

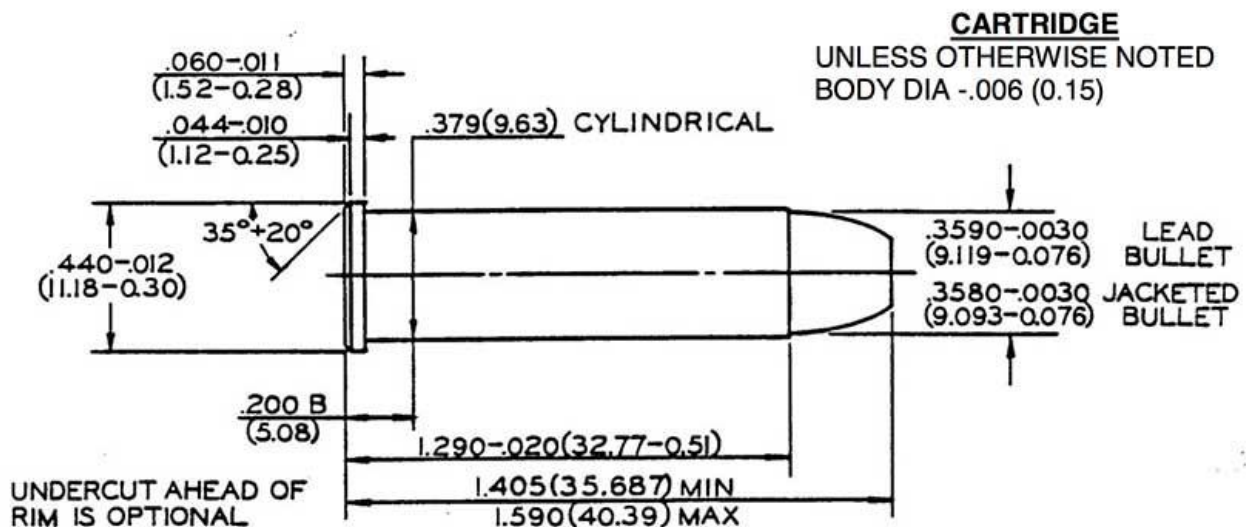
The .357 Magnum: Most Versatile Handgun Round Ever?

by WILEY CLAPP

Eighty-five years have passed since the introduction of the most versatile handgun cartridge of all time. On April 8, 1935, [Smith & Wesson](#) announced a brand new high performance cartridge for an equally new top-of-the-line revolver: the .357 Magnum.

In the years preceding that day, there had been a wave of interest in more widespread use of the revolver as a sporting arm and at greater ranges than ever before. Early luminaries of the handgun world—Phil Sharpe, Elmer Keith, Julian Hatcher and Ed McGivern—all contributed to a growing trend.

There was a move toward handloading ever hotter, heavier .38 Special ammunition. The interest convinced the ammo makers to load special heavy .38/44 ammo. Both [Colt](#) and Smith & Wesson made large-frame revolvers to handle it.



It was inevitable that the case-capacity limits of the .38 case would be enhanced by just a little more length and therefore, a little more capacity. Also, the new .357 Magnum case would not fit in .38 Special chambers of several smaller, lighter revolvers. Thus was born the most versatile cartridge of all time.

I strongly contend that this is true and I'll give you my reasoning for that belief. We have to start with a review of what happened in the world of revolver-ing since that fateful day in 1935. Smith & Wesson continued to build the gun collectors now call the "Registered Magnum."

It was a beautifully fitted and finished N-frame revolver with a myriad of options. It is not widely known, but Colt quickly responded with a few Peacemakers in .357, as well as fixed-sight New Services and target-grade Shooting Masters. In the late 1930s, all of these excellent revolvers established the initial reputation of the cartridge.



Today known as the Model 27, the first gun chambered for the .357 Magnum was launched in 1935 as the "Registered Magnum."

A lot of these guns went to law enforcement officers, particularly the FBI. Production of the guns and their ammunition went on the back burner in 1941 or early '42. The military services needed handguns, but not highly finished sporting or law enforcement revolvers.

We all know that there were exceptions, like General George Patton's ivory-gripped 3 ½-inch Smith & Wesson. The important thing to remember is the .357 reputation had four-plus war years to build before the guns and ammo went back into production.

By the mid-to-late 1950s, there were a number of .357 Smith & Wesson models and almost as many Colts. By the 60s, Ruger had joined in and before you knew it,

everybody and their brother offered a firearm chambered for this hot centerfire cartridge.



It was widely used as an afield carry revolver, even a medium game hunter. For home and camp defense, it was an excellent choice. By the 1980s, the cartridge had found its way into the five-shot cylinders of most makes of concealed carry revolvers. In some forms of handgun competition, the round was right at home. And of course, the .357 magnum was the modern peace officer's choice in on-duty service armament.

If this isn't versatility, I don't know what is. However, this is not the only reason. Every one of the millions of .357 Magnum revolvers ever made is, *ipso facto*, also a .38 Special. The original intent of the designers was to create a powerful .357 cartridge that was a fraction of an inch too long for .38 Special chamber. But nothing prevents a .38 Special cartridge from entering a .357 Magnum chamber. Serious implications here.

On the bookshelf just to the left of my monitor, there is a book written by a guy named Bob Forker. I am acquainted with Bob from working with him on another magazine. Named *Ammo & Ballistics 5*, this book is an encyclopedic listing of every load for every cartridge made.



One of the most famous .357 Magnum revolvers of all time is the Colt Python, relaunched in 2020.

There's velocity, trajectory, energy and dimensions. It is all about commercial ammo and it's a valuable reference. In the multi-page section on the .357 Magnum cartridge, he lists 72 different loads. They run from an 80-grain Glaser Safety Slug to a 200-grain LWSC. This is an impressive set of choices.

But the section on the .38 Special is even more impressive. It's 80 grains for the lightest bullet weight, through 110-, 125- and 140-grain bullets to traditional 148 and 158 lead slugs. There are a total of 101 .38 Special loads theoretically available to the shopping handgunner.

