

NEW DATA - NEW STORIES - MORE ACTION

## THIS ISSUE

LOADING BENCH LOGISTICS

NEW CENTERFIRE RIFLE FROM LITHGOW ARMS

ADI .308 WINCHESTER BRASS

HUNTING ADVENTURES IN NEW ZEALAND

BRINGING A NEW PROPELLANT MANUFACTURING FACILITY ONLINE

JUDGING DISTANCES

NEW LOADS - NEW DATA!

KEEPING FIRST TIME SHOOTERS INTERESTED

BAGGING MY FIRST SAMBAR

RIFLE RANGES AROUND OZ

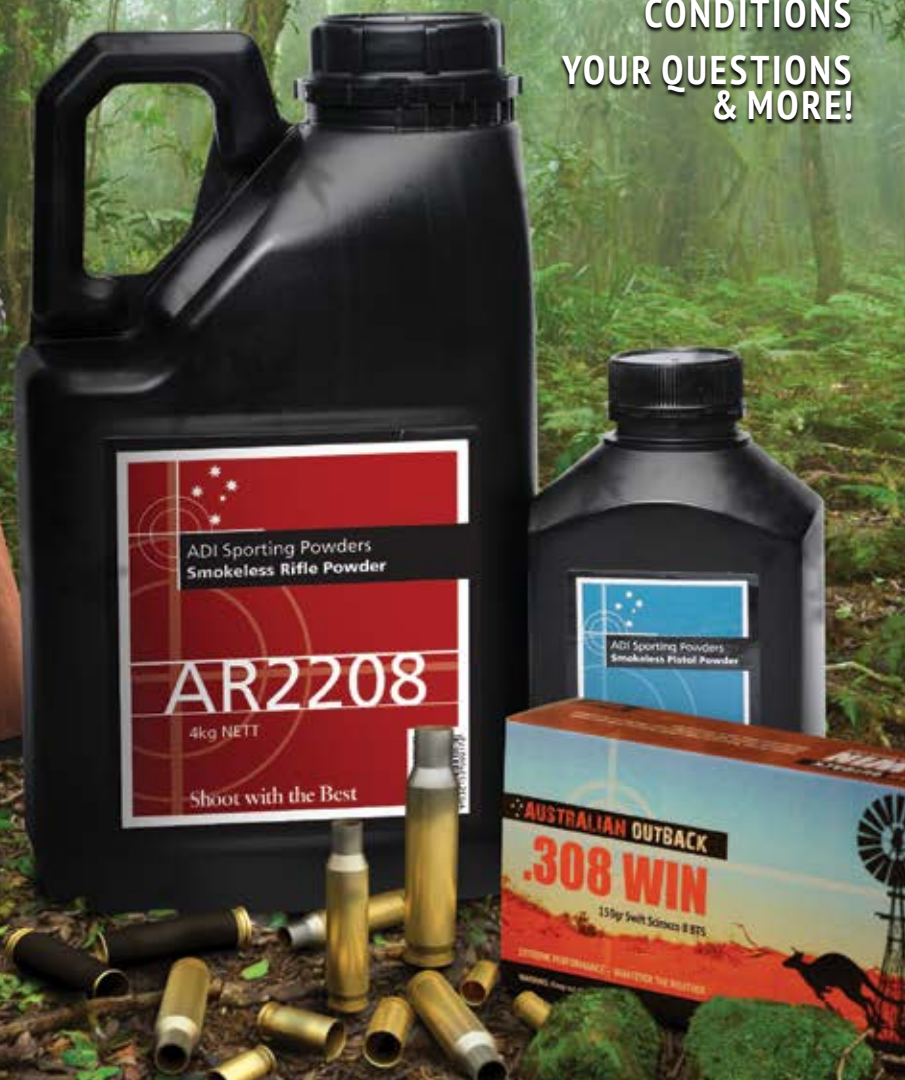
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# DEAR RELOADER

Welcome to the ninth edition of the ADI powders reloading guide, which we hope you will enjoy reading and using as much as we enjoyed putting it together. Thank you for all of the feedback and questions this year. We use your feedback to improve the products and services we provide to you, the Australian reloading community.

I am pleased to say that we received very few complaints related to the availability of powder over the last year. The challenges of moving dangerous goods around Australia have not reduced, but we made some changes to our distribution network that had a positive effect on availability. Over the last 12 months we supplied more reloading powder to Australian gunshops than in any equivalent period previously.

In this issue you can read about our new powder plant that is now undergoing commissioning in Mulwala, known as the Mulwala Redevelopment Project (MRP). We will be running the old and the new plants alongside each other until we are confident that the new plant is able to produce our entire range of propellants reliably, after which we will start the phased shutdown of the old plant.

The MRP facility will ensure that reloading powders are manufactured sustainably in Australia for many years to come.

We continue to enjoy a strong relationship with our US distributor, Hodgdon Powder Company, sharing reloading data and technical information to keep our products at the cutting edge of performance and quality. Our exports to the US also help to keep local manufacture economically viable through economy of scale.

Please visit [adi-powders.com.au](http://adi-powders.com.au) for the most up-to-date reloading information and news about ADI powders. Our reloading experts are available at [reload.support@adi-powders.com.au](mailto:reload.support@adi-powders.com.au) to answer any technical reloading questions you may have.

Thank you all for your loyal support of our Australian made world-class powders. Enjoy our sport, and please stay safe out there.

**Ferdi Kluever**  
*Sales Director, Australian Munitions*

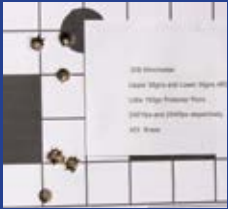


Australian Munitions are always on the lookout for interesting articles or products.

If you would like to contribute to, or advertise in, the 2017, 10th edition of our ADI Powders Handloaders' Guide please contact: [info@australian-munitions.com.au](mailto:info@australian-munitions.com.au).



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Statements and opinions expressed in articles, reviews and other materials herein are those of the authors and not ADI powders or Australian Munitions Pty Ltd.

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# BULLET GLOSSARY

## Brand abbreviation

BAR	Barnes
BEAR CRK	Bear Creek
BER	Berger
BERB	Berry's Bullets
BLX	Bull-X
BTB	Beartooth Bullets
CPB	Cast Performance
FA	Freedom Arms
HDY	Hornady
LY	Lyman SPM
MEI	Meister
NOS	Nosler
REM	Remington
SFIRE	Sinterfire
SFT	Swift
SIE	Sierra
SPR	Speer
WDLGH	Woodleigh
WIN	Winchester

## Bullet abbreviation

AB	Accu-Bond
AF/SS	A-Frame Semi-Spitzer
BK	Blitz King
BR	Bench Rest
BT	Ballistic Tip
BTSP	Boat Tail Spire Point
FMC	Full Metal Case
FMJ	Full Metal Jacket

FMJBT	Full Metal Jacket Boat Tail
FN	Flat Nose
FP	Flat Point
FPJ	Full Plated Jacket
FS	Fail Safe
GC	Gas Check
GDHP	Gold Dot Hollow Point
GDSP	Gold Dot Soft Point
GS	Grand Slam
HB	Hollow Base
HC	Hollow Cavity
HP	Hollow Point
HPBT	Hollow Point Boat Tail
HSP	Hollow Soft Point
IB	Inter Bond
JFP	Jacketed Flat Point
JHC	Jacketed Hollow Cavity
JRN	Jacketed Round Nose
JSWC	Jacketed Semi-Wadcutter
LBBWC	Lead Bevel Base Wadcutter
LCN	Lead Conical Nose
LF	Lead Free
LFN	Lead Flat Nose
LFNPB	Lead Flat Nose Plain Base
LFP	Lead Flat Point
LHBWC	Lead Hollow Base Wadcutter
LRN	Lead Round Nose
LSWC	Lead Semi-Wadcutter
MK	Match King
MT-SP	Mag Tip Soft Point

PART	Partition
PSPCL	Pointed Soft Point Core-Lokt
RN	Round Nose
SB	Solid Base
SBT	Spitzer Boat Tail
SCIR	Scirocco
SJ	Short Jacket
SMP	Semi-Pointed
SP	Soft Point, Spitzer, Spire Point
SPBT	Soft Point Boat Tail
SPT	Spitzer
SSP	Single Shot Pistol
SST	Super Shock Tip
ST	Silver Tip
SX	Super Explosive
TACT	Tactical
TARG	Target
TMJ	Total Metal Jacket
TSX	Triple Shock X
VAR	Varmint
VG FB	Varmint Grenade
VLD	Very Low Drag
W/GCK	With Gas Check
WC	Wadcutter
XBT	X Boat Tail
XBTC	X Boat Tail Coated
XFB	X Flat Base
XPB	X Pistol Bullet
XTP	Extreme Terminal Performance



# POWDER EQUIVALENTS

ADI	Hodgdon	Alliant	IMR	Winchester	Vectan	Norma	Accurate Arms	Vihtavuori
AS30N		Bullseye						N310
Trail Boss			Trail Boss					
			PB	W231			AA 2	N320
AS50N	International	Green Dot	700X	WST			AA5	
AP70N	Universal	Unique	SR 7625					N330
		Herco		WSF	A1			
			800X	WAP			AA7	N340
AP100			SR 4756					
	HS-6			W540				3N37
	HS-7	Blue Dot		W571			AA9	N350
		Steel			Ba 6			N105
		2400	SR 4759					N110
AR2205	H4227 / H110		IMR 4227	W296		R-123	AA 1680	N120
AR2207	H4198	Reloader 7	IMR 4198	W680	Tu 2000	N200		N130
Bench Mark1								N133
AR2219	H322	10-X						
Bench Mark 2	BENCHMARK		IMR 3031				AA 2015	
Bench Mark 8208			IMR 8208 XBR					
AR2206	BLC(2)				Tu 3000		AA 2230	
	N335			W748				N135
AR2206H	H4895		IMR 4895		Tu 5000		AA 2460	
AR2208	Varget		IMR 4064				AA 2520	
			IMR 4320			N201		
						N202	AA 2700	N140 / N540
	H380	Reloader 15				N203		
AR2209	H414 / H4350		IMR 4350	W760	Tu 7000	N204	AA 4350	N150 / N550
	H450	Reloader 19				N205		
			IMR 4831	WMR			AA 3100	N160 / N560
AR2213SC	H4831							
		Reloader 22	IMR 7828	WXR	Tu 8000	MRP		N165
AR2217	H1000							N170
AR2225	Retumbo	Reloader 25					Magpro	24N41
AR2218	H870 / H50BMG						AA 8700	20N29

**NOTE:**

Table shows only approximate equivalent values within about 5%. Actual burning rates can vary depending on the calibre, weapon, loading components and practices, as well as from powder lot to lot. As a consequence, it must be understood that Australian Munitions cannot accept any responsibility for use of this information in any way.



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# BURNING RATE EXAMPLES

POWDER	BURNING RATE	EXAMPLES OF APPLICATION		
		PISTOL	SHOTGUN	RIFLE
AS30N	Fastest		12 Gauge trap/skeet load	
Trail Boss		.45 Colt		45-70 Government
AP50N		.45 ACP		
AS50N			12 Gauge trap/sporting	
AP70N		40-40 Winchester	12 Gauge field load	
AP100		.38 Super Auto	20 Gauge	
AR2205		357 Magnum	410 Gauge	.22 Hornet
AR2207		.7mm TCU		.222 Remington
Bench Mark 1				.223 Remington
AR2219				6mm PPC
Bench Mark 2				.22-250 Remington
Bench Mark 8208				.204 Ruger
AR2206				.308 Winchester
AR2206H				257 Roberts
AR2208				30-30 Winchester
AR2209				30-06 Springfield
AR2213SC				300 Win. Magnum
AR2217				7mm Rem. Magnum
AR2225				300 Rem. Ultra Magnum
AR2218	Slowest			.30/378 Weatherby

This section provides examples of applications for the ADI powders across the range of burning rates.

## DID YOU KNOW

The longest distance of a confirmed sniper kill in combat is an astounding 2.48 km. This was made in November 2009 by UK Corporal Craig Harrison. Harrison had to creatively modify his AI .338 Lapua Magnum on the fly to achieve the level of accuracy needed to make the shot.

Using untrimmed cases that are too long is one of the most common reloading mistakes. For bolt actions, if the neck becomes long enough it will contact the end of the chamber and decrease accuracy. Semiautomatics, on the other hand, are easily crippled by cases of excessive length.





# WANT TO SHOOT BETTER?

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- Streamlined secant ogive and optimum boattail design
- AMP® Bullet Jackets

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## ABOUT OUR CONTRIBUTORS

**DR GARRY WARRENDER** is a chemist working as a design engineer in the Research & Development space for Australian Munitions on the development of propellants. He studied chemistry at both Charles Darwin University and Sydney University, and was awarded a Doctor of Philosophy from Sydney University in 2006. Garry is a keen shooter and enjoys both target and sport shooting.

**DR EMMA COEN** took up target shooting in her early teens, thanks to the influence of her parents who are also target shooters. While her father very kindly kept her in hand-loads during her earlier years, she has taken over that responsibility and hand-loads with ADI Powders. As a scientist and engineer, she finds the optimisation of shooting to be endlessly fascinating.

**EWAN WILLIAMS** is a Bachelor of Science and Masters qualified former soldier of 4RAR (Commando), now 2 Commando Regiment, whose passion for all things tactical continued back into his civilian life. A keen rifle and pistol shooter, as well as hunter, he is always striving for knowledge while honing his skills. His inability to sit still has resulted in various entrepreneurial ventures outside of his full-time employment and he is always keen to meet like-minded individuals.

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**MARK DUNDAS** has been a member of the Australian Munitions Technical & Engineering Team for a decade. He currently manages the Benalla Chemical Laboratory along with the Ballistics & Trials Team, which conducts all the performance testing of our ADI Powders and Outback Ammunition products.

**MATTHEW CAMERON** has been a contributing author to Australian shooting magazines since 2004. His articles have been published in New Zealand as well as Varmint Hunter Magazine in the USA. He is a keen experimenter when it comes to reloading and is always looking for a better more accurate load. His rifles have never digested a factory round.

## DID YOU KNOW?

During 'The Great War', used brass casings were returned to the munitions factory for refilling many times. Some were kept and crafted into 'trench art' (perhaps to provide a distraction from life on the western front), kept as souvenirs or sent to relatives back home.

Australian Munitions's ADI AR2205 smokeless powder was sold in the USA by Hodgdon Power Company as IMR 4227. In 1995, it was used in the NASA mission SPACEHAB-3 as a NASA Standard initiator to activate the forward or aft solid rocket booster/external tank separation bolt.

The world's smallest working gun is a 5 cm long pistol, created by Paul Erard in Switzerland. It weighs 17 g and it fires the smallest bullets invented, being 2.34 mm in diameter. Even though it was created as art, a gun licence is required to buy one.

The first practical smokeless powder made from nitrocellulose was in the 1880s. It was used by the French for firearms and artillery ammunition. This revolutionised warfare as it was more powerful than traditional gunpowder. It increased the weapon's range and prevented the battlefield from being obscured with thick clouds of smoke.







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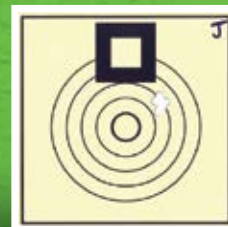
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# UNFINISHED BUSINESS

- Nicole Urquhart -



We fell in love with New Zealand in September 2014, but it also broke my heart coming home without a bull tahr. We booked our return trip to take care of that unfinished business with Chris McCarthy of Lake Hawea Hunting Safaris for the end of May 2015.

However, an injury from a waterski jump in January and the subsequent anterior cruciate ligament reconstructive surgery in March spoiled the plan. I was gutted when the surgeon said "I don't think so!" with regards to my hunting trip.

With steely determination I made a speedy recovery and eleven weeks post op, I headed across the Tasman with Sparra and son, Jordy. I was lucky enough to have our great friend Laurie take me out to the range for some trigger time and give me some coaching on setting up for a shot and breathing control before we left.

When we arrived, Queenstown was blanketed in white from an early dump of snow, a very different picture to the last time we were there. It was lovely to catch up with Chris and his family again. The next morning was crisp and clear as we took a couple of practice shots of the 270 from the frozen bench. The boys also had a shot each with the 7 mm to hit the gong across the ridge at 350 m. We packed some gear for a night away and travelled back to Queenstown to catch the ferry across Lake Wakatipu to Mt. Nicholas Station, a spectacular property bordered by the lake and snow-capped mountains.

We headed to the hunting area, after unloading our gear at the quarters, and set up on a spotting ridge. We glassed both red and fallow deer from our vantage point. Chris and Sparra headed off to have a closer look at a couple of stags with about forty five minutes of light remaining.

As the daylight faded, Jordy and I headed back down the hill with Bruce, the Manager. On the way we watched an old stag with only one (but very impressive) antler. A little further on, we spotted the rump of a red stag with his head down feeding. As we watched, he lifted his head, silhouetted against the lake, to display the widest rack I had ever seen. It was like he had big wide handlebars on his head.

There were four other stags with him but they paled in comparison. They became aware of us but were content to watch us as we moved on. We met up with Sparra and Chris heading out, they had assessed the stags but decided to hold off and see what was around in the morning. Bruce and Adriane treated us to a delicious meal, from produce grown on the station and we bedded down after a few night caps and catch up stories. ►►

The next morning we rugged up and made our way to the hill as daylight was breaking. Again, we had our eyes peeled glassing for stags. Chris and Sparra got a good look at the wide stag that we had seen the evening before – he even had to turn his head to the side to get through the scrub. After a while, Sparra and Chris headed off to get a better look around the other face of the hill to see if anything was moving about over there, while Jordy and I sat tight. At 9:50 am, we heard a shot and Jordy said that due to the thud he thought the deer would be down. We sat tight for what felt like an eternity when Jordy spotted them in his binos, with a stag down.

We made our way down to them and what a stag he was, with big heavy antlers (weighing in at 11 kg). After lots of photos and video, Chris started the hard work of caping him out. We were packed up and ready to catch the return ferry at 2 pm. What an amazing 24 hours. On our way back to Hawea Flats we stopped at the Cardrona Hotel to toast the mighty red stag and discuss our next plan of attack – my long awaited bull tahr.

The next morning we headed off from Chris's and arrived at the hunting area just on day break. We spotted tahr as we were gathering our packs at the vehicle. Chris, Jordy and I set off up the hill after spotting a good bull. The hill climb was a challenge for me and I was pretty slow. We got closer to the ridge and crawled to the top to see if we could spot the bull. He was with a nanny but after I set up for the shot he remained partially obscured behind a bush, not presenting a clear shot. We watched and waited, willing him to head uphill but he turned and dropped down into some thick scrub.

We moved further forward to watch and see if he was going to come out and as we were laying there, we noticed another group of tahr coming around the side of the hill straight towards us. There were a couple of young bulls, one with a beautiful winter cape, grazing with some kids and nannies. The tahrs were completely unaware of us laying there and were walking only about 40 m from us. One young bull came over closer to us and stood only about 15 m from us, sniffing the air trying to work out what we were.

He eventually decided that something wasn't quite right, turned and left us, the others scampering away with him. It was a magical encounter. We moved a little further out onto the ridge and set up to glass another gully system. Jordy picked up a good bull a couple of gullies over heading our way and Chris spotted a nanny and bull on the next ridge, just below a rocky outcrop. After my initial panic of not being able to find him in the scope, I picked him up with Chris's guidance and locked onto him. I remembered Laurie's advice and controlled my breathing. The bull was facing us but turned downhill presenting a shoulder shot. Chris had already told me it was around 200 m, so I squeezed the trigger.

The bull was hit! I watched him fall and Chris and Jordy congratulated me. I was shaking, so relieved it was a good shot. We heard a whoop from Sparra, at the base of the hill. He hadn't been able to see the bull but he saw us lying down set for the shot so knew something was happening.







He said he was so relieved when there hadn't been a second shot (Jordy had the 7 mm as my backup). Jordy waited for Sparra to reach the shooting position, while Chris and I headed over to find the bull, a very slow process for me and my knee. The boys caught up to us just as we reached where the bull had been. We had seen him fall off the back of the ridge, so the boys started scouting the scrub below. The sinking feeling in my gut was slowly starting to grow when Chris called out that he had found him. I was ecstatic – I finally had my beautiful bull tahr with a magnificent winter cape.

After some photos, Chris set to work caping him out. The shot had hit where it was intended and part of the projectile was sitting against the skin of the opposite shoulder.

The bulk of it had done major damage to the shoulder and engine room. The tahr had dropped dead, landing hard on his rump which was quite bruised from falling from the ridge. Chris also got the back skin for me and harvested the back legs and back straps. Next was the tricky part for me – getting down. We negotiated

our way down the mountain side, in which I spent a lot of time scooting down on my behind. It was not the most conventional or elegant method but did save my knees. The boys were very patient with my slow pace and I couldn't have done it without them. It is very frustrating when you are unable to do the things you want to do, but I did appreciate their help and understanding and was just relieved to have been able to get there at all.

|| The bull was hit!  
I watched him fall  
and Chris and Jordy  
congratulated me."

Back at Hawea Flats, Chris worked on the skull cap in the beautiful sunshine. The cape and back skin went into salt.

Two mates of Chris's from Australia, Marty and Rob, arrived after a few days hunting on an East Coast block. They hadn't had a lot of luck and the weather had come in on them. They were very grateful of the opportunity to warm up and dry out their gear. The next morning we headed off to hunt Chamois

and Marty and Rob came along as a couple of extra sets of eyes. It was wet and drizzly but we were hoping that the cloud would lift and the rain would clear.

We set up on a plateau and we glassed some chamois up on the snow/shale line. Chris decided that they were worth taking a closer look so he took Sparra, Jordy, Marty and headed up the hill. Rob and I stayed behind to continue glassing but unfortunately the clouds came in so we couldn't see much at all. It snowed on the boys while they were up the top and visibility was poor for them too, but there was no buck in the mob that they were watching. With the lack of visibility, the boys decided to head off the mountain, so as to not spook the animals in the hope that the weather would be better tomorrow for another crack at a buck. We headed back to Chris's to warm up and get organised for tomorrow. Chris's mum, Yeverly treated us all to another delicious dinner before we called it a night – the boys had had a big walk in tough conditions. ►►





We woke to a white frost and clear day, so Chris, Sparra, Jordy and I headed off to take on the chamois again. We spotted a mob of chamois on the mountain again, so Chris and Jordy set off on foot while Sparra and I stayed put with the binos. It was a nerve racking wait but at least the skies were clear for us to glass. We watched the animals move higher and the boys continued to climb, they were so high. We could see one mob but couldn't be sure that they were the same animals the boys were stalking. After nearly three hours we heard a shot, which was closely followed by another one. We watched the animals that we could see, all run up and over the ridge and into the next gully away from the boys.

It was hard not to think the worst and that things had not gone to plan. My heart sank when I spotted the boys through my binos shortly afterwards, heading down without an animal. Sparra and I were both so disappointed for them, as they had worked so hard in chasing the chamois. The terrain that they had covered was amazing. We had a sandwich and a hot cuppa ready for them as they arrived back, both looking exhausted. We didn't probe with questions and Jordy was just about finished his sandwich when Chris said to Sparra that he hoped he was feeling fresh because there was a retrieval required. Jordy couldn't contain himself any longer and cracked up laughing.

It's funny how quickly disappointment can turn to elation! Jordy had taken a buck across a gully that we hadn't been able to see. His first shot was at 315 m and had gone just under the buck, so he quickly readjusted and squeezed off the second shot. It was across a frozen creek, so Chris decided that the safest retrieval would be from the top, where they had been the day before. The boys headed off and returned with Jordy's beautiful buck, which Chris had skinned out for a full body mount. Wow, what a day!

## || The opportunity for Sparra to take a pair of paradise duck presented, which he took advantage of"

We all enjoyed a nice sleep in before the boys started on the prep of Jordy's chamois, not a small task by any means. While working on the chamois, Jordy spotted a pair of Californian Quail on the edge of the bush line. Sparra wasted no time in grabbing Chris's shotgun and bagged the pair of quails to add to his collection of birds in his games room. Marty's dad, Craig and another Rob arrived in from a successful hunting trip on the West Coast. Marty and Rob also returned and had secured a cracking chamois buck from their hunt, the previous day. It was a relaxing day for us to recharge and share stories before our next hunt.

Chris arranged our export paperwork to be processed before we headed off to try for a fallow buck. We saw a number of deer, in the most spectacular setting; mostly reds and about half a dozen fallow buck but not the large one Chris had in mind. The boys had a stalk but decided they would have another look tomorrow for a better buck.

We woke to steady rain but decided we would take one last look for the big fallow buck. Conditions were not great for glassing, due to the steady rain. There was one decent buck but the big boy wasn't spotted. Chris, Sparra and Jordy had a stalk for about an hour before calling it quits. The rain didn't look like letting up, but was good for the ducks! The opportunity for Sparra to take a pair of paradise ducks presented, which he took advantage of. They were really an added bonus to top off another fantastic trip. We dropped the quails and ducks at David Jacobs Taxidermy at Arrowtown, on the way to Queenstown. Our next stop was the airport to collect the export permits before checking in to a motel for the night before our early flight the next morning. We set about drying our gear, cleaning our boots and packing our capes and trophies, for the next morning. We enjoyed our final night in New Zealand to finish of another fantastic trip. I was going home very relieved that I had a bull tahr this time, unfinished business taken care of thanks to Chris and his dedication.

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# LOADING BENCH LOGISTICS

- Matthew Cameron -

Hand loading of ammunition in reality follows two distinct separate paths, either we are dealing with new unused cartridge cases direct from the factory or we are reusing previously fired cases which need some attention before they are suitable to be used again. New cases require minimum attention before use; used cases need to go through several processes to return them to almost as new condition.

There seems to be some confusion when confronted by a pile of dirty used cartridge cases on just how one should proceed to convert these articles into reusable cartridges again, aside from any other reason the ability to reuse the cases reduces the cost of our shooting considerably, in addition to allowing the shooter to tailor his reloads to a particular rifle. The result should be increased accuracy with a particular cartridge/projectile combination. The other advantage is that our hunter has the ability to load a particular projectile suitable for his specific needs, whatever they may be.

A typical example is to use a low drag projectile in a varmint rifle which may not be available in commercial ammunition. The end result is better down range performance and perhaps enhanced accuracy. Another possibility is the ability to load a specific projectile to cover a particular hunting requirement.

This article is merely the various processes as used by one individual, it may be considered to be excessively time consuming by some. The upside to this statement is that because of the constant handling you will quickly pick up those cases that have problems, perhaps split necks, incipient head separation, damages case mouths etc. The ability to do this prevents potential problems in the future. It is also the culmination of more than thirty five years of reloading experience; the various processes have evolved over time and are subject to constant revision. Annealing is a relatively late arrival; its use at an earlier stage would have prevented the scrapping of some brass and certainly prolonged the life of much more.

Thus back to our beginning, a quantity of used brass perhaps in various stages of cleanliness. It is a personal decision

to treat all brass as dirty to some degree even if it never left the shooting bench. Almost certainly the necks of the brass will be contaminated with primer and combustion residue. There seems to be some difference of opinion of just how to remove this residue and whether in fact it is necessary to do so. There is an old statement applicable to hydraulics that says cleanliness is next to godliness; personally I think the same applies to cartridge cases and ammunition. Logically, clean ammunition or fired brass will not contaminate either a rifle's chamber or a set of reloading dies.

Some just tumble the cases at this stage to remove some of the neck residue, others use steel wool with the case in a drill; this will remove some brass around the neck. To the author neither is acceptable, the cleaning is not 100% and I do not like removing excessive brass. Numerous liquids were tried over many years, all failed for some reason or another. My solution to this problem is common bathroom cream cleaner, many different brands all with the same result. Apply some on a cleaning rag, twist the case neck a couple of times and the residue is removed, however the neck is now contaminated with some of the cleaner.



All used brass is contaminated on some degree.



First two cases have necks cleaned with liquid bathroom cleaner.



Split necks and partial case separation.

The next step is to clean up this residue and perhaps the case at the same time. Either a rotary case tumbler or a vibrating model seem to achieve the same result, usually the medium is crushed walnut shell plus the addition of some car polish, preferably one without ammonia. If the cases are badly tarnished this process will remove some of the accumulated grit and grime. Perhaps a minimum of fifteen minutes or so is time enough, further cleaning down the line will leave the cases squeaky clean and shiny.

If you are going to anneal the cases now is the time to do so, if you do anneal, how often should the process be carried out? Some benchrest and varmint shooters do so every time a case is processed across their reloading bench, personally I use this frequency with all of my long range varmint cartridges, perhaps for hunting cartridges once in every three or so firings may be suitable enough. Due to repeated firings and trips through the normal reloading dies, the neck hardens and the projectile "grip" becomes less, you can feel this when seating projectiles with well used un-annealed cases, you eventually reach the stage where there is very little resistance when the projectile is seated. Without annealing this is close to the scrapping stage, it is also usually when split necks occur.

All you are achieving by annealing is to restore the ductile properties of the brass neck to its original or near original configuration. This actually affects the tension of the neck on the projectile to remain almost constant, a major factor in relation to accuracy. How to anneal is outside the scope of this article but there is adequate instruction available in print and on the internet, it is neither difficult nor excessively costly. Consulted known experts in the field of annealing all suggest that it is not necessary to quench cases after annealing; it is a personal decision whether to do so or not. On a personal basis the number of scrapped cases mainly due to split necks has dropped dramatically in currently used calibres ranging from .222 Remington to 30-06.

We are now at the stage where we can lubricate the cases and run them through the normal decapping and resizing die. Those who make reloading equipment also produce the lubrication necessary, there are other options if you so desire or run out of lubricant at an inconvenient time. Medical grade Lanoline works OK as does an automotive product called STP Oil Treatment, a bottle of this will last the average reloader a long time.

There are also some more modern lubricants in spray bottles, this may be okay if applied correctly but there are continual complaints on the internet of stuck cartridge cases, obviously the

amount of lubricant applied by spray is insufficient. Another suggestion is to place the sprayed cases in a plastic bag and roll them around to ensure more even distribution of the lubricant. It's up to the individual whether to use the spray method or the more traditional pad, not enough lubricant via either method will require a stuck case remover!

One of the continuing problems with reloading cases is that with use they will tend to grow in length, the hotter the load the more rapid the growth. Note also that some older case designs will tend to grow more rapidly than newer ones. Nearly all reloading manuals will specify maximum case length, for your particular cartridge, this length should not be exceeded as it will cause problems leading to excessive pressures. To measure cases a dial calliper graded in thousands of an inch is suitable for the task. There are two distinct schools of thought on trimming cases. Many manufacturers of reloading equipment sell what I will loosely call a universal case trimmer. In essence the tool is a small hand driven lathe that allows you to trim individual cases. The disadvantage of the system is that you have to reset the tool each time you change to a different calibre.

Several companies that make reloading dies also make a form and trim die, whilst it has several applications for trimming cases it is simplicity in itself. ▶▶



Good lubrication is essential when processing cases through the decapping and sizing die.



All primer pockets cleaned with uniforming tool, note variations.



Annealing can be done with minimum tools.



Insert a lubricated case fully into the die, if the length of the case is excessive it will protrude above the top of the die, in this case file it flat, chamfer inside and out, job done. Whilst I have used both the trim dies are a personal preference, they are quick, easy and foolproof particularly when multiple calibres are involved.

Having removed the primer, resized the case and run it through the trim die it is a requirement to remove the lubrication before we proceed further. If the lubricant is water based (most modern ones tend to be) rinse in clean water and allow to dry. With older petroleum based lubricants one of two methods is available. Either run them through the rotary or vibratory case cleaner with the normal walnut shell for fifteen minutes or so or rinse in acetone and allow to air dry, either will work.

At this stage of the process we need to clean the primer pockets, again this is an individual choice; some never bother and claim that subsequent primer use is not compromised. Perhaps but my personal preference is to clean. One method is to use a primer pocket brush, note that there are specific sizes for both small and large primer pockets. Another option is a primer pocket uniformer – I use this tool for two reasons, firstly it removes some of the accumulated combustion

residue from the primer pocket. Secondly, primer pockets tend to grow slightly with increasing numbers of firings; this tool ensures that the depth of the pocket remains the same and that the new primer is able to be correctly seated, the result is consistent ignition, a requirement for all accurate ammunition.

|| **Aside from any other reason the ability to reuse the cases reduces the cost of our shooting considerably"**

Having reached this stage of preparation perhaps we should look at cleaning the inside of the case, there will be combustion residue there that could possibly build up over repeated firings, there are a couple of ways we can proceed. One involves a wet rotary tumbler complete with detergent and a quantity of small steel pins. The combination both cleans and polishes the cases, including the primer pockets, although I have not used this it is obviously very effective.

A second method is the use of ultrasonic cleaning. From the firearms point of view it was looked at many years ago but for some reason there was little interest, it is widely used in industry to clean components.

Whilst those who make reloading equipment make such items there are other options. My initial unit was sold by a supermarket chain as a "Jewellery" cleaner; it cost \$25.00, lasted for nearly three years and cleaned many hundreds of cases. Just be aware that the capacity is limited. When it finally expired I had certainly had my money's worth, a quick look on the internet had another one on my doorstep via the post in two days. If you clean a lot of cases perhaps a more commercial larger model may be desirable.

A couple of things of note, the unit works better if the cases are placed in the container without the plastic tub that comes with the unit, it cleans more effectively. There is much on the internet about which liquids to use. Yes there are commercial models but I have found that a solution of one litre of water, half a teaspoon of cream of Tartar plus an unscientific "squirt" of household detergent works very well, cheap also. Normally I run each batch of cases through two time cycles of eight minutes each, the cases come out shiny and bright. Each batch of liquid in the unit will normally clean two lots of cases, after that it is very dirty and is discarded. Also note that the ultrasonic use will remove the heating discoloration on the case necks caused by annealing. This method may not completely remove any residue left in the primer pocket.



Correct case length is important to prevent pressure problems.



Typical form and trim die.



Excessive case length that was filed flat.



Normally the cases are rinsed in clean water and allowed to air dry. If it is necessary to speed up the drying process I would suggest the use of a hair dryer, it simply cannot get hot enough to cause problems. From time to time I read enquiries about drying cases in an oven, if done at a very low heat it is not a problem, at high heat it will ruin the cases and may have lethal consequences, my advice is not to use that method. Either method will clean the outside of the cases and leave them bright and shiny. You can also remove most of the accumulated contamination on the outside of cases simply by soaking them in common vinegar for about fifteen minutes, rinse in clean water and allow to dry.

If you want to polish them do so with walnut shell and some automotive polish in the tumbler or vibratory cleaner. Having done all of this we need some method to store our clean cases or for that matter when we have reloaded them. Like most items in this day and age almost 100% of boxes available to store cases and/or ammunition are plastic.

Perhaps the sole exception is commercial ammunition that is sold in cardboard boxes with either a cardboard or Styrofoam tray. Whilst the plastic is OK in some ways the older boxes are preferable, for one reason the new ammunition will not rattle.

|| **Nearly all reloading manuals will specify maximum case length, for your particular cartridge, this length should not be exceeded as it will cause problems leading to excessive pressures"**

I would be the last one to state that all of the above is the only way to process cases prior to reloading them. Each reloader will have his own system and methods, the above is merely some suggestions how a reloading beginner might proceed to carry out the required processes; obviously different

reloaders have different requirements. My methods are slow and thorough but they may not be suitable for one who has to deal with a large volume of extremely dirty cases.

Shoot safe.



If you need to dry cases rapidly use a ladies hair dryer.



You can clean primer pockets with a uniformer or a wire brush.



Minimum cost jewellery cleaner will clean cases ultrasonically.



Vibratory cleaner and polish.



Keep your recycled cases and ammunition clean in either a plastic or cardboard box.

# HOW TO KEEP NEW SHOOTERS COMING BACK

- Emma Coen -



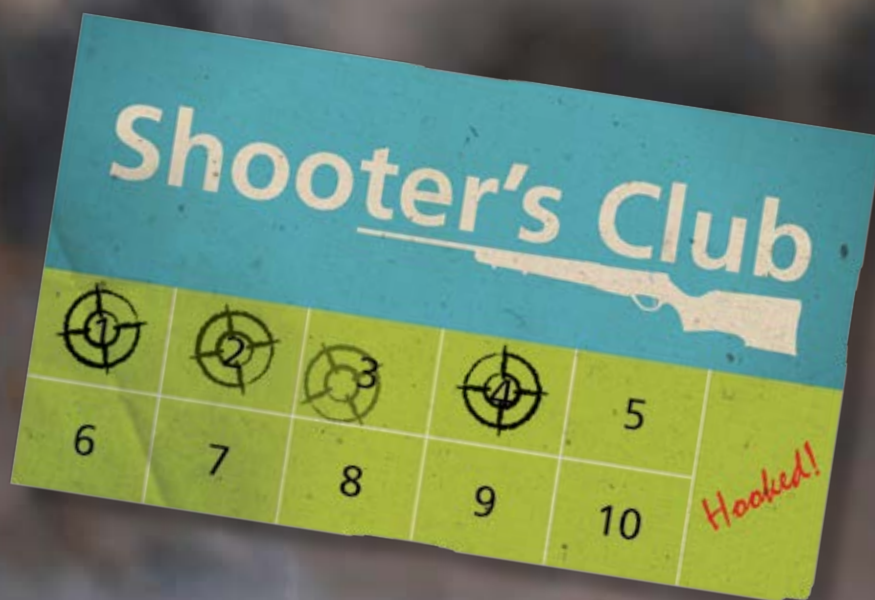
I have also tried to introduce many people, often other women, to shooting. And one of the biggest barriers to taking up shooting? The recoil of a rifle. A lot of people don't know what to expect and especially for people who haven't grown up around air rifles and small calibre firearms, the recoil can be frightening. We only have one chance to make a first impression, and a new shooter who is scared or bruised by the recoil might come back to grow to love our sport.

One solution to recoil is to use lighter loads. There are other reasons to deliberately load a lighter than usual load. We are all getting older. The day may come when a lighter load is the thing that allows us to continue enjoying our sport. While I am a target shooter, there are also reasons that a hunter might wish for a lighter load, such as noise. The ability to make a lighter load also gives us versatility with our firearms: we can tune our bullets to have a wider range of velocities with just one propellant. This can save us from a larger collection of firearms – I readily admit that for me, this is not a selling point for this technique.

**"I tried shooting once, and I hated it."**

I love full bore target shooting: it has been an important part of my life since I was old enough for my dad to finally let me try shooting at ANZAC Rifle Range. (I do not care to give the year I started shooting. Let it be said that some very dubious hairstyles were then in fashion.) And like every enthusiast, I have talked to many people about shooting.





There is a simple technique to make a safe and reliable lighter load, for any load that uses a jacketed projectile and AR2206H.

AR2206H is the only propellant for which this technique is recommended. The case has a fair amount of empty space if you have a reduced load, and AR2206H is known to light up well even with the reduced charges. It is extremely dangerous to underload, with the risk of poorly controlled burning of the propellant. This can lead to unexpectedly high or low pressure being generated in the gun, and both are highly undesirable. Low pressure can lead to a projectile being stuck in the barrel of a firearm, leading to a blocked barrel (remember to always check the barrel if a shot sounds "off", or if nothing was hit.) High pressures can damage our valuable guns, and potentially, our even more valuable selves. It is essential to check the primers for flattening (a sign of high pressure), whenever you work up a load.

In order to calculate your reduced load, go to your required calibre in this Handloaders' Guide.

## One of the biggest barriers to taking up shooting? The recoil of a rifle"

If there is a jacketed projectile (not cast), and a load already reported for AR2206H, then you're in business.

Take 60% of the maximum load, and that is the starting load. Remember, this only works for AR2206H; it lights up well. You can then start your load development there. If the load is too slow or too light for your needs, you can then work up the load, increasing it by small increments. Even though there can be a fair amount of empty space in the cartridge, wads are not recommended or required for these loads.

So, let's consider the development of a low pressure for 155 gr jacketed projectiles, in the .308 Winchester calibre (a combination that I would have been very impressed by, when I was starting out).

The Handloaders' Guide gives 46.0 grains as the maximum load for a 155 gr jacketed projectile, and 60% of 46.0 gr is 27.6 gr (multiply by 0.6 to get 60%). Then, if this doesn't give the desired velocity or accuracy, work it up slowly, increasing the propellant weight by about 0.4 gr, until you are in the right region and can fine tune.

If there is no data for AR2206H for your preferred calibre and projectile weight, it is possible that you are out of luck with this technique for reduced loads. The data in the Reloading Guide and on the website shows the most up-to-date information available, for a wide range of calibres.

Good luck with developing reduced loads using AR2206H, and good luck recruiting more people into our sport.

# MY FIRST SAMBAR

- Nicole Urquhart -



With the kids not being so little anymore, it was getting harder to have a weekend hunting trip together, so it was great when we were able to arrange an October weekend where all four of us could escape to the bush.

After unpacking our gear, we set off for an afternoon hunt. We worked out the areas that each of us were going to hunt – Zoe and Sparra were going to set up and glass one area, Jordy was going to check a known wallow and I picked an area that opened up into a nice large clearing. I was dropped off with the instructions that if I heard a shot from one of the others to turn on my radio for an update. I worked my way into the bush and, up and around towards the clearing I was going to check out. I eventually picked a good vantage point under a tree in the shade that gave me good vision of most of the area. I slid off my pack and was setting myself up when I noticed that my radio or phone were not in the pocket of my pack. I cursed myself for putting them in the unzipped section of the pack, thinking that they must have fallen out as I was making my way through the bush. I reluctantly decided that I would have to back track my way to try to locate them.

I set off, scouring the ground that I had travelled over and when I arrived back where I had been dropped off without finding them I was so frustrated with myself. I turned around holding on to a glimmer of hope that I would find them on the way back and cursed myself for being so stupid.

|| My heart was pounding as I lay there, wondering if Jordy had heard the shot"

I was just coming to the bottom edge of the clearing, again, when I looked up and noticed some movement at the far end. I immediately dropped to the ground and raised my binos. There was a doe feeding and following a little way behind was a stag. He was rubbing his head gear on a small tree. I watched him for what seemed like an eternity, switching from my binos to my rifle scope. He wasn't a monster but he was a nice stag. I waited quietly, thankful that the conditions were favourable for me and they had no idea that I was lying on the ground watching them.

I loaded up my bipod and waited for the stag to present a shot. He was facing directly towards me and when he turned side on, I squeezed off the trigger of my 270 Winchester. The stag dropped immediately but bounced back up. I quickly rechambered but he dropped again as I watched through the scope. My heart was pounding as I lay there, wondering if Jordy had heard the shot. I had no way of letting the others know what had just happened.

I decided the best thing I could do would be to head back out to my drop off point to try to meet up with the others. As I was heading down, they arrived – Jordy had heard the shot and radioed through to Sparra and Zoe. They had realised that I was without comms, as they had fallen out in the ute. I was relieved that I hadn't lost them and learned a valuable lesson too, but in one way it worked out for the best. I had my first Sambar stag on the ground.





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# A YEAR IN SHOOTING

## RIFLE RANGES AROUND AUSTRALIA



Chapman Valley Rifle Range, WA



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Graham Crowe on the Lockhart Rifle Range, NSW



Lithgow Rifle Range, NSW



Lower Light Rifle Range, SA





Albany Rifle Range, WA



Eugowra Rifle Range, NSW



Townsville Range, QLD

Malabar Rifle Range Sydney, NSW



YRC Captain Warren Breeding fires the first shot on the newly opened range at Yunta, SA



Smithton Rifle Range, TAS



# LITHGOW ARMS' RELEASES DEBUT CENTREFIRE RIFLE



Lithgow Arms has released its first centrefire rifle – the much anticipated LA102 CrossOver, along with two new rimfire calibres.

The centrefire debut follows the success of the .22LR LA101 CrossOver, which has proven a big hit among local shooters wanting a tough, accurate and reliable Australian-made firearm.

The LA102 is available initially in .308 calibre, with two further calibres, .223 and .243, to follow later this year – giving customers a choice of calibre to suit a variety of purposes from hunting to target shooting.

In response to market demand, the LA102 has three stock options – timber, laminate, and the military grade polymer seen on the LA101. Timber and laminate stocks will also be made available as spare parts.

Graham Evenden, head of Lithgow Arms, said the centrefire expands the Lithgow Arms range to appeal to shooters who wanted something more than a .22: *"Since launching Lithgow Arms we've had numerous requests to produce a centrefire rifle – and now we're doing it. We really appreciate the support everyone has given the LA101, and we're confident the new CrossOver will appeal to people who value durability, accuracy, and high quality Australian manufacturing."*

All three LA102 calibres are made at the company's historic site in Lithgow, NSW. The rifles have a cold hammer-forged barrel, three locking lugs and 65° bolt lift.



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Each model also has a fully adjustable trigger, plus a choice of Cerakote 'H' series Titanium or Armor Black on the barrel, receiver and sight rail, and on the bolt handle, shroud and safety.

The LA102 also has a Picatinny rail, giving sporting shooters an ideal platform for sights and other accessories. The .308 and .243 have three-round magazines and the .223 has a four round magazine.

Along with the centrefires, Lithgow Arms has also released two new calibres for the LA101 CrossOver, which is now available in .22 WMR rimfire and .17 HMR rimfire.

Lithgow Arms is a brand built on more than 100 years of weapons expertise at the small arms factory in Lithgow, NSW. Since 1912, Lithgow Arms has proudly supported Australian soldiers on battlefields around the world. From the .303 and SLR to today's F88SA2 and the future F90, Lithgow Arms represents a unique heritage – the home of small arms in Australia.

The Lithgow Arms team includes local experts and people with international experience from some of the world's most renowned manufacturers, as well as former military personnel.

The team uses this expertise to design and produce high-quality Australian weapons and firearms for military and civilian markets.

To find out more, visit the Lithgow Arms website at [www.lithgowarms.com](http://www.lithgowarms.com)



# ADI.308 WINCHESTER BRASS

- Matthew Cameron -

There are several good reasons to consider another look at load development of a cartridge released to the US shooting public in 1952, after some sixty three years great advances have occurred in shooting with particular reference to powder and projectiles. My Speer No 10 Manual (circa 1979) listed some twenty different projectiles; the latest in my library (No 14) lists some twenty seven. I am sure other commercial manufacturers are similar in terms of increased numbers, plus of course the numerous custom makers.

Of course any new cartridge case is a target for those who dabble in wildcat cartridges. Very quickly the .308 Winchester was necked down to 7mm, however the 7mm/08 was only "legitimised" by Remington in 1980. Perhaps its most famous offspring is the .243 Winchester released in 1955, there are of course others including the .338 Federal and the .358 Winchester. Logic would also suggest that a .25 calibre projectiles would suit this case. In fact the .25 "Souper" surfaced in the mid 1950's but was never considered for the commercial market as its performance was very close to other successful cartridges. The 6.5 mm version, the 260 Remington was introduced in 1997.

Any cartridge that will handle a range of projectiles from 110gns to 208gns in weight has to be worthy of consideration for Australian hunting conditions, there was no logical personal reason to own a .308 Winchester as the 30-06 in the family gun cupboard covered more or less the same ground. Despite being a very suitable pig cartridge it had seen little use.

However I was well aware that one of our shooting group continues to do good work on pigs with the .308 Winchester cartridge mainly using 150gn Hornady Accubond projectiles

propelled by AR 2206H. He must have liked its performance as he purchased a second, lighter rifle in the same calibre. In addition there are probably more than thirty calibre projectiles available than any other, bulletdatabase.com lists 463, the selection is vast and no matter what your hunting requirements a suitable projectile will be available. Not surprisingly most projectiles are in the mid to high range of weights, i.e. the hunting range; however history has proven that the .308 is no shrinking violet as a target round. Powder wise we are in good shape with the excellent ADI range available, the current manual mainly uses AR 2207 and AR 2219 for lighter projectiles, for greater weights Benchmark 2, Benchmark 8208 and AR 2206H with some AR 2208 loads coupled with the heaviest projectiles.

The opportunity to test the new release ADI brass in this calibre was irresistible, as was the comparison between ADI 1993 vintage once fired .308 cases which were at that time issued to rifle Clubs as target ammunition, it was highly thought of. Brisbane projectile maker Gary Little had some available, he had already removed the military crimp, reamed the primer pockets and trimmed the cases for length. I could not detect any difference between the two batches of brass, the quality control similar to that of the previously



Note progressive primer flattening.



New and old head stamps

tested ADI.223 Remington brass, the primer pockets were all of the same depth, case mouths lightly chamfered, ready to load! Neck thickness averaged .0014 of an inch with very little variation around the neck of individual cases.

As I suspected any additional preparation of the new brass was basically unnecessary, the only concession a quick run through the sizing die to ensure perfectly round necks, even ADI brass can suffer dents when packed in the inevitable plastic bag.



Ruger 77 Mk 2 rifle used for all test loads.



Problem number one was that I did not own a .308 Winchester, I rang my shooting mate and came to an arrangement to use his original Mk 2 Ruger for the testing; the rifle topped with a 4 X12 Leupold telescopic sight, together with a set of RCBS reloading dies. It was a deliberate decision on my part not to seek his loads, I preferred to run my own tests and see whether we came to the same conclusions.

Perhaps this cartridge also falls into that group that I suggest are inherently accurate, to some who write about firearms there is no such term. For the sake of discussion, the argument against the .270 Winchester being inherently accurate is that it was never a military round and hence was never fired in military rifles. My counter argument to this statement is the 6.5X55 mm was a military cartridge first but it was always considered accurate, even in the original military configuration. It is still a popular target cartridge in Scandinavian countries and elsewhere, it is not lacking in the world's hunting fields either.

Argue and discuss as much as you like, it seems to me that there are certain cartridges that have several common traits. Almost invariably they are accurate when fired from a wide variety of rifles; many are used for target shooting. In addition they seem to handle a wide range of projectile weights and powders

without fuss or bother at what might be considered moderate velocities, perhaps you could add the word flexible into the mix! The .308 Winchester is, I suggest, one such cartridge and is also a very acceptable hunting round. In addition the cartridge has seen use by the military and various law enforcement authorities as a sniper round.

**Any cartridge that will handle a range of projectiles from 110gns to 208gns in weight has to be worthy of consideration"**

The next question to be decided was that of projectiles, there were two initially available, the lightest some 150 gn protector points produced by Brisbane projectile maker Gary Little. We have used Gary's projectiles for a number of years in several calibres; they are always consistent with a high degree of quality control. This projectile weight seemed to a common in this cartridge when hunting for pigs, it's always a balance between velocity, target energy and accuracy. The other projectile available was a Speer 165gn round nose, both are mid range hunting projectiles.

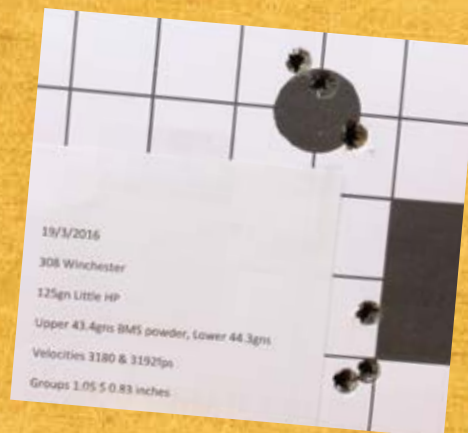
Further Gary also suggested that perhaps some 125 gn hollow points might be an interesting comparison. Made on J4 jackets to benchmark standards there is no reason why they would not be a useful hunting bullet.

There were 24 with a slight boat tail and another 24 with flat bases and a slightly finer nose. Personally I have never used hollow point projectiles in the bigger calibres, except for target type projectiles there are not many available; it would be interesting to see how they performed.

Initially the 125 gn projectiles were coupled with Benchmark 2 powder, an averaged maximum load of 45.3 grains plus two other weights each one grain lower than the other and some Remington 9 1/2 magnum primers produced the following results when shot in the Ruger.

Charge Weight	Velocity (Av)	Group
43.3 gns	3180 fps	1.05"
44.3 gns	3192 fps	0.83"
45.3 gns	3307 fps	1.16"

It was thought that possibly the 44.3 gn load offered the most potential and the proofs were loaded accordingly. These two proof loads on another day showed and average speed of 2927 fps and two groups of 1.85 and 0.48 inches, overall 3015 fps and a group average of 1.05 inches, certainly good enough hunting accuracy. ▶▶



Good initial groups.

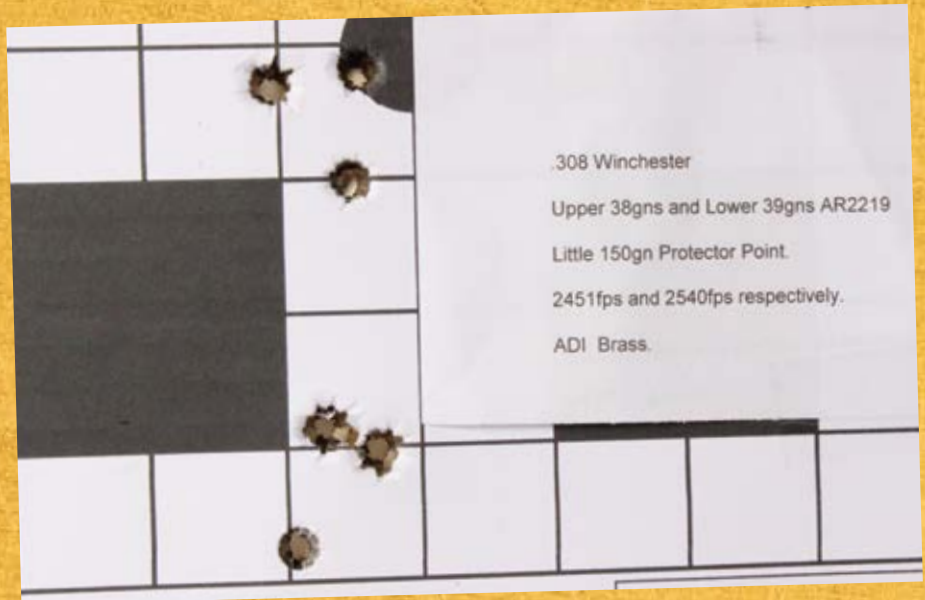


For each projectile weight the maximum loads were extracted from either five or six reloading manuals including ADI's and averaged out, this provided a never exceed maximum. This "system" has worked for more than thirty years without any apparent pressure problems, IMR or other equivalents are used to compare with the ADI powder range. Lesser loads in one grain decrements are then calculated. Normal load development procedures are adhered to looking for any pressure signs. With a selection of projectiles available we could also use several ADI powders; there was much to do on the reloading bench!

For the 165gn Speer's we changed several of the components. The brass used was the '93 ADI version and Remington 91/2 Magnum primers. Although this particular Speer projectile is no longer listed it was representative of other 165 gn projectiles currently available, certainly a useful weight for pig hunting in this rifle. Powder was also changed to AR 2206H.

Charge Weight	Velocity (Av)	Group
39.9 gns	2414 fps	2.4"
40.9 gns	2469 fps	2.2"
41.9 gns	2527 fps	1.55"
42.9 gns	2570 fps	2.18"

There is an argument to be made in relation to the maximum load. Either the next lowest load was the best accuracy attainable OR because the group was horizontal it is possible that either a sighting problem or wind influenced the group size. Although I was not conscious of either, the possibility existed, note that the group size was shrinking with increasing



Consistent grouping.

powder charges, this is normal and made me suspicious of the maximum group size. The decision to discard this particular load based on first assumptions may well be premature. This maximum load was reshot on another day and produced a velocity of 2635 fps and a group of 1.1".

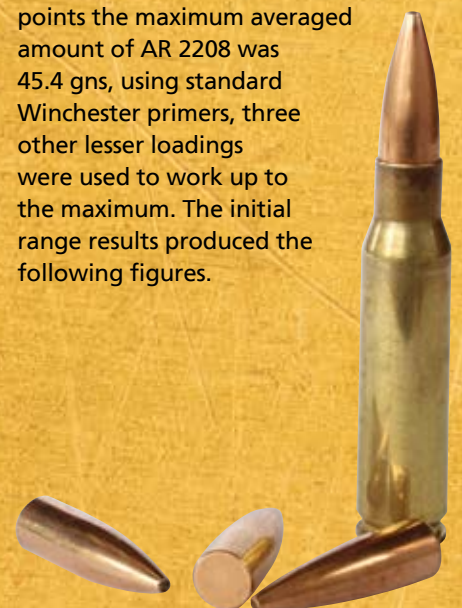
## || Powder wise we are in good shape with the excellent ADI range"

Based on many previous groups if the 41.9 gn load was the best attainable the 2.18 inch group would be considered a normal increase, ie, it would mirror the previous 2.2 inch group. The proof loads showed an average velocity of 2564 fps and groups of 0.57" and 1.21", thus the overall averages were 2566fps and 0.96 inches, all very acceptable.

I am of the opinion that these figures are a true indication of the loads potential. It may also be argued that I am "fiddling the figures" to get a better result. I disagree, I suggest you have to look at all of the evidence and in my opinion the original

maximum load group size was an aberration when you consider the rest of the figures. If you look at the raw figures the average group size is 1.32 inches which may be acceptable at short range in the lignum swamps where you would probably use this projectile. Whatever the logic I would be happy with this round and powder load.

For the 150 gn Little protector points the maximum averaged amount of AR 2208 was 45.4 gns, using standard Winchester primers, three other lesser loadings were used to work up to the maximum. The initial range results produced the following figures.



Gary Little 150gn Protector points.



Charge Weight	Velocity (Av)	Group
43.4 gns	2610 (av)	1.1"
44.4 gns	2669 (av)	1.67"
45.4 gns	2731 (av)	0.97"
45.4 gns	2798 (av)	2.10"

The question here is which load(s) are aberrations? Whilst the velocity rise was normal the 44.4 gn load contained one flyer bracketed with more acceptable groups, it was thought that another test with the same components was worth exploring; this produced an average velocity of 2573 fps and a group of 1.8 inches, perhaps not an aberration after all! If this is correct I suggest that the 45.4 gn load is an aberration, I would suggest that the groups were actually opening up.

Further with the maximum load it was noticed that the primers had started to flatten, this may be a sign of high pressure depending on the type of primer. In this case the primer was a standard Winchester, my experience with this primer is such that when it begins to flatten the pressure is excessive and it's time to back off, in addition usually the most accurate load is some two to three grains less than the maximum, logically in this case the 43.4 gn load is in fact the best load.

Just to satisfy my own curiosity it was worth while trying some proof loads with this powder the lower velocity not an issue. These two loads produced an average velocity of 2588 fps and an average group size of 1.04 inches for an aggregate groups size overall of 1.06 inches at an average velocity of 2595 fps. I would suggest that this minimum load is the best attainable using these components. You simply have to look at ALL of the evidence to be able to make a rational decision.

The other possibility using this projectile was BM2 powder ignited by Remington 91/2 magnum primers.

Charge Weight	Velocity (Av)	Group
40.6 gns	2591	1.27"
41.6 gns	2651	1.65"
42.6 gns	2694	1.4"
43.6 gns	2759	0.39"

Again there was an inconsistent group size although it is worth noting that the last two groups showed a constant reduction, this situation can be fairly common. The increase in speed between increasing loads is rarely linear and also tends to vary. Shooting all test loads off sandbags or a bipod can go a long way to eliminate many errors however not all of them. Unless you are honest with yourself and call all pulled shots the results you log can be discredited and skew the results. In a perfect world such aberrations would not occur but rarely is everything perfect when shooting rifles. ▶▶



AR 2206H and Speer 165gn round nose are a good combination



Little 125 Protector Point, Little 150gn Protector point and Speed 165gn round nose.





Both proof loads using 43.6 grains of powder showed consistent velocities at 2757 and 2760 fps, groups were 1" and 1.8" respectively, again an aberration but overall grouping was 1.06 inches which to me is acceptable hunting accuracy.

By changing the recipe slightly using ADI brass, Remington 9 1/2 primers and Little 150gn protector point projectiles propelled with AR 2219 powder produced the following results at the range.

Charge Weight	Velocity (Av)	Group
38 gns	2461 fps	0.85"
39 gns	2540 fps	0.83"
40 gns	2627 fps	1.19"

The consistency of the two lower loads suggested that perhaps the 39gn load was worth pursuing. The two proof loads showed and average of 2535fps and two groups of 1.05" and 1.03" Overall this is good hunting accuracy of just under an inch. Thus I would suggest there was not much to choose between the three different powders and this particular projectile. The projectiles used are representative of the many available; eventually it depends on individual choice.

I will readily concede to recently changing the way that I look at multiple groups, perhaps in the past groups with an aberration that have been hastily discarded might have in fact produced suitable figures.

You have to accept all of the evidence, we are looking for consistency both good and bad! In addition we have reduced the speed of shooting each particular load; currently we are investigating a particular time interval.



Gary Little 150gn Protector Points and AR 2219 work well together.

I imagine that anyone who worked with statistics could or would complain about the small sample size in relation to the particular way I personally test ammunition. Perhaps a valid point, however you have to draw the line somewhere; you can wear a barrel out by seeking the ultimate in accuracy as some benchrest shooters have discovered.

Unless you are honest with yourself and call all pulled shots the results you log can be discredited and skew the results"

One gentleman on the internet suggested that the only way to get a real test was to fire one hundred shots at a target. No details were specified in relation to rate of fire or whether cleaning was necessary! There have to be practical limits both in time and results; sometimes you simply have to abandon a load due to inconsistency in both speed and groups.

In relation to this article all of the cases performed flawlessly without any problems. As an exercise several of each vintage of cases were converted to 7 mm/08 simply by lubricating the case and initially running it into a 7 mm/08 trim die followed by a normal sizing die. The cases were then annealed and trimmed. Previously in relation to different article I had converted ADI .308 Winchester cases to .243 Winchester and 22-250 Remington. All such reductions require good lubrication and frequent annealing, it can be a time consuming exercise.

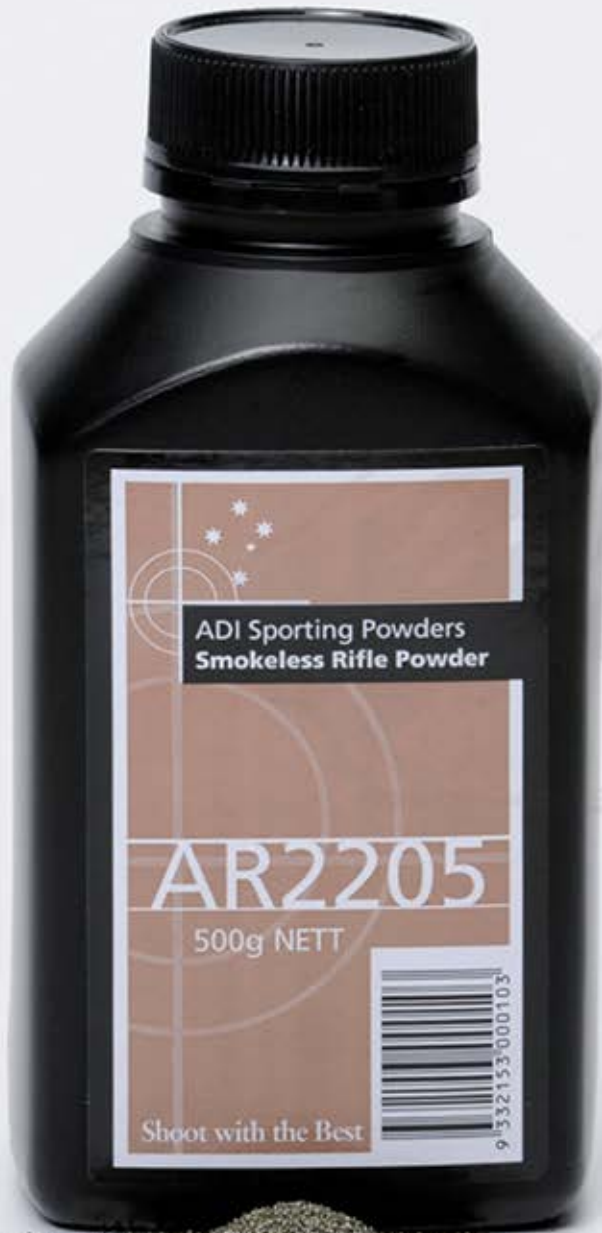
The author gratefully acknowledges the supply of brass and some powder by ADI that contributed to the writing of this article.



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# JUDGING DISTANCES

## PRACTICE MAKES PERFECT

- Ewan Williams -

Anybody that has ever served in the military, especially us Grunts, will likely remember being taught the different methods of judging distance, usually while yelling out fire control commands to a fake platoon of soldiers to hone in on an imaginary enemy. While the skill of judging distances is something innate to us all, to be good at it takes more than just guesswork; it takes practice and a level of understanding of the methods one can use to make those decisions. Without the ability to judge distances accurately, you may as well be firing blind. Ever had that experience where you think you've placed the perfect shot, only to watch as your intended meal darts away to cover while you try and work out what went wrong?

In this article one will address what effects an observers ability to judge distances i.e. what variables can make objects look closer or further away, before touching on some of the methods an observer can use to successfully judge the distance to an object and under which circumstances to use a particular tool.

Anybody who has ever tried to measure a distance visually, and subsequently found out they were wrong, has likely been the victim of the following variables, whether they realised it or not. Objects are said to appear further away when they are the same colour as their surroundings or if their colours make them blend in with their surroundings (camouflaged).

Other items that can make objects appear as though they are further away include broken or undulating ground, viewing objects across valleys but also anywhere that there are long, straight expanses with high 'walls'. These walls could be caused by walking through a ravine or gorge, or a more traditional situation – a long city street with office buildings on either side.

Additionally, lighting and atmospheric effects can make an object look as though it is further away than it actually is. If an object is shadowed, viewed through mist or fog, or under diminished lighting conditions such as the sun being low in the sky or even by moonlight it all has the effect of adding distance.

■ ■ While the skill of judging distances is something innate to us all, to be good at it takes more than just guesswork"

The last couple of things that come to mind when thinking of variables that add to an objects perceived distance is having the object only partially visible / obstructed from complete view, or having larger objects nearby that give the effect of it being small by comparison.

Inversely, objects appear closer when the object and its surroundings have contrasting colours, when the sun is behind the observer, or when the ground between the observer and the object is level or covered with snow.

Additionally, if it is a bright, sunny day with clear atmosphere i.e. no mist or cloud cover, sun is high in the sky etc. then an object is likely to appear closer. Objects viewed across water, deep chasms, in an upward or downward direction will also appear closer than they actually are. Lastly, if an object is very large in stature, or appears large compared to other objects in its surroundings, it will appear closer.

Now that we know what kinds of environmental variables can have an effect on our ability to accurately measure distances with the naked eye, let's discuss the techniques that can be used. While understanding these techniques and how to use them is important, it's just as important to understand the limitations of them. If you utilise a method that doesn't suit the application, you are unlikely to obtain the desired results.

The two primary techniques utilised to accurately gauge a distance visually are the unit of measure method and the appearance method.



## The Unit of Measure Technique

The basics of this technique are exactly that – basic. To use it effectively, visualise a known distance and calculate how many of those objects would fit in the space between you and the target object. It is important to utilise landmarks on the terrain as key points for where your unit of measure ends.

**|| If you utilise a method that doesn't suit the application, you are unlikely to obtain the desired results"**

For example, most, if not all of us, know the length of a football field. Visualise you are standing at one end of the football field and establish where the field would end. Find a landmark at that location, in the general direction of the object you are trying to establish the distance to, and visualise the next football field starting at that location. Continue this process until you've reached the desired object and simply count the total number of complete football fields, plus any fraction, to establish the distance.

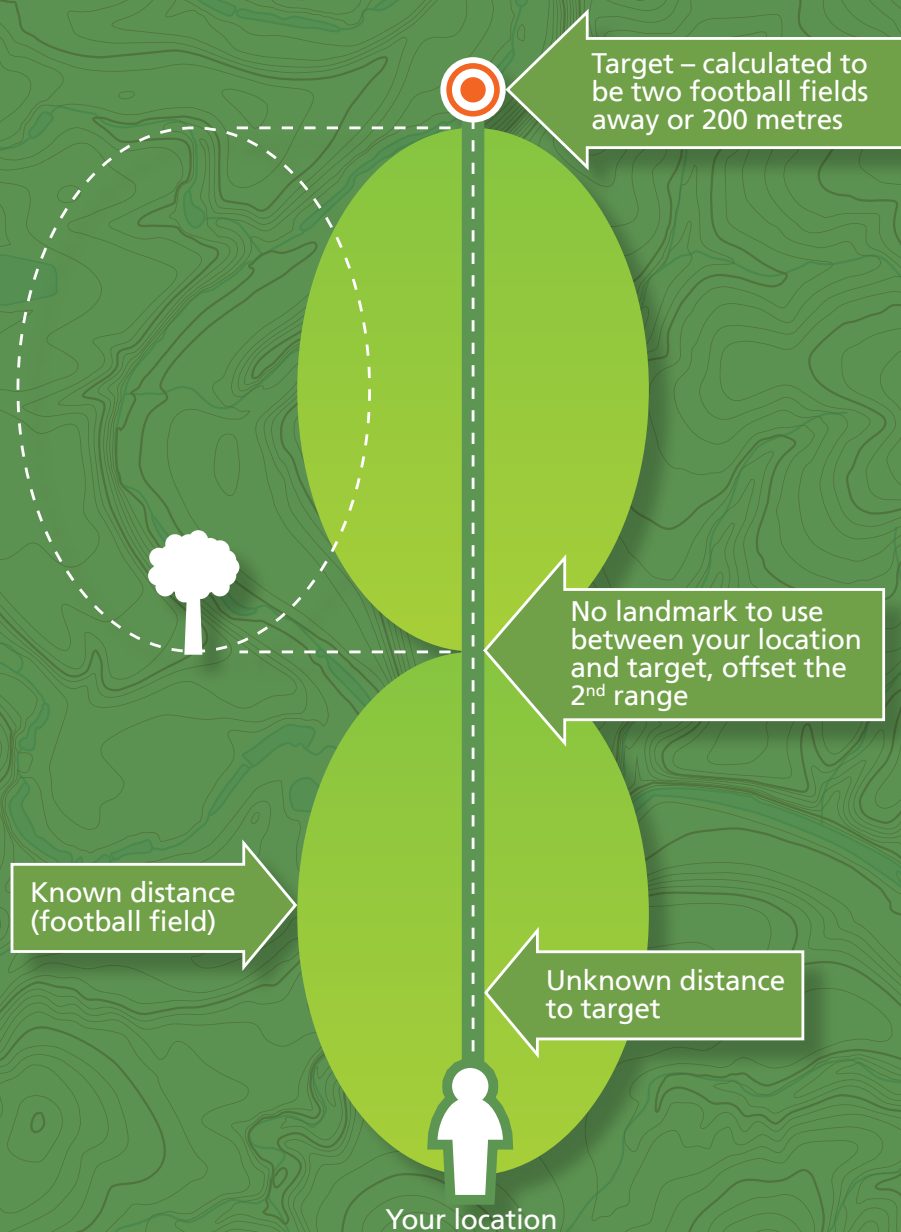
Easy right? Yes, but also no. If you're trying to establish the distance to an object that is say, 1000 metres away, the chances of accurately achieving a known distance with this method diminish quite quickly. Ideally, once you get out to the 400 metre or beyond mark, you're probably better off using some of the sub-methods under the unit of measure label. Secondly, and just as importantly, the effectiveness of this technique can be questionable when you cannot see all the intervening ground between your location and the object.

A key point to remember is that the landmark you utilise for the end (and subsequent start point) of your known distance, be it a football field, running track, the distance to the end of your straight street at home, does not need to be directly in line between you and the target.

This is what one means when referring to a landmark in the 'general direction'. You can pick something that is off to one side, even

20 or 30 meters is fine, as long as you understand that your known distance needs to offset itself the same distance, in the same direction, at the target objects location. See the following figure for an example.

Now that we understand the basic idea of the unit of measure technique, we can have a look at some of the sub-methods that can be used to aid your decision making processes. ▶▶





|| At 100m, assuming your vision is normal, we would anticipate to easily see every element of the animal in clear detail"

## Bracketing

In most instances, bracketing is likely to yield the best results under varying environmental conditions, but it relies on an individual's ability to measure certain distances to begin with. The way to utilise this sub-method is to pick two distances (the furthest distance from the object you can safely estimate, as well as the closest) and simply take the mean of the distances. To give you an example, let's say we spot a deer at an unknown distance in an open field. We are in a slightly elevated position so can see all the ground between our location and the deer and the two distances you come up with are 800 metres at the furthest, and 400 metres at the closest. Add these numbers together (giving 1200 metres), then divide that by the number of values you added together (2), giving you an estimated range to the deer of 600 metres.

## Halving

This sub-method is similar to that of bracketing, but is more prone to error. Ideally you don't want to try and use this method out past 1000 metres, but theoretically you could. The method itself requires the observer to judge the distance to the half way point, then just double that estimated distance. The error factor comes into play when you consider the fact that an observer may misjudge the first distance. You cannot expect to achieve an accurate distance estimation if the initial data point is incorrect; garbage in, garbage out as they say.

## Key Ranges

If you're lucky enough to have private property of adequate size to shoot on, whether you have any game animals or not, then this sub-method will be incredibly useful and you probably already use it without knowing what it's actually called. Additionally, this method is perfect for individuals who frequent the same hunting spots multiple times throughout the year, but does take prior known distance knowledge to utilise correctly.

Basically you need to know the distance to key objects within an arc of observation. Once you have this information, you can estimate the distances between objects and by extension any target object.

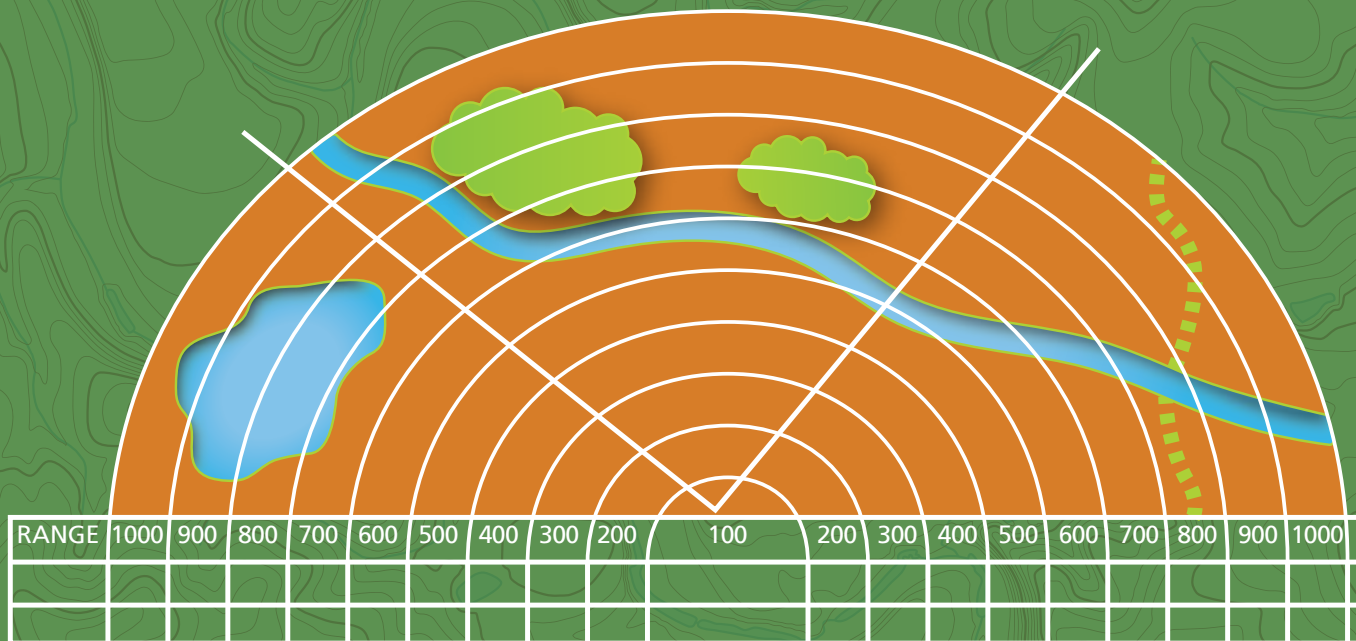
Depending on how much time you have, and how often you are at this spot, you could potentially walk to these different objects and pace out the distance. For example, if one knows that they take 120 steps per 100 metres, which is the case personally, it allows for accurate distance calculations. Recently, while out on a friends property, derogatory comments, smirks and head shaking abounded when conducting a demonstration of this skill. Having been shadowed by a second person utilising a measuring wheel, one was able to advise on a 100m distance within 14 centimetres.

The easier thing to do of course is utilise a laser range finder if you have access to one. Just be wary though if you're contemplating buying one; a lot of these devices are marketed as say 1000m or 1200m range, but in most cases they actually achieve much less in your average hunting location. This maximum range is accurate, but only off certain types of objects (shiny/reflective). The aforementioned 1000m or 1200m marketed laser range finders may in fact only do half that distance on normal surfaces (trees, dirt, rocks etc.).

Depending on how serious you want to take all this, you can also use some military principles used by snipers as well as operational firm bases/checkpoints/observation posts and develop a range card for reference. Explaining these is beyond the scope of this article, however they are straight forward, and exceptionally useful if you have the time/motivation to construct one. A very simple range card is included here, although there are many ways to set these up and comes down to personal preference for us civilians.







### Group Average

This sub-method is great when you have the people power to do it, and as long as the individuals involved are similarly skilled in judging distance, it goes a long way to negating any possible error variance. All the primary observer has to do, is ask those present to judge the distance to the target object, before adding all the responses together and obtaining the average. With the right group of people, this can be a particularly accurate method.

### The Appearance Technique

While the appearance method was developed for use judging the distances to human individuals, it can be modified for use when judging distance to any object, with a little bit of prior knowledge that is relatively easy to acquire. That being said, it is a harder skill to master than the aforementioned unit of measure technique and it's sub-methods.

For the sake of simplicity, one will focus on human sized animals and above for this technique, but will point out key considerations to developing your own skills throughout. The most important consideration is attention to detail as without this you simply won't get your range estimations correct.

In ideal environmental conditions, we would expect the following when on flat ground at the same elevation to the animal:

At 100m, assuming your vision is normal, we would anticipate to easily see every element of the animal in clear detail. Depending on the size of the animal, we might even see ears move, mouth, tongue, tail moving. If the ambient temperature is low we could even see breath. Colours should be easily distinguishable, and texture is likely visible on the animal. Determining which direction the animal is facing and/or traveling should be effortless to establish.

**At 600m and beyond, it might as well be a unicorn, you'll never know unless you get closer.**

At 200m, we should still be able to see clearly the entirety of the animal's body, and clearly define the colours on its exterior. While it is less likely that you'll be able to determine movement of facial features the face itself should still be identifiable. If the animal is at the appropriate viewing angle you should still be able to see the tails movement, and define direction of travel with ease.

At 300m, unless you have eagle vision, you aren't going to be able to see facial features on your average size game animal anymore, but should be able to still determine a clear outline of the animal. That being said, it won't be a crisp clean image any more, and will likely start looking a bit 'fuzzy'. Colours should still be relatively easily accounted for, but this is where the environmental conditions, and the overall colour of an animal will start to come into play a lot. Colours that are very similar to one another, or take up small amounts of real estate on the animal, will start to blend together and become less noticeable or even non-existent.

At 400m, we start to notice major discrepancies in what we can see. The outline of the animal will definitely be 'fuzzy' and the chances of pinpointing any level of detail are unlikely, colours will be completely blended together amongst the main colour of the animal. You probably can't tell which direction the animal is facing, nor if it is moving, unless it is perpendicular to your visual field. At this distance though you can continue to rely on body language for most animals, especially if they are having a meal or drinking. ▶▶

At 500m, you'll be able to tell there is an animal out there, but the head and neck will likely be one with the body, that is, cannot be distinguished. The outline starts to become much more blob like, the level of fuzziness continues to grow, as does your ability to identify what the animal is.

At 600m and beyond, it might as well be a unicorn, you'll never know unless you get closer. The body will still be visible, but you definitely won't be able to distinguish the head and neck from the rest of the body. Direction of facing or travel will be nigh impossible, although might still be possible with an animal that is standing perpendicular to your visual field.

It is important to remember that you don't have to rely on having seen animals of varying sizes at these distances, you can in fact use just about anything in your environment to ascertain distance (and by extension the size of objects). Consider this; when was the last time you looked at a tree and thought to yourself, I wonder what detail I can see at what distance?

One would think it is unlikely the majority of readers have had this thought. How far away can you see the colour variations on the bark? The texture of the trunk? The leaves moving? All are valid questions to ask and indications of distance from a target object.

You can also rely on trees as an aid to judge the size of objects at a distance, or as an internal analysis of your known distance estimates. Chances are, that the trees right near you are the same, if not a similar height, near your target object. As a result you can estimate the height of the object, or imagine how many trees would fit into the area that you already thought was probably 100 metres; all can increase your accuracy.

|| A shooter needs to be aware of their surroundings, you can't just start popping off shots in random directions to establish a distance without any thought as to what is in your environment"



## Alternative Methods

Ignoring the technologically advanced options such as laser range finders or scopes with laser range finders built into them, we can actually use the reticle on binoculars or our optics to judge distance. While accurate, it is also rather complex, as to successfully estimate distance you need to understand your reticle, including how to use its markings and be able to estimate the size of items at a distance (consider the trees previously discussed). Even if you can achieve all that, you still need to be able to do the calculation, either in your head, on a piece of paper or pull out your mobile device and use the inbuilt calculator.

Using Mildot as an example, the formula used is the same whether you want the distance in yards or meters – you just plug your target object's size in and go from there. It is important to note that you need to have two of these variables to complete the calculation (target size and Mils read on your reticle).

|| Without the ability to judge distances accurately, you may as well be firing blind"

Target size (yards or meters) x 1000 / Mils read = distance to target.

For smaller objects, or if you prefer to work in inches for the target size, you can modify this formula slightly.

Target size (inches) x 27.77 / Mils read = distance to target (yards).

Target size (inches) x 25.4 / Mils read = distance to target (meters).

You can also judge the distance to a target object by using sound i.e. an explosion, although in civilian applications this will not be helpful (one would hope). What can be helpful though, is the timing of a shot into the ground – as long as that shot is visible to you and you can accurately determine the projectile's flight time. This technique also relies on your knowing technical data about your chosen ammunition or handload.

A key consideration when utilising this technique is safety though. A shooter needs to be aware of their surroundings, you can't just start popping off shots in random directions to establish a distance without any thought as to what is in your environment. The last thing anybody wants is collateral damage up to and including loss of life of an innocent bystander or animal.

Safety considerations aside, the math to complete this type of activity is very simple in comparison to other mathematical techniques.

Projectile speed (feet per second) x time of flight (seconds) = distance to target (feet)

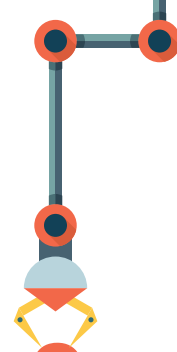
You can easily switch between feet and meters by multiplying the feet by 0.3048 (to get meters) or the meters by 3.28084 (to get feet).

Now, one knows what a lot of you will be thinking, to do with the projectile speed. The published technical data for a projectile speed is usually taken at or close to the muzzle, and as it loses energy and gains distance from the shooter said speed diminishes. As such, the aforementioned simplistic calculation will not be correct, no matter how accurately you measure the flight time because it does not take into consideration the drop in velocity over time.

Therefore we need to think of the above formula as the maximum distance your projectile could cover – in reality it can never achieve the distance your calculation establishes, with the resultant number also being higher than the actual distance. The longer a projectile is in the air between you and a target object, the greater the error variance will be. While it would be possible to delve more deeply into these calculations, for a quick on the fly estimate of a distance, the above is enough to get by with.

To conclude, in this article we have had a look at the variables that can alter our perceptions of distance to a target object and had a brief look at some of the methods that an individual can use to establish distances. As with every skill, whether it is more art than science, practice makes perfect, and it is only through repetition that we improve at these types of thing. Good luck using these in the field, and stay safe out there.

# BRINGING A NEW MODERNISED PROPELLANT MANUFACTURING PLANT ONLINE



- Dr. Garry Warrender -

Australian Munitions is the operator of the Commonwealth's propellant and explosives plant in Mulwala, NSW. Australian Munitions manufactures over two dozen propellant variants for both military and civil applications, with products for shotgun, pistol, rifle, and medium and large calibre applications.

The Commonwealth has built a new propellant plant in Mulwala to replace the original one that was built in the 1940s to provide military propellants for WWII. The new propellant plant uses modern technology to reduce environmental risks and impacts, and to improve safety in manufacturing.

The technology in the modernised plant opens up a range of opportunities for propellant design. New high performance propellant variants are currently being developed and will be offered alongside the current product range in the future. For example, a newly developed APS range – replacing products in the shotgun/pistol range (AS/AP) – will be offered together with the existing AR22-series rifle propellants.



## THE NEW PROPELLANT MANUFACTURING PLANT

Over the last 10 years, contracts were awarded and executed for the construction of a truly modern propellant manufacturing plant to replace the aging propellant plant that had seen continuous use since first opening in 1943 to support the war effort.

Australian Munitions is now in control of the day-to-day operations at the new plant and is actively transitioning propellant manufacturing from the old plant to the new plant, as part of an industrialisation activity.

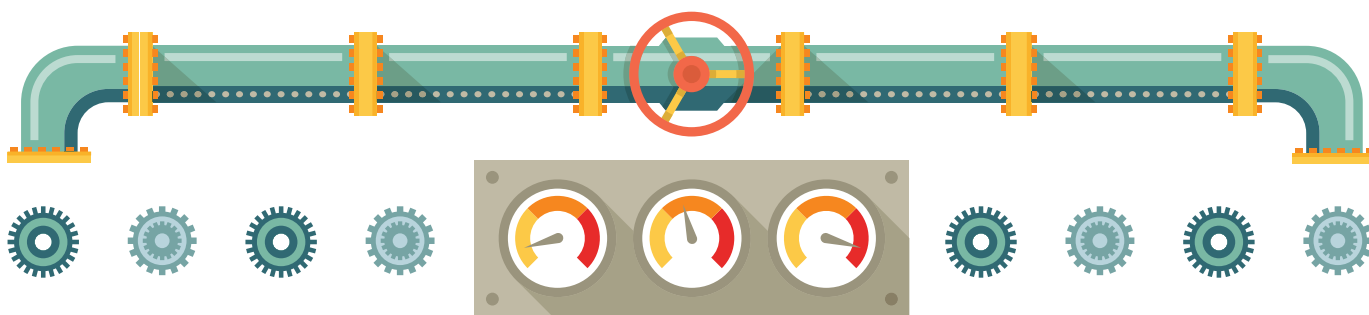
The transition process requires a detailed understanding of how the performance and physical characteristics of the propellants from the new plant compare to similar propellants from the old plant. Replicating one propellant design from the old plant in the new plant requires a large number of experimental iterations to properly gauge production consistency. When setting out on this replication path, it was important to develop an operational understanding of the new plant through step-by-step learning by application of the plant in the way it was designed – to achieve the prime modernisation goals of improved environmental and safety benefits.

Significant developmental effort is concentrated on how Australian Munitions can use the plant in its designed state to transition the propellants from one manufacturing stream to another. Understanding the impact of new manufacturing methods on the propellant's behaviour is critical to successful transition of each propellant type to ensure continuity of supply.

Propellant designs require certain quality features that ensure the products will function in an appropriate manner. These features by necessity involve several trade-offs. For example, making a very long propellant cord or stick was once considered a performance and safety trade-off that limited projectile velocity, but conveniently prevented a gun from exploding – a valuable safety feature, to say the least. Modern propellants take advantage of the chemistry of burn rate modifiers to compensate for granule size to enable a significant increase in projectile velocity. In fact, modern projectiles deform to a lesser extent than lead balls do. They load more efficiently into cartridges and are better suited to commercial cartridge assembly on a large scale than a stick or cord propellant would.

Using the new plant will change the method that propellants are manufactured, so careful consideration of the propellant's entire design is required to establish and replicate the performance of the propellants from the original plant.





In an ideal world, compensating for a change to the propellant's burn rate would be as simple as dialling up the concentration of the burn rate modifier. But as the real world is rarely ideal, the findings of our transition work to date have demonstrated that certain propellant types will transition with some minor adjustments, while others will require modifications to plant or process.

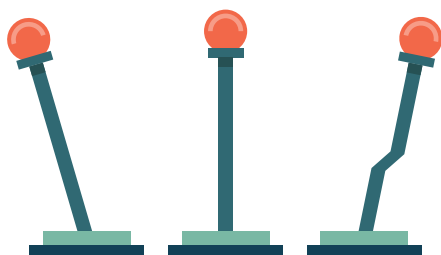
Replicating the old design in the new plant does not directly translate to the same performance. The task requires that the relationship between loadability and pressure velocity be consistent across calibres and cartridge builds for each product variant. Therefore, effort is being placed into achieving a detailed understanding of how the processing parameters in the new plant are linked to performance, as well as how the formulation can be modified to compensate for the change. This multi-factor assessment is complicated, and means the transition of some rifle propellant designs will be slower than for others. To compensate for this, ongoing supply will be maintained as the old plant continues to operate during the transition phase.

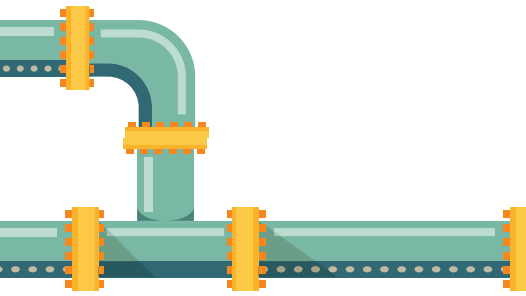
## TRANSITIONING FROM THE OLD PLANT TO THE NEW

The old manufacturing plant at Mulwala was a replicated design from North America, with sister plants in both the USA and Canada. When the old plant was brought on line in 1943, it was a simply a matter of starting it up to manufacture propellants in the way the Americans had. However, the new plant does not have the same heritage as the old one and cannot be simply turned on to manufacture propellants – there is no equivalent or sister plant to learn from. There needs to be a transition period in which mature assessment of plant capabilities must be completed. As with all building projects, there are a number of adaptations that must be worked through before full scale manufacturing trials can begin.

Full transition to the new plant requires that a high degree of maturity is proven in both the product design and manufacturing to design. This means the propellants must be manufacturable and demonstrated to be manufactured consistently before the product is taken to market. Australian Munitions also works with domestic authorities to approve any new propellant products as authorised explosives. At the time of writing, the new flake propellant products were progressing through technical and manufacturing maturity levels in order to be taken through the approvals process and then to market.

A large number of experimental trials have been completed or work is underway in the new plant to prove our flake, rifle and cannon propellants. Each propellant type is progressing in maturity at a different rate, depending on its relative ease of manufacturing. ▶▶





## QUALITY PRODUCT MAINTAINED

Australian Munitions has a long and proud history of quality propellant manufacturing, with excellent product performance, superior ballistic temperature independence and low barrel-corrosion. This tradition will continue after the manufacturing has fully transitioned to the new plant.

Australian Munitions is developing the new flake propellants (APS range) into the new plant and these will be the first products released from the new plant. These propellants, covering the existing burn rate ranges for shotgun and pistol, will be designed for ease of loading, with improved bulk density overall and with the performance you'd expect.

The Australian Munitions quality system will not change either once the products are transitioned, so customers can be rest assured that safety and certainty of performance will continue through all the product lines.



## OPPORTUNITIES RESULTING FROM THE NEW FACILITY

There are better ways to manufacture improved propellants with the new plant than ever before. The transition has opened up new doors to improved formulations and geometries that will be capitalised on. For instance, some ingredients can be replaced with newer, more effective materials for ease of manufacture.

The success with the flake transition has demonstrated the potential for further improvements, with a completely new design of rifle propellants in the future. Investigations are underway to industrialise the lessons learnt and to implement new propellant designs for high performance products with better metering characteristics and higher velocities, while still retaining the ballistic temperature independence technology of the old range that sets our propellants apart. In addition, the new propellants have other benefits such as lower flame temperatures to



help reduce gun barrel / chamber erosion, and Australian Munitions is adding de-coppering additives to inhibit the build-up of copper in the rifling of gun barrels.

What all this means for Australian sporting shooters is the continued supply of the rifle propellants you have come to love, plus completely modernised propellant designs. This transition will help keep a strategic capability in Australia, providing local jobs and a domestic supply of propellants. Australian Munitions will gradually roll out products into the reloading market, starting with flake powders for shotguns and pistols, known as the APS range. The release date for these variants is in the first half of 2017, once the rigorous development and domestic authorisation processes are completed.





