOPS	2.8	3002	85.5	3240	62000 PSI	3.550
A-XMR-4350	73.8	5.46	2 SCOOPS	2.5	2992	80.5	3230	62400 PSI	3.550
ACCUR 2700	66.7	4.57	NA	4.3	2902	72.0	3102	61700 PSI	3.550
A-XMR-4064	66.3	5.00	2 SCOOPS	2.2	2886	71.0	3085	61300 PSI	3.550
ACC XMP5744	57.3	4.31	NA	4.3	2891	60.0	3044	58600 PSI	3.550
ACC XMP5744	38.0	2.86	DBLD	2.8	2184	38.0	2184	27100 PSI	3.550
165 Grain Lead Bullet									
ACC XMP5744	25.0	1.88	DBLD	1.6	1636	35.0	2090	21900 PSI	3.380
165 Grain Barnes X Bullet									
IMR7828	83.5	6.05	2 SCOOPS	2.8	3022	89.0	3200	61000 PSI	3.600
IMR4350	76.6	5.63	2 SCOOPS	2.8	2993	81.7	3170	61000 PSI	3.600
IMR4831	77.4	5.69	2 SCOOPS	2.8	2974	82.5	3150	61000 PSI	3.600
168 Grain Jacketed Bullet									
A-XMR-3100	83.8	6.27	2 SCOOPS	3.1	3081	91.0	3326	62100 PSI	3.600
ACCUR 8700	112.0c	7.71	2 SCOOPS	3.7	3297	112.0c	3297	55400 PSI	3.600
A-XMR-4350	76.3	5.64	2 SCOOPS	2.8	3007	84.0	3277	63000 PSI	3.600
A-XMR-4064	69.4	5.24	2 SCOOPS	2.5	2896	76.0	3156	62600 PSI	3.600
ACCUR 2700	68.4	4.68	2 SCOOPS	2.2	2891	74.0	3121	61900 PSI	3.600
ACC XMP5744	57.4	4.31	NA	4.3	2901	61.0	3072	60800 PSI	3.600
ACC XMP5744	38.0	2.86	DBLD	2.8	2185	38.0	2185	26900 PSI	3.600
168 Grain Lead Bullet									
ACC XMP5744	25.0	1.88	DBLD	1.6	1540	25.0	1540	12000 PSI	3.475
180 Grain Jacketed Bullet									
RELODER 25	86.2	6.09	2 SCOOPS	2.8	2954	96.0	3250	63700 PSI	3.530
ACC MAG PRO	81.0	5.37	2 SCOOPS	2.5	2951	90.0	3193	63100 PSI	3.550
ACCUR 8700	112.0c	7.71	2 SCOOPS	3.7	3189	112.0c	3189	56100 PSI	3.550
A-XMR-3100	79.4	5.94	2 SCOOPS	2.8	2920	87.0	3182	62700 PSI	3.550
RELODER22	84.7	5.90	2 SCOOPS	2.8	2989	90.0	3165	60800 PSI	3.600
IMR7828	81.6	5.91	2 SCOOPS	2.8	2965	87.0	3140	61000 PSI	3.600
A-XMR-4350	75.3	5.57	2 SCOOPS	2.5	2934	80.0	3105	62800 PSI	3.600
IMR4350	72.9	5.36	2 SCOOPS	2.5	2844	79.0	3070	62000 PSI	3.600
IMR4831	77.6	5.70	2 SCOOPS	2.8	2927	81.4	3070	60000 PSI	3.600
ACCUR 2700	69.2	4.74	2 SCOOPS	2.2	2840	71.5	2975	62000 PSI	3.600
A-XMR-4064	64.0	4.83	2 SCOOPS	2.2	2741	68.5	2935	63600 PSI	3.600

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

300 REMINGTON ULTRA MAGNUM (Continued)

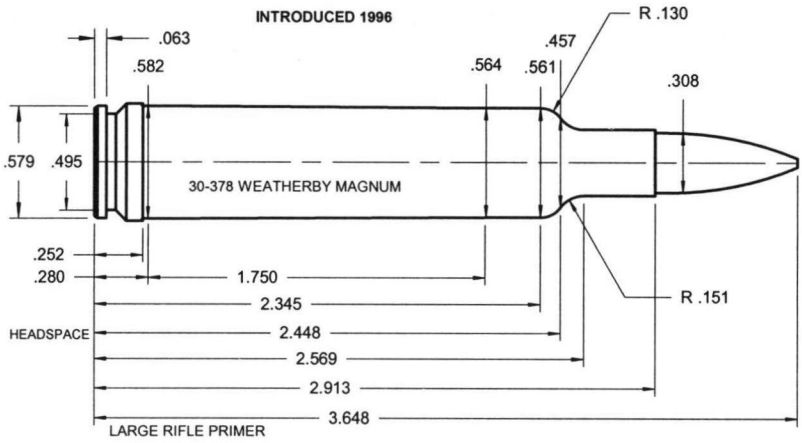
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
180 Grain Jacketed Bullet (Continued)									
ACC XMP5744	55.4	4.17	NA	4.0	2726	58.0	2882	59300 PSI	3.550
ACC XMP5744	38.0	2.86	DBLD	2.8	2111	38.0	2111	28300 PSI	3.550
180 Grain Lead Bullet									
ACC XMP5744	25.0	1.88	DBLD	1.6	1604	38.0	2161	26000 PSI	3.400
180 Grain Barnes X Bullet									
ACCUR 8700	104.3c	7.17	2 SCOOPS	3.4	3045	113.0c	3286	62000 PSI	3.600
A-XMR-3100	81.2	6.07	2 SCOOPS	2.8	2952	86.0	3126	60600 PSI	3.600
RELODER 25	81.8	5.78	2 SCOOPS	2.8	2909	87.9	3110	61500 PSI	3.600
A-XMR-4350	73.6	5.45	2 SCOOPS	2.5	2910	74.5	2938	57900 PSI	3.600
A-XMR-4064	65.3	4.93	2 SCOOPS	2.2	2706	71.0	2920	62200 PSI	3.600
ACCUR 2700	65.9	4.51	NA	4.3	2749	69.5	2883	60300 PSI	3.600
ACC XMP5744	56.1	4.22	NA	4.0	2795	58.0	2876	59100 PSI	3.600
ACC XMP5744	38.0	2.86	DBLD	2.8	2063	38.0	2063	29700 PSI	3.600
200 Grain Jacketed Bullet									
ACCUR 8700	96.9	6.66	2 SCOOPS	3.1	2862	106.0c	3119	62600 PSI	3.600
RELODER 25	86.1	6.08	2 SCOOPS	2.8	2852	91.5	3020	60800 PSI	3.550
IMR7828	80.5	5.83	2 SCOOPS	2.8	2824	85.8	2990	61000 PSI	3.600
IMR4350	72.0	5.29	2 SCOOPS	2.5	2724	78.0	2940	62000 PSI	3.600
A-XMR-3100	75.2	5.63	2 SCOOPS	2.8	2747	80.5	2937	61200 PSI	3.600
IMR4831	75.2	5.53	2 SCOOPS	2.5	2758	80.2	2920	61000 PSI	3.600
A-XMR-4350	62.4	4.61	2 SCOOPS	2.2	2535	69.0	2788	63300 PSI	3.600
ACCUR 2700	61.0	4.17	NA	4.0	2561	65.0	2713	61000 PSI	3.600
ACC XMP5744	53.9	4.05	NA	4.0	2588	56.0	2689	59400 PSI	3.600
A-XMR-4064	59.4	4.48	NA	4.3	2513	63.0	2661	60700 PSI	3.600
ACC XMP5744	38.0	2.86	DBLD	2.8	2014	38.0	2014	33100 PSI	3.600
200 Grain Barnes X Bullet									
RELODER 25	74.7	5.28	2 SCOOPS	2.5	2686	81.0	2900	62000 PSI	3.600
220 Grain Jacketed Bullet									
ACCUR 8700	100.7	6.93	2 SCOOPS	3.4	2832	106.0c	2970	60200 PSI	3.570
A-XMR-3100	74.4	5.57	2 SCOOPS	2.5	2619	83.0	2881	63800 PSI	3.570
A-XMR-4350	65.8	4.87	2 SCOOPS	2.2	2522	69.0	2645	60000 PSI	3.570
ACCUR 2700	61.3	4.20	NA	4.0	2442	67.0	2636	62500 PSI	3.570
ACC XMP5744	53.1	3.99	NA	3.7	2446	57.0	2615	61400 PSI	3.570
A-XMR-4064	59.2	4.47	NA	4.3	2375	65.0	2588	62800 PSI	3.570
ACC XMP5744	38.0	2.86	DBLD	2.8	1921	38.0	1921	31800 PSI	3.570

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c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

30-378 WEATHERBY MAGNUM

This is a wildcat cartridge, extra care should be exercised in approaching the maximum listed loads.



Useful case capacity 7.80 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL
150 Grain Jacketed Bullet								
H1000	110.0c	7.84	2 SCOOPS	3.7	3464	114.0c3598	52400 CUP	3.600
H4831	100.0	7.25	2 SCOOPS	3.4	3449	104.0 3555	53900 CUP	3.600
ACCUR 8700	114.3c	7.86	2 SCOOPS	3.7	3004	127.0c3414	64000 PSI	3.600
150 Grain Barnes X Bullet								
ACCUR 8700	113.4	7.80	2 SCOOPS	3.7	2930	126.0c3330	65000 PSI	3.745
155 Grain Jacketed Bullet								
v-N165	103.1	7.34	2 SCOOPS	3.4	3327	107.1 3517	NA	NA 3.661
v-N170	111.6c	7.96	2 SCOOPS	3.7	3297	116.4c3497	NA	NA 3.661
v-N160	94.1	6.91	2 SCOOPS	3.4	3284	98.9 3474	NA	NA 3.661
165 Grain Jacketed Bullet								
H1000	106.0	7.56	2 SCOOPS	3.7	3285	112.0c3495	55000 CUP	3.600
H870	119.0c	8.16	2 SCOOPS	4.0	3395	122.0c3470	46400 CUP	3.600
H4831	95.0	6.89	2 SCOOPS	3.4	3202	100.5 3391	53800 CUP	3.600
ACCUR 8700	111.6	7.68	2 SCOOPS	3.7	2952	124.0c3355	61800 PSI	3.615
170 Grain Jacketed Bullet								
v-N170	107.1	7.64	2 SCOOPS	3.7	3128	111.1c3297	NA	NA 3.661
v-N165	97.7	6.96	2 SCOOPS	3.4	3128	102.9 3278	NA	NA 3.661
180 Grain Jacketed Bullet								
H1000	105.0	7.49	2 SCOOPS	3.7	3213	111.0c3412	54300 CUP	3.600
H870	115.0c	7.89	2 SCOOPS	3.7	3267	118.0c3333	46700 CUP	3.600
H4831	94.0	6.81	2 SCOOPS	3.4	3134	100.0 3301	54500 CUP	3.600

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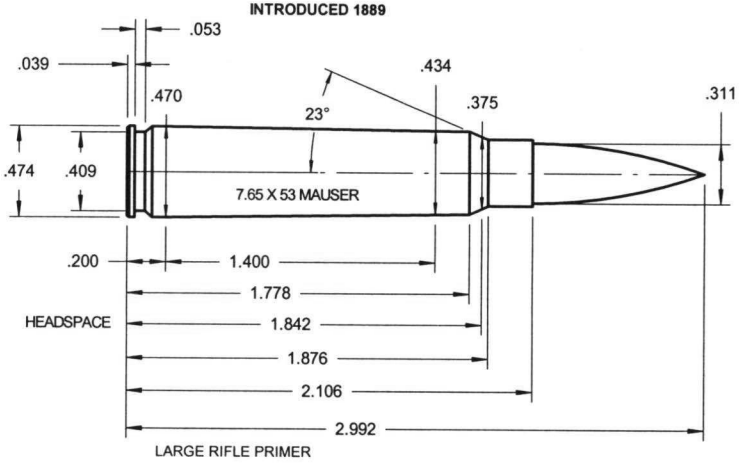
30-378 WEATHERBY MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL
180 Grain Jacketed Bullet (Continued)								
ACCUR 8700	110.2	7.58	2 SCOOPS	3.7	2881	122.5c3274	63400 PSI	3.615
H 50 BMG	116.0c	8.06	2 SCOOPS	4.0	3089	120.0c3229	47100 CUP	3.600
180 Grain Barnes X Bullet								
ACCUR 8700	106.2	7.31	2 SCOOPS	3.4	2889	118.0c3283	59300 PSI	3.895
185 Grain Jacketed Bullet								
v-N170	103.2	7.36	2 SCOOPS	3.4	3092	109.9c3301	NA NA	3.661
190 Grain Jacketed Bullet								
H870	115.0c	7.89	2 SCOOPS	3.7	3260	118.0c3351	51400 CUP	3.625
H1000	102.0	7.27	2 SCOOPS	3.4	3154	108.0 3316	54800 CUP	3.625
H 50 BMG	115.0c	7.99	2 SCOOPS	3.7	3113	120.0c3243	50900 CUP	3.625
200 Grain Jacketed Bullet								
ACCUR 8700	105.3	7.24	2 SCOOPS	3.4	2823	117.0c3208	62100 PSI	3.910
200 Grain Barnes X Bullet								
H 50 BMG	111.0	7.71	2 SCOOPS	3.7	3134	117.0c3227	54800 CUP	3.645
H870	113.0	7.75	2 SCOOPS	3.7	3105	116.0c3206	52000 CUP	3.645
220 Grain Jacketed Bullet								
H870	113.0	7.75	2 SCOOPS	3.7	3098	116.0c3180	53500 CUP	3.600
H 50 BMG	115.0c	7.99	2 SCOOPS	3.7	3047	118.5c3145	53700 CUP	3.600
H1000	99.0	7.06	2 SCOOPS	3.4	2965	104.0 3084	53700 CUP	3.600
ACCUR 8700	103.5	7.12	2 SCOOPS	3.4	2684	115.0c3050	62200 PSI	3.875
250 Grain Jacketed Bullet								
ACCUR 8700	99.9	6.87	2 SCOOPS	3.4	2600	111.0 2954	59400 PSI	3.880

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c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

7.65x53 MAUSER



Useful case capacity 3.25 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
150 Grain Jacketed Bullet										
A-XMR-2495	42.8	3.20	DBLD	3.1	2436	47.5c	2768	48800	PSI	2.850
ACCUR 2520	41.9	2.86	DBLD	2.8	2431	46.5	2763	50300	PSI	2.850
ACCUR 2230	40.5	2.66	DBLD	2.5	2411	45.0	2740	48200	PSI	2.850
ACCUR 2460	40.5	2.66	DBLD	2.5	2377	45.0	2701	48600	PSI	2.850
ACCUR 2700	46.4	3.18	DBLD	3.1	2373	51.5c	2697	46400	PSI	2.850
A-XMR-2015	37.4	2.73	DBLD	2.5	2367	41.5	2690	47900	PSI	2.850
BL-C(2)	39.5	2.55	DBLD	2.5	2455	43.0	2650	NA	NA	2.815
H414	45.0	2.97	DBLD	2.8	2453	49.0	2648	NA	NA	2.815
H335	39.0	2.52	DBLD	2.5	2422	43.0	2639	NA	NA	2.815
H4350	45.0c	3.26	DBLD	3.1	2422	49.0c	2614	NA	NA	2.815
H4895	39.5	2.88	DBLD	2.8	2406	43.0	2597	NA	NA	2.815
H380	42.5	2.94	DBLD	2.8	2395	46.0	2585	NA	NA	2.815
152 Grain Lead Bullet										
ACCUR 2700	39.6	2.71	DBLD	2.5	2119	44.0	2408	35000	PSI	2.730
A-XMR-2495	37.8	2.83	DBLD	2.8	2030	42.0	2307	25700	PSI	2.730
A-XMR-4350	42.3	3.13	DBLD	3.1	1950	47.0c	2216	23500	PSI	2.730
A-XMR-3100	43.2	3.23	DBLD	3.1	1786	48.0c	2029	18200	PSI	2.730
ACCUR 8700	47.3c	3.25	DBLD	3.1	1537	52.5c	1747	17100	PSI	2.730
174 Grain Jacketed Bullet										
H4831	46.6c	3.38	NA	3.1	2191	53.0c	2456	NA	NA	2.850
H4350	43.0	3.12	DBLD	3.1	2252	47.0c	2454	NA	NA	2.850

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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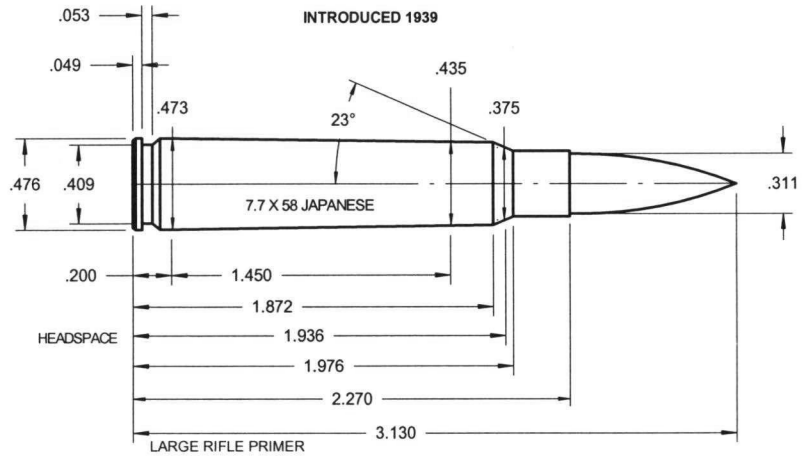
7.65x53 MAUSER (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
174 Grain Jacketed Bullet (Continued)										
H414	43.0	2.84	DBLD	2.8	2250	47.0	2452	NA	NA	2.850
H380	41.5	2.87	DBLD	2.8	2267	45.0	2447	NA	NA	2.850
BL-C(2)	37.0	2.39	DBLD	2.2	2221	40.0	2375	NA	NA	2.850
H335	37.0	2.39	DBLD	2.2	2219	40.0	2372	NA	NA	2.850
H4895	37.0	2.69	DBLD	2.5	2200	40.0	2351	NA	NA	2.850
180 Grain Jacketed Bullet										
ACCUR 2520	40.5	2.76	DBLD	2.5	2262	45.0	2570	51100	PSI	2.850
A-XMR-2495	41.4	3.10	DBLD	2.8	2237	46.0c	2542	47500	PSI	2.850
ACCUR 2460	38.7	2.54	DBLD	2.5	2217	43.0	2519	49700	PSI	2.850
ACCUR 2230	38.3	2.52	DBLD	2.5	2203	42.5	2503	49300	PSI	2.850
A-XMR-2015	36.0	2.63	DBLD	2.5	2172	40.0	2468	48700	PSI	2.850
ACCUR 2700	43.2	2.96	DBLD	2.8	2167	48.0c	2463	45100	PSI	2.850

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7.7mm JAPANESE ARISAKA



Useful case capacity 3.47 cc

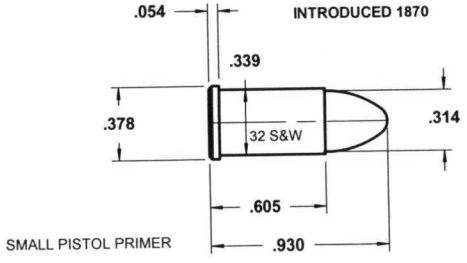
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
150 Grain Jacketed Bullet										
ACCUR 2700	48.5	3.32	NA	3.1	2602	51.0c	2768	46400	PSI	3.175
A-XMR-4350	46.8	3.46	NA	3.4	2346	52.0c	2666	39500	PSI	3.175
H4895	41.0	2.98	DBLD	2.8	2337	44.0	2529	NA	NA	3.050
H4350	48.0c	3.48	NA	3.4	2330	51.0c	2514	NA	NA	3.050
H335	41.0	2.64	DBLD	2.5	2309	44.0	2499	NA	NA	3.050
BL-C(2)	41.0	2.64	DBLD	2.5	2289	44.0	2487	NA	NA	3.050
H380	44.0	3.04	DBLD	2.8	2169	47.0	2461	NA	NA	3.050
H4831	50.0c	3.62	NA	3.4	2180	55.0c	2445	NA	NA	3.050
H414	45.0	2.97	DBLD	2.8	2155	48.0	2424	NA	NA	3.050
A-XMR-3100	46.8c	3.50	NA	3.4	2132	52.0c	2423	31000	PSI	3.175
180 Grain Jacketed Bullet										
A-XMR-4350	46.8	3.46	NA	3.4	2240	52.0c	2545	42300	PSI	3.150
ACCUR 2700	44.2	3.03	DBLD	2.8	2318	46.5	2466	45700	PSI	3.150
H4350	44.0	3.19	DBLD	3.1	2090	47.0	2309	NA	NA	3.150
A-XMR-3100	46.8c	3.50	NA	3.4	2024	52.0c	2300	31900	PSI	3.150
H380	42.0	2.90	DBLD	2.8	2090	45.0	2257	NA	NA	3.150
H414	43.0	2.84	DBLD	2.8	2070	46.0	2234	NA	NA	3.150
H4831	46.0	3.33	NA	3.1	2011	50.0c	2233	NA	NA	3.150
H4895	37.0	2.69	DBLD	2.5	2060	40.0	2230	NA	NA	3.150
H335	37.0	2.39	DBLD	2.2	2077	40.0	2202	NA	NA	3.150
BL-C(2)	37.0	2.39	DBLD	2.2	2054	40.0	2191	NA	NA	3.150

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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32 SMITH & WESSON



Useful case capacity 0.40 cc

....STARTING LOADS....

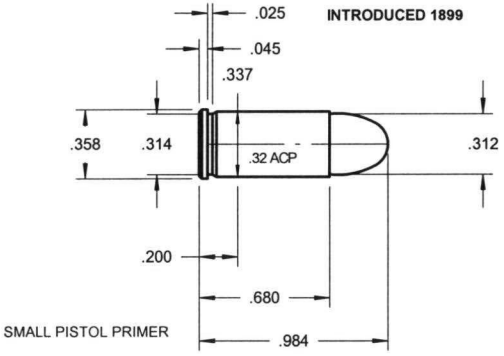
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
77 Grain Lead Bullet										
VEC BA10	**0.9**	**.12**	**.12**	**NA**	**614**	1.2	676	11001	CIP	**0.880**
85 Grain Lead Bullet										
HP38	**1.2**	**.11**	**NA**	**NA**	**608**	1.4	680	NA	NA	**0.880**
WIN 231	**1.4**	**.13**	**.12**	**NA**	**595**	1.4	595	9500	CUP	**0.880**

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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32 AUTO

Also known as 32 ACP and 7.65mm Browning.



Useful case capacity 0.45 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
71 Grain Jacketed Bullet										
v-N310	1.7	.21	.21	NA	812	2.2	1001	NA	NA	0.984
TITEGROUP	2.0	.17	.15	.17	836	2.2	910	14800	CUP	0.978
UNIVERSAL	2.2	.24	.24	NA	817	2.4	881	14900	CUP	0.978
HERCO	3.1	.35	.34	.3	864	3.2	880	13500	PSI	0.984
HP38	2.1	.19	.18	.17	799	2.3	871	14400	CUP	0.978
WIN 231	2.4	.22	.21	NA	817	2.5	865	14000	CUP	0.940
BULLSEYE	2.2	.23	.21	NA	835	2.2	835	12500	PSI	0.984
CLAYS	1.5	.22	.21	NA	740	1.7	830	15000	CUP	0.978
UNIQUE	2.5	.27	.27	NA	820	2.5	820	11200	PSI	0.984
GREEN DOT	2.3	.29	.27	NA	810	2.3	810	11900	PSI	0.984
RED DOT	2.1	.30	.30	NA	805	2.1	805	12900	PSI	0.984
ACCUR #5	2.9	.18	.18	.17	619	3.2	703	19700	PSI	0.955
ACCUR #2	2.0	.17	.15	NA	572	2.2	650	19300	PSI	0.955
77 Grain Jacketed Bullet										
VEC BA10	1.5	.20	.18	NA	804	1.9	873	24224	CIP	0.955
77 Grain Lead Bullet										
VEC BA10	1.2	.16	.15	NA	768	1.2	768	17271	CIP	0.955
84 Grain Lead Bullet										
ACCUR #2	1.6	.13	.12	NA	679	1.8	772	19000	PSI	0.950
ACCUR #5	2.0	.12	.12	NA	671	2.2	762	19800	PSI	0.950

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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32 AUTO (Continued)

Also known as 32 ACP and 7.65mm Browning.

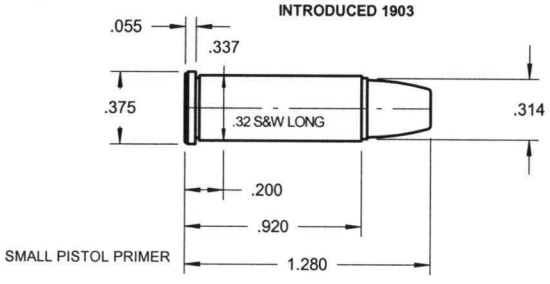
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
85 Grain XTP									
ACCUR #5	**2.2**	**.14**	**NA**	**NA**	**615**	2.4	699	19100 PSI	**0.940**
ACCUR #2	**1.6**	**.13**	**.12**	**NA**	**612**	1.8	695	18800 PSI	**0.940**

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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32 SMITH & WESSON LONG



Useful case capacity 0.78 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
83 Grain Wad Cutter										
v-N310	1.5	.18	.18	.17	767	1.7	856	NA	NA	0.969
85 Grain Jacketed Bullet										
UNIVERSAL	2.7	.30	.30	NA	705	3.0	865	12000	CUP	1.160
TITEGROUP	2.1	.18	.18	.17	723	2.4	819	11300	CUP	1.160
HP38	2.4	.22	.21	NA	707	2.7	810	11500	CUP	1.160
85 Grain XTP										
ACCUR #5	3.2	.20	.18	.17	818	3.6	930	12000	CUP	1.175
ACCUR #2	2.1	.18	.18	.17	769	2.3	875	12000	CUP	1.175
90 Grain Jacketed Bullet										
ACCUR #2	2.3	.19	.18	.17	780	2.5	886	12000	CUP	1.190
ACCUR #5	3.1	.19	.18	.17	759	3.4	863	11200	CUP	1.190
UNIVERSAL	2.6	.29	.27	NA	676	2.9	838	11200	CUP	1.170
HP38	2.3	.21	.21	NA	678	2.6	766	10500	CUP	1.170
TITEGROUP	2.0	.17	.15	.17	665	2.3	749	10000	CUP	1.170
90 Grain Lead Bullet										
ACCUR #5	3.1	.19	.18	.17	811	3.4	922	12000	CUP	1.190
UNIVERSAL	2.4	.26	.24	NA	777	2.7	844	10200	CUP	1.850
ACCUR #2	2.1	.18	.18	.17	741	2.3	842	10800	CUP	1.190
HP38	2.1	.19	.18	.17	744	2.4	831	11300	CUP	1.850
TITEGROUP	1.9	.16	.15	NA	765	2.1	818	10900	CUP	1.850
90 Grain Wad Cutter										
ACCUR #5	2.7	.17	.15	NA	774	3.0	880	11100	CUP	0.930

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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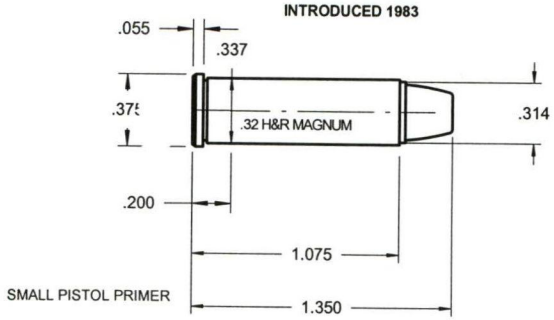
32 SMITH & WESSON LONG (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
90 Grain Wad Cutter (Continued)										
HP38	1.9	.18	.18	.17	733	2.3	861	11600	CUP	0.920
TITEGROUP	1.8	.15	.15	NA	781	2.0	860	11500	CUP	0.920
UNIVERSAL	1.9	.21	.21	NA	726	2.2	830	11000	CUP	0.920
ACCUR #2	1.8	.15	.15	NA	692	2.0	786	10000	CUP	0.930
98 Grain Lead Bullet										
v-N310	1.9	.23	.21	NA	848	2.2	916	NA	NA	1.172
WIN 231	2.3	.21	.21	NA	737	2.4	765	11000	CUP	1.230
GREEN DOT	2.2	.28	.27	NA	725	2.2	725	10100	CUP	1.265
HERCO	2.7	.30	.30	.3	720	2.7	720	9900	CUP	1.265
RED DOT	2.0	.28	.27	NA	715	2.0	715	9900	CUP	1.265
UNIQUE	2.7	.29	.27	NA	715	2.7	715	9700	CUP	1.265
BULLSEYE	1.8	.19	.18	.17	700	1.8	700	10100	CUP	1.265
98 Grain Wad Cutter										
HP38	1.9	.18	.18	.17	718	2.3	861	11600	CUP	0.920
TITEGROUP	1.8	.15	.15	NA	781	2.0	860	11500	CUP	0.920
UNIVERSAL	1.9	.21	.21	NA	675	2.2	830	11000	CUP	0.920
v-N310	1.1	.13	.12	NA	618	1.3	691	NA	NA	0.969
100 Grain XTP										
ACCUR #5	2.9	.18	.18	.17	685	3.2	778	12000	CUP	1.160
ACCUR #2	1.9	.16	.15	NA	614	2.1	700	12000	CUP	1.160

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

32 H&R MAGNUM



Useful case capacity 0.96 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
85 Grain Jacketed Bullet									
ACCUR #7	5.9	.39	.37	NA	1200	6.5	1364	20300 CUP	1.325
ACCUR #5	4.9	.30	.30	.3	1176	5.3	1336	20100 CUP	1.325
ACCUR #2	3.6	.30	.30	.3	1117	4.0	1269	20800 CUP	1.325
A NITRO100	3.2	.43	.43	NA	1082	3.5	1229	19800 CUP	1.325
H4227	8.5	.65	.61	NA	989	9.5	1151	21000 CUP	1.290
HS6	5.2	.37	.37	NA	902	5.6	1146	20200 CUP	1.290
UNIVERSAL	4.0	.44	.43	NA	1090	4.3	1123	19000 CUP	1.290
TITEGROUP	3.0	.25	.24	NA	929	3.7	1110	20900 CUP	1.290
BLUE DOT	6.4	.56	.53	.5	1070	6.6	1100	19000 PSI	1.320
HS7	5.8	.40	.40	NA	977	6.6	1095	20900 CUP	1.300
HERCO	4.5	.50	.49	.5	1040	4.6	1060	18900 PSI	1.320
UNIQUE	3.9	.43	.43	NA	1010	4.1	1050	18700 PSI	1.320
GREEN DOT	3.3	.42	.40	NA	986	3.5	1035	19500 PSI	1.320
RED DOT	3.3	.46	.46	NA	990	3.4	1030	19200 PSI	1.320
BULLSEYE	3.1	.33	.32	.3	1001	3.4	1020	18700 PSI	1.320
HP38	3.2	.30	.30	NA	785	3.8	1003	20700 CUP	1.290
90 Grain Jacketed Bullet									
ACCUR #7	5.7	.37	.37	NA	1149	6.3	1306	19800 CUP	1.340
ACCUR #5	4.8	.30	.30	.3	1137	5.3	1292	20000 CUP	1.340
ACCUR #2	3.6	.30	.30	.3	1096	4.0	1245	21000 CUP	1.340
A NITRO100	3.2	.43	.43	NA	1058	3.5	1202	20300 CUP	1.340

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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32 H&R MAGNUM (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
90 Grain Jacketed Bullet (Continued)									
HS6	5.4	.38	.37	NA	1026	6.0	1140	20200 CUP	1.340
H4227	9.5	.73	.71	.7	1042	10.0	1079	17000 CUP	1.340
UNIVERSAL	3.7	.41	.40	NA	1008	4.0	1072	20000 CUP	1.340
TITEGROUP	3.1	.26	.24	NA	932	3.6	1060	20600 CUP	1.340
HP38	3.5	.32	.32	.3	930	4.0	1033	20300 CUP	1.340
90 Grain Lead Bullet									
HS6	4.6	.33	.32	.3	845	5.0	963	14800 CUP	1.350
HP38	2.8	.26	.24	NA	828	3.2	919	12500 CUP	1.350
TITEGROUP	2.4	.20	.18	NA	819	2.8	911	13300 CUP	1.350
UNIVERSAL	3.0	.33	.32	.3	819	3.2	908	11500 CUP	1.350
90 Grain Wad Cutter									
BLUE DOT	4.6	.40	.40	NA	1055	5.1	1150	20300 PSI	1.180
HERC 2400	5.6	.42	.40	NA	1055	6.2	1150	20400 PSI	1.180
UNIQUE	3.4	.37	.37	NA	1019	3.7	1110	20300 PSI	1.180
HERCO	3.6	.41	.40	NA	981	4.0	1070	20400 PSI	1.180
BULLSEYE	3.1	.33	.32	.3	1000	3.3	1060	19600 PSI	1.180
GREEN DOT	3.0	.38	.37	NA	963	3.3	1050	20400 PSI	1.180
RED DOT	2.9	.40	.40	NA	945	3.1	1020	20000 PSI	1.180
95 Grain Lead Bullet									
H4227	8.0	.61	.61	NA	930	9.0	1043	20900 CUP	1.300
HS7	5.4	.37	.37	NA	943	5.9	1017	20100 CUP	1.300
HS6	4.7	.34	.34	.3	937	5.0	982	19500 CUP	1.300
HP38	3.4	.31	.30	.3	902	3.6	956	19700 CUP	1.300
98 Grain Lead Bullet									
BULLSEYE	3.2	.34	.34	.3	972	3.4	1020	19500 PSI	1.320
GREEN DOT	3.3	.42	.40	NA	954	3.5	1010	19600 PSI	1.320
UNIQUE	3.9	.42	.40	NA	972	4.0	1000	19000 PSI	1.320
RED DOT	2.9	.41	.40	NA	926	3.1	980	19700 PSI	1.320
100 Grain Jacketed Bullet									
ACCUR #5	4.5	.28	.27	NA	1077	5.0	1224	21000 CUP	1.335
ACCUR #7	5.4	.35	.34	.3	1075	6.0	1222	20200 CUP	1.335
ACCUR #2	3.3	.28	.27	NA	1008	3.7	1146	20700 CUP	1.335
A NITRO100	3.0	.41	.40	NA	985	3.3	1119	20200 CUP	1.335
H4227	9.0	.69	.66	NA	980	10.0	1060	19300 CUP	1.345
HS6	4.8	.34	.34	.3	885	5.4	1023	20200 CUP	1.345
UNIVERSAL	3.3	.36	.34	NA	847	3.7	973	19900 CUP	1.345
TITEGROUP	2.8	.24	.24	NA	833	3.3	956	19900 CUP	1.345
HP38	3.3	.31	.30	.3	860	3.7	947	19400 CUP	1.345

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

32 H&R MAGNUM (Continued)

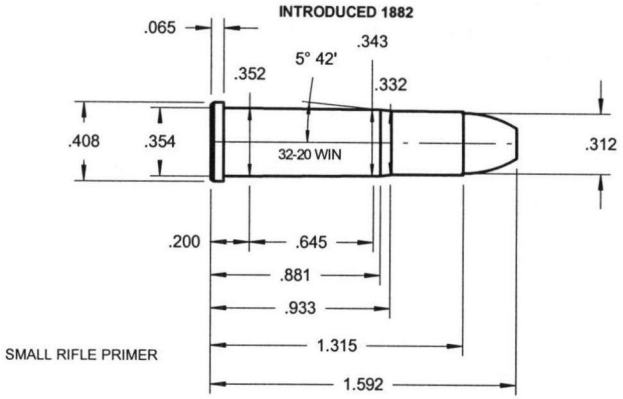
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
100 Grain Lead Bullet									
ACCUR #7	5.4	.35	.34	.3	1126	6.0	1279	20200 CUP	1.310
ACCUR #5	4.2	.26	.24	NA	1110	4.7	1261	21000 CUP	1.310
A NITRO100	3.0	.40	.40	NA	1048	3.3	1191	20800 CUP	1.310
ACCUR #2	3.2	.27	.27	NA	1021	3.6	1160	18700 CUP	1.310

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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32-20 WINCHESTER

Velocities will be 10% to 15% higher in rifles.



Useful case capacity 1.11 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
85 Grain Jacketed Bullet										
HS7	7.0	.48	.46	NA	1075	8.0	1205	NA	NA	1.540
HS6	6.2	.44	.43	NA	1055	7.0	1182	NA	NA	1.540
H LIL GUN	7.2	.49	.49	NA	1002	8.0	1102	15700	CUP	1.550
BULLSEYE	3.4	.36	.34	NA	1000	3.6	1060	NA	NA	1.540
HP38	4.0	.37	.37	NA	936	4.5	1050	NA	NA	1.540
TITEGROUP	3.1	.26	.24	NA	865	3.5	961	15900	CUP	1.550
90 Grain Jacketed Bullet										
HS7	6.9	.47	.46	NA	1045	7.8	1172	NA	NA	1.540
HS6	6.0	.43	.43	NA	964	6.8	1081	NA	NA	1.540
ACCUR 1680	13.7	.90	.88	NA	977	14.4	1039	13700	CUP	1.565
HP38	3.8	.35	.34	.3	912	4.3	1023	NA	NA	1.540
ACCUR #9	6.9	.45	.43	NA	927	7.3	986	13600	CUP	1.565
ACCUR #7	5.8	.38	.37	NA	881	6.1	937	13400	CUP	1.565
ACC XMP5744	8.7	.65	.61	NA	846	9.7	920	NA	NA	1.565
ACCUR #5	4.8	.30	.30	.3	852	5.0	906	14200	CUP	1.565
A-XMR-2015	14.3	1.04	1.02	1.0	823	15.0	875	12700	CUP	1.565
90 Grain Lead Bullet										
TITEGROUP	3.0	.25	.24	NA	902	3.4	1012	15800	CUP	1.490
HP38	3.2	.30	.30	NA	888	3.5	969	16000	CUP	1.490
100 Grain Jacketed Bullet										
H LIL GUN	6.6	.45	.43	NA	908	7.5	1018	16000	CUP	1.580

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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32-20 WINCHESTER (Continued)

Velocities will be 10% to 15% higher in rifles.

....STARTING LOADS....

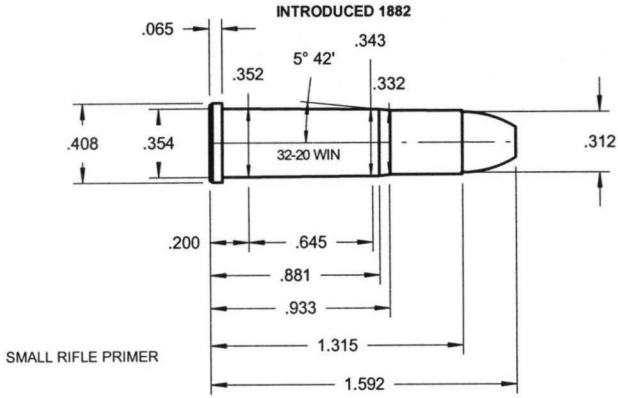
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet (Continued)										
HS7	6.7	.45	.43	NA	886	7.6	993	NA	NA	1.540
HS6	5.8	.41	.40	NA	885	6.6	992	NA	NA	1.540
HP38	3.6	.33	.32	.3	885	4.1	992	NA	NA	1.540
BULLSEYE	3.0	.32	.32	.3	852	3.4	955	NA	NA	1.540
TITEGROUP	3.0	.25	.24	NA	794	3.5	908	16000	CUP	1.580
100 Grain Lead Bullet										
ACCUR 1680	12.2	.80	.76	.7	888	12.8	945	15100	CUP	1.585
ACCUR #9	6.7	.44	.43	NA	869	7.0	924	15500	CUP	1.585
ACCUR #7	5.8	.38	.37	NA	869	6.1	924	16000	CUP	1.585
ACC XMP5744	8.4	.63	.61	NA	828	9.3	900	NA	NA	1.585
ACCUR #5	4.6	.29	.27	NA	813	4.8	865	14400	CUP	1.585
A-XMR-2015	13.3	.97	.95	NA	795	14.0	846	16000	CUP	1.585
100 Grain XTP										
ACCUR 1680	11.9	.78	.76	.7	917	12.5	975	15600	CUP	1.565
ACC XMP5744	8.6	.65	.61	NA	856	9.5	930	NA	NA	1.565
ACCUR #9	6.7	.44	.43	NA	871	7.0	927	15500	CUP	1.565
ACCUR #7	5.5	.36	.34	NA	834	5.8	887	14800	CUP	1.565
A-XMR-2015	14.0	1.02	1.02	1.0	824	14.7	877	15400	CUP	1.565
ACCUR #5	4.5	.28	.27	NA	793	4.7	844	15200	CUP	1.565
110 Grain Jacketed Bullet										
HS7	6.6	.45	.43	NA	890	7.5	998	NA	NA	1.540
HS6	5.7	.41	.40	NA	881	6.5	988	NA	NA	1.540
HP38	3.5	.33	.32	.3	775	4.0	869	NA	NA	1.540
115 Grain Jacketed Bullet										
BULLSEYE	2.9	.31	.30	.3	802	3.1	850	NA	NA	1.540
115 Grain Lead Bullet										
HP38	3.2	.30	.30	NA	840	3.5	915	15600	CUP	1.580
UNIVERSAL	3.0	.33	.32	.3	821	3.2	869	16000	CUP	1.580
TITEGROUP	2.7	.23	.21	NA	778	3.0	857	15300	CUP	1.580
118 Grain Jacketed Bullet										
BULLSEYE	2.6	.28	.27	NA	900	3.0	1009	NA	NA	1.585
RED DOT	2.3	.32	.32	.3	823	2.6	923	NA	NA	1.585

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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32-20 WINCHESTER RIFLE

FOR MODEL 92 WINCHESTER OR STRONGER RIFLES.



Useful case capacity 1.11 cc

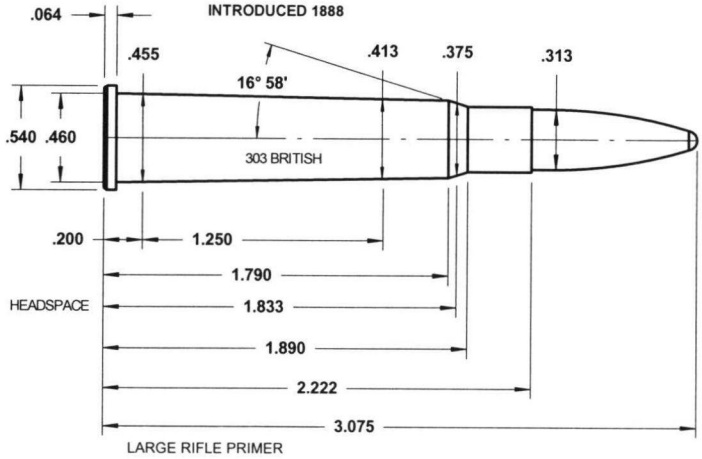
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
90 Grain Jacketed Bullet									
ACCUR 1680	15.7	1.03	1.02	1.0	1794	16.5	1909	21700 CUP	1.565
A-XMR-2015	17.1c	1.25	1.18	NA	1645	18.0c	1750	20000 CUP	1.565
ACCUR #9	8.7	.57	.57	.5	1568	9.2	1668	22000 CUP	1.565
ACCUR #7	7.4	.48	.46	NA	1497	7.8	1593	22000 CUP	1.565
90 Grain Lead Bullet									
TITEGROUP	3.0	.25	.24	NA	902	3.4	1012	15800 CUP	1.490
HP38	3.2	.30	.30	NA	888	3.5	969	16000 CUP	1.490
100 Grain Lead Bullet									
A-XMR-2015	16.2c	1.18	1.18	NA	1575	17.0c	1676	22200 CUP	1.585
ACCUR 1680	13.3	.87	.82	NA	1545	14.0	1644	21400 CUP	1.585
ACCUR #9	8.1	.53	.53	.5	1454	8.5	1547	21700 CUP	1.585
ACCUR #7	6.7	.44	.43	NA	1357	7.0	1444	21600 CUP	1.585
ACCUR #5	5.7	.36	.34	NA	1350	6.0	1436	23300 CUP	1.585
100 Grain XTP									
ACCUR 1680	14.7	.96	.95	NA	1738	15.5	1849	23600 CUP	1.565
A-XMR-2015	16.6c	1.21	1.18	NA	1653	17.5c	1758	22000 CUP	1.565
ACCUR #9	8.4	.55	.53	.5	1485	8.8	1580	22800 CUP	1.565

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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303 BRITISH



Useful case capacity 3.28 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
100 Grain Jacketed Bullet										
H380	42.2	2.92	DBLD	2.8	2460	48.0c	2759	NA	NA	2.915
H4895	39.6	2.88	DBLD	2.8	2452	45.0	2750	NA	NA	2.915
H335	39.6	2.55	DBLD	2.5	2390	45.0	2680	NA	NA	2.915
H4350	42.2	3.06	DBLD	2.8	2080	48.0c	2333	NA	NA	2.915
123 Grain Jacketed Bullet										
RELODER15	45.6	3.22	DBLD	3.1	2793	49.8c	3015	43200	CUP	2.915
RELODER 7	35.4	2.58	DBLD	2.5	2548	38.6	2750	43200	CUP	2.915
WIN 748	47.3	3.10	DBLD	2.8	2720	47.3	2720	34000	PSI	3.075
125 Grain Jacketed Bullet										
A-XMR-2015	41.4	3.02	DBLD	2.8	2795	46.0c	3075	44200	CUP	2.870
ACCUR 2520	42.8	2.92	DBLD	2.8	2744	47.5	3019	44800	CUP	2.870
ACCUR 2460	41.4	2.72	DBLD	2.5	2708	46.0	2979	42600	CUP	2.870
A-XMR-4064	45.0c	3.40	NA	3.1	2685	50.0c	2954	38100	CUP	2.870
ACCUR 2230	39.6	2.60	DBLD	2.5	2645	44.0	2910	42600	CUP	2.870
H335	45.0	2.90	DBLD	2.8	2678	49.0	2890	NA	NA	2.915
A-XMR-2495	43.2	3.23	DBLD	3.1	2625	48.0c	2887	35900	CUP	2.870
ACCUR 2700	45.0	3.08	DBLD	2.8	2499	50.0c	2749	43400	CUP	2.870
H4895	39.5	2.88	DBLD	2.8	2455	43.0	2650	NA	NA	2.915
ACC XMP5744	28.8	2.16	DBLD	1.9	2399	32.0	2639	45600	CUP	2.870
H414	45.0	2.97	DBLD	2.8	2425	49.0	2617	NA	NA	2.915
130 Grain Jacketed Bullet										
H335	43.1	2.78	DBLD	2.5	2578	49.0	2890	NA	NA	2.915

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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303 BRITISH (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
130 Grain Jacketed Bullet (Continued)										
BL-C(2)	50.0	3.22	DBLD	3.1	2886	50.0	2886	37300	CUP	2.915
H4895	37.8	2.75	DBLD	2.5	2363	43.0	2650	NA	NA	2.915
H414	43.1	2.85	DBLD	2.8	2334	49.0	2617	NA	NA	2.915
H4350	42.2	3.06	DBLD	2.8	2167	48.0c	2430	NA	NA	2.915
150 Grain Jacketed Bullet										
ACCUR 2520	41.4	2.83	DBLD	2.8	2517	46.0	2769	45000	CUP	3.010
RELODER15	42.4	2.99	DBLD	2.8	2553	46.2	2755	43200	CUP	2.915
A-XMR-4064	42.7	3.22	DBLD	3.1	2505	47.5c	2755	40500	CUP	3.010
H335	44.0	2.84	DBLD	2.8	2529	48.0	2729	NA	NA	3.035
ACCUR 2460	39.6	2.60	DBLD	2.5	2480	44.0	2728	42900	CUP	3.010
A-XMR-2495	41.4	3.10	DBLD	2.8	2479	46.0c	2727	42500	CUP	3.010
A-XMR-2015	36.9	2.69	DBLD	2.5	2466	41.0	2714	42300	CUP	3.010
ACCUR 2230	38.7	2.54	DBLD	2.5	2458	43.0	2704	43600	CUP	3.010
VEC SP7	41.7	2.74	DBLD	2.5	2329	47.1	2625	39187	CIP	3.075
WIN 748	45.4	2.97	DBLD	2.8	2565	45.4	2565	37700	PSI	3.075
ACCUR 2700	43.2	2.96	DBLD	2.8	2328	48.0c	2561	43200	CUP	3.010
H4350	45.0	3.26	DBLD	3.1	2361	48.0c	2501	NA	NA	3.035
H414	44.0	2.91	DBLD	2.8	2300	48.0	2482	NA	NA	3.035
H4895	38.5	2.80	DBLD	2.5	2297	42.0	2479	NA	NA	3.035
H380	40.5	2.80	DBLD	2.5	2263	44.0	2443	NA	NA	3.035
ACC XMP5744	27.9	2.10	DBLD	1.9	2194	31.0	2413	45000	CUP	3.010
RELODER 7	29.8	2.17	DBLD	1.9	2310	31.0	2400	41200	CUP	2.915
H450	44.0	2.87	DBLD	2.8	2057	50.0	2306	NA	NA	2.915
H4831	45.0	3.26	DBLD	3.1	2126	49.0c	2295	NA	NA	3.035
174 Grain Jacketed Bullet										
A-XMR-2495	37.8	2.83	DBLD	2.8	2269	42.0	2496	42300	CUP	3.075
ACCUR 2520	35.1	2.40	DBLD	2.2	2224	39.0	2447	42900	CUP	3.075
A-XMR-4064	36.0	2.72	DBLD	2.5	2207	40.0	2428	43300	CUP	3.075
A-XMR-4350	41.4	3.06	DBLD	2.8	2188	46.0c	2407	42800	CUP	3.075
ACCUR 2700	38.7	2.65	DBLD	2.5	2137	43.0	2351	44600	CUP	3.075
A-XMR-3100	42.3	3.16	DBLD	3.1	1932	47.0c	2126	34900	CUP	3.075
179 Grain Jacketed Bullet										
VEC SP7	38.6	2.54	DBLD	2.5	2051	41.7	2320	39942	CIP	3.075
180 Grain Jacketed Bullet										
ACCUR 2520	39.6	2.70	DBLD	2.5	2335	44.0	2568	45000	CUP	3.000
v-N140	41.7	3.06	DBLD	2.8	2543	41.7	2543	NA	NA	2.898
A-XMR-4064	40.5	3.06	DBLD	2.8	2306	45.0c	2537	41700	CUP	3.000
RELODER15	40.1	2.83	DBLD	2.8	2330	43.7	2515	43200	CUP	2.915

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027

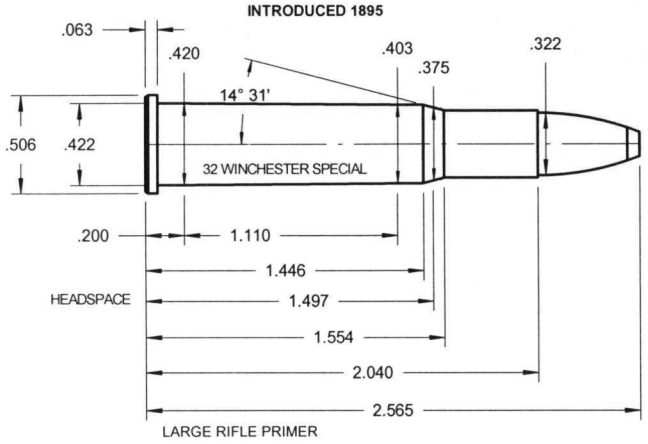
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
180 Grain Jacketed Bullet (Continued)										
A-XMR-2495	39.6	2.96	DBLD	2.8	2252	44.0c	2478	42700	CUP	3.000
ACCUR 2230	36.0	2.37	DBLD	2.2	2247	40.0	2472	43800	CUP	3.000
ACCUR 2460	36.5	2.39	DBLD	2.2	2220	40.5	2442	41500	CUP	3.000
WIN 760	42.9	2.86	DBLD	2.8	2278	46.3	2435	46550	PSI	3.075
ACCUR 2700	41.4	2.83	DBLD	2.8	2207	46.0	2428	44100	CUP	3.000
A-XMR-2015	34.2	2.50	DBLD	2.2	2200	38.0	2420	42300	CUP	3.000
RELODER19	50.0c	3.53	NA	3.4	2414	50.0c	2414	39800	PSI	2.940
WIN 748	36.8	2.41	DBLD	2.2	2194	39.8	2345	46600	PSI	3.075
H4350	43.0	3.12	DBLD	3.1	2182	46.0c	2333	NA	NA	3.075
H335	38.0	2.45	DBLD	2.2	2173	41.0	2323	NA	NA	3.075
H414	42.5	2.81	DBLD	2.8	2135	46.0	2304	NA	NA	3.075
H4895	37.0	2.69	DBLD	2.5	2146	40.0	2295	NA	NA	3.075
H450	44.0	2.87	DBLD	2.8	2034	50.0	2281	NA	NA	2.915
A-XMR-4350	41.4	3.06	DBLD	2.8	2073	46.0c	2280	35800	CUP	3.000
H380	38.5	2.66	DBLD	2.5	2109	42.0	2276	NA	NA	3.075
H4831	43.0	3.12	DBLD	3.1	2054	47.0c	2238	NA	NA	3.075
ACC XMP5744	26.1	1.96	DBLD	1.9	1990	29.0	2189	44900	CUP	3.000
180 Grain Lead Bullet										
A-XMR-2495	39.6	2.96	DBLD	2.8	2299	44.0c	2529	39500	CUP	2.930
A-XMR-4064	39.6	2.99	DBLD	2.8	2293	44.0c	2523	38700	CUP	2.930
ACCUR 2460	36.0	2.36	DBLD	2.2	2254	40.0	2480	40600	CUP	2.930
A-XMR-2015	34.2	2.50	DBLD	2.2	2238	38.0	2462	41400	CUP	2.930
ACCUR 2230	35.1	2.31	DBLD	2.2	2236	39.0	2459	42500	CUP	2.930
ACCUR 2520	36.0	2.46	DBLD	2.2	2225	40.0	2448	40300	CUP	2.930
ACCUR 2700	37.8	2.59	DBLD	2.5	2101	42.0	2312	41400	CUP	2.930
A-XMR-4350	41.4	3.06	DBLD	2.8	2093	46.0c	2302	36000	CUP	2.930
ACC XMP5744	25.0	1.88	DBLD	1.6	1943	28.0	2159	40700	CUP	2.930
215 Grain Jacketed Bullet										
H414	37.8	2.50	DBLD	2.2	1885	43.0	2114	NA	NA	2.915
H4350	37.8	2.74	DBLD	2.5	1864	43.0	2090	NA	NA	2.915
H335	34.3	2.21	DBLD	2.2	1825	39.0	2047	NA	NA	2.915
H4831	39.6	2.87	DBLD	2.8	1785	45.0	2001	NA	NA	2.915

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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32 WINCHESTER SPECIAL



Useful case capacity 2.54 cc

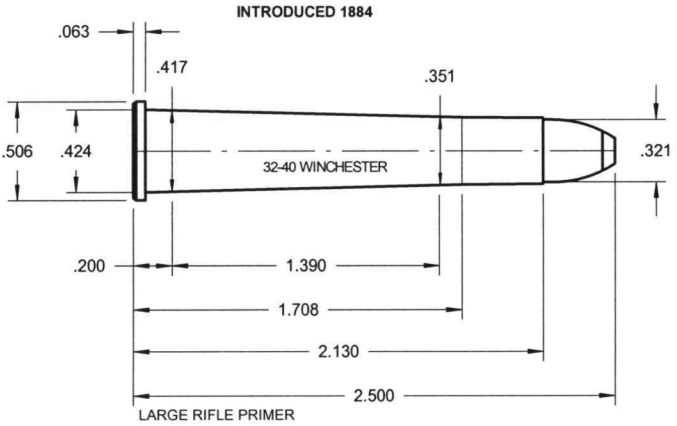
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
170 Grain Jacketed Bullet										
WIN 748	32.6	2.14	DBLD	1.9	2195	36.2	2240	32500	CUP	2.500
H4198	24.0	1.80	DBLD	1.6	1952	27.0	2168	NA	NA	2.560
ACCUR 2520	28.4	1.94	DBLD	1.9	1874	31.5	2129	38400	PSI	2.545
ACCUR 2230	27.0	1.77	DBLD	1.6	1869	30.0	2124	42000	PSI	2.545
ACCUR 2460	27.2	1.78	DBLD	1.6	1864	30.2	2118	39900	PSI	2.545
ACCUR 2700	33.3	2.28	DBLD	2.2	1972	35.0	2098	39700	PSI	2.545
A-XMR-2495	26.6	1.99	DBLD	1.9	1844	29.5	2095	40200	PSI	2.545
A-XMR-2015	24.3	1.77	DBLD	1.6	1793	27.0	2038	38600	PSI	2.545
A-XMR-4064	27.0	2.04	DBLD	1.9	1757	30.0	1997	39900	PSI	2.545
BL-C(2)	30.0	1.93	DBLD	1.9	1855	32.0	1964	NA	NA	2.560
H335	30.0	1.93	DBLD	1.9	1851	32.0	1960	NA	NA	2.560
H4895	31.0	2.26	DBLD	2.2	1833	33.0	1941	NA	NA	2.560
RELODER 7	23.6	1.72	DBLD	1.6	1874	24.0	1910	NA	NA	2.500

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32-40 WINCHESTER

These loads are only for guns that are safe with smokeless powder.



Useful case capacity 2.20 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
165 Grain Jacketed Bullet										
RELODER 7	26.0	1.89	DBLD	1.9	2025	26.0	2025	25000	CUP	2.590
165 Grain Lead Bullet										
ACC XMP5744	14.4	1.08	1.02	1.0	1264	16.0	1436	14600	CUP	2.500
170 Grain Bullet										
H335	23.0	1.48	1.46	1.3	1891	23.0	1891	NA	NA	2.460
H4895	22.0	1.60	DBLD	1.6	1864	22.0	1864	NA	NA	2.460
H322	21.0	1.52	1.46	1.3	1837	21.0	1837	NA	NA	2.460
BL-C(2)	25.0	1.61	DBLD	1.6	1806	25.0	1806	NA	NA	2.460
H4198	19.0	1.43	1.36	1.3	1760	19.0	1760	NA	NA	2.460
H110	14.0	.92	.88	NA	1594	14.0	1594	NA	NA	2.460
H4227	14.0	1.08	1.02	1.0	1511	14.0	1511	NA	NA	2.460
170 Grain Jacketed Bullet										
A-XMR-2495	28.4	2.13	DBLD	1.9	1825	31.5c	2074	27100	CUP	2.575
A-XMR-2015	24.3	1.78	DBLD	1.6	1870	27.0	2057	29300	CUP	2.575
ACCUR 2520	27.0	1.84	DBLD	1.6	1783	30.0	2026	27800	CUP	2.575
ACCUR 2460	25.7	1.69	DBLD	1.6	1734	28.5	1971	28300	CUP	2.575
ACCUR 2230	24.7	1.62	DBLD	1.6	1773	27.5	1950	29400	CUP	2.575
RELODER 7	25.5	1.86	DBLD	1.6	1930	25.5	1930	25900	CUP	2.590
ACC XMP5744	18.0	1.35	1.26	1.3	1563	20.0	1777	29400	CUP	2.575

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32-40 WINCHESTER (Continued)

These loads are only for guns that are safe with smokeless powder.

....STARTING LOADS....

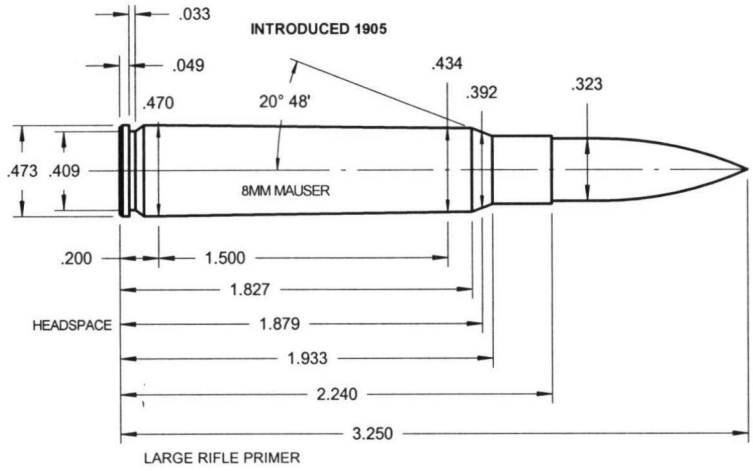
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
170 Grain Lead Bullet									
A-XMR-2495	27.5	2.06	DBLD	1.9	1810	30.5c	2057	26200 CUP	2.410
A-XMR-2015	23.4	1.71	DBLD	1.6	1787	26.0	2031	28600 CUP	2.410
ACCUR 2520	26.1	1.78	DBLD	1.6	1774	29.0	2016	29300 CUP	2.410
ACCUR 2460	24.8	1.63	DBLD	1.6	1738	27.5	1975	28800 CUP	2.410
ACCUR 2230	24.3	1.60	DBLD	1.6	1712	27.0	1946	27300 CUP	2.410
ACC XMP5744	18.0	1.35	1.26	1.3	1585	20.0	1802	28800 CUP	2.410
196 Grain Lead Bullet									
H110	12.0	.79	.76	.7	1376	12.0	1376	19200 CUP	2.555
H4227	13.0	1.00	.95	1.0	1367	13.0	1367	18000 CUP	2.555
202 Grain Lead Bullet									
H110	13.0	.85	.82	NA	1386	13.0	1386	17900 CUP	2.555
H4227	14.0	1.08	1.02	1.0	1376	14.0	1376	15900 CUP	2.555
204 Grain Lead Bullet									
H110	13.0	.85	.82	NA	1369	13.0	1369	17900 CUP	2.555
H4227	13.5	1.04	1.02	1.0	1367	13.5	1367	16300 CUP	2.555

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8x57mm MAUSER

Use .323 bullets only if rifle has .323 groove diameter.



Useful case capacity 3.69 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
125 Grain Jacketed Bullet										
v-N133	48.5c	3.73	NA	3.7	2920	53.9c	3213	NA	NA	2.913
v-N135	49.6c	3.85	NA	3.7	2905	55.1c	3196	NA	NA	2.913
v-N130	43.2	3.26	DBLD	3.1	2833	48.2	3117	NA	NA	2.913
H4198	39.0	2.93	DBLD	2.8	2857	42.0	3054	NA	NA	2.880
H380	50.5	3.49	NA	3.4	2695	55.0c	2909	NA	NA	2.880
H414	53.5	3.54	NA	3.4	2681	58.0c	2893	NA	NA	2.880
H335	47.0	3.03	DBLD	2.8	2679	51.0	2891	NA	NA	2.880
H322	43.0	3.12	DBLD	3.1	2607	47.0	2840	NA	NA	2.880
H4895	47.0	3.42	NA	3.4	2590	51.0c	2796	NA	NA	2.880
BL-C(2)	46.0	2.97	DBLD	2.8	2584	50.0	2789	NA	NA	2.880
RELODER15	42.3	2.99	DBLD	2.8	2509	46.8	2760	36000	CUP	2.820
RELODER12	41.3	2.85	DBLD	2.8	2520	45.0	2720	35500	CUP	2.820
H450	52.0	3.40	NA	3.1	2346	56.0	2509	NA	NA	2.815
H4350	50.0	3.63	NA	3.4	2320	54.0c	2480	NA	NA	2.880
A-XMR-4350	47.7	3.53	NA	3.4	2198	53.0c	2418	25200	PSI	2.890
150 Grain Jacketed Bullet										
v-N140	48.3	3.54	NA	3.4	2659	53.9c	2927	NA	NA	2.992
v-N135	45.9	3.57	NA	3.4	2625	51.1c	2887	NA	NA	2.992
H4198	38.0	2.85	DBLD	2.8	2663	41.0	2848	NA	NA	3.050
H380	49.5	3.42	NA	3.4	2574	54.0c	2778	NA	NA	3.050

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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8x57mm MAUSER (Continued)

Use .323 bullets only if rifle has .323 groove diameter.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
150 Grain Jacketed Bullet (Continued)										
H414	51.5	3.40	NA	3.1	2569	56.0c	2773	NA	NA	3.050
H4895	46.0	3.35	NA	3.1	2545	50.0	2747	NA	NA	3.050
H335	45.0	2.90	DBLD	2.8	2542	49.0	2744	NA	NA	3.050
H322	42.0	3.04	DBLD	2.8	2502	46.0	2726	NA	NA	3.050
VEC TU5000	49.7	3.58	NA	3.4	2665	50.5	2717	35805	CIP	3.228
RELODER15	39.8	2.81	DBLD	2.8	2327	44.0	2560	36000	CUP	2.975
BL-C(2)	42.5	2.74	DBLD	2.5	2365	46.0	2553	NA	NA	3.050
H4350	50.0	3.63	NA	3.4	2387	54.0c	2552	NA	NA	3.050
RELODER12	40.1	2.77	DBLD	2.5	2297	43.0	2455	34900	CUP	2.975
H4831	53.0c	3.84	NA	3.7	2294	57.0c	2452	NA	NA	3.050
A-XMR-4350	45.0	3.33	NA	3.1	2176	50.0c	2394	32500	PSI	2.950
IMR3031	30.4	2.31	DBLD	2.2	2082	34.5	2335	37000	CUP	2.945
IMR4831	41.6	3.06	DBLD	2.8	2074	47.0	2325	36800	CUP	2.945
IMR4350	38.0	2.80	DBLD	2.5	2064	43.0	2315	36800	CUP	2.945
IMR4895	31.7	2.31	DBLD	2.2	2059	36.0	2310	37000	CUP	2.945
IMR4064	31.7	2.36	DBLD	2.2	2056	36.0	2305	37000	CUP	2.945
H450	49.0	3.20	DBLD	3.1	2117	53.0	2285	35900	CUP	2.815
IMR4320	31.8	2.27	DBLD	2.2	2024	36.0	2270	36900	CUP	2.945
A-XMR-3100	47.7	3.57	NA	3.4	2025	53.0c	2228	27100	PSI	2.950
IMR4198	25.1	1.99	DBLD	1.9	1984	28.5	2225	37000	CUP	2.945
165 Grain Lead Bullet										
VEC TU2000	24.7	1.88	DBLD	1.6	1831	24.7	1831	19158	CIP	3.228
170 Grain Jacketed Bullet										
v-N150	48.4	3.61	NA	3.4	2544	53.7c	2799	NA	NA	3.031
v-N140	46.1	3.38	NA	3.1	2499	51.4c	2749	NA	NA	3.031
VEC TU5000	48.6	3.50	NA	3.4	2674	49.4	2726	45950	CIP	3.228
v-N135	44.1	3.43	NA	3.4	2470	49.0c	2718	NA	NA	3.031
VEC SP7	31.0	2.04	DBLD	1.9	1942	47.8	2713	47445	CIP	3.228
H414	49.0	3.24	DBLD	3.1	2396	53.0	2586	NA	NA	2.890
H322	40.0	2.90	DBLD	2.8	2345	44.0	2555	NA	NA	2.890
H380	45.0	3.11	DBLD	3.1	2324	49.0	2509	NA	NA	2.890
H4350	50.0	3.63	NA	3.4	2345	54.0c	2507	NA	NA	2.890
H4895	42.5	3.09	DBLD	2.8	2317	46.0	2501	NA	NA	2.890
H335	42.5	2.74	DBLD	2.5	2289	46.0	2470	NA	NA	2.890
BL-C(2)	41.5	2.68	DBLD	2.5	2242	45.0	2421	NA	NA	2.890
H4831	53.0c	3.84	NA	3.7	2261	57.0c	2418	NA	NA	2.890
WIN 748	40.5	2.65	DBLD	2.5	2149	46.0	2410	37000	CUP	2.815

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027

8x57mm MAUSER (Continued)

Use .323 bullets only if rifle has .323 groove diameter.

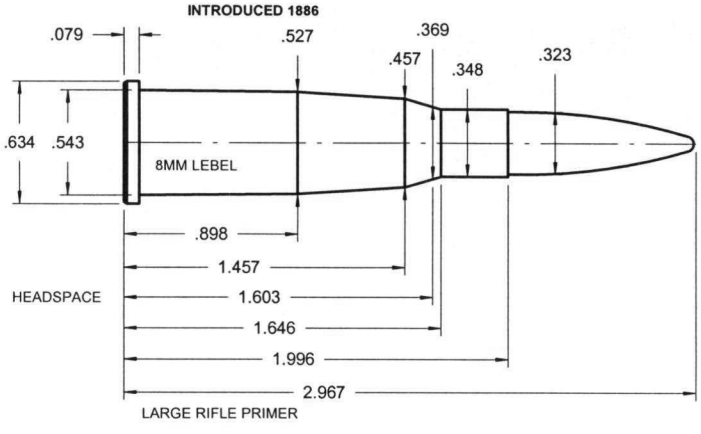
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
170 Grain Jacketed Bullet (Continued)										
RELODER15	37.4	2.64	DBLD	2.5	2181	41.4	2400	36000	CUP	3.015
RELODER12	36.9	2.55	DBLD	2.5	2113	40.0	2280	35300	CUP	3.015
A-XMR-4350	43.2	3.20	DBLD	3.1	2057	48.0	2262	33600	PSI	2.840
IMR4831	40.5	2.98	DBLD	2.8	2012	46.0	2255	37000	CUP	2.840
WIN 760	48.0	3.20	DBLD	3.1	2240	48.0	2240	32000	CUP	2.815
A-XMR-3100	47.7	3.57	NA	3.4	1982	53.0c	2181	30400	PSI	2.840
IMR4350	37.0	2.72	DBLD	2.5	1943	42.0	2180	37000	CUP	2.840
IMR4064	30.9	2.30	DBLD	2.2	1939	35.0	2175	36900	CUP	2.840
IMR4895	29.5	2.15	DBLD	1.9	1913	33.5	2145	37000	CUP	2.840
H450	46.0	3.00	DBLD	2.8	2019	49.0	2138	36500	CUP	2.815
IMR3031	29.3	2.23	DBLD	2.2	1913	32.5	2105	36100	CUP	2.840
IMR4320	31.0	2.22	DBLD	2.2	1913	34.5	2105	36200	CUP	2.840
170 Grain Lead Bullet										
A-XMR-4350	42.3	3.13	DBLD	3.1	2048	47.0	2253	31700	PSI	2.710
A-XMR-3100	47.7	3.57	NA	3.4	2004	53.0c	2205	29700	PSI	2.710
ACCUR 8700	49.1	3.38	NA	3.1	1633	54.5c	1797	24100	PSI	2.710
187 Grain Jacketed Bullet										
VEC SP7	33.4	2.20	DBLD	1.9	1938	52.5	2733	48461	CIP	3.228
VEC TU5000	47.8	3.44	NA	3.4	2398	48.6	2444	35500	CIP	3.228
200 Grain Jacketed Bullet										
v-N160	50.5c	3.71	NA	3.7	2341	56.2c	2575	NA	NA	3.189
v-N150	44.1	3.29	DBLD	3.1	2255	49.3	2505	NA	NA	3.130
v-N140	42.8	3.14	DBLD	3.1	2263	47.5	2490	NA	NA	3.130
A-XMR-4350	39.6	2.93	DBLD	2.8	1854	44.0	2039	31200	PSI	2.970
A-XMR-3100	44.1	3.30	DBLD	3.1	1800	49.0	1980	28100	PSI	2.970
220 Grain Jacketed Bullet										
A-XMR-3100	44.3	3.31	NA	3.1	1770	49.2	1946	30900	PSI	2.990
A-XMR-4350	37.8	2.80	DBLD	2.5	1732	42.0	1906	30800	PSI	2.990
ACCUR 8700	46.4	3.19	DBLD	3.1	1375	51.5	1512	23200	PSI	2.990
225 Grain Jacketed Bullet										
H4831	53.0c	3.84	NA	3.7	2195	57.0c	2346	NA	NA	2.815
H414	46.0	3.04	DBLD	2.8	2170	50.0	2342	NA	NA	2.815
H380	42.5	2.94	DBLD	2.8	2117	46.0	2285	NA	NA	2.815
H4350	44.0	3.19	DBLD	3.1	2137	46.0	2221	NA	NA	2.815
H450	45.0	2.94	DBLD	2.8	1988	49.0	2145	NA	NA	2.815

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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8mm LEBEL

THESE LOADS ARE MODIFIED FROM A SIMILAR SIZE AND CALIBER CARTRIDGE.



Useful case capacity 4.10 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
125 Grain Jacketed Bullet									
RELODER15	45.8	3.23	DBLD	3.1	2708	46.8	2760	36000 CUP	2.537
RELODER12	44.6	3.08	DBLD	2.8	2694	45.0	2720	35500 CUP	2.537
A-XMR-4350	53.0	3.92	NA	3.7	2418	53.0	2418	25200 CUP	2.607
A-XMR-3100	53.0	3.96	NA	3.7	2185	53.0	2185	20400 CUP	2.607
150 Grain Jacketed Bullet									
RELODER15	43.0	3.04	DBLD	2.8	2512	44.0	2560	36000 CUP	2.692
RELODER12	43.0	2.97	DBLD	2.8	2455	43.0	2455	34900 CUP	2.692
A-XMR-4350	50.0	3.70	NA	3.4	2394	50.0	2394	32500 CUP	2.667
IMR3031	32.8	2.50	DBLD	2.2	2226	34.5	2335	37000 CUP	2.662
IMR4831	45.0	3.30	NA	3.1	2238	47.0	2325	36800 CUP	2.662
IMR4350	41.1	3.02	DBLD	2.8	2228	43.0	2315	36800 CUP	2.662
IMR4895	34.2	2.49	DBLD	2.2	2202	36.0	2310	37000 CUP	2.662
IMR4064	34.2	2.55	DBLD	2.5	2198	36.0	2305	37000 CUP	2.662
IMR4320	34.3	2.46	DBLD	2.2	2164	36.0	2270	36900 CUP	2.662
A-XMR-3100	53.0	3.96	NA	3.7	2228	53.0	2228	27100 CUP	2.667
IMR4198	27.1	2.15	DBLD	1.9	2121	28.5	2225	37000 CUP	2.662
IMR4227	21.6	1.66	DBLD	1.6	1939	22.5	2015	36700 CUP	2.662
SR4759	20.5	2.03	DBLD	1.9	1869	21.5	1960	37000 CUP	2.662

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c = Compressed charge

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8mm LEBEL (Continued)

THESE LOADS ARE MODIFIED FROM A SIMILAR SIZE AND CALIBER CARTRIDGE.

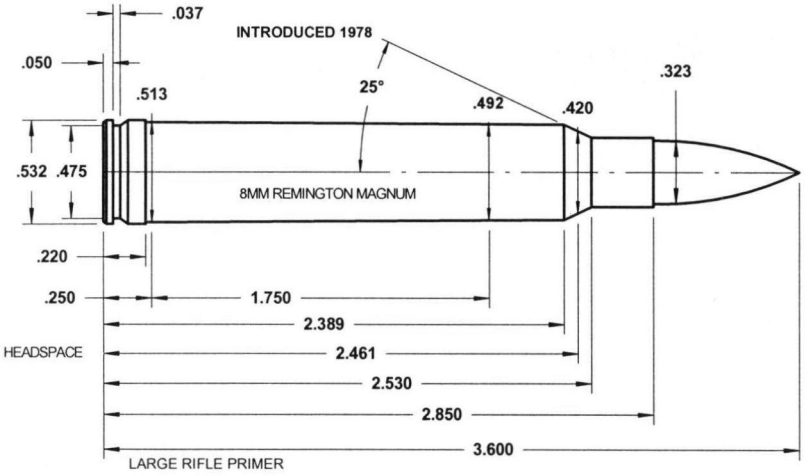
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
170 Grain Jacketed Bullet									
WIN 748	43.8	2.87	DBLD	2.8	2298	46.0	2410	37000 CUP	2.532
RELODER15	40.5	2.86	DBLD	2.8	2354	41.4	2400	36000 CUP	2.732
RELODER12	39.9	2.76	DBLD	2.5	2280	40.0	2280	35300 CUP	2.732
A-XMR-4350	48.0	3.55	NA	3.4	2262	48.0	2262	33600 CUP	2.557
IMR4831	43.8	3.22	DBLD	3.1	2150	46.0	2255	37000 CUP	2.557
WIN 760	48.0	3.20	DBLD	3.1	2240	48.0	2240	32000 CUP	2.532
A-XMR-3100	53.0	3.96	NA	3.7	2181	53.0	2181	30400 CUP	2.557
IMR4350	40.0	2.94	DBLD	2.8	2078	42.0	2180	37000 CUP	2.557
IMR4064	33.4	2.49	DBLD	2.2	2074	35.0	2175	36900 CUP	2.557
IMR4895	31.9	2.32	DBLD	2.2	2045	33.5	2145	37000 CUP	2.557
IMR3031	31.7	2.41	DBLD	2.2	2065	32.5	2105	36100 CUP	2.557
IMR4320	33.5	2.40	DBLD	2.2	2045	34.5	2105	36200 CUP	2.557
IMR4198	26.2	2.07	DBLD	1.9	1978	27.5	2075	37000 CUP	2.557
IMR4227	20.7	1.59	DBLD	1.3	1791	21.5	1860	36600 CUP	2.557
200 Grain Jacketed Bullet									
A-XMR-4350	44.0	3.26	DBLD	3.1	2039	44.0	2039	31200 CUP	2.687
A-XMR-3100	49.0	3.67	NA	3.4	1980	49.0	1980	28100 CUP	2.687
220 Grain Jacketed Bullet									
A-XMR-3100	49.2	3.68	NA	3.4	1946	49.2	1946	30900 CUP	2.707
A-XMR-4350	42.0	3.11	DBLD	3.1	1906	42.0	1906	30800 CUP	2.707

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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8mm REMINGTON MAGNUM



Useful case capacity 6.08 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL
125 Grain Jacketed Bullet										
H4350	79.0	5.73	2 SCOOPS	2.8	3325	83.0	3488	NA	NA	3.550
H4895	69.0	5.02	2 SCOOPS	2.5	3365	71.0	3463	NA	NA	3.550
H380	73.0	5.04	2 SCOOPS	2.5	3265	76.0	3392	NA	NA	3.550
H4831	83.0	6.02	2 SCOOPS	2.8	3228	85.0c	3290	NA	NA	3.550
H870	90.0c	6.17	2 SCOOPS	2.8	2943	93.0c	3029	NA	NA	3.550
150 Grain Jacketed Bullet										
A-XMR-3100	80.1	5.99	2 SCOOPS	2.8	3026	89.0c	3439	58400	PSI	3.565
A-XMR-4350	73.8	5.46	2 SCOOPS	2.5	3013	82.0	3424	60100	PSI	3.565
H414	77.0	5.09	2 SCOOPS	2.5	3226	79.0	3320	NA	NA	2.900
H4350	76.0	5.51	2 SCOOPS	2.5	3150	79.0	3272	NA	NA	2.900
H450	74.8	4.88	2 SCOOPS	2.2	2916	85.0	3270	NA	NA	3.450
H380	71.0	4.91	2 SCOOPS	2.2	3095	73.0	3185	NA	NA	2.900
H4895	64.0	4.66	2 SCOOPS	2.2	3053	67.0	3172	NA	NA	2.900
H870	81.8	5.61	2 SCOOPS	2.8	2701	93.0c	3029	NA	NA	3.450
ACCUR 8700	88.2	6.07	2 SCOOPS	2.8	2655	98.0c	3017	44700	PSI	3.565
170 Grain Jacketed Bullet										
RELODER22	80.8	5.63	2 SCOOPS	2.8	3133	87.2	3350	61700	PSI	3.500
RELODER19	76.8	5.42	2 SCOOPS	2.5	3101	82.8	3315	61700	PSI	3.500
175 Grain Jacketed Bullet										
A-XMR-3100	78.8	5.89	2 SCOOPS	2.8	2865	87.5c	3256	60900	PSI	3.565
A-XMR-4350	71.1	5.26	2 SCOOPS	2.5	2833	79.0	3219	59400	PSI	3.565

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

8mm REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
175 Grain Jacketed Bullet (Continued)										
H4831	80.0	5.80	2 SCOOPS	2.8	3084	82.0	3144	NA	NA	3.600
H4350	73.0	5.29	2 SCOOPS	2.5	2982	77.0	3128	NA	NA	3.600
H450	72.2	4.71	2 SCOOPS	2.2	2767	82.0	3103	NA	NA	3.500
H414	72.0	4.76	2 SCOOPS	2.2	2961	75.0	3076	NA	NA	3.600
H870	89.0c	6.11	2 SCOOPS	2.8	2883	92.0c	2967	NA	NA	3.600
ACCUR 8700	87.3	6.01	2 SCOOPS	2.8	2475	97.0c	2813	40000	PSI	3.565
180 Grain Barnes X Bullet										
H4831	77.0	5.58	2 SCOOPS	2.5	2911	80.0	3024	NA	NA	3.600
H4350	71.0	5.15	2 SCOOPS	2.5	2867	75.0	3007	NA	NA	3.600
H870	88.0	6.04	2 SCOOPS	2.8	2856	91.0c	2939	NA	NA	3.600
185 Grain Jacketed Bullet										
IMR4831	71.4	5.25	2 SCOOPS	2.5	2813	79.5	3095	52900	CUP	3.560
IMR4350	69.4	5.10	2 SCOOPS	2.5	2782	77.5	3090	53100	CUP	3.560
H4831	70.4	5.10	2 SCOOPS	2.5	2697	80.0	3024	NA	NA	3.500
H4350	66.0	4.79	2 SCOOPS	2.2	2682	75.0	3007	NA	NA	3.500
H450	69.5	4.54	NA	4.3	2663	79.0	2987	NA	NA	3.500
IMR4064	58.5	4.36	NA	4.3	2654	66.5	2975	54000	CUP	3.560
H870	80.1	5.49	2 SCOOPS	2.5	2621	91.0c	2939	NA	NA	3.500
IMR3031	55.9	4.26	NA	4.0	2607	62.5	2895	53100	CUP	3.560
IMR4895	54.4	3.96	NA	3.7	2570	61.0	2855	53300	CUP	3.560
IMR4320	55.6	3.98	NA	3.7	2590	62.0	2850	53000	CUP	3.560
IMR4198	45.9	3.64	NA	3.4	2418	51.0	2660	52800	CUP	3.560
SR4759	40.7	4.04	NA	4.0	2254	45.0	2480	52600	CUP	3.560
IMR4227	37.4	2.88	DBLD	2.8	2158	42.5	2420	54000	CUP	3.560
200 Grain Jacketed Bullet										
RELODER 25	83.3	5.89	2 SCOOPS	2.8	3004	88.0c	3151	60400	PSI	3.525
RELODER22	75.2	5.24	2 SCOOPS	2.5	2890	81.0	3090	61600	PSI	3.525
A-XMR-3100	74.7	5.59	2 SCOOPS	2.5	2703	83.0c	3072	62300	PSI	3.595
RELODER19	72.1	5.09	2 SCOOPS	2.5	2853	77.7	3050	61600	PSI	3.525
H4831	75.0	5.44	2 SCOOPS	2.5	2795	79.0	2932	NA	NA	3.600
H4350	69.0	5.00	2 SCOOPS	2.2	2783	73.0	2919	NA	NA	3.600
H870	87.0	5.97	2 SCOOPS	2.8	2832	90.0c	2914	NA	NA	3.600
A-XMR-4350	64.8	4.80	2 SCOOPS	2.2	2533	72.0	2878	59400	PSI	3.595
ACCUR 8700	86.4	5.94	2 SCOOPS	2.8	2516	96.0c	2859	48600	PSI	3.595
220 Grain Jacketed Bullet										
RELODER 25	77.6	5.48	2 SCOOPS	2.5	2812	83.0	3006	61200	PSI	3.600
RELODER22	71.8	5.01	2 SCOOPS	2.2	2722	77.0	2910	61300	PSI	3.600
RELODER19	69.6	4.92	2 SCOOPS	2.2	2699	75.0	2885	61600	PSI	3.600

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

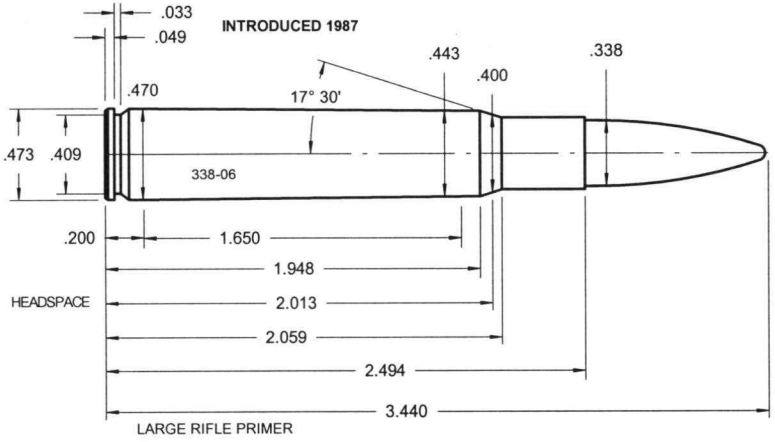
8mm REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
220 Grain Jacketed Bullet (Continued)										
A-XMR-3100	72.5	5.42	2 SCOOPS	2.5	2538	80.5	2884	61600	PSI	3.595
H4831	74.0	5.36	2 SCOOPS	2.5	2737	78.0	2871	NA	NA	3.600
H870	87.0	5.97	2 SCOOPS	2.8	2775	90.0c	2856	NA	NA	3.600
IMR4831	67.1	4.93	2 SCOOPS	2.2	2536	76.0	2845	53800	CUP	3.560
IMR4350	64.6	4.74	2 SCOOPS	2.2	2540	72.0	2795	53000	CUP	3.560
ACCUR 8700	84.6	5.82	2 SCOOPS	2.8	2423	94.0c	2753	48500	PSI	3.595
A-XMR-4350	63.5	4.70	2 SCOOPS	2.2	2416	70.5	2745	58500	PSI	3.595
IMR4064	55.2	4.11	NA	4.0	2408	62.5	2700	53800	CUP	3.560
IMR3031	52.9	4.03	NA	4.0	2381	59.0	2620	53000	CUP	3.560
IMR4895	54.7	3.98	NA	3.7	2446	59.0	2615	51300	CUP	3.560
IMR4320	55.2	3.95	NA	3.7	2427	59.5	2595	51200	CUP	3.560
IMR4198	42.3	3.35	NA	3.1	2160	47.5	2400	53300	CUP	3.560
IMR4227	36.3	2.79	DBLD	2.5	2024	39.5	2185	51700	CUP	3.560
SR4759	37.0	3.67	NA	3.4	1943	42.0	2180	54000	CUP	3.560
225 Grain Jacketed Bullet										
H4831	68.6	4.98	2 SCOOPS	2.2	2559	78.0	2871	NA	NA	3.500
H870	79.2	5.43	2 SCOOPS	2.5	2547	90.0c	2856	NA	NA	3.500
H450	66.9	4.37	NA	4.3	2516	76.0	2822	NA	NA	3.500
250 Grain Jacketed Bullet										
H4831	66.9	4.85	2 SCOOPS	2.2	2476	76.0	2776	NA	NA	3.500
H870	75.7	5.19	2 SCOOPS	2.5	2464	86.0	2764	NA	NA	3.500

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

338-06



Useful case capacity 4.39 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
200 Grain Jacketed Bullet									
A-XMR-2495	45.0	3.37	NA	3.1	2394	50.0	2720	58900 PSI	3.335
ACCUR 2700	57.0	3.90	NA	3.7	2542	60.0	2704	55600 PSI	3.335
A-XMR-4350	54.9	4.06	NA	4.0	2380	61.0c	2704	51100 PSI	3.335
ACCUR 2460	45.0	2.95	DBLD	2.8	2368	50.0	2691	56800 PSI	3.335
ACCUR 2520	45.9	3.13	DBLD	3.1	2367	51.0	2690	58800 PSI	3.335
ACCUR 2230	44.6	2.93	DBLD	2.8	2350	49.5	2670	57700 PSI	3.335
A-XMR-2015	41.9	3.06	DBLD	2.8	2336	46.5	2654	57100 PSI	3.335
A-XMR-3100	55.8	4.17	NA	4.0	2216	62.0c	2518	42100 PSI	3.335
200 Grain Lead Bullet									
ACCUR 2520	41.4	2.83	DBLD	2.8	2208	46.0	2509	41700 PSI	3.080
ACCUR 2460	40.5	2.66	DBLD	2.5	2198	45.0	2498	40300 PSI	3.080
A-XMR-4350	48.6	3.60	NA	3.4	2195	54.0	2494	39800 PSI	3.080
ACCUR 2230	39.6	2.60	DBLD	2.5	2188	44.0	2486	49600 PSI	3.080
A-XMR-2495	38.7	2.90	DBLD	2.8	2184	43.0	2482	39400 PSI	3.080
A-XMR-2015	37.8	2.76	DBLD	2.5	2180	42.0	2477	38400 PSI	3.080
ACCUR 2700	48.5	3.32	NA	3.1	2321	51.0	2469	38900 PSI	3.080
A-XMR-3100	52.2	3.90	NA	3.7	2128	58.0	2418	36400 PSI	3.080
200 Grain Barnes X Bullet									
H414	57.0	3.77	NA	3.7	2625	63.0	2802	NA	NA 3.340
H4350	59.0	4.28	NA	4.0	2487	65.0c	2710	NA	NA 3.340
210 Grain Jacketed Bullet									
H414	56.0	3.70	NA	3.4	2552	62.0	2807	NA	NA 3.340

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

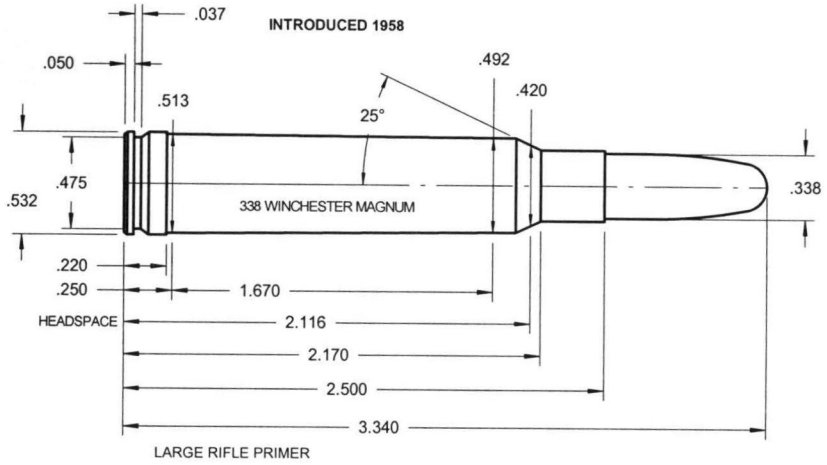
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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
210 Grain Jacketed Bullet (Continued)									
A-XMR-4350	54.0	4.00	NA	3.7	2372	60.0c	2695	57600 PSI	3.265
ACCUR 2700	56.1	3.84	NA	3.7	2510	59.0	2670	58600 PSI	3.265
ACCUR 2520	44.6	3.04	DBLD	2.8	2283	49.5	2594	58300 PSI	3.265
A-XMR-2495	42.3	3.17	DBLD	3.1	2267	47.0	2576	59200 PSI	3.265
ACCUR 2230	42.8	2.81	DBLD	2.8	2242	47.5	2548	56900 PSI	3.265
ACCUR 2460	43.2	2.83	DBLD	2.8	2242	48.0	2548	55700 PSI	3.265
225 Grain Jacketed Bullet									
H4350	56.0	4.06	NA	4.0	2494	62.0c	2744	NA NA	3.340
A-XMR-4350	54.0	4.00	NA	3.7	2306	60.0c	2620	55900 PSI	3.315
ACCUR 2700	55.1	3.77	NA	3.7	2404	58.0	2557	55800 PSI	3.315
ACCUR 2520	44.1	3.01	DBLD	2.8	2211	49.0	2512	58000 PSI	3.315
A-XMR-2495	42.3	3.17	DBLD	3.1	2203	47.0	2503	56700 PSI	3.315
A-XMR-2015	41.0	2.99	DBLD	2.8	2190	45.5	2489	56600 PSI	3.315
ACCUR 2460	42.3	2.77	DBLD	2.5	2189	47.0	2488	54800 PSI	3.315
225 Grain Barnes X Bullet									
ACCUR 2700	54.2	3.71	NA	3.7	2396	57.0	2549	57400 PSI	3.315
A-XMR-4350	52.2	3.86	NA	3.7	2226	58.0	2530	53500 PSI	3.315
ACCUR 2520	42.8	2.92	DBLD	2.8	2162	47.5	2457	57300 PSI	3.315
ACCUR 2460	41.0	2.69	DBLD	2.5	2117	45.5	2406	57800 PSI	3.315
A-XMR-2015	38.7	2.83	DBLD	2.8	2113	43.0	2401	57100 PSI	3.315
ACCUR 2230	40.5	2.66	DBLD	2.5	2079	45.0	2363	56000 PSI	3.315
250 Grain Jacketed Bullet									
H414	54.0	3.57	NA	3.4	2347	60.0	2583	NA NA	3.340
H4350	54.0	3.92	NA	3.7	2336	60.0	2569	NA NA	3.340
A-XMR-4350	52.2	3.86	NA	3.7	2214	58.0	2516	52400 PSI	3.315
ACCUR 2700	52.3	3.58	NA	3.4	2269	55.0	2414	55700 PSI	3.315
H4831	55.0	3.99	NA	3.7	2189	61.0c	2408	NA NA	3.340
275 Grain Jacketed Bullet									
H4831	53.0	3.84	NA	3.7	2135	59.0	2348	NA NA	3.340

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c = Compressed charge

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338 WINCHESTER MAGNUM



Useful case capacity 5.07 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
160 Grain Barnes X Bullet											
H380	66.0	4.56	NA	4.3	2893	73.0	3183	61156 PSI	3.280	.9865	.9802
H4350	65.0	4.71	2 SCOOPS	2.2	2868	72.0c	3156	59496 PSI	3.280	....	....
H-VARGET	57.0	4.17	NA	4.0	2865	63.0	3152	63170 PSI	3.280	.9843	.9707
H414	65.0	4.30	NA	4.0	2857	72.0	3143	61748 PSI	3.280	.9863	.9730
H4895	57.0	4.15	NA	4.0	2853	63.0	3139	61867 PSI	3.280	.9843	.9752
H4831	70.0c	5.07	2 SCOOPS	2.5	2842	78.0c	3127	59852 PSI	3.280	....	....
175 Grain Jacketed Bullet											
H450	75.3	4.92	2 SCOOPS	2.2	2869	80.0c	3039	59852 PSI	3.280	....	....
175 Grain Barnes X Bullet											
H380	64.0	4.42	NA	4.3	2773	71.0	3051	63052 PSI	3.280	.9863	.9819
H4350	63.0	4.57	NA	4.3	2771	70.0c	3049	62696 PSI	3.280	.9865	.9636
H4831	68.0	4.93	2 SCOOPS	2.2	2737	76.0c	3041	62341 PSI	3.280	....	....
H414	62.0	4.10	NA	4.0	2741	69.0	3016	62104 PSI	3.280	.9863	.9682
H4895	54.0	3.93	NA	3.7	2672	60.5	2968	62815 PSI	3.280	.9839	.9708
H-VARGET	53.0	3.87	NA	3.7	2673	59.0	2941	62222 PSI	3.280	.9841	.9600
180 Grain Jacketed Bullet											
H4350	69.0	5.00	2 SCOOPS	2.2	2953	74.5c	3157	61867 PSI	3.340	....	....
H380	65.0	4.49	NA	4.3	2828	72.5	3111	60563 PSI	3.340	.9873	.9808
H414	66.0	4.36	NA	4.3	2878	72.0	3107	61393 PSI	3.340	.9873	.9702
H-VARGET	57.0	4.17	NA	4.0	2806	63.5	3087	63052 PSI	3.340	.9854	.9762
H4831	70.0c	5.07	2 SCOOPS	2.5	2787	78.0c	3067	58193 PSI	3.340	....	....