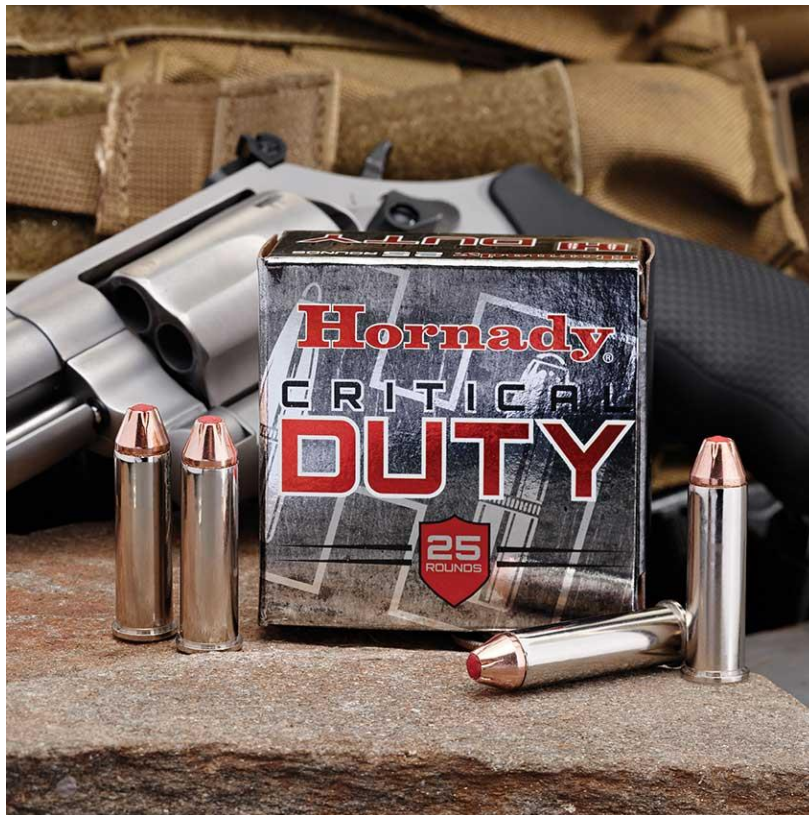
If he or she is feeding a .357 Magnum revolver, there are 173 different commercial rounds that may be fired through that gun. You are not likely to find them in a single retail outlet. This is one aspect of the versatility question, but there are others.



Ruger also offers a number of revolvers chambered for .357 Magnum, such as this Redhawk.

It is possible to take one good .357 Magnum revolver and a variety of .38 and .357 ammo and compete in several matches in one weekend. Use 180-grain .357 slugs in your revolver for a silhouette (IHMSA) match on Saturday morning and 148-grain .38 wadcutters for a 900-aggregate bullseye match or even a PPC match on Saturday afternoon.

Sunday? Sure, whatever's available—ICORE, IPSC or even Bowling Pin matches. Obviously, I am exaggerating for emphasis, but I remember a guy who shot PPC, NRA bullseye and IHMSA matches with the same 6-inch Colt Trooper III he carried as a working patrolman. The cartridge is versatile.



Hornady's Critical Duty ammunition is a popular defensive load for the .357 Magnum.

It even made it into the chambers of several replicas of frontier-era rifles and modern lever actions, as well as a commemorative variant of the elegant Ruger No. 1 single shot. I have been asked by prospective gun buyers who are contemplating the purchase of a concealed carry snubby or general purpose defensive gun: “Is a .357 worth the extra money over a .38?”

Yes, it is. I have at least 173 reasons why.

357 Magnum

History

Developed primarily as a law enforcement pistol cartridge, the .357 Magnum was introduced by Smith and Wesson in 1934. Advertised as the world's most powerful handgun cartridge, the .357 retained this title for some 20 years.

The .357 was designed in response to crime problems within the U.S during the 1920's through 30's. Prior to the release of the .357, the standard police service cartridge was the .38 special. The .38 Special was an adequate cartridge but not in any way emphatic, nor did it possess any great barrier penetration qualities. A young Elmer Keith began to experiment with improving the performance of the .38 Special. By using a strong framed pistol action, Keith was able to increase loads in the .38 to produce much higher velocities. Smith and Wesson engineers adopted Keith's approach and by lengthening the .38 Special case slightly, a new cartridge was created that could not be fired in existing older arms.

Since this time the .357 Magnum has become an incredibly popular cartridge for anti personal use. Outside of the U.S, hunters marvel at the little cartridges ability to produce excellent kills on light to mid-sized game as a rifle cartridge but in the U.S, this cartridge is often viewed as being under powered due to it being more commonly used in handguns.

Factory loads for the .357 are produced by all major ammunition manufacturers and are generally available in two base weights, a 125 grain bullet at 1400 - 1500fps depending on handgun barrel length and a 158 grain bullet weight at 1200 to 1300fps. From a 16 to 20" rifle barrel, velocities increase by an average of 500fps. More recent factory loads feature bullet weights of 135 to 145 grains at reduced velocities (minimal recoil). These loads have for the most part replaced the heavy and hard hitting 180 grain loadings of old. Note that .38 Special ammunition can also be used in the .357 Magnum. The bullet diameter for both is .357". The .38 Special has a case length of 1.155" (29.3mm) while the .357 Magnum has a case length of 1.280" (32.5mm).

The popularity of the .357 also lead to the creation of the .357 Remington Maximum based on a wildcat created by Elgin Gates. Remington loads for the Maximum boasted impressive velocities of over 1800fps with 158 grain bullets and over 1550fps with 180 grain bullets. The .357 Maximum was initially chambered in the Ruger Blackhawk in 1983 and was for a time adopted by other handgun manufactures. But after losing popularity due to gas cutting issues, this chambering was eventually dropped by all manufacturers. Brass is however still available.

Performance

To begin with, it must be understood that the .357 Magnum is a low velocity cartridge. The .357 is to some extent reliant on what I call mechanical wounding in order to achieve fast killing. This cartridge does its best work when loaded with fast expanding hollow point bullet types. A bullet that sheds some weight is also highly useful in the .357 as a means to maximize energy transfer. Having said this, such a bullet needs a good amount of weight to begin with if it is achieve acceptable penetration..

It is also critical to understand that most .357 Magnum factory loads are designed for anti personal use - not hunting. When selecting a hunting load, it is important to match the bullet weight and construction to the job at hand.

As a general guide to performance, the .357 can produce quite spectacular kills at impact velocities of 2000fps and faster using hollow point projectiles.

At impact velocities of 2000 to 1600fps, game hit with a fast expanding hollow point tend to react in a drunken manner, often attempting to run but not generally making too much ground before succumbing quickly to blood loss.

Between 1600 and 1300fps, dead runs may be longer but wounding is still somewhat disproportionate to caliber. Again, bullet weights must be matched to the job at hand. If the bullet is too heavy, it may not meet enough resistance to render a wide wound at low velocities. If the bullet is too light, it may not have enough energy to render a deep and broad wound on larger bodied animals.