# Laser Training Solutions

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Hunters ✓

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Improve marksmanship, speed, trigger pull and more

Scene Stats:					Target Stats:	
Shots:	Total Hits:	Total Misses:	First Shot:	Last Shot:	Target Hits:	
7	5		0.81 secs	8.81 secs		

Shot ID	Status	Shot Time
1	HIT	0.81
2	HIT	1.74
3	HIT	2.82
4	HIT	3.80
5	HIT	4.80
6	Miss	5.41
7	HIT	8.81



**Suits pistols, rifles & shotguns**

**Dedicated laser training pistols**



**Electronic targets**

**Simulator software for LE & civilian training**



# NRAA



# NRAA

## LOADS OF FUN IN TARGET SHOOTING

- Daniel Cotterill Editor ATR Magazine -

The National Rifle Association of Australia sanctions a broad variety of target rifle shooting disciplines. From ultra long range match rifle, full bore target rifle to field class and rim fire events, the NRAA offers something for everyone interested in target rifle shooting.

Full bore target shooting has been conducted in Australia since 1860. For many years it was an adjunct to military rifle training and competitors used the then current service rifle, often cunningly tuned to perform a little better than the off-the-shelf item. These days, modern purpose built rifles in .308 Winchester and .223 Remington are used in matches fired over 300 metres to 1000 yards.

Full bore target rifles are fitted with aperture sights with fine adjustments for windage and elevation, though in more recent years F Class competitions have been gathering strength. F Class rifles are permitted to use telescopic sights.

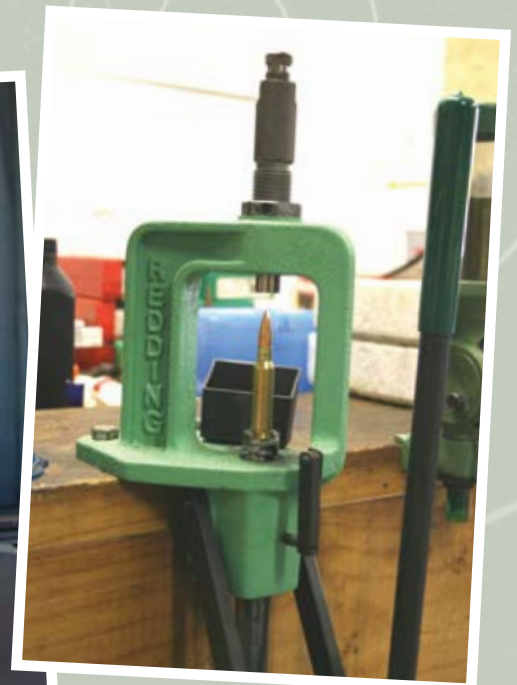
Match rifle competitions are conducted at a maximum range of 1200 yards. The rifles are .308 Winchester and telescopic sight equipped. The hand loaded ammunition uses heavy match bullets, and there is a delicate balance between achieving sufficient muzzle velocity for the projectile to remain supersonic at the target and not exceeding the pressure limits of the case.

The NRAA has, through its state and territory associations, nationwide access to rifle ranges and standard competition and safety rules no matter where in the country you may be competing. The new member and coaching programs are suitable for newcomers to firearm related sport or those already involved in hunting or other forms of target shooting looking for a new challenge.

Not only are the long range target shooting disciplines sanctioned by the NRAA a challenge to your shooting skills, you will soon find out whether your rifle and

ammunition are up to the job as well. In fact, many competitors find the challenge of precision hand loading, using only the finest quality cases, propellants and projectiles to deliver the best combination for a certain rifle, to be amongst the most satisfying elements of the sport.

For more information and the contact details for your local club go to [www.nraa.com.au](http://www.nraa.com.au)





## KEEP UP-TO-DATE WITH AUSTRALIAN TARGET RIFLE MAGAZINE!

Australian Target Rifle Magazine (ATR) is published by the National Rifle Association of Australia and is used to showcase the sport of target rifle shooting and to provide regular updates to members from their national association. Each issue also features articles on recent international, national and state target rifle events. Items are regularly submitted on technical, historical and current issues, giving a comprehensive overview of topics relevant to target shooting.

The magazine provides a one-stop-shop to find relevant suppliers of equipment and services available to shooters including: scopes, stocks, sights, bipods, barrels, rifles, projectiles, gunsmithing and electronic target systems.

ATR is a member's magazine, produced six times per year, with local clubs submitting reports on open prize meetings and other events. Participation is encouraged through letters, articles, event reports and classifieds to provide a forum of communication by and for members of the NRAA.

Target shooters can arrange subscriptions to ATR at the time of renewing their membership with their State or Territory Association. Those who are not part of a State or Territory Association can subscribe via the National Rifle Association of Australia. For further information about the NRAA or ATR magazine go to [www.nraa.com.au](http://www.nraa.com.au)

### QUEENS SERIES - 2016

- May 18-22 \_\_\_\_\_ NQRA Queens
- June 9-13 \_\_\_\_\_ NTRA Queens
- June 22-26 \_\_\_\_\_ National Queens
- September 7-11 \_\_\_\_\_ NSWRA Queens
- September 9-13 \_\_\_\_\_ QRA Queens
- September 22-26 \_\_\_\_\_ WARA Queens
- November 16-20 \_\_\_\_\_ ACT Queens



# AUSTRALIAN AMMO FOR AUSTRALIAN CONDITIONS

Australian Outback ammunition is proving a popular choice with Australian shooters looking for high quality performance from a local supplier.

The product range is ideally suited to local conditions, where hunting requires not only superior ammunition, but consistent performance in extreme temperature conditions. Whether it's a freezing winter's night in Tassie, or a hot, dry afternoon in Victoria, Australian Outback ammunition will give you the results you're looking for in terms of accuracy and reliability.

The product range includes .223 and .308 calibres as well as 300 Blackout, which combines the versatility and low recoil of 5.56 mm with the stopping power of 7.62 mm. The Blackout range itself comprises 125gr HP MatchKing, 144gr AM FMJ and 125gr Woodleigh Protected Soft Point. In addition to the usual 20-round boxes, the 144gr AM FMJ also comes in an olive drab M2A1 ammunition can, which is used by NATO forces around the world. The can contains 900 rounds in sealed blister packs, making it a worthwhile investment for regular users.

As you'd expect from the Australian Outback range, the powder used in 300 Blackout contains proprietary Ballistic Temperature Independence technology, which ensures consistent pressure and velocity whatever the weather.

Ferdi Kluever, Sales Director, says the feedback from the range's first few years on the market has been very positive. "Australian shooters are a discerning bunch who care a lot about quality and performance," he says. "A lot of them are familiar with our ADI Powders and the reputation they've built up over the years. However, not everyone is a reloader, so there is demand out there for locally made ammunition that gives shooters genuine options depending on the type of hunting or target shooting they prefer."

*"Many of our customers say to me that they're proud to support Australian manufacturing, especially in times like these where nationally the sector has had some difficulties. We're continuing to invest though, and you'll see that in the 300 Blackout range, both the 144gr AM FMJ and the 125gr Woodleigh Protected Soft Point are wholly made in Australia. That gives our customers the reassurance that they're buying quality product from a local supplier."*

*"Customers have also been asking us a lot recently about trajectory data. We know this is an important subject, so on the following pages we're providing charts for the range. As always, we're always interested in hearing our customers' views, so please get in contact via the website and let us know your thoughts on the range – we appreciate it."*





**AUSTRALIAN OUTBACK**  
EXTREME PERFORMANCE - WHATEVER THE WEATHER

# 300 BLACKOUT

Hottest new caliber in decades joins the ranks of Australian Outback!



## FEATURING

Ballistic Temperature  
Independence (BTI)

Extreme clean  
burning technology



144 gr. AM FMJ 20 rds./bx., 5 rd. blister-paks

125 gr. Woodleigh Protected SP 20 rds./bx., 5 rd. blister-paks

125 gr. Sierra HP MatchKing 20 rds./bx., 5 rd. blister-paks

144 gr. AM FMJ M2A1 **900 rds./can.**

Made in  
Australia 

Check out our other calibers at [www.outbackammo.com.au](http://www.outbackammo.com.au)

# FROM THE RELOADING ENQUIRIES DESK

Ten years ago 662 reloading enquiries were logged and answered, this has grown steadily and in 2015 we received and answered 1137 enquiries. It is great to hear from the shooting fraternity, we get a wide variety of queries and some really interesting questions. It's always rewarding to hear back from a re-loader that we've helped them out with some useful information. Sometimes it isn't always good feedback but we do endeavour to answer all questions in conjunction with our other work duties. When we are not at our desks answering enquiries our other tasks include testing of existing products for quality assurance, trialling and assessing new products, generating and updating our reloading data, not to mention all the maintenance tasks associated with keeping a busy testing facility running.

Our data generation is limited by test equipment, it is impossible for us to have the broad range of equipment to test every calibre/cartridge combination available. Specialist load development projects also require considerable time in the range. At the moment our range is kept very busy proof firing powders for ADI Powders and ammunition for the Australian Outback Ammo range and Defence products.

We pride ourselves on the fact that our products are designed and tested to ensure that they meet the highest standard and provide the specified ballistic performance. We base our testing on the SAAMI standards and conduct our testing in SAAMI proof barrels with NATA accredited calibrated equipment, such as pressure transducers. Sporting Arms & Ammunition Manufacturers Institute (SAAMI) publish industry standards for safety, interchangeability, reliability and quality. So just remember to always begin your load development at the suggested start load, this ensures that loads are safe for you and your application.

Team members also enjoy heading out testing loads in their personal time, either on the range or escaping into the bush hunting both game and vermin.

Suggestions and feedback are welcomed, we encourage you to let us know what you would like to see in our guide or on the website.



## Frequently Asked Questions About ADI Powders

*We regularly receive questions about ADI powders from the reloading community, and we've noticed that the same issues keep cropping up. Here is a current list of those questions and answers. Of course, please feel free to contact us at [reload.support@adi-powders.com.au](mailto:reload.support@adi-powders.com.au) if these FAQs do not fully address any questions you may have.*

**What if my bullet isn't listed?**

If your particular brand of bullet is not listed in our reloading data, you should refer to the data for the bullet that is most similar in structure and design to yours. For example a Nosler BT is a lead core spitzer so you can refer to the Speer SP as a guide for your load development.

**Why has some data changed over time?**

We now include the test bullet that was used in developing the load data. The bullet's design influences pressure and in turn, the maximum charge weight.

**What is SAAMI and why is it important?**

SAAMI stands for Sporting Arms & Ammunition Manufacturers Institute. It creates and publishes industry standards for safety, interchangeability, reliability and quality. SAAMI specifies the maximum average pressure (MAP) limits for all popular cartridges. The maximum charge weight is established during a series of test firings for each powder component combination in a particular calibre.

**NOTE:** Velocity does not have any influence over maximum charge weight. ►►



My new powder is a different colour to my last lot?  
Powder varies in colour from dark green to grey and some variation within lots is normal and will not affect performance. All the lots released have passed stringent quality and performance tests.

What is a compressed load?

Rifle and pistol cases are considered full or at 100% loading density when the powder charge sits at the base of the bullet when the bullet is fully seated. It is possible with some powders and cartridges to increase the powder charge slightly so that when the bullet is seated, it compresses the powder slightly. Compression should not be to the extent where it will damage the grains.

I would like a low energy, reduced load – what powder should I use?

Trail Boss is ideal for reduced loads for rifles and pistols. Trail Boss was designed primarily for reduced loads using cast lead projectiles in pistol cartridges. However, Trail Boss offers superb versatility in rifle and pistol cartridges producing reduced loads using cast lead or jacketed projectiles.

There is a general method for load development using Trail Boss propellant for any cartridge and projectile combination, as follows:

1. Find the charge weight of Trail Boss, which would fill the case up to the base of the seated projectile. This is the maximum load. Pressures will be below the maximum average pressure limit for the cartridge.
2. Take 70% of the above maximum charge weight. This is the starting load.
3. Begin your load development from the starting load and work up until you find the best reduced load for your firearm.

My barrel is a different length to the test barrel, what will this mean?

Barrel length has a significant influence on muzzle velocity. A longer barrel will generally produce a higher velocity and vice versa. Barrel length does not influence barrel pressure, so a maximum load in a long barrel is still the maximum load in a short barrel and vice versa.

I have AR2206H but you only list loads for AR2206. Is the data interchangeable?

AR2206H has a slightly slower burn rate than AR2206. As such, AR2206H can be used for loads where AR2206 is listed.

The bullet weight I intend to use is not listed in your data?

Please email us at [reload.support@adi-powders.com.au](mailto:reload.support@adi-powders.com.au) and we will attempt to provide some guidance on charge weights for you to perform your load development with.

I cannot achieve your maximum load in my firearm and components?

Our reloading data is intended as a guide and differences in components may mean that some loads are not possible with your components. There can be large variations in case volume between manufacturers. The type of bullet selected also has an impact on the COL. Loads should be worked up for the components that you are using.

What's the best powder for a particular calibre?

Selection of the most appropriate powder varies and usually, is based on compromises because many shooters have a number of different calibre firearms and they prefer to limit the number of powders they use. As a rule of thumb, a powder which can fill the case and produce acceptable velocity may provide more consistent velocity than a powder which only fills 80% of the available case volume. Maximum velocity should not be your primary consideration when developing an accurate and consistent load.



# ADI WORLD-CLASS POWDERS

1

## AR2206H

A very versatile powder in a range of calibres giving outstanding accuracy.

### TYPICAL APPLICATION RIFLE

.308 Winchester with 155 grain jacketed projectile  
Charge weight: 46 grains  
Velocity: 2,873 ft/sec

2

## AR2207

A very useful fine grained fast burning rifle powder for many popular cartridges.

### TYPICAL APPLICATION RIFLE

.222 Remington with 50 grain jacketed projectile  
Charge weight: 20.5 grains  
Velocity: 3,160 ft/sec

3

## AR2208

A useful fine grained slow/medium burning rifle powder for medium sized cartridges.

### TYPICAL APPLICATION RIFLE

30-30 Winchester with 150 grain jacketed projectile  
Charge weight: 34.5 grains  
Velocity: 2,349 ft/sec

4

## AR2209

A fine grained, moderately slow burning rifle powder.

### TYPICAL APPLICATION RIFLE

30-06 Springfield with 165 grain jacketed projectile  
Charge weight: 59 grains  
Velocity: 2,835 ft/sec

5

## AR2218

An extremely slow burning rifle propellant initially developed for the Australian Defence Force .50 cal and perfect for over bore, large capacity magnums.

### TYPICAL APPLICATION RIFLE

30-378 Weatherby with 220 grain jacketed projectile  
Charge weight: 118.5 grains  
Velocity: 3,145 ft/sec

6

## AP100

An effective slow burning handgun powder suitable for major power factor loads.

### TYPICAL APPLICATION PISTOL

.38 Super Auto (4" barrel) with 135 grain lead projectile  
Charge weight: 7.5 grains  
Velocity: 1,325 ft/sec

7

## AP50N

An effective intermediate bulk density medium/fast burning rate handgun powder suitable for medium target loads.

### TYPICAL APPLICATION PISTOL

.38 Special (4" vented barrel) with 158 grain lead SWC projectile  
Charge weight: 3.6 grains  
Velocity: 745 ft/sec

8

## AP70N

A versatile medium burning rate handgun powder and an effective slow/medium burning rate shotgun powder.

### TYPICAL APPLICATION SHOTGUN

12 gauge, 32 gram lead shot, compression formed case  
Charge weight: 24.5 grains  
Velocity: 1,300 ft/sec

### PISTOL

44 Remington Magnum (8" barrel) with 240 grain lead projectile  
Charge weight: 10 grains  
Velocity: 1,225 ft/sec

9

## AS50N

An effective intermediate bulk density, fast/medium burning rate shotgun powder.

### TYPICAL APPLICATION SHOTGUN

12 gauge, 28 gram lead shot, compression formed case  
Charge weight: 21.5 grains  
Velocity: 1,300 ft/sec

10

## AS30N

A versatile fast burning powder with low density and suitable for many shotgun applications.

### TYPICAL APPLICATION SHOTGUN

12 gauge, 24 gram lead shot, compression formed case  
Charge weight: 18.5 grains  
Velocity: 1,300 ft/sec

### PISTOL

.38 Special (4" vented barrel) with 148 grain lead projectile  
Charge weight: 2.5 grains  
Velocity: 836 ft/sec

11

## TRAIL BOSS

Trail boss is designed specifically for low velocity lead bullet loads for Single Action shooting.

### TYPICAL APPLICATION PISTOL

.45 Colt with 200 grain cast lead projectile  
Charge weight: 6.5 grains  
Velocity: 855 ft/sec

### RIFLE

45-70 Government with 385 grain lead projectile  
Charge weight: 16.0 grains  
Velocity: 1,140 ft/sec





12

**.223 CASES**

Our cases have been exclusively developed for military application and are manufactured to exacting military specifications. When you use ADI's cases you will achieve optimal performance and consistency every time. Used in conjunction with ADI powders you will be taking your quality, consistency and performance to the next level.

**TYPICAL APPLICATION RIFLE**

55 grain jacketed projectile with Bench Mark 1 Propellant

13

**.50 CAL CASES**

Nothing will prepare you for the performance of our .50 calibre cases. This highly specialised military case was designed and is manufactured for ultimate performance to military specifications. When used in conjunction with ADI powders you will experience rifle shooting at the highest level. Cases will be sold in bags of 10.

**TYPICAL APPLICATION RIFLE**

655 grain jacketed projectile and AR2218 Propellant.

14

**AR2205**

A very fine grained, very fast burning rifle powder that is suited to many small rifle and magnum pistol loads.

**TYPICAL APPLICATION SHOTGUN**

410 Bore, 14 gram lead shot, compression formed case  
Charge weight: 14.0 grains  
Velocity: 1,200 ft/sec

**PISTOL**

.357 Magnum (10" barrel) with 150 grain jacketed projectile  
Charge weight: 16.5 grains  
Velocity: 1,583 ft/sec

**RIFLE**

.22 Hornet with 45 grain jacketed projectile  
Charge weight: 9.8 grains  
Velocity: 2,484 ft/sec

15

**AR221325C**

A slow burning rifle powder for medium sized rifle cartridges.

**TYPICAL APPLICATION RIFLE**

300 Winchester Magnum with 165 grain jacketed projectile  
Charge weight: 75.5 grains  
Velocity: 3,055 ft/sec

16

**AR2217**

A fine grained, very slow burning rifle powder suited for use in most large calibre magnums.

**TYPICAL APPLICATION RIFLE**

7mm Remington Magnum with 150 grain jacketed projectile  
Charge weight: 68 grains  
Velocity: 2,936 ft/sec

17

**AR2219**

This powder was originally developed for the Australian Defence Force 5.56mm. It is considered to produce excellent accuracy in small and medium capacity cartridges.

**TYPICAL APPLICATION RIFLE**

6mm PPC with 70 grain jacket projectile  
Charge weight: 26.5 grains  
Velocity: 3,068 ft/sec

21

**BENCH MARK 8208**

This short grain reloading powder has acquired a deserved reputation among serious shooters for accuracy and stability over a wide temperature range. Bench Mark 8208 will maintain consistency from lot to lot, meaning that a load developed for this powder will need less tweaking.

**TYPICAL APPLICATION RIFLE**

.204 Ruger  
Charge weight: 27.3 grains  
Velocity: 3755 ft/sec

18

**AR2225**

A very slow burning rate rifle propellant suitable for use in large calibre magnum cases and small overbore cartridges.

**TYPICAL APPLICATION RIFLE**

300 Remington Ultra Magnum with 180 grain jacketed projectile  
Charge weight: 100.5 grains  
Velocity: 3,300 ft/sec

19

**BENCH MARK 1**

A very fine grained powder with very high bulk density and superior metering characteristics for use by bench rest shooters.

**TYPICAL APPLICATION RIFLE**

.223 Remington with 55 grain jacketed projectile  
Charge weight: 22.6 grains  
Velocity: 2,995 ft/sec

20

**BENCH MARK 2**

A fine grained powder with very high bulk density and superior metering characteristics for use in national rifle association match loads.

**TYPICAL APPLICATION RIFLE**

.22-250 Remington with 52 grain jacketed projectile  
Charge weight: 34.6 grains  
Velocity: 3,755 ft/sec



# RELOADING SAFETY

1. These instructions on Reloading Safety should be read in conjunction with the Warnings section.
2. Take care at all times - items and equipment used for reloading can all be dangerous if mishandled or abused.
3. Keep reloading components out of the reach of children - in particular powder, primers and lead projectiles.
4. Keep powder away from other combustible material and from possible sources of ignition.
5. Do not keep old powders, salvaged powders or powders of uncertain origins.
6. Do not smoke in areas where powder is stored or while handling powder or primers.
7. Only store powder in its original container to avoid the risk of the powder being mislabelled.
8. Do not leave any powder or primers in reloading presses or in powder/primer dispensers after handloading is completed.
9. Clean up spilled powder promptly. Use a brush and dustpan. Do not use a vacuum cleaner. Keep the waste powder under water in a suitable container until it can be disposed of safely. Do not accumulate large amounts of waste powder.
10. Each ADI Powder has specific burning rate and bulking characteristics determined by its composition, geometry and manufacturing process. The factors are carefully controlled during manufacture to ensure consistent ballistic performance. Do not attempt to mix or blend different powders as such mixtures may produce dangerous and erratic velocities and pressures.
11. Develop a strict routine for reloading operations and avoid distraction such as television, visitors etc.
12. Recheck each operation for safety and uniformity.
13. Double check critical points like powder type, projectile weight and diameter before starting.
14. Only have one powder type and one projectile type in the actual working area while reloading.
15. Do not trim cases below the minimum design length for any calibre.
16. Ensure that cases are not deformed and are free of body splits, mouth cracks, enlarged primer pockets, enlarged flash holes and any foreign matter. Only use cases which are dry (but do not dry cases by direct heating or in an oven above 150° C).
17. Check projectiles for damage and ensure that lead projectiles are free from casting defects.
18. Always wear safety glasses or goggles while reloading and wear gloves while handling lead projectiles.
19. Owing to the effect of variations within allowable manufacturing tolerances for cartridge components made by different manufacturers, firearm variations and conditions, operating temperatures etc, pressures developed by any given rifle or pistol load can vary significantly from those that apply to our recommended loads. It is therefore essential that loads be worked up from a charge weight lower than the recommended maximum, watching for any signs of excessive pressure (difficult extraction, gas leaks, flattened or blown primers, unusual recoil or expanded case heads). Loads can then be worked up to safe comfortable levels providing signs of excessive pressure are not observed. If signs of excessive pressure are noticed then loads must be reduced until they are at least 5% lower than the load at which the excessive pressure signs were first noted.
20. Take special care when working up trial loads with slow burning powders in large calibre cartridges. Light loads in some calibres may produce occasional dangerously high pressures. It is suggested that minimum loads in large calibre cartridges should not be reduced below about 75% case capacity.



# RELOADING SAFETY

21. Keep detailed records of your safe loads for your firearms and consult them before reloading. However, be prepared to work them up again whenever you change the lot of powder or alter the firearm. Normally a starting reduction of 5% in charge weight is all that should be necessary when you change lots of powder.
22. Never exceed maximum recommended loads.
23. Carry out frequent check weighing of powder charges thrown either by a hand operated powder measure or reloading press to ensure the setting has not changed. At least five charges should be used for each check using a good set of powder scales.
24. Because many recommended loads (especially for pistols) do not fill the cartridge case it is essential that, prior to bullet seating, each filled case is individually inspected to ensure that it contains only a single charge. Never load a cartridge with a double charge as excessively dangerous pressures are certain to occur. After bullet seating, the cartridge overall length must be individually checked to ensure that it has not fallen below the minimum design value where excessive dangerous pressures may be experienced.
25. Ensure that all reloaded cartridges are free from oil, grease, excess lead bullet lubricant and any other foreign matter prior to firing.
26. Never attempt to decap live primers from a cartridge case. Primed cases or cartridges should always be fired in a firearm to destroy the primer. NOTE: Whenever practicable, avoid loading to maximum possible velocity. Experienced shooters know that velocities which are somewhat slower than maximum will usually give the best accuracy while helping to prolong firearm and barrel life and making shooting more comfortable.
27. Any questions or concerns related to the use of ADI Powders should be directed to:  
Australian Munitions, Mulwala NSW at  
[reload.support@adi-powders.com.au](mailto:reload.support@adi-powders.com.au)

# WARNING

1. For the safety of the purchaser and others, ADI powders must be used in accordance with the latest edition of the ADI Powders Handloaders' Guide. Overloading, incorrect storage or improper use can result in personal injury or death to the user and/or other persons as well as damage to property. It is essential that users of ADI powders:
  - Follow the recommendations of the ADI Powders Handloaders' Guide by not exceeding the maximum loads.
  - Use only the latest reloading data.
  - Keep the powders out of reach of children and those persons unfamiliar with the properties of powders.
  - Store the powders in a cool, dry and safe place with the lid tightly closed.
  - Check the powders at least once per year for any signs of deterioration as described below.
  - Store all powders in the original containers.
  - Do not smoke in areas where ADI powders are stored and used.
  - Do not have loaded firearms in areas where ADI powders are stored and used.
2. Loading data provided within the ADI Powders Handloaders' Guide has been compiled from many sources including actual ballistic testing by Australian Munitions under controlled conditions and published loading/ballistic information available in the literature. The ballistic performance of powders varies considerably depending upon factors such as the type of firearm being used and its condition, the particular components being used in a cartridge with a powder, the reloading techniques used, the actual batch of the powder being loaded, weather conditions at the time of firing, etc. Therefore, it is not possible for the loading data in the ADI Powders Handloaders' Guide (or any other similar manual) to be other than a guide to a safe load for any particular application. Exceeding the recommended loading data will increase the chance of obtaining unsafe pressures and may result in damage and/or personal injury or even death.
3. While Australian Munitions controls the burning rate of its various powders within tight limits at the time of manufacture, all other factors affecting the ballistic performance of these powders at the time of use are outside Australian Munitions's control. Australian Munitions therefore disclaims any and all warranties concerning the use of its various powders for any particular application. Australian Munitions does not assume, nor does it authorise any person to assume for it, any liability in connection with the use of any product or data.
4. The buyer of ADI Powders assumes the risk of having to follow safe loading practices otherwise damage and/or severe personal injury (including death) may occur.
5. NEVER substitute ADI Powders for black powder or Pyrodex® and NEVER mix ADI powders with these materials. NEVER use ADI powders in black powder firearms, saluting cannons or similar devices. Any of these practices may result in the firearm blowing apart resulting in property damage, personal injury or even death.
6. Store powders in a cool dry place separate from solvents, flammable gases and other combustible materials. Ensure that the storage area selected is free from any possible source of excess heat and is isolated from open flame, hot water heaters, furnaces, chimneys, flue pipes, etc. Avoid storing powders in areas which may be heated by the sun or where electrical, electronic or mechanical equipment is operated. Do not allow containers of powder to contact walls of storage areas that are exposed on the other side to sunlight or other form of heating. Any such form of heating or ignition may result in a fire, either immediately or after some time due to accelerated chemical deterioration and subsequent spontaneous ignition. An average storage temperature below 25° C is recommended to obtain a safe shelf life of at least 10 years from the date of packing. Increased storage temperature will reduce the safe shelf life significantly—by approximately one-third for every 10° C above 25° C.



# WARNING

7. All powders deteriorate chemically as they get older. This rate of deterioration can be accelerated by storage in warm conditions, exposure to other chemicals and exposure to direct sunlight etc. Any such deterioration may ultimately lead to a fire through spontaneous ignition of the powder. CHECK containers of smokeless powder for possible chemical deterioration through age or inadequate storage. Yearly checks are recommended. Chemical deterioration may ultimately lead to spontaneous ignition of the powder. Chemical deterioration of smokeless powder can be recognised by carefully smelling the contents of the container. Any deterioration produces an acrid, acidic odour quite different from the normal sweet smelling odours of ethanol or ether that are usually present. Rusting of metal surfaces exposed to smokeless powder can also indicate deterioration.
8. Deteriorated smokeless powder should be disposed of by carefully burning it in thin layers (not more than 10mm deep) in small quantities (never more than 500 gram) in an isolated location (at least 10 metres from any other combustible material). DO NOT LIGHT THE POWDER DIRECTLY. Always use an ignition train of slow burning combustible material so that you are able to retreat to a safe distance before the powder ignites.
9. Store ADI Powders in their original containers, which have been approved for that purpose. Storage cabinets used for storage of containers of powders should be constructed of insulating materials with weak walls, seams or joints to provide easy venting in the event of a fire. Such storage cabinets should not be located on walls where heating on the other side (by the sun or other heating arrangement) will occur.
10. DO NOT SMOKE in areas where smokeless powder is stored or used.
11. DO NOT HAVE LOADED FIREARMS in areas where ADI Powders are stored or used—accidental or intended operation of the firearm may cause ignition of smokeless powder, either by direct ignition of powder in the open or through bullet impact on containers of powders.
12. Do not cut, pierce or puncture powder containers.
13. ADI rifle powders are designed to give less ballistic variation with temperature changes than regular powders. This does not mean that ballistics will never change with temperature. The extent to which change is minimised depends upon many factors including the calibre, primer brand and projectile weight. Care should always be taken to ensure that any particular load is safe at the extreme temperatures at which it will be used.
14. Powders can change their moisture reasonably quickly if exposed to the atmosphere. Any change of moisture can affect the powder burning rate and the effectiveness or safety of a particular load. Always minimise the exposure of any smokeless powder to the atmosphere during loading. Use minimum quantities of powder at any time in powder loaders and keep lids on containers tightly closed at all times. Do not keep powders in loaders for long periods of time. In this way you are more likely to preserve the appropriate level of moisture for the lot of the powder in use and obtain consistent reliable ballistic performances from every load.
15. Follow the hints on Reloading Safety given in the ADI Powders Handloaders' Guide. Remember that powders and ammunition are explosive and that firearms are only designed to operate within safe working limits and are not indestructible. The wrong combination of powder burning rate, charge weight, cartridge components and firearm can be disastrous. ALWAYS TAKE EXTREME CAUTION when you are reloading.
16. Never mix any varieties of powder, regardless of their type, brand or source.
17. Do not salvage powder from old cartridges, and do not mix new and salvaged powder.
18. Always store powder in the smallest practical quantities. If you have large quantities of powder, do not maintain it all in one place only. Spread your containers, and remember that small containers are safer than large containers.

# SHOTGUN DATA

Loads listed here should be followed as they are printed. These loads are for use with lead shot only, and must not be used with steel shot under any circumstances.

**NEVER EXCEED THE MAXIMUM RECOMMENDED LOADS.**

## Introduction

The shotgun data for this edition was developed through the use of pressure/proof barrels. All loads for standard cartridges adhere to the guidelines provided by the Sporting Arms and Ammunition Manufacturers Institute (SAAMI).

Loads have been listed in a convenient presentation that lists all components used for a given set of data. The data shown is to be used for lead shot only and should not be used with steel or bismuth shot. Never substitute components when loading shotshells using this data. Substitution of different components could cause excessive or unsafe pressures, which may result in damage to your firearm and/or personal injury.

## Velocity

Velocity is measured electronically with the use of two magnetic sightscreens. The screens measure the time taken for the shot to pass through the screens. Screens are set at 3 feet apart with the first screen positioned 1½ feet from the muzzle.

## Pressure

Pressures are listed in either lead units of pressure (LUP) or pounds per square inch (psi). Lead units of pressure (LUP) is determined mechanically using a lead slug called a "crusher". The crusher is placed in a fixture over the chamber where a hole passes through the barrel to the chamber. When the cartridge is fired, the resulting gases cause the "crusher" to flatten. The "crusher" is then measured and the result is then converted to pressure in by comparing to a tarage table.

Pressure data listed in psi was measured electronically with the use of a pressure transducer. The pressure transducer rests against the cartridge when loaded in the chamber. When the cartridge is fired, the gases cause the brass to expand against the pressure transducer.

## Loading Instructions

When loading, weigh actual charges thrown by the bushing or charge bar. Bushing or charge bars do not throw the exact powder charge as listed in the tables. Charge weight variations occur because of small tolerances in bushing sizes, tolerances in bulk density of powder and the way each loader is mounted and operated. It is essential that charges being dropped are verified for safety and to ensure you are obtaining the charge weight listed.





# SHOTGUN DATA

## 12 GAUGE 2 1/2" WINCHESTER COMPRESSION-FORMED AA TYPE SHELLS

Barrel: 30" Full Choke

28g (1 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	20.0	1,180 fps	8,500 PSI	WAA12R	Win. 209
	21.0	1,250 fps	9,500 PSI	WAA12R	Win. 209
	22.0	1,300 fps	10,300 PSI	WAA12R	Win. 209

## 12 GAUGE 2 3/4" ACTIV PLASTIC SHELLS

Barrel: 30" Full Choke

24g (7/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	19.0	1,200 fps	6,150 PSI	GU 1225	Fio. 616
	19.0	1,200 fps	6,150 PSI	GU 1225	Win. 209
	20.0	1,250 fps	6,600 PSI	GU 1225	Fio. 616
	20.0	1,250 fps	6,600 PSI	GU 1225	Win. 209
	20.5	1,300 fps	7,150 PSI	GU 1225	Fio. 616
	20.5	1,300 fps	7,150 PSI	GU 1225	Win. 209
	21.5	1,350 fps	7,700 PSI	GU 1225	Fio. 616
	21.5	1,350 fps	7,700 PSI	GU 1225	Win. 209
	22.5	1,400 fps	8,250 PSI	GU 1225	Win. 209
	22.5	1,400 fps	8,250 PSI	GU 1225	Fio. 616

28g (1 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	19.0	1,200 fps	8,100 PSI	GU 1225	Fio. 616
	19.0	1,200 fps	8,100 PSI	GU 1225	Win. 209
	19.8	1,250 fps	9,000 PSI	GU 1225	Fio. 616
	19.8	1,250 fps	9,000 PSI	GU 1225	Win. 209
	21.0	1,300 fps	10,200 PSI	GU 1225	Fio. 616
	21.0	1,300 fps	10,200 PSI	GU 1225	Win. 209
AS50N	21.0	1,200 fps	7,050 PSI	GU 1225	Fio. 616
	21.0	1,200 fps	7,050 PSI	GU 1225	Win. 209
	21.6	1,250 fps	7,850 PSI	GU 1225	Fio. 616
	21.6	1,250 fps	7,850 PSI	GU 1225	Win. 209
	22.6	1,300 fps	8,700 PSI	GU 1225	Fio. 616
	22.6	1,300 fps	8,700 PSI	GU 1225	Win. 209

32g (1 1/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	18.7	1,200 fps	11,250 PSI	GU 1222	Win. 209
	18.7	1,200 fps	11,250 PSI	GU 1222	Fio. 616
AS50N	21.0	1,200 fps	8,550 PSI	GU 1222	Win. 209
	21.0	1,200 fps	8,550 PSI	GU 1222	Fio. 616
	22.0	1,250 fps	10,450 PSI	GU 1222	Fio. 616

# SHOTGUN DATA

12 GAUGE 2 3/4" ACTIV PLASTIC SHELLS					
Barrel: 30" Full Choke					
32g (1 1/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	21.0	1,200 fps	8,550 PSI	GU 1222	Fio. 616
	22.0	1,250 fps	10,450 PSI	GU 1222	Fio. 616
	22.0	1,250 fps	10,450 PSI	GU 1222	Win. 209
	22.6	1,300 fps	11,350 PSI	GU 1222	Fio. 616
	22.6	1,300 fps	11,350 PSI	GU 1222	Win. 209
AP70N	26.0	1,250 fps	8,800 PSI	GU 1222	Fio. 616
	26.0	1,250 fps	8,800 PSI	GU 1222	Win. 209
	27.0	1,300 fps	9,850 PSI	GU 1222	Fio. 616
	27.0	1,300 fps	9,850 PSI	GU 1222	Win. 209
	25.5	1,200 fps	9,200 PSI	Gualandi	Fio. 616
	25.5	1,200 fps	9,200 PSI	Gualandi	Win. 209
	26.4	1,250 fps	10,150 PSI	Gualandi	Win. 209
	26.4	1,250 fps	10,150 PSI	Gualandi	Fio. 616
	27.5	1,300 fps	9,850 PSI	Gualandi	Fio. 616
	27.5	1,300 fps	9,850 PSI	Gualandi	Win. 209
12 GAUGE 2 3/4" BASHIERI & PELLAGRI PLASTIC SHELLS					
Barrel: 30" Full Choke					
28g (1 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	18.4	1,180 fps	8,200 PSI	Fed. 12SO	Fio. 616
	19.7	1,235 fps	9,400 PSI	Fed. 12SO	Fio. 616
	21.1	1,290 fps	10,600 PSI	Fed. 12SO	Fio. 616
	18.4	1,180 fps	7,200 PSI	WAA12SL	Fio. 616
	19.6	1,235 fps	8,500 PSI	WAA12SL	Fio. 616
	20.8	1,290 fps	9,800 PSI	WAA12SL	Fio. 616
	22.0	1,345 fps	11,000 PSI	WAA12SL	Fio. 616
AS50N	22.1	1,235 fps	7,800 PSI	Fed. 12S3	Fio. 616
	23.0	1,290 fps	9,200 PSI	Fed. 12S3	Fio. 616
	23.9	1,345 fps	10,500 PSI	Fed. 12S3	Fio. 616
	22.9	1,235 fps	7,000 PSI	Rem. FIG. 8	Fio. 616
	23.7	1,290 fps	8,000 PSI	Rem. FIG. 8	Fio. 616
	24.6	1,345 fps	9,000 PSI	Rem. FIG. 8	Fio. 616
	25.6	1,400 fps	10,200 PSI	Rem. FIG. 8	Fio. 616
	21.7	1,235 fps	7,500 PSI	WAA12	Fio. 616
	22.9	1,290 fps	8,500 PSI	WAA12	Fio. 616
	24.1	1,345 fps	9,500 PSI	WAA12	Fio. 616
	25.3	1,400 fps	10,500 PSI	WAA12	Fio. 616



# SHOTGUN DATA

## 12 GAUGE 2 3/4" BASHIERI & PELLAGRI PLASTIC SHELLS

Barrel: 30" Full Choke

32g (1 1/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	17.2	1,090 fps	7,400 PSI	Fed. 12S3	Fio. 616
	18.1	1,145 fps	9,000 PSI	Fed. 12S3	Fio. 616
	19.0	1,200 fps	10,500 PSI	Fed. 12S3	Fio. 616
	16.8	1,090 fps	6,800 PSI	Rem. FIG. 8	Fio. 616
	18.1	1,145 fps	7,900 PSI	Rem. FIG. 8	Fio. 616
	19.4	1,200 fps	9,100 PSI	Rem. FIG. 8	Fio. 616
	20.6	1,255 fps	10,200 PSI	Rem. FIG. 8	Fio. 616
	16.6	1,090 fps	7,300 PSI	WAA12	Fio. 616
	17.9	1,145 fps	8,600 PSI	WAA12	Fio. 616
	19.2	1,200 fps	9,800 PSI	WAA12	Fio. 616
	20.5	1,255 fps	11,000 PSI	WAA12	Fio. 616
AS50N	19.4	1,090 fps	6,500 PSI	Fed. 12S3	Fio. 616
	20.5	1,145 fps	7,600 PSI	Fed. 12S3	Fio. 616
	21.6	1,200 fps	8,700 PSI	Fed. 12S3	Fio. 616
	22.6	1,255 fps	9,800 PSI	Fed. 12S3	Fio. 616
	21.1	1,145 fps	6,800 PSI	Rem. FIG. 8	Fio. 616
	22.2	1,200 fps	7,800 PSI	Rem. FIG. 8	Fio. 616
	23.3	1,255 fps	8,800 PSI	Rem. FIG. 8	Fio. 616
	21.2	1,145 fps	6,800 PSI	WAA12	Fio. 616
	22.0	1,200 fps	7,900 PSI	WAA12	Fio. 616
	22.9	1,255 fps	9,000 PSI	WAA12	Fio. 616
AP70N	24.4	1,200 fps	8,100 PSI	Fed. 12S3	Fio. 616
	25.6	1,255 fps	9,100 PSI	Fed. 12S3	Fio. 616
	26.7	1,310 fps	10,100 PSI	Fed. 12S3	Fio. 616
	27.8	1,365 fps	11,000 PSI	Fed. 12S3	Fio. 616
	26.0	1,200 fps	7,600 PSI	Rem. FIG. 8	Fio. 616
	27.0	1,255 fps	8,300 PSI	Rem. FIG. 8	Fio. 616
	28.0	1,310 fps	9,000 PSI	Rem. FIG. 8	Fio. 616
	29.0	1,365 fps	9,700 PSI	Rem. FIG. 8	Fio. 616
	25.1	1,200 fps	7,800 PSI	WAA12	Fio. 616
	26.3	1,255 fps	8,600 PSI	WAA12	Fio. 616
	27.4	1,310 fps	9,300 PSI	WAA12	Fio. 616
36g (1 1/4 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	25.2	1,220 fps	9,700 PSI	WAA12F114	Fio. 616
	26.5	1,275 fps	10,700 PSI	WAA12F114	Fio. 616

# SHOTGUN DATA

12 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS					
Barrel: 30" Full Choke					
22g (3/4 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	16.6	1,200 fps	6,200 PSI	Fed. 12SO	Win. 209
	17.8	1,250 fps	6,800 PSI	Fed. 12SO	Win. 209
24g (7/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	17.1	1,200 fps	7,400 PSI	Fed. 12SO	Win. 209
	16.8	1,200 fps	7,100 PSI	Fed. 12SO	Rem. 209P
	16.0	1,200 fps	8,100 PSI	Fed. 12SO	CCI 209M
	16.0	1,200 fps	8,800 PSI	Fed. 12SO	Fed. 209A
	17.2	1,250 fps	10,200 PSI	Fed. 12SO	CCI 209M
	17.4	1,250 fps	9,400 PSI	Fed. 12SO	Fed. 209A
	18.0	1,250 fps	8,600 PSI	Fed. 12SO	Rem. 209P
	18.0	1,250 fps	8,000 PSI	Fed. 12SO	Win. 209
	18.2	1,300 fps	11,400 PSI	Fed. 12SO	CCI 209M
	18.3	1,300 fps	11,300 PSI	Fed. 12SO	Fed. 209A
	19.0	1,300 fps	9,200 PSI	Fed. 12SO	Rem. 209P
	20.0	1,300 fps	10,700 PSI	Fed. 12SO	Win. 209
	15.8	1,200 fps	7,100 PSI	Rem. TGT 12	Win. 209
	18.2	1,200 fps	6,000 LUP	Rem. TGT 12	Rem. 209P
	16.0	1,200 fps	6,900 PSI	Rem. TGT 12	Fed. 209A
	16.5	1,200 fps	7,100 PSI	Rem. TGT 12	CCI 209M
	17.2	1,250 fps	9,300 PSI	Rem. TGT 12	Fed. 209A
	18.9	1,250 fps	6,800 LUP	Rem. TGT 12	Rem. 209P
	17.4	1,250 fps	8,000 PSI	Rem. TGT 12	Win. 209
	17.5	1,250 fps	7,800 PSI	Rem. TGT 12	CCI 209M
	18.5	1,300 fps	8,900 PSI	Rem. TGT 12	CCI 209M
	18.5	1,300 fps	9,900 PSI	Rem. TGT 12	Fed. 209A
	18.4	1,300 fps	9,000 PSI	Rem. TGT 12	Win. 209
	19.5	1,350 fps	11,400 PSI	Rem. TGT 12	Fed. 209A
	19.4	1,350 fps	11,300 PSI	Rem. TGT 12	Win. 209
	16.8	1,200 fps	7,000 PSI	WAA1224	Win. 209
	17.5	1,255 fps	8,350 PSI	WAA1224	Win. 209
	18.5	1,300 fps	9,500 PSI	WAA1224	Win. 209
	19.2	1,350 fps	10,600 PSI	WAA1224	Win. 209
	16.9	1,200 fps	7,100 LUP	WAA12SL	Win. 209
	18.1	1,250 fps	7,400 LUP	WAA12SL	Win. 209
	18.0	1,250 fps	8,500 PSI	WAA12SL	Fed. 209A
19.0	1,300 fps	9,700 PSI	WAA12SL	Fed. 209A	
19.7	1,300 fps	8,400 LUP	WAA12SL	Win. 209	
AS50N	19.0	1,250 fps	8,200 PSI	Fed. 12SO	CCI 209M



# SHOTGUN DATA

## 12 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS

Barrel: 30" Full Choke

24g (7/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	19.7	1,300 fps	8,400 LUP	WAA12SL	Win. 209
AS50N	19.0	1,250 fps	8,200 PSI	Fed. 12SO	CCI 209M
	18.5	1,250 fps	8,700 PSI	Fed. 12SO	Fed. 209A
	19.9	1,250 fps	8,000 PSI	Fed. 12SO	Rem. 209P
	19.5	1,250 fps	8,100 PSI	Fed. 12SO	Win. 209
	20.9	1,300 fps	8,500 PSI	Fed. 12SO	Win. 209
	20.0	1,300 fps	9,100 PSI	Fed. 12SO	CCI 209M
	19.5	1,300 fps	9,900 PSI	Fed. 12SO	Fed. 209A
	20.7	1,300 fps	8,600 PSI	Fed. 12SO	Rem. 209P
	21.9	1,350 fps	9,500 PSI	Fed. 12SO	Win. 209
	22.0	1,350 fps	9,600 PSI	Fed. 12SO	Rem. 209P
	21.0	1,350 fps	10,200 PSI	Fed. 12SO	CCI 209M
	20.8	1,350 fps	11,000 PSI	Fed. 12SO	Fed. 209A
	22.0	1,400 fps	11,000 PSI	Fed. 12SO	CCI 209M
	22.9	1,400 fps	10,500 PSI	Fed. 12SO	Rem. 209P
	19.0	1,250 fps	7,400 PSI	Rem. TGT 12	CCI 209M
	18.6	1,250 fps	8,300 PSI	Rem. TGT 12	Fed. 209A
	20.5	1,250 fps	6,800 PSI	Rem. TGT 12	Rem. 209P
	19.2	1,250 fps	7,100 PSI	Rem. TGT 12	Win. 209
	20.0	1,300 fps	8,900 PSI	Rem. TGT 12	CCI 209M
	19.7	1,300 fps	9,000 PSI	Rem. TGT 12	Fed. 209A
	21.5	1,300 fps	7,300 PSI	Rem. TGT 12	Rem. 209P
	20.2	1,300 fps	7,800 PSI	Rem. TGT 12	Win. 209
	20.8	1,350 fps	8,900 PSI	Rem. TGT 12	CCI 209M
	21.2	1,350 fps	8,700 PSI	Rem. TGT 12	Win. 209
	20.6	1,350 fps	10,000 PSI	Rem. TGT 12	Fed. 209A
	22.5	1,350 fps	8,300 PSI	Rem. TGT 12	Rem. 209P
	22.0	1,400 fps	10,400 PSI	Rem. TGT 12	CCI 209M
	22.0	1,400 fps	10,800 PSI	Rem. TGT 12	Fed. 209A
	23.0	1,400 fps	9,300 PSI	Rem. TGT 12	Rem. 209P
	22.5	1,400 fps	9,300 PSI	Rem. TGT 12	Win. 209
	20.0	1,250 fps	7,800 PSI	WAA12SL	Fed. 209A
	20.5	1,250 fps	7,900 PSI	WAA12SL	Win. 209
21.0	1,300 fps	8,600 PSI	WAA12SL	Fed. 209A	
21.0	1,300 fps	8,600 PSI	WAA12SL	Win. 209	
21.5	1,350 fps	9,100 PSI	WAA12SL	Win. 209	
22.0	1,350 fps	9,500 PSI	WAA12SL	Fed. 209A	
22.5	1,400 fps	10,200 PSI	WAA12SL	Win. 209	

# SHOTGUN DATA

12 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS					
Barrel: 30" Full Choke					
28g (1 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	15.8	1,125 fps	9,000 PSI	Fed. 12SO	CCI 209
	16.0	1,125 fps	8,200 PSI	Fed. 12SO	Rem. 209P
	17.0	1,180 fps	10,500 PSI	Fed. 12SO	CCI 209
	17.4	1,180 fps	9,400 PSI	Fed. 12SO	Rem. 209P
	18.7	1,235 fps	11,400 PSI	Fed. 12SO	Rem. 209P
	15.2	1,125 fps	7,800 PSI	Rem. TGT 12	Fed. 209A
	16.1	1,125 fps	7,500 PSI	Rem. TGT 12	Rem. 209P
	15.8	1,125 fps	7,700 PSI	Rem. TGT 12	Win. 209
	16.7	1,180 fps	9,500 PSI	Rem. TGT 12	Fed. 209A
	17.3	1,180 fps	8,400 PSI	Rem. TGT 12	Rem. 209P
	16.8	1,180 fps	8,500 PSI	Rem. TGT 12	Win. 209
	18.5	1,235 fps	9,900 PSI	Rem. TGT 12	Rem. 209P
	18.2	1,235 fps	10,300 PSI	Rem. TGT 12	Win. 209
	18.2	1,235 fps	11,000 PSI	Rem. TGT 12	Fed. 209A
	15.4	1,125 fps	8,500 PSI	WAA12SL	Fed. 209A
	16.2	1,125 fps	6,500 PSI	WAA12SL	Rem. 209P
	15.7	1,125 fps	7,900 PSI	WAA12SL	CCI 209
	17.0	1,180 fps	8,700 PSI	WAA12SL	CCI 209
	16.9	1,180 fps	9,000 PSI	WAA12SL	Fed. 209A
	17.4	1,180 fps	8,000 PSI	WAA12SL	Rem. 209P
	18.4	1,235 fps	10,900 PSI	WAA12SL	CCI 209
	18.4	1,235 fps	10,900 PSI	WAA12SL	Fed. 209A
	18.6	1,235 fps	9,200 PSI	WAA12SL	Rem. 209P
	20.4	1,290 fps	10,600 PSI	WAA12SL	Rem. 209P
	16.3	1,125 fps	6,500 PSI	Windjammer	CCI 209
	15.1	1,125 fps	7,900 PSI	Windjammer	Fed. 209A
	17.5	1,180 fps	7,600 PSI	Windjammer	CCI 209
	17.2	1,180 fps	7,700 PSI	Windjammer	Rem. 209P
	16.8	1,180 fps	9,200 PSI	Windjammer	Fed. 209A
	18.8	1,235 fps	9,000 PSI	Windjammer	CCI 209
	18.2	1,235 fps	11,200 PSI	Windjammer	Fed. 209A
	18.5	1,235 fps	8,900 PSI	Windjammer	Rem. 209P
20.3	1,290 fps	10,700 PSI	Windjammer	CCI 209	
20.0	1,290 fps	10,600 PSI	Windjammer	Rem. 209P	
AS50N	17.7	1,180 fps	8,800 PSI	Fed. 12SO	CCI 209
	18.0	1,180 fps	9,700 PSI	Fed. 12SO	Fed. 209A
	18.8	1,180 fps	9,100 PSI	Fed. 12SO	Rem. 209P
	18.4	1,180 fps	8,700 PSI	Fed. 12SO	Win. 209
	20.0	1,235 fps	9,900 PSI	Fed. 12SO	Rem. 209P



# SHOTGUN DATA

## 12 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS

Barrel: 30" Full Choke

28g (1 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
	19.6	1,235 fps	10,500 PSI	Fed. 12SO	Win. 209
	19.4	1,235 fps	10,500 PSI	Fed. 12SO	CCI 209
	19.0	1,235 fps	10,800 PSI	Fed. 12SO	Fed. 209A
	20.7	1,290 fps	11,100 PSI	Fed. 12SO	Win. 209
	18.0	1,180 fps	7,400 PSI	Rem. TGT 12	CCI 209
	17.8	1,180 fps	9,000 PSI	Rem. TGT 12	Fed. 209A
	18.4	1,180 fps	7,700 PSI	Rem. TGT 12	Win. 209
	18.8	1,235 fps	9,700 PSI	Rem. TGT 12	Fed. 209A
	19.6	1,235 fps	8,600 PSI	Rem. TGT 12	Win. 209
	19.2	1,235 fps	8,700 PSI	Rem. TGT 12	CCI 209
	20.0	1,290 fps	10,500 PSI	Rem. TGT 12	Fed. 209A
	20.7	1,290 fps	9,600 PSI	Rem. TGT 12	Win. 209
	20.2	1,290 fps	10,000 PSI	Rem. TGT 12	CCI 209
	22.2	1,345 fps	11,000 PSI	Rem. TGT 12	Win. 209
	19.0	1,180 fps	7,700 PSI	WAA12SL	Rem. 209P
	18.0	1,180 fps	8,700 PSI	WAA12SL	Fed. 209A
	20.0	1,235 fps	9,200 PSI	WAA12SL	Rem. 209P
	19.0	1,235 fps	10,400 PSI	WAA12SL	Fed. 209A
	20.0	1,290 fps	11,300 PSI	WAA12SL	Fed. 209A
	21.2	1,290 fps	9,700 PSI	WAA12SL	Rem. 209P
	22.5	1,345 fps	11,100 PSI	WAA12SL	Rem. 209P
	22.5	1,350 fps	11,250 PSI	WAA12SL	Win. 209

32g (1 1/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	15.5	1,090 fps	9,200 PSI	Rem. Fig. 8	Fio. 616
	16.3	1,090 fps	9,000 PSI	Rem. Fig. 8	Rem. 209P
	15.8	1,090 fps	10,700 PSI	Rem. Fig. 8	Fed. 209A
	16.0	1,090 fps	8,700 PSI	Rem. Fig. 8	CCI 209
	16.6	1,145 fps	11,100 PSI	Rem. Fig. 8	Fed. 209A
	16.5	1,145 fps	10,700 PSI	Rem. Fig. 8	Fio. 616
	17.3	1,145 fps	10,100 PSI	Rem. Fig. 8	Rem. 209P
	16.8	1,145 fps	9,600 PSI	Rem. Fig. 8	CCI 209
	18.5	1,200 fps	11,500 PSI	Rem. Fig. 8	Rem. 209P
	16.0	1,090 fps	8,900 PSI	WAA12	CCI 209
	15.9	1,090 fps	8,900 PSI	WAA12	Rem. 209P
	15.0	1,090 fps	9,700 PSI	WAA12	Fed. 209A
	15.5	1,090 fps	9,400 PSI	WAA12	Fio. 616
	17.0	1,145 fps	9,800 PSI	WAA12	CCI 209
	16.0	1,145 fps	10,800 PSI	WAA12	Fed. 209A

# SHOTGUN DATA

12 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS					
Barrel: 30" Full Choke					
32g (1 1/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	17.0	1,145 fps	9,800 PSI	WAA12	CCI 209
	16.0	1,145 fps	10,800 PSI	WAA12	Fed. 209A
	16.0	1,145 fps	10,900 PSI	WAA12	Fio. 616
	17.0	1,145 fps	9,400 PSI	WAA12	Rem. 209P
	18.1	1,200 fps	11,300 PSI	WAA12	CCI 209
	16.0	1,090 fps	8,200 PSI	Windjammer	CCI 209
	16.0	1,090 fps	9,100 PSI	Windjammer	Fed. 209A
	15.3	1,090 fps	8,400 PSI	Windjammer	Fio. 616
	16.5	1,090 fps	8,100 PSI	Windjammer	Rem. 209P
	16.8	1,145 fps	8,600 PSI	Windjammer	CCI 209
	17.3	1,145 fps	10,100 PSI	Windjammer	Win. 209
	17.5	1,145 fps	9,400 PSI	Windjammer	Rem. 209P
	16.3	1,145 fps	9,500 PSI	Windjammer	Fio. 616
	16.7	1,145 fps	10,300 PSI	Windjammer	Fed. 209A
	18.5	1,200 fps	11,100 PSI	Windjammer	CCI 209
	18.0	1,200 fps	11,400 PSI	Windjammer	Fed. 209A
	17.7	1,200 fps	11,200 PSI	Windjammer	Fio. 616
	18.5	1,200 fps	10,400 PSI	Windjammer	Rem. 209P
18.2	1,200 fps	10,900 PSI	Windjammer	Win. 209	
AS50N	17.0	1,090 fps	9,300 PSI	Rem. Fig. 8	CCI 209
	16.5	1,090 fps	9,700 PSI	Rem. Fig. 8	Fed. 209A
	16.3	1,090 fps	8,600 PSI	Rem. Fig. 8	Fio. 616
	17.3	1,090 fps	8,100 PSI	Rem. Fig. 8	Win. 209
	17.0	1,145 fps	10,100 PSI	Rem. Fig. 8	Fed. 209A
	17.6	1,145 fps	9,500 PSI	Rem. Fig. 8	Fio. 616
	17.8	1,145 fps	10,100 PSI	Rem. Fig. 8	CCI 209
	18.3	1,145 fps	9,500 PSI	Rem. Fig. 8	Win. 209
	18.5	1,200 fps	11,200 PSI	Rem. Fig. 8	CCI 209
	18.0	1,200 fps	10,900 PSI	Rem. Fig. 8	Fed. 209A
	18.3	1,200 fps	10,200 PSI	Rem. Fig. 8	Fio. 616
	17.0	1,090 fps	9,700 PSI	WAA12	CCI 209
	16.0	1,090 fps	9,500 PSI	WAA12	Fed. 209A
	16.3	1,090 fps	9,600 PSI	WAA12	Fio. 616
	16.5	1,090 fps	8,900 PSI	WAA12	Rem. 209P
	17.8	1,145 fps	9,500 PSI	WAA12	Rem. 209P
	17.4	1,145 fps	10,500 PSI	WAA12	CCI 209
	16.8	1,145 fps	10,300 PSI	WAA12	Fed. 209A
	17.0	1,145 fps	11,000 PSI	WAA12	Fio. 616
	18.7	1,200 fps	11,100 PSI	WAA12	Rem. 209P



# SHOTGUN DATA

## 12 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS

Barrel: 30" Full Choke

32g (1 1/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
	17.5	1,200 fps	10,900 PSI	WAA12	Fed. 209A
	18.2	1,200 fps	11,400 PSI	WAA12	CCI 209
	17.0	1,090 fps	8,300 PSI	Windjammer	CCI 209
	17.4	1,090 fps	6,900 PSI	Windjammer	Fed. 209A
	17.2	1,090 fps	8,100 PSI	Windjammer	Rem. 209P
	17.3	1,090 fps	7,900 PSI	Windjammer	Win. 209
	17.7	1,145 fps	8,800 PSI	Windjammer	CCI 209
	18.0	1,145 fps	7,700 PSI	Windjammer	Fed. 209A
	18.3	1,145 fps	8,300 PSI	Windjammer	Rem. 209P
	18.0	1,145 fps	8,600 PSI	Windjammer	Win. 209
	19.5	1,200 fps	9,500 PSI	Windjammer	Fed. 209A
	19.2	1,200 fps	9,000 PSI	Windjammer	Rem. 209P
	19.5	1,200 fps	9,800 PSI	Windjammer	CCI 209
	19.5	1,200 fps	9,800 PSI	Windjammer	Win. 209
	20.5	1,255 fps	11,500 PSI	Windjammer	CCI 209
	21.3	1,255 fps	11,200 PSI	Windjammer	Fed. 209A
	20.8	1,255 fps	10,800 PSI	Windjammer	Rem. 209P
	20.8	1,255 fps	10,300 PSI	Windjammer	Win. 209
<b>AP70N</b>	21.5	1,200 fps	9,600 PSI	WAA12	Fed. 209A
	22.8	1,255 fps	10,700 PSI	WAA12	Fed. 209A
	23.6	1,310 fps	11,300 PSI	WAA12	Fed. 209A
	23.3	1,200 fps	8,000 PSI	Windjammer	CCI 209
	24.3	1,255 fps	9,300 PSI	Windjammer	CCI 209

36g (1 1/4 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
<b>AP70N</b>	24.5	1,220 fps	9,600 PSI	Rem. SP12	Fio. 616
	23.3	1,220 fps	10,600 PSI	Rem. SP12	Rem. 209P
	23.3	1,220 fps	11,100 PSI	Rem. SP12	CCI 209M
	22.5	1,220 fps	10,700 PSI	Rem. SP12	CCI 209
	22.8	1,220 fps	10,700 PSI	Rem. SP12	Win. 209
	22.4	1,220 fps	11,500 PSI	Rem. SP12	Fed. 209A
	23.9	1,250 fps	11,100 PSI	Rem. SP12	CCI 209
	24.2	1,250 fps	11,200 PSI	Rem. SP12	Rem. 209P
	23.3	1,250 fps	11,400 PSI	Rem. SP12	Win. 209
	23.5	1,220 fps	10,000 PSI	WAA12F114	CCI 209
	22.5	1,220 fps	11,400 PSI	WAA12F114	CCI 209M
	22.6	1,220 fps	11,500 PSI	WAA12F114	Fed. 209A
	23.0	1,220 fps	11,500 PSI	WAA12F114	Rem. 209P
	23.0	1,220 fps	10,900 PSI	WAA12F114	Win. 209

# SHOTGUN DATA

12 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS					
Barrel: 30" Full Choke					
32g (1 1/8 oz.) LEAD shot (size 2 to BB)					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	24.1	1,250 fps	8,403 PSI	WAA12	Win. 209
	25.0	1,300 fps	9,411 PSI	WAA12	Win. 209
	25.9	1,350 fps	10,418 PSI	WAA12	Win. 209
	26.4	1,400 fps	10,922 PSI	WAA12	Win. 209
36g (1 1/4 oz.) LEAD shot (size 2 to BB)					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	23.8	1,250 fps	10,365 PSI	WAA12F114	Win. 209
	24.9	1,300 fps	11,358 PSI	WAA12F114	Win. 209
SG/00 - 9 balls LEAD buckshot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	21.1	1,250 fps	8,963 PSI	WAA12F114	Win. 209
	22.3	1,300 fps	10,023 PSI	WAA12F114	Win. 209
	23.5	1,350 fps	11,084 PSI	WAA12F114	Win. 209
AP70N	24.9	1,250 fps	8,646 PSI	WAA12F114	Win. 209
	25.8	1,300 fps	9,498 PSI	WAA12F114	Win. 209
	26.7	1,350 fps	10,350 PSI	WAA12F114	Win. 209
24g (7/8 oz.) LEE LEAD slug					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	29.7	1,550 fps	9,548 PSI	WAA12SL	Win. 209
28g (1 oz.) LEE LEAD slug					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	28.1	1,450 fps	9,984 PSI	WAA12	Win. 209
12 GAUGE 2 3/4" WINCHESTER, FIOCCHI, RIBBED STRAIGHT WALL PLASTIC SHELLS (CHEDDITE)					
Barrel: 30" Full Choke					
24g (7/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	16.6	1,200 fps	6,800 PSI	Fed. 12SO	Fio. 616
	17.8	1,250 fps	7,500 PSI	Fed. 12SO	Fio. 616
	19.2	1,300 fps	8,500 PSI	Fed. 12SO	Fio. 616
	18.7	1,250 fps	7,600 PSI	GU 1225	Fio. 616
	20.1	1,300 fps	8,500 PSI	GU 1225	Fio. 616
	21.5	1,350 fps	9,500 PSI	GU 1225	Fio. 616
	22.8	1,400 fps	10,400 PSI	GU 1225	Fio. 616
	16.5	1,200 fps	6,400 PSI	Rem. TGT 12	Fed. 209A
	17.7	1,250 fps	7,300 PSI	Rem. TGT 12	Fed. 209A
	18.7	1,300 fps	7,400 PSI	Rem. TGT 12	Fed. 209A
	16.8	1,200 fps	6,200 PSI	WAA12SL	Win. 209



# SHOTGUN DATA

## 12 GAUGE 2 3/4" WINCHESTER, FIOCCHI, RIBBED STRAIGHT WALL PLASTIC SHELLS (CHEDDITE)

Barrel: 30" Full Choke

24g (7/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	18.0	1,250 fps	7,200 PSI	WAA12SL	Win. 209
	19.0	1,300 fps	8,000 PSI	WAA12SL	Win. 209

28g (1 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	18.2	1,180 fps	7,700 PSI	GU 1225	Fio. 616
	19.6	1,235 fps	8,900 PSI	GU 1225	Fio. 616
	21.0	1,290 fps	10,200 PSI	GU 1225	Fio. 616
	17.5	1,180 fps	7,600 PSI	Rem. TGT 12	Fed. 209A
	18.5	1,235 fps	8,600 PSI	Rem. TGT 12	Fed. 209A
	19.7	1,290 fps	9,700 PSI	Rem. TGT 12	Fed. 209A
	17.1	1,180 fps	7,800 PSI	WAA12SL	Win. 209
	18.5	1,235 fps	9,200 PSI	WAA12SL	Win. 209
	19.3	1,290 fps	10,600 PSI	WAA12SL	Win. 209
AS50N	20.2	1,180 fps	7,000 PSI	GU 1225	Fio. 616
	21.5	1,235 fps	7,800 PSI	GU 1225	Fio. 616
	22.8	1,290 fps	8,600 PSI	GU 1225	Fio. 616
	24.0	1,345 fps	9,600 PSI	GU 1225	Fio. 616
	19.3	1,180 fps	6,600 PSI	Rem. TGT 12	Fed. 209A
	20.3	1,235 fps	7,800 PSI	Rem. TGT 12	Fed. 209A
	20.9	1,290 fps	8,800 PSI	Rem. TGT 12	Fed. 209A
	19.0	1,180 fps	7,100 PSI	WAA12SL	Win. 209
	20.0	1,235 fps	8,600 PSI	WAA12SL	Win. 209
	21.1	1,290 fps	9,600 PSI	WAA12SL	Win. 209

32g (1 1/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	16.5	1,090 fps	9,100 PSI	Fed. 12S3	Fed. 209A
	17.0	1,145 fps	10,000 PSI	Fed. 12S3	Fed. 209A
	16.1	1,090 fps	8,100 PSI	GU 1222	Fio. 616
	17.3	1,145 fps	9,300 PSI	GU 1222	Fio. 616
	19.0	1,200 fps	11,100 PSI	GU 1222	Fio. 616
	17.6	1,090 fps	6,200 LUP	Rem. Fig. 8	Rem. 209P
	18.8	1,145 fps	6,800 LUP	Rem. Fig. 8	Rem. 209P
	19.9	1,200 fps	7,500 LUP	Rem. Fig. 8	Rem. 209P
	16.3	1,090 fps	6,800 LUP	WAA12	Win. 209
	17.6	1,145 fps	8,000 LUP	WAA12	Win. 209
	18.9	1,200 fps	9,200 LUP	WAA12	Win. 209
AS50N	18.0	1,090 fps	6,900 PSI	GU 1222	Fio. 616
	19.1	1,145 fps	7,800 PSI	GU 1222	Fio. 616
	20.2	1,200 fps	8,700 PSI	GU 1222	Fio. 616

# SHOTGUN DATA

12 GAUGE 2 3/4" WINCHESTER, FIOCCHI, RIBBED STRAIGHT WALL PLASTIC SHELLS (CHEDDITE)					
Barrel: 30" Full Choke					
32g (1 1/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	19.1	1,145 fps	7,800 PSI	GU 1222	Fio. 616
	20.2	1,200 fps	8,700 PSI	GU 1222	Fio. 616
	21.4	1,255 fps	9,600 PSI	GU 1222	Fio. 616
	19.2	1,090 fps	7,000 LUP	WAA12	Win. 209
	19.7	1,145 fps	7,400 LUP	WAA12	Win. 209
	21.0	1,200 fps	8,500 LUP	WAA12	Win. 209
	22.0	1,255 fps	9,800 LUP	WAA12	Win. 209
AP70N	23.3	1,200 fps	9,100 PSI	WAA12	Win. 209
	24.0	1,255 fps	9,600 PSI	WAA12	Win. 209
	25.0	1,310 fps	10,800 PSI	WAA12	Win. 209
36g (1 1/4 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	24.0	1,220 fps	10,900 PSI	WAA12F114	Fio. 616
32g (1 1/8 oz.) LEAD shot (size 2 to BB)					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	26.5	1,300 fps	8,096 PSI	B&P H24	Fio. 616
	27.8	1,350 fps	8,898 PSI	B&P H24	Fio. 616
	28.4	1,375 fps	9,299 PSI	B&P H24	Fio. 616
	26.7	1,300 fps	7,934 PSI	WAA12	Win. 209
	27.9	1,350 fps	8,722 PSI	WAA12	Win. 209
	28.5	1,375 fps	9,166 PSI	WAA12	Win. 209
36g (1 1/4 oz.) LEAD shot (size 2 to BB)					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	25.8	1,250 fps	8,626 PSI	B&P H21	Fio. 616
	26.9	1,300 fps	9,554 PSI	B&P H21	Fio. 616
	28.0	1,350 fps	10,482 PSI	B&P H21	Fio. 616
	26.1	1,250 fps	8,313 PSI	WAA12F114	Win. 209
	26.9	1,300 fps	9,305 PSI	WAA12F114	Win. 209
	27.7	1,350 fps	10,296 PSI	WAA12F114	Win. 209
SG/00 - 9 balls LEAD buckshot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	22.7	1,250 fps	7,153 PSI	B&P H21	Fio. 616
	23.9	1,300 fps	8,243 PSI	B&P H21	Fio. 616
	25.0	1,350 fps	9,334 PSI	B&P H21	Fio. 616
	22.3	1,250 fps	7,067 PSI	WAA12F114	Win. 209
	23.5	1,300 fps	8,164 PSI	WAA12F114	Win. 209
	24.7	1,350 fps	9,260 PSI	WAA12F114	Win. 209
AP70N	25.8	1,300 fps	7,931 PSI	B&P H21	Fio. 616



# SHOTGUN DATA

## 12 GAUGE 2 3/4" WINCHESTER, FIOCCHI, RIBBED STRAIGHT WALL PLASTIC SHELLS (CHEDDITE)

Barrel: 30" Full Choke

SG/00 - 9 balls LEAD buckshot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	24.7	1,350 fps	9,260 PSI	WAA12F114	Win. 209
AP70N	25.8	1,300 fps	7,931 PSI	B&P H21	Fio. 616
	27.2	1,350 fps	8,523 PSI	B&P H21	Fio. 616
	28.5	1,400 fps	9,115 PSI	B&P H21	Fio. 616
	26.7	1,300 fps	7,312 PSI	WAA12F114	Win. 209
	27.6	1,350 fps	8,150 PSI	WAA12F114	Win. 209
	28.5	1,400 fps	8,988 PSI	WAA12F114	Win. 209

24g (7/8 oz.) LEE LEAD slug

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	31.3	1,550 fps	8,435 PSI	B&P H24	Fio. 616
	32.6	1,550 fps	7,812 PSI	WAA12SL	Win. 209

28g (1 oz.) LEE LEAD slug

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	30.4	1,450 fps	8,303 PSI	B&P H24	Win. 209
	30.0	1,450 fps	8,446 PSI	WAA12	Win. 209

## 16 GAUGE 2 3/4" WINCHESTER, FIOCCHI, RIBBED STRAIGHT WALL PLASTIC SHELLS (CHEDDITE)

Barrel: 28" Full Choke

28g (1 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	19.5	1,165 fps	8,000 PSI	WAA16	Fio. 616
	20.5	1,220 fps	8,900 PSI	WAA16	Fio. 616
	22.0	1,275 fps	10,300 PSI	WAA16	Fio. 616

## 20 GAUGE 2 3/4" ACTIV PLASTIC SHELLS

Barrel: 26" Full Choke

24g (7/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	18.5	1,200 fps	8,300 PSI	WAA20	Win. 209

28g (1 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	18.5	1,165 fps	8,700 PSI	WAA20F1	CC1209
	19.0	1,220 fps	9,600 PSI	WAA20F1	CC1209

# SHOTGUN DATA

20 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS					
Barrel: 26" Full Choke					
22g (3/4 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	12.1	1,150 fps	10,100 PSI	WAA20	CCI 209M
	12.1	1,150 fps	9,000 PSI	WAA20	Rem. 209P
	12.0	1,150 fps	10,100 PSI	WAA20	Win. 209
	12.7	1,200 fps	11,500 PSI	WAA20	CCI 209M
	13.2	1,200 fps	10,500 PSI	WAA20	Rem. 209P
	13.0	1,200 fps	11,700 PSI	WAA20	Win. 209
20 GAUGE 2 3/4" WINCHESTER, FIOCCHI, RIBBED STRAIGHT WALL PLASTIC SHELLS (CHEDDITE)					
Barrel: 26" Full Choke					
24g (7/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	14.8	1,200 fps	11,700 PSI	WAA20	Fio. 616
AP70N	18.1	1,200 fps	8,500 PSI	GU 2025	Fio. 616
	18.5	1,225 fps	9,000 PSI	GU 2025	Fio. 616
	18.9	1,250 fps	9,400 PSI	GU 2025	Fio. 616
	19.3	1,275 fps	9,800 PSI	GU 2025	Fio. 616
	17.0	1,200 fps	9,300 PSI	WAA20	Fio. 616
	17.6	1,225 fps	9,800 PSI	WAA20	Fio. 616
	18.0	1,250 fps	10,000 PSI	WAA20	Fio. 616
20 GAUGE 3" REMINGTON PREMIER PLASTIC SHELLS					
Barrel: 30" Full Choke					
32g (1 1/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	17.0	1,075 fps	10,070 PSI	REM SP20	Win. 209
	18.0	1,135 fps	11,990 PSI	REM SP20	Win. 209
20 GAUGE 3" WINCHESTER COMPRESSION FORMED PLASTIC SHELLS					
Barrel: 30" Full Choke					
32g (1 1/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	16.0	1,070 fps	11,130 PSI	REM SP20	Win. 209
	16.5	1,105 fps	11,980 PSI	REM SP20	Win. 209
28 GAUGE 2 3/4" WINCHESTER AAHS AND SUPER-X HS PLASTIC SHELLS					
Barrel: 26" Full Choke					
22g (3/4 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	14.2	1,200 fps	12,100 PSI	WAA28HS	CCI 209M



# SHOTGUN DATA

## 28 GAUGE 2 3/4" WINCHESTER AAHS AND SUPER-X HS PLASTIC SHELLS

Barrel: 26" Full Choke

22g (3/4 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	14.0	1,200 fps	11,300 PSI	WAA28HS	Rem. 209P
	14.1	1,200 fps	12,200 PSI	WAA28HS	Win. 209

## 28 GAUGE 2 3/4" WINCHESTER COMPRESSION FORMED PLASTIC SHELLS

Barrel: 26" Full Choke

22g (3/4 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	13.0	1,200 fps	10,800 PSI	WAA28	Win. 209

## 410 BORE 2 1/2" WINCHESTER COMPRESSION FORMED PLASTIC SHELLS

Barrel: 26" Full Choke

11g (3/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP100	8.0	1,125 fps	10,341 PSI	WAA410	Win. 209
	9.0	1,238 fps	11,991 PSI	WAA410	Win. 209

14g (1/2 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AR2205	14.0	1,200 fps	10,500 PSI	WAA410	CCI209M
	14.0	1,200 fps	10,500 PSI	WAA410	Win. 209

## 410 BORE 3" WINCHESTER COMPRESSION FORMED PLASTIC SHELLS

Barrel: 26" Full Choke

19.5g (11/16 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AR2205	15.5	1,140 fps	12,500 PSI	WAA410	Win. 209

# SHOTGUN POWDER BUSHING CHART AS30N

CHARGE WEIGHT (grains)	PACIFIC										TEXAN		HORNADY
	LEE	PONSNESS WARREN	BAIR	MEC	LYMAN	REDDING	DL-155 DL-155APF DL-105	DL-266	DL-366	GT, FW, LT A, AP, D, DP	M		
16.0	.141	H		29									429
16.5	.148	F1				12	414	420	420	124	126		
	.155	I	429	30	H10	13							
17.0	.163	J		31						125	127		441
17.5		J1	441		H11		423	432	432		128		
18.0		J2		32		14				127	129		456
18.5	.171	G	450				432	441	441	128			
		G1		33							130		
19.0	.180				H11A		444	450	450	1129	131		468
			449	34	H12								
19.5		M	465							130	132		
20.0	.189			35			453	459	462	131			483
20.5		N		36	H13	15				132			
21.0		O		37									495
21.5		P											
22.0	.198	Q		38									507
22.5				38A									
23.0													
23.5													

**NOTE:**

This bushing chart does not represent recommended charge weights. It is intended only as a guide to the approximate weight of powder which will be dropped by the listed bushing. It is essential that charges being dropped are weighed on each occasion a loading machine is used.



# SHOTGUN POWDER BUSHING CHART AS50N

CHARGE WEIGHT (grains)	LEE	PONSNESSE WARREN	BAIR	MEC	LYMAN	REDDING	DL-155 DL-155APF DL-105	PACIFIC DL-266	DL-366	GT, FW, LT A, AP, D, DP	TEXAN M	HORNADY
13.7	.105			21								
14.0												375
14.3				22								378
14.6												381
												384
14.9				23								387
												390
15.2	.116	D										393
15.5		D1		24								396
16.0	.122	E		25								402
16.5	.128	E1		26								408
				27								414
17.0		E2										
17.5	.134	F1		28								420
18.0				29								423
18.5	.141	H				12				124		429
19.0		I	429	30	H10	13	414	420	420	125	126	435
19.5	.148	J		31							127	441
20.0		J1	441		H11		423	423	432	126	128	447
20.5	.155	K	450	32		14				127		453
							432	441	441		129	
21.0				33						128	130	459
21.5	.163	L			H11A					129		465
			459		H12		444	450	450		131	
22.0				34						130		471
22.5	.171	M	465								132	477
23.0				35			453	459	462	131	133	483
23.5	.180	N		36		15	462	479	474	132		489
24.0		O			H13							495
24.5	.189	P		37								501
25.0		Q		38								507
25.5												
26.0	.198			38A								

**NOTE:**

This bushing chart does not represent recommended charge weights. It is intended only as a guide to the approximate weight of powder which will be dropped by the listed bushing. It is essential that charges being dropped are weighed on each occasion a loading machine is used.

# SHOTGUN POWDER BUSHING CHART AP70N

CHARGE WEIGHT (grains)	LEE	PONSNESS WARREN	BAIR	MEC	LYMAN	REDDING	PACIFIC			GT, FW, LT A, AP, D, DP	TEXAN	HORNADY
							DL-155 DL-155APF DL-105	DL-266	DL-366		M	
12.7		C									112	
13.0		C		16								330
13.5				17							113	
13.6										111		
14.0		D1		18						112	114	342
14.5				19							115	
15.0											116	354
15.5	.095	E		20						113	117	
16.0				21						114		366
		E1		22						115		
16.5										116	118	372
	.105											
17.0		E2		22							119	378
		D								117		
17.4				23								384
	.110	D1								118	120	
18.0		F									121	390
18.5	.116	F1		24								393
19.0		F6		25						119	122	402
19.4	.122		26							120	123	405
20.0	.123	G		27						121	124	411
20.6		G1								122		417
21.0	.134			28						123		420
21.5							423	420	420		126	423
22.0		H		29		12				124	127	429
22.5	.141			30			432	432	432		128	432
23.0		I	429			13				125		438
23.5	.148			31	H10					126		441
						14				127		
24.0	.151	J	441		H11		447	447	447		129	447
24.5	.155	J1		32							130	450
25.0		K					456	456	456	128	131	456
	.163	L	450	33						129		
26.0			459	34			468	468	468		132	468
				35						130	133	
27.0	.171	M	465				480	480	480	131		480
28.0		N		36		15				132		489
29.0		O		37	H13					133		501

**NOTE:**

This bushing chart does not represent recommended charge weights. It is intended only as a guide to the approximate weight of powder which will be dropped by the listed bushing. It is essential that charges being dropped are weighed on each occasion a loading machine is used.



# PISTOL DATA

This section shows the maximum load for every configuration of pistol, bullet weight and powder type. It also shows the recommended starting load for some configurations. Pressure variations due to different components; firearms; firearm conditions and powder lots, are relatively greater for pistols than for rifles. For your first load, use the starting load; if no starting load is shown, it is essential that you use 20% less than the maximum load.

To work up to your safe load, increase the starting load by no more than 2% at a time.

The pistol loads shown are for jacketed projectiles unless otherwise specified.

## NEVER EXCEED THE MAXIMUM RECOMMENDED LOADS.

### Introduction

The pistol data for this edition was developed through the use of pressure/proof barrels. All loads for standard cartridges adhere to the guidelines provided by the Sporting Arms and Ammunition Manufacturers Institute (SAAMI). For data on obsolete or less popular cartridges where a pressure/proof barrel was not available, maximum loads were obtained by firings in actual firearms while noting visual case head signs such as flat or cratered primers, difficult extraction and measured case heads.

### Velocity

Velocities for all cartridges listed are limited by the SAAMI maximum allowable pressures. Minimum loads are also established by pressure, since loads with very low pressure may fail to function in very cold weather, resulting in a projectile becoming lodged in the bore (please see the Warnings section of this guide).

The average loss in velocity from the listed pressure/proof barrel data when using a 4 $\frac{3}{8}$  inch barrelled revolver is 175 fps. A 7 $\frac{1}{2}$  inch revolver will lose approximately 50 f.p.s.

Velocity is measured electronically with the use of two infrared sightscreens. The screens measure the time taken for the projectile to pass through the screens. Screens are set at 20 feet apart with the first screen positioned 5 feet from the muzzle.

### Pressure

Pressures are listed in either copper units of pressure (cup) or pounds per square inch (psi). Copper units of pressure (cup) is determined mechanically using a copper slug called a "crusher". The crusher is placed in a fixture over the chamber where a hole passes through the barrel to the chamber. When the cartridge is fired, the resulting gases cause the "crusher" to flatten. The "crusher" is then measured and the result is then converted to pressure in by comparing to a target table.

Pressure data listed in psi was measured electronically with the use of a pressure transducer. The pressure transducer rests against the cartridge when loaded in the chamber. When the cartridge is fired, the gases cause the brass to expand against the pressure transducer.

### Loading Instructions

When working up a load, the reloader should always begin with the starting load, advance in small increments, watch for pressure signs and begin again if changing components. Generally, the best powder choice is the powder that most fills the case for the intended velocity while still remaining clean burning. Most cartridges have only a certain number of appropriate powders. Those cartridges that are more versatile can use a wider range of propellant burning rates. For others, lesser numbers of propellants will give optimum results.

Most often, slower burning powders are more suitable with heavy bullets, while faster powders are better with lighter projectiles. Most reloaders like a powder that delivers near maximum or maximum results throughout the range of projectiles, but that is not always obtainable, since some cartridges have too wide a range of bullets for any one burning rate to be ideal.

The handloader that seriously loads for any given cartridge will choose different components (primer, powders, projectiles, cases) in varying combinations to obtain the best overall performance and accuracy. The handloader reloads to save money, but also reloads to improve accuracy and performance, creating special loads that cannot be found on the dealers' shelves.