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c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

338 WINCHESTER MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
180 Grain Jacketed Bullet (Continued)											
H4895	58.0	4.22	NA	4.0	2813	64.0	3066	61985 PSI	3.340	.9858	.9756
185 Grain Barnes X Bullet											
H4350	62.0	4.50	NA	4.3	2727	68.5	2971	61156 PSI	3.280	.9868	.9685
H4831	67.0	4.86	2 SCOOPS	2.2	2725	74.0c	2969	62341 PSI	3.280	....	....
H414	61.0	4.03	NA	4.0	2678	67.5	2946	61630 PSI	3.280	.9853	.9659
H380	60.0	4.15	NA	4.0	2675	67.0	2943	62459 PSI	3.280	.9865	.9726
H4895	53.0	3.86	NA	3.7	2649	58.5	2886	61630 PSI	3.280	.9845	.9721
H-VARGET	51.0	3.73	NA	3.7	2558	57.0	2841	62104 PSI	3.280	.9827	.9556
200 Grain Jacketed Bullet											
IMR4350	64.4	4.73	2 SCOOPS	2.2	2702	73.0c	3030	53900 CUP	3.330	....	....
IMR4831	70.8c	5.20	2 SCOOPS	2.5	2825	76.0c	3020	51000 CUP	3.330	....	....
RELODER19	70.7	4.99	2 SCOOPS	2.2	2771	78.0c	3020	52400 CUP	3.340	....	....
H4350	65.0	4.71	2 SCOOPS	2.2	2699	72.5c	2969	61867 PSI	3.300	....	....
v-N160	72.7c	5.34	2 SCOOPS	2.5	2631	80.8c	2969	NA NA	3.346	....	....
H4831	70.0c	5.07	2 SCOOPS	2.5	2695	77.5c	2965	62104 PSI	3.300	....	....
A-XMR-4350	66.1	4.89	2 SCOOPS	2.2	2708	73.0c	2950	62200 PSI	3.335	....	....
v-N165	82.2c	5.85	2 SCOOPS	2.8	2941	82.6c	2950	NA NA	3.280	....	....
H450	79.0c	5.16	2 SCOOPS	2.5	2942	79.0c	2942	56296 PSI	3.280	....	....
H414	63.0	4.16	NA	4.0	2700	69.5	2942	62104 PSI	3.300	.9869	.9700
RELODER15	60.2	4.25	NA	4.0	2745	65.0	2935	51300 CUP	3.340	....	....
H380	62.0	4.28	NA	4.0	2656	69.0	2921	62578 PSI	3.300	.9863	.9771
IMR4064	56.3	4.20	NA	4.0	2605	64.0	2920	54000 CUP	3.330	....	....
WIN 760	65.2	4.34	NA	4.3	2712	70.0	2900	51000 CUP	3.280	....	....
ACCUR 2700	64.9	4.44	NA	4.3	2685	70.5	2898	61200 PSI	3.335	....	....
IMR4895	54.0	3.93	NA	3.7	2568	61.0	2880	53700 CUP	3.330	....	....
H4895	56.0	4.08	NA	4.0	2615	62.0	2877	62341 PSI	3.300	.9842	.9732
IMR4320	55.4	3.97	NA	3.7	2563	63.0	2875	54000 CUP	3.330	....	....
RELODER22	78.0c	5.44	2 SCOOPS	2.5	2875	78.0c	2875	43200 CUP	3.340	....	....
A-XMR-4064	56.7	4.28	NA	4.0	2517	63.0	2861	59000 PSI	3.335	....	....
IMR3031	53.7	4.09	NA	4.0	2551	61.0	2860	54000 CUP	3.330	....	....
ACCUR 2520	60.1	4.10	NA	4.0	2737	62.5	2843	58600 PSI	3.335	....	....
A-XMR-3100	76.0c	5.68	2 SCOOPS	2.8	2833	76.0c	2833	55200 PSI	3.335	....	....
A-XMR-2495	51.6	3.86	NA	3.7	2576	57.0	2807	62200 PSI	3.335	....	....
H-VARGET	53.0	3.87	NA	3.7	2574	58.5	2805	60563 PSI	3.300	.9844	.9525
WIN MAG RIFLE	71.7c	5.15	2 SCOOPS	2.5	2660	71.7c	2660	43400 PSI	3.280	....	....
200 Grain Lead Bullet											
A-XMR-4350	56.7	4.20	NA	4.0	2264	63.0	2573	36400 PSI	3.200	....	....
ACCUR 8700	72.5	4.99	2 SCOOPS	2.2	2219	80.5c	2522	35800 PSI	3.200	....	....

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338 WINCHESTER MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
200 Grain Lead Bullet (Continued)										
A-XMR-3100	58.5	4.38	NA	4.3	2195	65.0	2494 36900 PSI	3.200	....	....
ACC XMP5744	28.0	2.10	DBLD	1.9	1815	38.0	2302 31100 PSI	3.200	....	....
210 Grain Jacketed Bullet										
H450	73.7	4.81	2 SCOOPS	2.2	2832	76.0	2914 58074 PSI	3.280	....	....
RELODER19	67.6	4.77	2 SCOOPS	2.2	2670	74.0c	2910 52000 CUP	3.330	....	....
H4831	68.0	4.93	2 SCOOPS	2.2	2626	75.5c	2888 61985 PSI	3.280	....	....
IMR4831	67.6	4.97	2 SCOOPS	2.2	2701	72.0c	2860 60000 PSI	3.300	....	....
H4350	63.0	4.57	NA	4.3	2595	70.0c	2855 61393 PSI	3.280	.9863	.9687
H414	60.0	3.97	NA	3.7	2588	67.0	2848 61393 PSI	3.280	.9863	.9715
RELODER22	76.0c	5.30	2 SCOOPS	2.5	2840	76.0c	2840 46200 CUP	3.330	....	....
IMR4350	64.5	4.74	2 SCOOPS	2.2	2672	68.7	2830 60000 PSI	3.300	....	....
H380	59.0	4.08	NA	4.0	2518	66.0	2797 62815 PSI	3.280	.9851	.9686
IMR7828	75.0c	5.44	2 SCOOPS	2.5	2790	75.0c	2790 56000 PSI	3.300	....	....
H4895	54.0	3.93	NA	3.7	2535	60.0	2788 62815 PSI	3.280	.9842	.9698
H-VARGET	53.0	3.87	NA	3.7	2555	58.5	2784 62222 PSI	3.280	.9844	.9594
220 Grain Jacketed Bullet										
WIN MAG RIFLE	72.2c	5.18	2 SCOOPS	2.5	2640	72.2c	2640 41800 PSI	3.280	....	....
225 Grain Jacketed Bullet										
RELODER19	68.7	4.85	2 SCOOPS	2.2	2630	75.3c	2865 52100 CUP	3.325	....	....
v-N165	79.8c	5.68	2 SCOOPS	2.8	2798	80.2c	2820 NA NA	3.280	....	....
H414	62.0	4.10	NA	4.0	2555	69.0	2811 61274 PSI	3.340	.9863	.9747
A-XMR-4350	62.1	4.60	2 SCOOPS	2.2	2471	69.0c	2809 64000 PSI	3.240	....	....
H4831	67.0	4.86	2 SCOOPS	2.2	2537	74.5c	2792 61630 PSI	3.340	....	....
RELODER22	77.0c	5.37	2 SCOOPS	2.5	2790	77.0c	2790 46200 CUP	3.325	....	....
H4350	63.0	4.57	NA	4.3	2556	69.5	2785 61274 PSI	3.340	.9868	.9653
v-N560	68.1	4.70	2 SCOOPS	2.2	2448	76.8c	2772 NA NA	3.307	....	....
H450	72.0	4.70	2 SCOOPS	2.2	2661	75.0	2765 58667 PSI	3.280	....	....
H380	58.0	4.01	NA	4.0	2438	65.0	2708 62341 PSI	3.340	.9851	.9739
v-N160	64.8	4.76	2 SCOOPS	2.2	2423	72.9c	2707 NA NA	3.307	....	....
RELODER15	56.9	4.02	NA	4.0	2506	61.8	2705 51600 CUP	3.325	....	....
A-XMR-4064	54.4	4.11	NA	4.0	2377	60.5	2702 62700 PSI	3.340	....	....
H4895	53.0	3.86	NA	3.7	2443	59.0	2688 62104 PSI	3.340	.9842	.9676
ACCUR 2700	58.9	4.03	NA	4.0	2364	65.5	2687 61400 PSI	3.240	....	....
A-XMR-3100	73.0c	5.46	2 SCOOPS	2.5	2682	73.0c	2682 55900 PSI	3.340	....	....
H-VARGET	52.0	3.80	NA	3.7	2436	57.5	2680 62459 PSI	3.340	.9827	.9575
A-XMR-2495	51.8	3.88	NA	3.7	2488	54.0	2585 58700 PSI	3.340	....	....
ACCUR 2520	52.0	3.55	NA	3.4	2412	56.0	2579 60700 PSI	3.340	....	....
225 Grain Barnes X Bullet										
RELODER22	73.0c	5.09	2 SCOOPS	2.5	2790	73.0c	2790 46200 CUP	3.335	....	....

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2 SCOOPS = Use TWO dippers of powder in each round.

338 WINCHESTER MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
225 Grain Barnes X Bullet (Continued)											
RELODER19	67.2	4.75	2 SCOOPS	2.2	2586	72.0c	2765	50900 CUP	3.335	....	....
RELODER15	52.0	3.67	NA	3.4	2400	56.5	2590	51600 CUP	3.335	....	....
230 Grain Winchester Fail Safe											
A-XMR-4350	63.0	4.66	2 SCOOPS	2.2	2471	70.0c	2808	49500 PSI	3.310	....	....
RELODER19	67.0	4.73	2 SCOOPS	2.2	2609	72.0c	2790	60500 PSI	3.335	....	....
RELODER22	72.9c	5.08	2 SCOOPS	2.5	2760	73.0c	2760	56400 PSI	3.335	....	....
ACCUR 2700	60.3	4.13	NA	4.0	2372	67.0	2696	47200 PSI	3.310	....	....
A-XMR-3100	65.7	4.91	2 SCOOPS	2.2	2357	73.0c	2679	42100 PSI	3.310	....	....
ACCUR 2520	52.2	3.56	NA	3.4	2302	58.0	2617	52300 PSI	3.310	....	....
A-XMR-2495	47.7	3.57	NA	3.4	2222	53.0	2525	48900 PSI	3.310	....	....
WIN MAG RIFLE	66.8	4.80	2 SCOOPS	2.2	2450	66.8	2450	44900 PSI	3.340	....	....
250 Grain Jacketed Bullet											
RELODER19	66.3	4.68	2 SCOOPS	2.2	2510	73.0c	2735	52300 CUP	3.330	....	....
H450	69.2	4.52	NA	4.3	2509	75.0	2708	61037 PSI	3.280	....	....
H4350	61.0	4.42	NA	4.3	2415	67.5	2657	61511 PSI	3.340	.9853	.9680
H4831	64.0	4.64	2 SCOOPS	2.2	2413	71.5c	2655	61985 PSI	3.340	....	....
v-N550	59.6	4.13	NA	4.0	2343	65.5	2625	NA NA	3.307	....	....
H1000	72.0c	5.13	2 SCOOPS	2.5	2500	76.0c	2622	55111 PSI	3.340	....	....
H414	59.0	3.90	NA	3.7	2406	65.0	2622	62696 PSI	3.340	.9857	.9701
RELODER22	73.0c	5.09	2 SCOOPS	2.5	2620	73.0c	2620	45300 CUP	3.330	....	....
v-N165	65.6	4.67	2 SCOOPS	2.2	2570	74.5c	2618	NA NA	3.339	....	....
A-XMR-3100	67.7	5.06	2 SCOOPS	2.5	2485	71.0c	2607	59100 PSI	3.340	....	....
v-N560	61.6	4.25	NA	4.0	2300	70.5	2605	NA NA	3.339	....	....
IMR7828	67.8	4.91	2 SCOOPS	2.2	2469	71.0c	2590	59000 PSI	3.325	....	....
A-XMR-4350	60.3	4.46	NA	4.3	2419	65.0	2586	60700 PSI	3.340	....	....
IMR4350	61.0	4.48	NA	4.3	2418	65.0	2560	60000 PSI	3.300	....	....
WIN MAG RIFLE	72.0c	5.17	2 SCOOPS	2.5	2550	72.0c	2550	51600 PSI	3.280	....	....
IMR4831	62.7	4.61	2 SCOOPS	2.2	2408	66.8	2550	60000 PSI	3.300	....	....
A-XMR-4064	52.2	3.94	NA	3.7	2242	58.0	2548	62500 PSI	3.340	....	....
ACCUR 2700	56.5	3.87	NA	3.7	2315	63.0	2547	62800 PSI	3.340	....	....
v-N160	61.1	4.48	NA	4.3	2299	68.2	2546	NA NA	3.339	....	....
WIN 760	59.5	3.96	NA	3.7	2404	63.2	2545	50500 CUP	3.280	....	....
ACCUR 2520	53.5	3.66	NA	3.4	2381	56.0	2474	58900 PSI	3.340	....	....
A-XMR-2495	46.9	3.51	NA	3.4	2222	52.0	2445	62500 PSI	3.340	....	....
260 Grain Jacketed Bullet											
v-N560	67.9	4.69	2 SCOOPS	2.2	2346	78.1c	2703	NA NA	3.350	....	....
v-N165	71.5c	5.09	2 SCOOPS	2.5	2398	80.2c	2674	NA NA	3.350	....	....
v-N160	59.9	4.40	NA	4.3	2260	71.4c	2635	NA NA	3.350	....	....

....STARTING LOADS....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

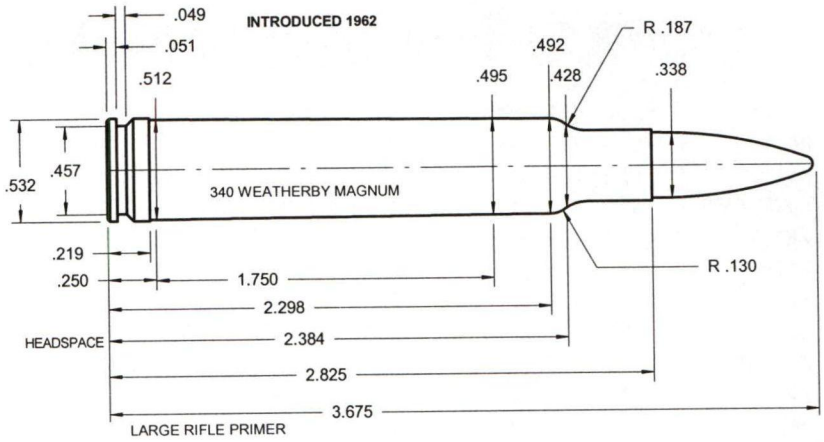
338 WINCHESTER MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
275 Grain Jacketed Bullet									
H1000	70.0	4.99	2 SCOOPS	2.2	2376	76.0c 2564	60563 PSI	3.340	....
H450	61.5	4.02	NA	4.0	2321	68.0 2529	62222 PSI	3.280	....
H4831	62.0	4.49	NA	4.3	2274	69.0 2502	61985 PSI	3.340	.9865 .9711
A-XMR-4350	57.1	4.23	NA	4.0	2190	63.5 2489	63800 PSI	3.240	....
v-N165	67.1	4.78	2 SCOOPS	2.2	2265	74.4c 2487	NA NA	3.346	....
H4350	57.0	4.13	NA	4.0	2224	63.5 2447	61748 PSI	3.340	.9854 .9642
H414	56.0	3.70	NA	3.4	2222	62.0 2445	62222 PSI	3.340	.9842 .9739
A-XMR-3100	63.8	4.77	2 SCOOPS	2.2	2297	68.0c 2432	60000 PSI	3.330	....
IMR7828	71.0c	5.15	2 SCOOPS	2.5	2430	71.0c 2430	43400 CUP	3.340	....
v-N160	64.8	4.76	2 SCOOPS	2.2	2430	65.1 2430	NA NA	3.280	....
H870	79.0c	5.42	2 SCOOPS	2.5	2416	79.0c 2416	50963 PSI	3.280	....
ACCUR 2700	55.3	3.79	NA	3.7	2114	61.5 2403	62800 PSI	3.240	....
WIN MAG RIFLE	67.1	4.82	2 SCOOPS	2.2	2390	67.1 2390	50800 PSI	3.280	....
A-XMR-4064	49.5	3.74	NA	3.7	2066	55.0 2348	62800 PSI	3.330	....
ACCUR 2520	47.4	3.23	DBLD	3.1	2067	53.0 2296	63000 PSI	3.330	....
A-XMR-2495	45.8	3.43	NA	3.4	2077	50.0 2242	61500 PSI	3.330	....
300 Grain Jacketed Bullet									
IMR4831	60.3	4.43	NA	4.3	2212	68.5 2480	54000 CUP	3.330	....
H450	61.8	4.04	NA	4.0	2267	67.0 2447	61037 PSI	3.280	....
IMR4350	57.0	4.19	NA	4.0	2149	64.5 2410	53800 CUP	3.330	....
H1000	73.0c	5.20	2 SCOOPS	2.5	2313	76.0c 2403	58667 PSI	3.280	....
H4350	59.6	4.32	NA	4.3	2224	64.0 2378	60444 PSI	3.280	....
H4831	62.4	4.52	NA	4.3	2278	65.0 2366	58667 PSI	3.280	....
v-N560	59.4	4.10	NA	4.0	2107	68.0 2362	NA NA	3.339	....
v-N160	57.7	4.24	NA	4.0	2076	65.4 2326	NA NA	3.339	....
H870	77.0c	5.28	2 SCOOPS	2.5	2308	77.0c 2308	50370 PSI	3.280	....
IMR4064	49.5	3.69	NA	3.4	2056	56.0 2305	53800 CUP	3.330	....
WIN 760	55.2	3.67	NA	3.4	2117	59.8 2285	51500 CUP	3.280	....
IMR4320	48.2	3.45	NA	3.4	2029	54.5 2275	53700 CUP	3.330	....
IMR4895	46.2	3.36	NA	3.1	2019	52.5 2265	54000 CUP	3.330	....
IMR3031	47.3	3.60	NA	3.4	2016	53.5 2260	53800 CUP	3.330	....

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c = Compressed charge Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

340 WEATHERBY MAGNUM



Useful case capacity 6.18 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
200 Grain Jacketed Bullet									
RELODER22	91.0c	6.34	2 SCOOPS	3.1	3170	91.0c	3170	53200 PSI	3.660
A-XMR-4350	74.7	5.53	2 SCOOPS	2.5	2777	83.0	3156	64100 PSI	3.600
A-XMR-3100	81.0	6.06	2 SCOOPS	2.8	2746	90.0c	3121	54300 PSI	3.600
RELODER19	85.0	6.00	2 SCOOPS	2.8	3095	85.0	3095	53300 PSI	3.660
H4831	85.0	6.16	2 SCOOPS	2.8	2837	90.0c	3040	NA NA	3.560
H4350	77.0	5.58	2 SCOOPS	2.5	2777	80.0	2994	NA NA	3.560
ACCUR 2700	73.2	5.01	2 SCOOPS	2.5	2811	77.0	2990	57100 PSI	3.600
RELODER15	71.8	5.07	2 SCOOPS	2.5	2990	71.8	2990	53100 PSI	3.660
210 Grain Jacketed Bullet									
RELODER22	89.2c	6.22	2 SCOOPS	3.1	3135	89.2c	3135	53500 PSI	3.595
RELODER19	84.3	5.95	2 SCOOPS	2.8	3075	84.3	3075	53500 PSI	3.595
IMR7828	90.5c	6.56	2 SCOOPS	3.1	3070	90.5c	3070	51600 PSI	3.608
RELODER15	70.8	5.00	2 SCOOPS	2.2	2930	70.8	2930	53500 PSI	3.595
225 Grain Jacketed Bullet									
RELODER22	88.0	6.13	2 SCOOPS	2.8	3035	88.0	3035	53400 PSI	3.645
RELODER19	83.7	5.91	2 SCOOPS	2.8	2995	83.7	2995	53500 PSI	3.645
IMR7828	89.0c	6.45	2 SCOOPS	3.1	2965	89.0c	2965	51000 PSI	6.645
H4831	81.0	5.87	2 SCOOPS	2.8	2620	86.0c	2889	NA NA	3.655
H4350	75.0	5.44	2 SCOOPS	2.5	2707	78.0	2866	NA NA	3.655
225 Grain Barnes X Bullet									
A-XMR-3100	81.0	6.06	2 SCOOPS	2.8	2607	90.0c	2963	59800 PSI	3.600

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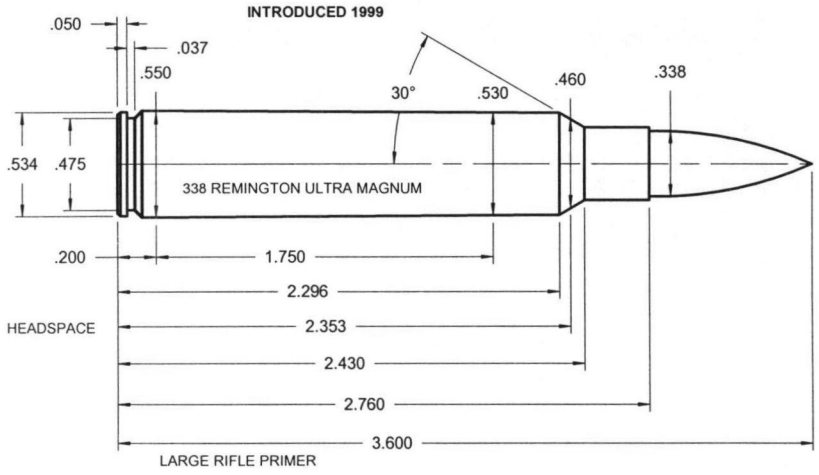
340 WEATHERBY MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
225 Grain Barnes X Bullet (Continued)									
A-XMR-4350	72.9	5.39	2 SCOOPS	2.5	2564	81.0	2914	61900 PSI	3.600
ACCUR 2700	70.3	4.81	2 SCOOPS	2.2	2619	74.0	2786	60700 PSI	3.600
230 Grain Winchester Fail Safe									
A-XMR-4350	74.7	5.53	2 SCOOPS	2.5	2625	83.0	2983	63400 PSI	3.560
A-XMR-3100	80.1	5.99	2 SCOOPS	2.8	2557	89.0c	2906	58200 PSI	3.560
250 Grain Jacketed Bullet									
RELODER22	84.7	5.90	2 SCOOPS	2.8	2880	84.7	2880	53300 PSI	3.665
A-XMR-3100	79.7	5.96	2 SCOOPS	2.8	2534	88.5c	2879	63500 PSI	3.600
RELODER19	80.7	5.70	2 SCOOPS	2.8	2865	80.7	2865	53500 PSI	3.665
IMR7828	87.5c	6.34	2 SCOOPS	3.1	2860	87.5c	2860	53100 PSI	3.658
H4831	78.0	5.65	2 SCOOPS	2.8	2487	83.0	2784	NA NA	3.560
A-XMR-4350	71.1	5.26	2 SCOOPS	2.5	2446	79.0	2780	61800 PSI	3.600
H4350	73.0	5.29	2 SCOOPS	2.5	2570	76.0	2724	NA NA	3.560
ACCUR 2700	71.3	4.88	2 SCOOPS	2.2	2555	75.0	2718	63400 PSI	3.600
H870	85.0	5.83	2 SCOOPS	2.8	2250	92.0c	2524	NA NA	3.560
275 Grain Jacketed Bullet									
A-XMR-3100	77.4	5.79	2 SCOOPS	2.8	2387	86.0c	2713	63500 PSI	3.600
A-XMR-4350	68.4	5.06	2 SCOOPS	2.5	2286	76.0	2598	59600 PSI	3.600
H870	85.0	5.83	2 SCOOPS	2.8	2314	90.0	2594	NA NA	3.560
H4350	71.0	5.15	2 SCOOPS	2.5	2460	74.0	2575	NA NA	3.560
H4831	75.0	5.44	2 SCOOPS	2.5	2376	80.0	2569	NA NA	3.560
ACCUR 2700	66.5	4.55	NA	4.3	2335	70.0	2484	61700 PSI	3.600

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338 REMINGTON ULTRA MAG



Useful case capacity 6.61 cc

INCLUDES LIGHT XMP5744 LOADS

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED FPS	Velocity Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
160 Grain Barnes X Bullet										
H4350	89.0	6.45	2 SCOOPS 3.1		3279	94.5c 3473	62700 PSI	3.500	....	....
H414	87.0	5.75	2 SCOOPS 2.8		3079	92.0 3462	63000 PSI	3.500	....	....
H4831	96.0c	6.96	2 SCOOPS 3.4		3235	102.0c3414	63200 PSI	3.500	....	....
H1000	99.0c	7.06	2 SCOOPS 3.4		3108	102.0c3215	49400 PSI	3.500	....	....
175 Grain Barnes X Bullet										
H4350	86.0	6.24	2 SCOOPS 3.1		3141	91.5c 3332	62900 PSI	3.500	.9893	.9720
H4831	93.5c	6.78	2 SCOOPS 3.1		3100	99.5c 3290	63000 PSI	3.500	....	....
H414	81.0	5.35	2 SCOOPS 2.5		3134	86.8 3287	63900 PSI	3.500	.9917	.9799
H1000	96.0c	6.84	2 SCOOPS 3.4		3013	102.0c3191	54000 PSI	3.500	....	....
185 Grain Barnes X Bullet										
H4350	86.0	6.24	2 SCOOPS 3.1		3125	91.0 3301	62800 PSI	3.570	....	....
H4831	91.0	6.60	2 SCOOPS 3.1		3035	97.0c 3233	62700 PSI	3.570	....	....
H1000	98.0c	6.99	2 SCOOPS 3.4		3090	102.0c3229	57900 PSI	3.570	....	....
H414	79.6	5.26	2 SCOOPS 2.5		3009	86.0 3217	61800 PSI	3.570	....	....
193 Grain Lead Bullet										
ACC XMP5744	25.0	1.88	DBLD	1.6	1595	40.0 2185	27600 PSI	3.310	....	....
200 Grain Jacketed Bullet										
A-XMR-3100	84.1	6.29	2 SCOOPS 3.1		2814	93.5c 3198	62300 PSI	3.575	....	....
A-XMR-4350	81.0	5.99	2 SCOOPS 2.8		2813	90.0c 3197	63300 PSI	3.575	....	....
IMR7828	86.9	6.30	2 SCOOPS 3.1		2946	94.2c 3180	62000 PSI	3.600	....	....
IMR4831	81.8	6.01	2 SCOOPS 2.8		2928	88.7 3160	62000 PSI	3.600	....	....

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2 SCOOPS = Use TWO dippers of powder in each round.

338 REMINGTON ULTRA MAG (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
200 Grain Jacketed Bullet (Continued)									
H4350	84.0	6.09	2 SCOOPS 2.8		3011	89.5 3156	63000 PSI	3.590	.9915 .9769
IMR4350	79.0	5.80	2 SCOOPS 2.8		2918	85.6 3150	62000 PSI	3.600	....
H4831	91.0	6.60	2 SCOOPS 3.1		2977	96.5c 3138	63000 PSI	3.590	....
H1000	96.0c	6.84	2 SCOOPS 3.4		2944	102.0c3127	58600 PSI	3.590	....
ACCUR 2700	74.2	5.08	2 SCOOPS 2.5		2741	82.5 3115	62100 PSI	3.575	....
H414	79.0	5.22	2 SCOOPS 2.5		2956	84.0 3089	63100 PSI	3.590	.9913 .9781
ACCUR 8700	97.2c	6.69	2 SCOOPS 3.1		2495	108.0c2836	44600 PSI	3.575	....
ACC XMP5744	40.0	3.01	DBLD	2.8	2134	40.0 2134	27400 PSI	3.575	....
210 Grain Jacketed Bullet									
H1000	96.0c	6.84	2 SCOOPS 3.4		2952	102.0c3153	62900 PSI	3.540	....
H4350	82.0	5.95	2 SCOOPS 2.8		2941	87.0 3107	62900 PSI	3.540	.9892 .9689
H4831	89.0	6.45	2 SCOOPS 3.1		2913	94.5c 3084	63100 PSI	3.540	....
215 Grain Jacketed Bullet									
H1000	96.0c	6.84	2 SCOOPS 3.4		2947	102.0c3127	62800 PSI	3.590	....
A-XMR-4350	83.0	6.14	2 SCOOPS 2.8		2940	89.0 3127	63000 PSI	3.575	.9899 .9748
A-XMR-3100	82.8	6.19	2 SCOOPS 2.8		2728	92.0c 3101	63400 PSI	3.575	....
H4350	83.0	6.02	2 SCOOPS 2.8		2940	88.0 3088	62700 PSI	3.590	.9903 .9709
H4831	89.0	6.45	2 SCOOPS 3.1		2881	94.5c 3057	62800 PSI	3.590	....
ACCUR 2700	72.4	4.96	2 SCOOPS 2.2		2646	80.5 3007	63000 PSI	3.575	....
ACCUR 8700	95.4	6.56	2 SCOOPS 3.1		2442	106.0c2775	43900 PSI	3.575	....
ACC XMP5744	40.0	3.01	DBLD	2.8	2115	40.0 2115	28700 PSI	3.575	....
225 Grain Jacketed Bullet									
H1000	94.0c	6.70	2 SCOOPS 3.1		2860	100.0c3058	63000 PSI	3.550	....
A-XMR-4350	76.5	5.66	2 SCOOPS 2.8		2650	85.0 3012	63600 PSI	3.490	....
A-XMR-3100	81.0	6.06	2 SCOOPS 2.8		2640	90.0c 3001	62600 PSI	3.490	....
IMR7828	86.3	6.25	2 SCOOPS 3.1		2833	92.0c 3000	61000 PSI	3.595	....
H4831	88.0	6.38	2 SCOOPS 3.1		2825	93.5c 2977	63000 PSI	3.550	....
H4350	81.0	5.87	2 SCOOPS 2.8		2832	86.0 2976	62600 PSI	3.550	.9899 .9716
IMR4350	75.1	5.52	2 SCOOPS 2.5		2724	81.4 2940	62000 PSI	3.595	....
IMR4831	79.0	5.80	2 SCOOPS 2.8		2776	84.2 2940	61000 PSI	3.595	....
ACCUR 2700	69.3	4.74	2 SCOOPS 2.2		2545	77.0 2893	62600 PSI	3.490	....
ACCUR 8700	93.6	6.44	2 SCOOPS 3.1		2398	104.0c2726	43900 PSI	3.490	....
ACC XMP5744	42.0	3.16	DBLD	3.1	2144	42.0 2144	32800 PSI	3.490	....

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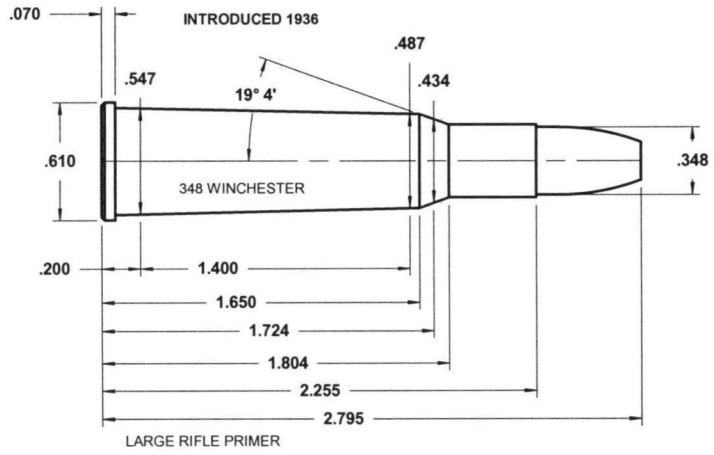
338 REMINGTON ULTRA MAG (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
250 Grain Jacketed Bullet											
H1000	92.0	6.56	2 SCOOPS	3.1	2756	98.0c	2923	62400 PSI	3.580	....	....
H4831	84.0	6.09	2 SCOOPS	2.8	2662	90.0	2858	62500 PSI	3.580	.9881	.9635
A-XMR-3100	77.4	5.79	2 SCOOPS	2.8	2508	86.0	2851	63300 PSI	3.575	....	....
IMR7828	81.6	5.91	2 SCOOPS	2.8	2654	87.0	2810	61000 PSI	3.525	....	....
A-XMR-4350	71.1	5.26	2 SCOOPS	2.5	2440	79.0	2773	61700 PSI	3.575	....	....
IMR4831	76.7	5.64	2 SCOOPS	2.8	2616	81.8	2770	61000 PSI	3.525	....	....
IMR4350	74.5	5.48	2 SCOOPS	2.5	2597	79.5	2750	61000 PSI	3.525	....	....
ACCUR 8700	93.6	6.44	2 SCOOPS	3.1	2419	104.0c	2749	48200 PSI	3.575	....	....
H4350	74.0	5.37	2 SCOOPS	2.5	2561	79.0	2707	53100 PSI	3.580	.9888	.9696
ACCUR 2700	63.9	4.38	NA	4.3	2345	71.0	2665	63000 PSI	3.575	....	....
ACC XMP5744	42.0	3.16	DBLD	3.1	2053	42.0	2053	36000 PSI	3.575	....	....
275 Grain Jacketed Bullet											
H1000	86.0	6.13	2 SCOOPS	2.8	2602	91.0	2729	62700 PSI	3.490	....	....
A-XMR-3100	75.6	5.65	2 SCOOPS	2.8	2372	84.0	2696	63600 PSI	3.490	....	....
H4831	81.0	5.87	2 SCOOPS	2.8	2570	86.0	2693	62500 PSI	3.490	.9908	.9748
H4350	73.0	5.29	2 SCOOPS	2.5	2507	78.0	2650	62900 PSI	3.490	.9888	.9728
A-XMR-4350	66.6	4.93	2 SCOOPS	2.2	2275	74.0	2586	61600 PSI	3.490	....	....
ACCUR 8700	88.2	6.07	2 SCOOPS	2.8	2191	98.0c	2490	42100 PSI	3.490	....	....
ACCUR 2700	59.4	4.07	NA	4.0	2174	66.0	2471	62000 PSI	3.490	....	....
ACC XMP5744	44.0	3.31	NA	3.1	2082	44.0	2082	42900 PSI	3.490	....	....

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348 WINCHESTER



Useful case capacity 4.32 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
150 Grain Jacketed Bullet									
RELODER 7	48.0	3.49	NA	3.4	2750	48.0	2750	34900 CUP	2.790
180 Grain Jacketed Bullet									
BL-C(2)	44.5	2.87	DBLD	2.8	2381	44.5	2381	31900 CUP	2.770
H450	56.5	3.69	NA	3.4	2338	56.5	2338	32600 CUP	2.770
200 Grain Jacketed Bullet									
A-XMR-4350	55.8	4.13	NA	4.0	2223	62.0c	2526	24600 PSI	2.810
H4831	65.0c	4.71	2 SCOOPS	2.2	2416	68.0c	2510	NA NA	2.830
ACCUR 2700	53.2	3.64	NA	3.4	2332	56.0	2481	26700 PSI	2.810
A-XMR-3100	61.2c	4.58	2 SCOOPS	2.2	2178	68.0c	2475	26700 PSI	2.810
RELODER 7	44.2	3.22	DBLD	3.1	2286	45.0	2330	35800 CUP	2.790
H450	62.0	4.05	NA	4.0	2319	62.0	2319	32800 CUP	2.770
ACC XMP5744	30.6	2.30	DBLD	2.2	1917	34.0	2179	28100 PSI	2.810
220 Grain Jacketed Bullet									
H4831	57.2	4.15	NA	4.0	2205	65.0c	2472	NA NA	2.830
A-XMR-4350	53.1	3.93	NA	3.7	2114	59.0c	2402	24900 PSI	2.750
A-XMR-3100	57.6	4.31	NA	4.3	2095	64.0c	2381	25400 PSI	2.750
ACCUR 2700	50.4	3.45	NA	3.4	2175	53.0	2314	25800 PSI	2.750
H450	57.0	3.72	NA	3.7	2214	57.0	2214	33500 CUP	2.770
ACC XMP5744	28.8	2.16	DBLD	1.9	1783	32.0	2027	27900 PSI	2.750
250 Grain Jacketed Bullet									
A-XMR-3100	55.8	4.17	NA	4.0	2021	62.0c	2297	27100 PSI	2.800

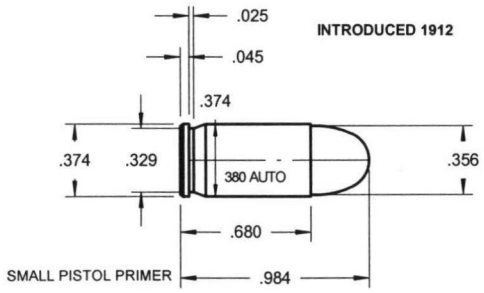
CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
250 Grain Jacketed Bullet (Continued)									
A-XMR-4350	49.5	3.66	NA	3.4	1974	55.0	2243	26300 PSI	2.800
ACCUR 2700	47.5	3.25	DBLD	3.1	2018	50.0	2147	26300 PSI	2.800
H4895	44.0	3.20	DBLD	3.1	1951	47.0	2066	NA NA	2.830
ACC XMP5744	27.4	2.06	DBLD	1.9	1650	30.5	1876	28200 PSI	2.800
250 Grain Lead Bullet									
A-XMR-4350	49.5	3.66	NA	3.4	1947	55.0	2212	23700 PSI	2.800
A-XMR-3100	54.0	4.04	NA	4.0	1874	60.0c	2130	20000 PSI	2.800

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380 AUTO or 9mm KURTZ



Useful case capacity 0.49 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
88 Grain Jacketed Bullet									
BLUE DOT	**6.0c**	**.52**	**.49**	**.5**	**1000**	6.0c	1000	14700 PSI	**0.960**
HERCO	**4.1**	**.46**	**.46**	**NA**	**995**	4.1	995	14900 PSI	**0.960**
AMER-SELECT	**3.6**	**.48**	**.46**	**NA**	**951**	3.7c	987	19700 PSI	**0.960**
BULLSEYE	**3.2**	**.34**	**.34**	**.3**	**980**	3.2	980	14300 PSI	**0.960**
RED DOT	**3.1**	**.44**	**.43**	**NA**	**965**	3.1	965	14600 PSI	**0.960**
GREEN DOT	**3.4**	**.43**	**.43**	**NA**	**940**	3.4	940	14600 PSI	**0.960**
UNIQUE	**4.0**	**.44**	**.43**	**NA**	**920**	4.0	920	13600 PSI	**0.960**
90 Grain Jacketed Bullet									
BLUE DOT	**6.0c**	**.52**	**.49**	**.5**	**980**	6.0c	980	14800 PSI	**0.960**
TITEGROUP	**2.7**	**.23**	**.21**	**NA**	**833**	3.2	970	15600 CUP	**0.955**
HERCO	**4.0**	**.45**	**.43**	**NA**	**960**	4.0	960	14800 PSI	**0.960**
HP38	**3.2**	**.30**	**.30**	**NA**	**878**	3.5	957	15400 CUP	**0.955**
UNIVERSAL	**3.2**	**.35**	**.34**	**.3**	**815**	3.6	955	15700 CUP	**0.955**
UNIQUE	**4.0**	**.44**	**.43**	**NA**	**940**	4.0	940	14000 PSI	**0.960**
RED DOT	**3.1**	**.44**	**.43**	**NA**	**940**	3.1	940	14300 PSI	**0.960**
BULLSEYE	**3.0**	**.32**	**.32**	**.3**	**940**	3.0	940	12900 PSI	**0.960**
IMR 700X	**2.7**	**.37**	**.37**	**NA**	**846**	2.9	895	15900 CUP	**0.970**
GREEN DOT	**3.2**	**.40**	**.40**	**NA**	**890**	3.2	890	12800 PSI	**0.960**
IMR PB	**2.9**	**.34**	**.34**	**.3**	**850**	3.0	890	15700 CUP	**0.970**
SR7625	**3.2**	**.33**	**.32**	**.3**	**880**	3.2	880	14700 CUP	**0.970**
SR4756	**3.5**	**.38**	**.37**	**NA**	**856**	3.6	880	15500 CUP	**0.970**

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c = Compressed charge

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380 AUTO or 9mm KURTZ (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
90 Grain Jacketed Bullet (Continued)									
IMR 800X	4.0	.42	.40	NA	846	4.1	870	15500 CUP	0.970
90 Grain XTP									
POWER PISTOL	3.3	.30	.30	NA	831	4.8	1105	21500 PSI	0.960
v-N320	3.0	.36	.34	NA	930	3.5	1073	NA NA	0.980
v-N310	2.4	.29	.27	NA	875	2.8	1010	NA NA	0.980
ACCUR #2	3.3	.27	.27	NA	830	3.7	930	17000 CUP	0.960
ACCUR #5	4.3	.27	.27	NA	837	4.8	920	16700 CUP	0.960
95 Grain Jacketed Bullet									
v-N320	3.1	.38	.37	NA	942	3.6	1066	NA NA	0.980
POWER PISTOL	4.2	.38	.37	NA	968	4.7	1065	21000 PSI	0.975
v-N310	2.5	.30	.30	.3	886	2.8	994	NA NA	0.980
TITEGROUP	2.7	.23	.21	NA	818	3.2	953	15600 CUP	0.970
ACCUR #2	3.3	.28	.27	NA	841	3.7	934	14600 CUP	0.945
UNIQUE	4.2	.46	.46	NA	910	4.2	910	14600 PSI	0.975
HERCO	4.4c	.49	.49	NA	910	4.4c	910	14600 PSI	0.975
BLUE DOT	6.5c	.56	.53	.5	910	6.5c	910	14200 PSI	0.975
UNIVERSAL	3.1	.34	.34	.3	814	3.5	901	15500 CUP	0.970
BULLSEYE	3.2	.34	.34	.3	900	3.2	900	14700 PSI	0.975
ACCUR #5	4.3	.27	.27	NA	811	4.8	891	14000 CUP	0.945
GREEN DOT	3.5	.44	.43	NA	890	3.5	890	14700 PSI	0.975
RED DOT	3.1	.44	.43	NA	885	3.1	885	14900 PSI	0.975
HP38	2.9	.27	.27	NA	812	3.2	884	15400 CUP	0.970
WIN 231	3.2	.30	.30	.3	860	3.2	860	15000 CUP	0.975
100 Grain Jacketed Bullet									
POWER PISTOL	4.2	.38	.37	NA	959	4.6	1035	20600 PSI	0.975
v-N320	2.9	.35	.34	.3	889	3.3	1007	NA NA	0.980
UNIQUE	4.2	.46	.46	NA	977	4.3	1005	19500 PSI	0.975
BULLSEYE	3.1	.33	.32	.3	931	3.3	985	20100 PSI	0.975
GREEN DOT	2.9	.37	.37	NA	910	3.1	955	20000 PSI	0.975
RED DOT	2.7	.38	.37	NA	877	2.8	920	19900 PSI	0.975
v-N310	2.2	.27	.27	NA	814	2.5	912	NA NA	0.980
TITEGROUP	2.6	.22	.21	NA	806	3.0	912	14700 CUP	0.980
ACCUR #5	4.4	.27	.27	NA	814	4.9	895	17000 CUP	0.975
UNIVERSAL	3.0	.33	.32	.3	793	3.4	889	16100 CUP	0.980
SR4756	3.3	.36	.34	NA	827	3.5	875	15900 CUP	0.980
SR7625	2.9	.30	.30	.3	831	3.0	855	15500 CUP	0.980
HP38	2.9	.27	.27	NA	795	3.1	843	15400 CUP	0.980
IMR 800X	4.0	.43	.43	NA	840	4.0	840	14700 CUP	0.980

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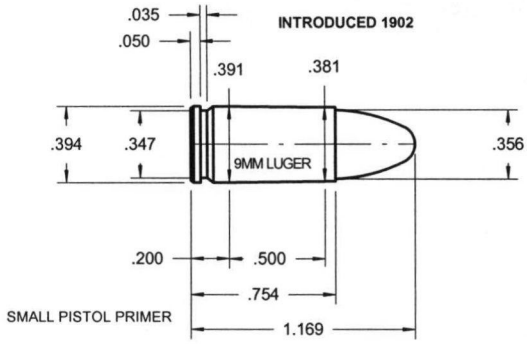
380 AUTO or 9mm KURTZ (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
100 Grain Jacketed Bullet (Continued)									
IMR 700X	2.7	.36	.34	NA	824	2.7	840	15200 CUP	0.980
IMR PB	2.7	.33	.32	.3	811	2.8	835	15400 CUP	0.980
ACCUR #2	3.1	.26	.24	NA	736	3.4	793	16300 CUP	0.975
100 Grain Lead Bullet									
ACCUR #2	3.2	.27	.27	NA	841	3.6	943	17000 CUP	0.950
ACCUR #5	4.1	.26	.24	NA	846	4.5	922	16900 CUP	0.975
115 Grain Jacketed Bullet									
HP38	2.7	.25	.24	NA	778	2.7	778	NA	NA 0.950
124 Grain Jacketed Bullet									
HP38	2.4	.22	.21	NA	714	2.4	714	NA	NA 0.950

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9mm LUGER or 9mm PARABELLUM



Useful case capacity 0.74 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
88 Grain Jacketed Bullet										
VEC AO	6.9c	.83	.82	NA	1444	6.9c	1444	NA	NA	1.100
VEC BA9	4.6	.42	.40	NA	1198	4.9	1270	27417	CIP	1.100
90 Grain Jacketed Bullet										
HS6	7.9	.56	.53	.5	1361	8.2	1413	30900	CUP	1.010
ACCUR #5	6.8	.42	.40	NA	1209	7.5	1374	33000	CUP	1.095
HP38	5.5	.51	.49	.5	1286	5.8	1349	30100	CUP	1.010
ACCUR #7	8.6	.56	.53	.5	1158	9.5	1316	31200	CUP	1.095
TITEGROUP	4.7	.40	.40	NA	1233	5.0	1305	30000	CUP	1.010
ACCUR #2	4.8	.40	.40	NA	1133	5.3	1287	33000	CUP	1.095
UNIVERSAL	5.0	.55	.53	.5	1162	5.5	1266	30100	CUP	1.010
90 Grain XTP										
v-3N37	6.6	.60	.57	NA	1453	7.4	1532	NA	NA	1.063
v-N350	6.6	.64	.61	NA	1417	7.4	1522	NA	NA	1.063
v-N340	5.7	.61	.61	NA	1411	6.4	1508	NA	NA	1.063
v-N330	5.6	.60	.57	NA	1394	6.2	1455	NA	NA	1.063
v-N320	4.9	.59	.57	NA	1332	5.4	1397	NA	NA	1.063
v-N310	4.0	.49	.49	NA	1224	4.3	1272	NA	NA	1.063
95 Grain Jacketed Bullet										
POWER PISTOL	7.3	.65	.61	NA	1365	7.8	1445	32900	PSI	1.055
HS6	7.3	.52	.49	.5	1265	7.8	1339	31300	CUP	1.020
UNIQUE	6.4	.70	.66	.7	1284	6.5	1308	31400	PSI	1.055

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9mm LUGER or 9mm PARABELLUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
95 Grain Jacketed Bullet (Continued)									
TITEGROUP	4.7	.40	.40	NA	1226	5.0	1298	32000 CUP	1.020
BULLSEYE	5.4	.57	.57	.5	1271	5.5	1295	31400 PSI	1.055
UNIVERSAL	4.6	.51	.49	.5	1153	5.2	1292	31700 CUP	1.020
WIN 571	7.3	.50	.49	.5	1165	8.3	1290	33200 PSI	1.095
RED DOT	5.1	.72	.71	.7	1237	5.3c	1285	32100 PSI	1.055
WIN ACTION PI	5.6	.45	.43	NA	1140	6.4	1285	33000 PSI	1.095
AMER-SELECT	5.6c	.75	.71	.7	1197	6.0c	1280	33200 PSI	1.055
HP38	4.8	.44	.43	NA	1168	5.3	1273	31400 CUP	1.020
ACCUR #2	4.8	.40	.40	NA	1110	5.3	1261	33000 CUP	1.080
ACCUR #5	6.5	.40	.40	NA	1110	7.2	1261	30700 CUP	1.080
ACCUR #7	8.2	.54	.53	.5	1096	9.1	1246	29100 CUP	1.080
WIN 540	6.6	.45	.43	NA	1145	7.1	1245	33100 PSI	1.095
GREEN DOT	5.5	.69	.66	.7	1240	5.5	1240	25500 PSI	1.055
WIN 231	4.6	.43	.43	NA	1145	5.1	1235	32600 PSI	1.095
HERCO	6.8c	.76	.76	.7	1225	6.8c	1225	24400 PSI	1.055
wSUPER-LIT	4.3	.36	.34	NA	1100	4.8	1195	32700 PSI	1.095
BLUE DOT	8.3	.72	.71	.7	1180	8.3	1180	22000 PSI	1.055
100 Grain Jacketed Bullet									
v-3N37	6.7	.61	.61	NA	1335	7.5	1452	NA NA	1.083
v-N340	5.9	.63	.61	NA	1319	6.6	1436	NA NA	1.083
v-N330	5.5	.59	.57	NA	1309	6.0	1384	NA NA	1.083
v-N320	4.8	.58	.57	.5	1243	5.3	1328	NA NA	1.083
HS6	7.2	.51	.49	.5	1265	7.5	1313	28600 CUP	1.050
TITEGROUP	4.7	.40	.40	NA	1217	5.0	1289	30300 CUP	1.050
HP38	5.1	.47	.46	NA	1199	5.5	1282	28400 CUP	1.050
ACCUR #7	8.1	.53	.53	.5	1103	9.0	1253	29800 CUP	1.095
ACCUR #5	6.3	.39	.37	NA	1091	7.0	1240	29800 CUP	1.095
ACCUR #2	4.9	.41	.40	NA	1067	5.4	1213	33000 CUP	1.095
UNIVERSAL	4.8	.53	.53	.5	1112	5.3	1212	31500 CUP	1.050
VEC BA9	4.3	.40	.40	NA	1109	4.6	1204	31814 CIP	1.169
114 Grain Lead Bullet									
WIN ACTION PI	4.8	.39	.37	NA	1040	5.7	1160	33200 PSI	1.110
WIN 540	5.6	.38	.37	NA	1050	6.2	1125	33000 PSI	1.110
WIN 231	3.8	.35	.34	NA	1010	4.2	1115	32500 PSI	1.110
wSUPER-LIT	3.8	.32	.32	.3	965	4.1	1050	32700 PSI	1.110
115 Grain Jacketed Bullet									
POWER PISTOL	6.2	.55	.53	.5	1186	6.7	1280	33500 PSI	1.120
HS6	6.7	.48	.46	NA	1188	7.0	1234	29400 CUP	1.125

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9mm LUGER or 9mm PARABELLUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
115 Grain Jacketed Bullet (Continued)									
ACCUR #7	7.9	.52	.49	.5	1052	8.8	1196	29700 CUP	1.095
wSUPER-FLD	4.9	.41	.40	NA	1060	5.7	1195	31900 PSI	1.095
ACCUR #5	6.3	.39	.37	NA	1049	7.0	1192	31400 CUP	1.095
BLUE DOT	8.0	.69	.66	NA	1190	8.0	1190	29200 PSI	1.120
VEC SP8	6.8	.46	.46	NA	1181	6.8	1181	31930 CIP	1.169
BULLSEYE	5.0	.53	.53	.5	1169	5.0	1180	31000 PSI	1.120
WIN 571	7.0	.48	.46	NA	1080	7.6	1180	33000 PSI	1.095
HERCO	6.3	.71	.71	.7	1180	6.3	1180	28700 PSI	1.120
SR4756	6.0	.66	.66	NA	1120	6.3	1175	30600 CUP	1.110
UNIQUE	5.1	.56	.53	.5	1092	5.5	1168	33200 PSI	1.120
VEC BA9	5.1	.47	.46	NA	1082	5.6	1168	36284 CIP	1.169
HP38	4.7	.44	.43	NA	1081	5.1	1167	28100 CUP	1.125
TITEGROUP	4.5	.38	.37	NA	1135	4.8	1158	30500 CUP	1.125
IMR 800X	6.2	.67	.66	NA	1106	6.5	1150	30300 CUP	1.110
GREEN DOT	4.7	.59	.57	NA	1150	4.7	1150	30000 PSI	1.120
WIN ACTION PI	5.3	.43	.43	NA	1055	5.8	1150	33200 PSI	1.095
RED DOT	4.3	.60	.57	NA	1114	4.5	1150	32600 PSI	1.120
UNIVERSAL	4.5	.49	.49	NA	1045	5.0	1149	31200 CUP	1.125
AMER-SELECT	4.9	.65	.61	NA	1072	5.2	1135	32800 PSI	1.140
IMR 700X	4.2	.56	.53	.5	1017	4.7	1130	32600 CUP	1.110
WIN 540	6.1	.42	.40	NA	1050	6.6	1130	33400 PSI	1.095
WIN 231	4.3	.40	.40	NA	1010	4.8	1120	32100 PSI	1.095
wSUPER-LIT	4.1	.35	.34	.3	1025	4.5	1105	33600 PSI	1.095
SR7625	4.6	.48	.46	NA	995	5.1	1095	32400 CUP	1.110
ACCUR #2	4.0	.34	.34	.3	961	4.4	1092	29900 CUP	1.100
IMR PB	4.3	.52	.49	.5	968	4.8	1075	32500 CUP	1.110
IMR4227	8.8	.68	.66	NA	820	8.8	820	14500 PSI	1.110
115 Grain Lead Bullet									
ACCUR #7	7.8	.51	.49	.5	1078	8.7	1225	33000 CUP	1.100
ACCUR #5	5.7	.36	.34	NA	1040	6.3	1182	33000 CUP	1.100
ACCUR #2	4.4	.37	.37	NA	1008	4.9	1146	32900 CUP	1.100
115 Grain Copper Plated									
v-N350	5.8	.57	.57	.5	1217	6.5	1304	NA NA	1.142
v-3N37	6.2	.57	.57	.5	1211	6.6	1271	NA NA	1.142
v-N340	5.1	.54	.53	.5	1175	5.6	1245	NA NA	1.142
v-N330	4.7	.51	.49	.5	1138	5.2	1201	NA NA	1.142
v-N320	4.1	.50	.49	.5	1086	4.5	1157	NA NA	1.142
ACCUR #2	3.9	.33	.32	.3	968	4.3	1100	33300 PSI	1.100

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

9mm LUGER or 9mm PARABELLUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
115 Grain Copper Plated (Continued)										
ACCUR #7	6.6	.43	.43	NA	968	7.3	1100	31100	PSI	1.100
ACCUR #5	5.2	.32	.32	.3	967	5.8	1099	30700	PSI	1.100
115 Grain XTP										
v-3N37	6.2	.57	.57	.5	1237	6.9	1328	NA	NA	1.142
v-N340	5.5	.59	.57	.5	1224	6.1	1327	NA	NA	1.142
v-N350	6.0	.59	.57	.5	1243	6.6	1318	NA	NA	1.142
v-N330	5.0	.54	.53	.5	1188	5.5	1272	NA	NA	1.142
v-N320	4.1	.50	.49	.5	1135	4.6	1206	NA	NA	1.142
116 Grain Jacketed Bullet										
VEC AO	5.2	.62	.61	NA	1119	5.2	1119	22917	CIP	1.169
VEC BA9	4.0	.37	.37	NA	1001	4.3	1099	33817	CIP	1.169
120 Grain Jacketed Bullet										
v-N350	6.0	.59	.57	.5	1194	6.5	1277	NA	NA	1.130
v-N340	5.1	.54	.53	.5	1155	5.7	1234	NA	NA	1.130
v-3N37	5.7	.52	.49	.5	1132	6.2	1209	NA	NA	1.130
v-N330	4.8	.52	.49	.5	1132	5.3	1207	NA	NA	1.130
v-N320	4.0	.48	.46	NA	1030	4.4	1103	NA	NA	1.130
124 Grain Jacketed Bullet										
v-3N37	6.1	.56	.53	.5	1188	6.6	1252	NA	NA	1.142
v-N340	5.3	.56	.53	.5	1158	5.8	1233	NA	NA	1.142
v-N350	5.6	.55	.53	.5	1161	6.1	1232	NA	NA	1.142
ACCUR #5	5.8	.36	.34	NA	1069	6.4	1200	33000	CUP	1.095
v-N330	5.0	.54	.53	.5	1125	5.3	1196	NA	NA	1.142
HS6	6.4	.46	.46	NA	1103	6.8	1169	27100	CUP	1.090
ACCUR #7	7.2	.47	.46	NA	1026	8.0	1166	29800	CUP	1.095
SR4756	5.6	.62	.61	NA	1055	6.3	1160	32400	CUP	1.135
TITEGROUP	4.1	.35	.34	.3	1063	4.4	1136	30600	CUP	1.090
WIN 571	6.8	.46	.46	NA	1035	7.5	1125	32900	PSI	1.135
UNIVERSAL	4.3	.47	.46	NA	996	4.9	1118	30600	CUP	1.090
IMR 800X	6.5	.70	.66	.7	1115	6.5	1115	28600	CUP	1.135
wSUPER-FLD	4.7	.39	.37	NA	1015	5.3	1115	32700	PSI	1.095
v-N320	4.0	.48	.46	NA	1037	4.4	1115	NA	NA	1.142
IMR 700X	4.3	.57	.57	.5	999	4.8	1110	32600	CUP	1.135
WIN ACTION PI	4.9	.40	.40	NA	1005	5.6	1105	33300	PSI	1.095
HP38	4.4	.41	.40	NA	1008	4.8	1088	28800	CUP	1.090
WIN 540	5.6	.38	.37	NA	1000	6.1	1065	32900	PSI	1.095
WIN 231	4.2	.39	.37	NA	1005	4.5	1060	32700	PSI	1.095
IMR PB	4.4	.53	.53	.5	945	4.9	1050	32500	CUP	1.135

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c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

9mm LUGER or 9mm PARABELLUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
					....STARTING LOADS....					
124 Grain Jacketed Bullet (Continued)										
ACCUR #2	3.7	.31	.30	.3	923	4.1	1049	33800	PSI	1.100
SR7625	4.4	.46	.46	NA	945	4.9	1040	32300	CUP	1.135
wSUPER-LIT	3.8	.32	.32	.3	970	4.1	1025	32600	PSI	1.095
IMR4227	8.8	.68	.66	NA	790	8.8	790	13200	CUP	1.135
124 Grain Lead Bullet										
v-3N37	5.5	.50	.49	.5	1171	6.0	1234	NA	NA	1.142
v-N340	4.8	.51	.49	.5	1155	5.3	1230	NA	NA	1.142
v-N350	5.1	.50	.49	.5	1148	5.6	1205	NA	NA	1.142
v-N330	4.5	.49	.49	NA	1142	4.9	1186	NA	NA	1.142
v-N320	3.8	.46	.46	NA	1086	4.2	1138	NA	NA	1.142
WIN ACTION PI	4.4	.36	.34	NA	955	5.1	1080	33200	PSI	1.095
wSUPER-FLD	4.0	.34	.34	.3	945	4.7	1055	27300	PSI	1.095
WIN 540	5.0	.34	.34	.3	950	5.7	1050	33500	PSI	1.095
WIN 231	3.3	.31	.30	.3	910	4.0	1035	32900	PSI	1.095
wSUPER-LIT	3.4	.29	.27	NA	920	3.8	985	33500	PSI	1.095
124 Grain Copper Plated										
v-N350	5.5	.54	.53	.5	1135	6.1	1216	NA	NA	1.142
v-3N37	5.5	.50	.49	.5	1135	6.1	1214	NA	NA	1.142
v-N340	4.7	.50	.49	.5	1096	5.3	1171	NA	NA	1.142
v-N330	4.4	.47	.46	NA	1079	4.8	1146	NA	NA	1.142
v-N320	3.8	.46	.46	NA	1017	4.2	1086	NA	NA	1.142
ACCUR #7	6.2	.40	.40	NA	940	6.9	1069	33600	PSI	1.100
ACCUR #2	3.7	.31	.30	.3	930	4.1	1057	29500	CUP	1.095
ACCUR #5	4.9	.31	.30	.3	909	5.4	1034	32100	PSI	1.100
125 Grain Jacketed Bullet										
VEC SP8	6.6	.45	.43	NA	1280	6.6	1280	29028	CIP	1.169
POWER PISTOL	6.0	.53	.53	.5	1133	6.6	1235	34000	PSI	1.150
HERCO	6.1	.69	.66	NA	1114	6.5	1180	32700	PSI	1.150
BLUE DOT	8.2	.71	.71	.7	1170	8.2	1170	29900	PSI	1.150
BULLSEYE	4.7	.50	.49	.5	1111	4.9	1155	32000	PSI	1.150
GREEN DOT	5.0	.63	.61	NA	1106	5.2	1150	32100	PSI	1.150
RED DOT	4.3	.61	.61	NA	1071	4.6	1145	33000	PSI	1.150
HP38	4.8	.44	.43	NA	1088	4.8	1088	28800	CUP	1.095
UNIQUE	4.8	.52	.49	.5	1047	4.9	1077	31700	PSI	1.150
AMER-SELECT	4.4	.59	.57	.5	981	4.7	1050	33100	PSI	1.150
125 Grain Lead Bullet										
BLUE DOT	8.2	.71	.71	.7	1190	8.2	1190	29700	PSI	1.150
BULLSEYE	4.7	.50	.49	.5	1121	4.9	1165	32100	PSI	1.150

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9mm LUGER or 9mm PARABELLUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
125 Grain Lead Bullet (Continued)									
HERCO	6.2	.70	.66	.7	1165	6.2	1165	28500 PSI	1.150
GREEN DOT	5.0	.63	.61	NA	1121	5.2	1165	32100 PSI	1.150
ACCUR #7	7.5	.49	.49	NA	1017	8.3	1156	32500 CUP	1.100
RED DOT	4.3	.61	.61	NA	1101	4.5	1145	32000 PSI	1.150
UNIQUE	5.3	.58	.57	.5	1106	5.5	1139	31700 PSI	1.150
ACCUR #5	5.6	.35	.34	.3	997	6.2	1133	32800 CUP	1.100
VEC AO	4.6	.55	.53	.5	1066	4.9	1129	35356 CIP	1.169
VEC BA9	4.3	.40	.40	NA	1093	4.3	1093	32787 CIP	1.169
ACCUR #2	4.1	.34	.34	.3	935	4.5	1063	30100 CUP	1.100
VEC BA10	2.3	.31	.30	.3	879	2.3	879	28462 CIP	1.169
126 Grain Lead Bullet									
VEC BA9	4.6	.42	.40	NA	1066	4.9	1129	33338 CIP	1.169
VEC AO	4.9	.59	.57	.5	1056	4.9	1056	26023 CIP	1.169
VEC BA10	2.8	.38	.37	NA	925	2.8	925	32104 CIP	1.169
130 Grain Jacketed Bullet									
v-N105	7.2	.65	.61	NA	1171	7.5	1252	NA NA	1.142
v-N350	5.2	.51	.49	.5	1096	5.6	1148	NA NA	1.142
v-3N37	5.1	.47	.46	NA	1083	5.7	1145	NA NA	1.142
ACCUR #7	7.3	.48	.46	NA	1004	8.1	1141	31500 CUP	1.095
v-N340	4.4	.47	.46	NA	1079	4.9	1132	NA NA	1.142
v-N330	4.2	.45	.43	NA	1047	4.6	1109	NA NA	1.142
TITEGROUP	4.1	.35	.34	.3	1032	4.4	1102	32500 CUP	1.120
HS6	6.3	.45	.43	NA	1040	6.6	1090	26900 CUP	1.120
v-N320	3.7	.45	.43	NA	997	4.1	1062	NA NA	1.142
ACCUR #5	5.3	.33	.32	.3	929	5.9	1060	33000 CUP	1.095
UNIVERSAL	4.2	.46	.46	NA	953	4.7	1058	30400 CUP	1.120
HP38	4.3	.40	.40	NA	981	4.6	1050	28300 CUP	1.120
ACCUR #2	4.2	.35	.34	.3	906	4.7	1029	30900 CUP	1.095
130 Grain Lead Bullet									
ACCUR #7	7.4	.48	.46	NA	1030	8.2	1170	33000 CUP	1.095
ACCUR #5	5.4	.34	.34	.3	1018	6.0	1157	33000 CUP	1.095
ACCUR #2	3.6	.30	.30	.3	895	4.0	1017	31100 CUP	1.095
135 Grain Jacketed Bullet									
ACCUR #5	5.5	.34	.34	.3	974	6.1	1110	33000 CUP	1.095
ACCUR #7	6.8	.44	.43	NA	958	7.5	1089	31000 CUP	1.095
ACCUR #2	4.0	.34	.34	.3	858	4.4	975	27500 CUP	1.095

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9mm LUGER or 9mm PARABELLUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
145 Grain Lead Bullet										
v-3N37	4.6	.42	.40	NA	1001	5.1	1073	NA	NA	1.142
v-N350	4.3	.42	.40	NA	991	4.8	1066	NA	NA	1.142
v-N340	4.0	.43	.43	NA	997	4.4	1060	NA	NA	1.142
ACCUR #7	6.5	.42	.40	NA	926	7.2	1052	29500	CUP	1.140
v-N330	3.5	.38	.37	NA	951	3.9	1016	NA	NA	1.142
ACCUR #5	4.6	.29	.27	NA	866	5.1	984	26800	CUP	1.140
ACCUR #2	3.3	.28	.27	NA	786	3.7	893	24100	CUP	1.140
147 Grain Jacketed Bullet										
ACCUR #7	6.5	.42	.40	NA	921	7.2	1047	31900	CUP	1.095
ACCUR #5	4.8	.30	.30	.3	872	5.3	991	30900	CUP	1.095
wSUPER-FLD	3.9	.33	.32	.3	895	4.3	950	32300	PSI	1.095
WIN 571	5.5	.37	.37	NA	900	5.8	935	32800	PSI	1.095
WIN ACTION PI	4.0	.32	.32	.3	865	4.4	920	33300	PSI	1.095
ACCUR #2	3.6	.30	.30	.3	781	4.0	888	29200	CUP	1.095
WIN 540	4.3	.29	.27	NA	800	4.8	885	33300	PSI	1.095
147 Grain Lead Bullet										
WIN ACTION PI	3.9	.32	.32	.3	845	4.7	985	33100	PSI	1.095
WIN 571	5.6	.38	.37	NA	916	5.9	970	32700	PSI	1.095
wSUPER-FLD	3.7	.31	.30	.3	905	4.1	965	32800	PSI	1.095
WIN 540	4.5	.31	.30	.3	840	5.0	925	32500	PSI	1.095
WIN 231	3.3	.31	.30	.3	865	3.5	905	32100	PSI	1.135
147 Grain Copper Plated										
v-N350	4.3	.42	.40	NA	955	4.8	1033	NA	NA	1.142
v-3N37	4.6	.42	.40	NA	955	5.0	1025	NA	NA	1.142
v-N340	3.9	.42	.40	NA	909	4.2	977	NA	NA	1.142
v-N330	3.6	.39	.37	NA	906	3.9	954	NA	NA	1.142
ACCUR #7	5.1	.33	.32	.3	784	5.7	892	31800	PSI	1.140
ACCUR #5	4.0	.25	.24	NA	769	4.4	874	30300	PSI	1.140
ACCUR #2	3.0	.25	.24	NA	750	3.3	853	31300	PSI	1.140
147 Grain XTP										
v-N105	6.2	.56	.53	.5	1056	6.5	1125	NA	NA	1.142
POWER PISTOL	5.2	.46	.46	NA	1005	5.7	1095	34000	PSI	1.140
v-N350	4.7	.46	.46	NA	1010	5.1	1089	NA	NA	1.142
v-3N37	4.8	.44	.43	NA	997	5.3	1070	NA	NA	1.142
BLUE DOT	6.2	.54	.53	.5	1050	6.2	1050	30200	PSI	1.140
v-N330	4.1	.44	.43	NA	981	4.4	1050	NA	NA	1.142
v-N340	4.1	.44	.43	NA	965	4.4	1031	NA	NA	1.142
IMR 800X	4.7	.50	.49	.5	914	5.3	1025	32900	CUP	1.130

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9mm LUGER or 9mm PARABELLUM (Continued)

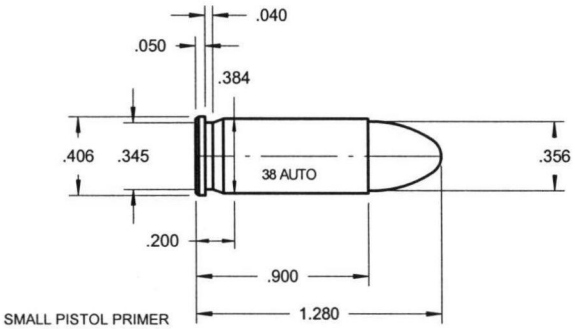
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
147 Grain XTP (Continued)									
BULLSEYE	3.9	.42	.40	NA	954	4.2	1010	32900 PSI	1.140
HERCO	4.9	.55	.53	.5	1010	4.9	1010	30500 PSI	1.140
SR4756	3.9	.43	.43	NA	855	4.4	950	32700 CUP	1.130
SR7625	3.9	.41	.40	NA	871	4.3	950	32900 CUP	1.130
IMR PB	3.5	.43	.43	NA	855	4.0	950	32800 CUP	1.130
IMR 700X	3.3	.45	.43	NA	850	3.7	935	32100 CUP	1.130
GREEN DOT	3.5	.45	.43	NA	894	3.7	930	32200 PSI	1.140
TITEGROUP	3.2	.27	.27	NA	837	3.6	929	27500 CUP	1.100
UNIQUE	3.8	.41	.40	NA	886	3.9	912	31900 PSI	1.140
RED DOT	3.2	.46	.46	NA	854	3.4	895	32400 PSI	1.140
AMER-SELECT	3.5	.47	.46	NA	842	3.7	890	32700 PSI	1.140
HS6	4.3	.31	.30	.3	775	5.0	885	27900 CUP	1.100
UNIVERSAL	3.0	.33	.32	.3	797	3.3	869	31000 CUP	1.100
150 Grain Jacketed Bullet									
v-N350	4.4	.43	.43	NA	951	4.7	1012	NA NA	1.130
v-3N37	4.4	.40	.40	NA	922	4.8	995	NA NA	1.130
v-N340	3.9	.42	.40	NA	919	4.2	981	NA NA	1.130
v-N330	3.5	.38	.37	NA	883	3.8	945	NA NA	1.130

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027**

38 AUTOMATIC

Also known as 38 AUTO and 38 ACP

INTRODUCED 1900



Useful case capacity 1.00 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
115 Grain Jacketed Bullet									
IMR 800X	5.5	.58	.57	.5	941	5.9	1015	21900 CUP	1.265
SR4756	4.8	.53	.53	.5	902	5.2	965	21800 CUP	1.265
IMR 700X	3.5	.47	.46	NA	852	4.0	955	22900 CUP	1.265
IMR PB	3.6	.43	.43	NA	868	4.0	955	22500 CUP	1.265
SR7625	4.2	.44	.43	NA	892	4.5	955	21800 CUP	1.265
115 Grain XTP									
ACCUR #7	7.2	.47	.46	NA	1003	8.2	1125	23000 CUP	1.225
ACCUR #5	5.9	.37	.37	NA	1012	6.5	1113	22400 CUP	1.225
ACCUR #2	4.2	.35	.34	NA	918	4.8	1030	23000 CUP	1.225
124 Grain XTP									
ACCUR #7	7.0	.46	.46	NA	984	8.0	1103	23000 CUP	1.265
ACCUR #5	5.5	.35	.34	.3	958	6.3	1074	23000 CUP	1.265
ACCUR #2	4.2	.35	.34	NA	924	4.8	1036	23000 CUP	1.265
130 Grain Jacketed Bullet									
ACCUR #7	7.0	.46	.46	NA	951	8.0	1066	23000 CUP	1.300
ACCUR #5	5.6	.35	.34	.3	931	6.1	1014	22200 CUP	1.300
BLUE DOT	7.5	.65	.61	NA	1000	7.5	1000	19400 CUP	1.260
ACCUR #2	4.0	.33	.32	.3	887	4.5	995	23000 CUP	1.300
UNIQUE	5.3	.58	.57	.5	945	5.3	945	18800 CUP	1.260
HERCO	5.3	.59	.57	NA	945	5.3	945	19600 CUP	1.260

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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38 AUTOMATIC (Continued)

Also known as 38 AUTO and 38 ACP

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
130 Grain Jacketed Bullet (Continued)									
BULLSEYE	**4.0**	**.43**	**.43**	**NA**	**935**	4.0	935	18100 CUP	**1.260**
RED DOT	**4.0**	**.57**	**.57**	**.5**	**910**	4.0	910	19400 CUP	**1.260**
GREEN DOT	**4.2**	**.53**	**.53**	**.5**	**910**	4.2	910	19000 CUP	**1.260**
WIN 231	**4.4**	**.41**	**.40**	**NA**	**875**	4.4	875	20000 CUP	**1.260**

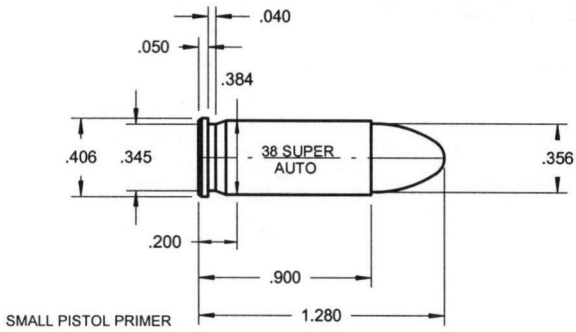
CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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38 SUPER AUTOMATIC

DO NOT USE THESE LOADS IN 38 AUTOMATIC OR 38 ACP.

INTRODUCED 1929



Useful case capacity 1.00 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
90 Grain Jacketed Bullet										
ACCUR #5	8.6	.54	.53	.5	1370	9.6	1557	33000	CUP	1.195
ACCUR #7	10.2	.67	.66	NA	1324	11.3	1504	31800	CUP	1.195
HS6	8.5	.61	.61	NA	1298	9.5	1392	32000	CUP	1.180
TITEGROUP	5.3	.45	.43	NA	1288	6.0	1384	31200	CUP	1.180
ACCUR #2	5.2	.44	.43	NA	1200	5.8	1379	33000	CUP	1.195
UNIVERSAL	5.7	.63	.61	NA	1312	6.3	1352	31600	CUP	1.180
HP38	6.0	.56	.53	.5	1253	6.7	1345	32000	CUP	1.180
95 Grain Jacketed Bullet										
ACCUR #7	10.3	.67	.66	NA	1294	11.4	1470	31700	CUP	1.225
ACCUR #5	8.2	.51	.49	.5	1262	9.1	1434	31500	CUP	1.225
ACCUR #2	5.1	.43	.43	NA	1161	5.7	1323	33000	CUP	1.225
100 Grain Jacketed Bullet										
ACCUR #7	9.9	.65	.61	NA	1270	11.0	1450	33000	CUP	1.240
ACCUR #9	12.2	.80	.76	.7	1256	13.5	1427	29300	CUP	1.240
ACCUR #5	7.8	.49	.49	NA	1251	8.7	1423	33000	CUP	1.240
HS6	8.5	.61	.61	NA	1284	9.4	1347	32500	CUP	1.215
UNIVERSAL	5.4	.59	.57	NA	1233	6.0	1327	32500	CUP	1.215
ACCUR #2	5.3	.44	.43	NA	1148	5.9	1300	33000	CUP	1.240
TITEGROUP	5.1	.43	.43	NA	1204	5.8	1292	31400	CUP	1.215
HP38	5.7	.53	.53	.5	1206	6.4	1272	31500	CUP	1.215

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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38 SUPER AUTOMATIC (Continued)

DO NOT USE THESE LOADS IN 38 AUTOMATIC OR 38 ACP.

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
115 Grain Jacketed Bullet										
v-N350	7.9	.77	.76	.7	1358	9.1	1519	NA	NA	1.276
v-3N37	7.5	.68	.66	NA	1296	8.4	1453	NA	NA	1.276
v-N340	6.0	.64	.61	NA	1235	6.9	1398	NA	NA	1.240
ACCUR #9	11.7	.77	.76	.7	1228	13.0	1395	32800	CUP	1.240
BLUE DOT	9.9	.86	.82	NA	1321	10.2	1360	33000	PSI	1.255
POWER PISTOL	6.8	.61	.61	NA	1258	7.3	1345	34400	PSI	1.255
ACCUR #7	9.3	.61	.61	NA	1186	10.3	1340	33000	CUP	1.240
WIN ACTION PI	6.6	.53	.53	.5	1190	7.8	1340	34300	PSI	1.220
ACCUR #5	7.5	.47	.46	NA	1162	8.3	1321	33000	CUP	1.240
WIN 540	7.8	.53	.53	.5	1185	8.5	1320	34300	PSI	1.220
wSUPER-FLD	6.0	.50	.49	.5	1185	7.1	1320	34400	PSI	1.220
v-N320	4.8	.58	.57	.5	1110	5.7	1293	NA	NA	1.240
UNIQUE	6.3	.68	.66	NA	1205	6.6	1265	33800	PSI	1.255
HERCO	6.4	.72	.71	.7	1189	6.8	1260	34000	PSI	1.255
wSUPER-LIT	4.8	.41	.40	NA	1090	5.9	1260	34500	PSI	1.220
BULLSEYE	5.2	.55	.53	.5	1182	5.5	1240	33900	PSI	1.255
WIN 231	5.0	.47	.46	NA	1080	5.9	1230	34200	PSI	1.240
GREEN DOT	5.4	.68	.66	NA	1168	5.7	1225	33800	PSI	1.255
ACCUR #2	5.1	.43	.43	NA	1056	5.7	1200	32200	CUP	1.240
RED DOT	4.5	.64	.61	NA	1111	4.7	1155	33500	PSI	1.255
115 Grain Lead Bullet										
ACCUR #9	11.3	.74	.71	.7	1209	12.5	1374	32400	CUP	1.285
ACCUR #7	8.8	.57	.57	.5	1162	9.8	1320	33000	CUP	1.285
ACCUR #5	6.8	.42	.40	NA	1115	7.6	1267	32600	CUP	1.285
ACCUR #2	4.3	.36	.34	NA	992	4.8	1133	33000	CUP	1.285
115 Grain Copper Plated										
v-N350	6.6	.64	.61	NA	1273	7.9	1437	NA	NA	1.240
v-3N37	6.9	.63	.61	NA	1280	7.9	1417	NA	NA	1.240
v-N340	6.0	.64	.61	NA	1253	7.0	1398	NA	NA	1.240
v-N320	4.8	.58	.57	.5	1171	5.7	1293	NA	NA	1.240
115 Grain XTP										
v-3N37	6.5	.59	.57	NA	1263	7.9	1430	NA	NA	1.240
v-N340	6.0	.64	.61	NA	1250	6.9	1398	NA	NA	1.240
v-N350	5.5	.54	.53	.5	1171	7.1	1362	NA	NA	1.240
v-N320	5.1	.62	.61	NA	1188	5.9	1319	NA	NA	1.240
HS6	7.8	.56	.53	.5	1212	8.5	1314	31500	CUP	1.245
HP38	5.7	.53	.53	.5	1198	6.1	1261	32700	CUP	1.245

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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38 SUPER AUTOMATIC (Continued)

DO NOT USE THESE LOADS IN 38 AUTOMATIC OR 38 ACP.

	....STARTING LOADS....									
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
115 Grain XTP (Continued)										
UNIVERSAL	4.9	.54	.53	.5	1141	5.5	1225	32300	CUP	1.245
TITEGROUP	4.7	.40	.40	NA	1104	5.3	1208	31800	CUP	1.245
124 Grain Jacketed Bullet										
v-N105	10.0	.90	.88	NA	1407	10.9	1594	NA	NA	1.260
v-N340	6.0	.64	.61	NA	1207	7.1	1355	NA	NA	1.260
v-N350	6.4	.63	.61	NA	1201	7.5	1348	NA	NA	1.260
ACCUR #9	11.3	.74	.71	.7	1184	12.5	1346	33000	CUP	1.245
v-3N37	7.1	.65	.61	NA	1227	7.7	1316	NA	NA	1.260
WIN ACTION PI	6.2	.50	.49	.5	1150	7.3	1270	34300	PSI	1.220
ACCUR #7	8.6	.56	.53	.5	1111	9.6	1263	31700	CUP	1.245
WIN 540	7.3	.50	.49	.5	1110	8.3	1260	34600	PSI	1.220
wSUPER-FLD	5.2	.44	.43	NA	1060	6.6	1245	34600	PSI	1.220
ACCUR #5	6.8	.42	.40	NA	1079	7.6	1230	33000	CUP	1.245
wSUPER-LIT	4.6	.39	.37	NA	1040	5.6	1210	34200	PSI	1.220
WIN 231	4.9	.46	.46	NA	1060	5.7	1185	34600	PSI	1.240
ACCUR #2	4.9	.41	.40	NA	1023	5.4	1163	32200	CUP	1.245
124 Grain Lead Bullet										
v-3N37	6.3	.58	.57	.5	1237	7.4	1368	NA	NA	1.260
v-N350	6.0	.59	.57	.5	1217	7.1	1362	NA	NA	1.260
v-N340	5.4	.58	.57	.5	1204	6.4	1329	NA	NA	1.260
125 Grain Jacketed Bullet										
HS6	7.5	.53	.53	.5	1158	8.3	1271	32100	CUP	1.275
UNIVERSAL	4.9	.54	.53	.5	1069	5.5	1179	32300	CUP	1.275
HP38	5.1	.47	.46	NA	1098	5.7	1159	31200	CUP	1.275
TITEGROUP	4.4	.37	.37	NA	1020	5.0	1124	31800	CUP	1.275
125 Grain Lead Bullet										
ACCUR #9	10.8	.71	.71	.7	1177	12.0	1338	31200	CUP	1.220
ACCUR #7	8.6	.56	.53	.5	1133	9.6	1287	33000	CUP	1.220
HS6	7.2	.51	.49	.5	1151	8.1	1264	31300	CUP	1.230
ACCUR #5	6.5	.40	.40	NA	1100	7.2	1260	33000	CUP	1.220
HP38	5.1	.47	.46	NA	1129	5.7	1214	32600	CUP	1.230
TITEGROUP	4.5	.38	.37	NA	1114	5.1	1199	32200	CUP	1.230
ACCUR #2	4.6	.39	.37	NA	1030	5.1	1171	33000	CUP	1.220
UNIVERSAL	4.7	.52	.49	.5	1110	5.3	1171	32300	CUP	1.230
130 Grain Jacketed Bullet										
v-N105	9.3	.84	.82	NA	1319	10.1	1457	NA	NA	1.260
v-3N37	6.3	.58	.57	.5	1181	7.3	1309	NA	NA	1.260

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38 SUPER AUTOMATIC (Continued)

DO NOT USE THESE LOADS IN 38 AUTOMATIC OR 38 ACP.