At impact velocities of 1200fps and below, bullet expansion may be fully evident, yet wounding can be narrow (proportionate to the expanded caliber of the bullet) and blood trails poor. At these velocities and in the absence of any major hydraulic force, the .357 is reliant on mechanical wounding, the size of the wound being directly proportionate to the diameter of the expanded bullet. Bullets with deep skives along with very deep and broad hollow points can prove the most effective for generating fast bleeding wounds at these very low impact velocities. At low velocities, it is important to try to keep shots well forwards in at attempt to break bone. As a contrast to this, if a rear lung shot is taken, although the bullet may expand, the blood may drain to the bottom of the chest, not out through the exit wound as might be expected.

Depending on the bullet design, most jacketed hollow point handgun bullets will continue to expand down to impact velocities of around 800fps with good bullet designs such as the XTP continuing to display some level of expansion down to impact velocities of 600fps. Nevertheless, best performance occurs at impact velocities at or above 1300fps.

Regarding bullet weights. When loaded with fast expanding 125 grain bullets traveling at or over 2000fps (rifles), the .357 magnum can produce spectacular kills on light bodied game. This bullet

weight cannot produce deep penetration yet should not by the same token be completely ignored. For very light framed game weighing up to 60kg (132lb), this bullet weight combined with high velocities can be very useful.

The 158 grain bullet is the compromise weight for handgun hunting. Driven at velocities of 1400 to 1500fps from a handgun, the .357 can produce relatively fast bleeding and can tackle lighter bodied deer species. From a rifle, this bullet weight can be driven at relatively high velocities of around 1900fps and can create broad internal wounding. But there are some pitfalls with this bullet weight to be mindful of and readers are urged to try to remember the following. If a **tough** 158 grain bullet is selected, wounds may be proportionate to caliber. If a **soft** bullet is selected, penetration will be limited on larger bodied animals, especially at rifle velocities. Nevertheless, this bullet weight can produce very broad and fast killing wounds when bullet construction is matched to the job at hand. The 158 grain Hornady XTP can for example produce exceptional results on Fallow or White Tail deer, but this same bullet is not well suited to the likes of wild boar with heavy shoulder shields.

The 180 grain bullet weight is particularly useful in the .357 but also has some caveats. In a rifle, producing around 1700fps, a bullet like the 180 grain XTP can be considered an all around go-to design for a wide range of game body weights. But in handguns, factory ammunition may only yield muzzle velocities of around 1100fps. The .357 cannot be expected to produce wide wounds at these speeds. To achieve optimum performance, a good projectile such as the 180 grain XTP should arrive at its target at an impact velocity of 1300fps or higher, although this bullet will continue to expand at lower impact velocities. Hunters are also advised to try to aim forwards in an attempt to strike major locomotive muscles, bones and vital tissues.

Of the available rifles, the Rossi Puma lever action rifle, a re-creation of the Winchester Model 92 has to be one of the handiest little carbines every produced. Older models featured blocky rectangular sights, these being the very best with regards to accurate shooting. Current Rossi rifles feature more stylized buckhorn sights which are not as good as the originals but are suitable enough.

The Rossi rifle has been especially popular in New Zealand among pig hunters. These rifles have for some time been available in stainless steel which is ideal for wet conditions. The Rossi rifles are so light that the hunter can run fast through bush. After the kill, the rifles can simply be carried in addition to the carcass without any great constraint, or are sometimes even carried within the carcass of the pig though this is certainly not good for the bore.

The one weakness of this rifle (and most levers) is that the stock can snap at the tang. The Rossi rifle is particularly prone to this if it is slammed against the ground (e.g. after slipping when carrying out game) and must be treated with a degree of care. Unfortunately, many are not treated with such care in New Zealand and it is common to see rifles with taped stocks and damaged bores that struggle to maintain any degree of accuracy.

It should also be noted that the Rossi .44 Magnum is now the preferred choice of the New Zealand pig hunter due to the thick cartilage shields of mature wild boar which can and have stopped a good number of 158 grain .357" bullets. The shot placement utilized by pig hunters tends to vary with each hunter and each situation. However, when the chips are down, a shoulder shot is the obvious choice. When the Rossi rifle was first released into New Zealand the .357 magnum rifles arrived in great numbers. Little was known about the limitations of the cartridge and most pig hunters still do not realize that the ammunition they used was designed for home defense, not hunting. Not a great many pig hunters reload and so the simplest course of action to remedy penetration issues was to step up to the .44 Magnum Rossi rifle utilizing basic 240 grain factory loads. These comments aside, there are a number of pig hunters still using the .357 Magnum, however best results are obtained with 180 grain hand loads. Note also that both under and over penetration are concerns for New Zealand pig hunters. Any over penetration can potentially result in the death of hunting dogs. Shot placement and individual expectations of the hunter and how his dogs are utilized therefore effect decisions as to whether to opt for mild or maximum penetration and ultimately which cartridge is selected.

For those who prefer scoped rifles, there are a few break open single shot rifles available or better still, the Marlin Lever action rifle. The Marlin 1894 rifle is somewhat heavier and bulkier than the Rossi but can make for a very accurate carbine (and youth rifle). Although open sights have a somewhat romantic appeal, there is nothing worse than trying to shoot a dark furred animal in low light within a forest canopy. It is under these circumstances that a scoped carbine rifle can be immensely handy.

With regards to the .357 Maximum, there are some who have a hankering to use this in custom built carbines. In my experience, it is just as easy to adopt either the .35 Remington or .356 Winchester. Even though bullet diameters differ, both can be coaxed to shoot .357" projectiles for those who really want to explore high velocity pistol bullet performance in carbine rifles

Factory ammunition

Before we begin looking at factory loads, readers are urged to study the website "Ballistics By the Inch" in conjunction with the data supplied here, in order to study the effects of barrel length on the .357 Magnum: <http://www.ballisticsbytheinch.com/calibers.html>

Hornady currently list several loads for the .357 Magnum but unfortunately do not furnish heavy hunting loads. All loads are tested in an 8" vented test barrel. Hornady loads include the 125 grain FTX Critical Defense at 1500fps, the 125 grain XTP American Gunner at 1500fps, the 135 grain FTX Critical Duty at 1275fps (similar to .357 Sig at 1225fps) and the 158 grain XTP at 1250fps (similar to the XTP Sig load at 1225fps). Hornady also offer the 140 grain FTX Leverrevolution rifle load at 1850fps from 18" barrel

Over the past few years there has been a lot of confusion and possibly nonsense surrounding Hornady's FTX pistol loads. The Flex Tip (FTX) bullet was originally designed for lever action rifles. This enabled Hornady to use pointed bullets in tube loaded rifles thanks to the rubber bullet tips which eliminate any risk of primer detonation in tube loaded magazines. But, due to the nature of lever action cartridges, such bullets could not be made with long sleek ogives without effecting OAL's and creating potential feeding / cycling issues. A narrow meplat can also degrade the terminal performance of a low velocity cartridge. The net result of this, is that although the current FTX Leverevolution bullet ogive designs are somewhat sleeker than their flat point counterparts, the BC's (Ballistic Coefficient as it relates to aerodynamic performance) of these bullets are in many instances not all that much higher. Nevertheless, the FTX bullets are well designed, akin to an SST for lever action rifles.