# PISTOL DATA

17 Bumble Bee				Case: Winchester (reformed) Twist: 1:10" Primer: FEDERAL 200			Barrel length: 10" Trim length: 0.910"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
25 GR. HDY HP	AR2205	.172"	1.290"	6.0	2,033 fps	-	7.0	2,331 fps	-
22 Hornet				Case: Winchester Twist: 1:16" Primer: WINCHESTER SR			Barrel length: 15" Trim length: 1.393"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
35 GR. HDY V-MAX	AR2205	.224"	1.725"	10.5	2,579 fps	35,600 CUP	11.6C	2,770 fps	42,500 CUP
40 GR. SPR SP	AR2205	.224"	1.725"	9.0	2,403 fps	39,900 CUP	10.2	2,458 fps	43,000 CUP
45 GR. BAR XBT	AR2205	.224"	1.850"	8.5	2,189 fps	37,000 CUP	9.8	2,339 fps	42,700 CUP
	AR2207	.224"	1.850"	10.5	2,010 fps	31,500 CUP	11.5C	2,261 fps	36,900 CUP
45 GR. HDY SP	AR2205	.224"	1.750"	8.5	2,202 fps	39,900 CUP	9.8	2,349 fps	42,000 CUP
	AR2207	.224"	1.750"	10.5	2,002 fps	28,000 CUP	11.5C	2,200 fps	32,000 CUP
50 GR. SIE SP	AR2205	.224"	1.850"	8.4	2,120 fps	39,700 CUP	9.4	2,270 fps	41,800 CUP
	AR2207	.224"	1.850"	10.5	2,007 fps	28,200 CUP	11.5C	2,203 fps	34,100 CUP
53 GR. BAR XFB	AR2205	.224"	1.850"	8.0	1,943 fps	37,600 CUP	8.7	2,068 fps	43,000 CUP
	AR2207	.224"	1.850"	10.0	1,859 fps	31,600 CUP	11.0	2,098 fps	40,600 CUP
55 GR. HDY SP	AR2205	.224"	1.850"	8.0	1,987 fps	41,800 CUP	9.0	2,151 fps	43,000 CUP
	AR2207	.224"	1.850"	10.0	1,846 fps	30,000 CUP	11.5	2,182 fps	41,000 CUP
				C = Compressed load					
22 Remington Jet Magnum				Case: Remington Twist: 1:14" Primer: REMINGTON 5 1/2			Barrel length: 8.375" Trim length: 1.278"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
40 GR.	AP100	.222"	1.550"	-	-	-	8.0	1,800 fps	-
40 GR. HDY JET	AR2205	.222"	1.550"	-	-	-	13.5	2,290 fps	32,900 CUP
45 GR.	AP100	.222"	-	-	-	-	7.5	1,700 fps	-
	AR2205	.222"	-	-	-	-	12.5	2,300 fps	-



# PISTOL DATA

22 K Hornet				Case: Winchester Twist: 1:14" Primer: WINCHESTER SR			Barrel length: 15" Trim length: 1.393"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
35 GR. HDY V-MAX	AR2205	.224"	1.725"	11.0	2,747 fps	39,500 CUP	12.3	2,924 fps	46,000 CUP
40 GR. NOS BT	AR2205	.224"	1.900"	11.0	2,644 fps	37,500 CUP	12.2C	2,822 fps	45,500 CUP
45 GR. BAR XBT	AR2205	.224"	1.850"	10.5	2,502 fps	40,900 CUP	11.3	2,619 fps	45,300 CUP
45 GR. SPR SP	AR2205	.224"	1.750"	10.7	2,520 fps	40,700 CUP	11.7	2,669 fps	45,500 CUP
50 GR. SIE BK	AR2205	.224"	1.900"	10.0	2,375 fps	40,200 CUP	11.0	2,520 fps	45,700 CUP
	AR2207	.224"	1.900"	11.5	2,201 fps	30,100 CUP	12.5C	2,386 fps	38,700 CUP
53 GR. BAR XFB	AR2205	.224"	1.850"	9.5	2,240 fps	39,000 CUP	10.5	2,357 fps	45,900 CUP
	AR2207	.224"	1.850"	11.5	2,153 fps	30,200 CUP	12.5C	2,335 fps	42,600 CUP
55 GR. HDY SP	AR2205	.224"	1.850"	10.0	2,313 fps	43,400 CUP	11.0	2,443 fps	46,100 CUP
	AR2207	.224"	1.850"	11.5	2,167 fps	31,100 CUP	12.5C	2,352 fps	39,400 CUP
				C = Compressed load					
221 Remington Fireball				Case: Remington Twist: 1:12" Primer: REMINGTON 7 1/2			Barrel length: 10.75" Trim length: 1.390"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
40 GR. SPR SP	AR2205	.224"	1.830"	15.5	2,925 fps	-	17.0	3,033 fps	-
45 GR. HDY SP	AR2205	.224"	1.840"	15.0	2,592 fps	-	16.0	2,697 fps	-
	AR2207	.224"	1.840"	16.0	2,451 fps	-	17.0	2,632 fps	-
50 GR. NOS BT	AR2205	.224"	1.850"	15.0	2,582 fps	-	16.0	2,672 fps	-
	AR2207	.224"	1.850"	15.5	2,412 fps	-	16.5	2,539 fps	-
53 GR. SIE HPBT	AR2205	.224"	1.840"	15.0	2,449 fps	-	16.0	2,603 fps	-
	AR2207	.224"	1.840"	15.5	2,343 fps	-	16.5	2,537 fps	-
55 GR. SPR SP	AR2205	.224"	1.830"	14.5	2,418 fps	-	15.5	2,503 fps	-
	AR2207	.224"	1.830"	15.0	2,261 fps	-	16.0	2,441 fps	-
60 GR. HDY SP	AR2205	.224"	1.840"	14.0	2,328 fps	-	15.0	2,414 fps	-
	AR2207	.224"	1.840"	15.0	2,251 fps	-	16.0	2,399 fps	-
222 Remington				Case: Remington Twist: 1:14" Primer: REMINGTON 7 1/2			Barrel length: 10" Trim length: 1.690"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
45 GR. SIE SP	AR2205	.224"	2.130"	-	-	-	17.1	2,500 fps	45,200 CUP
50 GR. REM PSP	AR2205	.224"	2.130"	-	-	-	16.1	2,365 fps	45,800 CUP
52 GR. SIE HPBT	AR2205	.224"	2.190"	-	-	-	15.8	2,300 fps	45,600 CUP

# PISTOL DATA

222 Remington				Case: Remington Twist: 1:14" Primer: REMINGTON 7 1/2			Barrel length: 10" Trim length: 1.690"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR. HDY HP	AR2205	.224"	2.245"	-	-	-	14.7	2,105 fps	45,000 CUP
223 Remington				Case: Winchester Twist: 1:12" Primer: WINCHESTER SR			Barrel length: 15" Trim length: 1.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
36 GR. BAR VG FB	Bench Mark 8208	.224"	2.200"	25.4	2,829 fps	44,500 PSI	27.0C	3,057 fps	50,600 PSI
40 GR. NOS BT	AR2207	.224"	2.280"	20.5	2,755 fps	29,400 CUP	22.5	3,014 fps	49,600 CUP
	AR2219	.224"	2.280"	23.5	2,783 fps	34,600 CUP	25.5	3,087 fps	48,000 CUP
	Bench Mark 2	.224"	2.280"	25.3	2,900 fps	39,600 CUP	27.3	3,174 fps	51,000 CUP
	Bench Mark 8208	.224"	2.280"	25.0	2,755 fps	41,500 PSI	26.7C	2,985 fps	50,400 PSI
	AR2206H	.224"	2.280"	25.0	2,628 fps	32,100 CUP	27.5C	3,060 fps	44,500 CUP
	AR2208	.224"	2.280"	25.0	2,609 fps	34,400 CUP	28.0C	3,069 fps	47,200 CUP
45 GR. SIE SP	AR2207	.224"	2.240"	20.0	2,617 fps	28,800 CUP	22.0	2,847 fps	49,100 CUP
	AR2219	.224"	2.240"	23.0	2,635 fps	36,000 CUP	25.0	2,926 fps	47,400 CUP
	Bench Mark 2	.224"	2.240"	25.3	2,815 fps	41,400 CUP	27.3	3,089 fps	51,100 CUP
	Bench Mark 8208	.224"	2.240"	24.5	2,617 fps	41,700 PSI	26.8	3,022 fps	52,000 PSI
	AR2206H	.224"	2.240"	25.0	2,603 fps	33,800 CUP	27.5C	3,017 fps	43,400 CUP
	AR2208	.224"	2.240"	25.0	2,550 fps	30,200 CUP	28.0C	3,010 fps	43,700 CUP
50 GR. SPR SP	AR2207	.224"	2.210"	19.5	2,429 fps	32,400 CUP	21.5	2,824 fps	45,900 CUP
	AR2219	.224"	2.210"	22.0	2,460 fps	36,500 CUP	24.0	2,740 fps	49,300 CUP
	Bench Mark 2	.224"	2.210"	24.0	2,639 fps	38,600 CUP	26.5	2,953 fps	50,400 CUP
	Bench Mark 8208	.224"	2.210"	23.5	2,525 fps	40,500 PSI	25.8	2,849 fps	53,300 PSI
	AR2206H	.224"	2.210"	25.0	2,658 fps	38,300 CUP	27.5C	3,024 fps	51,300 CUP
	AR2208	.224"	2.210"	26.5	2,842 fps	40,800 CUP	27.5C	2,959 fps	44,800 CUP
53 GR. SIE HP	AR2207	.224"	2.200"	19.5	2,650 fps	34,200 CUP	21.5	2,846 fps	46,700 CUP
	AR2219	.224"	2.200"	21.5	2,527 fps	39,200 CUP	23.5	2,707 fps	48,900 CUP
	Bench Mark 2	.224"	2.200"	24.0	2,652 fps	39,900 CUP	26.0	2,932 fps	49,800 CUP
	Bench Mark 8208	.224"	2.200"	23.0	2,382 fps	41,400 PSI	25.4	2,789 fps	53,400 PSI
	AR2206H	.224"	2.200"	25.0	2,660 fps	37,400 CUP	27.0C	2,965 fps	48,600 CUP
	AR2208	.224"	2.200"	24.0	2,449 fps	38,400 CUP	27.0C	2,833 fps	47,900 CUP

# PISTOL DATA

223 Remington				Case: Winchester Twist: 1:12" Primer: WINCHESTER SR			Barrel length: 15" Trim length: 1.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. SPR SP	AR2207	.224"	2.200"	19.0	2,400 fps	34,800 CUP	21.0	2,719 fps	47,600 CUP
	AR2219	.224"	2.200"	21.0	2,439 fps	38,600 CUP	23.0	2,638 fps	48,900 CUP
	Bench Mark 2	.224"	2.200"	24.0	2,625 fps	42,600 CUP	25.6	2,840 fps	50,000 CUP
	Bench Mark 8208	.224"	2.200"	23.0	2,390 fps	42,100 PSI	25.3	2,715 fps	53,100 PSI
	AR2206H	.224"	2.200"	25.0	2,721 fps	39,700 CUP	26.0	2,880 fps	49,000 CUP
	AR2208	.224"	2.200"	25.5	2,697 fps	41,300 CUP	27.5C	2,972 fps	49,700 CUP
60 GR. HDY V-MAX	AR2207	.224"	2.250"	18.0	2,450 fps	42,500 CUP	20.0	2,647 fps	47,600 CUP
	AR2219	.224"	2.250"	22.0	2,526 fps	40,300 CUP	23.5	2,657 fps	49,800 CUP
	Bench Mark 2	.224"	2.250"	23.0	2,515 fps	42,500 CUP	24.6	2,744 fps	49,900 CUP
	Bench Mark 8208	.224"	2.250"	21.5	2,179 fps	43,500 PSI	23.6	2,488 fps	51,700 PSI
	AR2206H	.224"	2.250"	24.0	2,514 fps	37,600 CUP	26.0C	2,804 fps	50,100 CUP
	AR2208	.224"	2.250"	25.0	2,544 fps	40,400 CUP	27.0C	2,825 fps	51,900 CUP
63 GR. SIE SP	AR2207	.224"	2.200"	18.0	2,294 fps	33,600 CUP	20.0	2,572 fps	44,600 CUP
	AR2219	.224"	2.200"	20.0	2,240 fps	38,100 CUP	22.0	2,482 fps	48,400 CUP
	Bench Mark 2	.224"	2.200"	22.0	2,318 fps	41,800 CUP	24.2	2,601 fps	50,500 CUP
	Bench Mark 8208	.224"	2.200"	21.0	2,158 fps	43,000 PSI	23.1	2,409 fps	52,400 PSI
	AR2206H	.224"	2.200"	23.5	2,434 fps	43,300 CUP	25.5	2,800 fps	50,000 CUP
	AR2208	.224"	2.200"	24.5	2,566 fps	42,400 CUP	26.4	2,809 fps	50,700 CUP
69 GR. SIE HPBT	Bench Mark 8208	.224"	2.235"	21.0	2,168 fps	42,200 PSI	23.8	2,515 fps	52,900 PSI
70 GR. SPR SP	Bench Mark 8208	.224"	2.140"	20.0	2,051 fps	44,100 PSI	21.8	2,201 fps	52,800 PSI
				C = Compressed load					
22 BR Remington				Case: Remington (reformed) Twist: 1:14" Primer: REMINGTON 7 1/2			Barrel length: 15" Trim length: 1.510"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
40 GR. NOS BT	AR2207	.224"	2.090"	25.5	3,145 fps	43,200 CUP	27.6	3,394 fps	50,400 CUP
	AR2219	.224"	2.090"	28.0	3,002 fps	38,000 CUP	30.0	3,245 fps	49,000 CUP
	Bench Mark 2	.224"	2.090"	30.0	3,248 fps	41,400 CUP	32.0	3,485 fps	49,200 CUP
	AR2206H	.224"	2.090"	31.0	3,152 fps	38,300 CUP	32.8	3,320 fps	46,400 CUP
	AR2208	.224"	2.090"	33.5	3,101 fps	36,500 CUP	31.5	3,285 fps	43,500 CUP
45 GR. SPR SP	AR2219	.224"	1.945"	29.0	3,130 fps	41,000 CUP	31.5	3,446 fps	49,400 CUP
	Bench Mark 2	.224"	1.945"	29.5	3,106 fps	41,100 CUP	31.6	3,412 fps	48,900 CUP
	AR2206H	.224"	1.945"	30.0	2,980 fps	41,600 CUP	32.5	3,334 fps	49,000 CUP
	AR2208	.224"	1.945"	31.5	3,005 fps	36,800 CUP	33.5	3,246 fps	43,600 CUP



# PISTOL DATA

<b>22 BR Remington</b>				Case: Remington (reformed)			Barrel length: 15"		
				Twist: 1:14"			Trim length: 1.510"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>50 GR. SPR SP</b>	AR2219	.224"	1.945"	28.0	3,036 fps	37,000 CUP	30.5	3,289 fps	50,000 CUP
	Bench Mark 2	.224"	1.945"	29.5	3,113 fps	40,400 CUP	31.5	3,377 fps	49,700 CUP
	AR2206H	.224"	1.945"	29.5	2,957 fps	41,200 CUP	32.0	3,229 fps	48,000 CUP
	AR2208	.224"	1.945"	31.5	3,040 fps	38,900 CUP	33.5	3,248 fps	44,600 CUP
<b>53 GR. HDY HP</b>	AR2219	.224"	2.065"	28.0	3,070 fps	38,000 CUP	30.0	3,281 fps	48,400 CUP
	Bench Mark 2	.224"	2.065"	28.5	3,075 fps	41,200 CUP	30.5	3,272 fps	49,200 CUP
	AR2206H	.224"	2.065"	29.5	3,034 fps	41,900 CUP	31.5	3,233 fps	49,000 CUP
	AR2208	.224"	2.065"	31.0	3,050 fps	43,400 CUP	33.0	3,224 fps	51,500 CUP
<b>55 GR. SPR SP</b>	AR2219	.224"	2.050"	28.0	3,125 fps	40,000 CUP	30.0	3,277 fps	48,400 CUP
	Bench Mark 2	.224"	2.050"	28.5	3,062 fps	41,600 CUP	30.5	3,276 fps	49,600 CUP
	AR2206H	.224"	2.050"	29.0	3,015 fps	37,100 CUP	31.0	3,214 fps	49,400 CUP
	AR2208	.224"	2.050"	30.0	3,030 fps	41,600 CUP	32.5	3,203 fps	49,300 CUP
<b>63 GR. SIE SP</b>	AR2219	.224"	2.015"	24.0	2,699 fps	40,800 CUP	26.5	2,909 fps	48,800 CUP
	Bench Mark 2	.224"	2.015"	27.0	2,901 fps	42,000 CUP	29.0	3,074 fps	49,300 CUP
	AR2206H	.224"	2.015"	26.0	2,691 fps	41,600 CUP	28.0	2,884 fps	49,400 CUP
	AR2208	.224"	2.015"	28.5	2,869 fps	44,500 CUP	30.5	3,017 fps	49,300 CUP
<b>70 GR. SPR SP</b>	AR2219	.224"	1.900"	22.0	2,516 fps	40,000 CUP	24.0	2,675 fps	49,900 CUP
	Bench Mark 2	.224"	1.900"	26.0	2,829 fps	43,400 CUP	28.0	2,955 fps	49,700 CUP
	AR2206H	.224"	1.900"	23.0	2,491 fps	41,400 CUP	24.5	2,611 fps	50,000 CUP
	AR2208	.224"	1.900"	26.0	2,650 fps	43,000 CUP	28.0	2,814 fps	49,500 CUP
<b>6mm TCU</b>				Case: Federal (reformed)			Barrel length: 14"		
				Twist: 1:10"			Trim length: 1.740"		
				Primer: FEDERAL 205M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>70 GR. NOS BT</b>	AR2219	.243"	2.375"	26.5	2,600 fps	-	28.5	2,859 fps	-
	AR2206H	.243"	2.375"	27.5	2,589 fps	-	29.5	2,896 fps	-
<b>75 GR. SPR HP</b>	AR2219	.243"	2.480"	26.0	2,499 fps	-	28.0	2,808 fps	-
	AR2206H	.243"	2.480"	27.0	2,513 fps	-	29.0	2,819 fps	-
<b>80 GR. HDY SP</b>	AR2219	.243"	2.410"	25.0	2,466 fps	-	27.5	2,728 fps	-
	AR2206H	.243"	2.410"	26.0	2,480 fps	-	28.5	2,739 fps	-
<b>85 GR. SPR SPBT</b>	AR2219	.243"	2.500"	24.5	2,437 fps	-	26.5	2,644 fps	-
	AR2206H	.243"	2.500"	25.5	2,449 fps	-	27.5	2,649 fps	-
<b>90 GR. SPR SP</b>	AR2219	.243"	2.580"	24.0	2,380 fps	-	26.0	2,507 fps	-
	AR2206H	.243"	2.580"	25.0	2,401 fps	-	27.0	2,538 fps	-

# PISTOL DATA

6mm TCU				Case: Federal (reformed) Twist: 1:10" Primer: FEDERAL 205M			Barrel length: 14" Trim length: 1.740"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
100 GR. HDY SP	AR2219	.243"	2.500"	23.0	2,179 fps	-	25.0	2,398 fps	-
	AR2206H	.243"	2.500"	24.0	2,172 fps	-	26.0	2,412 fps	-
6mm-204 RR				Case: Hornady (reformed) Twist: 1:10" Primer: FEDERAL 205M			Barrel length: 15" Trim length: 1.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
70 GR. NOS BT	AR2219	.243"	2.480"	-	-	-	27.5	2,970 fps	-
	Bench Mark 2	.243"	2.480"	-	-	-	29.0	2,980 fps	-
	Bench Mark 8208	.243"	2.480"	-	-	-	29.6	3,020 fps	-
75 GR. HDY V-MAX	Bench Mark 2	.243"	2.480"	-	-	-	28.2	2,865 fps	-
	Bench Mark 8208	.243"	2.480"	-	-	-	28.9	2,935 fps	-
80 GR. BAR TTSX BT	Bench Mark 2	.243"	2.500"	-	-	-	27.6	2,805 fps	-
	Bench Mark 8208	.243"	2.500"	-	-	-	28.4	2,855 fps	-
6mm BR Remington				Case: Remington Twist: 1:9" Primer: REMINGTON 7 1/2			Barrel length: 15" Trim length: 1.550"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
55 GR. NOS BT	AR2207	.243"	2.080"	26.0	2,963 fps	37,600 CUP	28.8	3,228 fps	51,000 CUP
	AR2219	.243"	2.080"	30.0	3,029 fps	38,800 CUP	32.5	3,275 fps	51,100 CUP
	Bench Mark 2	.243"	2.080"	31.0	2,991 fps	41,200 CUP	33.5C	3,229 fps	50,300 CUP
	AR2206H	.243"	2.080"	31.0	2,910 fps	37,300 CUP	33.0C	3,084 fps	45,300 CUP
	AR2208	.243"	2.080"	31.0	2,723 fps	31,600 CUP	34.0C	3,014 fps	41,800 CUP
58 GR. HDY V-MAX	AR2207	.243"	2.140"	26.0	2,995 fps	38,000 CUP	28.5	3,235 fps	49,900 CUP
	AR2219	.243"	2.140"	29.5	2,984 fps	40,100 CUP	31.3	3,179 fps	48,400 CUP
	Bench Mark 2	.243"	2.140"	30.0	3,013 fps	42,000 CUP	32.0	3,201 fps	50,600 CUP
	AR2206H	.243"	2.140"	31.5	3,021 fps	38,000 CUP	33.5	3,204 fps	45,100 CUP
	AR2208	.243"	2.140"	31.0	2,849 fps	34,300 CUP	34.0	3,115 fps	46,100 CUP
60 GR. SIE HP	AR2207	.243"	2.080"	25.0	2,889 fps	39,600 CUP	27.5	3,121 fps	50,700 CUP
	AR2219	.243"	2.080"	30.0	3,066 fps	42,000 CUP	32.0	3,265 fps	49,500 CUP
	Bench Mark 2	.243"	2.080"	30.0	2,945 fps	41,400 CUP	32.0	3,141 fps	49,900 CUP
	AR2206H	.243"	2.080"	31.0	2,927 fps	42,000 CUP	33.0C	3,131 fps	47,000 CUP
	AR2208	.243"	2.080"	31.0	2,753 fps	36,000 CUP	34.0C	3,056 fps	48,500 CUP

# PISTOL DATA

6mm BR Remington				Case: Remington Twist: 1:9" Primer: REMINGTON 7 1/2			Barrel length: 15" Trim length: 1.550"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
65 GR. HDY V-MAX	AR2207	.243"	2.140"	25.0	2,848 fps	42,200 CUP	27.0	3,023 fps	49,100 CUP
	AR2219	.243"	2.140"	27.0	2,761 fps	36,800 CUP	30.5	3,075 fps	49,600 CUP
	Bench Mark 2	.243"	2.140"	27.0	2,678 fps	36,000 CUP	30.5	2,987 fps	46,400 CUP
	AR2206H	.243"	2.140"	30.0	2,820 fps	37,700 CUP	33.0C	3,145 fps	49,300 CUP
	AR2208	.243"	2.140"	31.0	2,840 fps	42,200 CUP	33.0C	3,028 fps	49,900 CUP
70 GR. NOS BT	AR2219	.243"	2.100"	28.0	2,764 fps	38,700 CUP	30.0	2,979 fps	47,000 CUP
	Bench Mark 2	.243"	2.100"	29.7	2,817 fps	39,900 CUP	31.6	3,053 fps	49,000 CUP
	AR2206H	.243"	2.100"	29.0	2,657 fps	38,200 CUP	31.0	2,894 fps	47,000 CUP
	AR2208	.243"	2.100"	31.0	2,754 fps	38,900 CUP	34.0	2,986 fps	49,400 CUP
75 GR. SPR HP	AR2219	.243"	2.115"	26.0	2,656 fps	47,100 CUP	28.0	2,802 fps	47,000 CUP
	Bench Mark 2	.243"	2.115"	29.0	2,787 fps	41,700 CUP	31.0	2,978 fps	49,600 CUP
	AR2206H	.243"	2.115"	28.5	2,662 fps	40,000 CUP	30.5	2,860 fps	47,000 CUP
	AR2208	.243"	2.115"	30.5	2,709 fps	42,200 CUP	32.5	2,867 fps	50,000 CUP
80 GR. SPR SP	AR2219	.243"	2.115"	26.0	2,628 fps	39,300 CUP	28.0	2,771 fps	47,000 CUP
	Bench Mark 2	.243"	2.115"	28.5	2,713 fps	40,900 CUP	30.5	2,895 fps	49,400 CUP
	AR2206H	.243"	2.115"	28.0	2,611 fps	40,400 CUP	30.0	2,766 fps	47,000 CUP
	AR2208	.243"	2.115"	30.5	2,695 fps	43,100 CUP	32.5	2,850 fps	50,700 CUP
85 GR. SPR SP	AR2219	.243"	2.115"	22.0	2,302 fps	40,400 CUP	24.0	2,457 fps	47,000 CUP
	Bench Mark 2	.243"	2.115"	27.7	2,670 fps	42,100 CUP	29.7	2,826 fps	49,800 CUP
	AR2206H	.243"	2.115"	24.5	2,326 fps	38,100 CUP	26.5	2,495 fps	49,500 CUP
	AR2208	.243"	2.115"	29.0	2,589 fps	43,100 CUP	31.0	2,761 fps	50,800 CUP
90 GR. SPR SP	AR2219	.243"	2.115"	22.0	2,275 fps	40,600 CUP	24.0	2,437 fps	48,000 CUP
	Bench Mark 2	.243"	2.115"	27.0	2,597 fps	43,200 CUP	29.0	2,761 fps	49,300 CUP
	AR2206H	.243"	2.115"	24.5	2,323 fps	40,400 CUP	27.0	2,546 fps	48,000 CUP
	AR2208	.243"	2.115"	27.5	2,488 fps	39,500 CUP	30.2	2,694 fps	47,500 CUP
100 GR. HDY SP	AR2219	.243"	2.150"	22.0	2,212 fps	42,000 CUP	23.5	2,328 fps	50,000 CUP
	Bench Mark 2	.243"	2.150"	26.0	2,447 fps	43,100 CUP	28.0	2,611 fps	49,500 CUP
	AR2206H	.243"	2.150"	24.5	2,273 fps	42,500 CUP	27.0	2,472 fps	49,000 CUP
	AR2208	.243"	2.150"	26.0	2,292 fps	43,000 CUP	28.0	2,453 fps	48,900 CUP
107 GR. SIE HPBT	AR2219	.243"	2.250"	23.0	2,272 fps	40,800 CUP	25.5	2,437 fps	49,200 CUP
	Bench Mark 2	.243"	2.250"	26.0	2,407 fps	42,000 CUP	28.0	2,575 fps	49,800 CUP
	AR2206H	.243"	2.250"	24.5	2,264 fps	37,900 CUP	27.5	2,480 fps	49,800 CUP
	AR2208	.243"	2.250"	26.0	2,255 fps	39,800 CUP	29.0C	2,497 fps	50,100 CUP

C = Compressed load



# PISTOL DATA

243 Winchester				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 15" Trim length: 2.035"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
55 GR. NOS BT	Bench Mark 2	.243"	2.650"	39.0	3,288 fps	42,600 CUP	41.5	3,387 fps	50,100 CUP
	AR2206H	.243"	2.650"	40.0	3,223 fps	35,100 CUP	44.5	3,515 fps	49,300 CUP
	AR2208	.243"	2.650"	41.0	3,124 fps	42,600 CUP	45.0	3,329 fps	50,000 CUP
58 GR. HDY V-MAX	Bench Mark 2	.243"	2.600"	35.0	2,989 fps	41,800 CUP	37.5	3,177 fps	50,400 CUP
	AR2206H	.243"	2.600"	40.0	3,210 fps	43,300 CUP	43.0	3,353 fps	49,900 CUP
	AR2208	.243"	2.600"	41.0	3,198 fps	44,800 CUP	44.0	3,329 fps	49,800 CUP
60 GR. SIE HP	Bench Mark 2	.243"	2.600"	38.5	3,296 fps	47,000 CUP	41.2	3,435 fps	50,700 CUP
	AR2206H	.243"	2.600"	38.0	3,177 fps	40,500 CUP	42.0	3,264 fps	50,500 CUP
	AR2208	.243"	2.600"	40.0	3,035 fps	45,400 CUP	42.7	3,188 fps	50,400 CUP
65 GR. HDY V-MAX	Bench Mark 2	.243"	2.600"	37.0	3,090 fps	44,300 CUP	40.0	3,255 fps	50,600 CUP
	AR2206H	.243"	2.600"	38.0	3,055 fps	44,500 CUP	41.0	3,220 fps	49,200 CUP
	AR2208	.243"	2.600"	38.0	2,707 fps	43,100 CUP	41.0	3,045 fps	49,600 CUP
70 GR. SPR HP	Bench Mark 2	.243"	2.625"	36.5	3,080 fps	45,100 CUP	39.3	3,196 fps	50,300 CUP
	AR2206H	.243"	2.625"	36.0	2,912 fps	42,700 CUP	39.5	3,167 fps	49,200 CUP
	AR2208	.243"	2.625"	38.0	2,921 fps	45,500 CUP	40.5	3,061 fps	50,100 CUP
75 GR. HDY HP	AR2206H	.243"	2.640"	34.0	2,741 fps	40,900 CUP	38.0	3,018 fps	49,400 CUP
	AR2208	.243"	2.640"	36.0	2,737 fps	45,000 CUP	38.5	2,899 fps	50,500 CUP
80 GR. SIE BTSP	AR2206H	.243"	2.635"	35.0	2,786 fps	45,800 CUP	38.0	2,988 fps	50,100 CUP
	AR2208	.243"	2.635"	36.0	2,714 fps	45,400 CUP	38.5	2,854 fps	50,500 CUP
85 GR. BAR XBTC	AR2206H	.243"	2.560"	35.0	2,797 fps	45,100 CUP	38.0	2,952 fps	49,900 CUP
	AR2208	.243"	2.560"	35.0	2,621 fps	44,200 CUP	38.0	2,811 fps	50,400 CUP
	AR2209	.243"	2.560"	42.0	2,637 fps	39,700 CUP	45.5C	2,850 fps	49,600 CUP
90 GR. SPR SP	AR2206H	.243"	2.625"	34.0	2,654 fps	44,900 CUP	36.5	2,819 fps	50,800 CUP
	AR2208	.243"	2.625"	34.0	2,548 fps	44,800 CUP	36.5	2,670 fps	50,400 CUP
	AR2209	.243"	2.625"	42.0	2,729 fps	44,400 CUP	44.5	2,850 fps	50,600 CUP
	AR2213SC	.243"	2.625"	45.0	2,638 fps	43,700 CUP	48.0C	2,793 fps	50,800 CUP
95 GR. NOS PART	AR2206H	.243"	2.650"	33.0	2,592 fps	45,000 CUP	35.0	2,740 fps	50,700 CUP
	AR2208	.243"	2.650"	33.0	2,485 fps	45,000 CUP	35.0	2,600 fps	50,200 CUP
	AR2209	.243"	2.650"	39.0	2,524 fps	45,800 CUP	42.0	2,688 fps	50,500 CUP
	AR2213SC	.243"	2.650"	42.0	2,459 fps	47,000 CUP	44.5C	2,589 fps	50,700 CUP
	AR2217	.243"	2.650"	45.0	2,434 fps	44,900 CUP	48.0C	2,603 fps	50,000 CUP
100 GR. SPR BTSP	AR2206H	.243"	2.650"	31.0	2,400 fps	44,900 CUP	33.0	2,521 fps	50,100 CUP
	AR2208	.243"	2.650"	31.0	2,311 fps	42,700 CUP	33.7	2,465 fps	50,400 CUP
	AR2209	.243"	2.650"	37.0	2,434 fps	45,100 CUP	40.0	2,582 fps	51,000 CUP
	AR2213SC	.243"	2.650"	39.0	2,276 fps	44,400 CUP	42.0	2,438 fps	50,100 CUP
	AR2217	.243"	2.650"	44.0	2,419 fps	45,700 CUP	47.0C	2,571 fps	49,800 CUP

# PISTOL DATA

243 Winchester				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 15" Trim length: 2.035"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
105 GR. HDY A-MAX	AR2206H	.243"	2.760"	30.5	2,390 fps	44,900 CUP	32.5	2,503 fps	50,100 CUP
	AR2208	.243"	2.760"	31.0	2,297 fps	45,600 CUP	33.0	2,411 fps	50,800 CUP
	AR2209	.243"	2.760"	35.0	2,267 fps	44,300 CUP	37.5	2,443 fps	49,500 CUP
	AR2213SC	.243"	2.760"	38.0	2,227 fps	43,900 CUP	41.0	2,375 fps	50,200 CUP
	AR2217	.243"	2.760"	43.0	2,330 fps	45,400 CUP	46.0C	2,517 fps	50,200 CUP
107 GR. SIE BTHP	AR2206H	.243"	2.850"	30.5	2,348 fps	45,900 CUP	32.5	2,472 fps	49,900 CUP
	AR2208	.243"	2.850"	31.0	2,272 fps	45,300 CUP	33.0	2,385 fps	50,400 CUP
	AR2209	.243"	2.850"	35.0	2,266 fps	43,100 CUP	37.5	2,424 fps	50,200 CUP
	AR2213SC	.243"	2.850"	38.0	2,215 fps	43,700 CUP	41.0	2,360 fps	50,100 CUP
	AR2217	.243"	2.850"	43.0	2,345 fps	44,700 CUP	46.0C	2,513 fps	50,100 CUP
				C = Compressed load					
25 ACP				Case: Winchester Twist: 1:16" Primer: FEDERAL 100M			Barrel length: 2" Trim length: 0.610"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
35 GR. HDY XTP	AP70N	.251"	0.860"	1.5	823 fps	14,500 CUP	1.7	922 fps	16,200 CUP
50 GR. SIE FMJ	AP50N	.251"	0.900"	-	-	-	1.2	750 fps	-
	AP70N	.251"	0.900"	1.2	620 fps	12,000 CUP	1.4	751 fps	16,600 CUP
256 Winchester				Case: Winchester Twist: 1:14" Primer: WINCHESTER SR			Barrel length: 10" Trim length: 1.271"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR. HDY FP	AR2205	.257"	1.560"	15.0	2,156 fps	-	16.0	2,386 fps	-
	AR2207	.257"	1.560"	-	-	-	18.0	1,704 fps	-
75 GR. SPR HP	AR2205	.257"	1.740"	14.0	2,026 fps	-	15.0	2,120 fps	-
87 GR. HDY SP	AR2205	.257"	1.825"	13.0	1,798 fps	-	14.0	2,040 fps	-
	AR2207	.257"	1.825"	-	-	-	15.0	2,007 fps	-

# PISTOL DATA

6.5mm TCU				Case: Winchester (reformed)			Barrel length: 14"		
				Twist: 1:10"			Trim length: 1.740"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
87 GR. SPR SP	AR2207	.264"	2.350"	21.0	2,140 fps	-	23.0	2,368 fps	-
	AR2219	.264"	2.350"	24.0	2,116 fps	-	26.0	2,310 fps	-
	AR2206H	.264"	2.350"	25.0	2,180 fps	-	27.0	2,403 fps	-
100 GR. NOS BT	AR2207	.264"	2.400"	20.0	1,914 fps	-	22.0	2,101 fps	-
	AR2219	.264"	2.400"	23.0	1,921 fps	-	25.0	2,119 fps	-
	AR2206H	.264"	2.400"	24.0	2,049 fps	-	26.0	2,229 fps	-
120 GR. SPR SP	AR2207	.264"	2.350"	19.0	1,770 fps	-	21.0	1,993 fps	-
	AR2219	.264"	2.350"	21.5	1,857 fps	-	23.5	2,036 fps	-
	AR2206H	.264"	2.350"	23.0	1,880 fps	-	25.0	2,075 fps	-
129 GR. HDY SP	AR2207	.264"	2.550"	18.0	1,688 fps	-	20.0	1,849 fps	-
	AR2219	.264"	2.550"	21.0	1,731 fps	-	23.0	1,911 fps	-
	AR2206H	.264"	2.550"	22.5	1,784 fps	-	24.5	1,970 fps	-
140 GR. HDY BTHP	AR2207	.264"	2.700"	17.0	1,590 fps	-	19.0	1,714 fps	-
	AR2219	.264"	2.700"	20.0	1,616 fps	-	22.0	1,799 fps	-
	AR2206H	.264"	2.700"	21.0	1,660 fps	-	23.0	1,842 fps	-

6.5mm BR				Case: Remington (reformed)			Barrel length: 15"		
				Twist: 1:8"			Trim length: 1.510"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
90 GR. SPR TNT	AR2219	.264"	2.140"	29.0	2,558 fps	39,400 CUP	31.0	2,737 fps	49,100 CUP
	Bench Mark 2	.264"	2.140"	29.7	2,581 fps	42,300 CUP	31.7	2,808 fps	49,100 CUP
	AR2206H	.264"	2.140"	31.0	2,507 fps	35,800 CUP	33.0C	2,715 fps	44,100 CUP
	AR2208	.264"	2.140"	31.0	2,441 fps	35,400 CUP	33.0C	2,625 fps	41,500 CUP
95 GR. HDY V-MAX	AR2219	.264"	2.220"	28.8	2,540 fps	40,300 CUP	30.7	2,727 fps	50,000 CUP
	Bench Mark 2	.264"	2.220"	29.0	2,548 fps	43,200 CUP	31.0	2,707 fps	49,000 CUP
	AR2206H	.264"	2.220"	31.0	2,546 fps	40,000 CUP	33.0C	2,746 fps	48,500 CUP
	AR2208	.264"	2.220"	31.0	2,483 fps	40,000 CUP	33.0C	2,647 fps	45,900 CUP
100 GR. NOS BT	AR2219	.264"	2.220"	28.0	2,424 fps	39,400 CUP	29.7	2,573 fps	50,200 CUP
	Bench Mark 2	.264"	2.220"	28.3	2,404 fps	41,700 CUP	30.2	2,548 fps	49,400 CUP
	AR2206H	.264"	2.220"	31.0	2,531 fps	41,700 CUP	33.0C	2,707 fps	49,100 CUP
	AR2208	.264"	2.220"	31.0	2,475 fps	39,600 CUP	33.0C	2,641 fps	48,700 CUP
107 GR. HPBT	AR2219	.264"	2.340"	27.2	2,393 fps	39,100 CUP	29.0	2,528 fps	49,800 CUP
	Bench Mark 2	.264"	2.340"	27.8	2,330 fps	40,200 CUP	29.6	2,588 fps	49,400 CUP
	AR2206H	.264"	2.340"	29.8	2,489 fps	38,900 CUP	31.8C	2,633 fps	47,900 CUP
	AR2208	.264"	2.340"	30.5	2,462 fps	41,800 CUP	32.5C	2,623 fps	48,500 CUP



# PISTOL DATA

6.5mm BR				Case: Remington (reformed) Twist: 1:8" Primer: REMINGTON 7 1/2			Barrel length: 15" Trim length: 1.510"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. NOS BT	AR2219	.264"	2.250"	26.7	2,242 fps	40,800 CUP	28.5	2,413 fps	49,500 CUP
	Bench Mark 2	.264"	2.250"	27.2	2,198 fps	43,800 CUP	29.0	2,396 fps	50,000 CUP
	AR2206H	.264"	2.250"	29.0	2,360 fps	41,300 CUP	31.0C	2,507 fps	47,700 CUP
	AR2208	.264"	2.250"	29.0	2,289 fps	39,400 CUP	31.0C	2,423 fps	45,100 CUP
129 GR. HDY SP	AR2219	.264"	2.280"	26.0	2,190 fps	44,500 CUP	27.7	2,298 fps	49,200 CUP
	Bench Mark 2	.264"	2.280"	26.3	2,148 fps	43,800 CUP	28.0	2,272 fps	49,600 CUP
	AR2206H	.264"	2.280"	28.4	2,228 fps	44,200 CUP	30.3C	2,387 fps	49,400 CUP
	AR2208	.264"	2.280"	29.0	2,237 fps	44,200 CUP	31.0C	2,387 fps	49,900 CUP
140 GR. SPR SP	AR2219	.264"	2.300"	25.0	2,075 fps	43,900 CUP	26.7	2,178 fps	50,200 CUP
	Bench Mark 2	.264"	2.300"	26.3	2,100 fps	44,200 CUP	28.0	2,229 fps	49,800 CUP
	AR2206H	.264"	2.300"	28.2	2,193 fps	44,200 CUP	30.0C	2,308 fps	49,000 CUP
	AR2208	.264"	2.300"	28.3	2,167 fps	42,100 CUP	30.2C	2,300 fps	49,000 CUP
142 GR. SIE HPBT	AR2219	.264"	2.350"	24.5	2,067 fps	44,200 CUP	26.1	2,193 fps	49,400 CUP
	Bench Mark 2	.264"	2.350"	25.2	2,065 fps	45,500 CUP	26.9	2,178 fps	49,900 CUP
	AR2206H	.264"	2.350"	27.3	2,147 fps	41,900 CUP	29.0	2,291 fps	49,300 CUP
	AR2208	.264"	2.350"	27.9	2,165 fps	40,900 CUP	29.7C	2,284 fps	49,600 CUP
				C = Compressed load					
6.5mm JDJ				Case: Winchester (reformed) Twist: 1:9" Primer: WINCHESTER LR			Barrel length: 14" Trim length: 1.920"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. SPR SP	AR2209	.264"	2.700"	35.0	2,122 fps	-	40.0	2,414 fps	-
129 GR. HDY SP	AR2213SC	.264"	2.750"	35.0	1,973 fps	-	39.0	2,194 fps	-
140 GR. SPR SP	AR2213SC	.264"	2.700"	33.0	1,651 fps	-	37.0	1,968 fps	-
270 Ren				Case: Winchester (reformed) Twist: 1:8" Primer: WINCHESTER SR			Barrel length: 10" Trim length: 1.280"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
90 GR. SPR HP	AR2205	.277"	1.900"	8.5	1,370 fps	-	9.5	1,589 fps	-
100 GR. HDY SP	AR2205	.277"	1.790"	8.0	1,179 fps	-	9.0	1,404 fps	-
110 GR. HDY HP	AR2205	.277"	1.900"	7.8	1,160 fps	-	8.7	1,370 fps	-

# PISTOL DATA

270 Winchester				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 15" Trim length: 2.530"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
90 GR. SIE HP	AR2206H	.277"	3.200"	50.0	3,096 fps	48,100 CUP	53.0	3,216 fps	50,400 CUP
	AR2208	.277"	3.200"	51.0	2,958 fps	46,000 CUP	55.0	3,091 fps	51,400 CUP
	AR2209	.277"	3.200"	58.0	2,859 fps	43,700 CUP	62.0C	3,051 fps	49,800 CUP
100 GR. SPR SP	AR2206H	.277"	3.145"	47.0	2,940 fps	47,000 CUP	50.0	3,051 fps	50,200 CUP
	AR2208	.277"	3.145"	48.0	2,782 fps	44,400 CUP	52.0	2,928 fps	50,200 CUP
	AR2209	.277"	3.145"	56.0	2,759 fps	44,000 CUP	59.4	2,917 fps	50,200 CUP
110 GR. HDY HP	AR2206H	.277"	3.250"	45.0	2,816 fps	46,700 CUP	47.5	2,927 fps	50,800 CUP
	AR2208	.277"	3.250"	43.0	2,479 fps	44,100 CUP	48.7	2,788 fps	50,800 CUP
	AR2209	.277"	3.250"	54.0	2,667 fps	46,900 CUP	57.0	2,843 fps	50,100 CUP
120 GR. BAR XFB	AR2206H	.277"	3.270"	42.0	2,559 fps	45,000 CUP	45.0	2,719 fps	50,400 CUP
	AR2208	.277"	3.270"	44.0	2,504 fps	46,300 CUP	47.0	2,650 fps	51,000 CUP
	AR2209	.277"	3.270"	51.0	2,533 fps	44,700 CUP	55.0	2,723 fps	51,200 CUP
	AR2213SC	.277"	3.270"	58.0	2,627 fps	45,800 CUP	62.0C	2,782 fps	51,200 CUP
130 GR. HDY SP	AR2206H	.277"	3.280"	42.0	2,528 fps	44,700 CUP	45.0	2,676 fps	51,000 CUP
	AR2208	.277"	3.280"	43.0	2,416 fps	43,900 CUP	46.0	2,557 fps	49,600 CUP
	AR2209	.277"	3.280"	51.0	2,501 fps	45,200 CUP	54.3	2,619 fps	50,500 CUP
	AR2213SC	.277"	3.280"	56.0	2,471 fps	44,400 CUP	60.0C	2,609 fps	51,000 CUP
	AR2217	.277"	3.280"	61.0	2,508 fps	42,900 CUP	64.0C	2,650 fps	48,100 CUP
135 GR. SIE BT	AR2206H	.277"	3.340"	41.0	2,465 fps	44,300 CUP	44.0	2,616 fps	50,600 CUP
	AR2208	.277"	3.340"	41.0	2,336 fps	40,800 CUP	45.0	2,523 fps	50,200 CUP
	AR2209	.277"	3.340"	50.0	2,460 fps	44,400 CUP	53.5	2,633 fps	50,700 CUP
	AR2213SC	.277"	3.340"	55.0	2,446 fps	43,600 CUP	59.5C	2,618 fps	51,000 CUP
	AR2217	.277"	3.340"	61.0	2,547 fps	43,100 CUP	63.0C	2,608 fps	47,600 CUP
140 GR. SFT SP	AR2206H	.277"	3.280"	40.0	2,381 fps	45,300 CUP	42.6	2,515 fps	50,600 CUP
	AR2208	.277"	3.280"	41.0	2,313 fps	44,300 CUP	43.7	2,437 fps	50,500 CUP
	AR2209	.277"	3.280"	49.0	2,458 fps	44,500 CUP	52.0	2,570 fps	50,400 CUP
	AR2213SC	.277"	3.280"	54.0	2,442 fps	43,900 CUP	58.0C	2,588 fps	50,100 CUP
	AR2217	.277"	3.280"	59.0	2,539 fps	41,800 CUP	63.0C	2,694 fps	50,800 CUP
150 GR. HDY SP	AR2209	.277"	3.285"	46.0	2,298 fps	43,400 CUP	49.0	2,420 fps	51,000 CUP
	AR2213SC	.277"	3.285"	52.0	2,319 fps	46,300 CUP	55.7	2,437 fps	51,200 CUP
	AR2217	.277"	3.285"	55.0	2,284 fps	44,900 CUP	59.0C	2,472 fps	51,000 CUP
160 GR. NOS PART	AR2209	.277"	3.340"	46.0	2,271 fps	43,600 CUP	49.0	2,430 fps	51,100 CUP
	AR2213SC	.277"	3.340"	50.0	2,246 fps	43,000 CUP	54.0	2,388 fps	50,500 CUP
	AR2217	.277"	3.340"	55.0	2,336 fps	44,200 CUP	59.0C	2,467 fps	50,900 CUP

C = Compressed load

# PISTOL DATA

7mm TCU				Case: Federal (reformed)			Barrel length: 14"		
				Twist: 1:10"			Trim length: 1.740"		
				Primer: FEDERAL 205					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. SIE HP	AR2205	.284"	2.475"	17.0	1,749 fps	-	19.0	2,011 fps	-
	AR2207	.284"	2.475"	22.0	2,007 fps	-	24.0	2,176 fps	-
	AR2219	.284"	2.475"	25.0	2,029 fps	-	26.0	2,169 fps	-
	AR2206H	.284"	2.475"	25.0	1,913 fps	-	26.0	2,071 fps	-
120 GR. SPR SP	AR2205	.284"	2.410"	16.0	1,662 fps	-	18.0	1,914 fps	-
	AR2207	.284"	2.410"	21.0	1,880 fps	-	23.0	2,075 fps	-
	AR2219	.284"	2.410"	24.0	1,898 fps	-	26.0	2,117 fps	-
	AR2206H	.284"	2.410"	24.0	1,818 fps	-	26.0	2,020 fps	-
130 GR. SPR SP	AR2205	.284"	2.465"	15.0	1,490 fps	-	17.0	1,675 fps	-
	AR2207	.284"	2.465"	20.0	1,745 fps	-	22.0	1,935 fps	-
	AR2219	.284"	2.465"	23.0	1,724 fps	-	25.0	1,988 fps	-
	AR2206H	.284"	2.465"	24.0	1,797 fps	-	26.0	2,007 fps	-
139 GR. HDY SP	AR2205	.284"	2.625"	14.5	1,441 fps	-	16.5	1,635 fps	-
	AR2207	.284"	2.625"	19.0	1,717 fps	-	21.0	1,904 fps	-
	AR2219	.284"	2.625"	22.0	1,747 fps	-	24.0	1,938 fps	-
	AR2206H	.284"	2.625"	23.0	1,750 fps	-	25.0	2,001 fps	-
150 GR. SIE HPBT	AR2205	.284"	2.630"	14.0	1,404 fps	-	16.0	1,597 fps	-
	AR2207	.284"	2.630"	18.5	1,640 fps	-	20.5	1,835 fps	-
	AR2219	.284"	2.630"	21.5	1,674 fps	-	23.5	1,859 fps	-
	AR2206H	.284"	2.630"	22.0	1,688 fps	-	24.0	1,874 fps	-
162 GR. HDY SPBT	AR2205	.284"	2.675"	13.0	1,314 fps	-	15.0	1,474 fps	-
	AR2207	.284"	2.675"	17.5	1,519 fps	-	19.5	1,729 fps	-
	AR2219	.284"	2.675"	20.0	1,611 fps	-	22.0	1,792 fps	-
	AR2206H	.284"	2.675"	21.0	1,628 fps	-	23.0	1,795 fps	-

7mm BR Remington				Case: Remington			Barrel length: 14"		
				Twist: 1:9.5"			Trim length: 1.515"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. BAR XFB	AR2207	.284"	2.125"	26.0	2,334 fps	36,600 CUP	28.5	2,569 fps	49,900 CUP
	AR2219	.284"	2.125"	29.0	2,248 fps	37,700 CUP	31.5C	2,516 fps	49,800 CUP
	Bench Mark 2	.284"	2.125"	29.0	2,194 fps	38,800 CUP	32.0C	2,510 fps	50,100 CUP
	AR2206H	.284"	2.125"	31.0	2,309 fps	40,900 CUP	33.0C	2,486 fps	45,300 CUP



# PISTOL DATA

7mm BR Remington				Case: Remington Twist: 1:9.5" Primer: REMINGTON 7 1/2			Barrel length: 14" Trim length: 1.515"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
115 GR. SPR HP	AR2207	.284"	2.150"	26.0	2,254 fps	41,500 CUP	28.5	2,474 fps	50,500 CUP
	AR2219	.284"	2.150"	29.0	2,227 fps	37,200 CUP	31.5C	2,473 fps	49,800 CUP
	Bench Mark 2	.284"	2.150"	30.0	2,251 fps	41,600 CUP	32.0C	2,476 fps	49,800 CUP
	AR2206H	.284"	2.150"	31.0	2,313 fps	38,900 CUP	33.0C	2,450 fps	45,300 CUP
120 GR. HDY V-MAX	AR2207	.284"	2.300"	25.5	2,262 fps	40,200 CUP	27.5	2,397 fps	49,500 CUP
	AR2219	.284"	2.300"	28.0	2,210 fps	39,800 CUP	30.8	2,427 fps	50,400 CUP
	Bench Mark 2	.284"	2.300"	29.0	2,202 fps	43,100 CUP	31.0	2,390 fps	49,900 CUP
	AR2206H	.284"	2.300"	30.0	2,202 fps	39,600 CUP	32.7C	2,460 fps	49,800 CUP
130 GR. SIE HPBT	AR2207	.284"	2.250"	25.0	2,176 fps	40,000 CUP	27.0	2,362 fps	50,500 CUP
	AR2219	.284"	2.250"	28.0	2,170 fps	40,500 CUP	30.0C	2,387 fps	50,600 CUP
	Bench Mark 2	.284"	2.250"	28.0	2,161 fps	40,700 CUP	30.2C	2,339 fps	50,000 CUP
	AR2206H	.284"	2.250"	30.0	2,224 fps	43,900 CUP	32.0C	2,390 fps	49,200 CUP
139 GR. HDY SST	AR2207	.284"	2.260"	24.0	2,078 fps	42,500 CUP	26.0	2,262 fps	49,800 CUP
	AR2219	.284"	2.260"	26.5	2,094 fps	40,100 CUP	28.5C	2,251 fps	49,700 CUP
	Bench Mark 2	.284"	2.260"	27.5	2,078 fps	41,200 CUP	29.7C	2,267 fps	49,900 CUP
	AR2206H	.284"	2.260"	29.0	2,117 fps	41,200 CUP	31.0C	2,263 fps	47,000 CUP
145 GR. SPR SPBT	AR2219	.284"	2.200"	27.0	2,087 fps	37,400 CUP	28.5C	2,221 fps	47,500 CUP
	Bench Mark 2	.284"	2.200"	27.5	2,052 fps	40,400 CUP	29.7C	2,263 fps	50,400 CUP
	AR2206H	.284"	2.200"	29.0	2,143 fps	42,400 CUP	31.0C	2,264 fps	47,500 CUP
150 GR. NOS BT	AR2219	.284"	2.340"	26.5	2,045 fps	40,400 CUP	28.5C	2,206 fps	49,600 CUP
	Bench Mark 2	.284"	2.340"	27.0	2,012 fps	41,900 CUP	29.5C	2,228 fps	50,200 CUP
	AR2206H	.284"	2.340"	28.5	2,054 fps	39,600 CUP	30.5C	2,216 fps	48,300 CUP
162 GR. HDY A-MAX	AR2219	.284"	2.400"	26.0	1,973 fps	39,800 CUP	28.3	2,174 fps	49,800 CUP
	Bench Mark 2	.284"	2.400"	27.0	1,998 fps	41,200 CUP	29.0C	2,170 fps	49,500 CUP
	AR2206H	.284"	2.400"	27.5	1,963 fps	37,500 CUP	29.5C	2,132 fps	49,600 CUP
168 GR. SIE HPBT	AR2219	.284"	2.320"	26.0	1,985 fps	40,300 CUP	28.0	2,125 fps	49,600 CUP
	Bench Mark 2	.284"	2.320"	26.5	1,986 fps	41,400 CUP	28.5	2,118 fps	49,700 CUP
	AR2206H	.284"	2.320"	28.0	2,028 fps	42,300 CUP	30.0C	2,160 fps	49,200 CUP
				C = Compressed load					

# PISTOL DATA

7-30 Waters				Case: Federal			Barrel length: 15"		
				Twist: 1:9.5"			Trim length: 2.030"		
				Primer: FEDERAL 210					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. HDY HP	AR2219	.284"	2.700"	27.0	2,185 fps	30,500 CUP	30.0	2,449 fps	40,200 CUP
	Bench Mark 2	.284"	2.700"	27.0	2,179 fps	29,600 CUP	30.5	2,414 fps	39,300 CUP
	AR2206H	.284"	2.700"	34.0	2,451 fps	33,500 CUP	37.0C	2,639 fps	39,200 CUP
	AR2208	.284"	2.700"	35.0	2,374 fps	31,400 CUP	38.0C	2,530 fps	35,000 CUP
120 GR. NOS FP	AR2219	.284"	2.550"	26.0	2,040 fps	29,500 CUP	29.0	2,263 fps	40,200 CUP
	Bench Mark 2	.284"	2.550"	26.5	2,078 fps	31,500 CUP	29.5	2,274 fps	40,200 CUP
	AR2206H	.284"	2.550"	31.0	2,242 fps	33,200 CUP	34.5	2,437 fps	39,400 CUP
	AR2208	.284"	2.550"	34.0	2,280 fps	31,100 CUP	37.0C	2,446 fps	40,000 CUP
130 GR. SIE HPBT	AR2219	.284"	2.720"	25.0	1,961 fps	31,600 CUP	27.3	2,152 fps	39,300 CUP
	Bench Mark 2	.284"	2.720"	25.0	1,960 fps	28,900 CUP	28.0	2,172 fps	40,100 CUP
	AR2206H	.284"	2.720"	31.0	2,178 fps	31,000 CUP	33.4C	2,323 fps	39,500 CUP
	AR2208	.284"	2.720"	32.0	2,129 fps	30,600 CUP	35.6C	2,341 fps	40,100 CUP
139 GR. HDY FP	AR2219	.284"	2.550"	24.0	1,836 fps	28,500 CUP	27.0	2,073 fps	39,400 CUP
	Bench Mark 2	.284"	2.550"	25.0	1,865 fps	31,000 CUP	28.0	2,075 fps	39,600 CUP
	AR2206H	.284"	2.550"	30.0	2,074 fps	32,900 CUP	33.0	2,242 fps	39,800 CUP
	AR2208	.284"	2.550"	32.0	2,091 fps	30,900 CUP	35.5C	2,260 fps	39,100 CUP
145 GR. SPR SP	Bench Mark 2	.284"	2.720"	25.0	1,855 fps	30,200 CUP	28.0	2,054 fps	40,100 CUP
	AR2206H	.284"	2.720"	29.0	2,055 fps	35,100 CUP	29.0	2,192 fps	39,900 CUP
	AR2208	.284"	2.720"	31.0	2,051 fps	33,600 CUP	34.2	2,212 fps	39,700 CUP
150 GR. NOS BT	Bench Mark 2	.284"	2.780"	23.0	1,747 fps	30,400 CUP	26.0	1,963 fps	39,200 CUP
	AR2206H	.284"	2.780"	29.0	2,019 fps	33,300 CUP	32.0C	2,169 fps	39,600 CUP
	AR2208	.284"	2.780"	31.0	2,030 fps	32,900 CUP	34.2C	2,187 fps	40,000 CUP
168 GR. SIE HPBT	Bench Mark 2	.284"	2.780"	23.0	1,718 fps	31,600 CUP	25.5	1,893 fps	39,800 CUP
	AR2206H	.284"	2.780"	28.0	1,977 fps	34,400 CUP	30.2	2,045 fps	38,600 CUP
	AR2208	.284"	2.780"	29.0	1,912 fps	33,000 CUP	32.0C	2,062 fps	39,200 CUP
				C = Compressed load					
7mm IHMSA				Case: IHMSA			Barrel length: 14"		
				Twist: 1:9"			Trim length: 1.865"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. HDY HP	AR2207	.284"	2.650"	31.0	2,297 fps	-	33.0	2,514 fps	-
	AR2219	.284"	2.650"	34.0	2,330 fps	-	36.0	2,482 fps	-
	AR2206H	.284"	2.650"	36.0	2,319 fps	-	38.0	2,498 fps	-
	AR2209	.284"	2.650"	42.0	2,311 fps	-	44.0	2,483 fps	-
	AR2213SC	.284"	2.650"	42.0	2,174 fps	-	44.0	2,349 fps	-

# PISTOL DATA

7mm IHMSA				Case: IHMSA Twist: 1:9" Primer: WINCHESTER LR			Barrel length: 14" Trim length: 1.865"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. SIE SP	AR2207	.284"	2.700"	30.0	2,185 fps	-	32.0	2,371 fps	-
	AR2219	.284"	2.700"	33.0	2,131 fps	-	35.0	2,339 fps	-
	AR2206H	.284"	2.700"	35.0	2,192 fps	-	37.0	2,387 fps	-
	AR2209	.284"	2.700"	42.0	2,262 fps	-	44.0	2,431 fps	-
	AR2213SC	.284"	2.700"	42.0	2,137 fps	-	44.0	2,295 fps	-
130 GR. SIE SP	AR2207	.284"	2.730"	29.0	2,129 fps	-	31.0	2,307 fps	-
	AR2219	.284"	2.730"	32.0	2,143 fps	-	34.0	2,297 fps	-
	AR2206H	.284"	2.730"	34.0	2,136 fps	-	36.0	2,298 fps	-
	AR2209	.284"	2.730"	41.0	2,239 fps	-	43.0	2,388 fps	-
	AR2213SC	.284"	2.730"	42.0	2,146 fps	-	44.0	2,264 fps	-
145 GR. SPR SP	AR2207	.284"	2.750"	28.0	2,007 fps	-	30.0	2,193 fps	-
	AR2219	.284"	2.750"	31.0	2,043 fps	-	33.0	2,217 fps	-
	AR2206H	.284"	2.750"	33.0	2,033 fps	-	35.0	2,212 fps	-
	AR2209	.284"	2.750"	40.0	2,131 fps	-	42.0	2,269 fps	-
	AR2213SC	.284"	2.750"	41.0	2,019 fps	-	43.0	2,169 fps	-
154 GR. HDY SP	AR2219	.284"	2.750"	30.0	2,004 fps	-	32.0	2,139 fps	-
	AR2206H	.284"	2.750"	32.0	2,036 fps	-	34.0	2,165 fps	-
	AR2209	.284"	2.750"	39.0	2,070 fps	-	41.0	2,210 fps	-
	AR2213SC	.284"	2.750"	41.0	2,091 fps	-	43.0	2,223 fps	-
160 GR. SPR SPBT	AR2219	.284"	2.760"	29.5	1,904 fps	-	31.5	2,068 fps	-
	AR2206H	.284"	2.760"	31.5	1,981 fps	-	33.5	2,106 fps	-
	AR2209	.284"	2.760"	38.0	2,036 fps	-	40.5	2,163 fps	-
	AR2213SC	.284"	2.760"	41.0	2,026 fps	-	43.0	2,156 fps	-
168 GR. SIE HPBT	AR2219	.284"	2.770"	29.0	1,926 fps	-	31.0	2,047 fps	-
	AR2206H	.284"	2.770"	31.0	1,966 fps	-	33.0	2,075 fps	-
	AR2209	.284"	2.770"	37.0	2,009 fps	-	40.0	2,152 fps	-
	AR2213SC	.284"	2.770"	40.0	1,978 fps	-	42.0	2,106 fps	-
175 GR. SIE SPBT	AR2219	.284"	2.800"	28.0	1,779 fps	-	30.0	1,905 fps	-
	AR2206H	.284"	2.800"	30.0	1,862 fps	-	32.0	1,987 fps	-
	AR2209	.284"	2.800"	36.0	1,942 fps	-	39.5	2,066 fps	-
	AR2213SC	.284"	2.800"	39.0	1,982 fps	-	41.0	2,094 fps	-



# PISTOL DATA

7mm-08 Remington				Case: Remington Twist: 1:9.5" Primer: REMINGTON 9 1/2			Barrel length: 15" Trim length: 2.025"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. BAR XFB	Bench Mark 2	.284"	2.650"	40.0	2,655 fps	41,400 CUP	42.5	2,827 fps	49,600 CUP
	AR2206H	.284"	2.650"	41.0	2,585 fps	41,000 CUP	45.0	2,942 fps	49,900 CUP
	AR2208	.284"	2.650"	42.0	2,636 fps	40,800 CUP	45.7	2,931 fps	49,600 CUP
130 GR. SIE HPBT	Bench Mark 2	.284"	2.800"	37.0	2,339 fps	41,500 CUP	39.8	2,558 fps	50,200 CUP
	AR2206H	.284"	2.800"	39.5	2,454 fps	43,500 CUP	42.0	2,632 fps	50,200 CUP
	AR2208	.284"	2.800"	40.0	2,460 fps	43,400 CUP	43.5	2,710 fps	50,100 CUP
139 GR. HDY SP	Bench Mark 2	.284"	2.800"	37.5	2,351 fps	40,300 CUP	40.5	2,520 fps	49,600 CUP
	AR2206H	.284"	2.800"	39.0	2,369 fps	42,500 CUP	42.5	2,575 fps	50,200 CUP
	AR2208	.284"	2.800"	40.5	2,436 fps	44,700 CUP	43.5	2,612 fps	50,000 CUP
	AR2209	.284"	2.800"	47.0	2,408 fps	40,400 CUP	50.0C	2,581 fps	47,500 CUP
150 GR. SIE HPBT	Bench Mark 2	.284"	2.800"	36.0	2,283 fps	43,300 CUP	38.5	2,408 fps	50,200 CUP
	AR2206H	.284"	2.800"	37.0	2,298 fps	43,300 CUP	40.5	2,499 fps	50,000 CUP
	AR2208	.284"	2.800"	38.5	2,345 fps	42,400 CUP	41.3	2,508 fps	50,000 CUP
	AR2209	.284"	2.800"	45.0	2,333 fps	42,000 CUP	48.5C	2,552 fps	50,300 CUP
162 GR. HDY A-MAX	Bench Mark 2	.284"	2.875"	36.0	2,264 fps	43,100 CUP	38.0	2,394 fps	49,200 CUP
	AR2206H	.284"	2.875"	37.0	2,239 fps	43,700 CUP	39.5	2,429 fps	49,800 CUP
	AR2208	.284"	2.875"	38.5	2,312 fps	43,400 CUP	41.0	2,468 fps	49,800 CUP
	AR2209	.284"	2.875"	45.0	2,302 fps	42,600 CUP	48.0C	2,472 fps	49,800 CUP
168 GR. SIE HPBT	Bench Mark 2	.284"	2.800"	36.0	2,211 fps	43,500 CUP	38.0	2,343 fps	49,400 CUP
	AR2206H	.284"	2.800"	36.5	2,211 fps	45,400 CUP	39.0	2,345 fps	49,700 CUP
	AR2208	.284"	2.800"	37.5	2,231 fps	44,600 CUP	40.0	2,380 fps	50,100 CUP
	AR2209	.284"	2.800"	44.5	2,255 fps	42,600 CUP	47.2C	2,404 fps	50,000 CUP
175 GR. NOS PART	Bench Mark 2	.284"	2.800"	34.0	2,107 fps	42,400 CUP	36.5	2,213 fps	49,700 CUP
	AR2206H	.284"	2.800"	35.0	2,117 fps	44,500 CUP	37.5	2,228 fps	49,700 CUP
	AR2208	.284"	2.800"	35.0	2,134 fps	43,400 CUP	37.5	2,236 fps	49,500 CUP
	AR2209	.284"	2.800"	42.0	2,152 fps	41,900 CUP	45.0C	2,325 fps	49,900 CUP
				C = Compressed load					
30 Luger (7.65mm Parabellum)				Case: - Twist: - Primer: -			Barrel length: 4.5" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR.	AP50N	.309"	1.150"	-	-	-	4.0	1,000 fps	-
95 GR.	AP50N	.309"	1.150"	-	-	-	3.8	925 fps	-

# PISTOL DATA

<b>30 Carbine (30 M1 Carbine)</b>				Case: Winchester Twist: 1:20" Primer: CCI 400			Barrel length: 7" Trim length: 1.286"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. SIE RN	AR2205	.308"	1.625"	14.5	1,643 fps	25,200 CUP	15.5C	1,745 fps	30,700 CUP
100 GR. SPR SP	AR2205	.308"	1.625"	13.0	1,503 fps	28,900 CUP	14.5C	1,621 fps	33,600 CUP
110 GR. HDY JRN	AR2205	.308"	1.680"	13.0	1,461 fps	30,100 CUP	14.5C	1,602 fps	38,800 CUP
				C = Compressed load					
<b>30 Herrett</b>				Case: Federal (reformed) Twist: 1:14" Primer: FEDERAL 210			Barrel length: 10" Trim length: 1.595"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. HDY SP	AR2205	.308"	2.320"	-	-	-	18.8	2,035 fps	44,600 CUP
130 GR. SPR HP	AR2205	.308"	2.320"	-	-	-	18.0	1,885 fps	44,800 CUP
150 GR. HDY SPBT	AR2207	.308"	2.320"	19.0	1,623 fps	-	22.0	1,797 fps	-
	AR2219	.308"	2.320"	23.0	1,609 fps	-	24.0	1,654 fps	-
<b>30 Mauser (7.6mm Mauser)</b>				Case: - Twist: - Primer: -			Barrel length: 5.5" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR.	AP50N	-	-	-	-	-	4.5	1,225 fps	-
95 GR.	AP50N	-	-	-	-	-	3.8	1,100 fps	-
<b>30-30 Winchester</b>				Case: Winchester Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 14" Trim length: 2.029"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
130 GR. SPR FP	Bench Mark 2	.308"	2.540"	27.7	1,905 fps	33,700 CUP	29.7	2,020 fps	37,100 CUP
	AR2206H	.308"	2.540"	31.5	1,984 fps	27,600 CUP	35.0	2,194 fps	35,300 CUP
	AR2208	.308"	2.540"	32.5	1,988 fps	30,200 CUP	36.0C	2,238 fps	35,700 CUP
150 GR. SIE FN	Bench Mark 2	.308"	2.550"	27.0	1,817 fps	32,100 CUP	29.0	1,944 fps	37,200 CUP
	AR2206H	.308"	2.550"	30.5	1,899 fps	27,900 CUP	34.0	2,116 fps	36,700 CUP
	AR2208	.308"	2.550"	31.0	1,907 fps	31,100 CUP	34.5	2,119 fps	36,200 CUP

# PISTOL DATA

30-30 Winchester				Case: Winchester Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 14" Trim length: 2.029"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
170 GR. SIE FP	Bench Mark 2	.308"	2.550"	25.3	1,686 fps	32,200 CUP	27.0	1,782 fps	36,100 CUP
	AR2206H	.308"	2.550"	27.5	1,704 fps	28,200 CUP	30.5	1,896 fps	35,200 CUP
	AR2208	.308"	2.550"	29.5	1,806 fps	30,200 CUP	33.0	2,023 fps	36,500 CUP
				C = Compressed load					
308 Winchester				Case: Winchester Twist: 1:12" Primer: FEDERAL 210M			Barrel length: 15" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. BAR TSX	Bench Mark 8208	.308"	2.690"	45.5	2,695 fps	37,700 PSI	50.0C	2,965 fps	50,000 PSI
110 GR. BAR XFB	AR2207	.308"	2.800"	37.0	2,644 fps	40,700 CUP	40.0	2,841 fps	51,000 CUP
	AR2219	.308"	2.800"	42.0	2,676 fps	43,600 CUP	45.0	2,879 fps	51,800 CUP
	Bench Mark 2	.308"	2.800"	44.0	2,722 fps	42,400 CUP	48.0	2,944 fps	50,800 CUP
	AR2206H	.308"	2.800"	45.0	2,617 fps	39,000 CUP	49.0C	2,887 fps	49,900 CUP
	AR2208	.308"	2.800"	48.0	2,738 fps	42,100 CUP	50.0C	2,921 fps	46,100 CUP
125 GR. SIE SP	AR2207	.308"	2.700"	36.0	2,446 fps	46,600 CUP	39.5	2,662 fps	49,800 CUP
	AR2219	.308"	2.700"	42.0	2,611 fps	43,400 CUP	45.0	2,787 fps	51,400 CUP
	Bench Mark 2	.308"	2.700"	43.0	2,545 fps	40,600 CUP	47.5	2,827 fps	50,700 CUP
	Bench Mark 8208	.308"	2.700"	46.0	2,707 fps	50,200 PSI	49.2C	2,887 fps	60,100 PSI
	AR2206H	.308"	2.700"	45.0	2,579 fps	36,800 CUP	49.0C	2,831 fps	48,400 CUP
	AR2208	.308"	2.700"	48.0	2,727 fps	42,400 CUP	50.0C	2,843 fps	45,700 CUP
130 GR. SPR HP	AR2207	.308"	2.615"	35.0	2,472 fps	44,700 CUP	37.0	2,590 fps	49,700 CUP
	AR2219	.308"	2.615"	40.0	2,481 fps	41,200 CUP	43.0	2,664 fps	49,800 CUP
	Bench Mark 2	.308"	2.615"	41.0	2,429 fps	38,800 CUP	46.0	2,767 fps	50,100 CUP
	AR2206H	.308"	2.615"	45.0	2,599 fps	41,800 CUP	49.0C	2,831 fps	50,100 CUP
	AR2208	.308"	2.615"	47.0	2,706 fps	42,900 CUP	50.0C	2,847 fps	50,400 CUP
130 GR. SPR SP	Bench Mark 8208	.308"	2.615"	43.0	2,531 fps	46,900 PSI	48.0C	2,856 fps	62,000 PSI
150 GR. NOS BT	Trail Boss	.308"	2.800"	10.0	1,060 fps	25,800 PSI	14.0	1,344 fps	27,100 PSI
	AR2219	.308"	2.800"	37.0	2,284 fps	39,100 CUP	40.0	2,471 fps	50,500 CUP
	Bench Mark 2	.308"	2.800"	39.0	2,315 fps	38,800 CUP	43.0	2,596 fps	49,000 CUP
	Bench Mark 8208	.308"	2.800"	40.0	2,330 fps	45,500 PSI	44.5C	2,635 fps	60,800 PSI
	AR2206H	.308"	2.800"	43.0	2,478 fps	43,200 CUP	45.5	2,649 fps	51,000 CUP
	AR2208	.308"	2.800"	44.0	2,522 fps	43,300 CUP	47.0C	2,675 fps	50,300 CUP



# PISTOL DATA

308 Winchester				Case: Winchester Twist: 1:12" Primer: FEDERAL 210M			Barrel length: 15" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
155 GR. SIE HPBT	AR2219	.308"	2.775"	38.0	2,283 fps	42,400 CUP	41.0	2,520 fps	49,400 CUP
	Bench Mark 2	.308"	2.775"	39.0	2,271 fps	41,900 CUP	43.0	2,549 fps	50,200 CUP
	Bench Mark 8208	.308"	2.775"	41.0	2,362 fps	47,300 PSI	45.3	2,650 fps	60,900 PSI
	AR2206H	.308"	2.775"	43.0	2,476 fps	42,000 CUP	46.0	2,668 fps	49,700 CUP
	AR2208	.308"	2.775"	44.0	2,502 fps	41,300 CUP	47.0C	2,680 fps	49,400 CUP
165 GR. HDY SP	Bench Mark 2	.308"	2.750"	38.5	2,261 fps	40,200 CUP	42.5	2,487 fps	50,500 CUP
	Bench Mark 8208	.308"	2.750"	38.5	2,219 fps	49,100 PSI	42.8	2,506 fps	60,200 PSI
	AR2206H	.308"	2.750"	41.0	2,341 fps	38,600 CUP	43.5	2,497 fps	50,000 CUP
	AR2208	.308"	2.750"	42.0	2,384 fps	40,800 CUP	46.0C	2,576 fps	50,500 CUP
168 GR. SIE HPBT	Bench Mark 8208	.308"	2.800"	39.0	2,235 fps	49,000 PSI	43.3	2,521 fps	61,500 PSI
	AR2206H	.308"	2.800"	41.0	2,312 fps	38,300 CUP	43.5	2,484 fps	49,500 CUP
175 GR. SIE HPBT	Bench Mark 2	.308"	2.800"	38.0	2,231 fps	40,100 CUP	41.5	2,415 fps	50,800 CUP
	Bench Mark 8208	.308"	2.800"	39.0	2,232 fps	52,200 PSI	42.5	2,456 fps	61,800 PSI
	AR2206H	.308"	2.800"	40.0	2,274 fps	39,100 CUP	42.7	2,422 fps	49,000 CUP
	AR2208	.308"	2.800"	42.0	2,370 fps	42,600 CUP	45.0C	2,539 fps	48,600 CUP
180 GR. SPR SP	Bench Mark 2	.308"	2.800"	38.0	2,200 fps	40,700 CUP	41.3	2,361 fps	50,800 CUP
	Bench Mark 8208	.308"	2.800"	36.0	2,082 fps	51,600 PSI	40.0	2,264 fps	60,100 PSI
	AR2206H	.308"	2.800"	40.0	2,237 fps	41,200 CUP	42.5	2,359 fps	49,700 CUP
	AR2208	.308"	2.800"	41.0	2,274 fps	41,200 CUP	45.0C	2,480 fps	49,600 CUP
				C = Compressed load					
30-06 Springfield				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 15" Trim length: 2.484"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. HDY SP	AR2206H	.308"	3.170"	51.0	2,792 fps	39,000 CUP	57.0	2,978 fps	49,300 CUP
	AR2208	.308"	3.170"	55.0	2,774 fps	44,400 CUP	59.0	2,910 fps	48,500 CUP
125 GR. SIE SP	AR2206H	.308"	3.150"	48.0	2,680 fps	41,400 CUP	53.7	2,892 fps	49,300 CUP
	AR2208	.308"	3.150"	54.0	2,731 fps	45,500 CUP	57.2	2,820 fps	49,500 CUP
130 GR. SPR HP	AR2206H	.308"	3.060"	48.0	2,673 fps	38,600 CUP	53.1	2,838 fps	46,100 CUP
	AR2208	.308"	3.060"	49.0	2,542 fps	41,300 CUP	53.5	2,690 fps	48,400 CUP
150 GR. NOS BT	AR2206H	.308"	3.250"	46.0	2,503 fps	44,400 CUP	51.0	2,721 fps	48,500 CUP
	AR2208	.308"	3.250"	47.0	2,442 fps	42,600 CUP	51.0	2,582 fps	50,000 CUP
	AR2209	.308"	3.250"	56.0	2,440 fps	37,100 CUP	62.0C	2,704 fps	48,400 CUP

# PISTOL DATA

30-06 Springfield				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 15" Trim length: 2.484"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
155 GR. SIE HPBT	AR2206H	.308"	3.225"	46.0	2,428 fps	41,200 CUP	51.0	2,692 fps	45,600 CUP
	AR2208	.308"	3.225"	48.0	2,445 fps	44,600 CUP	50.7	2,558 fps	48,800 CUP
	AR2209	.308"	3.225"	56.0	2,392 fps	36,000 CUP	62.0C	2,647 fps	47,500 CUP
165 GR. SIE SPBT	AR2206H	.308"	3.300"	43.0	2,360 fps	41,100 CUP	47.5	2,521 fps	49,000 CUP
	AR2208	.308"	3.300"	47.0	2,384 fps	44,500 CUP	50.5	2,534 fps	49,700 CUP
	AR2209	.308"	3.300"	53.0	2,355 fps	38,400 CUP	59.0	2,562 fps	49,400 CUP
168 GR. HDY HPBT	AR2206H	.308"	3.230"	43.0	2,356 fps	41,200 CUP	47.5	2,529 fps	50,000 CUP
	AR2208	.308"	3.230"	47.0	2,389 fps	42,700 CUP	50.5	2,526 fps	49,200 CUP
	AR2209	.308"	3.230"	55.0	2,374 fps	40,400 CUP	59.0	2,525 fps	48,100 CUP
175 GR. SIE HPBT	AR2206H	.308"	3.300"	43.8	2,295 fps	44,100 CUP	46.7	2,440 fps	49,000 CUP
	AR2208	.308"	3.300"	45.0	2,315 fps	41,700 CUP	48.0	2,437 fps	49,000 CUP
	AR2209	.308"	3.300"	55.0	2,422 fps	42,100 CUP	59.0	2,600 fps	48,700 CUP
	AR2213SC	.308"	3.300"	57.0	2,341 fps	38,300 CUP	61.5C	2,488 fps	44,400 CUP
180 GR. SIE SPBT	AR2206H	.308"	3.300"	41.0	2,200 fps	38,100 CUP	46.0	2,421 fps	48,800 CUP
	AR2208	.308"	3.300"	44.0	2,226 fps	41,900 CUP	47.0	2,342 fps	50,000 CUP
	AR2209	.308"	3.300"	52.0	2,288 fps	37,800 CUP	57.5	2,480 fps	49,300 CUP
	AR2213SC	.308"	3.300"	54.0	2,132 fps	34,700 CUP	60.0	2,332 fps	44,300 CUP
190 GR. HDY SPBT	AR2206H	.308"	3.220"	41.0	2,208 fps	41,400 CUP	45.5	2,376 fps	48,000 CUP
	AR2208	.308"	3.220"	43.5	2,197 fps	41,800 CUP	46.5	2,314 fps	49,700 CUP
	AR2209	.308"	3.220"	51.0	2,201 fps	39,500 CUP	56.5	2,433 fps	49,200 CUP
	AR2213SC	.308"	3.220"	57.0	2,223 fps	44,100 CUP	61.0C	2,393 fps	50,000 CUP
200 GR. NOS AB	AR2206H	.308"	3.300"	41.0	2,158 fps	43,700 CUP	44.0	2,268 fps	49,500 CUP
	AR2208	.308"	3.300"	42.0	2,144 fps	41,900 CUP	47.0	2,315 fps	49,100 CUP
	AR2209	.308"	3.300"	50.0	2,185 fps	40,400 CUP	53.7	2,358 fps	48,400 CUP
	AR2213SC	.308"	3.300"	55.0	2,220 fps	42,100 CUP	59.0C	2,372 fps	49,300 CUP
	AR2217	.308"	3.300"	57.0	2,062 fps	35,800 CUP	61.0C	2,222 fps	42,200 CUP
200 GR. SPR SP	AR2206H	.308"	3.230"	39.0	2,059 fps	40,700 CUP	43.5	2,262 fps	49,200 CUP
	AR2208	.308"	3.230"	42.5	2,136 fps	44,700 CUP	45.5	2,258 fps	49,600 CUP
	AR2209	.308"	3.230"	50.0	2,234 fps	44,500 CUP	53.0	2,334 fps	49,100 CUP
	AR2213SC	.308"	3.230"	54.0	2,163 fps	43,200 CUP	57.5C	2,269 fps	49,400 CUP
	AR2217	.308"	3.230"	55.0	2,050 fps	33,600 CUP	61.0C	2,261 fps	44,400 CUP
220 GR. HDY JRN	AR2208	.308"	3.230"	42.0	2,041 fps	44,000 CUP	45.0	2,166 fps	49,400 CUP
	AR2209	.308"	3.230"	50.0	2,146 fps	43,400 CUP	53.0	2,254 fps	49,200 CUP
	AR2213SC	.308"	3.230"	54.0	2,041 fps	43,300 CUP	57.5C	2,156 fps	48,600 CUP
	AR2217	.308"	3.230"	58.0	2,055 fps	36,500 CUP	61.0C	2,172 fps	43,600 CUP

# PISTOL DATA

<b>30-06 Springfield</b>				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 15" Trim length: 2.484"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. BAR JRN	AR2209	.308"	3.200"	45.0	1,941 fps	43,000 CUP	47.5	2,031 fps	48,400 CUP
	AR2213SC	.308"	3.200"	50.0	1,897 fps	43,900 CUP	52.5C	2,009 fps	49,600 CUP
	AR2217	.308"	3.200"	55.0	1,920 fps	43,600 CUP	58.0C	2,019 fps	49,500 CUP
				C = Compressed load					
<b>32 ACP</b>				Case: Winchester Twist: 1:16" Primer: FEDERAL 100M			Barrel length: 4" Trim length: 0.675"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
71 GR. SIE FMJ	AS30N	.312"	0.978"	1.5	745 fps	11,700 CUP	1.7	830 fps	15,000 CUP
	AP70N	.312"	0.978"	2.2	781 fps	11,600 CUP	2.4	881 fps	14,900 CUP
<b>32 Smith &amp; Wesson</b>				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SP			Barrel length: 4" Trim length: 0.600"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. LRN	AS30N	.314"	0.930"	-	-	-	1.2	600 fps	-
	AP50N	.314"	0.930"	-	-	-	1.4	650 fps	-
	AP70N	.314"	0.930"	-	-	-	1.8	730 fps	-
<b>32 S&amp;W Long</b>				Case: Remington Twist: 1:18.75" Primer: CCI 500			Barrel length: 5.32" Trim length: 0.915"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
83 GR. BERB HBWC	AP70N	.314"	0.920"	2.2	592 fps	7,000 CUP	2.7	798 fps	10,500 CUP
85 GR. HDY JHP	AP70N	.312"	1.160"	2.7	705 fps	8,000 CUP	3.0	865 fps	12,000 CUP
90 GR. HDY LSWC	Trail Boss	.314"	1.185"	1.5	599 fps	5,900 CUP	2.0	730 fps	8,100 CUP
	AP70N	.314"	1.185"	2.4	777 fps	8,800 CUP	2.7	844 fps	10,200 CUP
90 GR. SIE JHC	AP70N	.312"	1.170"	2.6	676 fps	7,500 CUP	2.9	838 fps	11,200 CUP
98 GR. SPR LHBWC	AP70N	.314"	0.920"	1.9	675 fps	6,100 CUP	2.2	830 fps	11,000 CUP



# PISTOL DATA

32 North American Arms				Case: Corbon Twist: 1:16" Primer: WINCHESTER SP			Barrel length: 2.5" Trim length: 0.670"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
60 GR. SPR GDHP	AS30N	.312"	0.930"	2.3	960 fps	15,700 PSI	2.6	1,053 fps	21,800 PSI
	AP70N	.312"	0.930"	3.8	1,068 fps	15,500 PSI	4.1	1,189 fps	20,200 PSI
71 GR. HDY FMJ/RN	AS30N	.311"	0.940"	2.2	895 fps	18,200 PSI	2.4	946 fps	22,000 PSI
	AP70N	.311"	0.940"	3.4	985 fps	16,400 PSI	3.8	1,087 fps	21,200 PSI
32 H&R Magnum				Case: Federal Twist: 1:16" Primer: FEDERAL 100			Barrel length: 5" Trim length: 1.070"		
NOTE: See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
85 GR. HDY HP	AP70N	.312"	1.290"	4.0	1,090 fps	18,400 CUP	4.3	1,123 fps	19,000 CUP
	AR2205	.312"	1.290"	8.5	989 fps	19,300 CUP	9.5	1,151 fps	21,000 CUP
90 GR. SIE JHP	AP70N	.312"	1.340"	3.7	1,008 fps	16,900 CUP	4.0	1,072 fps	20,000 CUP
	AR2205	.312"	1.340"	9.5	1,042 fps	15,000 CUP	10.0	1,079 fps	17,000 CUP
100 GR. SPR JHP	AP70N	.312"	1.345"	3.3	847 fps	14,300 CUP	3.7	973 fps	19,900 CUP
	AR2205	.312"	1.345"	9.0	980 fps	15,700 CUP	10.0	1,060 fps	19,300 CUP
327 Federal Magnum				Case: Federal Twist: 1:16" Primer: FEDERAL 200			Barrel length: 5" Trim length: 1.200"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
77 GR. CAST LFP	Trail Boss	.314"	1.460"	3.0	919 fps	12,300 PSI	3.5	1,024 fps	18,700 PSI
	AS30N	.314"	1.460"	3.7	1,121 fps	18,000 PSI	4.5	1,297 fps	30,900 PSI
	AP70N	.314"	1.460"	4.9	1,190 fps	15,700 PSI	5.5	1,357 fps	22,800 PSI
83 GR. BERB HBWC	AS30N	.314"	1.200"	2.8	979 fps	23,900 PSI	3.5	1,108 fps	36,900 PSI
	AP70N	.314"	1.200"	3.4	958 fps	13,400 PSI	4.4	1,221 fps	27,000 PSI
85 GR. HDY XTP	AP70N	.312"	1.450"	5.3	1,253 fps	32,100 PSI	6.0	1,378 fps	38,700 PSI
90 GR. CAST LRNFP	Trail Boss	.312"	1.460"	2.7	789 fps	11,200 PSI	3.2	890 fps	14,800 PSI
	AS30N	.312"	1.460"	3.5	1,065 fps	26,400 PSI	4.2	1,186 fps	37,900 PSI
	AP70N	.312"	1.460"	4.3	1,090 fps	16,600 PSI	5.2	1,274 fps	27,800 PSI
90 GR. LHBWC	AS30N	.314"	1.200"	1.9	792 fps	17,800 PSI	2.2	856 fps	20,600 PSI
	AP70N	.314"	1.200"	2.4	721 fps	9,100 PSI	2.8	869 fps	12,500 PSI
90 GR. SIE JHC	AP70N	.312"	1.460"	5.3	1,275 fps	26,800 PSI	5.7	1,372 fps	40,900 PSI
100 GR. HDY XTP	AP70N	.312"	1.450"	4.5	1,087 fps	28,000 PSI	5.4	1,250 fps	40,800 PSI
	AR2205	.312"	1.450"	11.5	1,239 fps	27,100 PSI	12.5C	1,318 fps	30,000 PSI

# PISTOL DATA

327 Federal Magnum				Case: Federal Twist: 1:16" Primer: FEDERAL 200			Barrel length: 5" Trim length: 1.200"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
115 GR. MEI LRNFP	Trail Boss	.312"	1.460"	2.5	733 fps	15,200 PSI	3.0	804 fps	19,600 PSI
	AS30N	.312"	1.460"	3.0	913 fps	26,600 PSI	3.7	1,017 fps	39,500 PSI
	AP70N	.312"	1.460"	4.2	1,059 fps	25,200 PSI	5.0	1,184 fps	40,200 PSI
				C = Compressed load					
380 Auto (9mm Kurz)				Case: Remington Twist: 1:16" Primer: CCI 500			Barrel length: 3.75" Trim length: 0.675"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
80 GR. BAR TAC XP	AP70N	.355"	0.980"	2.8	889 fps	16,100 PSI	3.0	964 fps	17,900 PSI
90 GR. HDY JHP	AP50N	.355"	0.955"	-	-	-	3.0	800 fps	-
	AP70N	.355"	0.955"	3.2	815 fps	10,700 CUP	3.6	955 fps	15,700 CUP
	AP100	.355"	0.955"	-	-	-	5.1	850 fps	-
95 GR. SPR FMJ	AP70N	.355"	0.970"	3.1	814 fps	12,500 CUP	3.5	901 fps	15,500 CUP
100 GR. HDY FMJ	AP50N	.355"	0.980"	-	-	-	2.8	725 fps	-
	AP70N	.355"	0.980"	3.0	721 fps	11,400 CUP	3.4	889 fps	16,100 CUP
	AP100	.355"	0.980"	-	-	-	4.7	775 fps	-
115 GR.	AP50N	-	-	-	-	-	2.3	725 fps	-
	AP100	-	-	-	-	-	4.4	750 fps	-
9mm Luger				Case: Winchester Twist: 1:10" Primer: CCI 500			Barrel length: 4" Trim length: 0.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
80 GR. BAR TAC-XP	AP70N	.355"	1.025"	3.7	1,156 fps	31,400 PSI	3.9	1,166 fps	31,500 PSI
90 GR. SPR GDHP	AP70N	.355"	1.010"	5.0	1,170 fps	25,700 CUP	5.5	1,266 fps	30,100 CUP
95 GR. SIE FMJ	AP70N	.355"	1.020"	4.6	1,182 fps	26,800 CUP	5.2	1,292 fps	31,700 CUP
100 GR. SFIRE	AP70N	.355"	1.140"	3.8	1,057 fps	21,700 PSI	4.2	1,169 fps	30,700 PSI
100 GR. SPR FMJ	AP70N	.355"	1.050"	4.8	1,119 fps	27,200 CUP	5.3	1,212 fps	31,500 CUP
115 GR. LRN	AS30N	.356"	1.100"	3.0	954 fps	25,300 CUP	3.4	1,039 fps	31,000 CUP
	AP50N	.356"	1.169"	3.0	920 fps	14,900 PSI	4.0	1,110 fps	34,300 PSI
	AP70N	.356"	1.100"	4.0	1,034 fps	24,400 CUP	4.5	1,124 fps	31,300 CUP
	AP100	.356"	1.169"	5.5	1,055 fps	18,100 PSI	6.8	1,285 fps	33,900 PSI
115 GR. SPR GDHP	AS30N	.355"	1.125"	3.7	1,066 fps	30,900 CUP	3.9	1,095 fps	32,600 CUP
	AP70N	.355"	1.125"	4.5	1,029 fps	27,400 CUP	5.0	1,149 fps	31,200 CUP

# PISTOL DATA

9mm Luger				Case: Winchester Twist: 1:10" Primer: CCI 500			Barrel length: 4" Trim length: 0.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
120 GR. LRN	AP50N	.355"	1.113"	3.0	970 fps	26,500 PSI	3.5	1,075 fps	34,800 PSI
	AP100	.355"	1.113"	5.0	1,000 fps	23,000 PSI	6.0	1,180 fps	33,200 PSI
124 GR. BERB HBRN TP	AS30N	.356"	1.150"	2.7	791 fps	27,900 PSI	3.0	857 fps	31,200 PSI
	AP70N	.356"	1.150"	3.8	904 fps	26,300 PSI	4.4	1,045 fps	33,500 PSI
125 GR. HDY HAP	AP70N	.356"	1.069"	3.0	803 fps	26,800 PSI	3.3	892 fps	32,200 PSI
125 GR. LCN	AS30N	.356"	1.125"	2.9	899 fps	22,700 CUP	3.3	993 fps	30,900 CUP
	AP50N	.355"	1.114"	2.5	835 fps	19,500 PSI	3.2	1,000 fps	32,500 PSI
	AP70N	.356"	1.125"	3.8	993 fps	24,400 CUP	4.3	1,096 fps	31,300 CUP
	AP100	.355"	1.114"	5.0	890 fps	17,300 PSI	6.2	1,135 fps	33,500 PSI
125 GR. SIE FMJ	AS30N	.355"	1.090"	3.5	1,010 fps	28,000 CUP	3.7	1,056 fps	32,500 CUP
	AP70N	.355"	1.090"	4.3	1,031 fps	26,900 CUP	4.9	1,118 fps	30,600 CUP
130 GR. BERB RN	AS30N	.356"	1.150"	2.7	755 fps	27,400 PSI	3.0	853 fps	31,700 PSI
	AP70N	.356"	1.150"	3.8	857 fps	26,600 PSI	4.2	978 fps	31,500 PSI
135 GR. CAST LRN	AP50N	.355"	1.168"	2.3	710 fps	13,100 PSI	3.3	955 fps	34,100 PSI
	AP70N	.355"	1.168"	3.2	800 fps	15,250 PSI	4.2	1,050 fps	33,850 PSI
	AP100	.355"	1.168"	5.2	970 fps	25,100 PSI	6.0	1,100 fps	34,100 PSI
147 GR. HDY XTP	AP70N	.355"	1.100"	3.0	803 fps	24,100 CUP	3.3	869 fps	31,000 CUP

38 ACP				Case: - Twist: - Primer: -			Barrel length: 3.75" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
90 GR. LEAD	AP70N	-	-	-	-	-	3.6	955 fps	-
95 GR. LEAD	AP70N	-	-	-	-	-	3.5	900 fps	-
100 GR. LEAD	AP70N	-	-	-	-	-	3.4	890 fps	-

38 Super Auto				Case: Remington Twist: 1:16" Primer: REMINGTON 1 1/2			Barrel length: 5" Trim length: 0.895"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
90 GR. SIE JHP	AP70N	.355"	1.180"	5.7	1,312 fps	26,200 CUP	6.3	1,352 fps	31,600 CUP
95 GR. BAR TAC-XP	AS30N	.355"	1.255"	3.5	1,072 fps	27,100 CUP	4.6	1,287 fps	32,200 CUP
	AP70N	.355"	1.255"	5.0	1,232 fps	26,400 CUP	5.4	1,323 fps	31,500 CUP
100 GR. SPR JHP	AP70N	.355"	1.215"	5.4	1,233 fps	25,200 CUP	6.0	1,327 fps	32,500 CUP
115 GR. HDY XTP	AP70N	.355"	1.245"	4.9	1,141 fps	25,300 CUP	5.5	1,225 fps	32,300 CUP



# PISTOL DATA

<b>38 Super Auto</b>				Case: Remington Twist: 1:16" Primer: REMINGTON 1 1/2			Barrel length: 5" Trim length: 0.895"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
115 GR. LRN	AS30N	.356"	1.250"	4.0	1,046 fps	28,600 CUP	4.6	1,104 fps	31,600 CUP
	AP50N *	.356"	1.205"	-	-	-	4.8	1,190 fps	36,200 PSI
	AP70N	.356"	1.250"	5.0	1,115 fps	21,900 CUP	5.7	1,216 fps	31,900 CUP
	AP100 *	.356"	1.205"	6.0	1,010 fps	19,600 PSI	8.0	1,425 fps	34,500 PSI
124 GR. BERB HBRN TP	AS30N	.356"	1.250"	3.8	1,000 fps	26,700 CUP	4.4	1,126 fps	31,900 CUP
	AP70N	.356"	1.250"	4.8	1,088 fps	24,300 CUP	5.2	1,182 fps	32,100 CUP
125 GR. CAST LCN	AS30N	.356"	1.230"	3.9	1,014 fps	27,300 CUP	4.4	1,063 fps	31,600 CUP
	AP50N *	.355"	1.363"	4.0	1,046 fps	28,900 PSI	4.5	1,128 fps	36,500 PSI
	AP70N	.356"	1.230"	4.7	1,110 fps	25,200 CUP	5.3	1,171 fps	32,300 CUP
	AP100 *	.355"	1.363"	7.0	1,260 fps	23,200 PSI	8.0	1,415 fps	36,500 PSI
125 GR. HDY HAP	AS30N	.356"	1.210"	3.6	1,034 fps	25,900 CUP	4.2	1,132 fps	32,100 CUP
	AP70N	.356"	1.210"	4.5	1,105 fps	25,500 CUP	5.1	1,202 fps	31,700 CUP
125 GR. SIE FMJ	AP70N	.355"	1.275"	4.9	1,069 fps	27,600 CUP	5.5	1,179 fps	32,300 CUP
130 GR. BERB RN	AP70N	.355"	1.270"	4.4	984 fps	23,000 CUP	4.9	1,073 fps	30,500 CUP
135 GR. LRN	AS30N	.356"	1.275"	3.5	928 fps	25,600 CUP	4.2	998 fps	32,500 CUP
	AP50N *	.355"	1.256"	3.5	925 fps	21,600 PSI	4.4	1,070 fps	36,400 PSI
	AP70N	.356"	1.275"	4.5	1,011 fps	22,800 CUP	5.1	1,108 fps	30,900 CUP
	AP100 *	.355"	1.256"	6.0	1,055 fps	23,800 PSI	7.5	1,325 fps	36,300 PSI
147 GR. HDY XTP	AP70N	.355"	1.260"	4.3	960 fps	26,900 CUP	4.8	1,017 fps	32,500 CUP
150 GR. CAST LRN	AP70N	.356"	1.230"	4.5	1,038 fps	27,600 CUP	5.0	1,111 fps	32,000 CUP
150 GR. SIE JFP	AP70N	.356"	1.265"	4.4	984 fps	26,600 CUP	4.9	1,059 fps	32,100 CUP
* Winchester case									
<b>38 Smith &amp; Wesson</b>				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SP			Barrel length: 4" Trim length: 0.765"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR.	AP50N	-	-	-	-	-	3.5	1,000 fps	-
	AP70N	-	-	-	-	-	4.1	1,000 fps	-
125 GR.	AP50N	-	-	-	-	-	3.4	950 fps	-
	AP70N	-	-	-	-	-	4.0	950 fps	-
148 GR. LEAD	AP50N	-	-	-	-	-	2.9	750 fps	-
	AP70N	-	-	-	-	-	3.4	750 fps	-
	AP100	-	-	-	-	-	4.3	750 fps	-

# PISTOL DATA

38 Smith & Wesson				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SP			Barrel length: 4" Trim length: 0.765"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
158 GR. LEAD	AP50N	-	-	-	-	-	2.8	700 fps	-
	AP70N	-	-	-	-	-	3.3	700 fps	-
	AP100	-	-	-	-	-	4.1	700 fps	-
38 Special				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SP			Barrel length: 7.7" Trim length: 1.145"		
NOTE: See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
110 GR. HDY XTP	AS30N	.357"	1.455"	4.0	1,002 fps	14,400 CUP	4.2	1,073 fps	17,000 CUP
	AP70N	.357"	1.455"	5.0	968 fps	11,800 CUP	5.6	1,143 fps	16,700 CUP
125 GR. HDY XTP	AS30N	.357"	1.455"	3.5	843 fps	12,400 CUP	3.9	937 fps	16,100 CUP
	AP70N	.357"	1.455"	4.7	918 fps	12,600 CUP	5.2	1,019 fps	17,000 CUP
140 GR. HDY XTP	AS30N	.357"	1.455"	3.0	703 fps	13,400 CUP	3.7	869 fps	16,700 CUP
	AP70N	.357"	1.455"	4.3	832 fps	12,400 CUP	4.8	939 fps	15,400 CUP
146 GR. SPR JHP	AP70N	.357"	1.370"	4.0	788 fps	11,100 CUP	4.5	933 fps	16,100 CUP
	AR2205	.357"	1.370"	9.6	908 fps	12,600 CUP	10.7	979 fps	15,700 CUP
158 GR. HDY XTP	AS30N	.357"	1.455"	3.0	633 fps	13,400 CUP	3.1	721 fps	16,600 CUP
	AP70N	.357"	1.455"	4.0	678 fps	12,600 CUP	4.4	778 fps	16,200 CUP
	AR2205	.357"	1.455"	9.0	769 fps	12,400 CUP	10.0	864 fps	15,500 CUP
170 GR. SIE JHC	AP70N	.357"	1.450"	3.8	744 fps	14,100 CUP	4.2	823 fps	16,100 CUP
	AR2205	.357"	1.450"	8.8	762 fps	12,900 CUP	9.8	888 fps	15,900 CUP
38 Special +P				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SP			Barrel length: 7.7" Trim length: 1.145"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
110 GR. HDY XTP	AP70N	.357"	1.455"	-	-	-	6.0	1,204 fps	18,700 CUP
125 GR. HDY XTP	AP70N	.357"	1.455"	-	-	-	5.4	1,072 fps	18,900 CUP
140 GR. HDY XTP	AP70N	.357"	1.455"	-	-	-	5.1	1,022 fps	19,100 CUP
	AR2205	.357"	1.455"	-	-	-	12.4	1,121 fps	19,400 CUP
146 GR. SPR JHP	AP70N	.357"	1.370"	-	-	-	4.7	987 fps	18,100 CUP
	AR2205	.357"	1.370"	-	-	-	12.0	1,085 fps	18,400 CUP
158 GR. HDY XTP	AP70N	.357"	1.455"	-	-	-	4.7	837 fps	19,200 CUP
	AR2205	.357"	1.455"	-	-	-	11.0	964 fps	17,600 CUP

# PISTOL DATA

<b>38 Special +P</b>				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SP			Barrel length: 7.7" Trim length: 1.145"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
170 GR. SIE JHC	AP70N	.357"	1.450"	-	-	-	4.3	847 fps	18,600 CUP
	AR2205	.357"	1.450"	-	-	-	10.6	950 fps	17,600 CUP
<b>357 SIG</b>				Case: Federal Twist: 1:16" Primer: WINCHESTER SP			Barrel length: 4" Trim length: 0.860"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
90 GR. HDY XTP	AP70N	.355"	1.135"	7.2	1,428 fps	27,000 PSI	8.1	1,578 fps	36,900 PSI
115 GR. HDY XTP	AP70N	.355"	1.135"	6.5	1,272 fps	31,600 PSI	7.3	1,375 fps	39,200 PSI
124 GR. HDY XTP	AP70N	.355"	1.135"	5.2	1,134 fps	27,500 PSI	5.8	1,235 fps	38,500 PSI
147 GR. HDY XTP	AP70N	.355"	1.140"	5.0	1,026 fps	29,200 PSI	5.6	1,110 fps	38,600 PSI
<b>357 Magnum</b>				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SPM			Barrel length: 10" Trim length: 1.285"		
<b>NOTE:</b> See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. HDY XTP	AP70N	.357"	1.590"	7.5	1,465 fps	35,100 CUP	8.0	1,536 fps	40,000 CUP
	AR2205	.357"	1.590"	18.9	1,774 fps	29,600 CUP	21.0	1,900 fps	35,500 CUP
125 GR. HDY XTP	AP70N	.357"	1.590"	7.1	1,394 fps	34,900 CUP	7.6	1,453 fps	39,600 CUP
	AP100 *	.357"	1.590"	-	-	-	10.3	1,270 fps	33,200 PSI
	AR2205	.357"	1.590"	18.0	1,692 fps	34,400 CUP	20.0	1,839 fps	42,000 CUP
140 GR. HDY FTX	AP70N	.357"	1.600"	4.0	922 fps	19,700 PSI	5.3	1,205 fps	34,200 PSI
	AR2205	.357"	1.600"	11.0	1,176 fps	29,900 PSI	13.0	1,320 fps	33,000 PSI
140 GR. HDY XTP	AP70N	.357"	1.590"	6.5	1,218 fps	34,800 CUP	7.0	1,299 fps	40,200 CUP
	AR2205	.357"	1.590"	16.2	1,541 fps	33,100 CUP	18.0	1,685 fps	42,600 CUP
146 GR. SPR JHP	AP70N	.357"	1.535"	6.0	1,160 fps	33,500 CUP	6.5	1,261 fps	39,900 CUP
	AR2205	.357"	1.535"	14.5	1,440 fps	34,300 CUP	16.0	1,566 fps	42,700 CUP
158 GR. HDY XTP	AP70N	.357"	1.580"	5.8	1,026 fps	32,100 CUP	6.3	1,133 fps	39,300 CUP
	AP100 *	.357"	1.593"	8.7	1,065 fps	28,200 PSI	9.0	1,075 fps	34,100 PSI
	AR2205	.357"	1.580"	14.5	1,402 fps	34,600 CUP	16.0	1,520 fps	42,600 CUP
170 GR. SIE JHC	AR2205	.357"	1.580"	13.0	1,272 fps	32,300 CUP	14.5	1,395 fps	41,200 CUP
180 GR. NOS PART	AR2205	.357"	1.575"	12.7	1,247 fps	36,900 CUP	13.7	1,308 fps	40,900 CUP



# PISTOL DATA

<b>357 Magnum</b>				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SPM			Barrel length: 10" Trim length: 1.285"		
NOTE: See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
180 GR. SPR TMJ	AP100 *	.357"	1.700"	7.0	770 fps	16,400 PSI	8.2	965 fps	34,200 PSI
* 4" Vented Barrel									
<b>357-44 Bain &amp; Davis</b>				Case: Federal (reformed) Twist: 1:14" Primer: FEDERAL 150			Barrel length: 10" Trim length: 1.270"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
110 GR. HDY JHP	AR2205	.357"	1.580"	23.0	1,680 fps	-	24.0	1,750 fps	-
125 GR. SIE JSP	AR2205	.357"	1.580"	22.0	1,564 fps	-	23.0	1,627 fps	-
140 GR. SPR JHP	AR2205	.357"	1.580"	21.0	1,514 fps	-	22.0	1,596 fps	-
150 GR. NOS SP	AR2205	.357"	1.580"	20.0	1,434 fps	-	21.0	1,557 fps	-
158 GR. HDY XTP	AR2205	.357"	1.580"	19.0	1,367 fps	-	20.0	1,440 fps	-
<b>357 Remington Maximum</b>				Case: Remington Twist: 1:18.75" Primer: REMINGTON 7 1/2			Barrel length: 10" Trim length: 1.600"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
110 GR. HDY XTP	AR2205	.357"	1.910"	26.0	2,120 fps	-	28.0	2,314 fps	-
125 GR. SPR JSP	AR2205	.357"	1.885"	25.0	1,968 fps	-	27.0	2,126 fps	-
140 GR. SPR JHP	AR2205	.357"	1.890"	22.0	1,866 fps	-	24.0	1,985 fps	-
150 GR. NOS SP	AR2205	.357"	1.890"	21.0	1,788 fps	-	23.0	1,923 fps	-
160 GR. HDY JTC SIL	AR2205	.357"	1.890"	20.5	1,709 fps	-	22.5	1,814 fps	-
170 GR. SIE JHC	AR2205	.357"	1.880"	19.0	1,638 fps	-	21.0	1,748 fps	-
180 GR. SPR TMJ SIL	AR2205	.357"	1.990"	18.0	1,551 fps	-	20.0	1,645 fps	-
200 GR. SPR TMJ SIL	AR2205	.357"	1.990"	16.0	1,280 fps	-	18.0	1,440 fps	-
<b>357 Herrett</b>				Case: Winchester (reformed) Twist: 1:14" Primer: FEDERAL 210			Barrel length: 14" Trim length: 1.740"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
110 GR. HDY JHP	AR2205	.357"	2.080"	-	-	-	23.8	2,225 fps	44,500 CUP
125 GR. HDY JHP	AR2205	.357"	2.080"	-	-	-	22.3	2,070 fps	44,900 CUP
158 GR. HDY JHP	AR2205	.357"	2.150"	-	-	-	20.2	1,815 fps	44,900 CUP

# PISTOL DATA

<b>357 Herrett</b>				Case: Winchester (reformed) Twist: 1:14" Primer: FEDERAL 210			Barrel length: 14" Trim length: 1.740"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
170 GR. SIE FMJ	AR2205	.357"	2.230"	-	-	-	20.1	1,735 fps	45,000 CUP
<b>35 Remington</b>				Case: Remington Twist: 1:16" Primer: REMINGTON 9 1/2			Barrel length: 14" Trim length: 1.910"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. SPR FN	AR2207	.358"	2.470"	28.0	1,794 fps	28,600 CUP	32.0	1,977 fps	33,000 CUP
	AR2219	.358"	2.470"	31.0	1,730 fps	28,200 CUP	35.0	1,915 fps	33,100 CUP
	Bench Mark 2	.358"	2.470"	32.5	1,697 fps	29,300 CUP	35.5	1,932 fps	32,300 CUP
	AR2206H	.358"	2.470"	35.0	1,812 fps	27,500 CUP	39.0	2,031 fps	33,100 CUP
	AR2208	.358"	2.470"	37.0	1,795 fps	27,200 CUP	40.5	1,998 fps	32,500 CUP
200 GR. HDY RN	AR2207	.358"	2.510"	27.0	1,525 fps	26,700 CUP	30.5	1,680 fps	31,700 CUP
	AR2219	.358"	2.510"	31.0	1,567 fps	28,500 CUP	33.8	1,670 fps	33,100 CUP
	Bench Mark 2	.358"	2.510"	32.5	1,551 fps	29,400 CUP	35.5	1,766 fps	32,600 CUP
	AR2206H	.358"	2.510"	35.0	1,613 fps	26,100 CUP	38.5	1,772 fps	32,300 CUP
	AR2208	.358"	2.510"	36.0	1,651 fps	28,800 CUP	39.5	1,797 fps	33,300 CUP
220 GR. SPR FN	AR2207	.358"	2.470"	26.0	1,500 fps	30,400 CUP	29.0	1,606 fps	33,400 CUP
	AR2219	.358"	2.470"	29.0	1,455 fps	26,100 CUP	32.5	1,608 fps	32,600 CUP
	Bench Mark 2	.358"	2.470"	31.0	1,484 fps	30,600 CUP	34.0	1,697 fps	33,300 CUP
	AR2206H	.358"	2.470"	33.0	1,589 fps	29,000 CUP	36.3	1,729 fps	33,600 CUP
	AR2208	.358"	2.470"	34.0	1,550 fps	27,800 CUP	38.0	1,718 fps	33,300 CUP
<b>9 x 18mm Makarov</b>				Case: Winchester Twist: 1:10" Primer: WINCHESTER SP			Barrel length: 4" Trim length: 0.708"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
90 GR. SPR FP	AP70N	.364"	0.970"	3.5	885 fps	17,900 PSI	3.9	1,022 fps	23,000 PSI
95 GR. HDY XTP	AP70N	.364"	0.965"	3.6	923 fps	20,100 PSI	4.0	1,030 fps	23,800 PSI
<b>375 Super Mag</b>				Case: Starline Twist: 1:18.75" Primer: FEDERAL 150			Barrel length: 8" Trim length: 1.590"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
220 GR. HDY FP	AR2205	.375"	2.080"	18.0	1,232 fps	-	21.0	1,314 fps	-

# PISTOL DATA

375 JDJ				Case: Remington (reformed)			Barrel length: 14"		
				Twist: 1:12"			Trim length: 2.230"		
				Primer: FEDERAL 210M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. SIE FP	AR2219	.375"	2.750"	45.0	1,811 fps	-	50.0	2,077 fps	-
	AR2206H	.375"	2.750"	47.0	1,971 fps	-	52.0	2,147 fps	-
220 GR. HDY FP	AR2207	.375"	2.750"	39.0	1,904 fps	-	44.0	2,115 fps	-
	AR2206H	.375"	2.750"	46.0	1,966 fps	-	51.0	2,214 fps	-
270 GR. HDY SP	AR2219	.375"	2.975"	40.0	1,612 fps	-	45.0	1,849 fps	-
	AR2206H	.375"	2.975"	43.0	1,660 fps	-	48.0	1,954 fps	-
300 GR. HDY RN	AR2219	.375"	2.970"	37.0	1,539 fps	-	42.0	1,773 fps	-
	AR2206H	.375"	2.970"	41.0	1,684 fps	-	46.0	1,951 fps	-

40 Smith & Wesson				Case: Homady			Barrel length: 4"		
				Twist: 1:16"			Trim length: 0.845"		
				Primer: WINCHESTER SP					
<p><b>WARNING:</b> This data is intended for use in firearms with barrels that fully support the cartridge in the chamber. Use of this data in firearms that do not fully support the cartridge may result in bulged cases, ruptured cases, case head separation or other condition that could cause damage to the firearm and/or injury to the shooter and/or bystanders.</p>									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
125 GR. SFIRE	AP70N	.400"	1.120"	4.7	1,059 fps	23,500 PSI	5.3	1,172 fps	32,300 PSI
135 GR. NOS JHP	AS30N	.400"	1.125"	4.0	940 fps	22,600 PSI	4.5	1,071 fps	32,900 PSI
	AP70N	.400"	1.125"	6.2	1,109 fps	22,000 PSI	6.8	1,250 fps	32,000 PSI
140 GR. BAR TAC-XP	AS30N	.400"	1.135"	2.6	713 fps	24,800 PSI	3.0	783 fps	31,900 PSI
	AP70N	.400"	1.135"	4.3	958 fps	23,100 PSI	4.8	1,070 fps	31,200 PSI
140 GR. LRN	AP50N *	.401"	1.075"	3.5	905 fps	17,900 PSI	4.7	1,110 fps	34,800 PSI
	AP70N *	.401"	1.075"	4.5	920 fps	16,500 PSI	5.9	1,205 fps	34,900 PSI
150 GR. NOS JHP	AS30N	.400"	1.125"	3.8	923 fps	28,400 PSI	4.0	960 fps	31,700 PSI
	AP70N	.400"	1.125"	5.4	1,066 fps	25,700 PSI	5.9	1,165 fps	32,900 PSI
155 GR. BERB FP	AS30N	.400"	1.125"	3.7	879 fps	23,500 PSI	4.1	959 fps	31,300 PSI
	AP70N	.400"	1.125"	5.5	1,049 fps	26,000 PSI	6.0	1,145 fps	33,500 PSI
155 GR. HDY XTP	AS30N	.400"	1.125"	3.6	854 fps	23,300 PSI	4.0	942 fps	30,900 PSI
	AP70N	.400"	1.125"	5.7	1,056 fps	23,900 PSI	6.2	1,138 fps	31,800 PSI
155 GR. LRN	AP50N †	.401"	1.100"	4.0	915 fps	20,000 PSI	4.6	1,015 fps	33,600 PSI
	AP70N †	.401"	1.100"	5.0	970 fps	19,200 PSI	5.6	1,100 fps	33,500 PSI
165 GR. BERB FP	AS30N	.400"	1.125"	3.4	829 fps	27,500 PSI	3.7	888 fps	32,000 PSI
	AP70N	.400"	1.125"	4.8	951 fps	24,200 PSI	5.4	1,051 fps	30,500 PSI
165 GR. SIE JHP	AS30N	.400"	1.125"	3.5	851 fps	29,900 PSI	3.9	897 fps	33,300 PSI
	AP70N	.400"	1.125"	5.1	976 fps	26,800 PSI	5.6	1,061 fps	32,900 PSI



# PISTOL DATA

<b>40 Smith &amp; Wesson</b>	<b>Case:</b> Homady	<b>Barrel length:</b> 4"
	<b>Twist:</b> 1:16"	<b>Trim length:</b> 0.845"
	<b>Primer:</b> WINCHESTER SP	

**WARNING:** This data is intended for use in firearms with barrels that fully support the cartridge in the chamber. Use of this data in firearms that do not fully support the cartridge may result in bulged cases, ruptured cases, case head separation or other condition that could cause damage to the firearm and/or injury to the shooter and/or bystanders.