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL
130 Grain Jacketed Bullet (Continued)								
ACCUR #9	10.7	.70	.66	.7	1148	1305	33000 CUP	1.250
v-N350	5.9	.58	.57	.5	1113	1273	NA NA	1.260
BLUE DOT	9.0	.78	.76	.7	1253	1265	32500 PSI	1.260
v-N340	5.5	.59	.57	.5	1145	1260	NA NA	1.260
POWER PISTOL	6.3	.56	.53	.5	1174	1255	34600 PSI	1.260
WIN ACTION PI	6.3	.51	.49	.5	1120	1250	34600 PSI	1.240
HS6	7.3	.52	.49	.5	1089	1231	32500 CUP	1.275
WIN 540	6.8	.46	.46	NA	1065	1225	34600 PSI	1.240
ACCUR #7	8.3	.54	.53	.5	1060	1209	33000 CUP	1.250
ACCUR #5	6.6	.41	.40	NA	1057	1201	33000 CUP	1.250
UNIQUE	5.9	.64	.61	NA	1134	1200	34000 PSI	1.260
wSUPER-FLD	5.4	.45	.43	NA	1065	1200	34400 PSI	1.240
HERCO	6.0	.68	.66	NA	1136	1180	33500 PSI	1.260
BULLSEYE	4.9	.52	.49	.5	1126	1170	33600 PSI	1.260
wSUPER-LIT	4.6	.39	.37	NA	1030	1160	34100 PSI	1.240
WIN 231	4.8	.45	.43	NA	1020	1145	34800 PSI	1.240
GREEN DOT	5.0	.63	.61	NA	1092	1135	33600 PSI	1.260
HP38	4.9	.45	.43	NA	1021	1134	31200 CUP	1.275
UNIVERSAL	4.7	.52	.49	.5	1003	1124	32200 CUP	1.275
ACCUR #2	4.7	.39	.37	NA	978	1116	33000 CUP	1.250
TITEGROUP	4.4	.37	.37	NA	1022	1116	31000 CUP	1.275
RED DOT	4.3	.60	.57	NA	1045	1095	33900 PSI	1.260
130 Grain Lead Bullet								
ACCUR #9	10.4	.68	.66	NA	1106	1257	29100 CUP	1.220
ACCUR #7	8.1	.53	.53	.5	1095	1244	32000 CUP	1.220
ACCUR #5	6.3	.39	.37	NA	1043	1185	31900 CUP	1.220
ACCUR #2	4.0	.34	.34	.3	970	1102	33000 CUP	1.220
130 Grain Copper Plated								
v-3N37	6.3	.58	.57	.5	1165	1286	NA NA	1.260
v-N350	5.9	.58	.57	.5	1138	1273	NA NA	1.260
ACCUR #7	8.4	.55	.53	.5	1087	1236	31400 CUP	1.280
v-N340	5.4	.58	.57	.5	1129	1230	NA NA	1.260
ACCUR #9	9.9	.65	.61	NA	1061	1206	27100 CUP	1.280
ACCUR #5	6.3	.39	.37	NA	1011	1149	29000 CUP	1.280
ACCUR #2	4.5	.38	.37	NA	961	1093	30100 CUP	1.280
135 Grain Jacketed Bullet								
ACCUR #9	9.6	.63	.61	NA	1055	1199	27100 CUP	1.250

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38 SUPER AUTOMATIC (Continued)

DO NOT USE THESE LOADS IN 38 AUTOMATIC OR 38 ACP.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
135 Grain Jacketed Bullet (Continued)										
ACCUR #7	8.3	.54	.53	.5	1045	9.0	1190	33000	CUP	1.250
ACCUR #2	4.9	.41	.40	NA	1000	5.2	1140	33000	CUP	1.250
ACCUR #5	6.3	.39	.37	NA	1003	7.0	1140	31400	CUP	1.250
140 Grain Lead Bullet										
ACCUR #9	9.9	.65	.61	NA	1079	11.0	1226	30400	CUP	1.340
ACCUR #7	7.8	.51	.49	.5	1033	8.7	1180	33000	CUP	1.340
ACCUR #5	6.2	.39	.37	NA	1015	6.9	1158	33000	CUP	1.340
ACCUR #2	4.3	.36	.34	NA	9483	4.8	1077	32500	CUP	1.340
145 Grain Lead Bullet										
ACCUR #9	9.5	.62	.61	NA	1062	10.5	1207	30700	CUP	1.250
v-3N37	5.5	.50	.49	.5	1079	6.3	1207	NA	NA	1.260
v-N350	5.1	.50	.49	.5	1047	6.0	1175	NA	NA	1.260
ACCUR #5	6.1	.38	.37	NA	1028	6.8	1168	33000	CUP	1.250
ACCUR #7	7.7	.50	.49	.5	1025	8.5	1165	31400	CUP	1.250
v-N340	4.3	.46	.46	NA	1033	5.2	1148	NA	NA	1.260
ACCUR #2	4.3	.36	.34	NA	949	4.8	1078	33000	CUP	1.250
147 Grain Jacketed Bullet										
v-N105	7.9	.71	.71	.7	1209	8.5	1293	NA	NA	1.260
ACCUR #9	9.2	.60	.57	NA	1034	10.2	1175	29400	CUP	1.230
ACCUR #7	7.8	.51	.49	.5	1008	8.7	1146	31500	CUP	1.230
v-3N37	5.6	.51	.49	.5	1031	6.3	1145	NA	NA	1.260
v-N340	4.9	.52	.49	.5	998	5.7	1142	NA	NA	1.260
v-N350	5.2	.51	.49	.5	972	6.2	1132	NA	NA	1.260
WIN 540	6.3	.43	.43	NA	975	7.2	1115	34000	PSI	1.250
WIN ACTION PI	5.5	.45	.43	NA	990	6.3	1110	34500	PSI	1.250
ACCUR #5	6.1	.38	.37	NA	970	6.8	1100	33000	CUP	1.230
wSUPER-FLD	4.8	.40	.40	NA	960	5.6	1070	34400	PSI	1.250
ACCUR #2	4.4	.37	.37	NA	913	4.9	1038	33000	CUP	1.230
wSUPER-LIT	4.3	.36	.34	NA	930	4.8	1020	34400	PSI	1.250
WIN 231	4.4	.41	.40	NA	930	4.9	1010	34900	PSI	1.240
147 Grain Copper Plated										
v-3N37	5.5	.50	.49	.5	1037	6.3	1145	NA	NA	1.260
v-N340	5.0	.53	.53	.5	1053	5.7	1142	NA	NA	1.260
v-N350	5.3	.52	.49	.5	1007	6.1	1132	NA	NA	1.260
147 Grain XTP										
v-N105	7.8	.70	.66	.7	1181	8.4	1293	NA	NA	1.260
v-3N37	5.9	.54	.53	.5	1096	6.8	1220	NA	NA	1.260

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c = Compressed charge

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38 SUPER AUTOMATIC (Continued)

DO NOT USE THESE LOADS IN 38 AUTOMATIC OR 38 ACP.

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
147 Grain XTP (Continued)										
BLUE DOT	8.1	.70	.66	.7	1164	8.6	1220	33900	PSI	1.275
HERC 2400	10.4	.77	.76	.7	1170	10.9	1215	33600	PSI	1.275
v-N350	5.7	.56	.53	.5	1073	6.5	1194	NA	NA	1.260
v-N340	5.1	.54	.53	.5	1033	5.9	1161	NA	NA	1.260
POWER PISTOL	5.7	.51	.49	.5	1070	6.2	1155	34900	PSI	1.275
HERCO	6.1	.68	.66	NA	1082	6.4	1135	33800	PSI	1.275
HS7	7.0	.48	.46	NA	1019	7.8	1118	32200	CUP	1.260
HS6	6.3	.45	.43	NA	997	7.0	1106	31900	CUP	1.260
UNIQUE	5.5	.60	.57	NA	1045	5.8	1105	34000	PSI	1.275
BULLSEYE	4.7	.50	.49	.5	1035	5.0	1095	34000	PSI	1.275
TITEGROUP	3.9	.33	.32	.3	976	4.4	1066	31700	CUP	1.260
GREEN DOT	4.5	.57	.57	.5	1005	4.7	1045	33500	PSI	1.275
RED DOT	4.3	.60	.57	NA	977	4.5	1035	34000	PSI	1.275
HP38	4.4	.41	.40	NA	965	4.9	1032	31800	CUP	1.260
UNIVERSAL	4.3	.47	.46	NA	960	4.8	1017	32500	CUP	1.260
150 Grain Jacketed Bullet										
HS7	7.2	.49	.49	NA	1059	8.0	1149	31300	CUP	1.265
ACCUR #7	7.7	.50	.49	.5	1010	8.5	1148	32700	CUP	1.250
HS6	6.5	.46	.46	NA	1029	7.2	1137	31200	CUP	1.265
ACCUR #9	8.7	.57	.57	.5	978	9.7	1111	27900	CUP	1.250
ACCUR #5	5.9	.37	.37	NA	946	6.5	1075	30100	CUP	1.250
HP38	4.5	.42	.40	NA	968	5.0	1066	32100	CUP	1.265
TITEGROUP	4.0	.34	.34	.3	976	4.6	1063	32100	CUP	1.265
UNIVERSAL	4.4	.48	.46	NA	984	4.9	1059	32100	CUP	1.265
ACCUR #2	4.3	.36	.34	NA	913	4.8	1038	32300	CUP	1.250
150 Grain Lead Bullet										
HS7	7.1	.48	.46	NA	1085	7.9	1181	30200	CUP	1.230
HS6	6.4	.46	.46	NA	1068	7.1	1175	30900	CUP	1.230
HP38	4.5	.42	.40	NA	1026	5.1	1135	31400	CUP	1.230
TITEGROUP	4.3	.36	.34	NA	1066	4.8	1131	31800	CUP	1.230
UNIVERSAL	4.5	.49	.49	NA	1038	5.0	1111	32000	CUP	1.230
151 Grain Copper Plated										
ACCUR #7	7.7	.50	.49	.5	1007	8.6	1145	30900	CUP	1.280
ACCUR #9	8.9	.58	.57	.5	955	9.9	1086	26600	CUP	1.280
ACCUR #5	5.7	.36	.34	NA	953	6.3	1083	30700	CUP	1.280
ACCUR #2	4.4	.37	.37	NA	917	4.9	1043	31100	CUP	1.280
158 Grain Jacketed Bullet										
ACCUR #9	8.7	.57	.57	.5	986	9.7	1121	31000	CUP	1.250

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38 SUPER AUTOMATIC (Continued)

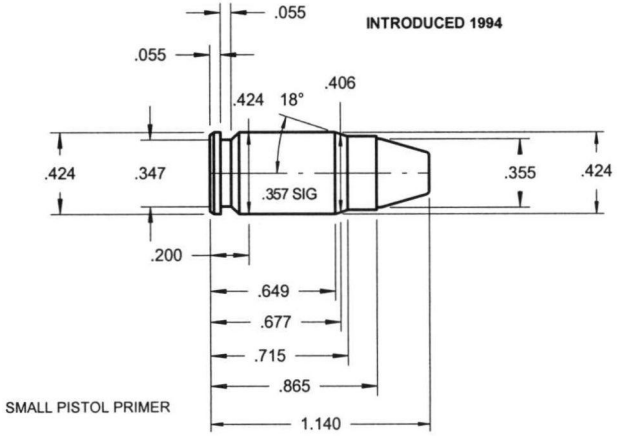
DO NOT USE THESE LOADS IN 38 AUTOMATIC OR 38 ACP.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
....STARTING LOADS....									
158 Grain Jacketed Bullet (Continued)									
ACCUR #7	7.2	.47	.46	NA	936	8.0	1064	31000 CUP	1.250
ACCUR #5	5.6	.35	.34	.3	903	6.2	1026	31400 CUP	1.250
ACCUR #2	3.9	.33	.32	.3	850	4.3	970	33000 CUP	1.250
158 Grain Lead Bullet									
BLUE DOT	7.9	.68	.66	NA	1135	8.3	1190	33900 PSI	1.275
UNIQUE	5.6	.61	.61	NA	1035	5.9	1085	33800 PSI	1.275
HERCO	5.8	.65	.61	NA	1050	6.0	1080	33100 PSI	1.275
BULLSEYE	4.4	.47	.46	NA	990	4.6	1030	33600 PSI	1.275
GREEN DOT	4.6	.59	.57	.5	977	4.9	1025	33900 PSI	1.275
RED DOT	3.8	.53	.53	.5	931	4.0	985	34000 PSI	1.275
160 Grain Lead Bullet									
ACCUR #9	8.6	.57	.57	.5	982	9.5	1116	29500 CUP	1.280
ACCUR #7	7.2	.47	.46	NA	981	8.0	1115	32800 CUP	1.250
ACCUR #5	5.4	.34	.34	.3	922	6.0	1048	33000 CUP	1.250
WIN ACTION PI	4.6	.37	.37	NA	930	5.5	1035	34200 PSI	1.250
WIN 540	5.1	.35	.34	.3	905	6.0	1030	34300 PSI	1.250
ACCUR #2	4.1	.34	.34	.3	902	4.5	1025	32500 CUP	1.250
wSUPER-FLD	3.8	.32	.32	.3	875	4.9	1010	34600 PSI	1.250
wSUPER-LIT	3.6	.30	.30	.3	900	4.2	975	34800 PSI	1.250
WIN 231	3.5	.33	.32	.3	860	4.2	955	34400 PSI	1.250

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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357 SIG



Useful case capacity 0.89 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
88 Grain Jacketed Bullet									
ACCUR #5	10.0	.62	.61	NA	1422	11.1	1616	39000 PSI	1.130
ACCUR #7	11.8	.77	.76	.7	1408	13.1	1601	39300 PSI	1.130
ACCUR #2	7.1	.59	.57	NA	1359	7.9	1545	39100 PSI	1.130
ACCUR #9	13.5	.89	.88	NA	1359	15.0c	1545	32100 PSI	1.130
90 Grain Jacketed Bullet									
POWER PISTOL	10.8c	.96	.95	NA	1635	11.4c	1715	37000 PSI	1.090
BLUE DOT	12.8c	1.10	1.09	1.0	1690	12.8c	1690	35300 PSI	1.090
HERCO	10.1c	1.13	1.09	1.0	1625	10.1c	1625	34600 PSI	1.090
UNIQUE	8.7c	.95	.95	NA	1540	9.2c	1615	37100 PSI	1.090
BULLSEYE	7.0	.74	.71	.7	1463	7.5	1564	37900 PSI	1.090
GREEN DOT	7.5c	.95	.95	NA	1487	7.8c	1545	36500 PSI	1.090
AMER-SELECT	8.1c	1.08	1.02	1.0	1436	8.5c	1506	37100 PSI	1.090
RED DOT	6.9c	.97	.95	NA	1481	7.1c	1495	35400 PSI	1.090
90 Grain XTP									
HS6	9.8	.70	.66	.7	1499	10.8	1634	38700 PSI	1.135
UNIVERSAL	6.3	.69	.66	NA	1374	7.0	1511	37200 PSI	1.135
HP38	6.6	.61	.61	NA	1372	7.3	1509	37500 PSI	1.135
95 Grain Jacketed Bullet									
v-N350	9.3c	.91	.88	NA	1592	10.5c	1768	NA NA	1.201
v-3N37	9.1	.83	.82	NA	1563	10.3c	1752	NA NA	1.201
v-N340	8.2	.87	.82	NA	1527	9.2c	1713	NA NA	1.201

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
95 Grain Jacketed Bullet (Continued)									
ACCUR #5	10.0	.62	.61	NA	1383	11.0	1572	39200 PSI	1.135
ACCUR #7	11.7	.76	.76	.7	1374	13.0	1562	38900 PSI	1.135
ACCUR #9	13.5	.89	.88	NA	1346	15.0c	1530	32600 PSI	1.135
ACCUR #2	6.8	.57	.57	.5	1290	7.6	1467	37100 PSI	1.135
100 Grain Jacketed Bullet									
ACCUR #9	13.0	.85	.82	NA	1334	14.5c	1516	35100 PSI	1.140
ACCUR #5	9.4	.59	.57	.5	1316	10.5	1496	38800 PSI	1.140
ACCUR #7	11.0	.72	.71	.7	1311	12.2	1490	38500 PSI	1.140
ACCUR #2	6.6	.55	.53	.5	1244	7.3	1414	38800 PSI	1.140
115 Grain Jacketed Bullet									
v-N350	7.7	.75	.71	.7	1372	9.0	1568	NA NA	1.201
v-3N37	7.9	.72	.71	.7	1387	8.9	1555	NA NA	1.201
v-N340	6.8	.72	.71	.7	1325	8.0	1529	NA NA	1.201
POWER PISTOL	9.7	.86	.82	NA	1463	10.0	1505	36200 PSI	1.140
BLUE DOT	10.6c	.92	.88	NA	1411	11.3c	1495	37400 PSI	1.140
HERCO	8.4c	.94	.88	NA	1348	8.7c	1400	36600 PSI	1.140
UNIQUE	7.4	.81	.76	.7	1288	8.0	1377	38000 PSI	1.140
BULLSEYE	6.1	.65	.61	NA	1263	6.5	1337	37600 PSI	1.140
GREEN DOT	6.6	.83	.82	NA	1245	6.9	1305	37000 PSI	1.140
AMER-SELECT	6.7c	.90	.88	NA	1216	7.1c	1288	37400 PSI	1.140
RED DOT	6.1	.86	.82	NA	1225	6.4c	1285	37100 PSI	1.140
115 Grain Lead Bullet									
ACCUR #9	12.1	.79	.76	.7	1258	13.5	1430	39000 PSI	1.140
ACCUR #7	9.9	.65	.61	NA	1182	11.0	1344	37800 PSI	1.140
ACCUR #5	8.1	.50	.49	.5	1160	9.0	1319	38500 PSI	1.140
ACCUR #2	5.6	.47	.46	NA	1099	6.2	1249	38200 PSI	1.140
115 Grain XTP									
ACCUR #9	12.1	.79	.76	.7	1261	13.5	1434	36900 PSI	1.140
HS6	8.7	.62	.61	NA	1321	9.4	1412	38800 PSI	1.135
ACCUR #7	10.2	.67	.66	NA	1218	11.3	1385	39100 PSI	1.140
ACCUR #5	8.4	.52	.49	.5	1191	9.4	1354	37900 PSI	1.140
UNIVERSAL	5.5	.60	.57	NA	1182	6.1	1300	37400 PSI	1.135
ACCUR #2	5.7	.48	.46	NA	1122	6.4	1276	38600 PSI	1.140
122 Grain Lead Bullet									
ACCUR #9	11.7	.77	.76	.7	1217	13.0	1383	36100 PSI	1.140
ACCUR #7	9.6	.63	.61	NA	1162	10.7	1321	37900 PSI	1.140
ACCUR #5	7.9	.49	.49	NA	1144	8.8	1300	37100 PSI	1.140
ACCUR #2	5.2	.44	.43	NA	1070	5.8	1217	38100 PSI	1.140

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c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
123 Grain Megashock										
v-N350	7.4	.72	.71	.7	1291	8.8	1503	NA	NA	1.201
v-3N37	7.4	.68	.66	NA	1300	8.6	1486	NA	NA	1.201
v-N340	6.5	.69	.66	NA	1191	7.7	1388	NA	NA	1.201
124 Grain Jacketed Bullet										
BLUE DOT	10.1	.87	.82	NA	1340	10.6c	1405	36900	PSI	1.120
HERCO	7.8	.87	.82	NA	1270	8.3c	1345	37600	PSI	1.120
BULLSEYE	6.7	.71	.71	.7	1264	7.0	1325	37000	PSI	1.120
GREEN DOT	6.2	.78	.76	.7	1207	6.5	1255	36800	PSI	1.120
AMER-SELECT	6.6	.89	.88	NA	1163	7.0c	1219	37100	PSI	1.120
RED DOT	5.7	.80	.76	.7	1159	6.0	1215	37200	PSI	1.120
124 Grain XTP										
ACCUR #9	11.7	.77	.76	.7	1220	13.0	1387	39100	PSI	1.140
HS6	8.0	.57	.57	.5	1205	9.0	1339	38700	PSI	1.135
ACCUR #5	8.3	.52	.49	.5	1166	9.2	1325	39600	PSI	1.140
ACCUR #7	10.0	.65	.61	NA	1161	11.0	1320	37100	PSI	1.140
UNIVERSAL	5.2	.57	.57	.5	1122	5.8	1235	38500	PSI	1.135
ACCUR #2	5.4	.45	.43	NA	1066	6.0	1212	38900	PSI	1.140
125 Grain Jacketed Bullet										
BLUE DOT	10.1	.87	.82	NA	1323	10.5c	1375	36700	PSI	1.140
POWER PISTOL	8.2	.73	.71	.7	1293	8.6	1357	36900	PSI	1.140
UNIQUE	7.2	.78	.76	.7	1240	7.5	1300	36900	PSI	1.140
BULLSEYE	5.8	.62	.61	NA	1186	6.1	1244	37000	PSI	1.140
130 Grain Jacketed Bullet										
ACCUR #9	10.8	.71	.71	.7	1130	12.0	1285	35900	PSI	1.135
ACCUR #7	9.4	.61	.61	NA	1124	10.4	1278	39300	PSI	1.135
ACCUR #5	7.9	.49	.49	NA	1102	8.8	1253	38300	PSI	1.135
ACCUR #2	5.4	.45	.43	NA	1037	6.0	1179	38700	PSI	1.135
130 Grain Copper Plated										
v-N350	7.3	.71	.71	.7	1271	8.5	1453	NA	NA	1.201
v-N340	6.5	.69	.66	NA	1238	7.4	1388	NA	NA	1.201
v-3N37	7.4	.68	.66	NA	1222	8.4	1358	NA	NA	1.201
147 Grain Lead Bullet										
ACCUR #7	8.6	.56	.53	.5	1071	9.6	1218	40000	PSI	1.140
ACCUR #5	6.7	.42	.40	NA	1029	7.5	1170	36900	PSI	1.140
ACCUR #9	9.4	.62	.61	NA	1029	10.5	1170	33000	PSI	1.140
ACCUR #2	4.2	.35	.34	.3	923	4.7	1049	36800	PSI	1.140
147 Grain XTP										
HS6	6.8	.48	.46	NA	1056	7.6	1173	36600	PSI	1.140

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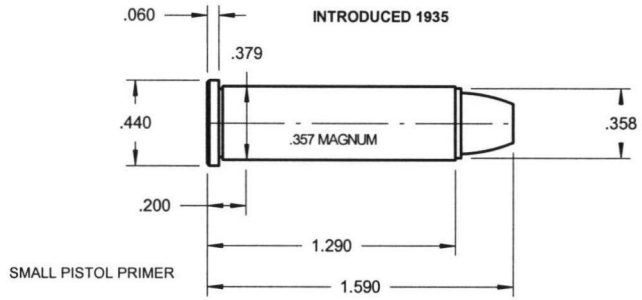
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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
147 Grain XTP (Continued)									
ACCUR #7	8.3	.54	.53	.5	1020	9.2	1160	38600 PSI	1.140
ACCUR #5	7.1	.44	.43	NA	1019	7.9	1159	38400 PSI	1.140
ACCUR #9	9.4	.62	.61	NA	1018	10.5	1158	34400 PSI	1.140
UNIVERSAL	4.5	.49	.49	NA	983	4.9	1062	36300 PSI	1.140
ACCUR #2	4.7	.39	.37	NA	933	5.3	1061	39800 PSI	1.140
147 Grain Barnes X Bullet									
POWER PISTOL	7.4	.66	.66	NA	1187	7.8	1245	37000 PSI	1.138
BLUE DOT	8.1	.70	.66	.7	1183	8.2	1205	35800 PSI	1.138
HERCO	6.0	.67	.66	NA	1076	6.4	1140	37600 PSI	1.138
UNIQUE	5.5	.60	.57	NA	1059	5.8	1110	37200 PSI	1.138
BULLSEYE	5.1	.54	.53	.5	1078	5.1	1078	35300 PSI	1.138
GREEN DOT	4.6	.57	.57	.5	963	4.8	1010	37100 PSI	1.138
AMER-SELECT	5.1	.68	.66	NA	965	5.2	983	35900 PSI	1.138

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357 MAGNUM



Useful case capacity 1.15 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
110 Grain Jacketed Bullet									
ACCUR #9	16.6	1.09	1.09	1.0	1765	18.4c	2006	43700 CUP	1.575
HERCO	12.0c	1.35	1.26	1.3	1746	13.0c	1885	33300 PSI	1.560
ACCUR #7	12.6	.82	.82	.7	1628	14.0	1850	41700 CUP	1.575
ACCUR #5	10.8	.67	.66	NA	1619	12.0	1840	41600 CUP	1.575
UNIQUE	9.0	.99	.95	NA	1578	10.0	1735	34100 PSI	1.560
BULLSEYE	8.7	.93	.88	NA	1642	9.0	1690	31700 PSI	1.560
POWER PISTOL	8.8	.78	.76	.7	1551	9.7	1690	34000 PSI	1.560
ACCUR #2	7.6	.64	.61	NA	1475	8.4	1676	44100 CUP	1.575
GREEN DOT	9.8c	1.24	1.18	NA	1628	10.0c	1660	31300 PSI	1.560
VEC BA9	10.0	.92	.88	NA	1598	10.5	1657	42496 CIP	1.590
HS7	12.0	.82	.82	.7	1569	13.0	1646	29800 CUP	1.540
WIN 231	8.2	.76	.76	.7	1473	8.8	1575	42500 CUP	1.540
RED DOT	7.0	.99	.95	NA	1431	7.7	1560	34000 PSI	1.560
AMER-SELECT	7.3	.99	.95	NA	1436	7.8	1520	32700 PSI	1.560
IMR4227	21.0c	1.61	DBLD	1.6	1510	21.0c	1510	35600 CUP	1.590
IMR 800X	10.9c	1.17	1.09	1.0	1475	10.9c	1475	33600 CUP	1.590
HP38	5.9	.55	.53	.5	1167	7.9	1414	27600 CUP	1.540
SR4756	9.5	1.04	1.02	1.0	1330	9.5	1330	35800 CUP	1.590
SR7625	7.9	.83	.82	NA	1230	7.9	1230	35600 CUP	1.590
IMR PB	7.6	.92	.88	NA	1195	7.6	1195	36000 CUP	1.590

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain Jacketed Bullet (Continued)										
IMR 700X	6.6	.89	.88	NA	1165	6.6	1165	35600	CUP	1.590
110 Grain XTP										
H110	22.0c	1.44	1.36	1.3	2308	23.0c	2398	37200	CUP	1.590
H4227	18.9c	1.45	1.36	1.3	2030	21.0c	2233	35500	CUP	1.590
v-N110	18.5c	1.54	DBLD	NA	1716	20.1c	1909	NA	NA	1.575
HS6	10.3	.73	.71	.7	1664	11.5	1830	42300	CUP	1.590
HP38	8.0	.74	.71	.7	1604	9.0	1782	42500	CUP	1.590
TITEGROUP	7.2	.61	.61	NA	1587	8.0	1746	41500	CUP	1.590
UNIVERSAL	7.5	.82	.82	NA	1577	8.0	1670	40000	CUP	1.590
v-N350	9.9	.97	.95	NA	1546	10.8	1647	NA	NA	1.575
v-3N37	9.5	.87	.82	NA	1535	10.7	1646	NA	NA	1.575
v-N340	8.5	.91	.88	NA	1458	9.4	1579	NA	NA	1.575
v-N320	7.4	.90	.88	NA	1390	8.0	1474	NA	NA	1.575
v-N310	6.2	.75	.71	.7	1296	6.7	1367	NA	NA	1.575
124 Grain Lead Bullet										
v-N110	15.7c	1.31	1.26	1.3	1546	17.4c	1699	NA	NA	1.614
v-N350	8.3	.81	.76	.7	1387	9.3	1479	NA	NA	1.614
v-N340	7.9	.84	.82	NA	1375	8.8	1469	NA	NA	1.614
125 Grain Jacketed Bullet										
HERC 2400	17.0c	1.26	1.26	NA	1759	17.6c	1810	31800	PSI	1.570
WIN 296	NA	NA	NA	NA	NA	18.5c	1800	32500	CUP	1.540
HS7	11.5	.78	.76	.7	1511	12.5	1604	31500	CUP	1.540
HERCO	9.0	1.01	.95	1.0	1473	9.8	1590	33600	PSI	1.570
UNIQUE	8.7	.96	.95	NA	1455	9.6	1585	33800	PSI	1.570
POWER PISTOL	8.5	.75	.71	.7	1441	9.2	1555	33500	PSI	1.570
BULLSEYE	7.9	.84	.82	NA	1464	8.4	1550	32800	PSI	1.570
VEC BA9	9.6	.88	.88	NA	1447	10.0	1503	38766	CIP	1.590
VEC SP3	17.7c	1.21	1.18	NA	1362	19.3c	1503	29956	CIP	1.590
WIN 231	7.5	.70	.66	.7	1366	8.1	1460	42500	CUP	1.540
GREEN DOT	6.7	.84	.82	NA	1310	7.3	1414	33600	PSI	1.570
RED DOT	6.3	.90	.88	NA	1294	7.0	1410	34000	PSI	1.570
AMER-SELECT	6.9	.92	.88	NA	1309	7.4	1400	33200	PSI	1.570
IMR 800X	10.2	1.09	1.09	1.0	1360	10.2	1360	35300	CUP	1.580
IMR4227	18.5c	1.42	1.36	1.3	1325	18.5c	1325	35400	CUP	1.580
HP38	5.0	.46	.46	NA	1007	7.0	1319	27200	CUP	1.540
SR4756	8.6	.95	.95	NA	1180	8.6	1180	35800	CUP	1.580
SR7625	7.4	.77	.76	.7	1100	7.4	1100	35800	CUP	1.580

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
125 Grain Jacketed Bullet (Continued)									
IMR 700X	6.2	.83	.82	NA	1075	6.2	1075	36000 CUP	1.580
IMR PB	6.8	.82	.82	.7	1060	6.8	1060	35800 CUP	1.580
125 Grain Lead Bullet									
UNIVERSAL	4.8	.53	.53	.5	1046	6.8	1401	34200 CUP	1.580
TITEGROUP	4.0	.34	.34	.3	1055	5.4	1274	22800 CUP	1.580
CLAYS	3.5	.51	.49	.5	910	5.3	1260	33000 CUP	1.580
HP38	4.6	.43	.43	NA	1052	5.5	1185	18800 CUP	1.580
125 Grain Copper Plated									
ACCUR #9	11.8	.78	.76	.7	1434	13.1	1630	32200 PSI	1.535
ACCUR #7	10.1	.66	.66	NA	1388	11.2	1578	33500 PSI	1.535
ACCUR #5	8.0	.50	.49	.5	1313	8.9	1493	32200 PSI	1.535
ACCUR #2	6.2	.52	.49	.5	1223	6.8	1390	32100 PSI	1.535
125 Grain XTP									
H4227	18.0c	1.38	1.36	1.3	1929	20.0c	2122	42000 CUP	1.590
H110	21.0c	1.38	1.36	1.3	1881	22.0c	1966	41400 CUP	1.590
ACCUR #9	15.3	1.01	.95	1.0	1647	17.0	1872	45100 CUP	1.575
v-N110	16.8c	1.40	1.36	1.3	1625	18.4c	1772	NA NA	1.575
ACCUR #7	11.9	.78	.76	.7	1527	13.2	1735	42700 CUP	1.575
ACCUR #5	10.4	.65	.61	NA	1521	11.5	1728	42800 CUP	1.575
HS6	9.8	.70	.66	.7	1568	10.9	1724	42100 CUP	1.590
HP38	7.3	.68	.66	NA	1419	8.5	1622	42700 CUP	1.590
TITEGROUP	6.8	.58	.57	.5	1456	7.5	1586	41200 CUP	1.590
ACCUR #2	7.2	.60	.57	NA	1370	8.0	1557	43800 CUP	1.575
UNIVERSAL	7.1	.78	.76	.7	1428	7.6	1526	39600 CUP	1.590
v-N350	8.7	.85	.82	NA	1415	9.7	1512	NA NA	1.575
v-N340	7.8	.83	.82	NA	1352	8.8	1462	NA NA	1.575
v-N320	6.2	.75	.71	.7	1229	7.1	1329	NA NA	1.575
v-N310	5.5	.67	.66	NA	1134	6.1	1234	NA NA	1.575
130 Grain Jacketed Bullet									
H110	18.5c	1.21	1.18	NA	1759	18.5c	1759	33600 CUP	1.540
H4227	15.5c	1.19	1.18	NA	1529	17.5c	1648	33600 CUP	1.540
HS7	11.0	.75	.71	.7	1439	12.0	1579	30800 CUP	1.540
HS6	8.2	.58	.57	.5	1208	9.8	1503	33600 CUP	1.540
HP38	4.8	.44	.43	NA	947	6.8	1267	28800 CUP	1.540
135 Grain Lead Bullet									
UNIVERSAL	4.8	.53	.53	.5	1026	6.5	1314	27800 CUP	1.580
CLAYS	3.4	.50	.49	.5	881	5.1	1207	30200 CUP	1.580
TITEGROUP	3.5	.30	.30	NA	866	5.2	1186	24500 CUP	1.580

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
135 Grain Lead Bullet (Continued)										
HP38	4.1	.38	.37	NA	825	5.3	1027	19400	CUP	1.580
140 Grain Jacketed Bullet										
ACCUR #9	13.9	.91	.88	NA	1495	15.4	1699	43100	CUP	1.575
v-N110	15.7c	1.31	1.26	1.3	1499	17.1c	1647	NA	NA	1.575
ACCUR #5	9.9	.62	.61	NA	1436	11.0	1632	43200	CUP	1.575
ACCUR #7	11.0	.72	.71	.7	1408	12.2	1600	43600	CUP	1.575
HS7	10.0	.68	.66	NA	1243	11.0	1465	32200	CUP	1.540
ACCUR #2	6.7	.56	.53	.5	1258	7.4	1429	43900	CUP	1.575
VEC SP3	17.3c	1.18	1.18	NA	1342	17.7c	1404	29739	CIP	1.590
VEC BA9	8.5	.78	.76	.7	1299	9.3	1391	41103	CIP	1.590
v-3N37	8.3	.76	.76	.7	1278	9.3	1386	NA	NA	1.575
v-N350	8.2	.80	.76	.7	1280	9.1	1382	NA	NA	1.575
v-N340	7.6	.81	.76	.7	1251	8.3	1340	NA	NA	1.575
IMR 800X	9.7	1.04	1.02	1.0	1230	9.7	1230	35200	CUP	1.590
HP38	4.4	.41	.40	NA	872	6.4	1219	29200	CUP	1.540
IMR4227	17.2c	1.32	1.26	1.3	1210	17.2c	1210	35700	CUP	1.590
SR4756	8.2	.90	.88	NA	1025	8.2	1025	35500	CUP	1.590
IMR 700X	6.0	.81	.76	.7	960	6.0	960	35700	CUP	1.590
SR7625	7.0	.73	.71	.7	955	7.0	955	36000	CUP	1.590
IMR PB	6.4	.77	.76	.7	910	6.4	910	36000	CUP	1.590
140 Grain XTP										
H110	17.1	1.12	1.09	1.0	1815	19.0c	1997	40900	CUP	1.590
H4227	16.2c	1.25	1.18	NA	1755	18.0c	1930	42600	CUP	1.590
HS6	9.5	.68	.66	NA	1467	10.5	1613	43000	CUP	1.590
HP38	6.5	.60	.57	NA	1243	7.7	1447	41900	CUP	1.590
TITEGROUP	6.3	.53	.53	.5	1295	7.0	1425	41900	CUP	1.590
UNIVERSAL	6.5	.71	.71	.7	1268	7.0	1356	40200	CUP	1.590
145 Grain Lead Bullet										
v-N110	14.0c	1.17	1.09	1.0	1475	15.3c	1591	NA	NA	1.614
v-3N37	7.5	.68	.66	NA	1269	8.5	1368	NA	NA	1.614
v-N350	6.8	.66	.66	NA	1231	8.1	1344	NA	NA	1.614
v-N340	6.6	.70	.66	.7	1238	7.4	1319	NA	NA	1.614
v-N320	5.8	.70	.66	.7	1175	6.4	1245	NA	NA	1.614
146 Grain Jacketed Bullet										
H110	15.5	1.02	1.02	1.0	1537	17.2	1691	42600	CUP	1.535
H4227	14.5	1.12	1.09	1.0	1437	16.0c	1566	42700	CUP	1.535
HS6	8.5	.61	.61	NA	1315	9.5	1461	41800	CUP	1.535
HP38	6.0	.56	.53	.5	1153	7.1	1330	42200	CUP	1.535

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
146 Grain Jacketed Bullet (Continued)									
TITEGROUP	5.9	.50	.49	.5	1186	6.6	1317	42900 CUP	1.535
UNIVERSAL	6.0	.66	.66	NA	1168	6.5	1261	39900 CUP	1.535
IMR 800X	9.2	.99	.95	NA	1215	9.2	1215	36000 CUP	1.500
IMR4227	14.9	1.15	1.09	1.0	1100	14.9	1100	35400 CUP	1.500
SR4756	7.9	.87	.82	NA	1060	7.9	1060	36000 CUP	1.500
SR7625	6.2	.65	.61	NA	945	6.2	945	35600 CUP	1.500
IMR 700X	5.2	.70	.66	.7	915	5.2	915	35600 CUP	1.500
IMR PB	5.6	.67	.66	NA	885	5.6	885	36000 CUP	1.500
148 Grain Wad Cutter									
HERCO	6.1	.68	.66	NA	1386	6.7	1510	33900 PSI	1.330
BULLSEYE	5.2	.55	.53	.5	1354	5.7	1475	34000 PSI	1.330
UNIQUE	5.8	.64	.61	NA	1344	6.4	1465	33800 PSI	1.330
GREEN DOT	4.6	.58	.57	.5	1202	5.1	1310	34000 PSI	1.330
RED DOT	4.2	.60	.57	NA	1204	4.6	1300	33600 PSI	1.330
SR4756	8.5	.93	.88	NA	1215	8.5	1215	35600 CUP	1.420
IMR 800X	4.5	.48	.46	NA	715	8.3	1215	35500 CUP	1.325
IMR4227	15.0c	1.15	1.09	1.0	1185	15.0c	1185	32700 CUP	1.420
SR7625	6.0	.63	.61	NA	1030	6.0	1030	35600 CUP	1.420
IMR PB	3.3	.40	.40	NA	720	5.7	1010	35400 CUP	1.420
UNIVERSAL	3.5	.38	.37	NA	882	4.0	989	17700 CUP	1.290
IMR 700X	3.0	.40	.40	NA	720	5.1	980	34800 CUP	1.420
TITEGROUP	2.9	.25	.24	NA	811	3.3	909	18900 CUP	1.290
HP38	3.0	.28	.27	NA	810	3.4	908	17600 CUP	1.290
WIN 231	3.4	.32	.32	.3	880	3.4	880	19500 CUP	1.330
AMER-SELECT	2.9	.39	.37	NA	825	2.9	825	11300 PSI	1.330
BULLSEYE	2.8	.30	.30	.3	780	2.8	780	10000 PSI	1.330
GREEN DOT	2.8	.35	.34	NA	780	2.8	780	14100 PSI	1.330
RED DOT	2.7	.38	.37	NA	775	2.7	775	12400 PSI	1.330
UNIQUE	3.3	.36	.34	NA	775	3.3	775	10000 PSI	1.330
IMR 700X	3.0	.40	.40	NA	705	3.0	705	14900 CUP	1.325
150 Grain Jacketed Bullet									
H110	16.0	1.05	1.02	1.0	1706	17.0	1807	28900 CUP	1.590
H4227	15.0c	1.15	1.09	1.0	1628	16.5c	1775	36700 CUP	1.590
ACCUR #9	13.7	.90	.88	NA	1466	15.2	1666	43000 CUP	1.590
ACCUR #7	11.8	.77	.76	.7	1371	12.0	1558	43400 CUP	1.590
HS6	9.0	.64	.61	NA	1406	9.7	1503	39900 CUP	1.590
ACCUR #5	9.5	.59	.57	NA	1302	10.5	1480	42700 CUP	1.590
TITEGROUP	6.1	.52	.49	.5	1299	6.8	1429	40900 CUP	1.590

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
150 Grain Jacketed Bullet (Continued)										
HP38	6.5	.60	.57	NA	1268	7.0	1356	39700	CUP	1.590
ACCUR #2	6.5	.54	.53	.5	1180	7.2	1343	45000	CUP	1.590
UNIVERSAL	6.2	.68	.66	NA	1238	6.7	1323	39900	CUP	1.590
IMR 800X	7.9	.84	.82	NA	1002	9.0	1135	35300	CUP	1.590
IMR4227	13.8	1.06	1.02	1.0	997	15.9c	1130	35600	CUP	1.590
SR4756	6.7	.74	.71	.7	854	7.8	975	35800	CUP	1.590
SR7625	5.5	.58	.57	.5	809	6.4	925	35800	CUP	1.590
IMR 700X	4.8	.65	.61	NA	791	5.6	905	35900	CUP	1.590
IMR PB	5.1	.61	.61	NA	766	5.9	875	35700	CUP	1.590
150 Grain Lead Bullet										
ACCUR #9	12.9	.85	.82	NA	1375	14.3	1562	42100	CUP	1.655
WIN 296	NA	NA	NA	NA	NA	14.0	1510	32000	CUP	1.540
ACCUR #7	10.3	.67	.66	NA	1297	11.4	1474	44000	CUP	1.655
ACCUR #5	8.5	.53	.53	.5	1250	9.4	1422	41900	CUP	1.655
WIN 231	6.5	.61	.61	NA	1233	6.9	1305	42000	CUP	1.540
ACCUR #2	5.9	.49	.49	NA	1097	6.5	1247	43800	CUP	1.655
158 Grain Jacketed Bullet										
WIN 296	NA	NA	NA	NA	NA	16.6c	1610	39500	CUP	1.590
HERC 2400	14.1	1.05	1.02	1.0	1436	15.2	1535	33100	PSI	1.580
v-N110	14.1c	1.17	1.09	1.0	1368	15.3c	1502	NA	NA	1.575
BLUE DOT	9.9	.86	.82	NA	1316	10.7	1420	33300	PSI	1.580
HERCO	7.4	.83	.82	NA	1198	8.2	1305	34000	PSI	1.580
POWER PISTOL	7.3	.65	.61	NA	1198	8.0	1305	33800	PSI	1.574
UNIQUE	7.2	.79	.76	.7	1197	7.8	1280	33200	PSI	1.580
v-N350	7.6	.74	.71	.7	1200	8.5	1276	NA	NA	1.575
WIN 231	6.5	.61	.61	NA	1189	6.9	1260	42000	CUP	1.590
v-3N37	7.4	.68	.66	NA	1152	8.3	1254	NA	NA	1.575
BULLSEYE	6.3	.67	.66	NA	1169	6.8	1250	33100	PSI	1.580
GREEN DOT	6.3	.80	.76	.7	1115	7.0	1215	34000	PSI	1.580
v-N340	6.7	.71	.71	.7	1117	7.4	1198	NA	NA	1.575
RED DOT	5.5	.78	.76	.7	1075	6.0	1160	33400	PSI	1.580
AMER-SELECT	5.3	.72	.71	.7	1067	5.7	1130	32900	PSI	1.580
v-N320	5.7	.69	.66	NA	1023	6.3	1114	NA	NA	1.575
IMR 800X	8.6	.92	.88	NA	1080	8.6	1080	35400	CUP	1.580
IMR4227	15.3c	1.18	1.18	NA	1075	15.3c	1075	36000	CUP	1.580
SR4756	7.5	.82	.82	NA	940	7.5	940	35700	CUP	1.580
IMR 700X	5.2	.70	.66	.7	885	5.2	885	35800	CUP	1.580
IMR PB	5.7	.69	.66	NA	875	5.7	875	36000	CUP	1.580

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
158 Grain Jacketed Bullet (Continued)									
SR7625	6.2	.65	.61	NA	855	6.2	855	35700 CUP	1.580
158 Grain Lead Bullet									
HERC 2400	13.9	1.03	1.02	1.0	1487	15.3	1620	34000 PSI	1.580
WIN 296	NA	NA	NA	NA	NA	14.5	1560	38000 CUP	1.540
ACCUR #9	12.2	.80	.76	.7	1319	13.5	1499	41300 CUP	1.590
BLUE DOT	9.4	.82	.82	.7	1381	10.3	1490	33600 PSI	1.580
ACCUR #7	9.9	.65	.61	NA	1243	11.0	1413	42600 CUP	1.590
HERCO	7.2	.81	.76	.7	1253	7.9	1365	33900 PSI	1.580
ACCUR #5	8.1	.50	.49	.5	1192	9.0	1354	39100 CUP	1.590
BULLSEYE	5.9	.63	.61	NA	1211	6.5	1320	33900 PSI	1.580
UNIQUE	6.2	.67	.66	NA	1188	6.8	1295	33900 PSI	1.580
WIN 231	6.2	.58	.57	.5	1192	6.7	1275	42500 CUP	1.540
UNIVERSAL	4.0	.44	.43	NA	891	6.2	1247	33400 CUP	1.610
GREEN DOT	5.4	.69	.66	NA	1138	6.0	1240	34000 PSI	1.580
RED DOT	5.0	.70	.66	.7	1115	5.5	1215	34000 PSI	1.580
IMR 800X	8.9	.95	.95	NA	1215	8.9	1215	36000 CUP	1.580
AMER-SELECT	5.6	.76	.76	.7	1144	6.0	1210	32800 PSI	1.580
IMR4227	15.8c	1.22	1.18	NA	1205	15.8c	1205	35800 CUP	1.580
ACCUR #2	5.2	.44	.43	NA	1011	5.8	1149	40400 CUP	1.590
SR4756	7.7	.85	.82	NA	1111	7.7	1111	35800 CUP	1.580
HP38	3.4	.31	.30	.3	796	5.0	1109	23900 CUP	1.610
TITEGROUP	4.5	.38	.37	NA	1028	5.0	1108	24900 CUP	1.610
HS6	6.0	.43	.43	NA	990	7.0	1106	15500 CUP	1.610
CLAYS	3.2	.47	.46	NA	811	4.6	1079	33600 CUP	1.610
SR7625	6.5	.68	.66	NA	1020	6.5	1020	35800 CUP	1.580
IMR PB	5.9	.71	.71	.7	985	5.9	985	35700 CUP	1.580
IMR 700X	5.5	.74	.71	.7	980	5.5	980	35600 CUP	1.580
158 Grain Copper Plated									
ACCUR #9	10.4	.68	.66	NA	1224	11.6	1392	33900 PSI	1.545
ACCUR #7	8.8	.57	.57	.5	1182	9.8	1344	34500 PSI	1.545
ACCUR #5	7.0	.44	.43	NA	1064	7.8	1210	31700 PSI	1.545
ACCUR #2	5.2	.44	.43	NA	990	5.8	1126	32900 PSI	1.545
158 Grain XTP									
H110	15.0	.98	.95	NA	1597	16.7	1757	40700 CUP	1.580
H4227	14.5	1.12	1.09	1.0	1530	16.0c	1668	42600 CUP	1.580
ACCUR #9	13.5	.89	.88	NA	1423	15.0	1633	44900 CUP	1.580
ACCUR #7	10.3	.67	.66	NA	1429	11.4	1624	43900 CUP	1.580
ACCUR #5	8.8	.55	.53	.5	1279	9.8	1453	43500 CUP	1.580

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
158 Grain XTP (Continued)										
HS6	8.0	.57	.57	.5	1225	9.5	1427	41900	CUP	1.580
v-N105	10.9	.98	.95	NA	1320	11.9	1417	NA	NA	1.575
ACC XMP5744	13.0	.98	.95	NA	1203	14.5	1368	31600	PSI	1.580
ACCUR #2	5.9	.49	.49	NA	1109	6.6	1260	44200	CUP	1.580
TITEGROUP	5.4	.46	.46	NA	1135	6.1	1229	41900	CUP	1.580
HP38	6.2	.57	.57	.5	1109	6.9	1220	40000	CUP	1.580
UNIVERSAL	5.8	.64	.61	NA	1026	6.3	1133	39300	CUP	1.580
160 Grain Lead Bullet										
v-N110	13.2	1.10	1.09	1.0	1404	14.4c	1514	NA	NA	1.575
v-3N37	7.3	.67	.66	NA	1176	8.0	1273	NA	NA	1.575
v-N350	6.6	.64	.61	NA	1191	7.6	1270	NA	NA	1.575
v-N340	6.3	.67	.66	NA	1181	7.1	1244	NA	NA	1.575
161 Grain Lead Bullet										
VEC SP3	17.7c	1.21	1.18	NA	1296	18.5c	1371	35733	CIP	1.590
170 Grain Jacketed Bullet										
H110	14.0	.92	.88	NA	1511	15.5	1662	40800	CUP	1.580
H4227	13.0	1.00	.95	1.0	1395	14.5	1535	41200	CUP	1.580
ACCUR #9	12.2	.80	.76	.7	1304	13.5	1482	45000	CUP	1.565
HS6	8.0	.57	.57	.5	1258	9.2	1424	42900	CUP	1.580
WIN 296	NA	NA	NA	NA	NA	14.3	1390	42000	CUP	1.540
ACCUR #5	8.3	.52	.49	.5	1222	9.2	1389	44100	CUP	1.565
ACCUR #7	9.5	.62	.61	NA	1207	10.5	1370	44600	CUP	1.565
HERC 2400	11.1	.82	.82	.7	1265	12.1	1365	33600	PSI	1.585
BLUE DOT	8.8	.76	.76	.7	1202	9.7	1310	33800	PSI	1.585
TITEGROUP	5.4	.46	.46	NA	1155	6.0	1270	41800	CUP	1.580
POWER PISTOL	7.4	.66	.66	NA	1107	8.0	1195	33300	PSI	1.585
ACCUR #2	5.4	.45	.43	NA	1037	6.0	1178	44200	CUP	1.565
BULLSEYE	5.6	.60	.57	NA	1078	6.2	1175	33900	PSI	1.585
UNIQUE	6.2	.68	.66	NA	1088	6.8	1175	33600	PSI	1.585
HERCO	6.4	.72	.71	.7	1088	7.0	1175	33500	PSI	1.585
GREEN DOT	5.6	.70	.66	.7	1000	6.1	1090	33700	PSI	1.585
IMR 800X	8.3	.89	.88	NA	1030	8.3	1030	35500	CUP	1.580
RED DOT	5.0	.70	.66	.7	950	5.4	1025	33600	PSI	1.585
IMR4227	13.7	1.05	1.02	1.0	985	13.7	985	35500	CUP	1.580
AMER-SELECT	5.2	.70	.66	.7	960	5.2	960	30700	PSI	1.585
SR4756	7.1	.78	.76	.7	885	7.1	885	35600	CUP	1.580
SR7625	5.6	.59	.57	.5	815	5.6	815	35600	CUP	1.580
IMR 700X	4.8	.64	.61	NA	795	4.8	795	35600	CUP	1.580

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
170 Grain Jacketed Bullet (Continued)										
IMR PB	5.1	.61	.61	NA	785	5.1	785	35600	CUP	1.580
173 Grain Lead Bullet										
ACCUR #9	12.2	.80	.76	.7	1302	13.5	1480	42700	CUP	1.660
ACCUR #5	8.6	.54	.53	.5	1198	9.5	1361	43500	CUP	1.660
ACCUR #7	9.5	.62	.61	NA	1198	10.6	1361	41600	CUP	1.660
ACC XMP5744	13.0	.98	.95	NA	1197	14.5	1361	34400	CUP	1.660
ACCUR #2	5.0	.42	.40	NA	885	5.5	1006	41100	CUP	1.660
180 Grain Jacketed Bullet										
VEC SP3	16.2	1.11	1.09	1.0	1398	17.7c	1516	45109	CIP	1.590
H110	13.0	.85	.82	NA	1344	13.5	1396	39100	CUP	1.575
v-N110	12.7	1.06	1.02	1.0	1253	14.0c	1394	NA	NA	1.677
H4227	12.7	.98	.95	NA	1240	13.7	1325	40900	CUP	1.575
HERC 2400	11.8	.87	.82	NA	1228	12.5	1300	32700	PSI	1.580
v-N105	8.9	.80	.76	.7	1154	10.3	1261	NA	NA	1.677
BLUE DOT	9.0	.78	.76	.7	1167	9.7	1260	33300	PSI	1.580
POWER PISTOL	6.4	.57	.57	.5	1051	7.0	1145	33800	PSI	1.580
BULLSEYE	5.7	.61	.61	NA	1042	6.3	1135	34000	PSI	1.580
UNIQUE	6.4	.70	.66	.7	1033	7.0	1125	33800	PSI	1.580
v-3N37	7.0	.64	.61	NA	1013	7.9	1120	NA	NA	1.677
HERCO	6.5	.73	.71	.7	1019	7.2	1110	34000	PSI	1.580
v-N350	6.4	.63	.61	NA	961	7.4	1087	NA	NA	1.677
v-N340	6.3	.67	.66	NA	972	7.1	1069	NA	NA	1.677
TITEGROUP	5.0	.42	.40	NA	936	5.5	1020	40300	CUP	1.575
GREEN DOT	5.4	.69	.66	NA	927	6.0	1010	34000	PSI	1.580
RED DOT	4.9	.69	.66	.7	870	5.3	930	33200	PSI	1.580
AMER-SELECT	4.6	.62	.61	NA	802	4.9	850	32700	PSI	1.580
180 Grain Lead Bullet										
ACCUR #9	11.3	.74	.71	.7	1204	12.6	1368	40200	CUP	1.675
ACCUR #7	9.0	.59	.57	.5	1121	10.0	1274	43400	CUP	1.675
ACCUR #5	7.7	.48	.46	NA	1101	8.5	1251	42300	CUP	1.675
ACC XMP5744	11.7	.88	.88	NA	1083	13.0	1231	33500	CUP	1.675
ACCUR #2	4.9	.41	.40	NA	786	5.4	894	42500	CUP	1.675
180 Grain Barnes X Bullet										
ACCUR #9	11.7	.77	.76	.7	1265	13.0	1437	43000	CUP	1.575
ACCUR #7	9.3	.61	.61	NA	1170	10.3	1329	43600	CUP	1.575
ACCUR #5	8.3	.52	.49	.5	1167	9.2	1326	44300	CUP	1.575
ACC XMP5744	11.7	.88	.88	NA	1052	13.0	1196	34900	CUP	1.575
ACCUR #2	5.4	.45	.43	NA	980	6.0	1114	43900	CUP	1.575

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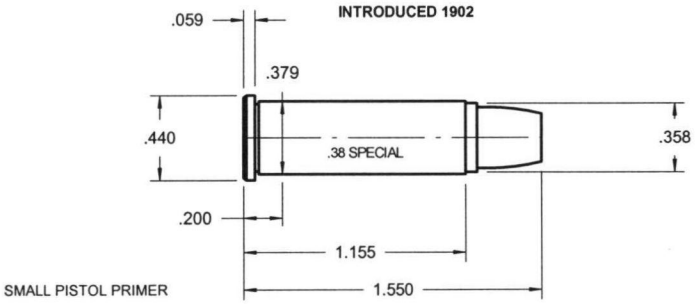
357 MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
200 Grain Jacketed Bullet										
v-N110	11.4	.95	.95	NA	1107	12.4	1204	NA	NA	1.697
v-N105	8.4	.76	.76	.7	1020	9.4	1123	NA	NA	1.697
v-3N37	6.4	.58	.57	.5	891	7.2	991	NA	NA	1.697
v-N350	6.2	.61	.61	NA	838	7.1	966	NA	NA	1.697
200 Grain Lead Bullet										
WIN 296	NA	NA	NA	NA	NA	12.4c	1335	35000	CUP	1.540
HERC 2400	9.4	.70	.66	.7	1176	10.0	1245	32800	PSI	1.575
BLUE DOT	7.5	.64	.61	NA	1124	8.2	1225	33900	PSI	1.575
H110	11.5	.75	.71	.7	1212	11.5	1212	31200	CUP	1.540
H4227	10.5	.81	.76	.7	1062	12.0	1174	31800	CUP	1.540
HS7	7.5	.51	.49	.5	1041	8.5	1142	29600	CUP	1.540
UNIQUE	5.5	.60	.57	NA	1015	6.0	1105	33900	PSI	1.575
HERCO	5.5	.62	.61	NA	1015	6.1	1105	33900	PSI	1.575
BULLSEYE	4.8	.51	.49	.5	995	5.3	1085	33900	PSI	1.575
HS6	5.2	.37	.37	NA	822	6.8	1073	30600	CUP	1.540
WIN 231	5.1	.48	.46	NA	990	5.5	1060	42500	CUP	1.540
GREEN DOT	4.5	.57	.57	.5	932	5.0	1015	34000	PSI	1.575
IMR 800X	7.5	.80	.76	.7	995	7.5	995	36000	CUP	1.590
RED DOT	4.2	.60	.57	NA	918	4.6	990	33600	PSI	1.575
IMR4227	12.5	.96	.95	NA	966	12.5	966	35500	CUP	1.590
SR4756	6.2	.68	.66	NA	885	6.2	885	35900	CUP	1.590
HP38	3.4	.31	.30	.3	709	4.2	821	28100	CUP	1.540
SR7625	5.1	.53	.53	.5	795	5.1	795	35700	CUP	1.580
IMR 700X	4.3	.58	.57	.5	795	4.3	795	35800	CUP	1.590
IMR PB	4.6	.55	.53	.5	780	4.6	780	35700	CUP	1.590

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38 SPECIAL



Useful case capacity 1.30 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
90 Grain Jacketed Bullet									
HP38	4.7	.44	.43	NA	1164	5.7	1201	14300 CUP	1.425
95 Grain Jacketed Bullet									
IMR 800X	7.4	.80	.76	.7	1140	7.8	1195	15700 CUP	1.470
IMR4227	11.2	.86	.82	NA	1030	11.9	1090	15900 CUP	1.470
SR4756	6.1	.67	.66	NA	1020	6.5	1080	15900 CUP	1.470
SR7625	5.3	.56	.53	.5	1015	5.6	1065	15700 CUP	1.470
IMR PB	4.9	.59	.57	NA	1015	5.1	1055	15600 CUP	1.470
IMR 700X	4.4	.59	.57	NA	986	4.6	1025	15600 CUP	1.470
110 Grain Jacketed Bullet									
BLUE DOT	7.4	.64	.61	NA	1115	7.8	1170	15700 PSI	1.430
IMR 800X	6.8	.73	.71	.7	1045	7.2	1095	15800 CUP	1.460
UNIQUE	5.4	.59	.57	NA	1060	5.6	1090	15400 PSI	1.430
HERCO	5.3	.59	.57	NA	1040	5.6	1090	15800 PSI	1.430
BULLSEYE	4.5	.48	.46	NA	1085	4.5	1085	14900 PSI	1.430
SR7625	5.3	.56	.53	.5	1030	5.5	1060	15400 CUP	1.460
GREEN DOT	4.3	.54	.53	.5	990	4.6	1050	16000 PSI	1.430
HP38	4.2	.39	.37	NA	959	5.2	1043	14800 CUP	1.425
SR4756	5.9	.65	.61	NA	1000	6.2	1040	15600 CUP	1.460
IMR4227	10.5	.81	.76	.7	972	11.1	1020	15800 CUP	1.460
AMER-SELECT	4.2	.57	.57	.5	986	4.4	1015	15500 PSI	1.430
RED DOT	3.8	.54	.53	.5	954	4.0	1000	15800 PSI	1.430

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain Jacketed Bullet (Continued)										
IMR PB	4.7	.57	.57	.5	972	4.8	990	15200	CUP	1.460
IMR 700X	4.1	.55	.53	.5	943	4.2	970	15400	CUP	1.460
110 Grain XTP										
v-N350	6.4	.62	.61	NA	1107	7.1	1227	NA	NA	1.437
v-3N37	6.9	.63	.61	NA	1112	7.7	1224	NA	NA	1.437
v-N340	5.8	.62	.61	NA	1085	6.5	1194	NA	NA	1.437
v-N320	5.1	.62	.61	NA	1086	5.7	1188	NA	NA	1.437
HS6	7.0	.50	.49	.5	1071	7.8	1178	17000	CUP	1.455
A NITRO100	3.9	.53	.53	.5	1014	4.4	1153	15900	PSI	1.435
UNIVERSAL	5.0	.55	.53	.5	968	5.6	1143	16700	CUP	1.455
TITEGROUP	4.3	.36	.34	NA	1011	4.8	1109	16000	CUP	1.455
HP38	4.6	.43	.43	NA	948	5.5	1096	16300	CUP	1.455
SOLO 1000	3.9	.52	.49	.5	962	4.4	1094	16800	PSI	1.435
ACCUR #5	6.6	.41	.40	NA	959	7.3	1090	16600	PSI	1.435
ACCUR #2	5.0	.42	.40	NA	953	5.6	1083	16800	PSI	1.435
CLAYS	4.0	.58	.57	.5	1002	4.2	1073	17000	CUP	1.455
124 Grain Lead Bullet										
v-N350	5.7	.56	.53	.5	1045	6.4	1150	NA	NA	1.437
v-3N37	5.9	.54	.53	.5	1034	6.6	1137	NA	NA	1.437
v-N340	5.4	.57	.57	.5	1028	6.0	1131	NA	NA	1.437
v-N320	4.3	.52	.49	.5	979	4.8	1077	NA	NA	1.437
125 Grain Jacketed Bullet										
HERCO	5.1	.58	.57	.5	981	5.5	1040	16000	PSI	1.440
BLUE DOT	7.0	.61	.61	NA	995	7.3	1035	15600	PSI	1.440
A NITRO100	3.7	.50	.49	.5	907	4.1	1031	14800	PSI	1.445
UNIQUE	5.0	.54	.53	.5	959	5.3	1015	16000	PSI	1.440
SOLO 1000	3.7	.49	.49	NA	888	4.1	1010	15700	PSI	1.445
BULLSEYE	4.3	.46	.46	NA	981	4.4	1000	15300	PSI	1.440
ACCUR #2	4.8	.40	.40	NA	871	5.3	990	16800	PSI	1.445
GREEN DOT	4.0	.51	.49	.5	931	4.3	985	15900	PSI	1.440
IMR 800X	6.7	.71	.71	.7	953	6.9	980	15500	CUP	1.525
RED DOT	3.7	.53	.53	.5	914	3.9	950	15600	PSI	1.440
SR7625	5.0	.52	.49	.5	882	5.3	935	15900	CUP	1.525
IMR4227	10.1	.78	.76	.7	878	10.8	930	16000	CUP	1.525
SR4756	5.7	.63	.61	NA	873	6.1	925	15900	CUP	1.525
AMER-SELECT	4.0	.54	.53	.5	869	4.3	920	15900	PSI	1.440
HP38	3.8	.35	.34	.3	829	4.8	914	14100	CUP	1.425
IMR PB	4.4	.53	.53	.5	841	4.6	865	15500	CUP	1.525

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
125 Grain Jacketed Bullet (Continued)									
ACCUR #5	6.1	.38	.37	NA	757	6.8	860	16300 PSI	1.445
IMR 700X	3.9	.53	.53	.5	808	4.1	840	15600 CUP	1.525
125 Grain Lead Bullet									
HP38	3.8	.35	.34	.3	876	4.8	1071	16900 CUP	1.445
UNIVERSAL	4.3	.47	.46	NA	872	4.7	1036	16800 CUP	1.445
TITEGROUP	3.2	.27	.27	NA	856	3.8	985	12000 CUP	1.445
CLAYS	2.5	.37	.37	NA	810	3.5	978	16900 CUP	1.445
125 Grain Copper Plated									
ACCUR #5	6.5	.40	.40	NA	1030	7.2	1171	17000 PSI	1.430
v-3N37	5.9	.54	.53	.5	996	6.6	1096	NA NA	1.437
ACCUR #2	4.2	.35	.34	.3	953	4.7	1083	17000 PSI	1.430
v-N350	5.7	.55	.53	.5	967	6.3	1064	NA NA	1.437
v-N340	5.1	.55	.53	.5	959	5.7	1055	NA NA	1.437
v-N320	4.2	.51	.49	.5	903	4.7	1017	NA NA	1.437
125 Grain XTP									
v-N350	6.2	.60	.57	NA	1009	7.0	1132	NA NA	1.437
v-3N37	6.3	.58	.57	.5	994	7.2	1115	NA NA	1.437
v-N340	5.5	.58	.57	.5	983	6.2	1102	NA NA	1.437
HS6	6.5	.46	.46	NA	931	7.2	1048	16600 CUP	1.455
v-N320	4.7	.56	.53	.5	930	5.3	1043	NA NA	1.437
UNIVERSAL	4.7	.52	.49	.5	918	5.2	1019	17000 CUP	1.455
TITEGROUP	4.3	.36	.34	NA	953	4.6	1010	15600 CUP	1.455
CLAYS	3.5	.51	.49	.5	843	3.9	937	16100 CUP	1.455
HP38	4.3	.40	.40	NA	826	4.9	934	16300 CUP	1.455
130 Grain Jacketed Bullet									
HS6	6.2	.44	.43	NA	878	7.2	1077	14900 CUP	1.425
HP38	3.5	.32	.32	.3	811	4.5	900	15000 CUP	1.425
135 Grain Lead Bullet									
UNIVERSAL	4.1	.45	.43	NA	924	4.6	1025	16900 CUP	1.418
HP38	3.7	.34	.34	.3	872	4.7	1024	17000 CUP	1.418
TITEGROUP	3.1	.26	.24	NA	824	3.6	927	12900 CUP	1.418
CLAYS	2.6	.38	.37	NA	767	3.3	910	16200 CUP	1.418
140 Grain Jacketed Bullet									
v-3N37	5.9	.54	.53	.5	918	6.6	1010	NA NA	1.437
v-N350	5.7	.56	.53	.5	913	6.4	1004	NA NA	1.437
v-N340	5.2	.55	.53	.5	891	5.8	981	NA NA	1.437
v-N320	4.5	.54	.53	.5	868	5.0	955	NA NA	1.437
A NITRO100	3.5	.47	.46	NA	821	3.9	933	16900 PSI	1.445

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
140 Grain Jacketed Bullet (Continued)									
SOLO 1000	3.5	.47	.46	NA	782	3.9	889	16600 PSI	1.445
ACCUR #2	4.2	.35	.34	.3	781	4.7	888	16700 PSI	1.445
HP38	3.4	.31	.30	.3	822	4.0	862	15100 CUP	1.425
ACCUR #5	5.8	.36	.34	NA	757	6.4	860	16700 PSI	1.445
IMR 800X	5.7	.61	.61	NA	790	6.0	830	15700 CUP	1.455
IMR4227	9.9	.76	.76	.7	770	10.3	800	15600 CUP	1.455
SR7625	4.4	.46	.46	NA	745	4.6	780	15800 CUP	1.455
SR4756	5.2	.58	.57	.5	723	5.6	765	16000 CUP	1.455
IMR PB	4.0	.48	.46	NA	700	4.2	735	15700 CUP	1.455
IMR 700X	3.5	.47	.46	NA	688	3.7	730	15900 CUP	1.455
140 Grain XTP									
UNIVERSAL	4.3	.47	.46	NA	832	4.8	939	15400 CUP	1.455
HS6	5.8	.41	.40	NA	808	6.5	933	16000 CUP	1.455
TITEGROUP	3.9	.33	.32	.3	864	4.2	919	15800 CUP	1.455
CLAYS	3.0	.44	.43	NA	703	3.7	869	16700 CUP	1.455
HP38	4.2	.39	.37	NA	809	4.6	861	15800 CUP	1.455
145 Grain Lead Bullet									
v-N350	5.2	.51	.49	.5	948	5.8	1043	NA NA	1.476
v-N340	4.8	.51	.49	.5	939	5.3	1033	NA NA	1.476
v-3N37	5.0	.46	.46	NA	910	5.6	1001	NA NA	1.476
v-N320	3.7	.45	.43	NA	853	4.1	938	NA NA	1.476
146 Grain Jacketed Bullet									
H4227	9.6	.74	.71	.7	908	10.7	979	15700 CUP	1.370
HS6	5.6	.40	.40	NA	808	6.3	969	16100 CUP	1.370
UNIVERSAL	4.0	.44	.43	NA	788	4.5	933	16100 CUP	1.370
v-3N37	5.1	.47	.46	NA	847	5.7	932	NA NA	1.378
v-N350	5.0	.49	.49	NA	847	5.6	932	NA NA	1.378
v-N340	4.5	.48	.46	NA	838	5.0	922	NA NA	1.378
TITEGROUP	3.5	.30	.30	NA	808	4.0	914	16000 CUP	1.370
IMR4227	9.8	.75	.71	.7	840	10.3	880	15700 CUP	1.395
HP38	4.0	.37	.37	NA	733	4.5	876	15500 CUP	1.370
SR4756	5.0	.55	.53	.5	808	5.2	840	15600 CUP	1.395
IMR 800X	5.6	.60	.57	NA	782	5.8	805	15400 CUP	1.395
SR7625	4.0	.42	.40	NA	712	4.2	740	15600 CUP	1.395
IMR PB	3.7	.45	.43	NA	690	3.9	725	15700 CUP	1.395
IMR 700X	3.3	.44	.43	NA	683	3.5	725	15900 CUP	1.395
147 Grain Lead Bullet									
VEC BA9	6.2	.57	.57	.5	969	6.8	1056	14992 CIP	1.550

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
148 Grain Wad Cutter										
HP38	3.5	.32	.32	.3	869	4.0	956	15900	CUP	1.160
IMR4227	10.7	.82	.82	.7	891	11.4	945	16000	CUP	1.295
HS6	4.5	.32	.32	.3	816	5.2	943	14300	CUP	1.160
UNIVERSAL	2.9	.32	.32	.3	709	3.8	940	15600	CUP	1.160
TITEGROUP	2.7	.23	.21	NA	771	3.3	908	11800	CUP	1.160
IMR 800X	4.3	.46	.46	NA	734	5.5	905	15900	CUP	1.295
SR4756	4.9	.53	.53	.5	855	5.2	905	16000	CUP	1.295
v-N350	3.9	.38	.37	NA	812	4.3	892	NA	NA	1.181
SR7625	3.2	.33	.32	.3	696	4.2	875	16000	CUP	1.295
v-N340	3.5	.37	.37	NA	783	3.9	863	NA	NA	1.181
A NITRO100	2.4	.32	.32	.3	759	2.7	863	15300	PSI	1.252
IMR PB	2.8	.34	.34	.3	666	3.8	855	15800	CUP	1.295
IMR 700X	2.6	.35	.34	.3	663	3.5	850	16000	CUP	1.295
v-N330	3.2	.35	.34	.3	763	3.6	840	NA	NA	1.181
CLAYS	2.3	.34	.34	.3	784	2.5	836	13200	CUP	1.160
SOLO 1000	2.4	.32	.32	.3	730	2.7	830	15100	PSI	1.252
HERCO	3.3	.37	.37	NA	774	3.5	820	16000	PSI	1.180
v-N320	2.9	.35	.34	.3	746	3.2	820	NA	NA	1.181
BULLSEYE	2.6	.28	.27	NA	769	2.8	815	15900	PSI	1.180
BLUE DOT	5.3	.46	.46	NA	810	5.3	810	13600	PSI	1.180
ACCUR #5	3.6	.22	.21	NA	710	4.0	807	16200	PSI	1.152
GREEN DOT	2.7	.34	.34	.3	756	2.9	800	15900	PSI	1.180
WIN 540	4.6	.31	.30	.3	728	5.1	800	15300	PSI	1.180
BULLSEYE	2.7	.29	.27	NA	785	2.7	785	14600	PSI	1.180
UNIQUE	3.2	.35	.34	.3	775	3.2	775	14100	PSI	1.180
VEC BA10	2.3	.31	.30	.3	687	2.6	771	16269	CIP	1.195
WIN 231	2.9	.27	.27	NA	686	3.3	770	16100	PSI	1.180
RED DOT	2.4	.34	.34	.3	729	2.5	750	15500	PSI	1.180
ACCUR #2	2.6	.22	.21	NA	634	2.9	720	15500	PSI	1.152
wSUPER-TAR	2.5	.30	.30	.3	649	2.7	700	16300	PSI	1.180
150 Grain Jacketed Bullet										
HS6	7.0	.50	.49	.5	1011	7.0	1011	14900	CUP	1.425
H4227	10.1	.78	.76	.7	883	10.5	909	15500	CUP	1.425
A NITRO100	3.3	.45	.43	NA	791	3.7	899	15800	PSI	1.450
SOLO 1000	3.3	.44	.43	NA	755	3.7	859	16200	PSI	1.450
HP38	3.3	.31	.30	.3	814	3.8	856	15000	CUP	1.425
ACCUR #2	4.2	.35	.34	.3	751	4.7	853	17000	PSI	1.450
ACCUR #5	5.9	.36	.34	NA	715	6.5	813	16600	PSI	1.450

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
150 Grain Jacketed Bullet (Continued)									
IMR 800X	5.5	.59	.57	.5	766	5.7	795	15600 CUP	1.445
SR7625	4.1	.43	.43	NA	735	4.3	770	15700 CUP	1.445
IMR4227	9.4	.72	.71	.7	728	10.0	770	15900 CUP	1.445
IMR PB	3.8	.45	.43	NA	723	4.0	765	15900 CUP	1.445
SR4756	5.0	.56	.53	.5	723	5.4	765	16000 CUP	1.445
IMR 700X	3.3	.44	.43	NA	713	3.5	755	15900 CUP	1.445
157 Grain Jacketed Bullet									
VEC BA9	4.9	.45	.43	NA	801	5.2	876	14905 CIP	1.550
157 Grain Lead Bullet									
VEC BA9	5.4	.50	.49	.5	909	5.9	981	14644 CIP	1.550
VEC AO	6.2	.74	.71	.7	958	6.2	958	13860 CIP	1.550
158 Grain Jacketed Bullet									
v-N350	5.2	.51	.49	.5	825	5.9	925	NA NA	1.437
v-3N37	5.4	.49	.49	NA	816	6.1	915	NA NA	1.437
v-N340	4.6	.49	.49	NA	781	5.2	876	NA NA	1.437
v-N320	3.7	.45	.43	NA	709	4.2	794	NA NA	1.437
IMR4227	9.1	.70	.66	.7	666	9.7	705	15900 CUP	1.465
SR4756	5.1	.56	.53	.5	691	5.2	705	15300 CUP	1.465
IMR 800X	5.3	.57	.57	.5	675	5.5	695	15400 CUP	1.465
SR7625	4.1	.43	.43	NA	630	4.3	660	15700 CUP	1.465
IMR PB	3.6	.44	.43	NA	584	3.9	620	16000 CUP	1.465
IMR 700X	3.3	.45	.43	NA	573	3.4	585	15300 CUP	1.465
158 Grain Lead Bullet									
HS6	5.7	.41	.40	NA	928	6.3	1010	16200 CUP	1.475
H4227	9.0	.69	.66	NA	887	10.0	983	15700 CUP	1.475
UNIVERSAL	3.5	.38	.37	NA	756	4.5	974	16700 CUP	1.475
BLUE DOT	5.8	.51	.49	.5	919	6.1	955	15600 PSI	1.420
AMER-SELECT	3.8	.51	.49	.5	855	4.3	950	16900 PSI	1.420
ACCUR #5	5.3	.33	.32	.3	827	5.9	940	16100 PSI	1.481
HERCO	4.3	.48	.46	NA	886	4.5	930	15800 PSI	1.420
UNIQUE	4.0	.44	.43	NA	869	4.3	920	16000 PSI	1.420
TITEGROUP	3.2	.27	.27	NA	815	3.8	920	15400 CUP	1.475
BULLSEYE	3.5	.37	.37	NA	884	3.6	910	15500 PSI	1.420
A NITRO100	2.9	.39	.37	NA	786	3.3	894	16600 PSI	1.481
WIN 540	6.2	.42	.40	NA	808	6.8	880	15900 PSI	1.550
IMR 800X	4.8	.51	.49	.5	752	5.7	875	16000 CUP	1.520
WIN 571	6.7	.46	.46	NA	803	7.4	875	16000 PSI	1.550
CLAYS	2.8	.41	.40	NA	812	3.1	871	15100 CUP	1.475

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
158 Grain Lead Bullet (Continued)									
GREEN DOT	3.4	.42	.40	NA	838	3.5	870	15600 PSI	1.420
ACCUR #2	3.6	.30	.30	.3	764	4.0	868	14100 PSI	1.481
SOLO 1000	3.0	.40	.40	NA	754	3.4	857	14900 PSI	1.481
RED DOT	2.9	.41	.40	NA	795	3.1	835	15800 PSI	1.420
HP38	3.1	.29	.27	NA	782	3.7	834	14600 CUP	1.475
WIN 231	4.0	.37	.37	NA	747	4.5	830	15800 PSI	1.550
SR4756	4.9	.54	.53	.5	785	5.2	825	15800 CUP	1.520
IMR4227	9.1	.70	.66	.7	785	9.5	825	15700 CUP	1.520
IMR 700X	3.0	.40	.40	NA	672	3.6	790	15800 CUP	1.520
SR7625	3.7	.39	.37	NA	691	4.3	790	15200 CUP	1.520
IMR PB	3.4	.41	.40	NA	672	4.0	775	15500 CUP	1.520
wSUPER-TAR	3.3	.40	.40	NA	693	3.7	770	15700 PSI	1.550
158 Grain Copper Plated									
ACCUR #5	5.1	.32	.32	.3	829	5.7	943	16900 PSI	1.430
v-3N37	5.5	.50	.49	.5	841	6.1	925	NA NA	1.476
v-N350	5.3	.52	.49	.5	838	5.9	922	NA NA	1.476
v-N340	4.8	.51	.49	.5	799	5.3	879	NA NA	1.476
v-N320	3.9	.47	.46	NA	766	4.3	843	NA NA	1.476
ACCUR #2	3.3	.28	.27	NA	727	3.7	827	16100 PSI	1.430
158 Grain XTP									
H4227	9.0	.69	.66	NA	769	10.0	864	15500 CUP	1.455
HS6	5.6	.40	.40	NA	761	6.2	862	16300 CUP	1.455
ACCUR #5	5.2	.32	.32	.3	740	5.8	841	16500 PSI	1.445
SOLO 1000	3.1	.41	.40	NA	702	3.4	798	15900 PSI	1.445
TITEGROUP	3.5	.30	.30	NA	704	3.9	798	15900 CUP	1.455
A NITRO100	2.9	.39	.37	NA	691	3.2	786	14400 PSI	1.445
HP38	3.8	.35	.34	.3	661	4.3	779	15900 CUP	1.455
UNIVERSAL	4.0	.44	.43	NA	678	4.4	778	16200 CUP	1.455
ACCUR #2	3.6	.30	.30	.3	665	4.0	756	16500 PSI	1.445
CLAYS	3.0	.44	.43	NA	633	3.1	721	16600 CUP	1.455
160 Grain Jacketed Bullet									
HS6	6.5	.46	.46	NA	914	6.5	914	14600 CUP	1.425
H4227	9.6	.74	.71	.7	920	10.0	872	15100 CUP	1.425
HERC 2400	7.2	.53	.53	.5	802	7.6	850	15900 PSI	1.435
BLUE DOT	5.9	.51	.49	.5	805	6.2	845	15800 PSI	1.435
HP38	3.1	.29	.27	NA	783	3.7	819	14900 CUP	1.425
HERCO	4.1	.46	.46	NA	761	4.4	805	16000 PSI	1.435
BULLSEYE	3.4	.36	.34	NA	774	3.5	804	15600 PSI	1.435

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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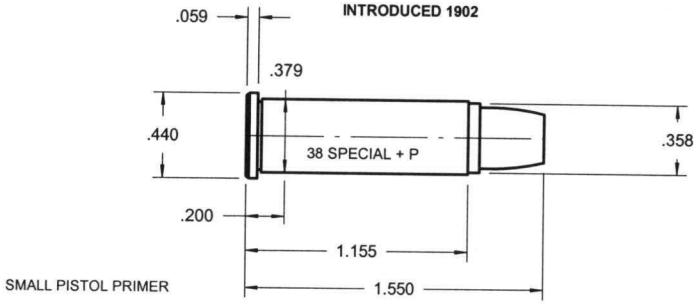
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
160 Grain Jacketed Bullet (Continued)									
UNIQUE	4.0	.44	.43	NA	770	4.2	800	15600 PSI	1.435
GREEN DOT	3.2	.41	.40	NA	715	3.4	750	15800 PSI	1.435
RED DOT	3.0	.43	.43	NA	680	3.2	715	15700 PSI	1.435
160 Grain Lead Bullet									
v-N340	4.8	.52	.49	.5	939	5.4	1033	NA NA	1.476
v-N350	5.1	.50	.49	.5	922	5.7	1014	NA NA	1.476
v-3N37	5.1	.47	.46	NA	888	5.7	978	NA NA	1.476
CLAYS	2.8	.41	.40	NA	812	3.5	911	16400 CUP	1.425
HP38	3.1	.29	.27	NA	782	3.7	834	14600 CUP	1.425
170 Grain Jacketed Bullet									
H4227	8.8	.68	.66	NA	762	9.8	888	15900 CUP	1.450
HS7	6.5	.44	.43	NA	788	7.0	840	15600 CUP	1.425
HS6	5.3	.38	.37	NA	710	5.9	832	16100 CUP	1.450
UNIVERSAL	3.8	.42	.40	NA	744	4.2	823	16100 CUP	1.450
TITEGROUP	3.0	.25	.24	NA	635	3.6	764	16000 CUP	1.450
HP38	3.8	.35	.34	.3	683	4.1	752	15800 CUP	1.450
173 Grain Lead Bullet									
ACCUR #5	4.9	.31	.30	.3	766	5.4	870	16500 PSI	1.515
ACCUR #2	3.6	.30	.30	.3	721	4.0	819	16300 PSI	1.515
195 Grain Lead Bullet									
ACCUR #7	5.9	.39	.37	NA	786	6.5	894	15200 PSI	1.550
ACCUR #5	4.5	.28	.27	NA	740	5.0	841	14900 PSI	1.550
ACCUR #2	3.2	.27	.27	NA	706	3.5	803	16900 PSI	1.550
200 Grain Lead Bullet									
IMR4227	8.7	.67	.66	NA	822	9.2	870	15900 CUP	1.500
BLUE DOT	5.0	.43	.43	NA	802	5.3	850	16000 PSI	1.540
H4227	8.0	.62	.61	NA	773	8.5	819	15900 CUP	1.425
HS6	4.5	.32	.32	.3	749	5.0	794	15900 CUP	1.425
HERCO	3.7	.41	.40	NA	764	3.8	785	15500 PSI	1.540
UNIQUE	3.4	.37	.37	NA	745	3.6	780	15700 PSI	1.540
IMR PB	3.2	.39	.37	NA	725	3.4	760	15800 CUP	1.500
BULLSEYE	3.0	.32	.32	.3	753	3.0	760	15100 PSI	1.540
SR7625	3.3	.35	.34	.3	720	3.5	755	15800 CUP	1.500
GREEN DOT	3.0	.38	.37	NA	729	3.1	750	15500 PSI	1.540
SR4756	4.1	.45	.43	NA	705	4.3	740	15700 CUP	1.500
IMR 700X	3.0	.40	.40	NA	725	3.0	725	15000 CUP	1.500
RED DOT	2.8	.39	.37	NA	718	2.8	725	15100 PSI	1.540
IMR 800X	4.4	.48	.46	NA	704	4.6	725	15500 CUP	1.500

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38 SPECIAL +P

These hot loads may wear guns prematurely.



DO NOT USE IN SMALL FRAME, OR ALUMINUM FRAME REVOLVERS, OR IN SEMI AUTO PISTOLS.

Useful case capacity 1.18 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
90 Grain Jacketed Bullet									
BLUE DOT	8.8	.76	.76	.7	1294	9.1	1345	16900 PSI	1.410
BULLSEYE	5.3	.56	.53	.5	1290	5.5	1340	17000 PSI	1.410
HERCO	6.2	.69	.66	.7	1250	6.5	1310	17100 PSI	1.410
UNIQUE	6.1	.67	.66	NA	1264	6.3	1300	16800 PSI	1.410
GREEN DOT	4.9	.62	.61	NA	1212	5.1	1260	16900 PSI	1.410
RED DOT	4.3	.61	.61	NA	1198	4.5	1245	17000 PSI	1.410
110 Grain Jacketed Bullet									
BLUE DOT	7.9	.69	.66	NA	1172	8.2	1205	16800 PSI	1.430
POWER PISTOL	6.2	.55	.53	.5	1145	6.5	1200	17100 PSI	1.430
BULLSEYE	4.7	.50	.49	.5	1109	5.0	1175	17400 PSI	1.430
UNIQUE	5.5	.60	.57	NA	1085	5.9	1160	17500 PSI	1.430
HERCO	5.5	.62	.61	NA	1075	5.9	1150	17500 PSI	1.430
GREEN DOT	4.5	.57	.57	.5	1040	4.8	1100	17400 PSI	1.430
WIN 540	8.2	.56	.53	.5	1005	8.7	1070	17800 PSI	1.455
RED DOT	3.9	.55	.53	.5	972	4.2	1040	17500 PSI	1.430
WIN 231	5.3	.49	.49	NA	935	5.7	1015	17600 PSI	1.455
110 Grain XTP									
HS6	7.5	.54	.53	.5	1244	8.4	1268	19600 CUP	1.455
v-3N37	8.0	.73	.71	.7	1266	8.0	1266	NA NA	1.437
v-N350	7.1	.69	.66	.7	1218	7.4	1266	NA NA	1.437

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38 SPECIAL +P (Continued)

These hot loads may wear guns prematurely.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
110 Grain XTP (Continued)										
v-N320	5.7	.69	.66	NA	1195	5.9	1230	NA	NA	1.437
v-N340	6.5	.69	.66	NA	1194	6.7	1229	NA	NA	1.437
UNIVERSAL	5.6	.62	.61	NA	1204	6.0	1204	18700	CUP	1.455
ACCUR #5	6.8	.42	.40	NA	1046	7.5	1189	17400	PSI	1.435
TITEGROUP	4.9	.41	.40	NA	1185	5.2	1185	18800	CUP	1.455
HP38	5.6	.51	.49	.5	1541	5.9	1155	18700	CUP	1.455
ACCUR #2	5.2	.44	.43	NA	996	5.8	1132	17800	PSI	1.435
124 Grain Lead Bullet										
v-N350	6.4	.63	.61	NA	1150	6.6	1183	NA	NA	1.437
v-3N37	6.6	.60	.57	NA	1137	6.8	1170	NA	NA	1.437
v-N340	6.0	.64	.61	NA	1131	6.2	1164	NA	NA	1.437
v-N320	4.8	.58	.57	.5	1077	5.0	1119	NA	NA	1.437
125 Grain Jacketed Bullet										
POWER PISTOL	6.0	.53	.53	.5	1110	6.3	1165	17200	PSI	1.440
BULLSEYE	4.5	.48	.46	NA	1020	4.8	1090	17500	PSI	1.437
UNIQUE	5.2	.57	.57	.5	1000	5.6	1070	17500	PSI	1.440
BLUE DOT	7.2	.62	.61	NA	1025	7.5	1065	16900	PSI	1.440
HERCO	5.6	.63	.61	NA	1010	5.8	1050	16900	PSI	1.440
ACCUR #2	5.0	.42	.40	NA	899	5.5	1022	17700	PSI	1.445
GREEN DOT	4.3	.54	.53	.5	950	4.6	1015	17500	PSI	1.440
WIN 540	7.8	.53	.53	.5	945	8.2	1000	17500	PSI	1.437
RED DOT	3.9	.55	.53	.5	929	4.1	965	17000	PSI	1.440
WIN 231	4.8	.45	.43	NA	840	5.3	935	17200	PSI	1.437
ACCUR #5	6.4	.40	.40	NA	810	7.1	920	17300	PSI	1.445
125 Grain Copper Plated										
v-3N37	6.6	.60	.57	NA	1096	6.9	1140	NA	NA	1.437
v-N350	6.3	.62	.61	NA	1064	6.6	1115	NA	NA	1.437
v-N340	5.7	.61	.61	NA	1055	6.0	1106	NA	NA	1.437
v-N320	4.7	.57	.57	.5	993	5.0	1053	NA	NA	1.437
125 Grain XTP										
HS6	7.0	.50	.49	.5	1116	7.8	1138	19500	CUP	1.455
UNIVERSAL	5.0	.55	.53	.5	999	5.4	1072	18900	CUP	1.455
TITEGROUP	4.7	.40	.40	NA	1000	5.0	1069	18700	CUP	1.455
HP38	4.7	.44	.43	NA	900	5.3	1018	19800	CUP	1.455
140 Grain Jacketed Bullet										
v-3N37	6.6	.60	.57	NA	1024	6.9	1064	NA	NA	1.437
v-N350	6.4	.63	.61	NA	1013	6.7	1053	NA	NA	1.437

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38 SPECIAL +P (Continued)

These hot loads may wear guns prematurely.