The FTX pistol loads differ from rifle loads in that the rubber tip is omitted to keep cartridge over all lengths within acceptable limits for handgun magazine feeding. That said, some of the red rubber tip material is retained within the hollow point. Various articles have been written as to why this is so. Authorities have stated that the rubber insert within the hollow point is to prevent clogging when striking clothing, as if clothing (or hide) is in itself a newly invented and near insurmountable obstacle. My personal take on this is that the fill is simply a form of marketing. One can easily test the FTX with and without its hollow point fill to see just how little difference this makes.

While the XTP (Hornady's traditional hollow point) boasts an immensely wide frontal area, it needs some measure of weight / SD to obtain desirable penetration. In contrast to this, the FTX has a narrower ogive and meplat (bullet tip) which produces more gradual energy transfer with somewhat increased penetration. This has also allowed Hornady to use a lighter bullet driven at mild velocities for reduced recoil in handguns. This is but one way to approach the problem of penetration.

With regards to barrier penetration and the often quoted "must pass through four layers of denim", all too often the design of a bullet is called into question without shooters taking responsibility for the weight of the bullet selected or cartridge case capacity (potential velocity). When Elmer Keith experimented with the .38 Special his goal was to increase its power. Keith wanted to drive heavy bullets fast because he had seen first hand from field experience, that this type of load killed very quickly. Nowadays folk want the performance Keith obtained but almost to the point of wanting to break away from the laws of physics to do so. This places great strains on ammunition manufacturers.

Now, finally getting back to factory load performance, Hornady list Critical Defense and Critical Duty FTX loads. The major differences between these two loads are the weights and bullet construction. The 125 grain load is designed to minimize over penetration while maximizing trauma (and yes, it is OK to use the term stopping power in lieu of maximum trauma). The Critical duty load on the other hand boasts slightly increased penetration via both increased bullet weight, decreased velocity and a heavier jacket. The heavy jacket does not however seem to inhibit expansion in any way. If anything,

there is a similarity here between the XTP and Interlock rifle bullets versus the Duty and SST.

As far as hunting performance is concerned all of the Hornady loads are best suited to light framed deer. As velocity is increased (from handgun to rifle), killing performance also increases but only to a point. The Critical Duty load is for example designed to give best penetration at impact velocities of around 1100-1250fps. At 1775fps this load can produce immense trauma but cannot be called a deep penetrating hunting bullet. Still, as a load for hunting light framed deer, this can be put to good use at rifle velocities and should be taken into consideration.

Hornady's heaviest factory load, the 158 grain XTP is perhaps the most versatile hunting load of the bunch, its wide hollow point can produce very high huge trauma. But in practice, this bullet works best (speed of killing) at impact velocities above 1200fps. True velocity from a 4" barrel is around 1200fps with 6" barrels yielding around 1300fps and rifles yielding around 1700fps. The 158 grain XTP performs very well on light to mid weight deer species at close ranges and for many hunters, this may be considered a go-to load. This is about as much weight as can be utilized in a handgun at close ranges without greatly sacrificing wounding (width). This bullet does have its limitations and is not the best choice for large tough bodied game. For tough game, select either a tough bullet, a heavier bullet or a more potent cartridge design.

Loads from Federal (4" barrel) include the 125 grain JHP Personal Defense load at 1440fps, the 130 grain Hydra Shok Premium Personal Defense at 1410fps, the 140 grain Barnes Expander hunting load at 1400fps, the 158 grain American Eagle JSP target load at 1240fps, the 158 grain JHP Personal Defense load at 1240fps, the 158 grain Hydra Shok Premium Personal Defense at 1240fps, the 158 grain Fusion bonded soft point hunting load at 1240fps, the 180 grain Castcore hunting load at 1130fps and finally the 180 grain Swift A-Frame hunting load at 1130fps.

Federal lines can be divided into two distinct groups: those that offer fast expansion, weight loss and high trauma versus those that offer controlled expansion and deep penetration. The latter of these are intended for hunting including one solid load for maximum penetration.

Federal's basic jacketed hollow point Premium and Personal Defense loads are fast expanders and adequate for hunting light framed game. The Defense load consists of a basic conventional hollow point while their premium load features Federal's Hydra Shok bullet. This bullet utilizes a stake through its center to essentially pin the jacket to the core while still allowing the bullet to expand and shed weight. The Hydra shok has been relied on by law enforcement officers for many years but also has merit as a deer hunting bullet.

Federal are one of the few manufacturers to offer dedicated hunting loads for the .357 Magnum but these do need to be considered with care. This can be hard to put into words and requires a good deal of field experience to fully understand. Put simply, ballistics gelatin is only good for testing how bullets

perform in ballistics gelatin. On the one hand, a soft 'defense' style bullet can lack the ability to produce optimum penetration on larger bodied game while on the other hand, a bullet that boasts high weight retention can produce delayed kills in the .357 Magnum. Remember - some bullet weight loss can be a great aid to killing when using this cartridge.

The Barnes 140 grain XPB load with its wide hollow point can be an emphatic killer but this bullet does its best work on stout bodied game such as wild boar. The XPB bullet opens right up to create a high level of trauma. At high impact velocities (especially when fired from a rifle), the petals of the Barnes fold right back, enabling it to obtain relatively deep penetration. At low impact velocities the petals of the Barnes remain extended like blender blades. The light weight of the Barnes bullet shows no disadvantage due to its high weight retention. At lower impact velocities of between 1200 and 1000fps, the Barnes can certainly kill but kills can be delayed. Like all .357 magnum bullets, best performance is obtained at impact velocities above 1300fps.

Unfortunately, core bonded bullets can be tricky customers in the handguns and levers. The 158 grain Fusion load is very much reliant on stout bodied game if it is to produce a fast kill. In some instances it can be best to increase the depth of the hollow point. That said, one cannot tell when it is best to deepen the hollow point or how far to deepen it until field results have already been obtained using the benefit of hindsight. Suffice to say that the Federal Fusion load does its best work on pigs while on deer, a deeper hollow point can help increase speed of killing regardless of any risk of lowered penetration. Please see comments on hollow pointing the Speer Gold Dot in the following hand loading section for more thoughts on hollow point alterations.

Federal's 180 grain Swift does its best work when used on stout animals such as wild boar and/or at high impact velocities. Employed this way, the Swift is a very fast and emphatic killer. From an 16 - 18" barreled carbine this load yields around 1600fps and performs much better when used in this manner than when used in a short barreled hand gun.