Bullet	Powder	Bullet Diam.	C.O.L.	Start loads			Maximum loads		
				Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
170 GR. TAIPAN LRN	AP50N †	.401"	1.100"	3.3	790 fps	17,600 PSI	3.8	895 fps	31,900 PSI
	AP70N †	.401"	1.100"	4.0	850 fps	17,000 PSI	4.8	1,005 fps	35,000 PSI
	AP100 †	.401"	1.100"	6.0	920 fps	22,450 PSI	6.8	1,060 fps	35,000 PSI
180 GR. BERB FP	AS30N	.400"	1.125"	3.0	732 fps	25,400 PSI	3.4	809 fps	32,100 PSI
	AP70N	.400"	1.125"	4.6	925 fps	28,300 PSI	5.1	1,002 fps	33,100 PSI
180 GR. CAST LCN	AP50N *	.401"	1.097"	2.8	775 fps	20,500 PSI	3.4	885 fps	31,900 PSI
	AP70N *	.401"	1.097"	3.5	790 fps	18,600 PSI	4.5	985 fps	35,000 PSI
	AP100 *	.401"	1.097"	5.0	820 fps	16,900 PSI	6.5	1,050 fps	34,900 PSI
180 GR. HDY XTP	AS30N	.400"	1.125"	3.0	727 fps	26,000 PSI	3.5	847 fps	34,300 PSI
	AP70N	.400"	1.125"	5.0	973 fps	26,500 PSI	5.8	1,046 fps	33,400 PSI
200 GN. CAST BBFN	AP50N *	.401"	1.100"	2.0	580 fps	15,100 PSI	2.8	760 fps	32,300 PSI
	AP70N *	.401"	1.100"	2.8	660 fps	18,000 PSI	3.7	855 fps	35,000 PSI
	AP100 *	.401"	1.100"	4.0	680 fps	20,400 PSI	5.2	910 fps	34,100 PSI
200 GR. HDY XTP	AP70N	.400"	1.125"	4.0	824 fps	25,000 PSI	4.7	903 fps	33,600 PSI

\* Winchester case  
† Fiocchi case

<b>10mm Auto</b>	<b>Case:</b> Winchester	<b>Barrel length:</b> 5"
	<b>Twist:</b> 1:16"	<b>Trim length:</b> 0.987"
	<b>Primer:</b> WINCHESTER LP	

Bullet	Powder	Bullet Diam.	C.O.L.	Start loads			Maximum loads		
				Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
135 GR. NOS JHP	AP70N	.400"	1.250"	7.0	1,284 fps	30,200 PSI	8.0	1,416 fps	36,100 PSI
140 GR. BAR TAC-XP	AP70N	.400"	1.260"	5.6	1,171 fps	29,500 PSI	6.1	1,232 fps	36,000 PSI
155 GR. HDY XTP	AP70N	.400"	1.260"	6.5	1,135 fps	22,600 PSI	7.5	1,279 fps	35,200 PSI
180 GR. SIE JHC	AP70N	.400"	1.260"	5.4	965 fps	22,300 PSI	6.4	1,122 fps	32,200 PSI
200 GR. HDY FMJ	AP70N	.400"	1.260"	4.9	846 fps	24,300 PSI	5.9	1,015 fps	36,900 PSI

# PISTOL DATA

41 Action Express				Case: -			Barrel length: 5"		
				Twist: 1:16"			Trim length: 0.861"		
				Primer: -					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
150 GR.	AP70N	.410"	-	-	-	-	6.5	1,025 fps	-
	AP100	.410"	-	-	-	-	9.2	1,075 fps	-
150 GR. LEAD	AP70N	.410"	-	-	-	-	6.3	1,125 fps	-
	AP100	.410"	-	-	-	-	9.0	1,200 fps	-
170 GR.	AP70N	.410"	-	-	-	-	5.1	900 fps	-
	AP100	.410"	-	-	-	-	6.7	925 fps	-
170 GR. LEAD	AP70N	.410"	-	-	-	-	4.9	1,000 fps	-
	AP100	.410"	-	-	-	-	6.5	1,050 fps	-
200 GR. LEAD	AP70N	.410"	-	-	-	-	4.4	875 fps	-
	AP100	.410"	-	-	-	-	6.0	925 fps	-
41 Remington Magnum				Case: Remington			Barrel length: 10.125"		
				Twist: 1:18.75"			Trim length: 1.280"		
				Primer: WINCHESTER LP					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
170 GR. SIE JHC	AP70N	.410"	1.575"	8.0	1,229 fps	21,600 CUP	10.3	1,488 fps	38,700 CUP
	AR2205	.410"	1.575"	22.5	1,582 fps	26,100 CUP	24.9	1,745 fps	35,600 CUP
180 GR. BAR XPB FB	AP70N	.410"	1.590"	6.9	873 fps	29,800 CUP	8.0	1,151 fps	39,700 CUP
	AR2205	.410"	1.590"	16.6	1,141 fps	26,300 CUP	18.5C	1,364 fps	37,800 CUP
200 GR. CAST LFP	AS30N	.410"	1.550"	4.0	854 fps	13,400 CUP	5.2	997 fps	21,200 CUP
210 GR. HDY XTP	AP70N	.410"	1.580"	6.9	971 fps	17,700 CUP	8.9	1,243 fps	37,700 CUP
	AR2205	.410"	1.580"	19.3	1,379 fps	28,000 CUP	21.5	1,518 fps	38,000 CUP
215 GR. CAST LFP	Trail Boss	.410"	1.600"	4.5	752 fps	13,000 CUP	6.5	910 fps	17,100 CUP
	AS30N	.410"	1.585"	4.0	825 fps	24,600 CUP	5.2	979 fps	26,700 CUP
220 GR. SPR JSP	AP70N	.410"	1.580"	6.5	921 fps	18,900 CUP	8.5	1,178 fps	38,600 CUP
	AR2205	.410"	1.580"	18.0	1,296 fps	29,700 CUP	20.0	1,433 fps	37,500 CUP
245 GR. CAST LSWC	Trail Boss	.410"	1.630"	3.5	683 fps	12,600 CUP	6.0	834 fps	16,100 CUP
	AP70N	.410"	1.630"	6.3	1,001 fps	21,200 CUP	8.0	1,164 fps	36,000 CUP
	AR2205	.410"	1.630"	18.0	1,272 fps	27,000 CUP	20.0	1,444 fps	37,700 CUP
250 GR. WFNGC	Trail Boss	.410"	1.540"	3.7	611 fps	14,600 CUP	5.0	748 fps	20,300 CUP
	AR2205	.410"	1.540"	17.0	1,302 fps	33,600 CUP	18.4	1,398 fps	39,700 CUP
255 GR. WFNGC	AR2205	.410"	1.660"	18.8	1,378 fps	33,900 CUP	20.0	1,446 fps	38,800 CUP
265 GR. WLNGC	AR2205	.410"	1.710"	18.6	1,366 fps	31,900 CUP	19.8	1,429 fps	35,700 CUP
				C = Compressed load					

# PISTOL DATA

44 S&W Special				Case: Starline Twist: 1:20" Primer: WINCHESTER LP			Barrel length: 8" Trim length: 1.155"		
<b>NOTE:</b> See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. NOS JHP	AP70N	.429"	1.460"	6.0	834 fps	9,000 CUP	6.8	967 fps	12,900 CUP
	AR2205	.429"	1.460"	13.0	848 fps	9,100 CUP	15.0	1,021 fps	13,100 CUP
44 Remington Magnum				Case: Winchester Twist: 1:20" Primer: REMINGTON 2 1/2			Barrel length: 8.275" Trim length: 1.280"		
<b>NOTE:</b> See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. HDY XTP	AP70N	.430"	1.600"	9.0	1,209 fps	19,000 CUP	11.3	1,463 fps	36,900 CUP
	AR2205	.430"	1.600"	27.5	1,575 fps	24,000 CUP	29.0	1,708 fps	31,200 CUP
200 GR. NOS JHP	AP70N	.429"	1.600"	10.0	1,303 fps	30,700 CUP	11.1	1,398 fps	38,300 CUP
	AR2205	.429"	1.600"	25.0	1,553 fps	29,800 CUP	27.0	1,686 fps	37,800 CUP
210 GR. SIE JHC	AP70N	.430"	1.600"	9.0	1,190 fps	26,000 CUP	11.0	1,365 fps	37,600 CUP
	AR2205	.430"	1.600"	25.0	1,458 fps	29,200 CUP	27.0	1,624 fps	37,600 CUP
225 GR. HDY FTX	AR2205	.430"	1.665"	19.8	1,130 fps	26,800 PSI	22.0	1,307 fps	34,500 PSI
225 GR. SPR JHP	AP70N	.429"	1.575"	8.0	1,041 fps	18,900 CUP	10.5	1,291 fps	37,300 CUP
	AR2205	.429"	1.575"	23.0	1,383 fps	27,400 CUP	25.5	1,537 fps	35,700 CUP
240 GR. NOS JHP	AP70N	.429"	1.600"	8.0	1,018 fps	21,900 CUP	10.2	1,246 fps	38,200 CUP
	AR2205	.429"	1.600"	22.0	1,301 fps	28,400 CUP	24.0	1,458 fps	36,100 CUP
240 GR. SPR JSP	AP70N	.429"	1.576"	8.0	975 fps	17,500 PSI	10.2	1,225 fps	36,000 PSI
	AP100	.429"	1.576"	11.0	1,010 fps	18,400 PSI	13.5	1,350 fps	34,500 PSI
	AR2205	.429"	1.576"	22.5	1,220 fps	20,700 PSI	24.0C	1,330 fps	26,500 PSI
270 GR. SPR GDSP	AP70N	.429"	1.600"	8.5	1,049 fps	32,100 CUP	9.5	1,128 fps	36,700 CUP
	AR2205	.429"	1.600"	20.5	1,275 fps	28,400 CUP	22.5	1,425 fps	37,400 CUP
280 GR. SFT JHP	AP70N	.430"	1.700"	8.0	917 fps	27,400 CUP	9.7	1,090 fps	38,200 CUP
	AR2205	.430"	1.700"	20.0	1,215 fps	27,600 CUP	22.0	1,373 fps	37,800 CUP
300 GR. HDY XTP	AP70N	.430"	1.600"	8.0	972 fps	31,200 CUP	9.6	1,113 fps	38,200 CUP
	AR2205	.430"	1.600"	18.0	1,180 fps	30,600 CUP	20.0	1,312 fps	38,600 CUP
325 GR. BTB LFN GC	AP70N	.430"	1.730"	8.0	942 fps	27,700 CUP	10.0	1,090 fps	38,000 CUP
	AR2205	.430"	1.730"	17.0	1,041 fps	19,200 CUP	21.0C	1,278 fps	34,200 CUP
330 GR. BTB LFN GC	AP70N	.430"	1.730"	8.0	943 fps	27,800 CUP	9.5	1,058 fps	37,000 CUP
	AR2205	.430"	1.730"	18.0	1,132 fps	25,900 CUP	20.7C	1,278 fps	34,200 CUP



# PISTOL DATA

<b>44 Remington Magnum</b>				Case: Winchester Twist: 1:20" Primer: REMINGTON 2 1/2			Barrel length: 8.275" Trim length: 1.280"		
NOTE: See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
355 GR. BTB LFN GC	AP70N	.430"	1.710"	7.8	922 fps	30,700 CUP	8.8	991 fps	37,300 CUP
	AR2205	.430"	1.710"	17.5	1,125 fps	28,100 CUP	19.0	1,223 fps	37,800 CUP
C = Compressed load									
<b>44 Auto Mag</b>				Case: Federal (reformed) Twist: 1:18" Primer: CCI 350			Barrel length: 6" Trim length: 1.293"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. SIE JHC	AR2205	.430"	1.610"	25.0	1,316 fps	-	27.0	1,478 fps	-
200 GR. HDY XTP	AR2205	.430"	1.610"	25.0	1,379 fps	-	26.0	1,427 fps	-
225 GR. SPR JHP SWC	AR2205	.429"	1.595"	20.0	1,126 fps	-	22.0	1,269 fps	-
240 GR. NOS HP	AR2205	.429"	1.600"	20.0	1,125 fps	-	21.0	1,183 fps	-
<b>445 Super Mag</b>				Case: Starline Twist: 1:20" Primer: FEDERAL 210			Barrel length: 10" Trim length: 1.590"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. SIE JHC	AR2205	.430"	1.925"	34.5	1,655 fps	-	37.0	1,901 fps	-
200 GR. BAR X	AR2205	.430"	1.925"	35.0	1,795 fps	-	38.0	1,885 fps	-
225 GR. BAR X	AR2205	.430"	1.925"	34.0	1,708 fps	-	37.5	1,864 fps	-
<b>444 Marlin</b>				Case: Remington Twist: 1:38" Primer: REMINGTON 9 1/2			Barrel length: 15" Trim length: 2.215"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. BAR XFB	AR2207	.429"	2.550"	46.0	2,086 fps	34,400 CUP	51.2C	2,348 fps	42,900 CUP
	AR2219	.429"	2.550"	50.0	1,940 fps	30,200 CUP	52.0C	2,037 fps	33,600 CUP
	Bench Mark 2	.429"	2.550"	50.0	1,940 fps	27,600 CUP	54.0	2,102 fps	35,800 CUP
225 GR. BAR XFB	AR2207	.429"	2.550"	42.2	1,916 fps	32,300 CUP	46.9	2,158 fps	42,300 CUP
	AR2219	.429"	2.550"	47.0	1,846 fps	33,400 CUP	50.0C	1,986 fps	37,000 CUP
	Bench Mark 2	.429"	2.550"	49.0	1,901 fps	34,500 CUP	52.0C	2,044 fps	38,100 CUP

# PISTOL DATA

444 Marlin				Case: Remington Twist: 1:38" Primer: REMINGTON 9 1/2			Barrel length: 15" Trim length: 2.215"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
240 GR. SIE JHC	AR2207	.430"	2.535"	44.0	1,969 fps	36,100 CUP	49.2C	2,179 fps	42,100 CUP
	AR2219	.430"	2.535"	49.5	1,900 fps	31,400 CUP	52.0C	2,012 fps	35,900 CUP
	Bench Mark 2	.430"	2.535"	51.0	1,948 fps	31,600 CUP	55.0C	2,093 fps	40,600 CUP
	AR2206H	.430"	2.535"	51.0	1,760 fps	29,600 CUP	53.0C	1,862 fps	33,100 CUP
265 GR. HDY JFP	AR2207	.430"	2.550"	42.0	1,867 fps	31,200 CUP	47.0	2,092 fps	41,100 CUP
	AR2219	.430"	2.550"	47.0	1,803 fps	33,200 CUP	52.0C	2,028 fps	38,300 CUP
	Bench Mark 2	.430"	2.550"	49.0	1,855 fps	31,000 CUP	53.0C	2,004 fps	40,700 CUP
	AR2206H	.430"	2.550"	50.0	1,763 fps	29,300 CUP	53.0C	1,891 fps	34,800 CUP
270 GR. SPR JFP	AR2207	.429"	2.540"	42.0	1,898 fps	34,900 CUP	46.5	2,083 fps	41,400 CUP
	AR2219	.429"	2.540"	47.0	1,823 fps	31,700 CUP	52.0C	2,026 fps	38,100 CUP
	Bench Mark 2	.429"	2.540"	50.0	1,902 fps	33,500 CUP	54.0C	2,041 fps	41,700 CUP
	AR2206H	.429"	2.540"	50.0	1,781 fps	29,300 CUP	53.0C	1,893 fps	33,400 CUP
275 GR. BAR FP	AR2207	.430"	2.520"	40.0	1,866 fps	33,500 CUP	44.5	2,049 fps	41,800 CUP
	AR2219	.430"	2.520"	46.0	1,802 fps	33,800 CUP	51.0C	2,044 fps	43,100 CUP
	Bench Mark 2	.430"	2.520"	48.0	1,866 fps	35,900 CUP	51.0C	1,964 fps	43,300 CUP
	AR2206H	.430"	2.520"	47.0	1,705 fps	27,100 CUP	52.0C	1,941 fps	36,200 CUP
280 GR. SFT HP	AR2207	.430"	2.620"	38.0	1,765 fps	37,300 CUP	42.5	1,977 fps	42,300 CUP
	AR2219	.430"	2.620"	44.5	1,809 fps	33,400 CUP	49.5	1,986 fps	42,400 CUP
	Bench Mark 2	.430"	2.620"	46.0	1,815 fps	38,300 CUP	49.5C	1,941 fps	42,600 CUP
	AR2206H	.430"	2.620"	47.0	1,760 fps	30,300 CUP	52.0C	1,973 fps	37,600 CUP
	AR2208	.430"	2.620"	49.0	1,707 fps	33,000 CUP	52.0C	1,875 fps	36,800 CUP
300 GR. SFT HP	AR2207	.430"	2.620"	38.5	1,816 fps	36,200 CUP	42.5	1,946 fps	42,500 CUP
	AR2219	.430"	2.620"	43.0	1,694 fps	30,600 CUP	48.0	1,905 fps	42,600 CUP
	Bench Mark 2	.430"	2.620"	46.0	1,790 fps	36,200 CUP	48.5	1,893 fps	41,900 CUP
	AR2206H	.430"	2.620"	47.0	1,722 fps	33,600 CUP	50.0C	1,853 fps	35,600 CUP
	AR2208	.430"	2.620"	47.0	1,631 fps	30,700 CUP	50.0C	1,753 fps	35,700 CUP
				C = Compressed load					
45 GAP (Glock Auto)				Case: Speer Twist: 1:16" Primer: WINCHESTER SP			Barrel length: 5" Trim length: 0.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
155 GR. LSWC CAST	AS30N	.452"	1.110"	3.9	974 fps	18,000 PSI	4.4	1,047 fps	22,300 PSI
160 GR. BAR TAC-XP	AS30N	.451"	1.110"	3.1	692 fps	20,500 PSI	3.3	748 fps	22,600 PSI
	AP70N	.451"	1.110"	4.3	798 fps	16,600 PSI	4.9	974 fps	22,000 PSI

# PISTOL DATA

45 GAP (Glock Auto)				Case: Speer Twist: 1:16" Primer: WINCHESTER SP			Barrel length: 5" Trim length: 0.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
185 GR. HDY XTP	AS30N	.451"	1.060"	3.7	816 fps	18,800 PSI	4.1	881 fps	21,400 PSI
	AP70N	.451"	1.060"	5.5	864 fps	17,700 PSI	6.3	1,027 fps	22,300 PSI
200 GR. SPR GDHP	AS30N	.451"	1.080"	3.3	718 fps	17,300 PSI	3.7	796 fps	20,400 PSI
	AP70N	.451"	1.080"	5.2	838 fps	18,500 PSI	5.7	924 fps	20,900 PSI
45 ACP				Case: Winchester Twist: 1:16" Primer: FEDERAL 150			Barrel length: 5" Trim length: 0.893"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
150 GR. CAST LSWC	AP50N	.452"	1.210"	4.5	930 fps	12,900 PSI	5.4	1,090 fps	19,200 PSI
	AP70N	.452"	1.210"	6.5	1,050 fps	16,100 PSI	7.2	1,185 fps	20,600 PSI
	AP100	.452"	1.210"	8.5	970 fps	14,900 PSI	9.5	1,165 fps	20,400 PSI
155 GR. CAST LSWC	AS30N	.451"	1.230"	4.9	1,040 fps	16,100 CUP	5.2	1,082 fps	17,700 CUP
	AP50N	.452"	1.245"	5.0	940 fps	9,200 PSI	6.2	1,175 fps	20,400 PSI
	AP70N	.451"	1.230"	6.5	1,015 fps	13,000 CUP	7.0	1,135 fps	16,700 CUP
155 GR. SFIRE	AP70N	.451"	1.220"	5.4	828 fps	12,300 CUP	6.0	1,050 fps	16,900 CUP
160 GR. BAR TAC-XP	AS30N	.451"	1.200"	3.4	833 fps	17,100 PSI	3.9	906 fps	20,000 PSI
	AP70N	.451"	1.200"	5.4	938 fps	17,100 PSI	5.9	1,047 fps	19,500 PSI
175 GR. CAST LSWC	AP50N	.452"	1.250"	4.5	845 fps	12,000 PSI	5.5	1,020 fps	17,900 PSI
180 GR. LFP	Trail Boss	.452"	1.140"	3.5	664 fps	7,100 CUP	5.0	852 fps	13,700 CUP
	AS30N	.452"	1.140"	3.8	783 fps	11,600 CUP	4.5	910 fps	16,700 CUP
	AP70N	.452"	1.140"	5.3	755 fps	11,100 CUP	6.4	1,019 fps	17,600 CUP
185 GR. CAST LSWC	AP50N	.452"	1.271"	4.5	800 fps	8,000 PSI	5.8	1,030 fps	20,100 PSI
185 GR. HDY JSWC	AS30N	.451"	1.135"	4.5	855 fps	14,500 CUP	4.9	981 fps	17,400 CUP
	AP70N	.451"	1.135"	6.0	908 fps	13,100 CUP	6.4	977 fps	16,800 CUP
200 GR. CAST LSWC	Trail Boss	.451"	1.225"	3.5	652 fps	9,200 CUP	5.5	816 fps	16,100 CUP
	AS30N	.451"	1.225"	3.6	759 fps	11,800 CUP	4.3	888 fps	17,000 CUP
	AP50N	.452"	1.255"	4.0	755 fps	11,100 PSI	5.0	960 fps	21,000 PSI
	AP70N	.451"	1.225"	5.8	889 fps	13,900 CUP	6.3	962 fps	16,800 CUP
200 GR. SPR JHP	AS30N	.451"	1.155"	3.9	714 fps	15,200 CUP	4.3	785 fps	17,700 CUP
	AP70N	.451"	1.155"	5.8	889 fps	15,100 CUP	6.2	949 fps	17,200 CUP
230 GR. HDY FMJ FP	AS30N	.451"	1.200"	3.7	670 fps	15,900 CUP	4.0	732 fps	17,000 CUP
	AP70N	.451"	1.200"	5.1	716 fps	11,800 CUP	5.6	844 fps	16,800 CUP

# PISTOL DATA

<b>45 ACP</b>				Case: Winchester Twist: 1:16" Primer: FEDERAL 150			Barrel length: 5" Trim length: 0.893"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
230 GR. LRN	Trail Boss	.452"	1.200"	3.5	658 fps	11,200 CUP	4.5	761 fps	15,100 CUP
	AS30N	.452"	1.200"	3.5	716 fps	13,700 CUP	4.0	793 fps	16,800 CUP
	AP50N	.452"	1.250"	3.8	720 fps	9,700 PSI	4.5	840 fps	18,100 PSI
	AP70N	.452"	1.200"	4.5	703 fps	11,400 CUP	5.4	857 fps	16,800 CUP
<b>45 SUPER</b>				Case: Winchester Twist: 1:16" Primer: FEDERAL 150			Barrel length: 5" Trim length: 0.893"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
185 GR. HDY JSWC	AP70N	.451"	1.195"	6.0	908 fps	13,100 CUP	7.0	1,067 fps	20,100 CUP
200 GR. SPR JHP	AP70N	.451"	1.155"	5.8	889 fps	15,100 CUP	6.7	1,014 fps	20,100 CUP
230 GR. HDY FMJ FP	AP70N	.451"	1.200"	5.1	716 fps	11,800 CUP	6.0	877 fps	19,400 CUP
<b>45 Colt</b>				Case: Winchester Twist: 1:16" Primer: WINCHESTER LP			Barrel length: 7.25" Trim length: 1.280"		
<b>NOTE:</b> See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. HDY XTP	AP70N	.452"	1.600"	8.0	915 fps	9,600 CUP	9.0	1,068 fps	13,900 CUP
225 GR. HDY FTX	AS30N	.452"	1.600"	4.4	538 fps	9,400 PSI	5.5	761 fps	13,600 PSI
	AP70N	.452"	1.600"	6.4	684 fps	7,800 PSI	8.2	916 fps	13,200 PSI
250 GR. HDY XTP	AP70N	.452"	1.595"	7.5	705 fps	10,300 CUP	8.5	856 fps	14,000 CUP
260 GR. SPR JHP	AP70N	.451"	1.595"	7.0	661 fps	9,400 CUP	8.0	813 fps	14,000 CUP
300 GR. SIE JFP	AP70N	.452"	1.670"	6.6	593 fps	11,200 CUP	7.3	700 fps	13,700 CUP
<b>45 Colt (Ruger, Freedom Arms &amp; T/C only)</b>				Case: Winchester Twist: 1:16" Primer: WINCHESTER LP			Barrel length: 7.25" Trim length: 1.280"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
225 GR. BAR XPB	AR2205	.451"	1.600"	20.9	1,077 fps	19,900 CUP	24.9	1,312 fps	29,800 CUP
225 GR. HDY FTX	AR2205	.452"	1.700"	20.6	1,146 fps	20,200 PSI	25.7	1,383 fps	30,400 PSI
240 GR. SIE JHC	AR2205	.452"	1.600"	20.0	1,169 fps	20,100 CUP	26.0	1,413 fps	30,000 CUP
250 GR. HDY XTP	AR2205	.452"	1.600"	20.0	1,150 fps	23,500 CUP	24.6	1,343 fps	30,300 CUP
300 GR. SPR JFP	AR2205	.451"	1.650"	19.0	1,051 fps	23,600 CUP	22.3	1,202 fps	29,900 CUP



# PISTOL DATA

<b>45 Colt (Ruger, Freedom Arms &amp; T/C only)</b>				Case: Winchester Twist: 1:16" Primer: WINCHESTER LP			Barrel length: 7.25" Trim length: 1.280"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
325 GR. CPB LFN PB	AR2205	.452"	1.680"	20.0	1,053 fps	22,300 CUP	23.0	1,189 fps	28,000 CUP
335 GR. CPB LFN GC	AR2205	.452"	1.680"	20.0	1,011 fps	21,100 CUP	22.5C	1,155 fps	28,300 CUP
360 GR. CPB LFN GC	AR2205	.452"	1.680"	19.5	1,004 fps	21,100 CUP	22.0C	1,167 fps	29,800 CUP
				C = Compressed load					
<b>45 Winchester Magnum</b>				Case: Winchester Twist: 1:16" Primer: CCI 350			Barrel length: 5" Trim length: 1.193"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
230 GR. HDY FMJ FP	AR2205	.451"	1.500"	24.0	1,160 fps	27,400 CUP	25.0	1,259 fps	29,400 CUP
240 GR. SIE JHC	AR2205	.451"	1.555"	24.0	1,164 fps	29,000 CUP	25.0	1,266 fps	33,000 CUP
250 GR. NOS JHP	AR2205	.451"	1.500"	23.0	1,141 fps	34,000 CUP	24.0	1,239 fps	37,100 CUP
260 GR. SPR JHP	AR2205	.451"	1.505"	22.0	1,148 fps	32,600 CUP	23.0	1,209 fps	35,400 CUP
<b>450 Extreme</b>				Case: Starline Twist: 1:24" Primer: CCI 350			Barrel length: 8" Trim length: 1.340"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
240 GR. HDY XTP-MAG.	AR2205	.452"	1.725"	31.0	1,744 fps	40,100 PSI	33.0C	1,827 fps	44,700 PSI
260 GR. HDY XTP-MAG.	AR2205	.452"	1.725"	29.5	1,649 fps	39,600 PSI	30.5	1,722 fps	44,800 PSI
265 GR. CPB LFP/GC	AR2205	.453"	1.670"	29.0	1,651 fps	39,900 PSI	31.0	1,736 fps	44,900 PSI
300 GR. HDY XTP-MAG.	AR2205	.452"	1.725"	25.6	1,465 fps	38,900 PSI	27.3	1,564 fps	45,600 PSI
				C = Compressed load					
<b>454 Casull</b>				Case: Freedom Arms Twist: 1:24" Primer: WINCHESTER SR			Barrel length: 9.375" Trim length: 1.380"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
240 GR. FA JHP	AR2205	.452"	1.765"	29.0	1,512 fps	22,300 CUP	34.0C	1,834 fps	43,300 CUP
240 GR. SIE JHC	AP70N	.452"	1.680"	10.2	1,212 fps	24,400 CUP	11.5	1,325 fps	37,500 CUP
250 GR. BAR X	AR2205	.451"	1.780"	26.0	1,580 fps	40,800 CUP	28.5C	1,685 fps	50,000 CUP
250 GR. MEI LRNFP	Trail Boss	.452"	1.680"	6.7	862 fps	14,800 CUP	9.0	1,011 fps	19,300 CUP
250 GR. NOS JHP	AP70N	.451"	1.700"	10.8	1,221 fps	25,700 CUP	12.0	1,290 fps	35,300 CUP
260 GR. FA JFP	AR2205	.452"	1.765"	28.0	1,421 fps	19,000 CUP	33.0C	1,762 fps	42,100 CUP

# PISTOL DATA

<b>454 Casull</b>				Case: Freedom Arms Twist: 1:24" Primer: WINCHESTER SR			Barrel length: 9.375" Trim length: 1.380"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
260 GR. SPR JHP	AP70N	.451"	1.675"	10.3	1,157 fps	25,500 CUP	11.5	1,245 fps	34,900 CUP
265 GR. CPB LFP GC	Trail Boss	.452"	1.700"	7.0	836 fps	18,800 CUP	9.0	984 fps	27,100 CUP
300 GR. CPB LFN GC	Trail Boss	.452"	1.800"	6.5	767 fps	14,900 CUP	8.0	865 fps	23,900 CUP
300 GR. FA JFP	AR2205	.452"	1.775"	27.0	1,541 fps	41,100 CUP	31.0C	1,702 fps	52,400 CUP
325 GR. CPB LFN PB	Trail Boss	.452"	1.760"	5.0	636 fps	13,600 CUP	7.0	798 fps	23,700 CUP
	AR2205	.452"	1.760"	24.7	1,389 fps	30,300 CUP	25.5C	1,452 fps	36,900 CUP
325 GR. SFT HP	AR2205	.451"	1.750"	23.0	1,323 fps	42,600 CUP	25.5	1,460 fps	52,600 CUP
335 GR. CPB LFN GC	Trail Boss	.452"	1.770"	4.8	618 fps	15,500 CUP	6.8	778 fps	25,600 CUP
	AR2205	.452"	1.770"	23.0	1,306 fps	30,000 CUP	25.5	1,460 fps	42,800 CUP
360 GR. CPB LFN GC	Trail Boss	.452"	1.760"	5.0	615 fps	18,000 CUP	6.0	699 fps	27,300 CUP
	AR2205	.452"	1.760"	21.0	1,205 fps	31,000 CUP	24.0	1,406 fps	48,300 CUP
395 GR. CPB LFN GC	Trail Boss	.452"	1.770"	4.0	519 fps	19,200 CUP	5.0	607 fps	23,600 CUP
	AR2205	.452"	1.770"	18.0	1,076 fps	29,600 CUP	21.0	1,269 fps	48,300 CUP
				C = Compressed load					
<b>460 S&amp;W MAGNUM</b>				Case: Starline Twist: 1:20" Primer: WINCHESTER LRM			Barrel length: 10.743" Trim length: 1.790"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. BAR XPB	AR2205	.451"	2.320"	41.0	2,077 fps	35,200 PSI	45.5C	2,238 fps	42,200 PSI
225 GR. BAR X	AR2205	.451"	2.110"	37.0	2,007 fps	42,100 PSI	41.0C	2,191 fps	54,400 PSI
240 GR. HDY XTP MAG.	AR2205	.452"	2.160"	40.0	2,018 fps	43,200 PSI	45.0C	2,198 fps	51,800 PSI
250 GR. BAR X	AR2205	.451"	2.200"	36.0	1,938 fps	45,700 PSI	40.0C	2,074 fps	57,200 PSI
260 GR. NOS PART	AR2205	.451"	2.175"	38.0	1,939 fps	45,000 PSI	43.0C	2,098 fps	51,300 PSI
265 GR. SFT HP	AR2205	.451"	2.180"	38.0	1,940 fps	44,800 PSI	43.5C	2,109 fps	53,100 PSI
300 GR. HDY XTP MAG.	AR2205	.452"	2.160"	36.0	1,852 fps	49,000 PSI	40.0C	1,988 fps	57,000 PSI
325 GR. CPB LFN PB	Trail Boss	.452"	2.200"	7.0	734 fps	16,500 PSI	11.0	914 fps	20,400 PSI
	AR2205	.452"	2.200"	34.0	1,790 fps	51,100 PSI	38.0	1,897 fps	56,400 PSI
325 GR. SFT HP	AR2205	.451"	2.175"	33.0	1,716 fps	46,700 PSI	37.0	1,859 fps	57,300 PSI
	AR2207	.451"	2.175"	37.0	1,556 fps	36,200 PSI	41.0C	1,695 fps	42,500 PSI
335 GR. CPB WLN GC	Trail Boss	.452"	2.180"	7.0	726 fps	17,700 PSI	10.0	887 fps	22,200 PSI
	AR2205	.452"	2.180"	33.0	1,719 fps	50,000 PSI	37.5	1,849 fps	55,700 PSI
360 GR. CPB WLN GC	Trail Boss	.452"	2.190"	7.0	712 fps	19,600 PSI	9.0	827 fps	24,200 PSI
	AR2205	.452"	2.190"	31.0	1,632 fps	49,500 PSI	35.5	1,776 fps	56,500 PSI
	AR2207	.452"	2.190"	37.0	1,531 fps	38,200 PSI	40.0C	1,644 fps	43,200 PSI

# PISTOL DATA

460 S&W MAGNUM				Case: Starline Twist: 1:20" Primer: WINCHESTER LRM			Barrel length: 10.743" Trim length: 1.790"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
395 GR. CPB WLN GC	Trail Boss	.452"	2.185"	7.0	695 fps	21,100 PSI	8.0	754 fps	24,000 PSI
	AR2205	.452"	2.185"	28.0	1,516 fps	48,700 PSI	32.0	1,647 fps	56,600 PSI
	AR2207	.452"	2.185"	35.0	1,484 fps	40,000 PSI	38.0C	1,596 fps	46,600 PSI
				C = Compressed load					
45-70 Government				Case: Winchester Twist: 1:20" Primer: CCI 200			Barrel length: 15" Trim length: 2.100"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
300 GR. CAST LFP	AR2207	.458"	2.465"	30.0	1,175 fps	14,400 CUP	35.5	1,418 fps	16,100 CUP
	AR2206H	.458"	2.465"	45.0	1,326 fps	14,400 CUP	51.0	1,464 fps	15,500 CUP
	AR2208	.458"	2.465"	45.0	1,276 fps	17,800 CUP	55.0	1,530 fps	20,600 CUP
300 GR. SIE HP	AR2207	.458"	2.525"	45.0	1,774 fps	16,700 CUP	55.0	2,076 fps	27,600 CUP
	AR2219	.458"	2.525"	54.0	1,699 fps	18,100 CUP	60.0	1,940 fps	28,000 CUP
	AR2206H	.458"	2.525"	58.0	1,654 fps	16,500 CUP	62.0C	1,874 fps	21,000 CUP
	AR2208	.458"	2.525"	57.0	1,512 fps	16,300 CUP	63.0C	1,821 fps	23,800 CUP
385 GR. CAST LFP	AR2207	.458"	2.505"	28.0	1,077 fps	13,300 CUP	32.0	1,249 fps	14,700 CUP
	AR2206H	.458"	2.505"	35.0	1,101 fps	11,900 CUP	42.0	1,301 fps	23,100 CUP
	AR2208	.458"	2.505"	42.5	1,293 fps	15,400 CUP	52.5	1,537 fps	21,800 CUP
405 GR. CAST LFP	AR2207	.458"	2.540"	27.0	1,057 fps	14,200 CUP	31.0	1,224 fps	17,100 CUP
	AR2206H	.458"	2.540"	40.0	1,261 fps	14,900 CUP	48.0	1,453 fps	18,900 CUP
	AR2208	.458"	2.540"	40.0	1,188 fps	15,600 CUP	50.0	1,445 fps	20,900 CUP
485 GR. CAST LFP	AR2207	.458"	2.540"	28.0	1,065 fps	16,400 CUP	32.0	1,233 fps	20,400 CUP
	AR2206H	.458"	2.540"	32.0	1,010 fps	15,600 CUP	39.0	1,209 fps	22,700 CUP
				C = Compressed load					
480 Ruger				Case: Hornady Twist: 1:18" Primer: WINCHESTER LP			Barrel length: 7.5" Trim length: 1.275"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
325 GR. HDY XTP	AR2205	.475"	1.620"	24.0	1,295 fps	32,600 PSI	27.2	1,477 fps	45,600 PSI
355 GR. BTB LFN GC	Trail Boss	.476"	1.630"	5.0	621 fps	16,700 PSI	6.5	740 fps	22,700 PSI
	AR2205	.476"	1.630"	25.0	1,363 fps	38,500 PSI	28.0C	1,485 fps	46,500 PSI
370 GR. CPB LFP	Trail Boss	.475"	1.640"	4.5	597 fps	16,000 PSI	5.7	689 fps	20,900 PSI
	AR2205	.475"	1.640"	22.5	1,248 fps	32,800 PSI	26.0C	1,427 fps	45,900 PSI

# PISTOL DATA

<b>480 Ruger</b>				Case: Hornady Twist: 1:18" Primer: WINCHESTER LP			Barrel length: 7.5" Trim length: 1.275"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
400 GR. HDY XTP	AR2205	.475"	1.620"	18.0	1,026 fps	31,600 PSI	21.0	1,211 fps	46,100 PSI
405 GR. CPB (w/GCK)	Trail Boss	.475"	1.620"	3.5	469 fps	15,200 PSI	5.5	645 fps	25,700 PSI
	AR2205	.475"	1.620"	19.0	1,112 fps	33,200 PSI	21.7	1,255 fps	45,500 PSI
420 GR. BTB LFN GC	Trail Boss	.476"	1.640"	3.5	467 fps	16,200 PSI	5.0	597 fps	24,300 PSI
	AR2205	.476"	1.640"	19.5	1,125 fps	39,100 PSI	21.3C	1,214 fps	46,400 PSI
				C = Compressed load					
<b>475 Linebaugh</b>				Case: Hornady Twist: 1:20" Primer: WINCHESTER LP			Barrel length: 8" Trim length: 1.390"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
325 GR. HDY XTP	AR2205	.475"	1.740"	27.0	1,288 fps	28,000 PSI	31.2	1,546 fps	47,700 PSI
370 GR. CPB LFP	Trail Boss	.475"	1.770"	6.0	661 fps	16,000 PSI	8.5	824 fps	27,500 PSI
	AR2205	.475"	1.770"	25.5	1,259 fps	31,800 PSI	28.5	1,443 fps	47,400 PSI
400 GR. HDY XTP	AR2205	.475"	1.740"	21.0	1,049 fps	28,200 PSI	25.0	1,301 fps	48,800 PSI
405 GR. CPB LFP GC	Trail Boss	.475"	1.745"	5.5	603 fps	19,000 PSI	7.5	732 fps	29,600 PSI
	AR2205	.475"	1.745"	22.0	1,148 fps	32,400 PSI	25.0	1,304 fps	46,200 PSI
<b>50 Action Express</b>				Case: Speer Twist: 1:19" Primer: CCI 350			Barrel length: 6" Trim length: 1.280"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
325 GR. SPR AE UCHP	AR2205	.500"	1.575"	29.0	1,201 fps	-	30.8	1,294 fps	-
<b>500 Linebaugh</b>				Case: Starline Twist: 1:20" Primer: CCI 350			Barrel length: 8" Trim length: 1.400"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
410 GR. LFP	Trail Boss	.511"	1.800"	8.5	752 fps	15,400 PSI	10.0	815 fps	17,400 PSI
	AR2205	.511"	1.800"	32.0	1,294 fps	30,400 PSI	33.7	1,369 fps	34,800 PSI
425 GR. LFP (w/GCK)	Trail Boss	.511"	1.800"	7.5	664 fps	13,100 PSI	9.5	768 fps	16,400 PSI
	AR2205	.511"	1.800"	30.0	1,244 fps	29,400 PSI	32.0	1,356 fps	35,200 PSI
450 GR. MT. BAL LWSC	Trail Boss	.512"	1.840"	9.2	759 fps	19,700 PSI	10.0	800 fps	25,000 PSI



# PISTOL DATA

500 Linebaugh				Case: Starline			Barrel length: 8"		
				Twist: 1:20"			Trim length: 1.400"		
				Primer: CCI 350					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
468 GR. LFP	Trail Boss	.511"	1.800"	7.3	640 fps	14,400 PSI	9.2	730 fps	18,100 PSI
	AR2205	.511"	1.800"	28.5	1,209 fps	29,300 PSI	30.5	1,297 fps	35,000 PSI
500 Wyoming Express				Case: Freedom Arms			Barrel length: 9"		
				Twist: 1:20"			Trim length: 1.360"		
				Primer: FEDERAL 210					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
350 GR. HDY XTP	AR2205	.500"	1.740"	31.0	1,378 fps	32,400 PSI	35.0C	1,584 fps	44,200 PSI
370 GR. CPB LGC	Trail Boss	.500"	1.740"	7.0	698 fps	19,100 PSI	10.0	859 fps	23,800 PSI
	AR2205	.500"	1.740"	31.0	1,382 fps	33,600 PSI	34.0C	1,535 fps	43,300 PSI
400 GR. CPB LGC	Trail Boss	.500"	1.750"	8.0	738 fps	23,200 PSI	10.0	842 fps	28,000 PSI
	AR2205	.500"	1.750"	30.0	1,390 fps	39,900 PSI	33.0	1,509 fps	46,700 PSI
420 GR. BLT MTN PB	AR2205	.500"	1.765"	23.0	1,038 fps	28,700 PSI	27.0C	1,274 fps	31,600 PSI
440 GR. CPB LGC	Trail Boss	.500"	1.740"	6.0	600 fps	20,100 PSI	8.0	717 fps	24,800 PSI
	AR2205	.500"	1.740"	26.0	1,220 fps	34,400 PSI	30.0C	1,413 fps	48,300 PSI
				C = Compressed load					
500 S&W Magnum				Case: Starline			Barrel length: 10"		
				Twist: 1:18"			Trim length: 1.615"		
				Primer: WINCHESTER LRM					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
275 GR. BAR XPB	AR2205	.500"	2.085"	40.0	1,891 fps	41,000 PSI	44.0	2,047 fps	48,400 PSI
325 GR. BAR XPB	AR2205	.500"	2.290"	40.0	1,788 fps	40,700 PSI	43.0	1,920 fps	49,200 PSI
350 GR. HDY XTP	AR2205	.500"	1.985"	38.0	1,675 fps	41,400 PSI	42.5	1,863 fps	49,900 PSI
370 GR. CPB LGC	Trail Boss	.500"	2.020"	8.0	746 fps	13,500 PSI	12.0	926 fps	19,000 PSI
	AR2205	.500"	2.020"	40.0	1,688 fps	38,700 PSI	42.0	1,784 fps	48,900 PSI
375 GR. BAR XPB	AR2205	.500"	2.290"	33.0	1,550 fps	38,000 PSI	36.8	1,717 fps	50,500 PSI
385 GR. REM. HP	AR2205	.500"	2.150"	37.0	1,644 fps	41,900 PSI	41.0	1,788 fps	51,800 PSI
400 GR. SIE JSP	AR2205	.500"	2.050"	36.5	1,585 fps	42,000 PSI	39.5	1,698 fps	49,100 PSI
440 GR. CPB LGC	Trail Boss	.500"	2.025"	7.0	643 fps	14,600 PSI	10.0	799 fps	21,200 PSI
	AR2205	.500"	2.025"	34.0	1,496 fps	41,900 PSI	37.0	1,609 fps	49,400 PSI
500 GR. HDY SP	AR2205	.500"	2.065"	30.0	1,360 fps	42,300 PSI	32.2	1,436 fps	49,300 PSI

# RIFLE DATA

This section shows the maximum load for every configuration of rifle, bullet weight and powder type. It also shows the recommended starting load for some configurations. For your first load, use the starting load; if no starting load is shown, use 10% less than the maximum load.

To work up to your safe load, increase the starting load by no more than 3% at a time.

The rifle loads shown are for jacketed projectiles unless otherwise specified.

## NEVER EXCEED THE MAXIMUM RECOMMENDED LOADS.

### Introduction

The rifle data for this edition was developed through the use of pressure/proof barrels. All loads for standard cartridges adhere to the guidelines provided by the Sporting Arms and Ammunition Manufacturers Institute (SAAMI). For data on obsolete or less popular cartridges where a pressure/proof barrel was not available, maximum loads were obtained by firings in actual firearms while noting visual case head signs such as flat or cratered primers, difficult extraction and measured case heads.

### Velocity

Velocity is measured electronically with the use of two infrared sightscreens. The screens measure the time taken for the projectile to pass through the screens. Screens are set at 20 feet apart with the first screen positioned 5 feet from the muzzle. Velocities for all cartridges listed are limited by the SAAMI maximum allowable pressures. The average change in velocity from the listed pressure barrel data is approximately 35 to 50 fps for each inch of barrel length.

### Pressure

Pressures are listed in either copper units of pressure (cup) or pounds per square inch (psi). Copper units of pressure (cup) is determined mechanically using a copper slug called a "crusher". The crusher is placed in a fixture over the chamber where a hole passes through the barrel to the chamber. When the cartridge is fired, the resulting gases cause the "crusher" to flatten. The "crusher" is then measured and the result is then converted to pressure in by comparing to a target table.

### Loading Instructions

When working up a load, the reloader should always begin with the starting load, advance in small increments, watch for pressure signs and begin again if changing components. Generally, the best powder choice is the powder that most nearly fills the case for the intended velocity. Most cartridges have only a certain number of appropriate powders. Those cartridges that are more versatile can use a wider range of propellant burning rates. For others, lesser numbers of propellants will give optimum results.

Most often, slower burning powders are more suitable with heavy bullets, while faster powders are better with lighter projectiles. Most reloaders like a powder that delivers near maximum or maximum results throughout the range of projectiles, but that is not always obtainable, since some cartridges (like the 30-06) have too wide a range of projectiles for any one burning rate to be ideal.

The handloader that seriously loads for any given cartridge will choose different components (primer, powders, projectiles, cases) in varying combinations to obtain the best overall performance and accuracy. The handloader reloads to save money, but also reloads to improve accuracy and performance, creating special loads that cannot be found on the dealers' shelves.



# RIFLE DATA

17 Ackley Hornet				Case: Winchester (reformed)			Barrel length: 24"		
				Twist: 1:10"			Trim length: 1.380"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
20 GR. HDY V-MAX	AR2205	.172"	1.800"	8.5	3,080 fps	41,200 CUP	9.2	3,238 fps	45,700 CUP
	AR2207	.172"	1.800"	11.5	3,246 fps	32,700 CUP	12.5C	3,515 fps	44,400 CUP
25 GR. HDY HP	AR2207	.172"	1.760"	10.9	3,015 fps	38,800 CUP	11.6	3,176 fps	45,900 CUP
	AR2219	.172"	1.760"	12.0	2,894 fps	42,500 CUP	13.0C	3,153 fps	45,400 CUP
30 GR. BER HP	AR2207	.172"	1.800"	10.0	2,711 fps	33,400 CUP	10.7	2,923 fps	45,600 CUP
	AR2219	.172"	1.800"	11.5	2,745 fps	36,100 CUP	12.2	2,984 fps	45,700 CUP
	Bench Mark 2	.172"	1.800"	12.2	2,900 fps	43,200 CUP	13.0C	2,975 fps	44,800 CUP
				C = Compressed load					
17 Hornet				Case: Homady			Barrel length: 24"		
				Twist: 1:9"			Trim length: 1.340"		
				Primer: FEDERAL 205M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
20 GR. HDY V-MAX	AR2205	.172"	1.715"	9.3	3,204 fps	40,700 PSI	10.1	3,356 fps	45,400 PSI
	AR2207	.172"	1.715"	11.0	3,226 fps	32,200 PSI	11.8C	3,463 fps	39,300 PSI
25 GR. HDY V-MAX	AR2205	.172"	1.715"	8.5	2,856 fps	40,900 PSI	9.3	3,032 fps	45,700 PSI
	AR2207	.172"	1.715"	10.3	2,983 fps	34,900 PSI	11.1C	3,187 fps	42,500 PSI
	AR2219	.172"	1.715"	12.0	3,091 fps	30,600 PSI	12.8C	3,283 fps	36,200 PSI
30 GR. BER HP	AR2207	.172"	1.715"	10.0	2,815 fps	38,700 PSI	10.8C	3,024 fps	47,300 PSI
	AR2219	.172"	1.715"	11.7	2,853 fps	40,500 PSI	12.5C	3,020 fps	48,000 PSI
				C = Compressed load					
17 Ackley Bee				Case: Winchester (reformed)			Barrel length: 22"		
				Twist: 1:10"			Trim length: 1.325"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
25 GR. HDY HP	AR2205	.172"	1.650"	10.0	2,910 fps	36,500 CUP	11.0	3,131 fps	45,300 CUP
	AR2207	.172"	1.650"	12.5	2,976 fps	32,400 CUP	13.5	3,365 fps	45,300 CUP

# RIFLE DATA

<b>17 Mach IV</b>				Case: Remington (reformed) Twist: 1:10" Primer: WINCHESTER SR			Barrel length: 21.75" Trim length: 1.390"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
25 GR. HDY HP	AR2207	.172"	1.770"	15.0	3,237 fps	36,500 CUP	16.0	3,576 fps	49,800 CUP
<b>17 Remington Fireball</b>				Case: Remington Twist: 1:9" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.400"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>20 GR. HDY V-MAX</b>	AR2207	.172"	1.830"	16.0	3,811 fps	39,200 CUP	17.3	4,037 fps	47,800 CUP
	AR2219	.172"	1.830"	18.0	3,652 fps	37,500 CUP	19.5C	4,019 fps	49,200 CUP
	Bench Mark 2	.172"	1.830"	18.5	3,758 fps	40,300 CUP	20.0C	4,013 fps	49,100 CUP
	Bench Mark 8208	.172"	1.830"	18.0	3,636 fps	33,900 CUP	20.2C	4,038 fps	44,700 CUP
<b>25 GR. HDY HP</b>	AR2207	.172"	1.800"	15.4	3,549 fps	40,500 CUP	17.0	3,789 fps	49,900 CUP
	AR2219	.172"	1.800"	17.0	3,504 fps	38,500 CUP	18.3	3,704 fps	48,900 CUP
	Bench Mark 2	.172"	1.800"	17.5	3,550 fps	41,900 CUP	19.0	3,745 fps	48,500 CUP
	Bench Mark 8208	.172"	1.800"	17.0	3,453 fps	34,900 CUP	19.2	3,854 fps	48,900 CUP
<b>30 GR. BER HP</b>	AR2207	.172"	1.800"	14.9	3,299 fps	42,400 CUP	15.9	3,481 fps	50,400 CUP
	AR2219	.172"	1.800"	16.5	3,295 fps	38,500 CUP	18.0	3,533 fps	49,300 CUP
	Bench Mark 2	.172"	1.800"	17.0	3,307 fps	39,700 CUP	18.7C	3,569 fps	49,400 CUP
	Bench Mark 8208	.172"	1.800"	16.5	3,316 fps	38,400 CUP	18.6	3,634 fps	50,200 CUP
				C = Compressed load					
<b>17-222</b>				Case: Remington (reformed) Twist: 1:10" Primer: WINCHESTER SR			Barrel length: 21.75" Trim length: 1.690"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>25 GR. HDY HP</b>	AR2207	.172"	2.070"	16.2	3,448 fps	42,500 CUP	17.2	3,601 fps	49,800 CUP
	AR2206H	.172"	2.070"	19.5	3,439 fps	39,800 CUP	20.5	3,646 fps	48,000 CUP
	AR2208	.172"	2.070"	19.5	3,400 fps	-	21.0	3,600 fps	-
<b>17-223</b>				Case: Remington (reformed) Twist: 1:10" Primer: WINCHESTER SR			Barrel length: 22" Trim length: 1.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>25 GR. HDY HP</b>	AR2206H	.172"	2.130"	21.0	3,681 fps	-	23.0	3,960 fps	-



# RIFLE DATA

17 Remington				Case: Remington Twist: 1:9" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.786"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
20 GR. HDY V-MAX	AR2219	.172"	2.170"	21.0	3,963 fps	37,500 CUP	23.2	4,292 fps	49,500 CUP
	Bench Mark 2	.172"	2.170"	22.0	3,985 fps	38,000 CUP	24.5	4,342 fps	50,500 CUP
	Bench Mark 8208	.172"	2.170"	24.0	4,138 fps	40,500 CUP	25.5	4,378 fps	48,500 CUP
	AR2206H	.172"	2.170"	23.0	4,037 fps	37,000 CUP	25.5C	4,436 fps	47,500 CUP
	AR2208	.172"	2.170"	23.5	3,936 fps	37,800 CUP	25.5C	4,208 fps	45,200 CUP
25 GR. HDY HP	AR2219	.172"	2.150"	19.5	3,656 fps	40,500 CUP	21.8	3,921 fps	49,700 CUP
	Bench Mark 2	.172"	2.150"	21.5	3,791 fps	43,000 CUP	23.3	4,038 fps	50,600 CUP
	Bench Mark 8208	.172"	2.150"	22.7	3,882 fps	42,800 CUP	24.2	4,072 fps	48,500 CUP
	AR2206H	.172"	2.150"	21.0	3,760 fps	40,500 CUP	23.0	4,033 fps	48,500 CUP
	AR2208	.172"	2.150"	22.0	3,759 fps	39,600 CUP	24.5	4,123 fps	50,800 CUP
25 GR. REM HP	AR2207	.172"	2.120"	15.5	3,530 fps	47,500 PSI	18.5	3,900 fps	60,900 PSI
	Bench Mark 1	.172"	2.120"	17.5	3,535 fps	43,300 PSI	20.5	3,965 fps	61,500 PSI
	AR2209	.172"	2.120"	23.0	3,510 fps	43,500 PSI	25.5C	3,765 fps	51,900 PSI
30 GR. BER HP	AR2219	.172"	2.150"	18.0	3,311 fps	38,700 CUP	20.0	3,594 fps	49,800 CUP
	Bench Mark 2	.172"	2.150"	20.0	3,444 fps	43,200 CUP	22.0	3,709 fps	50,500 CUP
	Bench Mark 8208	.172"	2.150"	21.2	3,527 fps	42,900 CUP	22.6	3,700 fps	48,800 CUP
	AR2206H	.172"	2.150"	20.0	3,495 fps	44,000 CUP	22.0	3,696 fps	49,900 CUP
	AR2208	.172"	2.150"	20.0	3,405 fps	39,700 CUP	22.5	3,742 fps	49,700 CUP
				C = Compressed load					
20 Tactical				Case: Winchester (reformed) Twist: 1:12" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
33 GR. HDY V-MAX	AR2207	.204"	2.245"	20.0	3,434 fps	40,500 PSI	22.5	3,844 fps	55,100 PSI
	AR2219	.204"	2.245"	23.0	3,529 fps	42,900 PSI	25.5	3,852 fps	54,900 PSI
	Bench Mark 2	.204"	2.245"	23.0	3,506 fps	41,900 PSI	25.5	3,844 fps	54,500 PSI
	AR2206H	.204"	2.245"	25.0	3,573 fps	42,700 PSI	27.0C	3,800 fps	50,600 PSI
	AR2208	.204"	2.245"	25.0	3,344 fps	37,900 PSI	27.0C	3,659 fps	49,600 PSI
36 GR. BER HP	AR2207	.204"	2.200"	20.0	3,434 fps	45,000 PSI	22.0	3,675 fps	55,000 PSI
	AR2219	.204"	2.200"	22.0	3,434 fps	44,900 PSI	24.2	3,686 fps	54,500 PSI
	Bench Mark 2	.204"	2.200"	22.0	3,358 fps	42,000 PSI	24.5	3,678 fps	54,400 PSI
	AR2206H	.204"	2.200"	24.0	3,453 fps	42,900 PSI	26.5C	3,746 fps	54,900 PSI
	AR2208	.204"	2.200"	25.0	3,456 fps	45,200 PSI	27.0C	3,681 fps	54,300 PSI
				C = Compressed load					

# RIFLE DATA

204 Ruger				Case: Homady			Barrel length: 24"		
				Twist: 1:12"			Trim length: 1.840"		
				Primer: FEDERAL 205M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
24 GR. HDY NTX	AR2207	.204"	2.290"	22.6	4,294 fps	54,100 PSI	24.0	4,400 fps	56,600 PSI
	AR2219	.204"	2.290"	26.3	4,143 fps	48,700 PSI	28.0	4,358 fps	56,000 PSI
	Bench Mark 2	.204"	2.290"	27.3	4,109 fps	45,500 PSI	29.0	4,373 fps	54,500 PSI
	Bench Mark 8208	.204"	2.290"	27.0	3,997 fps	40,600 PSI	30.0C	4,447 fps	56,000 PSI
	AR2206H	.204"	2.290"	27.0	4,061 fps	43,400 PSI	29.5C	4,423 fps	54,900 PSI
26 GR. BAR VG FB	AR2207	.204"	2.250"	23.0	4,124 fps	54,100 PSI	24.5	4,258 fps	57,300 PSI
	AR2219	.204"	2.250"	25.9	4,055 fps	52,200 PSI	27.5	4,229 fps	57,100 PSI
	Bench Mark 2	.204"	2.250"	27.0	4,036 fps	47,600 PSI	28.7	4,279 fps	56,700 PSI
	Bench Mark 8208	.204"	2.250"	27.7	4,132 fps	48,400 PSI	29.5C	4,309 fps	54,900 PSI
	AR2206H	.204"	2.250"	28.2	4,067 fps	48,900 PSI	30.0C	4,302 fps	57,300 PSI
	AR2208	.204"	2.250"	27.5	3,962 fps	47,500 PSI	30.0C	4,110 fps	51,000 PSI
30 GR. BER FB VAR	AR2207	.204"	2.235"	22.2	3,789 fps	45,100 PSI	24.2	4,073 fps	56,300 PSI
	AR2219	.204"	2.235"	24.5	3,740 fps	44,500 PSI	26.6	4,054 fps	56,700 PSI
	Bench Mark 2	.204"	2.235"	25.7	3,754 fps	44,500 PSI	28.0	4,076 fps	56,800 PSI
	Bench Mark 8208	.204"	2.235"	26.7	3,798 fps	44,500 PSI	28.8	4,118 fps	56,400 PSI
	AR2206H	.204"	2.235"	26.2	3,800 fps	44,500 PSI	28.5	4,124 fps	56,800 PSI
	AR2208	.204"	2.235"	27.1	3,640 fps	41,300 PSI	29.5C	4,028 fps	55,200 PSI
32 GR. HDY V-MAX	AR2219	.204"	2.250"	25.5	3,826 fps	48,300 PSI	27.5	4,030 fps	56,400 PSI
	Bench Mark 2	.204"	2.250"	26.0	3,770 fps	45,500 PSI	28.0	4,047 fps	57,100 PSI
	Bench Mark 8208	.204"	2.250"	27.5	3,917 fps	47,500 PSI	29.0	4,130 fps	56,500 PSI
	AR2206H	.204"	2.250"	27.0	3,669 fps	40,500 PSI	29.0C	3,980 fps	51,100 PSI
	AR2208	.204"	2.250"	27.0	3,557 fps	38,300 PSI	29.0C	3,798 fps	47,400 PSI
35 GR. BER HP	AR2219	.204"	2.240"	24.0	3,586 fps	45,600 PSI	26.3	3,828 fps	55,400 PSI
	Bench Mark 2	.204"	2.240"	25.0	3,590 fps	44,100 PSI	26.6	3,863 fps	56,600 PSI
	Bench Mark 8208	.204"	2.240"	27.0	3,830 fps	50,700 PSI	28.2	3,961 fps	56,300 PSI
	AR2206H	.204"	2.240"	26.0	3,576 fps	42,200 PSI	28.2C	3,910 fps	55,700 PSI
	AR2208	.204"	2.240"	28.0	3,705 fps	48,300 PSI	29.0C	3,812 fps	53,100 PSI
40 GR. HDY V-MAX	AR2219	.204"	2.250"	23.0	3,319 fps	41,500 PSI	25.1	3,639 fps	55,900 PSI
	Bench Mark 2	.204"	2.250"	24.0	3,419 fps	45,200 PSI	25.7	3,646 fps	55,400 PSI
	Bench Mark 8208	.204"	2.250"	26.0	3,586 fps	48,300 PSI	27.3	3,754 fps	56,300 PSI
	AR2206H	.204"	2.250"	26.0	3,500 fps	45,500 PSI	27.7C	3,741 fps	56,000 PSI
	AR2208	.204"	2.250"	26.0	3,395 fps	44,100 PSI	28.1C	3,647 fps	55,100 PSI

# RIFLE DATA

204 Ruger				Case: Hornady			Barrel length: 24"		
				Twist: 1:12"			Trim length: 1.840"		
				Primer: FEDERAL 205M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
50 GR. BER HPBT	AR2219	.204"	2.300"	22.0	3,105 fps	48,300 PSI	23.5	3,252 fps	55,100 PSI
	Bench Mark 2	.204"	2.300"	22.5	3,110 fps	47,800 PSI	24.0	3,256 fps	54,300 PSI
	Bench Mark 8208	.204"	2.300"	23.0	3,129 fps	47,800 PSI	24.9	3,327 fps	56,100 PSI
	AR2206H	.204"	2.300"	24.0	3,167 fps	46,900 PSI	25.7	3,352 fps	56,000 PSI
	AR2208	.204"	2.300"	24.0	3,071 fps	44,900 PSI	26.0	3,287 fps	55,200 PSI
				C = Compressed load					
22 Hornet				Case: Winchester			Barrel length: 24"		
				Twist: 1:16"			Trim length: 1.393"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
30 GR. BAR VG FB	AR2205	.224"	1.750"	10.0	2,321 fps	37,300 CUP	11.7C	2,703 fps	37,600 CUP
35 GR. HDY V-MAX	AR2205	.224"	1.725"	10.5	2,630 fps	35,600 CUP	11.6C	2,896 fps	42,500 CUP
	AR2207	.224"	1.725"	10.5	2,223 fps	23,100 CUP	11.5C	2,420 fps	26,300 CUP
40 GR. SPR SP	AR2205	.224"	1.725"	9.0	2,421 fps	39,900 CUP	10.2	2,567 fps	43,000 CUP
	AR2207	.224"	1.725"	10.5	2,253 fps	26,100 CUP	11.5C	2,488 fps	32,800 CUP
45 GR. BAR XBT	AR2205	.224"	1.850"	8.5	2,198 fps	37,000 CUP	9.8	2,346 fps	42,700 CUP
	AR2207	.224"	1.850"	10.5	2,217 fps	31,500 CUP	11.5C	2,390 fps	36,900 CUP
45 GR. HDY SP	AR2205	.224"	1.750"	8.5	2,312 fps	39,900 CUP	9.8	2,484 fps	42,000 CUP
	AR2207	.224"	1.750"	10.5	2,239 fps	28,000 CUP	11.5C	2,400 fps	32,000 CUP
50 GR. SIE SP	AR2205	.224"	1.850"	8.4	2,131 fps	39,700 CUP	9.4	2,256 fps	41,800 CUP
	AR2207	.224"	1.850"	10.5	2,102 fps	28,200 CUP	11.5C	2,296 fps	34,100 CUP
53 GR. BAR XFB	AR2205	.224"	1.850"	8.0	1,887 fps	37,600 CUP	8.7	2,062 fps	43,000 CUP
	AR2207	.224"	1.850"	10.0	2,025 fps	31,600 CUP	11.0C	2,165 fps	40,600 CUP
55 GR. HDY SP	AR2205	.224"	1.850"	8.0	1,915 fps	41,800 CUP	9.0	2,095 fps	43,000 CUP
	AR2207	.224"	1.850"	10.0	1,955 fps	30,000 CUP	11.5C	2,273 fps	41,000 CUP
				C = Compressed load					
22 K Hornet				Case: Winchester (reformed)			Barrel length: 24"		
				Twist: 1:14"			Trim length: 1.393"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
30 GR. BAR VG FB	AR2205	.224"	1.750"	10.8	2,241 fps	27,300 CUP	12.0C	2,569 fps	30,600 CUP
35 GR. HDY V-MAX	AR2205	.224"	1.725"	11.0	2,809 fps	39,500 CUP	12.3	3,023 fps	46,000 CUP
40 GR. NOS BT	AR2205	.224"	1.900"	11.0	2,684 fps	37,500 CUP	12.2C	2,871 fps	45,500 CUP

# RIFLE DATA

22 K Hornet				Case: Winchester (reformed) Twist: 1:14" Primer: WINCHESTER SR			Barrel length: 24" Trim length: 1.393"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
45 GR. BAR XBT	AR2205	.224"	1.850"	10.5	2,524 fps	40,900 CUP	11.3	2,633 fps	45,300 CUP
45 GR. SPR SP	AR2205	.224"	1.750"	10.7	2,574 fps	40,700 CUP	11.7	2,747 fps	45,500 CUP
50 GR. SIE BK	AR2205	.224"	1.900"	10.0	2,398 fps	40,200 CUP	11.0	2,538 fps	45,700 CUP
	AR2207	.224"	1.900"	11.5	2,246 fps	30,100 CUP	12.5C	2,460 fps	38,700 CUP
53 GR. BAR XFB	AR2205	.224"	1.850"	9.5	2,208 fps	39,000 CUP	10.5	2,366 fps	45,900 CUP
	AR2207	.224"	1.850"	11.2	2,195 fps	30,200 CUP	12.5C	2,386 fps	42,600 CUP
55 GR. HDY SP	AR2205	.224"	1.850"	10.0	2,315 fps	43,400 CUP	11.0	2,445 fps	46,100 CUP
	AR2207	.224"	1.850"	11.5	2,223 fps	31,100 CUP	12.5C	2,388 fps	39,400 CUP
				C = Compressed load					
218 Bee				Case: Winchester Twist: 1:16" Primer: WINCHESTER SR			Barrel length: 24" Trim length: 1.335"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
30 GR. BAR VG FB	AR2205	.224"	1.680"	10.1	2,521 fps	29,200 CUP	12.4	2,914 fps	38,400 CUP
35 GR. HDY V-MAX	AR2205	.224"	1.650"	11.0	2,656 fps	30,400 CUP	13.3	3,035 fps	38,300 CUP
40 GR. SIE BK	AR2205	.224"	1.820"	11.0	2,608 fps	33,800 CUP	12.8	2,865 fps	38,700 CUP
46 GR. SPR JFP	AR2205	.224"	1.670"	9.0	2,143 fps	23,300 CUP	10.7	2,424 fps	38,200 CUP
	AR2207	.224"	1.670"	13.5	2,417 fps	26,700 CUP	15.0C	2,708 fps	37,200 CUP
50 GR. NOS BT	AR2205	.224"	1.900"	9.5	2,195 fps	29,500 CUP	10.8	2,421 fps	38,400 CUP
	AR2207	.224"	1.900"	13.5	2,420 fps	29,500 CUP	14.9C	2,654 fps	38,500 CUP
				C = Compressed load					
221 Remington Fireball				Case: Remington Twist: 1:14" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.390"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
30 GR. BAR VG FN	AR2205	.224"	1.790"	15.7	3,327 fps	45,400 CUP	17.1	3,491 fps	49,100 CUP
	AR2207	.224"	1.790"	18.0	3,242 fps	31,900 CUP	20.0C	3,636 fps	42,200 CUP
35 GR. HDY V-MAX	AR2205	.224"	1.745"	14.8	3,110 fps	37,500 CUP	16.5	3,403 fps	50,600 CUP
	AR2207	.224"	1.745"	18.0	3,056 fps	31,900 CUP	20.0C	3,423 fps	44,700 CUP
36 GR. BAR VG FB	AR2205	.224"	1.830"	15.5	3,081 fps	41,300 CUP	16.7	3,264 fps	49,100 CUP
	AR2207	.224"	1.830"	18.0	3,177 fps	35,000 CUP	19.0C	3,361 fps	41,500 CUP



# RIFLE DATA

221 Remington Fireball				Case: Remington			Barrel length: 24"		
				Twist: 1:14"			Trim length: 1.390"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
40 GR. NOS BT	AR2205	.224"	1.830"	14.5	3,042 fps	43,100 CUP	16.0	3,251 fps	50,200 CUP
	AR2207	.224"	1.830"	17.0	2,851 fps	30,000 CUP	19.0C	3,195 fps	40,300 CUP
	AR2219	.224"	1.830"	19.7	2,883 fps	33,200 CUP	21.0C	3,087 fps	39,100 CUP
45 GR. BAR X	AR2205	.224"	1.830"	13.8	2,848 fps	43,500 CUP	15.3	3,015 fps	48,600 CUP
	AR2207	.224"	1.830"	17.6	2,934 fps	37,200 CUP	19.5C	3,184 fps	46,500 CUP
	AR2219	.224"	1.830"	19.0	2,762 fps	31,600 CUP	20.5C	2,978 fps	39,900 CUP
45 GR. SIE SPT	AR2205	.224"	1.800"	14.0	2,872 fps	40,900 CUP	15.7	3,078 fps	49,100 CUP
	AR2207	.224"	1.800"	17.5	2,851 fps	31,700 CUP	19.5C	3,178 fps	43,700 CUP
	AR2219	.224"	1.800"	19.0	2,767 fps	31,400 CUP	20.5C	2,955 fps	37,000 CUP
50 GR. SPR TNT HP	AR2205	.224"	1.830"	13.0	2,629 fps	36,500 CUP	14.8	2,901 fps	51,200 CUP
	AR2207	.224"	1.830"	16.5	2,661 fps	27,800 CUP	18.5C	2,996 fps	40,800 CUP
	AR2219	.224"	1.830"	19.0	2,703 fps	31,600 CUP	21.0C	2,968 fps	40,100 CUP
52 GR. SIE HPBT	AR2205	.224"	1.830"	13.0	2,612 fps	40,900 CUP	14.5	2,798 fps	48,100 CUP
	AR2207	.224"	1.830"	16.7	2,692 fps	33,700 CUP	18.5C	2,967 fps	45,300 CUP
	AR2219	.224"	1.830"	18.9	2,693 fps	35,100 CUP	21.0C	2,987 fps	46,800 CUP
55 GR. HDY SPSX	AR2205	.224"	1.830"	13.5	2,643 fps	48,100 CUP	14.5	2,742 fps	49,300 CUP
	AR2207	.224"	1.830"	16.7	2,655 fps	34,100 CUP	18.5	2,922 fps	46,800 CUP
	AR2219	.224"	1.830"	18.9	2,681 fps	36,000 CUP	21.0C	2,944 fps	48,200 CUP
				C = Compressed load					
222 Remington				Case: Winchester			Barrel length: 24"		
				Twist: 1:14"			Trim length: 1.690"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
30 GR. BAR VG	AR2205	.224"	2.040"	15.7	3,268 fps	40,000 PSI	17.6	3,567 fps	48,400 PSI
	AR2207	.224"	2.040"	20.3	3,500 fps	37,400 PSI	21.9	3,817 fps	48,500 PSI
	AR2219	.224"	2.040"	23.3	3,535 fps	40,300 PSI	25.5C	3,817 fps	49,400 PSI
	Bench Mark 2	.224"	2.040"	23.2	3,332 fps	35,500 PSI	25.2C	3,628 fps	44,200 PSI
	Bench Mark 8208	.224"	2.040"	23.0	3,234 fps	34,900 PSI	25.0C	3,522 fps	42,700 PSI
35 GR. HDY V-MAX	AR2205	.224"	2.025"	15.0	3,095 fps	38,100 CUP	17.2	3,342 fps	43,000 CUP
	AR2207	.224"	2.025"	20.5	3,366 fps	36,500 CUP	22.0	3,591 fps	43,300 CUP
	AR2219	.224"	2.025"	23.5	3,316 fps	36,500 CUP	25.2C	3,591 fps	45,600 CUP
	Bench Mark 2	.224"	2.025"	23.5	3,138 fps	33,700 CUP	25.0C	3,368 fps	40,900 CUP
	Bench Mark 8208	.224"	2.025"	23.0	3,181 fps	32,000 PSI	25.0C	3,464 fps	40,500 PSI

# RIFLE DATA

222 Remington				Case: Winchester			Barrel length: 24"		
				Twist: 1:14"			Trim length: 1.690"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
35 GR. NOS BT LF	AR2207	.224"	2.130"	19.3	3,472 fps	44,800 PSI	20.5	3,612 fps	47,300 PSI
	AR2219	.224"	2.130"	21.6	3,290 fps	39,700 PSI	23.2	3,527 fps	47,600 PSI
	Bench Mark 2	.224"	2.130"	22.5	3,316 fps	34,600 PSI	25.0C	3,665 fps	48,600 PSI
	Bench Mark 8208	.224"	2.130"	22.1	3,096 fps	32,500 PSI	24.5C	3,516 fps	42,200 PSI
36 GR. BAR VG FB	AR2207	.224"	2.150"	19.3	3,277 fps	40,500 PSI	20.5	3,470 fps	46,700 PSI
	AR2219	.224"	2.150"	22.3	3,331 fps	41,400 PSI	23.7	3,535 fps	47,500 PSI
	Bench Mark 2	.224"	2.150"	22.0	3,178 fps	38,500 PSI	24.0C	3,471 fps	48,300 PSI
	Bench Mark 8208	.224"	2.150"	22.0	3,144 fps	36,700 PSI	25.0C	3,582 fps	40,400 PSI
40 GR. HDY V-MAX	AR2205	.224"	2.132"	15.0	2,840 fps	25,550 PSI	19.2	3,480 fps	49,550 PSI
	AR2207	.224"	2.132"	19.0	3,020 fps	26,100 PSI	22.0	3,605 fps	49,900 PSI
	Bench Mark 1	.224"	2.132"	21.0	3,030 fps	28,500 PSI	23.5	3,525 fps	49,400 PSI
	Bench Mark 2	.224"	2.132"	22.0	2,985 fps	28,350 PSI	25.5C	3,535 fps	49,500 PSI
	AR2206	.224"	2.132"	23.0	3,060 fps	31,100 PSI	24.5C	3,365 fps	40,600 PSI
	AR2208	.224"	2.132"	23.0	2,930 fps	26,800 PSI	25.0C	3,195 fps	34,300 PSI
40 GR. SIE HP	AR2205	.224"	2.125"	14.0	2,984 fps	38,100 PSI	16.0	3,240 fps	45,200 PSI
	AR2207	.224"	2.125"	19.5	3,201 fps	35,200 CUP	21.4	3,480 fps	45,700 CUP
	AR2219	.224"	2.125"	20.7	2,966 fps	31,700 CUP	23.0	3,313 fps	44,000 CUP
	Bench Mark 2	.224"	2.125"	23.5	3,110 fps	34,800 CUP	25.0	3,303 fps	40,700 CUP
	Bench Mark 8208	.224"	2.125"	22.5	3,049 fps	30,400 PSI	25.0C	3,452 fps	42,800 PSI
	AR2206H	.224"	2.125"	20.0	2,572 fps	23,300 CUP	24.0C	3,133 fps	34,200 CUP
45 GR. HDY SP	AR2205	.224"	2.132"	14.0	2,650 fps	27,750 PSI	18.0	3,250 fps	49,900 PSI
	AR2207	.224"	2.132"	19.0	3,000 fps	33,000 PSI	21.5	3,385 fps	47,100 PSI
	Bench Mark 1	.224"	2.132"	21.0	3,000 fps	33,300 PSI	23.5	3,345 fps	46,300 PSI
45 GR. SPR SP	AR2205	.224"	2.130"	11.0	2,259 fps	24,300 CUP	14.5	2,863 fps	46,100 CUP
	AR2207	.224"	2.130"	18.9	3,011 fps	33,400 CUP	21.0	3,315 fps	44,800 CUP
	AR2219	.224"	2.130"	20.5	2,914 fps	34,600 CUP	22.5	3,173 fps	43,600 CUP
	Bench Mark 2	.224"	2.130"	23.0	3,092 fps	39,700 CUP	24.5	3,290 fps	44,900 CUP
	Bench Mark 8208	.224"	2.130"	22.2	3,121 fps	38,700 PSI	23.6	3,327 fps	47,200 PSI
	AR2206H	.224"	2.130"	20.0	2,510 fps	25,000 CUP	23.8C	3,080 fps	35,900 CUP
50 GR. HDY SP	AR2207	.224"	2.130"	18.5	2,890 fps	34,000 CUP	20.5	3,160 fps	44,200 CUP
	Bench Mark 1	.224"	2.132"	20.0	2,830 fps	32,000 PSI	22.5	3,220 fps	47,500 PSI
	AR2219	.224"	2.130"	20.2	2,810 fps	33,300 CUP	22.2	3,079 fps	43,200 CUP
	Bench Mark 2	.224"	2.130"	22.5	2,994 fps	39,200 CUP	24.0	3,168 fps	45,800 CUP
	Bench Mark 8208	.224"	2.130"	21.9	3,006 fps	39,200 PSI	23.3	3,201 fps	47,100 PSI
	AR2206H	.224"	2.130"	20.0	2,466 fps	23,900 CUP	23.8C	3,022 fps	36,500 CUP
	AR2208	.224"	2.130"	23.0	2,884 fps	33,600 CUP	25.0C	3,114 fps	40,600 CUP

# RIFLE DATA

222 Remington				Case: Winchester			Barrel length: 24"		
				Twist: 1:14"			Trim length: 1.690"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
52 GR. HDY HPBT	AR2207	.224"	2.205"	18.0	2,850 fps	36,800 PSI	20.3	3,185 fps	50,000 PSI
	Bench Mark 1	.224"	2.205"	20.0	2,840 fps	36,400 PSI	22.0	3,130 fps	49,100 PSI
	Bench Mark 2	.224"	2.205"	21.0	2,725 fps	32,500 PSI	23.4	3,135 fps	49,250 PSI
	AR2208	.224"	2.205"	22.0	2,680 fps	30,100 PSI	25.0C	3,140 fps	46,800 PSI
53 GR. HDY HP	AR2205	.224"	2.200"	16.0	2,830 fps	42,200 PSI	17.0	2,990 fps	50,000 PSI
	AR2207	.224"	2.140"	17.5	2,800 fps	35,300 CUP	19.5	3,038 fps	45,500 CUP
	Bench Mark 1	.224"	2.200"	20.5	2,890 fps	42,500 PSI	21.6	3,060 fps	49,800 PSI
	AR2219	.224"	2.140"	19.3	2,724 fps	34,900 CUP	21.5	3,005 fps	46,000 CUP
	Bench Mark 2	.224"	2.140"	21.5	2,852 fps	38,800 CUP	23.0	3,063 fps	45,500 CUP
	Bench Mark 8208	.224"	2.140"	21.4	2,844 fps	36,100 PSI	22.8	3,117 fps	48,200 PSI
	AR2206H	.224"	2.140"	20.0	2,585 fps	27,800 CUP	23.5C	3,043 fps	41,600 CUP
	AR2208	.224"	2.140"	23.0	2,863 fps	33,500 CUP	25.0C	3,097 fps	42,700 CUP
55 GR. NOS BT	Bench Mark 1	.224"	2.145"	20.0	2,845 fps	38,800 PSI	22.0	3,055 fps	48,900 PSI
	AR2206	.224"	2.145"	22.0	2,850 fps	36,700 PSI	23.7	3,125 fps	49,800 PSI
55 GR. SPR SP	AR2207	.224"	2.130"	17.5	2,733 fps	33,400 CUP	19.5	3,017 fps	45,300 CUP
	AR2219	.224"	2.130"	19.0	2,654 fps	31,600 CUP	21.2	2,953 fps	45,100 CUP
	Bench Mark 2	.224"	2.130"	21.5	2,843 fps	38,100 CUP	23.2	3,052 fps	45,100 CUP
	Bench Mark 8208	.224"	2.130"	21.8	2,905 fps	38,400 PSI	23.2C	3,120 fps	48,500 PSI
	AR2206H	.224"	2.130"	20.0	2,569 fps	28,900 CUP	23.5C	3,023 fps	39,900 CUP
	AR2208	.224"	2.130"	23.0	2,860 fps	34,500 CUP	25.0C	3,095 fps	43,000 CUP
60 GR. HDY V-MAX	AR2207	.224"	2.160"	16.9	2,633 fps	36,100 CUP	18.0	2,771 fps	42,400 CUP
	AR2219	.224"	2.160"	19.0	2,592 fps	34,800 CUP	20.7	2,818 fps	42,900 CUP
	Bench Mark 2	.224"	2.160"	19.7	2,627 fps	35,900 CUP	21.0	2,805 fps	42,800 CUP
	Bench Mark 8208	.224"	2.160"	20.5	2,737 fps	39,200 PSI	21.8	2,920 fps	48,200 PSI
	AR2206H	.224"	2.160"	21.7	2,802 fps	38,500 CUP	23.1C	2,937 fps	43,500 CUP
	AR2208	.224"	2.160"	22.0	2,734 fps	36,600 CUP	23.5C	2,906 fps	42,800 CUP
63 GR. SIE SP	AR2207	.224"	2.125"	16.9	2,597 fps	36,200 CUP	18.8	2,793 fps	43,800 CUP
	AR2219	.224"	2.125"	18.6	2,531 fps	33,600 CUP	20.7	2,780 fps	44,400 CUP
	Bench Mark 2	.224"	2.125"	21.0	2,732 fps	39,000 CUP	22.5	2,903 fps	45,700 CUP
	Bench Mark 8208	.224"	2.125"	20.2	2,681 fps	39,300 PSI	21.5	2,865 fps	48,400 PSI
	AR2206H	.224"	2.125"	20.0	2,537 fps	30,300 CUP	23.5C	2,965 fps	45,500 CUP
	AR2208	.224"	2.125"	22.0	2,718 fps	34,500 CUP	24.0C	2,935 fps	43,800 CUP