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL
140 Grain Jacketed Bullet (Continued)										
v-N340	5.8	.62	.61	NA	981	6.1	1030	NA	NA	1.437
v-N320	5.0	.60	.57	NA	984	5.1	1003	NA	NA	1.437
WIN 571	7.4	.50	.49	.5	785	8.0	890	17300	PSI	1.437
ACCUR #5	6.0	.37	.37	NA	778	6.7	884	17800	PSI	1.445
ACCUR #2	4.4	.37	.37	NA	775	4.9	881	18300	PSI	1.445
WIN 540	7.0	.48	.46	NA	785	7.4	875	17300	PSI	1.437
WIN 231	4.3	.40	.40	NA	685	4.8	785	17200	PSI	1.437
140 Grain XTP										
H4227	11.2	.87	.82	NA	1110	12.4	1121	19400	CUP	1.455
UNIVERSAL	4.7	.52	.49	.5	1022	5.1	1022	19100	CUP	1.455
HS6	6.7	.48	.46	NA	992	7.0	992	18300	CUP	1.455
TITEGROUP	4.2	.36	.34	NA	975	4.6	984	19300	CUP	1.455
HP38	4.6	.43	.43	NA	1110	4.9	892	18600	CUP	1.455
145 Grain Lead Bullet										
v-N350	5.8	.57	.57	.5	1029	6.2	1089	NA	NA	1.476
v-N340	5.3	.56	.53	.5	1026	5.6	1076	NA	NA	1.476
v-3N37	5.6	.51	.49	.5	990	5.9	1039	NA	NA	1.476
v-N320	4.1	.50	.49	.5	908	4.4	971	NA	NA	1.476
145 Grain Wad Cutter										
VEC BA10	2.3	.31	.30	.3	700	2.6	784	17460	CIP	1.195
146 Grain Jacketed Bullet										
H4227	11.5	.88	.88	NA	1085	12.0	1085	18400	CUP	1.370
HS6	6.4	.46	.46	NA	1035	6.7	1035	18400	CUP	1.370
UNIVERSAL	4.6	.50	.49	.5	987	4.7	987	18100	CUP	1.370
TITEGROUP	4.0	.34	.34	.3	972	4.4	981	19300	CUP	1.370
v-3N37	5.7	.52	.49	.5	948	5.9	975	NA	NA	1.378
HP38	4.9	.45	.43	NA	1085	4.9	975	17700	CUP	1.370
v-N350	5.6	.55	.53	.5	953	5.7	971	NA	NA	1.378
v-N340	5.0	.53	.53	.5	927	5.2	963	NA	NA	1.378
147 Grain Lead Bullet										
VEC AO	5.4	.65	.61	NA	907	6.9	1119	19085	CIP	1.550
VEC BA10	3.4	.46	.46	NA	837	3.7	902	17213	CIP	1.550
148 Grain Wad Cutter										
v-N350	4.3	.42	.40	NA	892	4.5	928	NA	NA	1.181
v-N340	3.9	.42	.40	NA	878	4.0	895	NA	NA	1.181
v-N330	3.6	.39	.37	NA	851	3.7	875	NA	NA	1.181
v-N320	3.2	.39	.37	NA	800	3.4	848	NA	NA	1.181

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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38 SPECIAL +P (Continued)

These hot loads may wear guns prematurely.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
....STARTING LOADS....									
150 Grain Jacketed Bullet									
ACCUR #2	4.4	.37	.37	NA	791	4.9	899	17600 PSI	1.450
ACCUR #5	6.0	.37	.37	NA	757	6.7	860	18200 PSI	1.450
157 Grain Jacketed Bullet									
VEC AO	5.4	.65	.61	NA	889	6.2	1007	19846 CIP	1.550
157 Grain Lead Bullet									
VEC BA10	3.4	.46	.46	NA	788	3.9	892	17851 CIP	1.550
158 Grain Jacketed Bullet									
WIN 540	6.1	.42	.40	NA	750	6.6	800	17400 PSI	1.481
WIN 571	6.6	.45	.43	NA	700	7.3	800	17400 PSI	1.481
WIN 231	4.0	.37	.37	NA	635	4.4	720	17200 PSI	1.481
158 Grain Lead Bullet									
ACCUR #5	5.6	.35	.34	.3	880	6.2	1000	18400 PSI	1.481
ACCUR #2	4.2	.35	.34	.3	879	4.7	999	18500 PSI	1.481
BLUE DOT	6.0	.52	.49	.5	959	6.3	995	17000 PSI	1.420
HERCO	4.4	.50	.49	.5	911	4.7	965	17300 PSI	1.420
AMER-SELECT	4.1	.56	.53	.5	914	4.3	950	16900 PSI	1.420
UNIQUE	4.3	.47	.46	NA	905	4.5	950	17100 PSI	1.420
BULLSEYE	3.6	.38	.37	NA	900	3.8	945	17200 PSI	1.420
WIN 540	6.7	.46	.46	NA	864	7.1	915	17300 PSI	1.481
WIN 571	7.2	.49	.49	NA	860	7.7	910	17300 PSI	1.481
GREEN DOT	3.5	.44	.43	NA	868	3.7	910	17200 PSI	1.420
WIN 231	4.5	.42	.40	NA	820	4.7	860	17100 PSI	1.481
RED DOT	3.1	.44	.43	NA	831	3.2	855	16800 PSI	1.420
wSUPER-TAR	3.7	.44	.43	NA	756	3.9	800	17300 PSI	1.481
158 Grain Copper Plated									
v-3N37	6.1	.56	.53	.5	943	6.3	970	NA NA	1.476
v-N350	5.9	.58	.57	.5	936	6.1	963	NA NA	1.476
v-N340	5.3	.56	.53	.5	887	5.5	923	NA NA	1.476
v-N320	4.3	.52	.49	.5	829	4.6	885	NA NA	1.476
158 Grain XTP									
H4227	11.0	.85	.82	NA	964	11.0	964	17600 CUP	1.455
HS6	6.2	.44	.43	NA	926	6.6	926	18700 CUP	1.455
TITEGROUP	3.9	.33	.32	.3	896	4.3	905	19300 CUP	1.455
ACCUR #5	5.4	.34	.34	.3	792	6.0	900	18500 PSI	1.445
UNIVERSAL	4.3	.47	.46	NA	837	4.7	837	19200 CUP	1.455
HP38	4.5	.41	.40	NA	987	4.6	807	18100 CUP	1.455
ACCUR #2	3.8	.32	.32	.3	702	4.2	798	17800 PSI	1.445

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38 SPECIAL +P (Continued)

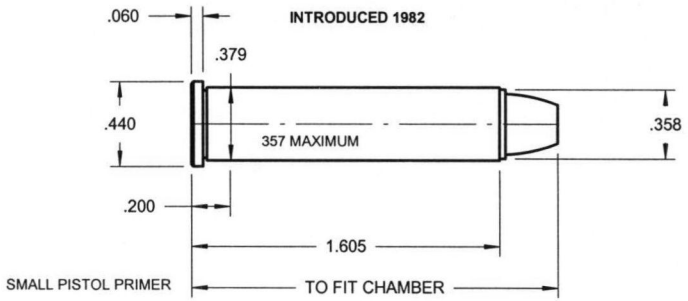
These hot loads may wear guns prematurely.

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
160 Grain Jacketed Bullet									
BLUE DOT	5.9	.51	.49	.5	855	6.3	905	17400 PSI	1.430
UNIQUE	4.2	.46	.46	NA	845	4.4	885	17100 PSI	1.430
POWER PISTOL	4.6	.41	.40	NA	832	4.9	880	17300 PSI	1.430
HERCO	4.4	.49	.49	NA	795	4.6	835	17200 PSI	1.430
BULLSEYE	3.5	.37	.37	NA	781	3.7	820	17100 PSI	1.430
GREEN DOT	3.4	.43	.43	NA	728	3.6	770	17300 PSI	1.430
RED DOT	3.1	.44	.43	NA	708	3.3	750	17400 PSI	1.430
160 Grain Lead Bullet									
v-N340	5.4	.58	.57	.5	1030	5.6	1070	NA NA	1.476
v-N350	5.7	.56	.53	.5	1016	5.9	1046	NA NA	1.476
v-3N37	5.7	.52	.49	.5	973	6.0	1021	NA NA	1.476
170 Grain Jacketed Bullet									
H4227	10.6	.82	.82	.7	950	10.6	950	17600 CUP	1.450
HS6	6.0	.42	.40	NA	897	6.3	897	18600 CUP	1.450
UNIVERSAL	4.1	.45	.43	NA	847	4.3	847	18600 CUP	1.450
TITEGROUP	3.7	.31	.30	.3	846	4.0	846	19000 CUP	1.450
HP38	4.3	.40	.40	NA	819	4.4	819	18100 CUP	1.450
173 Grain Lead Bullet									
ACCUR #5	5.0	.31	.30	.3	792	5.6	900	17900 PSI	1.515
ACCUR #2	3.8	.32	.32	.3	748	4.2	850	18000 PSI	1.515
200 Grain Lead Bullet									
HERC 2400	6.6	.49	.49	NA	834	7.1	890	17500 PSI	1.540
HERCO	3.8	.43	.43	NA	793	4.0	825	17000 PSI	1.540
UNIQUE	3.5	.38	.37	NA	763	3.7	800	17100 PSI	1.540
BULLSEYE	3.1	.33	.32	.3	759	3.3	795	17100 PSI	1.540
GREEN DOT	3.0	.38	.37	NA	740	3.2	775	17100 PSI	1.540
RED DOT	2.8	.39	.37	NA	722	2.9	750	17000 PSI	1.540

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027**

357 REMINGTON MAXIMUM



Useful case capacity 1.79 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain XTP										
H4227	26.0c	2.00	DBLD	1.9	2164	28.0c	2314	NA	NA	1.910
H110	29.0c	1.90	DBLD	1.9	2179	30.0c	2242	NA	NA	1.910
125 Grain Jacketed Bullet										
H110	27.5c	1.80	DBLD	1.6	2082	28.5c	2163	NA	NA	1.885
H4227	25.0c	1.92	DBLD	1.9	1989	27.0c	2126	NA	NA	1.885
140 Grain Jacketed Bullet										
H110	24.0	1.57	DBLD	NA	1854	26.0	2001	NA	NA	1.890
H4227	22.0	1.69	DBLD	1.6	1839	24.0c	1985	NA	NA	1.890
150 Grain Jacketed Bullet										
H110	23.0	1.51	1.46	1.3	1805	25.0	1947	NA	NA	1.890
H4227	21.0	1.61	DBLD	1.6	1765	23.0	1923	NA	NA	1.890
158 Grain Jacketed Bullet										
ACCUR 1680	22.8	1.49	1.46	1.3	1758	25.3	1998	38300	CUP	1.905
ACC XMP5744	18.9	1.42	1.36	1.3	1606	21.0	1825	42900	CUP	1.905
ACCUR 2230	23.9	1.57	DBLD	NA	1390	26.5	1580	29200	CUP	1.905
A-XMR-2015	22.5	1.64	DBLD	1.6	1356	25.0c	1541	22200	CUP	1.905
158 Grain Copper Plated										
v-N110	18.6	1.55	DBLD	NA	1740	20.2	1897	NA	NA	1.890
v-3N37	9.5	.87	.82	NA	1342	11.4	1539	NA	NA	1.890
v-N350	9.7	.95	.95	NA	1306	11.8	1533	NA	NA	1.890
158 Grain Barnes X Bullet										
v-N110	17.5	1.46	1.46	1.3	1737	19.4	1888	NA	NA	1.890

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357 REMINGTON MAXIMUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
158 Grain Barnes X Bullet (Continued)										
v-3N37	10.1	.92	.88	NA	1440	11.3	1560	NA	NA	1.890
v-N350	8.6	.84	.82	NA	1341	10.7	1528	NA	NA	1.890
160 Grain Jacketed Bullet										
H110	22.0	1.44	1.36	1.3	1747	24.0	1886	NA	NA	1.890
H4227	20.5	1.58	DBLD	NA	1665	22.5	1814	NA	NA	1.890
160 Grain Lead Bullet										
v-3N37	9.1	.83	.82	NA	1455	10.9	1572	NA	NA	1.890
v-N350	9.5	.93	.88	NA	1445	10.6	1547	NA	NA	1.890
170 Grain Jacketed Bullet										
ACCUR 1680	21.2	1.39	1.36	1.3	1727	23.5	1962	38400	CUP	1.875
H110	20.0	1.31	1.26	1.3	1637	22.0	1784	NA	NA	1.880
H4227	19.0	1.46	1.46	1.3	1589	21.0	1748	NA	NA	1.880
ACC XMP5744	18.0	1.35	1.26	1.3	1505	20.0	1711	42800	CUP	1.875
A-XMR-2015	22.5	1.64	DBLD	1.6	1364	25.0c	1550	24800	CUP	1.875
ACCUR 2230	23.9	1.57	DBLD	NA	1362	26.5	1548	31600	CUP	1.875
180 Grain Jacketed Bullet										
ACCUR 1680	23.9	1.57	DBLD	NA	1732	26.5	1968	41000	CUP	2.190
ACC XMP5744	19.8	1.49	1.46	1.3	1567	22.0	1781	44100	CUP	2.190
v-N120	20.4	1.58	DBLD	NA	1604	22.4	1752	NA	NA	1.894
v-N110	15.5	1.29	1.26	1.3	1559	17.2	1695	NA	NA	1.894
H110	19.0	1.25	1.18	NA	1540	21.0	1694	NA	NA	1.990
WIN 296	NA	NA	NA	NA	NA	19.0	1670	46900	CUP	1.940
H4227	18.0	1.38	1.36	1.3	1496	20.0	1645	NA	NA	1.990
ACCUR 2230	24.3	1.60	DBLD	1.6	1377	27.0	1565	29700	CUP	2.190
A-XMR-2015	22.5	1.64	DBLD	1.6	1304	25.0c	1482	21500	CUP	2.190
200 Grain Jacketed Bullet										
VEC SP3	24.7	1.68	DBLD	1.6	1768	24.7	1768	43425	CIP	1.990
ACCUR 1680	19.4	1.27	1.26	NA	1474	21.5	1675	41900	CUP	1.990
H110	18.0	1.18	1.18	NA	1458	20.0	1604	NA	NA	1.990
v-N120	18.9	1.47	1.46	1.3	1397	20.8	1573	NA	NA	2.000
A-XMR-2015	21.6	1.58	DBLD	NA	1347	24.0	1531	35500	CUP	1.990
v-N110	14.2	1.18	1.18	NA	1361	16.0	1499	NA	NA	2.000
ACC XMP5744	16.2	1.22	1.18	NA	1317	18.0	1497	41700	CUP	1.990
VEC TU2000	21.6	1.65	DBLD	1.6	1476	21.6	1476	30232	CIP	1.990
ACCUR 2230	23.0	1.51	1.46	1.3	1284	25.5	1459	41300	CUP	1.990
H4227	16.0	1.23	1.18	NA	1296	18.0	1440	NA	NA	1.990
210 Grain Lead Bullet										
ACCUR 1680	18.0	1.18	1.18	NA	1451	20.0	1649	42200	CUP	1.965

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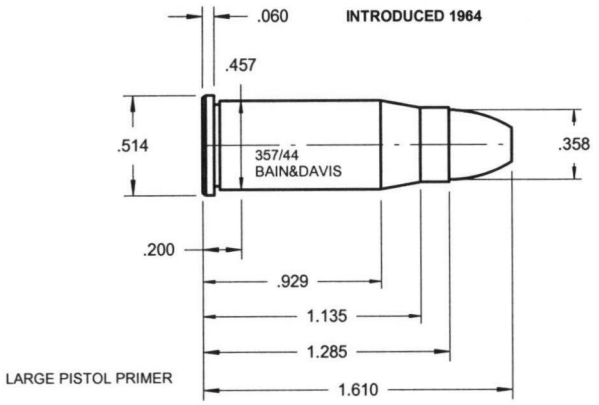
357 REMINGTON MAXIMUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
210 Grain Lead Bullet (Continued)									
A-XMR-2015	20.7	1.51	1.46	1.3	1374	23.0	1561	38700 CUP	1.965
ACC XMP5744	16.3	1.22	1.18	NA	1335	17.0	1518	45300 CUP	1.965
ACCUR 2230	21.2	1.39	1.36	1.3	1265	23.5	1438	39800 CUP	1.965

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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357-44 BAIN & DAVIS



Useful case capacity 1.81 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL
110 Grain Jacketed Bullet										
H110	24.0	1.57	DBLD	NA	1746	25.0	1810	NA	NA	1.580
H4227	23.0	1.77	DBLD	1.6	1680	24.0c	1750	NA	NA	1.580
125 Grain Jacketed Bullet										
ACCUR #9	19.8	1.30	1.26	1.3	1932	22.0	2196	39700	PSI	1.660
ACCUR 1680	27.0	1.77	DBLD	1.6	1867	30.0c	2122	21900	PSI	1.660
ACCUR #7	17.1	1.12	1.09	1.0	1843	19.0	2094	37500	PSI	1.660
H110	23.0	1.51	1.46	1.3	1703	24.0	1769	NA	NA	1.580
H4227	22.0	1.69	DBLD	1.6	1567	23.0	1627	NA	NA	1.580
125 Grain XTP										
ACCUR #9	19.4	1.27	1.26	NA	1878	21.5	2134	40600	PSI	1.700
ACCUR 1680	27.0	1.77	DBLD	1.6	1835	30.0c	2085	24000	PSI	1.700
ACCUR #7	16.7	1.09	1.09	1.0	1800	18.5	2045	38100	PSI	1.700
140 Grain Jacketed Bullet										
H110	22.0	1.44	1.36	1.3	1636	23.0	1700	NA	NA	1.580
H4227	21.0	1.61	DBLD	1.6	1521	22.0	1596	NA	NA	1.580
140 Grain XTP										
ACCUR #9	18.5	1.22	1.18	NA	1733	20.5	1969	38300	PSI	1.700
ACCUR 1680	25.2	1.65	DBLD	1.6	1676	28.0c	1905	22500	PSI	1.700
150 Grain Jacketed Bullet										
H110	21.0	1.38	1.36	1.3	1610	22.0	1689	NA	NA	1.580
H4227	20.0	1.54	1.46	NA	1484	21.0	1557	NA	NA	1.580

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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c = Compressed charge
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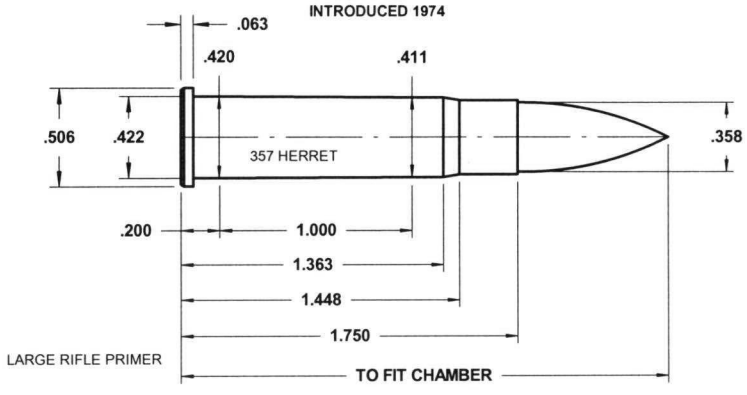
357-44 BAIN & DAVIS (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
158 Grain Jacketed Bullet										
ACCUR 1680	25.2	1.65	DBLD	1.6	1672	28.0c	1900	30300	PSI	1.685
ACCUR #9	18.0	1.18	1.18	NA	1651	20.0	1876	37800	PSI	1.685
158 Grain XTP										
H110	20.0	1.31	1.26	1.3	1529	21.0	1604	NA	NA	1.580
H4227	19.0	1.46	1.46	1.3	1373	20.0	1440	NA	NA	1.580
170 Grain Jacketed Bullet										
ACCUR 1680	25.2	1.65	DBLD	1.6	1617	28.0c	1838	31000	PSI	1.740
ACCUR #9	17.1	1.12	1.09	1.0	1544	19.0	1755	37900	PSI	1.740

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357 HERRET



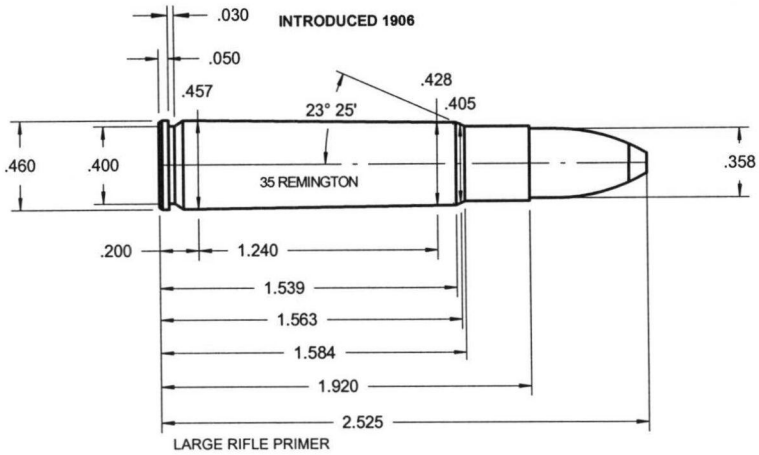
Useful case capacity 2.33 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
110 Grain XTP										
H4227	30.0	2.31	DBLD	2.2	2184	33.0c	2380	NA	NA	2.065
125 Grain Jacketed Bullet										
H4227	29.0	2.23	DBLD	2.2	2137	32.0c	2329	NA	NA	2.100
140 Grain Jacketed Bullet										
H4227	27.0	2.08	DBLD	1.9	1998	30.0	2198	NA	NA	2.065
150 Grain Jacketed Bullet										
H4227	26.0	2.00	DBLD	1.9	1947	29.0	2142	NA	NA	2.065
158 Grain Jacketed Bullet										
ACCUR 1680	30.6	2.00	DBLD	1.9	1944	34.0	2209	37300	PSI	2.080
A-XMR-2015	32.4c	2.37	DBLD	2.2	1837	36.0c	2087	35900	PSI	2.080
H4227	25.0	1.92	DBLD	1.9	1821	28.0	2022	NA	NA	2.065
ACCUR 2230	33.3	2.19	DBLD	1.9	1741	37.0c	1978	35100	PSI	2.080
180 Grain Jacketed Bullet										
ACCUR 1680	32.4	2.12	DBLD	1.9	1945	36.0c	2210	41100	PSI	2.420
A-XMR-2015	32.4c	2.37	DBLD	2.2	1730	36.0c	1966	31700	PSI	2.420
ACCUR 2230	34.2	2.25	DBLD	2.2	1692	38.0c	1923	32400	PSI	2.420
ACC XMP5744	23.8	1.79	DBLD	1.6	1662	26.5	1889	39700	PSI	2.420
200 Grain Jacketed Bullet										
ACCUR 1680	30.6	2.00	DBLD	1.9	1801	34.0	2047	41500	PSI	2.310
ACCUR 2230	34.2	2.25	DBLD	2.2	1683	38.0c	1912	37200	PSI	2.310
A-XMR-2015	31.5	2.30	DBLD	2.2	1668	35.0c	1895	33300	PSI	2.310

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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35 REMINGTON



Useful case capacity 2.85 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL	1 Grain Veloc	Factor Pressr
150 Grain Jacketed Bullet												
IMR3031	37.8c	2.88	DBLD	2.8	2173	42.0c	2390	34200	CUP	2.500	....	....
IMR4064	38.7c	2.89	DBLD	2.8	2173	43.0c	2390	34200	CUP	2.500	....	....
IMR4895	38.3	2.79	DBLD	2.8	2107	43.0c	2340	34600	CUP	2.500	....	....
IMR4320	37.7	2.70	DBLD	2.5	2066	42.5c	2295	34700	CUP	2.500	....	....
RELODER 7	32.0	2.33	DBLD	2.2	2290	32.0	2290	30700	CUP	2.485	....	....
IMR4198	25.5	2.02	DBLD	1.9	1953	29.0	2190	35000	CUP	2.500	....	....
SR4759	20.2	2.01	DBLD	1.9	1771	23.0	1985	35000	CUP	2.500	....	....
IMR4350	43.5c	3.20	DBLD	3.1	1985	43.5c	1985	24100	CUP	2.500	....	....
IMR4227	20.2	1.55	DBLD	NA	1793	22.0	1935	33600	CUP	2.500	....	....
IMR4831	43.5c	3.20	DBLD	3.1	1850	43.5c	1850	21300	CUP	2.500	....	....
158 Grain Lead Bullet												
RELODER 7	28.0	2.04	DBLD	1.9	2200	28.0	2200	29800	CUP	2.485	....	....
180 Grain Jacketed Bullet												
H4895	35.0	2.55	DBLD	2.5	2029	39.0	2232	31681	PSI	2.470	.9763	.9547
H-VARGET	37.0	2.70	DBLD	2.5	2015	40.5c	2196	31107	PSI	2.470	....	....
H4198	28.0	2.10	DBLD	1.9	1937	32.0	2172	31586	PSI	2.470	.9717	.9649
BL-C(2)	39.0	2.52	DBLD	2.5	1971	43.0	2147	30916	PSI	2.470	.9788	.9759
ACCUR 2520	35.1	2.40	DBLD	2.2	1867	39.0	2122	27100	PSI	2.465	....	....
A-XMR-2495	36.9	2.76	DBLD	2.5	1866	41.0c	2121	30000	PSI	2.465	....	....
H335	34.0	2.19	DBLD	2.2	1937	37.5	2111	32160	PSI	2.470	.9756	.9672
H414	41.7	2.75	DBLD	2.5	1932	46.0c	2106	NA	NA	2.490	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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35 REMINGTON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
....STARTING LOADS....											
180 Grain Jacketed Bullet (Continued)											
H322	31.0	2.25	DBLD	2.2	1894	35.0	2104	31681 PSI	2.470	.9740	.9607
A-XMR-2015	32.4	2.37	DBLD	2.2	1847	36.0	2099	27800 PSI	2.465	----	----
ACCUR 2460	33.3	2.18	DBLD	1.9	1838	37.0	2089	28300 PSI	2.465	----	----
H380	39.9	2.75	DBLD	2.5	1904	44.0c	2075	NA NA	2.490	----	----
ACCUR 2230	32.9	2.16	DBLD	1.9	1814	36.5	2061	28900 PSI	2.465	----	----
VEC TU2000	28.5	2.17	DBLD	1.9	2008	29.3	2047	24775 CIP	2.500	----	----
ACC XMP5744	22.5	1.69	DBLD	1.6	1664	25.0	1891	32700 PSI	2.465	----	----
200 Grain Jacketed Bullet											
VEC SP10	34.7	2.32	DBLD	2.2	2152	34.7	2152	27126 CIP	2.500	----	----
H-VARGET	36.0	2.63	DBLD	2.5	1963	39.5c	2139	31873 PSI	2.510	----	----
WIN 748	36.4	2.38	DBLD	2.2	1993	39.0	2130	33000 CUP	2.490	----	----
RELODER 7	31.0	2.26	DBLD	2.2	2115	31.0	2115	30700 CUP	2.485	----	----
IMR3031	33.3	2.54	DBLD	2.5	1900	37.5c	2110	34700 CUP	2.500	----	----
H4895	35.0	2.55	DBLD	2.5	1936	38.5	2110	30916 PSI	2.510	.9756	.9409
VEC SP9	36.3	2.48	DBLD	2.2	2100	36.3	2100	24790 CIP	2.500	----	----
IMR4064	35.6	2.65	DBLD	2.5	1891	39.5c	2080	34200 CUP	2.500	----	----
ACCUR 2520	35.1	2.40	DBLD	2.2	1822	39.0	2071	27800 PSI	2.470	----	----
A-XMR-2015	31.5	2.30	DBLD	2.2	1806	35.0	2052	31000 PSI	2.470	----	----
H335	33.0	2.13	DBLD	1.9	1844	37.0	2048	31777 PSI	2.510	.9740	.9505
IMR4895	32.2	2.35	DBLD	2.2	1810	36.5	2030	34900 CUP	2.500	----	----
ACCUR 2460	33.3	2.18	DBLD	1.9	1785	37.0	2028	27200 PSI	2.470	----	----
A-XMR-2495	36.0	2.69	DBLD	2.5	1784	40.0c	2027	25500 PSI	2.470	----	----
IMR4320	33.9	2.43	DBLD	2.2	1802	38.5	2020	35000 CUP	2.500	----	----
BL-C(2)	38.0	2.45	DBLD	2.2	1863	41.5	2011	30341 PSI	2.510	.9781	.9147
H4198	27.0	2.03	DBLD	1.9	1800	30.5	1999	30341 PSI	2.510	.9702	.9521
H322	31.0	2.25	DBLD	2.2	1840	33.8	1987	31681 PSI	2.510	.9728	.9480
ACCUR 2230	31.5	2.07	DBLD	1.9	1744	35.0	1982	30900 PSI	2.470	----	----
IMR4198	24.8	1.97	DBLD	1.9	1774	27.0	1915	33500 CUP	2.500	----	----
IMR4350	43.0c	3.16	DBLD	3.1	1915	43.0c	1915	29200 CUP	2.500	----	----
IMR4831	43.0c	3.16	DBLD	3.1	1780	43.0c	1780	25900 CUP	2.500	----	----
ACC XMP5744	21.6	1.62	DBLD	1.6	1563	24.0	1777	29800 PSI	2.470	----	----
SR4759	18.0	1.79	DBLD	1.6	1579	20.5	1770	35000 CUP	2.500	----	----
IMR4227	18.5	1.42	1.36	1.3	1570	21.0	1760	35000 CUP	2.500	----	----
200 Grain Lead Bullet											
ACCUR 2520	34.2	2.33	DBLD	2.2	1834	38.0	2084	30900 PSI	2.410	----	----
A-XMR-2495	36.0	2.69	DBLD	2.5	1769	40.0c	2010	24000 PSI	2.410	----	----
ACCUR 2460	30.6	2.01	DBLD	1.9	1726	34.0	1961	30300 PSI	2.410	----	----
A-XMR-2015	29.3	2.14	DBLD	1.9	1705	32.5	1938	30800 PSI	2.410	----	----

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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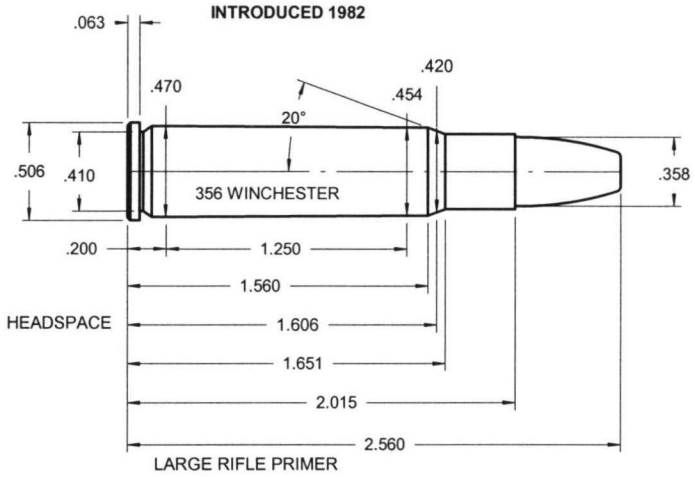
35 REMINGTON (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
200 Grain Lead Bullet (Continued)									
ACCUR 2230	29.3	1.93	DBLD	1.9	1680	32.5	1909 29700 PSI	2.410	....
VEC TU2000	23.1	1.76	DBLD	1.6	1709	24.4	1781 21234 CIP	2.500	....
ACC XMP5744	20.7	1.56	DBLD	NA	1546	23.0	1757 27600 PSI	2.410	....
220 Grain Jacketed Bullet									
H4895	33.0	2.40	DBLD	2.2	1844	36.3	2010 32160 PSI	2.470	.9740 .9564
H-VARGET	34.0	2.49	DBLD	2.5	1799	38.0	1998 31873 PSI	2.470	.9739 .9559
BL-C(2)	36.0	2.32	DBLD	2.2	1759	39.5	1917 29671 PSI	2.470	.9754 .9603
H380	35.3	2.44	DBLD	2.2	1723	39.0	1878 NA NA	2.490	....
H322	29.0	2.10	DBLD	1.9	1684	32.5	1870 31203 PSI	2.470	.9702 .9384
H4198	26.0	1.95	DBLD	1.9	1697	29.0	1867 31969 PSI	2.470	.9685 .9691
H414	37.1	2.46	DBLD	2.2	1708	41.0	1862 NA NA	2.490	....
H335	30.0	1.93	DBLD	1.9	1656	33.5	1821 31969 PSI	2.470	.9729 .9614
250 Grain Lead Bullet									
ACCUR 2460	30.4	1.99	DBLD	1.9	1614	32.0	1717 32200 PSI	2.685	....
A-XMR-2495	33.3	2.49	DBLD	2.5	1595	35.0	1697 26100 PSI	2.685	....
ACCUR 2520	30.4	2.08	DBLD	1.9	1550	32.0	1649 30700 PSI	2.685	....
ACCUR 2230	27.6	1.81	DBLD	1.6	1543	29.0	1641 33500 PSI	2.685	....
A-XMR-2015	25.7	1.88	DBLD	1.6	1451	27.0	1544 31800 PSI	2.685	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

356 WINCHESTER



Useful case capacity 2.91 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
180 Grain Jacketed Bullet										
A-XMR-2015	40.5c	2.96	DBLD	2.8	2379	45.0c	2703	46300	CUP	2.545
H4198	40.0c	3.00	DBLD	2.8	2432	43.0c	2600	NA	NA	2.565
ACCUR 2520	44.1c	3.01	DBLD	2.8	2267	49.0c	2576	41800	CUP	2.545
H322	44.0c	3.19	DBLD	3.1	2410	47.0c	2552	NA	NA	2.565
ACCUR 2460	41.4	2.72	DBLD	2.5	2244	46.0c	2550	44400	CUP	2.545
H4895	46.0c	3.35	NA	3.1	2394	49.0c	2535	NA	NA	2.565
ACCUR 2230	40.5	2.66	DBLD	2.5	2207	45.0c	2508	45500	CUP	2.545
A-XMR-2495	43.2c	3.23	DBLD	3.1	2177	48.0c	2474	37600	CUP	2.545
H335	49.0c	3.16	DBLD	3.1	2357	51.0c	2449	NA	NA	2.565
BL-C(2)	50.0c	3.22	DBLD	3.1	2340	52.0c	2431	NA	NA	2.565
ACCUR 2700	46.6c	3.19	DBLD	3.1	2161	49.0c	2299	40600	CUP	2.545
H4227	24.0	1.85	DBLD	1.6	1849	30.0	2238	NA	NA	2.565
200 Grain Jacketed Bullet										
H4198	37.0	2.78	DBLD	2.5	2229	40.0c	2383	NA	NA	2.550
H322	41.0c	2.97	DBLD	2.8	2189	44.0c	2340	NA	NA	2.550
H4895	43.0c	3.13	DBLD	3.1	2187	46.0c	2338	NA	NA	2.550
H335	48.0c	3.10	DBLD	2.8	2226	49.0c	2269	NA	NA	2.550
BL-C(2)	49.0c	3.16	DBLD	3.1	2201	50.0c	2243	NA	NA	2.550

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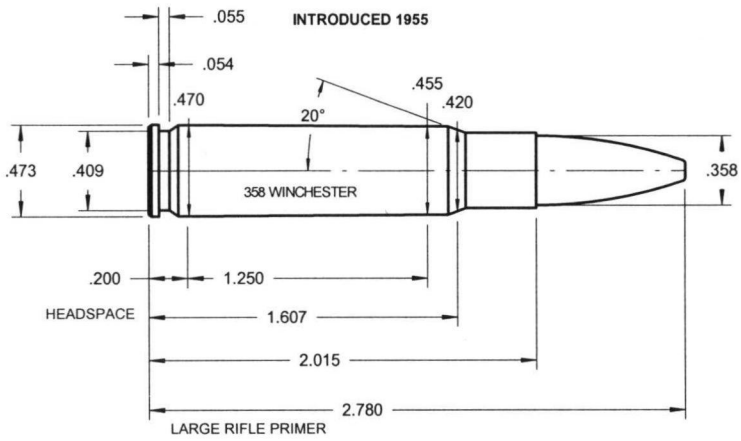
356 WINCHESTER (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
220 Grain Jacketed Bullet										
ACCUR 2520	41.9	2.86	DBLD	2.8	2116	46.5c	2404	45400	CUP	2.555
A-XMR-2015	35.1	2.56	DBLD	2.5	2037	39.0	2315	44200	CUP	2.555
A-XMR-2495	40.5c	3.03	DBLD	2.8	2015	45.0c	2290	39100	CUP	2.555
ACCUR 2460	36.9	2.42	DBLD	2.2	1992	41.0	2264	45300	CUP	2.555
ACCUR 2230	36.0	2.37	DBLD	2.2	1961	40.0	2228	46600	CUP	2.555
ACCUR 2700	45.6c	3.12	DBLD	3.1	2029	48.0c	2158	45400	CUP	2.555
WIN 748	42.1	2.76	DBLD	2.5	2015	42.1	2015	31000	CUP	2.780
WIN 760	42.1	2.80	DBLD	2.5	1805	42.1	1805	27500	CUP	2.780
250 Grain Jacketed Bullet										
BL-C(2)	46.0c	2.97	DBLD	2.8	2082	48.0c	2163	NA	NA	2.775
H335	44.0	2.84	DBLD	2.8	2071	46.0c	2151	NA	NA	2.775
H4198	34.0	2.55	DBLD	2.5	1976	37.0	2133	NA	NA	2.775
H4895	40.0c	2.91	DBLD	2.8	1991	43.0c	2128	NA	NA	2.775
H322	38.0	2.75	DBLD	2.5	1970	41.0c	2106	NA	NA	2.775

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027

358 WINCHESTER



Useful case capacity 3.07 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
180 Grain Jacketed Bullet										
H4198	40.0	3.00	DBLD	2.8	2535	43.0c	2711	NA	NA	2.565
200 Grain Jacketed Bullet										
IMR3031	43.3c	3.30	DBLD	3.1	2345	49.0c	2630	51800	CUP	2.765
ACCUR 2520	44.6	3.04	DBLD	2.8	2260	49.5c	2568	48900	CUP	2.640
IMR4895	44.1c	3.21	DBLD	3.1	2332	49.0c	2565	50800	CUP	2.765
IMR4320	45.1c	3.23	DBLD	3.1	2292	51.0c	2545	51700	CUP	2.765
H4198	38.0	2.85	DBLD	2.8	2368	41.0c	2532	NA	NA	2.550
IMR4064	48.5c	3.62	NA	3.4	2501	49.0c	2525	46200	CUP	2.765
A-XMR-2015	37.8	2.76	DBLD	2.5	2218	42.0	2520	49400	CUP	2.640
ACCUR 2460	41.4	2.72	DBLD	2.5	2206	46.0	2507	51400	CUP	2.640
WIN 748	46.3	3.03	DBLD	2.8	2316	50.6c	2500	50000	CUP	2.730
IMR4198	35.2	2.79	DBLD	2.5	2225	40.0c	2495	52000	CUP	2.765
RELODER12	50.0c	3.45	NA	3.4	2455	50.0c	2455	44100	CUP	2.780
ACCUR 2230	39.6	2.60	DBLD	2.5	2160	44.0	2454	51400	CUP	2.640
RELODER 7	37.7	2.75	DBLD	2.5	2397	38.0	2420	46100	CUP	2.780
A-XMR-2495	41.4c	3.10	DBLD	2.8	2124	46.0c	2414	40700	CUP	2.640
ACCUR 2700	47.5c	3.25	DBLD	3.1	2164	50.0c	2302	45500	CUP	2.640
IMR4350	51.0c	3.75	NA	3.7	2270	51.0c	2270	37600	CUP	2.765
205 Grain Lead Bullet										
A-XMR-2495	38.7	2.90	DBLD	2.8	2177	43.0c	2474	44800	CUP	2.595
A-XMR-2015	36.9	2.69	DBLD	2.5	2174	41.0	2470	41600	CUP	2.595

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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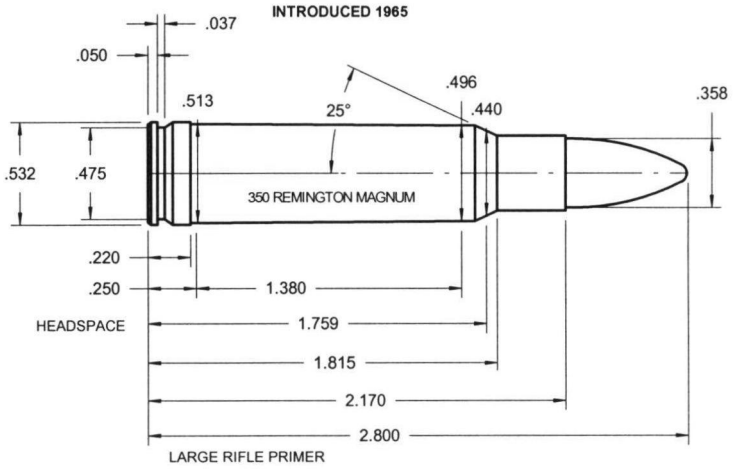
358 WINCHESTER (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL
205 Grain Lead Bullet (Continued)								
ACCUR 2520	40.5	2.76	DBLD	2.5	2167	45.0c 2462	41200 CUP	2.595
ACCUR 2460	38.7	2.54	DBLD	2.5	2132	43.0 2423	42700 CUP	2.595
ACCUR 2230	36.9	2.42	DBLD	2.2	2061	41.0 2342	43300 CUP	2.595
ACCUR 2700	44.7	3.06	DBLD	2.8	2080	47.0c 2213	42600 CUP	2.595
220 Grain Jacketed Bullet								
H4198	38.0	2.85	DBLD	2.8	2340	41.0c 2502	NA NA	2.565
H335	46.0	2.97	DBLD	2.8	2372	48.0c 2464	NA NA	2.565
BL-C(2)	46.0	2.97	DBLD	2.8	2369	48.0c 2461	NA NA	2.565
225 Grain Jacketed Bullet								
ACCUR 2520	43.2	2.95	DBLD	2.8	2167	48.0c 2462	49000 CUP	2.740
A-XMR-2495	41.4c	3.10	DBLD	2.8	2116	46.0c 2405	47800 CUP	2.740
A-XMR-2015	36.9	2.69	DBLD	2.5	2109	41.0 2397	49300 CUP	2.740
ACCUR 2460	39.6	2.60	DBLD	2.5	2090	44.0 2375	51000 CUP	2.740
ACCUR 2230	38.7	2.54	DBLD	2.5	2062	43.0 2343	50800 CUP	2.740
ACCUR 2700	47.5c	3.25	DBLD	3.1	2111	50.0c 2248	47600 CUP	2.740
250 Grain Jacketed Bullet								
ACCUR 2520	45.6c	3.11	DBLD	3.1	2247	48.0c 2390	49700 CUP	2.745
BL-C(2)	45.0	2.90	DBLD	2.8	2242	48.0c 2374	NA NA	2.775
H4198	36.0	2.70	DBLD	2.5	2141	39.0 2312	NA NA	2.775
ACCUR 2460	39.6	2.60	DBLD	2.5	2033	44.0 2310	52000 CUP	2.745
A-XMR-2495	41.4c	3.10	DBLD	2.8	2027	46.0c 2303	43400 CUP	2.745
H335	44.0	2.84	DBLD	2.8	2213	46.0 2299	NA NA	2.775
A-XMR-2015	36.0	2.63	DBLD	2.5	2013	40.0 2288	49600 CUP	2.745
ACCUR 2230	38.7	2.54	DBLD	2.5	1998	43.0 2271	52000 CUP	2.745
IMR4064	38.7	2.88	DBLD	2.8	2024	44.0c 2270	52000 CUP	2.780
IMR3031	37.8	2.88	DBLD	2.8	2055	42.0c 2260	50800 CUP	2.780
WIN 748	41.9	2.74	DBLD	2.5	2065	46.2 2250	50500 CUP	2.730
IMR4895	38.4	2.80	DBLD	2.5	2013	43.0c 2235	51200 CUP	2.780
ACCUR 2700	47.5c	3.25	DBLD	3.1	2081	50.0c 2214	49800 CUP	2.745
IMR4320	39.6	2.84	DBLD	2.8	1990	44.5c 2210	51400 CUP	2.780
IMR4350	47.0c	3.45	NA	3.4	2115	47.0c 2115	41700 CUP	2.780
RELODER 7	34.5	2.51	DBLD	2.5	2075	34.5 2075	44700 CUP	2.780
IMR4198	28.8	2.28	DBLD	2.2	1841	32.5 2045	51700 CUP	2.780
275 Grain Jacketed Bullet								
H4198	33.2	2.49	DBLD	2.2	1890	37.0 2079	NA NA	2.730

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027

350 REMINGTON MAGNUM



Useful case capacity 4.04 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
150 Grain Jacketed Bullet											
RELODER 7	54.0	3.93	NA	3.7	3017	55.0	3075	47500 CUP	2.800	....	....
180 Grain Jacketed Bullet											
H4895	56.0c	4.08	NA	4.0	2793	61.0c	3015	52300 PSI	2.740	....	....
H335	57.0	3.68	NA	3.4	2785	62.0	3006	50600 PSI	2.740	.9850	.9546
BL-C(2)	57.0	3.68	NA	3.4	2772	62.0	2992	50300 PSI	2.740	.9849	.9562
H322	53.0	3.84	NA	3.7	2657	58.0c	2894	50300 PSI	2.740	....	....
H4198	48.0	3.60	NA	3.4	2652	51.0	2808	48000 PSI	2.740	.9811	.9035
H4831	62.0c	4.49	NA	4.3	2254	62.0c	2254	21000 PSI	2.740	....	....
200 Grain Jacketed Bullet											
ACCUR 2520	54.0	3.69	NA	3.4	2647	60.0c	3008	51800 CUP	2.800	....	....
ACCUR 2230	53.1	3.49	NA	3.4	2504	59.0	2846	51300 CUP	2.800	....	....
ACCUR 2460	53.6	3.52	NA	3.4	2499	59.5	2840	50700 CUP	2.800	....	....
IMR3031	55.2c	4.21	NA	4.0	2627	60.0c	2835	50700 CUP	2.765	....	....
H4895	54.5	3.97	NA	3.7	2614	59.0c	2822	52100 PSI	2.740	....	....
IMR4320	57.7c	4.13	NA	4.0	2562	64.5c	2820	52100 CUP	2.765	....	....
IMR4895	55.3	4.03	NA	4.0	2535	62.0c	2815	52300 CUP	2.765	....	....
BL-C(2)	55.0	3.55	NA	3.4	2602	60.0	2808	50100 PSI	2.740	.9849	.9541
IMR4064	54.9c	4.09	NA	4.0	2521	61.5c	2800	52200 CUP	2.765	....	....
H335	55.0	3.55	NA	3.4	2663	58.0	2794	50000 PSI	2.740	....	....
A-XMR-2015	48.6	3.55	NA	3.4	2445	54.0	2778	50700 CUP	2.800	....	....
A-XMR-2495	53.1	3.97	NA	3.7	2441	59.0c	2774	51700 CUP	2.800	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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350 REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc Pressr
200 Grain Jacketed Bullet (Continued)									
H380	59.0c	4.08	NA	4.0	2551	64.0c 2753	45900 PSI	2.740	....
IMR4198	44.0	3.48	NA	3.4	2399	50.0 2690	53000 CUP	2.765	....
H322	50.0	3.62	NA	3.4	2463	55.0 2684	49300 PSI	2.740	.9827 .9576
RELODER 7	46.2	3.36	NA	3.1	2454	48.0 2550	48500 CUP	2.800	....
H4198	45.0	3.38	NA	3.1	2372	48.0 2512	44100 PSI	2.740	.9808 .9188
IMR4350	63.5c	4.67	2 SCOOPS	2.2	2475	63.5c 2475	33600 CUP	2.765	....
IMR4227	34.0	2.62	DBLD	2.5	2158	38.5 2420	52800 CUP	2.765	....
SR4759	34.3	3.41	NA	3.4	2144	39.0 2405	53000 CUP	2.765	....
IMR4831	63.5c	4.67	2 SCOOPS	2.2	2320	63.5c 2320	29400 CUP	2.765	....
H4831	61.0c	4.42	NA	4.3	2144	61.0c 2144	24000 PSI	2.740	....
204 Grain Lead Bullet									
A-XMR-2015	47.7	3.48	NA	3.4	2389	53.0 2715	47300 CUP	2.700	....
ACCUR 2230	48.6	3.19	DBLD	3.1	2353	54.0 2674	42200 CUP	2.700	....
ACCUR 2520	49.5	3.38	NA	3.1	2348	55.0 2668	43600 CUP	2.700	....
ACCUR 2460	48.6	3.19	DBLD	3.1	2312	54.0 2627	39000 CUP	2.700	....
A-XMR-2495	49.0	3.67	NA	3.4	2311	54.5c 2626	41400 CUP	2.700	....
220 Grain Jacketed Bullet									
H4895	51.5	3.75	NA	3.7	2456	56.0c 2651	51200 PSI	2.740	.9831 .9315
BL-C(2)	51.5	3.32	NA	3.1	2446	56.0 2640	51000 PSI	2.740	.9832 .9578
H335	51.0	3.29	DBLD	3.1	2493	54.0 2640	51600 PSI	2.740	....
H380	56.0	3.87	NA	3.7	2381	61.0c 2569	47300 PSI	2.740	....
H322	48.0	3.48	NA	3.4	2292	52.0 2473	49300 PSI	2.740	.9812 .9443
H4198	43.0	3.23	DBLD	3.1	2266	46.0 2423	48500 PSI	2.740	.9780 .9104
H4831	60.0c	4.35	NA	4.3	2141	60.0c 2141	30000 PSI	2.740	....
225 Grain Jacketed Bullet									
ACCUR 2230	51.3	3.37	NA	3.1	2409	57.0 2718	52400 CUP	2.800	....
ACCUR 2460	51.8	3.40	NA	3.1	2407	57.5 2709	52500 CUP	2.800	....
ACCUR 2520	51.8	3.54	NA	3.4	2374	57.5 2690	52500 CUP	2.800	....
A-XMR-2015	47.3	3.45	NA	3.4	2306	52.5 2657	52600 CUP	2.800	....
A-XMR-2495	49.1	3.67	NA	3.4	2269	54.5c 2578	52400 CUP	2.800	....
250 Grain Jacketed Bullet									
ACCUR 2460	50.4	3.31	NA	3.1	2267	56.0 2576	53000 CUP	2.800	....
ACCUR 2230	48.6	3.19	DBLD	3.1	2217	54.0 2519	49600 CUP	2.800	....
ACCUR 2520	50.9	3.47	NA	3.4	2213	56.5 2515	53000 CUP	2.800	....
A-XMR-2015	45.9	3.35	NA	3.1	2200	51.0 2500	52600 CUP	2.800	....
H4895	49.5	3.60	NA	3.4	2314	54.0 2497	53200 PSI	2.930	.9832 .9269
IMR4895	49.7	3.62	NA	3.4	2237	56.0c 2485	52500 CUP	2.730	....
BL-C(2)	48.5	3.13	DBLD	3.1	2283	53.0 2464	52100 PSI	2.930	.9830 .9312

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

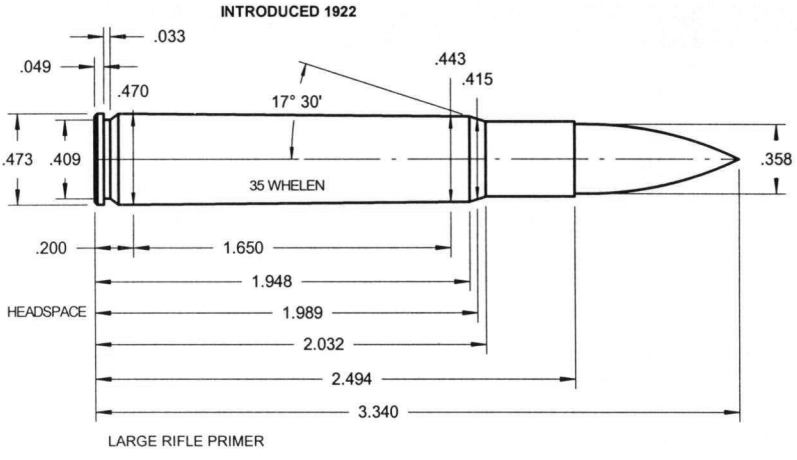
350 REMINGTON MAGNUM (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
250 Grain Jacketed Bullet (Continued)											
H335	48.0	3.10	DBLD	2.8	2321	51.0	2457	51800 PSI	2.930	.9811	.8939
A-XMR-2495	48.6	3.64	NA	3.4	2141	54.0c	2433	53000 CUP	2.800	....	....
IMR3031	51.7	3.94	NA	3.7	2364	53.0c	2410	47800 CUP	2.730	....	....
H380	54.0	3.73	NA	3.7	2233	59.0c	2410	47300 PSI	2.930	.9848	.9592
IMR4320	52.0	3.73	NA	3.7	2244	56.0	2400	50200 CUP	2.730	....	....
H322	45.0	3.26	DBLD	3.1	2161	49.0	2333	51600 PSI	2.930	.9809	.9498
IMR4064	53.0	3.95	NA	3.7	2310	53.0	2310	41400 CUP	2.730	....	....
IMR4198	38.8	3.07	DBLD	2.8	2061	43.5	2290	52300 CUP	2.730	....	....
RELODER 7	40.7	2.96	DBLD	2.8	2126	43.0	2230	49300 CUP	2.800	....	....
H4198	39.0	2.93	DBLD	2.8	2048	42.0	2190	45900 PSI	2.930	.9778	.9119
H4831	59.0c	4.28	NA	4.0	2125	59.0c	2125	32400 PSI	2.930	....	....
IMR4350	55.0c	4.04	NA	4.0	2070	55.0c	2070	29600 CUP	2.730	....	....
IMR4227	29.9	2.30	DBLD	2.2	1824	34.0	2045	53000 CUP	2.730	....	....
SR4759	29.7	2.95	DBLD	2.8	1837	33.5	2040	52600 CUP	2.730	....	....
IMR4831	55.0c	4.04	NA	4.0	1925	55.0c	1925	24900 CUP	2.730	....	....
275 Grain Jacketed Bullet											
H380	57.1	3.94	NA	3.7	2284	59.0c	2350	48200 PSI	2.730	....	....
BL-C(2)	48.9	3.15	DBLD	3.1	2182	52.0	2311	49600 PSI	2.730	....	....
H335	48.4	3.12	DBLD	3.1	2238	50.0	2303	48200 PSI	2.730	....	....
H4895	51.0	3.71	NA	3.7	2226	52.0	2269	47600 PSI	2.730	....	....
H4831	59.0c	4.28	NA	4.0	2100	59.0c	2100	34800 PSI	2.730	....	....
H322	43.6	3.16	DBLD	3.1	1944	47.0	2079	50300 PSI	2.730	....	....
300 Grain Jacketed Bullet											
H335	46.6	3.01	DBLD	2.8	2031	50.0	2171	50000 PSI	2.730	....	....
BL-C(2)	47.9	3.09	DBLD	2.8	2023	51.0	2142	49700 PSI	2.730	....	....
H4895	46.7	3.40	NA	3.1	1994	50.0	2131	49900 PSI	2.730	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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35 WHELEN



Useful case capacity 4.12 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
180 Grain Jacketed Bullet											
A-XMR-2015	50.9	3.72	NA	3.7	2607	56.5c	2963	51900 PSI	3.035	....	....
A-XMR-2495	53.6	4.01	NA	4.0	2585	59.5c	2937	51800 PSI	3.035	....	....
ACCUR 2520	54.5	3.72	NA	3.7	2564	60.5c	2914	48500 PSI	3.035	....	....
H335	56.0	3.61	NA	3.4	2685	60.0	2870	59615 PSI	3.045	.9834	.9772
ACCUR 2460	53.1	3.48	NA	3.4	2518	59.0	2861	45000 PSI	3.035	....	....
BL-C(2)	62.0	4.00	NA	3.7	2727	65.0c	2860	57827 PSI	3.045	....	....
H322	55.0	3.99	NA	3.7	2697	58.0c	2829	57827 PSI	3.045	....	....
ACCUR 2230	51.3	3.37	NA	3.1	2482	57.0	2820	44600 PSI	3.035	....	....
H4895	56.0	4.08	NA	4.0	2617	60.0c	2798	55800 PSI	3.045	....	....
ACCUR 2700	62.7c	4.29	NA	4.0	2609	66.0c	2776	43400 PSI	3.035	....	....
H-VARGET	54.0	3.95	NA	3.7	2512	60.0c	2764	50673 PSI	3.045	....	....
VEC SP7	56.3	3.70	NA	3.4	2608	56.3	2608	35922 CIP	3.307	....	....
A-XMR-4350	58.5c	4.33	NA	4.3	2252	65.0c	2559	31200 PSI	3.035	....	....
200 Grain Jacketed Bullet											
BL-C(2)	60.0	3.87	NA	3.7	2676	63.0	2807	58423 PSI	3.050	....	....
A-XMR-2015	48.6	3.55	NA	3.4	2462	54.0	2798	52400 PSI	3.140	....	....
A-XMR-2495	51.3	3.84	NA	3.7	2458	57.0c	2793	50200 PSI	3.140	....	....
ACCUR 2520	52.7	3.60	NA	3.4	2424	58.5	2755	47900 PSI	3.140	....	....
ACCUR 2700	61.8c	4.23	NA	4.0	2579	65.0c	2744	48500 PSI	3.140	....	....
ACCUR 2460	51.3	3.37	NA	3.1	2401	57.0	2728	49800 PSI	3.140	....	....
ACCUR 2230	49.5	3.25	DBLD	3.1	2379	55.0	2703	50700 PSI	3.140	....	....

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c = Compressed charge
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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
200 Grain Jacketed Bullet (Continued)											
IMR4064	53.1	3.95	NA	3.7	2502	58.0c	2700	50000 CUP	3.075	....	....
H322	52.0	3.77	NA	3.7	2517	56.0	2691	57827 PSI	3.050	.9834	.9681
H4895	54.0	3.93	NA	3.7	2563	57.0c	2689	58423 PSI	3.050	....	....
H335	52.0	3.35	NA	3.1	2559	55.0	2684	59615 PSI	3.050	....	....
RELODER15	60.0c	4.24	NA	4.0	2675	60.0c	2675	44800 CUP	3.125	....	....
IMR4895	53.7	3.91	NA	3.7	2483	58.0c	2655	49400 CUP	3.075	....	....
H-VARGET	52.0	3.80	NA	3.7	2435	57.0c	2653	50435 PSI	3.050	....	....
IMR3031	51.4	3.91	NA	3.7	2479	55.0c	2650	49000 CUP	3.075	....	....
IMR4320	52.0	3.73	NA	3.7	2400	58.0c	2640	51000 CUP	3.075	....	....
RELODER 7	46.9	3.41	NA	3.4	2413	51.5	2630	50300 CUP	3.125	....	....
H380	59.0	4.08	NA	4.0	2529	61.0c	2602	53654 PSI	3.050	....	....
IMR4198	40.6	3.21	DBLD	3.1	2314	46.0	2595	51900 CUP	3.075	....	....
RELODER12	60.0c	4.15	NA	4.0	2590	60.0c	2590	43200 CUP	3.125	....	....
A-XMR-4350	53.1	3.93	NA	3.7	2074	59.0c	2357	29500 PSI	3.140	....	....
IMR4350	60.0c	4.41	NA	4.3	2345	60.0c	2345	39100 CUP	3.075	....	....
IMR4227	32.4	2.49	DBLD	2.2	2061	36.5	2290	51500 CUP	3.075	....	....
SR4759	30.7	3.05	DBLD	2.8	2038	34.5	2265	51400 CUP	3.075	....	....
200 Grain Barnes X Bullet											
ACCUR 2460	50.4	3.31	NA	3.1	2420	56.0	2750	48300 PSI	3.225	....	....
ACCUR 2230	49.1	3.23	DBLD	3.1	2378	54.5	2702	46500 PSI	3.225	....	....
ACCUR 2520	50.9	3.47	NA	3.4	2374	56.5	2698	46200 PSI	3.225	....	....
A-XMR-2015	45.9	3.35	NA	3.1	2359	51.0	2681	46900 PSI	3.225	....	....
A-XMR-2495	49.1	3.67	NA	3.4	2316	54.5	2632	46600 PSI	3.225	....	....
ACCUR 2700	57.5	3.94	NA	3.7	2422	60.5c	2577	42300 PSI	3.225	....	....
A-XMR-4350	54.0	4.00	NA	3.7	2033	60.0c	2310	29800 PSI	3.225	....	....
205 Grain Lead Bullet											
ACCUR 2520	48.6	3.32	NA	3.1	2410	54.0	2739	50000 PSI	3.045	....	....
A-XMR-2495	46.8	3.50	NA	3.4	2388	52.0	2714	48700 PSI	3.045	....	....
A-XMR-2015	45.0	3.28	DBLD	3.1	2387	50.0	2713	49400 PSI	3.045	....	....
ACCUR 2230	46.8	3.07	DBLD	2.8	2378	52.0	2702	53700 PSI	3.045	....	....
ACCUR 2700	57.0	3.90	NA	3.7	2521	60.0	2682	48000 PSI	3.045	....	....
ACCUR 2460	46.8	3.07	DBLD	2.8	2358	52.0	2679	48400 PSI	3.045	....	....
A-XMR-4350	54.0	4.00	NA	3.7	2220	60.0c	2523	38300 PSI	3.045	....	....
ACC XMP5744	30.0	2.25	DBLD	2.2	2023	38.0	2452	48100 PSI	3.045	....	....
ACCUR 8700	58.5	4.02	NA	4.0	1648	65.0c	1873	26600 PSI	3.045	....	....
220 Grain Jacketed Bullet											
BL-C(2)	58.0	3.74	NA	3.7	2513	61.0	2636	58423 PSI	3.045	....	....
H4895	51.0	3.71	NA	3.7	2421	55.0	2588	59615 PSI	3.045	.9833	.9685

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c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
220 Grain Jacketed Bullet (Continued)											
H322	50.0	3.62	NA	3.4	2401	54.0	2566	59019 PSI	3.045	.9836	.9682
VEC SP7	56.3	3.70	NA	3.4	2566	56.3	2566	49927 CIP	3.307	....	....
H335	50.0	3.22	DBLD	3.1	2379	53.0	2519	59019 PSI	3.045	.9809	.9651
H380	58.0	4.01	NA	4.0	2420	60.0c	2490	53415 PSI	3.045	....	....
VEC TU5000	54.0	3.89	NA	3.7	2346	54.0	2346	50943 CIP	3.307	....	....
225 Grain Jacketed Bullet											
ACCUR 2460	48.6	3.19	DBLD	3.1	2299	54.0	2613	51900 PSI	3.280	....	....
ACCUR 2700	58.4	4.00	NA	3.7	2445	61.5c	2601	51200 PSI	3.280	....	....
ACCUR 2520	49.5	3.38	NA	3.1	2287	55.0	2599	51100 PSI	3.280	....	....
H-VARGET	51.0	3.73	NA	3.7	2375	56.0	2588	55323 PSI	3.175	.9829	.9872
ACCUR 2230	47.3	3.11	DBLD	3.1	2264	52.5	2573	49200 PSI	3.280	....	....
A-XMR-2015	44.1	3.22	DBLD	3.1	2248	49.0	2554	51200 PSI	3.280	....	....
A-XMR-2495	44.6	3.34	NA	3.1	2207	49.5	2508	51300 PSI	3.280	....	....
A-XMR-4350	53.1	3.93	NA	3.7	2121	59.0c	2410	38100 PSI	3.280	....	....
225 Grain Barnes X Bullet											
ACCUR 2460	46.8	3.07	DBLD	2.8	2261	52.0	2569	50400 PSI	3.220	....	....
ACCUR 2230	46.8	3.07	DBLD	2.8	2251	52.0	2558	51300 PSI	3.220	....	....
ACCUR 2520	48.2	3.29	DBLD	3.1	2226	53.5	2529	48900 PSI	3.220	....	....
A-XMR-2015	43.2	3.15	DBLD	3.1	2198	48.0	2498	50600 PSI	3.220	....	....
A-XMR-2495	47.7	3.57	NA	3.4	2174	53.0	2470	48800 PSI	3.220	....	....
ACCUR 2700	56.1	3.84	NA	3.7	2305	59.0	2452	43700 PSI	3.220	....	....
A-XMR-4350	53.1	3.93	NA	3.7	2027	59.0c	2303	35100 PSI	3.220	....	....
250 Grain Jacketed Bullet											
RELODER15	56.3	3.97	NA	3.7	2431	59.5c	2550	48400 CUP	3.225	....	....
RELODER12	55.2	3.82	NA	3.7	2321	60.0c	2505	49700 CUP	3.225	....	....
IMR4064	48.9	3.65	NA	3.4	2234	55.5c	2505	51900 CUP	3.240	....	....
BL-C(2)	56.0	3.61	NA	3.4	2386	59.0	2503	58304 PSI	3.220	....	....
H-VARGET	50.0	3.65	NA	3.4	2281	55.0	2486	59496 PSI	3.220	.9829	.9791
IMR3031	46.8	3.57	NA	3.4	2212	53.0	2480	51800 CUP	3.240	....	....
IMR4895	48.8	3.55	NA	3.4	2228	55.0	2475	51600 CUP	3.240	....	....
IMR4320	49.1	3.51	NA	3.4	2228	55.0	2475	51300 CUP	3.240	....	....
H4895	49.0	3.57	NA	3.4	2275	53.0	2455	59615 PSI	3.220	.9809	.9669
ACCUR 2520	45.9	3.13	DBLD	3.1	2146	51.0	2439	53300 PSI	3.255	....	....
ACCUR 2700	55.1	3.77	NA	3.7	2284	58.0	2430	49100 PSI	3.255	....	....
A-XMR-2495	44.1	3.30	NA	3.1	2126	49.0	2416	54500 PSI	3.255	....	....
H380	57.0	3.94	NA	3.7	2347	59.0	2416	53058 PSI	3.220	....	....
H335	49.0	3.16	DBLD	3.1	2270	52.0	2404	59615 PSI	3.220	.9809	.9597
ACCUR 2460	44.1	2.89	DBLD	2.8	2111	49.0	2399	53000 PSI	3.255	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
250 Grain Jacketed Bullet (Continued)											
H322	48.0	3.48	NA	3.4	2221	52.0	2398	57827 PSI	3.220	.9808	.9760
VEC SP7	54.0	3.55	NA	3.4	2300	54.8	2398	51234 CIP	3.307	....	....
ACCUR 2230	43.7	2.87	DBLD	2.8	2092	48.5	2377	52100 PSI	3.255	....	....
A-XMR-4350	52.2	3.86	NA	3.7	2079	58.0c	2363	41100 PSI	3.255	....	....
A-XMR-2015	40.5	2.96	DBLD	2.8	2062	45.0	2343	50800 PSI	3.255	....	....
RELODER 7	43.2	3.15	DBLD	3.1	2137	47.6	2330	50400 CUP	3.225	....	....
VEC TU5000	53.2	3.83	NA	3.7	2329	53.2	2329	50711 CIP	3.307	....	....
IMR4198	39.4	3.12	DBLD	3.1	2126	43.0	2295	50000 CUP	3.240	....	....
IMR4350	58.0c	4.26	NA	4.0	2265	58.0c	2265	41200 CUP	3.240	....	....
IMR4227	31.0	2.39	DBLD	2.2	1814	35.0	2015	51600 CUP	3.240	....	....
SR4759	29.4	2.92	DBLD	2.8	1795	32.5	1975	50600 CUP	3.240	....	....
250 Grain Lead Bullet											
A-XMR-2495	50.0	3.74	NA	3.7	2190	55.5c	2489	50100 PSI	3.250	....	....
ACCUR 2520	45.0	3.07	DBLD	2.8	2088	50.0	2373	53000 PSI	3.250	....	....
A-XMR-4350	54.0	4.00	NA	3.7	2084	60.0c	2368	44800 PSI	3.250	....	....
ACCUR 2460	42.3	2.77	DBLD	2.5	2029	47.0	2306	48200 PSI	3.250	....	....
ACCUR 2230	41.4	2.72	DBLD	2.5	2028	46.0	2305	50900 PSI	3.250	....	....
A-XMR-2015	40.5	2.96	DBLD	2.8	2020	45.0	2296	48900 PSI	3.250	....	....
ACCUR 2700	49.4	3.38	NA	3.1	2069	52.0	2201	43100 PSI	3.250	....	....
ACC XMP5744	32.4	2.43	DBLD	2.2	1912	36.0	2173	47700 PSI	3.250	....	....
A-XMR-3100	54.0	4.04	NA	4.0	1894	60.0c	2152	44800 PSI	3.250	....	....
ACCUR 8700	58.5	4.02	NA	4.0	1573	65.0c	1788	28300 PSI	3.250	....	....
250 Grain Barnes X Bullet											
ACCUR 2460	44.1	2.89	DBLD	2.8	2123	49.0	2412	52500 PSI	3.220	....	....
ACCUR 2230	44.1	2.90	DBLD	2.8	2116	49.0	2405	52800 PSI	3.220	....	....
ACCUR 2520	45.9	3.13	DBLD	3.1	2109	51.0	2397	51500 PSI	3.220	....	....
ACCUR 2700	55.1	3.77	NA	3.7	2252	58.0	2396	49400 PSI	3.220	....	....
A-XMR-2015	42.8	3.12	DBLD	3.1	2106	47.5	2393	51200 PSI	3.220	....	....
A-XMR-2495	47.3	3.54	NA	3.4	2084	52.5	2368	53500 PSI	3.220	....	....
A-XMR-4350	52.2	3.86	NA	3.7	1945	58.0c	2210	34700 PSI	3.220	....	....
275 Grain Jacketed Bullet											
BL-C(2)	52.7	3.40	NA	3.1	2215	57.0	2390	59019 PSI	3.200	....	....
H380	58.0	4.01	NA	4.0	2336	58.0	2336	53296 PSI	3.200	....	....
H4895	48.1	3.50	NA	3.4	2184	51.0	2313	57827 PSI	3.200	....	....
H335	48.6	3.14	DBLD	3.1	2185	51.0	2292	57231 PSI	3.200	....	....
H322	47.2	3.42	NA	3.4	2157	49.0	2241	56635 PSI	3.200	....	....

CAUTION: With **NEVER EXCEED LOADS** maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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35 WHELEN (Continued)

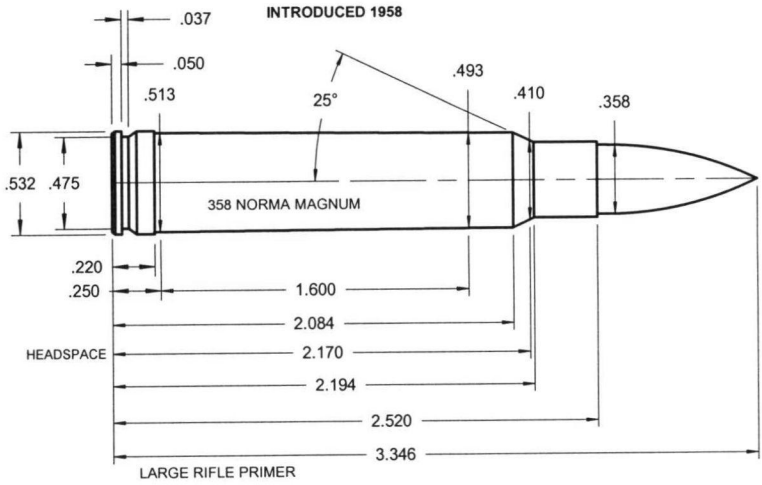
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
280 Grain Lead Bullet											
A-XMR-4350	49.5	3.66	NA	3.4	1939	55.0	2203	41600 PSI	3.050	....	....
A-XMR-2495	43.2	3.23	DBLD	3.1	1925	48.0	2188	38500 PSI	3.050	....	....
ACCUR 2520	40.5	2.76	DBLD	2.5	1909	45.0	2169	46000 PSI	3.050	....	....
ACCUR 2460	38.3	2.51	DBLD	2.5	1863	42.5	2117	44400 PSI	3.050	....	....
A-XMR-2015	36.9	2.69	DBLD	2.5	1857	41.0	2110	46100 PSI	3.050	....	....
ACCUR 2230	37.8	2.48	DBLD	2.2	1846	42.0	2098	42700 PSI	3.050	....	....
ACCUR 2700	45.6	3.12	DBLD	3.1	1966	48.0	2091	42400 PSI	3.050	....	....
A-XMR-3100	51.3	3.84	NA	3.7	1824	57.0c	2073	34300 PSI	3.050	....	....
ACC XMP5744	30.6	2.30	DBLD	2.2	1773	34.0	2015	43900 PSI	3.050	....	....
ACCUR 8700	54.0	3.72	NA	3.7	1463	60.0c	1663	28700 PSI	3.050	....	....
300 Grain Jacketed Bullet											
BL-C(2)	50.4	3.25	DBLD	3.1	2115	54.0	2260	58423 PSI	3.300	....	....
H380	55.7	3.85	NA	3.7	2185	56.0	2206	54846 PSI	3.300	....	....
H4895	45.8	3.33	NA	3.1	2034	48.0	2134	57231 PSI	3.300	....	....
H322	43.9	3.18	DBLD	3.1	1969	47.0	2105	58423 PSI	3.300	....	....
H335	43.4	2.80	DBLD	2.5	1944	47.0	2099	59019 PSI	3.300	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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358 NORMA MAGNUM



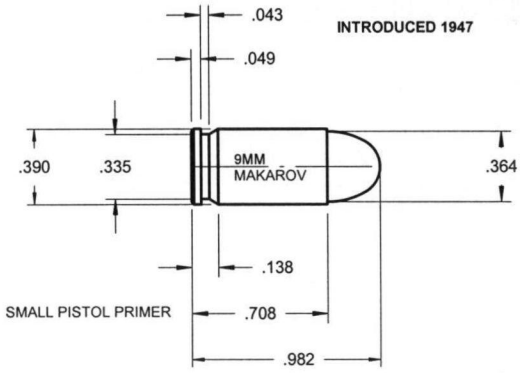
Useful case capacity 5.18 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
180 Grain Jacketed Bullet										
H380	67.0	4.63	2 SCOOPS	2.2	2965	71.0	3111	NA	NA	3.340
H414	74.0	4.89	2 SCOOPS	2.2	2878	78.0	3048	NA	NA	3.340
H4350	75.0c	5.44	2 SCOOPS	2.5	2894	79.0c	3017	NA	NA	3.340
200 Grain Jacketed Bullet										
H380	66.0	4.56	NA	4.3	2966	70.0	3102	NA	NA	3.140
H414	73.0	4.83	2 SCOOPS	2.2	2853	77.0	3029	NA	NA	3.140
ACCUR 2700	71.1	4.87	2 SCOOPS	2.2	2641	79.0c	3001	59900	PSI	3.200
H4350	74.0c	5.37	2 SCOOPS	2.5	2852	78.0c	2984	NA	NA	3.140
A-XMR-4350	72.9c	5.39	2 SCOOPS	2.5	2617	81.0c	2974	50500	PSI	3.200
225 Grain Jacketed Bullet										
A-XMR-4350	72.9c	5.39	2 SCOOPS	2.5	2626	81.0c	2984	60100	PSI	3.280
ACCUR 2700	69.3	4.74	2 SCOOPS	2.2	2528	77.0c	2873	62000	PSI	3.280
250 Grain Jacketed Bullet										
A-XMR-4350	70.2c	5.19	2 SCOOPS	2.5	2498	78.0c	2839	63000	PSI	3.280
v-N160	80.2c	5.89	2 SCOOPS	2.8	2488	80.2c	2789	NA	NA	3.228
H4350	71.0	5.15	2 SCOOPS	2.5	2634	75.0c	2778	NA	NA	3.300
H414	70.0	4.63	2 SCOOPS	2.2	2589	74.0	2754	NA	NA	3.300
H4895	61.0	4.44	NA	4.3	2544	65.0	2736	NA	NA	3.300
ACCUR 2700	65.7	4.50	NA	4.3	2380	73.0	2705	62200	PSI	3.280
H380	63.0	4.35	NA	4.3	2441	67.0	2609	NA	NA	3.300

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

9x18 MAKAROV



Useful case capacity 0.53 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
90 Grain Jacketed Bullet									
TITEGROUP	3.3	.28	.27	NA	948	3.7	1053	22900 PSI	0.970
HP38	3.6	.33	.32	.3	937	4.0	1031	24000 PSI	0.970
UNIVERSAL	3.5	.38	.37	NA	885	3.9	1022	23000 PSI	0.970
95 Grain Jacketed Bullet									
ACCUR #5	5.0	.31	.30	.3	934	5.6	1064	19400 CUP	0.965
ACCUR #7	6.5	.42	.40	NA	919	7.2	1044	18200 CUP	0.965
ACCUR #2	3.8	.32	.32	.3	895	4.2	1017	17900 CUP	0.965
POWER PISTOL	4.6	.41	.40	NA	990	4.7	1010	21600 PSI	0.965
BULLSEYE	3.2	.34	.34	.3	865	3.6	970	21200 PSI	0.965
95 Grain Lead Bullet									
ACCUR #5	4.7	.29	.27	NA	931	5.2	1058	17200 CUP	0.955
ACCUR #7	6.5	.42	.40	NA	921	7.2	1047	16300 CUP	0.955
ACCUR #2	3.6	.30	.30	.3	900	4.0	1023	17200 CUP	0.955
95 Grain XTP									
ACCUR #5	5.0	.31	.30	.3	936	5.6	1064	19000 CUP	0.965
ACCUR #2	3.8	.32	.32	.3	918	4.2	1043	19500 CUP	0.965
ACCUR #7	6.5	.42	.40	NA	915	7.2	1040	18100 CUP	0.965
UNIVERSAL	3.6	.40	.40	NA	923	4.0	1030	23800 PSI	0.965
TITEGROUP	3.2	.27	.27	NA	920	3.6	1022	22500 PSI	0.965
HP38	3.4	.31	.30	.3	891	3.8	990	24000 PSI	0.965

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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c = Compressed charge

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9x18 MAKAROV (Continued)

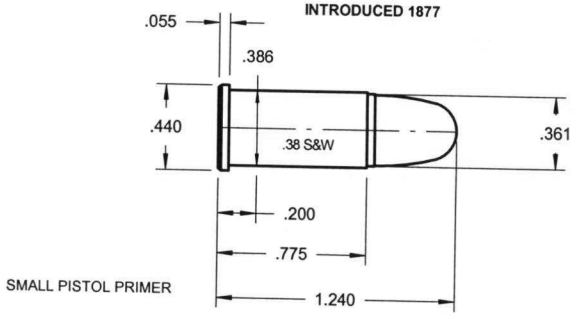
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
100 Grain Jacketed Bullet									
ACCUR #7	6.5	.42	.40	NA	907	7.2	1031	18500 CUP	0.965
TITEGROUP	3.3	.28	.27	NA	910	3.7	1011	23500 PSI	0.970
UNIVERSAL	3.6	.40	.40	NA	828	4.0	996	23600 PSI	0.970
POWER PISTOL	4.6	.41	.40	NA	986	4.7	995	21400 PSI	0.965
ACCUR #2	3.7	.31	.30	.3	869	4.1	987	18800 CUP	0.965
ACCUR #5	4.7	.29	.27	NA	853	5.2	969	16600 CUP	0.965
HP38	3.4	.31	.30	.3	872	3.8	969	23500 PSI	0.970
BULLSEYE	3.2	.34	.34	.3	856	3.6	960	21100 PSI	0.965
GREEN DOT	3.1	.39	.37	NA	825	3.5	925	21300 PSI	0.965
RED DOT	2.7	.39	.37	NA	807	3.1	905	21300 PSI	0.965
100 Grain Lead Bullet									
UNIQUE	3.8	.41	.40	NA	878	4.3	985	20900 PSI	0.965
POWER PISTOL	4.1	.37	.37	NA	932	4.2	950	21600 PSI	0.965
BULLSEYE	2.8	.30	.30	.3	821	3.2	920	21000 PSI	0.965
GREEN DOT	2.8	.36	.34	NA	812	3.2	910	21600 PSI	0.965
RED DOT	2.4	.34	.34	.3	771	2.7	865	21300 PSI	0.965

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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38 SMITH & WESSON



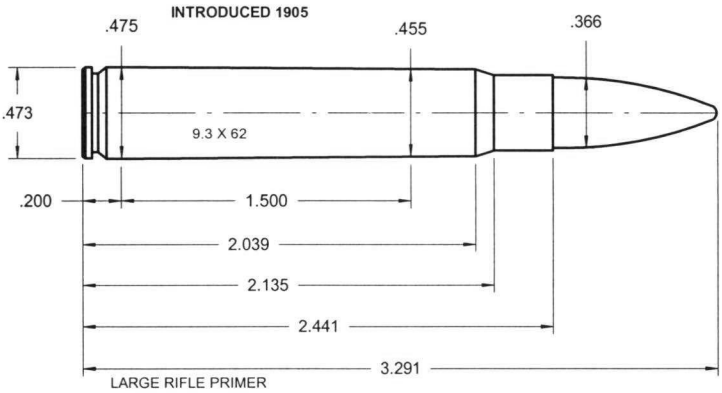
Useful case capacity 0.62 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
145 Grain Lead Bullet									
WIN 231	2.6	.24	.24	NA	669	2.6	675	11500 CUP	1.160
GREEN DOT	2.5	.32	.32	.3	665	2.5	665	10960 CUP	1.160
UNIQUE	3.1	.34	.34	.3	650	3.1	650	10400 CUP	1.160
RED DOT	2.4	.34	.34	.3	645	2.4	645	10600 CUP	1.160
HP38	2.5	.23	.21	NA	630	2.5	630	NA NA	1.160
BULLSEYE	2.2	.23	.21	NA	630	2.2	630	10200 CUP	1.160
146 Grain Lead Bullet									
v-N340	3.5	.37	.37	NA	755	3.5	755	NA NA	1.181
158 Grain Lead Bullet									
ACCUR #5	3.3	.21	.21	NA	675	3.7	767	10100 CUP	1.120
ACCUR #2	2.5	.21	.21	NA	664	2.8	754	10700 CUP	1.120
A NITRO100	2.1	.28	.27	NA	635	2.3	722	9300 CUP	1.120
195 Grain Lead Bullet									
ACCUR #2	2.1	.18	.18	.17	574	2.3	653	12700 CUP	1.240
ACCUR #5	2.7	.17	.15	NA	539	3.0	613	10600 CUP	1.240

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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9.3x62mm MAUSER



Useful case capacity 4.35 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
250 Grain Barnes X Bullet										
A-XMR-2015	45.9	3.35	NA	3.1	2135	51.0	2426	46500	PSI	3.310
ACCUR 2230	46.8	3.07	DBLD	2.8	2105	52.0	2392	48600	PSI	3.310
ACCUR 2520	48.6	3.32	NA	3.1	2093	54.0	2378	49200	PSI	3.310
ACCUR 2460	47.7	3.13	DBLD	3.1	2077	53.0	2360	47400	PSI	3.310
A-XMR-2495	45.9	3.43	NA	3.4	2063	51.0	2344	47600	PSI	3.310
ACCUR 2700	57.0	3.90	NA	3.7	2181	60.0	2320	42400	PSI	3.310
258 Grain Jacketed Bullet										
v-N135	57.6	4.48	NA	4.3	2510	57.6	2510	NA	NA	3.217
VEC SP9	52.2	3.56	NA	3.4	2299	55.6	2434	46255	CIP	3.305
270 Grain Jacketed Bullet										
v-N150	52.5	3.92	NA	3.7	2096	60.3	2346	NA	NA	3.173
v-N140	46.0	3.37	NA	3.1	2024	55.7	2329	NA	NA	3.173
ACCUR 2700	58.0	3.97	NA	3.7	2188	61.0	2328	47600	PSI	2.825
A-XMR-2495	47.3	3.54	NA	3.4	2022	52.5	2298	48300	PSI	2.825
v-N135	45.4	3.53	NA	3.4	1932	54.3	2297	NA	NA	3.173
ACCUR 2520	47.7	3.26	DBLD	3.1	2013	53.0	2287	47600	PSI	2.825
A-XMR-2015	43.7	3.19	DBLD	3.1	1969	48.5	2238	45400	PSI	2.825
ACCUR 2230	45.5	2.99	DBLD	2.8	1967	50.5	2235	48700	PSI	2.825
ACCUR 2460	46.4	3.04	DBLD	2.8	1962	51.5	2229	45200	PSI	2.825
285 Grain Jacketed Bullet										
v-N135	46.5	3.61	NA	3.4	1970	54.0	2297	NA	NA	3.283

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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9.3x62mm MAUSER (Continued)

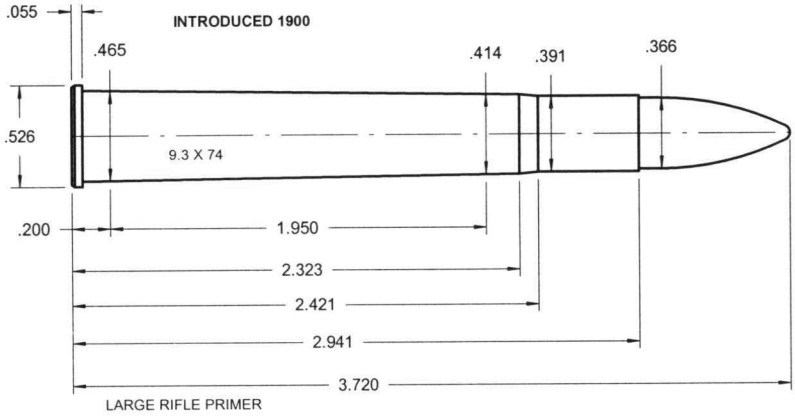
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
285 Grain Jacketed Bullet (Continued)										
v-N140	50.9	3.73	NA	3.7	1970	56.9	2215	NA	NA	3.283
286 Grain Barnes X Bullet										
A-XMR-2015	44.1	3.22	DBLD	3.1	1952	49.0	2218	48100	PSI	3.305
ACCUR 2520	46.8	3.19	DBLD	3.1	1903	52.0	2163	46900	PSI	3.305
ACCUR 2460	45.9	3.01	DBLD	2.8	1888	51.0	2146	47900	PSI	3.305
ACCUR 2230	45.0	2.96	DBLD	2.8	1880	50.0	2136	47400	PSI	3.305
ACCUR 2700	55.1	3.77	NA	3.7	1976	58.0	2102	38100	PSI	3.305
A-XMR-2495	40.5	3.03	DBLD	2.8	1840	45.0	2091	47100	PSI	3.305

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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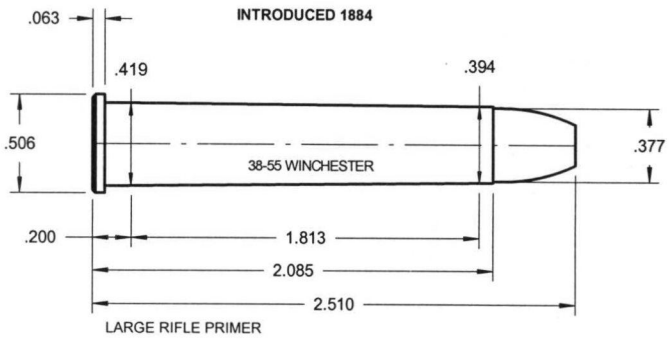
Useful case capacity 4.35 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
231 Grain Jacketed Bullet										
v-N140	57.4	4.21	NA	4.0	2356	63.3c	2557	NA	NA	3.626
VEC TU2000	46.5	3.55	NA	3.4	2237	50.9	2438	41900	CIP	3.626
VEC TU5000	58.6	4.22	NA	4.0	2329	58.6	2329	29695	CIP	3.626
250 Grain Barnes X Bullet										
ACCUR 2520	46.8	3.19	DBLD	3.1	1986	52.0	2257	42700	PSI	3.800
ACCUR 2700	56.1	3.84	NA	3.7	2119	59.0	2254	42000	PSI	3.800
A-XMR-4350	58.5	4.33	NA	4.3	1949	65.0c	2215	33500	PSI	3.800
256 Grain Jacketed Bullet										
v-N140	54.0	3.96	NA	3.7	2147	59.6c	2372	NA	NA	3.630
260 Grain Jacketed Bullet										
v-N140	54.3	3.98	NA	3.7	2144	60.2c	2329	NA	NA	3.602
v-N135	50.0	3.88	NA	3.7	2101	58.0c	2303	NA	NA	3.602
270 Grain Jacketed Bullet										
A-XMR-4350	61.7c	4.57	NA	4.3	2071	68.5c	2353	43000	PSI	3.775
286 Grain Jacketed Bullet										
VEC TU5000	53.7	3.87	NA	3.7	2005	58.6	2270	38563	CIP	3.721
286 Grain Barnes X Bullet										
A-XMR-4350	58.5	4.33	NA	4.3	1955	65.0c	2222	45100	PSI	3.800
v-N140	48.0	3.52	NA	3.4	2015	52.8	2165	NA	NA	3.843
A-XMR-3100	58.5c	4.38	NA	4.3	1773	65.0c	2015	34000	PSI	3.800
293 Grain Jacketed Bullet										
v-N140	50.0	3.66	NA	3.4	1979	55.4	2198	NA	NA	3.760

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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38-55 WINCHESTER



Useful case capacity 2.60 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
200 Grain Jacketed Bullet										
A-XMR-2015	32.4	2.37	DBLD	2.2	1938	36.0c	2132	27900	CUP	2.590
A-XMR-2495	36.0c	2.69	DBLD	2.5	1852	40.0c	2037	22800	CUP	2.590
ACC XMP5744	22.9	1.72	DBLD	1.6	1685	25.5	1853	28400	CUP	2.590
220 Grain Jacketed Bullet										
A-XMR-2495	34.2	2.56	DBLD	2.5	1859	38.0c	2045	25700	CUP	2.580
A-XMR-2015	28.8	2.10	DBLD	1.9	1714	32.0	1886	25200	CUP	2.580
ACC XMP5744	21.1	1.59	DBLD	1.6	1498	23.5	1648	26200	CUP	2.580
240 Grain Lead Bullet										
A-XMR-2495	34.2	2.56	DBLD	2.5	1836	38.0c	2020	25200	CUP	2.510
A-XMR-2015	28.4	2.07	DBLD	1.9	1767	31.5	1943	28000	CUP	2.510
ACC XMP5744	16.0	1.20	1.18	NA	1238	22.0	1601	28200	CUP	2.510
250 Grain Lead Bullet										
H4198	20.0	1.50	1.46	1.3	1480	24.0	1740	26200	CUP	2.500
H322	24.0	1.74	DBLD	1.6	1523	27.0	1692	27600	CUP	2.500
255 Grain Bullet										
H4895	30.0	2.18	DBLD	2.2	1512	35.0	1729	NA	NA	2.530
H335	35.0	2.26	DBLD	2.2	1601	37.0	1679	NA	NA	2.530
BL-C(2)	36.0	2.32	DBLD	2.2	1588	38.0	1666	NA	NA	2.530
255 Grain Jacketed Bullet										
H322	27.0	1.96	DBLD	1.9	1541	33.0	1830	NA	NA	2.620
H4198	24.0	1.80	DBLD	1.6	1554	28.0	1788	26700	CUP	2.620

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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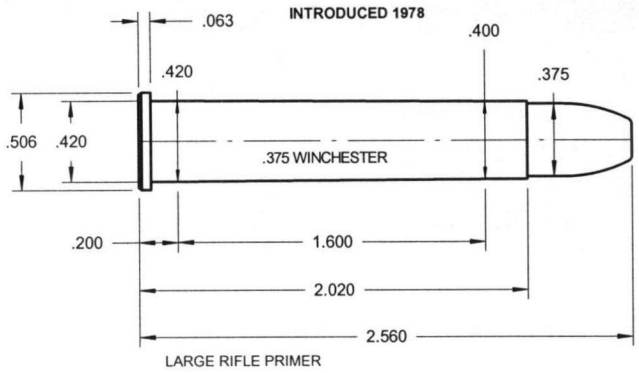
38-55 WINCHESTER (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
255 Grain Jacketed Bullet (Continued)									
RELODER 7	26.5	1.93	DBLD	1.9	1725	26.5	1725	26000 CUP	2.530
HERC 2400	18.0	1.34	1.26	1.3	1410	18.0	1410	23500 CUP	2.530
255 Grain Lead Bullet									
ACC XMP5744	20.2	1.52	1.46	1.3	1451	22.5	1596	27900 CUP	2.515

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 12-18-2002 Lee Precision Inc. Hartford, Wi. 53027

375 WINCHESTER



Useful case capacity 2.62 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL
200 Grain Bullet								
H4895	36.1c	2.63	DBLD	2.5	1823	41.0c 2044	NA NA	2.530
H335	37.8	2.44	DBLD	2.2	1808	43.0c 2027	NA NA	2.530
BL-C(2)	38.7	2.50	DBLD	2.2	1800	44.0c 2018	NA NA	2.530
200 Grain Jacketed Bullet								
ACCUR 1680	36.0	2.36	DBLD	2.2	2211	40.0 2512	41500 CUP	2.525
H4198	35.0c	2.63	DBLD	2.5	2298	38.0c 2480	50600 CUP	2.530
H322	39.0c	2.83	DBLD	2.8	2262	42.0c 2419	46900 CUP	2.530
A-XMR-2015	36.0c	2.63	DBLD	2.5	1981	40.0c 2251	35800 CUP	2.525
VEC SP3	28.5	1.94	DBLD	1.9	2221	28.5 2221	47286 CIP	2.560
ACC XMP5744	27.9	2.10	DBLD	1.9	1899	31.0 2158	50800 CUP	2.525
VEC SP10	36.3	2.42	DBLD	2.2	2126	36.3 2126	34253 CIP	2.560
220 Grain Bullet								
H4895	34.3	2.50	DBLD	2.2	1716	39.0c 1924	NA NA	2.530
BL-C(2)	37.0	2.38	DBLD	2.2	1711	42.0c 1919	NA NA	2.530
H335	36.1	2.33	DBLD	2.2	1701	41.0c 1907	NA NA	2.530
220 Grain Jacketed Bullet								
ACCUR 1680	34.2	2.24	DBLD	2.2	2087	38.0 2372	44800 CUP	2.530
RELODER 7	36.0	2.62	DBLD	2.5	2260	36.0 2260	45500 CUP	2.555
H322	35.0	2.54	DBLD	2.5	2052	38.5c 2236	48900 CUP	2.500
H4198	31.0	2.33	DBLD	2.2	2049	34.0 2233	49300 CUP	2.500
A-XMR-2015	36.0c	2.63	DBLD	2.5	1947	40.0c 2213	39500 CUP	2.530