The 180 grain Castcore load is a hard core penetrator and is an Elmer Keith type bullet design. The bullet has a wide flat meplat as a means to initiate trauma. Strike a pool of water with your finger tips and the water will displace; strike the same pool of water with the flat of your hand and the water and due to surface tension, the water cannot move away quickly from the path of your hand (and if you slap hard enough, it will hurt). In the same manner, a wide meplat is used to cause tissue damage as a result of hydraulic forces while the solid projectile achieves very deep penetration. The trouble is, such a method is reliant on high impact velocities and also target resistance. This type of load has been used in the past for bear defense and there is certainly merit in this from the perspective that penetration is guaranteed from all angles. Nevertheless, there is a risk of low trauma at low impact velocities. For further information on this subject readers are referred to the article 'The effects of the meplat on terminal performance' which can be found in the game killing section of this knowledge base.

Remington loads are interesting in that there have been no 'improvements' in recent years where other manufacturers have gone to great extents to invent or enhance bullet designs. The only changes to the Remington line have been basic rebranding exercises. Beyond this, Remington have adopted an 'if it ain't broke, don't fix it' attitude. And here finally we see a basic but very useful 180 grain load.

Remington (4" barrel) loads include the 125 grain JSP budget UMC target load at 1450fps and the 125 grain Ultimate Defense JHP at 1220fps. Under their High Terminal Performance (HTP) banner, all loads are based on Remington's traditional semi jacket hollow point bullet design and include the 110 grain HTP at 1295fps, the 125 grain HTP at 1450fps, the 158 grain HTP at 1235fps, the 158gr soft point HTP variant (as opposed to standard HP) at 1235fps and the 180 grain HTP at 1145fps (velocity for this load taken in an 8" barrel).

Throughout these loads we see the same basic trends as other manufacturers: fast expanding light weight bullets that can be used on very light framed game, mid weight 158 grain loads suitable for deer but also a heavy weight hollow point.

One factor that needs to be made clear is that the .357 magnum does produce best trauma with a hollow point bullet. Among the Remington loads we see two 158 grain candidates for hunting, one is a hollow point and one is a soft point. In my experience, the soft point (and this includes other brands along with target bullets) does not produce significant expansion and can lack the ability to produce high trauma. The soft point load offered by Remington leans towards penetration rather than maximum trauma. In contrast to this, Remington's 158 grain semi Jacket HP strikes the balance between trauma and penetration and is suitable for hunting light to mid sized deer. Again, best performance (fast bleeding wounds) occurs at impact velocities above 1300fps however bullet expansion is still evident at impact velocities of around 1000fps.

The true winner of the Remington line has to be their 180 grain hollow point. Although Remington used an 8" test barrel, this load can still yield over 1150fps in a 4" revolver. This load proves better still when fired in a rifle, yielding velocities of around 1600fps. Readers should note that although the semi jacket design offers a great deal of exposed lead, the hollow point of the Remington is somewhat shallow. This allows the 180 grain load to achieve high weight retention and very deep penetration. Performance can be altered even further by changing the depth of the hollow point, enabling wider wounding albeit with slightly shallower penetration. This should be considered if using the Remington load at low impact velocities. In summary, this is a load that works well, but one that can be further enhanced to suit individual needs. It is a load that can be used on light bodied deer, but also some larger bodied animals, working very well on Red and Mule body weights.

Winchester loads follow a traditional format but lack any heavy weight offerings. All loads are tested in a 4" barrel. These loads include the 125 grain Defender at 1450fps, the 125 grain JSP (note soft

point) at 1370fps, the 125 grain JHP at 1450fps, the 158 grain JHP at 1235fps, the 158 grain JSP (note soft point again) at 1235fps and finally the premium 145 grain Silvertip (Super-X) at 1290fps.

Within the Winchester line we see hollow points for fast expansion and soft points for deep penetration. Again, readers are reminded that soft points can produce noticeably slower kills than hollow points when using the .357 Magnum, especially at low impact velocities. Of the light loads, the 125 grain Defender is a bonded design, an attempt to obtain both high velocity and high weight retention. This is a very good bullet design for close range work on light bodied weight deer. At longer ranges, low energy can lead to narrow wounding. But for those wanting a compromise between high velocity and penetration, this bullet is worth consideration, especially as a rifle load for light bodied deer at ranges inside 100 yards. In comparison to this, Winchester's 125 grain JSP load is highly frangible when used at rifle speeds. This design can work exceptionally well on light framed game provided one has realistic expectations. Again, this is the sort of load that should not be discounted. But by the same token, it pays to not become overconfident with this bullet weight and design.

Winchester's premium 145 grain bullet is very similar to the Hornady XTP in its design. This is a wide wounding bullet at rifle velocities and can be used with success on lighter bodied deer. At handgun speeds, this load is like so many, right on the threshold. At very close ranges and with a forwards shoulder shot, kills can be fast. But at 1000fps, kills can be delayed regardless of expansion. Still, this is a good bullet weight versus potential impact velocities, having some forethought put into its design.

Please note that there are other brands of ammunition I have not been able to test. These include the Buffalo Bore "Heavy Magnum" loads and those from Grizzly and Cor-Bon. For those who have access to these brands, these are worth investigating.

As a summary to this factory load information, please understand that velocity has a significant effect on results. As we increase velocity (lighter bullets driven fast) we increase target resistance. This can cause wider wounding but also shallow penetration. On the other hand, if the bullet is traveling too slowly (heavy bullet, extended range or reduced recoil load), it may fail to impart energy as a result of poor expansion and poor hydraulic forces. If the bullet is light and soft, penetration can be an issue, if the bullet is too stout, wounding (insufficient) may be an issue.

Ultimately, a soft but heavy .357 Magnum bullet can prove ideal, but we can't afford to go too slow.

A hollow point is also highly effective. Anybody who has hunted small game with a .22LR (especially when shooting subsonic) will have a rudimentary understanding of this and how a hollow point .22LR bullet is vastly more effective than a basic soft nose .22 bullet design.

Hand Loading

The .357 Magnum like many pistol cartridges is a doddle to reload. Progressive reloading systems can enable fast reloading while carbide tungsten dies do not require the use of case lube saving even more time. Whether loading for a handgun or rifle, always use a sturdy crimp when reloading the .357 Magnum. This helps ensure that any ammunition within a magazine or non firing cylinder will not suffer a loose grip on the projectile and also helps ensure uniform pressures when using spherical powders.