C = Compressed load

# RIFLE DATA

223 Remington				Case: Winchester			Barrel length: 24"		
				Twist: 1:12"			Trim length: 1.750"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
35 GR. NOS BT LF	AR2207	.224"	2.280"	20.4	3,599 fps	45,100 PSI	21.7	3,780 fps	52,000 PSI
	AR2219	.224"	2.280"	24.3	3,610 fps	43,800 PSI	25.8	3,771 fps	50,600 PSI
	Bench Mark 2	.224"	2.280"	24.5	3,555 fps	42,700 PSI	27.2C	3,851 fps	52,900 PSI
	Bench Mark 8208	.224"	2.280"	25.2	3,560 fps	41,100 PSI	28.0C	3,891 fps	53,400 PSI
	AR2206H	.224"	2.280"	24.3	3,522 fps	39,600 PSI	27.0C	3,891 fps	53,000 PSI
	AR2208	.224"	2.280"	25.2	3,424 fps	38,500 PSI	28.0C	3,751 fps	49,300 PSI
36 GR. BAR VG FB	AR2207	.224"	2.200"	21.1	3,511 fps	36,800 PSI	22.5	3,723 fps	51,800 PSI
	AR2219	.224"	2.200"	24.2	3,523 fps	44,300 PSI	25.7	3,721 fps	52,700 PSI
	Bench Mark 2	.224"	2.200"	24.4	3,508 fps	44,100 PSI	26.0	3,702 fps	50,800 PSI
	Bench Mark 8208	.224"	2.200"	25.4	3,548 fps	44,500 PSI	27.0C	3,728 fps	50,600 PSI
	AR2206H	.224"	2.200"	25.5	3,487 fps	36,500 PSI	27.3C	3,755 fps	49,200 PSI
	AR2208	.224"	2.200"	24.8	3,278 fps	37,000 PSI	27.5C	3,593 fps	47,300 PSI
40 GR. HDY V-MAX	AR2205	.224"	2.205"	17.0	3,080 fps	34,700 PSI	20.0	3,545 fps	49,500 PSI
	AR2207	.224"	2.205"	21.0	3,245 fps	35,650 PSI	24.0	3,755 fps	54,100 PSI
	Bench Mark 1	.224"	2.205"	24.0	3,350 fps	39,800 PSI	26.0	3,695 fps	52,800 PSI
	Bench Mark 2	.224"	2.205"	25.0	3,265 fps	37,750 PSI	27.5C	3,690 fps	52,650 PSI
	AR2206	.224"	2.205"	25.0	3,260 fps	36,200 PSI	27.5C	3,690 fps	51,200 PSI
	AR2208	.224"	2.205"	25.0	3,055 fps	31,700 PSI	27.5C	3,460 fps	43,300 PSI
40 GR. NOS BT	AR2207	.224"	2.280"	20.5	3,147 fps	29,400 CUP	22.5	3,601 fps	49,600 CUP
	AR2219	.224"	2.280"	23.5	3,376 fps	34,600 CUP	25.5	3,574 fps	48,000 CUP
	Bench Mark 2	.224"	2.280"	25.3	3,404 fps	39,600 CUP	27.3	3,666 fps	51,000 CUP
	Bench Mark 8208	.224"	2.280"	25.0	3,433 fps	41,500 PSI	26.7C	3,659 fps	50,400 PSI
	AR2206H	.224"	2.280"	25.0	3,204 fps	32,100 CUP	27.5C	3,573 fps	44,500 CUP
	AR2208	.224"	2.280"	25.0	3,310 fps	34,400 CUP	28.0C	3,674 fps	47,200 CUP
45 GR. SFIRE	AR2207	.224"	2.220"	19.0	3,097 fps	40,200 PSI	21.8	3,414 fps	51,400 PSI
	AR2219	.224"	2.220"	22.0	3,088 fps	38,900 PSI	24.6C	3,399 fps	50,800 PSI
	Bench Mark 2	.224"	2.220"	22.5	3,130 fps	39,600 PSI	25.0	3,410 fps	51,000 PSI
	Bench Mark 8208	.224"	2.220"	23.0	3,124 fps	38,800 PSI	26.0C	3,491 fps	52,100 PSI
45 GR. SIE SP	AR2207	.224"	2.240"	20.0	3,009 fps	28,800 CUP	22.0	3,472 fps	49,100 CUP
	AR2219	.224"	2.240"	23.0	3,164 fps	36,000 CUP	25.0	3,424 fps	47,400 CUP
	Bench Mark 2	.224"	2.240"	25.3	3,327 fps	41,100 CUP	27.3	3,554 fps	51,100 CUP
	Bench Mark 8208	.224"	2.240"	24.5	3,287 fps	41,700 PSI	26.8	3,550 fps	52,000 PSI
	AR2206H	.224"	2.240"	25.0	3,211 fps	33,800 CUP	27.5C	3,454 fps	43,400 CUP
	AR2208	.224"	2.240"	25.0	3,071 fps	30,200 CUP	28.0C	3,477 fps	43,700 CUP



# RIFLE DATA

223 Remington				Case: Winchester			Barrel length: 24"		
				Twist: 1:12"			Trim length: 1.750"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
50 GR. HDY SP	AR2207	.224"	2.186"	19.0	2,955 fps	38,250 PSI	22.5	3,380 fps	54,600 PSI
	Bench Mark 1	.224"	2.186"	22.0	3,050 fps	40,200 PSI	24.5	3,340 fps	52,000 PSI
	Bench Mark 2	.224"	2.186"	24.0	3,045 fps	42,200 PSI	26.3	3,410 fps	54,500 PSI
	AR2206	.224"	2.186"	23.0	2,975 fps	36,900 PSI	26.5C	3,455 fps	55,000 PSI
	AR2208	.224"	2.186"	24.0	2,910 fps	35,300 PSI	27.5C	3,410 fps	54,000 PSI
50 GR. SPR SP	AR2207	.224"	2.210"	19.5	3,023 fps	32,400 CUP	21.5	3,223 fps	45,900 CUP
	AR2219	.224"	2.210"	22.0	3,018 fps	36,500 CUP	24.0	3,301 fps	49,300 CUP
	Bench Mark 2	.224"	2.210"	24.0	3,139 fps	38,600 CUP	26.5	3,396 fps	50,400 CUP
	Bench Mark 8208	.224"	2.210"	23.5	3,111 fps	40,500 PSI	25.8	3,407 fps	53,300 PSI
	AR2206H	.224"	2.210"	25.0	3,200 fps	38,300 CUP	27.5C	3,468 fps	51,300 CUP
	AR2208	.224"	2.210"	26.5	3,242 fps	40,800 CUP	27.5C	3,383 fps	44,800 CUP
52 GN. SIE HPBT	AR2207	.224"	2.250"	19.0	2,880 fps	34,900 PSI	22.5	3,315 fps	53,850 PSI
	Bench Mark 1	.224"	2.250"	21.0	2,925 fps	37,150 PSI	24.5	3,340 fps	54,650 PSI
	Bench Mark 2	.224"	2.250"	23.0	2,960 fps	37,450 PSI	26.2	3,365 fps	54,850 PSI
	AR2208	.224"	2.250"	24.0	2,905 fps	35,100 PSI	27.0C	3,330 fps	51,900 PSI
53 GR. SIE HP	AR2207	.224"	2.200"	19.5	2,986 fps	34,200 CUP	21.5	3,188 fps	46,700 CUP
	AR2219	.224"	2.200"	21.5	2,912 fps	39,200 CUP	23.5	3,183 fps	48,900 CUP
	Bench Mark 2	.224"	2.200"	24.0	3,102 fps	39,900 CUP	26.0	3,308 fps	49,800 CUP
	Bench Mark 8208	.224"	2.200"	23.0	3,032 fps	41,400 PSI	25.4	3,310 fps	53,400 PSI
	AR2206H	.224"	2.200"	25.0	3,166 fps	37,400 CUP	27.0C	3,383 fps	48,600 CUP
	AR2208	.224"	2.200"	24.0	3,026 fps	38,400 CUP	27.0C	3,389 fps	47,900 CUP
55 GR. BAR TSX FB	AR2219	.224"	2.180"	21.0	2,953 fps	48,600 PSI	22.4	3,083 fps	51,300 PSI
	Bench Mark 2	.224"	2.180"	20.0	2,885 fps	47,600 PSI	22.2	3,066 fps	52,200 PSI
	Bench Mark 8208	.224"	2.180"	21.5	2,949 fps	47,600 PSI	23.0	3,105 fps	52,900 PSI
	AR2206H	.224"	2.180"	21.0	2,910 fps	43,700 PSI	22.6	3,110 fps	51,500 PSI
	AR2208	.224"	2.180"	22.8	2,996 fps	47,600 PSI	24.0C	3,134 fps	53,300 PSI
55 GR. HDY FMJ	Trail Boss *	.224"	2.200"	-	-	-	4.0	1,074 fps	-
	AS30N *	.224"	2.200"	-	-	-	3.2	1,060 fps	3,700 CUP
55 GR. SFIRE	AR2207	.224"	2.220"	18.0	2,852 fps	42,700 PSI	20.4	3,084 fps	51,400 PSI
	AR2219	.224"	2.220"	21.0	2,894 fps	42,800 PSI	23.1	3,113 fps	51,700 PSI
	Bench Mark 2	.224"	2.220"	21.0	2,903 fps	42,600 PSI	23.4	3,128 fps	51,000 PSI
	AR2206H	.224"	2.220"	22.0	2,941 fps	40,600 PSI	24.6C	3,226 fps	53,500 PSI
	AR2208	.224"	2.220"	23.5	2,990 fps	45,200 PSI	25.1C	3,149 fps	51,700 PSI

# RIFLE DATA

223 Remington				Case: Winchester Twist: 1:12" Primer: WINCHESTER SR			Barrel length: 24" Trim length: 1.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. SPR SP	AR2207	.224"	2.200"	19.0	2,841 fps	34,800 CUP	21.0	3,150 fps	47,600 CUP
	AR2219	.224"	2.200"	21.0	2,841 fps	38,600 CUP	23.0	3,106 fps	48,900 CUP
	Bench Mark 2	.224"	2.200"	24.0	3,113 fps	42,600 CUP	25.6	3,264 fps	50,000 CUP
	Bench Mark 8208	.224"	2.200"	23.0	3,024 fps	42,100 PSI	25.3	3,268 fps	53,100 PSI
	AR2206H	.224"	2.200"	25.0	3,176 fps	39,700 CUP	26.0	3,315 fps	49,000 CUP
	AR2208	.224"	2.200"	25.5	3,174 fps	41,300 CUP	27.5C	3,384 fps	49,700 CUP
60 GR. HDY V-MAX	AR2207	.224"	2.250"	18.0	2,747 fps	42,500 CUP	20.0	2,953 fps	47,600 CUP
	AR2219	.224"	2.250"	22.0	2,873 fps	40,300 CUP	23.5	3,063 fps	49,800 CUP
	Bench Mark 2	.224"	2.250"	23.0	2,913 fps	42,500 CUP	24.6	3,086 fps	49,900 CUP
	Bench Mark 8208	.224"	2.250"	21.5	2,857 fps	43,500 PSI	23.6	3,057 fps	51,700 PSI
	AR2206H	.224"	2.250"	24.0	2,918 fps	37,600 CUP	26.0C	3,174 fps	50,100 CUP
	AR2208	.224"	2.250"	25.0	2,924 fps	40,400 CUP	27.0C	3,159 fps	51,900 CUP
62 GR. SFT SCIR	AR2219	.224"	2.260"	19.5	2,717 fps	45,400 PSI	21.2	2,904 fps	52,300 PSI
	Bench Mark 2	.224"	2.260"	20.8	2,755 fps	45,400 PSI	22.7	2,948 fps	52,800 PSI
	Bench Mark 8208	.224"	2.260"	21.4	2,787 fps	43,400 PSI	23.2	2,999 fps	53,000 PSI
	AR2206H	.224"	2.260"	21.0	2,740 fps	42,300 PSI	23.0	3,004 fps	53,000 PSI
	AR2208	.224"	2.260"	22.1	2,773 fps	44,700 PSI	24.1	2,974 fps	52,600 PSI
63 GR. SIE SP	AR2207	.224"	2.200"	18.0	2,680 fps	33,600 CUP	20.0	2,846 fps	44,600 CUP
	AR2219	.224"	2.200"	20.0	2,672 fps	38,100 CUP	22.0	2,862 fps	48,400 CUP
	Bench Mark 2	.224"	2.200"	22.0	2,845 fps	41,800 CUP	24.2	3,066 fps	50,500 CUP
	Bench Mark 8208	.224"	2.200"	21.0	2,783 fps	43,000 PSI	23.1	2,995 fps	52,400 PSI
	AR2206H	.224"	2.200"	23.5	2,831 fps	43,300 CUP	25.5	3,078 fps	50,000 CUP
	AR2208	.224"	2.200"	24.5	3,000 fps	42,400 CUP	26.4C	3,199 fps	50,700 CUP
69 GR. SIE HPBT	AR2219	.224"	2.235"	21.0	2,746 fps	40,500 CUP	23.0	2,932 fps	49,400 CUP
	Bench Mark 2	.224"	2.235"	21.5	2,770 fps	39,700 CUP	23.5	2,970 fps	49,700 CUP
	Bench Mark 8208	.224"	2.235"	21.0	2,696 fps	42,200 PSI	23.8	2,959 fps	52,900 PSI
	AR2206H	.224"	2.235"	24.0	2,870 fps	41,100 CUP	26.0C	3,069 fps	49,700 CUP
	AR2208	.224"	2.235"	24.0	2,784 fps	39,200 CUP	26.0C	3,010 fps	50,200 CUP
70 GR. SPR SP	AR2219	.224"	2.140"	19.0	2,515 fps	37,500 CUP	23.0	2,962 fps	51,200 CUP
	Bench Mark 2	.224"	2.140"	20.5	2,665 fps	45,200 CUP	22.8	2,869 fps	51,000 CUP
	Bench Mark 8208	.224"	2.140"	20.0	2,621 fps	44,100 PSI	21.8	2,797 fps	52,800 PSI
	AR2206H	.224"	2.140"	23.0	2,782 fps	40,400 CUP	25.0	2,997 fps	50,500 CUP
	AR2208	.224"	2.140"	23.5	2,827 fps	41,000 CUP	26.0C	3,024 fps	48,400 CUP

# RIFLE DATA

<b>223 Remington</b>				Case: Winchester			Barrel length: 24"		
				Twist: 1:12"			Trim length: 1.750"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>75 GR. JLK VLD</b>	AR2219	.224"	2.250"	20.0	2,594 fps	40,700 CUP	22.0	2,785 fps	48,100 CUP
	Bench Mark 2	.224"	2.250"	21.5	2,610 fps	41,900 CUP	23.5	2,829 fps	49,400 CUP
	Bench Mark 8208	.224"	2.250"	20.0	2,538 fps	40,800 PSI	22.7	2,804 fps	53,900 PSI
	AR2206H	.224"	2.250"	22.5	2,696 fps	39,900 CUP	24.5	2,905 fps	50,000 CUP
	AR2208	.224"	2.250"	22.5	2,693 fps	40,600 CUP	25.0C	2,907 fps	48,400 CUP
<b>77 GR. SIE HPBT</b>	AR2219	.224"	2.260"	20.0	2,578 fps	44,900 CUP	21.8	2,721 fps	50,900 CUP
	Bench Mark 2	.224"	2.260"	20.5	2,523 fps	37,400 CUP	22.8	2,763 fps	50,000 CUP
	Bench Mark 8208	.224"	2.260"	20.5	2,535 fps	41,800 PSI	23.2	2,792 fps	55,000 PSI
	AR2206H	.224"	2.260"	20.0	2,474 fps	40,300 CUP	22.6C	2,727 fps	50,200 CUP
	AR2208	.224"	2.260"	21.0	2,528 fps	42,700 CUP	23.7C	2,737 fps	50,700 CUP
<b>80 GR. SIE MK</b>	AR2219	.224"	2.550"	20.0	2,546 fps	40,700 CUP	22.0	2,744 fps	49,000 CUP
	Bench Mark 2	.224"	2.550"	20.5	2,525 fps	43,900 CUP	22.5	2,700 fps	49,600 CUP
	Bench Mark 8208	.224"	2.550"	19.0	2,456 fps	44,400 PSI	21.0	2,628 fps	52,900 PSI
	AR2206H	.224"	2.550"	21.5	2,578 fps	40,100 CUP	24.0	2,825 fps	50,000 CUP
	AR2208	.224"	2.550"	22.0	2,547 fps	40,300 CUP	25.0C	2,869 fps	51,500 CUP
<b>82 GR. BER BT TARG</b>	Bench Mark 8208	.224"	2.375"	18.4	2,392 fps	44,440 PSI	19.9	2,554 fps	52,100 PSI
	AR2206H	.224"	2.375"	18.9	2,448 fps	46,500 PSI	20.4	2,585 fps	52,700 PSI
	AR2208	.224"	2.375"	20.0	2,417 fps	44,000 PSI	21.5	2,590 fps	52,800 PSI
<b>90 GR. SIE HPBT</b>	Bench Mark 8208	.224"	2.380"	18.0	2,270 fps	45,600 PSI	19.6	2,419 fps	52,800 PSI
	AR2206H	.224"	2.380"	20.0	2,352 fps	47,500 PSI	21.5	2,481 fps	53,500 PSI
	AR2208	.224"	2.380"	21.0	2,332 fps	46,700 PSI	22.3C	2,447 fps	52,100 PSI
* Subsonic load				C = Compressed load					
<b>222 Remington Magnum</b>				Case: Remington			Barrel length: 26"		
				Twist: 1:14"			Trim length: 1.840"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>40 GR. SIE SP</b>	AR2205	.224"	2.145"	15.5	2,714 fps	29,400 CUP	17.0	3,062 fps	36,600 CUP
	AR2207	.224"	2.145"	23.0	3,592 fps	45,400 CUP	24.5	3,760 fps	49,100 CUP
	AR2219	.224"	2.145"	25.0	3,318 fps	35,300 CUP	27.0	3,622 fps	48,400 CUP
	AR2206H	.224"	2.145"	26.5	3,363 fps	34,800 CUP	29.0	3,490 fps	45,400 CUP
<b>45 GR. SPR SP</b>	AR2207	.224"	2.220"	22.0	3,392 fps	42,400 CUP	24.0	3,641 fps	50,200 CUP
	AR2219	.224"	2.220"	24.5	3,159 fps	33,300 CUP	26.5	3,532 fps	50,300 CUP
	AR2206H	.224"	2.220"	26.5	3,314 fps	35,400 CUP	29.0	3,442 fps	49,700 CUP

# RIFLE DATA

222 Remington Magnum				Case: Remington Twist: 1:14" Primer: REMINGTON 7 1/2			Barrel length: 26" Trim length: 1.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
50 GR. HDY SP	AR2207	.224"	2.305"	21.5	3,147 fps	39,600 CUP	23.5	3,379 fps	45,400 CUP
	AR2219	.224"	2.305"	24.0	3,128 fps	38,100 CUP	26.0	3,385 fps	49,300 CUP
	AR2206H	.224"	2.305"	26.0	3,166 fps	41,400 CUP	28.5	3,306 fps	45,900 CUP
53 GR. SIE HP	AR2207	.224"	2.275"	21.0	3,076 fps	38,400 CUP	23.0	3,282 fps	45,900 CUP
	AR2219	.224"	2.275"	24.0	3,014 fps	39,200 CUP	25.0	3,285 fps	49,800 CUP
	AR2206H	.224"	2.275"	25.5	3,137 fps	40,800 CUP	28.0	3,272 fps	48,500 CUP
55 GR. HDY SP	AR2207	.224"	2.325"	21.0	3,024 fps	37,800 CUP	23.0	3,222 fps	46,300 CUP
	AR2219	.224"	2.325"	22.5	2,867 fps	36,500 CUP	24.5	3,191 fps	49,300 CUP
	AR2206H	.224"	2.325"	25.5	3,121 fps	39,000 CUP	28.0	3,257 fps	48,900 CUP
63 GR. SIE SP	AR2207	.224"	2.280"	18.5	2,845 fps	40,200 CUP	20.5	3,019 fps	47,800 CUP
	AR2219	.224"	2.280"	21.5	2,763 fps	38,100 CUP	23.5	2,934 fps	48,900 CUP
	AR2206H	.224"	2.280"	24.5	2,869 fps	37,800 CUP	26.5	3,046 fps	48,400 CUP
22 PPC				Case: Sako (reformed) Twist: 1:14" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.510"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
40 GR. NOS BT	Bench Mark 2	.224"	2.065"	27.0	3,349 fps	37,500 CUP	30.0	3,675 fps	49,200 CUP
	Bench Mark 8208	.224"	2.065"	27.0	3,366 fps	38,400 CUP	29.3C	3,684 fps	47,000 CUP
	AR2208	.224"	2.065"	27.5	3,314 fps	36,000 CUP	29.5C	3,560 fps	45,700 CUP
50 GR. SPR SP	AR2219	.224"	2.065"	25.0	3,204 fps	42,000 CUP	26.0	3,385 fps	48,000 CUP
	Bench Mark 2	.224"	2.065"	27.0	3,204 fps	40,000 CUP	29.0	3,430 fps	49,600 CUP
	Bench Mark 8208	.224"	2.065"	26.0	3,213 fps	40,600 CUP	28.8C	3,507 fps	50,400 CUP
	AR2206H	.224"	2.065"	26.0	2,989 fps	37,100 CUP	28.0	3,347 fps	46,500 CUP
	AR2208	.224"	2.065"	27.5	3,205 fps	37,100 CUP	29.5	3,408 fps	48,200 CUP
53 GR. HDY HP	AR2219	.224"	2.065"	24.0	3,046 fps	39,800 CUP	26.0	3,333 fps	48,500 CUP
	Bench Mark 2	.224"	2.065"	26.5	3,141 fps	40,200 CUP	28.5	3,368 fps	49,400 CUP
	Bench Mark 8208	.224"	2.065"	25.5	3,112 fps	37,300 CUP	28.2	3,418 fps	48,700 CUP
	AR2206H	.224"	2.065"	26.0	3,079 fps	41,500 CUP	28.0	3,321 fps	49,000 CUP
	AR2208	.224"	2.065"	26.5	3,179 fps	39,100 CUP	28.5	3,363 fps	48,900 CUP



# RIFLE DATA

22 PPC				Case: Sako (reformed)			Barrel length: 24"		
				Twist: 1:14"			Trim length: 1.510"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. SPR SP	AR2219	.224"	2.050"	24.0	3,052 fps	41,400 CUP	26.0	3,306 fps	50,000 CUP
	Bench Mark 2	.224"	2.050"	26.0	3,080 fps	39,900 CUP	28.2	3,310 fps	49,600 CUP
	Bench Mark 8208	.224"	2.050"	25.0	3,006 fps	35,400 CUP	28.0	3,362 fps	48,600 CUP
	AR2206H	.224"	2.050"	26.0	3,047 fps	42,000 CUP	28.0	3,346 fps	50,000 CUP
	AR2208	.224"	2.050"	26.5	3,147 fps	43,600 CUP	28.5	3,317 fps	47,800 CUP
				C = Compressed load					
22 BR Remington				Case: Remington (reformed)			Barrel length: 24"		
				Twist: 1:14"			Trim length: 1.510"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
40 GR. NOS BT	AR2207	.224"	2.090"	25.5	3,645 fps	43,200 CUP	27.6	3,859 fps	50,400 CUP
	AR2219	.224"	2.090"	28.0	3,561 fps	38,000 CUP	30.0	3,795 fps	49,000 CUP
	Bench Mark 2	.224"	2.090"	30.0	3,542 fps	41,400 CUP	32.0	3,816 fps	49,200 CUP
	AR2206H	.224"	2.090"	31.0	3,594 fps	38,300 CUP	32.8	3,834 fps	46,400 CUP
	AR2208	.224"	2.090"	31.5	3,558 fps	36,500 CUP	33.5	3,788 fps	43,500 CUP
45 GR. SPR SP	AR2219	.224"	1.945"	29.0	3,409 fps	41,000 CUP	31.5	3,741 fps	49,400 CUP
	Bench Mark 2	.224"	1.945"	29.5	3,486 fps	41,100 CUP	31.6	3,702 fps	48,900 CUP
	AR2206H	.224"	1.945"	30.0	3,429 fps	41,600 CUP	32.5	3,768 fps	49,000 CUP
	AR2208	.224"	1.945"	31.5	3,502 fps	36,800 CUP	33.5	3,693 fps	43,600 CUP
50 GR. SPR SP	AR2219	.224"	1.945"	28.0	3,292 fps	37,000 CUP	30.5	3,637 fps	50,000 CUP
	Bench Mark 2	.224"	1.945"	29.5	3,398 fps	40,400 CUP	31.5	3,618 fps	49,700 CUP
	AR2206H	.224"	1.945"	29.5	3,404 fps	41,200 CUP	32.0	3,606 fps	48,000 CUP
	AR2208	.224"	1.945"	31.5	3,426 fps	38,900 CUP	33.5	3,624 fps	44,600 CUP
53 GR. HDY HP	AR2219	.224"	2.065"	28.0	3,270 fps	38,000 CUP	30.0	3,544 fps	48,400 CUP
	Bench Mark 2	.224"	2.065"	28.5	3,305 fps	41,200 CUP	30.5	3,523 fps	49,200 CUP
	AR2206H	.224"	2.065"	29.5	3,377 fps	41,900 CUP	31.5	3,566 fps	49,000 CUP
	AR2208	.224"	2.065"	31.0	3,425 fps	43,400 CUP	33.0	3,638 fps	51,100 CUP
55 GR. SPR SP	AR2219	.224"	2.050"	28.0	3,219 fps	40,000 CUP	30.0	3,439 fps	48,800 CUP
	Bench Mark 2	.224"	2.050"	28.5	3,302 fps	41,600 CUP	30.5	3,470 fps	49,600 CUP
	AR2206H	.224"	2.050"	29.0	3,212 fps	37,100 CUP	31.0	3,478 fps	49,400 CUP
	AR2208	.224"	2.050"	30.0	3,308 fps	41,600 CUP	32.5	3,530 fps	49,300 CUP
63 GR. SIE SP	AR2219	.224"	2.015"	24.0	2,962 fps	40,800 CUP	26.5	3,120 fps	48,800 CUP
	Bench Mark 2	.224"	2.015"	27.0	3,088 fps	42,000 CUP	29.0	3,270 fps	49,300 CUP
	AR2206H	.224"	2.015"	26.0	2,994 fps	41,600 CUP	28.0	3,146 fps	49,400 CUP
	AR2208	.224"	2.015"	28.5	3,134 fps	44,500 CUP	30.5	3,307 fps	49,300 CUP

# RIFLE DATA

22 BR Remington				Case: Remington (reformed) Twist: 1:14" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.510"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
70 GR. SPR SP	AR2219	.224"	1.900"	22.0	2,696 fps	40,000 CUP	24.0	2,889 fps	49,900 CUP
	Bench Mark 2	.224"	1.900"	26.0	2,919 fps	43,400 CUP	28.0	3,095 fps	49,700 CUP
	AR2206H	.224"	1.900"	23.0	2,707 fps	41,400 CUP	24.5	2,845 fps	50,000 CUP
	AR2208	.224"	1.900"	26.0	2,858 fps	43,000 CUP	28.0	3,035 fps	49,500 CUP
5.6 x 50mm Magnum (5.6 x 50Rmm)				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
40 GR.	AR2206	-	-	-	-	-	29.0	3,630 fps	-
45 GR.	AR2206	-	-	-	-	-	28.5	3,550 fps	-
	AR2208	-	-	-	-	-	30.0	3,550 fps	-
50 GR.	AR2206	-	-	-	-	-	28.0	3,500 fps	-
	AR2208	-	-	-	-	-	29.5	3,500 fps	-
55 GR.	AR2206	-	-	-	-	-	27.0	3,300 fps	-
	AR2208	-	-	-	-	-	28.5	3,300 fps	-
60 GR.	AR2208	-	-	-	-	-	27.5	3,250 fps	-
70 GR.	AR2208	-	-	-	-	-	26.5	3,100 fps	-
22 Savage Hi Power (5.6mm x 52Rmm)				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
70 GR.	AR2207	-	-	-	-	-	21.5	2,900 fps	-
	AR2208	-	-	-	-	-	24.5	2,900 fps	-
224 Weatherby Magnum				Case: Weatherby Twist: 1:14" Primer: FEDERAL 210			Barrel length: 23" Trim length: 1.915"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
45 GR. SIE SP	AR2206H	.224"	2.375"	29.5	3,419 fps	-	32.0	3,861 fps	-
50 GR. HDY SP	AR2206H	.224"	2.375"	28.5	3,199 fps	-	31.0	3,648 fps	-
53 GR. SIE HP	AR2206H	.224"	2.310"	27.5	3,032 fps	-	30.0	3,522 fps	-

# RIFLE DATA

224 Weatherby Magnum				Case: Weatherby Twist: 1:14" Primer: FEDERAL 210			Barrel length: 23" Trim length: 1.915"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. HDY SP	AR2206H	.224"	2.375"	27.5	2,971 fps	-	30.0	3,503 fps	-
	AR2209	.224"	2.375"	32.0	2,879 fps	-	34.0	3,240 fps	-
	AR2213SC	.224"	2.375"	31.5	2,834 fps	-	34.0	3,200 fps	-
60 GR. HDY SP	AR2206H	.224"	2.375"	26.0	2,792 fps	-	28.0	3,205 fps	-
	AR2209	.224"	2.375"	31.0	2,832 fps	-	34.0	3,240 fps	-
	AR2213SC	.224"	2.375"	31.0	2,781 fps	-	33.5	3,041 fps	-
70 GR. SPR SP	AR2209	.224"	2.310"	30.0	2,644 fps	-	32.0	2,777 fps	-
	AR2213SC	.224"	2.310"	30.0	2,395 fps	-	32.0	2,486 fps	-
				Case: Winchester (reformed) Twist: 1:14" Primer: WINCHESTER LR			Barrel length: 28" Trim length: 1.740"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
40 GR. SIE SP	AR2206H	.224"	2.130"	-	-	-	28.0	3,312 fps	-
55 GR. HDY SP	AR2206H	.224"	2.130"	-	-	-	28.0	3,501 fps	-
				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
45 GR.	AR2207	-	-	-	-	-	22.0	3,200 fps	-
	AR2206	-	-	-	-	-	25.0	3,200 fps	-
	AR2208	-	-	-	-	-	26.0	3,200 fps	-
50 GR.	AR2207	-	-	-	-	-	21.0	3,000 fps	-
	AR2206	-	-	-	-	-	24.0	3,000 fps	-
	AR2208	-	-	-	-	-	25.0	3,000 fps	-
52-53 GR.	AR2207	-	-	-	-	-	20.5	2,900 fps	-
	AR2206	-	-	-	-	-	23.5	2,900 fps	-
	AR2208	-	-	-	-	-	24.5	2,900 fps	-
55 GR.	AR2207	-	-	-	-	-	20.0	2,800 fps	-
	AR2206	-	-	-	-	-	23.0	2,800 fps	-
	AR2208	-	-	-	-	-	24.0	2,800 fps	-

# RIFLE DATA

225 Winchester				Case: Winchester Twist: 1:14" Primer: WINCHESTER LR			Barrel length: 26" Trim length: 1.920"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
40 GR. SPR SP	AR2219	.224"	2.370"	28.0	3,628 fps	39,700 CUP	31.0	3,896 fps	49,800 CUP
	AR2206H	.224"	2.370"	31.5	3,583 fps	39,600 CUP	34.0	3,811 fps	48,200 CUP
45 GR. HDY SP	AR2219	.224"	2.425"	27.0	3,303 fps	36,500 CUP	30.0	3,685 fps	50,000 CUP
	AR2206H	.224"	2.425"	31.0	3,504 fps	39,600 CUP	33.5	3,736 fps	49,300 CUP
50 GR. SIE SP	AR2219	.224"	2.400"	26.0	3,164 fps	37,500 CUP	29.0	3,401 fps	48,900 CUP
	AR2206H	.224"	2.400"	31.0	3,330 fps	38,400 CUP	34.0	3,722 fps	48,400 CUP
52 GR. SPR SP	AR2219	.224"	2.500"	26.0	3,128 fps	39,200 CUP	28.5	3,333 fps	48,000 CUP
	AR2206H	.224"	2.500"	29.5	3,239 fps	37,200 CUP	32.0	3,463 fps	49,600 CUP
55 GR. HDY SP	AR2219	.224"	2.420"	25.5	3,052 fps	38,600 CUP	28.0	3,283 fps	48,900 CUP
	AR2206H	.224"	2.420"	29.5	3,159 fps	36,000 CUP	32.0	3,476 fps	48,000 CUP
	AR2209	.224"	2.420"	35.0	2,970 fps	37,600 CUP	37.0	3,189 fps	46,000 CUP
60 GR. HDY SP	AR2206H	.224"	2.410"	29.0	3,125 fps	43,200 CUP	32.0	3,396 fps	49,000 CUP
	AR2209	.224"	2.410"	34.0	2,911 fps	37,000 CUP	36.0	3,120 fps	44,400 CUP
70 GR. SPR SP	AR2209	.224"	2.310"	32.0	2,696 fps	39,100 CUP	35.0	2,949 fps	47,800 CUP

22-250 Remington				Case: Winchester Twist: 1:14" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.902"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
35 GR. NOS LF	Bench Mark 2	.224"	2.350"	35.7	4,170 fps	48,700 PSI	38.0	4,476 fps	62,600 PSI
	Bench Mark 8208	.224"	2.350"	35.1	4,096 fps	46,900 PSI	39.0	4,469 fps	60,700 PSI
	AR2206H	.224"	2.350"	34.1	4,120 fps	47,200 PSI	37.5C	4,432 fps	58,200 PSI
	AR2208	.224"	2.350"	35.6	3,929 fps	42,900 PSI	39.5C	4,421 fps	61,000 PSI
36 GR. BAR VG FB	Bench Mark 2	.224"	2.350"	35.6	4,108 fps	51,700 PSI	37.8	4,335 fps	61,100 PSI
	Bench Mark 8208	.224"	2.350"	36.5	4,137 fps	50,700 PSI	38.8	4,404 fps	62,300 PSI
	AR2206H	.224"	2.350"	36.6	4,130 fps	50,700 PSI	39.0C	4,376 fps	61,400 PSI
	AR2208	.224"	2.350"	37.8	4,061 fps	50,800 PSI	40.2C	4,277 fps	59,800 PSI
40 GR. HDY V-MAX	Bench Mark 2	.224"	2.369"	33.0	3,810 fps	47,600 PSI	37.0	4,165 fps	61,525 PSI
	AR2206	.224"	2.369"	35.0	3,825 fps	45,690 PSI	37.5	4,250 fps	64,800 PSI
	AR2208	.224"	2.369"	35.0	3,795 fps	46,670 PSI	38.8	4,225 fps	63,335 PSI
40 GR. NOS BT	Bench Mark 2	.224"	2.350"	34.0	3,837 fps	41,600 CUP	36.5	4,114 fps	50,100 CUP
	Bench Mark 8208	.224"	2.350"	35.0	3,944 fps	47,000 PSI	39.0	4,336 fps	63,500 PSI
	AR2206H	.224"	2.350"	34.0	3,750 fps	43,800 CUP	37.0	4,060 fps	48,700 CUP
	AR2208	.224"	2.350"	37.5	3,936 fps	43,400 CUP	39.5	4,135 fps	51,100 CUP



# RIFLE DATA

22-250 Remington				Case: Winchester Twist: 1:14" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.902"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
45 GR. BAR XBT	AR2219	.224"	2.340"	31.0	3,490 fps	44,600 CUP	32.5	3,720 fps	48,500 CUP
	Bench Mark 2	.224"	2.340"	33.5	3,786 fps	45,300 CUP	36.0	3,979 fps	51,000 CUP
	AR2206H	.224"	2.340"	34.0	3,660 fps	47,300 CUP	37.0	3,918 fps	49,100 CUP
	AR2208	.224"	2.340"	35.0	3,652 fps	46,000 CUP	38.0	3,921 fps	49,200 CUP
50 GR. HDY SP	Bench Mark 2	.224"	2.355"	31.0	3,440 fps	46,400 PSI	34.0	3,770 fps	61,250 PSI
	AR2206	.224"	2.355"	32.0	3,465 fps	45,800 PSI	36.0	3,830 fps	61,050 PSI
	AR2208	.224"	2.355"	33.0	3,485 fps	47,100 PSI	36.8	3,865 fps	64,600 PSI
	AR2209	.224"	2.355"	38.0	3,405 fps	46,350 PSI	41.0C	3,680 fps	57,650 PSI
50 GR. SIE SP	AR2219	.224"	2.350"	30.0	3,441 fps	46,200 CUP	32.0	3,628 fps	50,300 CUP
	Bench Mark 2	.224"	2.350"	33.5	3,718 fps	45,900 CUP	36.0	3,903 fps	51,400 CUP
	Bench Mark 8208	.224"	2.350"	33.0	3,728 fps	55,200 PSI	36.0	3,925 fps	62,900 PSI
	AR2206H	.224"	2.350"	33.5	3,530 fps	43,800 CUP	36.5	3,827 fps	50,200 CUP
	AR2208	.224"	2.350"	34.5	3,596 fps	43,600 CUP	37.5	3,834 fps	50,400 CUP
	AR2209	.224"	2.350"	39.0	3,410 fps	43,600 CUP	42.0	3,579 fps	48,900 CUP
52 GR. HDY A-MAX	AR2219	.224"	2.350"	29.0	3,379 fps	45,500 CUP	31.0	3,498 fps	48,000 CUP
	Bench Mark 2	.224"	2.350"	32.5	3,602 fps	45,800 CUP	34.6	3,755 fps	49,800 CUP
	Bench Mark 8208	.224"	2.350"	32.5	3,612 fps	52,200 PSI	35.5	3,837 fps	60,100 PSI
	AR2206H	.224"	2.350"	32.5	3,467 fps	44,400 CUP	35.5	3,729 fps	49,600 CUP
	AR2208	.224"	2.350"	34.0	3,630 fps	45,500 CUP	36.0	3,784 fps	50,000 CUP
	AR2209	.224"	2.350"	39.0	3,402 fps	43,800 CUP	41.0	3,557 fps	49,400 CUP
52 GR. SIE HPBT	Bench Mark 2	.224"	2.353"	29.0	3,305 fps	44,000 PSI	34.0	3,775 fps	64,250 PSI
	AR2206	.224"	2.353"	31.0	3,390 fps	45,200 PSI	35.6	3,840 fps	64,600 PSI
	AR2208	.224"	2.353"	32.0	3,400 fps	45,800 PSI	36.0	3,795 fps	64,100 PSI
	AR2209	.224"	2.353"	38.0	3,360 fps	46,100 PSI	41.0C	3,640 fps	57,800 PSI
55 GR. SIE SP	Bench Mark 2	.224"	2.384"	30.5	3,440 fps	54,150 PSI	33.0	3,650 fps	64,600 PSI
	AR2208	.224"	2.384"	33.0	3,465 fps	52,250 PSI	36.0	3,730 fps	64,900 PSI
	AR2209	.224"	2.384"	38.0	3,405 fps	51,550 PSI	41.0C	3,665 fps	64,100 PSI
55 GR. SPR SP	Trail Boss	.224"	2.350"	9.1	1,664 fps	17,200 PSI	13.0	1,984 fps	26,600 PSI
	AR2219	.224"	2.350"	28.0	3,339 fps	46,200 CUP	30.0	3,480 fps	49,800 CUP
	Bench Mark 2	.224"	2.350"	31.6	3,532 fps	46,200 CUP	33.6	3,674 fps	50,200 CUP
	Bench Mark 8208	.224"	2.350"	32.0	3,514 fps	52,300 PSI	35.8	3,768 fps	62,700 PSI
	AR2206H	.224"	2.350"	32.5	3,446 fps	45,000 CUP	35.5	3,670 fps	49,300 CUP
	AR2208	.224"	2.350"	34.0	3,490 fps	46,100 CUP	36.5	3,664 fps	50,400 CUP
AR2209	.224"	2.350"	37.0	3,296 fps	46,400 CUP	39.0	3,490 fps	47,800 CUP	

# RIFLE DATA

22-250 Remington				Case: Winchester Twist: 1:14" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.902"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR. HDY V-MAX	AR2219	.224"	2.350"	29.0	3,222 fps	50,900 PSI	31.5	3,434 fps	62,000 PSI
	Bench Mark 2	.224"	2.350"	29.0	3,183 fps	49,000 PSI	32.0	3,406 fps	59,900 PSI
	Bench Mark 8208	.224"	2.350"	31.5	3,412 fps	55,600 PSI	34.0	3,550 fps	61,000 PSI
	AR2206H	.224"	2.350"	32.0	3,340 fps	51,700 PSI	35.0	3,551 fps	61,300 PSI
	AR2208	.224"	2.350"	33.0	3,318 fps	52,200 PSI	35.8	3,503 fps	60,400 PSI
	AR2209	.224"	2.350"	39.0	3,374 fps	51,600 PSI	41.5C	3,570 fps	60,500 PSI
62 GR. BAR TAC-X BT	Bench Mark 8208	.224"	2.385"	31.6	3,367 fps	52,400 PSI	34.0	3,554 fps	62,400 PSI
	AR2206H	.224"	2.385"	31.9	3,467 fps	57,800 PSI	34.0	3,564 fps	60,900 PSI
	AR2208	.224"	2.385"	32.9	3,354 fps	54,200 PSI	35.0	3,500 fps	60,400 PSI
63 GR. SIE SP	Bench Mark 8208	.224"	2.350"	30.0	3,256 fps	52,400 PSI	33.0	3,459 fps	62,100 PSI
	AR2206H	.224"	2.350"	31.5	3,317 fps	47,300 CUP	34.0	3,486 fps	50,400 CUP
	AR2208	.224"	2.350"	29.5	3,039 fps	39,500 CUP	34.0	3,426 fps	50,400 CUP
	AR2209	.224"	2.350"	36.0	3,210 fps	45,400 CUP	38.0	3,391 fps	48,000 CUP
70 GR. SPR SP	Bench Mark 8208	.224"	2.230"	28.0	3,015 fps	49,800 PSI	31.0	3,246 fps	61,600 PSI
	AR2206H	.224"	2.330"	28.0	2,933 fps	43,000 CUP	31.5	3,196 fps	50,700 CUP
	AR2208	.224"	2.330"	29.5	3,006 fps	44,700 CUP	32.0	3,196 fps	50,300 CUP
	AR2209	.224"	2.330"	34.0	3,007 fps	44,800 CUP	36.0	3,129 fps	49,600 CUP
	AR2213SC	.224"	2.330"	35.0	2,976 fps	42,000 CUP	38.0	3,189 fps	50,300 CUP
	AR2217	.224"	2.330"	36.0	3,042 fps	41,100 CUP	38.0	3,187 fps	47,500 CUP
				C = Compressed load					
22-250 Ackley Improved				Case: - Twist: - Primer: -			Barrel length: 26" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
50 GR.	AR2206	-	-	-	-	-	36.5	3,800 fps	-
	AR2208	-	-	-	-	-	39.0	3,800 fps	-
	AR2209	-	-	-	-	-	42.5	3,800 fps	-
52-53 GR.	AR2206	-	-	-	-	-	35.5	3,750 fps	-
	AR2208	-	-	-	-	-	38.0	3,750 fps	-
	AR2209	-	-	-	-	-	41.0	3,750 fps	-
55 GR.	AR2206	-	-	-	-	-	34.5	3,650 fps	-
	AR2208	-	-	-	-	-	37.0	3,650 fps	-
	AR2209	-	-	-	-	-	40.0	3,650 fps	-

# RIFLE DATA

22-250 Ackley Improved				Case: -			Barrel length: 26"		
				Twist: -			Trim length: -		
				Primer: -					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
60-63 GR.	AR2206	-	-	-	-	-	32.5	3,500 fps	-
	AR2208	-	-	-	-	-	35.0	3,500 fps	-
	AR2209	-	-	-	-	-	38.0	3,500 fps	-
68-70 GR.	AR2206	-	-	-	-	-	31.5	3,400 fps	-
	AR2208	-	-	-	-	-	34.0	3,400 fps	-
	AR2209	-	-	-	-	-	37.0	3,400 fps	-
220 Swift				Case: Winchester			Barrel length: 24"		
				Twist: 1:14"			Trim length: 2.195"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
35 GR. NOS LF	AR2206H	.224"	2.680"	37.6	4,171 fps	47,400 CUP	40.0	4,401 fps	52,300 CUP
	AR2208	.224"	2.680"	38.5	4,035 fps	43,500 CUP	41.0	4,251 fps	51,100 CUP
36 GR. BAR VG FB	Bench Mark 8208	.224"	2.635"	38.0	4,078 fps	46,800 CUP	40.0	4,296 fps	53,000 CUP
	AR2206H	.224"	2.635"	37.6	4,002 fps	44,300 CUP	40.0	4,251 fps	50,800 CUP
	AR2208	.224"	2.635"	40.0	4,076 fps	44,600 CUP	42.5	4,306 fps	50,900 CUP
40 GR. SIE HP	AR2206H	.224"	2.680"	37.0	3,768 fps	41,400 CUP	40.0	4,126 fps	52,000 CUP
	AR2208	.224"	2.680"	38.0	4,007 fps	49,800 CUP	40.5	4,113 fps	49,800 CUP
45 GR. HDY SP	AR2206H	.224"	2.680"	36.5	3,676 fps	38,400 CUP	39.5	3,996 fps	52,100 CUP
	AR2208	.224"	2.680"	36.0	3,777 fps	47,100 CUP	40.2	4,002 fps	52,100 CUP
50 GR. HDY SP	Bench Mark 2	.224"	2.684"	35.0	3,675 fps	50,800 PSI	37.5	3,845 fps	59,225 PSI
	AR2206	.224"	2.684"	36.0	3,720 fps	50,000 PSI	39.0	3,970 fps	64,370 PSI
	AR2206H	.224"	2.680"	35.0	3,460 fps	39,000 CUP	38.0	3,840 fps	51,200 CUP
	AR2208	.224"	2.684"	38.0	3,775 fps	53,445 PSI	40.5	3,985 fps	64,475 PSI
	AR2209	.224"	2.684"	42.0	3,580 fps	43,770 PSI	44.5C	3,770 fps	54,180 PSI
	AR2213SC	.224"	2.684"	43.0	3,400 fps	35,895 PSI	44.5C	3,545 fps	42,040 PSI
52 GR. SIE HPBT	Bench Mark 2	.224"	2.680"	35.0	3,620 fps	49,300 PSI	38.0	3,885 fps	61,145 PSI
	AR2206H	.224"	2.680"	33.8	3,588 fps	45,100 CUP	36.0	3,736 fps	50,000 CUP
	AR2208	.224"	2.680"	35.0	3,495 fps	41,600 PSI	40.5	3,915 fps	62,375 PSI
	AR2209	.224"	2.680"	41.0	3,500 fps	44,865 PSI	45.0C	3,800 fps	57,400 PSI
55 GR. HDY SP	AR2206H	.224"	2.680"	34.0	3,481 fps	45,900 CUP	37.0	3,698 fps	52,000 CUP
	AR2208	.224"	2.680"	34.0	3,516 fps	47,000 CUP	36.0	3,645 fps	51,900 CUP
	AR2209	.224"	2.680"	39.0	3,225 fps	42,000 CUP	42.0	3,619 fps	50,800 CUP
	AR2213SC	.224"	2.680"	41.5	3,194 fps	36,600 CUP	46.0	3,616 fps	46,600 CUP

# RIFLE DATA

220 Swift				Case: Winchester Twist: 1:14" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.195"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR. NOS PART	AR2206H	.224"	2.680"	30.5	3,165 fps	39,200 CUP	33.5	3,401 fps	49,600 CUP
	AR2208	.224"	2.680"	33.0	3,242 fps	40,000 CUP	36.0	3,473 fps	49,000 CUP
	AR2209	.224"	2.680"	37.0	3,230 fps	39,800 CUP	41.0	3,527 fps	50,600 CUP
	AR2213SC	.224"	2.680"	41.5	3,252 fps	41,600 CUP	46.0C	3,556 fps	51,800 CUP
62 GR. BAR TAC-X BT	AR2206H	.224"	2.680"	31.7	3,121 fps	45,700 CUP	33.7	3,364 fps	51,400 CUP
	AR2208	.224"	2.680"	32.3	3,161 fps	44,100 CUP	34.3	3,315 fps	50,400 CUP
	AR2209	.224"	2.680"	37.2	3,177 fps	43,500 CUP	40.5C	3,389 fps	52,400 CUP
63 GR. SIE SP	AR2206H	.224"	2.680"	32.5	3,218 fps	40,800 CUP	35.5	3,484 fps	51,000 CUP
	AR2208	.224"	2.680"	32.0	3,181 fps	42,200 CUP	34.0	3,407 fps	49,300 CUP
	AR2209	.224"	2.680"	37.0	3,181 fps	46,000 CUP	39.0	3,474 fps	52,000 CUP
	AR2213SC	.224"	2.680"	41.5	3,180 fps	37,200 CUP	46.0	3,586 fps	52,000 CUP
70 GR. SPR SP	AR2208	.224"	2.680"	31.0	3,103 fps	46,500 CUP	33.0	3,247 fps	49,900 CUP
	AR2209	.224"	2.680"	36.0	3,027 fps	45,200 CUP	38.0	3,313 fps	51,200 CUP
	AR2213SC	.224"	2.680"	37.0	2,991 fps	45,800 CUP	42.0	3,359 fps	52,600 CUP
	AR2217	.224"	2.680"	42.0	3,149 fps	43,800 CUP	44.0	3,317 fps	50,200 CUP
				C = Compressed load					
220 Jaybird				Case: Winchester (reformed) Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 26" Trim length: 1.990"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
52 GR. HDY BTHP	AR2209	.224"	2.450"	43.0	3,508 fps	-	47.0	3,992 fps	-
55 GR. SPR SP	AR2209	.224"	2.350"	43.0	3,509 fps	-	47.0	3,981 fps	-
60 GR. HDY HP	AR2209	.224"	2.450"	41.0	3,235 fps	-	45.0	3,763 fps	-
	AR2213SC	.224"	2.450"	43.0	3,362 fps	-	47.0	3,772 fps	-
69 GR. SIE HP	AR2213SC	.224"	2.450"	43.0	3,318 fps	-	47.0	3,654 fps	-
5.6 x 57mm RWS (5.6 x 57Rmm)				Case: - Twist: - Primer: -			Barrel length: 26" Trim length: -		
<b>WARNING:</b> If reloading old style thick walled brass reduce these loads by at least 4 grains to avoid dangerous pressures.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
50 GR.	AR2208	-	-	-	-	-	37.0	3,700 fps	-
	AR2209	-	-	-	-	-	41.0	3,700 fps	-



# RIFLE DATA

5.6 x 57mm RWS (5.6 x 57Rmm)				Case: -			Barrel length: 26"		
				Twist: -			Trim length: -		
				Primer: -					
WARNING: If reloading old style thick walled brass reduce these loads by at least 4 grains to avoid dangerous pressures.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR.	AR2208	-	-	-	-	-	36.0	3,550 fps	-
	AR2209	-	-	-	-	-	40.0	3,550 fps	-
60 GR.	AR2208	-	-	-	-	-	35.0	3,450 fps	-
	AR2209	-	-	-	-	-	39.0	3,450 fps	-
69-70 GR.	AR2208	-	-	-	-	-	34.0	3,300 fps	-
	AR2209	-	-	-	-	-	38.0	3,300 fps	-
74 GR.	AR2209	-	-	-	-	-	37.0	3,250 fps	-

22 Cheetah Mark II				Case: Winchester (reformed)			Barrel length: 27"		
				Twist: 1:10"			Trim length: 2.010"		
				Primer: WINCHESTER SR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
50 GR. HDY SP	AR2209	.224"	2.580"	46.0	3,901 fps	-	51.0	4,069 fps	-
55 GR. SIE SP	AR2209	.224"	2.580"	46.0	3,776 fps	-	51.0	4,017 fps	-

223 Winchester Super Short Magnum				Case: Winchester			Barrel length: 24"		
				Twist: 1:8"			Trim length: 1.660"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
35 GR. NOS LF	Bench Mark 8208	.224"	2.200"	38.0	4,051 fps	49,400 PSI	42.7	4,439 fps	62,700 PSI
	AR2206H	.224"	2.200"	38.0	4,041 fps	48,300 PSI	43.0	4,438 fps	62,000 PSI
	AR2208	.224"	2.200"	39.0	4,027 fps	50,000 PSI	43.5	4,364 fps	62,500 PSI
36 GR. BAR VG FB	Bench Mark 8208	.224"	2.120"	37.0	4,014 fps	48,300 PSI	41.5	4,400 fps	63,100 PSI
	AR2206H	.224"	2.120"	37.0	4,037 fps	48,100 PSI	41.5	4,417 fps	62,600 PSI
	AR2208	.224"	2.120"	39.0	4,086 fps	51,300 PSI	43.2	4,368 fps	62,400 PSI
40 GR. NOS BT	Bench Mark 8208	.224"	2.200"	40.0	4,110 fps	52,900 PSI	42.5	4,307 fps	62,600 PSI
	AR2206H	.224"	2.200"	40.4	4,121 fps	54,300 PSI	43.0	4,320 fps	62,900 PSI
	AR2208	.224"	2.200"	41.0	4,074 fps	54,100 PSI	43.5	4,278 fps	63,800 PSI
45 GR. BAR X	AR2206H	.224"	2.100"	40.0	3,951 fps	51,200 PSI	42.8	4,153 fps	61,900 PSI
	AR2208	.224"	2.100"	40.7	3,935 fps	51,400 PSI	43.3	4,136 fps	61,800 PSI
	AR2209	.224"	2.100"	47.0	3,887 fps	54,100 PSI	50.0C	4,131 fps	63,000 PSI
50 GR. BAR XLC	AR2206H	.224"	2.100"	40.0	3,805 fps	51,600 PSI	42.9	4,021 fps	62,700 PSI
	AR2208	.224"	2.100"	41.0	3,784 fps	50,500 PSI	44.0	4,015 fps	61,800 PSI
	AR2209	.224"	2.100"	47.0	3,781 fps	50,200 PSI	50.0C	4,023 fps	61,500 PSI

# RIFLE DATA

223 Winchester Super Short Magnum				Case: Winchester Twist: 1:8" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.660"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
52 GR. SPR HPBT	Bench Mark 8208	.224"	2.150"	37.8	3,721 fps	55,200 PSI	40.2	3,894 fps	62,500 PSI
	AR2206H	.224"	2.150"	38.8	3,805 fps	54,400 PSI	41.3	3,948 fps	61,600 PSI
	AR2208	.224"	2.150"	40.0	3,758 fps	54,000 PSI	43.0	3,948 fps	63,600 PSI
	AR2209	.224"	2.150"	46.0	3,753 fps	51,500 PSI	49.0C	3,959 fps	62,300 PSI
55 GR. HDY V-MAX	Bench Mark 8208	.224"	2.200"	35.3	3,557 fps	54,600 PSI	37.6	3,715 fps	62,000 PSI
	AR2206H	.224"	2.200"	36.5	3,622 fps	53,200 PSI	39.0	3,798 fps	62,100 PSI
	AR2208	.224"	2.200"	38.0	3,651 fps	53,300 PSI	40.5	3,836 fps	62,100 PSI
	AR2209	.224"	2.200"	44.5	3,713 fps	55,900 PSI	47.5	3,881 fps	63,100 PSI
	AR2213SC	.224"	2.200"	46.0	3,579 fps	53,000 PSI	49.0C	3,743 fps	62,600 PSI
60 GR. NOS PART	Bench Mark 8208	.224"	2.150"	32.9	3,383 fps	56,100 PSI	35.0	3,524 fps	62,100 PSI
	AR2206H	.224"	2.150"	35.0	3,479 fps	53,700 PSI	37.3	3,625 fps	62,200 PSI
	AR2208	.224"	2.150"	36.0	3,510 fps	55,400 PSI	38.5	3,656 fps	61,400 PSI
	AR2209	.224"	2.150"	41.0	3,568 fps	57,800 PSI	43.8	3,723 fps	63,400 PSI
	AR2213SC	.224"	2.150"	43.5	3,522 fps	58,300 PSI	46.3C	3,661 fps	63,500 PSI
69 GR. SIE HPBT	AR2206H	.224"	2.230"	34.5	3,278 fps	56,500 PSI	36.8	3,426 fps	61,800 PSI
	AR2208	.224"	2.230"	36.0	3,324 fps	55,900 PSI	38.5	3,492 fps	62,900 PSI
	AR2209	.224"	2.230"	40.0	3,321 fps	52,400 PSI	42.5	3,505 fps	63,300 PSI
	AR2213SC	.224"	2.230"	43.5	3,312 fps	54,700 PSI	46.5C	3,489 fps	63,200 PSI
	AR2217	.224"	2.230"	46.8	3,329 fps	53,700 PSI	49.8C	3,472 fps	60,100 PSI
75 GR. HDY V-MAX	AR2206H	.224"	2.360"	33.0	3,119 fps	56,200 PSI	35.2	3,266 fps	61,200 PSI
	AR2208	.224"	2.360"	34.5	3,174 fps	55,200 PSI	36.8	3,330 fps	61,700 PSI
	AR2209	.224"	2.360"	39.0	3,227 fps	57,900 PSI	41.5	3,376 fps	63,700 PSI
	AR2213SC	.224"	2.360"	42.0	3,201 fps	56,500 PSI	45.1	3,352 fps	63,200 PSI
	AR2217	.224"	2.360"	46.0	3,250 fps	55,900 PSI	49.0C	3,378 fps	62,400 PSI
77 GR. SIE HPBT	AR2206H	.224"	2.230"	32.0	3,048 fps	58,100 PSI	34.2	3,196 fps	62,700 PSI
	AR2208	.224"	2.230"	33.5	3,099 fps	59,100 PSI	35.8	3,249 fps	63,000 PSI
	AR2209	.224"	2.230"	37.0	3,135 fps	54,600 PSI	39.5	3,289 fps	61,000 PSI
	AR2213SC	.224"	2.230"	40.5	3,159 fps	57,600 PSI	43.3	3,299 fps	62,700 PSI
	AR2217	.224"	2.230"	44.5	3,221 fps	57,400 PSI	47.7C	3,359 fps	63,500 PSI
				C = Compressed load					

# RIFLE DATA

6mm-222				Case: Remington (reformed) Twist: 1:9" Primer: REMINGTON 7 1/2			Barrel length: 23.5" Trim length: 1.690"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
60 GR. SIE HP	AR2207	.243"	2.200"	17.0	2,792 fps	37,800 CUP	19.0	3,023 fps	48,500 CUP
	AR2206H	.243"	2.200"	21.5	2,748 fps	42,000 CUP	23.5	3,043 fps	50,200 CUP
75 GR. HDY HP	AR2207	.243"	2.200"	16.0	2,469 fps	36,600 CUP	18.0	2,718 fps	47,600 CUP
	AR2206H	.243"	2.200"	20.0	2,443 fps	39,600 CUP	22.0	2,660 fps	46,700 CUP
85 GR. SPR SP	AR2207	.243"	2.260"	14.5	2,292 fps	37,800 CUP	16.5	2,514 fps	47,600 CUP
	AR2206H	.243"	2.260"	19.5	2,375 fps	42,400 CUP	20.5	2,505 fps	49,600 CUP
100 GR. HDY SP	AR2207	.243"	2.260"	13.0	1,912 fps	36,000 CUP	15.0	2,090 fps	46,300 CUP
	AR2206H	.243"	2.260"	17.0	1,998 fps	36,000 CUP	19.0	2,212 fps	49,100 CUP

6 x 45mm (6mm-223)				Case: Remington (reformed) Twist: 1:9" Primer: FEDERAL 205M			Barrel length: 24" Trim length: 1.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
60 GR. SIE HP	AR2219	.243"	2.260"	23.0	2,849 fps	39,500 CUP	25.0	3,097 fps	47,000 CUP
	Bench Mark 2	.243"	2.260"	24.0	2,636 fps	32,000 CUP	27.0C	3,042 fps	41,600 CUP
	AR2206H	.243"	2.260"	25.5	2,872 fps	40,000 CUP	27.5C	3,102 fps	48,500 CUP
62 GR. BAR VG	Bench Mark 2	.243"	2.350"	24.0	2,726 fps	36,400 CUP	27.0C	3,064 fps	49,400 CUP
	Bench Mark 8208	.243"	2.350"	24.0	2,636 fps	33,000 CUP	27.0C	3,019 fps	44,600 CUP
70 GR. HDY SP	AR2219	.243"	2.260"	23.0	2,758 fps	39,800 CUP	25.0	2,985 fps	47,500 CUP
	Bench Mark 2	.243"	2.260"	24.0	2,609 fps	45,200 CUP	27.0C	2,962 fps	45,200 CUP
	Bench Mark 8208	.243"	2.260"	24.0	2,555 fps	32,000 CUP	27.0C	2,916 fps	41,200 CUP
	AR2206H	.243"	2.260"	25.5	2,809 fps	44,000 CUP	27.5	3,034 fps	49,500 CUP
75 GR. HDY HP	AR2219	.243"	2.260"	23.0	2,774 fps	45,500 CUP	24.0	2,860 fps	47,500 CUP
	Bench Mark 2	.243"	2.260"	24.0	2,587 fps	34,200 CUP	27.0C	2,923 fps	47,200 CUP
	Bench Mark 8208	.243"	2.260"	24.0	2,513 fps	31,400 CUP	27.0C	2,882 fps	44,500 CUP
	AR2206H	.243"	2.260"	25.0	2,704 fps	39,300 CUP	27.0C	2,952 fps	48,000 CUP
80 GR. SPR SP	AR2219	.243"	2.350"	21.5	2,503 fps	37,600 CUP	23.5	2,783 fps	47,500 CUP
	Bench Mark 2	.243"	2.350"	24.0	2,608 fps	36,400 CUP	27.0C	2,919 fps	48,600 CUP
	Bench Mark 8208	.243"	2.350"	24.0	2,576 fps	34,400 CUP	27.0C	2,867 fps	44,200 CUP
	AR2206H	.243"	2.350"	25.0	2,689 fps	40,900 CUP	27.0C	2,904 fps	48,500 CUP
85 GR. SPR SP	AR2219	.243"	2.350"	21.5	2,480 fps	41,500 CUP	23.5	2,695 fps	49,000 CUP
	Bench Mark 2	.243"	2.350"	23.0	2,518 fps	35,800 CUP	26.2C	2,829 fps	49,300 CUP
	Bench Mark 8208	.243"	2.350"	23.5	2,525 fps	34,800 CUP	26.5C	2,842 fps	48,000 CUP
	AR2206H	.243"	2.350"	24.0	2,559 fps	39,300 CUP	26.0C	2,786 fps	49,000 CUP

# RIFLE DATA

6 x 45mm (6mm-223)				Case: Remington (reformed) Twist: 1:9" Primer: FEDERAL 205M			Barrel length: 24" Trim length: 1.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
90 GR. SPR SP	AR2219	.243"	2.350"	20.5	2,391 fps	41,000 CUP	22.5	2,531 fps	49,500 CUP
	Bench Mark 2	.243"	2.350"	23.0	2,453 fps	36,600 CUP	26.0C	2,739 fps	48,900 CUP
	Bench Mark 8208	.243"	2.350"	23.0	2,438 fps	35,600 CUP	26.0C	2,729 fps	46,300 CUP
	AR2206H	.243"	2.350"	23.5	2,509 fps	41,500 CUP	25.5	2,721 fps	50,000 CUP
100 GR. HDY SP	Bench Mark 2	.243"	2.340"	23.5	2,456 fps	43,900 CUP	24.5C	2,546 fps	48,700 CUP
	Bench Mark 8208	.243"	2.340"	23.0	2,365 fps	38,300 CUP	25.0C	2,558 fps	46,200 CUP
	AR2206H	.243"	2.340"	22.0	2,414 fps	42,000 CUP	24.0C	2,616 fps	50,000 CUP
				C = Compressed load					
6 x 47mm				Case: Federal Twist: 1:14" Primer: FEDERAL 205M			Barrel length: 23.5" Trim length: 1.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR. SIE HP	AR2207	.243"	2.400"	22.0	2,895 fps	35,400 CUP	24.0	3,170 fps	49,800 CUP
	AR2219	.243"	2.400"	26.0	3,040 fps	38,100 CUP	28.0	3,222 fps	44,500 CUP
	AR2206H	.243"	2.400"	26.0	2,919 fps	35,600 CUP	28.5	3,098 fps	43,100 CUP
70 GR. HDY SP	AR2207	.243"	2.445"	21.0	2,726 fps	39,300 CUP	23.0	2,944 fps	49,400 CUP
	AR2219	.243"	2.445"	26.0	2,935 fps	43,000 CUP	28.0	3,116 fps	49,800 CUP
	AR2206H	.243"	2.445"	26.0	2,745 fps	37,600 CUP	28.0	2,915 fps	44,700 CUP
75 GR. SPR HP	AR2207	.243"	2.445"	20.5	2,664 fps	41,500 CUP	22.5	2,852 fps	48,900 CUP
	AR2219	.243"	2.445"	24.0	2,698 fps	40,300 CUP	26.0	2,958 fps	48,400 CUP
	AR2206H	.243"	2.445"	25.5	2,709 fps	38,200 CUP	27.5	2,911 fps	47,500 CUP
80 GR. SPR SP	AR2207	.243"	2.440"	20.0	2,527 fps	39,800 CUP	22.0	2,700 fps	46,900 CUP
	AR2219	.243"	2.440"	23.5	2,604 fps	41,400 CUP	25.5	2,808 fps	48,000 CUP
	AR2206H	.243"	2.440"	25.0	2,622 fps	40,400 CUP	27.0	2,860 fps	49,800 CUP
85 GR. SPR SP	AR2207	.243"	2.440"	19.5	2,400 fps	37,100 CUP	21.5	2,571 fps	46,900 CUP
	AR2219	.243"	2.440"	23.0	2,514 fps	40,800 CUP	25.0	2,713 fps	48,000 CUP
	AR2206H	.243"	2.440"	24.0	2,483 fps	39,800 CUP	26.0	2,712 fps	49,400 CUP



# RIFLE DATA

6mm PPC				Case: Sako (reformed)			Barrel length: 24"		
				Twist: 1:14"			Trim length: 1.510"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. NOS BT	AR2207	.243"	2.100"	25.0	3,281 fps	42,300 CUP	26.7	3,443 fps	50,200 CUP
	AR2219	.243"	2.100"	27.5	3,161 fps	39,100 CUP	29.5	3,390 fps	49,600 CUP
	Bench Mark 2	.243"	2.100"	28.0	3,206 fps	42,100 CUP	30.0	3,405 fps	50,000 CUP
58 GR. HDY V-MAX	AR2207	.243"	2.075"	24.0	3,109 fps	40,200 CUP	25.7	3,349 fps	49,300 CUP
	AR2219	.243"	2.075"	27.0	3,161 fps	42,500 CUP	29.0	3,355 fps	50,600 CUP
	Bench Mark 2	.243"	2.075"	27.7	3,118 fps	39,800 CUP	29.5	3,322 fps	50,000 CUP
	Bench Mark 8208	.243"	2.075"	27.5	3,084 fps	39,400 CUP	30.0C	3,353 fps	49,800 CUP
60 GR. SIE HP	AR2207	.243"	2.080"	21.0	2,856 fps	46,500 CUP	23.0	2,973 fps	49,500 CUP
	AR2219	.243"	2.080"	26.0	3,090 fps	45,000 CUP	27.0	3,165 fps	47,000 CUP
	Bench Mark 2	.243"	2.080"	26.0	2,909 fps	36,100 CUP	29.0	3,236 fps	48,600 CUP
	Bench Mark 8208	.243"	2.080"	27.0	3,053 fps	40,000 CUP	30.0C	3,334 fps	51,100 CUP
	AR2206H	.243"	2.080"	27.0	2,913 fps	44,500 CUP	29.0	3,218 fps	48,500 CUP
	AR2208	.243"	2.080"	27.0	2,901 fps	40,200 CUP	29.0	3,076 fps	44,100 CUP
65 GR. HDY V-MAX	AR2207	.243"	2.075"	23.5	3,011 fps	41,700 CUP	25.5	3,218 fps	50,500 CUP
	AR2219	.243"	2.075"	26.3	2,984 fps	38,900 CUP	28.0	3,178 fps	49,400 CUP
	Bench Mark 2	.243"	2.075"	26.6	3,003 fps	42,700 CUP	28.3	3,159 fps	49,800 CUP
	Bench Mark 8208	.243"	2.140"	27.0	3,064 fps	42,300 CUP	29.5C	3,253 fps	50,900 CUP
70 GR. NOS BT	AR2207	.243"	2.100"	21.0	2,745 fps	47,000 CUP	22.0	2,839 fps	50,400 CUP
	AR2219	.243"	2.100"	25.0	2,967 fps	46,500 CUP	26.5	3,068 fps	50,000 CUP
	Bench Mark 2	.243"	2.100"	26.0	2,803 fps	35,500 CUP	29.0	3,149 fps	50,500 CUP
	Bench Mark 8208	.243"	2.100"	27.0	2,900 fps	47,400 CUP	29.5C	3,193 fps	50,300 CUP
	AR2206H	.243"	2.100"	26.0	2,714 fps	42,000 CUP	28.0	3,034 fps	46,500 CUP
	AR2208	.243"	2.100"	27.0	2,845 fps	39,800 CUP	29.0	3,034 fps	48,000 CUP
75 GR. SPR HP	AR2207	.243"	2.115"	20.0	2,661 fps	45,500 CUP	21.0	2,780 fps	49,000 CUP
	AR2219	.243"	2.115"	24.5	2,809 fps	45,000 CUP	26.0	2,974 fps	49,500 CUP
	Bench Mark 2	.243"	2.115"	25.5	2,749 fps	38,900 CUP	28.5	3,037 fps	50,100 CUP
	Bench Mark 8208	.243"	2.115"	26.0	2,817 fps	38,400 CUP	28.7	3,089 fps	51,200 CUP
	AR2206H	.243"	2.115"	25.5	2,740 fps	43,500 CUP	27.5	2,981 fps	48,500 CUP
	AR2208	.243"	2.115"	26.0	2,737 fps	40,000 CUP	28.0	2,906 fps	47,000 CUP
80 GR. SPR SP	AR2207	.243"	2.115"	19.0	2,359 fps	37,600 CUP	21.0	2,641 fps	49,500 CUP
	AR2219	.243"	2.115"	23.5	2,658 fps	42,000 CUP	25.5	2,866 fps	47,500 CUP
	Bench Mark 2	.243"	2.115"	25.0	2,674 fps	36,400 CUP	28.0	2,970 fps	50,400 CUP
	Bench Mark 8208	.243"	2.115"	26.0	2,811 fps	39,700 CUP	28.3	3,023 fps	51,400 CUP
	AR2206H	.243"	2.115"	25.0	2,641 fps	40,400 CUP	27.0	2,904 fps	47,500 CUP
	AR2208	.243"	2.115"	26.0	2,689 fps	38,200 CUP	28.0	2,843 fps	44,400 CUP

# RIFLE DATA

6mm PPC				Case: Sako (reformed)			Barrel length: 24"		
				Twist: 1:14"			Trim length: 1.510"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. SIE HPBT	AR2219	.243"	2.080"	23.0	2,571 fps	44,000 CUP	25.0	2,794 fps	49,000 CUP
	Bench Mark 2	.243"	2.080"	24.5	2,619 fps	38,300 CUP	27.0	2,860 fps	50,000 CUP
	Bench Mark 8208	.243"	2.080"	25.0	2,719 fps	41,700 CUP	27.5	2,928 fps	52,200 CUP
	AR2206H	.243"	2.080"	24.0	2,540 fps	41,500 CUP	26.0	2,782 fps	48,000 CUP
	AR2208	.243"	2.080"	26.0	2,671 fps	43,400 CUP	28.0	2,848 fps	50,000 CUP
107 GR. SIE HPBT	AR2219	.243"	2.240"	22.0	2,351 fps	42,000 CUP	24.5	2,553 fps	51,100 CUP
	Bench Mark 2	.243"	2.240"	24.0	2,437 fps	43,400 CUP	25.8	2,584 fps	51,200 CUP
	Bench Mark 8208	.243"	2.240"	23.0	2,403 fps	42,400 CUP	25.3	2,584 fps	51,300 CUP
	AR2206H	.243"	2.240"	24.5	2,426 fps	41,500 CUP	26.8C	2,631 fps	49,700 CUP
	AR2208	.243"	2.240"	26.0	2,503 fps	44,900 CUP	27.7C	2,626 fps	50,000 CUP
				C = Compressed load					
6mm BR Remington				Case: Remington			Barrel length: 24"		
				Twist: 1:9"			Trim length: 1.510"		
				Primer: REMINGTON 7 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. NOS BT	AR2207	.243"	2.080"	26.0	3,230 fps	37,600 CUP	28.8	3,542 fps	51,000 CUP
	AR2219	.243"	2.080"	30.0	3,333 fps	38,800 CUP	32.5	3,604 fps	51,100 CUP
	Bench Mark 2	.243"	2.080"	31.0	3,322 fps	41,200 CUP	33.5C	3,557 fps	50,300 CUP
	Bench Mark 8208	.243"	2.080"	30.0	3,204 fps	33,900 CUP	33.5C	3,546 fps	44,800 CUP
	AR2206H	.243"	2.080"	31.0	3,233 fps	37,300 CUP	33.0C	3,449 fps	45,300 CUP
	AR2208	.243"	2.080"	31.0	3,043 fps	31,600 CUP	34.0C	3,347 fps	41,800 CUP
58 GR. HDY V-MAX	AR2207	.243"	2.140"	26.0	3,205 fps	38,000 CUP	28.5	3,454 fps	49,900 CUP
	AR2219	.243"	2.140"	29.5	3,240 fps	40,100 CUP	31.3	3,415 fps	48,400 CUP
	Bench Mark 2	.243"	2.140"	30.0	3,241 fps	42,000 CUP	32.0	3,450 fps	50,600 CUP
	Bench Mark 8208	.243"	2.140"	30.0	3,207 fps	36,800 CUP	33.5C	3,552 fps	50,000 CUP
	AR2206H	.243"	2.140"	31.5	3,250 fps	38,000 CUP	33.5	3,415 fps	45,100 CUP
	AR2208	.243"	2.140"	31.0	3,052 fps	34,300 CUP	34.0C	3,355 fps	46,100 CUP
60 GR. SIE HP	AR2207	.243"	2.080"	25.0	3,137 fps	39,600 CUP	27.5	3,378 fps	50,700 CUP
	AR2219	.243"	2.080"	30.0	3,281 fps	42,000 CUP	32.0	3,481 fps	49,500 CUP
	Bench Mark 2	.243"	2.080"	30.0	3,165 fps	41,400 CUP	32.0	3,373 fps	49,900 CUP
	Bench Mark 8208	.243"	2.080"	29.0	3,121 fps	36,800 CUP	32.7	3,475 fps	48,900 CUP
	AR2206H	.243"	2.080"	31.0	3,177 fps	42,000 CUP	33.0C	3,384 fps	47,000 CUP
	AR2208	.243"	2.080"	31.0	3,161 fps	36,000 CUP	34.0C	3,442 fps	48,500 CUP

# RIFLE DATA

6mm BR Remington				Case: Remington Twist: 1:9" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.510"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>62 GR. BAR VG FB</b>	AR2207	.243"	2.140"	24.4	3,028 fps	41,800 CUP	26.0	3,145 fps	47,700 CUP
	AR2219	.243"	2.140"	27.8	3,070 fps	42,000 CUP	29.6	3,190 fps	47,600 CUP
	Bench Mark 2	.243"	2.140"	29.1	3,060 fps	40,300 CUP	31.0C	3,265 fps	48,300 CUP
	Bench Mark 8208	.243"	2.140"	29.6	3,146 fps	41,600 CUP	31.5C	3,307 fps	47,900 CUP
	AR2206H	.243"	2.140"	29.6	3,166 fps	41,500 CUP	31.5C	3,349 fps	49,300 CUP
	AR2208	.243"	2.140"	28.7	3,102 fps	45,200 CUP	31.5C	3,258 fps	49,200 CUP
<b>65 GR. HDY V-MAX</b>	AR2207	.243"	2.140"	25.0	3,071 fps	42,200 CUP	27.0	3,242 fps	49,100 CUP
	AR2219	.243"	2.140"	27.0	2,978 fps	36,800 CUP	30.5	3,303 fps	49,600 CUP
	Bench Mark 2	.243"	2.140"	27.0	2,997 fps	36,000 CUP	30.5	3,205 fps	46,400 CUP
	Bench Mark 8208	.243"	2.140"	29.0	3,084 fps	36,300 CUP	32.3	3,397 fps	48,700 CUP
	AR2206H	.243"	2.140"	30.0	3,064 fps	37,700 CUP	33.0	3,366 fps	49,300 CUP
	AR2208	.243"	2.140"	31.0	3,021 fps	42,200 CUP	33.0	3,268 fps	49,900 CUP
<b>70 GR. NOS BT</b>	AR2219	.243"	2.100"	28.0	2,976 fps	38,700 CUP	30.0	3,200 fps	47,000 CUP
	Bench Mark 2	.243"	2.100"	29.7	3,019 fps	39,900 CUP	31.6	3,227 fps	49,000 CUP
	Bench Mark 8208	.243"	2.100"	29.5	3,045 fps	37,100 CUP	32.7	3,361 fps	51,600 CUP
	AR2206H	.243"	2.100"	29.0	2,895 fps	38,200 CUP	31.0	3,188 fps	47,000 CUP
	AR2208	.243"	2.100"	31.0	3,101 fps	38,900 CUP	34.0C	3,342 fps	49,400 CUP
<b>75 GR. SPR HP</b>	AR2219	.243"	2.115"	26.0	2,756 fps	37,100 CUP	28.0	3,096 fps	47,000 CUP
	Bench Mark 2	.243"	2.115"	29.0	2,959 fps	41,700 CUP	31.0	3,127 fps	49,600 CUP
	Bench Mark 8208	.243"	2.115"	28.0	2,926 fps	38,900 CUP	30.8	3,167 fps	48,800 CUP
	AR2206H	.243"	2.115"	28.5	2,980 fps	40,000 CUP	30.5	3,129 fps	47,000 CUP
	AR2208	.243"	2.115"	30.5	3,057 fps	42,200 CUP	32.5	3,239 fps	50,000 CUP
<b>80 GR. SPR SP</b>	AR2219	.243"	2.115"	26.0	2,787 fps	39,300 CUP	28.0	3,005 fps	47,000 CUP
	Bench Mark 2	.243"	2.115"	28.5	2,872 fps	40,900 CUP	30.5	3,048 fps	49,400 CUP
	Bench Mark 8208	.243"	2.115"	27.0	2,823 fps	39,800 CUP	30.4	3,107 fps	49,500 CUP
	AR2206H	.243"	2.115"	28.0	2,945 fps	40,400 CUP	30.0	3,100 fps	47,000 CUP
	AR2208	.243"	2.115"	30.5	2,999 fps	43,100 CUP	32.5	3,159 fps	50,700 CUP
<b>85 GR. SPR SP</b>	AR2219	.243"	2.115"	22.0	2,472 fps	40,400 CUP	24.0	2,632 fps	47,000 CUP
	Bench Mark 2	.243"	2.115"	27.7	2,792 fps	42,100 CUP	29.7	2,960 fps	49,800 CUP
	Bench Mark 8208	.243"	2.115"	27.0	2,782 fps	41,400 CUP	29.8	3,016 fps	49,900 CUP
	AR2206H	.243"	2.115"	24.5	2,590 fps	38,100 CUP	26.5	2,770 fps	49,500 CUP
	AR2208	.243"	2.115"	29.0	2,840 fps	43,100 CUP	31.0	3,007 fps	50,800 CUP
<b>90 GR. SPR SP</b>	AR2219	.243"	2.115"	22.0	2,423 fps	40,600 CUP	24.0	2,607 fps	48,000 CUP
	Bench Mark 2	.243"	2.115"	27.0	2,703 fps	43,200 CUP	29.0	2,868 fps	49,300 CUP
	Bench Mark 8208	.243"	2.115"	25.0	2,599 fps	41,500 CUP	28.0	2,813 fps	50,000 CUP
	AR2206H	.243"	2.115"	24.5	2,560 fps	40,400 CUP	27.0	2,743 fps	48,000 CUP
	AR2208	.243"	2.115"	27.5	2,674 fps	39,500 CUP	30.2	2,886 fps	47,500 CUP

# RIFLE DATA

6mm BR Remington				Case: Remington Twist: 1:9" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.510"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. HDY SP	AR2219	.243"	2.150"	22.0	2,275 fps	42,000 CUP	23.5	2,519 fps	50,000 CUP
	Bench Mark 2	.243"	2.150"	26.0	2,485 fps	43,100 CUP	28.0	2,670 fps	49,500 CUP
	Bench Mark 8208	.243"	2.150"	24.0	2,388 fps	40,500 CUP	27.0	2,630 fps	49,800 CUP
	AR2206H	.243"	2.150"	24.5	2,423 fps	42,500 CUP	27.0	2,603 fps	49,000 CUP
	AR2208	.243"	2.150"	26.0	2,491 fps	43,000 CUP	28.0	2,649 fps	48,900 CUP
107 GR. SIE HPBT	AR2219	.243"	2.250"	23.0	2,325 fps	40,800 CUP	25.5	2,525 fps	49,200 CUP
	Bench Mark 2	.243"	2.250"	26.0	2,466 fps	42,000 CUP	28.0	2,613 fps	49,800 CUP
	Bench Mark 8208	.243"	2.250"	24.0	2,380 fps	42,700 CUP	26.7	2,555 fps	50,400 CUP
	AR2206H	.243"	2.250"	24.5	2,329 fps	37,900 CUP	27.5	2,605 fps	49,800 CUP
	AR2208	.243"	2.250"	26.0	2,367 fps	39,800 CUP	29.0C	2,620 fps	50,100 CUP
				C = Compressed load					
6mm Dasher				Case: Lapua (reformed) Twist: 1:8" Primer: CCI BR4			Barrel length: 30" Trim length: 1.540"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
58 GR. HDY V-MAX	Bench Mark 2	.243"	2.180"	33.0	3,546 fps	43,300 CUP	36.3	3,847 fps	52,000 CUP
	Bench Mark 8208	.243"	2.180"	33.5	3,508 fps	41,200 CUP	36.3	3,819 fps	50,800 CUP
	AR2206H	.243"	2.180"	35.1	3,682 fps	42,700 CUP	37.0C	3,866 fps	48,000 CUP
	AR2208	.243"	2.180"	36.4	3,668 fps	45,000 CUP	38.7C	3,844 fps	51,000 CUP
70 GR. NOS BT	Bench Mark 8208	.243"	2.180"	33.6	3,430 fps	44,200 CUP	35.8C	3,643 fps	51,400 CUP
	AR2206H	.243"	2.180"	33.7	3,457 fps	44,300 CUP	36.3C	3,693 fps	51,800 CUP
	AR2208	.243"	2.180"	35.1	3,449 fps	43,500 CUP	37.4	3,646 fps	51,500 CUP
90 GR. SFT SCIR	Bench Mark 8208	.243"	2.280"	29.9	2,933 fps	43,100 CUP	32.5	3,149 fps	52,400 CUP
	AR2206H	.243"	2.280"	30.3	2,971 fps	42,300 CUP	32.9C	3,182 fps	51,800 CUP
	AR2208	.243"	2.280"	30.7	2,943 fps	43,900 CUP	33.8	3,208 fps	52,200 CUP
	AR2209	.243"	2.280"	35.2	2,990 fps	42,200 CUP	38.3C	3,220 fps	51,600 CUP
100 GR. SPR BTSP	Bench Mark 8208	.243"	2.360"	27.9	2,756 fps	42,000 CUP	30.4	2,928 fps	51,400 CUP
	AR2208	.243"	2.360"	29.5	2,820 fps	43,300 CUP	32.5	3,023 fps	52,000 CUP
	AR2209	.243"	2.360"	33.4	2,836 fps	41,600 CUP	36.8C	3,086 fps	51,700 CUP
107 GR. SIE HPBT	Bench Mark 8208	.243"	2.360"	27.4	2,647 fps	41,700 CUP	30.2	2,836 fps	51,500 CUP
	AR2208	.243"	2.360"	29.2	2,726 fps	42,900 CUP	31.8	2,916 fps	51,900 CUP
	AR2209	.243"	2.360"	33.4	2,792 fps	44,600 CUP	35.2C	2,917 fps	48,800 CUP
				C = Compressed load					



# RIFLE DATA

6mm-250 (6mm International)				Case: Winchester (reformed)			Barrel length: 24"		
				Twist: 1:8"			Trim length: 1.902"		
				Primer: FEDERAL 210					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. NOS BT	Bench Mark 2	.243"	2.500"	34.0	3,452 fps	43,700 CUP	37.0	3,684 fps	52,000 CUP
	AR2206H	.243"	2.500"	37.0	3,544 fps	41,100 CUP	39.7C	3,766 fps	51,000 CUP
	AR2208	.243"	2.500"	38.0	3,515 fps	43,900 CUP	40.5C	3,720 fps	50,900 CUP
60 GR. SIE HP	Bench Mark 2	.243"	2.400"	33.0	3,337 fps	44,500 CUP	35.5	3,525 fps	51,000 CUP
	AR2206H	.243"	2.400"	36.0	3,417 fps	40,500 CUP	38.5	3,674 fps	51,400 CUP
	AR2208	.243"	2.400"	37.0	3,398 fps	44,300 CUP	39.3	3,601 fps	51,400 CUP
70 GR. SIE HPBT	Bench Mark 2	.243"	2.400"	31.0	3,149 fps	47,000 CUP	34.3	3,311 fps	49,000 CUP
	AR2206H	.243"	2.400"	34.0	3,228 fps	40,900 CUP	37.0	3,436 fps	51,300 CUP
	AR2208	.243"	2.400"	35.0	3,166 fps	40,200 CUP	37.5	3,383 fps	50,900 CUP
80 GR. SIE BTSP	AR2206H	.243"	2.400"	34.0	3,185 fps	45,800 CUP	36.0	3,304 fps	51,000 CUP
	AR2208	.243"	2.400"	34.0	3,104 fps	44,800 CUP	36.7	3,274 fps	51,400 CUP
	AR2209	.243"	2.400"	39.0	3,082 fps	40,400 CUP	41.0C	3,211 fps	45,000 CUP
85 GR. SPR SPBT	AR2206H	.243"	2.450"	32.7	3,070 fps	45,300 CUP	34.8	3,191 fps	50,700 CUP
	AR2208	.243"	2.450"	33.0	3,011 fps	44,100 CUP	35.4	3,171 fps	51,700 CUP
	AR2209	.243"	2.450"	38.5	3,059 fps	42,800 CUP	41.0C	3,223 fps	48,900 CUP
90 GR. SPR SP	AR2206H	.243"	2.400"	32.4	2,939 fps	46,000 CUP	34.5	3,060 fps	51,400 CUP
	AR2208	.243"	2.400"	33.3	2,923 fps	44,900 CUP	35.5	3,053 fps	51,300 CUP
	AR2209	.243"	2.400"	38.5	2,985 fps	44,900 CUP	41.0C	3,126 fps	49,900 CUP
95 GR. NOS PART	AR2206H	.243"	2.500"	31.0	2,830 fps	45,900 CUP	33.0	2,935 fps	50,600 CUP
	AR2208	.243"	2.500"	31.7	2,819 fps	43,900 CUP	33.8	2,962 fps	50,800 CUP
	AR2209	.243"	2.500"	36.5	2,887 fps	44,800 CUP	39.0C	3,045 fps	50,700 CUP
100 GR. HDY SP	AR2206H	.243"	2.500"	29.8	2,710 fps	46,500 CUP	31.8	2,835 fps	50,200 CUP
	AR2208	.243"	2.500"	31.5	2,741 fps	46,000 CUP	33.5	2,851 fps	50,800 CUP
	AR2209	.243"	2.500"	35.5	2,769 fps	45,300 CUP	37.9C	2,890 fps	50,900 CUP
105 GR. HDY A-MAX	AR2206H	.243"	2.600"	28.9	2,646 fps	46,000 CUP	30.8	2,731 fps	51,700 CUP
	AR2208	.243"	2.600"	30.8	2,726 fps	48,600 CUP	32.8	2,822 fps	51,400 CUP
	AR2209	.243"	2.600"	34.7	2,724 fps	45,700 CUP	37.0C	2,883 fps	52,200 CUP
	AR2213SC	.243"	2.600"	37.6	2,692 fps	45,400 CUP	40.0C	2,800 fps	48,700 CUP
107 GR. SIE HPBT	AR2206H	.243"	2.600"	29.7	2,659 fps	45,900 CUP	31.6	2,783 fps	51,700 CUP
	AR2208	.243"	2.600"	31.2	2,716 fps	47,400 CUP	33.2	2,817 fps	51,800 CUP
	AR2209	.243"	2.600"	35.2	2,720 fps	45,000 CUP	37.5	2,844 fps	50,300 CUP
	AR2213SC	.243"	2.600"	37.6	2,606 fps	40,600 CUP	40.0C	2,738 fps	45,500 CUP