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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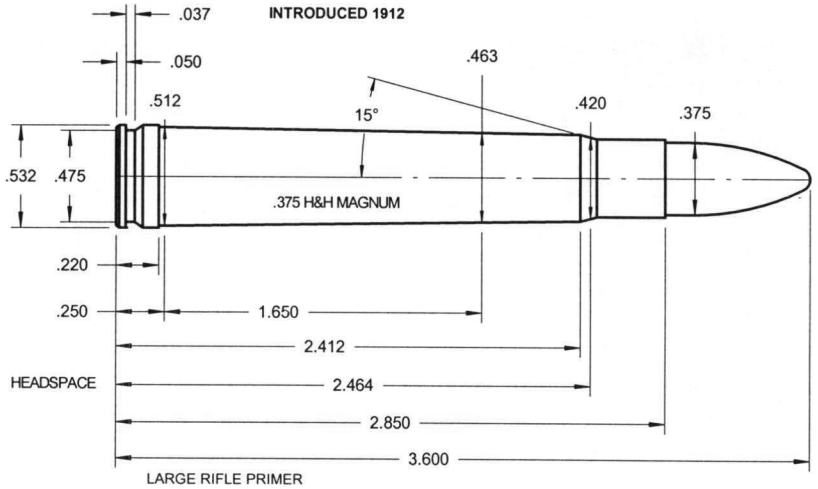
375 WINCHESTER (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
220 Grain Jacketed Bullet (Continued)										
VEC TU2000	33.2	2.53	DBLD	2.5	2110	33.2	2110	32554	CIP	2.560
VEC SP10	36.3	2.42	DBLD	2.2	2064	36.3	2064	34485	CIP	2.560
ACC XMP5744	26.5	1.99	DBLD	1.9	1771	29.5	2013	50000	CUP	2.530
HERC 2400	23.5	1.74	DBLD	1.6	1900	23.5	1900	44000	CUP	2.555
250 Grain Jacketed Bullet										
VEC SP3	24.4	1.66	DBLD	1.6	1798	27.0	1978	53745	CIP	2.560
VEC SP10	34.7	2.32	DBLD	2.2	1929	34.7	1929	37533	CIP	2.560
250 Grain Lead Bullet										
A-XMR-2015	28.8	2.10	DBLD	1.9	1674	32.0	1902	40700	CUP	2.400
ACC XMP5744	23.4	1.76	DBLD	1.6	1629	26.0	1852	49900	CUP	2.400
VEC TU2000	27.8	2.12	DBLD	1.9	1847	27.8	1847	31437	CIP	2.560
ACCUR 1680	25.2	1.65	DBLD	1.6	1624	28.0	1845	33600	CUP	2.400
VEC SP3	25.5	1.74	DBLD	1.6	1841	25.5	1841	45210	CIP	2.560
VEC SP10	33.2	2.22	DBLD	2.2	1841	33.2	1841	31030	CIP	2.560
255 Grain Bullet										
H322	31.7	2.30	DBLD	2.2	1657	36.0	1858	NA	NA	2.530
H4198	26.4	1.98	DBLD	1.9	1648	30.0	1848	NA	NA	2.530
H4895	37.0c	2.69	DBLD	2.5	1845	37.0c	1845	NA	NA	2.530
H335	35.2	2.27	DBLD	2.2	1640	40.0	1839	NA	NA	2.530
BL-C(2)	35.2	2.27	DBLD	2.2	1623	40.0	1820	NA	NA	2.530

CAUTION: With **NEVER EXCEED LOADS** maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-21-2003 Lee Precision Inc. Hartford, Wi. 53027

375 H&H MAGNUM



Useful case capacity 5.61 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
200 Grain Jacketed Bullet											
BL-C(2)	78.0	5.03	2 SCOOPS	2.5	2874	87.0c	3195	54747 PSI	3.350	.9884	.9763
H335	68.0	4.39	NA	4.3	2800	80.0	3153	58257 PSI	3.350	.9901	.9847
H-VARGET	65.0	4.75	2 SCOOPS	2.2	2839	76.0	3121	58842 PSI	3.350	.9914	.9835
H4895	67.0	4.88	2 SCOOPS	2.2	2828	78.5c	3116	56970 PSI	3.350	....	....
H380	78.0	5.39	2 SCOOPS	2.5	2898	83.0c	2999	51004 PSI	3.350	....	....
210 Grain Barnes X Bullet											
BL-C(2)	80.0	5.16	2 SCOOPS	2.5	2924	85.0	3077	54747 PSI	3.600	.9898	.9748
H4895	67.5	4.91	2 SCOOPS	2.2	2865	75.0	3059	58257 PSI	3.600	.9913	.9848
H-VARGET	65.0	4.75	2 SCOOPS	2.2	2810	72.5	3023	57906 PSI	3.600	.9902	.9823
H335	66.5	4.29	NA	4.0	2738	74.0	2980	57321 PSI	3.600	.9888	.9768
H380	77.0	5.32	2 SCOOPS	2.5	2831	81.0	2905	51589 PSI	3.600	....	....
220 Grain Jacketed Bullet											
RELODER15	71.8	5.07	2 SCOOPS	2.5	2787	77.0	2980	50000 CUP	3.360	....	....
RELODER12	70.7	4.88	2 SCOOPS	2.2	2677	75.0	2835	49500 CUP	3.360	....	....
235 Grain Jacketed Bullet											
BL-C(2)	80.0	5.16	2 SCOOPS	2.5	2858	85.0	2964	55098 PSI	3.600	.9926	.9878
A-XMR-2495	66.6	4.98	2 SCOOPS	2.2	2560	74.0	2909	57000 PSI	3.550	....	....
v-N160	74.8	5.49	2 SCOOPS	2.5	2536	86.7c	2900	NA	NA	3.583	....	....
H4895	69.0	5.02	2 SCOOPS	2.5	2743	74.0	2895	58958 PSI	3.600	.9892	.9745
v-N140	65.9	4.83	2 SCOOPS	2.2	2530	76.4	2890	NA	NA	3.583	....	....
ACCUR 2700	76.0	5.20	2 SCOOPS	2.5	2706	80.0	2879	56600 PSI	3.540	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

375 H&H MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
235 Grain Jacketed Bullet (Continued)											
ACCUR 2520	63.9	4.36	NA	4.3	2530	71.0	2875	57000 PSI	3.540	....	....
H335	69.0	4.45	NA	4.3	2694	74.0	2853	58491 PSI	3.600	.9885	.9730
VEC TU2000	64.8	4.94	2 SCOOPS	2.2	2772	66.4	2851	47315 CIP	3.580	....	....
A-XMR-4350	77.4c	5.73	2 SCOOPS	2.8	2495	86.0c	2835	46700 PSI	3.540	....	....
H380	76.0	5.25	2 SCOOPS	2.5	2786	81.0	2835	54747 PSI	3.600	.9966	.9710
H-VARGET	65.0	4.75	2 SCOOPS	2.2	2684	70.0	2819	59894 PSI	3.600	.9902	.9818
H414	80.0	5.29	2 SCOOPS	2.5	2693	83.0	2749	49834 PSI	3.600	....	....
H4831	83.0c	6.02	2 SCOOPS	2.8	2544	86.0c	2669	NA NA	3.540	....	....
H450	85.0	5.55	2 SCOOPS	2.5	2591	87.0c	2649	NA NA	3.540	....	....
A-XMR-3100	77.4c	5.79	2 SCOOPS	2.8	2259	86.0c	2567	33300 PSI	3.540	....	....
250 Grain Jacketed Bullet											
BL-C(2)	75.0	4.84	2 SCOOPS	2.2	2711	80.0	2835	57672 PSI	3.555	.9910	.9771
A-XMR-4350	75.6	5.59	2 SCOOPS	2.5	2431	84.0c	2763	48900 PSI	3.585	....	....
H380	74.0	5.11	2 SCOOPS	2.5	2635	79.0	2753	55332 PSI	3.555	.9912	.9825
H414	77.0	5.09	2 SCOOPS	2.5	2586	82.5	2746	54162 PSI	3.555	.9892	.9786
A-XMR-2495	60.8	4.55	NA	4.3	2409	67.5	2738	60000 PSI	3.585	....	....
H4350	78.0c	5.66	2 SCOOPS	2.8	2620	83.0c	2733	52525 PSI	3.555	....	....
ACCUR 2700	71.1	4.87	2 SCOOPS	2.2	2396	79.0	2723	60400 PSI	3.545	....	....
H4895	64.0	4.66	2 SCOOPS	2.2	2574	69.0	2696	58140 PSI	3.555	.9908	.9795
H335	64.0	4.13	NA	4.0	2496	68.0	2659	59192 PSI	3.555	.9844	.9511
H4831	82.0c	5.94	2 SCOOPS	2.8	2580	85.0c	2656	NA NA	3.540	....	....
H450	82.0	5.35	2 SCOOPS	2.5	2569	84.0	2649	NA NA	3.540	....	....
H-VARGET	62.0	4.53	NA	4.3	2471	66.5	2642	58140 PSI	3.555	.9853	.9728
A-XMR-3100	77.4c	5.79	2 SCOOPS	2.8	2233	86.0c	2537	36800 PSI	3.585	....	....
250 Grain Barnes X Bullet											
ACCUR 2700	75.1	5.14	2 SCOOPS	2.5	2539	79.0	2701	54100 PSI	3.550	....	....
A-XMR-4350	74.3	5.50	2 SCOOPS	2.5	2332	82.5c	2650	45500 PSI	3.550	....	....
A-XMR-2495	54.0	4.04	NA	4.0	2193	60.0	2492	54200 PSI	3.550	....	....
A-XMR-3100	75.6c	5.65	2 SCOOPS	2.8	2113	84.0c	2401	32800 PSI	3.550	....	....
255 Grain Lead Bullet											
ACC XMP5744	34.0	2.55	DBLD	2.5	1771	47.0	2310	41500 PSI	3.325	....	....
270 Grain Winchester Fail Safe											
H4350	80.0c	5.80	2 SCOOPS	2.8	2609	83.0c	2694	54747 PSI	3.600	....	....
H380	71.0	4.91	2 SCOOPS	2.2	2508	78.0	2632	54513 PSI	3.600	.9931	.9876
H4895	61.0	4.44	NA	4.3	2485	68.0	2624	59075 PSI	3.600	.9922	.9928
H-VARGET	63.0	4.61	2 SCOOPS	2.2	2530	67.0	2620	60362 PSI	3.600	.9912	.9845
H414	75.0	4.96	2 SCOOPS	2.2	2513	78.0	2576	53226 PSI	3.600	....	....
270 Grain Jacketed Bullet											
v-N160	72.5	5.32	2 SCOOPS	2.5	2440	84.1c	2790	NA NA	3.602	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

375 H&H MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
			....STARTING LOADS....								
270 Grain Jacketed Bullet (Continued)											
v-N140	63.2	4.63	2 SCOOPS	2.2	2415	73.3	2760	NA NA	3.602	....	....
A-XMR-4350	75.6	5.59	2 SCOOPS	2.5	2386	84.0c	2711	50300 PSI	3.605	....	....
IMR4350	69.1	5.08	2 SCOOPS	2.5	2417	78.5c	2710	53000 CUP	3.600	....	....
ACCUR 2700	76.0	5.20	2 SCOOPS	2.5	2530	80.0	2691	55800 PSI	3.570	....	....
IMR4831	75.9	5.58	2 SCOOPS	2.5	2492	82.5c	2690	50700 CUP	3.600	....	....
RELODER15	69.2	4.88	2 SCOOPS	2.2	2535	73.4	2685	49500 CUP	3.545	....	....
A-XMR-2495	63.5	4.75	2 SCOOPS	2.2	2346	70.5	2666	59000 PSI	3.570	....	....
WIN 760	77.5	5.16	2 SCOOPS	2.5	2660	77.5	2660	51000 PSI	3.540	....	....
IMR4064	61.3	4.57	NA	4.3	2390	69.0	2655	52500 CUP	3.600	....	....
H450	83.0	5.42	2 SCOOPS	2.5	2579	85.0	2627	NA NA	3.540	....	....
IMR3031	57.6	4.39	NA	4.3	2327	65.5	2610	53000 CUP	3.600	....	....
H4831	82.0c	5.94	2 SCOOPS	2.8	2510	85.0c	2609	NA NA	3.540	....	....
IMR4895	57.2	4.16	NA	4.0	2288	65.0	2565	53000 CUP	3.600	....	....
IMR4320	59.6	4.27	NA	4.0	2314	66.5	2545	52000 CUP	3.600	....	....
RELODER12	69.0	4.77	2 SCOOPS	2.2	2399	73.5	2540	49700 CUP	3.545	....	....
A-XMR-3100	77.4c	5.79	2 SCOOPS	2.8	2217	86.0c	2519	38700 PSI	3.615	....	....
IMR4198	43.1	3.42	NA	3.4	2051	49.0	2300	53000 CUP	3.600	....	....
SR4759	36.5	3.63	NA	3.4	1859	41.5	2085	53000 CUP	3.600	....	....
IMR4227	34.8	2.67	DBLD	2.5	1846	39.5	2070	53000 CUP	3.600	....	....
300 Grain Jacketed Bullet											
H4350	77.0	5.58	2 SCOOPS	2.5	2539	81.5c	2645	57906 PSI	3.600	....	....
IMR4350	69.0	5.07	2 SCOOPS	2.5	2358	78.0c	2620	52700 CUP	3.600	....	....
IMR4831	77.3c	5.68	2 SCOOPS	2.8	2488	80.0c	2560	48300 CUP	3.600	....	....
WIN 760	77.5	5.16	2 SCOOPS	2.5	2560	77.5	2560	51500 PSI	3.540	....	....
v-N160	70.5	5.18	2 SCOOPS	2.5	2240	81.8c	2560	NA NA	3.563	....	....
ACCUR 2700	71.3	4.88	2 SCOOPS	2.2	2397	75.0	2550	56600 PSI	3.585	....	....
H414	75.0	4.96	2 SCOOPS	2.2	2502	78.0	2548	54747 PSI	3.600	....	....
A-XMR-4350	71.1	5.26	2 SCOOPS	2.5	2241	79.0c	2547	51500 PSI	3.585	....	....
RELODER19	74.3	5.24	2 SCOOPS	2.5	2399	79.0	2540	49600 CUP	3.550	....	....
H4831	80.0c	5.80	2 SCOOPS	2.8	2397	84.0c	2539	NA NA	3.540	....	....
v-N140	60.0	4.40	NA	4.3	2214	69.6	2530	NA NA	3.563	....	....
IMR4064	59.5	4.43	NA	4.3	2273	67.0	2525	52500 CUP	3.600	....	....
H450	81.0	5.29	2 SCOOPS	2.5	2440	84.0	2516	NA NA	3.540	....	....
VEC TU5000	74.1	5.34	2 SCOOPS	2.5	2510	74.1	2510	43541 CIP	3.580	....	....
H4895	61.0	4.44	NA	4.3	2411	65.0	2505	58958 PSI	3.600	.9903	.9816
IMR3031	56.0	4.26	NA	4.0	2220	63.0	2465	52500 CUP	3.600	....	....
RELODER15	62.5	4.41	NA	4.3	2319	66.5	2455	49600 CUP	3.550	....	....
H-VARGET	58.0	4.24	NA	4.0	2345	62.0	2454	57672 PSI	3.600	.9886	.9784

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2 SCOOPS = Use TWO dippers of powder in each round.

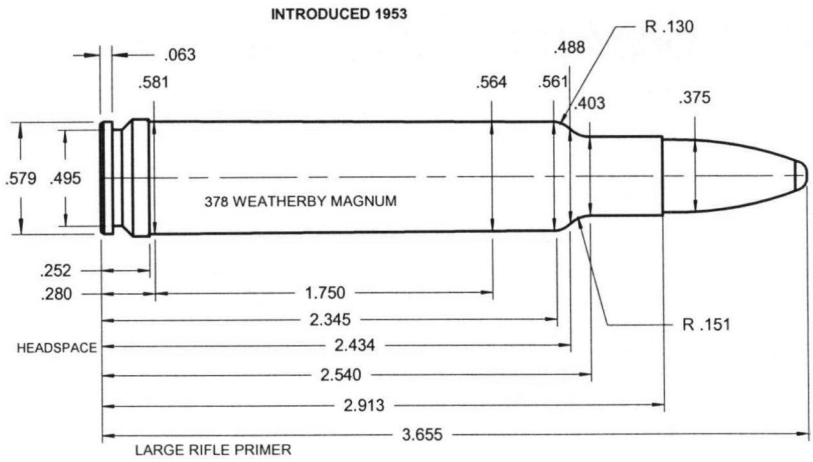
375 H&H MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
300 Grain Jacketed Bullet (Continued)											
A-XMR-3100	74.7	5.59	2 SCOOPS	2.5	2159	83.0c	2453	43200 PSI	3.585	....	....
A-XMR-2495	56.3	4.21	NA	4.0	2148	62.5	2441	58600 PSI	3.585	....	....
IMR4320	55.4	3.97	NA	3.7	2144	63.0	2405	53000 CUP	3.600	....	....
IMR4895	53.9	3.92	NA	3.7	2139	61.0	2400	52800 CUP	3.600	....	....
IMR4198	41.4	3.28	DBLD	3.1	1913	47.0	2145	53000 CUP	3.600	....	....
IMR4227	33.7	2.59	DBLD	2.5	1742	38.0	1935	52600 CUP	3.600	....	....
SR4759	34.3	3.41	NA	3.4	1717	39.0	1925	53000 CUP	3.600	....	....
350 Grain Jacketed Bullet											
H414	68.0	4.49	NA	4.3	2280	71.0	2461	NA	NA	3.540	....
H4831	72.0	5.22	2 SCOOPS	2.5	2288	76.0	2452	NA	NA	3.540	....
H4350	68.0	4.93	2 SCOOPS	2.2	2261	72.0	2432	NA	NA	3.540	....
H380	63.0	4.35	NA	4.3	2238	67.0	2414	NA	NA	3.540	....
A-XMR-4350	67.5	5.00	2 SCOOPS	2.2	2072	75.0	2355	54800 PSI	3.560	....	....
ACCUR 2700	63.7	4.36	NA	4.3	2123	67.0	2259	56600 PSI	3.560	....	....
A-XMR-3100	65.7	4.91	2 SCOOPS	2.2	1853	73.0	2106	36600 PSI	3.560	....	....
A-XMR-2495	49.5	3.70	NA	3.4	1851	55.0	2103	56100 PSI	3.560	....	....

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2 SCOOPS = Use TWO dippers of powder in each round.

378 WEATHERBY MAGNUM



Useful case capacity 7.89 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
235 Grain Jacketed Bullet										
H4350	102.0	7.40	2 SCOOPS	3.4	3003	109.0c	3224	NA	NA	3.645
H4831	107.0	7.76	2 SCOOPS	3.7	2972	117.0c	3202	NA	NA	3.645
250 Grain Barnes X Bullet										
A-XMR-4350	94.5	6.99	2 SCOOPS	3.4	2762	105.0	3139	57200	PSI	3.665
A-XMR-3100	101.7	7.61	2 SCOOPS	3.7	2711	113.0c	3081	57600	PSI	3.665
ACCUR 8700	123.3c	8.48	2 SCOOPS	4.0	2516	137.0c	2859	48300	PSI	3.665
270 Grain Jacketed Bullet										
RELODER19	99.2	7.00	2 SCOOPS	3.4	2800	110.8	3110	53100	CUP	3.620
H4831	105.0	7.61	2 SCOOPS	3.7	2724	115.0c	3102	NA	NA	3.645
H4350	99.0	7.18	2 SCOOPS	3.4	2779	105.0	3091	NA	NA	3.645
A-XMR-4350	93.6	6.93	2 SCOOPS	3.4	2700	104.0	3068	59200	PSI	3.685
A-XMR-3100	100.8	7.54	2 SCOOPS	3.7	2687	112.0c	3053	59200	PSI	3.685
RELODER22	115.0c	8.02	2 SCOOPS	4.0	3050	115.0c	3050	47200	CUP	3.620
RELODER15	80.7	5.70	2 SCOOPS	2.8	2647	90.5	2940	53300	CUP	3.620
ACCUR 8700	121.5c	8.36	2 SCOOPS	4.0	2495	135.0c	2835	43600	PSI	3.685
285 Grain Jacketed Bullet										
IMR7828	107.7	7.81	2 SCOOPS	3.7	2835	117.0c	3060	51600	CUP	3.625
300 Grain Jacketed Bullet										
IMR7828	104.8	7.60	2 SCOOPS	3.7	2751	118.0c	3055	53500	CUP	3.644
H4350	95.0	6.89	2 SCOOPS	3.4	2595	100.0	2940	NA	NA	3.680
H4831	102.0	7.39	2 SCOOPS	3.4	2624	112.0c	2926	NA	NA	3.680

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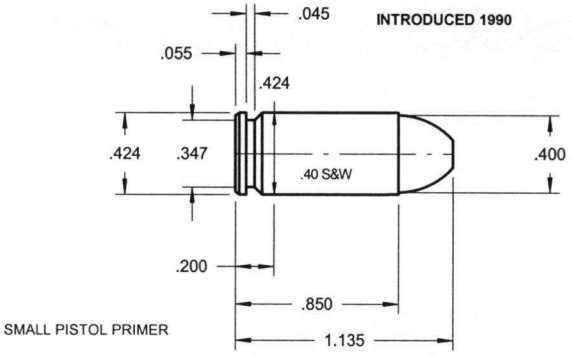
378 WEATHERBY MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL
300 Grain Jacketed Bullet (Continued)								
H870	105.6	7.24	2 SCOOPS	3.4	2336	120.0c2620	NA NA	3.680
300 Grain Solid Bullet								
RELODER22	105.0	7.32	2 SCOOPS	3.4	2747	114.0c2965	51600 CUP	3.625
RELODER19	96.8	6.84	2 SCOOPS	3.4	2664	108.6 2960	53300 CUP	3.625
A-XMR-4350	90.9	6.73	2 SCOOPS	3.1	2508	101.0 2850	57300 PSI	3.530
A-XMR-3100	98.1	7.34	2 SCOOPS	3.4	2492	109.0c2832	55500 PSI	3.530
ACCUR 8700	117.0c	8.05	2 SCOOPS	4.0	2385	130.0c2710	47900 PSI	3.530

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2 SCOOPS = Use TWO dippers of powder in each round.

40 SMITH & WESSON



Do not use reloads in Glock or similar guns with chambers that do not fully support the cartridge due to the intrusion of the feed ramp.

Useful case capacity 0.69 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
135 Grain Jacketed Bullet									
BULLSEYE	7.0c	.74	.71	.7	1251	7.6c	1350	33600 PSI	1.105
POWER PISTOL	8.4c	.75	.71	.7	1230	9.3c	1340	34000 PSI	1.105
GREEN DOT	7.0c	.88	.88	NA	1244	7.5c	1330	33100 PSI	1.105
UNIVERSAL	6.8c	.75	.71	.7	1215	7.5c	1324	32500 PSI	1.125
HS6	9.0	.64	.61	NA	1178	10.2c	1321	33600 PSI	1.125
IMR 800X	10.5c	1.12	1.09	1.0	1305	10.5c	1305	24000 PSI	1.125
UNIQUE	8.5c	.93	.88	NA	1290	8.5c	1290	26600 PSI	1.105
SR4756	9.0c	.99	.95	NA	1285	9.0c	1285	30000 PSI	1.125
RED DOT	6.2c	.88	.88	NA	1197	6.7c	1280	33200 PSI	1.105
ACCUR #5	8.4	.52	.49	.5	1151	9.3	1266	34900 PSI	1.125
TITEGROUP	5.8	.49	.49	NA	1148	6.4	1251	33200 PSI	1.125
SR7625	7.8c	.82	.82	.7	1250	7.8c	1250	30200 PSI	1.125
ACCUR #2	6.8	.57	.57	.5	1122	7.6	1247	34700 PSI	1.125
HP38	6.3	.58	.57	.5	1131	7.0	1244	33100 PSI	1.125
ACCUR #7	10.1	.66	.66	NA	1124	11.2c	1237	33900 PSI	1.125
IMR PB	7.0c	.84	.82	NA	1147	7.5c	1230	31000 PSI	1.125
IMR 700X	5.8c	.78	.76	.7	1144	6.2c	1210	32900 PSI	1.125
145 Grain Lead Bullet									
ACCUR #5	7.2	.45	.43	NA	1072	8.0	1179	34900 PSI	1.115
ACCUR #7	9.0	.59	.57	.5	1065	10.0	1171	33700 PSI	1.115
ACCUR #2	5.9	.49	.49	NA	1040	6.6	1155	33400 PSI	1.115

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
145 Grain Lead Bullet (Continued)									
ACCUR #9	10.8c	.71	.71	.7	1021	12.0c	1123	29200 PSI	1.115
150 Grain Jacketed Bullet									
BLUE DOT	10.4c	.90	.88	NA	1179	11.5c	1285	34000 PSI	1.105
UNIQUE	7.2c	.79	.76	.7	1143	8.0c	1245	34000 PSI	1.105
WIN 571	9.5	.65	.61	NA	1129	10.4c	1230	33200 PSI	1.100
BULLSEYE	6.1	.65	.61	NA	1124	6.7c	1225	34000 PSI	1.105
HERCO	7.5c	.84	.82	NA	1115	8.2c	1215	33900 PSI	1.105
POWER PISTOL	7.6	.67	.66	NA	1126	8.2c	1215	33300 PSI	1.105
IMR 800X	8.8c	.94	.88	NA	1205	8.8c	1205	25000 PSI	1.125
wSUPER-FLD	6.7	.56	.53	.5	1061	7.7	1200	33200 PSI	1.135
SR4756	7.3c	.81	.76	.7	1129	7.8c	1195	32700 PSI	1.125
WIN ACTION PI	7.0	.57	.57	.5	1113	7.5	1190	32800 PSI	1.135
GREEN DOT	5.6c	.71	.71	.7	1078	6.2c	1175	33800 PSI	1.105
WIN 540	7.7	.53	.53	.5	1055	8.6	1175	33000 PSI	1.100
ACCUR #5	7.5	.47	.46	NA	1064	8.3	1170	35000 PSI	1.120
SR7625	6.8c	.71	.71	.7	1110	7.2c	1165	32500 PSI	1.125
RED DOT	5.3c	.76	.76	.7	1060	5.9c	1155	34000 PSI	1.105
ACCUR #2	6.3	.53	.53	.5	1050	7.0	1155	34200 PSI	1.120
WIN 231	5.2	.48	.46	NA	977	6.3	1150	33200 PSI	1.135
wSUPER-LIT	4.6	.39	.37	NA	933	5.8	1140	33200 PSI	1.135
AMER-SELECT	5.6c	.75	.71	.7	1066	6.0c	1140	33000 PSI	1.105
ACCUR #7	9.2	.60	.57	NA	1033	10.2	1136	34300 PSI	1.120
IMR PB	6.0c	.72	.71	.7	1052	6.5c	1135	33500 PSI	1.125
IMR 700X	5.0	.67	.66	NA	1028	5.5c	1120	34000 PSI	1.125
wSUPER-TAR	5.5	.66	.66	NA	927	6.3c	1050	27100 PSI	1.135
155 Grain Jacketed Bullet									
wSUPER-FLD	6.0	.50	.49	.5	993	7.3	1180	33200 PSI	1.135
WIN 571	8.5	.58	.57	.5	1023	10.0	1180	33200 PSI	1.100
WIN ACTION PI	6.9	.56	.53	.5	1094	7.4	1170	33500 PSI	1.135
WIN 540	7.7	.53	.53	.5	1046	8.5	1140	33100 PSI	1.100
WIN 231	5.1	.47	.46	NA	954	6.0	1100	33200 PSI	1.100
wSUPER-LIT	4.5	.38	.37	NA	909	5.6	1100	33200 PSI	1.135
wSUPER-TAR	5.5	.66	.66	NA	963	6.0c	1040	27900 PSI	1.100
155 Grain Lead Bullet									
ACCUR #5	6.8	.42	.40	NA	1063	7.5	1158	35000 PSI	1.130
ACCUR #7	8.7	.57	.57	.5	1042	9.7	1146	34600 PSI	1.130
ACCUR #9	10.8c	.71	.71	.7	1038	12.0c	1142	32100 PSI	1.130
ACCUR #2	5.7	.48	.46	NA	1015	6.3	1116	34100 PSI	1.130

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40 SMITH & WESSON (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
155 Grain Lead Bullet (Continued)									
POWER PISTOL	6.7	.59	.57	NA	1064	7.0	1115	32300 PSI	1.125
AMER-SELECT	5.4c	.72	.71	.7	1001	5.7c	1061	32600 PSI	1.125
UNIQUE	6.2	.68	.66	NA	1021	6.5c	1061	32200 PSI	1.125
BULLSEYE	4.6	.49	.49	NA	982	4.9	1051	33100 PSI	1.125
155 Grain Copper Plated									
v-N350	7.2c	.70	.66	.7	1167	8.1c	1296	NA NA	1.126
v-3N37	7.5	.68	.66	NA	1154	8.5c	1293	NA NA	1.126
v-N340	6.4	.68	.66	NA	1138	7.3c	1276	NA NA	1.126
v-N330	6.0	.65	.61	NA	1112	6.7c	1224	NA NA	1.126
v-N320	5.3	.64	.61	NA	1065	5.9c	1171	NA NA	1.126
ACCUR #7	9.3	.61	.61	NA	1032	10.3	1135	34300 PSI	1.125
ACCUR #9	11.7c	.77	.76	.7	1026	13.0c	1129	28700 PSI	1.125
ACCUR #2	5.6	.47	.46	NA	1000	6.2	1100	35000 PSI	1.125
ACCUR #5	6.9	.43	.43	NA	995	7.7	1095	32100 PSI	1.125
155 Grain XTP									
v-3N37	7.3	.67	.66	NA	1169	8.1c	1286	NA NA	1.126
v-N350	6.6	.64	.61	NA	1115	7.6c	1263	NA NA	1.126
v-N340	6.0	.64	.61	NA	1103	6.9c	1250	NA NA	1.126
v-N330	6.0	.65	.61	NA	1122	6.7c	1234	NA NA	1.126
v-N320	5.2	.63	.61	NA	1063	5.9c	1191	NA NA	1.126
UNIVERSAL	6.0	.66	.66	NA	1088	6.6c	1186	33300 PSI	1.125
TITEGROUP	5.4	.46	.46	NA	1055	5.9	1139	31700 PSI	1.125
HS6	7.7	.55	.53	.5	1044	8.5	1137	33200 PSI	1.125
HP38	5.0	.46	.46	NA	939	6.0	1103	33000 PSI	1.125
170 Grain Jacketed Bullet									
v-3N37	6.0	.55	.53	.5	1019	7.0	1165	NA NA	1.126
v-N350	5.8	.57	.57	.5	1005	6.8	1161	NA NA	1.126
v-N340	5.3	.56	.53	.5	1002	6.1	1135	NA NA	1.126
WIN ACTION PI	6.2	.50	.49	.5	1015	6.7	1085	33500 PSI	1.135
wSUPER-FLD	5.5	.46	.46	NA	936	6.5	1080	33200 PSI	1.115
WIN 571	7.6	.52	.49	.5	945	8.8	1080	33200 PSI	1.115
WIN 540	7.0	.48	.46	NA	986	7.7	1075	33400 PSI	1.115
ACCUR #7	8.4	.55	.53	.5	954	9.3	1049	34400 PSI	1.125
ACCUR #2	5.6	.47	.46	NA	946	6.2	1041	35000 PSI	1.125
ACCUR #5	6.5	.40	.40	NA	941	7.2	1035	34000 PSI	1.125
ACCUR #9	10.2	.67	.66	NA	932	11.3c	1025	30800 PSI	1.125
WIN 231	4.5	.42	.40	NA	867	5.3	1000	33200 PSI	1.115
wSUPER-LIT	4.2	.36	.34	NA	859	5.0	1000	33200 PSI	1.135

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40 SMITH & WESSON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
170 Grain Jacketed Bullet (Continued)									
wSUPER-TAR	4.2	.51	.49	.5	771	5.5	970	30100 PSI	1.115
170 Grain Lead Bullet									
wSUPER-FLD	5.2	.44	.43	NA	936	6.2	1090	33200 PSI	1.135
WIN ACTION PI	5.7	.46	.46	NA	968	6.4	1075	33400 PSI	1.135
WIN 571	7.0	.48	.46	NA	909	8.4	1070	33200 PSI	1.100
WIN 540	6.3	.43	.43	NA	945	7.2	1060	33200 PSI	1.100
wSUPER-LIT	4.3	.36	.34	NA	936	4.8	1030	33200 PSI	1.135
WIN 231	4.0	.37	.37	NA	827	5.2	1030	33200 PSI	1.100
wSUPER-TAR	4.0	.48	.46	NA	801	5.0	970	30000 PSI	1.135
170 Grain XTP									
BLUE DOT	8.9c	.77	.76	.7	1074	9.8c	1170	33900 PSI	1.124
HERCO	6.7c	.75	.71	.7	1033	7.4c	1125	34000 PSI	1.124
HERC 2400	11.1c	.82	.82	.7	1029	12.1c	1110	33600 PSI	1.124
POWER PISTOL	6.8	.60	.57	NA	1025	7.3	1105	33300 PSI	1.124
UNIVERSAL	5.6	.62	.61	NA	988	6.3c	1097	32400 PSI	1.125
HS6	7.0	.50	.49	.5	989	7.7	1078	33200 PSI	1.125
UNIQUE	6.1	.67	.66	NA	986	6.7c	1075	33800 PSI	1.124
GREEN DOT	5.1	.65	.61	NA	959	5.6c	1045	33700 PSI	1.124
TITEGROUP	4.6	.39	.37	NA	950	5.0	1025	32000 PSI	1.125
AMER-SELECT	5.0	.67	.66	NA	954	5.4c	1020	33100 PSI	1.124
BULLSEYE	5.1	.54	.53	.5	941	5.5	1015	33500 PSI	1.125
HP38	4.4	.41	.40	NA	857	5.3	1007	33000 PSI	1.125
RED DOT	4.6	.65	.61	NA	904	5.1c	985	34000 PSI	1.124
175 Grain Lead Bullet									
ACCUR #7	7.6	.50	.49	.5	922	8.4	1014	35000 PSI	1.115
ACCUR #9	9.2	.60	.57	NA	908	10.2	998	34900 PSI	1.115
ACCUR #5	5.5	.34	.34	.3	896	6.1	986	35000 PSI	1.115
ACCUR #2	4.8	.40	.40	NA	894	5.3	975	34200 PSI	1.115
180 Grain Jacketed Bullet									
v-N350	5.9	.58	.57	.5	1018	6.7	1142	NA NA	1.126
v-3N37	5.8	.53	.53	.5	967	6.8	1115	NA NA	1.126
v-N340	5.5	.59	.57	.5	1008	6.1	1109	NA NA	1.126
UNIQUE	5.8	.64	.61	NA	977	6.4c	1065	33800 PSI	1.125
BLUE DOT	8.0c	.69	.66	NA	977	8.8c	1065	34000 PSI	1.125
POWER PISTOL	6.3	.56	.53	.5	963	6.9	1050	33700 PSI	1.125
HERCO	6.3c	.71	.71	.7	959	7.0c	1045	34000 PSI	1.125
wSUPER-FLD	5.6	.47	.46	NA	945	6.2	1040	33200 PSI	1.135
IMR 800X	7.2c	.77	.76	.7	1030	7.2c	1030	26000 PSI	1.125

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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40 SMITH & WESSON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
180 Grain Jacketed Bullet (Continued)									
HERC 2400	9.9c	.73	.71	.7	941	10.9c	1025	33900 PSI	1.125
WIN ACTION PI	5.5	.45	.43	NA	918	6.2	1020	33200 PSI	1.135
BULLSEYE	5.0	.53	.53	.5	932	5.5	1015	33900 PSI	1.125
WIN 571	7.8	.53	.53	.5	959	8.3	1015	33200 PSI	1.125
GREEN DOT	4.9	.61	.61	NA	936	5.3	1010	33600 PSI	1.125
SR4756	5.6	.61	.61	NA	936	6.0	1000	33100 PSI	1.125
ACCUR #9	9.9	.65	.61	NA	904	11.0c	994	32100 PSI	1.125
ACCUR #5	6.3	.39	.37	NA	902	7.0	992	35000 PSI	1.125
SR7625	5.3	.55	.53	.5	918	5.7	990	33300 PSI	1.125
WIN 540	6.2	.42	.40	NA	895	6.9	985	32800 PSI	1.100
ACCUR #7	7.9	.52	.49	.5	894	8.8	984	34400 PSI	1.125
RED DOT	4.5	.64	.61	NA	899	5.0c	980	34000 PSI	1.125
IMR PB	4.6	.55	.53	.5	886	5.1	975	34400 PSI	1.125
IMR 700X	4.1	.55	.53	.5	873	4.6	970	34600 PSI	1.125
ACCUR #2	5.1	.43	.43	NA	860	5.7	955	33800 PSI	1.125
WIN 231	4.0	.37	.37	NA	783	5.0	950	33200 PSI	1.100
wSUPER-LIT	4.0	.34	.34	.3	807	4.8	950	33200 PSI	1.135
VEC AO	4.9	.59	.57	.5	882	5.2	935	30986 CIP	1.134
AMER-SELECT	4.5	.60	.57	NA	886	4.7	930	32400 PSI	1.125
VEC BA9	4.6	.42	.40	NA	876	4.9	928	31523 CIP	1.134
180 Grain Lead Bullet									
POWER PISTOL	6.5	.58	.57	.5	923	6.9	977	32700 PSI	1.125
UNIQUE	5.2	.57	.57	.5	919	5.5	973	32700 PSI	1.125
AMER-SELECT	4.6	.62	.61	NA	854	5.0	912	33200 PSI	1.125
BULLSEYE	4.2	.45	.43	NA	853	4.5	911	33000 PSI	1.125
180 Grain Copper Plated									
ACCUR #9	9.6	.63	.61	NA	917	10.7c	1008	34500 PSI	1.125
ACCUR #5	5.8	.36	.34	NA	869	6.5	965	33600 PSI	1.125
ACCUR #7	7.4	.48	.46	NA	862	8.2	949	33700 PSI	1.125
ACCUR #2	4.3	.36	.34	NA	822	4.8	903	33400 PSI	1.125
180 Grain XTP									
UNIVERSAL	5.0	.55	.53	.5	915	5.8	1046	33400 PSI	1.125
ACCUR #9	9.9	.65	.61	NA	927	11.0c	1019	35000 PSI	1.135
TITEGROUP	4.2	.36	.34	NA	880	4.7	978	33300 PSI	1.125
ACCUR #7	7.7	.50	.49	.5	897	8.5	978	34600 PSI	1.135
HS6	6.1	.43	.43	NA	870	6.9	976	32500 PSI	1.125
ACCUR #2	5.0	.42	.40	NA	870	5.6	967	35000 PSI	1.135
ACCUR #5	5.9	.37	.37	NA	869	6.6	965	32500 PSI	1.135

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40 SMITH & WESSON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
180 Grain XTP (Continued)									
HP38	4.1	.38	.37	NA	797	5.0	947	32900 PSI	1.125
CLAYS	3.0	.44	.43	NA	741	3.5	847	34300 PSI	1.125
185 Grain Lead Bullet									
ACCUR #7	7.4	.48	.46	NA	900	8.2	990	35000 PSI	1.120
ACCUR #5	5.4	.34	.34	.3	886	6.0	975	35000 PSI	1.120
ACCUR #9	8.7	.57	.57	.5	869	9.7	956	33500 PSI	1.120
ACCUR #2	4.6	.39	.37	NA	856	5.1	942	33000 PSI	1.120
190 Grain Jacketed Bullet									
BLUE DOT	7.9	.69	.66	NA	954	8.7c	1040	33800 PSI	1.130
POWER PISTOL	6.4	.57	.57	.5	954	6.9	1020	33100 PSI	1.130
UNIQUE	5.5	.60	.57	NA	927	6.1	1010	34000 PSI	1.130
HERCO	6.1	.69	.66	NA	918	6.7c	1000	33800 PSI	1.130
ACCUR #9	9.9	.65	.61	NA	907	11.0c	997	32700 PSI	1.125
HERC 2400	9.7c	.72	.71	.7	903	10.6c	975	33600 PSI	1.130
ACCUR #7	7.7	.50	.49	.5	876	8.6	964	34300 PSI	1.125
BULLSEYE	4.9	.52	.49	.5	876	5.4	955	34000 PSI	1.130
GREEN DOT	4.7	.59	.57	NA	884	5.1	955	33600 PSI	1.130
ACCUR #5	6.0	.37	.37	NA	863	6.7	950	35000 PSI	1.125
ACCUR #2	5.0	.42	.40	NA	838	5.6	931	32000 PSI	1.125
RED DOT	4.5	.63	.61	NA	830	4.9c	895	33600 PSI	1.130
AMER-SELECT	4.5	.61	.61	NA	862	4.7	895	32000 PSI	1.130
195 Grain Lead Bullet									
ACCUR #9	8.1	.53	.53	.5	839	9.0	923	35000 PSI	1.110
ACCUR #5	4.8	.30	.30	.3	833	5.3	907	35000 PSI	1.110
ACCUR #7	6.1	.40	.40	NA	803	6.8	883	34800 PSI	1.110
ACCUR #2	4.1	.34	.34	.3	792	4.6	880	34900 PSI	1.110
200 Grain Jacketed Bullet									
v-N105	7.5	.68	.66	NA	1069	8.0c	1132	NA	NA 1.126
v-N350	5.3	.52	.49	.5	884	6.0	991	NA	NA 1.126
v-3N37	5.1	.47	.46	NA	857	6.0	988	NA	NA 1.126
v-N340	4.7	.50	.49	.5	864	5.4	978	NA	NA 1.126
BLUE DOT	7.2	.62	.61	NA	880	7.9	960	33800 PSI	1.130
POWER PISTOL	5.8	.51	.49	.5	880	6.3	960	33700 PSI	1.130
UNIQUE	4.8	.53	.53	.5	876	5.3	955	33900 PSI	1.130
HERCO	5.3	.59	.57	NA	876	5.8	955	34000 PSI	1.130
ACCUR #9	9.5	.62	.61	NA	865	10.6c	952	34500 PSI	1.135
BULLSEYE	4.2	.45	.43	NA	875	4.6	945	33600 PSI	1.130
ACCUR #7	7.5	.49	.49	NA	846	8.3	931	35000 PSI	1.135

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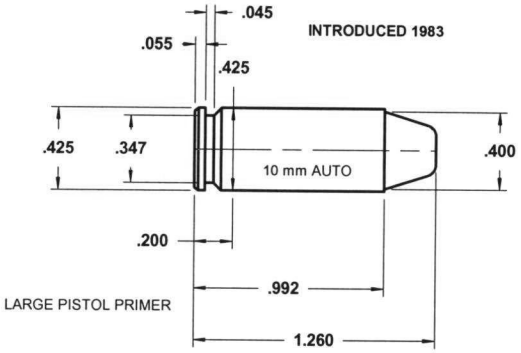
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40 SMITH & WESSON (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
200 Grain Jacketed Bullet (Continued)									
wSUPER-FLD	4.9	.41	.40	NA	814	5.7	930	33200 PSI	1.130
HERC 2400	7.8	.58	.57	.5	857	8.5	925	33600 PSI	1.130
IMR 800X	6.3	.67	.66	NA	925	6.3	925	26100 PSI	1.125
WIN ACTION PI	4.8	.39	.37	NA	805	5.6	920	32600 PSI	1.135
WIN 571	6.6	.45	.43	NA	812	7.5	910	33200 PSI	1.130
SR4756	5.0	.55	.53	.5	824	5.6	906	34200 PSI	1.125
200 Grain Lead Bullet									
wSUPER-FLD	3.9	.33	.32	.3	747	5.0	920	33200 PSI	1.135
WIN 571	5.0	.34	.34	.3	724	6.5	900	33200 PSI	1.135
WIN ACTION PI	4.2	.34	.34	.3	787	4.9	900	33000 PSI	1.135
wSUPER-LIT	3.0	.25	.24	NA	690	3.9	860	33200 PSI	1.135
WIN 540	4.7	.32	.32	.3	769	5.3	855	32900 PSI	1.100
WIN 231	3.0	.28	.27	NA	669	4.0	850	33200 PSI	1.135
wSUPER-TAR	3.5	.42	.40	NA	760	3.5	760	25200 PSI	1.100
200 Grain XTP									
UNIVERSAL	4.0	.44	.43	NA	782	4.7	903	33600 PSI	1.125
HS6	5.5	.39	.37	NA	795	6.3	900	32800 PSI	1.125
ACCUR #9	8.3	.55	.53	.5	783	9.2	863	35000 PSI	1.130
HP38	3.9	.36	.34	NA	729	4.7	857	33400 PSI	1.125
ACCUR #7	6.7	.44	.43	NA	779	7.4	850	35000 PSI	1.130
ACCUR #5	5.0	.31	.30	.3	760	5.5	828	33500 PSI	1.130
TITEGROUP	3.4	.29	.27	NA	740	3.8	822	31700 PSI	1.125
ACCUR #2	4.2	.35	.34	.3	734	4.7	815	33500 PSI	1.130
205 Grain Lead Bullet									
ACCUR #9	7.8	.51	.49	.5	800	8.7	880	35000 PSI	1.110
ACCUR #7	5.9	.39	.37	NA	761	6.6	845	33700 PSI	1.110
ACCUR #2	3.9	.33	.32	.3	768	4.3	838	32400 PSI	1.110
ACCUR #5	4.5	.28	.27	NA	760	5.0	836	32600 PSI	1.110

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-20-2003 Lee Precision Inc. Hartford, Wi. 53027

10mm AUTO



Useful case capacity 0.95 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
135 Grain Jacketed Bullet									
ACCUR #5	10.3	.64	.61	NA	1323	11.4	1503	36900 PSI	1.250
ACCUR #7	12.2	.80	.76	.7	1299	13.6	1476	34900 PSI	1.250
TITEGROUP	7.2	.61	.61	NA	1362	8.0	1459	35800 PSI	1.250
ACCUR #2	8.2	.69	.66	NA	1271	9.1	1444	36300 PSI	1.250
HS6	10.0	.71	.71	.7	1318	11.2	1435	36900 PSI	1.250
UNIVERSAL	7.0	.77	.76	.7	1284	8.0	1416	36100 PSI	1.250
145 Grain Lead Bullet									
ACCUR #9	13.5	.89	.88	NA	1251	15.0c	1422	32500 PSI	1.250
ACCUR #7	10.8	.71	.71	.7	1203	12.0	1367	33700 PSI	1.250
ACCUR #5	8.7	.54	.53	.5	1190	9.7	1352	33400 PSI	1.250
ACCUR #2	6.8	.57	.57	.5	1138	7.5	1293	32200 PSI	1.250
150 Grain Jacketed Bullet									
ACCUR #9	15.0c	.99	.95	NA	1284	16.7c	1459	33000 PSI	1.245
POWER PISTOL	9.0	.80	.76	.7	1324	9.7	1415	35600 PSI	1.250
ACCUR #7	11.7	.76	.76	.7	1236	13.0	1405	36400 PSI	1.245
ACCUR #5	9.5	.59	.57	NA	1229	10.6	1397	36900 PSI	1.245
WIN ACTION PI	8.7	.70	.66	.7	1290	9.8	1395	35500 PSI	1.240
ACCUR #2	7.6	.63	.61	NA	1182	8.4	1343	36700 PSI	1.245
WIN 540	8.7	.59	.57	NA	1105	10.6	1330	35600 PSI	1.240
WIN 571	9.5	.65	.61	NA	1130	11.4	1330	35600 PSI	1.240
wSUPER-FLD	6.5	.55	.53	.5	1083	8.1	1310	35600 PSI	1.240

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c = Compressed charge
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10mm AUTO (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
150 Grain Jacketed Bullet (Continued)									
WIN 231	6.0	.56	.53	.5	1060	7.0	1210	35600 PSI	1.240
wSUPER-LIT	5.5	.47	.46	NA	1110	6.3	1210	35600 PSI	1.240
155 Grain Jacketed Bullet									
ACCUR #9	14.3	.94	.88	NA	1244	15.9c	1414	32700 PSI	1.250
ACCUR #7	11.4	.74	.71	.7	1214	12.7	1379	37500 PSI	1.250
WIN 540	9.3	.64	.61	NA	1165	10.8	1355	35400 PSI	1.240
WIN ACTION PI	8.8	.71	.71	.7	1265	9.7	1355	35400 PSI	1.240
WIN 571	9.7	.66	.66	NA	1110	12.0	1350	35300 PSI	1.240
IMR 800X	9.8c	1.05	1.02	1.0	1350	9.8c	1350	30000 PSI	1.250
BLUE DOT	11.1c	.96	.95	NA	1302	11.5c	1340	34100 PSI	1.250
ACCUR #5	9.0	.56	.53	.5	1174	10.0	1334	35300 PSI	1.250
wSUPER-FLD	6.8	.57	.57	.5	1100	8.4	1320	35600 PSI	1.240
SR4756	8.2	.90	.88	NA	1262	8.5	1310	34400 PSI	1.250
ACCUR #2	7.2	.60	.57	NA	1140	8.0	1296	35700 PSI	1.250
SR7625	7.5	.78	.76	.7	1227	7.8	1275	34300 PSI	1.250
HERC 2400	13.4c	.99	.95	1.0	1246	13.6c	1270	33600 PSI	1.250
WIN 231	5.8	.54	.53	.5	1040	7.3	1250	35600 PSI	1.240
wSUPER-LIT	5.4	.46	.46	NA	1050	6.9	1250	35600 PSI	1.240
IMR PB	6.8	.82	.82	.7	1166	7.2	1235	35000 PSI	1.250
HERCO	8.0	.90	.88	NA	1206	8.2	1230	33800 PSI	1.250
IMR 700X	6.2	.83	.82	NA	1175	6.4	1220	34300 PSI	1.250
wSUPER-TAR	5.0	.60	.57	NA	1000	8.0c	1220	31900 PSI	1.240
UNIQUE	7.3	.80	.76	.7	1178	7.5	1200	33800 PSI	1.250
BULLSEYE	6.5	.69	.66	NA	1157	6.7	1190	34000 PSI	1.250
155 Grain Lead Bullet									
POWER PISTOL	9.5	.84	.82	NA	1320	9.5	1320	33000 PSI	1.250
155 Grain Copper Plated									
v-N350	8.0	.78	.76	.7	1243	8.9	1378	NA NA	1.256
ACCUR #9	13.5	.89	.88	NA	1206	15.0c	1371	35000 PSI	1.260
v-3N37	8.2	.75	.71	.7	1224	9.0	1345	NA NA	1.256
ACCUR #7	11.2	.73	.71	.7	1173	12.4	1333	34500 PSI	1.260
v-N340	7.2	.77	.76	.7	1211	8.0	1322	NA NA	1.256
ACCUR #5	8.9	.55	.53	.5	1151	9.9	1309	34300 PSI	1.260
ACCUR #2	6.1	.51	.49	.5	1087	6.8	1236	36200 PSI	1.260
155 Grain XTP									
HS6	8.8	.63	.61	NA	1095	11.0	1350	35000 PSI	1.260
v-N350	7.1	.69	.66	.7	1178	8.4	1316	NA NA	1.256
v-3N37	7.2	.66	.66	NA	1178	8.6	1316	NA NA	1.256

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10mm AUTO (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
155 Grain XTP (Continued)									
TITEGROUP	6.4	.54	.53	.5	1211	7.2	1315	35700 PSI	1.260
v-N340	6.7	.71	.71	.7	1165	7.6	1286	NA NA	1.256
UNIVERSAL	6.5	.71	.71	.7	1135	7.5	1279	35200 PSI	1.260
HP38	5.8	.54	.53	.5	1030	7.3	1253	35700 PSI	1.260
165 Grain Lead Bullet									
ACCUR #9	12.6	.83	.82	NA	1174	14.0	1334	32900 PSI	1.250
ACCUR #7	9.9	.65	.61	NA	1120	11.0	1273	35500 PSI	1.250
ACCUR #5	7.8	.49	.49	NA	1085	8.7	1233	31800 PSI	1.250
ACCUR #2	6.4	.54	.53	.5	1082	7.1	1230	36000 PSI	1.250
170 Grain Jacketed Bullet									
ACCUR #9	13.5	.89	.88	NA	1180	15.0c	1341	34100 PSI	1.250
ACCUR #7	10.8	.71	.71	.7	1148	12.0	1305	37500 PSI	1.250
WIN ACTION PI	7.9	.64	.61	NA	1165	9.1	1285	34600 PSI	1.240
ACCUR #5	8.7	.54	.53	.5	1122	9.7	1275	36200 PSI	1.250
WIN 540	8.7	.59	.57	NA	1105	9.9	1265	35500 PSI	1.240
WIN 571	9.0	.61	.61	NA	1060	10.8	1240	35600 PSI	1.240
ACCUR #2	6.9	.58	.57	.5	1074	7.7	1220	36400 PSI	1.250
wSUPER-FLD	6.0	.50	.49	.5	1000	7.5	1210	35600 PSI	1.240
HERC 2400	12.3	.91	.88	NA	1168	12.6	1190	33800 PSI	1.250
BLUE DOT	9.9	.86	.82	NA	1169	10.1	1180	33500 PSI	1.250
HERCO	7.4	.83	.82	NA	1123	7.5	1145	33600 PSI	1.250
BULLSEYE	6.0	.64	.61	NA	1102	6.2	1135	34000 PSI	1.250
UNIQUE	6.7	.73	.71	.7	1102	6.9	1135	34100 PSI	1.250
wSUPER-LIT	4.1	.35	.34	.3	850	6.0	1130	35600 PSI	1.240
WIN 231	4.7	.44	.43	NA	882	6.3	1120	35600 PSI	1.240
170 Grain Lead Bullet									
WIN ACTION PI	7.4	.60	.57	NA	1180	8.4	1270	35300 PSI	1.240
WIN 571	8.5	.58	.57	.5	1040	10.5	1250	35600 PSI	1.240
WIN 540	8.2	.56	.53	.5	1120	9.3	1245	35400 PSI	1.240
wSUPER-FLD	5.5	.46	.46	NA	1020	6.6	1170	35600 PSI	1.240
WIN 231	4.8	.45	.43	NA	980	5.6	1100	35600 PSI	1.240
wSUPER-LIT	3.5	.30	.30	NA	830	5.2	1100	35600 PSI	1.240
VEC BA9	5.6	.51	.49	.5	965	6.2	1099	33309 CIP	1.260
170 Grain XTP									
HS6	8.0	.57	.57	.5	1027	9.9	1246	35000 PSI	1.260
TITEGROUP	6.0	.51	.49	.5	1148	6.6	1232	36200 PSI	1.260
UNIVERSAL	5.5	.60	.57	NA	989	6.7	1187	36100 PSI	1.260
HP38	4.7	.44	.43	NA	882	6.3	1119	35900 PSI	1.260

....STARTING LOADS....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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10mm AUTO (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
175 Grain Lead Bullet										
ACCUR #9	12.2	.80	.76	.7	1131	13.6	1285	34900	PSI	1.245
ACCUR #7	9.4	.61	.61	NA	1055	10.4	1199	35200	PSI	1.245
ACCUR #2	6.0	.50	.49	.5	1027	6.7	1167	35300	PSI	1.245
ACCUR #5	7.5	.47	.46	NA	1026	8.3	1166	31500	PSI	1.245
180 Grain Jacketed Bullet										
ACCUR #9	13.1	.86	.82	NA	1135	14.5c	1290	32600	PSI	1.250
POWER PISTOL	8.2	.73	.71	.7	1182	8.7	1240	34900	PSI	1.250
ACCUR #7	10.3	.67	.66	NA	1084	11.4	1232	36600	PSI	1.250
BLUE DOT	9.6	.83	.82	NA	1131	10.4	1220	35800	PSI	1.250
ACCUR #5	8.3	.52	.49	.5	1069	9.2	1215	37000	PSI	1.250
HERC 2400	11.8	.88	.88	NA	1122	12.9c	1210	36000	PSI	1.250
WIN ACTION PI	7.5	.61	.61	NA	1110	8.4	1210	34400	PSI	1.240
IMR 800X	8.7	.93	.88	NA	1210	8.7	1210	30000	PSI	1.250
v-3N37	6.6	.60	.57	NA	1093	7.8	1201	NA	NA	1.256
WIN 540	8.0	.55	.53	.5	1040	9.3	1190	35500	PSI	1.240
v-N350	5.9	.58	.57	.5	1076	7.2	1184	NA	NA	1.256
ACCUR #2	6.7	.56	.53	.5	1037	7.4	1178	36700	PSI	1.250
WIN 571	8.3	.56	.53	.5	950	10.2	1170	35600	PSI	1.240
SR4756	7.3	.80	.76	.7	1111	7.6	1155	34400	PSI	1.250
v-N340	6.0	.64	.61	NA	1024	6.9	1155	NA	NA	1.256
wSUPER-FLD	5.7	.48	.46	NA	950	7.1	1150	35600	PSI	1.240
TITEGROUP	5.4	.46	.46	NA	1051	6.0	1141	34300	PSI	1.260
HERCO	6.9	.78	.76	.7	1056	7.5	1140	35800	PSI	1.250
SR7625	6.6	.69	.66	NA	1076	7.0	1140	35100	PSI	1.250
HS6	7.4	.53	.53	.5	940	9.4	1127	35800	PSI	1.260
BULLSEYE	5.9	.63	.61	NA	1043	6.4	1125	35900	PSI	1.250
UNIQUE	6.5	.71	.71	.7	1043	7.0	1125	35700	PSI	1.250
UNIVERSAL	5.4	.59	.57	NA	965	6.4	1122	32200	PSI	1.260
IMR 700X	5.8	.77	.76	.7	1065	6.0	1105	34400	PSI	1.250
IMR PB	6.1	.73	.71	.7	1055	6.4	1105	34900	PSI	1.250
HP38	5.2	.48	.46	NA	944	5.8	1061	34900	PSI	1.260
wSUPER-LIT	4.8	.41	.40	NA	950	5.6	1060	35600	PSI	1.240
180 Grain Lead Bullet										
POWER PISTOL	8.3	.74	.71	.7	1177	8.7	1235	34700	PSI	1.250
180 Grain Copper Plated										
ACCUR #9	12.1	.79	.76	.7	1086	13.5	1235	35500	PSI	1.260
ACCUR #7	9.9	.65	.61	NA	1051	11.0	1195	36200	PSI	1.260
ACCUR #5	7.9	.49	.49	NA	1037	8.8	1179	36300	PSI	1.260

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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10mm AUTO (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
180 Grain Copper Plated (Continued)									
ACCUR #2	5.3	.44	.43	NA	947	5.9	1077	35400 PSI	1.260
180 Grain XTP									
ACCUR #9	12.2	.80	.76	.7	1093	13.5	1242	34100 PSI	1.250
ACCUR #5	7.8	.49	.49	NA	1053	8.7	1197	36800 PSI	1.250
ACCUR #7	9.6	.63	.61	NA	1041	10.7	1183	35300 PSI	1.250
ACCUR #2	6.1	.51	.49	.5	986	6.8	1120	34300 PSI	1.250
185 Grain Lead Bullet									
ACCUR #9	11.7	.77	.76	.7	1098	13.0	1248	34700 PSI	1.245
ACCUR #7	9.2	.60	.57	NA	1032	10.2	1173	34500 PSI	1.245
ACCUR #5	7.5	.47	.46	NA	1030	8.3	1171	35800 PSI	1.245
ACCUR #2	5.9	.49	.49	NA	1000	6.6	1136	35900 PSI	1.245
190 Grain Jacketed Bullet									
ACCUR #9	12.8	.84	.82	NA	1115	14.2	1267	35800 PSI	1.250
POWER PISTOL	7.5	.67	.66	NA	1112	8.2	1200	35900 PSI	1.250
ACCUR #7	10.1	.66	.66	NA	1054	11.2	1198	36000 PSI	1.250
HERC 2400	11.5	.85	.82	NA	1107	12.5	1195	35800 PSI	1.250
ACCUR #5	8.2	.51	.49	.5	1044	9.1	1186	36800 PSI	1.250
BLUE DOT	9.2	.79	.76	.7	1097	10.0	1185	36000 PSI	1.250
WIN ACTION PI	7.4	.60	.57	NA	1100	8.3	1185	34700 PSI	1.240
WIN 540	8.0	.55	.53	.5	1030	9.3	1175	35400 PSI	1.240
WIN 571	8.5	.58	.57	.5	940	10.1	1140	35600 PSI	1.240
ACCUR #2	6.5	.54	.53	.5	991	7.2	1126	34400 PSI	1.250
wSUPER-FLD	5.5	.46	.46	NA	880	7.1	1120	35600 PSI	1.240
BULLSEYE	5.9	.62	.61	NA	981	6.3	1050	35500 PSI	1.250
HERCO	6.6	.74	.71	.7	972	7.2	1050	35800 PSI	1.250
wSUPER-LIT	4.5	.38	.37	NA	860	5.7	1040	35600 PSI	1.240
195 Grain Lead Bullet									
ACCUR #9	10.7	.70	.66	.7	1050	11.9	1193	35600 PSI	1.245
ACCUR #7	8.6	.56	.53	.5	998	9.5	1134	35400 PSI	1.245
ACCUR #5	6.6	.41	.40	NA	965	7.3	1097	34900 PSI	1.245
ACCUR #2	5.2	.44	.43	NA	928	5.8	1055	35500 PSI	1.245
200 Grain Jacketed Bullet									
ACCUR #9	12.2	.80	.76	.7	1056	13.5	1200	36300 PSI	1.250
v-N105	7.7	.69	.66	.7	1050	8.6	1155	NA NA	1.256
POWER PISTOL	7.1	.63	.61	NA	1071	7.7	1145	35600 PSI	1.260
ACCUR #7	9.6	.63	.61	NA	1007	10.7	1144	36200 PSI	1.250
ACCUR #5	7.8	.49	.49	NA	1003	8.7	1140	37100 PSI	1.250
IMR 800X	7.8	.84	.82	NA	1130	7.8	1130	32500 PSI	1.250

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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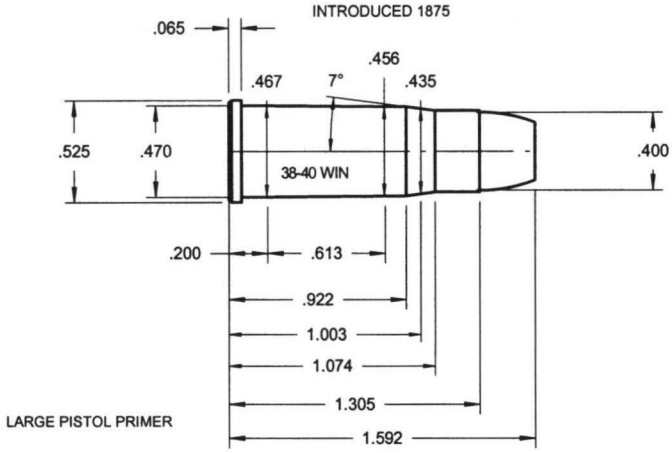
10mm AUTO (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
....STARTING LOADS....									
200 Grain Jacketed Bullet (Continued)									
HERC 2400	10.8	.80	.76	.7	1084	11.2	1115	34100 PSI	1.260
WIN ACTION PI	6.9	.56	.53	.5	1025	7.8	1115	35700 PSI	1.240
BLUE DOT	8.7	.75	.71	.7	1089	8.9	1110	33800 PSI	1.260
ACCUR #2	6.3	.53	.53	.5	959	7.0	1090	37500 PSI	1.250
WIN 540	7.5	.51	.49	.5	960	8.6	1090	35600 PSI	1.240
HS6	7.5	.53	.53	.5	957	8.6	1089	35900 PSI	1.260
v-3N37	5.9	.54	.53	.5	948	6.8	1073	NA NA	1.256
WIN 571	8.3	.56	.53	.5	960	9.3	1070	35600 PSI	1.240
v-N350	5.3	.52	.49	.5	898	6.3	1047	NA NA	1.256
SR4756	6.1	.67	.66	NA	968	6.6	1045	35800 PSI	1.250
SR7625	5.7	.60	.57	NA	963	6.2	1040	35700 PSI	1.250
TITEGROUP	4.8	.41	.40	NA	946	5.3	1024	36100 PSI	1.260
wSUPER-FLD	5.2	.44	.43	NA	875	6.2	1020	35600 PSI	1.240
UNIVERSAL	4.9	.54	.53	.5	846	5.9	1015	36900 PSI	1.260
v-N340	5.0	.53	.53	.5	904	5.7	1014	NA NA	1.256
HP38	4.6	.43	.43	NA	827	5.6	1011	35700 PSI	1.260
VEC AO	5.9	.71	.71	.7	955	6.2	1010	37170 CIP	1.260
WIN 231	4.6	.43	.43	NA	843	5.6	1000	35600 PSI	1.240
200 Grain Lead Bullet									
WIN 571	7.5	.51	.49	.5	950	9.0	1110	35600 PSI	1.240
WIN 540	6.6	.45	.43	NA	960	7.6	1085	35600 PSI	1.240
wSUPER-FLD	5.0	.42	.40	NA	920	6.3	1080	35600 PSI	1.240
WIN ACTION PI	5.8	.47	.46	NA	975	6.9	1080	35200 PSI	1.240
WIN 231	4.2	.39	.37	NA	870	5.5	1030	35600 PSI	1.240
wSUPER-LIT	3.8	.32	.32	.3	850	4.9	990	35600 PSI	1.240
wSUPER-TAR	3.8	.46	.46	NA	830	5.0	940	32400 PSI	1.240
200 Grain XTP									
ACCUR #9	11.3	.74	.71	.7	1030	12.5	1170	37000 PSI	1.250
ACCUR #7	8.8	.57	.57	.5	960	9.8	1091	36500 PSI	1.250
ACCUR #5	7.0	.44	.43	NA	938	7.8	1066	35100 PSI	1.250
ACCUR #2	5.7	.48	.46	NA	916	6.3	1041	36700 PSI	1.250
205 Grain Lead Bullet									
ACCUR #9	10.6	.70	.66	.7	1018	11.8	1157	36200 PSI	1.250
ACCUR #7	8.4	.55	.53	.5	960	9.3	1091	35900 PSI	1.250
ACCUR #5	6.3	.39	.37	NA	935	7.0	1063	35700 PSI	1.250
ACCUR #2	4.7	.39	.37	NA	862	5.2	979	33800 PSI	1.250

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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38-40 WINCHESTER



Useful case capacity 2.13 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
145 Grain Lead Bullet									
A NITRO100	5.2	.70	.66	.7	903	5.8	1027	13700 CUP	1.580
ACCUR #2	5.2	.44	.43	NA	894	5.8	1016	13200 CUP	1.580
150 Grain Jacketed Bullet									
ACCUR 1680	24.8	1.62	DBLD	1.6	1096	27.5	1246	13200 CUP	1.575
A-XMR-2015	27.0	1.97	DBLD	1.9	994	30.0c	1130	13900 CUP	1.575
ACC XMP5744	15.7	1.18	1.18	NA	914	17.5	1039	13200 CUP	1.575
BLUE DOT	11.1	.96	.95	NA	963	11.8	1020	13100 PSI	1.585
HERCO	8.7	.97	.95	NA	941	9.2	995	13100 PSI	1.585
UNIQUE	7.7	.84	.82	NA	927	8.2	990	13200 PSI	1.585
A NITRO100	5.3	.71	.71	.7	862	5.9	980	13600 CUP	1.575
HERC 2400	13.3	.98	.95	NA	916	14.1	970	13100 PSI	1.585
BULLSEYE	6.5	.69	.66	NA	960	6.5	960	12000 PSI	1.585
GREEN DOT	6.6	.83	.82	NA	923	6.8	950	12700 PSI	1.585
RED DOT	6.0	.84	.82	NA	876	6.2	910	12800 PSI	1.585
155 Grain Lead Bullet									
ACC XMP5744	14.8	1.11	1.09	1.0	891	16.5	1013	12700 CUP	1.585
165 Grain Lead Bullet									
A NITRO100	4.7	.63	.61	NA	843	5.2	959	13700 CUP	1.580
ACCUR #2	4.9	.41	.40	NA	832	5.4	946	13500 CUP	1.580
180 Grain Jacketed Bullet									
RELODER 7	23.5	1.71	DBLD	1.6	1601	25.8	1745	13500 PSI	1.585

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available c = Compressed charge

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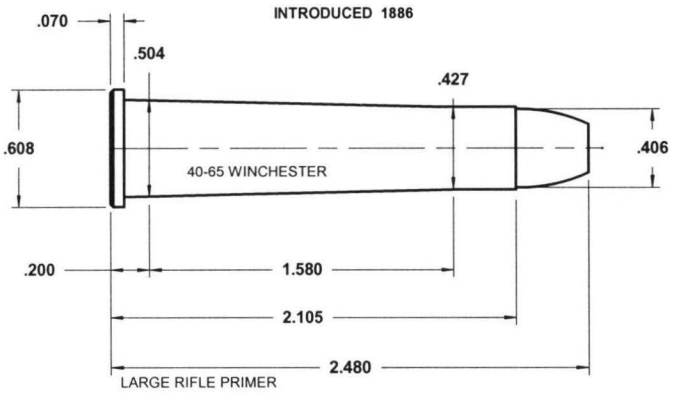
38-40 WINCHESTER (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
180 Grain Jacketed Bullet (Continued)									
ACCUR 1680	23.0	1.51	1.46	1.3	1052	25.5	1196	14000 CUP	1.585
A-XMR-2015	24.3	1.77	DBLD	1.6	864	27.0	982	14000 CUP	1.585
ACC XMP5744	14.8	1.11	1.09	1.0	845	16.5	961	13700 CUP	1.585
HERC 2400	12.0	.89	.88	NA	811	13.0	875	13400 PSI	1.585
BLUE DOT	9.6	.83	.82	NA	819	10.3	875	13200 PSI	1.585
A NITRO100	4.6	.62	.61	NA	734	5.1	835	13800 CUP	1.585
BULLSEYE	5.6	.60	.57	NA	820	5.6	820	12200 PSI	1.585
UNIQUE	6.4	.70	.66	.7	762	6.9	815	13200 PSI	1.585
HERCO	6.9	.77	.76	.7	752	7.3	795	13100 PSI	1.585
GREEN DOT	5.4	.69	.66	NA	724	5.6	745	12700 PSI	1.585
RED DOT	5.0	.71	.71	.7	733	5.1	740	12500 PSI	1.585
180 Grain Lead Bullet									
TITEGROUP	5.0	.42	.40	NA	819	6.4	990	13300 PSI	1.600
UNIVERSAL	6.9	.76	.76	.7	813	7.5	955	11900 PSI	1.600
HP38	5.8	.54	.53	.5	747	6.8	934	13500 PSI	1.600
CLAYS	4.7	.69	.66	NA	760	5.5	889	13500 PSI	1.600
185 Grain Lead Bullet									
ACCUR 1680	21.2	1.39	1.36	1.3	964	23.5	1095	14000 CUP	1.580
A-XMR-2015	22.5	1.64	DBLD	1.6	821	25.0	933	13800 CUP	1.580
ACC XMP5744	13.0	.98	.95	NA	792	14.5	900	11900 CUP	1.580
A NITRO100	4.5	.61	.61	NA	778	5.0	885	13000 CUP	1.580
SOLO 1000	5.0	.67	.66	NA	777	5.5	884	13500 CUP	1.580
ACCUR #2	4.5	.38	.37	NA	766	5.0	871	13400 CUP	1.580
200 Grain Jacketed Bullet									
RELODER 7	22.1	1.61	DBLD	1.6	1492	24.0	1610	13400 PSI	1.585
BLUE DOT	9.0	.78	.76	.7	770	9.9	840	13500 PSI	1.585
HERC 2400	11.6	.86	.82	NA	761	12.7	830	13500 PSI	1.585
HERCO	6.8	.76	.76	.7	736	7.3	785	13300 PSI	1.585
UNIQUE	6.3	.69	.66	NA	723	6.7	765	13100 PSI	1.585
BULLSEYE	5.3	.56	.53	.5	743	5.3	750	12400 PSI	1.585
GREEN DOT	5.4	.68	.66	NA	723	5.5	730	12500 PSI	1.585
RED DOT	4.8	.67	.66	NA	678	4.8	685	12400 PSI	1.585
200 Grain Lead Bullet									
A NITRO100	4.3	.58	.57	.5	735	4.8	836	13100 CUP	1.580
ACCUR #2	4.3	.36	.34	NA	717	4.8	815	12800 CUP	1.580

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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40-65 WINCHESTER



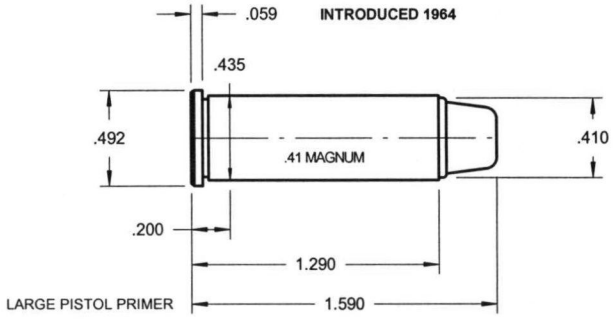
Useful case capacity 3.43 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
260 Grain Lead Bullet									
ACC XMP5744	23.4	1.76	DBLD	1.6	1452	26.0	1651	20000 PSI	2.540
300 Grain Lead Bullet									
A-XMR-2495	38.7	2.90	DBLD	2.8	1649	43.0	1874	18800 PSI	2.660
ACC XMP5744	21.6	1.62	DBLD	1.6	1338	24.0	1521	21600 PSI	2.660
ACCUR 8700	54.0c	3.72	NA	3.7	1255	60.0c	1426	21900 PSI	2.660
350 Grain Lead Bullet									
A-XMR-2495	36.0	2.69	DBLD	2.5	1556	40.0	1768	20800 PSI	2.660
ACC XMP5744	20.7	1.56	DBLD	1.3	1263	23.0	1436	21000 PSI	2.660
ACCUR 8700	48.6	3.34	NA	3.1	1104	54.0c	1255	19700 PSI	2.660
400 Grain Lead Bullet									
A-XMR-2495	33.3	2.49	DBLD	2.2	1437	37.0	1633	19600 PSI	2.830
ACC XMP5744	20.7	1.56	DBLD	1.3	1200	23.0	1364	22000 PSI	2.830
ACCUR 8700	46.8	3.22	DBLD	3.1	1041	52.0c	1183	16800 PSI	2.830

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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41 REMINGTON MAGNUM



Useful case capacity 1.35 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
170 Grain Jacketed Bullet										
H110	23.5c	1.54	DBLD	NA	1669	26.5c	1887	37400	CUP	1.575
v-N110	21.7c	1.81	DBLD	1.6	1654	23.5c	1795	NA	NA	1.579
IMR 800X	13.1c	1.40	1.36	1.3	1600	14.6c	1760	39200	CUP	1.575
H4227	22.5c	1.73	DBLD	1.6	1582	24.9c	1745	35600	CUP	1.575
ACCUR #9	17.7	1.16	1.09	1.0	1500	19.7	1705	37800	CUP	1.565
v-N105	15.3c	1.38	1.36	1.3	1539	17.5c	1690	NA	NA	1.579
SR4756	13.0c	1.43	1.36	1.3	1485	14.6c	1650	39600	CUP	1.575
IMR4227	23.0c	1.77	DBLD	1.6	1605	23.0c	1605	32900	CUP	1.575
HS6	12.2	.87	.82	NA	1447	13.7	1597	37200	CUP	1.575
ACC XMP5744	21.6c	1.62	DBLD	1.6	1387	24.0c	1577	40000	CUP	1.565
ACCUR #7	14.0	.91	.88	NA	1368	15.5	1555	37000	CUP	1.565
v-N350	11.1	1.08	1.02	1.0	1368	13.0	1526	NA	NA	1.579
ACCUR #5	10.8	.67	.66	NA	1314	12.0	1493	37900	CUP	1.565
UNIVERSAL	8.0	.88	.88	NA	1229	10.3	1488	38700	CUP	1.575
SR7625	9.6	1.01	.95	1.0	1337	10.8	1485	39400	CUP	1.575
TITEGROUP	8.2	.69	.66	.7	1361	9.2	1470	37700	CUP	1.575
IMR PB	9.9	1.20	1.18	NA	1302	11.3c	1460	40000	CUP	1.575
ACCUR #2	9.0	.75	.71	.7	1277	10.0	1451	39600	CUP	1.565
HP38	8.8	.81	.76	.7	1326	9.8	1440	38300	CUP	1.575
IMR 700X	7.4	1.00	.95	1.0	1226	8.4	1375	39800	CUP	1.575
HS7	13.1	.89	.88	NA	1154	14.5	1269	NA	NA	1.540

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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41 REMINGTON MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
170 Grain Jacketed Bullet (Continued)									
HP38	6.7	.62	.61	NA	845	7.4	929	NA NA	1.540
200 Grain Jacketed Bullet									
HERC 2400	16.0	1.19	1.18	NA	1303	17.5	1420	34700 PSI	1.580
HERCO	8.9	1.00	.95	1.0	1177	10.1	1320	35800 PSI	1.580
UNIQUE	8.9	.97	.95	NA	1153	10.0	1280	35700 PSI	1.580
BULLSEYE	7.1	.76	.76	.7	1111	8.0	1235	35700 PSI	1.580
RED DOT	7.1	1.01	.95	1.0	1145	7.5	1200	33400 PSI	1.580
GREEN DOT	7.5	.95	.95	NA	1074	8.3	1170	35000 PSI	1.580
210 Grain Jacketed Bullet									
IMR 800X	10.6	1.13	1.09	1.0	1319	12.0	1480	39900 CUP	1.590
WIN 296	NA	NA	NA	NA	NA	20.4c	1460	24000 CUP	1.540
SR4756	11.3	1.25	1.18	NA	1309	12.8c	1455	39700 CUP	1.590
HERC 2400	16.4	1.21	1.18	NA	1333	17.5	1425	33900 PSI	1.575
IMR4227	20.5c	1.58	DBLD	NA	1395	20.5c	1395	30000 CUP	1.590
HERCO	9.4	1.05	1.02	1.0	1211	10.3	1320	34800 PSI	1.575
UNIQUE	9.0	.99	.95	NA	1139	10.1	1265	35400 PSI	1.575
IMR PB	8.5	1.03	1.02	1.0	1128	9.7	1265	40000 CUP	1.590
BULLSEYE	7.7	.82	.82	.7	1154	8.3	1245	34300 PSI	1.575
SR7625	8.1	.84	.82	NA	1121	9.1	1245	39700 CUP	1.590
RED DOT	7.6	1.07	1.02	1.0	1135	8.2	1225	34300 PSI	1.575
WIN 231	8.2	.76	.76	.7	1142	8.8	1220	38000 CUP	1.540
IMR 700X	6.9	.92	.88	NA	1077	7.6	1185	39000 CUP	1.590
GREEN DOT	7.7	.97	.95	NA	1039	8.7	1165	35800 PSI	1.575
210 Grain Lead Bullet									
ACCUR #9	16.2	1.06	1.02	1.0	1392	18.0	1582	38600 CUP	1.675
IMR4227	20.5c	1.58	DBLD	NA	1480	20.5c	1480	33400 CUP	1.590
IMR 800X	10.5	1.12	1.09	1.0	1354	11.5	1475	38700 CUP	1.590
ACCUR #7	13.1	.86	.82	NA	1296	14.5	1442	37000 CUP	1.675
ACCUR #5	11.3	.70	.66	.7	1264	12.5	1436	36700 CUP	1.675
ACC XMP5744	19.3c	1.45	1.36	1.3	1259	21.5c	1431	38000 CUP	1.675
SR4756	10.3	1.13	1.09	1.0	1267	11.7	1420	40000 CUP	1.590
ACCUR #2	8.3	.70	.66	.7	1157	9.2	1315	40000 CUP	1.675
SR7625	8.0	.84	.82	NA	1130	9.0	1255	39500 CUP	1.590
IMR PB	8.1	.97	.95	NA	1136	9.0	1250	39300 CUP	1.590
IMR 700X	6.7	.89	.88	NA	1073	7.4	1180	39100 CUP	1.590
WIN 231	7.4	.69	.66	NA	1125	7.4	1125	28000 CUP	1.540

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c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

41 REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
210 Grain XTP										
H110	19.8	1.30	1.26	1.3	1465	22.0c	1631	36400	CUP	1.580
ACCUR #9	16.2	1.06	1.02	1.0	1338	18.0	1521	40000	CUP	1.570
H4227	19.3c	1.48	1.46	1.3	1379	21.5c	1518	38000	CUP	1.580
v-N105	13.0	1.17	1.09	1.0	1329	15.1c	1470	NA	NA	1.579
ACCUR #7	12.8	.84	.82	NA	1214	14.2	1379	39600	CUP	1.570
v-N350	10.4	1.02	1.02	1.0	1221	11.8	1339	NA	NA	1.579
ACC XMP5744	18.4c	1.38	1.36	1.3	1166	20.5c	1326	36800	CUP	1.570
ACCUR #5	10.4	.65	.61	NA	1163	11.5	1322	39200	CUP	1.570
HS6	10.6	.75	.71	.7	1186	11.8	1321	35700	CUP	1.580
ACCUR #2	8.6	.72	.71	.7	1096	9.5	1245	40000	CUP	1.570
UNIVERSAL	6.9	.76	.76	.7	971	8.9	1243	37700	CUP	1.580
HP38	8.0	.74	.71	.7	1089	8.6	1200	39800	CUP	1.580
TITEGROUP	6.5	.55	.53	.5	1053	7.4	1173	33200	CUP	1.580
220 Grain Jacketed Bullet										
H110	18.0	1.18	1.18	NA	1352	20.0	1529	34000	CUP	1.580
ACCUR #9	16.2	1.06	1.02	1.0	1316	18.0	1496	37700	CUP	1.560
H4227	18.0c	1.38	1.36	1.3	1296	20.0c	1433	37500	CUP	1.580
HERC 2400	15.1	1.12	1.09	1.0	1265	16.4	1365	34300	PSI	1.575
ACCUR #7	12.8	.84	.82	NA	1200	14.2	1364	39400	CUP	1.560
ACC XMP5744	18.0c	1.35	1.26	1.3	1153	20.0c	1311	37700	CUP	1.560
ACCUR #5	10.4	.65	.61	NA	1153	11.5	1310	39400	CUP	1.560
HS6	10.0	.71	.71	.7	1159	11.3	1271	36700	CUP	1.580
ACCUR #2	8.3	.70	.66	.7	1081	9.2	1228	40000	CUP	1.560
HERCO	8.2	.92	.88	NA	1088	9.3	1220	35800	PSI	1.575
UNIQUE	8.3	.91	.88	NA	1104	9.3	1215	35300	PSI	1.575
UNIVERSAL	6.5	.71	.71	.7	921	8.5	1178	38600	CUP	1.580
BULLSEYE	6.6	.71	.71	.7	1025	7.5	1150	35800	PSI	1.575
GREEN DOT	7.0	.88	.88	NA	1016	7.9	1140	35800	PSI	1.575
TITEGROUP	6.4	.54	.53	.5	997	7.3	1127	33700	CUP	1.580
RED DOT	6.5	.92	.88	NA	1003	7.4	1125	35900	PSI	1.575
HP38	7.2	.67	.66	NA	1031	8.0	1125	36700	CUP	1.580
220 Grain Copper Plated										
ACCUR #9	15.6	1.02	1.02	1.0	1305	17.3	1483	38800	CUP	1.590
ACCUR #7	12.9	.84	.82	NA	1236	14.3	1405	38300	CUP	1.590
ACCUR #5	10.3	.64	.61	NA	1188	11.5	1350	40000	CUP	1.590
ACCUR #2	7.4	.62	.61	NA	1060	8.2	1205	38700	CUP	1.590
240 Grain Lead Bullet										
ACCUR #9	15.5	1.02	1.02	1.0	1305	17.2	1483	39300	CUP	1.710

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c = Compressed charge

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41 REMINGTON MAGNUM (Continued)

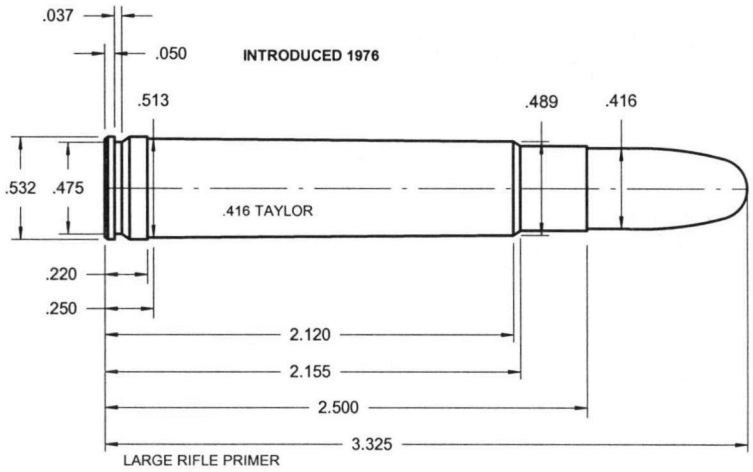
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
240 Grain Lead Bullet (Continued)										
ACCUR #7	12.6	.82	.82	.7	1197	14.0	1360	37800	CUP	1.710
ACCUR #5	10.8	.67	.66	NA	1194	12.0	1357	40000	CUP	1.710
ACC XMP5744	18.0c	1.35	1.26	1.3	1173	20.0c	1334	38100	CUP	1.710
ACCUR #2	7.4	.62	.61	NA	1047	8.2	1190	39700	CUP	1.710
245 Grain Lead Bullet										
H110	18.5	1.21	1.18	NA	1372	21.0c	1563	37400	CUP	1.630
H4227	18.0c	1.38	1.36	1.3	1272	20.0c	1444	37700	CUP	1.630
TITEGROUP	6.5	.55	.53	.5	1075	7.8	1202	39500	CUP	1.630
UNIVERSAL	6.3	.69	.66	NA	1001	8.0	1164	36000	CUP	1.630
250 Grain Lead Bullet										
H110	18.5	1.21	1.18	NA	1219	20.5	1342	NA	NA	1.540
290 Grain Lead Bullet										
ACCUR #9	12.1	.79	.76	.7	1071	13.5	1218	38900	CUP	1.710
ACCUR #7	10.0	.65	.61	NA	1017	11.2	1156	38500	CUP	1.710
ACC XMP5744	13.9	1.04	1.02	1.0	972	15.5	1105	35800	CUP	1.710
300 Grain Lead Bullet										
H110	17.1	1.12	1.09	1.0	1152	19.0	1267	NA	NA	1.540

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416 TAYLOR



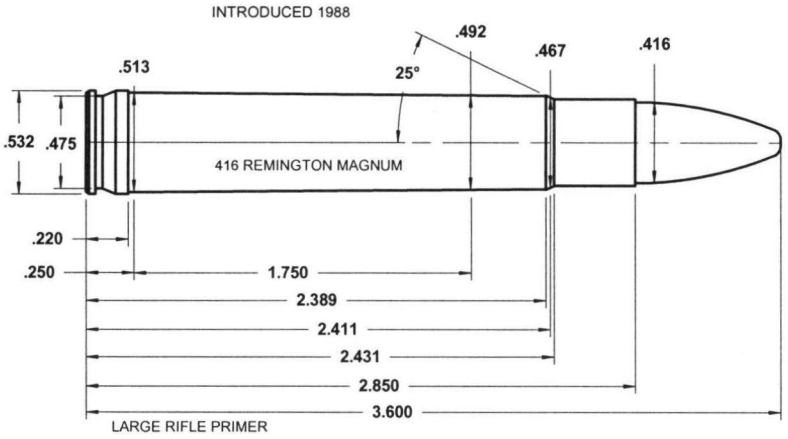
Useful case capacity 4.96 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
300 Grain Jacketed Bullet									
ACCUR 2460	67.5	4.43	NA	4.3	2338	75.0	2657	59100 PSI	3.265
ACCUR 2520	67.5	4.61	2 SCOOPS	2.2	2333	75.0c	2651	59100 PSI	3.265
A-XMR-2015	63.0	4.60	2 SCOOPS	2.2	2311	70.0c	2626	58700 PSI	3.265
ACCUR 2230	64.8	4.26	NA	4.0	2291	72.0	2603	58900 PSI	3.265
ACCUR 2700	75.1c	5.14	2 SCOOPS	2.5	2332	79.0c	2481	46200 PSI	3.265
A-XMR-4350	68.4c	5.06	2 SCOOPS	2.5	1966	76.0c	2234	30800 PSI	3.265
350 Grain Jacketed Bullet									
ACCUR 2460	62.1	4.07	NA	4.0	2102	69.0	2389	58700 PSI	3.315
ACCUR 2520	63.0	4.30	NA	4.0	2090	70.0	2375	58400 PSI	3.315
ACCUR 2230	61.2	4.02	NA	4.0	2087	68.0	2372	60400 PSI	3.315
A-XMR-2015	56.7	4.14	NA	4.0	2045	63.0	2324	59200 PSI	3.315
A-XMR-4350	65.7	4.86	2 SCOOPS	2.2	1874	73.0c	2129	39100 PSI	3.315
ACCUR 2700	66.5	4.55	NA	4.3	1992	70.0	2119	40500 PSI	3.315
400 Grain Jacketed Bullet									
A-XMR-4350	65.7	4.86	2 SCOOPS	2.2	1880	73.0c	2136	45700 PSI	3.295
ACCUR 2700	67.5	4.62	2 SCOOPS	2.2	2000	71.0	2128	48500 PSI	3.295
ACCUR 2520	55.8	3.81	NA	3.7	1869	62.0	2124	59200 PSI	3.295
A-XMR-2015	53.1	3.88	NA	3.7	1867	59.0	2122	59200 PSI	3.295
ACCUR 2460	54.9	3.60	NA	3.4	1853	61.0	2106	58700 PSI	3.295
ACCUR 2230	54.0	3.55	NA	3.4	1840	60.0	2091	59500 PSI	3.295

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c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

416 REMINGTON MAGNUM



Useful case capacity 6.09 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
300 Grain Jacketed Bullet											
H4895	77.1	5.61	2 SCOOPS	2.8	2662	86.0c	2930	63796 PSI	3.350	....	....
BL-C(2)	92.1	5.94	2 SCOOPS	2.8	2769	95.0c	2850	58981 PSI	3.350	....	....
H380	92.3c	6.38	2 SCOOPS	3.1	2612	100.0c	2820	61991 PSI	3.350	....	....
H335	84.4	5.44	2 SCOOPS	2.5	2689	87.0	2767	58981 PSI	3.350	....	....
H322	76.6	5.55	2 SCOOPS	2.5	2527	83.0	2727	61991 PSI	3.350	....	....
300 Grain Barnes X Bullet											
RELODER15	82.1	5.79	2 SCOOPS	2.8	2653	90.5c	2890	52400 CUP	3.600	....	....
RELODER12	82.1	5.67	2 SCOOPS	2.8	2559	90.0c	2790	52100 CUP	3.600	....	....
350 Grain Jacketed Bullet											
H-VARGET	77.0	5.63	2 SCOOPS	2.8	2476	82.0	2622	63074 PSI	3.590	.9887	.9781
H380	84.3	5.82	2 SCOOPS	2.8	2372	94.0c	2610	63796 PSI	3.350	....	....
H4895	75.0	5.46	2 SCOOPS	2.5	2456	80.0	2601	62833 PSI	3.590	.9886	.9708
BL-C(2)	84.0	5.42	2 SCOOPS	2.5	2507	87.0	2580	53806 PSI	3.590	....	....
H335	78.0	5.03	2 SCOOPS	2.5	2452	82.0	2572	61269 PSI	3.590	....	....
H322	69.3	5.02	2 SCOOPS	2.5	2242	78.0	2490	64398 PSI	3.350	....	....
IMR4064	74.6	5.56	2 SCOOPS	2.5	2302	81.0	2485	51600 CUP	3.545	....	....
IMR3031	68.6	5.23	2 SCOOPS	2.5	2227	76.5	2450	53000 CUP	3.545	....	....
IMR4895	68.1	4.96	2 SCOOPS	2.2	2162	77.0	2425	53700 CUP	3.545	....	....
350 Grain Lead Bullet											
ACC XMP5744	35.0	2.63	DBLD	2.5	1643	55.0	2267	51900 CUP	3.430	....	....
350 Grain Barnes X Bullet											
ACCUR 2230	71.1	4.67	2 SCOOPS	2.2	2328	79.0	2645	53000 CUP	3.680	....	....