In pistols featuring barrel lengths of 4-6", hand loads can yield 1500fps to 1600fps with 125 grain bullets, 1400fps to 1500fps with 158 grain bullets and up to and above 1300fps with 180 grain bullets. In some instances and with longer barrels, it is possible to drive loads 100fps faster than the figures quoted here. By the same token, some pistols including short barreled models may only achieve velocities 100fps slower than those quoted here. Those interested in hunting should seek safe yet full power hand loads using a chronograph to help obtain data.

In a rifle of sound condition with a barrel length of 16-20", the potent little .357 Magnum is capable of achieving velocities of 2100 to 2200fps with 125 grain bullets, 1800 to 1900fps with 158 grain bullets and 1700 to 1800fps with 180 grain bullets.

The very best powders available for the .357 Magnum are Winchester 296 and Hodgdon H110 which has since been confirmed by Hodgdon to be the same powder. This powder should always be ignited with a pistol magnum primer. The potent ball powder helps wring excellent performance out of the .357 Magnum.

Hornady produce the well designed XTP .357" bullet in several weights including 110, 125, 140, 158 and 180 grains. Along with these, Hornady now also offer the 140 grain FTX for lever action rifles.

The light 125 grain XTP can produce an extremely violent wound with an exit spatter covering several yards. This can be a highly effective bullet for hunting light framed game weighing up to 60kg (132lb). A key factor to success, is to not become overconfident in the performance of this bullet after witnessing good results. If used on large animals, this bullet can suffer either shallow penetration at close ranges or simply a lack of energy at extended ranges. This is a good bullet, but must be used wisely.

The 158 grain XTP is another great performer and can work exceptionally well on deer weighing up to 80kg (176lb). Best performance is derived at rifle velocities however the 158 grain can prove immensely effective in handguns as a means to increase velocity and therefore wounding without greatly sacrificing penetration. This bullet does not have the authority of the 180gr XTP when used on larger bodied deer weighing up to 100kg (220lb) or tough game such as wild boar weighing over 60kg (132lb). Nevertheless, it is sometimes wiser to choose the faster 158gr if suitable velocities cannot be

obtained with the 180 grain bullet. This requires careful thought, taking potential muzzle velocities, game weights, ranges and expected angles into consideration.

The 180 grain XTP is an excellent bullet. It produces very fast killing, though not always immediate. At impact velocities between 1600 and 1400fps, animals do not generally move too far and move off either in a drunken manner or bunched up, showing the hunter an indication of a solid hit. At impact velocities below 1400fps, dead runs may be longer and the speed of killing is directly related to shot placement. It is at this point, worth comparing the performance of the .357 Magnum rifle to its .44 magnum counterpart. In the .44, when using a 240 grain bullet, kills on lighter weight deer can be slow at 1400fps. Internal wounding is vivid yet not dramatic. Dead runs may be long with rear lung shots or snap shots which strike the liver. But by changing to a 200 grain bullet in the .44 Magnum, it can produce greater energy transfer on light to mid weight deer. In the .357 by comparison, the 180 grain bullet produces similar performance to the .44 200 grain bullet at similar impact velocities.

Loaded to rifle velocities, the 180 grain XTP will sometimes produce bullet blow back at very close ranges (wide entry wounding but not as a result of bullet blow up). On lean animals this bullet also produces a good sized exit wound and a swarthy blood trail, sometimes on both sides. This bullet is capable of penetrating vitals from tail on shots on game weighing up to 45kg (100lb). As game weights approach 60kg (132lb) however, tail on shots present too much resistance and the XTP can shed too much weight, becoming arrested in gut fiber. The 180 grain XTP can tackle mid-sized deer, reaching its limits on Red and Mule deer species weighing up to 150kg (330lb). This bullet can also tackle wild boar weighing up to 100kg (220lb) and will smash through heavily shielded muscle and bone and destroy vitals before coming to rest in either the offside chest wall or in offside muscle and bone. This bullet is at its absolute limit on boar of this size. Nevertheless for its modest performance the XTP anchors pigs fast and does not give any impression that this cartridge is under powered but for its lack of absolute penetration with hollow point bullets.

All told, the 180 grain XTP is an impressive little bullet design. readers are however reminded that it does have its limitations. It does not have the bone crunching deep penetrating power of a .44 caliber 300 grain bullet. The 180 grain XTP is probably the most effective all-around bullet for the .357 Magnum. The one caveat to this is of course impact velocities. Those who cannot get the speeds required from this bullet may be better served with a lighter and faster projectile.

Sierra produce their Power Jacket pistol bullet in the weights 110, 125, 140, 158 and 170 grains. The 125 grain bullet is yet another that can produce a huge exit wound and spatter on light framed game. This is a highly effective bullet design provided one does not become overconfident in its performance, The 125 grain can just as easily suffer shallow penetration on tough game. The most suitable deer bullets produced by Sierra are the 158 and 170 grain offerings. Expansion of the Power Jacket is much slower than Hornady's XTP. While this should be conducive to deeper penetration, the Sierra projectiles continue to expand losing most of their sectional density. Weight retention is fairly

consistent, upwards of 60%. Kills with the Sierra bullets are slower than the XTP and to some extent, less spectacular. The .357 Power Jacket bullets tend to release energy slowly rather than dump a large amount of energy immediately and dramatically. The net result is that although these bullets can be very reliable, kills can be somewhat more delayed than the XTP design.

Speer .357 Magnum projectiles require careful consideration. Currently Speer list one traditional 158 grain JHP (Plinker) which produces performance on par with the Sierra Power Jacket. Beyond this, the product line consists of the Uni-Cor bullet design.

To make a Uni-Cor Gold Dot (and therefore Deep Curl), lead cores are placed in an electroplating bath which then builds the copper jacket over the core, resulting in exceptionally strong core bonding. Speer call these 'Uni-Cor', with product lines divided thereafter into Gold Dot (anti personal), Gold Dot Short Barrel (anti personal) and Deep Curl (hunting). In essence, all are the same Uni-Cor bullet or Gold Dot if you are more familiar with this term.

The Uni-Cor design is most useful where a deep penetrating bullet is required but can be highly counterproductive when it comes to wounding. In all instances, readers are advised to steer clear of any soft point handgun bullet designs and to also be wary of dished hollow point designs although these can work well in lighter bullet weights (125 grain) driven at high velocities. These matters aside, the deep hollow point is a very good hunting bullet without need of further control unless there is a direct call for maximum penetration.

The 158 grain Deep Curl (dished hollow point) bullet can in some instances cleave to its energy regardless of expansion. Yet again, this is difficult to explain to those who are only familiar with ballistics gelatin. This bullet can be used on game weighing around 100kg (220lb) which generally speaking is the maximum body weight that the .357 Magnum can handle if taking tougher animals into consideration. In this sense, the Speer can be used as a means to guarantee full penetration with cross body and quartering shots. But, the Deep Curl does this at the expense of wide wounding. Kills can therefore be quite delayed and shots need to be kept well forwards to avoid this. Impact velocities also affect results significantly. These bullets need to be driven fast for best results.