C = Compressed load

# RIFLE DATA

243 Winchester				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.035"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. NOS BT	Bench Mark 2	.243"	2.650"	39.0	3,575 fps	42,600 CUP	41.5	3,815 fps	50,100 CUP
	Bench Mark 8208	.243"	2.650"	40.0	3,687 fps	47,700 PSI	43.0	3,931 fps	58,600 PSI
	AR2206	.243"	2.654"	38.0	3,610 fps	46,650 PSI	42.0	3,890 fps	58,650 PSI
	AR2206H	.243"	2.650"	40.0	3,638 fps	35,100 CUP	44.5	4,058 fps	49,300 CUP
	AR2208	.243"	2.650"	41.0	3,776 fps	42,000 CUP	45.0	4,000 fps	50,000 CUP
	AR2209	.243"	2.654"	47.0	3,580 fps	47,900 PSI	50.0C	3,825 fps	58,450 PSI
55 GR. NOS BT LF	AR2206H	.243"	2.710"	35.7	3,621 fps	50,700 PSI	38.0	3,777 fps	57,100 PSI
	AR2208	.243"	2.710"	37.1	3,646 fps	53,000 PSI	39.5	3,782 fps	57,700 PSI
58 GR. HDY V-MAX	Bench Mark 2	.243"	2.600"	35.0	3,417 fps	41,800 CUP	37.5	3,607 fps	50,000 CUP
	Bench Mark 8208	.243"	2.600"	39.0	3,581 fps	47,300 PSI	42.3	3,825 fps	58,300 PSI
	AR2206H	.243"	2.600"	40.0	3,643 fps	43,300 CUP	43.0	3,851 fps	49,900 CUP
	AR2208	.243"	2.600"	41.0	3,617 fps	44,800 CUP	44.0	3,790 fps	49,800 CUP
60 GR. SIE HP	Bench Mark 2	.243"	2.600"	38.5	3,587 fps	47,000 CUP	41.2	3,713 fps	50,700 CUP
	Bench Mark 8208	.243"	2.600"	37.0	3,505 fps	50,000 PSI	40.2	3,702 fps	58,500 PSI
	AR2206H	.243"	2.600"	38.0	3,521 fps	40,500 CUP	42.0	3,812 fps	50,600 CUP
	AR2208	.243"	2.600"	40.0	3,671 fps	45,400 CUP	42.7	3,816 fps	50,400 CUP
62 GR. BAR VG FB	Bench Mark 2	.243"	2.620"	36.1	3,442 fps	52,000 PSI	38.0	3,586 fps	58,600 PSI
	Bench Mark 8208	.243"	2.620"	35.0	3,321 fps	46,500 PSI	39.0	3,598 fps	58,800 PSI
	AR2206H	.243"	2.620"	36.7	3,478 fps	51,200 PSI	39.0	3,622 fps	57,400 PSI
	AR2208	.243"	2.620"	39.3	3,476 fps	50,900 PSI	41.4	3,620 fps	57,100 PSI
65 GR. HDY V-MAX	Bench Mark 2	.243"	2.600"	37.0	3,417 fps	44,300 CUP	40.0	3,598 fps	50,600 CUP
	Bench Mark 8208	.243"	2.600"	37.0	3,363 fps	45,800 PSI	41.0	3,666 fps	58,500 PSI
	AR2206H	.243"	2.600"	38.0	3,522 fps	44,500 CUP	41.0	3,677 fps	49,200 CUP
	AR2208	.243"	2.600"	38.0	3,494 fps	43,100 CUP	41.0	3,682 fps	49,600 CUP
70 GR. SIE HPBT	AR2206	.243"	2.637"	35.0	3,230 fps	47,800 PSI	38.0	3,495 fps	59,945 PSI
	AR2209	.243"	2.637"	39.0	2,935 fps	46,300 PSI	43.5	3,190 fps	58,300 PSI
	AR2213SC	.243"	2.637"	44.0	3,000 fps	-	48.0	3,160 fps	-
70 GR. SPR HP	Bench Mark 2	.243"	2.625"	36.5	3,128 fps	45,100 CUP	39.3	3,491 fps	50,300 CUP
	Bench Mark 8208	.243"	2.625"	35.0	3,232 fps	47,600 PSI	38.6	3,461 fps	58,100 PSI
	AR2206H	.243"	2.625"	36.0	3,286 fps	42,700 CUP	39.5	3,477 fps	49,200 CUP
	AR2208	.243"	2.625"	38.0	3,433 fps	45,500 CUP	40.5	3,574 fps	50,100 CUP
75 GR. HDY HP	Bench Mark 8208	.243"	2.640"	34.5	3,114 fps	48,200 PSI	37.8	3,316 fps	57,900 PSI
	AR2206H	.243"	2.640"	34.0	3,101 fps	40,900 CUP	38.0	3,354 fps	49,400 CUP
	AR2208	.243"	2.640"	36.0	3,246 fps	45,000 CUP	38.5	3,408 fps	50,500 CUP
75 GR. SPR HP	AR2206	.243"	2.625"	34.0	3,125 fps	49,050 PSI	36.5	3,330 fps	59,650 PSI
	AR2209	.243"	2.625"	41.0	2,950 fps	-	44.5	3,335 fps	58,250 PSI
	AR2213SC	.243"	2.625"	44.0	2,950 fps	-	48.0	3,175 fps	-

# RIFLE DATA

243 Winchester				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.035"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
80 GR. HDY FMJ	AR2206	.243"	2.620"	33.0	2,970 fps	45,624 PSI	36.0	3,225 fps	59,030 PSI
	AR2209	.243"	2.620"	42.0	3,100 fps	50,700 PSI	45.0	3,290 fps	59,500 PSI
	AR2213SC	.243"	2.620"	44.0	3,015 fps	46,915 PSI	47.3	3,295 fps	59,875 PSI
80 GR. HDY GMX	Bench Mark 8208	.243"	2.610"	33.0	2,961 fps	51,400 PSI	35.1	3,109 fps	58,800 PSI
	AR2206H	.243"	2.610"	32.7	2,982 fps	51,900 PSI	34.8	3,123 fps	58,100 PSI
	AR2208	.243"	2.610"	34.1	2,986 fps	51,200 PSI	36.3	3,137 fps	58,700 PSI
	AR2209	.243"	2.610"	38.3	3,045 fps	52,600 PSI	40.7	3,183 fps	58,500 PSI
80 GR. SIE BTSP	Bench Mark 8208	.243"	2.635"	34.0	3,013 fps	45,400 PSI	38.0	3,269 fps	57,500 PSI
	AR2206H	.243"	2.635"	35.0	3,123 fps	45,800 CUP	38.0	3,307 fps	50,100 CUP
	AR2208	.243"	2.635"	36.0	3,193 fps	45,400 CUP	38.5	3,355 fps	50,300 CUP
85 GR. BAR TSX	AR2206H	.243"	2.620"	32.6	2,955 fps	51,800 PSI	34.7	3,089 fps	57,500 PSI
	AR2208	.243"	2.620"	34.3	2,997 fps	52,200 PSI	36.5	3,121 fps	58,000 PSI
	AR2209	.243"	2.620"	37.3	2,972 fps	49,600 PSI	40.5	3,141 fps	57,300 PSI
87 GR. HDY SP	AR2206	.243"	2.653"	32.0	2,880 fps	47,600 PSI	35.0	3,035 fps	57,900 PSI
	AR2208	.243"	2.653"	32.0	2,865 fps	46,600 PSI	36.0	3,120 fps	58,900 PSI
	AR2209	.243"	2.653"	39.0	2,935 fps	46,300 PSI	43.5	3,190 fps	58,300 PSI
90 GR. SPR SP	AR2206H	.243"	2.625"	34.0	2,967 fps	44,900 CUP	36.5	3,114 fps	50,800 CUP
	AR2208	.243"	2.625"	34.0	2,964 fps	44,800 CUP	36.5	3,106 fps	50,400 CUP
	AR2209	.243"	2.625"	42.0	3,039 fps	44,400 CUP	44.5	3,185 fps	50,600 CUP
	AR2213SC	.243"	2.625"	45.0	3,010 fps	43,700 CUP	48.0C	3,203 fps	50,800 CUP
95 GR. NOS PART	AR2206H	.243"	2.650"	33.0	2,865 fps	45,000 CUP	35.0	2,990 fps	50,700 CUP
	AR2208	.243"	2.650"	33.0	2,870 fps	45,000 CUP	35.0	2,996 fps	50,200 CUP
	AR2209	.243"	2.650"	39.0	2,917 fps	45,800 CUP	42.0	3,087 fps	50,500 CUP
	AR2213SC	.243"	2.650"	42.0	2,930 fps	47,000 CUP	44.5C	3,052 fps	50,700 CUP
	AR2217	.243"	2.650"	45.0	2,946 fps	44,900 CUP	48.0C	3,077 fps	50,000 CUP
100 GR. SPR BTSP	Trail Boss	.243"	2.650"	8.0	1,045 fps	27,300 CUP	15.3	1,603 fps	39,100 CUP
	AR2206H	.243"	2.650"	31.0	2,683 fps	44,900 CUP	33.0	2,818 fps	50,100 CUP
	AR2208	.243"	2.650"	31.0	2,674 fps	42,700 CUP	33.7	2,838 fps	50,400 CUP
	AR2209	.243"	2.650"	37.0	2,806 fps	45,100 CUP	40.0	2,973 fps	51,000 CUP
	AR2213SC	.243"	2.650"	39.0	2,761 fps	44,400 CUP	42.0	2,924 fps	50,100 CUP
	AR2217	.243"	2.650"	44.0	2,876 fps	45,700 CUP	47.0C	3,000 fps	49,800 CUP
105 GR. HDY A-MAX	AR2206H	.243"	2.760"	30.5	2,619 fps	44,900 CUP	32.5	2,724 fps	50,100 CUP
	AR2208	.243"	2.760"	31.0	2,631 fps	45,600 CUP	33.0	2,769 fps	50,800 CUP
	AR2209	.243"	2.760"	35.0	2,663 fps	44,300 CUP	37.5	2,799 fps	49,500 CUP
	AR2213SC	.243"	2.760"	38.0	2,687 fps	43,900 CUP	41.0	2,846 fps	50,200 CUP
	AR2217	.243"	2.760"	43.0	2,798 fps	45,400 CUP	46.0C	2,930 fps	50,200 CUP
	AR2225	.243"	2.760"	46.0	2,772 fps	44,200 CUP	49.0C	2,986 fps	49,700 CUP

# RIFLE DATA

243 Winchester				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.035"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
107 GR. SIE BTHP	AR2206H	.243"	2.850"	30.5	2,613 fps	45,900 CUP	32.5	2,719 fps	49,900 CUP
	AR2208	.243"	2.850"	31.0	2,630 fps	45,300 CUP	33.0	2,749 fps	50,400 CUP
	AR2209	.243"	2.850"	35.0	2,671 fps	43,100 CUP	37.5	2,800 fps	50,200 CUP
	AR2213SC	.243"	2.850"	38.0	2,678 fps	43,700 CUP	41.0	2,835 fps	50,100 CUP
	AR2217	.243"	2.850"	43.0	2,787 fps	44,700 CUP	46.0C	2,918 fps	50,100 CUP
	AR2225	.243"	2.850"	46.0	2,785 fps	42,800 CUP	49.0C	2,974 fps	48,500 CUP
				C = Compressed load					
6mm Remington (244 Remington)				Case: Winchester Twist: 1:9" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.223"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. NOS BT	Bench Mark 2	.243"	2.800"	40.0	3,656 fps	44,800 PSI	44.5	4,028 fps	59,600 PSI
	Bench Mark 8208	.243"	2.800"	40.0	3,533 fps	39,700 PSI	45.0	4,044 fps	59,300 PSI
	AR2206H	.243"	2.800"	42.0	3,656 fps	43,700 PSI	46.5	4,066 fps	59,300 PSI
	AR2208	.243"	2.800"	43.0	3,678 fps	45,700 PSI	47.5	4,023 fps	58,800 PSI
55 GR. NOS BT LF	Bench Mark 2	.243"	2.825"	40.0	3,584 fps	44,900 PSI	44.0	4,005 fps	61,700 PSI
	Bench Mark 8208	.243"	2.825"	40.0	3,540 fps	42,200 PSI	44.6	4,013 fps	60,800 PSI
	AR2206H	.243"	2.825"	41.0	3,598 fps	43,200 PSI	46.0	4,071 fps	61,800 PSI
	AR2208	.243"	2.825"	43.0	3,679 fps	46,900 PSI	47.0	4,027 fps	60,700 PSI
58 GR. HDY V-MAX	Bench Mark 2	.243"	2.775"	39.0	3,500 fps	42,200 PSI	43.0	3,896 fps	59,000 PSI
	Bench Mark 8208	.243"	2.775"	40.0	3,537 fps	42,700 PSI	44.5	3,939 fps	58,600 PSI
	AR2206H	.243"	2.775"	41.0	3,590 fps	44,500 PSI	46.0	3,972 fps	58,900 PSI
	AR2208	.243"	2.775"	42.0	3,571 fps	44,600 PSI	46.7	3,953 fps	59,600 PSI
60 GR. SIE HP	Bench Mark 2	.243"	2.700"	39.0	3,478 fps	44,400 PSI	43.0	3,826 fps	59,000 PSI
	Bench Mark 8208	.243"	2.700"	40.0	3,488 fps	43,000 PSI	44.5	3,907 fps	60,500 PSI
	AR2206H	.243"	2.700"	41.0	3,544 fps	45,300 PSI	46.0	3,934 fps	61,400 PSI
	AR2208	.243"	2.700"	42.0	3,565 fps	47,200 PSI	46.5	3,900 fps	60,200 PSI
65 GR. HDY V-MAX	Bench Mark 2	.243"	2.825"	39.0	3,472 fps	49,000 PSI	41.3	3,694 fps	60,200 PSI
	Bench Mark 8208	.243"	2.825"	39.0	3,412 fps	45,000 PSI	43.5	3,777 fps	60,900 PSI
	AR2206H	.243"	2.825"	39.0	3,460 fps	47,100 PSI	44.0	3,797 fps	60,600 PSI
	AR2208	.243"	2.825"	41.0	3,468 fps	47,600 PSI	45.5	3,775 fps	60,200 PSI
	AR2209	.243"	2.825"	48.0	3,564 fps	50,900 PSI	51.5C	3,763 fps	58,900 PSI

# RIFLE DATA

6mm Remington (244 Remington)				Case: Winchester Twist: 1:9" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.223"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
70 GR. SIE HPBT	Bench Mark 2	.243"	2.810"	38.0	3,315 fps	46,800 PSI	41.0	3,579 fps	59,300 PSI
	Bench Mark 8208	.243"	2.810"	38.0	3,236 fps	43,000 PSI	42.7	3,616 fps	59,500 PSI
	AR2206H	.243"	2.810"	39.0	3,435 fps	51,200 PSI	43.0	3,653 fps	60,100 PSI
	AR2208	.243"	2.810"	40.0	3,355 fps	47,800 PSI	44.5	3,639 fps	59,500 PSI
	AR2209	.243"	2.810"	46.0	3,360 fps	46,700 PSI	50.8C	3,671 fps	59,800 PSI
75 GR. HDY HP	Bench Mark 8208	.243"	2.825"	37.0	3,184 fps	48,100 PSI	41.5	3,470 fps	59,700 PSI
	AR2206H	.243"	2.825"	37.0	3,230 fps	49,900 PSI	41.5	3,482 fps	60,500 PSI
	AR2208	.243"	2.825"	38.0	3,207 fps	48,500 PSI	42.6	3,480 fps	59,500 PSI
	AR2209	.243"	2.825"	44.0	3,262 fps	48,600 PSI	49.0	3,563 fps	61,200 PSI
80 GR. BAR TTSX BT	Bench Mark 8208	.243"	2.810"	36.0	3,068 fps	46,400 PSI	40.3	3,363 fps	60,100 PSI
	AR2206H	.243"	2.810"	37.0	3,169 fps	49,500 PSI	41.3	3,419 fps	60,500 PSI
	AR2208	.243"	2.810"	38.0	3,140 fps	47,900 PSI	42.5	3,416 fps	59,800 PSI
	AR2209	.243"	2.810"	42.0	3,065 fps	43,900 PSI	47.5	3,427 fps	58,800 PSI
80 GR. SPR SP	Bench Mark 8208	.243"	2.775"	37.0	3,156 fps	51,600 PSI	40.7	3,353 fps	59,800 PSI
	AR2206H	.243"	2.775"	37.0	3,167 fps	50,900 PSI	40.5	3,377 fps	59,900 PSI
	AR2208	.243"	2.775"	38.0	3,148 fps	49,400 PSI	41.8	3,376 fps	59,400 PSI
	AR2209	.243"	2.775"	42.0	3,123 fps	46,700 PSI	47.0	3,430 fps	59,400 PSI
85 GR. NOS PART	AR2206H	.243"	2.825"	35.5	3,003 fps	48,400 PSI	39.5	3,253 fps	59,200 PSI
	AR2208	.243"	2.825"	37.0	3,020 fps	49,200 PSI	41.0	3,270 fps	59,100 PSI
	AR2209	.243"	2.825"	42.0	3,075 fps	48,200 PSI	46.5	3,350 fps	59,300 PSI
87 GR. HDY HPBT	AR2206H	.243"	2.825"	35.5	2,986 fps	49,100 PSI	39.5	3,214 fps	60,300 PSI
	AR2208	.243"	2.825"	37.0	3,011 fps	49,100 PSI	41.0	3,243 fps	59,300 PSI
	AR2209	.243"	2.825"	42.0	3,051 fps	48,100 PSI	46.7	3,317 fps	59,500 PSI
	AR2213SC	.243"	2.825"	44.0	2,871 fps	41,900 PSI	49.5C	3,164 fps	53,200 PSI
95 GR. NOS BT	AR2206H	.243"	2.825"	35.0	2,855 fps	50,100 PSI	38.7	3,076 fps	60,100 PSI
	AR2208	.243"	2.825"	36.0	2,843 fps	47,800 PSI	40.0	3,091 fps	58,900 PSI
	AR2209	.243"	2.825"	41.0	2,909 fps	48,100 PSI	45.5	3,167 fps	59,200 PSI
	AR2213SC	.243"	2.825"	44.0	2,798 fps	43,700 PSI	49.5C	3,125 fps	57,600 PSI
	AR2217	.243"	2.825"	47.0	2,835 fps	43,000 PSI	50.5C	3,056 fps	52,900 PSI
100 GR. SPR BT	AR2206H	.243"	2.775"	34.0	2,749 fps	45,900 PSI	38.5	3,035 fps	59,900 PSI
	AR2208	.243"	2.775"	36.0	2,843 fps	49,800 PSI	40.2	3,055 fps	59,200 PSI
	AR2209	.243"	2.775"	41.0	2,879 fps	47,900 PSI	45.5	3,137 fps	59,800 PSI
	AR2213SC	.243"	2.775"	45.0	2,794 fps	43,900 PSI	49.0C	3,064 fps	56,100 PSI
	AR2217	.243"	2.775"	47.0	2,779 fps	41,500 PSI	50.0C	2,955 fps	48,900 PSI



# RIFLE DATA

6mm Remington (244 Remington)				Case: Winchester Twist: 1:9" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.223"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
105 GR. HDY A-MAX	AR2208	.243"	2.825"	34.0	2,711 fps	47,400 PSI	38.0	2,946 fps	58,800 PSI
	AR2209	.243"	2.825"	40.0	2,838 fps	49,700 PSI	43.5	3,029 fps	58,800 PSI
	AR2213SC	.243"	2.825"	44.0	2,839 fps	49,400 PSI	47.5C	3,028 fps	57,900 PSI
	AR2217	.243"	2.825"	47.0	2,817 fps	45,800 PSI	50.0C	2,980 fps	53,300 PSI
107 GR. SIE HPBT	AR2208	.243"	2.950"	34.0	2,652 fps	46,300 PSI	38.5	2,930 fps	60,200 PSI
	AR2209	.243"	2.950"	39.0	2,779 fps	48,800 PSI	43.5	3,016 fps	59,600 PSI
	AR2213SC	.243"	2.950"	43.0	2,779 fps	48,300 PSI	48.0C	3,042 fps	59,600 PSI
	AR2217	.243"	2.950"	47.0	2,818 fps	47,400 PSI	50.0C	2,980 fps	55,100 PSI
	AR2225	.243"	2.950"	47.0	2,836 fps	44,900 PSI	50.0C	3,033 fps	55,200 PSI
115 GR. BAR RN	AR2209	.243"	2.825"	36.0	2,537 fps	43,200 CUP	39.0	2,696 fps	49,700 CUP
	AR2213SC	.243"	2.825"	39.0	2,598 fps	43,800 CUP	42.0	2,761 fps	49,800 CUP
	AR2217	.243"	2.825"	43.0	2,665 fps	43,800 CUP	45.5	2,793 fps	49,600 CUP
	AR2225	.243"	2.825"	47.0	2,711 fps	43,200 CUP	50.0C	2,878 fps	49,000 CUP
				C = Compressed load					
243 Winchester Super Short Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.660"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
58 GR. HDY V-MAX	Bench Mark 8208	.243"	2.200"	40.0	3,677 fps	50,200 PSI	44.3	3,985 fps	63,200 PSI
	AR2206H	.243"	2.220"	42.0	3,756 fps	51,700 PSI	45.3	4,021 fps	63,100 PSI
	AR2208	.243"	2.220"	44.0	3,739 fps	52,000 PSI	47.0	3,975 fps	62,800 PSI
62 GR. BAR VG FB	Bench Mark 8208	.243"	2.240"	38.5	3,562 fps	54,800 PSI	40.9	3,726 fps	62,300 PSI
	AR2206H	.243"	2.240"	38.0	3,497 fps	55,700 PSI	40.0	3,641 fps	62,800 PSI
	AR2208	.243"	2.240"	39.9	3,441 fps	54,900 PSI	42.4	3,637 fps	61,900 PSI
70 GR. NOS BT	Bench Mark 8208	.243"	2.200"	38.0	3,445 fps	54,000 PSI	41.5	3,646 fps	62,900 PSI
	AR2206H	.243"	2.280"	39.0	3,434 fps	52,500 PSI	42.0	3,618 fps	62,500 PSI
	AR2208	.243"	2.280"	41.0	3,474 fps	54,500 PSI	43.7	3,655 fps	63,400 PSI
	AR2209	.243"	2.280"	45.0	3,385 fps	48,000 PSI	48.7C	3,614 fps	58,400 PSI
80 GR. SIE BTSP	Bench Mark 8208	.243"	2.200"	35.0	3,137 fps	50,500 PSI	39.0	3,394 fps	62,400 PSI
	AR2206H	.243"	2.220"	38.5	3,255 fps	53,300 PSI	41.0	3,409 fps	62,500 PSI
	AR2208	.243"	2.220"	39.0	3,288 fps	54,400 PSI	42.0	3,462 fps	63,300 PSI
	AR2209	.243"	2.220"	45.0	3,323 fps	52,600 PSI	48.7C	3,545 fps	63,000 PSI

# RIFLE DATA

243 Winchester Super Short Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.660"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
90 GR. SFT SCIR	Bench Mark 8208	.243"	2.300"	32.0	2,866 fps	52,200 PSI	35.8	3,098 fps	63,600 PSI
	AR2206H	.243"	2.300"	35.0	2,954 fps	52,000 PSI	37.7	3,124 fps	61,900 PSI
	AR2208	.243"	2.300"	36.0	2,979 fps	53,200 PSI	39.2	3,175 fps	63,200 PSI
	AR2209	.243"	2.300"	41.0	3,087 fps	56,200 PSI	44.0C	3,245 fps	62,900 PSI
	AR2213SC	.243"	2.300"	44.0	3,045 fps	55,800 PSI	47.0C	3,200 fps	63,200 PSI
100 GR. SPR BTSP	Bench Mark 8208	.243"	2.300"	31.5	2,764 fps	52,500 PSI	35.0	2,982 fps	63,100 PSI
	AR2206H	.243"	2.300"	33.0	2,809 fps	55,100 PSI	35.5	2,946 fps	63,600 PSI
	AR2208	.243"	2.300"	34.0	2,829 fps	53,600 PSI	36.6	2,981 fps	62,100 PSI
	AR2209	.243"	2.300"	39.0	2,938 fps	55,400 PSI	41.7	3,074 fps	62,300 PSI
	AR2213SC	.243"	2.300"	41.5	2,878 fps	54,000 PSI	45.0	3,058 fps	63,000 PSI
				C = Compressed load					
6mm - 284				Case: Winchester (reformed) Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 26" Trim length: 2.160"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
55 GR. NOS BT	AR2206H	.243"	2.780"	47.0	3,837 fps	47,100 CUP	50.0	4,050 fps	51,700 CUP
	AR2208	.243"	2.780"	47.0	3,779 fps	47,500 CUP	50.5	3,921 fps	51,600 CUP
	AR2209	.243"	2.780"	55.0	3,738 fps	42,300 CUP	59.0C	4,039 fps	51,600 CUP
60 GR. SIE HP	AR2206H	.243"	2.680"	45.0	3,740 fps	47,200 CUP	48.5	3,910 fps	52,100 CUP
	AR2208	.243"	2.680"	45.0	3,672 fps	47,700 CUP	49.0	3,855 fps	52,400 CUP
	AR2209	.243"	2.680"	54.0	3,719 fps	44,800 CUP	58.0	3,976 fps	52,300 CUP
	AR2213SC	.243"	2.680"	56.0	3,584 fps	46,400 CUP	60.0C	3,756 fps	51,400 CUP
62 GR. BAR VG FB	AR2206H	.243"	2.775"	40.0	3,408 fps	40,600 CUP	44.5	3,707 fps	50,800 CUP
	AR2208	.243"	2.775"	44.0	3,583 fps	44,500 CUP	48.5	3,851 fps	51,800 CUP
	AR2209	.243"	2.775"	48.0	3,489 fps	41,600 CUP	54.3C	3,863 fps	52,500 CUP
	AR2213SC	.243"	2.775"	55.0	3,607 fps	46,400 CUP	59.0C	3,777 fps	50,300 CUP
65 GR. HDY V-MAX	AR2206H	.243"	2.735"	43.0	3,528 fps	42,800 CUP	46.0	3,724 fps	50,400 CUP
	AR2208	.243"	2.735"	44.0	3,532 fps	45,200 CUP	47.0	3,688 fps	49,800 CUP
	AR2209	.243"	2.735"	51.7	3,584 fps	44,500 CUP	55.0	3,767 fps	49,800 CUP
	AR2213SC	.243"	2.735"	54.0	3,481 fps	43,800 CUP	57.5	3,678 fps	51,300 CUP
70 GR. HDY SP	AR2209	.243"	2.730"	52.0	3,550 fps	46,300 CUP	55.0	3,731 fps	52,200 CUP
	AR2213SC	.243"	2.730"	55.0	3,442 fps	45,900 CUP	58.5C	3,632 fps	51,900 CUP
75 GR. HDY V-MAX	AR2209	.243"	2.750"	49.0	3,466 fps	46,800 CUP	53.0	3,644 fps	52,300 CUP
	AR2213SC	.243"	2.750"	53.0	3,331 fps	45,200 CUP	56.5	3,566 fps	52,200 CUP

# RIFLE DATA

6mm - 284				Case: Winchester (reformed) Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 26" Trim length: 2.160"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
80 GR. SPR SP	AR2209	.243"	2.730"	47.5	3,259 fps	45,600 CUP	50.5	3,447 fps	51,800 CUP
	AR2213SC	.243"	2.730"	52.0	3,306 fps	47,100 CUP	55.0	3,440 fps	52,000 CUP
	AR2217	.243"	2.730"	55.0	3,296 fps	46,700 CUP	59.0C	3,467 fps	52,000 CUP
85 GR. BAR TSX	AR2209	.243"	2.750"	43.0	3,116 fps	43,100 CUP	47.5	3,343 fps	51,800 CUP
	AR2213SC	.243"	2.750"	46.0	3,137 fps	46,200 CUP	50.0	3,332 fps	51,700 CUP
	AR2217	.243"	2.750"	51.0	3,234 fps	48,200 CUP	55.5C	3,374 fps	51,700 CUP
	AR2225	.243"	2.750"	55.0	3,272 fps	44,300 CUP	57.0C	3,398 fps	49,000 CUP
90 GR. NOS E-TIP	AR2209	.243"	2.800"	46.0	3,064 fps	43,700 CUP	50.0C	3,244 fps	49,100 CUP
	AR2213SC	.243"	2.800"	49.0	2,986 fps	41,100 CUP	54.5C	3,267 fps	50,100 CUP
	AR2217	.243"	2.800"	52.0	3,001 fps	41,200 CUP	57.0C	3,236 fps	48,200 CUP
	AR2225	.243"	2.800"	52.0	3,035 fps	39,500 CUP	57.0C	3,278 fps	46,800 CUP
90 GR. SPR SP	AR2209	.243"	2.750"	44.5	3,077 fps	46,300 CUP	47.5	3,223 fps	51,800 CUP
	AR2213SC	.243"	2.750"	49.0	3,101 fps	47,100 CUP	52.5	3,272 fps	52,200 CUP
	AR2217	.243"	2.750"	52.0	3,072 fps	45,900 CUP	55.5	3,241 fps	51,900 CUP
	AR2225	.243"	2.750"	55.5	3,185 fps	46,300 CUP	59.0C	3,338 fps	51,900 CUP
100 GR. NOS PART	AR2209	.243"	2.760"	43.0	2,925 fps	46,300 CUP	46.0	3,066 fps	52,000 CUP
	AR2213SC	.243"	2.760"	48.0	2,960 fps	46,400 CUP	51.0	3,108 fps	52,100 CUP
	AR2217	.243"	2.760"	52.0	3,007 fps	47,300 CUP	55.0	3,145 fps	52,200 CUP
	AR2225	.243"	2.760"	54.0	3,018 fps	44,400 CUP	57.5	3,219 fps	51,800 CUP
105 GR. SPR SP	AR2213SC	.243"	2.800"	45.0	2,804 fps	47,700 CUP	48.0	2,978 fps	52,200 CUP
	AR2217	.243"	2.800"	47.0	2,794 fps	45,700 CUP	50.0	2,913 fps	51,600 CUP
	AR2225	.243"	2.800"	51.0	2,901 fps	45,700 CUP	54.5C	3,070 fps	52,000 CUP
107 GR. SIE HPBT	AR2213SC	.243"	2.800"	48.0	2,946 fps	48,000 CUP	51.0	3,049 fps	52,200 CUP
	AR2217	.243"	2.800"	51.0	2,879 fps	45,700 CUP	54.5	3,069 fps	52,400 CUP
	AR2225	.243"	2.800"	53.0	2,972 fps	45,700 CUP	56.5C	3,138 fps	51,800 CUP
115 GR. BAR SP	AR2213SC	.243"	2.650"	43.0	2,670 fps	46,500 CUP	46.0	2,797 fps	51,800 CUP
	AR2217	.243"	2.650"	46.0	2,682 fps	46,400 CUP	49.0	2,805 fps	52,200 CUP
	AR2225	.243"	2.650"	50.0	2,805 fps	47,500 CUP	53.0C	2,934 fps	51,900 CUP
				C = Compressed load					
240 Weatherby Magnum				Case: Weatherby Twist: 1:9" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.490"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR. SIE HP	AR2206H	.243"	3.060"	-	-	-	47.0	3,521 fps	-
	AR2213SC	.243"	3.060"	-	-	-	57.0	3,488 fps	-

# RIFLE DATA

<b>240 Weatherby Magnum</b>				Case: Weatherby Twist: 1:9" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.490"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
75 GR. HDY HP	AR2206H	.243"	3.075"	-	-	-	46.0	3,445 fps	-
	AR2213SC	.243"	3.075"	-	-	-	56.0	3,453 fps	-
80 GR. SPR SP	AR2206H	.243"	3.060"	-	-	-	44.0	3,359 fps	-
	AR2213SC	.243"	3.060"	-	-	-	56.0	3,481 fps	-
	AR2217	.243"	3.060"	57.0	3,082 fps	-	59.0	3,207 fps	-
85 GR. SIE HPBT	AR2213SC	.243"	3.060"	-	-	-	56.0	3,460 fps	-
	AR2217	.243"	3.060"	57.0	3,043 fps	-	59.0	3,167 fps	-
90 GR. SPR SP	AR2213SC	.243"	3.060"	-	-	-	55.0	3,394 fps	-
	AR2217	.243"	3.060"	57.0	3,037 fps	-	59.0	3,140 fps	-
100 GR. NOS PART	AR2213SC	.243"	3.060"	-	-	-	53.0	3,202 fps	-
	AR2217	.243"	3.060"	57.0	3,018 fps	-	59.0	3,122 fps	-
115 GR. BAR SP	AR2213SC	.243"	3.050"	-	-	-	46.0	2,779 fps	-
	AR2217	.243"	3.050"	56.0	2,971 fps	-	58.0	3,066 fps	-

<b>25-20 Winchester (25-20 WCF)</b>				Case: Remington Twist: 1:14" Primer: WINCHESTER SR			Barrel length: 24" Trim length: 1.320"		
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NOTE: See Single Action Rifle section for more loads with lead bullets.

				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
60 GR. HDY FP	AR2205	.257"	1.600"	9.6	1,854 fps	24,200 CUP	10.2	1,962 fps	26,700 CUP
	AR2207	.257"	1.600"	12.0	1,814 fps	20,200 CUP	14.2C	2,101 fps	25,800 CUP
	AR2219	.257"	1.600"	14.0	1,799 fps	23,600 CUP	15.0C	1,900 fps	25,700 CUP
75 GR. SPR FP	AR2205	.257"	1.575"	8.3	1,521 fps	21,000 CUP	9.3	1,741 fps	27,900 CUP
	AR2207	.257"	1.575"	10.5	1,530 fps	18,100 CUP	12.8	1,877 fps	27,300 CUP
	AR2219	.257"	1.575"	12.0	1,523 fps	22,300 CUP	13.5	1,702 fps	26,700 CUP
86 GR. REM SP	AR2205	.257"	1.600"	8.0	1,444 fps	23,700 CUP	8.6	1,545 fps	27,600 CUP
	AR2207	.257"	1.600"	10.5	1,576 fps	24,500 CUP	11.5	1,673 fps	26,500 CUP
	AR2219	.257"	1.600"	11.3	1,358 fps	22,100 CUP	12.0	1,517 fps	26,300 CUP

C = Compressed load

<b>256 Winchester Magnum</b>				Case: Winchester Twist: 1:14" Primer: WINCHESTER SR			Barrel length: 24" Trim length: 1.271"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
60 GR. HDY SP	AR2207	.257"	1.560"	17.0	2,686 fps	-	18.0	2,794 fps	-

# RIFLE DATA

256 Winchester Magnum				Case: Winchester Twist: 1:14" Primer: WINCHESTER SR			Barrel length: 24" Trim length: 1.271"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
75 GR. SPR FP	AR2207	.257"	1.540"	14.0	2,019 fps	-	16.0	2,327 fps	-
87 GR. HDY SP	AR2207	.257"	1.775"	14.0	2,081 fps	-	15.0	2,192 fps	-

25 Remington				Case: - Twist: - Primer: -			Barrel length: 20" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
87 GR.	AR2207	-	-	-	-	-	21.0	2,500 fps	-
	AR2206	-	-	-	-	-	25.0	2,500 fps	-
	AR2208	-	-	-	-	-	26.0	2,500 fps	-
100 GR.	AR2207	-	-	-	-	-	20.0	2,200 fps	-
	AR2206	-	-	-	-	-	24.0	2,200 fps	-
	AR2208	-	-	-	-	-	26.0	2,200 fps	-
117 GR.	AR2207	-	-	-	-	-	18.5	2,000 fps	-
	AR2206	-	-	-	-	-	22.5	2,000 fps	-
	AR2208	-	-	-	-	-	23.5	2,000 fps	-

25-35 Winchester (25-35 WCF)				Case: Winchester Twist: 1:8" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.033"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR. HDY JFP	AR2207	.257"	2.300"	20.0	2,626 fps	29,700 CUP	21.7	2,827 fps	36,100 CUP
	AR2219	.257"	2.300"	22.0	2,522 fps	27,700 CUP	24.5	2,793 fps	35,900 CUP
	Bench Mark 2	.257"	2.300"	23.0	2,626 fps	29,700 CUP	25.7	2,867 fps	36,600 CUP
	Bench Mark 8208	.257"	2.300"	25.0	2,838 fps	34,500 CUP	27.5	2,913 fps	36,300 CUP
	AR2206H	.257"	2.300"	26.0	2,796 fps	32,300 CUP	30.5C	3,014 fps	36,200 CUP
	AR2208	.257"	2.300"	28.0	2,677 fps	27,900 CUP	31.5C	2,972 fps	36,200 CUP
75 GR. SPR JFP	AR2207	.257"	2.280"	19.0	2,422 fps	32,300 CUP	20.5	2,515 fps	35,500 CUP
	AR2219	.257"	2.280"	21.0	2,256 fps	25,900 CUP	23.5	2,543 fps	35,900 CUP
	Bench Mark 2	.257"	2.280"	21.0	2,305 fps	28,600 CUP	23.0	2,502 fps	36,400 CUP
	Bench Mark 8208	.257"	2.280"	23.0	2,444 fps	29,200 CUP	25.7	2,660 fps	34,200 CUP
	AR2206H	.257"	2.280"	25.0	2,471 fps	32,000 CUP	27.4	2,689 fps	36,500 CUP
	AR2208	.257"	2.280"	26.5	2,487 fps	29,800 CUP	29.0	2,672 fps	36,300 CUP
90 GR. LFP W/GCK	Trail Boss	.257"	2.320"	5.5	1,224 fps	22,000 CUP	8.0	1,414 fps	23,200 CUP
	AS30N	.257"	2.320"	5.0	1,284 fps	25,100 CUP	6.0	1,344 fps	34,000 CUP



# RIFLE DATA

<b>25-35 Winchester (25-35 WCF)</b>				Case: Winchester			Barrel length: 24"		
				Twist: 1:8"			Trim length: 2.033"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
117 GR. HDY RN	AR2207	.257"	2.550"	16.8	1,889 fps	29,100 CUP	18.8	2,065 fps	36,100 CUP
	AR2219	.257"	2.550"	19.0	1,916 fps	27,900 CUP	21.0	2,127 fps	36,000 CUP
	Bench Mark 2	.257"	2.550"	19.0	1,902 fps	27,200 CUP	21.0	2,063 fps	32,500 CUP
	Bench Mark 8208	.257"	2.550"	20.0	1,985 fps	28,800 CUP	22.5	2,257 fps	35,700 CUP
	AR2206H	.257"	2.550"	19.5	1,875 fps	25,000 CUP	22.5	2,168 fps	36,000 CUP
	AR2208	.257"	2.550"	21.0	1,916 fps	25,800 CUP	24.5	2,244 fps	36,600 CUP
				C = Compressed load					
<b>257 Kimber</b>				Case: Remington (reformed)			Barrel length: 22"		
				Twist: 1:10"			Trim length: 1.820"		
				Primer: CCI 400					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
75 GR. HDY HP	AR2219	.257"	2.335"	27.0	2,806 fps	-	30.0	3,198 fps	-
	AR2206H	.257"	2.335"	28.0	2,756 fps	-	31.5	3,192 fps	-
87 GR. HDY SP	AR2219	.257"	2.375"	25.0	2,604 fps	-	28.0	2,868 fps	-
	AR2206H	.257"	2.375"	29.0	2,824 fps	-	31.0	3,056 fps	-
100 GR. SPR SP	AR2206H	.257"	2.390"	26.0	2,527 fps	-	28.0	2,760 fps	-
117 GR. SIE SPBT	AR2206H	.257"	2.455"	22.0	2,017 fps	-	24.0	2,223 fps	-
<b>250-3000 Savage</b>				Case: Remington			Barrel length: 24"		
				Twist: 1:10"			Trim length: 1.902"		
				Primer: REMINGTON 9 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
75 GR. HDY V-MAX	Bench Mark 2	.257"	2.475"	31.0	2,981 fps	38,300 CUP	33.0	3,102 fps	43,900 CUP
	Bench Mark 8208	.257"	2.475"	34.0	3,103 fps	37,500 CUP	37.0	3,341 fps	43,200 CUP
	AR2206H	.257"	2.475"	34.0	3,088 fps	39,400 CUP	36.5	3,256 fps	43,500 CUP
	AR2208	.257"	2.475"	36.0	3,061 fps	36,700 CUP	38.5	3,254 fps	43,200 CUP
80 GR. BAR TTSX BT	Bench Mark 2	.257"	2.500"	32.0	2,949 fps	39,300 CUP	34.0	3,090 fps	43,700 CUP
	Bench Mark 8208	.257"	2.500"	32.0	2,868 fps	36,000 CUP	34.5	3,112 fps	43,100 CUP
	AR2206H	.257"	2.500"	33.0	2,963 fps	36,600 CUP	35.0	3,121 fps	42,800 CUP
	AR2208	.257"	2.500"	35.0	2,977 fps	38,300 CUP	37.3C	3,149 fps	43,500 CUP
85 GR. NOS BT	Bench Mark 2	.257"	2.500"	29.5	2,793 fps	38,200 CUP	31.5	2,943 fps	43,200 CUP
	Bench Mark 8208	.257"	2.500"	32.0	2,897 fps	34,600 CUP	35.3	3,162 fps	44,600 CUP
	AR2206H	.257"	2.500"	33.0	2,929 fps	38,100 CUP	35.0	3,084 fps	43,600 CUP
	AR2208	.257"	2.500"	34.0	2,854 fps	35,300 CUP	37.0	3,090 fps	43,500 CUP

# RIFLE DATA

250-3000 Savage				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 1.902"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
87 GR. SPR SP	Bench Mark 2	.257"	2.450"	30.5	2,804 fps	39,000 CUP	32.5	2,937 fps	43,000 CUP
	Bench Mark 8208	.257"	2.450"	31.5	2,864 fps	35,300 CUP	35.0	3,103 fps	44,800 CUP
	AR2206H	.257"	2.450"	33.0	2,913 fps	39,100 CUP	35.5	3,068 fps	43,700 CUP
	AR2208	.257"	2.450"	35.0	2,947 fps	40,200 CUP	37.0	3,074 fps	43,200 CUP
90 GR. SIE HPBT	Bench Mark 2	.257"	2.425"	31.0	2,831 fps	39,200 CUP	33.0	2,965 fps	43,900 CUP
	Bench Mark 8208	.257"	2.425"	32.0	2,913 fps	38,100 CUP	35.0	3,002 fps	44,200 CUP
	AR2206H	.257"	2.425"	33.0	2,901 fps	39,000 CUP	35.5	3,060 fps	43,900 CUP
	AR2208	.257"	2.425"	34.0	2,860 fps	37,300 CUP	36.5	3,021 fps	43,300 CUP
100 GR. HDY SP	Bench Mark 8208	.257"	2.500"	30.0	2,687 fps	38,300 CUP	33.0	2,862 fps	44,200 CUP
	AR2206H	.257"	2.500"	31.0	2,698 fps	38,500 CUP	33.5	2,849 fps	43,600 CUP
	AR2208	.257"	2.500"	33.0	2,750 fps	40,000 CUP	35.2	2,877 fps	43,700 CUP
	AR2209	.257"	2.500"	38.0	2,773 fps	38,500 CUP	40.5C	2,936 fps	44,100 CUP
115 GR. NOS BT	Bench Mark 8208	.257"	2.525"	28.0	2,770 fps	39,000 CUP	31.0	2,614 fps	44,400 CUP
	AR2206H	.257"	2.525"	28.5	2,440 fps	38,400 CUP	30.5	2,567 fps	43,400 CUP
	AR2208	.257"	2.525"	30.5	2,494 fps	39,400 CUP	32.5	2,611 fps	43,500 CUP
	AR2209	.257"	2.525"	34.5	2,497 fps	36,800 CUP	36.8C	2,642 fps	43,400 CUP
117 GR. SIE SPBT	Bench Mark 8208	.257"	2.475"	27.5	2,429 fps	38,200 CUP	30.6	2,594 fps	45,000 CUP
	AR2206H	.257"	2.475"	28.5	2,447 fps	38,000 CUP	30.5	2,579 fps	43,800 CUP
	AR2208	.257"	2.475"	30.0	2,493 fps	41,100 CUP	32.0	2,594 fps	43,700 CUP
	AR2209	.257"	2.475"	35.0	2,518 fps	37,900 CUP	37.0C	2,637 fps	43,400 CUP
	AR2213SC	.257"	2.475"	38.0	2,453 fps	35,900 CUP	39.0C	2,519 fps	39,600 CUP
120 GR. SFT SP	Bench Mark 8208	.257"	2.525"	26.0	2,296 fps	35,000 CUP	28.8	2,480 fps	44,200 CUP
	AR2206H	.257"	2.525"	27.5	2,331 fps	37,500 CUP	29.0	2,467 fps	43,400 CUP
	AR2208	.257"	2.525"	29.0	2,397 fps	37,200 CUP	31.0	2,508 fps	43,200 CUP
	AR2209	.257"	2.525"	33.5	2,443 fps	38,000 CUP	35.5	2,577 fps	43,300 CUP
	AR2213SC	.257"	2.525"	37.5	2,470 fps	39,100 CUP	39.0C	2,537 fps	42,200 CUP
				C = Compressed load					
25-303				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
87 GR.	AR2206	-	-	-	-	-	34.0	3,050 fps	-
	AR2208	-	-	-	-	-	37.0	3,050 fps	-
	AR2209	-	-	-	-	-	41.0	3,050 fps	-

# RIFLE DATA

25-303				Case: -			Barrel length: 24"		
				Twist: -			Trim length: -		
				Primer: -					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR.	AR2206	-	-	-	-	-	31.0	2,850 fps	-
	AR2208	-	-	-	-	-	33.5	2,850 fps	-
	AR2209	-	-	-	-	-	38.0	2,850 fps	-
117 GR.	AR2206	-	-	-	-	-	28.0	2,700 fps	-
	AR2208	-	-	-	-	-	31.0	2,700 fps	-
	AR2209	-	-	-	-	-	36.0	2,700 fps	-
25-308				Case: -			Barrel length: 24"		
				Twist: -			Trim length: -		
				Primer: -					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR.	AR2206	-	-	-	-	-	45.0	3,700 fps	-
	AR2208	-	-	-	-	-	46.5	3,700 fps	-
	AR2209	-	-	-	-	-	51.0	3,700 fps	-
87 GR.	AR2206	-	-	-	-	-	41.0	3,200 fps	-
	AR2208	-	-	-	-	-	42.5	3,200 fps	-
	AR2209	-	-	-	-	-	47.5	3,200 fps	-
100 GR.	AR2208	-	-	-	-	-	40.5	3,000 fps	-
	AR2209	-	-	-	-	-	45.5	3,000 fps	-
120 GR.	AR2209	-	-	-	-	-	43.5	2,850 fps	-
257 Roberts				Case: Remington			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.223"		
				Primer: REMINGTON 9 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR. HDY SP	Bench Mark 2	.257"	2.535"	41.0	3,453 fps	42,200 CUP	43.7	3,671 fps	45,000 CUP
	AR2206H	.257"	2.535"	42.0	3,376 fps	36,600 CUP	46.0	3,805 fps	45,000 CUP
	AR2209	.257"	2.535"	48.0	3,290 fps	36,200 CUP	51.0	3,612 fps	44,700 CUP
	AR2213SC	.257"	2.535"	49.0	2,847 fps	23,700 CUP	53.0	3,382 fps	33,600 CUP
75 GR. HDY HP	Bench Mark 2	.257"	2.795"	39.0	3,226 fps	39,200 CUP	41.7	3,434 fps	45,000 CUP
	Bench Mark 8208	.257"	2.795"	40.5	3,390 fps	39,300 CUP	43.0	3,456 fps	44,900 CUP
	AR2206H	.257"	2.795"	40.5	3,201 fps	34,800 CUP	44.0	3,561 fps	47,300 CUP
	AR2208	.257"	2.795"	37.0	3,155 fps	34,700 CUP	41.0	3,453 fps	43,700 CUP
	AR2209	.257"	2.795"	47.0	3,129 fps	35,200 CUP	50.0	3,422 fps	44,000 CUP

# RIFLE DATA

257 Roberts				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.223"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
80 GR. BAR TTSX BT	Bench Mark 2	.257"	2.780"	35.5	2,990 fps	36,900 CUP	39.5	3,285 fps	45,000 CUP
	Bench Mark 8208	.257"	2.780"	36.0	3,062 fps	38,400 CUP	39.8	3,284 fps	44,700 CUP
	AR2206H	.257"	2.780"	37.0	3,090 fps	38,800 CUP	40.8	3,281 fps	44,600 CUP
	AR2208	.257"	2.780"	39.0	3,061 fps	37,500 CUP	43.0	3,287 fps	45,000 CUP
	AR2209	.257"	2.780"	44.0	2,999 fps	36,000 CUP	48.5	3,290 fps	45,000 CUP
90 GR. HDY GMX	Bench Mark 8208	.257"	2.880"	33.0	2,739 fps	38,300 CUP	36.3	2,927 fps	44,100 CUP
	AR2206H	.257"	2.880"	33.0	2,739 fps	37,700 CUP	36.5	2,943 fps	44,800 CUP
	AR2208	.257"	2.880"	35.0	2,788 fps	39,100 CUP	38.0	2,968 fps	44,600 CUP
	AR2209	.257"	2.880"	38.0	2,729 fps	36,000 CUP	42.0	2,968 fps	44,200 CUP
	AR2213SC	.257"	2.880"	40.0	2,645 fps	35,200 CUP	44.5	2,925 fps	44,600 CUP
90 GR. SIE HPBT	Bench Mark 8208	.257"	2.775"	39.4	3,129 fps	40,200 CUP	42.0	3,314 fps	46,800 CUP
	AR2206H	.257"	2.775"	38.5	2,954 fps	33,600 CUP	42.0	3,372 fps	47,600 CUP
	AR2208	.257"	2.775"	36.0	2,990 fps	36,300 CUP	40.0	3,269 fps	44,900 CUP
	AR2209	.257"	2.775"	44.0	2,890 fps	36,100 CUP	46.0	3,040 fps	43,700 CUP
	AR2213SC	.257"	2.775"	48.0	2,786 fps	27,600 CUP	52.0	3,236 fps	39,500 CUP
100 GR. SPR SPBT	Bench Mark 8208	.257"	2.770"	37.1	2,991 fps	39,400 CUP	39.5	3,085 fps	44,700 CUP
	AR2206H	.257"	2.770"	35.0	2,661 fps	30,600 CUP	38.0	2,990 fps	46,100 CUP
	AR2208	.257"	2.770"	34.0	2,724 fps	34,400 CUP	38.0	2,981 fps	44,900 CUP
	AR2209	.257"	2.770"	43.0	2,833 fps	34,200 CUP	45.0	2,970 fps	45,400 CUP
	AR2213SC	.257"	2.770"	45.0	2,660 fps	29,100 CUP	49.0	3,010 fps	44,100 CUP
115 GR. NOS PART	Bench Mark 8208	.257"	2.780"	34.8	2,707 fps	39,200 CUP	37.0	2,798 fps	45,000 CUP
	AR2206H	.257"	2.780"	33.0	2,433 fps	31,200 CUP	36.0	2,702 fps	45,100 CUP
	AR2208	.257"	2.780"	31.0	2,462 fps	34,300 CUP	35.0	2,701 fps	44,900 CUP
	AR2209	.257"	2.780"	41.0	2,660 fps	40,600 CUP	43.0	2,777 fps	44,400 CUP
	AR2213SC	.257"	2.780"	43.0	2,479 fps	30,400 CUP	46.0	2,760 fps	46,000 CUP
257 Roberts Improved				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
60 GR.	AR2206	-	-	-	-	-	49.0	3,650 fps	-
	AR2208	-	-	-	-	-	50.0	3,650 fps	-
	AR2209	-	-	-	-	-	53.5	3,650 fps	-
75 GR.	AR2206	-	-	-	-	-	48.0	3,500 fps	-
	AR2208	-	-	-	-	-	49.0	3,500 fps	-
	AR2209	-	-	-	-	-	52.5	3,500 fps	-

# RIFLE DATA

257 Roberts Improved				Case: -			Barrel length: 24"		
				Twist: -			Trim length: -		
				Primer: -					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
87-90 GR.	AR2206	-	-	-	-	-	45.5	3,300 fps	-
	AR2208	-	-	-	-	-	46.5	3,300 fps	-
	AR2209	-	-	-	-	-	51.0	3,300 fps	-
100 GR.	AR2206	-	-	-	-	-	42.0	3,100 fps	-
	AR2208	-	-	-	-	-	43.5	3,100 fps	-
	AR2209	-	-	-	-	-	48.0	3,100 fps	-
117-120 GR.	AR2208	-	-	-	-	-	41.5	2,900 fps	-
	AR2209	-	-	-	-	-	46.0	2,900 fps	-
<b>25-284</b>				Case: Winchester (reformed)			Barrel length: 26"		
				Twist: 1:10"			Trim length: 2.160"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
75 GR. HDY HP	AR2209	.257"	2.795"	48.0	3,429 fps	-	52.0	3,640 fps	-
	AR2213SC	.257"	2.795"	53.5	3,330 fps	-	58.0	3,604 fps	-
87 GR. SIE SP	AR2209	.257"	2.795"	46.0	3,180 fps	-	50.0	3,400 fps	-
	AR2213SC	.257"	2.795"	52.5	3,347 fps	-	57.0	3,544 fps	-
100 GR. SPR SP	AR2209	.257"	2.795"	43.0	2,860 fps	-	48.0	3,129 fps	-
	AR2213SC	.257"	2.795"	49.5	3,068 fps	-	54.0	3,369 fps	-
117 GR. HDY BTSP	AR2213SC	.257"	2.775"	48.0	2,882 fps	-	52.0	3,025 fps	-
120 GR. NOS PART	AR2209	.257"	2.795"	41.0	2,642 fps	-	44.0	2,916 fps	-
	AR2213SC	.257"	2.795"	45.0	2,871 fps	-	49.0	2,978 fps	-
<b>25-06 Remington</b>				Case: Remington			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.484"		
				Primer: REMINGTON 9 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
75 GR. HDY V-MAX	AR2206H	.257"	3.100"	45.0	3,474 fps	45,000 CUP	48.5	3,642 fps	50,800 CUP
	AR2208	.257"	3.100"	46.0	3,454 fps	43,400 CUP	49.7	3,660 fps	51,200 CUP
	AR2209	.257"	3.100"	54.0	3,460 fps	43,300 CUP	58.5	3,700 fps	50,900 CUP
	AR2213SC	.257"	3.100"	58.0	3,393 fps	41,800 CUP	62.0C	3,599 fps	49,300 CUP
	AR2217	.257"	3.100"	58.0	3,135 fps	35,300 CUP	62.0C	3,339 fps	40,000 CUP
80 GR. BAR TTSX BT	AR2206H	.257"	3.075"	43.0	3,408 fps	52,100 PSI	47.5	3,630 fps	61,500 PSI
	AR2208	.257"	3.075"	45.0	3,389 fps	51,800 PSI	49.0	3,613 fps	60,900 PSI
	AR2209	.257"	3.075"	51.0	3,347 fps	48,500 PSI	55.0C	3,560 fps	56,900 PSI



# RIFLE DATA

25-06 Remington				Case: Remington			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.484"		
				Primer: REMINGTON 9 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. NOS BT	AR2206H	.257"	3.230"	41.0	3,176 fps	44,600 CUP	44.5	3,369 fps	51,600 CUP
	AR2208	.257"	3.230"	43.0	3,271 fps	45,000 CUP	46.5	3,449 fps	50,900 CUP
	AR2209	.257"	3.230"	49.0	3,255 fps	44,400 CUP	53.0	3,445 fps	50,700 CUP
	AR2213SC	.257"	3.230"	54.0	3,302 fps	46,000 CUP	58.0	3,473 fps	51,700 CUP
	AR2217	.257"	3.230"	58.0	3,218 fps	41,000 CUP	62.0C	3,442 fps	48,100 CUP
87 GR. SPR HP	AR2206H	.257"	3.115"	43.0	3,243 fps	47,700 CUP	45.5	3,364 fps	51,600 CUP
	AR2208	.257"	3.115"	43.0	3,231 fps	44,900 CUP	46.0	3,382 fps	50,500 CUP
	AR2209	.257"	3.115"	50.0	3,234 fps	45,600 CUP	54.5	3,409 fps	50,800 CUP
	AR2213SC	.257"	3.115"	56.0	3,232 fps	43,500 CUP	60.0	3,421 fps	50,500 CUP
	AR2217	.257"	3.115"	58.0	3,176 fps	36,200 CUP	62.0C	3,296 fps	43,700 CUP
90 GR. HDY GMX	AR2206H	.257"	3.115"	39.0	3,053 fps	50,800 PSI	43.0	3,281 fps	60,200 PSI
	AR2208	.257"	3.115"	41.0	3,098 fps	51,600 PSI	44.0	3,261 fps	58,800 PSI
	AR2209	.257"	3.115"	45.0	3,117 fps	51,300 PSI	49.5	3,344 fps	60,600 PSI
	AR2213SC	.257"	3.115"	50.0	3,205 fps	56,200 PSI	54.5C	3,363 fps	61,000 PSI
	AR2217	.257"	3.115"	56.0	3,248 fps	54,900 PSI	60.0C	3,377 fps	59,300 PSI
	AR2225	.257"	3.115"	56.0	3,250 fps	51,000 PSI	60.0C	3,432 fps	58,700 PSI
90 GR. SIE HPBT	AR2206H	.257"	3.100"	41.0	3,128 fps	44,100 CUP	44.0	3,257 fps	51,000 CUP
	AR2208	.257"	3.100"	42.0	3,165 fps	45,000 CUP	45.0	3,312 fps	50,400 CUP
	AR2209	.257"	3.100"	49.0	3,191 fps	44,000 CUP	53.0	3,370 fps	50,700 CUP
	AR2213SC	.257"	3.100"	54.0	3,213 fps	46,000 CUP	58.0	3,481 fps	50,400 CUP
	AR2217	.257"	3.100"	58.0	3,142 fps	40,300 CUP	62.0C	3,330 fps	47,500 CUP
100 GR. NOS PART	Trail Boss	.257"	3.200"	13.4	1,454 fps	25,500 PSI	19.2	1,712 fps	30,600 PSI
	AR2206H	.257"	3.200"	40.0	2,921 fps	44,200 CUP	43.0	3,072 fps	51,000 CUP
	AR2208	.257"	3.200"	41.0	2,974 fps	45,600 CUP	44.0	3,125 fps	51,400 CUP
	AR2209	.257"	3.200"	47.0	3,038 fps	47,800 CUP	50.0	3,155 fps	51,500 CUP
	AR2213SC	.257"	3.200"	51.0	3,025 fps	46,800 CUP	54.3	3,172 fps	51,400 CUP
	AR2217	.257"	3.200"	56.0	3,055 fps	44,600 CUP	59.7C	3,212 fps	50,700 CUP
117 GR. HDY SPBT	AR2206H	.257"	3.165"	37.0	2,641 fps	44,500 CUP	40.0	2,797 fps	50,600 CUP
	AR2208	.257"	3.165"	37.0	2,637 fps	42,900 CUP	41.0	2,838 fps	50,100 CUP
	AR2209	.257"	3.165"	44.0	2,737 fps	44,300 CUP	47.7	2,923 fps	50,800 CUP
	AR2213SC	.257"	3.165"	48.0	2,748 fps	43,000 CUP	52.0	2,937 fps	50,900 CUP
	AR2217	.257"	3.165"	55.0	2,936 fps	47,200 CUP	58.5C	3,046 fps	51,000 CUP
	AR2225	.257"	3.165"	56.0	2,876 fps	44,600 CUP	60.5C	3,079 fps	50,700 CUP

# RIFLE DATA

25-06 Remington				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.484"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. SFT SP	AR2206H	.257"	3.150"	37.0	2,541 fps	45,400 CUP	40.0	2,694 fps	51,700 CUP
	AR2208	.257"	3.150"	38.0	2,584 fps	45,100 CUP	41.0	2,755 fps	51,900 CUP
	AR2209	.257"	3.150"	44.0	2,643 fps	42,900 CUP	47.5	2,816 fps	50,900 CUP
	AR2213SC	.257"	3.150"	48.0	2,705 fps	45,800 CUP	51.5	2,856 fps	51,200 CUP
	AR2217	.257"	3.150"	52.0	2,772 fps	44,900 CUP	55.5	2,902 fps	50,600 CUP
	AR2225	.257"	3.150"	56.0	2,806 fps	43,700 CUP	60.0C	2,991 fps	50,300 CUP
				C = Compressed load					
25 Winchester Super Short Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.660"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
75 GR. HDY V-MAX	Bench Mark 8208	.257"	2.350"	40.0	3,341 fps	47,200 PSI	45.0	3,687 fps	62,700 PSI
	AR2206H	.257"	2.350"	42.0	3,473 fps	49,700 PSI	45.2	3,708 fps	61,800 PSI
	AR2208	.257"	2.350"	43.0	3,437 fps	49,700 PSI	46.5	3,677 fps	62,200 PSI
85 GR. NOS BT	Bench Mark 8208	.257"	2.350"	38.0	3,174 fps	48,900 PSI	42.4	3,456 fps	62,600 PSI
	AR2206H	.257"	2.350"	40.0	3,268 fps	50,700 PSI	43.3	3,475 fps	62,100 PSI
	AR2208	.257"	2.350"	40.0	3,180 fps	46,200 PSI	44.9	3,497 fps	62,200 PSI
87 GR. SIE SP	Bench Mark 8208	.257"	2.300"	38.0	3,152 fps	49,500 PSI	42.7	3,423 fps	62,100 PSI
	AR2206H	.257"	2.300"	40.0	3,271 fps	53,000 PSI	43.3	3,456 fps	62,300 PSI
	AR2208	.257"	2.300"	40.0	3,189 fps	49,800 PSI	44.0	3,431 fps	62,600 PSI
100 GR. SPR BT	Bench Mark 8208	.257"	2.300"	36.0	2,954 fps	51,200 PSI	40.0	3,166 fps	62,100 PSI
	AR2206H	.257"	2.300"	38.0	3,042 fps	50,500 PSI	41.5	3,243 fps	61,700 PSI
	AR2208	.257"	2.300"	39.0	3,022 fps	50,000 PSI	42.8	3,248 fps	62,700 PSI
	AR2209	.257"	2.300"	45.0	3,035 fps	51,400 PSI	48.5C	3,233 fps	61,300 PSI
115 GR. NOS BT	Bench Mark 8208	.257"	2.350"	33.0	2,648 fps	51,000 PSI	37.0	2,877 fps	63,000 PSI
	AR2206H	.257"	2.350"	34.0	2,658 fps	51,600 PSI	37.0	2,830 fps	62,200 PSI
	AR2208	.257"	2.350"	36.0	2,726 fps	53,700 PSI	38.7	2,871 fps	62,600 PSI
	AR2209	.257"	2.350"	42.0	2,806 fps	52,800 PSI	45.3C	2,999 fps	63,000 PSI
	AR2213SC	.257"	2.350"	44.0	2,733 fps	52,100 PSI	47.0C	2,883 fps	60,900 PSI
117 GR. HDY BTSP	Bench Mark 8208	.257"	2.335"	33.0	2,629 fps	49,200 PSI	36.7	2,851 fps	61,700 PSI
	AR2206H	.257"	2.335"	35.0	2,723 fps	53,800 PSI	37.5	2,858 fps	62,200 PSI
	AR2208	.257"	2.335"	36.0	2,725 fps	52,700 PSI	39.0	2,888 fps	62,200 PSI
	AR2209	.257"	2.335"	42.0	2,796 fps	52,300 PSI	45.0	2,965 fps	62,300 PSI
	AR2213SC	.257"	2.335"	44.0	2,731 fps	51,100 PSI	47.5C	2,901 fps	61,300 PSI

# RIFLE DATA

<b>25 Winchester Super Short Magnum</b>				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.660"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. SFT SP	Bench Mark 8208	.257"	2.330"	32.0	2,542 fps	48,300 PSI	36.3	2,800 fps	62,900 PSI
	AR2206H	.257"	2.330"	35.0	2,700 fps	53,300 PSI	37.7	2,840 fps	61,700 PSI
	AR2208	.257"	2.330"	36.0	2,702 fps	53,200 PSI	39.0	2,878 fps	63,500 PSI
	AR2209	.257"	2.330"	42.0	2,793 fps	51,000 PSI	45.5C	2,981 fps	62,400 PSI
	AR2213SC	.257"	2.330"	45.0	2,744 fps	51,600 PSI	48.0C	2,902 fps	61,100 PSI
				C = Compressed load					
<b>257 Weatherby Magnum</b>				Case: Weatherby Twist: 1:10" Primer: FEDERAL 215			Barrel length: 26" Trim length: 2.535"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
75 GR. HDY V-MAX	AR2209	.257"	3.250"	65.0	3,715 fps	43,100 CUP	70.0	3,905 fps	51,800 CUP
	AR2213SC	.257"	3.250"	71.0	3,652 fps	45,200 CUP	75.0	3,841 fps	51,900 CUP
	AR2217	.257"	3.250"	76.0	3,517 fps	37,700 CUP	80.0C	3,649 fps	42,000 CUP
85 GR. NOS BT	AR2209	.257"	3.250"	63.0	3,544 fps	44,400 CUP	67.0	3,739 fps	51,600 CUP
	AR2213SC	.257"	3.250"	68.0	3,498 fps	45,000 CUP	72.0	3,664 fps	52,200 CUP
	AR2217	.257"	3.250"	76.0	3,548 fps	44,600 CUP	80.0C	3,665 fps	47,900 CUP
90 GR. SIE HPBT	AR2209	.257"	3.150"	62.5	3,524 fps	46,600 CUP	66.5	3,685 fps	52,400 CUP
	AR2213SC	.257"	3.150"	67.0	3,420 fps	44,400 CUP	71.0	3,611 fps	52,500 CUP
	AR2217	.257"	3.150"	76.0	3,494 fps	43,800 CUP	80.0C	3,671 fps	50,000 CUP
100 GR. SPR SPBT	AR2209	.257"	3.200"	59.0	3,312 fps	44,900 CUP	63.0	3,500 fps	52,400 CUP
	AR2213SC	.257"	3.200"	64.0	3,312 fps	45,800 CUP	68.0	3,462 fps	52,500 CUP
	AR2217	.257"	3.200"	73.0	3,410 fps	45,800 CUP	78.0	3,575 fps	52,400 CUP
115 GR. BAR XFB	AR2209	.257"	3.250"	56.0	2,988 fps	46,900 CUP	60.0	3,188 fps	52,500 CUP
	AR2213SC	.257"	3.250"	60.0	3,030 fps	46,200 CUP	64.0	3,170 fps	52,000 CUP
	AR2217	.257"	3.250"	67.0	3,147 fps	50,000 CUP	71.0	3,265 fps	52,700 CUP
117 GR. HDY SPBT	AR2209	.257"	3.220"	57.0	3,112 fps	46,000 CUP	60.5	3,266 fps	52,000 CUP
	AR2213SC	.257"	3.220"	62.0	3,099 fps	44,800 CUP	66.0	3,252 fps	52,300 CUP
	AR2217	.257"	3.220"	70.0	3,169 fps	45,200 CUP	74.0	3,321 fps	51,800 CUP
120 GR. SFT SP	AR2209	.257"	3.220"	56.0	3,000 fps	44,400 CUP	60.0	3,189 fps	51,800 CUP
	AR2213SC	.257"	3.220"	61.0	3,013 fps	44,600 CUP	65.0	3,184 fps	51,800 CUP
	AR2217	.257"	3.220"	69.0	3,103 fps	45,700 CUP	73.0	3,256 fps	51,800 CUP
				C = Compressed load					

# RIFLE DATA

6.5mm Grendel				Case: Lapua Twist: 1:9" Primer: FEDERAL 205M			Barrel length: 24" Trim length: 1.515"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. SIE HP	AR2207	.264"	2.240"	24.5	2,674 fps	38,500 PSI	27.2C	2,919 fps	49,500 PSI
	AR2219	.264"	2.240"	27.0	2,625 fps	36,600 PSI	30.1C	2,927 fps	49,400 PSI
90 GR. SPR TNT HP	AR2207	.264"	2.200"	24.0	2,594 fps	36,800 PSI	26.8C	2,854 fps	49,400 PSI
	AR2219	.264"	2.200"	26.5	2,534 fps	34,600 PSI	29.5C	2,863 fps	49,500 PSI
	Bench Mark 2	.264"	2.200"	28.5	2,662 fps	37,700 PSI	30.5C	2,870 fps	47,000 PSI
	Bench Mark 8208	.264"	2.220"	29.0	2,580 fps	34,700 PSI	31.0C	2,794 fps	42,400 PSI
95 GR. HDY V-MAX	AR2207	.264"	2.230"	23.0	2,483 fps	36,600 PSI	25.8C	2,750 fps	49,300 PSI
	AR2219	.264"	2.230"	26.0	2,477 fps	35,900 PSI	28.8C	2,768 fps	49,300 PSI
	Bench Mark 2	.264"	2.230"	27.0	2,476 fps	33,900 PSI	30.0C	2,807 fps	49,700 PSI
	Bench Mark 8208	.264"	2.230"	28.0	2,527 fps	35,600 PSI	31.0C	2,840 fps	49,600 PSI
100 GR. NOS BT	AR2207	.264"	2.200"	23.0	2,414 fps	36,800 PSI	25.6C	2,666 fps	49,800 PSI
	AR2219	.264"	2.200"	26.0	2,420 fps	36,700 PSI	29.0C	2,716 fps	49,800 PSI
	Bench Mark 2	.264"	2.200"	27.0	2,460 fps	36,300 PSI	29.9C	2,739 fps	49,900 PSI
	Bench Mark 8208	.264"	2.200"	29.0	2,542 fps	38,300 PSI	30.8C	2,732 fps	47,600 PSI
107 GR. SIE HPBT	AR2207	.264"	2.250"	22.0	2,324 fps	37,000 PSI	24.8	2,576 fps	49,900 PSI
	AR2219	.264"	2.250"	25.0	2,325 fps	35,900 PSI	27.7C	2,607 fps	49,800 PSI
	Bench Mark 2	.264"	2.250"	26.0	2,355 fps	34,800 PSI	29.0C	2,653 fps	49,600 PSI
	Bench Mark 8208	.264"	2.250"	27.0	2,356 fps	34,600 PSI	29.8C	2,667 fps	49,300 PSI
120 GR. BAR TSX	AR2207	.264"	2.200"	20.5	2,074 fps	41,000 PSI	22.9C	2,272 fps	49,700 PSI
	AR2219	.264"	2.200"	23.0	2,074 fps	37,700 PSI	25.8C	2,347 fps	50,000 PSI
	Bench Mark 2	.264"	2.200"	24.5	2,133 fps	36,900 PSI	27.3	2,401 fps	50,200 PSI
	Bench Mark 8208	.264"	2.200"	25.0	2,094 fps	34,600 PSI	28.0C	2,419 fps	50,000 PSI
123 GR. SIE HPBT	AR2207	.264"	2.250"	21.0	2,153 fps	37,700 PSI	23.7C	2,375 fps	50,000 PSI
	AR2219	.264"	2.250"	24.0	2,192 fps	36,600 PSI	26.6C	2,434 fps	49,900 PSI
	Bench Mark 2	.264"	2.250"	25.0	2,225 fps	36,900 PSI	27.5C	2,460 fps	49,900 PSI
	Bench Mark 8208	.264"	2.250"	25.5	2,180 fps	33,900 PSI	28.5C	2,497 fps	50,000 PSI

C = Compressed load

# RIFLE DATA

6.5mm BR				Case: Remington (reformed) Twist: 1:8" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.510"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
90 GR. SPR TNT HP	AR2219	.264"	2.140"	29.0	2,749 fps	39,400 CUP	31.0	2,919 fps	49,100 CUP
	Bench Mark 2	.264"	2.140"	29.7	2,807 fps	42,300 CUP	31.7	2,953 fps	49,100 CUP
	Bench Mark 8208	.264"	2.140"	31.0	2,799 fps	39,800 CUP	33.2C	3,017 fps	46,500 CUP
	AR2206H	.264"	2.140"	31.0	2,714 fps	35,800 CUP	33.0C	2,923 fps	44,100 CUP
	AR2208	.264"	2.140"	31.0	2,670 fps	35,400 CUP	33.0C	2,835 fps	41,500 CUP
95 GR. HDY V-MAX	AR2219	.264"	2.220"	28.8	2,722 fps	40,300 CUP	30.7	2,894 fps	50,000 CUP
	Bench Mark 2	.264"	2.220"	29.0	2,740 fps	43,200 CUP	31.0	2,871 fps	49,000 CUP
	Bench Mark 8208	.264"	2.220"	30.0	2,725 fps	38,700 CUP	33.0C	2,992 fps	50,100 CUP
	AR2206H	.264"	2.220"	31.0	2,774 fps	40,000 CUP	33.0C	2,946 fps	48,500 CUP
	AR2208	.264"	2.220"	31.0	2,698 fps	40,000 CUP	33.0C	2,843 fps	45,900 CUP
100 GR. NOS BT	AR2219	.264"	2.220"	28.0	2,601 fps	39,400 CUP	29.7	2,772 fps	50,200 CUP
	Bench Mark 2	.264"	2.220"	28.3	2,584 fps	41,700 CUP	30.2	2,748 fps	49,400 CUP
	Bench Mark 8208	.264"	2.220"	29.0	2,624 fps	38,400 CUP	32.0C	2,887 fps	50,000 CUP
	AR2206H	.264"	2.220"	31.0	2,702 fps	41,700 CUP	33.0C	2,878 fps	49,100 CUP
	AR2208	.264"	2.220"	31.0	2,635 fps	39,600 CUP	33.0C	2,797 fps	48,700 CUP
107 GR. SIE HPBT	AR2219	.264"	2.340"	27.2	2,563 fps	39,100 CUP	29.0	2,738 fps	49,800 CUP
	Bench Mark 2	.264"	2.340"	27.8	2,587 fps	40,200 CUP	29.6	2,741 fps	49,400 CUP
	Bench Mark 8208	.264"	2.340"	28.0	2,532 fps	37,600 CUP	31.3	2,817 fps	49,500 CUP
	AR2206H	.264"	2.340"	29.8	2,623 fps	38,900 CUP	31.8C	2,811 fps	47,900 CUP
	AR2208	.264"	2.340"	30.5	2,658 fps	41,800 CUP	32.5C	2,798 fps	48,500 CUP
120 GR. NOS BT	AR2219	.264"	2.250"	26.7	2,403 fps	40,800 CUP	28.5	2,549 fps	49,500 CUP
	Bench Mark 2	.264"	2.250"	27.2	2,445 fps	43,800 CUP	29.0	2,569 fps	50,000 CUP
	Bench Mark 8208	.264"	2.250"	27.0	2,375 fps	37,500 CUP	30.2	2,623 fps	50,200 CUP
	AR2206H	.264"	2.250"	29.0	2,475 fps	41,300 CUP	31.0C	2,624 fps	47,700 CUP
	AR2208	.264"	2.250"	29.0	2,409 fps	39,400 CUP	31.0C	2,542 fps	45,100 CUP
129 GR. HDY SP	AR2219	.264"	2.280"	26.0	2,293 fps	44,500 CUP	27.7	2,417 fps	49,200 CUP
	Bench Mark 2	.264"	2.280"	26.3	2,285 fps	43,800 CUP	28.0	2,411 fps	49,600 CUP
	Bench Mark 8208	.264"	2.280"	27.0	2,314 fps	39,100 CUP	29.8	2,514 fps	49,600 CUP
	AR2206H	.264"	2.280"	28.4	2,378 fps	44,200 CUP	30.3C	2,502 fps	49,400 CUP
	AR2208	.264"	2.280"	29.0	2,371 fps	44,200 CUP	31.0C	2,494 fps	49,900 CUP
140 GR. SPR SP	AR2219	.264"	2.300"	25.0	2,199 fps	43,900 CUP	26.7	2,299 fps	50,200 CUP
	Bench Mark 2	.264"	2.300"	26.3	2,233 fps	44,200 CUP	28.0	2,362 fps	49,800 CUP
	Bench Mark 8208	.264"	2.300"	26.0	2,186 fps	39,200 CUP	28.8	2,391 fps	50,300 CUP
	AR2206H	.264"	2.300"	28.2	2,298 fps	44,200 CUP	30.0C	2,421 fps	49,000 CUP
	AR2208	.264"	2.300"	28.3	2,278 fps	42,100 CUP	30.2C	2,415 fps	49,000 CUP



# RIFLE DATA

6.5mm BR				Case: Remington (reformed) Twist: 1:8" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.510"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
142 GR. SIE HPBT	AR2219	.264"	2.350"	24.5	2,199 fps	44,200 CUP	26.1	2,293 fps	49,400 CUP
	Bench Mark 2	.264"	2.350"	25.2	2,232 fps	45,500 CUP	26.9	2,326 fps	49,900 CUP
	Bench Mark 8208	.264"	2.350"	26.0	2,231 fps	40,000 CUP	28.8	2,426 fps	49,800 CUP
	AR2206H	.264"	2.350"	27.3	2,271 fps	41,900 CUP	29.0	2,395 fps	49,300 CUP
	AR2208	.264"	2.350"	27.9	2,250 fps	40,900 CUP	29.7C	2,396 fps	49,600 CUP
				C = Compressed load					
6.5 x 50mm Japanese				Case: Norma Twist: 1:9" Primer: FEDERAL 210			Barrel length: 32" Trim length: 1.998"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. SIE SP	AR2206H	.264"	2.700"	35.0	2,408 fps	-	37.0	2,717 fps	-
	AR2213SC	.264"	2.700"	39.0	2,350 fps	-	41.0	2,424 fps	-
120 GR. SPR SP	AR2206H	.264"	2.920"	33.0	2,368 fps	-	35.0	2,505 fps	-
	AR2213SC	.264"	2.920"	39.0	2,300 fps	-	41.0	2,429 fps	-
140 GR. NOS PART	AR2206H	.264"	2.920"	32.0	2,186 fps	-	34.0	2,407 fps	-
	AR2213SC	.264"	2.920"	38.0	2,222 fps	-	41.0	2,392 fps	-
160 GR. HDY RN	AR2206H	.264"	2.855"	30.0	2,118 fps	-	32.0	2,334 fps	-
	AR2213SC	.264"	2.855"	36.0	2,201 fps	-	38.0	2,393 fps	-
6.5mm Carcano (6.5 x 52mm)				Case: Norma Twist: - Primer: FEDERAL 210			Barrel length: 21" Trim length: 2.057"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. HDY SP	AR2206H	.264"	2.835"	31.0	2,204 fps	-	33.0	2,394 fps	-
	AR2213SC	.264"	2.835"	40.0	2,189 fps	-	43.0	2,414 fps	-
120 GR. HDY SP	AR2206H	.264"	2.835"	28.0	1,959 fps	-	30.0	2,147 fps	-
	AR2213SC	.264"	2.835"	38.0	2,019 fps	-	41.0	2,224 fps	-
140 GR. NOS PART	AR2206H	.264"	2.900"	28.0	1,904 fps	-	30.0	2,089 fps	-
	AR2213SC	.264"	2.900"	37.0	1,919 fps	-	40.0	2,192 fps	-
160 GR. HDY RN	AR2206H	.264"	2.935"	27.0	1,804 fps	-	30.0	1,992 fps	-
	AR2213SC	.264"	2.935"	37.0	1,891 fps	-	39.0	2,086 fps	-

# RIFLE DATA

6.5 x 54mm Mauser				Case: - Twist: - Primer: -			Barrel length: 20" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120-125 GR.	AR2206	-	-	-	-	-	33.0	2,500 fps	-
	AR2208	-	-	-	-	-	35.0	2,500 fps	-
140 GR.	AR2206	-	-	-	-	-	30.0	2,200 fps	-
	AR2208	-	-	-	-	-	32.0	2,200 fps	-

6.5 x 54mm (Mannlicher-Schoenauer)				Case: - Twist: - Primer: -			Barrel length: 18" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR.	AR2206	-	-	-	-	-	38.0	2,800 fps	-
	AR2208	-	-	-	-	-	40.0	2,800 fps	-
120 GR.	AR2206	-	-	-	-	-	36.5	2,700 fps	-
	AR2208	-	-	-	-	-	38.5	2,700 fps	-
	AR2209	-	-	-	-	-	42.5	2,700 fps	-
129-130 GR.	AR2206	-	-	-	-	-	35.5	2,500 fps	-
	AR2208	-	-	-	-	-	37.5	2,500 fps	-
	AR2209	-	-	-	-	-	41.5	2,500 fps	-
140 GR.	AR2206	-	-	-	-	-	33.5	2,350 fps	-
	AR2208	-	-	-	-	-	35.5	2,350 fps	-
	AR2209	-	-	-	-	-	39.5	2,350 fps	-
160 GR.	AR2206	-	-	-	-	-	31.5	2,100 fps	-
	AR2208	-	-	-	-	-	33.5	2,100 fps	-
	AR2209	-	-	-	-	-	37.5	2,100 fps	-

6.5 Creedmoor				Case: Homady Twist: 1:8" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 1.910"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
95 GR. HDY V-MAX	Bench Mark 8208	.264"	2.670"	36.0	3,041 fps	50,800 PSI	40.0	3,228 fps	58,900 PSI
	AR2206H	.264"	2.670"	37.0	3,059 fps	50,400 PSI	41.0	3,276 fps	60,300 PSI
	AR2208	.264"	2.670"	39.0	3,051 fps	49,000 PSI	43.0	3,286 fps	60,100 PSI
	AR2209	.264"	2.670"	43.0	2,972 fps	45,000 PSI	47.0C	3,224 fps	56,100 PSI

# RIFLE DATA

6.5 Creedmoor				Case: Hornady Twist: 1:8" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 1.910"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. BAR TTSX BT	Bench Mark 8208	.264"	2.655"	33.2	2,812 fps	49,300 PSI	37.4	3,056 fps	60,900 PSI
	AR2206H	.264"	2.655"	33.1	2,819 fps	49,100 PSI	37.3	3,063 fps	61,000 PSI
	AR2208	.264"	2.655"	34.8	2,867 fps	50,700 PSI	39.0	3,101 fps	62,100 PSI
	AR2209	.264"	2.655"	39.9	2,895 fps	49,200 PSI	44.7	3,133 fps	60,300 PSI
100 GR. NOS BT	Bench Mark 8208	.264"	2.760"	34.0	2,850 fps	48,700 PSI	38.0	3,087 fps	60,000 PSI
	AR2206H	.264"	2.760"	35.0	2,878 fps	49,400 PSI	38.5	3,097 fps	59,300 PSI
	AR2208	.264"	2.760"	36.5	2,888 fps	48,900 PSI	40.5	3,122 fps	60,300 PSI
	AR2209	.264"	2.760"	40.5	2,905 fps	48,500 PSI	45.0C	3,156 fps	59,800 PSI
107 GR. SIE HPBT	Bench Mark 8208	.264"	2.780"	34.0	2,812 fps	48,900 PSI	37.8	3,027 fps	59,700 PSI
	AR2206H	.264"	2.780"	35.0	2,846 fps	49,400 PSI	39.0	3,073 fps	60,900 PSI
	AR2208	.264"	2.780"	37.0	2,863 fps	48,600 PSI	41.0	3,093 fps	60,200 PSI
	AR2209	.264"	2.780"	41.0	2,829 fps	45,300 PSI	46.0C	3,139 fps	60,900 PSI
120 GR. HDY A-MAX	Bench Mark 8208	.264"	2.670"	32.0	2,564 fps	45,800 PSI	36.0	2,818 fps	60,300 PSI
	AR2206H	.264"	2.670"	34.0	2,672 fps	50,500 PSI	37.4	2,858 fps	60,400 PSI
	AR2208	.264"	2.670"	36.0	2,668 fps	49,600 PSI	40.2	2,891 fps	60,400 PSI
	AR2209	.264"	2.670"	40.5	2,709 fps	47,700 PSI	45.0C	2,965 fps	60,800 PSI
123 GR. SIE HPBT	Bench Mark 8208	.264"	2.670"	32.0	2,570 fps	46,100 PSI	36.0	2,806 fps	59,000 PSI
	AR2208	.264"	2.670"	36.0	2,712 fps	51,100 PSI	39.8	2,887 fps	59,200 PSI
	AR2209	.264"	2.670"	40.0	2,680 fps	45,500 PSI	44.8	2,951 fps	59,700 PSI
130 GR. NOS AB	Bench Mark 8208	.264"	2.750"	30.5	2,378 fps	49,700 PSI	34.0	2,589 fps	61,200 PSI
	AR2206H	.264"	2.750"	30.1	2,361 fps	48,500 PSI	33.8	2,583 fps	61,200 PSI
	AR2208	.264"	2.750"	31.4	2,414 fps	51,500 PSI	34.9	2,610 fps	61,400 PSI
	AR2209	.264"	2.750"	35.2	2,464 fps	49,300 PSI	39.2	2,687 fps	60,400 PSI
140 GR. HDY A-MAX	Bench Mark 8208	.264"	2.820"	30.0	2,335 fps	49,200 PSI	32.8	2,511 fps	59,300 PSI
	AR2206H	.264"	2.820"	30.0	2,316 fps	46,800 PSI	34.0	2,555 fps	60,400 PSI
	AR2208	.264"	2.820"	32.0	2,371 fps	47,400 PSI	35.8	2,598 fps	59,900 PSI
	AR2209	.264"	2.820"	36.0	2,464 fps	49,200 PSI	40.0C	2,660 fps	59,200 PSI
142 GR. SIE HPBT	Bench Mark 8208	.264"	2.780"	32.2	2,431 fps	51,500 PSI	33.5	2,518 fps	58,000 PSI
	AR2206H	.264"	2.780"	32.4	2,426 fps	49,800 PSI	34.5	2,551 fps	58,000 PSI
	AR2208	.264"	2.780"	34.5	2,489 fps	52,600 PSI	36.3	2,598 fps	60,100 PSI
	AR2209	.264"	2.780"	38.8	2,573 fps	52,300 PSI	41.5	2,694 fps	59,800 PSI

C = Compressed load

# RIFLE DATA

260 Remington				Case: Remington Twist: 1:9" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.025"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
95 GR. HDY V-MAX	Bench Mark 2	.264"	2.780"	40.0	3,190 fps	51,400 PSI	43.5	3,391 fps	59,600 PSI
	Bench Mark 8208	.264"	2.780"	37.6	3,038 fps	51,900 PSI	40.0	3,166 fps	58,200 PSI
	AR2206H	.264"	2.780"	38.0	3,069 fps	51,300 PSI	40.8	3,225 fps	58,500 PSI
	AR2208	.264"	2.780"	39.0	3,070 fps	50,200 PSI	42.0	3,244 fps	58,500 PSI
	AR2209	.264"	2.780"	47.0	3,135 fps	51,200 PSI	49.7	3,284 fps	58,100 PSI
100 GR. BAR XFB	Bench Mark 2	.264"	2.750"	38.0	2,981 fps	50,700 PSI	41.0	3,171 fps	59,900 PSI
	AR2206H	.264"	2.750"	35.0	2,810 fps	51,300 PSI	38.0	2,974 fps	58,800 PSI
	AR2208	.264"	2.750"	36.5	2,861 fps	52,000 PSI	39.5	3,027 fps	58,900 PSI
	AR2209	.264"	2.750"	42.0	2,946 fps	52,900 PSI	45.0	3,077 fps	58,200 PSI
	AR2213SC	.264"	2.750"	46.0	2,925 fps	52,800 PSI	48.8C	3,055 fps	58,600 PSI
107 GR. SIE HPBT	Bench Mark 2	.264"	2.780"	40.0	3,158 fps	50,900 PSI	42.5	3,227 fps	59,500 PSI
	Bench Mark 8208	.264"	2.780"	37.2	2,900 fps	52,300 PSI	39.1	3,001 fps	57,900 PSI
	AR2206H	.264"	2.780"	38.0	2,950 fps	51,900 PSI	40.7	3,074 fps	58,000 PSI
	AR2208	.264"	2.780"	38.5	2,947 fps	49,800 PSI	41.5	3,125 fps	58,700 PSI
	AR2209	.264"	2.780"	46.0	2,997 fps	50,400 PSI	49.0	3,164 fps	58,700 PSI
	AR2213SC	.264"	2.780"	50.0	2,963 fps	50,300 PSI	51.0C	3,027 fps	54,000 PSI
120 GR. SPR SP	Bench Mark 2	.264"	2.780"	37.0	2,768 fps	51,200 PSI	40.0	2,935 fps	59,500 PSI
	AR2206H	.264"	2.780"	35.0	2,664 fps	51,900 PSI	38.0	2,813 fps	58,900 PSI
	AR2208	.264"	2.780"	36.0	2,716 fps	50,300 PSI	39.0	2,877 fps	58,300 PSI
	AR2209	.264"	2.780"	43.5	2,814 fps	51,400 PSI	46.5	2,960 fps	58,200 PSI
	AR2213SC	.264"	2.780"	47.0	2,812 fps	52,100 PSI	50.0C	2,954 fps	59,200 PSI
	AR2217	.264"	2.780"	49.0	2,710 fps	44,600 PSI	51.0C	2,810 fps	49,300 PSI
125 GR. NOS PART	AR2206H	.264"	2.780"	34.0	2,623 fps	54,300 PSI	37.0	2,743 fps	58,900 PSI
	AR2208	.264"	2.780"	34.5	2,624 fps	51,200 PSI	37.5	2,785 fps	58,400 PSI
	AR2209	.264"	2.780"	41.0	2,714 fps	50,900 PSI	44.3	2,867 fps	57,900 PSI
	AR2213SC	.264"	2.780"	45.0	2,725 fps	51,600 PSI	48.0C	2,862 fps	58,000 PSI
	AR2217	.264"	2.780"	48.0	2,685 fps	46,300 PSI	51.0C	2,821 fps	53,300 PSI
130 GR. NOS AB	AR2206H	.264"	2.780"	33.0	2,504 fps	50,700 PSI	36.0	2,677 fps	59,500 PSI
	AR2208	.264"	2.780"	34.6	2,563 fps	50,500 PSI	37.2	2,719 fps	58,800 PSI
	AR2209	.264"	2.780"	39.7	2,646 fps	50,600 PSI	42.7	2,816 fps	59,000 PSI
	AR2213SC	.264"	2.780"	43.2	2,682 fps	51,700 PSI	46.6C	2,845 fps	59,400 PSI
	AR2217	.264"	2.780"	46.9	2,658 fps	46,000 PSI	50.0C	2,814 fps	54,000 PSI
140 GR. NOS PART	AR2206H	.264"	2.780"	32.0	2,367 fps	50,500 PSI	34.3	2,517 fps	58,400 PSI
	AR2208	.264"	2.780"	34.0	2,469 fps	53,300 PSI	36.0	2,578 fps	59,400 PSI
	AR2209	.264"	2.780"	39.0	2,530 fps	51,900 PSI	42.0	2,677 fps	58,800 PSI
	AR2213SC	.264"	2.780"	43.0	2,568 fps	53,000 PSI	45.7	2,686 fps	59,000 PSI
	AR2217	.264"	2.780"	48.0	2,619 fps	51,200 PSI	50.5	2,730 fps	57,000 PSI

# RIFLE DATA

260 Remington				Case: Remington Twist: 1:9" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.025"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
142 GR. SIE HPBT	AR2206H	.264"	2.780"	34.0	2,486 fps	52,000 PSI	36.2	2,597 fps	58,200 PSI
	AR2208	.264"	2.780"	35.0	2,541 fps	54,000 PSI	37.5	2,645 fps	59,100 PSI
	AR2209	.264"	2.780"	41.5	2,590 fps	50,100 PSI	44.5	2,735 fps	58,000 PSI
	AR2213SC	.264"	2.780"	45.0	2,601 fps	50,900 PSI	48.0C	2,747 fps	58,700 PSI
160 GR. HDY RN	AR2209	.264"	2.860"	40.0	2,417 fps	52,100 PSI	43.0	2,538 fps	58,200 PSI
	AR2213SC	.264"	2.860"	43.0	2,419 fps	50,900 PSI	46.0	2,540 fps	58,100 PSI
	AR2217	.264"	2.860"	48.0	2,498 fps	50,500 PSI	50.0C	2,595 fps	56,400 PSI
				C = Compressed load					
6.5 x 55mm Swedish Mauser				Case: Winchester Twist: 1:7.87" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.155"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. SIE HP	AR2206H	.264"	2.800"	40.0	3,031 fps	34,600 CUP	44.0	3,370 fps	45,100 CUP
	AR2208	.264"	2.800"	40.0	3,128 fps	36,600 CUP	44.0	3,350 fps	42,300 CUP
	AR2209	.264"	2.800"	47.0	2,909 fps	31,600 CUP	52.0C	3,283 fps	42,100 CUP
100 GR. SIE HP	AR2206H	.264"	2.850"	37.0	2,820 fps	38,800 CUP	41.0	3,033 fps	46,000 CUP
	AR2208	.264"	2.850"	38.0	2,892 fps	37,800 CUP	42.0	3,177 fps	45,800 CUP
	AR2209	.264"	2.850"	45.0	2,724 fps	31,400 CUP	50.0C	3,172 fps	46,000 CUP
	AR2213SC	.264"	2.850"	46.0	2,552 fps	27,800 CUP	51.0C	2,883 fps	37,500 CUP
107 GR. SIE HPBT	AR2206H	.264"	3.050"	37.0	2,777 fps	39,600 CUP	39.7	2,943 fps	45,900 CUP
	AR2208	.264"	3.050"	38.0	2,742 fps	39,800 CUP	42.0	2,952 fps	45,600 CUP
	AR2209	.264"	3.050"	43.0	2,706 fps	36,000 CUP	48.0C	3,035 fps	45,600 CUP
	AR2213SC	.264"	3.050"	46.0	2,590 fps	34,500 CUP	51.0C	2,911 fps	42,700 CUP
120 GR. NOS BT	AR2206H	.264"	3.000"	34.0	2,571 fps	43,000 CUP	37.8	2,715 fps	46,000 CUP
	AR2208	.264"	3.000"	35.0	2,579 fps	36,800 CUP	39.0	2,812 fps	45,300 CUP
	AR2209	.264"	3.000"	41.5	2,545 fps	36,800 CUP	46.0	2,792 fps	45,800 CUP
	AR2213SC	.264"	3.000"	44.5	2,528 fps	36,200 CUP	49.5C	2,802 fps	45,900 CUP
129 GR. HDY SP	AR2206H	.264"	2.935"	33.0	2,373 fps	38,200 CUP	36.3	2,561 fps	45,600 CUP
	AR2208	.264"	2.935"	34.0	2,472 fps	36,900 CUP	37.5	2,664 fps	46,000 CUP
	AR2209	.264"	2.935"	40.0	2,430 fps	35,100 CUP	45.5	2,703 fps	45,500 CUP
	AR2213SC	.264"	2.935"	44.0	2,449 fps	35,600 CUP	48.5C	2,689 fps	45,000 CUP