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2 SCOOPS = Use TWO dippers of powder in each round.

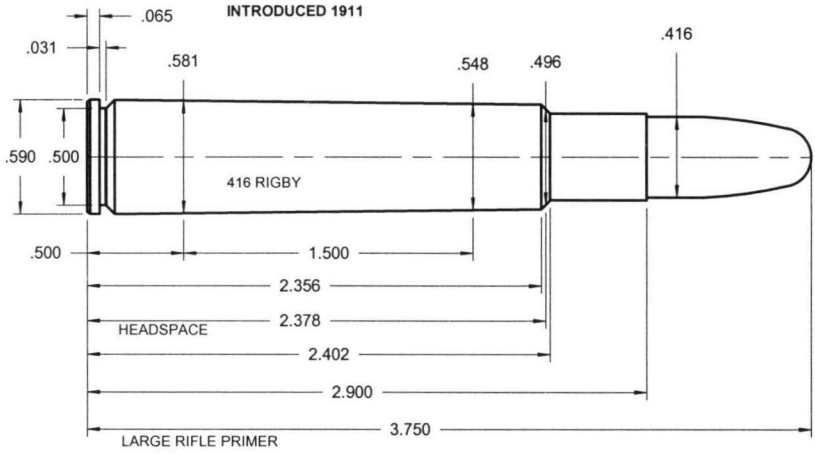
416 REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED	FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
350 Grain Barnes X Bullet (Continued)											
A-XMR-2015	67.5	4.93	2 SCOOPS	2.2	2304	75.0	2618	51400 CUP	3.680	....	....
ACCUR 2460	71.1	4.66	2 SCOOPS	2.2	2298	79.0	2611	51000 CUP	3.680	....	....
RELODER15	77.1	5.44	2 SCOOPS	2.5	2395	85.0	2610	52400 CUP	3.600	....	....
ACCUR 2520	70.2	4.79	2 SCOOPS	2.2	2255	78.0	2563	48600 CUP	3.680	....	....
A-XMR-4064	74.7	5.64	2 SCOOPS	2.8	2235	83.0c	2540	46200 CUP	3.680	....	....
ACCUR 2700	81.7	5.59	2 SCOOPS	2.5	2384	86.0	2536	47000 CUP	3.680	....	....
A-XMR-2495	73.8	5.52	2 SCOOPS	2.5	2226	82.0c	2530	46500 CUP	3.680	....	....
RELODER12	77.1	5.33	2 SCOOPS	2.5	2317	85.0	2525	52400 CUP	3.600	....	....
A-XMR-4350	72.0	5.33	2 SCOOPS	2.5	1954	80.0	2221	32600 CUP	3.680	....	....
400 Grain Jacketed Bullet											
A-XMR-4350	78.3	5.79	2 SCOOPS	2.8	2155	87.0c	2449	43900 CUP	3.580	....	....
A-XMR-2495	72.0	5.39	2 SCOOPS	2.5	2154	80.0	2448	50000 CUP	3.580	....	....
RELODER15	75.4	5.32	2 SCOOPS	2.5	2265	82.0	2445	51700 CUP	3.565	....	....
ACCUR 2700	80.8	5.53	2 SCOOPS	2.5	2295	85.0	2442	49800 CUP	3.580	....	....
H414	77.7	5.13	2 SCOOPS	2.5	2229	85.0	2429	62593 PSI	3.400	....	....
BL-C(2)	78.0	5.03	2 SCOOPS	2.5	2285	83.0	2420	60787 PSI	3.560	.9886	.9811
A-XMR-4064	72.0	5.43	2 SCOOPS	2.5	2128	80.0	2419	47800 CUP	3.580	....	....
H-VARGET	72.0	5.26	2 SCOOPS	2.5	2273	77.0	2407	63796 PSI	3.560	.9885	.9733
H4350	85.0c	6.16	2 SCOOPS	2.8	2327	88.0c	2395	55852 PSI	3.560	....	....
A-XMR-2015	63.0	4.60	2 SCOOPS	2.2	2104	70.0	2391	52200 CUP	3.580	....	....
H4895	71.0	5.17	2 SCOOPS	2.5	2237	76.0	2391	64157 PSI	3.560	.9866	.9714
RELODER12	74.9	5.18	2 SCOOPS	2.5	2194	82.0	2390	52000 CUP	3.565	....	....
ACCUR 2520	67.5	4.61	2 SCOOPS	2.2	2099	75.0	2385	51900 CUP	3.580	....	....
ACCUR 2460	66.6	4.37	NA	4.3	2097	74.0	2383	50300 CUP	3.580	....	....
ACCUR 2230	65.7	4.32	NA	4.3	2094	73.0	2380	49900 CUP	3.580	....	....
H380	78.0	5.39	2 SCOOPS	2.5	2215	84.0	2367	58380 PSI	3.560	.9888	.9798
IMR4064	71.3	5.31	2 SCOOPS	2.5	2142	78.0	2335	52000 CUP	3.555	....	....
IMR4895	67.6	4.92	2 SCOOPS	2.2	2074	76.5	2325	53800 CUP	3.555	....	....
IMR3031	68.4	5.21	2 SCOOPS	2.5	2124	75.0	2315	52100 CUP	3.555	....	....
RELODER19	83.0	5.86	2 SCOOPS	2.8	2140	83.0	2140	35600 CUP	3.565	....	....
400 Grain Solid Bullet											
RELODER15	75.6	5.34	2 SCOOPS	2.5	2297	81.0	2455	50900 CUP	3.600	....	....
RELODER12	73.5	5.08	2 SCOOPS	2.5	2212	81.0	2410	52400 CUP	3.600	....	....
RELODER19	82.0	5.79	2 SCOOPS	2.8	2130	82.0	2130	35600 CUP	3.600	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

416 RIGBY



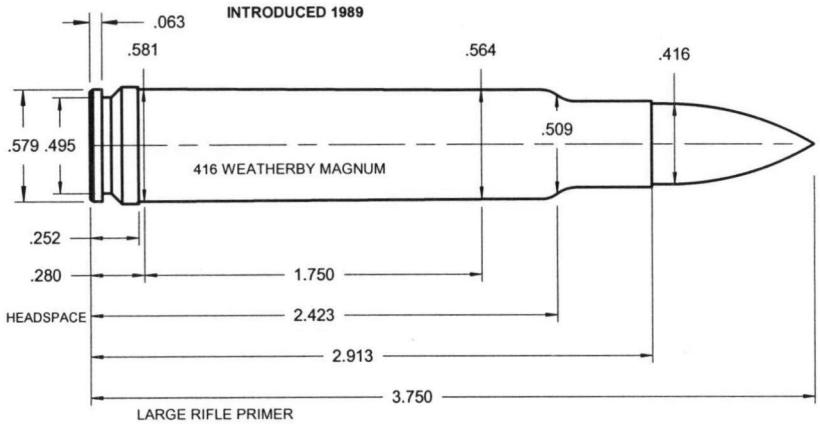
Useful case capacity 7.15 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
300 Grain Barnes X Bullet										
RELODER22	92.9	6.48	2 SCOOPS	3.1	2354	103.0c	2590	40000	CUP	3.650
350 Grain Lead Bullet										
ACC XMP5744	49.5	3.72	NA	3.7	1912	55.0	2173	41600	PSI	3.480
350 Grain Barnes X Bullet										
A-XMR-3100	91.8	6.87	2 SCOOPS	3.4	2218	102.0c	2521	42800	PSI	3.750
H4350	98.0	7.11	2 SCOOPS	3.4	2424	102.0c	2518	NA	NA	3.600
RELODER22	90.4	6.30	2 SCOOPS	3.1	2232	101.0	2455	40300	CUP	3.675
ACCUR 8700	112.5c	7.74	2 SCOOPS	3.7	2013	125.0c	2287	38800	PSI	3.750
400 Grain Jacketed Bullet										
H4831	100.0c	7.25	2 SCOOPS	3.4	2287	106.0c	2422	NA	NA	3.600
H4350	96.0	6.96	2 SCOOPS	3.4	2324	100.0c	2414	NA	NA	3.600
H1000	106.0c	7.56	2 SCOOPS	3.7	2319	110.0c	2409	NA	NA	3.600
RELODER22	87.0	6.07	2 SCOOPS	2.8	2161	96.0	2355	39800	CUP	3.725
A-XMR-3100	86.4	6.46	2 SCOOPS	3.1	2052	96.0c	2332	43700	PSI	3.610
ACCUR 8700	108.0c	7.43	2 SCOOPS	3.7	1882	120.0c	2139	38900	PSI	3.635
400 Grain Solid Bullet										
RELODER22	85.9	5.99	2 SCOOPS	2.8	2145	96.0	2360	40300	CUP	3.725
A-XMR-3100	88.2	6.60	2 SCOOPS	3.1	2042	98.0c	2320	43000	PSI	3.615
ACCUR 8700	114.8c	7.90	2 SCOOPS	3.7	2028	127.5c	2305	40400	PSI	3.615

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c = Compressed charge **Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

416 WEATHERBY MAGNUM



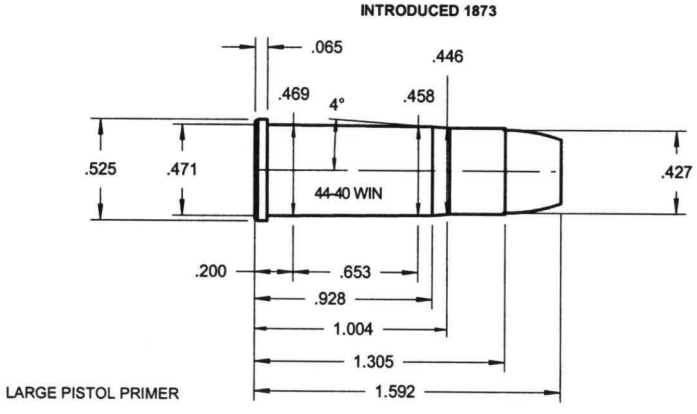
Useful case capacity 7.91 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
300 Grain Barnes X Bullet										
H414	110.0	7.27	2 SCOOPS	3.4	2911	115.0	3052	NA	NA	3.780
H4350	117.0c	8.48	2 SCOOPS	4.0	2917	122.0c	3051	NA	NA	3.780
325 Grain Barnes X Bullet										
RELODER22	109.0	7.60	2 SCOOPS	3.7	2694	117.0c	2880	51000	CUP	3.650
350 Grain Barnes X Bullet										
H4350	112.0c	8.12	2 SCOOPS	4.0	2728	118.0c	2891	NA	NA	3.780
RELODER22	108.9	7.59	2 SCOOPS	3.7	2647	116.9c	2830	51000	CUP	3.650
A-XMR-4350	98.1	7.26	2 SCOOPS	3.4	2484	109.0c	2823	59300	PSI	3.785
A-XMR-3100	100.8	7.54	2 SCOOPS	3.7	2316	112.0c	2632	47900	PSI	3.785
400 Grain Jacketed Bullet										
RELODER22	109.5	7.63	2 SCOOPS	3.7	2544	117.5c	2720	51000	CUP	3.615
H4831	116.0c	8.41	2 SCOOPS	4.0	2625	120.0c	2703	NA	NA	3.780
H4350	105.0	7.61	2 SCOOPS	3.7	2564	110.0c	2687	NA	NA	3.780
A-XMR-4350	95.4	7.06	2 SCOOPS	3.4	2297	106.0	2610	58300	PSI	3.640
A-XMR-3100	100.8	7.54	2 SCOOPS	3.7	2261	112.0c	2569	52900	PSI	3.640
H1000	116.0c	8.27	2 SCOOPS	4.0	2348	120.0c	2419	NA	NA	3.780
400 Grain Solid Bullet										
RELODER22	110.1	7.67	2 SCOOPS	3.7	2554	117.0c	2705	50500	CUP	3.680

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c = Compressed charge **Copyright 01-14-2003 Lee Precision Inc. Hartford, Wi. 53027**
2 SCOOPS = Use TWO dippers of powder in each round.

44-40 WINCHESTER



Useful case capacity 2.07 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
180 Grain Jacketed Bullet									
ACCUR #7	11.4	.74	.71	.7	939	12.9	1053	13000 CUP	1.510
ACCUR #5	10.3	.64	.61	NA	971	10.5	989	11700 CUP	1.510
ACCUR #2	6.5	.54	.53	.5	866	6.7	890	11800 CUP	1.510
A NITRO100	5.4	.73	.71	.7	788	6.0	860	12600 CUP	1.510
SOLO 1000	5.9	.78	.76	.7	772	6.5	850	12700 CUP	1.510
190 Grain Lead Bullet									
ACCUR #5	7.7	.48	.46	NA	863	8.5	950	12700 CUP	1.390
ACCUR #2	4.1	.34	.34	.3	731	5.2	891	14500 CUP	1.390
A NITRO100	4.1	.56	.53	.5	782	4.6	861	12700 CUP	1.390
SOLO 1000	4.5	.60	.57	NA	796	4.9	860	12400 CUP	1.390
200 Grain Bullet									
HS6	7.9	.56	.53	.5	1153	9.0	1292	NA	NA 1.580
200 Grain Jacketed Bullet									
HERC 2400	13.3	.98	.95	NA	1140	14.5	1230	12500 CUP	1.590
BLUE DOT	11.0	.95	.95	NA	1135	12.0	1225	12500 CUP	1.590
HERCO	7.8	.87	.82	NA	1020	8.5	1100	12500 CUP	1.590
UNIQUE	7.4	.81	.76	.7	1010	8.0	1090	12400 CUP	1.590
BULLSEYE	6.1	.65	.61	NA	1000	6.6	1070	12300 CUP	1.590
ACCUR #5	8.6	.54	.53	.5	883	10.0	1010	13300 CUP	1.600
ACCUR #7	10.4	.68	.66	NA	887	11.8	995	13000 CUP	1.600
GREEN DOT	6.2	.78	.76	.7	936	6.6	990	12200 CUP	1.590

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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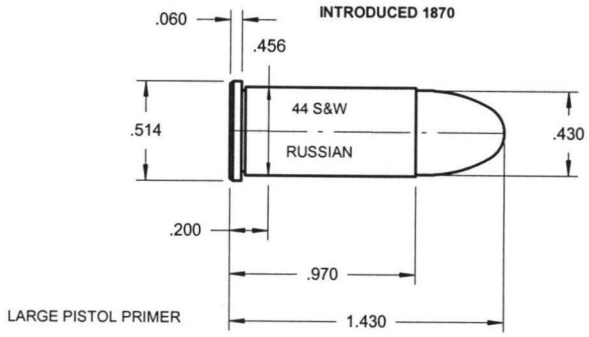
44-40 WINCHESTER (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
200 Grain Jacketed Bullet (Continued)									
RED DOT	5.4	.77	.76	.7	853	5.9	920	12400 CUP	1.590
A NITRO100	5.0	.68	.66	NA	770	5.5	832	12500 CUP	1.600
ACCUR #2	5.9	.50	.49	.5	818	6.0	826	11600 CUP	1.600
SOLO 1000	5.3	.71	.71	.7	737	6.0	818	12900 CUP	1.600
200 Grain Lead Bullet									
WIN 231	6.4	.59	.57	NA	1050	6.7	1100	12000 PSI	1.580
ACCUR #7	11.2	.73	.71	.7	1000	11.2	1000	11300 CUP	1.575
ACCUR #5	8.6	.54	.53	.5	929	9.2	983	12200 CUP	1.575
ACCUR #2	5.2	.43	.43	NA	809	6.3	961	13900 CUP	1.575
A NITRO100	4.4	.60	.57	NA	819	5.3	954	13700 CUP	1.575
SOLO 1000	4.9	.66	.66	NA	821	5.7	929	13200 CUP	1.575
CLAYS	4.2	.61	.61	NA	792	5.0	924	11700 PSI	1.600
TITEGROUP	5.0	.42	.40	NA	753	6.2	901	12900 PSI	1.600
HP38	5.5	.51	.49	.5	711	6.5	820	12400 PSI	1.600
UNIVERSAL	6.6	.73	.71	.7	707	7.3	777	11100 PSI	1.600
215 Grain Lead Bullet									
ACCUR #9	12.2	.80	.76	.7	1013	13.0	1073	12200 CUP	1.560
ACCUR #5	7.9	.49	.49	NA	854	8.8	949	12800 CUP	1.560
ACCUR #7	10.4	.68	.66	NA	908	10.5	917	11600 CUP	1.560
SOLO 1000	4.9	.65	.61	NA	761	5.7	877	13400 CUP	1.560
A NITRO100	4.5	.61	.61	NA	772	5.2	874	13200 CUP	1.560
ACCUR #2	5.5	.46	.46	NA	846	5.5	846	11300 CUP	1.560
240 Grain Lead Bullet									
RELODER 7	22.2	1.62	DBLD	1.6	1230	23.5	1290	12100 CUP	1.580
HERC 2400	11.0	.81	.76	.7	1047	12.0	1130	12500 CUP	1.580
BLUE DOT	9.1	.78	.76	.7	1043	9.9	1125	12500 CUP	1.580
HERCO	6.6	.73	.71	.7	884	7.1	955	12400 CUP	1.580
UNIQUE	6.1	.67	.66	NA	879	6.7	950	12500 CUP	1.580
GREEN DOT	5.2	.65	.61	NA	802	5.5	850	12200 CUP	1.580
BULLSEYE	4.7	.50	.49	.5	802	5.0	850	12200 CUP	1.580
RED DOT	4.4	.62	.61	NA	749	4.7	800	12300 CUP	1.580

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

44 S&W RUSSIAN



Useful case capacity 1.05 cc

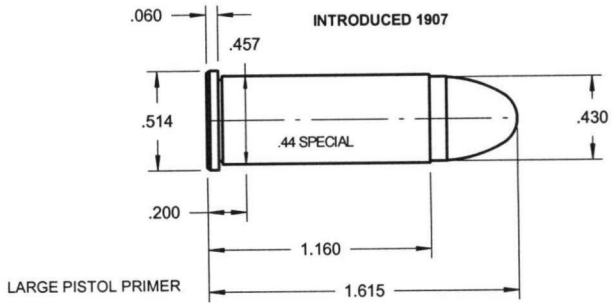
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
165 Grain Lead Bullet									
HP38	4.5	.42	.40	NA	878	5.2	1002	10400 CUP	1.250
CLAYS	3.0	.44	.43	NA	776	4.0	977	11100 CUP	1.250
200 Grain Lead Bullet									
UNIVERSAL	4.8	.53	.53	.5	816	5.7	970	11500 CUP	1.250
ACCUR #2	4.3	.36	.34	NA	826	4.8	939	13600 CUP	1.240
SOLO 1000	4.1	.55	.53	.5	812	4.6	923	12900 CUP	1.240
ACC XMP5744	12.7	.95	.95	NA	808	13.0	919	11100 CUP	1.240
ACCUR #5	6.7	.42	.40	NA	806	7.5	917	12000 CUP	1.240
HP38	4.2	.39	.37	NA	763	5.0	900	11300 CUP	1.250
A NITRO100	3.6	.49	.49	NA	768	4.0	873	11700 CUP	1.240
CLAYS	3.2	.47	.46	NA	747	3.7	837	11100 CUP	1.250
240 Grain Lead Bullet									
HP38	4.0	.37	.37	NA	753	4.8	842	11000 CUP	1.300
UNIVERSAL	3.8	.42	.40	NA	679	4.6	841	11000 CUP	1.250
ACCUR #2	3.8	.32	.32	.3	725	4.2	824	12800 CUP	1.280
ACC XMP5744	10.3	.77	.76	.7	725	11.5	824	10900 CUP	1.280
ACCUR #5	5.9	.37	.37	NA	716	6.6	814	11200 CUP	1.280
SOLO 1000	3.3	.44	.43	NA	687	3.7	781	11000 CUP	1.280
CLAYS	3.0	.44	.43	NA	711	3.5	769	10700 CUP	1.300
A NITRO100	3.0	.40	.40	NA	676	3.3	769	11400 CUP	1.280

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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44 SPECIAL



Useful case capacity 1.68 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
165 Grain Lead Bullet										
UNIVERSAL	5.5	.60	.57	NA	920	6.3	1042	10900	CUP	1.365
HP38	4.9	.45	.43	NA	875	6.0	1040	12000	CUP	1.365
TITEGROUP	4.5	.38	.37	NA	839	5.8	1035	13400	CUP	1.365
CLAYS	3.6	.53	.53	.5	819	4.6	1009	13400	CUP	1.365
180 Grain Jacketed Bullet										
BLUE DOT	13.5	1.17	1.09	1.0	1020	13.5	1020	11900	CUP	1.600
HERCO	9.6	1.08	1.02	1.0	981	9.8	1000	12600	CUP	1.600
ACCUR #5	7.8	.49	.49	NA	878	8.7	1000	14000	CUP	1.485
ACCUR #7	9.9	.65	.61	NA	880	10.5	1000	14000	CUP	1.485
UNIQUE	8.9	.97	.95	NA	976	9.0	985	12500	CUP	1.600
HERC 2400	16.0	1.19	1.18	NA	950	16.0	950	11400	CUP	1.600
GREEN DOT	6.7	.84	.82	NA	916	6.7	925	12400	CUP	1.600
A NITRO100	4.6	.62	.61	NA	807	5.2	920	14000	CUP	1.485
ACCUR #2	5.3	.44	.43	NA	802	5.9	911	14000	CUP	1.485
BULLSEYE	6.5	.69	.66	NA	910	6.5	910	12000	CUP	1.600
AMER-SELECT	5.0	.67	.66	NA	834	5.4	890	13300	CUP	1.600
RED DOT	6.4	.90	.88	NA	885	6.4	885	12100	CUP	1.600
180 Grain XTP										
v-N350	9.9	.97	.95	NA	1084	10.5	1148	NA	NA	1.469
v-N340	8.8	.94	.88	NA	1071	9.5	1145	NA	NA	1.469
v-N330	7.7	.83	.82	NA	1008	8.6	1109	NA	NA	1.469

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL
180 Grain XTP (Continued)										
v-N320	6.8	.82	.82	.7	948	7.5	1033	NA	NA	1.469
185 Grain Lead Bullet										
UNIVERSAL	5.4	.59	.57	NA	884	6.4	1031	13900	CUP	1.400
TITEGROUP	4.0	.34	.34	.3	791	5.5	1025	11600	CUP	1.400
HP38	4.4	.41	.40	NA	779	5.6	953	12500	CUP	1.400
CLAYS	3.5	.51	.49	.5	790	4.2	930	13200	CUP	1.400
190 Grain Wad Cutter										
ACCUR #5	6.1	.38	.37	NA	766	6.7	871	13200	CUP	1.265
SOLO 1000	4.0	.53	.53	.5	740	4.4	842	12700	CUP	1.265
ACCUR #2	3.6	.30	.30	.3	735	4.0	836	12800	CUP	1.265
A NITRO100	3.3	.45	.43	NA	724	3.7	823	12800	CUP	1.265
200 Grain Jacketed Bullet										
H4227	13.0	1.00	.95	1.0	848	15.0	1021	13100	CUP	1.460
UNIVERSAL	6.0	.66	.66	NA	862	6.8	967	12900	CUP	1.460
HS6	8.0	.57	.57	.5	864	9.0	960	12500	CUP	1.460
ACCUR #7	9.0	.59	.57	.5	825	10.0	938	13800	CUP	1.490
TITEGROUP	5.0	.42	.40	NA	849	5.4	904	12700	CUP	1.460
HP38	5.5	.51	.49	.5	806	6.0	898	13100	CUP	1.460
ACCUR #5	7.2	.45	.43	NA	766	8.0	871	13000	CUP	1.490
ACCUR #2	4.9	.41	.40	NA	708	5.4	805	14000	CUP	1.490
SOLO 1000	4.4	.59	.57	.5	687	4.6	731	12200	CUP	1.490
200 Grain Lead Bullet										
H4227	13.0	1.00	.95	1.0	928	15.0	1051	13100	CUP	1.450
HS6	8.0	.57	.57	.5	856	9.5	1035	12400	CUP	1.450
ACCUR #9	10.4	.68	.66	NA	898	11.5	1020	13900	CUP	1.465
ACCUR #7	8.6	.56	.53	.5	873	9.5	992	14000	CUP	1.465
TITEGROUP	4.5	.38	.37	NA	828	5.4	973	13100	CUP	1.450
UNIVERSAL	5.5	.60	.57	NA	802	6.5	960	12900	CUP	1.450
ACCUR #5	6.4	.40	.40	NA	876	7.4	959	14000	CUP	1.465
HP38	4.5	.42	.40	NA	759	5.6	918	12500	CUP	1.450
ACCUR #2	4.7	.39	.37	NA	827	5.2	905	14000	CUP	1.465
CLAYS	3.5	.51	.49	.5	724	4.5	891	14000	CUP	1.450
A NITRO100	3.7	.50	.49	.5	762	4.1	867	11100	CUP	1.465
SOLO 1000	3.9	.52	.49	.5	715	4.3	813	9400	CUP	1.465
200 Grain XTP										
v-N350	9.1	.89	.88	NA	999	9.9	1079	NA	NA	1.469
v-N340	8.3	.88	.88	NA	978	9.1	1066	NA	NA	1.469
v-N330	7.7	.83	.82	NA	948	8.5	1033	NA	NA	1.469

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-27-2003 Lee Precision Inc. Hartford, Wi. 53027

44 SPECIAL (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
200 Grain XTP (Continued)										
v-N320	6.4	.77	.76	.7	885	7.0	965	NA	NA	1.469
215 Grain Lead Bullet										
ACCUR #9	10.3	.68	.66	NA	869	11.4	988	13800	CUP	1.535
ACCUR #5	7.0	.44	.43	NA	844	7.8	959	14000	CUP	1.535
ACCUR #7	8.6	.56	.53	.5	839	9.5	953	14000	CUP	1.535
ACCUR #2	4.8	.40	.40	NA	790	5.3	900	14000	CUP	1.535
A NITRO100	4.3	.58	.57	.5	780	4.8	890	14000	CUP	1.535
220 Grain Jacketed Bullet										
v-N350	7.7	.75	.71	.7	862	8.6	948	NA	NA	1.469
v-N340	6.6	.70	.66	.7	822	7.4	912	NA	NA	1.469
v-N330	6.2	.67	.66	NA	761	7.0	889	NA	NA	1.469
v-N320	5.2	.63	.61	NA	725	5.9	837	NA	NA	1.469
240 Grain Jacketed Bullet										
v-N350	7.5	.73	.71	.7	817	8.2	889	NA	NA	1.480
v-N340	6.3	.67	.66	NA	745	7.1	827	NA	NA	1.480
HP38	4.0	.37	.37	NA	718	5.2	790	13800	CUP	1.560
v-N330	5.5	.59	.57	NA	691	6.2	768	NA	NA	1.480
ACCUR #7	7.2	.47	.46	NA	689	8.0	745	14000	CUP	1.485
v-N320	4.9	.59	.57	NA	653	5.6	732	NA	NA	1.480
ACCUR #5	5.8	.36	.34	NA	640	6.5	730	14000	CUP	1.485
ACCUR #2	4.1	.34	.34	.3	532	4.5	604	13900	CUP	1.485
SOLO 1000	3.6	.48	.46	NA	516	4.0	587	14100	CUP	1.485
240 Grain Lead Bullet										
H4227	11.5	.88	.88	NA	837	13.2	947	12600	CUP	1.450
HS6	6.5	.46	.46	NA	765	8.0	917	13000	CUP	1.450
UNIVERSAL	4.9	.54	.53	.5	778	5.6	873	13300	CUP	1.450
TITEGROUP	4.0	.34	.34	.3	733	4.8	862	13100	CUP	1.450
HP38	4.2	.39	.37	NA	716	5.2	858	13200	CUP	1.450
AMER-SELECT	4.4	.59	.57	NA	756	4.7	800	13100	CUP	1.470
IMR4227	12.9	.99	.95	NA	719	14.3	790	13700	CUP	1.470
CLAYS	3.2	.47	.46	NA	638	4.0	771	13500	CUP	1.450
SR7625	5.5	.58	.57	.5	693	6.2	770	13800	CUP	1.470
SR4756	6.8	.75	.71	.7	697	7.5	760	13600	CUP	1.470
IMR PB	5.0	.60	.57	NA	668	5.7	750	14000	CUP	1.470
IMR 700X	4.3	.58	.57	.5	666	4.9	740	13900	CUP	1.470
IMR 800X	6.1	.65	.61	NA	627	6.9	695	13900	CUP	1.470
245 Grain Lead Bullet										
ACCUR #9	9.7	.64	.61	NA	818	10.8	930	14000	CUP	1.600

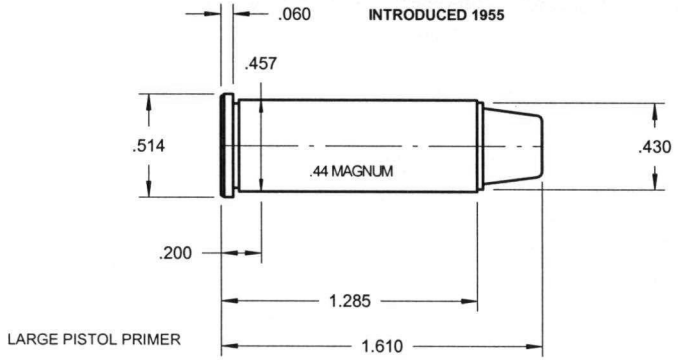
CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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Powder Type	Start Grains	Volume Auto-Disk CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
....STARTING LOADS....										
245 Grain Lead Bullet (Continued)										
ACCUR #7	7.8	.51	.49	.5	818	8.7	900	14000	CUP	1.600
ACCUR #5	6.1	.38	.37	NA	757	6.8	860	14000	CUP	1.600
ACCUR #2	4.2	.35	.34	.3	721	4.7	819	14000	CUP	1.600
SOLO 1000	4.0	.53	.53	.5	696	4.5	791	14000	CUP	1.600
A NITRO100	3.4	.46	.46	NA	661	3.8	752	14100	CUP	1.600
246 Grain Lead Bullet										
BLUE DOT	9.2	.80	.76	.7	845	9.2	845	12300	CUP	1.590
IMR4227	12.5	.96	.95	NA	727	14.2	815	14000	CUP	1.570
HERCO	7.7	.86	.82	NA	805	7.7	805	12100	CUP	1.590
HERC 2400	11.3	.84	.82	NA	805	11.3	805	11500	CUP	1.590
UNIQUE	6.0	.66	.66	NA	800	6.0	800	11700	CUP	1.590
WIN 231	5.3	.50	.49	.5	787	5.4	795	12500	CUP	1.560
GREEN DOT	5.0	.63	.61	NA	785	5.0	785	11900	CUP	1.590
SR7625	5.5	.57	.57	.5	696	6.2	780	14000	CUP	1.570
SR4756	6.9	.76	.76	.7	698	7.7	775	13800	CUP	1.570
BULLSEYE	4.5	.48	.46	NA	765	4.5	765	11700	CUP	1.590
IMR PB	5.1	.61	.61	NA	682	5.6	745	13600	CUP	1.570
RED DOT	4.3	.61	.61	NA	740	4.3	740	11900	CUP	1.590
IMR 700X	4.3	.58	.57	.5	678	4.8	740	13600	CUP	1.570
IMR 800X	6.4	.68	.66	NA	657	7.2	730	13900	CUP	1.570
250 Grain Jacketed Bullet										
v-N350	6.7	.65	.61	NA	761	7.6	853	NA	NA	1.469
v-N340	5.5	.59	.57	.5	674	6.5	778	NA	NA	1.469
v-N330	5.0	.54	.53	.5	636	6.0	748	NA	NA	1.469
v-N320	4.7	.57	.57	.5	642	5.5	741	NA	NA	1.469
250 Grain Lead Bullet										
ACCUR #9	10.4	.68	.66	NA	832	11.5	946	14000	CUP	1.575
ACCUR #7	8.1	.53	.53	.5	779	9.0	885	14000	CUP	1.575
ACCUR #5	6.3	.39	.37	NA	760	7.0	864	14000	CUP	1.575
ACCUR #2	4.5	.38	.37	NA	711	5.0	808	13900	CUP	1.575
HP38	4.3	.40	.40	NA	698	4.9	775	13900	CUP	1.560
A NITRO100	3.8	.51	.49	.5	679	4.2	772	14000	CUP	1.575
SOLO 1000	3.9	.52	.49	.5	661	4.3	751	14000	CUP	1.575
ACC XMP5744	11.9	.89	.88	NA	692	12.5	737	12600	CUP	1.575
267 Grain Lead Bullet										
v-N350	7.3	.71	.71	.7	849	8.0	925	NA	NA	1.539
v-N330	6.3	.68	.66	NA	838	7.0	922	NA	NA	1.539
v-N340	6.5	.69	.66	NA	846	7.1	912	NA	NA	1.539

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44 REMINGTON MAGNUM



Useful case capacity 1.63 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
165 Grain Lead Bullet									
HP38	6.0	.56	.53	.5	963	7.0	1088	13900 CUP	1.500
TITEGROUP	5.3	.45	.43	NA	949	6.5	1083	16400 CUP	1.500
CLAYS	4.4	.64	.61	NA	910	5.5	1064	15500 CUP	1.500
UNIVERSAL	6.5	.71	.71	.7	918	7.2	1059	11500 CUP	1.500
180 Grain Jacketed Bullet									
HERC 2400	21.9	1.63	DBLD	1.6	1662	23.3c	1760	33700 PSI	1.585
BLUE DOT	17.7	1.53	1.46	NA	1614	19.0c	1725	34000 PSI	1.585
ACCUR #7	18.5	1.21	1.18	NA	1502	20.5	1707	40000 CUP	1.560
HS7	17.0	1.16	1.09	1.0	1525	19.0	1694	29000 CUP	1.535
HS6	14.0	1.00	.95	1.0	1442	16.5	1663	35200 CUP	1.535
POWER PISTOL	13.9	1.23	1.18	NA	1556	14.9	1663	34000 PSI	1.585
ACCUR #5	14.8	.92	.88	NA	1421	16.4	1615	38100 CUP	1.560
HERCO	12.3	1.39	1.36	1.3	1431	13.6	1560	34900 PSI	1.585
UNIQUE	11.8	1.28	1.26	NA	1422	13.0	1550	35000 PSI	1.585
BULLSEYE	10.9	1.16	1.09	1.0	1450	11.5	1520	33400 PSI	1.585
GREEN DOT	10.3	1.31	1.26	1.3	1362	11.3	1470	34600 PSI	1.585
ACCUR #2	10.0	.84	.82	NA	1271	11.1	1444	36500 CUP	1.560
AMER-SELECT	10.5	1.40	1.36	1.3	1343	11.2	1435	33900 PSI	1.585
RED DOT	9.2	1.29	1.26	1.3	1306	10.0	1410	34600 PSI	1.585
HP38	8.0	.74	.71	.7	1080	10.0	1307	26200 CUP	1.535
180 Grain XTP									
H110	29.0c	1.90	DBLD	1.9	1714	31.5c	1896	29900 CUP	1.600

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c = Compressed charge

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44 REMINGTON MAGNUM (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL
					....STARTING LOADS....					
180 Grain XTP (Continued)										
H4227	27.5c	2.11	DBLD	1.9	1575	29.0c	1708	31200	CUP	1.600
v-N110	24.7c	2.06	DBLD	1.9	1585	26.2c	1686	NA	NA	1.602
HS7	17.0	1.16	1.09	1.0	1524	19.0	1676	38300	CUP	1.600
HS6	15.0	1.07	1.02	1.0	1463	17.0	1642	37700	CUP	1.600
v-N350	13.2	1.29	1.26	1.3	1430	15.2	1568	NA	NA	1.602
TITEGROUP	10.3	.87	.82	NA	1459	11.5	1544	38400	CUP	1.600
v-N340	12.5	1.33	1.26	1.3	1401	14.0	1539	NA	NA	1.602
HP38	10.0	.93	.88	NA	1327	12.0	1509	37300	CUP	1.600
UNIVERSAL	9.0	.99	.95	NA	1209	11.3	1463	36900	CUP	1.600
v-N320	10.2	1.23	1.18	NA	1300	11.7	1424	NA	NA	1.602
185 Grain Lead Bullet										
TITEGROUP	5.3	.45	.43	NA	902	6.6	1082	16500	CUP	1.540
UNIVERSAL	6.4	.70	.66	.7	919	7.4	1070	12600	CUP	1.540
HP38	5.9	.55	.53	.5	906	7.2	1058	14700	CUP	1.540
CLAYS	4.2	.61	.61	NA	839	6.0	1043	18400	CUP	1.540
200 Grain Jacketed Bullet										
H110	27.5c	1.80	DBLD	1.6	1708	28.5c	1806	37800	CUP	1.600
H4227	25.0c	1.92	DBLD	1.9	1553	27.0c	1686	37800	CUP	1.600
ACCUR #9	22.5	1.48	1.46	1.3	1475	25.0c	1676	37800	CUP	1.595
HERC 2400	21.4	1.59	DBLD	1.6	1542	23.2c	1665	34300	PSI	1.575
IMR 800X	13.7	1.47	1.46	1.3	1427	15.5c	1600	39800	CUP	1.610
HS6	15.0	1.07	1.02	1.0	1440	16.7	1569	37700	CUP	1.600
BLUE DOT	16.1	1.39	1.36	1.3	1492	17.0	1565	33400	PSI	1.575
ACCUR #7	16.8	1.10	1.09	1.0	1353	18.7	1538	37500	CUP	1.595
ACCUR #5	14.2	.88	.88	NA	1348	15.8	1532	40000	CUP	1.595
IMR4227	27.0c	2.08	DBLD	1.9	1520	27.0c	1520	33800	CUP	1.610
SR4756	12.9	1.42	1.36	1.3	1315	14.6	1475	39800	CUP	1.610
UNIQUE	12.0	1.31	1.26	1.3	1367	13.0	1475	34400	PSI	1.575
HERCO	11.9	1.34	1.26	1.3	1348	13.0	1455	34500	PSI	1.575
HP38	10.0	.93	.88	NA	1277	11.9	1444	37400	CUP	1.600
TITEGROUP	9.7	.82	.82	.7	1331	10.8	1433	38400	CUP	1.600
BULLSEYE	10.2	1.09	1.09	1.0	1329	11.0	1420	34000	PSI	1.575
UNIVERSAL	10.0	1.10	1.09	1.0	1303	11.1	1398	38300	CUP	1.600
GREEN DOT	9.8	1.24	1.18	NA	1269	10.7	1370	34500	PSI	1.575
SR7625	10.7	1.12	1.09	1.0	1215	12.1	1350	39700	CUP	1.610
ACCUR #2	9.9	.83	.82	NA	1181	11.0	1342	39500	CUP	1.595
IMR PB	10.6	1.28	1.26	NA	1195	12.0	1340	39800	CUP	1.610
RED DOT	8.8	1.25	1.18	NA	1211	9.7	1320	34800	PSI	1.575

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44 REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
200 Grain Jacketed Bullet (Continued)										
AMER-SELECT	9.8	1.32	1.26	1.3	1235	10.6	1320	34100	PSI	1.575
IMR 700X	8.9	1.19	1.18	NA	1160	10.1	1300	40000	CUP	1.610
200 Grain Lead Bullet										
TITEGROUP	5.0	.42	.40	NA	878	6.6	1061	17300	CUP	1.570
UNIVERSAL	6.8	.75	.71	.7	897	7.8	1045	15400	CUP	1.570
HP38	5.8	.54	.53	.5	875	7.4	1039	16700	CUP	1.570
CLAYS	4.2	.61	.61	NA	785	6.4	1028	20200	CUP	1.570
200 Grain XTP										
v-N110	23.7c	1.97	DBLD	1.9	1577	26.2c	1729	NA	NA	1.602
v-N105	15.9	1.43	1.36	1.3	1456	19.2c	1630	NA	NA	1.602
v-3N37	13.2	1.21	1.18	NA	1386	15.0	1506	NA	NA	1.602
v-N350	12.1	1.18	1.18	NA	1320	14.5	1476	NA	NA	1.602
v-N340	11.3	1.20	1.18	NA	1313	12.9	1426	NA	NA	1.602
v-N320	9.6	1.16	1.09	1.0	1218	11.2	1331	NA	NA	1.602
210 Grain Jacketed Bullet										
H110	26.0c	1.70	DBLD	1.6	1615	27.0c	1665	31100	CUP	1.600
H4227	25.0c	1.92	DBLD	1.9	1458	27.0c	1624	37600	CUP	1.600
HS6	13.0	.93	.88	NA	1254	16.2	1538	37900	CUP	1.600
HS7	15.0	1.02	1.02	1.0	1333	17.5	1517	36900	CUP	1.600
TITEGROUP	9.6	.81	.76	.7	1309	10.7	1411	38500	CUP	1.600
HP38	7.5	.69	.66	.7	985	11.7	1398	37500	CUP	1.600
WIN 231	10.8	1.01	.95	1.0	1295	11.7	1385	38000	CUP	1.535
UNIVERSAL	9.0	.99	.95	NA	1190	11.0	1365	37600	CUP	1.600
215 Grain Lead Bullet										
ACCUR #9	21.2	1.39	1.36	1.3	1456	23.6	1655	40000	CUP	1.560
H110	26.0c	1.70	DBLD	1.6	1630	26.0c	1630	33300	CUP	1.535
H4227	25.0c	1.92	DBLD	1.9	1532	26.0c	1592	34500	CUP	1.535
HS7	15.0	1.02	1.02	1.0	1375	17.0	1541	24400	CUP	1.535
ACCUR #7	16.5	1.08	1.02	1.0	1336	18.3	1518	40000	CUP	1.560
ACCUR #5	13.3	.83	.82	NA	1293	14.8	1469	38900	CUP	1.560
ACCUR #2	9.2	.77	.76	.7	1155	10.2	1313	39300	CUP	1.560
HS6	11.0	.78	.76	.7	1075	13.0	1240	20200	CUP	1.535
HP38	5.9	.55	.53	.5	835	6.9	954	15600	CUP	1.535
220 Grain Jacketed Bullet										
v-N350	12.1	1.18	1.18	NA	1274	14.6	1430	NA	NA	1.602
v-N340	10.7	1.14	1.09	1.0	1222	12.2	1321	NA	NA	1.602
v-N320	8.6	1.04	1.02	1.0	1118	10.3	1224	NA	NA	1.602
225 Grain Jacketed Bullet										
H110	23.0	1.51	1.46	1.3	1468	25.0c	1617	36300	CUP	1.575

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Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
					....STARTING LOADS....					
225 Grain Jacketed Bullet (Continued)										
H4227	23.0c	1.77	DBLD	1.6	1383	25.5c	1537	35700	CUP	1.575
IMR 800X	13.6	1.46	1.46	1.3	1361	15.4c	1525	39800	CUP	1.585
HERC 2400	18.9	1.40	1.36	1.3	1399	20.5	1510	34400	PSI	1.575
HS7	12.5	.85	.82	NA	1125	17.0	1469	38200	CUP	1.575
BLUE DOT	13.8	1.19	1.18	NA	1326	15.2	1445	34900	PSI	1.575
HS6	11.5	.82	.82	.7	1103	15.5	1434	38000	CUP	1.575
SR4756	12.9	1.42	1.36	1.3	1252	14.5	1390	39600	CUP	1.585
TITEGROUP	9.3	.79	.76	.7	1262	10.4	1360	38100	CUP	1.575
HP38	8.4	.78	.76	.7	1101	11.0	1344	38200	CUP	1.575
IMR4227	23.0c	1.77	DBLD	1.6	1295	23.0c	1295	30700	CUP	1.585
UNIVERSAL	8.0	.88	.88	NA	1041	10.5	1291	37300	CUP	1.575
UNIQUE	9.7	1.06	1.02	1.0	1184	10.7	1290	34800	PSI	1.575
HERCO	10.0	1.13	1.09	1.0	1179	11.0	1285	34700	PSI	1.575
BULLSEYE	8.7	.93	.88	NA	1177	9.5	1270	34600	PSI	1.575
SR7625	10.3	1.08	1.02	1.0	1123	11.7	1260	39900	CUP	1.585
IMR PB	9.9	1.19	1.18	NA	1110	11.2	1245	39900	CUP	1.585
IMR 700X	8.6	1.16	1.09	1.0	1100	9.8	1235	40000	CUP	1.585
GREEN DOT	8.4	1.06	1.02	1.0	1120	9.2	1220	34700	PSI	1.575
RED DOT	7.5	1.06	1.02	1.0	1097	8.2	1185	34600	PSI	1.575
AMER-SELECT	8.6	1.16	1.09	1.0	1110	9.1	1165	33400	PSI	1.575
240 Grain Jacketed Bullet										
ACC XMP5744	22.5c	1.69	DBLD	1.6	1349	25.0c	1534	39900	CUP	1.560
v-N110	19.8c	1.65	DBLD	1.6	1386	21.9c	1531	NA	NA	1.602
H110	23.0	1.51	1.46	1.3	1413	24.0	1522	36200	CUP	1.600
ACCUR #9	19.1	1.25	1.18	NA	1320	21.3	1500	40000	CUP	1.560
H4227	22.0c	1.69	DBLD	1.6	1301	24.0c	1458	36100	CUP	1.600
HERC 2400	17.0	1.26	1.26	NA	1321	18.7	1440	34800	PSI	1.585
WIN 296	NA	NA	NA	NA	NA	24.0c	1430	38000	CUP	1.535
v-N105	13.9	1.25	1.18	NA	1286	16.4	1424	NA	NA	1.602
HS6	12.0	.85	.82	NA	1144	15.1	1417	38200	CUP	1.600
ACCUR #7	15.6	1.02	1.02	1.0	1245	17.3	1415	40000	CUP	1.560
IMR 800X	12.6	1.35	1.26	1.3	1275	14.2	1415	39600	CUP	1.590
POWER PISTOL	13.4	1.19	1.18	NA	1387	13.5	1400	31900	PSI	1.585
HS7	13.0	.88	.88	NA	1144	16.5	1394	38200	CUP	1.600
ACCUR #5	13.0	.81	.76	.7	1217	14.4	1383	39800	CUP	1.560
BLUE DOT	13.1	1.13	1.09	1.0	1267	14.4	1380	34800	PSI	1.585
v-3N37	11.6	1.06	1.02	1.0	1185	13.2	1309	NA	NA	1.602
v-N350	11.6	1.13	1.09	1.0	1202	12.7	1301	NA	NA	1.602

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c = Compressed charge

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44 REMINGTON MAGNUM (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
240 Grain Jacketed Bullet (Continued)									
TITEGROUP	9.0	.76	.76	.7	1219	10.0	1292	37700 CUP	1.600
WIN 231	10.4	.97	.95	NA	1197	11.2	1280	38000 CUP	1.535
IMR4227	22.0c	1.69	DBLD	1.6	1275	22.0c	1275	32600 CUP	1.590
HP38	8.0	.74	.71	.7	1021	11.0	1272	37800 CUP	1.600
SR4756	11.8	1.29	1.26	1.3	1123	13.3	1260	39800 CUP	1.590
UNIQUE	9.3	1.02	1.02	1.0	1147	10.3	1250	34900 PSI	1.585
ACCUR #2	9.0	.75	.71	.7	1100	10.0	1250	38600 CUP	1.560
UNIVERSAL	8.0	.88	.88	NA	1018	10.2	1246	38200 CUP	1.600
HERCO	9.6	1.08	1.02	1.0	1143	10.5	1245	34700 PSI	1.585
v-N340	9.9	1.06	1.02	1.0	1148	11.4	1240	NA NA	1.602
BULLSEYE	8.1	.86	.82	NA	1115	8.9	1215	34700 PSI	1.585
IMR 700X	9.2	1.24	1.18	NA	1081	10.3	1200	39400 CUP	1.590
SR7625	10.2	1.07	1.02	1.0	1062	11.6	1190	39900 CUP	1.590
GREEN DOT	7.9	.99	.95	1.0	1092	8.7	1190	35000 PSI	1.585
IMR PB	9.8	1.18	1.18	NA	1057	11.1	1185	39800 CUP	1.590
v-N320	8.7	1.05	1.02	1.0	1059	9.7	1154	NA NA	1.602
AMER-SELECT	8.0	1.07	1.02	1.0	1030	8.6	1100	34200 PSI	1.585
RED DOT	7.0	.98	.95	NA	1000	7.7	1090	35000 PSI	1.585
240 Grain Lead Bullet									
WIN 296	NA	NA	NA	NA	NA	25.0c	1560	37500 CUP	1.535
ACCUR #9	19.5	1.28	1.26	NA	1364	21.7	1550	39600 CUP	1.560
HERC 2400	18.8	1.40	1.36	1.3	1386	20.6	1510	34700 PSI	1.600
BLUE DOT	15.2	1.31	1.26	1.3	1354	16.6	1475	34700 PSI	1.600
ACCUR #7	15.8	1.03	1.02	1.0	1283	17.5	1458	39700 CUP	1.560
ACC XMP5744	21.6	1.62	DBLD	1.6	1272	24.0c	1446	34500 CUP	1.560
ACCUR #5	12.6	.78	.76	.7	1235	14.0	1400	40000 CUP	1.560
IMR 800X	11.9	1.28	1.26	NA	1256	13.4	1395	39600 CUP	1.585
HP38	5.5	.51	.49	.5	800	11.0	1334	38100 CUP	1.620
HERCO	11.7	1.31	1.26	1.3	1256	12.5	1330	33800 PSI	1.600
SR4756	11.8	1.30	1.26	1.3	1188	13.3	1320	39700 CUP	1.585
IMR4227	22.0c	1.69	DBLD	1.6	1310	22.0c	1310	33300 CUP	1.585
TITEGROUP	4.7	.40	.40	NA	801	10.0	1288	38400 CUP	1.620
WIN 231	10.2	.95	.95	NA	1201	11.0	1285	38000 CUP	1.535
ACCUR #2	9.0	.75	.71	.7	1126	10.0	1280	40000 CUP	1.560
UNIVERSAL	6.5	.71	.71	.7	852	10.2	1276	37500 CUP	1.620
UNIQUE	10.7	1.17	1.09	1.0	1152	11.8	1255	35000 PSI	1.600
IMR PB	8.2	.99	.95	1.0	987	10.3	1195	39600 CUP	1.585
SR7625	9.5	.99	.95	1.0	1072	10.7	1190	39700 CUP	1.585

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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44 REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
240 Grain Lead Bullet (Continued)									
IMR 700X	8.4	1.12	1.09	1.0	1057	9.5	1185	40000 CUP	1.585
AMER-SELECT	8.6	1.16	1.09	1.0	1114	9.2	1180	33800 PSI	1.600
BULLSEYE	9.0	.96	.95	NA	1088	9.8	1175	34400 PSI	1.600
RED DOT	8.0	1.13	1.09	1.0	1078	8.8	1175	34900 PSI	1.600
GREEN DOT	8.6	1.09	1.09	1.0	1074	9.5	1170	34800 PSI	1.600
CLAYS	4.3	.63	.61	NA	759	6.2	940	21800 CUP	1.620
240 Grain Copper Plated									
ACCUR #9	18.0	1.18	1.18	NA	1370	20.0	1507	40000 CUP	1.575
ACCUR #7	15.0	.98	.95	NA	1293	16.8	1437	37300 CUP	1.575
ACCUR #5	12.6	.78	.76	.7	1214	13.0	1380	37400 CUP	1.600
ACCUR #2	9.0	.75	.71	.7	1106	10.0	1257	35600 CUP	1.600
240 Grain XTP									
ACC XMP5744	21.6	1.62	DBLD	1.6	1285	24.0c	1413	35000 CUP	1.580
250 Grain Jacketed Bullet									
ACCUR #9	18.9	1.24	1.18	NA	1275	21.0	1449	39200 CUP	1.600
ACCUR #5	13.1	.82	.82	.7	1198	14.5	1361	39700 CUP	1.600
ACCUR #7	15.3	1.00	.95	1.0	1170	17.0	1330	37700 CUP	1.600
v-N350	11.0	1.07	1.02	1.0	1166	13.0	1286	NA NA	1.602
ACCUR #2	9.5	.80	.76	.7	1083	10.5	1231	38400 CUP	1.600
v-N340	9.6	1.02	1.02	1.0	1084	11.1	1205	NA NA	1.602
v-N320	8.1	.98	.95	NA	994	9.6	1121	NA NA	1.602
250 Grain Lead Bullet									
H110	23.0	1.51	1.46	1.3	1602	23.0	1602	35000 CUP	1.535
H4227	22.0c	1.69	DBLD	1.6	1368	24.0c	1476	34800 CUP	1.535
HS7	11.0	.75	.71	.7	1072	13.0	1237	27800 CUP	1.535
HS6	10.0	.71	.71	.7	999	12.0	1176	24000 CUP	1.535
HP38	5.4	.50	.49	.5	757	6.4	881	16900 CUP	1.535
255 Grain Lead Bullet									
VEC SP3	23.1	1.58	DBLD	NA	1332	24.7c	1411	35573 CIP	1.600
VEC AO	11.3	1.35	1.26	1.3	1177	12.3	1270	38998 CIP	1.600
VEC BA9	11.1	1.02	1.02	1.0	1214	11.1	1214	31320 CIP	1.600
VEC BA10	5.9	.80	.76	.7	922	5.9	922	27126 CIP	1.600
265 Grain Jacketed Bullet									
H4227	19.0	1.46	1.46	1.3	1196	22.0c	1368	35400 CUP	1.535
HERC 2400	15.6	1.15	1.09	1.0	1204	17.0	1300	34600 PSI	1.620
HS7	12.0	.82	.82	.7	1133	14.0	1295	31900 CUP	1.535
HS6	10.0	.71	.71	.7	1004	13.5	1287	33600 CUP	1.535
BLUE DOT	11.6	1.01	.95	1.0	1158	12.7	1250	34600 PSI	1.620

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Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
265 Grain Jacketed Bullet (Continued)									
HERCO	8.7	.97	.95	NA	1033	9.5	1125	34700 PSI	1.620
UNIQUE	8.5	.93	.88	NA	1043	9.3	1125	34600 PSI	1.620
BULLSEYE	7.6	.80	.76	.7	1019	8.3	1110	34800 PSI	1.620
GREEN DOT	7.1	.89	.88	NA	959	7.8	1045	35000 PSI	1.620
AMER-SELECT	7.7	1.03	1.02	1.0	959	8.3	1025	34200 PSI	1.620
RED DOT	6.5	.91	.88	NA	918	7.1	1000	34800 PSI	1.620
267 Grain Lead Bullet									
v-N110	19.8c	1.65	DBLD	1.6	1347	21.7c	1468	NA NA	1.681
v-3N37	11.4	1.04	1.02	1.0	1127	13.1	1276	NA NA	1.681
v-N350	10.9	1.06	1.02	1.0	1107	12.6	1254	NA NA	1.681
v-N340	10.1	1.08	1.02	1.0	1104	11.4	1227	NA NA	1.681
268 Grain Lead Bullet									
VEC SP3	23.1	1.58	DBLD	NA	1329	24.7c	1378	38897 CIP	1.600
270 Grain Jacketed Bullet									
H4227	20.5	1.58	DBLD	NA	1275	22.5c	1425	37400 CUP	1.600
H110	19.5	1.28	1.26	NA	1295	21.5	1421	37700 CUP	1.600
HS6	11.0	.78	.76	.7	1036	14.0	1305	36900 CUP	1.600
HS7	12.0	.82	.82	.7	1067	15.0	1283	36900 CUP	1.600
HP38	8.0	.74	.71	.7	992	10.2	1194	37400 CUP	1.600
TITEGROUP	8.6	.73	.71	.7	1100	9.6	1175	37700 CUP	1.600
UNIVERSAL	8.5	.93	.88	NA	1049	9.5	1128	36700 CUP	1.600
275 Grain Jacketed Bullet									
H110	20.5	1.34	1.26	1.3	1341	20.5	1341	34800 CUP	1.535
H4227	18.5	1.42	1.36	1.3	1192	20.5	1311	37700 CUP	1.535
280 Grain Jacketed Bullet									
H4227	20.0	1.54	1.46	NA	1215	22.0c	1373	37800 CUP	1.700
H110	18.5	1.21	1.18	NA	1214	20.5	1342	36100 CUP	1.700
HS7	12.5	.85	.82	NA	1059	15.5	1286	38200 CUP	1.700
HS6	11.0	.78	.76	.7	1006	14.0	1251	37400 CUP	1.700
TITEGROUP	8.6	.73	.71	.7	1059	9.6	1152	37000 CUP	1.700
HP38	8.0	.74	.71	.7	918	10.0	1115	37300 CUP	1.700
UNIVERSAL	8.0	.88	.88	NA	917	9.7	1090	38200 CUP	1.700
280 Grain Lead Bullet									
ACCUR #9	17.1	1.12	1.09	1.0	1227	19.0	1350	40000 CUP	1.695
ACCUR #7	14.0	.91	.88	NA	1161	15.5	1277	34800 CUP	1.695
ACCUR #5	10.6	.66	.66	NA	1046	11.8	1151	29400 CUP	1.695
ACCUR #2	8.6	.72	.71	.7	1045	9.5	1139	36500 CUP	1.695
300 Grain Jacketed Bullet									
v-N110	17.3	1.44	1.36	1.3	1176	18.9	1296	NA NA	1.717

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44 REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
300 Grain Jacketed Bullet (Continued)										
ACCUR #9	17.1	1.12	1.09	1.0	1106	19.0	1257	40000	CUP	1.735
ACCUR #5	12.6	.78	.76	.7	1080	14.0	1227	40000	CUP	1.735
ACCUR #7	14.6	.95	.95	NA	1074	16.2	1221	40000	CUP	1.735
v-N105	12.2	1.10	1.09	1.0	1091	13.7	1200	NA	NA	1.717
v-3N37	9.6	.88	.88	NA	968	11.1	1081	NA	NA	1.717
v-N350	9.4	.92	.88	NA	935	10.9	1062	NA	NA	1.717
ACCUR #2	8.7	.73	.71	.7	933	9.7	1060	38700	CUP	1.735
v-N340	9.1	.97	.95	NA	944	10.1	1039	NA	NA	1.717
300 Grain Lead Bullet										
ACCUR #9	16.6	1.09	1.09	1.0	1175	18.5	1320	40000	CUP	1.720
ACCUR #7	13.5	.88	.88	NA	1100	15.0	1247	34000	CUP	1.720
ACCUR #5	10.4	.65	.61	NA	1003	11.6	1140	32300	CUP	1.720
ACCUR #2	8.6	.72	.71	.7	1001	9.5	1138	38800	CUP	1.720
300 Grain XTP										
v-N110	18.1	1.51	1.46	1.3	1218	20.1c	1363	NA	NA	1.717
H110	18.0	1.18	1.18	NA	1266	19.0	1325	38800	CUP	1.600
H4227	18.0	1.38	1.36	1.3	1180	20.0	1312	38600	CUP	1.600
ACCUR #9	15.9	1.04	1.02	1.0	1121	17.7	1274	38320	CUP	1.595
ACCUR #5	11.7	.73	.71	.7	1074	13.0	1220	39000	CUP	1.595
HS7	11.5	.78	.76	.7	1006	14.0	1214	37300	CUP	1.600
HS6	11.0	.78	.76	.7	1048	13.0	1214	37900	CUP	1.600
ACC XMP5744	18.0	1.35	1.26	1.3	1048	20.0	1191	31400	CUP	1.595
ACCUR #7	13.1	.86	.82	NA	1047	14.5	1190	38000	CUP	1.595
HERC 2400	14.4	1.07	1.02	1.0	1092	15.9	1190	35000	PSI	1.600
TITEGROUP	8.6	.73	.71	.7	1079	9.6	1186	38400	CUP	1.600
HP38	8.0	.74	.71	.7	966	10.0	1149	38100	CUP	1.600
v-N350	10.1	.99	.95	NA	999	11.6	1119	NA	NA	1.717
UNIVERSAL	8.0	.88	.88	NA	972	9.6	1113	38200	CUP	1.600
ACCUR #2	8.8	.74	.71	.7	975	9.8	1108	39400	CUP	1.595
BLUE DOT	10.8	.94	.88	NA	1035	11.7	1105	34200	PSI	1.600
v-N340	9.2	.98	.95	NA	974	10.4	1055	NA	NA	1.717
HERCO	8.5	.95	.95	NA	932	9.4	1015	35000	PSI	1.600
POWER PISTOL	8.4	.74	.71	.7	941	9.1	1015	34500	PSI	1.600
UNIQUE	7.6	.83	.82	NA	876	8.3	955	34800	PSI	1.600
BULLSEYE	6.8	.73	.71	.7	876	7.5	955	34800	PSI	1.600
GREEN DOT	6.2	.79	.76	.7	793	6.9	865	35000	PSI	1.600
RED DOT	6.1	.86	.82	NA	783	6.7	855	35000	PSI	1.600
AMER-SELECT	6.4	.85	.82	NA	802	6.8	850	33800	PSI	1.600

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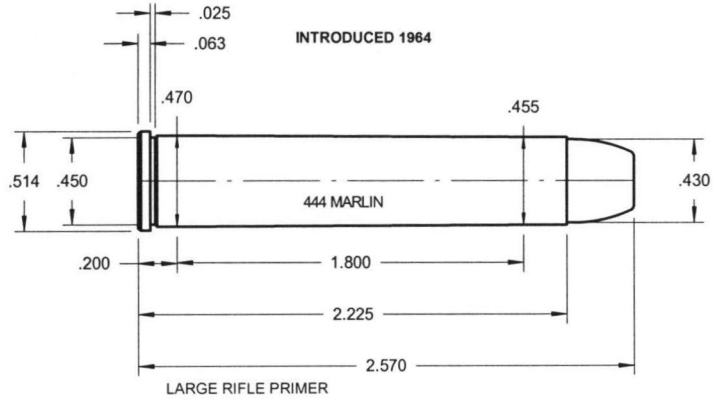
44 REMINGTON MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
310 Grain Lead Bullet									
HERC 2400	12.4	.92	.88	NA	1065	13.5	1150	34600 PSI	1.600
BLUE DOT	9.7	.84	.82	NA	1019	10.7	1110	34900 PSI	1.600
HERCO	7.2	.81	.76	.7	923	8.0	1005	35000 PSI	1.600
BULLSEYE	6.2	.65	.61	NA	894	6.8	975	35000 PSI	1.600
UNIQUE	6.6	.72	.71	.7	885	7.2	965	34800 PSI	1.600
GREEN DOT	5.7	.72	.71	.7	830	6.2	895	34600 PSI	1.600
RED DOT	5.3	.74	.71	.7	813	5.8	885	34900 PSI	1.600
325 Grain Lead Bullet									
ACCUR #9	15.7	1.03	1.02	1.0	1163	17.5	1322	39800 CUP	1.665
ACCUR #7	13.5	.88	.88	NA	1123	15.0	1277	39900 CUP	1.665
ACCUR #5	10.3	.64	.61	NA	1041	11.5	1183	37400 CUP	1.665
ACCUR #2	8.5	.71	.71	.7	982	9.5	1116	36100 CUP	1.665
ACC XMP5744	16.2	1.22	1.18	NA	952	18.0	1082	27800 CUP	1.665
355 Grain Lead Bullet									
ACCUR #9	14.4	.95	.95	NA	1060	16.0	1205	37700 CUP	1.715
ACCUR #7	13.0	.85	.82	NA	1041	14.5	1184	40000 CUP	1.715
ACCUR #5	10.3	.64	.61	NA	970	11.5	1103	39000 CUP	1.715
ACCUR #2	8.5	.71	.71	.7	925	9.5	1052	38800 CUP	1.715
ACCUR 1680	18.0	1.18	1.18	NA	942	20.0	1036	20900 CUP	1.715

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c = Compressed charge
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444 MARLIN



Useful case capacity 3.32 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
200 Grain Jacketed Bullet										
ACCUR 2460	56.1c	3.68	NA	3.4	2260	62.0c 2487	42800 CUP	2.520	....	....
ACCUR 2230	55.3c	3.63	NA	3.4	2270	61.0c 2474	42700 CUP	2.520	....	....
200 Grain Lead Bullet										
ACC XMP5744	34.2	2.57	DBLD	2.5	1958	38.0 2225	41000 CUP	2.560	....	....
200 Grain XTP										
v-N120	50.2c	3.90	NA	3.7	2551	55.4c 2754	NA NA	2.535	....	....
ACCUR 1680	54.2c	3.55	NA	3.4	2566	57.0c 2730	41300 CUP	2.520	....	....
A-XMR-2015	57.0c	4.16	NA	4.0	2409	60.0c 2563	42700 CUP	2.520	....	....
v-N110	41.1c	3.42	NA	3.4	2381	45.0c 2531	NA NA	2.535	....	....
ACCUR 2460	58.9c	3.86	NA	3.7	2338	62.0c 2487	42800 CUP	2.520	....	....
ACCUR 2230	58.0c	3.81	NA	3.7	2326	61.0c 2474	42700 CUP	2.520	....	....
ACC XMP5744	36.0	2.71	DBLD	2.5	2021	40.0 2297	42400 CUP	2.520	....	....
200 Grain Barnes X Bullet										
H4198	46.0c	3.45	NA	3.4	2333	51.2c 2566	40950 PSI	2.550	....	....
H335	53.0c	3.42	NA	3.4	2112	56.0c 2215	32264 PSI	2.550	....	....
H322	50.0c	3.62	NA	3.4	2123	52.0c 2206	32073 PSI	2.550	....	....
225 Grain Bullet										
BL-C(2)	59.0c	3.81	NA	3.7	2190	61.0c 2358	32073 PSI	2.500	....	....
H4895	54.0c	3.93	NA	3.7	2172	56.0c 2301	31500 PSI	2.500	....	....
H4227	30.0	2.31	DBLD	2.2	1914	33.0 2099	31786 PSI	2.500	.9694	.9427
225 Grain Barnes X Bullet										
H4198	42.2	3.17	DBLD	3.1	2146	46.9c 2361	40377 PSI	2.550	....	....

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c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
225 Grain Barnes X Bullet (Continued)										
H322	47.0c	3.41	NA	3.4	2025	50.0c 2144	35318 PSI	2.550	....	....
H335	49.0	3.16	DBLD	3.1	1918	52.0c 2031	32932 PSI	2.550	....	....
240 Grain Bullet										
BL-C(2)	58.0c	3.74	NA	3.7	2145	60.0c 2302	29591 PSI	2.500	....	....
H4227	29.0	2.23	DBLD	2.2	1862	32.0 2061	33791 PSI	2.500	.9664	.9421
240 Grain Jacketed Bullet										
H4198	44.0	3.30	NA	3.1	2249	49.2c 2499	40186 PSI	2.535	....	....
v-N130	50.7c	3.82	NA	3.7	2315	54.4c 2468	NA NA	2.539	....	....
v-N120	45.4c	3.52	NA	3.4	2261	50.3c 2455	NA NA	2.539	....	....
RELODER 7	51.0c	3.71	NA	3.7	2400	51.0c 2400	38100 CUP	2.500	....	....
A-XMR-2015	52.3c	3.82	NA	3.7	2217	55.0c 2359	43000 CUP	2.520	....	....
IMR4198	41.4	3.28	DBLD	3.1	2082	47.0c 2335	44000 CUP	2.570	....	....
ACCUR 2230	54.2c	3.56	NA	3.4	2181	57.0c 2320	44000 CUP	2.520	....	....
VEC TU2000	48.6c	3.71	NA	3.7	2297	48.6c 2297	27170 CIP	2.570	....	....
ACCUR 2460	54.2c	3.56	NA	3.4	2138	57.0c 2274	42700 CUP	2.520	....	....
VEC SP10	49.7c	3.32	NA	3.1	2185	50.6c 2231	25762 CIP	2.570	....	....
H335	52.5c	3.39	NA	3.1	2098	56.0c 2222	37132 PSI	2.535	....	....
IMR4895	56.0c	4.08	NA	4.0	2200	56.0c 2200	38600 CUP	2.570	....	....
H322	49.5c	3.59	NA	3.4	2083	52.0c 2185	34268 PSI	2.535	....	....
IMR3031	54.5c	4.15	NA	4.0	2175	54.5c 2175	35900 CUP	2.570	....	....
IMR4320	56.0c	4.01	NA	4.0	2125	56.0c 2125	37200 CUP	2.570	....	....
H4895	51.0c	3.71	NA	3.7	1992	53.0c 2069	31595 PSI	2.535	....	....
ACC XMP5744	33.3	2.50	DBLD	2.2	1820	37.0 2069	41900 CUP	2.520	....	....
SR4759	29.3	2.91	DBLD	2.8	1850	33.0 2055	43600 CUP	2.570	....	....
IMR4064	54.5c	4.06	NA	4.0	2055	54.5c 2055	32200 CUP	2.570	....	....
IMR4227	28.6	2.20	DBLD	1.9	1810	32.5 2030	44000 CUP	2.570	....	....
IMR4350	55.5c	4.08	NA	4.0	1775	55.5c 1775	24200 CUP	2.570	....	....
HERC 2400	25.0	1.85	DBLD	1.6	1730	25.0 1730	21900 CUP	2.500	....	....
240 Grain Lead Bullet										
RELODER 7	42.5	3.09	DBLD	2.8	2080	42.5 2080	28900 CUP	2.500	....	....
ACC XMP5744	32.4	2.43	DBLD	2.2	1804	36.0 2051	39200 CUP	2.570	....	....
HERC 2400	22.0	1.63	DBLD	1.6	1725	22.0 1725	27900 CUP	2.500	....	....
250 Grain Bullet										
H4198	44.0	3.30	NA	3.1	2147	47.0c 2322	37132 PSI	2.500	....	....
BL-C(2)	57.0c	3.68	NA	3.4	2094	59.0c 2292	29973 PSI	2.500	....	....
H335	57.0c	3.68	NA	3.4	2120	59.0c 2290	31786 PSI	2.500	....	....
H4895	53.0c	3.86	NA	3.7	2101	55.0c 2221	30545 PSI	2.500	....	....
H322	52.0c	3.77	NA	3.7	2140	54.0c 2211	32836 PSI	2.500	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
250 Grain Jacketed Bullet										
VEC SP10	49.1	3.28	DBLD	3.1	2116	50.2c 2175	23977 CIP	2.570	....	....
255 Grain Lead Bullet										
VEC TU2000	37.0	2.82	DBLD	2.8	1670	38.9 1785	16676 CIP	2.570	....	....
260 Grain Hard Core Freedom Arms Bullet										
H335	52.5c	3.39	NA	3.1	2077	56.0c 2200	39518 PSI	2.550	....	....
H4198	41.0	3.08	DBLD	2.8	1995	45.5c 2194	39041 PSI	2.550	....	....
H322	47.0c	3.41	NA	3.4	1962	52.0c 2159	39518 PSI	2.550	....	....
H4895	50.0c	3.64	NA	3.4	1942	53.0c 2057	35127 PSI	2.550	....	....
265 Grain Jacketed Bullet										
v-N120	43.5c	3.38	NA	3.1	2129	48.1c 2320	NA	NA 2.559	....	....
v-N130	46.8c	3.53	NA	3.4	2117	51.3c 2320	NA	NA 2.559	....	....
H4198	42.0	3.15	DBLD	3.1	2046	47.0c 2273	39232 PSI	2.550	....	....
VEC TU2000	48.6c	3.71	NA	3.7	2267	48.6c 2267	31451 CIP	2.570	....	....
A-XMR-2015	49.4c	3.61	NA	3.4	2088	52.0c 2221	41500 CUP	2.570	....	....
ACCUR 2460	53.2c	3.49	NA	3.4	2084	56.0c 2217	43700 CUP	2.570	....	....
RELODER 7	47.0c	3.42	NA	3.4	2215	47.0c 2215	35800 CUP	2.500	....	....
ACCUR 2230	52.3c	3.44	NA	3.4	2074	55.0c 2206	44000 CUP	2.570	....	....
H335	52.5c	3.39	NA	3.1	2065	56.0c 2187	37895 PSI	2.550	....	....
ACCUR 2520	52.3c	3.57	NA	3.4	2036	55.0c 2166	39300 CUP	2.570	....	....
H322	47.0c	3.41	NA	3.4	1967	52.0c 2164	36559 PSI	2.550	....	....
H4895	50.0c	3.64	NA	3.4	1964	53.0c 2080	33218 PSI	2.550	....	....
ACC XMP5744	31.5	2.37	DBLD	2.2	1692	35.0 1923	40500 CUP	2.570	....	....
HERC 2400	25.0	1.85	DBLD	1.6	1715	25.0 1715	22100 CUP	2.500	....	....
270 Grain Jacketed Bullet										
H4198	42.0	3.15	DBLD	3.1	2056	46.5c 2261	39518 PSI	2.540	....	....
H335	51.0	3.29	DBLD	3.1	2018	55.8c 2200	40186 PSI	2.540	....	....
H322	47.0c	3.41	NA	3.4	1972	52.0c 2169	36368 PSI	2.540	....	....
H4895	50.0c	3.64	NA	3.4	1964	53.0c 2080	31882 PSI	2.540	....	....
275 Grain Jacketed Bullet										
H4198	40.0	3.00	DBLD	2.8	1975	44.5c 2172	39900 PSI	2.520	.9790	.9520
H322	46.0c	3.33	NA	3.1	1951	51.0c 2146	41141 PSI	2.520	....	....
H335	50.0	3.22	DBLD	3.1	1983	53.5c 2120	39232 PSI	2.520	....	....
H4895	47.0c	3.42	NA	3.4	1837	52.0c 2021	34555 PSI	2.520	....	....
280 Grain Jacketed Bullet										
H322	44.5	3.23	DBLD	3.1	1927	49.5c 2120	40473 PSI	2.620	....	....
H335	49.5	3.19	DBLD	3.1	1992	52.8c 2109	40091 PSI	2.620	....	....
H4198	38.0	2.85	DBLD	2.8	1898	42.5 2108	40377 PSI	2.620	.9769	.9724
H4895	47.0c	3.42	NA	3.4	1899	52.0c 2089	35891 PSI	2.620	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
= Compressed charge

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....STARTING LOADS....

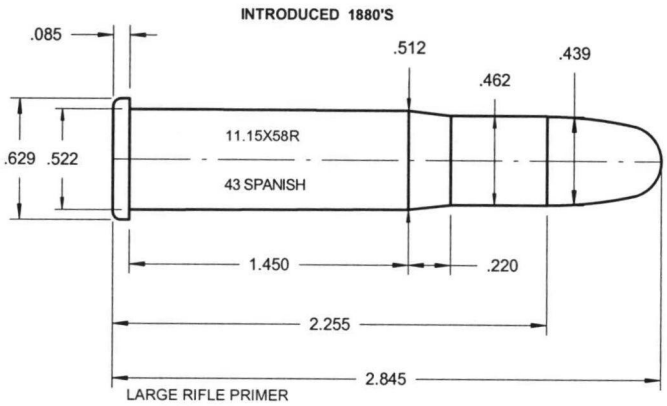
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
280 Grain Jacketed Bullet (Continued)										
H-VARGET	49.0c	3.58	NA	3.4	1912	52.0c 2025	35127 PSI	2.620	....	....
300 Grain Bullet										
BL-C(2)	56.0c	3.61	NA	3.4	1796	58.0c 1904	29591 PSI	2.500	....	....
300 Grain Jacketed Bullet										
H4198	38.5	2.89	DBLD	2.8	1911	42.5 2082	40568 PSI	2.620	.9786	.9607
H322	43.0	3.12	DBLD	3.1	1853	48.0c 2038	40664 PSI	2.620	....	....
H335	49.0	3.16	DBLD	3.1	1911	52.0c 2023	40377 PSI	2.620	....	....
H4895	47.0c	3.42	NA	3.4	1824	50.0c 1931	33982 PSI	2.620	....	....
H-VARGET	47.0c	3.44	NA	3.4	1808	50.0c 1914	34077 PSI	2.620	....	....

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43 SPANISH or 11.15x58R

THESE LOADS ARE MODIFIED FROM A SIMILAR SIZE AND CALIBER CARTRIDGE.



Useful case capacity 4.19 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
300 Grain Jacketed Bullet										
H4198	37.6	2.82	DBLD	2.8	1534	42.7	1720	NA	NA	2.525
H4895	50.1	3.65	NA	3.4	1650	55.1	1715	NA	NA	2.525
H-VARGET	49.9	3.64	NA	3.4	1642	54.1	1689	NA	NA	2.525
300 Grain Lead Bullet										
H4895	40.5	2.95	DBLD	2.8	1446	48.4	1567	NA	NA	2.465
H4198	27.0	2.03	DBLD	1.9	1279	31.8	1510	NA	NA	2.465
H-VARGET	36.0	2.63	DBLD	2.5	1325	42.7	1471	NA	NA	2.465
ACC XMP5744	25.1	1.89	DBLD	1.6	1293	29.4	1469	NA	NA	2.550
340 Grain Lead Bullet										
A-XMR-2495	46.2	3.46	NA	3.4	1498	54.1	1702	NA	NA	2.520
A-XMR-4350	47.8	3.54	NA	3.4	1273	56.0	1447	NA	NA	2.520
ACC XMP5744	24.3	1.83	DBLD	1.6	1209	28.5	1374	NA	NA	2.520
378 Grain Lead Bullet										
A-XMR-2495	40.5	3.03	DBLD	2.8	1361	47.5	1547	NA	NA	2.565
A-XMR-4350	43.7	3.24	DBLD	3.1	1158	51.3	1317	NA	NA	2.565
ACC XMP5744	23.0	1.73	DBLD	1.6	1147	27.1	1305	NA	NA	2.565
385 Grain Lead Bullet										
H-VARGET	38.2	2.80	DBLD	2.5	1047	40.4	1385	NA	NA	2.505
H4198	25.2	1.89	DBLD	1.6	1216	30.4	1364	NA	NA	2.505
RELODER 7	31.5	2.29	DBLD	2.2	1013	33.2	1334	NA	NA	2.575

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43 SPANISH or 11.15x58R (Continued)

THESE LOADS ARE MODIFIED FROM A SIMILAR SIZE AND CALIBER CARTRIDGE.

....STARTING LOADS....

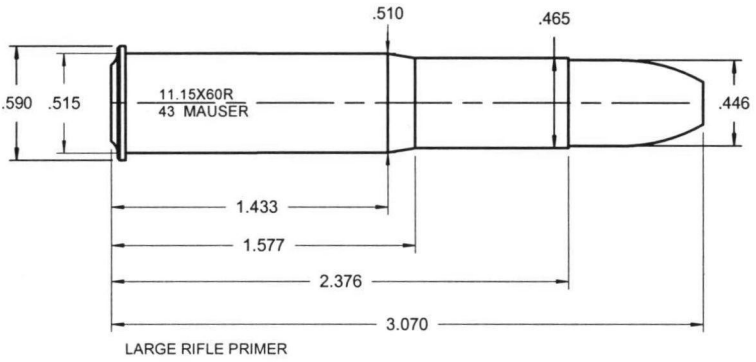
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
385 Grain Lead Bullet (Continued)										
H4895	31.5	2.29	DBLD	2.2	906	33.2	1194	NA	NA	2.505
400 Grain Jacketed Bullet										
ACC XMP5744	21.1	1.58	DBLD	1.3	949	24.7	1078	NA	NA	2.560
405 Grain Jacketed Bullet										
RELODER 7	30.6	2.23	DBLD	2.2	982	32.3	1283	NA	NA	2.700
405 Grain Lead Bullet										
H4895	36.0	2.62	DBLD	2.5	1287	45.6	1513	NA	NA	2.540
H4198	24.3	1.82	DBLD	1.6	1186	29.4	1342	NA	NA	2.540
H-VARGET	36.0	2.63	DBLD	2.5	989	38.0	1305	NA	NA	2.540
ACC XMP5744	21.9	1.64	DBLD	1.6	1128	25.6	1282	NA	NA	2.550
420 Grain Lead Bullet										
A-XMR-2495	40.5	3.03	DBLD	2.8	1340	47.5	1524	NA	NA	2.600
A-XMR-4350	45.4	3.36	NA	3.1	1193	53.2	1356	NA	NA	2.600
A-XMR-3100	48.6	3.64	NA	3.4	1151	57.0c	1308	NA	NA	2.600
ACC XMP5744	23.0	1.73	DBLD	1.6	1113	27.1	1265	NA	NA	2.600
475 Grain Lead Bullet										
A-XMR-2495	36.4	2.73	DBLD	2.5	1267	42.7	1440	NA	NA	2.680
A-XMR-4350	36.4	2.70	DBLD	2.5	1018	42.7	1157	NA	NA	2.680
ACC XMP5744	21.9	1.64	DBLD	1.6	1014	25.6	1153	NA	NA	2.680
485 Grain Lead Bullet										
H4198	24.3	1.83	DBLD	1.6	1144	26.6	1177	NA	NA	2.540
H4895	28.8	2.10	DBLD	1.9	850	30.4	1087	NA	NA	2.540
500 Grain Lead Bullet										
A-XMR-2495	39.6	2.96	DBLD	2.8	1068	41.8	1409	NA	NA	2.635

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c = Compressed charge

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43 MAUSER (11.15x60R)

INTRODUCED 1871



Useful case capacity 3.68 cc

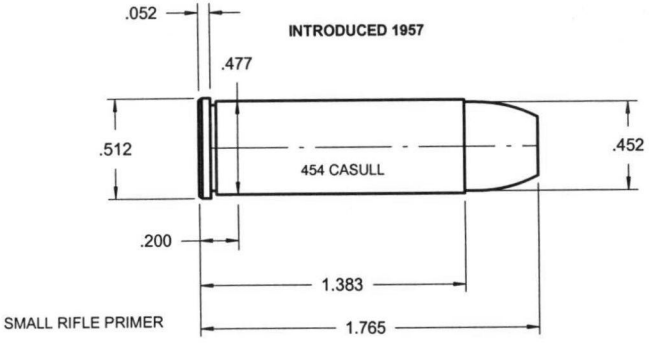
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
350 Grain Lead Bullet										
H4198	29.0	2.18	DBLD	1.9	1203	33.0	1350	NA	NA	2.800
IMR4198	29.0	2.30	DBLD	2.2	1203	33.0	1350	NA	NA	2.800
370 Grain Lead Bullet										
H4198	29.0	2.18	DBLD	1.9	1160	33.0	1300	NA	NA	2.800
IMR4198	29.0	2.30	DBLD	2.2	1160	33.0	1300	NA	NA	2.800
380 Grain Lead Bullet										
IMR4198	27.3	2.16	DBLD	1.9	1195	31.0	1340	NA	NA	3.000
H4198	27.3	2.05	DBLD	1.9	1195	31.0	1340	NA	NA	3.000
390 Grain Lead Bullet										
IMR4198	27.3	2.16	DBLD	1.9	1160	31.0	1300	NA	NA	3.000
H4198	27.3	2.05	DBLD	1.9	1160	31.0	1300	NA	NA	3.000

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c = Compressed charge

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454 CASULL



INDUSTRY STANDARD CUP PRESSURE IS 53,000 SOME OF THE HARD CORE BULLET LOADS EXCEED THIS VALUE USE MAXIMUM LOADS WITH CAUTION.

Useful case capacity 2.19 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
185 Grain XTP										
v-N105	26.6c	2.39	DBLD	2.2	2001	29.3c	2159	NA	NA	1.642
v-3N37	17.6	1.61	DBLD	1.6	1752	21.0	1962	NA	NA	1.642
v-N350	18.2	1.78	DBLD	1.6	1772	21.4	1959	NA	NA	1.642
225 Grain Jacketed Bullet										
v-N110	30.8c	2.57	DBLD	2.5	1864	33.5c	2005	NA	NA	1.681
v-N105	24.6c	2.21	DBLD	2.2	1765	26.7c	1913	NA	NA	1.681
v-3N37	16.8	1.53	1.46	NA	1558	19.6	1719	NA	NA	1.681
240 Grain Hard Core Freedom Arms Bullet										
H110	36.0c	2.36	DBLD	2.2	1923	38.2c	2065	51300	CUP	1.765
ACCUR #9	27.9	1.83	DBLD	1.6	1686	31.0	1916	54100	CUP	1.780
H4227	29.0c	2.23	DBLD	2.2	1512	34.0c	1834	43300	CUP	1.765
ACC XMP5744	33.3c	2.50	DBLD	2.5	1593	37.0c	1811	54000	CUP	1.780
ACCUR 1680	34.2c	2.24	DBLD	2.2	1557	38.0c	1769	46500	CUP	1.780
240 Grain Jacketed Bullet										
ACCUR #9	25.2	1.66	DBLD	1.6	1543	28.0	1753	39800	CUP	1.705
ACCUR 1680	32.4	2.12	DBLD	1.9	1498	36.0c	1702	42200	CUP	1.705
ACC XMP5744	31.5c	2.37	DBLD	2.2	1489	35.0c	1693	51800	CUP	1.705
HS6	15.5	1.10	1.09	1.0	1360	17.5	1508	36600	CUP	1.680
UNIVERSAL	10.2	1.12	1.09	1.0	1212	11.5	1325	37500	CUP	1.680
TITEGROUP	10.0	.85	.82	NA	1214	11.0	1309	34700	CUP	1.680
250 Grain Jacketed Bullet										
HS6	15.0	1.07	1.02	1.0	1295	17.0	1428	34600	CUP	1.700

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
250 Grain Jacketed Bullet (Continued)										
TITEGROUP	9.7	.82	.82	.7	1193	11.2	1298	36000	CUP	1.700
UNIVERSAL	10.8	1.19	1.18	NA	1221	12.0	1290	35300	CUP	1.700
250 Grain Lead Bullet										
ACC XMP5744	26.1	1.96	DBLD	1.9	1347	29.0	1531	37100	CUP	1.750
ACCUR #9	21.6	1.42	1.36	1.3	1326	24.0	1507	23000	CUP	1.750
250 Grain XTP										
v-N110	28.1c	2.34	DBLD	2.2	1719	30.7c	1873	NA	NA	1.685
ACCUR #9	25.2	1.66	DBLD	1.6	1558	28.0	1770	45800	CUP	1.700
v-N105	21.4	1.93	DBLD	1.9	1585	24.3	1765	NA	NA	1.685
ACCUR 1680	33.3	2.18	DBLD	2.2	1547	37.0c	1758	49100	CUP	1.700
ACC XMP5744	30.6c	2.30	DBLD	2.2	1518	34.0c	1726	52600	CUP	1.700
v-3N37	15.6	1.42	1.36	1.3	1437	18.2	1601	NA	NA	1.685
250 Grain Barnes X Bullet										
H110	27.5	1.80	DBLD	1.6	1725	28.5	1785	52300	CUP	1.780
H4227	26.0	2.00	DBLD	1.9	1580	28.5c	1685	50000	CUP	1.780
260 Grain Hard Core Freedom Arms Bullet										
H110	34.0c	2.23	DBLD	2.2	1817	36.0c	1954	51600	CUP	1.765
ACCUR #9	27.0	1.77	DBLD	1.6	1615	30.0	1835	52800	CUP	1.765
ACCUR 1680	34.7c	2.27	DBLD	2.2	1566	38.5c	1780	50800	CUP	1.765
H4227	28.0	2.15	DBLD	1.9	1421	33.0c	1762	42100	CUP	1.765
ACC XMP5744	32.4c	2.43	DBLD	2.2	1539	36.0c	1744	55200	CUP	1.765
260 Grain Jacketed Bullet										
WIN 296	NA	NA	NA	NA	NA	36.0c	1965	50000	PSI	1.765
ACC XMP5744	30.6c	2.30	DBLD	2.2	1485	34.0c	1688	52000	CUP	1.710
ACCUR #9	24.1	1.58	DBLD	NA	1458	26.8	1657	38600	CUP	1.710
ACCUR 1680	31.5	2.06	DBLD	1.9	1448	35.0c	1646	42500	CUP	1.710
HS6	14.5	1.03	1.02	1.0	1252	16.8	1420	36400	CUP	1.675
TITEGROUP	9.5	.81	.76	.7	1159	11.0	1270	35900	CUP	1.675
UNIVERSAL	10.3	1.13	1.09	1.0	1157	11.5	1245	34900	CUP	1.675
300 Grain Hard Core Freedom Arms Bullet										
H110	28.5	1.87	DBLD	1.6	1618	30.0	1716	53700	CUP	1.775
H4227	27.0	2.08	DBLD	1.9	1541	31.0c	1702	52400	CUP	1.775
ACCUR 1680	31.1	2.04	DBLD	1.9	1427	34.5c	1622	54500	CUP	1.755
ACCUR #9	22.5	1.48	1.46	1.3	1386	25.0	1575	49500	CUP	1.755
ACC XMP5744	28.8	2.16	DBLD	1.9	1376	32.0c	1564	54000	CUP	1.755
300 Grain Jacketed Bullet										
WIN 296	NA	NA	NA	NA	NA	31.5c	1750	50000	PSI	1.765
HERC 2400	22.5	1.67	DBLD	1.6	1395	28.9	1720	60000	PSI	1.750

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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454 CASULL (Continued)

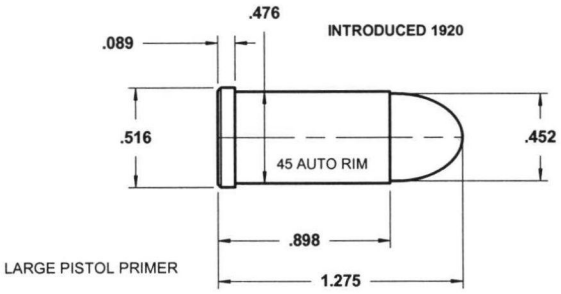
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
300 Grain Jacketed Bullet (Continued)										
v-N110	26.3c	2.19	DBLD	2.2	1555	28.7c	1686	NA	NA	1.752
ACCUR #9	23.4	1.54	1.46	NA	1404	26.0	1596	46200	CUP	1.765
ACCUR 1680	30.2	1.98	DBLD	1.9	1400	33.5c	1591	48500	CUP	1.765
v-N105	19.7	1.77	DBLD	1.6	1408	23.0	1588	NA	NA	1.752
v-3N37	15.2	1.39	1.36	1.3	1296	17.0	1414	NA	NA	1.752
300 Grain Lead Bullet										
ACC XMP5744	24.3	1.83	DBLD	1.6	1260	27.0	1432	45500	CUP	1.690
ACCUR 1680	27.0	1.77	DBLD	1.6	1229	30.0	1397	33700	CUP	1.690
ACCUR #9	18.9	1.24	1.18	NA	1228	21.0	1396	30200	CUP	1.690
300 Grain XTP										
HERC 2400	27.6	2.05	DBLD	1.9	1668	28.0	1700	58100	PSI	1.750
ACCUR #9	23.4	1.54	1.46	NA	1428	26.0	1623	50000	CUP	1.765
ACCUR 1680	30.2	1.98	DBLD	1.9	1403	33.5c	1594	49600	CUP	1.765
ACC XMP5744	28.8	2.16	DBLD	1.9	1381	32.0c	1570	52600	CUP	1.765

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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45 AUTO-RIM

SOME LOADS ARE REDUCED 45 ACP.