The 158 grain Deep Curl can easily be altered by deepening the hollow point by around 2 to 4mm (80 to 160 thou). Once this has been performed the shank form after penetration is compromised yet weight retention remains much the same. In other words, the Speer is forced to gradually arrest as a result of massive expansion. And it is this massive expansion that causes higher energy transfer and more rapid bleeding. This can help the Speer produce faster kills on light framed deer weighing around 60-80kg (130-180lb). Unfortunately though, this is a situation that requires some hindsight. It is only after taking several animals with the Uni-Cor that one can determine whether it is best to continue with the existing bullet or whether modifications are needed for local game. The point I wish to drive home here is that in either case, this bullet can be altered and that alterations produce meaningful

results.

Speer's Deep Curl 170 grain bullet is of the soft point variety. It features a wide flat point to help initiate hydraulic trauma and is for the most part, a non-expanding bullet. The 170 grain projectile can be very useful where deep penetration is required but in the absence of high velocity, kills can be very slow. This bullet works best when angled to break bone.

The Swift 180 grain A-Frame is a core bonded bullet but also features a partition to protect its rear core in the same manner as the Nosler Partition design. When used in a high velocity rifle (e.g .300 Win Mag), the A-Frame has some advantage over Nosler's design in that the core bonding helps prevent any risk of rear core separation as can occur when using projectiles of a low to mild sectional density on immensely tough game. But at handgun velocities, this level of control and 99% weight retention can limit trauma. Having said this, the Swift has a very deep hollow point to aid trauma. This bullet is designed for tough game but it pays to keep in mind that the .357 Magnum is not in itself suited to large and heavy game so common sense must be applied. In essence, this bullet does its best work on wild boar, achieving a greater level of penetration than the likes of the XTP while meeting enough target resistance to initiate trauma.

Nosler produce one hunting projectile for the .357 Magnum, the 180 grain Partition HG (hand gun). This projectile gives that little bit more reliability missing from the Hornady 180 grain XTP when hunting large bodied animals. By comparison, when used on appropriate game, the Hornady XTP retains around 50% weight - most of the time. But when a large or heavy animal is encountered the XTP can come under a lot of stress at rifle velocities for which it was never designed. The XTP does not generally blow up as such but continues to expand and lose frontal area. Under heavy pressure the double cannelures cannot prevent this continued action and eventually all that remains is the jacket stripped back to its base. The Nosler Partition design prevents this situation from occurring due to its mid-section partition. Weight retention averages around 50%, similar to the XTP under normal circumstances and is more reliable when tackling body weights of around 100kg (220lb) and higher. The Partition can lose its core if the projectile tumbles due to bone deflection but at .357 pistol and rifle velocities the bullet path is normally close to a straight line. Speed of killing is more in line with the Sierra Power Jacket which is somewhat more delayed in action than the XTP.

Having already covered the 140 grain Barnes XPB as loaded by Federal there is little more that needs saying with regards to this bullet line. Barnes have done their best to create a wide expanding bullet and for those needing deep penetration. Like the Swift bullet, the XPB has merit for hunting heavy wild boar or for those wanting a bullet suitable for defense against bear.

As a recap on hand loads, I would suggest that anyone wishing to hunt with the .357 rifle should try working with the 180 grain XTP and use this as a benchmark for performance. Start with this, then monitor performance making any necessary changes after gaining results in the field. If greater

penetration is required, the Partition, A-Frame, Deep Curl or XPB are all potential options. If greater wounding is required without need of penetration my experience leads me to suggest the 158gr XTP as the compromise, maintaining a level of consistency and reliability that cannot be obtained with lighter bullets. For very light framed game, 125 grain projectiles can produce spectacular performance.

Closing comments

The .357 lacks the energy for killing that most high powered rifle cartridges contain. To make up for this, wide hollow points can be utilized to create broad, violent, fast bleeding wound channels. This type of bullet design can however produce limited penetration. But if a stouter bullet is used, the .357 cannot produce the same level of wounding and kills can be slow. In this regard, it can be better to increase bullet weight, rather than adopting a tougher bullet. That said, there are situations which require maximum penetration and this subject should be approached with common sense.

Anyone who is familiar with using the .30-30 out to comfortable open sight ranges would find the .357 rifle cartridge impressive within its limitations. Like the .30-30, the .357 does not produce hydrostatic shock (not to be confused with hydraulic shock – see Game Killing section) and animals may move off some way after being struck through vitals. But by keeping shots well forwards and using a fast expanding .357 projectile, animals do not tend to move far.

As a handgun hunting cartridge the .357 does have some short comings. This cartridge often does its best work with a 180 grain projectile yet also requires high velocity to make the best use of this bullet weight. To this end, if using a handgun, the hunter must either keep ranges very short or adopt the 158 grain compromise weight. If a stout 158 grain bullet is selected, wounds may be narrow, if a soft bullet is selected penetration will be limited. But so long as the hunter is not tackling very large bodied deer, a soft bullet like the 158 grain XTP can produce excellent results.