# RIFLE DATA

6.5 x 55mm Swedish Mauser				Case: Winchester Twist: 1:7.87" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.155"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
140 GR. SPR SP	AR2206H	.264"	3.030"	32.5	2,305 fps	38,100 CUP	35.8	2,493 fps	45,700 CUP
	AR2208	.264"	3.030"	32.5	2,312 fps	37,500 CUP	36.0	2,528 fps	46,000 CUP
	AR2209	.264"	3.030"	39.5	2,418 fps	38,600 CUP	44.0	2,617 fps	45,700 CUP
	AR2213SC	.264"	3.030"	42.5	2,382 fps	38,100 CUP	47.0	2,586 fps	45,700 CUP
	AR2217	.264"	3.030"	46.5	2,423 fps	37,600 CUP	51.5C	2,651 fps	46,000 CUP
142 GR. SIE HPBT	AR2206H	.264"	3.050"	32.5	2,311 fps	37,800 CUP	35.8	2,511 fps	45,800 CUP
	AR2208	.264"	3.050"	34.0	2,334 fps	38,100 CUP	38.0	2,559 fps	45,700 CUP
	AR2209	.264"	3.050"	39.0	2,427 fps	38,400 CUP	43.7	2,653 fps	45,800 CUP
	AR2213SC	.264"	3.050"	42.5	2,383 fps	37,300 CUP	47.0	2,604 fps	45,300 CUP
	AR2217	.264"	3.050"	48.0	2,453 fps	37,500 CUP	51.5C	2,601 fps	41,600 CUP
160 GR. HDY RN	AR2208	.264"	3.000"	32.5	2,173 fps	38,200 CUP	36.0	2,354 fps	45,600 CUP
	AR2209	.264"	3.000"	40.0	2,317 fps	38,800 CUP	43.0	2,445 fps	44,900 CUP
	AR2213SC	.264"	3.000"	44.0	2,327 fps	36,600 CUP	48.0C	2,524 fps	46,000 CUP
	AR2217	.264"	3.000"	45.0	2,265 fps	35,000 CUP	50.0C	2,517 fps	45,300 CUP
				C = Compressed load					
6.5mm-06				Case: Winchester (reformed) Twist: 1:9" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 2.484"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. SIE HP	AR2206H	.264"	3.140"	43.0	3,245 fps	49,900 PSI	46.5	3,442 fps	60,600 PSI
	AR2208	.264"	3.140"	48.0	3,453 fps	58,400 PSI	52.0	3,588 fps	62,500 PSI
	AR2209	.264"	3.140"	53.0	3,336 fps	52,300 PSI	57.5	3,574 fps	62,300 PSI
95 GR. HDY V-MAX	AR2206H	.264"	3.200"	43.0	3,209 fps	55,400 PSI	46.0	3,359 fps	63,000 PSI
	AR2208	.264"	3.200"	44.0	3,167 fps	51,600 PSI	49.0	3,414 fps	63,100 PSI
	AR2209	.264"	3.200"	50.0	3,204 fps	52,100 PSI	54.5	3,436 fps	63,300 PSI
100 GR. NOS BT	AR2206H	.264"	3.200"	42.0	3,083 fps	56,400 PSI	44.0	3,205 fps	62,900 PSI
	AR2208	.264"	3.200"	43.0	3,070 fps	53,000 PSI	47.0	3,268 fps	63,300 PSI
	AR2209	.264"	3.200"	49.0	3,119 fps	53,800 PSI	53.0	3,315 fps	63,300 PSI
	AR2213SC	.264"	3.200"	53.0	3,085 fps	53,200 PSI	57.7	3,304 fps	63,400 PSI
107 GR. SIE HPBT	AR2208	.264"	3.300"	42.0	2,993 fps	52,700 PSI	45.8	3,185 fps	62,700 PSI
	AR2209	.264"	3.300"	47.0	3,022 fps	52,600 PSI	51.5	3,234 fps	62,700 PSI
	AR2213SC	.264"	3.300"	51.0	2,985 fps	51,800 PSI	55.5	3,200 fps	62,500 PSI
	AR2217	.264"	3.300"	56.0	2,945 fps	49,300 PSI	60.0C	3,141 fps	58,700 PSI

# RIFLE DATA

6.5mm-06				Case: Winchester (reformed) Twist: 1:9" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 2.484"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. SFT SP	AR2209	.264"	3.150"	45.0	2,823 fps	54,300 PSI	49.0	2,996 fps	63,300 PSI
	AR2213SC	.264"	3.150"	48.0	2,765 fps	51,400 PSI	52.5	2,970 fps	62,300 PSI
	AR2217	.264"	3.150"	55.0	2,837 fps	53,900 PSI	58.5C	2,986 fps	62,700 PSI
129 GR. HDY SP	AR2209	.264"	3.245"	43.0	2,676 fps	51,400 PSI	47.0	2,876 fps	62,500 PSI
	AR2213SC	.264"	3.245"	47.0	2,721 fps	54,100 PSI	51.0	2,889 fps	62,900 PSI
	AR2217	.264"	3.245"	51.0	2,683 fps	53,800 PSI	55.5C	2,885 fps	62,700 PSI
130 GR. NOS AB	AR2209	.264"	3.265"	42.1	2,615 fps	51,300 PSI	46.7	2,821 fps	61,500 PSI
	AR2213SC	.264"	3.265"	44.0	2,638 fps	54,700 PSI	48.8	2,824 fps	62,300 PSI
	AR2217	.264"	3.265"	47.7	2,670 fps	51,400 PSI	53.0	2,880 fps	61,600 PSI
140 GR. SPR GS-SP	AR2209	.264"	3.200"	42.0	2,558 fps	52,400 PSI	45.5	2,737 fps	62,700 PSI
	AR2213SC	.264"	3.200"	45.0	2,542 fps	52,300 PSI	49.5	2,731 fps	62,300 PSI
	AR2217	.264"	3.200"	49.0	2,570 fps	52,900 PSI	53.5C	2,761 fps	62,600 PSI
142 GR. SIE HPBT	AR2209	.264"	3.300"	42.0	2,572 fps	51,300 PSI	46.0	2,768 fps	62,900 PSI
	AR2213SC	.264"	3.300"	45.0	2,559 fps	50,000 PSI	50.3	2,795 fps	62,900 PSI
	AR2217	.264"	3.300"	49.0	2,555 fps	49,800 PSI	55.0C	2,816 fps	63,300 PSI
160 GR. HDY RN	AR2213SC	.264"	3.300"	46.0	2,461 fps	52,700 PSI	50.0	2,625 fps	62,600 PSI
	AR2217	.264"	3.300"	51.0	2,492 fps	53,600 PSI	55.0	2,650 fps	62,400 PSI
				C = Compressed load					
6.5-284				Case: Winchester (REF.) Twist: 1:9" Primer: FEDERAL 210			Barrel length: 24" Trim length: 2.160"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. SIE HP	AR2206H	.264"	2.750"	43.0	3,210 fps	-	46.5	3,417 fps	-
	AR2208	.264"	2.750"	48.0	3,378 fps	-	52.0	3,587 fps	-
	AR2209	.264"	2.750"	53.0	3,260 fps	-	57.5	3,531 fps	-
95 GR. HDY V-MAX	AR2206H	.264"	2.820"	43.0	3,195 fps	-	46.0	3,318 fps	-
	AR2208	.264"	2.820"	44.0	3,165 fps	-	49.0	3,380 fps	-
	AR2209	.264"	2.820"	50.0	3,088 fps	-	54.5	3,349 fps	-
100 GR. NOS BT	AR2206H	.264"	2.800"	42.0	3,058 fps	-	44.0	3,143 fps	-
	AR2208	.264"	2.800"	43.0	3,083 fps	-	47.0	3,227 fps	-
	AR2209	.264"	2.800"	49.0	3,003 fps	-	53.0	3,242 fps	-
	AR2213SC	.264"	2.800"	53.0	2,969 fps	-	57.7	3,211 fps	-

# RIFLE DATA

6.5-284				Case: Winchester (REF.)			Barrel length: 24"		
				Twist: 1:9"			Trim length: 2.160"		
				Primer: FEDERAL 210					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
107 GR. SIE HPBT	AR2208	.264"	2.920"	42.0	2,970 fps	-	45.8	3,125 fps	-
	AR2209	.264"	2.920"	47.0	2,898 fps	-	51.5	3,118 fps	-
	AR2213SC	.264"	2.920"	51.0	2,842 fps	-	55.5	3,084 fps	-
	AR2217	.264"	2.920"	56.0	2,808 fps	-	60.0C	2,985 fps	-
120 GR. SFT SP	AR2209	.264"	2.780"	45.0	2,744 fps	-	49.0	2,897 fps	-
	AR2213SC	.264"	2.780"	48.0	2,651 fps	-	52.5	2,871 fps	-
	AR2217	.264"	2.780"	55.0	2,743 fps	-	58.5C	2,901 fps	-
129 GR. HDY SP	AR2209	.264"	2.935"	43.0	2,670 fps	-	47.0	2,863 fps	-
	AR2213SC	.264"	2.935"	47.0	2,670 fps	-	51.0	2,859 fps	-
	AR2217	.264"	2.935"	51.0	2,638 fps	-	55.5C	2,820 fps	-
130 GR. NOS AB	AR2209	.264"	2.950"	42.1	2,645 fps	-	46.7	2,874 fps	-
	AR2213SC	.264"	2.950"	44.0	2,541 fps	-	48.8	2,779 fps	-
	AR2217	.264"	2.950"	47.7	2,570 fps	-	53.0	2,812 fps	-
140 GR. SPR GS-SP	AR2209	.264"	2.910"	42.0	2,548 fps	-	45.5	2,720 fps	-
	AR2213SC	.264"	2.910"	45.0	2,520 fps	-	49.5	2,722 fps	-
	AR2217	.264"	2.910"	49.0	2,503 fps	-	53.5C	2,694 fps	-
142 GR. SIE HPBT	AR2209	.264"	2.900"	42.0	2,583 fps	-	46.0	2,735 fps	-
	AR2213SC	.264"	2.900"	45.0	2,479 fps	-	50.3	2,714 fps	-
	AR2217	.264"	2.900"	49.0	2,436 fps	-	55.0C	2,700 fps	-
160 GR. HDY RN	AR2213SC	.264"	2.980"	46.0	2,433 fps	-	50.0	2,582 fps	-
	AR2217	.264"	2.980"	51.0	2,454 fps	-	55.0	2,622 fps	-
				C = Compressed load					
6.5mm Remington Magnum				Case: Remington			Barrel length: 26"		
				Twist: 1:9"			Trim length: 2.160"		
				Primer: REMINGTON 9 1/2 M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. SIE HP	AR2206H	.264"	2.800"	47.0	3,322 fps	39,000 CUP	51.0	3,613 fps	49,600 CUP
	AR2209	.264"	2.800"	54.0	3,220 fps	43,000 CUP	57.0	3,564 fps	50,700 CUP
	AR2213SC	.264"	2.800"	56.0	3,201 fps	34,800 CUP	61.0	3,570 fps	46,700 CUP
100 GR. HDY SP	AR2206H	.264"	2.940"	46.0	3,186 fps	42,600 CUP	50.0	3,475 fps	52,200 CUP
	AR2209	.264"	2.940"	51.0	3,071 fps	44,000 CUP	55.0	3,327 fps	51,700 CUP
	AR2213SC	.264"	2.940"	55.0	3,071 fps	37,200 CUP	60.0	3,416 fps	48,100 CUP
120 GR. SPR SP	AR2206H	.264"	2.790"	42.5	2,872 fps	42,000 CUP	46.0	3,081 fps	50,900 CUP
	AR2209	.264"	2.790"	49.0	2,780 fps	43,700 CUP	52.0	3,080 fps	51,200 CUP
	AR2213SC	.264"	2.790"	54.0	2,985 fps	42,600 CUP	59.0	3,286 fps	51,000 CUP

# RIFLE DATA

6.5mm Remington Magnum				Case: Remington Twist: 1:9" Primer: REMINGTON 9 1/2 M			Barrel length: 26" Trim length: 2.160"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
129 GR. HDY SP	AR2206H	.264"	3.040"	40.5	2,709 fps	39,600 CUP	44.0	2,936 fps	49,900 CUP
	AR2209	.264"	3.040"	47.0	2,709 fps	41,400 CUP	51.0	2,994 fps	50,700 CUP
	AR2213SC	.264"	3.040"	53.5	2,854 fps	40,200 CUP	58.0	3,155 fps	50,800 CUP
140 GR. NOS PART	AR2206H	.264"	2.790"	38.5	2,569 fps	43,800 CUP	42.0	2,752 fps	49,200 CUP
	AR2209	.264"	2.790"	45.0	2,514 fps	42,000 CUP	49.0	2,780 fps	51,200 CUP
	AR2213SC	.264"	2.790"	49.5	2,708 fps	44,400 CUP	54.0	2,943 fps	51,400 CUP
264 Winchester Magnum				Case: Winchester Twist: 1:8" Primer: WINCHESTER LRM			Barrel length: 26" Trim length: 2.490"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
85 GR. SIE HP	AR2206H	.264"	3.100"	50.5	3,264 fps	44,600 CUP	55.0	3,625 fps	52,900 CUP
	AR2209	.264"	3.100"	59.0	3,396 fps	43,600 CUP	61.0	3,669 fps	52,400 CUP
	AR2213SC	.264"	3.100"	67.0	3,304 fps	39,000 CUP	73.0	3,812 fps	54,100 CUP
	AR2217	.264"	3.100"	74.0	3,270 fps	37,600 CUP	78.0	3,480 fps	48,000 CUP
100 GR. HDY SP	AR2206H	.264"	3.230"	49.0	2,970 fps	44,100 CUP	53.0	3,405 fps	54,200 CUP
	AR2209	.264"	3.230"	56.0	3,194 fps	44,100 CUP	59.0	3,570 fps	52,600 CUP
	AR2213SC	.264"	3.230"	65.5	3,239 fps	45,900 CUP	71.0	3,680 fps	53,900 CUP
	AR2217	.264"	3.230"	72.0	3,164 fps	42,500 CUP	77.0	3,428 fps	47,500 CUP
120 GR. SPR SP	AR2209	.264"	3.250"	54.5	3,045 fps	53,000 PSI	58.0	3,185 fps	61,200 PSI
	AR2213SC	.264"	3.250"	60.6	3,027 fps	49,100 PSI	64.5	3,254 fps	62,000 PSI
	AR2217	.264"	3.250"	65.5	3,050 fps	49,100 PSI	69.7	3,267 fps	62,100 PSI
	AR2225	.264"	3.250"	66.3	3,091 fps	50,400 PSI	70.5	3,299 fps	61,700 PSI
129 GR. HDY SP	AR2209	.264"	3.250"	53.6	2,929 fps	53,500 PSI	57.0	3,067 fps	60,900 PSI
	AR2213SC	.264"	3.250"	58.3	2,927 fps	52,500 PSI	62.0	3,101 fps	61,400 PSI
	AR2217	.264"	3.250"	60.2	2,942 fps	54,500 PSI	64.0	3,064 fps	60,700 PSI
	AR2225	.264"	3.250"	63.5	3,005 fps	51,900 PSI	67.5	3,171 fps	61,500 PSI
130 GR. NOS AB	AR2209	.264"	3.280"	50.7	2,786 fps	54,600 PSI	55.0	2,956 fps	62,000 PSI
	AR2213SC	.264"	3.280"	55.3	2,864 fps	56,100 PSI	59.2	2,984 fps	60,500 PSI
	AR2217	.264"	3.280"	56.1	2,835 fps	54,600 PSI	60.4	3,005 fps	62,100 PSI
	AR2225	.264"	3.280"	59.9	2,932 fps	54,300 PSI	64.1	3,090 fps	60,800 PSI
140 GR. NOS PART	AR2209	.264"	3.260"	48.9	2,713 fps	55,300 PSI	52.0	2,829 fps	60,800 PSI
	AR2213SC	.264"	3.260"	51.7	2,753 fps	55,600 PSI	55.0	2,853 fps	59,400 PSI
	AR2217	.264"	3.260"	55.0	2,810 fps	58,600 PSI	58.5	2,900 fps	61,800 PSI
	AR2225	.264"	3.260"	59.7	2,904 fps	57,000 PSI	63.5	3,026 fps	63,000 PSI

# RIFLE DATA

264 Winchester Magnum				Case: Winchester Twist: 1:8" Primer: WINCHESTER LRM			Barrel length: 26" Trim length: 2.490"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
160 GR. HDY RN	AR2209	.264"	3.350"	53.4	2,675 fps	56,600 PSI	56.8	2,784 fps	61,500 PSI
	AR2213SC	.264"	3.350"	58.1	2,725 fps	54,800 PSI	61.8	2,847 fps	61,500 PSI
	AR2217	.264"	3.350"	61.5	2,730 fps	55,500 PSI	65.4	2,857 fps	62,200 PSI
	AR2225	.264"	3.350"	60.2	2,703 fps	54,800 PSI	64.0	2,846 fps	61,000 PSI
6.5 x 68mm RWS (Schuler)				Case: - Twist: - Primer: -			Barrel length: 25" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR.	AR2209	-	-	-	-	-	65.0	3,700 fps	-
	AR2213SC	-	-	-	-	-	73.0	3,705 fps	-
100 GR.	AR2213SC	-	-	-	-	-	71.0	3,550 fps	-
120 GR.	AR2213SC	-	-	-	-	-	68.0	3,310 fps	-
140 GR.	AR2213SC	-	-	-	-	-	63.0	2,995 fps	-
26 Nosler				Case: Nosler Twist: 1:8" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.575"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. NOS BT	AR2217	.264"	3.300"	77.9	3,484 fps	57,000 PSI	82.0	3,628 fps	63,100 PSI
	AR2225	.264"	3.300"	81.2	3,493 fps	56,200 PSI	85.5	3,675 fps	62,400 PSI
	AR2218	.264"	3.300"	89.0	3,387 fps	54,600 PSI	93.7	3,548 fps	61,300 PSI
120 GR. BAR TTSX BT	AR2217	.264"	3.300"	65.8	3,122 fps	56,700 PSI	71.0	3,269 fps	62,300 PSI
	AR2225	.264"	3.300"	68.5	3,127 fps	56,000 PSI	74.0	3,299 fps	62,800 PSI
	AR2218	.264"	3.300"	74.0	3,143 fps	59,000 PSI	78.0	3,245 fps	62,600 PSI
129 GR. NOS ABLR	AR2225	.264"	3.300"	70.5	3,185 fps	58,400 PSI	74.0	3,301 fps	64,300 PSI
	AR2218	.264"	3.300"	82.0	3,075 fps	54,700 PSI	86.5	3,267 fps	62,800 PSI
140 GR. SFT SP	AR2225	.264"	3.300"	62.0	2,847 fps	54,500 PSI	67.5	3,010 fps	61,700 PSI
	AR2218	.264"	3.300"	66.0	2,899 fps	59,200 PSI	72.5	3,026 fps	63,000 PSI



# RIFLE DATA

6.8mm Remington SPC				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 1.676"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
85 GR. BAR TAC-X FB	AR2207	.277"	2.230"	25.2	2,829 fps	40,400 PSI	27.4	3,030 fps	50,900 PSI
	AR2219	.277"	2.230"	28.0	2,637 fps	33,600 PSI	31.0C	2,949 fps	45,600 PSI
	Bench Mark 2	.277"	2.230"	27.9	2,595 fps	31,800 PSI	31.0C	2,848 fps	40,000 PSI
90 GR. SPR HP	AR2205	.277"	2.255"	21.0	2,590 fps	44,200 PSI	23.9	2,795 fps	51,000 PSI
	AR2207	.277"	2.255"	26.0	2,810 fps	47,700 PSI	28.6C	3,012 fps	54,000 PSI
	AR2219	.277"	2.255"	29.0	2,765 fps	42,100 PSI	31.0C	2,929 fps	49,500 PSI
	Bench Mark 2	.277"	2.255"	29.0	2,705 fps	38,900 PSI	31.0C	2,853 fps	45,900 PSI
100 GR. BAR X	AR2205	.277"	2.260"	20.0	2,431 fps	46,800 PSI	22.9	2,643 fps	53,000 PSI
	AR2207	.277"	2.260"	24.0	2,542 fps	40,500 PSI	26.5	2,791 fps	52,900 PSI
	AR2219	.277"	2.260"	27.0	2,502 fps	37,700 PSI	30.0C	2,803 fps	52,300 PSI
	Bench Mark 2	.277"	2.260"	28.0	2,588 fps	42,000 PSI	30.0C	2,755 fps	51,200 PSI
110 GR. HDY V-MAX	AR2207	.277"	2.260"	23.0	2,431 fps	40,600 PSI	25.3C	2,651 fps	52,000 PSI
	AR2219	.277"	2.260"	27.0	2,571 fps	47,600 PSI	29.0C	2,697 fps	53,600 PSI
	Bench Mark 2	.277"	2.260"	27.0	2,518 fps	44,000 PSI	28.8C	2,665 fps	52,000 PSI
	Bench Mark 8208	.277"	2.260"	28.0	2,496 fps	38,500 PSI	30.0C	2,690 fps	48,600 PSI
	AR2206H	.277"	2.260"	27.0	2,335 fps	33,900 PSI	29.0C	2,550 fps	42,400 PSI
115 GR. SIE HPBT	AR2207	.277"	2.260"	22.0	2,413 fps	47,800 PSI	24.0C	2,534 fps	52,300 PSI
	AR2219	.277"	2.260"	26.0	2,421 fps	43,500 PSI	28.2C	2,608 fps	53,300 PSI
	Bench Mark 2	.277"	2.260"	26.0	2,400 fps	42,400 PSI	28.5C	2,581 fps	51,800 PSI
	Bench Mark 8208	.277"	2.260"	28.0	2,483 fps	41,800 PSI	30.0C	2,647 fps	51,400 PSI
	AR2206H	.277"	2.260"	27.0	2,302 fps	34,300 PSI	29.0C	2,495 fps	42,800 PSI
				C = Compressed load					
270/303				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
<b>WARNING:</b> For SMLE Actions, reduce these loads by at least two grains.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR.	AR2206	-	-	-	-	-	35.0	2,750 fps	-
	AR2208	-	-	-	-	-	39.0	2,750 fps	-
	AR2209	-	-	-	-	-	44.0	2,750 fps	-
130 GR.	AR2206	-	-	-	-	-	33.0	2,500 fps	-
	AR2208	-	-	-	-	-	36.5	2,500 fps	-
	AR2209	-	-	-	-	-	42.5	2,500 fps	-

# RIFLE DATA

270/303				Case: -			Barrel length: 24"		
				Twist: -			Trim length: -		
				Primer: -					
<b>WARNING:</b> For SMLE Actions, reduce these loads by at least two grains.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
150 GR.	AR2208	-	-	-	-	-	33.5	2,350 fps	-
	AR2209	-	-	-	-	-	40.0	2,350 fps	-
270 Winchester				Case: Winchester			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.530"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
90 GR. SIE HP	Bench Mark 8208	.277"	3.200"	45.6	3,380 fps	57,900 PSI	48.0	3,476 fps	61,900 PSI
	AR2206H	.277"	3.200"	50.0	3,482 fps	48,100 CUP	53.0	3,595 fps	50,400 CUP
	AR2208	.277"	3.200"	51.0	3,409 fps	46,000 CUP	55.0	3,596 fps	51,400 CUP
	AR2209	.277"	3.200"	58.0	3,401 fps	43,700 CUP	62.0C	3,603 fps	49,800 CUP
100 GR. SPR SP	AR2206H	.277"	3.145"	47.0	3,298 fps	47,000 CUP	50.0	3,401 fps	50,200 CUP
	AR2208	.277"	3.145"	48.0	3,232 fps	44,400 CUP	52.0	3,397 fps	50,200 CUP
	AR2209	.277"	3.145"	56.0	3,258 fps	44,000 CUP	59.4	3,401 fps	50,200 CUP
110 GR. HDY HP	Bench Mark 8208	.277"	3.250"	44.1	3,064 fps	56,400 PSI	46.4	3,146 fps	59,500 PSI
	AR2206H	.277"	3.250"	45.0	3,113 fps	46,700 CUP	47.5	3,215 fps	50,800 CUP
	AR2208	.277"	3.250"	43.0	3,072 fps	44,100 CUP	48.7	3,248 fps	50,800 CUP
	AR2209	.277"	3.250"	54.0	3,164 fps	46,900 CUP	57.0	3,267 fps	50,100 CUP
	AR2213SC	.277"	3.250"	58.0	3,057 fps	42,600 CUP	62.0C	3,214 fps	48,200 CUP
120 GR. BAR XFB	AR2206H	.277"	3.270"	42.0	2,799 fps	45,000 CUP	45.0	2,950 fps	50,400 CUP
	AR2208	.277"	3.270"	44.0	2,858 fps	46,300 CUP	47.0	3,010 fps	51,000 CUP
	AR2209	.277"	3.270"	51.0	2,886 fps	44,700 CUP	55.0	3,069 fps	51,200 CUP
	AR2213SC	.277"	3.270"	58.0	2,918 fps	45,800 CUP	62.0C	3,112 fps	51,200 CUP
130 GR. BAR TSX	Bench Mark 8208	.277"	3.230"	42.3	2,798 fps	55,700 PSI	45.0	2,922 fps	62,400 PSI
	AR2208	.277"	3.230"	44.0	2,849 fps	54,800 PSI	48.0	3,013 fps	63,200 PSI
	AR2209	.277"	3.230"	51.0	2,905 fps	52,500 PSI	55.5	3,111 fps	63,500 PSI
	AR2213SC	.277"	3.230"	54.0	2,747 fps	45,500 PSI	60.0C	3,025 fps	59,000 PSI
	AR2217	.277"	3.230"	57.0	2,716 fps	42,100 PSI	60.0C	2,846 fps	48,200 PSI
130 GR. HDY SP	Trail Boss	.277"	3.180"	14.0	1,318 fps	22,800 PSI	19.7	1,537 fps	27,100 PSI
	Bench Mark 8208	.277"	3.180"	42.8	2,840 fps	57,600 PSI	45.0	2,934 fps	62,800 PSI
	AR2206H	.277"	3.180"	42.0	2,782 fps	44,700 CUP	45.0	2,922 fps	51,000 CUP
	AR2208	.277"	3.180"	43.0	2,797 fps	43,900 CUP	46.0	2,931 fps	49,600 CUP
	AR2209	.277"	3.180"	51.0	2,865 fps	45,200 CUP	54.3	3,012 fps	50,500 CUP
	AR2213SC	.277"	3.180"	56.0	2,843 fps	44,400 CUP	60.0C	3,019 fps	51,000 CUP
	AR2217	.277"	3.180"	61.0	2,900 fps	42,900 CUP	64.0C	3,025 fps	48,100 CUP

# RIFLE DATA

270 Winchester				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.530"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
135 GR. SIE BT	AR2206H	.277"	3.340"	41.0	2,735 fps	44,300 CUP	44.0	2,879 fps	50,600 CUP
	AR2208	.277"	3.340"	41.0	2,701 fps	40,800 CUP	45.0	2,902 fps	50,200 CUP
	AR2209	.277"	3.340"	50.0	2,834 fps	44,400 CUP	53.5	2,994 fps	50,700 CUP
	AR2213SC	.277"	3.340"	55.0	2,812 fps	43,600 CUP	59.5C	3,010 fps	51,000 CUP
	AR2217	.277"	3.340"	61.0	2,915 fps	43,100 CUP	63.0C	3,011 fps	47,600 CUP
140 GR. SFT SP	AR2206H	.277"	3.280"	40.0	2,627 fps	45,300 CUP	42.6	2,768 fps	50,600 CUP
	AR2208	.277"	3.280"	41.0	2,623 fps	44,300 CUP	43.7	2,772 fps	50,500 CUP
	AR2209	.277"	3.280"	49.0	2,737 fps	44,500 CUP	52.0	2,870 fps	50,400 CUP
	AR2213SC	.277"	3.280"	54.0	2,716 fps	43,900 CUP	58.0C	2,888 fps	50,100 CUP
	AR2217	.277"	3.280"	59.0	2,771 fps	41,800 CUP	63.0C	2,979 fps	50,800 CUP
150 GR. HDY SP	AR2209	.277"	3.285"	46.0	2,575 fps	43,400 CUP	49.0	2,724 fps	51,000 CUP
	AR2213SC	.277"	3.285"	52.0	2,651 fps	46,300 CUP	55.7	2,804 fps	51,200 CUP
	AR2217	.277"	3.285"	55.0	2,689 fps	44,900 CUP	59.0C	2,831 fps	51,000 CUP
160 GR. NOS PART	AR2209	.277"	3.340"	46.0	2,501 fps	43,600 CUP	49.0	2,646 fps	51,100 CUP
	AR2213SC	.277"	3.340"	50.0	2,510 fps	43,000 CUP	54.0	2,673 fps	50,500 CUP
	AR2217	.277"	3.340"	55.0	2,614 fps	44,200 CUP	59.0C	2,765 fps	50,900 CUP
180 GR. BAR JRN	AR2213SC	.277"	3.300"	47.0	2,358 fps	46,000 CUP	50.5	2,501 fps	51,100 CUP
	AR2217	.277"	3.300"	50.0	2,404 fps	45,100 CUP	54.0	2,540 fps	50,600 CUP
				C = Compressed load					
270 Winchester Short Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
90 GR. SIE HP	AR2206H	.277"	2.700"	53.0	3,508 fps	52,900 PSI	56.5	3,690 fps	62,500 PSI
	AR2208	.277"	2.700"	57.0	3,610 fps	57,600 PSI	60.5	3,734 fps	62,800 PSI
	AR2209	.277"	2.700"	64.0	3,568 fps	55,000 PSI	67.5	3,733 fps	62,800 PSI
	AR2213SC	.277"	2.700"	69.0	3,525 fps	54,900 PSI	73.0C	3,703 fps	63,400 PSI
100 GR. SPR HP	AR2206H	.277"	2.700"	51.0	3,338 fps	53,200 PSI	54.5	3,505 fps	62,500 PSI
	AR2208	.277"	2.700"	55.0	3,416 fps	55,700 PSI	58.5	3,573 fps	63,300 PSI
	AR2209	.277"	2.700"	62.0	3,458 fps	55,000 PSI	65.5	3,585 fps	62,900 PSI
	AR2213SC	.277"	2.700"	67.0	3,352 fps	52,900 PSI	71.0C	3,542 fps	62,700 PSI
110 GR. HDY HP	AR2208	.277"	2.800"	53.0	3,276 fps	57,000 PSI	56.0	3,406 fps	63,200 PSI
	AR2209	.277"	2.800"	59.0	3,287 fps	55,900 PSI	63.0	3,436 fps	63,200 PSI
	AR2213SC	.277"	2.800"	64.0	3,265 fps	56,300 PSI	67.5	3,404 fps	63,000 PSI
	AR2217	.277"	2.800"	71.0	3,279 fps	55,400 PSI	73.0C	3,360 fps	60,400 PSI

# RIFLE DATA

270 Winchester Short Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
130 GR. BAR TSX	AR2208	.277"	2.800"	48.0	2,900 fps	51,600 PSI	52.5	3,106 fps	62,500 PSI
	AR2209	.277"	2.800"	57.0	3,041 fps	55,700 PSI	61.5	3,191 fps	62,900 PSI
	AR2213SC	.277"	2.800"	63.0	3,002 fps	53,200 PSI	67.0C	3,160 fps	60,700 PSI
	AR2217	.277"	2.800"	69.0	3,066 fps	55,100 PSI	73.0C	3,196 fps	61,100 PSI
130 GR. HDY SP	Trail Boss	.277"	2.730"	16.0	1,516 fps	38,100 PSI	22.5	1,832 fps	47,900 PSI
	AR2208	.277"	2.730"	51.0	3,040 fps	56,400 PSI	54.0	3,169 fps	63,200 PSI
	AR2209	.277"	2.730"	57.0	3,093 fps	56,600 PSI	60.5	3,226 fps	63,500 PSI
	AR2213SC	.277"	2.730"	63.0	3,085 fps	56,300 PSI	67.0	3,228 fps	63,400 PSI
	AR2217	.277"	2.730"	71.0	3,100 fps	55,400 PSI	73.0C	3,168 fps	58,700 PSI
135 GR. SIE HPBT	AR2208	.277"	2.840"	51.0	3,000 fps	54,800 PSI	54.0	3,134 fps	63,000 PSI
	AR2209	.277"	2.840"	58.0	3,093 fps	57,000 PSI	61.5	3,211 fps	63,100 PSI
	AR2213SC	.277"	2.840"	62.0	3,056 fps	55,400 PSI	65.5	3,192 fps	62,900 PSI
	AR2217	.277"	2.840"	69.0	3,056 fps	54,400 PSI	73.0C	3,205 fps	62,600 PSI
140 GR. SFT SP	AR2209	.277"	2.800"	54.0	2,928 fps	54,500 PSI	58.0	3,087 fps	63,100 PSI
	AR2213SC	.277"	2.800"	59.0	2,974 fps	57,000 PSI	62.5	3,085 fps	63,000 PSI
	AR2217	.277"	2.800"	66.0	2,984 fps	55,700 PSI	70.0C	3,137 fps	63,500 PSI
	AR2225	.277"	2.800"	68.0	3,016 fps	53,200 PSI	71.0C	3,165 fps	61,300 PSI
150 GR. HDY SP	AR2209	.277"	2.740"	53.0	2,846 fps	55,600 PSI	56.5	2,978 fps	63,000 PSI
	AR2213SC	.277"	2.740"	56.0	2,804 fps	54,500 PSI	60.0	2,962 fps	63,100 PSI
	AR2217	.277"	2.740"	64.0	2,864 fps	54,600 PSI	67.5C	3,001 fps	62,800 PSI
	AR2225	.277"	2.740"	66.0	2,908 fps	53,300 PSI	70.0C	3,071 fps	63,000 PSI
160 GR. NOS PART	AR2209	.277"	2.830"	52.0	2,735 fps	56,100 PSI	55.0	2,834 fps	62,600 PSI
	AR2213SC	.277"	2.830"	57.0	2,784 fps	58,400 PSI	60.0	2,877 fps	63,300 PSI
	AR2217	.277"	2.830"	63.0	2,802 fps	57,400 PSI	66.5	2,913 fps	63,200 PSI
	AR2225	.277"	2.830"	65.0	2,826 fps	53,400 PSI	68.5	2,989 fps	62,600 PSI
				C = Compressed load					
270 Weatherby Magnum				Case: Weatherby Twist: 1:12" Primer: CCI 250			Barrel length: 26" Trim length: 2.539"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
90 GR. SIE HP	AR2206H	.277"	3.150"	63.0	3,388 fps	-	67.0	3,647 fps	-
	AR2209	.277"	3.150"	66.0	3,317 fps	-	70.0	3,631 fps	-
	AR2213SC	.277"	3.150"	72.0	3,386 fps	-	78.0	3,631 fps	-
	AR2217	.277"	3.150"	78.0	3,183 fps	-	81.0	3,269 fps	-

# RIFLE DATA

<b>270 Weatherby Magnum</b>				Case: Weatherby Twist: 1:12" Primer: CCI 250			Barrel length: 26" Trim length: 2.539"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>100 GR. SPR SP</b>	AR2206H	.277"	3.250"	63.0	3,377 fps	-	66.0	3,597 fps	-
	AR2209	.277"	3.250"	65.0	3,282 fps	-	69.0	3,509 fps	-
	AR2213SC	.277"	3.250"	74.0	3,482 fps	-	77.0	3,666 fps	-
	AR2217	.277"	3.250"	77.0	3,062 fps	-	81.0	3,287 fps	-
<b>110 GR. HDY HP</b>	AR2209	.277"	3.290"	64.0	3,214 fps	-	68.0	3,477 fps	-
	AR2213SC	.277"	3.290"	73.0	3,397 fps	-	76.0	3,482 fps	-
	AR2217	.277"	3.290"	76.0	3,045 fps	-	81.0	3,242 fps	-
<b>130 GR. SPR SP</b>	AR2209	.277"	3.250"	62.0	3,110 fps	-	66.0	3,262 fps	-
	AR2213SC	.277"	3.250"	67.0	3,087 fps	-	70.0	3,205 fps	-
	AR2217	.277"	3.250"	76.0	2,941 fps	-	81.0	3,259 fps	-
<b>140 GR. HDY BTSP</b>	AR2209	.277"	3.280"	60.0	2,926 fps	-	64.0	3,140 fps	-
	AR2213SC	.277"	3.280"	65.0	2,904 fps	-	68.0	3,112 fps	-
	AR2217	.277"	3.280"	75.0	2,849 fps	-	80.0	3,145 fps	-
<b>150 GR. NOS PART</b>	AR2209	.277"	3.250"	60.0	2,846 fps	-	63.0	2,986 fps	-
	AR2213SC	.277"	3.250"	65.0	2,872 fps	-	68.0	3,057 fps	-
	AR2217	.277"	3.250"	75.0	2,902 fps	-	79.0	3,132 fps	-
<b>160 GR. NOS PART</b>	AR2209	.277"	3.250"	58.0	2,666 fps	-	61.0	2,738 fps	-
	AR2213SC	.277"	3.250"	62.0	2,674 fps	-	65.0	2,901 fps	-
	AR2217	.277"	3.250"	74.0	2,872 fps	-	78.0	3,051 fps	-

<b>7mm BR Remington</b>				Case: Remington Twist: 1:9.5" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.515"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>100 GR. BAR XFB</b>	AR2207	.284"	2.125"	26.0	2,524 fps	36,600 CUP	28.5	2,743 fps	49,900 CUP
	AR2219	.284"	2.125"	29.0	2,516 fps	37,700 CUP	31.5C	2,738 fps	49,800 CUP
	Bench Mark 2	.284"	2.125"	29.0	2,439 fps	38,800 CUP	32.0C	2,719 fps	50,100 CUP
	AR2206H	.284"	2.125"	31.0	2,582 fps	40,900 CUP	33.0C	2,706 fps	45,300 CUP
<b>115 GR. SPR HP</b>	AR2207	.284"	2.150"	26.0	2,498 fps	41,500 CUP	28.5	2,685 fps	50,500 CUP
	AR2219	.284"	2.150"	29.0	2,476 fps	37,200 CUP	31.5C	2,693 fps	49,800 CUP
	Bench Mark 2	.284"	2.150"	30.0	2,524 fps	41,600 CUP	32.0C	2,674 fps	49,800 CUP
	Bench Mark 8208	.284"	2.150"	30.0	2,455 fps	34,400 CUP	33.0C	2,737 fps	45,300 CUP
	AR2206H	.284"	2.150"	31.0	2,497 fps	38,900 CUP	33.0C	2,644 fps	45,300 CUP



# RIFLE DATA

7mm BR Remington				Case: Remington Twist: 1:9.5" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.515"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. HDY V-MAX	AR2207	.284"	2.300"	25.5	2,399 fps	40,200 CUP	27.5	2,597 fps	49,500 CUP
	AR2219	.284"	2.300"	28.0	2,430 fps	39,800 CUP	30.8	2,636 fps	50,400 CUP
	Bench Mark 2	.284"	2.300"	29.0	2,457 fps	43,100 CUP	31.0	2,590 fps	49,900 CUP
	Bench Mark 8208	.284"	2.300"	30.0	2,479 fps	36,400 CUP	33.0C	2,726 fps	49,200 CUP
	AR2206H	.284"	2.300"	30.0	2,437 fps	39,600 CUP	32.7C	2,650 fps	49,800 CUP
130 GR. SIE HPBT	AR2207	.284"	2.250"	25.0	2,347 fps	40,000 CUP	27.0	2,514 fps	50,500 CUP
	AR2219	.284"	2.250"	28.0	2,376 fps	40,500 CUP	30.0C	2,543 fps	50,600 CUP
	Bench Mark 2	.284"	2.250"	28.0	2,361 fps	40,700 CUP	30.2C	2,517 fps	50,000 CUP
	Bench Mark 8208	.284"	2.250"	29.0	2,379 fps	37,500 CUP	32.0C	2,625 fps	50,400 CUP
	AR2206H	.284"	2.250"	30.0	2,431 fps	43,900 CUP	32.0C	2,560 fps	49,200 CUP
139 GR. HDY SST	AR2207	.284"	2.260"	24.0	2,275 fps	42,500 CUP	26.0	2,390 fps	49,800 CUP
	AR2219	.284"	2.260"	26.5	2,265 fps	40,100 CUP	28.5C	2,426 fps	49,700 CUP
	Bench Mark 2	.284"	2.260"	27.5	2,278 fps	41,200 CUP	29.7C	2,420 fps	49,900 CUP
	Bench Mark 8208	.284"	2.250"	29.0	2,359 fps	41,300 CUP	31.0C	2,510 fps	46,700 CUP
	AR2206H	.284"	2.260"	29.0	2,320 fps	41,200 CUP	31.0C	2,448 fps	47,000 CUP
145 GR. SPR SPBT	AR2219	.284"	2.200"	27.0	2,220 fps	37,400 CUP	28.5C	2,349 fps	47,500 CUP
	Bench Mark 2	.284"	2.200"	27.5	2,270 fps	40,400 CUP	29.7C	2,432 fps	50,400 CUP
	Bench Mark 8208	.284"	2.200"	28.5	2,290 fps	38,500 CUP	31.0C	2,492 fps	47,000 CUP
	AR2206H	.284"	2.200"	29.0	2,320 fps	42,400 CUP	31.0C	2,453 fps	47,500 CUP
150 GR. NOS BT	AR2219	.284"	2.340"	26.5	2,215 fps	40,400 CUP	28.5C	2,366 fps	49,600 CUP
	Bench Mark 2	.284"	2.340"	27.0	2,232 fps	41,900 CUP	29.5C	2,385 fps	50,200 CUP
	Bench Mark 8208	.284"	2.340"	28.5	2,289 fps	39,600 CUP	31.0C	2,475 fps	50,200 CUP
	AR2206H	.284"	2.340"	28.5	2,247 fps	39,600 CUP	30.5C	2,385 fps	48,300 CUP
162 GR. HDY A-MAX	AR2219	.284"	2.400"	26.0	2,132 fps	39,800 CUP	28.3	2,292 fps	49,800 CUP
	Bench Mark 2	.284"	2.400"	27.0	2,144 fps	41,200 CUP	29.0C	2,285 fps	49,500 CUP
	Bench Mark 8208	.284"	2.400"	28.0	2,209 fps	40,600 CUP	30.5C	2,387 fps	48,600 CUP
	AR2206H	.284"	2.400"	27.5	2,132 fps	37,500 CUP	29.5C	2,296 fps	49,600 CUP
168 GR. SIE HPBT	AR2219	.284"	2.320"	26.0	2,112 fps	40,300 CUP	28.0	2,247 fps	49,600 CUP
	Bench Mark 2	.284"	2.320"	26.5	2,118 fps	41,400 CUP	28.5	2,246 fps	49,700 CUP
	Bench Mark 8208	.284"	2.320"	28.0	2,165 fps	41,300 CUP	30.5C	2,354 fps	49,800 CUP
	AR2206H	.284"	2.320"	28.0	2,154 fps	42,300 CUP	30.0C	2,287 fps	49,200 CUP

C = Compressed load

# RIFLE DATA

7-30 Waters				Case: Federal Twist: 1:9.5" Primer: FEDERAL 210			Barrel length: 24" Trim length: 2.030"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. HDY HP	AR2219	.284"	2.700"	27.0	2,447 fps	30,500 CUP	30.0	2,679 fps	40,200 CUP
	Bench Mark 2	.284"	2.700"	27.0	2,407 fps	29,600 CUP	30.5	2,646 fps	39,300 CUP
	AR2206H	.284"	2.700"	34.0	2,707 fps	33,500 CUP	37.0C	2,908 fps	39,200 CUP
	AR2208	.284"	2.700"	35.0	2,660 fps	31,400 CUP	38.0C	2,814 fps	35,000 CUP
120 GR. NOS FP	AR2219	.284"	2.550"	26.0	2,274 fps	29,500 CUP	29.0	2,497 fps	40,200 CUP
	Bench Mark 2	.284"	2.550"	26.5	2,267 fps	31,500 CUP	29.5	2,474 fps	40,200 CUP
	AR2206H	.284"	2.550"	31.0	2,413 fps	33,200 CUP	34.5	2,654 fps	39,400 CUP
	AR2208	.284"	2.550"	34.0	2,480 fps	31,100 CUP	37.0C	2,653 fps	40,000 CUP
130 GR. SIE HPBT	AR2219	.284"	2.720"	25.0	2,142 fps	31,600 CUP	27.3	2,320 fps	39,300 CUP
	Bench Mark 2	.284"	2.720"	25.0	2,078 fps	28,900 CUP	28.0	2,314 fps	40,100 CUP
	AR2206H	.284"	2.720"	31.0	2,360 fps	31,000 CUP	33.4C	2,528 fps	39,500 CUP
	AR2208	.284"	2.720"	32.0	2,336 fps	30,600 CUP	35.6C	2,561 fps	40,100 CUP
139 GR. HDY FP	AR2219	.284"	2.550"	24.0	1,981 fps	28,500 CUP	27.0	2,217 fps	39,400 CUP
	Bench Mark 2	.284"	2.550"	25.0	2,048 fps	31,000 CUP	28.0	2,220 fps	39,600 CUP
	AR2206H	.284"	2.550"	30.0	2,250 fps	32,900 CUP	33.0	2,435 fps	39,800 CUP
	AR2208	.284"	2.550"	32.0	2,251 fps	30,900 CUP	35.5C	2,472 fps	39,100 CUP
145 GR. SPR SP	Bench Mark 2	.284"	2.720"	25.0	2,037 fps	30,200 CUP	28.0	2,235 fps	40,100 CUP
	AR2206H	.284"	2.720"	29.0	2,238 fps	35,100 CUP	32.0	2,369 fps	39,900 CUP
	AR2208	.284"	2.720"	31.0	2,217 fps	33,600 CUP	34.2	2,439 fps	39,700 CUP
150 GR. NOS BT	Bench Mark 2	.284"	2.780"	23.0	1,929 fps	30,400 CUP	26.0	2,144 fps	39,200 CUP
	AR2206H	.284"	2.780"	29.0	2,192 fps	33,300 CUP	32.0C	2,347 fps	39,600 CUP
	AR2208	.284"	2.780"	31.0	2,215 fps	32,900 CUP	34.2C	2,388 fps	40,000 CUP
168 GR. SIE HPBT	Bench Mark 2	.284"	2.780"	23.0	1,897 fps	31,600 CUP	25.5	2,055 fps	39,800 CUP
	AR2206H	.284"	2.780"	28.0	2,132 fps	34,400 CUP	30.2	2,222 fps	38,600 CUP
	AR2208	.284"	2.780"	29.0	2,089 fps	33,000 CUP	32.0C	2,229 fps	39,200 CUP
				C = Compressed load					
7mm-08 Remington				Case: Remington Twist: 1:9.5" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.025"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. BAR XFB	AR2219	.284"	2.650"	37.5	2,917 fps	40,300 CUP	40.0	3,105 fps	49,000 CUP
	Bench Mark 2	.284"	2.650"	40.0	2,968 fps	41,400 CUP	42.5	3,144 fps	49,600 CUP
	AR2206H	.284"	2.650"	41.0	3,037 fps	41,000 CUP	45.0	3,286 fps	49,900 CUP
	AR2208	.284"	2.650"	42.0	3,060 fps	40,800 CUP	45.7	3,277 fps	49,600 CUP

# RIFLE DATA

7mm-08 Remington				Case: Remington Twist: 1:9.5" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.025"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
115 GR. SPR HP	AR2219	.284"	2.655"	39.0	2,951 fps	44,800 CUP	41.0	3,053 fps	49,800 CUP
	Bench Mark 2	.284"	2.655"	40.0	2,887 fps	42,000 CUP	43.5	3,103 fps	50,500 CUP
	Bench Mark 8208	.284"	2.655"	40.6	2,866 fps	40,100 CUP	43.2	3,022 fps	48,400 CUP
	AR2206H	.284"	2.655"	42.0	3,007 fps	42,400 CUP	45.0	3,172 fps	49,900 CUP
	AR2208	.284"	2.655"	43.0	3,019 fps	41,200 CUP	46.3	3,216 fps	50,100 CUP
120 GR. NOS BT	Bench Mark 2	.284"	2.800"	39.0	2,812 fps	40,900 CUP	41.3	2,968 fps	49,000 CUP
	Bench Mark 8208	.284"	2.800"	40.1	2,830 fps	40,500 CUP	42.7	2,997 fps	48,900 CUP
	AR2206H	.284"	2.800"	41.0	2,931 fps	42,200 CUP	43.7	3,085 fps	49,700 CUP
	AR2208	.284"	2.800"	42.5	2,996 fps	43,800 CUP	45.0	3,117 fps	49,900 CUP
	AR2209	.284"	2.800"	48.0	2,895 fps	39,300 CUP	50.0C	3,039 fps	44,600 CUP
130 GR. SIE HPBT	Bench Mark 2	.284"	2.800"	37.0	2,701 fps	41,500 CUP	39.8	2,861 fps	50,200 CUP
	Bench Mark 8208	.284"	2.800"	39.1	2,755 fps	42,600 CUP	41.6	2,922 fps	50,400 CUP
	AR2206H	.284"	2.800"	39.5	2,824 fps	43,500 CUP	42.0	2,957 fps	50,200 CUP
	AR2208	.284"	2.800"	40.0	2,830 fps	43,400 CUP	43.5	3,004 fps	50,100 CUP
	AR2209	.284"	2.800"	47.0	2,871 fps	43,000 CUP	50.0C	2,998 fps	47,400 CUP
139 GR. HDY SP	Bench Mark 2	.284"	2.800"	37.5	2,624 fps	40,300 CUP	40.5	2,799 fps	49,600 CUP
	Bench Mark 8208	.284"	2.800"	39.0	2,642 fps	41,200 CUP	41.5	2,783 fps	49,000 CUP
	AR2206H	.284"	2.800"	39.0	2,678 fps	42,500 CUP	42.5	2,857 fps	50,200 CUP
	AR2208	.284"	2.800"	40.5	2,721 fps	44,700 CUP	43.5	2,877 fps	50,000 CUP
	AR2209	.284"	2.800"	47.0	2,729 fps	40,400 CUP	50.0C	2,906 fps	47,500 CUP
140 GR. SFT SP	Trail Boss	.284"	2.750"	11.0	1,211 fps	36,200 CUP	16.0	1,472 fps	43,300 CUP
	Bench Mark 2	.284"	2.750"	36.0	2,564 fps	42,600 CUP	38.3	2,688 fps	49,300 CUP
	Bench Mark 8208	.284"	2.750"	37.3	2,606 fps	43,200 CUP	39.7	2,732 fps	48,800 CUP
	AR2206H	.284"	2.750"	38.0	2,618 fps	42,000 CUP	40.5	2,769 fps	49,700 CUP
	AR2208	.284"	2.750"	39.5	2,695 fps	43,700 CUP	42.2	2,819 fps	49,800 CUP
	AR2209	.284"	2.750"	45.0	2,692 fps	42,300 CUP	48.0C	2,868 fps	49,800 CUP
145 GR. SPR SP	Bench Mark 2	.284"	2.730"	36.0	2,487 fps	40,900 CUP	39.5	2,693 fps	50,700 CUP
	Bench Mark 8208	.284"	2.730"	37.8	2,589 fps	43,700 CUP	40.2	2,721 fps	50,200 CUP
	AR2206H	.284"	2.730"	38.5	2,599 fps	44,400 CUP	41.0	2,728 fps	49,800 CUP
	AR2208	.284"	2.730"	39.0	2,639 fps	46,200 CUP	41.5	2,745 fps	50,200 CUP
	AR2209	.284"	2.730"	45.0	2,647 fps	42,300 CUP	48.0C	2,801 fps	49,800 CUP
150 GR. BAR TTSX BT	Bench Mark 2	.284"	2.770"	34.8	2,369 fps	45,900 CUP	37.0	2,506 fps	50,600 CUP
	Bench Mark 8208	.284"	2.770"	35.2	2,404 fps	44,600 CUP	37.4	2,518 fps	50,700 CUP
	AR2206H	.284"	2.770"	34.8	2,428 fps	45,200 CUP	37.0	2,561 fps	50,700 CUP
	AR2208	.284"	2.770"	37.3	2,448 fps	43,400 CUP	39.7	2,580 fps	50,700 CUP
	AR2209	.284"	2.770"	41.9	2,475 fps	40,100 CUP	45.5C	2,659 fps	50,400 CUP

# RIFLE DATA

7mm-08 Remington				Case: Remington Twist: 1:9.5" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.025"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>150 GR. SIE HPBT</b>	Bench Mark 2	.284"	2.800"	36.0	2,526 fps	43,300 CUP	38.5	2,667 fps	50,200 CUP
	Bench Mark 8208	.284"	2.800"	36.9	2,539 fps	43,200 CUP	39.3	2,677 fps	49,900 CUP
	AR2206H	.284"	2.800"	37.0	2,546 fps	43,300 CUP	40.5	2,723 fps	50,000 CUP
	AR2208	.284"	2.800"	38.5	2,597 fps	42,400 CUP	41.3	2,731 fps	50,000 CUP
	AR2209	.284"	2.800"	42.0	2,549 fps	40,600 CUP	45.4	2,724 fps	51,500 CUP
<b>154 GR. HDY SP</b>	Bench Mark 2	.284"	2.800"	36.0	2,467 fps	42,900 CUP	38.5	2,597 fps	49,500 CUP
	Bench Mark 8208	.284"	2.800"	36.2	2,482 fps	43,200 CUP	38.5	2,587 fps	49,100 CUP
	AR2206H	.284"	2.800"	37.0	2,484 fps	44,200 CUP	39.5	2,592 fps	49,900 CUP
	AR2208	.284"	2.800"	38.5	2,530 fps	44,100 CUP	41.2	2,666 fps	50,300 CUP
	AR2209	.284"	2.800"	42.3	2,531 fps	46,100 CUP	45.0	2,645 fps	51,300 CUP
	AR2213SC	.284"	2.800"	48.0	2,550 fps	40,900 CUP	49.5C	2,625 fps	44,500 CUP
<b>160 GR. SPR SPBT</b>	Bench Mark 2	.284"	2.800"	36.0	2,457 fps	44,100 CUP	38.5	2,592 fps	50,700 CUP
	Bench Mark 8208	.284"	2.800"	35.5	2,459 fps	45,400 CUP	37.7	2,554 fps	49,900 CUP
	AR2206H	.284"	2.800"	35.0	2,420 fps	44,400 CUP	38.5	2,530 fps	50,000 CUP
	AR2208	.284"	2.800"	36.5	2,451 fps	43,400 CUP	39.0	2,562 fps	49,900 CUP
	AR2209	.284"	2.800"	40.9	2,471 fps	45,400 CUP	43.5	2,583 fps	50,800 CUP
	AR2213SC	.284"	2.800"	47.5	2,547 fps	43,700 CUP	49.5C	2,627 fps	47,500 CUP
<b>162 GR. HDY A-MAX</b>	Bench Mark 2	.284"	2.875"	36.0	2,441 fps	43,100 CUP	38.0	2,557 fps	49,200 CUP
	Bench Mark 8208	.284"	2.875"	36.2	2,499 fps	41,000 CUP	40.2	2,725 fps	50,800 CUP
	AR2206H	.284"	2.875"	37.0	2,462 fps	43,700 CUP	39.5	2,600 fps	49,800 CUP
	AR2208	.284"	2.875"	38.5	2,504 fps	43,400 CUP	41.0	2,644 fps	49,800 CUP
	AR2209	.284"	2.875"	41.4	2,443 fps	40,400 CUP	45.0	2,622 fps	50,500 CUP
	AR2213SC	.284"	2.875"	47.5	2,501 fps	39,000 CUP	48.5C	2,555 fps	42,400 CUP
<b>168 GR. SIE HPBT</b>	Bench Mark 2	.284"	2.800"	36.0	2,389 fps	43,500 CUP	38.0	2,517 fps	49,400 CUP
	Bench Mark 8208	.284"	2.800"	34.9	2,414 fps	46,400 CUP	37.1	2,486 fps	49,600 CUP
	AR2206H	.284"	2.800"	36.5	2,390 fps	45,400 CUP	39.0	2,504 fps	49,700 CUP
	AR2208	.284"	2.800"	37.5	2,430 fps	44,600 CUP	40.0	2,540 fps	50,100 CUP
	AR2209	.284"	2.800"	41.6	2,431 fps	42,500 CUP	44.2	2,551 fps	50,700 CUP
	AR2213SC	.284"	2.800"	47.0	2,438 fps	39,700 CUP	49.0C	2,545 fps	45,000 CUP
<b>175 GR. NOS PART</b>	Bench Mark 2	.284"	2.800"	34.0	2,202 fps	42,400 CUP	36.5	2,333 fps	49,700 CUP
	Bench Mark 8208	.284"	2.800"	33.4	2,264 fps	43,200 CUP	35.5	2,372 fps	48,200 CUP
	AR2206H	.284"	2.800"	35.0	2,240 fps	44,500 CUP	37.5	2,354 fps	49,700 CUP
	AR2208	.284"	2.800"	35.0	2,231 fps	43,400 CUP	37.5	2,344 fps	49,500 CUP
	AR2209	.284"	2.800"	39.9	2,303 fps	41,900 CUP	42.4	2,451 fps	50,400 CUP
	AR2213SC	.284"	2.800"	47.0	2,443 fps	46,600 CUP	49.0C	2,516 fps	49,400 CUP

C = Compressed load

# RIFLE DATA

7mm Shooting Times Easterner				Case: Winchester (reformed) Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 22" Trim length: 2.010"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. NOS FP	AR2206H	.284"	2.475"	37.0	2,529 fps	-	41.0	2,909 fps	-
	AR2209	.284"	2.475"	44.0	2,503 fps	-	49.0	2,873 fps	-
139 GR. HDY FP	AR2209	.284"	2.500"	43.0	2,271 fps	-	48.0	2,676 fps	-
7 x 57mm Mauser				Case: Winchester Twist: 1:8.75" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.225"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. HDY HP	Bench Mark 2	.284"	2.900"	41.5	2,987 fps	39,900 CUP	44.3	3,138 fps	45,800 CUP
	Bench Mark 8208	.284"	2.900"	40.0	2,939 fps	40,500 CUP	44.0	3,113 fps	45,500 CUP
	AR2206H	.284"	2.900"	44.0	3,095 fps	41,200 CUP	46.0	3,208 fps	45,400 CUP
	AR2208	.284"	2.900"	45.0	3,123 fps	42,000 CUP	48.0	3,250 fps	45,600 CUP
	AR2209	.284"	2.900"	51.0	2,993 fps	36,000 CUP	54.0C	3,166 fps	41,200 CUP
110 GR. SPR HP	Bench Mark 2	.284"	2.980"	41.0	2,874 fps	39,300 CUP	44.0	3,034 fps	45,700 CUP
	Bench Mark 8208	.284"	2.980"	39.0	2,823 fps	43,400 CUP	43.5	3,006 fps	45,900 CUP
	AR2206H	.284"	2.980"	43.0	2,939 fps	39,600 CUP	46.0	3,078 fps	45,000 CUP
	AR2208	.284"	2.980"	41.0	2,902 fps	40,900 CUP	45.5	3,081 fps	46,000 CUP
	AR2209	.284"	2.980"	51.0	2,865 fps	36,000 CUP	54.0C	3,046 fps	41,900 CUP
120 GR. NOS BT	Bench Mark 2	.284"	3.000"	39.0	2,743 fps	42,900 CUP	41.5	2,863 fps	46,000 CUP
	Bench Mark 8208	.284"	3.000"	37.0	2,652 fps	42,800 CUP	41.0	2,821 fps	45,800 CUP
	AR2206H	.284"	3.000"	40.0	2,732 fps	40,900 CUP	42.0	2,859 fps	45,400 CUP
	AR2208	.284"	3.000"	41.0	2,820 fps	41,700 CUP	44.0	2,979 fps	46,000 CUP
	AR2209	.284"	3.000"	48.0	2,790 fps	40,300 CUP	51.0C	2,945 fps	45,800 CUP
	AR2213SC	.284"	3.000"	50.0	2,650 fps	36,500 CUP	52.5C	2,777 fps	40,800 CUP
130 GR. SPR SP	Bench Mark 2	.284"	2.800"	39.0	2,674 fps	43,300 CUP	41.2	2,765 fps	46,000 CUP
	Bench Mark 8208	.284"	2.800"	35.0	2,488 fps	41,700 CUP	39.0	2,676 fps	46,100 CUP
	AR2206H	.284"	2.800"	38.0	2,579 fps	40,600 CUP	41.0	2,704 fps	46,000 CUP
	AR2208	.284"	2.800"	39.0	2,678 fps	40,400 CUP	42.0	2,800 fps	45,700 CUP
	AR2209	.284"	2.800"	47.0	2,682 fps	40,500 CUP	50.0	2,848 fps	46,000 CUP
140 GR. NOS BT	Bench Mark 2	.284"	3.000"	35.5	2,441 fps	40,900 CUP	38.0	2,571 fps	45,700 CUP
	Bench Mark 8208	.284"	3.000"	33.0	2,335 fps	44,100 CUP	37.0	2,522 fps	46,100 CUP
	AR2206H	.284"	3.000"	35.0	2,376 fps	39,800 CUP	37.5	2,530 fps	45,800 CUP
	AR2208	.284"	3.000"	35.0	2,368 fps	40,800 CUP	37.7	2,516 fps	46,000 CUP
	AR2209	.284"	3.000"	43.0	2,530 fps	40,400 CUP	46.5	2,682 fps	46,000 CUP
	AR2213SC	.284"	3.000"	47.0	2,520 fps	42,500 CUP	49.5C	2,719 fps	46,000 CUP



# RIFLE DATA

7 x 57mm Mauser				Case: Winchester Twist: 1:8.75" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.225"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
150 GR. BAR TTSX	Bench Mark 2	.284"	2.965"	31.0	2,194 fps	40,300 CUP	35.0	2,356 fps	45,000 CUP
	AR2206H	.284"	2.965"	31.0	2,167 fps	37,700 CUP	35.0	2,403 fps	45,700 CUP
	AR2208	.284"	2.965"	32.0	2,183 fps	38,600 CUP	36.5	2,415 fps	45,900 CUP
	AR2209	.284"	2.965"	38.0	2,288 fps	36,900 CUP	42.5C	2,502 fps	45,300 CUP
	AR2213SC	.284"	2.965"	42.0	2,318 fps	39,000 CUP	46.0C	2,495 fps	45,000 CUP
150 GR. NOS BT	Bench Mark 2	.284"	3.000"	34.0	2,291 fps	40,900 CUP	36.0	2,365 fps	45,700 CUP
	Bench Mark 8208	.284"	3.000"	32.0	2,206 fps	39,500 CUP	36.0	2,401 fps	45,800 CUP
	AR2206H	.284"	3.000"	34.0	2,271 fps	40,200 CUP	36.0	2,383 fps	46,000 CUP
	AR2208	.284"	3.000"	34.0	2,265 fps	40,900 CUP	36.0	2,372 fps	45,600 CUP
	AR2209	.284"	3.000"	41.0	2,364 fps	38,800 CUP	44.0	2,513 fps	45,500 CUP
	AR2213SC	.284"	3.000"	45.0	2,411 fps	41,700 CUP	48.0	2,542 fps	46,000 CUP
160 GR. NOS PART	Bench Mark 2	.284"	3.000"	32.5	2,174 fps	40,800 CUP	34.7	2,284 fps	45,700 CUP
	Bench Mark 8208	.284"	3.000"	31.0	2,106 fps	38,000 CUP	34.5	2,287 fps	45,900 CUP
	AR2206H	.284"	3.000"	33.0	2,165 fps	40,200 CUP	34.5	2,245 fps	44,700 CUP
	AR2208	.284"	3.000"	33.0	2,160 fps	41,100 CUP	35.0	2,261 fps	45,900 CUP
	AR2209	.284"	3.000"	40.0	2,314 fps	42,100 CUP	42.5	2,399 fps	45,400 CUP
	AR2213SC	.284"	3.000"	43.0	2,311 fps	41,500 CUP	46.0	2,415 fps	45,700 CUP
168 GR. SIE HPBT	Bench Mark 2	.284"	3.000"	33.5	2,212 fps	40,900 CUP	36.0	2,336 fps	46,000 CUP
	Bench Mark 8208	.284"	3.000"	31.0	3,100 fps	39,100 CUP	34.0	2,260 fps	45,800 CUP
	AR2206H	.284"	3.000"	33.0	2,118 fps	36,400 CUP	34.5	2,211 fps	42,600 CUP
	AR2208	.284"	3.000"	34.5	2,232 fps	36,600 CUP	37.5	2,404 fps	45,500 CUP
	AR2209	.284"	3.000"	40.0	2,267 fps	40,400 CUP	42.5	2,378 fps	44,100 CUP
	AR2213SC	.284"	3.000"	43.0	2,244 fps	38,100 CUP	46.0	2,393 fps	43,900 CUP
	AR2217	.284"	3.000"	49.0	2,338 fps	40,800 CUP	52.0C	2,485 fps	46,000 CUP
175 GR. NOS PART	AR2208	.284"	3.025"	31.0	2,005 fps	34,200 CUP	35.0	2,178 fps	45,500 CUP
	AR2209	.284"	3.025"	35.0	2,066 fps	39,700 CUP	37.0	2,159 fps	43,400 CUP
	AR2213SC	.284"	3.025"	37.0	2,098 fps	41,300 CUP	40.0	2,201 fps	45,700 CUP
	AR2217	.284"	3.025"	42.0	2,038 fps	41,000 CUP	44.5	2,239 fps	45,500 CUP

C = Compressed load

# RIFLE DATA

280 Remington (7mm Express Remington)				Case: Remington			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.530"		
				Primer: REMINGTON 9 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
100 GR. SIE HP	AR2206H	.284"	3.180"	47.0	3,226 fps	42,800 CUP	50.5	3,418 fps	49,000 CUP
	AR2208	.284"	3.180"	48.0	3,254 fps	42,400 CUP	51.3	3,433 fps	48,300 CUP
	AR2209	.284"	3.180"	56.0	3,167 fps	41,400 CUP	60.5	3,379 fps	49,200 CUP
	AR2213SC	.284"	3.180"	59.0	3,053 fps	38,900 CUP	63.0C	3,266 fps	46,000 CUP
115 GR. SPR HP	AR2206H	.284"	3.180"	46.0	3,033 fps	42,600 CUP	49.0	3,175 fps	48,300 CUP
	AR2208	.284"	3.180"	46.0	3,040 fps	43,500 CUP	49.0	3,170 fps	47,700 CUP
	AR2209	.284"	3.180"	54.0	3,017 fps	40,200 CUP	58.5	3,234 fps	48,100 CUP
	AR2213SC	.284"	3.180"	58.0	3,014 fps	40,600 CUP	62.0C	3,190 fps	47,300 CUP
120 GR. BAR TSX	AR2206H	.284"	3.230"	46.9	3,067 fps	54,300 PSI	49.9	3,171 fps	57,200 PSI
	AR2208	.284"	3.230"	47.7	3,007 fps	48,800 PSI	50.7	3,177 fps	57,200 PSI
	AR2209	.284"	3.230"	55.5	3,093 fps	49,100 PSI	59.0C	3,254 fps	57,400 PSI
	AR2213SC	.284"	3.230"	58.0	2,923 fps	43,600 PSI	63.0C	3,124 fps	53,100 PSI
140 GR. NOS PART	AR2206H	.284"	3.230"	42.0	2,711 fps	43,200 CUP	45.2	2,830 fps	48,400 CUP
	AR2208	.284"	3.230"	42.0	2,674 fps	41,400 CUP	45.5	2,838 fps	48,100 CUP
	AR2209	.284"	3.230"	50.0	2,756 fps	41,900 CUP	53.5	2,918 fps	48,500 CUP
	AR2213SC	.284"	3.230"	54.0	2,732 fps	41,000 CUP	58.5	2,927 fps	48,500 CUP
145 GR. SPR SP	AR2206H	.284"	3.160"	38.0	2,434 fps	43,800 CUP	41.0	2,596 fps	48,400 CUP
	AR2208	.284"	3.160"	39.0	2,469 fps	44,900 CUP	43.0	2,690 fps	48,000 CUP
	AR2209	.284"	3.160"	45.0	2,553 fps	44,500 CUP	48.8	2,714 fps	49,900 CUP
	AR2213SC	.284"	3.160"	48.0	2,579 fps	46,900 CUP	53.0	2,727 fps	50,000 CUP
150 GR. NOS PART	AR2206H	.284"	3.300"	38.0	2,430 fps	43,700 CUP	41.5	2,588 fps	50,000 CUP
	AR2208	.284"	3.300"	39.0	2,485 fps	44,000 CUP	42.0	2,611 fps	49,800 CUP
	AR2209	.284"	3.300"	46.0	2,550 fps	42,500 CUP	49.7	2,700 fps	49,300 CUP
	AR2213SC	.284"	3.300"	50.0	2,579 fps	45,100 CUP	53.7	2,709 fps	49,500 CUP
	AR2217	.284"	3.300"	56.0	2,647 fps	43,500 CUP	60.0C	2,797 fps	49,300 CUP
160 GR. SFT SP	AR2206H	.284"	3.240"	38.0	2,341 fps	40,300 CUP	41.5	2,535 fps	49,500 CUP
	AR2208	.284"	3.240"	39.0	2,384 fps	43,000 CUP	42.5	2,555 fps	49,300 CUP
	AR2209	.284"	3.240"	46.0	2,441 fps	40,900 CUP	49.5	2,610 fps	48,900 CUP
	AR2213SC	.284"	3.240"	51.0	2,464 fps	40,600 CUP	55.0	2,660 fps	49,500 CUP
	AR2217	.284"	3.240"	57.0	2,517 fps	40,700 CUP	61.0C	2,714 fps	47,500 CUP
162 GR. HDY A-MAX	AR2206H	.284"	3.330"	38.0	2,396 fps	42,800 CUP	41.5	2,567 fps	50,000 CUP
	AR2208	.284"	3.330"	39.0	2,443 fps	44,100 CUP	42.0	2,573 fps	49,500 CUP
	AR2209	.284"	3.330"	46.0	2,468 fps	42,300 CUP	49.5	2,614 fps	49,900 CUP
	AR2213SC	.284"	3.330"	51.0	2,517 fps	44,100 CUP	54.5	2,644 fps	49,300 CUP
	AR2217	.284"	3.330"	56.0	2,526 fps	40,300 CUP	60.0C	2,711 fps	47,200 CUP

# RIFLE DATA

280 Remington (7mm Express Remington)				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.530"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
168 GR. SIE HPBT	AR2206H	.284"	3.330"	38.0	2,329 fps	45,900 CUP	41.2	2,468 fps	49,600 CUP
	AR2208	.284"	3.330"	40.0	2,424 fps	45,800 CUP	42.2	2,523 fps	49,900 CUP
	AR2209	.284"	3.330"	46.0	2,422 fps	41,300 CUP	50.0	2,586 fps	49,400 CUP
	AR2213SC	.284"	3.330"	51.0	2,462 fps	42,400 CUP	54.5	2,605 fps	49,200 CUP
	AR2217	.284"	3.330"	56.0	2,506 fps	39,400 CUP	60.0C	2,700 fps	49,300 CUP
175 GR. HDY SP	AR2209	.284"	3.300"	44.0	2,343 fps	44,600 CUP	46.5	2,447 fps	49,300 CUP
	AR2213SC	.284"	3.300"	48.0	2,362 fps	44,400 CUP	51.0	2,477 fps	49,800 CUP
	AR2217	.284"	3.300"	54.0	2,502 fps	47,000 CUP	57.0C	2,583 fps	49,600 CUP
				C = Compressed load					
284 Winchester				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.160"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. SIE HP	Bench Mark 8208	.284"	2.800"	48.9	3,322 fps	44,800 CUP	52.0	3,478 fps	52,000 CUP
	AR2206H	.284"	2.800"	47.0	3,213 fps	45,800 CUP	51.5	3,428 fps	51,600 CUP
	AR2208	.284"	2.800"	51.0	3,242 fps	45,900 CUP	54.0	3,435 fps	52,900 CUP
	AR2209	.284"	2.800"	55.0	3,096 fps	39,600 CUP	60.0C	3,368 fps	49,000 CUP
115 GR. SPR SP	AR2206H	.284"	2.800"	45.0	3,000 fps	43,500 CUP	50.0	3,245 fps	52,400 CUP
	AR2208	.284"	2.800"	49.0	3,096 fps	46,900 CUP	53.0	3,281 fps	53,400 CUP
	AR2209	.284"	2.800"	54.0	3,008 fps	40,200 CUP	59.0C	3,305 fps	52,200 CUP
120 GR. HDY V-MAX	Bench Mark 8208	.284"	2.825"	45.1	3,032 fps	45,600 CUP	48.0	3,134 fps	52,600 CUP
	AR2206H	.284"	2.825"	43.0	2,880 fps	41,400 CUP	48.0	3,120 fps	51,600 CUP
	AR2208	.284"	2.825"	45.0	2,919 fps	43,200 CUP	50.5	3,158 fps	52,200 CUP
	AR2209	.284"	2.825"	53.0	3,017 fps	44,700 CUP	57.0C	3,174 fps	49,600 CUP
	AR2213SC	.284"	2.825"	56.0	2,846 fps	38,900 CUP	60.0C	3,018 fps	45,200 CUP
130 GR. BAR XBT	AR2206H	.284"	2.850"	44.0	2,853 fps	47,300 CUP	47.5	2,984 fps	52,100 CUP
	AR2208	.284"	2.850"	45.0	2,844 fps	47,400 CUP	49.7	3,026 fps	52,700 CUP
	AR2209	.284"	2.850"	53.0	2,920 fps	45,700 CUP	57.0C	3,095 fps	50,900 CUP
	AR2213SC	.284"	2.850"	56.0	2,788 fps	40,500 CUP	60.0C	2,923 fps	46,300 CUP
139 GR. HDY SST	Bench Mark 8208	.284"	2.915"	42.8	2,772 fps	43,900 CUP	45.5	2,914 fps	51,900 CUP
	AR2206H	.284"	2.915"	43.0	2,811 fps	48,000 CUP	47.0	2,943 fps	51,700 CUP
	AR2208	.284"	2.915"	45.0	2,777 fps	44,400 CUP	49.5	2,996 fps	52,600 CUP
	AR2209	.284"	2.915"	52.0	2,840 fps	44,300 CUP	57.0C	3,079 fps	52,400 CUP
	AR2213SC	.284"	2.915"	56.0	2,760 fps	40,000 CUP	60.0C	2,923 fps	46,900 CUP

# RIFLE DATA

284 Winchester				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.160"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
145 GR. SPR SP	AR2206H	.284"	2.800"	43.0	2,736 fps	47,500 CUP	46.5	2,856 fps	51,600 CUP
	AR2208	.284"	2.800"	45.0	2,771 fps	48,300 CUP	49.0	2,905 fps	52,500 CUP
	AR2209	.284"	2.800"	50.0	2,743 fps	45,600 CUP	55.0	2,964 fps	53,200 CUP
	AR2213SC	.284"	2.800"	55.0	2,733 fps	45,200 CUP	60.0C	2,945 fps	52,500 CUP
150 GR. SFT SCIR	AR2206H	.284"	2.950"	43.0	2,719 fps	48,100 CUP	46.5	2,818 fps	52,300 CUP
	AR2208	.284"	2.950"	44.0	2,674 fps	45,400 CUP	48.7	2,863 fps	52,800 CUP
	AR2209	.284"	2.950"	50.0	2,721 fps	46,100 CUP	54.7C	2,913 fps	52,300 CUP
	AR2213SC	.284"	2.950"	55.0	2,682 fps	45,200 CUP	59.0C	2,852 fps	50,100 CUP
160 GR. BAR TSX	AR2206H	.284"	2.870"	40.0	2,374 fps	42,800 CUP	45.0	2,593 fps	51,500 CUP
	AR2208	.284"	2.870"	42.0	2,397 fps	43,100 CUP	46.5	2,632 fps	51,800 CUP
	AR2209	.284"	2.870"	47.0	2,497 fps	43,700 CUP	52.0C	2,672 fps	50,400 CUP
	AR2213SC	.284"	2.870"	50.0	2,391 fps	38,300 CUP	55.5C	2,629 fps	47,400 CUP
162 GR. HDY BTSP	AR2206H	.284"	2.970"	40.0	2,502 fps	42,900 CUP	44.2	2,703 fps	51,600 CUP
	AR2208	.284"	2.970"	42.0	2,557 fps	43,800 CUP	47.0	2,764 fps	52,500 CUP
	AR2209	.284"	2.970"	50.0	2,712 fps	47,600 CUP	53.5C	2,847 fps	53,000 CUP
	AR2213SC	.284"	2.970"	53.0	2,617 fps	44,500 CUP	58.0C	2,816 fps	50,900 CUP
168 GR. SIE HPBT	AR2206H	.284"	2.900"	40.0	2,531 fps	46,200 CUP	44.0	2,689 fps	52,300 CUP
	AR2208	.284"	2.900"	42.0	2,576 fps	45,400 CUP	47.0	2,736 fps	52,500 CUP
	AR2209	.284"	2.900"	50.0	2,668 fps	47,400 CUP	53.5C	2,822 fps	53,000 CUP
	AR2213SC	.284"	2.900"	53.0	2,602 fps	45,100 CUP	58.0C	2,807 fps	52,700 CUP
175 GR. SFT SP	AR2208	.284"	2.930"	42.0	2,413 fps	45,800 CUP	46.0	2,582 fps	52,600 CUP
	AR2209	.284"	2.930"	47.0	2,483 fps	44,900 CUP	51.5C	2,649 fps	52,000 CUP
	AR2213SC	.284"	2.930"	52.0	2,482 fps	44,500 CUP	57.0C	2,695 fps	52,900 CUP
				C = Compressed load					
280 Ackley Improved				Case: Nosler Twist: 1:9" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.530"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. NOS BT	AR2206H	.284"	3.320"	44.7	2,974 fps	51,800 PSI	47.5	3,128 fps	60,700 PSI
	AR2208	.284"	3.320"	47.0	2,988 fps	52,200 PSI	50.0	3,153 fps	61,300 PSI
	AR2209	.284"	3.320"	55.5	3,120 fps	54,000 PSI	59.0	3,271 fps	61,400 PSI
	AR2213SC	.284"	3.320"	61.1	3,024 fps	52,200 PSI	65.0C	3,240 fps	60,900 PSI
	AR2217	.284"	3.320"	62.0	2,924 fps	45,100 PSI	66.0C	3,120 fps	54,400 PSI

# RIFLE DATA

280 Ackley Improved				Case: Nosler			Barrel length: 24"		
				Twist: 1:9"			Trim length: 2.530"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
130 GR. SIE HPBT	AR2206H	.284"	3.320"	42.8	2,813 fps	51,200 PSI	45.5	2,953 fps	60,300 PSI
	AR2208	.284"	3.320"	44.7	2,855 fps	53,500 PSI	47.5	2,991 fps	60,800 PSI
	AR2209	.284"	3.320"	50.8	2,913 fps	53,300 PSI	54.0	3,051 fps	60,000 PSI
	AR2213SC	.284"	3.320"	57.3	2,910 fps	53,800 PSI	61.0	3,060 fps	61,300 PSI
	AR2217	.284"	3.320"	60.6	2,910 fps	51,600 PSI	64.5C	3,065 fps	59,800 PSI
140 GR. NOS BT	AR2206H	.284"	3.330"	42.8	2,737 fps	53,600 PSI	45.5	2,876 fps	61,600 PSI
	AR2208	.284"	3.330"	44.6	2,754 fps	54,100 PSI	47.4	2,903 fps	60,400 PSI
	AR2209	.284"	3.330"	52.2	2,893 fps	55,200 PSI	55.5	3,012 fps	61,600 PSI
	AR2213SC	.284"	3.330"	58.3	2,841 fps	53,600 PSI	62.0C	3,012 fps	61,100 PSI
	AR2217	.284"	3.330"	60.0	2,778 fps	48,200 PSI	64.0C	2,972 fps	58,700 PSI
150 GR. BAR TSX	AR2206H	.284"	3.230"	41.4	2,598 fps	52,800 PSI	44.0	2,716 fps	59,900 PSI
	AR2208	.284"	3.230"	43.0	2,632 fps	53,800 PSI	45.8	2,750 fps	60,900 PSI
	AR2209	.284"	3.230"	49.5	2,736 fps	55,600 PSI	52.7	2,855 fps	61,600 PSI
	AR2213SC	.284"	3.230"	54.1	2,705 fps	51,900 PSI	57.5C	2,840 fps	59,900 PSI
	AR2217	.284"	3.230"	54.5	2,592 fps	54,100 PSI	61.0C	2,826 fps	56,900 PSI
150 GR. SFT SCIR	AR2206H	.284"	3.330"	42.0	2,633 fps	52,100 PSI	44.6	2,773 fps	61,200 PSI
	AR2208	.284"	3.330"	43.5	2,647 fps	51,700 PSI	46.3	2,796 fps	59,300 PSI
	AR2209	.284"	3.330"	48.0	2,676 fps	51,900 PSI	54.5	2,908 fps	61,700 PSI
	AR2213SC	.284"	3.330"	53.6	2,657 fps	51,500 PSI	57.0	2,773 fps	61,200 PSI
	AR2217	.284"	3.330"	58.5	2,724 fps	57,100 PSI	62.2C	2,883 fps	60,300 PSI
160 GR. NOS AB	AR2206H	.284"	3.330"	40.9	2,496 fps	52,300 PSI	43.5	2,615 fps	59,500 PSI
	AR2208	.284"	3.330"	43.2	2,551 fps	53,200 PSI	46.0	2,685 fps	62,000 PSI
	AR2209	.284"	3.330"	48.4	2,633 fps	54,100 PSI	51.5	2,747 fps	60,700 PSI
	AR2213SC	.284"	3.330"	54.0	2,674 fps	55,000 PSI	57.5C	2,812 fps	62,000 PSI
	AR2217	.284"	3.330"	57.3	2,672 fps	54,200 PSI	61.0C	2,808 fps	61,100 PSI
162 GR. HDY BTSP	AR2206H	.284"	3.325"	40.9	2,535 fps	53,800 PSI	43.5	2,651 fps	61,400 PSI
	AR2208	.284"	3.325"	42.6	2,570 fps	54,600 PSI	45.3	2,690 fps	62,000 PSI
	AR2209	.284"	3.325"	47.6	2,629 fps	52,900 PSI	50.6	2,755 fps	60,800 PSI
	AR2213SC	.284"	3.325"	53.0	2,662 fps	54,200 PSI	56.4	2,788 fps	61,400 PSI
	AR2217	.284"	3.325"	56.8	2,653 fps	52,300 PSI	60.4	2,797 fps	61,300 PSI
168 GR. SIE HPBT	AR2206H	.284"	3.330"	40.4	2,474 fps	52,300 PSI	43.0	2,595 fps	60,900 PSI
	AR2208	.284"	3.330"	43.0	2,518 fps	53,700 PSI	46.0	2,667 fps	62,100 PSI
	AR2209	.284"	3.330"	48.4	2,621 fps	54,500 PSI	51.5	2,734 fps	61,800 PSI
	AR2213SC	.284"	3.330"	54.0	2,653 fps	55,100 PSI	57.7	2,779 fps	62,000 PSI
	AR2217	.284"	3.330"	57.8	2,641 fps	52,500 PSI	61.5C	2,789 fps	61,100 PSI
	AR2225	.284"	3.330"	59.0	2,652 fps	49,000 PSI	63.0C	2,831 fps	59,300 PSI



# RIFLE DATA

280 Ackley Improved				Case: Nosler Twist: 1:9" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.530"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
175 GR. SFT SP	AR2209	.284"	3.270"	47.7	2,515 fps	54,700 PSI	50.7	2,626 fps	62,100 PSI
	AR2213SC	.284"	3.270"	52.0	2,496 fps	51,900 PSI	55.5	2,651 fps	62,000 PSI
	AR2217	.284"	3.270"	55.5	2,544 fps	52,700 PSI	59.0C	2,675 fps	61,100 PSI
	AR2225	.284"	3.270"	56.7	2,604 fps	52,400 PSI	60.3C	2,743 fps	59,800 PSI
				C = Compressed load					
7mm Rem. S.A. Ultra Mag.				Case: Remington Twist: 1:9.25" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.025"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. HDY HP	AR2206H	.284"	2.700"	53.0	3,450 fps	53,900 PSI	57.0	3,631 fps	62,800 PSI
	AR2208	.284"	2.700"	56.0	3,418 fps	52,600 PSI	60.0	3,626 fps	63,000 PSI
	AR2209	.284"	2.700"	63.0	3,424 fps	52,500 PSI	66.5C	3,622 fps	63,100 PSI
110 GR. SPR TNT HP	AR2206H	.284"	2.730"	53.0	3,351 fps	55,400 PSI	56.5	3,494 fps	62,700 PSI
	AR2208	.284"	2.730"	54.0	3,295 fps	52,500 PSI	59.0	3,513 fps	63,200 PSI
	AR2209	.284"	2.730"	61.0	3,263 fps	49,400 PSI	65.0	3,499 fps	62,600 PSI
115 GR. SPR HP	AR2206H	.284"	2.650"	51.0	3,211 fps	55,700 PSI	54.0	3,336 fps	62,400 PSI
	AR2208	.284"	2.650"	54.0	3,234 fps	54,300 PSI	58.0	3,402 fps	62,800 PSI
	AR2209	.284"	2.650"	60.0	3,196 fps	51,100 PSI	64.0	3,413 fps	63,200 PSI
	AR2213SC	.284"	2.650"	65.0	3,212 fps	53,800 PSI	68.0C	3,342 fps	61,400 PSI
120 GR. BAR TSX	AR2208	.284"	2.725"	51.0	3,120 fps	52,900 PSI	55.5	3,310 fps	62,500 PSI
	AR2209	.284"	2.725"	58.0	3,130 fps	51,300 PSI	63.2	3,375 fps	63,700 PSI
	AR2213SC	.284"	2.725"	63.0	3,077 fps	50,100 PSI	67.0C	3,243 fps	58,200 PSI
130 GR. SIE HPBT	AR2208	.284"	2.800"	51.0	3,057 fps	55,700 PSI	54.0	3,190 fps	62,900 PSI
	AR2209	.284"	2.800"	57.0	3,060 fps	53,700 PSI	60.5	3,222 fps	62,600 PSI
	AR2213SC	.284"	2.800"	61.0	3,017 fps	52,300 PSI	65.0	3,192 fps	62,600 PSI
140 GR. NOS BT	AR2208	.284"	2.825"	50.0	2,945 fps	56,500 PSI	53.5	3,068 fps	62,300 PSI
	AR2209	.284"	2.825"	56.0	2,910 fps	50,600 PSI	60.0	3,122 fps	63,200 PSI
	AR2213SC	.284"	2.825"	61.0	2,928 fps	52,800 PSI	64.5C	3,099 fps	63,100 PSI
145 GR. SPR HPBT	AR2208	.284"	2.750"	49.0	2,865 fps	56,100 PSI	52.5	2,999 fps	63,400 PSI
	AR2209	.284"	2.750"	55.0	2,943 fps	54,000 PSI	58.5	3,093 fps	62,800 PSI
	AR2213SC	.284"	2.750"	59.0	2,909 fps	52,300 PSI	63.0	3,094 fps	63,100 PSI
150 GR. SFT SCIR	AR2209	.284"	2.825"	53.5	2,837 fps	53,500 PSI	57.0	2,984 fps	62,800 PSI
	AR2213SC	.284"	2.825"	58.0	2,823 fps	52,800 PSI	61.5	2,987 fps	63,000 PSI
	AR2217	.284"	2.825"	66.0	2,873 fps	53,500 PSI	68.0C	2,967 fps	59,300 PSI

# RIFLE DATA

7mm Rem. S.A. Ultra Mag.				Case: Remington Twist: 1:9.25" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.025"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
154 GR. HDY SP	AR2209	.284"	2.800"	53.0	2,805 fps	54,500 PSI	56.5	2,947 fps	62,900 PSI
	AR2213SC	.284"	2.800"	58.0	2,824 fps	55,000 PSI	61.5	2,947 fps	62,700 PSI
	AR2217	.284"	2.800"	65.0	2,866 fps	55,700 PSI	68.0C	2,960 fps	61,900 PSI
160 GR. NOS PART	AR2209	.284"	2.825"	53.0	2,774 fps	55,200 PSI	56.5	2,914 fps	63,100 PSI
	AR2213SC	.284"	2.825"	57.0	2,730 fps	53,800 PSI	60.5	2,900 fps	62,600 PSI
	AR2217	.284"	2.825"	63.0	2,772 fps	53,600 PSI	67.0C	2,931 fps	63,300 PSI
162 GR. HDY SPBT	AR2209	.284"	2.825"	52.0	2,760 fps	54,700 PSI	55.5	2,879 fps	62,500 PSI
	AR2213SC	.284"	2.825"	56.5	2,751 fps	55,100 PSI	60.0	2,887 fps	63,100 PSI
	AR2217	.284"	2.825"	64.0	2,793 fps	54,400 PSI	67.0C	2,902 fps	60,900 PSI
168 GR. SIE HPBT	AR2209	.284"	2.825"	51.0	2,666 fps	51,800 PSI	56.0	2,855 fps	62,900 PSI
	AR2213SC	.284"	2.825"	56.0	2,682 fps	52,400 PSI	60.5	2,848 fps	62,800 PSI
	AR2217	.284"	2.825"	64.0	2,770 fps	55,100 PSI	67.0C	2,874 fps	61,200 PSI
175 GR. HDY SP	AR2209	.284"	2.825"	50.0	2,619 fps	53,900 PSI	54.5	2,775 fps	63,100 PSI
	AR2213SC	.284"	2.825"	54.0	2,627 fps	54,300 PSI	58.0	2,760 fps	62,900 PSI
	AR2217	.284"	2.825"	61.0	2,658 fps	54,500 PSI	65.5C	2,817 fps	62,800 PSI
	AR2225	.284"	2.825"	62.0	2,686 fps	51,000 PSI	66.0C	2,863 fps	62,700 PSI
				C = Compressed load					
7mm Winchester Short Magnum				Case: Winchester Twist: 1:9.5" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.096"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. BAR XFB	AR2206H	.284"	2.725"	54.0	3,442 fps	56,100 PSI	57.5	3,590 fps	62,500 PSI
	AR2208	.284"	2.725"	56.0	3,392 fps	54,100 PSI	60.5	3,588 fps	62,400 PSI
	AR2209	.284"	2.725"	65.0	3,388 fps	51,800 PSI	70.0	3,647 fps	63,200 PSI
110 GR. SPR TNT HP	Bench Mark 8208	.284"	2.830"	53.3	3,283 fps	55,200 PSI	56.7	3,435 fps	63,400 PSI
	AR2206H	.284"	2.830"	53.0	3,229 fps	52,500 PSI	57.0	3,417 fps	62,300 PSI
	AR2208	.284"	2.830"	56.0	3,320 fps	56,200 PSI	60.0	3,458 fps	62,500 PSI
	AR2209	.284"	2.830"	65.0	3,323 fps	52,600 PSI	70.0	3,553 fps	63,300 PSI
	AR2213SC	.284"	2.830"	68.0	3,225 fps	51,300 PSI	73.0	3,465 fps	62,600 PSI
115 GR. SPR HP	Bench Mark 8208	.284"	2.770"	50.8	3,147 fps	54,400 PSI	54.0	3,298 fps	62,700 PSI
	AR2206H	.284"	2.770"	51.0	3,143 fps	54,700 PSI	55.0	3,309 fps	62,700 PSI
	AR2208	.284"	2.770"	54.0	3,220 fps	57,000 PSI	57.5	3,360 fps	63,800 PSI
	AR2209	.284"	2.770"	62.0	3,278 fps	56,400 PSI	66.5	3,441 fps	63,500 PSI
	AR2213SC	.284"	2.770"	65.0	3,179 fps	53,700 PSI	70.0	3,372 fps	62,900 PSI