Useful case capacity 1.02 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
155 Grain Lead Bullet									
TITEGROUP	5.1	.43	.43	NA	965	5.6	1041	14450 CUP	1.230
HS6	8.1	.58	.57	.5	909	9.0	1036	13855 CUP	1.230
HP38	5.4	.50	.49	.5	930	6.0	1023	14535 CUP	1.230
A NITRO100	4.5	.61	.61	NA	880	4.9	1000	13600 PSI	1.240
180 Grain Lead Bullet									
BULLSEYE	4.9	.52	.49	.5	906	4.9	906	13430 CUP	1.190
HERCO	6.0	.68	.66	NA	874	6.0	874	13430 CUP	1.190
BLUE DOT	8.1	.70	.66	.7	846	8.1	846	11560 CUP	1.190
GREEN DOT	4.8	.60	.57	NA	837	4.8	837	12325 CUP	1.190
RED DOT	4.3	.61	.61	NA	828	4.3	828	11985 CUP	1.190
UNIQUE	5.4	.59	.57	NA	805	5.4	805	11390 CUP	1.190
185 Grain Jacketed Bullet									
HS6	7.7	.55	.53	.5	842	8.5	916	14280 CUP	1.195
UNIVERSAL	6.1	.67	.66	NA	864	6.5	914	14450 CUP	1.195
CLAYS	4.0	.59	.57	NA	836	4.4	903	14790 CUP	1.195
TITEGROUP	4.5	.38	.37	NA	807	4.9	880	14450 CUP	1.195
wSUPER-FLD	5.4	.45	.43	NA	765	6.3	874	14960 CUP	1.190
HP38	4.5	.42	.40	NA	721	5.3	834	13430 CUP	1.195
185 Grain XTP									
ACCUR #7	10.5	.69	.66	NA	885	11.7	1006	15300 PSI	1.210

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45 AUTO-RIM (Continued)

SOME LOADS ARE REDUCED 45 ACP.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
					....STARTING LOADS....					
185 Grain XTP (Continued)										
A NITRO100	4.3	.58	.57	.5	775	4.8	880	14365	CUP	1.210
200 Grain Jacketed Bullet										
v-N350	6.1	.60	.57	NA	847	6.7	930	NA	NA	1.240
v-N340	5.7	.60	.57	NA	856	6.2	922	NA	NA	1.240
HS6	7.4	.53	.53	.5	799	8.1	872	13940	CUP	1.155
v-N320	4.5	.54	.53	.5	797	4.9	867	NA	NA	1.240
UNIVERSAL	5.4	.59	.57	NA	763	6.0	856	14620	CUP	1.155
HP38	4.7	.43	.43	NA	730	5.3	834	14195	CUP	1.155
TITEGROUP	4.2	.36	.34	NA	747	4.7	813	14365	CUP	1.155
SR7625	5.3	.55	.53	.5	703	5.8	759	14620	CUP	1.170
IMR PB	5.0	.60	.57	NA	703	5.4	759	14620	CUP	1.170
IMR 700X	4.2	.56	.53	.5	688	4.6	750	14875	CUP	1.170
200 Grain Lead Bullet										
ACCUR #2	5.6	.47	.46	NA	863	6.2	981	14600	CUP	1.175
v-N340	5.6	.59	.57	NA	903	6.0	970	NA	NA	1.240
ACCUR #5	7.7	.48	.46	NA	848	8.6	964	15000	CUP	1.175
UNIVERSAL	5.4	.59	.57	NA	820	6.0	903	14110	CUP	1.225
v-N320	4.3	.52	.49	.5	830	4.7	895	NA	NA	1.240
TITEGROUP	4.3	.37	.37	NA	793	4.9	880	14280	CUP	1.225
SOLO 1000	4.5	.60	.57	NA	762	5.0	866	14000	CUP	1.175
HP38	4.0	.37	.37	NA	688	5.0	841	14365	CUP	1.225
HS6	7.4	.53	.53	.5	791	7.6	834	13855	CUP	1.225
CLAYS	3.2	.47	.46	NA	702	3.9	817	14450	CUP	1.225
UNIQUE	4.6	.50	.49	.5	745	4.6	745	8160	CUP	1.190
RED DOT	3.6	.51	.49	.5	741	3.6	741	7990	CUP	1.190
GREEN DOT	3.9	.49	.49	NA	741	3.9	741	8415	CUP	1.190
BULLSEYE	3.6	.38	.37	NA	727	3.6	727	8330	CUP	1.190
AMER-SELECT	3.6	.48	.46	NA	718	3.6	718	9520	CUP	1.190
220 Grain Lead Bullet										
HP38	3.9	.36	.34	NA	703	4.9	815	13940	CUP	1.190
HS6	7.3	.52	.49	.5	781	7.5	814	13940	CUP	1.190
230 Grain Jacketed Bullet										
v-N350	6.1	.60	.57	NA	814	6.6	860	NA	NA	1.260
GREEN DOT	4.9	.61	.61	NA	846	4.9	846	13430	CUP	1.190
RED DOT	4.5	.64	.61	NA	837	4.5	837	13770	CUP	1.190
BULLSEYE	4.5	.48	.46	NA	833	4.5	833	13770	CUP	1.190
BLUE DOT	7.6	.66	.66	NA	828	7.6	828	13770	CUP	1.190

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 02-28-2003 Lee Precision Inc. Hartford, Wi. 53027

45 AUTO-RIM (Continued)

SOME LOADS ARE REDUCED 45 ACP.

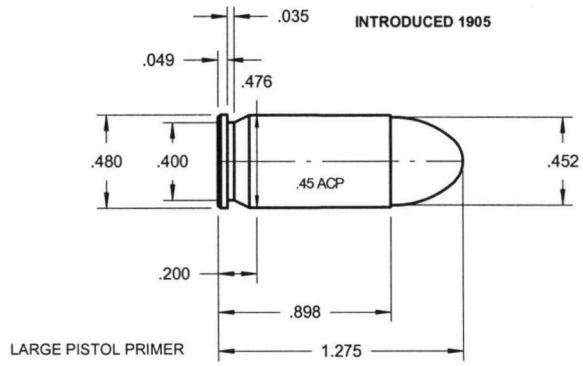
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
230 Grain Jacketed Bullet (Continued)									
UNIQUE	5.4	.59	.57	NA	823	5.4	823	13600 PSI	1.190
HERCO	5.6	.63	.61	NA	819	5.6	819	13770 CUP	1.190
UNIVERSAL	4.9	.53	.53	.5	713	5.4	785	14365 CUP	1.200
HP38	3.8	.35	.34	.3	625	4.8	765	14280 CUP	1.200
HS6	7.2	.51	.49	.5	744	7.4	759	13090 CUP	1.200
TITEGROUP	4.0	.34	.34	.3	697	4.3	753	14195 CUP	1.200
SR4756	6.0	.66	.66	NA	666	6.7	731	14960 CUP	1.260
SR7625	4.9	.51	.49	.5	627	5.4	685	14790 CUP	1.260
CLAYS	3.3	.49	.49	NA	628	3.6	673	14450 CUP	1.200
230 Grain Lead Bullet									
ACCUR #2	4.5	.38	.37	NA	705	5.0	800	14620 CUP	1.230
AMER-SELECT	4.0	.54	.53	.5	759	4.0	759	14365 CUP	1.190
HERCO	4.7	.53	.53	.5	750	4.7	750	11560 CUP	1.190
RED DOT	3.6	.51	.49	.5	745	3.6	745	10880 CUP	1.190
BULLSEYE	3.6	.38	.37	NA	745	3.6	745	11815 CUP	1.190
GREEN DOT	3.9	.49	.49	NA	741	3.9	741	11220 CUP	1.190
UNIQUE	4.5	.49	.49	NA	727	4.5	727	10030 CUP	1.190
235 Grain Lead Bullet									
ACCUR #2	5.2	.44	.43	NA	769	5.8	874	14700 CUP	1.265
ACCUR #5	7.2	.45	.43	NA	730	8.0	830	13900 CUP	1.265
SOLO 1000	4.3	.57	.57	.5	725	4.8	824	14400 CUP	1.265
240 Grain Jacketed Bullet									
A NITRO100	3.4	.46	.46	NA	618	3.8	703	15045 CUP	1.215
SOLO 1000	4.0	.53	.53	.5	616	4.4	701	14960 CUP	1.215
250 Grain Lead Bullet									
ACCUR #7	7.7	.51	.49	.5	673	8.5	765	14535 CUP	1.260
ACCUR #5	5.8	.36	.34	NA	664	6.4	754	15555 CUP	1.260
255 Grain Lead Bullet									
ACCUR #9	10.8	.71	.71	.7	769	12.0	874	14400 CUP	1.250
ACCUR #7	8.6	.56	.53	.5	744	9.5	846	13600 CUP	1.250
ACCUR #5	6.2	.39	.37	NA	733	6.9	833	15000 CUP	1.250
ACCUR #2	4.7	.39	.37	NA	710	5.2	807	14800 CUP	1.250
SOLO 1000	4.0	.53	.53	.5	683	4.4	777	13200 CUP	1.250
260 Grain Bullet									
HS7	7.9	.54	.53	.5	751	8.4	785	13515 CUP	1.190
HS6	6.8	.48	.46	NA	737	7.2	781	14280 CUP	1.190
HP38	4.0	.38	.37	NA	640	4.6	736	13940 CUP	1.190

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45 ACP-45 AUTO



Useful case capacity 1.14 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
154 Grain Lead Bullet									
v-N340	7.7	.82	.82	.7	1156	8.3	1260	NA NA	1.240
v-N320	5.9	.71	.71	.7	1052	6.5	1168	NA NA	1.240
WIN ACTION PI	8.2	.66	.66	NA	1072	9.0	1135	19700 PSI	1.200
wSUPER-LIT	5.5	.47	.46	NA	940	6.4	1085	19900 PSI	1.200
WIN 540	8.5	.58	.57	.5	940	9.6	1060	19800 PSI	1.200
155 Grain Lead Bullet									
ACCUR #7	12.0	.78	.76	.7	1076	13.3	1223	20200 PSI	1.240
ACCUR #2	6.8	.57	.57	.5	1060	7.5	1204	20600 PSI	1.240
UNIVERSAL	6.9	.76	.76	.7	1096	7.6	1195	18000 CUP	1.230
UNIQUE	7.5	.82	.82	.7	1146	7.8	1190	19200 PSI	1.270
ACCUR #5	9.0	.56	.53	.5	1046	10.0	1189	18500 PSI	1.240
HERCO	8.2	.92	.88	NA	1152	8.5	1185	19100 PSI	1.270
BULLSEYE	6.6	.70	.66	.7	1120	6.9	1175	19400 PSI	1.270
GREEN DOT	6.3	.80	.76	.7	1121	6.6	1165	19300 PSI	1.270
RED DOT	5.7	.81	.76	.7	1133	5.8	1155	18800 PSI	1.270
TITEGROUP	5.7	.48	.46	NA	1049	6.2	1132	17000 CUP	1.230
HS6	9.0	.64	.61	NA	988	10.0	1126	16300 CUP	1.230
AMER-SELECT	5.7	.77	.76	.7	1083	6.0	1125	19300 PSI	1.270
HP38	6.0	.56	.53	.5	1011	6.7	1112	17100 CUP	1.230
A NITRO100	5.0	.67	.66	NA	956	5.5	1087	16000 PSI	1.240
CLAYS	4.9	.72	.71	.7	1022	5.2	1082	17700 CUP	1.230

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45 ACP-45 AUTO (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
....STARTING LOADS....									
170 Grain Lead Bullet									
ACCUR #7	11.3	.74	.71	.7	1031	12.5	1172	20800 PSI	1.130
A NITRO100	5.0	.67	.66	NA	952	5.6	1082	19900 PSI	1.130
ACCUR #2	5.9	.49	.49	NA	950	6.5	1079	19400 PSI	1.130
ACCUR #5	8.1	.50	.49	.5	945	9.0	1074	17800 PSI	1.130
180 Grain Lead Bullet									
v-N340	6.9	.74	.71	.7	1050	7.5	1121	NA NA	1.244
v-N320	5.5	.67	.66	NA	974	6.1	1070	NA NA	1.244
wSUPER-FLD	6.6	.55	.53	.5	960	7.4	1060	20000 PSI	1.190
WIN ACTION PI	7.5	.61	.61	NA	940	8.3	1055	20000 PSI	1.190
WIN 231	5.3	.49	.49	NA	885	6.3	1020	20000 PSI	1.190
wSUPER-TAR	4.6	.55	.53	.5	880	5.4	1000	20000 PSI	1.190
wSUPER-LIT	5.0	.42	.40	NA	865	5.9	990	19800 PSI	1.190
BULLSEYE	5.4	.57	.57	.5	985	5.4	985	15800 PSI	1.190
WIN 540	8.0	.55	.53	.5	880	9.0	980	20300 PSI	1.190
HERCO	6.7	.75	.71	.7	950	6.7	950	15800 PSI	1.190
BLUE DOT	9.0	.78	.76	.7	920	9.0	920	13600 PSI	1.190
GREEN DOT	5.3	.67	.66	NA	910	5.3	910	14500 PSI	1.190
RED DOT	4.8	.68	.66	NA	900	4.8	900	14100 PSI	1.190
UNIQUE	6.0	.66	.66	NA	875	6.0	875	13400 PSI	1.190
185 Grain Jacketed Bullet									
v-N340	7.2	.77	.76	.7	1032	7.8	1100	NA NA	1.268
ACCUR #7	10.8	.70	.66	.7	969	12.0	1066	20600 PSI	1.135
WIN 571	10.3	.70	.66	.7	935	11.3	1045	19400 PSI	1.190
UNIQUE	8.0	.88	.88	NA	1010	8.2	1030	18900 PSI	1.275
POWER PISTOL	8.5	.75	.71	.7	1005	8.6	1025	18800 PSI	1.275
v-N320	5.7	.69	.66	NA	930	6.2	1003	NA NA	1.268
WIN ACTION PI	7.2	.58	.57	.5	865	8.1	1000	20000 PSI	1.190
HS6	8.6	.61	.61	NA	915	9.5	996	16800 CUP	1.195
A NITRO100	5.2	.70	.66	.7	876	5.8	995	19600 PSI	1.135
BULLSEYE	6.4	.68	.66	NA	950	6.7	995	19400 PSI	1.275
SOLO 1000	5.2	.69	.66	NA	873	5.8	993	19500 PSI	1.135
UNIVERSAL	6.8	.75	.71	.7	939	7.2	993	17000 CUP	1.195
HERCO	8.2	.92	.88	NA	990	8.2	990	18500 PSI	1.275
GREEN DOT	6.5	.82	.82	.7	954	6.8	990	19300 PSI	1.275
CLAYS	4.5	.66	.66	NA	909	4.9	981	17400 CUP	1.195
IMR 800X	6.8	.73	.71	.7	785	8.2	980	17700 CUP	1.150
AMER-SELECT	5.5	.74	.71	.7	912	5.9	975	19800 PSI	1.275
TITEGROUP	5.0	.42	.40	NA	877	5.5	956	17000 CUP	1.195

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45 ACP-45 AUTO (Continued)

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
185 Grain Jacketed Bullet (Continued)									
WIN 540	8.0	.55	.53	.5	825	9.0	950	20000 PSI	1.190
wSUPER-FLD	6.0	.50	.49	.5	831	7.0	950	17600 PSI	1.190
IMR 700X	4.4	.59	.57	NA	760	5.3	950	17900 CUP	1.210
RED DOT	5.6	.79	.76	.7	895	5.9	940	19500 PSI	1.275
SR4756	7.4	.82	.82	.7	838	8.4	940	17900 CUP	1.150
wSUPER-LIT	4.9	.42	.40	NA	775	5.9	935	20000 PSI	1.190
WIN 231	5.1	.47	.46	NA	670	6.1	920	18600 PSI	1.190
HP38	5.0	.46	.46	NA	784	5.9	906	15800 CUP	1.195
SR7625	5.7	.60	.57	NA	760	6.5	895	17700 CUP	1.150
wSUPER-TAR	4.3	.52	.49	.5	745	5.3	890	19000 PSI	1.190
IMR PB	5.1	.61	.61	NA	755	5.9	890	17900 CUP	1.150
185 Grain Copper Plated									
ACCUR #7	11.7	.76	.76	.7	986	13.0	1121	20800 PSI	1.215
ACCUR #5	9.4	.59	.57	.5	953	10.4	1084	18800 PSI	1.215
ACCUR #2	5.9	.49	.49	NA	906	6.6	1030	20000 PSI	1.215
185 Grain XTP									
ACCUR #5	9.2	.57	.57	.5	970	10.2	1102	19900 PSI	1.210
ACCUR #7	11.7	.76	.76	.7	962	13.0	1093	18000 PSI	1.210
ACCUR #2	6.8	.57	.57	.5	948	7.5	1077	20400 PSI	1.210
SOLO 1000	5.5	.73	.71	.7	862	6.1	980	19400 PSI	1.210
A NITRO100	4.8	.65	.61	NA	842	5.3	957	16900 PSI	1.210
200 Grain Jacketed Bullet									
v-N350	6.8	.66	.66	NA	921	7.5	1011	NA NA	1.240
v-N340	6.3	.67	.66	NA	930	6.9	1002	NA NA	1.240
BLUE DOT	10.0	.87	.82	NA	954	10.6	1000	19500 PSI	1.175
UNIQUE	6.7	.73	.71	.7	930	7.1	975	19500 PSI	1.175
wSUPER-FLD	6.6	.55	.53	.5	907	7.1	970	19500 PSI	1.190
WIN ACTION PI	7.0	.57	.57	.5	855	7.7	965	20100 PSI	1.190
POWER PISTOL	6.9	.61	.61	NA	902	7.4	965	19900 PSI	1.175
BULLSEYE	5.7	.61	.61	NA	915	6.0	960	19400 PSI	1.175
HERCO	7.4	.83	.82	NA	919	7.7	955	19300 PSI	1.175
HS6	8.2	.58	.57	.5	868	9.0	948	16400 CUP	1.155
WIN 571	9.0	.61	.61	NA	860	9.8	945	20000 PSI	1.190
v-N320	5.0	.60	.57	NA	866	5.5	942	NA NA	1.240
IMR 800X	7.3	.78	.76	.7	838	8.3	940	18000 CUP	1.170
UNIVERSAL	6.0	.66	.66	NA	829	6.7	930	17200 CUP	1.155
GREEN DOT	5.8	.73	.71	.7	897	5.9	915	18900 PSI	1.175
HP38	5.2	.48	.46	NA	794	5.9	906	16700 CUP	1.155

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45 ACP-45 AUTO (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
200 Grain Jacketed Bullet (Continued)									
WIN 231	5.3	.49	.49	NA	831	5.8	905	19500 PSI	1.190
AMER-SELECT	5.0	.67	.66	NA	843	5.4	900	19900 PSI	1.175
WIN 540	7.8	.53	.53	.5	810	8.5	895	19900 PSI	1.190
RED DOT	5.0	.71	.71	.7	858	5.2	890	19200 PSI	1.175
wSUPER-TAR	4.7	.57	.57	.5	820	5.2	885	19900 PSI	1.190
TITEGROUP	4.7	.40	.40	NA	812	5.2	884	16900 CUP	1.155
SR4756	7.2	.79	.76	.7	792	8.1	880	17700 CUP	1.170
wSUPER-LIT	4.7	.40	.40	NA	770	5.4	875	19600 PSI	1.190
SR7625	5.9	.62	.61	NA	764	6.4	825	17200 CUP	1.170
IMR PB	5.5	.67	.66	NA	764	6.0	825	17200 CUP	1.170
IMR 700X	4.6	.62	.61	NA	748	5.1	815	17500 CUP	1.170
CLAYS	3.9	.57	.57	.5	714	4.3	785	17700 CUP	1.155
200 Grain Lead Bullet									
v-N340	6.2	.66	.66	NA	981	6.7	1054	NA NA	1.240
ACCUR #5	7.8	.49	.49	NA	902	8.7	1025	19400 PSI	1.190
ACCUR #7	10.4	.68	.66	NA	888	11.5	1010	18900 PSI	1.190
UNIVERSAL	6.0	.66	.66	NA	891	6.7	981	16600 CUP	1.225
v-N320	4.8	.58	.57	.5	902	5.2	973	NA NA	1.240
wSUPER-FLD	6.0	.50	.49	.5	870	6.7	970	19400 PSI	1.190
WIN ACTION PI	6.6	.53	.53	.5	850	7.6	970	19700 PSI	1.190
TITEGROUP	4.8	.41	.40	NA	862	5.4	957	16800 CUP	1.225
IMR 800X	6.4	.69	.66	NA	791	7.9	950	18000 CUP	1.170
WIN 571	8.5	.58	.57	.5	835	9.5	945	19500 PSI	1.190
ACCUR #2	5.2	.44	.43	NA	826	5.8	939	17400 PSI	1.190
A NITRO100	4.4	.59	.57	NA	825	4.9	938	18200 PSI	1.190
SR4756	7.0	.77	.76	.7	765	8.2	930	17900 CUP	1.170
IMR 700X	4.4	.59	.57	NA	768	5.5	930	17700 CUP	1.170
WIN 540	7.2	.49	.49	NA	805	8.3	925	20000 PSI	1.190
HP38	4.4	.41	.40	NA	748	5.6	914	16900 CUP	1.225
WIN 231	4.8	.45	.43	NA	804	5.5	910	19600 PSI	1.190
wSUPER-TAR	4.4	.53	.53	.5	830	5.1	910	19900 PSI	1.190
wSUPER-LIT	4.3	.36	.34	NA	755	5.4	910	19800 PSI	1.190
HS6	8.2	.58	.57	.5	860	8.4	907	16300 CUP	1.225
SR7625	5.6	.59	.57	.5	787	6.5	900	18000 CUP	1.170
CLAYS	3.6	.53	.53	.5	763	4.3	888	17000 CUP	1.225
IMR PB	5.1	.61	.61	NA	775	5.9	885	17900 CUP	1.170
UNIQUE	5.1	.56	.53	.5	810	5.1	810	9600 PSI	1.190
RED DOT	4.0	.57	.57	.5	805	4.0	805	9400 PSI	1.190

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....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
200 Grain Lead Bullet (Continued)									
GREEN DOT	4.3	.54	.53	.5	805	4.3	805	9900 PSI	1.190
BULLSEYE	4.0	.43	.43	NA	790	4.0	790	9800 PSI	1.190
AMER-SELECT	4.0	.54	.53	.5	780	4.0	780	11200 PSI	1.190
200 Grain Copper Plated									
ACCUR #7	10.3	.67	.66	NA	888	11.5	1010	18900 PSI	1.220
ACCUR #2	5.2	.44	.43	NA	836	5.8	951	19700 PSI	1.220
ACCUR #5	7.8	.49	.49	NA	828	8.7	942	16900 PSI	1.220
200 Grain XTP									
ACCUR #5	8.7	.54	.53	.5	924	9.7	1050	20600 PSI	1.225
ACCUR #7	10.8	.71	.71	.7	912	12.0	1036	19200 PSI	1.225
ACCUR #2	5.9	.49	.49	NA	847	6.5	963	19700 PSI	1.225
SOLO 1000	5.2	.69	.66	NA	804	5.8	914	18800 PSI	1.225
A NITRO100	4.3	.58	.57	.5	768	4.8	873	16500 PSI	1.225
220 Grain Lead Bullet									
HP38	4.3	.40	.40	NA	764	5.4	886	16400 CUP	1.190
HS6	8.1	.58	.57	.5	849	8.3	885	16400 CUP	1.190
230 Grain Jacketed Bullet									
ACCUR #7	9.9	.65	.61	NA	828	11.0	942	20500 PSI	1.250
v-N350	6.8	.66	.66	NA	885	7.3	935	NA NA	1.260
v-N340	6.0	.64	.61	NA	873	6.5	928	NA NA	1.260
ACCUR #5	7.8	.49	.49	NA	816	8.7	927	19300 PSI	1.250
GREEN DOT	5.4	.68	.66	NA	920	5.4	920	15800 PSI	1.190
RED DOT	5.0	.71	.71	.7	910	5.0	910	16200 PSI	1.190
BULLSEYE	5.0	.53	.53	.5	905	5.0	905	16200 PSI	1.190
BLUE DOT	8.5	.74	.71	.7	900	8.5	900	16200 PSI	1.190
UNIQUE	6.0	.66	.66	NA	895	6.0	895	16000 PSI	1.190
POWER PISTOL	6.7	.59	.57	NA	830	7.2	895	20000 PSI	1.190
HERCO	6.2	.70	.66	.7	890	6.2	890	16200 PSI	1.190
v-N320	4.9	.59	.57	NA	801	5.3	863	NA NA	1.260
UNIVERSAL	5.4	.59	.57	NA	775	6.0	853	16900 CUP	1.200
wSUPER-FLD	5.7	.48	.46	NA	780	6.1	850	19600 PSI	1.190
SOLO 1000	4.9	.65	.61	NA	746	5.5	848	18900 PSI	1.250
WIN 571	8.4	.57	.57	.5	795	8.9	845	19900 PSI	1.190
IMR 800X	6.5	.70	.66	.7	756	7.3	840	17800 CUP	1.260
WIN ACTION PI	6.1	.49	.49	NA	760	6.6	835	20200 PSI	1.190
ACCUR #2	5.4	.45	.43	NA	734	6.0	835	20600 PSI	1.250
HP38	4.2	.39	.37	NA	679	5.3	832	16800 CUP	1.200
A NITRO100	4.1	.55	.53	.5	726	4.5	825	19100 PSI	1.250

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c = Compressed charge Copyright 02-28-2003 Lee Precision Inc. Hartford, Wi. 53027

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
230 Grain Jacketed Bullet (Continued)									
HS6	8.0	.57	.57	.5	809	8.2	825	15400 CUP	1.200
TITEGROUP	4.4	.37	.37	NA	758	4.8	818	16700 CUP	1.200
WIN 540	6.9	.47	.46	NA	715	7.6	800	19900 PSI	1.190
wSUPER-TAR	4.1	.49	.49	NA	686	4.9	800	19900 PSI	1.190
SR4756	6.7	.73	.71	.7	724	7.4	795	17600 CUP	1.260
WIN 231	4.8	.45	.43	NA	740	5.1	785	20000 PSI	1.190
AMER-SELECT	4.6	.62	.61	NA	738	4.9	780	19600 PSI	1.230
IMR 700X	4.5	.60	.57	NA	693	5.0	770	17700 CUP	1.260
wSUPER-LIT	4.4	.37	.37	NA	705	4.8	770	19900 PSI	1.190
IMR PB	4.9	.59	.57	.5	668	5.5	750	17900 CUP	1.260
SR7625	5.5	.57	.57	.5	682	6.0	745	17400 CUP	1.260
CLAYS	3.7	.54	.53	.5	683	4.0	732	17000 CUP	1.200
230 Grain Lead Bullet									
ACCUR #7	9.9	.65	.61	NA	862	11.0	979	19400 PSI	1.230
ACCUR #5	7.7	.48	.46	NA	852	8.5	968	19800 PSI	1.230
WIN ACTION PI	6.6	.53	.53	.5	845	7.3	915	19600 PSI	1.190
wSUPER-FLD	5.5	.46	.46	NA	820	6.2	910	19600 PSI	1.190
SOLO 1000	4.6	.61	.61	NA	790	5.1	898	18300 PSI	1.230
WIN 571	7.7	.52	.49	.5	800	8.7	890	19800 PSI	1.190
WIN 231	4.5	.42	.40	NA	765	5.1	870	19800 PSI	1.190
ACCUR #2	5.0	.42	.40	NA	766	5.6	870	17200 PSI	1.230
WIN 540	6.9	.47	.46	NA	750	7.6	860	19700 PSI	1.190
SR4756	6.9	.76	.76	.7	796	7.5	860	17800 CUP	1.270
IMR 800X	6.2	.66	.66	NA	753	7.2	860	18000 CUP	1.270
wSUPER-LIT	4.2	.36	.34	NA	745	4.8	840	19800 PSI	1.190
A NITRO100	4.1	.55	.53	.5	733	4.5	834	18600 PSI	1.230
SR7625	5.8	.61	.61	NA	778	6.2	825	17700 CUP	1.270
AMER-SELECT	4.5	.60	.57	NA	825	4.5	825	16900 PSI	1.190
HERCO	5.2	.58	.57	.5	815	5.2	815	13600 PSI	1.190
IMR PB	5.2	.63	.61	NA	772	5.5	810	17900 CUP	1.270
RED DOT	4.0	.57	.57	.5	810	4.0	810	12800 PSI	1.190
BULLSEYE	4.0	.43	.43	NA	810	4.0	810	13900 PSI	1.190
wSUPER-TAR	4.0	.48	.46	NA	726	4.5	805	20100 PSI	1.190
GREEN DOT	4.3	.54	.53	.5	805	4.3	805	13200 PSI	1.190
UNIQUE	5.0	.55	.53	.5	790	5.0	790	11800 PSI	1.190
IMR 700X	4.2	.56	.53	.5	698	4.7	775	17700 CUP	1.270
230 Grain Copper Plated									
ACCUR #7	9.7	.63	.61	NA	833	10.8	947	20500 PSI	1.245

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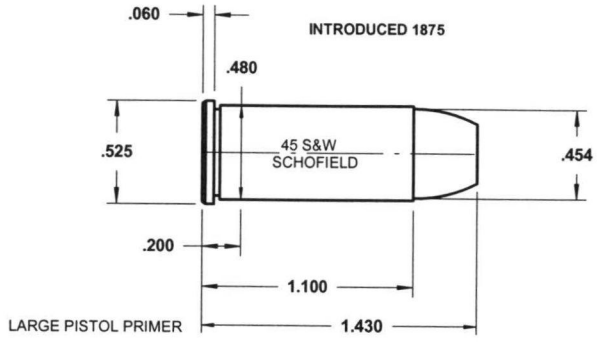
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Powder Type	....STARTING LOADS.... Start Grains	Volume Auto-Disk CC		Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
230 Grain Copper Plated (Continued)									
ACCUR #5	7.6	.47	.46	NA	804	8.5	914	18900 PSI	1.245
ACCUR #2	4.9	.41	.40	NA	760	5.4	864	20500 PSI	1.245
240 Grain Jacketed Bullet									
ACCUR #7	9.5	.62	.61	NA	793	10.5	901	20100 PSI	1.215
ACCUR #9	11.3	.74	.71	.7	774	12.5	879	18200 PSI	1.215
ACCUR #5	7.5	.47	.46	NA	769	8.3	874	20300 PSI	1.215
BLUE DOT	7.9	.69	.66	NA	833	8.3	865	19300 PSI	1.210
POWER PISTOL	6.0	.54	.53	.5	780	6.5	835	19900 PSI	1.210
HERCO	6.3	.70	.66	.7	788	6.5	820	19200 PSI	1.210
UNIQUE	5.7	.62	.61	NA	788	5.9	820	19200 PSI	1.210
BULLSEYE	4.9	.52	.49	.5	794	5.0	810	18900 PSI	1.210
ACCUR #2	5.1	.43	.43	NA	697	5.7	792	20000 PSI	1.215
GREEN DOT	4.8	.60	.57	NA	761	5.0	790	19300 PSI	1.210
AMER-SELECT	4.5	.60	.57	NA	740	4.7	775	19500 PSI	1.210
RED DOT	4.3	.61	.61	NA	742	4.5	770	19200 PSI	1.210
A NITRO100	3.8	.51	.49	.5	672	4.2	764	17700 PSI	1.215
SOLO 1000	4.4	.59	.57	.5	670	4.9	762	17600 PSI	1.215
250 Grain Jacketed Bullet									
ACCUR #7	9.5	.62	.61	NA	790	10.5	898	20900 PSI	1.230
ACCUR #9	11.3	.74	.71	.7	780	12.5	886	20800 PSI	1.230
ACCUR #5	7.2	.45	.43	NA	752	8.0	854	19100 PSI	1.230
ACCUR #2	5.1	.43	.43	NA	697	5.7	792	20000 PSI	1.230
SOLO 1000	4.2	.56	.53	.5	665	4.7	756	19000 PSI	1.230
250 Grain Lead Bullet									
ACCUR #9	10.8	.71	.71	.7	766	12.0	870	20600 PSI	1.260
ACCUR #7	8.6	.56	.53	.5	732	9.5	832	17100 PSI	1.260
ACCUR #5	6.4	.40	.40	NA	722	7.1	820	18300 PSI	1.260
ACCUR #2	4.7	.39	.37	NA	711	5.2	808	19400 PSI	1.260
SOLO 1000	3.8	.51	.49	.5	689	4.2	783	19700 PSI	1.260
260 Grain Bullet									
HS7	8.8	.60	.57	NA	816	9.3	853	15900 CUP	1.190
HS6	7.5	.54	.53	.5	801	8.0	849	16800 CUP	1.190
HP38	4.5	.42	.40	NA	696	5.1	800	16400 CUP	1.190
260 Grain Jacketed Bullet									
BLUE DOT	8.1	.70	.66	.7	759	8.3	780	19000 PSI	1.210
UNIQUE	5.1	.56	.53	.5	725	5.4	760	19400 PSI	1.210
HERCO	5.9	.66	.66	NA	743	5.9	750	18600 PSI	1.210
BULLSEYE	4.3	.46	.46	NA	690	4.5	725	19400 PSI	1.210

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45 S&W SCHOFIELD



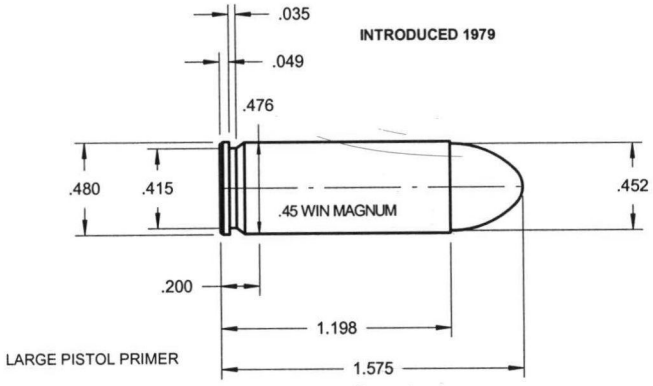
Useful case capacity 1.83 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
200 Grain Lead Bullet									
A NITRO100	5.0	.67	.66	NA	843	5.6	959	13300 CUP	1.300
SOLO 1000	5.6	.75	.71	.7	837	6.3	952	13000 CUP	1.300
UNIVERSAL	6.0	.66	.66	NA	773	7.0	938	13100 CUP	1.300
HP38	5.2	.48	.46	NA	745	6.2	877	13000 CUP	1.300
ACCUR #2	5.0	.42	.40	NA	759	5.6	863	12200 CUP	1.300
CLAYS	4.0	.58	.57	.5	730	5.0	845	13100 CUP	1.300
230 Grain Lead Bullet									
ACCUR #2	4.7	.39	.37	NA	765	5.3	870	13200 CUP	1.300
A NITRO100	4.5	.61	.61	NA	762	5.0	867	13000 CUP	1.300
SOLO 1000	5.2	.69	.66	NA	749	5.8	852	11100 CUP	1.300
UNIVERSAL	5.5	.60	.57	NA	738	6.0	816	11400 CUP	1.300
HP38	5.0	.46	.46	NA	719	5.7	816	12700 CUP	1.300
CLAYS	4.0	.58	.57	.5	697	4.7	783	13600 CUP	1.300
250 Grain Lead Bullet									
UNIVERSAL	6.0	.66	.66	NA	724	6.3	830	13800 CUP	1.350
HP38	4.5	.42	.40	NA	664	5.2	741	12100 CUP	1.350
CLAYS	4.0	.58	.57	.5	674	4.2	710	12500 CUP	1.350
255 Grain Lead Bullet									
SOLO 1000	4.9	.65	.61	NA	704	5.5	801	12400 CUP	1.350
ACCUR #2	4.6	.39	.37	NA	689	5.1	783	11900 CUP	1.350
A NITRO100	4.1	.55	.53	.5	682	4.6	775	11800 CUP	1.350

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c = Compressed charge
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45 WINCHESTER MAGNUM



Useful case capacity 1.90 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
185 Grain Jacketed Bullet										
ACCUR #9	27.0	1.77	DBLD	1.6	1717	30.0c	1889	35200	CUP	1.555
ACCUR #7	18.9	1.23	1.18	NA	1499	21.0	1650	35800	CUP	1.555
ACCUR #5	15.3	.95	.95	NA	1473	17.0	1620	36200	CUP	1.555
ACCUR #2	12.6	1.06	1.02	1.0	1424	14.0	1567	37800	CUP	1.555
HS6	17.0	1.21	1.18	NA	1390	18.0	1472	38700	CUP	1.500
HP38	9.5	.88	.88	NA	1147	11.6	1362	37000	CUP	1.500
185 Grain XTP										
v-3N37	15.0	1.37	1.36	1.3	1616	16.8	1795	NA	NA	1.516
200 Grain Jacketed Bullet										
v-N110	24.1c	2.01	DBLD	1.9	1818	26.3c	1962	NA	NA	1.516
v-N105	17.7	1.59	DBLD	1.6	1626	20.2	1824	NA	NA	1.555
v-3N37	14.6	1.33	1.26	1.3	1585	16.0	1726	NA	NA	1.516
HS6	16.0	1.14	1.09	1.0	1293	17.5	1409	37000	CUP	1.470
HP38	9.0	.83	.82	NA	1065	11.2	1289	37000	CUP	1.470
200 Grain XTP										
ACCUR #9	26.6	1.75	DBLD	1.6	1686	29.5c	1854	38400	CUP	1.570
ACCUR #7	18.5	1.21	1.18	NA	1450	20.5	1595	34700	CUP	1.570
ACCUR #5	15.3	.95	.95	NA	1444	17.0	1589	36600	CUP	1.570
ACCUR #2	12.2	1.02	1.02	1.0	1377	13.5	1514	40000	CUP	1.570
230 Grain Jacketed Bullet										
v-N110	22.8c	1.90	DBLD	1.9	1656	25.0c	1804	NA	NA	1.555

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c = Compressed charge

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45 WINCHESTER MAGNUM (Continued)

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
230 Grain Jacketed Bullet (Continued)										
ACCUR #9	24.8	1.63	DBLD	1.6	1580	27.5	1738	38700	CUP	1.575
v-3N37	13.4	1.22	1.18	NA	1404	14.9	1545	NA	NA	1.555
ACCUR #7	17.1	1.12	1.09	1.0	1336	19.0	1470	34400	CUP	1.575
ACCUR #5	14.0	.87	.82	NA	1300	15.5	1430	35200	CUP	1.575
H110	28.0	1.84	DBLD	1.6	1384	28.0	1410	29000	CUP	1.500
ACCUR #2	11.3	.95	.95	NA	1233	12.5	1357	38200	CUP	1.575
HS6	15.0	1.07	1.02	1.0	1156	17.0	1296	36600	CUP	1.500
H4227	24.0	1.85	DBLD	1.6	1211	25.0c	1259	29400	CUP	1.500
HP38	9.0	.83	.82	NA	1013	10.8	1191	37100	CUP	1.500
240 Grain Jacketed Bullet										
ACCUR #9	21.6	1.42	1.36	1.3	1460	24.0	1606	40000	CUP	1.490
ACCUR #7	17.1	1.12	1.09	1.0	1316	19.0	1448	34800	CUP	1.490
H110	25.4	1.67	DBLD	1.6	1385	27.0	1411	37400	CUP	1.555
ACCUR #5	13.0	.81	.76	.7	1273	14.5	1400	40000	CUP	1.490
HS6	14.0	1.00	.95	1.0	1160	16.0	1300	38800	CUP	1.555
H4227	24.0	1.85	DBLD	1.6	1218	25.0c	1266	33000	CUP	1.555
ACCUR #2	9.9	.83	.82	NA	1095	11.0	1205	38500	CUP	1.490
HP38	8.6	.80	.76	.7	986	10.3	1160	36800	CUP	1.555
250 Grain Jacketed Bullet										
H110	24.5	1.60	DBLD	1.6	1354	26.0	1380	37400	CUP	1.500
H4227	23.0	1.77	DBLD	1.6	1192	24.0	1239	37100	CUP	1.500
HS6	13.5	.96	.95	NA	1088	15.4	1220	37700	CUP	1.500
HP38	7.8	.72	.71	.7	909	9.8	1100	38400	CUP	1.500
250 Grain XTP										
v-N110	19.8	1.65	DBLD	1.6	1463	22.4	1640	NA	NA	1.504
ACCUR #9	19.3	1.27	1.26	NA	1364	21.5	1500	40000	CUP	1.480
ACCUR #7	16.9	1.10	1.09	1.0	1321	18.8	1454	39600	CUP	1.480
v-3N37	11.9	1.09	1.09	1.0	1249	13.8	1427	NA	NA	1.504
ACCUR #5	13.1	.82	.82	.7	1222	14.5	1345	39000	CUP	1.480
ACCUR #2	9.0	.75	.71	.7	1003	10.0	1103	40000	CUP	1.480
260 Grain Jacketed Bullet										
ACCUR #9	20.7	1.36	1.36	1.3	1331	23.0	1512	37100	CUP	1.515
ACCUR #7	17.1	1.12	1.09	1.0	1309	19.0	1441	38500	CUP	1.515
ACCUR 1680	27.0	1.77	DBLD	1.6	1249	30.0c	1374	31300	CUP	1.515
H110	23.5	1.54	DBLD	NA	1313	25.0	1339	37400	CUP	1.505
ACCUR #5	13.1	.82	.82	.7	1177	14.5	1295	38800	CUP	1.515
HS6	13.0	.93	.88	NA	1077	15.0	1219	37000	CUP	1.505
H4227	22.0	1.69	DBLD	1.6	1165	23.0	1209	35400	CUP	1.505

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45 WINCHESTER MAGNUM (Continued)

....STARTING LOADS....

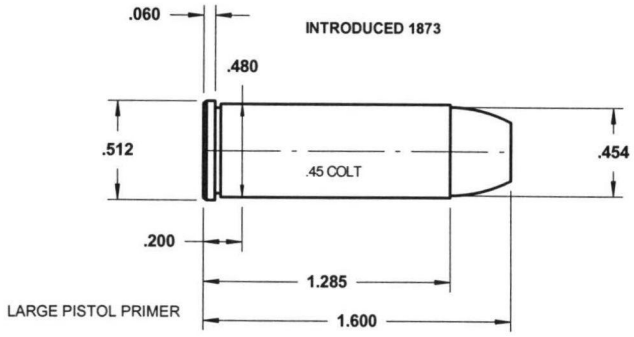
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
260 Grain Jacketed Bullet (Continued)									
ACCUR #2	9.9	.83	.82	NA	1033	11.0	1136	39100 CUP	1.515
HP38	7.4	.69	.66	NA	856	9.6	1066	37200 CUP	1.505
300 Grain Jacketed Bullet									
ACCUR #9	19.4	1.27	1.26	NA	1275	21.5	1402	37900 CUP	1.565
ACCUR 1680	25.2	1.65	DBLD	1.6	1202	28.0	1323	39900 CUP	1.565
ACCUR #7	15.8	1.03	1.02	1.0	1146	17.5	1261	38200 CUP	1.565
ACCUR #5	12.2	.76	.76	.7	1048	13.5	1142	38800 CUP	1.565
ACCUR #2	9.0	.75	.71	.7	881	10.0	970	37400 CUP	1.565

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c = Compressed charge

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45 COLT

Sometimes called 45 LONG COLT



Useful case capacity 1.93 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
160 Grain Lead Bullet										
UNIVERSAL	6.5	.71	.71	.7	882	9.5	1197	12900	CUP	1.480
HP38	6.5	.60	.57	NA	900	9.0	1177	13800	CUP	1.480
CLAYS	5.0	.73	.71	.7	878	6.4	1083	13500	CUP	1.480
TITEGROUP	6.0	.51	.49	.5	919	7.0	1051	9100	CUP	1.480
180 Grain Lead Bullet										
v-N350	11.1	1.08	1.02	1.0	1147	12.3	1262	NA	NA	1.594
v-N340	10.3	1.10	1.09	1.0	1165	11.1	1245	NA	NA	1.594
v-N330	9.9	1.07	1.02	1.0	1161	10.6	1241	NA	NA	1.594
v-N320	8.2	.99	.95	1.0	1074	9.0	1170	NA	NA	1.594
UNIVERSAL	6.5	.71	.71	.7	879	9.2	1161	13900	CUP	1.540
HP38	6.0	.56	.53	.5	841	8.2	1087	13900	CUP	1.540
TITEGROUP	6.0	.51	.49	.5	900	6.9	1020	10900	CUP	1.540
CLAYS	4.8	.70	.66	.7	840	6.0	1016	13800	CUP	1.540
185 Grain Jacketed Bullet										
ACC XMP5744	18.4	1.38	1.36	1.3	980	20.5	1078	12000	CUP	1.575
ACCUR #5	10.8	.67	.66	NA	977	12.0	1075	12200	CUP	1.575
SOLO 1000	6.8	.90	.88	NA	925	7.6	1027	13800	CUP	1.575
ACCUR #2	6.6	.55	.53	.5	912	7.3	1003	13600	CUP	1.575
A NITRO100	6.2	.84	.82	NA	912	6.8	993	13300	CUP	1.575
185 Grain XTP										
v-N320	8.5	1.03	1.02	1.0	1053	9.3	1147	NA	NA	1.594

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c = Compressed charge

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45 COLT (Continued)

Sometimes called 45 LONG COLT

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
200 Grain Jacketed Bullet										
v-N320	7.7	.93	.88	NA	990	8.6	1089	NA	NA	1.594
GREEN DOT	7.9	1.00	.95	1.0	931	8.0	940	12500	CUP	1.550
BLUE DOT	13.0	1.12	1.09	1.0	925	13.0	925	11800	CUP	1.550
RED DOT	6.8	.97	.95	NA	897	7.0	915	12600	CUP	1.550
UNIQUE	9.0	.98	.95	NA	895	9.0	895	11600	CUP	1.550
HERCO	9.5	1.07	1.02	1.0	895	9.5	895	11400	CUP	1.550
BULLSEYE	6.0	.64	.61	NA	870	6.0	870	11800	CUP	1.550
200 Grain Lead Bullet										
v-N340	10.5	1.12	1.09	1.0	1088	11.3	1164	NA	NA	1.594
v-N320	8.3	1.00	.95	1.0	1020	9.1	1111	NA	NA	1.594
UNIVERSAL	6.4	.70	.66	.7	825	8.8	1067	13600	CUP	1.600
TITEGROUP	6.5	.55	.53	.5	900	7.7	1050	12700	CUP	1.600
HP38	5.9	.55	.53	.5	782	8.0	1002	13800	CUP	1.600
CLAYS	4.6	.67	.66	NA	754	5.9	931	13100	CUP	1.600
200 Grain XTP										
HS6	11.7	.83	.82	NA	1010	13.0	1111	13900	CUP	1.600
UNIVERSAL	8.0	.88	.88	NA	962	9.0	1068	13900	CUP	1.600
HP38	7.8	.72	.71	.7	953	8.7	1048	14000	CUP	1.600
ACCUR #5	10.4	.65	.61	NA	938	11.5	1032	13400	CUP	1.595
TITEGROUP	6.7	.57	.57	.5	890	7.5	989	12700	CUP	1.600
A NITRO100	5.8	.78	.76	.7	875	6.4	954	12200	CUP	1.595
SOLO 1000	6.3	.84	.82	NA	847	7.0	932	13000	CUP	1.595
ACCUR #2	6.2	.52	.49	.5	846	6.9	931	13000	CUP	1.595
215 Grain Lead Bullet										
ACCUR #5	10.9	.68	.66	NA	934	12.1	1027	12500	CUP	1.575
UNIVERSAL	6.8	.75	.71	.7	820	8.6	1001	13800	CUP	1.650
TITEGROUP	6.2	.53	.53	.5	861	7.2	983	12100	CUP	1.650
HP38	5.9	.55	.53	.5	768	7.8	965	13500	CUP	1.650
A NITRO100	6.3	.85	.82	NA	873	7.0	961	14000	CUP	1.575
CLAYS	4.6	.67	.66	NA	743	5.7	889	13400	CUP	1.650
225 Grain Lead Bullet										
ACCUR #5	10.9	.68	.66	NA	939	12.1	1033	13800	CUP	1.620
SOLO 1000	5.8	.77	.76	.7	819	6.5	909	13500	CUP	1.620
A NITRO100	5.3	.71	.71	.7	816	5.9	897	12200	CUP	1.620
ACCUR #2	5.8	.49	.49	NA	833	6.1	873	11900	CUP	1.620
230 Grain Jacketed Bullet										
v-N340	9.4	1.00	.95	1.0	968	10.2	1045	NA	NA	1.594

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45 COLT (Continued)

Sometimes called 45 LONG COLT

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
					....STARTING LOADS....					
230 Grain Jacketed Bullet (Continued)										
v-N320	7.3	.88	.88	NA	897	8.0	978	NA	NA	1.594
230 Grain Lead Bullet										
UNIVERSAL	6.5	.71	.71	.7	806	8.1	975	13800	CUP	1.580
HP38	5.8	.54	.53	.5	769	7.3	941	13700	CUP	1.580
TITEGROUP	5.8	.49	.49	NA	841	6.5	934	13000	CUP	1.580
CLAYS	4.4	.64	.61	NA	722	5.4	865	13900	CUP	1.580
AMER-SELECT	5.6	.75	.71	.7	779	5.8	810	12800	CUP	1.550
230 Grain XTP										
ACCUR #5	9.9	.62	.61	NA	880	11.0	969	14000	CUP	1.595
ACC XMP5744	16.6	1.25	1.18	NA	862	18.5	949	11500	CUP	1.595
A NITRO100	5.1	.69	.66	NA	759	5.7	843	12300	CUP	1.595
ACCUR #2	5.6	.47	.46	NA	754	6.2	830	13100	CUP	1.595
SOLO 1000	5.7	.76	.76	.7	728	6.3	800	11800	CUP	1.595
240 Grain Jacketed Bullet										
ACCUR #5	9.5	.59	.57	NA	881	10.5	970	14000	CUP	1.590
ACC XMP5744	16.6	1.25	1.18	NA	872	18.5	960	11600	CUP	1.590
A NITRO100	5.0	.67	.66	NA	754	5.6	838	13000	CUP	1.590
ACCUR #2	5.8	.49	.49	NA	731	6.5	811	13400	CUP	1.590
SOLO 1000	5.4	.72	.71	.7	706	6.0	776	12400	CUP	1.590
240 Grain Lead Bullet										
ACCUR #5	10.2	.64	.61	NA	898	11.3	988	14000	CUP	1.570
ACC XMP5744	16.5	1.24	1.18	NA	863	18.5	959	11600	CUP	1.570
A NITRO100	5.1	.69	.66	NA	809	5.7	898	13600	CUP	1.570
SOLO 1000	6.0	.80	.76	.7	811	6.3	851	11600	CUP	1.570
ACCUR #2	5.4	.45	.43	NA	768	6.0	845	11900	CUP	1.570
250 Grain Lead Bullet										
HS6	9.0	.64	.61	NA	828	10.5	946	13300	CUP	1.600
UNIVERSAL	6.5	.71	.71	.7	799	7.8	941	13000	CUP	1.600
HP38	5.8	.54	.53	.5	771	7.1	916	13900	CUP	1.600
IMR 800X	8.5	.91	.88	NA	832	9.5	915	13700	CUP	1.600
HERCO	8.8	.99	.95	NA	892	9.0	910	12600	CUP	1.550
SR7625	7.7	.81	.76	.7	806	8.7	895	13900	CUP	1.600
BLUE DOT	11.5	.99	.95	1.0	890	11.5	890	12200	CUP	1.550
IMR4227	15.6	1.20	1.18	NA	794	17.7	890	14000	CUP	1.600
SR4756	9.1	1.00	.95	1.0	813	10.0	885	13500	CUP	1.600
TITEGROUP	5.5	.47	.46	NA	793	6.2	881	13000	CUP	1.600
GREEN DOT	6.8	.86	.82	NA	855	6.8	855	12300	CUP	1.550

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c = Compressed charge Copyright 02-28-2003 Lee Precision Inc. Hartford, Wi. 53027

45 COLT (Continued)

Sometimes called 45 LONG COLT

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
250 Grain Lead Bullet (Continued)										
UNIQUE	8.0	.87	.82	NA	850	8.0	850	11800	CUP	1.550
RED DOT	6.0	.85	.82	NA	830	6.0	830	12000	CUP	1.550
IMR PB	6.5	.79	.76	.7	761	7.2	830	13600	CUP	1.600
CLAYS	4.2	.61	.61	NA	687	5.1	817	13400	CUP	1.600
IMR 700X	5.7	.76	.76	.7	741	6.3	815	13710	CUP	1.600
BULLSEYE	5.4	.57	.57	.5	805	5.4	805	11800	CUP	1.550
AMER-SELECT	5.2	.70	.66	.7	759	5.5	795	13000	CUP	1.550
250 Grain Copper Plated										
ACCUR #5	9.4	.59	.57	.5	790	10.4	870	12900	CUP	1.585
ACCUR #2	5.7	.48	.46	NA	764	6.3	841	13300	CUP	1.585
250 Grain XTP										
v-N350	10.5	1.03	1.02	1.0	983	10.9	1022	NA	NA	1.673
v-N340	9.0	.96	.95	NA	919	9.6	973	NA	NA	1.634
ACC XMP5744	16.2	1.22	1.18	NA	845	18.0	929	13200	CUP	1.570
v-N320	7.0	.85	.82	NA	824	7.6	888	NA	NA	1.594
HS6	9.7	.69	.66	NA	782	10.8	862	13500	CUP	1.595
UNIVERSAL	7.5	.82	.82	NA	763	8.5	856	14000	CUP	1.595
TITEGROUP	5.5	.47	.46	NA	733	6.3	830	12700	CUP	1.595
ACCUR #5	9.9	.62	.61	NA	728	11.0	800	14000	CUP	1.570
HP38	6.5	.60	.57	NA	719	7.3	797	14000	CUP	1.595
A NITRO100	5.0	.67	.66	NA	666	5.5	757	12900	CUP	1.570
SOLO 1000	5.2	.69	.66	NA	680	5.8	750	11600	CUP	1.570
ACCUR #2	5.2	.44	.43	NA	643	5.8	707	12700	CUP	1.570
255 Grain Lead Bullet										
VEC AO	9.9	1.18	1.18	NA	873	10.5	984	11771	CIP	1.600
ACCUR #5	9.4	.59	.57	.5	873	10.4	961	13400	CUP	1.600
VEC BA10	5.9	.80	.76	.7	856	6.2	886	15167	CIP	1.600
WIN 231	6.7	.63	.61	NA	835	7.1	875	13000	CUP	1.550
A NITRO100	5.0	.67	.66	NA	796	5.5	868	13100	CUP	1.600
ACC XMP5744	16.0	1.20	1.18	NA	781	17.8	860	13100	CUP	1.600
VEC BA9	8.3	.76	.76	.7	761	9.0	830	8955	CIP	1.600
ACCUR #2	5.3	.44	.43	NA	740	5.9	813	12500	CUP	1.600
SOLO 1000	5.2	.69	.66	NA	734	5.8	807	12500	CUP	1.600
260 Grain Jacketed Bullet										
ACCUR #2	5.4	.45	.43	NA	699	6.0	769	14100	CUP	1.600
ACCUR #5	9.5	.59	.57	NA	692	10.5	762	14000	CUP	1.600
A NITRO100	4.8	.65	.61	NA	668	5.3	729	12300	CUP	1.600

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c = Compressed charge

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45 COLT (Continued)

Sometimes called 45 LONG COLT

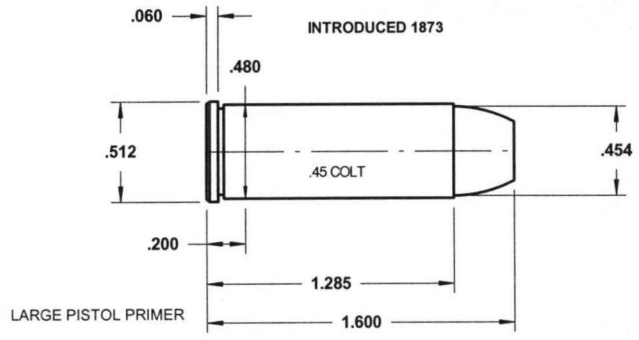
Powder Type	Start Grains	Volume Auto-Disk CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
260 Grain Jacketed Bullet (Continued)									
SOLO 1000	5.2	.69	.66	NA	633	5.8	695	11500 CUP	1.600
260 Grain XTP									
HS6	9.7	.69	.66	NA	793	10.7	865	14000 CUP	1.595
UNIVERSAL	7.0	.77	.76	.7	726	8.0	813	14000 CUP	1.595
TITEGROUP	5.5	.47	.46	NA	705	6.3	797	12500 CUP	1.595
HP38	6.5	.60	.57	NA	731	7.1	787	14000 CUP	1.595
300 Grain Jacketed Bullet									
HS6	9.0	.64	.61	NA	663	10.0	730	13700 CUP	1.670
UNIVERSAL	6.6	.73	.71	.7	637	7.3	700	13700 CUP	1.670
TITEGROUP	5.2	.44	.43	NA	622	5.8	682	12900 CUP	1.670
300 Grain XTP									
HERC 2400	12.5	.93	.88	NA	735	12.5	735	12200 CUP	1.580
BLUE DOT	9.0	.78	.76	.7	663	10.0	730	12300 CUP	1.580
UNIQUE	6.6	.73	.71	.7	677	6.8	690	12600 CUP	1.580
HERCO	7.1	.80	.76	.7	664	7.2	670	12500 CUP	1.580
GREEN DOT	5.6	.71	.71	.7	639	5.7	645	12500 CUP	1.580
BULLSEYE	5.0	.53	.53	.5	599	5.0	605	12400 CUP	1.580
RED DOT	4.8	.68	.66	NA	550	4.8	550	12200 CUP	1.580

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45 COLT (RUGER & T/C ONLY)

These loads must not be used in old or reproduction firearms.



Useful case capacity 1.93 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
200 Grain Jacketed Bullet									
ACCUR #5	13.1	.82	.82	.7	1120	14.6	1273	20000 CUP	1.560
ACCUR #7	14.8	.97	.95	NA	1055	16.4	1199	16300 CUP	1.560
A NITRO100	8.3	1.12	1.09	1.0	1021	9.2	1160	19300 CUP	1.560
215 Grain Lead Bullet									
ACCUR #7	14.9	.97	.95	NA	1104	16.6	1254	20900 CUP	1.550
ACCUR #5	12.2	.76	.76	.7	1090	13.6	1239	20800 CUP	1.550
A NITRO100	8.1	1.09	1.09	1.0	1023	9.0	1162	20700 CUP	1.550
225 Grain Lead Bullet									
ACCUR #7	14.8	.97	.95	NA	1087	16.4	1235	21000 CUP	1.575
ACCUR #5	12.2	.76	.76	.7	1076	13.6	1223	21400 CUP	1.575
A NITRO100	7.9	1.07	1.02	1.0	1005	8.8	1142	20800 CUP	1.575
230 Grain Jacketed Bullet									
ACCUR #7	13.9	.91	.88	NA	1018	15.4	1157	18500 CUP	1.600
ACCUR #5	11.7	.73	.71	.7	1000	13.0	1136	18600 CUP	1.600
A NITRO100	7.8	1.05	1.02	1.0	933	8.7	1060	19600 CUP	1.600
230 Grain Lead Bullet									
ACCUR #5	12.2	.76	.76	.7	1065	13.5	1210	20900 CUP	1.600
ACCUR #7	14.6	.95	.95	NA	1062	16.2	1207	20600 CUP	1.600
A NITRO100	7.7	1.04	1.02	1.0	965	8.6	1097	20300 CUP	1.600
240 Grain Jacketed Bullet									
H110	27.2	1.78	DBLD	1.6	1489	28.0	1532	30000 CUP	1.600

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45 COLT (RUGER & T/C ONLY) (Continued)

These loads must not be used in old or reproduction firearms.

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
240 Grain Jacketed Bullet (Continued)									
H4227	20.0	1.54	1.46	NA	1135	26.0c	1413	30000 CUP	1.600
ACCUR #7	14.0	.91	.88	NA	1010	15.5	1148	20400 CUP	1.570
ACCUR #5	11.7	.73	.71	.7	970	13.0	1102	18300 CUP	1.570
A NITRO100	7.7	1.04	1.02	1.0	920	8.5	1045	20100 CUP	1.570
240 Grain Lead Bullet									
ACCUR #7	14.1	.92	.88	NA	1052	15.7	1196	20600 CUP	1.570
ACCUR #5	11.1	.69	.66	NA	1010	12.3	1148	20000 CUP	1.570
A NITRO100	7.6	1.03	1.02	1.0	954	8.4	1084	20300 CUP	1.570
250 Grain Jacketed Bullet									
ACCUR #7	13.7	.89	.88	NA	971	15.2	1103	19600 CUP	1.585
ACCUR #5	10.9	.68	.66	NA	902	12.1	1025	18100 CUP	1.585
A NITRO100	7.5	1.01	.95	1.0	887	8.3	1008	19300 CUP	1.585
250 Grain Copper Plated									
ACCUR #9	16.2	1.06	1.02	1.0	1008	18.0	1146	20000 CUP	1.585
ACCUR #7	13.1	.86	.82	NA	900	14.6	1023	19100 CUP	1.585
ACCUR #2	7.2	.60	.57	NA	879	8.0	999	19500 CUP	1.585
ACCUR #5	11.1	.69	.66	NA	873	12.3	993	19800 CUP	1.585
250 Grain XTP									
H110	25.7	1.68	DBLD	1.6	1413	26.5	1455	29800 CUP	1.600
H4227	20.0	1.54	1.46	NA	1120	24.6	1343	30300 CUP	1.600
255 Grain Lead Bullet									
ACCUR #9	15.8	1.04	1.02	1.0	1038	17.6	1180	20100 CUP	1.600
ACCUR #7	13.6	.89	.88	NA	1010	15.1	1148	19700 CUP	1.600
ACCUR #5	10.6	.66	.66	NA	950	11.8	1080	18200 CUP	1.600
A NITRO100	7.3	.98	.95	NA	928	8.1	1055	20200 CUP	1.600
260 Grain Jacketed Bullet									
H110	23.5	1.54	DBLD	NA	1348	24.0	1374	30100 CUP	1.650
H4227	22.0	1.69	DBLD	1.6	1227	23.5	1299	29800 CUP	1.650
ACCUR #7	13.5	.88	.88	NA	953	15.0	1083	19400 CUP	1.595
ACCUR #5	10.7	.67	.66	NA	900	11.9	1023	19300 CUP	1.595
A NITRO100	7.3	.98	.95	NA	862	8.1	980	19700 CUP	1.595
280 Grain Lead Bullet									
ACCUR #9	15.8	1.04	1.02	1.0	998	17.5	1134	19300 CUP	1.650
ACCUR #7	12.6	.82	.82	.7	940	14.0	1068	19000 CUP	1.650
ACCUR #5	9.9	.62	.61	NA	891	11.0	1012	18300 CUP	1.650
A NITRO100	6.9	.93	.88	NA	865	7.7	983	19100 CUP	1.650
300 Grain Jacketed Bullet									
H4227	19.0	1.46	1.46	1.3	1043	22.3	1202	29900 CUP	1.650

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45 COLT (RUGER & T/C ONLY) (Continued)

These loads must not be used in old or reproduction firearms.

....STARTING LOADS....

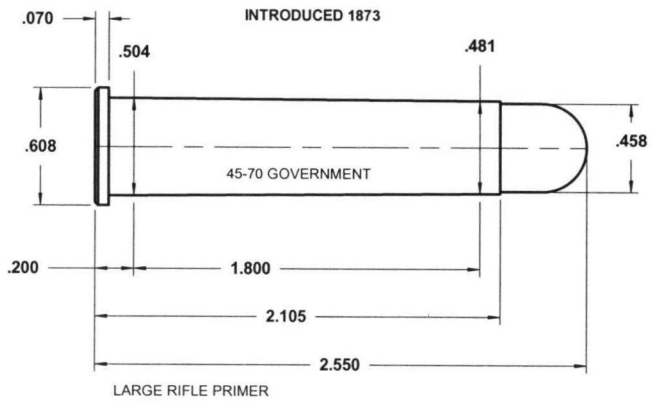
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
300 Grain Jacketed Bullet (Continued)									
H110	21.8	1.43	1.36	1.3	1176	22.2	1198	30100 CUP	1.650
ACCUR #7	11.7	.76	.76	.7	730	13.0	830	20300 CUP	1.585
ACCUR #9	13.5	.89	.88	NA	710	15.0	807	19500 CUP	1.580
300 Grain Lead Bullet									
ACCUR #7	11.7	.76	.76	.7	804	13.0	914	19200 CUP	1.585
ACCUR #9	13.5	.89	.88	NA	798	15.0	907	17600 CUP	1.585
300 Grain XTP									
ACCUR #9	13.5	.89	.88	NA	710	15.0	807	19500 CUP	1.580
ACCUR #7	11.7	.76	.76	.7	693	13.0	788	20700 CUP	1.580

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45-70 U.S. GOVERNMENT

These loads are for all guns in GOOD CONDITION.



Useful case capacity 4.06 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity	FPS	Press Units	Min. OAL
300 Grain Jacketed Bullet									
H322	47.3	3.43	NA	3.4	1737	54.0	1947	18100 CUP	2.525
H4198	42.7	3.20	DBLD	3.1	1783	45.0	1870	16700 CUP	2.525
H4895	55.7	4.05	NA	4.0	1794	58.0c	1864	16500 CUP	2.525
H-VARGET	55.4	4.05	NA	4.0	1785	57.0c	1836	16300 CUP	2.525
RELODER 7	34.0	2.48	DBLD	2.2	1450	34.0	1450	16400 CUP	2.475
HERC 2400	25.0	1.85	DBLD	1.6	1410	25.0	1410	16500 CUP	2.475
BLUE DOT	16.5	1.43	1.36	1.3	1100	16.5	1100	16100 CUP	2.475
300 Grain Lead Bullet									
H4895	45.0	3.28	DBLD	3.1	1572	51.0	1703	15500 CUP	2.465
H4198	30.0	2.25	DBLD	2.2	1390	33.5	1641	16100 CUP	2.465
H-VARGET	40.0	2.93	DBLD	2.8	1440	45.0	1599	17800 CUP	2.465
ACC XMP5744	27.9	2.10	DBLD	1.9	1405	31.0	1597	18000 PSI	2.550
340 Grain Lead Bullet									
A-XMR-2495	51.3	3.84	NA	3.7	1628	57.0c	1850	18000 PSI	2.520
A-XMR-4350	53.1	3.93	NA	3.7	1384	59.0c	1573	17900 PSI	2.520
ACC XMP5744	27.0	2.03	DBLD	1.9	1314	30.0	1494	14600 PSI	2.520
A-XMR-3100	54.0	4.04	NA	4.0	1255	60.0c	1426	15100 PSI	2.520
ACCUR 8700	54.0	3.72	NA	3.7	1059	60.0c	1203	10400 PSI	2.520
378 Grain Lead Bullet									
A-XMR-2495	45.0	3.37	NA	3.1	1479	50.0	1681	14500 PSI	2.565

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45-70 U.S. GOVERNMENT (Continued)

These loads are for all guns in GOOD CONDITION.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
					....STARTING LOADS....				
378 Grain Lead Bullet (Continued)									
A-XMR-4350	48.6	3.60	NA	3.4	1259	54.0	1431	15400 PSI	2.565
ACC XMP5744	25.6	1.92	DBLD	1.9	1247	28.5	1418	15100 PSI	2.565
A-XMR-3100	50.4	3.77	NA	3.7	1159	56.0c	1317	13900 PSI	2.565
ACCUR 8700	54.0	3.72	NA	3.7	1015	60.0c	1153	8300 PSI	2.565
385 Grain Lead Bullet									
H-VARGET	42.5	3.11	DBLD	3.1	1505	42.5	1505	15400 CUP	2.505
H4198	28.0	2.10	DBLD	1.9	1322	32.0	1483	14700 CUP	2.505
RELODER 7	35.0	2.55	DBLD	2.5	1450	35.0	1450	16300 CUP	2.575
H4895	35.0	2.55	DBLD	2.5	1298	35.0	1298	11900 CUP	2.505
HERC 2400	19.0	1.41	1.36	1.3	1070	19.0	1070	15770 CUP	2.575
BLUE DOT	15.0	1.30	1.26	1.0	1040	15.0	1040	8200 CUP	2.575
400 Grain Jacketed Bullet									
ACC XMP5744	23.4	1.76	DBLD	1.6	1031	26.0	1172	17200 PSI	2.560
405 Grain Jacketed Bullet									
RELODER 7	34.0	2.48	DBLD	2.2	1395	34.0	1395	15800 CUP	2.700
HERC 2400	20.0	1.48	1.46	1.3	1000	20.0	1000	15300 CUP	2.700
405 Grain Lead Bullet									
H4198	27.0	2.03	DBLD	1.9	1289	31.0	1459	17100 CUP	2.540
H-VARGET	40.0	2.92	DBLD	2.8	1419	40.0	1419	15600 CUP	2.540
ACC XMP5744	24.3	1.83	DBLD	1.6	1226	27.0	1394	16100 PSI	2.550
420 Grain Lead Bullet									
A-XMR-2495	45.0	3.37	NA	3.1	1457	50.0	1656	17700 PSI	2.600
A-XMR-4350	50.4	3.73	NA	3.7	1297	56.0c	1474	16200 PSI	2.600
ACC XMP5744	25.6	1.92	DBLD	1.9	1210	28.5	1375	16100 PSI	2.600
ACCUR 8700	54.0	3.72	NA	3.7	1025	60.0c	1165	11700 PSI	2.600
475 Grain Lead Bullet									
A-XMR-2495	40.5	3.03	DBLD	2.8	1377	45.0	1565	16000 PSI	2.680
A-XMR-4350	40.5	3.00	DBLD	2.8	1107	45.0	1258	16100 PSI	2.680
A-XMR-3100	44.1	3.30	DBLD	3.1	1074	49.0	1221	16300 PSI	2.680
ACCUR 8700	54.0	3.72	NA	3.7	915	60.0c	1040	15900 PSI	2.680
485 Grain Lead Bullet									
H4198	27.0	2.03	DBLD	1.9	1243	28.0	1279	16400 CUP	2.540
H4895	32.0	2.33	DBLD	2.2	1182	32.0	1182	15600 CUP	2.540
500 Grain Lead Bullet									
ACC XMP5744	22.5	1.69	DBLD	1.6	1063	25.0	1209	18000 PSI	2.850
A-XMR-4350	37.8	2.80	DBLD	2.5	1034	42.0	1175	16300 PSI	2.635
A-XMR-3100	40.5	3.03	DBLD	2.8	1001	45.0	1138	16500 PSI	2.635

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45-70 U.S. GOVERNMENT (Continued)

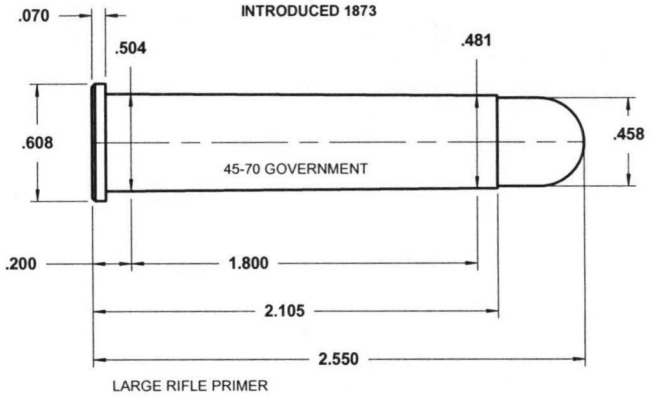
These loads are for all guns in GOOD CONDITION.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
				....STARTING LOADS....					
500 Grain Lead Bullet (Continued)									
ACCUR 8700	49.5	3.41	NA	3.4	842	55.0	957	9800 PSI	2.635
520 Grain Lead Bullet									
ACC XMP5744	21.6	1.62	DBLD	1.6	1060	24.0	1205	16300 PSI	2.655
530 Grain Lead Bullet									
A-XMR-2495	41.4	3.10	DBLD	2.8	1237	46.0	1406	11600 PSI	2.830
A-XMR-3100	49.5	3.70	NA	3.4	1196	55.0c	1359	16900 PSI	2.830
A-XMR-4350	43.2	3.20	DBLD	3.1	1167	48.0	1326	16600 PSI	2.830
ACCUR 8700	58.5	4.02	NA	4.0	932	65.0c	1059	15800 PSI	2.830
570 Grain Lead Bullet									
ACC XMP5744	19.8	1.49	1.46	1.3	949	22.0	1079	18000 PSI	2.870

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge **Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027**

45-70 MODEL 95 LEVER ACTION

DO NOT USE THESE LOADS IN TRAPDOOR OR ROLLING BLOCK ARMS.



Useful case capacity 4.06 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
300 Grain Jacketed Bullet									
H4198	49.1	3.68	NA	3.4	2021	55.0c	2245	27600 CUP	2.525
A-XMR-2495	59.4c	4.45	NA	4.3	1914	66.0c	2175	22100 PSI	2.550
A-XMR-2015	53.1	3.88	NA	3.7	1904	59.0c	2164	27900 PSI	2.550
H335	61.0	3.93	NA	3.7	2115	61.0	2115	22500 CUP	2.525
RELODER 7	49.9	3.63	NA	3.4	2075	50.0	2075	24700 PSI	2.475
H322	57.0c	4.13	NA	4.0	2047	57.0c	2047	21400 CUP	2.525
VEC TU2000	46.3	3.53	NA	3.4	1827	49.4	2031	22075 CIP	2.700
ACCUR 2700	58.5	4.01	NA	4.0	1706	65.0c	1939	25200 PSI	2.550
IMR3031	47.0	3.58	NA	3.4	1734	51.5	1890	27000 PSI	2.500
IMR4198	36.3	2.87	DBLD	2.8	1676	41.2	1880	28000 PSI	2.500
A-XMR-4350	63.0c	4.66	2 SCOOPS	2.2	1597	70.0c	1815	20100 PSI	2.550
VEC SP3	30.0	2.05	DBLD	1.9	1644	34.0	1791	20929 CIP	2.700
A-XMR-3100	63.0c	4.71	2 SCOOPS	2.2	1500	70.0c	1705	18300 PSI	2.550
ACC XMP5744	31.5	2.37	DBLD	2.2	1500	35.0	1704	27900 PSI	2.550
HERC 2400	30.0	2.23	DBLD	2.2	1650	30.0	1650	23000 PSI	2.475
300 Grain Lead Bullet									
ACC XMP5744	34.2	2.57	DBLD	2.5	1651	38.0	1877	28000 PSI	2.550
330 Grain Lead Bullet									
A-XMR-2495	53.1	3.97	NA	3.7	1738	59.0c	1975	19200 PSI	2.520
A-XMR-2015	45.0	3.28	DBLD	3.1	1697	50.0	1928	23200 PSI	2.520

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

45-70 MODEL 95 LEVER ACTION (Continued)

DO NOT USE THESE LOADS IN TRAPDOOR OR ROLLING BLOCK ARMS.

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
330 Grain Lead Bullet (Continued)									
ACCUR 2700	52.2	3.57	NA	3.4	1627	58.0	1849	26100 PSI	2.520
350 Grain Jacketed Bullet									
ACCUR 2520	54.0	3.69	NA	3.4	1836	60.0c	2086	28000 PSI	2.550
A-XMR-2495	54.9c	4.11	NA	4.0	1810	61.0c	2057	27100 PSI	2.550
ACCUR 2460	53.1	3.48	NA	3.4	1748	59.0	1986	26200 PSI	2.550
A-XMR-2015	47.7	3.48	NA	3.4	1700	53.0	1932	25400 PSI	2.550
H335	51.2	3.30	NA	3.1	1814	54.0	1903	26000 CUP	2.540
ACCUR 2230	48.6	3.19	DBLD	3.1	1648	54.0	1873	26200 PSI	2.550
H4895	53.0	3.86	NA	3.7	1859	53.0	1859	21700 CUP	2.540
H-VARGET	54.0	3.95	NA	3.7	1829	54.0	1829	21800 CUP	2.540
ACCUR 2700	54.9	3.76	NA	3.7	1579	61.0c	1794	26900 PSI	2.550
A-XMR-4350	58.5c	4.33	NA	4.3	1527	65.0c	1735	22700 PSI	2.550
A-XMR-3100	58.5c	4.38	NA	4.3	1399	65.0c	1590	21600 PSI	2.550
ACC XMP5744	28.8	2.16	DBLD	1.9	1327	32.0	1508	27100 PSI	2.550
378 Grain Lead Bullet									
A-XMR-2495	49.5	3.70	NA	3.4	1703	55.0c	1935	23800 PSI	2.565
A-XMR-2015	44.1	3.22	DBLD	3.1	1602	49.0	1821	23400 PSI	2.565
ACCUR 2700	51.3	3.51	NA	3.4	1525	57.0	1733	25600 PSI	2.565
A-XMR-4350	54.0	4.00	NA	3.7	1427	60.0c	1622	21500 PSI	2.565
ACC XMP5744	27.4	2.06	DBLD	1.9	1337	30.5	1520	28000 PSI	2.565
A-XMR-3100	54.0	4.04	NA	4.0	1307	60.0c	1485	19800 PSI	2.565
385 Grain Lead Bullet									
RELODER 7	44.2	3.22	DBLD	3.1	1776	45.0	1810	25100 PSI	2.575
HERC 2400	25.0	1.85	DBLD	1.6	1340	25.0	1340	21300 PSI	2.575
400 Grain Jacketed Bullet									
ACCUR 2460	51.3	3.37	NA	3.1	1695	57.0	1926	28000 PSI	2.560
ACCUR 2520	48.6	3.32	NA	3.1	1626	54.0	1848	23800 PSI	2.560
A-XMR-2495	49.5	3.70	NA	3.4	1616	55.0c	1836	23800 PSI	2.560
H322	50.0	3.62	NA	3.4	1821	50.0	1821	23700 CUP	2.540
H335	50.4	3.25	DBLD	3.1	1762	52.0	1813	25400 CUP	2.540
VEC TU2000	39.6	3.02	DBLD	2.8	1659	43.2	1791	27866 CIP	2.700
VEC SP9	50.9	3.47	NA	3.4	1765	50.9	1765	23977 CIP	2.700
A-XMR-2015	44.1	3.22	DBLD	3.1	1550	49.0	1761	24000 PSI	2.560
ACCUR 2230	44.1	2.90	DBLD	2.8	1532	49.0	1741	23100 PSI	2.560
H4895	50.0	3.64	NA	3.4	1706	50.0	1706	19200 CUP	2.540
H-VARGET	50.0	3.65	NA	3.4	1693	50.0	1693	18600 CUP	2.540
ACCUR 2700	49.5	3.39	NA	3.1	1415	55.0	1608	25900 PSI	2.560

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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45-70 MODEL 95 LEVER ACTION (Continued)

DO NOT USE THESE LOADS IN TRAPDOOR OR ROLLING BLOCK ARMS.

Powder Type	....STARTING LOADS.... Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL
400 Grain Jacketed Bullet (Continued)								
RELODER 7	39.6	2.88	DBLD	2.8	1565	40.0 1580	24900 PSI	2.700
VEC TU5000	50.9	3.66	NA	3.4	1572	50.9 1572	18636 CIP	2.700
A-XMR-4350	54.0	4.00	NA	3.7	1382	60.0c 1570	21300 PSI	2.560
A-XMR-3100	54.0	4.04	NA	4.0	1278	60.0c 1452	20100 PSI	2.560
ACC XMP5744	27.9	2.10	DBLD	1.9	1261	31.0 1434	27500 PSI	2.550
HERC 2400	25.0	1.85	DBLD	1.6	1260	25.0 1260	24000 PSI	2.700
ACCUR 8700	54.0	3.72	NA	3.7	873	60.0c 992	14300 PSI	2.560
405 Grain Jacketed Bullet								
IMR3031	46.9	3.57	NA	3.4	1647	51.4 1795	27000 CUP	2.550
IMR4895	48.1	3.50	NA	3.4	1654	52.5 1785	26900 CUP	2.550
IMR4064	50.8	3.78	NA	3.7	1649	55.0c 1780	26700 CUP	2.550
IMR4320	48.3	3.46	NA	3.4	1564	53.5 1720	27300 CUP	2.550
IMR4198	34.2	2.71	DBLD	2.5	1473	38.0 1620	27400 CUP	2.550
IMR4350	56.0c	4.12	NA	4.0	1555	56.0c 1555	20000 CUP	2.550
SR4759	26.6	2.64	DBLD	2.5	1390	29.0 1500	26900 CUP	2.550
IMR4227	27.9	2.15	DBLD	1.9	1370	30.0 1465	26500 CUP	2.550
IMR4831	56.0c	4.12	NA	4.0	1390	56.0c 1390	17800 CUP	2.550
405 Grain Lead Bullet								
A-XMR-2495	48.6	3.64	NA	3.4	1585	54.0 1801	22200 PSI	2.550
A-XMR-2015	48.6	3.55	NA	3.4	1465	54.0 1665	26800 PSI	2.550
ACCUR 2700	48.6	3.33	NA	3.1	1465	54.0 1665	26800 PSI	2.550
VEC TU2000	32.4	2.47	DBLD	2.2	1539	33.6 1572	20391 CIP	2.700
ACC XMP5744	27.0	2.03	DBLD	1.9	1327	30.0 1508	28000 PSI	2.550
A-XMR-4350	50.4	3.73	NA	3.7	1297	56.0c 1474	16200 PSI	2.550
A-XMR-3100	54.0	4.04	NA	4.0	1251	60.0c 1422	18200 PSI	2.550
475 Grain Lead Bullet								
A-XMR-2495	45.0	3.37	NA	3.1	1538	50.0 1748	24300 PSI	2.725
A-XMR-2015	39.6	2.89	DBLD	2.8	1461	44.0 1660	26300 PSI	2.725
A-XMR-4350	52.2	3.86	NA	3.7	1425	58.0c 1619	26300 PSI	2.725
A-XMR-3100	54.0	4.04	NA	4.0	1331	60.0c 1513	25700 PSI	2.725
ACCUR 2700	44.1	3.02	DBLD	2.8	1309	49.0 1488	26900 PSI	2.725
500 Grain Jacketed Bullet								
A-XMR-4350	52.2	3.86	NA	3.7	1410	58.0c 1602	25300 PSI	2.580
A-XMR-2495	41.4	3.10	DBLD	2.8	1353	46.0 1538	26400 PSI	2.580
ACCUR 2460	39.6	2.60	DBLD	2.5	1328	44.0 1509	25400 PSI	2.580
ACC XMP5744	27.9	2.10	DBLD	1.9	1309	31.0 1488	28000 PSI	2.580
ACCUR 2230	37.8	2.48	DBLD	2.2	1287	42.0 1462	26000 PSI	2.580

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027

45-70 MODEL 95 LEVER ACTION (Continued)

DO NOT USE THESE LOADS IN TRAPDOOR OR ROLLING BLOCK ARMS.

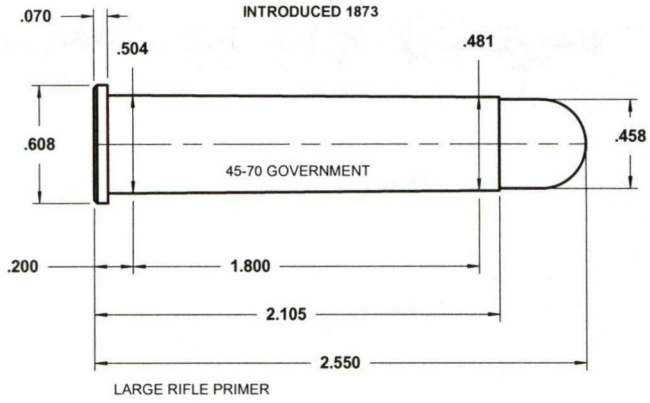
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
....STARTING LOADS....									
500 Grain Jacketed Bullet (Continued)									
A-XMR-3100	54.0	4.04	NA	4.0	1268	60.0c	1441	26400 PSI	2.580
ACCUR 2520	39.6	2.70	DBLD	2.5	1262	44.0	1434	28000 PSI	2.580
A-XMR-2015	36.0	2.63	DBLD	2.5	1251	40.0	1422	23800 PSI	2.580
ACCUR 2700	41.4	2.83	DBLD	2.8	1168	46.0	1327	23600 PSI	2.580
ACCUR 8700	54.0	3.72	NA	3.7	909	60.0c	1033	10000 PSI	2.580
500 Grain Lead Bullet									
A-XMR-2495	44.1	3.30	NA	3.1	1470	49.0	1670	24400 PSI	2.550
A-XMR-4350	52.2	3.86	NA	3.7	1392	58.0c	1582	24200 PSI	2.550
A-XMR-2015	37.8	2.76	DBLD	2.5	1379	42.0	1567	25900 PSI	2.550
A-XMR-3100	54.0	4.04	NA	4.0	1314	60.0c	1493	25000 PSI	2.550
ACC XMP5744	27.9	2.10	DBLD	1.9	1287	31.0	1463	28000 PSI	2.850
ACCUR 2700	42.3	2.90	DBLD	2.8	1244	47.0	1414	25900 PSI	2.550
530 Grain Lead Bullet									
ACC XMP5744	26.5	1.99	DBLD	1.9	1196	29.5	1360	27500 PSI	2.950
570 Grain Lead Bullet									
ACC XMP5744	23.8	1.79	DBLD	1.6	1098	26.5	1248	26400 PSI	2.870

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
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45-70 MODERN RIFLE DESIGN

Only for modern Bolt Action or Ruger Single shot arms.



Useful case capacity 4.06 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL	1 Grain Veloc	Factor Pressr
300 Grain Jacketed Bullet											
H4198	59.5c	4.46	NA	4.3	2391	63.0c	2532	50000 PSI	2.525	....	....
H335	61.0	3.93	NA	3.7	2073	68.0c	2326	38800 PSI	2.525	....	....
H322	57.0c	4.13	NA	4.0	2002	63.0c	2252	32600 PSI	2.525	....	....
v-N133	59.9c	4.61	2 SCOOPS	2.2	2187	60.0c	2187	NA	NA	2.490	....
v-N135	61.6c	4.78	2 SCOOPS	2.2	2134	61.7c	2134	NA	NA	2.490	....
v-N130	52.0	3.92	NA	3.7	2090	52.1	2090	NA	NA	2.490	....
v-N120	44.9	3.48	NA	3.4	2029	45.0	2029	NA	NA	2.490	....
H4227	35.2	2.71	DBLD	2.5	1732	40.0	1942	NA	NA	2.475	....
350 Grain Jacketed Bullet											
H4198	50.5	3.79	NA	3.7	2091	56.0c	2300	50000 PSI	2.540	....	....
H335	57.0	3.68	NA	3.4	1976	63.0c	2174	47300 PSI	2.540	.9842	.9378
H322	52.0	3.77	NA	3.7	1967	57.0c	2143	41100 PSI	2.540	....	....
ACCUR 2520	54.0	3.69	NA	3.4	1836	60.0c	2086	28000 PSI	2.550	....	....
H4895	53.0	3.86	NA	3.7	1784	59.0c	2045	32900 PSI	2.540	....	....
H-VARGET	54.0	3.95	NA	3.7	1786	60.0c	2013	29500 PSI	2.540	....	....
400 Grain Jacketed Bullet											
H4198	48.0	3.60	NA	3.4	1934	53.0	2108	49100 PSI	2.540	.9827	.9168
H335	54.0	3.48	NA	3.4	1870	60.0	2057	49800 PSI	2.540	.9842	.9285
H322	50.0	3.62	NA	3.4	1767	55.0	1984	39200 PSI	2.540	.9769	.9043
ACCUR 2460	51.3	3.37	NA	3.1	1695	57.0	1926	28000 PSI	2.560	....	....