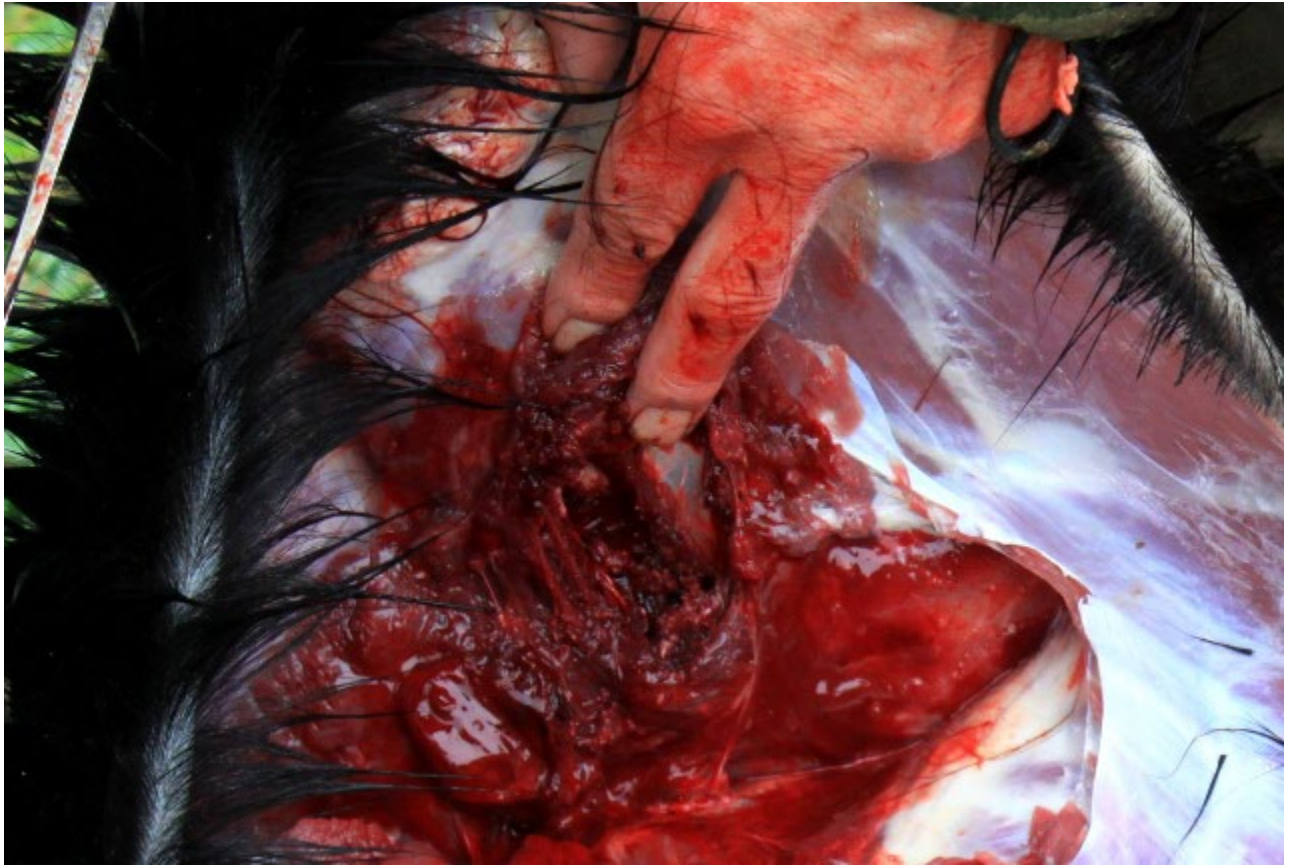
This cartridge is quite suitable for those who normally encounter light to mid-sized deer at bush / woods hunting ranges. At rifle velocities the cartridge performs very well out to 75 yards, its performance becomes more modest between 75 and 125 yards. Like the .44 Magnum, the .357 can be sighted to shoot comfortably out to 125 yards. The .357 can also be an excellent cartridge for introducing youngsters to hunting at close ranges providing rifles have suitable triggers that are not too heavy and are without creep. Rifles chambered in .357 are extremely compact and can suit younger hunters very well.

With regards to the age old comparison between the .357 and the .44, the 44 Magnum is a significantly superior hunting cartridge where heavier game may be encountered. The .44 Magnum boasts greater bullet weights for deep penetration combined with a wider frontal area as an aid to low velocity killing. On the other hand, the .357 Magnum can prove to be a vastly more emphatic killer

than some of our more recent low velocity tactical rifle cartridge designs although the latter have superior trajectories. In any case, this is a cartridge that has to be used in the field in order to be properly understood, a factor that seems to have been forgotten. It can teach us a great deal about ballistics in general, but only if we are willing to get away from gelatin and head into the woods.



The 158gr XTP, a compromise bullet weight. Impact velocity 1300fps. This bullet lacks the punch of the double cannelure 180gr XTP, yet can be very effective in its own right.



The below photo shows the exit wound of the 158gr XTP after breaking both shoulders (see previous photo). The exit wound is the diameter of the expanded bullet as the bullet gradually lost energy after a massive energy dump within the shoulders and vital organs.



Suggested loads: .357 Magnum					Barrel length: Variable	
No	ID		Sectional Density	Ballistic Coefficient	Observed MV Fps	ME Ft-lb's
1	FL	158gr XTP 6"	.177	.206	1300fps	593
2	FL	158gr XTP 16-20"	.177	.206	1700fps	1014
3	FL	180gr Rem SJHP 6"	.202	.164	1150fps	529
4	FL	180gr Rem SJHP 16-20"	.202	.164	1600fps	1023
5	HL	180gr XTP/ Partition 6"	.202	.230	1350fps	728
6	HL	180gr XTP/Partition 16-20"	.202	.230	1600fps	1023
7	HL	180gr XTP/Partition 16-20" heavy rifle load.	.202	.230	1800fps	1295

Suggested sight settings and bullet paths							
1	Yards	25	50	75	100	125	150
	Bt. path	0	-.67	-2.9	-6.7	-12.3	-19.9
2	Yards	25	50	75	100	125	150
	Bt. path	0.77	1.5	1.3	0	-2.4	-5.9
3	Yards	25	50	75	100	125	150

	Bt. path	0	-1	-4	-9.1	-16.4	-26.1
4	Yards	25	50	75	100	125	150
	Bt. path	1	1.8	1.5	0	-2.9	-7.3
5	Yards	25	50	75	100	125	150
	Bt. path	0	-.6	-2.5	-6	-11	-18
6	Yards	25	50	75	100	125	150
	Bt. path	.9	1.7	1.4	0	-2.6	-6.5
7	Yards	25	50	75	100	125	150
	Bt. path	.6	1.2	1	0	-2	-5

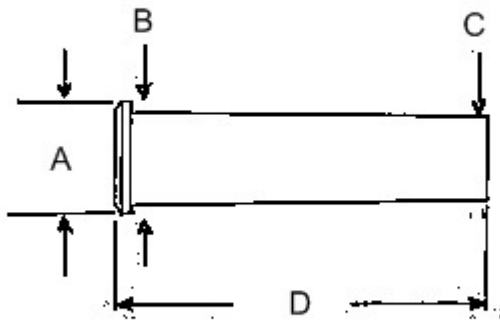
Sight height .75" (open sights).

No	At yards	10mphXwind	Velocity	Ft-lb's
1	100	3.7	1103	427
2	150	8	1270	566
3	100	4	988	390
4	150	4.7	1132	512
5	100	3.4	1145	524
6	150	7.1	1236	611
7	150	6.3	1383	764

Note load 3 falls below 1000fps at 100 yards. 50 yard velocity is 1056fps. In handguns, use at very close ranges for best results.

Load 7 impact velocity at 150 yards gives highly effective performance on game.

.357 Magnum



.357 Magnum	Imperial	Metric
A	.440	11.18
B	.379	9.63
C	.379	9.63
D	1.290	32.77
Max Case	1.290	32.77
Trim length	1.280	32.5

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