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DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

45-70 MODERN RIFLE DESIGN (Continued)

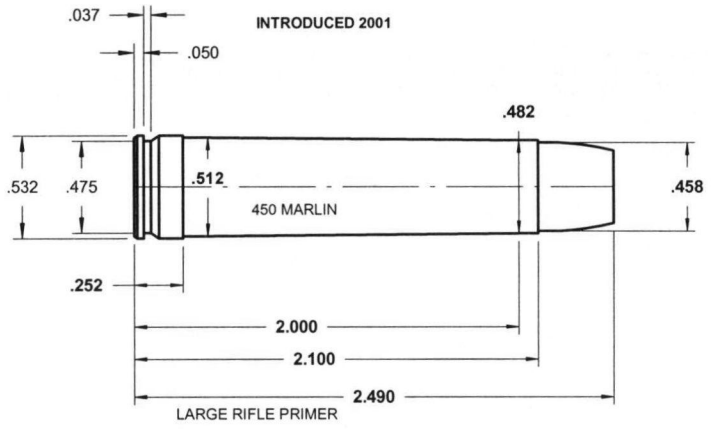
Only for modern Bolt Action or Ruger Single shot arms.

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units		Min. OAL	1 Grain Factor Veloc	Pressr
400 Grain Jacketed Bullet (Continued)												
v-N133	51.3	3.95	NA	3.7	1854	51.4	1854	NA	NA	2.490	....	....
v-N135	51.5	4.00	NA	3.7	1783	51.6	1783	NA	NA	2.490	....	....
v-N120	35.7	2.77	DBLD	2.5	1604	35.8	1604	NA	NA	2.490	....	....
405 Grain Bullet												
H322	47.5	3.45	NA	3.4	1652	54.0	1852	NA	NA	2.560	....	....
H4895	49.3	3.59	NA	3.4	1650	56.0c	1850	NA	NA	2.560	....	....
H4198	38.7	2.90	DBLD	2.8	1594	44.0	1788	NA	NA	2.560	....	....
BL-C(2)	51.0	3.29	DBLD	3.1	1593	58.0	1786	NA	NA	2.560	....	....
H335	51.0	3.29	DBLD	3.1	1587	58.0	1780	NA	NA	2.560	....	....
H4227	31.7	2.44	DBLD	2.2	1456	36.0	1631	NA	NA	2.560	....	....
500 Grain Bullet												
H4895	45.8	3.33	NA	3.1	1498	52.0	1679	NA	NA	2.700	....	....
H322	44.0	3.19	DBLD	3.1	1486	50.0	1667	NA	NA	2.700	....	....
H335	46.6	3.01	DBLD	2.8	1461	53.0	1638	NA	NA	2.700	....	....
BL-C(2)	46.6	3.01	DBLD	2.8	1448	53.0	1623	NA	NA	2.700	....	....
H4198	36.1	2.71	DBLD	2.5	1382	41.0	1549	NA	NA	2.700	....	....
H4227	29.9	2.30	DBLD	2.2	1308	34.0	1468	NA	NA	2.700	....	....
500 Grain Jacketed Bullet												
ACC XMP5744	27.9	2.10	DBLD	1.9	1309	31.0	1488	28000	PSI	2.580	....	....
ACCUR 2520	39.6	2.70	DBLD	2.5	1262	44.0	1434	28000	PSI	2.580	....	....

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c = Compressed charge

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450 MARLIN



Useful case capacity 4.06 cc

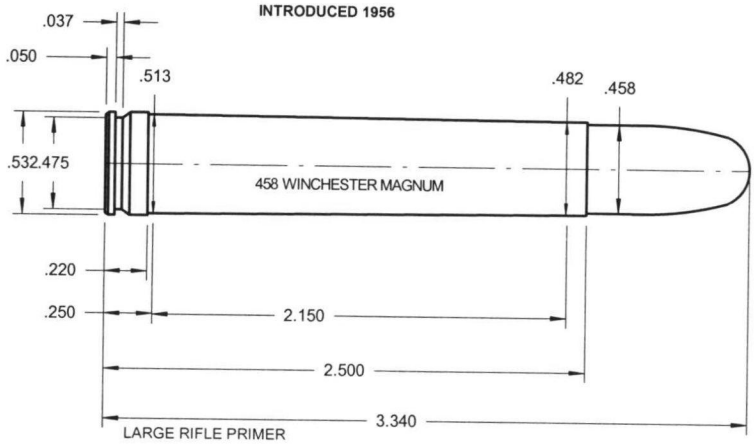
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED Velocity FPS	Press Units	Min. OAL	1 Grain Factor Veloc	Pressr
300 Grain Jacketed Bullet										
H4198	48.0	3.60	NA	3.4	2116	53.0	2321 42200 PSI	2.510	.9816	.9571
H322	56.0	4.06	NA	4.0	2160	59.0c	2289 37300 PSI	2.510	....	....
IMR3031	57.0c	4.34	NA	4.3	2100	57.0c	2100 35000 PSI	2.505	....	....
300 Grain Barnes X Bullet										
IMR4198	43.4	3.44	NA	3.4	1962	44.2	2000 39000 PSI	2.512	....	....
IMR3031	52.5	4.00	NA	3.7	1870	52.5	1870 35000 PSI	2.512	....	....
350 Grain Jacketed Bullet										
H322	53.0	3.84	NA	3.7	2043	58.0c	2196 42300 PSI	2.530	....	....
BENCHMARK	56.0	4.00	NA	3.7	2004	59.0c	2129 38600 PSI	2.530	....	....
H4198	43.0	3.23	DBLD	3.1	1939	48.5	2119 42200 PSI	2.530	.9839	.9700
IMR4198	43.1	3.41	NA	3.4	1974	45.0	2050 40000 PSI	2.550	....	....
IMR3031	56.0c	4.27	NA	4.0	2030	56.0c	2030 38000 PSI	2.550	....	....
400 Grain Jacketed Bullet										
H322	48.0	3.48	NA	3.4	1862	52.5	2023 41900 PSI	2.520	.9816	.9596
BENCHMARK	50.0	3.57	NA	3.4	1811	55.0	2010 42500 PSI	2.520	.9793	.9507
H4895	51.0	3.71	NA	3.7	1817	56.0c	1986 42000 PSI	2.520	.9822	.9625
H4198	41.0	3.08	DBLD	2.8	1872	45.5	1958 42600 PSI	2.520	.9899	.9926
H335	52.0	3.35	NA	3.1	1862	55.0	1953 41600 PSI	2.520	....	....
H-VARGET	54.0	3.95	NA	3.7	1803	57.0c	1910 38000 PSI	2.520	....	....
IMR3031	48.6	3.70	NA	3.4	1791	50.8	1860 40000 PSI	2.512	....	....
IMR4198	38.3	3.03	DBLD	2.8	1752	40.0	1820 40000 PSI	2.512	....	....

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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458 WINCHESTER MAGNUM



Useful case capacity 4.84 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
300 Grain Jacketed Bullet										
A-XMR-2015	68.4c	4.99	2 SCOOPS	2.2	2293	76.0c	2606	35500	CUP	2.940
v-N120	64.7c	5.02	2 SCOOPS	2.5	2407	70.0c	2598	NA	NA	2.933
RELODER 7	70.0c	5.10	2 SCOOPS	2.5	2555	70.0c	2555	41400	CUP	2.950
ACCUR 2230	70.2	4.61	2 SCOOPS	2.2	2248	78.0c	2554	33500	CUP	2.940
ACCUR 2460	70.2	4.61	2 SCOOPS	2.2	2205	78.0c	2506	30800	CUP	2.940
HERC 2400	35.0	2.60	DBLD	2.5	1590	35.0	1590	13500	CUP	2.950
300 Grain Barnes X Bullet										
H4198	72.0c	5.40	2 SCOOPS	2.5	2630	77.0c	2784	50700	CUP	3.275
H322	78.0c	5.65	2 SCOOPS	2.8	2600	83.0c	2753	46700	CUP	3.275
350 Grain Jacketed Bullet										
H322	75.0c	5.44	2 SCOOPS	2.5	2445	80.0c	2589	49400	CUP	3.105
A-XMR-2015	67.5c	4.93	2 SCOOPS	2.2	2250	75.0c	2557	44600	CUP	2.965
H4198	67.0c	5.03	2 SCOOPS	2.5	2383	72.0c	2548	51600	CUP	3.105
v-N130	69.0c	5.20	2 SCOOPS	2.5	2376	73.7c	2516	NA	NA	3.091
ACCUR 2230	70.2	4.61	2 SCOOPS	2.2	2211	78.0c	2512	45100	CUP	2.965
H4895	77.0c	5.61	2 SCOOPS	2.5	2403	80.0c	2496	38700	CUP	3.105
ACCUR 2460	70.2	4.61	2 SCOOPS	2.2	2189	78.0c	2487	42300	CUP	2.965
v-N120	63.5c	4.93	2 SCOOPS	2.2	2283	69.1c	2464	NA	NA	3.091
VEC TU2000	64.0c	4.88	2 SCOOPS	2.2	2303	64.0c	2303	33425	CIP	3.305
375 Grain Lead Bullet										
ACC XMP5744	46.8	3.52	NA	3.4	1971	52.0	2240	51500	CUP	3.000

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

458 WINCHESTER MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
385 Grain Lead Bullet										
RELODER 7	65.0	4.73	2 SCOOPS	2.2	2285	65.0	2285	42100	CUP	3.000
HERC 2400	30.0	2.23	DBLD	2.2	1290	30.0	1290	14200	CUP	3.000
400 Grain Jacketed Bullet										
A-XMR-2015	68.4c	4.99	2 SCOOPS	2.2	2172	76.0c	2468	48800	CUP	3.140
ACCUR 2230	72.0	4.73	2 SCOOPS	2.2	2162	80.0c	2457	45500	CUP	3.140
ACCUR 2460	72.0	4.72	2 SCOOPS	2.2	2158	80.0c	2452	44700	CUP	3.140
H322	68.5c	4.97	2 SCOOPS	2.2	2188	76.0c	2407	51100	CUP	3.220
H4895	72.0c	5.24	2 SCOOPS	2.5	2219	77.0c	2349	42500	CUP	3.220
H4198	61.0	4.58	2 SCOOPS	2.2	2132	67.0c	2323	51000	CUP	3.220
H-VARGET	74.0c	5.41	2 SCOOPS	2.5	2223	77.0c	2310	38800	CUP	3.220
VEC TU2000	64.0c	4.88	2 SCOOPS	2.2	2238	64.0c	2238	44586	CIP	3.305
400 Grain Lead Bullet										
ACC XMP5744	45.9	3.45	NA	3.4	1909	51.0	2170	50600	CUP	3.000
405 Grain Jacketed Bullet										
H4198	58.1	4.36	NA	4.3	1999	66.0c	2242	NA	NA	3.000
450 Grain Jacketed Bullet										
H322	67.0c	4.86	2 SCOOPS	2.2	2097	71.0c	2220	51000	CUP	3.340
H4895	70.0c	5.10	2 SCOOPS	2.5	2102	74.0c	2205	43000	CUP	3.340
H-VARGET	70.0c	5.12	2 SCOOPS	2.5	2093	74.0c	2195	41600	CUP	3.340
H335	71.5	4.61	2 SCOOPS	2.2	2051	76.0c	2172	44800	CUP	3.340
H4198	56.5	4.24	NA	4.0	1976	60.0	2092	50800	CUP	3.340
455 Grain Lead Bullet										
ACC XMP5744	44.1	3.31	NA	3.1	1779	49.0	2022	52000	CUP	3.110
475 Grain Lead Bullet										
ACCUR 2230	54.0	3.55	NA	3.4	1763	60.0	2003	32700	CUP	3.085
ACCUR 2460	54.9	3.60	NA	3.4	1753	61.0	1992	30800	CUP	3.085
A-XMR-2015	49.5	3.61	NA	3.4	1660	55.0	1886	28200	CUP	3.085
500 Grain Jacketed Bullet										
ACCUR 2460	66.6	4.37	NA	4.3	1929	74.0c	2192	44800	CUP	3.305
H335	71.0	4.58	2 SCOOPS	2.2	2042	75.5c	2163	50300	CUP	3.310
H4895	70.0c	5.10	2 SCOOPS	2.5	2060	74.0c	2161	50300	CUP	3.310
ACCUR 2230	64.8	4.26	NA	4.0	1900	72.0	2159	45600	CUP	3.305
H-VARGET	70.0c	5.12	2 SCOOPS	2.5	2052	74.0c	2152	48100	CUP	3.310
A-XMR-2015	61.2	4.47	NA	4.3	1891	68.0c	2149	49200	CUP	3.305
BL-C(2)	77.0c	4.97	2 SCOOPS	2.2	2117	77.0c	2117	43800	CUP	3.300
VEC SP10	61.7	4.12	NA	4.0	1946	68.7	2113	48882	CIP	3.305
H322	62.5	4.53	NA	4.3	1917	69.5c	2109	52000	CUP	3.310
v-N140	70.1c	5.14	2 SCOOPS	2.5	1983	74.5c	2100	NA	NA	3.327

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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c = Compressed charge Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

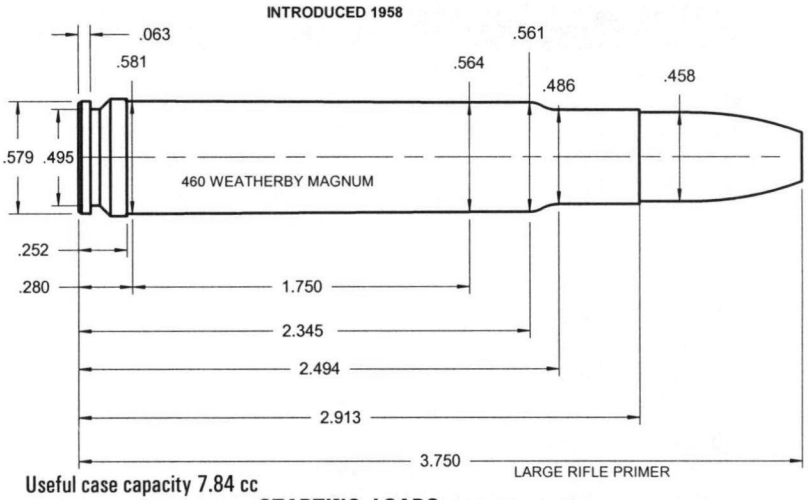
458 WINCHESTER MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
500 Grain Jacketed Bullet (Continued)										
v-N135	65.5c	5.09	2 SCOOPS	2.5	1927	70.4c	2060	NA	NA	3.327
VEC SP9	71.0c	4.84	2 SCOOPS	2.2	2054	71.0c	2054	44659	CIP	3.305
WIN 748	73.0	4.78	2 SCOOPS	2.2	2040	73.0	2040	39000	CUP	3.300
VEC TU2000	60.2	4.59	2 SCOOPS	2.2	2001	61.7	2031	45457	CIP	3.305
RELODER 7	63.5	4.62	2 SCOOPS	2.2	1981	64.0	2000	47000	CUP	3.280
H4198	53.0	3.98	NA	3.7	1823	58.5	1987	51100	CUP	3.310
HERC 2400	35.0	2.60	DBLD	2.5	1415	35.0	1415	32600	CUP	3.280
500 Grain Lead Bullet										
ACC XMP5744	42.3	3.18	DBLD	3.1	1672	47.0	1901	49900	CUP	3.170
500 Grain Solid Bullet										
v-N135	72.5c	5.63	2 SCOOPS	2.8	2053	72.5c	2053	NA	NA	3.280
510 Grain Jacketed Bullet										
IMR4895	63.8	4.64	2 SCOOPS	2.2	1873	72.5c	2100	53000	CUP	3.340
IMR4320	67.0	4.80	2 SCOOPS	2.2	1900	74.0c	2070	51500	CUP	3.340
WIN 748	75.0c	4.91	2 SCOOPS	2.2	2065	75.0c	2065	41000	CUP	3.300
IMR3031	69.0c	5.26	2 SCOOPS	2.5	2030	69.0c	2030	43900	CUP	3.340
IMR4064	71.0c	5.29	2 SCOOPS	2.5	2020	71.0c	2020	41300	CUP	3.340
IMR4198	51.5	4.08	NA	4.0	1733	58.0	1925	52500	CUP	3.340
IMR4350	72.0c	5.29	2 SCOOPS	2.5	1810	72.0c	1810	30300	CUP	3.340
IMR4831	72.0c	5.29	2 SCOOPS	2.5	1680	72.0c	1680	24900	CUP	3.340
IMR4227	39.8	3.06	DBLD	2.8	1498	45.0	1665	52700	CUP	3.340
SR4759	39.6	3.93	NA	3.7	1482	44.5	1645	52400	CUP	3.340
600 Grain Jacketed Bullet										
H335	59.8	3.86	NA	3.7	1729	68.0	1939	NA	NA	3.300
BL-C(2)	61.6	3.97	NA	3.7	1716	70.0	1924	NA	NA	3.300
H4895	59.0	4.29	NA	4.0	1712	67.0c	1920	NA	NA	3.300

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
Copyright 01-13-2003 Lee Precision Inc. Hartford, Wi. 53027
2 SCOOPS = Use TWO dippers of powder in each round.

460 WEATHERBY MAGNUM



Useful case capacity 7.84 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
350 Grain Jacketed Bullet									
ACCUR 2520	106.4	7.26	2 SCOOPS	3.4	2779	112.0	2956	62300 PSI	3.345
ACCUR 2700	115.9c	7.94	2 SCOOPS	3.7	2673	122.0c	2844	53000 PSI	3.345
A-XMR-4350	118.8c	8.79	2 SCOOPS	4.3	2657	125.0c	2827	49100 PSI	3.345
H380	104.0	7.19	2 SCOOPS	3.4	2583	114.0c	2808	NA NA	3.355
H414	110.0	7.27	2 SCOOPS	3.4	2442	120.0c	2791	NA NA	3.355
H4895	100.0	7.28	2 SCOOPS	3.4	2514	110.0c	2760	NA NA	3.355
H4350	115.0c	8.34	2 SCOOPS	4.0	2595	120.0c	2737	NA NA	3.355
H4831	118.0c	8.55	2 SCOOPS	4.0	2481	128.0c	2678	NA NA	3.355
ACC XMP5744	61.2	4.60	2 SCOOPS	2.2	2113	68.0	2402	48200 PSI	3.345
400 Grain Barnes X Bullet									
H414	107.0	7.07	2 SCOOPS	3.4	2494	117.0	2640	NA NA	3.710
H4350	112.0c	8.12	2 SCOOPS	4.0	2431	118.0c	2610	NA NA	3.710
H380	100.0	6.91	2 SCOOPS	3.4	2448	110.0	2593	NA NA	3.710
H4895	97.0	7.06	2 SCOOPS	3.4	2404	107.0	2589	NA NA	3.710
H4831	117.0c	8.48	2 SCOOPS	4.0	2434	127.0c	2565	NA NA	3.710
455 Grain Lead Bullet									
ACC XMP5744	40.0	3.01	DBLD	2.8	1520	65.0	2192	48800 PSI	3.605

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
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2 SCOOPS = Use TWO dippers of powder in each round.

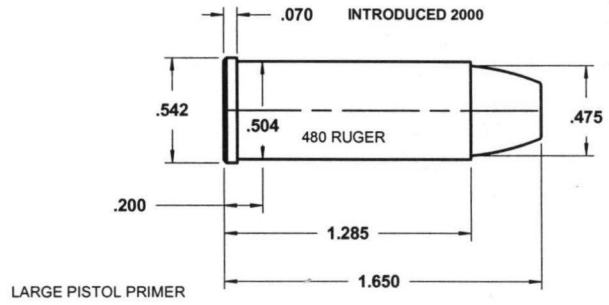
460 WEATHERBY MAGNUM (Continued)

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER Velocity EXCEED FPS	Press Units	Min. OAL
500 Grain Jacketed Bullet								
A-XMR-4350	114.0c	8.44	2 SCOOPS	4.0	2454	120.0c2611	62400 PSI	3.710
ACCUR 2700	108.3	7.42	2 SCOOPS	3.7	2383	114.0 2535	64700 PSI	3.710
H414	106.0	7.01	2 SCOOPS	3.4	2469	116.0 2530	NA NA	3.710
H4350	108.0	7.83	2 SCOOPS	3.7	2371	115.0c2508	NA NA	3.710
A-XMR-3100	120.7c	9.03	2 SCOOPS	4.3	2355	127.0c2505	56700 PSI	3.710
H380	98.0	6.77	2 SCOOPS	3.1	2376	108.0 2483	NA NA	3.710
H4895	95.0	6.92	2 SCOOPS	3.4	2314	105.0 2478	NA NA	3.710
H4831	116.0c	8.41	2 SCOOPS	4.0	2386	126.0c2469	NA NA	3.710
VEC TU5000	94.0	6.77	2 SCOOPS	3.1	2195	106.5 2461	55007 CIP	3.750
IMR7828	117.0c	8.48	2 SCOOPS	4.0	2360	117.0c2360	41900 CUP	3.720
VEC TU7000	115.7c	8.15	2 SCOOPS	4.0	2313	115.7c2313	46734 CIP	3.750
ACCUR 8700	128.3c	8.83	2 SCOOPS	4.3	1894	135.0c2015	34600 PSI	3.710
600 Grain Solid Bullet								
H4831	110.0c	7.97	2 SCOOPS	3.7	2302	115.0c2457	NA NA	3.710
H4350	98.0	7.11	2 SCOOPS	3.4	2292	104.0 2439	NA NA	3.710
H414	102.0	6.74	2 SCOOPS	3.1	2369	105.0 2419	NA NA	3.710

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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2 SCOOPS = Use TWO dippers of powder in each round.

480 RUGER



Useful case capacity 1.84 cc

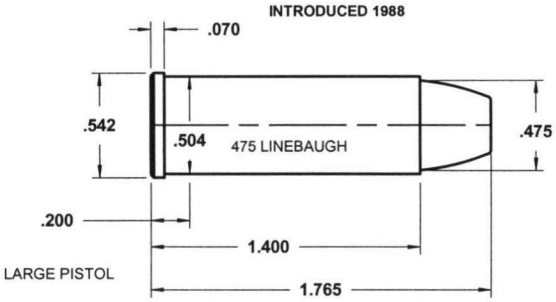
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
325 Grain XTP									
H LIL GUN	22.5	1.53	1.46	1.3	1416	25.1	1525	45200 PSI	1.620
H110	25.0	1.64	DBLD	1.6	1416	27.0	1518	44900 PSI	1.620
H4227	24.0c	1.85	DBLD	1.6	1295	27.2c	1477	45600 PSI	1.620
LONGSHOT	13.0	1.07	1.02	1.0	1217	14.5	1330	47000 PSI	1.620
TITEGROUP	9.0	.76	.76	.7	1016	10.7	1158	46200 PSI	1.620
370 Grain Lead Bullet									
H LIL GUN	22.0	1.49	1.46	1.3	1354	26.0	1539	46800 PSI	1.640
H110	24.0	1.57	DBLD	NA	1348	26.0	1454	41500 PSI	1.640
H4227	22.5	1.73	DBLD	1.6	1248	26.0c	1427	45900 PSI	1.640
LONGSHOT	12.0	.99	.95	NA	1162	13.8	1272	45800 PSI	1.640
TITEGROUP	9.0	.76	.76	.7	1047	10.3	1137	45800 PSI	1.640
400 Grain XTP									
H110	18.0	1.18	1.18	NA	1115	20.5	1258	46600 PSI	1.620
H LIL GUN	15.0	1.02	1.02	1.0	1067	18.0	1229	45600 PSI	1.620
H4227	18.0	1.38	1.36	1.3	1026	21.0	1211	46100 PSI	1.620
LONGSHOT	9.5	.78	.76	.7	965	11.0	1082	46900 PSI	1.620
TITEGROUP	7.0	.59	.57	NA	816	8.5	959	46800 PSI	1.620
405 Grain Lead Bullet									
H LIL GUN	19.0	1.29	1.26	1.3	1219	21.0	1337	43900 PSI	1.620
H110	20.0	1.31	1.26	1.3	1213	22.3	1328	45200 PSI	1.620
H4227	19.0	1.46	1.46	1.3	1112	21.7	1255	45500 PSI	1.620

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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475 LINEBAUGH



Useful case capacity 2.07 cc

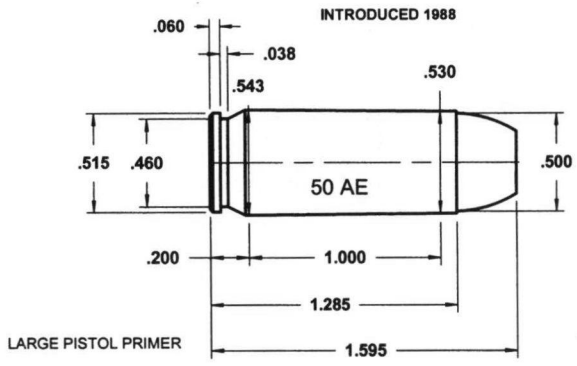
....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press Units	Min. OAL
385 Grain Lead Bullet									
H110	27.0	1.77	DBLD	1.6	1435	30.0	1566	55000 PSI	1.810
H LIL GUN	29.0	1.97	DBLD	1.9	1523	29.0	1523	47900 PSI	1.810
H4227	25.5	1.96	DBLD	1.9	1342	28.0c	1456	51100 PSI	1.810
TITEGROUP	7.0	.59	.57	NA	854	11.0	1130	51700 PSI	1.810
420 Grain Jacketed Bullet									
H110	25.0	1.64	DBLD	1.6	1304	27.0	1424	49600 PSI	1.810
H4227	24.0	1.85	DBLD	1.6	1243	26.5	1379	51800 PSI	1.810

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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50 ACTION EXPRESS



Useful case capacity 2.29 cc

....STARTING LOADS....

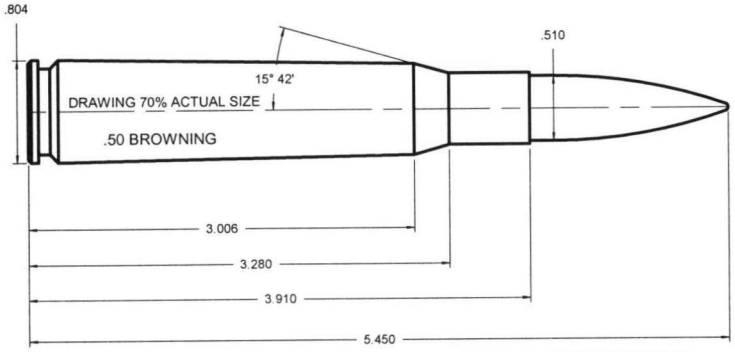
Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
300 Grain Jacketed Bullet										
v-N110	25.3	2.11	DBLD	1.9	1337	28.6c	1499	NA	NA	1.575
VEC SP3	32.4	2.21	DBLD	2.2	1358	34.0c	1463	30087	CUPe	1.575
v-N105	19.4	1.75	DBLD	1.6	1316	21.3	1434	NA	NA	1.575
v-N120	32.6c	2.53	DBLD	2.5	1255	36.0c	1368	NA	NA	1.575
325 Grain Jacketed Bullet										
v-N110	24.1	2.01	DBLD	1.9	1270	27.0	1460	NA	NA	1.575
H110	29.0	1.90	DBLD	1.9	1289	32.5	1431	NA	NA	1.575
v-N120	30.7c	2.38	DBLD	2.2	1205	34.5c	1339	NA	NA	1.575
v-N105	17.7	1.59	DBLD	1.6	1207	19.5	1316	NA	NA	1.575
ACCUR 1680	36.4c	2.38	DBLD	2.2	1257	37.8c	1305	32000	PSI	1.575
H4227	29.0	2.23	DBLD	2.2	1222	30.8c	1294	NA	NA	1.575
ACCUR #9	22.9	1.51	1.46	1.3	1199	23.8	1247	32000	PSI	1.575

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer. e = European
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge

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50 BROWNING

INTRODUCED 1918



EXTRA LARGE RIFLE PRIMER

Useful case capacity 17.01 cc

....STARTING LOADS....

Powder Type	Start Grains	Volume CC	Auto-Disk	Lee Dipper	Velocity FPS	NEVER EXCEED	Velocity FPS	Press	Units	Min. OAL
642 Grain Jacketed Bullet										
ACCUR 8700	205.0	14.1	NA	NA	2610	228.0	2930	NA	NA	5.450
647 Grain Jacketed Bullet										
v-N170	197.5	14.1	NA	NA	2591	220.6	2851	NA	NA	5.413
655 Grain Jacketed Bullet										
H 50 BMG	248.0c	17.2	NA	NA	3029	248.0c	3029	NA	NA	5.450
750 Grain Jacketed Bullet										
H 50 BMG	233.0	16.2	NA	NA	2800	233.0	2800	NA	NA	5.450
ACCUR 8700	195.0	13.4	NA	NA	2322	218.0	2700	NA	NA	5.450
v-N170	186.6	13.3	NA	NA	2422	209.0	2690	NA	NA	5.413
800 Grain Solid Bullet										
H 50 BMG	225.0	15.6	NA	NA	2725	225.0	2725	NA	NA	5.450

CAUTION: With NEVER EXCEED LOADS maintain Minimum Over All Length or longer.
DBLD = Double Disk, see instructions with your Auto-Disk powder measure. NA = None Available
c = Compressed charge
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VMD	POWDER
.06280	BLACK FFFG
.06800	BLACK FFG
.07190	BLACK FG
.06720	BLACKFFFFG
.13490	A NITRO100
.07300	A-XMR-2015
.07484	A-XMR-2495
.07480	A-XMR-3100
.07547	A-XMR-4064
.07400	A-XMR-4350
.06633	ACC MAG PRO
.07515	ACC XMP5744
.08380	ACCUR #2
.06230	ACCUR #5
.06530	ACCUR #7
.06570	ACCUR #9
.06550	ACCUR 1680
.06937	ACCUR 2200
.06570	ACCUR 2230
.06560	ACCUR 2460
.06826	ACCUR 2520
.06847	ACCUR 2700
.06880	ACCUR 8700
.13330	PEARL SCOT
.15870	ROYAL SCOT
.13307	SOLO 1000
.12200	SOLO 1250
.10990	SOLO 1500
.10630	ALLIANT STEEL
.13414	AMER-SELECT
.08650	BLUE DOT
.10640	BULLSEYE
.12620	GREEN DOT
.07420	HERC 2400
.11220	HERCO
.08891	POWER PISTOL
.14130	RED DOT
.07456	RELODER 10
.07066	RELODER 25
.07280	RELODER 7
.06910	RELODER12
.07060	RELODER15
.07060	RELODER19
.06970	RELODER22
.10920	UNIQUE

VMD	POWDER
.07147	BENCHMARK
.06450	BL-C(2)
.14620	CLAYS
.06944	H 50 BMG
.06780	H LIL GUN
.11710	H TRAP100
.08110	H-PYRDX RS
.08230	H-PYRODX P
.07310	H-VARGET
.07130	H1000
.06555	H110
.07250	H322
.06450	H335
.06910	H380
.06610	H414
.07500	H4198
.07690	H4227
.07251	H4350
.06530	H450
.07250	H4831
.07280	H4895
.06860	H870
.09260	HP38
.07120	HS6
.06800	HS7
.12660	INTERNATIONAL
.08244	LONGSHOT
.10145	PYRODEX CTG
.08475	TITEGROUP
.13004	TITEWAD
.10990	UNIVERSAL
.13430	IMR 700X
.10710	IMR 800X
.12050	IMR PB
.07620	IMR3031
.07450	IMR4064
.07920	IMR4198
.07690	IMR4227
.07160	IMR4320
.07350	IMR4350
.07350	IMR4831
.07280	IMR4895
.07250	IMR7828
.11000	SR4756
.09930	SR4759

VMD	POWDER
.10460	SR7625
.07410	AR2205
.07140	AR2206
.07590	AR2207
.07250	AR2208
.07130	AR2209
.06860	AR2213
.12080	AS50
.06770	NORMA 200
.06910	NORMA 201
.14340	NORMA 2010
.12080	NORMA 2020
.06910	NORMA 203
.06770	NORMA 204
.06720	NORMA 205
.06932	R ENFORCER
.00000	R SILHOUETTE
.06838	R TRUE BLUE
.07080	RAM BIG GAME
.06612	RAM MAGNUM
.06711	RAM TAC
.08163	RAM ZIP
.06814	X-TERMINATER
.08922	MP200
.10613	MS200
.11958	VEC AO
.13501	VEC BA10
.09187	VEC BA9
.06678	VEC SP10
.06821	VEC SP3
.06579	VEC SP7
.06821	VEC SP8
.06821	VEC SP9
.07624	VEC TU2000
.07200	VEC TU5000
.07043	VEC TU7000
.07043	VEC TU8000

VMD	POWDER
.09130	v-3N37
.09001	v-N105
.08330	v-N110
.07760	v-N120
.07540	v-N130
.07700	v-N133
.07770	v-N135
.07330	v-N140
.07460	v-N150
.07340	v-N160
.07120	v-N165
.07133	v-N170
.12140	v-N310
.12100	v-N320
.10790	v-N330
.10660	v-N340
.09770	v-N350
.07011	v-N540
.06923	v-N550
.06900	v-N560
.09310	WIN 231
.06560	WIN 296
.11710	WIN 452AA
.09750	WIN 473AA
.06830	WIN 540
.06800	WIN 571
.06660	WIN 630
.06550	WIN 680
.06550	WIN 748
.06660	WIN 760
.12962	WIN AA PLUS
.08097	WIN ACTION PI
.07181	WIN MAG RIFLE
.08400	wSUPER-FLD
.08470	wSUPER-LIT
.12050	wSUPER-TAR

VMD is the volume of one grain of gunpowder in cubic centimeters.
To find the volume of a powder charge multiply the grains of powder by the VMD.

Lee Dipper Capacity Chart

POWDER	0.3	0.5	0.7	1.0	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	4.0	4.3
BLACK FFFG	4.8	8.0	11.1	15.9	20.7	25.5	30.3	35.0	39.8	44.6	49.4	54.2	58.9	63.7	68.5
BLACK FFG	4.4	7.4	10.3	14.7	19.1	23.5	27.9	32.4	36.8	41.2	45.6	50.0	54.4	58.8	63.2
BLACK FG	4.2	7.0	9.7	13.9	18.1	22.3	26.4	30.6	34.8	39.0	43.1	47.3	51.5	55.7	59.8
BLACKFFFFG	4.5	7.4	10.4	14.9	19.4	23.8	28.3	32.8	37.2	41.7	46.2	50.6	55.1	59.6	64.0
A NITRO100	2.2	3.7	5.2	7.4	9.6	11.9	14.1	16.3	18.5	20.8	23.0	25.2	27.4	29.7	31.9
ACC XMP5744	4.0	6.7	9.3	13.3	17.3	21.3	25.3	29.3	33.3	37.3	41.3	45.2	49.2	53.2	57.2
ACCUR #2	3.6	6.0	8.4	11.9	15.5	19.1	22.7	26.2	29.8	33.4	37.0	40.6	44.1	47.7	51.3
ACCUR #5	4.8	8.0	11.2	16.1	20.9	25.7	30.5	35.3	40.1	45.0	49.8	54.6	59.4	64.2	69.0
ACCUR #7	4.6	7.7	10.7	15.3	19.9	24.5	29.1	33.7	38.3	42.9	47.5	52.1	56.7	61.2	65.8
ACCUR #9	4.6	7.6	10.7	15.2	19.8	24.4	28.9	33.5	38.1	42.6	47.2	51.8	56.4	60.9	65.5
ACCUR 1680	4.6	7.6	10.7	15.3	19.8	24.4	29.0	33.6	38.2	42.7	47.3	51.9	56.5	61.0	65.6
ACCUR 2015BR	4.1	6.8	9.6	13.7	17.8	21.9	26.0	30.1	34.2	38.3	42.5	46.6	50.7	54.8	58.9
ACCUR 2200	4.3	7.2	10.1	14.4	18.7	23.1	27.4	31.7	36.0	40.4	44.7	49.0	53.3	57.7	62.0
ACCUR 2230	4.6	7.6	10.7	15.2	19.8	24.4	28.9	33.5	38.1	42.6	47.2	51.8	56.3	60.9	65.5
ACCUR 2460	4.6	7.6	10.7	15.2	19.8	24.4	28.9	33.5	38.1	42.7	47.2	51.8	56.4	60.9	65.5
ACCUR 2495BR	4.0	6.7	9.4	13.4	17.4	21.4	25.4	29.4	33.4	37.4	41.4	45.4	49.4	53.5	57.5
ACCUR 2520	4.4	7.3	10.3	14.6	19.0	23.4	27.8	32.2	36.6	41.0	45.4	49.8	54.2	58.6	63.0
ACCUR 2700	4.4	7.3	10.2	14.6	19.0	23.4	27.7	32.1	36.5	40.9	45.3	49.7	54.0	58.4	62.8
ACCUR 3100	4.0	6.7	9.4	13.4	17.4	21.4	25.4	29.4	33.4	37.4	41.4	45.4	49.4	53.5	57.5
ACCUR 4064	4.0	6.6	9.3	13.3	17.2	21.2	25.2	29.2	33.1	37.1	41.1	45.1	49.0	53.0	57.0
ACCUR 4350	4.1	6.8	9.5	13.5	17.6	21.6	25.7	29.7	33.8	37.8	41.9	46.0	50.0	54.1	58.1
ACCUR 8700	4.4	7.3	10.2	14.5	18.9	23.3	27.6	32.0	36.4	40.7	45.1	49.4	53.8	58.2	62.5
PEARL SCOT	2.3	3.8	5.3	7.5	9.8	12.0	14.3	16.5	18.8	21.0	23.3	25.5	27.8	30.0	32.3
ROYAL SCOT	1.9	3.2	4.4	6.3	8.2	10.1	12.0	13.9	15.8	17.6	19.5	21.4	23.3	25.2	27.1
SOLO 1000	2.3	3.8	5.3	7.5	9.8	12.0	14.3	16.5	18.8	21.0	23.3	25.6	27.8	30.1	32.3
SOLO 1250	2.5	4.1	5.7	8.2	10.7	13.1	15.6	18.0	20.5	23.0	25.4	27.9	30.3	32.8	35.3
SOLO 1500	2.7	4.6	6.4	9.1	11.8	14.6	17.3	20.0	22.8	25.5	28.2	30.9	33.7	36.4	39.1
ALLIANT STEEL	2.8	4.7	6.6	9.4	12.2	15.1	17.9	20.7	23.5	26.3	29.2	32.0	34.8	37.6	40.5
AMER-SELECT	2.2	3.7	5.2	7.5	9.7	11.9	14.2	16.4	18.6	20.9	23.1	25.3	27.6	29.8	32.1
BLUE DOT	3.5	5.8	8.1	11.6	15.0	18.5	22.0	25.4	28.9	32.4	35.8	39.3	42.8	46.3	49.7
BULLSEYE	2.8	4.7	6.6	9.4	12.2	15.0	17.9	20.7	23.5	26.3	29.1	32.0	34.8	37.6	40.4
GREEN DOT	2.4	4.0	5.5	7.9	10.3	12.7	15.0	17.4	19.8	22.2	24.6	26.9	29.3	31.7	34.1
HERC 2400	4.0	6.7	9.4	13.5	17.5	21.6	25.6	29.7	33.7	37.8	41.8	45.9	49.9	53.9	58.0
HERCO	2.7	4.5	6.2	8.9	11.6	14.3	16.9	19.6	22.3	24.9	27.6	30.3	33.0	35.6	38.3
POWER PISTOL	3.4	5.6	7.9	11.2	14.6	18.0	21.4	24.7	28.1	31.5	34.9	38.2	41.6	45.0	48.4
RED DOT	2.1	3.5	5.0	7.1	9.2	11.3	13.5	15.6	17.7	19.8	21.9	24.1	26.2	28.3	30.4
RELODER 10	4.0	6.7	9.4	13.4	17.4	21.5	25.5	29.5	33.5	37.6	41.6	45.6	49.6	53.7	57.7
RELODER 25	4.2	7.1	9.9	14.2	18.4	22.6	26.9	31.1	35.4	39.6	43.9	48.1	52.4	56.6	60.9
RELODER 7	4.1	6.9	9.6	13.7	17.8	22.0	26.1	30.2	34.3	38.4	42.6	46.7	50.8	54.9	59.0
RELODER12	4.3	7.2	10.1	14.5	18.8	23.1	27.5	31.8	36.2	40.5	44.8	49.2	53.5	57.8	62.2
RELODER15	4.2	7.1	9.9	14.2	18.4	22.7	26.9	31.1	35.4	39.6	43.9	48.1	52.4	56.6	60.9
RELODER19	4.2	7.1	9.9	14.2	18.4	22.7	26.9	31.1	35.4	39.6	43.9	48.1	52.4	56.6	60.9
RELODER22	4.3	7.2	10.0	14.3	18.6	22.9	27.2	31.6	35.9	40.2	44.5	48.8	53.1	57.4	61.7
UNIQUE	2.7	4.6	6.4	9.2	11.9	14.6	17.4	20.1	22.9	25.6	28.4	31.1	33.9	36.6	39.4
BENCHMARK	4.2	7.0	9.8	14.0	18.2	22.4	26.6	30.8	35.0	39.2	43.4	47.6	51.8	56.0	60.2
BL-C(2)	4.7	7.8	10.8	15.5	20.1	24.8	29.4	34.1	38.8	43.4	48.0	52.7	57.4	62.0	66.7
CLAYS	2.1	3.4	4.8	6.8	8.9	10.9	13.0	15.0	17.1	19.2	21.2	23.3	25.3	27.4	29.4
H 50 BMG	4.3	7.2	10.1	14.4	18.7	23.0	27.4	31.7	36.0	40.3	44.6	49.0	53.3	57.6	61.9
H LIL GUN	4.4	7.4	10.3	14.8	19.2	23.6	28.0	32.5	36.9	41.3	45.7	50.2	54.6	59.0	63.4
H TRAP100	2.6	4.3	6.0	8.5	11.1	13.7	16.2	18.8	21.4	23.9	26.5	29.0	31.6	34.2	36.7
H-PYRDX RS	3.7	6.2	8.6	12.3	16.0	19.7	23.4	27.1	30.8	34.5	38.2	41.9	45.6	49.3	53.0
H-PYRODX P	3.6	6.1	8.5	12.1	15.8	19.4	23.1	26.7	30.4	34.0	37.6	41.3	44.9	48.6	52.2
H-VARGET	4.1	6.8	9.6	13.7	17.8	21.9	26.0	30.1	34.2	38.3	42.4	46.5	50.6	54.7	58.8
H1000	4.2	7.0	9.8	14.0	18.2	22.5	26.7	30.9	35.1	39.3	43.5	47.7	51.9	56.1	60.4
H110	4.6	7.6	10.7	15.3	19.8	24.4	29.0	33.6	38.1	42.7	47.3	51.9	56.4	61.0	65.6
H322	4.1	6.9	9.7	13.8	17.9	22.1	26.2	30.3	34.5	38.6	42.8	46.9	51.0	55.2	59.3
H335	4.7	7.8	10.8	15.5	20.1	24.8	29.4	34.1	38.8	43.4	48.0	52.7	57.4	62.0	66.7
H380	4.3	7.2	10.1	14.5	18.8	23.1	27.5	31.8	36.2	40.5	44.8	49.2	53.5	57.9	62.2
H414	4.5	7.6	10.6	15.1	19.7	24.2	28.8	33.3	37.8	42.4	46.9	51.5	56.0	60.5	65.1
H4198	4.0	6.7	9.3	13.3	17.3	21.3	25.3	29.3	33.3	37.3	41.3	45.3	49.3	53.3	57.3
H4227	3.9	6.5	9.1	13.0	16.9	20.8	24.7	28.6	32.5	36.4	40.3	44.2	48.1	52.0	55.9
H4350	4.1	6.9	9.7	13.8	17.9	22.1	26.2	30.3	34.5	38.6	42.8	46.9	51.0	55.2	59.3
H450	4.6	7.7	10.7	15.3	19.9	24.5	29.1	33.7	38.3	42.9	47.5	52.1	56.7	61.3	65.9
H4831	4.1	6.9	9.7	13.8	17.9	22.1	26.2	30.3	34.5	38.6	42.8	46.9	51.0	55.2	59.3
H4895	4.1	6.9	9.6	13.7	17.8	22.0	26.1	30.2	34.3	38.4	42.6	46.7	50.8	54.9	59.0
H870	4.4	7.3	10.2	14.6	19.0	23.3	27.7	32.1	36.5	40.8	45.2	49.6	54.0	58.3	62.7
HP38	3.2	5.4	7.6	10.8	14.0	17.3	20.5	23.8	27.0	30.2	33.5	36.7	40.0	43.2	46.4
HS6	4.2	7.0	9.8	14.0	18.2	22.5	26.7	30.9	35.1	39.3	43.5	47.7	51.9	56.1	60.4
HS7	4.4	7.4	10.3	14.7	19.1	23.5	27.9	32.4	36.8	41.2	45.6	50.0	54.4	58.8	63.2
INTERNATIONAL	2.4	4.0	5.5	7.9	10.3	12.6	15.0	17.4	19.8	22.1	24.5	26.9	29.2	31.6	34.0
LONGSHOT	3.6	6.1	8.5	12.1	15.8	19.4	23.0	26.7	30.3	34.0	37.6	41.2	44.9	48.5	52.2
PYRODEX CTG	3.0	4.9	6.9	9.9	12.8	15.8	18.7	21.7	24.6	27.6	30.6	33.5	36.5	39.4	42.4
TITEGROUP	3.5	5.9	8.3	11.8	15.3	18.9	22.4	26.0	29.5	33.0	36.6	40.1	43.7	47.2	50.7
TITEWAD	2.3	3.8	5.4	7.7	10.0	12.3	14.6	16.9	19.2	21.5	23.8	26.1	28.5	30.8	33.1
UNIVERSAL	2.7	4.6	6.4	9.1	11.8	14.6	17.3	20.0	22.8	25.5	28.2	30.9	33.7	36.4	39.1
IMR 700X	2.2	3.7	5.2	7.4	9.7	11.9	14.1	16.4	18.6	20.8	23.1	25.3	27.5	29.8	32.0
IMR 800X	2.8	4.7	6.5	9.3	12.1	14.9	17.7	20.5	23.3	26.1	28.9	31.7	34.5	37.3	40.1
IMR PB	2.5	4.1	5.8	8.3	10.8	13.3	15.8	18.3	20.7	23.2	25.7	28.2	30.7	33.2	35.7
IMR3031	3.9	6.6	9.2	13.1	17.1	21.0	24.9	28.9	32.8	36.7	40.7	44.6	48.5	52.5	56.4
IMR4064	4.0	6.7	9.4	13.4	17.5	21.5	25.5	29.5	33.6	37.6	41.6	45.6	49.7	53.7	57.7

Lee Dipper Capacity Chart

POWDER	0.3	0.5	0.7	1.0	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	4.0	4.3
IMR4198	3.8	6.3	8.8	12.6	16.4	20.2	24.0	27.8	31.6	35.4	39.2	42.9	46.7	50.5	54.3
IMR4227	3.9	6.5	9.1	13.0	16.9	20.8	24.7	28.6	32.5	36.4	40.3	44.2	48.1	52.0	55.9
IMR4320	4.2	7.0	9.8	14.0	18.2	22.4	26.6	30.7	34.9	39.1	43.3	47.5	51.7	55.9	60.1
IMR4350	4.1	6.8	9.5	13.6	17.7	21.8	25.9	29.9	34.0	38.1	42.2	46.3	50.3	54.4	58.5
IMR4831	4.1	6.8	9.5	13.6	17.7	21.8	25.9	29.9	34.0	38.1	42.2	46.3	50.3	54.4	58.5
IMR4895	4.1	6.9	9.6	13.7	17.8	22.0	26.1	30.2	34.3	38.4	42.6	46.7	50.8	54.9	59.0
IMR7828	4.1	6.9	9.7	13.8	17.9	22.1	26.2	30.3	34.5	38.6	42.7	46.9	51.0	55.2	59.3
SR4756	2.7	4.5	6.4	9.1	11.8	14.5	17.3	20.0	22.7	25.5	28.2	30.9	33.6	36.4	39.1
SR4759	3.0	5.0	7.0	10.1	13.1	16.1	19.1	22.2	25.2	28.2	31.2	34.2	37.3	40.3	43.3
SR7625	2.9	4.8	6.7	9.6	12.4	15.3	18.2	21.0	23.9	26.8	29.6	32.5	35.4	38.2	41.1
AR2205	4.0	6.7	9.4	13.5	17.5	21.6	25.6	29.7	33.7	37.8	41.8	45.9	49.9	54.0	58.0
AR2206	4.2	7.0	9.8	14.0	18.2	22.4	26.6	30.8	35.0	39.2	43.4	47.6	51.8	56.0	60.2
AR2207	4.0	6.6	9.2	13.2	17.1	21.1	25.0	29.0	33.0	36.9	40.9	44.8	48.8	52.7	56.7
AR2208	4.1	6.9	9.6	13.8	17.9	22.1	26.2	30.3	34.5	38.6	42.7	46.9	51.0	55.1	59.3
AR2209	4.2	7.0	9.8	14.0	18.2	22.4	26.6	30.8	35.0	39.2	43.5	47.7	51.9	56.1	60.3
AR2213	4.4	7.3	10.2	14.6	18.9	23.3	27.7	32.1	36.4	40.8	45.2	49.5	53.9	58.3	62.7
AS50	2.5	4.1	5.8	8.3	10.8	13.2	15.7	18.2	20.7	23.2	25.7	28.2	30.6	33.1	35.6
NORMA 200	4.4	7.4	10.3	14.8	19.2	23.6	28.1	32.5	36.9	41.4	45.8	50.2	54.6	59.1	63.5
NORMA 201	4.3	7.2	10.1	14.5	18.8	23.1	27.5	31.8	36.2	40.5	44.8	49.2	53.5	57.9	62.2
NORMA 2010	2.1	3.5	4.9	7.0	9.1	11.2	13.3	15.3	17.4	19.5	21.6	23.7	25.8	27.9	30.0
NORMA 2020	2.5	4.1	5.8	8.3	10.8	13.2	15.7	18.2	20.7	23.2	25.7	28.2	30.6	33.1	35.6
NORMA 203	4.3	7.2	10.1	14.5	18.8	23.1	27.5	31.8	36.2	40.5	44.8	49.2	53.5	57.9	62.2
NORMA 204	4.4	7.4	10.3	14.8	19.2	23.6	28.1	32.5	36.9	41.4	45.8	50.2	54.6	59.1	63.5
NORMA 205	4.5	7.4	10.4	14.9	19.4	23.8	28.3	32.8	37.2	41.7	46.2	50.6	55.1	59.6	64.0
R ENFORCER	4.3	7.2	10.1	14.4	18.8	23.1	27.4	31.7	36.1	40.4	44.7	49.0	53.4	57.7	62.0
R TRUE BLUE	4.4	7.3	10.2	14.6	19.0	23.4	27.8	32.2	36.6	41.0	45.3	49.7	54.1	58.5	62.9
RAM BIG BOY	4.5	7.6	10.6	15.1	19.7	24.2	28.7	33.3	37.8	42.3	46.9	51.4	56.0	60.5	65.0
RAM BIG GAME	4.2	7.1	9.9	14.1	18.4	22.6	26.8	31.1	35.3	39.5	43.8	48.0	52.3	56.5	60.7
RAM TAC	4.5	7.4	10.4	14.9	19.4	23.8	28.3	32.8	37.3	41.7	46.2	50.7	55.1	59.6	64.1
RAM ZIP	3.7	6.1	8.6	12.3	15.9	19.6	23.3	27.0	30.6	34.3	38.0	41.7	45.3	49.0	52.7
X-TERMINATER	4.4	7.3	10.3	14.7	19.1	23.5	27.9	32.3	36.7	41.1	45.5	49.9	54.3	58.7	63.1
MP200	3.4	5.6	7.8	11.2	14.6	17.9	21.3	24.7	28.0	31.4	34.7	38.1	41.5	44.8	48.2
MS200	2.8	4.7	6.6	9.4	12.2	15.1	17.9	20.7	23.6	26.4	29.2	32.0	34.9	37.7	40.5
VEC AO	2.5	4.2	5.9	8.4	10.9	13.4	15.9	18.4	20.9	23.4	25.9	28.4	30.9	33.5	36.0
VEC BA10	2.2	3.7	5.2	7.4	9.6	11.9	14.1	16.3	18.5	20.7	23.0	25.2	27.4	29.6	31.9
VEC BA9	3.3	5.4	7.6	10.9	14.2	17.4	20.7	23.9	27.2	30.5	33.7	37.0	40.3	43.5	46.8
VEC SP10	4.5	7.5	10.5	15.0	19.5	24.0	28.5	32.9	37.4	41.9	46.4	50.9	55.4	59.9	64.4
VEC SP3	4.4	7.3	10.3	14.7	19.1	23.5	27.9	32.3	36.7	41.0	45.4	49.8	54.2	58.6	63.0
VEC SP7	4.6	7.6	10.6	15.2	19.8	24.3	28.9	33.4	38.0	42.6	47.1	51.7	56.2	60.8	65.4
VEC SP8	4.4	7.3	10.3	14.7	19.1	23.5	27.9	32.3	36.7	41.0	45.4	49.8	54.2	58.6	63.0
VEC SP9	4.4	7.3	10.3	14.7	19.1	23.5	27.9	32.3	36.7	41.0	45.4	49.8	54.2	58.6	63.0
VEC TU2000	3.9	6.6	9.2	13.1	17.1	21.0	24.9	28.9	32.8	36.7	40.7	44.6	48.5	52.5	56.4
VEC TU5000	4.2	6.9	9.7	13.9	18.1	22.2	26.4	30.6	34.7	38.9	43.1	47.2	51.4	55.6	59.7
VEC TU7000	4.3	7.1	9.9	14.2	18.5	22.7	27.0	31.2	35.5	39.8	44.0	48.3	52.5	56.8	61.0
VEC TU8000	4.3	7.1	9.9	14.2	18.5	22.7	27.0	31.2	35.5	39.8	44.0	48.3	52.5	56.8	61.0
v-3N37	3.3	5.5	7.7	11.0	14.2	17.5	20.8	24.1	27.4	30.7	34.0	37.2	40.5	43.8	47.1
v-N105	3.3	5.6	7.8	11.1	14.4	17.8	21.1	24.4	27.8	31.1	34.4	37.8	41.1	44.4	47.8
v-N110	3.6	6.0	8.4	12.0	15.6	19.2	22.8	26.4	30.0	33.6	37.2	40.8	44.4	48.0	51.6
v-N120	3.9	6.4	9.0	12.9	16.8	20.6	24.5	28.4	32.2	36.1	40.0	43.8	47.7	51.6	55.4
v-N130	4.0	6.6	9.3	13.3	17.3	21.2	25.2	29.2	33.2	37.2	41.1	45.1	49.1	53.1	57.1
v-N133	3.9	6.5	9.1	13.0	16.9	20.8	24.7	28.6	32.5	36.4	40.3	44.2	48.1	52.0	55.9
v-N135	3.9	6.4	9.0	12.9	16.7	20.6	24.5	28.3	32.2	36.0	39.9	43.8	47.6	51.5	55.3
v-N140	4.1	6.8	9.6	13.6	17.7	21.8	25.9	30.0	34.1	38.2	42.3	46.4	50.5	54.6	58.7
v-N150	4.0	6.7	9.4	13.4	17.4	21.5	25.5	29.5	33.5	37.5	41.6	45.6	49.6	53.6	57.7
v-N160	4.1	6.8	9.5	13.6	17.7	21.8	25.9	30.0	34.0	38.1	42.2	46.3	50.4	54.5	58.6
v-N165	4.2	7.0	9.8	14.0	18.3	22.5	26.7	30.9	35.1	39.3	43.5	47.7	52.0	56.2	60.4
v-N170	4.2	7.0	9.8	14.0	18.2	22.4	26.6	30.8	35.1	39.3	43.5	47.7	51.9	56.1	60.3
v-N310	2.5	4.1	5.8	8.2	10.7	13.2	15.6	18.1	20.6	23.1	25.5	28.0	30.5	32.9	35.4
v-N320	2.5	4.1	5.8	8.3	10.7	13.2	15.7	18.2	20.7	23.1	25.6	28.1	30.6	33.0	35.5
v-N330	2.8	4.6	6.5	9.3	12.0	14.8	17.6	20.4	23.2	26.0	28.7	31.5	34.3	37.1	39.9
v-N340	2.8	4.7	6.6	9.4	12.2	15.0	17.8	20.6	23.5	26.3	29.1	31.9	34.7	37.5	40.4
v-N350	3.1	5.1	7.2	10.2	13.3	16.4	19.5	22.5	25.6	28.7	31.7	34.8	37.9	41.0	44.0
v-N540	4.3	7.1	10.0	14.3	18.5	22.8	27.1	31.4	35.7	39.9	44.2	48.5	52.8	57.0	61.3
v-N550	4.3	7.2	10.1	14.4	18.8	23.1	27.4	31.8	36.1	40.4	44.8	49.1	53.4	57.8	62.1
v-N560	4.3	7.2	10.1	14.5	18.8	23.2	27.5	31.9	36.2	40.6	44.9	49.3	53.6	58.0	62.3
WIN 231	3.2	5.4	7.5	10.7	14.0	17.2	20.4	23.6	26.8	30.1	33.3	36.5	39.7	43.0	46.2
WIN 296	4.6	7.6	10.7	15.3	19.8	24.4	29.0	33.6	38.1	42.7	47.3	51.9	56.4	61.0	65.6
WIN 452AA	2.6	4.3	6.0	8.5	11.1	13.7	16.2	18.8	21.4	23.9	26.5	29.0	31.6	34.2	36.7
WIN 473AA	3.1	5.1	7.2	10.3	13.3	16.4	19.5	22.6	25.6	28.7	31.8	34.9	37.9	41.0	44.1
WIN 540	4.4	7.3	10.3	14.6	19.0	23.4	27.8	32.2	36.6	41.0	45.4	49.8	54.2	58.6	63.0
WIN 571	4.4	7.4	10.3	14.7	19.1	23.5	27.9	32.4	36.8	41.2	45.6	50.0	54.4	58.8	63.2
WIN 630	4.5	7.5	10.5	15.0	19.5	24.0	28.5	33.0	37.5	42.0	46.5	51.0	55.5	60.0	64.6
WIN 680	4.6	7.6	10.7	15.3	19.8	24.4	29.0	33.6	38.1	42.7	47.3	51.9	56.4	61.0	65.6
WIN 748	4.6	7.6	10.7	15.3	19.8	24.4	29.0	33.6	38.1	42.7	47.3	51.9	56.4	61.0	65.6
WIN 760	4.5	7.5	10.5	15.0	19.5	24.0	28.5	33.0	37.5	42.0	46.5	51.0	55.5	60.0	64.6
WIN AA PLUS	2.3	3.9	5.4	7.7	10.0	12.3	14.7	17.0	19.3	21.6	23.9	26.2	28.5	30.9	33.2
WIN ACTION PI	3.7	6.2	8.6	12.4	16.1	19.8	23.5	27.2	30.9	34.6	38.3	42.0	45.7	49.4	53.1
WIN MAG RIFLE	4.2	7.0	9.7	13.9	18.1	22.3	26.5	30.6	34.8	39.0	43.2	47.3	51.5	55.7	59.9
wSUPER-FLD	3.6	5.9	8.3	11.9	15.5	19.0	22.6	26.2	29.8	33.3	36.9	40.5	44.0	47.6	51.2
wSUPER-LIT	3.5	5.9	8.3	11.8	15.3	18.9	22.4	26.0	29.5	33.0	36.6	40.1	43.7	47.2	50.7
wSUPER-TAR	2.5	4.2	5.8	8.3	10.8	13.3	15.8	18.3	20.8	23.2	25.7	28.2	30.7	33.2	35.7

Lee Auto-Disk Capacity Chart

ACCURATE	.30	.32	.34	.37	.40	.43	.46	.49	.53	.57	.61	.66	.71	.76	.82	.88	.95	1.02	1.09	1.18	1.26	1.36	1.46	1.57
A NITRO100	2.2	2.4	2.5	2.7	3.0	3.2	3.4	3.6	3.9	4.2	4.5	4.9	5.3	5.6	6.1	6.5	7.0	7.6	8.1	8.7	9.3	10.1	10.8	11.6
ACCUR #2	3.6	3.8	4.1	4.4	4.8	5.1	5.5	5.8	6.3	6.8	7.3	7.9	8.5	9.1	9.8	10.5	11.3	12.2	13.0	14.1	15.0	16.2	17.4	18.7
ACCUR #5	4.8	5.1	5.5	5.9	6.4	6.9	7.4	7.9	8.5	9.2	9.8	10.6	11.4	12.2	13.2	14.1	15.3	16.4	17.5	18.9	20.2	21.8	23.4	25.2
ACCUR #7	4.6	4.9	5.2	5.7	6.1	6.6	7.0	7.5	8.1	8.7	9.3	10.1	10.9	11.6	12.6	13.5	14.5	15.6	16.7	18.1	19.3	20.8	22.4	24.0
ACCUR #9	4.6	4.9	5.2	5.6	6.1	6.5	7.0	7.5	8.1	8.7	9.3	10.1	10.8	11.6	12.5	13.4	14.5	15.5	16.6	18.0	19.2	20.7	22.2	23.9
ACCUR 1680	4.6	4.9	5.2	5.6	6.1	6.6	7.0	7.5	8.1	8.7	9.3	10.1	10.8	11.6	12.5	13.4	14.5	15.6	16.6	18.0	19.2	20.8	22.3	24.0
A-XMR-2015	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.7	7.3	7.8	8.4	9.0	9.7	10.4	11.2	12.1	13.0	14.0	14.9	16.2	17.3	18.6	20.0	21.5
ACCUR 2230	4.6	4.9	5.2	5.6	6.1	6.5	7.0	7.5	8.1	8.7	9.3	10.0	10.8	11.6	12.5	13.4	14.5	15.5	16.6	18.0	19.2	20.7	22.2	23.9
SOLO 1000	2.3	2.4	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.3	4.6	5.0	5.3	5.7	6.2	6.6	7.1	7.7	8.2	8.9	9.5	10.2	11.0	11.8
A-XMR-4064	4.0	4.2	4.5	4.9	5.3	5.7	6.1	6.5	7.0	7.6	8.1	8.7	9.4	10.1	10.9	11.7	12.6	13.5	14.4	15.6	16.7	18.0	19.3	20.8
A-XMR-2495	4.0	4.3	4.5	4.9	5.3	5.7	6.1	6.5	7.1	7.6	8.2	8.8	9.5	10.2	11.0	11.8	12.7	13.6	14.6	15.8	16.8	18.2	19.5	21.0
ACCUR 2460	4.6	4.9	5.2	5.6	6.1	6.6	7.0	7.5	8.1	8.7	9.3	10.1	10.8	11.6	12.5	13.4	14.5	15.5	16.6	18.0	19.2	20.7	22.2	23.9
ACCUR 2520	4.4	4.7	5.0	5.4	5.9	6.3	6.7	7.2	7.8	8.4	8.9	9.7	10.4	11.1	12.0	12.9	13.9	14.9	16.0	17.3	18.5	19.9	21.4	23.0
ACCUR 2700	4.4	4.7	5.0	5.4	5.8	6.3	6.7	7.2	7.7	8.3	8.9	9.6	10.4	11.1	12.0	12.9	13.9	14.9	15.9	17.2	18.4	19.9	21.3	22.9
SOLO 1250	2.5	2.6	2.8	3.0	3.3	3.5	3.8	4.0	4.3	4.7	5.0	5.4	5.8	6.2	6.7	7.2	7.8	8.4	8.9	9.7	10.3	11.2	12.0	12.9
SOLO 1500	2.7	2.9	3.1	3.4	3.6	3.9	4.2	4.5	4.8	5.2	5.6	6.0	6.5	6.9	7.5	8.0	8.6	9.3	9.9	10.7	11.5	12.4	13.3	14.3

ALLIANT	.30	.32	.34	.37	.40	.43	.46	.49	.53	.57	.61	.66	.71	.76	.82	.88	.95	1.02	1.09	1.18	1.26	1.36	1.46	1.57
BULLSEYE	2.8	3.0	3.2	3.5	3.8	4.0	4.3	4.6	5.0	5.4	5.7	6.2	6.7	7.1	7.7	8.3	8.9	9.6	10.2	11.1	11.8	12.8	13.7	14.8
POWER PISTOL	3.4	3.6	3.8	4.2	4.5	4.8	5.2	5.5	6.0	6.4	6.9	7.4	8.0	8.5	9.2	9.9	10.7	11.5	12.3	13.3	14.2	15.3	16.4	17.7
RED DOT	2.1	2.3	2.4	2.6	2.8	3.0	3.3	3.5	3.8	4.0	4.3	4.7	5.0	5.4	5.8	6.2	6.7	7.2	7.7	8.4	8.9	9.6	10.3	11.1
GREEN DOT	2.4	2.5	2.7	2.9	3.2	3.4	3.6	3.9	4.2	4.5	4.8	5.2	5.6	6.0	6.5	7.0	7.5	8.1	8.6	9.3	10.0	10.8	11.6	12.4
BLUE DOT	3.5	3.7	3.9	4.3	4.6	5.0	5.3	5.7	6.1	6.6	7.1	7.6	8.2	8.8	9.5	10.2	11.0	11.8	12.6	13.6	14.6	15.7	16.9	18.2
AMER-SELECT	2.2	2.4	2.5	2.8	3.0	3.2	3.4	3.7	4.0	4.2	4.5	4.9	5.3	5.7	6.1	6.6	7.1	7.6	8.1	8.8	9.4	10.1	10.9	11.7
UNIQUE	2.7	2.9	3.1	3.4	3.7	3.9	4.2	4.5	4.9	5.2	5.6	6.0	6.5	7.0	7.5	8.1	8.7	9.3	10.0	10.8	11.5	12.4	13.4	14.4
HERCO	2.7	2.9	3.0	3.3	3.6	3.8	4.1	4.4	4.7	5.1	5.4	5.9	6.3	6.8	7.3	7.8	8.5	9.1	9.7	10.5	11.2	12.1	13.0	14.0
HERC 2400	4.0	4.3	4.6	5.0	5.4	5.8	6.2	6.6	7.1	7.7	8.2	8.9	9.6	10.2	11.1	11.9	12.8	13.8	14.7	15.9	17.0	18.3	19.7	21.2
RELODER 7	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.7	7.3	7.8	8.4	9.1	9.7	10.4	11.3	12.1	13.0	14.0	15.0	16.2	17.3	18.7	20.0	21.6
ALLIANT STEEL	2.8	3.0	3.2	3.5	3.8	4.0	4.3	4.6	5.0	5.4	5.7	6.2	6.7	7.1	7.7	8.3	8.9	9.6	10.3	11.1	11.9	12.8	13.7	14.8

HODGDON	.30	.32	.34	.37	.40	.43	.46	.49	.53	.57	.61	.66	.71	.76	.82	.88	.95	1.02	1.09	1.18	1.26	1.36	1.46	1.57
HS6	4.2	4.5	4.8	5.2	5.6	6.0	6.5	6.9	7.4	8.0	8.6	9.3	10.0	10.7	11.5	12.4	13.3	14.3	15.3	16.6	17.7	19.1	20.5	22.0
HS7	4.4	4.7	5.0	5.4	5.9	6.3	6.8	7.2	7.8	8.4	9.0	9.7	10.4	11.2	12.1	12.9	14.0	15.0	16.0	17.4	18.5	20.0	21.5	23.1
H110	4.6	4.9	5.2	5.6	6.1	6.6	7.0	7.5	8.1	8.7	9.3	10.1	10.8	11.6	12.5	13.4	14.5	15.6	16.6	18.0	19.2	20.7	22.3	24.0
H4227	3.9	4.2	4.4	4.8	5.2	5.6	6.0	6.4	6.9	7.4	7.9	8.6	9.2	9.9	10.7	11.4	12.3	13.3	14.2	15.3	16.4	17.7	19.0	20.4
H4198	4.0	4.3	4.5	4.9	5.3	5.7	6.1	6.5	7.1	7.6	8.1	8.8	9.5	10.1	10.9	11.7	12.7	13.6	14.5	15.7	16.8	18.1	19.5	20.9
HP38	3.2	3.5	3.7	4.0	4.3	4.6	5.0	5.3	5.7	6.2	6.6	7.1	7.7	8.2	8.9	9.5	10.3	11.0	11.8	12.7	13.6	14.7	15.8	17.0
CLAYS	2.1	2.2	2.3	2.5	2.7	2.9	3.1	3.4	3.6	3.9	4.2	4.5	4.9	5.2	5.6	6.0	6.5	7.0	7.5	8.1	8.6	9.3	10.0	10.7
INTERNATIONAL	2.4	2.5	2.7	2.9	3.2	3.4	3.6	3.9	4.2	4.5	4.8	5.2	5.6	6.0	6.5	7.0	7.5	8.1	8.6	9.3	10.0	10.7	11.5	12.4
UNIVERSAL	2.7	2.9	3.1	3.4	3.6	3.9	4.2	4.5	4.8	5.2	5.6	6.0	6.5	6.9	7.5	8.0	8.6	9.3	9.9	10.7	11.5	12.4	13.3	14.3
TITEGROUP	3.5	3.8	4.0	4.4	4.7	5.1	5.4	5.8	6.3	6.7	7.2	7.8	8.4	9.0	9.7	10.4	11.2	12.0	12.9	13.9	14.9	16.0	17.2	18.5
TITEWAD	2.3	2.5	2.6	2.8	3.1	3.3	3.5	3.8	4.1	4.4	4.7	5.1	5.5	5.8	6.3	6.8	7.3	7.8	8.4	9.1	9.7	10.5	11.2	12.1
H4895	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.7	7.3	7.8	8.4	9.1	9.7	10.4	11.3	12.1	13.0	14.0	15.0	16.2	17.3	18.7	20.0	21.6
BL-C(2)	4.7	5.0	5.3	5.7	6.2	6.7	7.1	7.6	8.2	8.8	9.5	10.2	11.0	11.8	12.7	13.6	14.7	15.8	16.9	18.3	19.5	21.1	22.6	24.3
H335	4.7	5.0	5.3	5.7	6.2	6.7	7.1	7.6	8.2	8.8	9.5	10.2	11.0	11.8	12.7	13.6	14.7	15.8	16.9	18.3	19.5	21.1	22.6	24.3
H LIL GUN	4.4	4.7	5.0	5.5	5.9	6.3	6.8	7.2	7.8	8.4	9.0	9.7	10.5	11.2	12.1	13.0	14.0	15.0	16.1	17.4	18.6	20.1	21.5	23.2
LONGSHOT	3.6	3.9	4.1	4.5	4.9	5.2	5.6	5.9	6.4	6.9	7.4	8.0	8.6	9.2	9.9	10.7	11.5	12.4	13.2	14.3	15.3	16.5	17.7	19.0
H-VARGET	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.7	7.3	7.8	8.3	9.0	9.7	10.4	11.2	12.0	13.0	14.0	14.9	16.1	17.2	18.6	20.0	21.5
H322	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.8	7.3	7.9	8.4	9.1	9.8	10.5	11.3	12.1	13.1	14.1	15.0	16.3	17.4	18.8	20.1	21.7

IMR	.30	.32	.34	.37	.40	.43	.46	.49	.53	.57	.61	.66	.71	.76	.82	.88	.95	1.02	1.09	1.18	1.26	1.36	1.46	1.57
IMR 700X	2.2	2.4	2.5	2.8	3.0	3.2	3.4	3.6	3.9	4.2	4.5	4.9	5.3	5.7	6.1	6.6	7.1	7.6	8.1	8.8	9.4	10.1	10.9	11.7
IMR PB	2.5	2.7	2.8	3.1	3.3	3.6	3.8	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.8	7.3	7.9	8.5	9.0	9.8	10.5	11.3	12.1	13.0
SR4756	2.7	2.9	3.1	3.4	3.6	3.9	4.2	4.5	4.8	5.2	5.5	6.0	6.5	6.9	7.5	8.0	8.6	9.3	9.9	10.7	11.5	12.4	13.3	14.3
SR4759	3.0	3.2	3.4	3.7	4.0	4.3	4.6	4.9	5.3	5.7	6.1	6.6	7.1	7.7	8.3	8.9	9.6	10.3	11.0	11.9	12.7	13.7	14.7	15.8
IMR4227	3.9	4.2	4.4	4.8	5.2	5.6	6.0	6.4	6.9	7.4	7.9	8.6	9.2	9.9	10.7	11.4	12.3	13.3	14.2	15.3	16.4	17.7	19.0	20.4
IMR4198	3.8	4.0	4.3	4.7	5.1	5.4	5.8	6.2	6.7	7.2	7.7	8.3	9.0	9.6	10.4	11.1	12.0	12.9	13.8	14.9	15.9	17.2	18.4	19.8
IMR3031	3.9	4.2	4.5	4.9	5.2	5.6	6.0	6.4	7.0	7.5	8.0	8.7	9.3	10.0	10.8	11.5	12.5	13.4	14.3	15.5	16.5	17.8	19.2	20.6
IMR4064	4.0	4.3	4.6	5.0	5.4	5.8	6.2	6.6	7.1	7.7	8.2	8.9	9.5	10.2	11.0	11.8	12.8	13.7	14.6	15.8	16.9	18.3	19.6	21.1
IMR4895	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.7	7.3	7.8	8.4	9.1	9.7	10.4	11.3	12.1	13.0	14.0	15.0	16.2	17.3	18.7	20.0	21.6
IMR4320	4.2	4.5	4.8	5.2	5.6	6.0	6.4	6.8	7.4	8.0	8.5	9.2	9.9	10.6	11.5	12.3	13.3	14.3	15.2	16.5	17.6	19.0	20.4	21.9
SR7625	2.9	3.1	3.3	3.5	3.8	4.1	4.4	4.7	5.1	5.5	5.8	6.3	6.8	7.3	7.8	8.4	9.1	9.8	10.4	11.3	12.0	13.0	14.0	15.0
IMR 800X	2.8	3.0	3.2	3.5	3.7	4.0	4.3	4.6	4.9	5.3	5.7	6.2	6.6	7.1	7.7	8.2	8.9	9.5	10.2	11.0	11.8	12.7	13.6	14.7

RAMSHOT	.30	.32	.34	.37	.40	.43	.46	.49	.53	.57	.61	.66	.71	.76	.82	.88	.95	1.02	1.09	1.18	1.26	1.36	1.46	1.57
RAM ZIP	3.7	3.9	4.2	4.5	4.9	5.3	5.6	6.0	6.5	7.0	7.5	8.1	8.7	9.3	10.0	10.8	11.6	12.5	13.4	14.5	15.4	16.7	17.9	19.2
R TRUE BLUE	4.4	4.7	5.0	5.4	5.8	6.3	6.7	7.2	7.8	8.3	8.9	9.7	10.4	11.1	12.0	12.9	13.9	14.9	15.9	17.3	18.4	19.9	21.4	23.0
R ENFORCER	4.3	4.6	4.9	5.3	5.8	6.2	6.6	7.1	7.6	8.2	8.8	9.5	10.2	11.0	11.8	12.7	13.7	14.7	15.7	17.0	18.2	19.6	21.1	22.6
X-TERMINATER	4.4	4.7	5.0	5.4	5.9	6.3	6.8	7.2	7.8	8.4	9.0	9.7	10.4	11.2	12.0	12.9	13.9	15.0	16.0	17.3	18.5	20.0	21.4	23.0
RAM TAC	4.5	4.8	5.1	5.5	6.0	6.4	6.9	7.3	7.9	8.5	9.1	9.8	10.6	11.3	12.2	13.1	14.2	15.2	16.2	17.6	18.8	20.3	21.8	23.4

VECTAN	.30	.32	.34	.37	.40	.43	.46	.49	.53	.57	.61	.66	.71	.76	.82	.88	.95	1.02	1.09	1.18	1.26	1.36	1.46	1.57
VEC BA10	2.2	2.4	2.5	2.7	3.0	3.2	3.4	3.6	3.9	4.2	4.5	4.9	5.3	5.6	6.1	6.5	7.0	7.6	8.1	8.7	9.3	10.1	10.8	11.6
VEC AO	2.5	2.7	2.8	3.1	3.3	3.6	3.8	4.1	4.4	4.8	5.1	5.5	5.9	6.4	6.9	7.4	7.9	8.5	9.1	9.9	10.5	11.4	12.2	13.1
VEC BA9	3.3	3.5	3.7	4.0	4.4	4.7	5.0	5.3	5.8	6.2	6.6	7.2	7.7	8.3	8.9	9.6	10.3	11.1	11.9	12.8	13.7	14.8	15.9	17.1

VIHTAVUORI	.30	.32	.34	.37	.40	.43	.46	.49	.53	.57	.61	.66	.71	.76	.82	.88	.95	1.02	1.09	1.18	1.26	1.36	1.46	1.57
v-N310	2.5	2.6	2.8	3.0	3.3	3.5	3.8	4.0	4.4	4.7	5.0	5.4	5.8	6.3	6.8	7.2	7.8	8.4	9.0	9.7	10.4	11.2	12.0	12.9
v-N320	2.5	2.6	2.8	3.1	3.3	3.6	3.8	4.0	4.4	4.7	5.0	5.5	5.9	6.3	6.8	7.3	7.8	8.4	9.0	9.7	10.4	11.2	12.1	13.0
v-N330	2.8	3.0	3.2	3.4	3.7	4.0	4.3	4.5	4.9	5.3	5.7	6.1	6.6	7.0	7.6	8.2	8.8	9.5	10.1	10.9	11.7	12.6	13.5	14.6
v-N340	2.8	3.0	3.2	3.5	3.8	4.0	4.3	4.6	5.0	5.3	5.7	6.2	6.7	7.1	7.7	8.3	8.9	9.6	10.2	11.1	11.8	12.8	13.7	14.7
v-3N37	3.3	3.5	3.7	4.1	4.4	4.7	5.0	5.4	5.8	6.2	6.7	7.2	7.8	8.3	9.0	9.6	10.4	11.2	11.9	12.9	13.8	14.9	16.0	17.2
v-N350	3.1	3.3	3.5	3.8	4.1	4.4	4.7	5.0	5.4	5.8	6.2	6.8	7.3	7.8	8.4	9.0	9.7	10.4	11.2	12.1	12.9	13.9	15.0	16.1
v-N110	3.6	3.8	4.1	4.4	4.8	5.2	5.5	5.9	6.4	6.8	7.3	7.9	8.5	9.1	9.8	10.6	11.4	12.2	13.1	14.2	15.1	16.3	17.5	18.8
v-N120	3.9	4.1	4.4	4.8	5.2	5.5	5.9	6.3	6.8	7.3	7.9	8.5	9.2	9.8	10.6	11.3	12.2	13.1	14.0	15.2	16.2	17.5	18.8	20.2
v-N130	4.0	4.2	4.5	4.9	5.3	5.7	6.1	6.5	7.0	7.6	8.1	8.8	9.4	10.1	10.9	11.7	12.6	13.5	14.5	15.7	16.7	18.0	19.4	20.8
v-N133	3.9	4.2	4.4	4.8	5.2	5.6	6.0	6.4	6.9	7.4	7.9	8.6	9.2	9.9	10.7	11.4	12.3	13.3	14.2	15.3	16.4	17.7	19.0	20.4
v-N135	3.9	4.1	4.4	4.8	5.1	5.5	5.9	6.3	6.8	7.3	7.9	8.5	9.1	9.8	10.6	11.3	12.2	13.1	14.0	15.2	16.2	17.5	18.8	20.2
v-N105	3.3	3.6	3.8	4.1	4.4	4.8	5.1	5.4	5.9	6.3	6.8	7.3	7.9	8.4	9.1	9.8	10.6	11.3	12.1	13.1	14.0	15.1	16.2	17.4
v-N140	4.1	4.4	4.6	5.0	5.5	5.9	6.3	6.7	7.2	7.8	8.3	9.0	9.7	10.4	11.2	12.0	13.0	13.9	14.9	16.1	17.2	18.6	19.9	21.4
v-N150	4.0	4.3	4.6	5.0	5.4	5.8	6.2	6.6	7.1	7.6	8.2	8.9	9.5	10.2	11.0	11.8	12.7	13.7	14.6	15.8	16.9	18.2	19.6	21.1

WINCHESTER	.30	.32	.34	.37	.40	.43	.46	.49	.53	.57	.61	.66	.71	.76	.82	.88	.95	1.02	1.09	1.18	1.26	1.36	1.46	1.57
WIN 231	3.2	3.4	3.7	4.0	4.3	4.6	4.9	5.3	5.7	6.1	6.6	7.1	7.6	8.2	8.8	9.5	10.2	11.0	11.7	12.7	13.5	14.6	15.7	16.9
WIN ACTION PI	3.7	4.0	4.2	4.6	4.9	5.3	5.7	6.1	6.5	7.0	7.5	8.2	8.8	9.4	10.1	10.9	11.7	12.6	13.5	14.6	15.6	16.8	18.0	19.4
WIN AA PLUS	2.3	2.5	2.6	2.9	3.1	3.3	3.5	3.8	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.8	7.3	7.9	8.4	9.1	9.7	10.5	11.3	12.1
WIN 296	4.6	4.9	5.2	5.6	6.1	6.6	7.0	7.5	8.1	8.7	9.3	10.1	10.8	11.6	12.5	13.4	14.5	15.6	16.6	18.0	19.2	20.7	22.3	24.0
wSUPER-LIT	3.5	3.8	4.0	4.4	4.7	5.1	5.4	5.8	6.3	6.7	7.2	7.8	8.4	9.0	9.7	10.4	11.2	12.0	12.9	13.9	14.9	16.0	17.2	18.5
wSUPER-TAR	2.5	2.7	2.8	3.1	3.3	3.6	3.8	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.8	7.3	7.9	8.5	9.0	9.8	10.5	11.3	12.1	13.0
wSUPER-FLD	3.6	3.8	4.0	4.4	4.8	5.1	5.5	5.8	6.3	6.8	7.3	7.9	8.4	9.0	9.8	10.5	11.3	12.1	13.0	14.0	15.0	16.2	17.4	18.7
WIN 540	4.4	4.7	5.0	5.4	5.9	6.3	6.7	7.2	7.8	8.3	8.9	9.7	10.4	11.1	12.0	12.9	13.9	14.9	16.0	17.3	18.5	19.9	21.4	23.0

HOW TO READ THE LOAD DATA

Cartridge Drawing:

The drawing has maximum allowable dimensions. This insures it will fit any standard chamber. If the tolerance is not given it is usually plus nothing and minus .008 inch on most diameters. Chambers usually have another .002 inch tolerance. This allows the cartridge to rattle around with up to .010 clearance between the cartridge and chamber. It is best to not full length size your rifle ammunition if best accuracy is important. It is also the reason Lee makes sizing dies near the high size. The closer fit helps accuracy.

Case length is the maximum allowed for a standard chamber. Most rifle cases may be trimmed .010 to .020 inch shorter. Cases such as the 380 Auto and the 45 ACP headspace on the end of the case. They should be the stated length or no shorter than .010 inch less than the maximum length. Lee case trimmers are .007 nominal less than maximum for best accuracy.

The case neck is usually considerably undersize because it must be small enough to firmly hold the bullet. Each cartridge neck will be the sum of the bullet diameter plus twice the case neck thickness.

Additional important drawing information includes primer size, bullet diameter and cartridge specific cautions.

Useful case capacity in CC

At the lower left of the drawing space you will find the useful case capacity in cubic centimeters. It is easy to compare this number to the "Volume CC" in the starting loads and judge how full the case will be. Some folks tend to unnecessarily shy away from compressed charges—those with a small "c" after the NEVER EXCEED loads. Often only the NEVER EXCEED charges are compressed and the starting charge is just a desirable full case.

Powder Type:

The powder names often are a combination of letters and numbers. Powders with the same number are not the same powder. Accurate Arms has a powder called No 2. Nobel used to make Nobel Pistol No. 2 and a Nobel Rifle No. 2. All are different powders with different quickness and density. Substituting one for another could be catastrophic. IMR makes a powder called IMR4350. Hodgdon sells H4350 and Accurate sells 4350. These powders are very similar, yet our tests indicate a difference in VMD. Do not substitute one for another. It may be safe, but it is unnecessary as the load data is listed for all three types in this manual. Always be certain of the powder you select.

Start Grains:

This is the weight in grains of powder you should use. If you feel your loads are safe—you may increase to the Never Exceed loads in five increments. That is the recommendation of all the powder companies and it's good advice. My advice is to use the start grains for all your ammunition. They are usually more accurate, and velocity is usually 5% to 8% less than maximum loads. Cases and guns last longer, fouling is less, accuracy is better and most important your safety factor is increased. There are variables that cause increases in pressure. Thicker cases, primer brand and type, bullet brand and type, seating depth, crimp, temperature, barrel condition, and powder humidity all affect the pressure. You can see that extra safety factor buys much peace of mind.

Volume CC:

This is the volume of the Start Grains of powder. This is the setting for your Lee Perfect Powder Measure. Because powders have different densities, this number will vary with each powder type of equal grain weight. It is always prudent to double check your setting with a quality powder scale to be certain there is no setting error.

Auto-Disk:

Use the Auto-Disk cavity shown in this column. The Auto-Disk is too small for most large rifle cases and "NA" will appear for None Available. Sometimes two disks can be stacked with the Double Disk Kit. If that's possible, you will see DBLD for Double Disk. Follow the instructions with the kit.

Lee Dipper:

This column lists the largest available Lee Dipper. It may dispense less than the starting charge, but an acceptable charge. NA indicates None Available. Some larger cartridges will list "2 SCOOPS." Use two full dippers of the size listed. We have selected dippers that will over fill the case if more than 2 full dippers are used. Should you attempt to ad a third dipper-full the case will overflow to alert you of the error.

Starting Load Velocity FPS:

This is the velocity for the Starting Load. It is a new feature in this edition because of customer requests. Starting loads are not uniformly reduced by the powder suppliers. Therefore, they cannot also be sorted by velocity.

NEVER EXCEED:

This is the maximum load in grains. Never, never go beyond this charge unless you have pressure measuring equipment.

Velocity FPS:

Velocity is stated in Feet Per Second of the Never Exceed Load. These are sorted by velocity in a descending order. Usually the loads near the top are the best loads. Defined as a load that is the best for that particular combination of case capacity, bore diameter and bullet weight.

Pressure:

Pressure information is generally not useful to the casual reloader. Attempting to use this information for interpolation can get you into big time trouble. See pages 120 and 121. The numbers are meaningless without considering the next column Units. See page 117 for details. Each powder supplier lists the Never Exceed load as the maximum safe load and cautions it should be worked up to cautiously. From this it is obvious pressure may be excessive with a NEVER EXCEED load for certain conditions. Chapter 8 thoroughly explains those conditions.

1 Grain Factor:

Multiply the velocity of the NEVER EXCEED load by the Velocity (Veloc) factor and you will know the velocity of a charge one grain less than the NEVER EXCEED load. You can multiply your new velocity again by the Velocity factor to find the velocity of another 1 grain reduction. This can be repeated for a full 1/3 reduction with very close results.

The "Pressr" or pressure factor works exactly the same. This explained in detail on page 157. If you have an inquiring mind you will find Chapter 9 very informative. It is an interesting story of how pressure and velocity factors were discovered.

Minimum Over All Length:

This is critical on most handgun cases. A small reduction in overall length can cause dangerous pressures because of reduced capacity caused by seating the bullet too deep. See details on page 123. Best accuracy is usually obtained with bullets seated at the maximum overall length and Factory Crimped.

Bullet Type:

Bullets are listed by weight and by type. Type of bullet often has great effect on the pressure. The types are as follows:

(XXX) Grain Bullet

Likely found only in a few older Hodgdon loads. It means you can use a lead core jacketed bullet of most any nose shape.

(XXX) Grain Jacketed

As the name implies, these are loads for jacketed bullets. While some of the handgun velocities are in cast bullet territory, it is not safe to substitute a lead bullet with a NEVER EXCEED load. This is especially true of modern high pressure loads.

(XXX) Grain Lead

This data is for swaged or cast lead bullets. It is not safe to substitute jacketed bullets for lead bullets with Never Exceed loads as they sometimes cause higher pressures.

(XXX) Grain Wadcutter

These are for target ammunition. The loads are lighter for lower recoil and to allow deeper seating depths. Wadcutters cut clean holes in the target and are the bull's-eye shooter's first choice. Never use a full wadcutter in place of a conventional bullet as the reduced case capacity will cause considerably higher pressures.

(XXX) Grain Solid

These are the solid bullets used for thick skinned African game. They are designed to penetrate without expansion.

(XXX) Barnes X Bullet

The Barnes X bullet is a solid copper or copper alloy bullet and requires this special load data.

(XXX) Copper Plated

These are loads for copper plated bullets. These are a highbred bullet not a true jacketed or lead bullet. Low manufacturing cost enable a low price to the reloader but require specific load data.

(XXX) Fail-Safe

These are loads for Winchester brand Fail-Safe bullets.

(XXX) XTP

Use these loads for the Hornady brand or Speer Gold Dot bullets. Their large hollow point uses up case capacity and requires a lighter charge in many cases. See page 123 for details.

Accurate Brand Powder Listings

Western Powders Inc. has acquired the Accurate brand of reloading powders. The **XMR** powder designation has been discontinued and replaced with **AA.**

Western Powders, Inc. Top of Yellowstone Hill / P.O. Box 158 Miles City, MT 59301

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Support the National Rifle Association of America

The NRA is the foremost guardian of the traditional right to "to keep and bear arms." This right, guaranteed by the Bill of Rights of the Constitution of the United States of America, is under constant attack.

The NRA is the lobby most feared by the extreme left and much of the media. If you are not already a member please call 1-800-672-3888 for membership information.