# RIFLE DATA

7mm Winchester Short Magnum				Case: Winchester Twist: 1:9.5" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.096"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR. HDY V-MAX	Bench Mark 8208	.284"	2.825"	49.2	3,052 fps	54,800 PSI	52.3	3,202 fps	62,000 PSI
	AR2206H	.284"	2.825"	50.0	3,059 fps	51,600 PSI	54.0	3,262 fps	62,500 PSI
	AR2208	.284"	2.825"	53.0	3,155 fps	56,300 PSI	57.0	3,311 fps	63,500 PSI
	AR2209	.284"	2.825"	61.0	3,206 fps	54,800 PSI	65.5	3,387 fps	63,500 PSI
	AR2213SC	.284"	2.825"	65.0	3,159 fps	55,100 PSI	69.5	3,335 fps	63,400 PSI
130 GR. SIE HPBT	Bench Mark 8208	.284"	2.860"	48.7	2,972 fps	55,500 PSI	51.8	3,109 fps	63,000 PSI
	AR2206H	.284"	2.860"	49.0	2,969 fps	54,500 PSI	53.0	3,136 fps	63,000 PSI
	AR2208	.284"	2.860"	51.5	3,029 fps	56,200 PSI	55.2	3,183 fps	64,000 PSI
	AR2209	.284"	2.860"	57.0	3,048 fps	54,500 PSI	61.0	3,213 fps	62,800 PSI
	AR2213SC	.284"	2.860"	62.0	3,041 fps	55,000 PSI	66.0	3,202 fps	63,200 PSI
	AR2217	.284"	2.860"	67.0	3,018 fps	52,300 PSI	72.0C	3,208 fps	61,600 PSI
140 GR. NOS PART	Bench Mark 8208	.284"	2.850"	48.6	2,895 fps	55,700 PSI	51.7	3,026 fps	62,900 PSI
	AR2206H	.284"	2.850"	49.0	2,873 fps	54,100 PSI	52.3	3,024 fps	63,000 PSI
	AR2208	.284"	2.850"	51.0	2,909 fps	54,100 PSI	54.5	3,063 fps	62,600 PSI
	AR2209	.284"	2.850"	58.0	2,979 fps	53,700 PSI	61.5	3,133 fps	61,900 PSI
	AR2213SC	.284"	2.850"	62.0	2,957 fps	53,600 PSI	66.0	3,116 fps	62,000 PSI
	AR2217	.284"	2.850"	69.0	2,995 fps	53,400 PSI	72.0C	3,091 fps	59,000 PSI
	AR2225	.284"	2.850"	69.0	2,888 fps	47,100 PSI	72.0C	3,046 fps	54,300 PSI
145 GR. SPR BTSP	Bench Mark 8208	.284"	2.860"	47.4	2,761 fps	55,100 PSI	50.4	2,885 fps	62,400 PSI
	AR2206H	.284"	2.860"	47.0	2,779 fps	55,100 PSI	50.5	2,922 fps	62,300 PSI
	AR2208	.284"	2.860"	50.0	2,872 fps	57,100 PSI	53.3	3,001 fps	64,000 PSI
	AR2209	.284"	2.860"	55.0	2,898 fps	55,700 PSI	58.7	3,040 fps	62,600 PSI
	AR2213SC	.284"	2.860"	59.0	2,890 fps	55,800 PSI	63.0	3,044 fps	63,400 PSI
	AR2217	.284"	2.860"	65.0	2,904 fps	54,000 PSI	70.0C	3,082 fps	62,900 PSI
150 GR. WIN SP	Bench Mark 8208	.284"	2.850"	47.9	2,803 fps	55,500 PSI	51.0	2,922 fps	62,200 PSI
	AR2206H	.284"	2.840"	48.0	2,782 fps	54,000 PSI	51.5	2,930 fps	62,300 PSI
	AR2208	.284"	2.840"	51.0	2,852 fps	55,700 PSI	55.0	3,000 fps	63,400 PSI
	AR2209	.284"	2.840"	59.0	2,923 fps	54,600 PSI	63.0	3,080 fps	62,900 PSI
	AR2213SC	.284"	2.840"	63.0	2,902 fps	53,700 PSI	67.3	3,066 fps	62,500 PSI
	AR2217	.284"	2.840"	68.0	2,899 fps	51,300 PSI	72.0C	3,031 fps	58,600 PSI
	AR2225	.284"	2.840"	68.0	2,824 fps	45,600 PSI	72.0C	2,987 fps	53,000 PSI

# RIFLE DATA

7mm Winchester Short Magnum				Case: Winchester Twist: 1:9.5" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.096"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
154 GR. HDY SP	Bench Mark 8208	.284"	2.860"	46.2	2,683 fps	54,200 PSI	49.7	2,824 fps	63,200 PSI
	AR2206H	.284"	2.860"	46.0	2,658 fps	55,200 PSI	49.5	2,799 fps	63,000 PSI
	AR2208	.284"	2.860"	48.0	2,705 fps	55,000 PSI	52.0	2,854 fps	62,800 PSI
	AR2209	.284"	2.860"	54.0	2,775 fps	54,500 PSI	57.7	2,920 fps	62,600 PSI
	AR2213SC	.284"	2.860"	58.0	2,779 fps	54,100 PSI	62.5	2,942 fps	62,900 PSI
	AR2217	.284"	2.860"	64.0	2,831 fps	55,100 PSI	68.5C	2,975 fps	62,500 PSI
	AR2225	.284"	2.860"	66.0	2,833 fps	50,000 PSI	71.0C	3,040 fps	61,700 PSI
160 GR. SFT SP	AR2206H	.284"	2.850"	46.0	2,614 fps	52,500 PSI	49.0	2,762 fps	62,600 PSI
	AR2208	.284"	2.850"	48.0	2,676 fps	54,100 PSI	51.3	2,823 fps	62,100 PSI
	AR2209	.284"	2.850"	56.0	2,782 fps	54,600 PSI	59.5	2,918 fps	62,200 PSI
	AR2213SC	.284"	2.850"	59.0	2,757 fps	54,200 PSI	63.5	2,921 fps	62,600 PSI
	AR2217	.284"	2.850"	65.0	2,801 fps	54,300 PSI	69.5C	2,956 fps	62,800 PSI
	AR2225	.284"	2.850"	66.0	2,793 fps	51,200 PSI	70.0C	2,958 fps	59,800 PSI
162 GR. HDY BTSP	AR2206H	.284"	2.860"	46.0	2,645 fps	54,800 PSI	49.0	2,773 fps	62,700 PSI
	AR2208	.284"	2.860"	48.0	2,691 fps	54,900 PSI	51.5	2,830 fps	62,900 PSI
	AR2209	.284"	2.860"	54.0	2,759 fps	53,700 PSI	58.0	2,909 fps	62,900 PSI
	AR2213SC	.284"	2.860"	58.0	2,772 fps	55,500 PSI	62.0	2,915 fps	62,800 PSI
	AR2217	.284"	2.860"	64.0	2,816 fps	55,600 PSI	69.0C	2,969 fps	63,400 PSI
	AR2225	.284"	2.860"	66.0	2,836 fps	53,300 PSI	70.5C	3,007 fps	62,500 PSI
168 GR. SIE HPBT	AR2206H	.284"	2.850"	46.0	2,615 fps	55,000 PSI	48.7	2,732 fps	62,600 PSI
	AR2208	.284"	2.850"	48.0	2,666 fps	55,100 PSI	51.0	2,788 fps	63,200 PSI
	AR2209	.284"	2.850"	55.0	2,747 fps	55,900 PSI	58.5	2,865 fps	62,300 PSI
	AR2213SC	.284"	2.850"	59.0	2,759 fps	56,200 PSI	63.0	2,892 fps	63,400 PSI
	AR2217	.284"	2.850"	65.0	2,759 fps	54,000 PSI	69.0C	2,907 fps	61,600 PSI
	AR2225	.284"	2.850"	66.0	2,757 fps	50,900 PSI	70.0C	2,921 fps	59,500 PSI
175 GR. SPR MAG TIP	AR2209	.284"	2.760"	49.0	2,545 fps	55,500 PSI	52.5	2,672 fps	62,200 PSI
	AR2213SC	.284"	2.760"	54.0	2,618 fps	58,100 PSI	57.5	2,733 fps	63,900 PSI
	AR2217	.284"	2.760"	58.0	2,635 fps	56,600 PSI	62.0C	2,764 fps	63,100 PSI
	AR2225	.284"	2.760"	60.0	2,651 fps	53,000 PSI	64.0C	2,800 fps	61,200 PSI

C = Compressed load

# RIFLE DATA

7 x 61mm Sharp & Hart				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
120 GR.	AR2206	-	-	-	-	-	54.5	3,250 fps	-
	AR2208	-	-	-	-	-	57.5	3,250 fps	-
	AR2209	-	-	-	-	-	64.0	3,250 fps	-
139-140 GR.	AR2206	-	-	-	-	-	53.0	3,100 fps	-
	AR2208	-	-	-	-	-	56.0	3,100 fps	-
	AR2209	-	-	-	-	-	62.5	3,100 fps	-
150 GR.	AR2206	-	-	-	-	-	52.0	3,000 fps	-
	AR2208	-	-	-	-	-	55.0	3,000 fps	-
	AR2209	-	-	-	-	-	61.5	3,000 fps	-
160-162 GR.	AR2206	-	-	-	-	-	51.0	2,800 fps	-
	AR2208	-	-	-	-	-	54.0	2,800 fps	-
	AR2209	-	-	-	-	-	60.5	2,800 fps	-
175 GR.	AR2208	-	-	-	-	-	52.0	2,700 fps	-
	AR2209	-	-	-	-	-	59.0	2,700 fps	-

7mm Remington Magnum				Case: Winchester Twist: 1:9.5" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.490"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. SIE HP	AR2208	.284"	3.150"	53.0	3,193 fps	39,600 CUP	59.0	3,487 fps	49,800 CUP
	AR2209	.284"	3.150"	65.0	3,334 fps	44,800 CUP	69.0	3,494 fps	49,600 CUP
	AR2213SC	.284"	3.150"	71.0	3,316 fps	43,300 CUP	75.0	3,499 fps	50,300 CUP
110 GR. SPR HP	AR2208	.284"	3.250"	54.0	3,174 fps	44,600 CUP	58.5	3,356 fps	50,300 CUP
	AR2209	.284"	3.250"	65.0	3,233 fps	44,700 CUP	68.5	3,357 fps	49,500 CUP
	AR2213SC	.284"	3.250"	68.0	3,213 fps	44,000 CUP	73.0	3,367 fps	49,700 CUP
115 GR. SPR HP	AR2208	.284"	3.200"	53.0	3,068 fps	44,800 CUP	56.5	3,245 fps	49,800 CUP
	AR2209	.284"	3.200"	62.0	3,089 fps	43,800 CUP	66.0	3,281 fps	50,300 CUP
	AR2213SC	.284"	3.200"	65.0	3,060 fps	44,200 CUP	69.7	3,257 fps	50,600 CUP
120 GR. HDY SP	AR2208	.284"	3.230"	53.0	3,021 fps	45,200 CUP	57.0	3,218 fps	50,900 CUP
	AR2209	.284"	3.230"	62.0	3,106 fps	44,700 CUP	65.0	3,226 fps	50,100 CUP
	AR2213SC	.284"	3.230"	65.0	3,095 fps	45,800 CUP	68.5	3,236 fps	50,600 CUP
130 GR. SPR SP	AR2208	.284"	3.185"	51.0	2,877 fps	45,700 CUP	54.0	2,998 fps	49,400 CUP
	AR2209	.284"	3.185"	58.0	2,953 fps	45,100 CUP	61.5	3,082 fps	50,800 CUP
	AR2213SC	.284"	3.185"	63.0	2,952 fps	46,300 CUP	66.0	3,051 fps	50,200 CUP

# RIFLE DATA

7mm Remington Magnum				Case: Winchester			Barrel length: 24"		
				Twist: 1:9.5"			Trim length: 2.490"		
				Primer: WINCHESTER LRM					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
139 GR. HDY GMX	AR2209	.284"	3.290"	56.1	2,834 fps	45,300 PSI	59.7	3,007 fps	57,800 PSI
	AR2213SC	.284"	3.290"	64.5	2,878 fps	50,200 PSI	68.8	3,054 fps	58,100 PSI
	AR2217	.284"	3.290"	67.5	2,847 fps	46,300 PSI	73.0C	3,065 fps	56,000 PSI
	AR2225	.284"	3.290"	68.0	2,869 fps	45,500 PSI	74.0C	3,128 fps	58,400 PSI
140 GR. NOS PART	Trail Boss	.284"	3.250"	17.2	1,405 fps	21,400 PSI	24.5	1,724 fps	31,000 PSI
	AR2209	.284"	3.250"	56.0	2,808 fps	45,500 CUP	59.0	2,927 fps	50,000 CUP
	AR2213SC	.284"	3.250"	61.0	2,841 fps	46,300 CUP	64.0	2,950 fps	50,200 CUP
	AR2217	.284"	3.250"	67.0	2,934 fps	46,200 CUP	70.0	3,036 fps	50,600 CUP
	AR2225	.284"	3.250"	71.0	2,955 fps	46,100 CUP	75.0C	3,107 fps	49,400 CUP
150 GR. BAR TTSX BT	AR2209	.284"	3.225"	57.9	2,836 fps	50,800 PSI	62.5	3,041 fps	59,800 PSI
	AR2213SC	.284"	3.225"	62.7	2,852 fps	50,600 PSI	68.0	3,080 fps	60,200 PSI
	AR2217	.284"	3.225"	67.2	2,847 fps	49,200 PSI	73.8	3,083 fps	59,100 PSI
	AR2225	.284"	3.225"	66.9	2,895 fps	47,900 PSI	73.5C	3,115 fps	57,200 PSI
150 GR. NOS PART	AR2209	.284"	3.270"	55.0	2,781 fps	45,700 CUP	57.0	2,859 fps	50,100 CUP
	AR2213SC	.284"	3.270"	59.0	2,775 fps	45,300 CUP	62.0	2,986 fps	51,100 CUP
	AR2217	.284"	3.270"	65.0	2,835 fps	46,200 CUP	68.0	2,936 fps	49,900 CUP
	AR2225	.284"	3.270"	68.0	2,818 fps	43,300 CUP	72.5C	2,998 fps	50,300 CUP
160 GR. NOS PART	AR2209	.284"	3.290"	53.0	2,651 fps	46,400 CUP	55.5	2,745 fps	49,800 CUP
	AR2213SC	.284"	3.290"	58.0	2,695 fps	46,400 CUP	60.0	2,787 fps	49,800 CUP
	AR2217	.284"	3.290"	63.0	2,729 fps	43,300 CUP	66.0	2,839 fps	49,600 CUP
	AR2225	.284"	3.290"	65.0	2,756 fps	43,200 CUP	69.5C	2,915 fps	49,900 CUP
162 GR. HDY SPBT	AR2209	.284"	3.290"	55.0	2,677 fps	43,400 CUP	58.0	2,799 fps	49,400 CUP
	AR2213SC	.284"	3.290"	60.0	2,731 fps	43,300 CUP	64.0	2,871 fps	49,800 CUP
	AR2217	.284"	3.290"	67.0	2,800 fps	45,400 CUP	70.0	2,905 fps	49,600 CUP
	AR2225	.284"	3.290"	69.0	2,787 fps	43,900 CUP	73.5C	2,963 fps	50,500 CUP
170 GR. SIE RN	AR2209	.284"	3.270"	58.0	2,701 fps	44,600 CUP	60.0	2,767 fps	48,500 CUP
	AR2213SC	.284"	3.270"	63.0	2,749 fps	46,300 CUP	65.0	2,806 fps	48,900 CUP
	AR2217	.284"	3.270"	69.0	2,744 fps	45,600 CUP	71.0	2,806 fps	49,400 CUP
	AR2225	.284"	3.270"	71.0	2,752 fps	44,200 CUP	75.0C	2,899 fps	50,700 CUP
175 GR. NOS PART	AR2209	.284"	3.290"	51.0	2,504 fps	46,200 CUP	54.0	2,617 fps	51,400 CUP
	AR2213SC	.284"	3.290"	55.0	2,532 fps	45,800 CUP	58.0	2,660 fps	50,200 CUP
	AR2217	.284"	3.290"	61.0	2,567 fps	45,000 CUP	64.5	2,692 fps	50,400 CUP
	AR2225	.284"	3.290"	64.0	2,650 fps	45,400 CUP	68.0	2,800 fps	51,200 CUP



# RIFLE DATA

7mm Remington Magnum				Case: Winchester			Barrel length: 24"		
				Twist: 1:9.5"			Trim length: 2.490"		
				Primer: WINCHESTER LRM					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. BER VLD	AR2209	.284"	3.290"	52.0	2,553 fps	48,000 PSI	56.0	2,752 fps	59,000 PSI
	AR2213SC	.284"	3.290"	58.6	2,652 fps	51,800 PSI	64.5	2,830 fps	60,200 PSI
	AR2217	.284"	3.290"	63.2	2,605 fps	46,000 PSI	69.5C	2,884 fps	60,000 PSI
	AR2225	.284"	3.290"	64.4	2,638 fps	46,400 PSI	70.8C	2,914 fps	59,600 PSI
				C = Compressed load					
7mm Weatherby Magnum				Case: Remington			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.539"		
				Primer: FEDERAL 215M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
140 GR. SFT SP	Trail Boss	.284"	3.250"	18.5	1,365 fps	22,700 CUP	26.5	1,529 fps	30,500 CUP
	AR2209	.284"	3.250"	64.0	3,046 fps	43,800 CUP	68.5	3,248 fps	54,000 CUP
	AR2213SC	.284"	3.250"	69.0	3,023 fps	43,600 CUP	74.0	3,258 fps	54,000 CUP
	AR2217	.284"	3.250"	75.0	3,104 fps	42,800 CUP	79.0C	3,273 fps	49,900 CUP
150 GR. NOS PART	AR2209	.284"	3.250"	64.0	3,012 fps	45,800 CUP	68.0	3,180 fps	54,000 CUP
	AR2213SC	.284"	3.250"	68.0	2,973 fps	44,800 CUP	72.0	3,152 fps	53,500 CUP
	AR2217	.284"	3.250"	75.0	3,073 fps	45,400 CUP	79.0C	3,223 fps	52,200 CUP
160 GR. BAR TTSX	AR2209	.284"	3.250"	55.0	2,723 fps	48,500 CUP	61.5	2,960 fps	55,300 CUP
	AR2213SC	.284"	3.250"	62.0	2,759 fps	48,300 CUP	69.0C	3,001 fps	55,000 CUP
	AR2217	.284"	3.250"	68.0	2,778 fps	45,600 CUP	75.0C	3,034 fps	54,800 CUP
175 GR. HDY SP	AR2209	.284"	3.350"	60.0	2,755 fps	45,900 CUP	63.7	2,899 fps	53,600 CUP
	AR2213SC	.284"	3.350"	63.0	2,724 fps	43,500 CUP	67.5	2,895 fps	53,400 CUP
	AR2217	.284"	3.350"	70.0	2,844 fps	45,000 CUP	74.7C	3,022 fps	54,000 CUP
180 GR. BER VLD	AR2209	.284"	3.350"	55.4	2,630 fps	44,400 CUP	60.3	2,840 fps	53,900 CUP
	AR2213SC	.284"	3.350"	60.3	2,647 fps	42,800 CUP	66.3	2,877 fps	53,600 CUP
	AR2217	.284"	3.350"	66.3	2,733 fps	44,400 CUP	72.1C	2,939 fps	53,600 CUP
				C = Compressed load					

# RIFLE DATA

7mm Shooting Times Westerner				Case: Federal			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.840"		
				Primer: FEDERAL 215					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
120 GR. SIE SP	AR2209	.284"	3.585"	69.0	3,185 fps	45,400 CUP	73.0	3,350 fps	52,300 CUP
	AR2213SC	.284"	3.585"	75.0	3,200 fps	46,300 CUP	78.5	3,348 fps	51,900 CUP
	AR2217	.284"	3.585"	82.0	3,255 fps	45,300 CUP	86.0	3,405 fps	51,800 CUP
	AR2225	.284"	3.585"	85.0	3,330 fps	47,900 CUP	89.5C	3,519 fps	54,300 CUP
139 GR. HDY SPBT	AR2209	.284"	3.585"	69.0	3,079 fps	46,700 CUP	71.0	3,183 fps	52,300 CUP
	AR2213SC	.284"	3.585"	72.0	3,018 fps	44,400 CUP	76.5	3,181 fps	51,900 CUP
	AR2217	.284"	3.585"	81.0	3,119 fps	46,400 CUP	85.5	3,284 fps	52,300 CUP
	AR2225	.284"	3.585"	83.0	3,165 fps	47,700 CUP	88.0C	3,347 fps	54,300 CUP
145 GR. SPR SP	AR2213SC	.284"	3.565"	68.0	2,937 fps	47,800 CUP	72.0	3,063 fps	52,300 CUP
	AR2217	.284"	3.565"	74.0	3,023 fps	47,400 CUP	77.0	3,120 fps	52,100 CUP
	AR2225	.284"	3.565"	77.0	3,052 fps	48,000 CUP	81.5C	3,195 fps	53,700 CUP
150 GR. BAR TSX	AR2213SC	.284"	3.530"	65.0	2,842 fps	47,100 CUP	70.0	3,022 fps	53,100 CUP
	AR2217	.284"	3.530"	71.0	2,889 fps	45,000 CUP	76.0C	3,038 fps	51,600 CUP
	AR2225	.284"	3.530"	71.0	2,929 fps	46,200 CUP	77.0C	3,140 fps	53,500 CUP
	AR2218	.284"	3.530"	80.0	2,908 fps	46,600 CUP	84.0C	3,005 fps	49,500 CUP
160 GR. SFT SP	AR2213SC	.284"	3.565"	70.0	2,884 fps	45,900 CUP	74.0	3,037 fps	52,300 CUP
	AR2217	.284"	3.565"	76.0	2,930 fps	44,300 CUP	80.7	3,084 fps	51,500 CUP
	AR2225	.284"	3.565"	75.0	2,909 fps	46,700 CUP	80.2	3,056 fps	53,600 CUP
	AR2218	.284"	3.565"	88.0	2,929 fps	46,100 CUP	90.0C	2,970 fps	46,600 CUP
175 GR. NOS PART	AR2217	.284"	3.585"	70.0	2,833 fps	47,700 CUP	74.0	2,944 fps	51,900 CUP
	AR2225	.284"	3.585"	72.0	2,819 fps	48,300 CUP	77.0	2,967 fps	54,200 CUP
	AR2218	.284"	3.585"	85.0	2,851 fps	46,900 CUP	89.0C	2,973 fps	52,300 CUP
180 GR. BER VLD	AR2217	.284"	3.655"	70.0	2,771 fps	48,800 CUP	74.5	2,892 fps	53,300 CUP
	AR2225	.284"	3.655"	69.3	2,760 fps	49,700 CUP	73.8	2,876 fps	53,500 CUP
	AR2218	.284"	3.655"	80.8	2,772 fps	48,800 CUP	86.0C	2,894 fps	52,400 CUP
				C = Compressed load					
28 Nosler				Case: Nosler			Barrel length: 24"		
				Twist: 1:9"			Trim length: 2.575"		
				Primer: WINCHESTER LRM					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
120 GR. NOS BT	AR2213SC	.284"	3.340"	78.5	3,323 fps	54,700 PSI	83.5	3,507 fps	62,400 PSI
	AR2217	.284"	3.340"	84.0	3,268 fps	50,500 PSI	89.4C	3,547 fps	63,000 PSI
	AR2225	.284"	3.340"	83.8	3,170 fps	44,900 PSI	90.2	3,576 fps	62,900 PSI
	AR2218	.284"	3.340"	90.2	3,062 fps	43,900 PSI	97.0C	3,346 fps	55,600 PSI

# RIFLE DATA

28 Nosler				Case: Nosler Twist: 1:9" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.575"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
140 GR. NOS E-TIP	AR2213SC	.284"	3.340"	71.8	3,031 fps	54,900 PSI	76.4	3,194 fps	62,400 PSI
	AR2217	.284"	3.340"	78.2	3,107 fps	56,300 PSI	83.2	3,254 fps	62,400 PSI
	AR2225	.284"	3.340"	79.1	3,131 fps	55,100 PSI	84.1	3,307 fps	62,800 PSI
	AR2218	.284"	3.340"	88.1	3,089 fps	56,600 PSI	93.8C	3,244 fps	63,100 PSI
145 GR. SPR SPBT	AR2213SC	.284"	3.340"	70.1	3,012 fps	54,000 PSI	74.6	3,190 fps	62,800 PSI
	AR2217	.284"	3.340"	75.4	3,096 fps	57,400 PSI	80.3	3,226 fps	63,000 PSI
	AR2225	.284"	3.340"	78.3	3,089 fps	53,800 PSI	83.4	3,275 fps	62,700 PSI
	AR2218	.284"	3.340"	85.7	3,080 fps	57,500 PSI	91.2C	3,206 fps	62,900 PSI
150 GR. BAR TTSX BT	AR2217	.284"	3.340"	74.5	3,016 fps	57,300 PSI	79.3	3,160 fps	63,400 PSI
	AR2225	.284"	3.340"	72.3	2,959 fps	53,300 PSI	77.1	3,137 fps	62,400 PSI
	AR2218	.284"	3.340"	81.4	3,000 fps	58,800 PSI	86.6C	3,103 fps	62,400 PSI
160 GR. NOS PART	AR2217	.284"	3.340"	75.8	2,984 fps	57,800 PSI	80.6	3,114 fps	63,500 PSI
	AR2225	.284"	3.340"	76.0	2,984 fps	55,700 PSI	80.9	3,131 fps	63,000 PSI
	AR2218	.284"	3.340"	83.2	2,934 fps	55,900 PSI	88.6C	3,086 fps	62,800 PSI
162 GR. HDY SPBT	AR2217	.284"	3.340"	76.3	2,975 fps	55,100 PSI	81.2	3,153 fps	63,500 PSI
	AR2225	.284"	3.340"	77.8	2,982 fps	53,900 PSI	82.8	3,161 fps	62,900 PSI
	AR2218	.284"	3.340"	83.8	2,908 fps	54,200 PSI	90.7C	3,103 fps	63,800 PSI
175 GR. NOS PART	AR2217	.284"	3.340"	72.8	2,864 fps	57,300 PSI	77.5	2,996 fps	63,800 PSI
	AR2225	.284"	3.340"	72.3	2,858 fps	56,000 PSI	78.0	3,018 fps	64,000 PSI
	AR2218	.284"	3.340"	80.9	2,850 fps	57,800 PSI	84.8	2,955 fps	62,900 PSI
180 GR. BER VLD	AR2217	.284"	3.340"	74.8	2,830 fps	55,100 PSI	79.6	2,976 fps	62,400 PSI
	AR2225	.284"	3.340"	76.6	2,804 fps	51,600 PSI	81.5	3,017 fps	63,300 PSI
	AR2218	.284"	3.340"	85.2	2,808 fps	53,700 PSI	90.6C	2,968 fps	62,600 PSI
				C = Compressed load					
7mm Remington Ultra Magnum				Case: Remington Twist: 1:1.9" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. HDY HP	AR2209	.284"	3.500"	82.0	3,618 fps	55,500 PSI	87.0	3,804 fps	63,300 PSI
	AR2213SC	.284"	3.500"	90.0	3,585 fps	55,900 PSI	95.0	3,754 fps	62,800 PSI
	AR2217	.284"	3.500"	98.0	3,515 fps	52,200 PSI	104.0C	3,750 fps	62,700 PSI
110 GR. SPR TNT HP	AR2209	.284"	3.500"	82.0	3,519 fps	56,000 PSI	86.0	3,675 fps	63,200 PSI
	AR2213SC	.284"	3.500"	88.0	3,431 fps	53,500 PSI	93.5	3,652 fps	63,000 PSI
	AR2217	.284"	3.500"	96.0	3,437 fps	52,100 PSI	102.0	3,676 fps	62,600 PSI

# RIFLE DATA

7mm Remington Ultra Magnum				Case: Remington			Barrel length: 24"		
				Twist: 1:1.9"			Trim length: 2.840"		
				Primer: REMINGTON 9 1/2M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
115 GR. SPR HP	AR2209	.284"	3.450"	82.0	3,472 fps	57,600 PSI	85.5	3,592 fps	63,400 PSI
	AR2213SC	.284"	3.450"	87.0	3,364 fps	54,000 PSI	91.5	3,565 fps	62,800 PSI
	AR2217	.284"	3.450"	95.0	3,380 fps	54,500 PSI	101.0	3,589 fps	63,100 PSI
	AR2225	.284"	3.450"	98.0	3,398 fps	54,100 PSI	104.0C	3,683 fps	64,100 PSI
120 GR. NOS BT	AR2209	.284"	3.600"	81.0	3,475 fps	59,700 PSI	83.0	3,552 fps	62,900 PSI
	AR2213SC	.284"	3.600"	85.0	3,344 fps	54,600 PSI	90.0	3,536 fps	63,000 PSI
	AR2217	.284"	3.600"	94.0	3,368 fps	54,600 PSI	99.5	3,572 fps	63,100 PSI
	AR2225	.284"	3.600"	96.0	3,326 fps	52,100 PSI	102.5C	3,601 fps	62,300 PSI
130 GR. BAR XBT	AR2213SC	.284"	3.560"	83.0	3,235 fps	55,600 PSI	88.0	3,412 fps	63,100 PSI
	AR2217	.284"	3.560"	90.0	3,224 fps	53,700 PSI	95.5	3,430 fps	62,900 PSI
	AR2225	.284"	3.560"	93.0	3,223 fps	52,400 PSI	99.5C	3,514 fps	63,600 PSI
	AR2218	.284"	3.560"	102.0	3,289 fps	56,900 PSI	107.0C	3,413 fps	62,300 PSI
140 GR. BAR XBT	AR2213SC	.284"	3.560"	82.0	3,123 fps	56,200 PSI	87.0	3,279 fps	63,100 PSI
	AR2217	.284"	3.560"	90.0	3,196 fps	59,300 PSI	95.0	3,277 fps	62,700 PSI
	AR2225	.284"	3.560"	90.0	3,142 fps	55,200 PSI	96.5C	3,353 fps	62,900 PSI
	AR2218	.284"	3.560"	101.0	3,092 fps	54,200 PSI	107.0C	3,271 fps	62,400 PSI
145 GR. SPR GSSP	AR2213SC	.284"	3.580"	83.0	3,125 fps	55,400 PSI	88.0	3,302 fps	63,400 PSI
	AR2217	.284"	3.580"	91.0	3,157 fps	55,300 PSI	97.0	3,331 fps	63,300 PSI
	AR2225	.284"	3.580"	93.0	3,159 fps	52,800 PSI	99.0	3,388 fps	63,400 PSI
	AR2218	.284"	3.580"	101.0	3,100 fps	53,800 PSI	107.0C	3,319 fps	63,600 PSI
150 GR. SFT SCIR	AR2213SC	.284"	3.600"	82.0	3,146 fps	61,900 PSI	84.0	3,187 fps	63,100 PSI
	AR2217	.284"	3.600"	87.0	3,045 fps	54,400 PSI	92.0	3,230 fps	63,100 PSI
	AR2225	.284"	3.600"	89.0	3,054 fps	53,000 PSI	95.0C	3,299 fps	63,600 PSI
	AR2218	.284"	3.600"	97.0	3,048 fps	55,000 PSI	103.0C	3,222 fps	63,200 PSI
154 GR. HDY SP	AR2217	.284"	3.630"	85.0	3,051 fps	56,700 PSI	90.0	3,192 fps	63,300 PSI
	AR2225	.284"	3.630"	90.0	3,055 fps	53,400 PSI	96.2	3,289 fps	63,900 PSI
	AR2218	.284"	3.630"	94.0	2,989 fps	54,800 PSI	100.0C	3,170 fps	63,100 PSI
160 GR. NOS PART	AR2217	.284"	3.600"	85.0	3,007 fps	56,500 PSI	91.0	3,167 fps	63,500 PSI
	AR2225	.284"	3.600"	88.0	3,003 fps	53,700 PSI	94.0	3,212 fps	62,800 PSI
	AR2218	.284"	3.600"	94.0	2,985 fps	55,600 PSI	100.0	3,144 fps	63,400 PSI
162 GR. HDY SPBT	AR2217	.284"	3.650"	84.0	2,993 fps	55,600 PSI	89.0	3,127 fps	62,500 PSI
	AR2225	.284"	3.650"	89.0	3,009 fps	53,100 PSI	95.0	3,223 fps	62,700 PSI
	AR2218	.284"	3.650"	94.0	2,979 fps	56,000 PSI	100.0	3,119 fps	62,600 PSI
168 GR. SIE HPBT	AR2217	.284"	3.650"	85.0	2,988 fps	57,500 PSI	90.0	3,116 fps	63,500 PSI
	AR2225	.284"	3.650"	89.0	2,986 fps	54,400 PSI	94.0	3,171 fps	63,300 PSI
	AR2218	.284"	3.650"	94.0	2,942 fps	55,600 PSI	100.0	3,118 fps	63,400 PSI

# RIFLE DATA

<b>7mm Remington Ultra Magnum</b>				Case: Remington Twist: 1:1.9" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
175 GR. SFT SP	AR2217	.284"	3.600"	82.0	2,871 fps	56,700 PSI	87.0	3,021 fps	63,500 PSI
	AR2225	.284"	3.600"	86.0	2,919 fps	57,300 PSI	91.5	3,069 fps	63,400 PSI
	AR2218	.284"	3.600"	91.0	2,888 fps	57,000 PSI	96.0	3,019 fps	63,100 PSI
				C = Compressed load					
<b>7.35mm Carcano (1938)</b>				Case: - Twist: - Primer: -			Barrel length: 21" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
128 GR.	AR2207	-	-	-	-	-	33.0	2,500 fps	-
	AR2206	-	-	-	-	-	37.0	2,500 fps	-
	AR2208	-	-	-	-	-	41.0	2,500 fps	-
150 GR.	AR2206	-	-	-	-	-	35.0	2,450 fps	-
	AR2208	-	-	-	-	-	39.0	2,450 fps	-
<b>30 Carbine (30 M1 Carbine)</b>				Case: Winchester Twist: 1:20" Primer: CCI 400			Barrel length: 20" Trim length: 1.285"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
85 GR. SIE RN	AR2205	.308"	1.625"	14.5	2,054 fps	25,200 CUP	15.5C	2,181 fps	30,700 CUP
100 GR. HDY SJ	AR2205	.308"	1.760"	-	-	-	16.0C	2,005 fps	40,000 CUP
100 GR. SPR SP	AR2205	.308"	1.625"	13.0	1,879 fps	28,900 CUP	14.5C	2,026 fps	33,600 CUP
110 GR. HDY JRN	AR2205	.308"	1.680"	13.0	1,826 fps	30,100 CUP	14.5C	2,003 fps	38,800 CUP
				C = Compressed load					
<b>300 AAC Blackout</b>				Case: Remington Twist: 1:8" Primer: REMINGTON 7 1/2			Barrel length: 16" Trim length: 1.363"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
110 GR. HDY V-MAX	Trail Boss *	.308"	2.040"	4.5	880 fps	21,900 CUP	6.3	1,046 fps	20,200 CUP
	AR2205	.308"	2.040"	17.6	1,942 fps	36,500 CUP	19.5C	2,130 fps	46,700 CUP
115 GR. BER TGT FB	Trail Boss *	.308"	2.050"	4.5	894 fps	23,200 CUP	6.3	1,044 fps	19,900 CUP
	AR2205	.308"	2.050"	17.6	1,934 fps	36,800 CUP	19.5C	2,110 fps	47,000 CUP
125 GR. NOS BT	AR2205	.308"	2.060"	16.5	1,818 fps	38,000 CUP	17.7C	1,965 fps	49,800 CUP

# RIFLE DATA

300 AAC Blackout				Case: Remington Twist: 1:8" Primer: REMINGTON 7 1/2			Barrel length: 16" Trim length: 1.363"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
130 GR. SPR HP	AR2205	.308"	2.005"	18.0	1,902 fps	41,900 CUP	19.2	2,008 fps	47,600 CUP
135 GR. SIE HPBT	AR2205	.308"	2.120"	17.1	1,818 fps	39,700 CUP	18.2	1,960 fps	47,600 CUP
140 GR. NOS HPBT	AR2205	.308"	2.055"	16.9	1,842 fps	40,900 CUP	18.2C	1,981 fps	50,500 CUP
150 GR. HDY IB	AR2205	.308"	2.235"	16.5	1,785 fps	41,800 CUP	17.8	1,908 fps	50,200 CUP
168 GR. HDY BTHP	AR2205	.308"	2.230"	15.8	1,672 fps	41,500 CUP	16.9	1,765 fps	47,500 CUP
175 GR. SIE HPBT	AR2205	.308"	2.215"	15.7	1,639 fps	41,400 CUP	16.7	1,709 fps	48,200 CUP
180 GR. SPR SP	AR2205	.308"	2.210"	15.0	1,497 fps	34,900 CUP	16.4	1,662 fps	47,700 CUP
	AR2207	.308"	2.210"	15.9	1,464 fps	23,500 CUP	16.9C	1,578 fps	29,200 CUP
208 GR. HDY A-MAX	AR2205 *	.308"	2.260"	-	-	-	10.3	1,073 fps	24,500 CUP
	AR2207 *	.308"	2.260"	-	-	-	11.2	1,042 fps	18,800 CUP
220 GR. SIE HPBT	AR2205 *	.308"	2.260"	-	-	-	10.5	1,044 fps	28,800 CUP
	AR2207 *	.308"	2.260"	-	-	-	11.5	1,068 fps	25,600 CUP
230 GR. BER TACT	AR2205 *	.308"	2.260"	-	-	-	10.2	1,065 fps	37,100 CUP
* Subsonic load				C = Compressed load					

30-30 Winchester				Case: Winchester Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.030"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>NOTE:</b> See Single Action Rifle section for more loads with lead bullets.									
110 GR. SPR FP	AR2207	.308"	2.415"	23.0	2,174 fps	27,100 CUP	25.5	2,409 fps	35,900 CUP
	Bench Mark 2	.308"	2.415"	30.5	2,406 fps	36,400 CUP	32.5	2,507 fps	37,800 CUP
	AR2206H	.308"	2.415"	34.0	2,417 fps	28,600 CUP	37.0	2,605 fps	31,100 CUP
	AR2208	.308"	2.415"	34.5	2,365 fps	27,200 CUP	38.0C	2,572 fps	31,900 CUP
130 GR. SPR FP	AR2207	.308"	2.540"	22.5	2,082 fps	29,200 CUP	24.5	2,234 fps	36,400 CUP
	Bench Mark 2	.308"	2.540"	27.7	2,165 fps	33,700 CUP	29.7	2,295 fps	37,100 CUP
	AR2206H	.308"	2.540"	31.5	2,248 fps	27,600 CUP	35.0	2,482 fps	35,300 CUP
	AR2208	.308"	2.540"	32.5	2,312 fps	30,200 CUP	36.0C	2,496 fps	35,700 CUP
140 GR. HDY MFTX	Bench Mark 2	.308"	2.550"	24.0	1,839 fps	26,400 PSI	28.0	2,160 fps	38,800 PSI
	AR2206H	.308"	2.550"	26.0	2,077 fps	36,800 PSI	29.7	2,273 fps	40,300 PSI
	AR2208	.308"	2.550"	27.0	1,986 fps	31,600 PSI	30.5C	2,225 fps	39,900 PSI
150GR. HDY RN	AR2207	.308"	2.540"	24.0	2,135 fps	34,200 PSI	26.3	2,275 fps	41,100 PSI
	Bench Mark 1	.308"	2.540"	27.0	2,135 fps	34,400 PSI	29.5	2,300 fps	41,400 PSI
	Bench Mark 2	.308"	2.540"	29.0	2,130 fps	32,400 PSI	32.0	2,355 fps	41,400 PSI



# RIFLE DATA

<b>30-30 Winchester</b>	<b>Case:</b> Winchester	<b>Barrel length:</b> 24"
	<b>Twist:</b> 1:12"	<b>Trim length:</b> 2.030"
	<b>Primer:</b> WINCHESTER LR	

**NOTE:** See Single Action Rifle section for more loads with lead bullets.

Bullet	Powder	Bullet Diam.	C.O.L.	Start loads			Maximum loads		
				Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>150 GR. SIE FN</b>	AR2207	.308"	2.550"	21.6	1,924 fps	26,900 CUP	24.0	2,110 fps	36,800 CUP
	Bench Mark 2	.308"	2.550"	27.0	2,042 fps	32,100 CUP	29.0	2,183 fps	37,200 CUP
	Bench Mark 8208	.308"	2.550"	30.0	2,213 fps	35,000 CUP	32.0	2,316 fps	36,700 CUP
	AR2206H	.308"	2.550"	30.5	2,138 fps	27,900 CUP	34.0	2,390 fps	36,700 CUP
	AR2208	.308"	2.550"	31.0	2,172 fps	31,100 CUP	34.5	2,349 fps	36,200 CUP
<b>160 GR. HDY FTX</b>	Bench Mark 2	.308"	2.550"	26.1	1,933 fps	31,000 CUP	27.8	2,045 fps	35,400 CUP
	Bench Mark 8208	.308"	2.550"	27.0	2,045 fps	33,900 CUP	30.0	2,207 fps	37,000 CUP
	AR2206H	.308"	2.550"	27.8	2,045 fps	31,100 CUP	30.0	2,200 fps	35,500 CUP
	AR2208	.308"	2.550"	29.8	2,081 fps	31,700 CUP	32.4	2,235 fps	35,900 CUP
<b>170 GR. SIE FP</b>	AR2207	.308"	2.550"	20.5	1,764 fps	27,300 CUP	22.5	1,918 fps	32,600 CUP
	Bench Mark 2	.308"	2.550"	25.3	1,894 fps	32,200 CUP	27.0	2,001 fps	36,100 CUP
	Bench Mark 8208	.308"	2.550"	27.8	2,052 fps	36,400 CUP	30.9	2,181 fps	37,500 CUP
	AR2206H	.308"	2.550"	27.5	1,947 fps	28,200 CUP	30.5	2,138 fps	35,200 CUP
	AR2208	.308"	2.550"	29.5	1,976 fps	30,200 CUP	33.0	2,168 fps	36,500 CUP

C = Compressed load

<b>30 AR Remington</b>	<b>Case:</b> Remington	<b>Barrel length:</b> 24"
	<b>Twist:</b> 1:10"	<b>Trim length:</b> 1.520"
	<b>Primer:</b> REMINGTON 7 1/2	

Bullet	Powder	Bullet Diam.	C.O.L.	Start loads			Maximum loads		
				Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>110 GR. HDY V-MAX</b>	AR2207	.308"	2.240"	32.0	2,794 fps	37,700 PSI	35.5C	3,076 fps	50,800 PSI
<b>115 GR. BER TGT FB</b>	AR2207	.308"	2.240"	32.0	2,717 fps	35,900 PSI	36.0	3,035 fps	50,900 PSI
	AR2219	.308"	2.240"	37.0	2,798 fps	39,100 PSI	40.0C	3,016 fps	50,200 PSI
<b>125 GR. NOS BT</b>	AR2219	.308"	2.240"	34.5	2,635 fps	38,900 PSI	38.2C	2,903 fps	53,500 PSI
	Bench Mark 2	.308"	2.240"	37.0	2,740 fps	47,000 PSI	40.0C	2,931 fps	51,400 PSI
	Bench Mark 8208	.308"	2.240"	37.0	2,676 fps	37,600 PSI	40.0C	2,875 fps	46,400 PSI
<b>130 GR. BAR TTSX BT</b>	AR2219	.308"	2.230"	34.0	2,557 fps	38,600 PSI	37.5C	2,818 fps	52,800 PSI
	Bench Mark 2	.308"	2.230"	36.0	2,622 fps	39,400 PSI	39.2C	2,866 fps	52,900 PSI
	Bench Mark 8208	.308"	2.230"	36.0	2,561 fps	36,500 PSI	39.0C	2,826 fps	48,600 PSI
<b>135 GR. SIE HPBT</b>	AR2219	.308"	2.250"	34.0	2,526 fps	36,900 PSI	37.7C	2,814 fps	52,700 PSI
	Bench Mark 2	.308"	2.250"	36.0	2,605 fps	38,800 PSI	39.5C	2,859 fps	51,800 PSI
	Bench Mark 8208	.308"	2.250"	36.0	2,557 fps	34,600 PSI	39.0C	2,790 fps	46,700 PSI

# RIFLE DATA

30 AR Remington				Case: Remington Twist: 1:10" Primer: REMINGTON 7 1/2			Barrel length: 24" Trim length: 1.520"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
150 GR. NOS BT	AR2219	.308"	2.250"	32.5	2,393 fps	38,900 PSI	35.5C	2,614 fps	51,700 PSI
	Bench Mark 2	.308"	2.250"	34.5	2,485 fps	41,300 PSI	37.5C	2,675 fps	52,100 PSI
	Bench Mark 8208	.308"	2.250"	34.0	2,385 fps	34,700 PSI	38.0C	2,692 fps	51,200 PSI
	AR2206H	.308"	2.250"	34.0	2,355 fps	35,200 PSI	38.0C	2,647 fps	51,000 PSI
160 GR. HDY FTX ME	AR2219	.308"	2.200"	31.0	2,260 fps	36,600 PSI	34.3C	2,515 fps	51,100 PSI
	Bench Mark 2	.308"	2.200"	33.0	2,353 fps	38,500 PSI	36.0C	2,566 fps	50,900 PSI
	Bench Mark 8208	.308"	2.200"	33.0	2,315 fps	35,600 PSI	36.0C	2,535 fps	47,300 PSI
				C = Compressed load					
30-40 Krag				Case: Winchester Twist: 1:10" Primer: CCI 200			Barrel length: 24" Trim length: 2.304"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. HDY SP	AR2205	.308"	2.880"	13.0	1,433 fps	-	16.0	1,706 fps	-
	AR2207	.308"	2.880"	30.0	2,604 fps	-	34.0	2,886 fps	-
	AR2219	.308"	2.880"	39.0	2,542 fps	-	43.0	2,898 fps	-
	AR2206H	.308"	2.880"	42.0	2,707 fps	-	44.0	2,835 fps	-
	AR2209	.308"	2.880"	48.0	2,300 fps	-	51.0	2,492 fps	-
110 GR. SIE HP	AR2207	.308"	2.875"	30.0	2,417 fps	-	34.0	2,807 fps	-
	AR2219	.308"	2.875"	39.0	2,497 fps	-	43.0	2,841 fps	-
130 GR. SPR HP	AR2207	.308"	2.865"	29.0	2,224 fps	-	33.0	2,565 fps	-
	AR2219	.308"	2.865"	38.0	2,458 fps	-	42.0	2,698 fps	-
	AR2209	.308"	2.865"	48.0	2,330 fps	-	51.0	2,535 fps	-
150 GR. NOS PART	AR2207	.308"	3.090"	28.0	2,220 fps	-	32.0	2,366 fps	-
	AR2219	.308"	3.090"	36.0	2,369 fps	-	40.0	2,518 fps	-
	AR2206H	.308"	3.090"	38.5	2,410 fps	-	42.0	2,575 fps	-
	AR2209	.308"	3.090"	46.0	2,198 fps	-	49.0	2,388 fps	-
	AR2213SC	.308"	3.090"	45.0	2,129 fps	-	49.0	2,306 fps	-
165 GR. HDY BTSP	AR2219	.308"	3.105"	35.0	2,228 fps	-	39.0	2,402 fps	-
	AR2209	.308"	3.105"	45.0	2,115 fps	-	48.0	2,242 fps	-
	AR2213SC	.308"	3.105"	44.0	1,967 fps	-	48.0	2,176 fps	-
180 GR. SPR GS SP	AR2219	.308"	3.090"	33.0	2,111 fps	-	37.0	2,250 fps	-
	AR2206H	.308"	3.090"	35.0	2,171 fps	-	38.0	2,265 fps	-
	AR2209	.308"	3.090"	43.0	2,006 fps	-	46.0	2,110 fps	-
200 GR. SIE SPBT	AR2219	.308"	3.090"	32.0	1,915 fps	-	35.0	2,075 fps	-
	AR2209	.308"	3.090"	42.0	1,929 fps	-	44.0	2,018 fps	-

# RIFLE DATA

30-40 Krag				Case: Winchester Twist: 1:10" Primer: CCI 200			Barrel length: 24" Trim length: 2.304"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
220 GR. HDY RN	AR2219	.308"	3.080"	30.0	1,852 fps	-	33.0	1,969 fps	-
	AR2209	.308"	3.080"	40.0	1,874 fps	-	42.0	1,947 fps	-
7.5 x 55mm Swiss				Case: Norma Twist: 1:10.6" Primer: WINCHESTER LR			Barrel length: 31" Trim length: 2.175"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
125 GR. SIE SP	AR2206H	.308"	2.800"	41.0	2,639 fps	-	43.0	2,762 fps	-
	AR2209	.308"	2.800"	47.0	2,565 fps	-	51.0	2,839 fps	-
	AR2213SC	.308"	2.800"	49.0	2,639 fps	-	52.0	2,811 fps	-
150 GR. HDY SP	AR2206H	.308"	2.790"	40.0	2,484 fps	-	42.0	2,578 fps	-
	AR2209	.308"	2.790"	45.0	2,420 fps	-	49.0	2,610 fps	-
	AR2213SC	.308"	2.790"	47.0	2,493 fps	-	51.0	2,659 fps	-
168 GR. SIE HPBT	AR2206H	.308"	3.060"	39.0	2,388 fps	-	41.0	2,432 fps	-
	AR2209	.308"	3.060"	44.0	2,379 fps	-	48.0	2,524 fps	-
	AR2213SC	.308"	3.060"	45.0	2,477 fps	-	49.0	2,578 fps	-
180 GR. HDY SP	AR2206H	.308"	2.900"	37.0	2,201 fps	-	39.0	2,296 fps	-
	AR2209	.308"	2.900"	42.0	2,250 fps	-	46.0	2,566 fps	-
	AR2213SC	.308"	2.900"	43.0	2,304 fps	-	47.0	2,424 fps	-
300 Savage				Case: Remington Twist: 1:12" Primer: REMINGTON 9 1/2			Barrel length: 22" Trim length: 1.861"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. SPR RN SP	AR2207	.308"	2.475"	34.0	2,914 fps	-	37.0	3,103 fps	-
	AR2206H	.308"	2.475"	41.0	2,819 fps	-	43.0	3,002 fps	-
110 GR. HDY SP	AR2207	.308"	2.450"	34.0	2,742 fps	-	37.0	2,978 fps	-
	AR2206H	.308"	2.450"	39.5	2,669 fps	-	43.0	2,944 fps	-
130 GR. HDY SP	AR2207	.308"	2.520"	33.0	2,624 fps	-	36.0	2,837 fps	-
	AR2206H	.308"	2.520"	39.5	2,324 fps	-	43.0	2,698 fps	-
150 GR. NOS PART	AR2206H	.308"	2.520"	37.0	2,187 fps	-	40.0	2,408 fps	-
165 GR. SIE SPBT	AR2206H	.308"	2.600"	35.0	2,164 fps	-	38.0	2,341 fps	-
180 GR. HDY SP	AR2206H	.308"	2.600"	34.0	2,081 fps	-	37.0	2,130 fps	-
200 GR. SPR SP	AR2206H	.308"	2.550"	32.0	1,973 fps	-	35.0	2,089 fps	-

# RIFLE DATA

307 Winchester				Case: Winchester Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 20" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
110 GR. SPR HP	AR2219	.308"	2.390"	41.0	2,814 fps	-	44.0	3,000 fps	-
	AR2206H	.308"	2.390"	42.0	2,724 fps	-	45.0	2,930 fps	-
	AR2209	.308"	2.390"	47.0	2,320 fps	-	50.0	2,589 fps	-
	AR2213SC	.308"	2.390"	48.0	2,340 fps	-	50.0	2,451 fps	-
125 GR. SPR FP	AR2219	.308"	2.520"	39.0	2,481 fps	-	42.0	2,669 fps	-
	AR2206H	.308"	2.520"	40.0	2,540 fps	-	43.0	2,762 fps	-
	AR2209	.308"	2.520"	47.0	2,380 fps	-	50.0	2,522 fps	-
	AR2213SC	.308"	2.520"	48.0	2,269 fps	-	50.0	2,400 fps	-
150 GR. HDY RN	AR2219	.308"	2.520"	38.0	2,319 fps	-	41.0	2,513 fps	-
	AR2206H	.308"	2.520"	39.0	2,402 fps	-	42.0	2,604 fps	-
	AR2209	.308"	2.520"	46.0	2,292 fps	-	48.0	2,453 fps	-
	AR2213SC	.308"	2.520"	47.0	2,154 fps	-	49.0	2,349 fps	-
170 GR. HDY FP	AR2219	.308"	2.520"	35.0	2,234 fps	-	38.0	2,418 fps	-
	AR2206H	.308"	2.520"	37.0	2,314 fps	-	40.0	2,474 fps	-
	AR2209	.308"	2.520"	45.0	2,210 fps	-	47.0	2,380 fps	-
				Case: Hornady Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.910"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
125 GR. SIE HP FN	AR2219	.308"	2.300"	34.0	2,555 fps	41,400 PSI	37.0	2,704 fps	46,200 PSI
	Bench Mark 2	.308"	2.300"	34.0	2,504 fps	39,500 PSI	37.6	2,680 fps	45,200 PSI
	Bench Mark 8208	.308"	2.300"	37.0	2,682 fps	39,200 PSI	41.0	2,868 fps	44,900 PSI
	AR2206H	.308"	2.300"	38.0	2,527 fps	35,900 PSI	42.0	2,788 fps	45,000 PSI
	AR2208	.308"	2.300"	39.0	2,525 fps	37,500 PSI	42.3C	2,700 fps	42,800 PSI
130 GR. SPR FP	AR2219	.308"	2.420"	32.0	2,388 fps	36,500 PSI	35.3	2,617 fps	45,800 PSI
	Bench Mark 2	.308"	2.420"	33.0	2,428 fps	38,800 PSI	36.5	2,635 fps	46,300 PSI
	Bench Mark 8208	.308"	2.420"	36.0	2,627 fps	40,700 PSI	40.0	2,808 fps	45,700 PSI
	AR2206H	.308"	2.420"	38.0	2,551 fps	38,600 PSI	41.7	2,762 fps	46,000 PSI
	AR2208	.308"	2.420"	39.0	2,502 fps	37,500 PSI	42.5	2,730 fps	46,400 PSI
150 GR. BAR TSX FN	Bench Mark 8208	.308"	2.350"	34.0	2,403 fps	40,700 PSI	37.4C	2,558 fps	46,100 PSI
	AR2206H	.308"	2.350"	35.0	2,279 fps	38,800 PSI	38.3C	2,498 fps	46,800 PSI
	AR2208	.308"	2.350"	36.0	2,268 fps	39,500 PSI	39.5C	2,458 fps	46,500 PSI
150 GR. HDY RN	Bench Mark 8208	.308"	2.430"	36.0	2,537 fps	42,600 PSI	39.5	2,665 fps	46,300 PSI
	AR2206H	.308"	2.430"	37.0	2,443 fps	40,000 PSI	40.5	2,607 fps	45,900 PSI
	AR2208	.308"	2.430"	38.0	2,405 fps	39,100 PSI	41.5C	2,572 fps	46,100 PSI

# RIFLE DATA

308 Marlin Express				Case: Homady Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.910"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
160 GR. HDY FTX ME	Bench Mark 8208	.308"	2.590"	35.0	2,456 fps	42,500 PSI	37.8	2,570 fps	46,700 PSI
	AR2206H	.308"	2.590"	34.8	2,442 fps	40,900 PSI	37.0	2,555 fps	46,800 PSI
	AR2208	.308"	2.590"	36.4	2,361 fps	38,900 PSI	39.6C	2,547 fps	46,800 PSI
170 GR. HDY FP	Bench Mark 8208	.308"	2.400"	33.0	2,288 fps	38,300 PSI	37.0	2,473 fps	46,600 PSI
	AR2206H	.308"	2.400"	35.0	2,289 fps	41,000 PSI	38.6C	2,439 fps	46,300 PSI
	AR2208	.308"	2.400"	36.0	2,255 fps	40,500 PSI	39.3C	2,394 fps	46,300 PSI
				C = Compressed load					
30 TC				Case: Homady Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.910"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
125 GR. NOS BT	AR2207	.308"	2.640"	34.0	2,800 fps	46,500 PSI	38.4	3,032 fps	58,500 PSI
	AR2219	.308"	2.640"	40.0	2,925 fps	52,000 PSI	44.8	3,137 fps	60,600 PSI
	Bench Mark 2	.308"	2.640"	41.0	2,860 fps	43,500 PSI	46.0	3,149 fps	59,300 PSI
	AR2206H	.308"	2.640"	43.0	2,895 fps	42,700 PSI	47.8C	3,177 fps	57,700 PSI
130 GR. BAR TSX BT	AR2219	.308"	2.640"	40.0	2,869 fps	49,500 PSI	44.5	3,089 fps	60,100 PSI
	Bench Mark 2	.308"	2.640"	41.0	2,841 fps	44,800 PSI	45.7C	3,104 fps	59,600 PSI
	AR2206H	.308"	2.640"	43.0	2,875 fps	44,800 PSI	47.5C	3,133 fps	59,200 PSI
	AR2208	.308"	2.640"	44.0	2,839 fps	45,200 PSI	48.0C	3,051 fps	55,900 PSI
135 GR. SIE HPBT	AR2219	.308"	2.640"	39.0	2,816 fps	50,100 PSI	43.0	3,002 fps	59,300 PSI
	Bench Mark 2	.308"	2.640"	40.0	2,758 fps	42,200 PSI	45.0C	3,057 fps	59,900 PSI
	Bench Mark 8208	.308"	2.640"	42.0	2,893 fps	46,500 PSI	45.3	3,095 fps	59,700 PSI
	AR2206H	.308"	2.640"	42.0	2,800 fps	42,900 PSI	47.3C	3,106 fps	59,300 PSI
	AR2208	.308"	2.640"	44.0	2,814 fps	45,600 PSI	49.0C	3,081 fps	60,200 PSI
150 GR. HDY IB	AR2219	.308"	2.640"	38.0	2,683 fps	53,600 PSI	42.5C	2,857 fps	60,700 PSI
	Bench Mark 2	.308"	2.640"	38.0	2,596 fps	45,700 PSI	42.5C	2,831 fps	59,400 PSI
	Bench Mark 8208	.308"	2.640"	39.0	2,646 fps	43,400 PSI	43.7	2,915 fps	60,000 PSI
	AR2206H	.308"	2.640"	41.0	2,652 fps	44,300 PSI	45.5C	2,901 fps	58,900 PSI
	AR2208	.308"	2.640"	42.0	2,631 fps	45,700 PSI	45.8C	2,830 fps	56,100 PSI
155 GR. NOS HPBT	AR2219	.308"	2.640"	36.0	2,590 fps	49,400 PSI	40.5	2,780 fps	58,400 PSI
	Bench Mark 2	.308"	2.640"	38.0	2,549 fps	40,800 PSI	42.6	2,834 fps	59,200 PSI
	AR2206H	.308"	2.640"	40.0	2,648 fps	45,500 PSI	44.4C	2,871 fps	58,300 PSI
	AR2208	.308"	2.640"	41.0	2,594 fps	43,700 PSI	46.0C	2,861 fps	59,100 PSI

# RIFLE DATA

30 TC				Case: Hornady Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 1.910"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
165 GR. BAR TSX	AR2219	.308"	2.630"	36.0	2,536 fps	54,500 PSI	40.5C	2,691 fps	59,600 PSI
	Bench Mark 2	.308"	2.630"	38.0	2,486 fps	44,000 PSI	42.0C	2,719 fps	58,800 PSI
	Bench Mark 8208	.308"	2.630"	38.0	2,524 fps	44,600 PSI	42.0C	2,752 fps	58,600 PSI
	AR2206H	.308"	2.630"	39.0	2,491 fps	43,900 PSI	43.4C	2,755 fps	59,700 PSI
	AR2208	.308"	2.630"	40.0	2,465 fps	43,700 PSI	45.0C	2,748 fps	60,500 PSI
168 GR. SIE HPBT	AR2219	.308"	2.640"	36.0	2,528 fps	54,400 PSI	40.2	2,678 fps	60,200 PSI
	Bench Mark 2	.308"	2.640"	38.0	2,494 fps	44,200 PSI	41.9	2,716 fps	59,700 PSI
	AR2206H	.308"	2.640"	39.0	2,514 fps	45,100 PSI	43.5	2,744 fps	58,400 PSI
	AR2208	.308"	2.640"	40.0	2,476 fps	42,800 PSI	45.2C	2,748 fps	59,100 PSI
180 GR. HDY SP	Bench Mark 2	.308"	2.640"	37.0	2,353 fps	45,600 PSI	41.0	2,565 fps	59,300 PSI
	Bench Mark 8208	.308"	2.640"	37.0	2,416 fps	49,000 PSI	41.5C	2,620 fps	59,900 PSI
	AR2206H	.308"	2.640"	38.0	2,379 fps	47,200 PSI	42.5C	2,596 fps	59,400 PSI
	AR2208	.308"	2.640"	39.0	2,345 fps	45,600 PSI	43.8C	2,579 fps	59,100 PSI
C = Compressed load									
308 Winchester				Case: Winchester Twist: 1:12" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. BAR TSX FB	AR2207	.308"	2.690"	39.9	3,124 fps	48,800 PSI	42.5	3,278 fps	58,700 PSI
	AR2219	.308"	2.690"	46.1	3,139 fps	48,100 PSI	49.0C	3,334 fps	59,000 PSI
	Bench Mark 2	.308"	2.690"	45.2	3,005 fps	39,700 PSI	50.2C	3,316 fps	54,200 PSI
	Bench Mark 8208	.308"	2.690"	45.5	2,975 fps	37,700 PSI	50.0C	3,266 fps	50,000 PSI
	AR2206H	.308"	2.690"	46.1	3,055 fps	40,300 PSI	49.0C	3,212 fps	46,200 PSI
125 GR. SFIRE	AR2219	.308"	2.700"	38.0	2,760 fps	43,500 PSI	42.5C	2,985 fps	52,800 PSI
	Bench Mark 2	.308"	2.700"	40.0	2,736 fps	38,200 PSI	44.5C	3,019 fps	52,000 PSI
	Bench Mark 8208	.308"	2.700"	42.0	2,830 fps	41,200 PSI	46.5C	3,110 fps	54,100 PSI
	AR2206H	.308"	2.700"	42.0	2,796 fps	39,500 PSI	46.0C	3,034 fps	49,600 PSI
125 GR. SIE SP	AR2207	.308"	2.700"	36.0	2,841 fps	46,600 CUP	39.5	2,988 fps	49,800 CUP
	AR2219	.308"	2.700"	42.0	2,888 fps	43,400 CUP	45.0	3,052 fps	51,400 CUP
	Bench Mark 2	.308"	2.700"	43.0	2,821 fps	40,600 CUP	47.5	3,070 fps	50,700 CUP
	Bench Mark 8208	.308"	2.700"	46.0	3,000 fps	50,200 PSI	49.2C	3,174 fps	60,100 PSI
	AR2206H	.308"	2.700"	45.0	2,891 fps	36,800 CUP	49.0C	3,127 fps	48,400 CUP
	AR2208	.308"	2.700"	48.0	3,049 fps	42,400 CUP	50.0C	3,135 fps	45,700 CUP



# RIFLE DATA

308 Winchester				Case: Winchester Twist: 1:12" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
130 GR. SPR HP	AR2207	.308"	2.615"	35.0	2,745 fps	44,700 CUP	37.0	2,837 fps	49,700 CUP
	AR2219	.308"	2.615"	40.0	2,754 fps	41,200 CUP	43.0	2,924 fps	49,800 CUP
	Bench Mark 2	.308"	2.615"	41.0	2,704 fps	38,800 CUP	46.0	2,985 fps	50,100 CUP
	Bench Mark 8208	.308"	2.615"	43.0	2,834 fps	46,900 PSI	48.0C	3,110 fps	62,100 PSI
	AR2206	.308"	2.644"	44.0	2,775 fps	42,000 PSI	47.5C	3,025 fps	56,000 PSI
	AR2206H	.308"	2.615"	45.0	2,903 fps	41,800 CUP	49.0C	3,099 fps	50,100 CUP
	AR2208	.308"	2.615"	47.0	2,975 fps	42,900 CUP	50.0C	3,130 fps	50,400 CUP
150 GR. NOS BT	Trail Boss	.308"	2.800"	10.0	1,176 fps	25,800 PSI	14.0	1,417 fps	27,100 PSI
	AR2219	.308"	2.800"	37.0	2,508 fps	39,100 CUP	40.0	2,702 fps	50,500 CUP
	Bench Mark 2	.308"	2.800"	39.0	2,521 fps	38,800 CUP	43.0	2,752 fps	49,900 CUP
	Bench Mark 8208	.308"	2.800"	40.0	2,604 fps	45,500 PSI	44.5C	2,870 fps	60,800 PSI
	AR2206H	.308"	2.800"	43.0	2,742 fps	43,200 CUP	45.5	2,870 fps	51,000 CUP
	AR2208	.308"	2.800"	44.0	2,788 fps	43,300 CUP	47.0C	2,937 fps	50,300 CUP
150 GR. NOS E-TIP	Bench Mark 2	.308"	2.800"	39.9	2,629 fps	47,300 PSI	43.0	2,819 fps	59,600 PSI
	Bench Mark 8208	.308"	2.800"	40.8	2,659 fps	45,900 PSI	44.3	2,889 fps	60,000 PSI
	AR2206H	.308"	2.800"	41.5	2,677 fps	48,700 PSI	45.6	2,893 fps	60,500 PSI
	AR2208	.308"	2.800"	42.3	2,670 fps	46,700 PSI	46.5C	2,914 fps	60,400 PSI
150GR. SPR SPBT	Bench Mark 2	.308"	2.703"	42.0	2,645 fps	44,300 PSI	45.0	2,870 fps	60,000 PSI
	AR2208	.308"	2.703"	44.0	2,660 fps	43,600 PSI	47.5C	2,895 fps	58,400 PSI
155 GR. SIE HPBT	AR2219	.308"	2.775"	38.0	2,588 fps	42,400 CUP	41.0	2,710 fps	49,400 CUP
	Bench Mark 2	.308"	2.775"	39.0	2,538 fps	41,900 CUP	43.0	2,753 fps	50,200 CUP
	Bench Mark 8208	.308"	2.775"	41.0	2,619 fps	47,300 PSI	45.3	2,854 fps	60,900 PSI
	AR2206	.308"	2.800"	42.0	2,655 fps	54,200 PSI	44.5	2,825 fps	57,100 PSI
	AR2206H	.308"	2.775"	43.0	2,735 fps	42,000 CUP	46.0	2,873 fps	49,700 CUP
	AR2208	.308"	2.775"	44.0	2,759 fps	41,300 CUP	47.0C	2,909 fps	49,400 CUP
165 GR. HDY SP	Bench Mark 2	.308"	2.750"	38.5	2,438 fps	40,200 CUP	42.5	2,647 fps	50,500 CUP
	Bench Mark 8208	.308"	2.750"	38.5	2,491 fps	49,100 PSI	42.8	2,691 fps	60,200 PSI
	AR2206H	.308"	2.750"	41.0	2,525 fps	38,600 CUP	43.5	2,694 fps	50,000 CUP
	AR2208	.308"	2.750"	42.0	2,582 fps	40,800 CUP	46.0C	2,773 fps	50,500 CUP
168 GR. BAR TTSX BT	Bench Mark 2	.308"	2.800"	38.0	2,458 fps	44,500 PSI	42.0C	2,686 fps	59,500 PSI
	Bench Mark 8208	.308"	2.800"	39.0	2,505 fps	46,500 PSI	43.0C	2,724 fps	60,700 PSI
	AR2206H	.308"	2.800"	39.0	2,497 fps	45,100 PSI	43.0C	2,727 fps	59,900 PSI
	AR2208	.308"	2.800"	41.0	2,514 fps	46,100 PSI	45.0C	2,737 fps	60,000 PSI

# RIFLE DATA

308 Winchester				Case: Winchester			Barrel length: 24"		
				Twist: 1:12"			Trim length: 2.005"		
				Primer: FEDERAL 210M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
168 GR. SIE HPBT	AS30N *	.308"	2.800"	-	-	-	8.0	1,060 fps	26,800 CUP
	Bench Mark 2	.308"	2.800"	40.0	2,505 fps	45,600 PSI	43.5	2,695 fps	59,200 PSI
	Bench Mark 8208	.308"	2.800"	39.0	2,493 fps	49,000 PSI	43.3	2,707 fps	61,500 PSI
	AR2206	.308"	2.800"	40.0	2,480 fps	43,500 PSI	43.7	2,705 fps	59,600 PSI
	AR2206H	.308"	2.800"	41.0	2,551 fps	38,300 CUP	43.5	2,703 fps	49,500 CUP
	AR2208	.308"	2.800"	41.0	2,450 fps	41,300 PSI	45.5	2,730 fps	59,200 PSI
175 GR. SIE HPBT	Bench Mark 2	.308"	2.800"	38.0	2,400 fps	40,100 CUP	41.5	2,590 fps	50,800 CUP
	Bench Mark 8208	.308"	2.800"	39.0	2,511 fps	52,200 PSI	42.5	2,664 fps	61,800 PSI
	AR2206	.308"	2.800"	39.0	2,440 fps	45,900 PSI	41.5	2,590 fps	55,200 PSI
	AR2206H	.308"	2.800"	40.0	2,489 fps	39,100 CUP	42.7	2,647 fps	49,000 CUP
	AR2208	.308"	2.800"	42.0	2,583 fps	42,600 CUP	45.0C	2,690 fps	48,600 CUP
180 GR. SPR SP	Bench Mark 2	.308"	2.800"	38.0	2,363 fps	40,700 CUP	41.3	2,542 fps	50,800 CUP
	Bench Mark 8208	.308"	2.800"	36.0	2,340 fps	51,600 PSI	40.0	2,497 fps	60,100 PSI
	AR2206H	.308"	2.800"	40.0	2,454 fps	41,200 CUP	42.5	2,595 fps	49,700 CUP
	AR2208	.308"	2.800"	41.0	2,470 fps	41,200 CUP	45.0C	2,661 fps	49,600 CUP
190 GR. HDY BTSP	Bench Mark 2	.308"	2.740"	37.0	2,288 fps	41,100 CUP	39.5	2,418 fps	48,500 CUP
	Bench Mark 8208	.308"	2.740"	36.0	2,303 fps	51,700 PSI	40.0	2,459 fps	59,800 PSI
	AR2206H	.308"	2.740"	39.0	2,359 fps	40,400 CUP	42.0	2,514 fps	49,500 CUP
	AR2208	.308"	2.740"	41.0	2,452 fps	46,100 CUP	44.0C	2,536 fps	49,100 CUP
200 GR. SFT SP	Bench Mark 2	.308"	2.700"	37.5	2,227 fps	43,000 CUP	40.0	2,355 fps	50,100 CUP
	Bench Mark 8208	.308"	2.700"	35.5	2,250 fps	51,900 PSI	39.5	2,400 fps	59,900 PSI
	AR2206H	.308"	2.700"	38.0	2,256 fps	42,400 CUP	41.0C	2,403 fps	49,400 CUP
	AR2208	.308"	2.700"	39.0	2,288 fps	43,100 CUP	42.0C	2,441 fps	50,100 CUP
208 GR. HDY A-MAX	Bench Mark 2	.308"	2.820"	35.2	2,207 fps	51,000 PSI	38.3	2,346 fps	59,300 PSI
	Bench Mark 8208	.308"	2.820"	36.4	2,219 fps	48,100 PSI	39.2	2,373 fps	59,300 PSI
	AR2206H	.308"	2.820"	35.6	2,218 fps	49,900 PSI	38.8C	2,359 fps	58,600 PSI
	AR2208	.308"	2.820"	38.1	2,260 fps	49,400 PSI	41.5C	2,420 fps	59,500 PSI
* Subsonic load				C = Compressed load					
7.62 x 54R				Case: Norma			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.104"		
				Primer: FEDERAL 210M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. HDY SP	Bench Mark 2	.308"	2.715"	47.0	3,060 fps	39,700 CUP	50.5	3,213 fps	44,900 CUP
	AR2206H	.308"	2.715"	51.0	3,150 fps	35,500 CUP	55.0C	3,345 fps	43,400 CUP
	AR2208	.308"	2.715"	51.0	3,016 fps	34,700 CUP	55.0C	3,200 fps	39,900 CUP

# RIFLE DATA

7.62 x 54R				Case: Norma Twist: 1:10" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 2.104"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
125 GR. SIE SP	AR2206H	.308"	2.715"	50.0	3,036 fps	36,700 CUP	54.0C	3,236 fps	45,700 CUP
	AR2208	.308"	2.715"	51.0	2,967 fps	37,400 CUP	55.0C	3,139 fps	45,700 CUP
150 GR. NOS BT	AR2206H	.308"	2.875"	46.0	2,769 fps	38,000 CUP	49.5C	2,938 fps	46,300 CUP
	AR2208	.308"	2.875"	47.0	2,721 fps	38,000 CUP	50.5	2,985 fps	46,400 CUP
165 GR. BAR XBTC	AR2206H	.308"	2.950"	44.0	2,633 fps	40,200 CUP	47.0	2,761 fps	45,800 CUP
	AR2208	.308"	2.950"	45.0	2,581 fps	39,800 CUP	48.3	2,727 fps	46,000 CUP
	AR2209	.308"	2.950"	52.0	2,608 fps	36,300 CUP	55.0C	2,740 fps	41,500 CUP
180 GR. SFT SCIR	Bench Mark 8208	.308"	2.975"	39.8	2,412 fps	39,800 CUP	42.8	2,550 fps	45,800 CUP
	AR2206H	.308"	2.975"	42.0	2,482 fps	40,900 CUP	45.4C	2,618 fps	45,800 CUP
	AR2208	.308"	2.975"	43.0	2,409 fps	38,400 CUP	46.5C	2,575 fps	45,900 CUP
	AR2209	.308"	2.975"	51.0	2,493 fps	37,600 CUP	55.0C	2,692 fps	44,700 CUP
	AR2213SC	.308"	2.975"	51.0	2,281 fps	31,900 CUP	55.0C	2,484 fps	39,200 CUP
200 GR. SPR SP	Bench Mark 8208	.308"	2.950"	36.0	2,173 fps	38,200 CUP	38.5	2,308 fps	45,800 CUP
	AR2206H	.308"	2.950"	39.0	2,271 fps	41,400 CUP	42.2	2,411 fps	46,400 CUP
	AR2208	.308"	2.950"	41.0	2,304 fps	41,500 CUP	44.0	2,412 fps	46,000 CUP
	AR2209	.308"	2.950"	48.0	2,329 fps	37,400 CUP	52.0	2,529 fps	46,500 CUP
	AR2213SC	.308"	2.950"	52.0	2,348 fps	41,100 CUP	55.0C	2,468 fps	45,700 CUP
220 GR. HDY JRN	Bench Mark 8208	.308"	2.830"	36.6	2,135 fps	40,600 CUP	39.3	2,243 fps	45,800 CUP
	AR2206H	.308"	2.830"	38.0	2,143 fps	41,200 CUP	41.0	2,263 fps	46,600 CUP
	AR2208	.308"	2.830"	40.0	2,178 fps	42,300 CUP	42.5	2,269 fps	46,000 CUP
	AR2209	.308"	2.830"	47.0	2,227 fps	37,600 CUP	50.5C	2,396 fps	45,900 CUP
	AR2213SC	.308"	2.830"	50.0	2,209 fps	39,100 CUP	54.0C	2,381 fps	46,000 CUP
				C = Compressed load					
30-06 Springfield				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.484"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. HDY SP	Bench Mark 2	.308"	3.170"	51.5	3,242 fps	45,600 CUP	55.0	3,396 fps	49,800 CUP
	Bench Mark 8208	.308"	3.170"	52.6	3,223 fps	46,200 PSI	56.0	3,415 fps	57,500 PSI
	AR2206H	.308"	3.170"	51.0	3,155 fps	39,000 CUP	57.0	3,431 fps	49,300 CUP
	AR2208	.308"	3.170"	55.0	3,308 fps	44,400 CUP	59.0	3,452 fps	48,500 CUP
125 GR. SIE SP	Bench Mark 2	.308"	3.150"	49.0	2,996 fps	40,700 CUP	52.0	3,178 fps	48,700 CUP
	Bench Mark 8208	.308"	3.150"	51.5	3,100 fps	50,400 PSI	54.7	3,243 fps	57,400 PSI
	AR2206H	.308"	3.150"	48.0	2,977 fps	41,400 CUP	53.7	3,229 fps	49,300 CUP
	AR2208	.308"	3.150"	54.0	3,159 fps	45,500 CUP	57.2	3,267 fps	49,500 CUP

# RIFLE DATA

30-06 Springfield				Case: Winchester Twist: 1:10" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.484"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
130 GR. SPR HP	Bench Mark 2	.308"	3.060"	48.0	2,986 fps	44,900 CUP	51.0	3,107 fps	48,700 CUP
	Bench Mark 8208	.308"	3.060"	49.1	3,021 fps	52,100 PSI	51.7	3,126 fps	56,900 PSI
	AR2206H	.308"	3.060"	48.0	2,927 fps	38,600 CUP	53.1	3,144 fps	46,100 CUP
	AR2208	.308"	3.060"	49.0	2,979 fps	41,300 CUP	53.5	3,154 fps	48,400 CUP
150 GR. NOS BT	Trail Boss	.308"	3.250"	13.3	1,061 fps	14,700 PSI	19.0	1,477 fps	26,400 PSI
	Bench Mark 2	.308"	3.250"	46.5	2,792 fps	44,600 CUP	49.5	2,944 fps	49,300 CUP
	Bench Mark 8208	.308"	3.250"	47.0	2,797 fps	50,500 PSI	50.0	2,935 fps	58,400 PSI
	AR2206H	.308"	3.250"	46.0	2,806 fps	44,400 CUP	51.0	2,976 fps	48,500 CUP
	AR2208	.308"	3.250"	47.0	2,808 fps	42,600 CUP	51.0	2,975 fps	50,000 CUP
	AR2209	.308"	3.250"	56.0	2,792 fps	37,100 CUP	62.0C	3,068 fps	48,400 CUP
150 GR. NOS E-TIP	Bench Mark 2	.308"	3.300"	44.0	2,631 fps	46,400 PSI	48.0	2,850 fps	58,600 PSI
	Bench Mark 8208	.308"	3.300"	44.0	2,677 fps	50,100 PSI	47.7	2,838 fps	58,500 PSI
	AR2206H	.308"	3.300"	43.0	2,658 fps	49,000 PSI	47.5	2,863 fps	59,700 PSI
	AR2208	.308"	3.300"	46.0	2,697 fps	49,900 PSI	49.5	2,860 fps	58,000 PSI
	AR2209	.308"	3.300"	54.0	2,747 fps	47,000 PSI	57.8C	2,927 fps	57,700 PSI
155 GR. SIE HPBT	Bench Mark 2	.308"	3.225"	46.5	2,779 fps	40,500 CUP	49.5	2,916 fps	49,400 CUP
	Bench Mark 8208	.308"	3.225"	46.1	2,747 fps	50,400 PSI	49.0	2,869 fps	57,500 PSI
	AR2206H	.308"	3.225"	46.0	2,752 fps	41,200 CUP	51.0	2,925 fps	45,600 CUP
	AR2208	.308"	3.225"	48.0	2,822 fps	44,600 CUP	50.7	2,958 fps	48,800 CUP
	AR2209	.308"	3.225"	56.0	2,757 fps	36,000 CUP	62.0C	3,038 fps	47,500 CUP
165 GR. HDY GMX	Bench Mark 8208	.308"	3.225"	43.2	2,572 fps	50,800 PSI	47.0	2,717 fps	58,300 PSI
	AR2206H	.308"	3.225"	43.4	2,595 fps	50,300 PSI	46.7	2,712 fps	57,100 PSI
	AR2208	.308"	3.225"	44.5	2,526 fps	46,600 PSI	48.3	2,724 fps	59,000 PSI
	AR2209	.308"	3.225"	51.0	2,587 fps	48,600 PSI	55.4	2,781 fps	59,200 PSI
165 GR. SIE SPBT	Bench Mark 2	.308"	3.300"	45.0	2,686 fps	45,600 CUP	47.7	2,795 fps	49,300 CUP
	Bench Mark 8208	.308"	3.300"	44.6	2,667 fps	55,100 PSI	46.5	2,728 fps	58,000 PSI
	AR2206H	.308"	3.300"	43.0	2,607 fps	41,100 CUP	47.5	2,782 fps	49,000 CUP
	AR2208	.308"	3.300"	47.0	2,726 fps	44,500 CUP	50.5	2,873 fps	49,700 CUP
	AR2209	.308"	3.300"	53.0	2,678 fps	38,400 CUP	59.0	2,938 fps	49,400 CUP
168 GR. HDY HPBT	Bench Mark 2	.308"	3.230"	44.0	2,614 fps	42,900 CUP	47.2	2,760 fps	49,400 CUP
	Bench Mark 8208	.308"	3.230"	45.1	2,661 fps	54,800 PSI	48.0	2,748 fps	58,700 PSI
	AR2206H	.308"	3.230"	43.0	2,574 fps	41,200 CUP	47.5	2,789 fps	50,000 CUP
	AR2208	.308"	3.230"	47.0	2,710 fps	42,700 CUP	50.5	2,859 fps	49,200 CUP
	AR2209	.308"	3.230"	55.0	2,695 fps	40,400 CUP	59.0	2,897 fps	48,100 CUP

# RIFLE DATA

30-06 Springfield				Case: Winchester			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.484"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
175 GR. SIE HPBT	AR2206H	.308"	3.300"	43.8	2,584 fps	44,100 CUP	46.7	2,700 fps	49,000 CUP
	AR2208	.308"	3.300"	45.0	2,551 fps	41,700 CUP	48.0	2,694 fps	49,000 CUP
	AR2209	.308"	3.300"	55.0	2,661 fps	42,100 CUP	59.0	2,842 fps	48,700 CUP
	AR2213SC	.308"	3.300"	57.0	2,535 fps	38,300 CUP	61.5C	2,719 fps	44,400 CUP
180 GR. SIE SPBT	Bench Mark 2	.308"	3.300"	43.0	2,550 fps	45,600 CUP	46.0	2,660 fps	49,000 CUP
	AR2206H	.308"	3.300"	41.0	2,427 fps	38,100 CUP	46.0	2,638 fps	48,800 CUP
	AR2208	.308"	3.300"	44.0	2,533 fps	41,900 CUP	47.0	2,668 fps	50,000 CUP
	AR2209	.308"	3.300"	52.0	2,543 fps	37,800 CUP	57.5	2,798 fps	49,300 CUP
	AR2213SC	.308"	3.300"	54.0	2,447 fps	34,700 CUP	60.0C	2,710 fps	44,300 CUP
190 GR. HDY BTSP	AR2206H	.308"	3.220"	41.0	2,380 fps	41,400 CUP	45.5	2,525 fps	48,000 CUP
	AR2208	.308"	3.220"	43.5	2,450 fps	41,800 CUP	46.5	2,608 fps	49,700 CUP
	AR2209	.308"	3.220"	51.0	2,451 fps	39,500 CUP	56.5	2,692 fps	49,200 CUP
	AR2213SC	.308"	3.220"	57.0	2,514 fps	44,100 CUP	61.0C	2,668 fps	50,000 CUP
200 GR. NOS AB	AR2206H	.308"	3.300"	41.0	2,355 fps	43,700 CUP	44.0	2,474 fps	49,500 CUP
	AR2208	.308"	3.300"	42.0	2,337 fps	41,900 CUP	47.0	2,505 fps	49,100 CUP
	AR2209	.308"	3.300"	50.0	2,412 fps	40,400 CUP	53.7	2,580 fps	48,400 CUP
	AR2213SC	.308"	3.300"	55.0	2,427 fps	42,100 CUP	59.0C	2,586 fps	49,300 CUP
	AR2217	.308"	3.300"	57.0	2,329 fps	35,800 CUP	61.0C	2,487 fps	42,200 CUP
200 GR. SPR SP	AR2206H	.308"	3.230"	39.0	2,246 fps	40,700 CUP	43.5	2,421 fps	49,200 CUP
	AR2208	.308"	3.230"	42.5	2,373 fps	44,700 CUP	45.5	2,501 fps	49,600 CUP
	AR2209	.308"	3.230"	50.0	2,431 fps	44,500 CUP	53.0	2,544 fps	49,100 CUP
	AR2213SC	.308"	3.230"	54.0	2,436 fps	43,200 CUP	57.5C	2,577 fps	49,400 CUP
	AR2217	.308"	3.230"	55.0	2,267 fps	33,600 CUP	61.0C	2,510 fps	44,400 CUP
208 GR. HDY A-MAX	AR2206H	.308"	3.285"	38.9	2,203 fps	48,700 PSI	43.2	2,362 fps	57,400 PSI
	AR2208	.308"	3.285"	40.9	2,226 fps	47,900 PSI	45.0	2,415 fps	59,200 PSI
	AR2209	.308"	3.285"	47.6	2,303 fps	47,600 PSI	52.4	2,499 fps	59,600 PSI
	AR2213SC	.308"	3.285"	52.1	2,301 fps	47,100 PSI	58.0C	2,511 fps	58,700 PSI
220 GR. HDY JRN	AR2208	.308"	3.230"	42.0	2,279 fps	44,000 CUP	45.0	2,382 fps	49,400 CUP
	AR2209	.308"	3.230"	50.0	2,318 fps	43,400 CUP	53.0	2,435 fps	49,200 CUP
	AR2213SC	.308"	3.230"	54.0	2,342 fps	43,300 CUP	57.5C	2,458 fps	48,600 CUP
	AR2217	.308"	3.230"	58.0	2,293 fps	36,500 CUP	61.0C	2,412 fps	43,600 CUP

C = Compressed load

# RIFLE DATA

30-06 Improved				Case: -			Barrel length: 24"		
				Twist: -			Trim length: -		
				Primer: -					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
130 GR.	AR2209	-	-	-	-	-	65.0	3,250 fps	-
150 GR.	AR2209	-	-	-	-	-	62.5	3,100 fps	-
165 GR.	AR2209	-	-	-	-	-	59.5	3,000 fps	-
180 GR.	AR2209	-	-	-	-	-	58.0	2,900 fps	-
200 GR.	AR2209	-	-	-	-	-	56.0	2,750 fps	-
300 H & H Magnum				Case: Winchester			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.840"		
				Primer: WINCHESTER LRM					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
130 GR. SPR HP	AR2209	.308"	3.440"	68.0	3,142 fps	-	72.0	3,394 fps	-
	AR2213SC	.308"	3.440"	75.0	3,186 fps	-	81.0	3,362 fps	-
150 GR. HDY SP	AR2209	.308"	3.560"	67.0	2,998 fps	-	71.0	3,202 fps	-
	AR2213SC	.308"	3.560"	72.0	3,096 fps	-	78.0	3,313 fps	-
165 GR. NOS PART	AR2209	.308"	3.560"	66.0	3,018 fps	-	69.0	3,164 fps	-
	AR2213SC	.308"	3.560"	71.0	2,949 fps	-	77.0	3,099 fps	-
200 GR. SIE HPBT	AR2209	.308"	3.655"	62.0	2,747 fps	-	66.0	2,909 fps	-
	AR2213SC	.308"	3.655"	67.0	2,737 fps	-	72.0	2,932 fps	-
220 GR. HDY RN	AR2209	.308"	3.580"	60.0	2,595 fps	-	64.0	2,717 fps	-
	AR2213SC	.308"	3.580"	65.0	2,655 fps	-	70.0	2,714 fps	-
250 GR. BAR RN	AR2209	.308"	3.580"	59.0	2,344 fps	-	62.0	2,493 fps	-
	AR2213SC	.308"	3.580"	63.0	2,372 fps	-	67.0	2,563 fps	-
308 Norma Magnum				Case: Norma			Barrel length: 26"		
				Twist: 1:10"			Trim length: 2.550"		
				Primer: CCI 250					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
100 GR. SPR RN SP	AR2206H	.308"	2.870"	-	-	-	52.0	2,997 fps	-
110 GR. SIE HP	AR2206H	.308"	3.160"	59.0	3,339 fps	41,400 CUP	64.0	3,554 fps	53,000 CUP
	AR2209	.308"	3.160"	72.0	3,202 fps	39,400 CUP	77.0	3,506 fps	51,200 CUP
	AR2213SC	.308"	3.160"	73.0	3,229 fps	37,800 CUP	80.0	3,563 fps	50,100 CUP
130 GR. HDY SP	AR2206H	.308"	3.275"	59.0	3,166 fps	42,600 CUP	64.0	3,388 fps	50,500 CUP
	AR2209	.308"	3.275"	71.0	3,139 fps	42,400 CUP	74.0	3,292 fps	51,400 CUP
	AR2213SC	.308"	3.275"	73.0	3,201 fps	40,800 CUP	79.0	3,302 fps	45,900 CUP
	AR2217	.308"	3.275"	80.0	3,211 fps	44,400 CUP	84.0	3,333 fps	46,400 CUP



# RIFLE DATA

308 Norma Magnum				Case: Norma Twist: 1:10" Primer: CCI 250			Barrel length: 26" Trim length: 2.550"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
150 GR. NOS PART	AR2206H	.308"	3.300"	57.0	2,940 fps	42,000 CUP	62.0	3,192 fps	54,700 CUP
	AR2209	.308"	3.300"	69.0	2,914 fps	43,100 CUP	73.0	3,188 fps	51,200 CUP
	AR2213SC	.308"	3.300"	70.0	3,157 fps	47,800 CUP	76.0	3,258 fps	51,900 CUP
	AR2217	.308"	3.300"	79.0	3,090 fps	46,600 CUP	83.0	3,279 fps	50,800 CUP
168 GR. SIE HPBT	AR2206H	.308"	3.250"	56.0	2,859 fps	48,200 CUP	61.0	3,059 fps	52,100 CUP
	AR2209	.308"	3.250"	68.0	2,880 fps	42,000 CUP	72.0	3,114 fps	51,000 CUP
	AR2213SC	.308"	3.250"	69.0	2,944 fps	43,800 CUP	75.0	3,140 fps	52,300 CUP
	AR2217	.308"	3.250"	75.0	2,939 fps	47,100 CUP	79.0	3,123 fps	52,000 CUP
180 GR. HDY SP	AR2206H	.308"	3.345"	54.0	2,732 fps	48,200 CUP	59.0	2,898 fps	53,400 CUP
	AR2209	.308"	3.345"	65.0	2,770 fps	43,000 CUP	69.0	2,999 fps	52,800 CUP
	AR2213SC	.308"	3.345"	67.0	2,865 fps	43,200 CUP	73.0	3,022 fps	52,300 CUP
	AR2217	.308"	3.345"	72.0	2,769 fps	45,900 CUP	76.0	2,940 fps	51,900 CUP
190 GR. HDY BTSP	AR2217	.308"	3.435"	70.0	2,711 fps	45,500 CUP	74.0	2,891 fps	51,100 CUP
200 GR. NOS PART	AR2209	.308"	3.400"	63.0	2,740 fps	44,700 CUP	67.0	2,851 fps	52,100 CUP
	AR2213SC	.308"	3.400"	64.5	2,662 fps	44,400 CUP	70.0	2,889 fps	52,700 CUP
	AR2217	.308"	3.400"	69.0	2,674 fps	47,400 CUP	73.0	2,859 fps	54,500 CUP
220 GR. HDY RN	AR2209	.308"	3.360"	61.0	2,519 fps	42,200 CUP	65.0	2,707 fps	52,800 CUP
	AR2213SC	.308"	3.360"	63.0	2,437 fps	42,600 CUP	68.0	2,697 fps	52,700 CUP
	AR2217	.308"	3.360"	66.0	2,449 fps	46,000 CUP	70.0	2,672 fps	52,000 CUP

300 Ruger Compact Magnum				Case: Homady Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
135 GR. SIE HPBT	AR2206H	.308"	2.820"	54.0	3,090 fps	50,900 PSI	57.4	3,259 fps	60,000 PSI
	AR2208	.308"	2.820"	55.2	3,064 fps	51,300 PSI	58.7	3,267 fps	63,200 PSI
150 GR. HDY IB	AR2206H	.308"	2.830"	51.7	2,922 fps	52,000 PSI	55.0	3,091 fps	62,500 PSI
	AR2208	.308"	2.830"	53.0	2,918 fps	53,600 PSI	56.4	3,086 fps	62,700 PSI
	AR2209	.308"	2.830"	59.1	2,901 fps	50,300 PSI	63.5C	3,118 fps	61,800 PSI
155 GR. NOS HPBT	AR2206H	.308"	2.830"	52.5	2,929 fps	54,700 PSI	55.0	3,066 fps	62,300 PSI
	AR2208	.308"	2.830"	52.6	2,896 fps	53,800 PSI	56.0	3,041 fps	61,900 PSI
	AR2209	.308"	2.830"	58.6	2,819 fps	47,100 PSI	62.3	3,062 fps	60,800 PSI
165 GR. BAR TSX	AR2206H	.308"	2.800"	49.8	2,785 fps	55,900 PSI	53.0	2,917 fps	62,700 PSI
	AR2208	.308"	2.800"	50.1	2,718 fps	53,100 PSI	54.2	2,908 fps	62,600 PSI
	AR2209	.308"	2.800"	58.8	2,843 fps	55,600 PSI	62.5C	2,979 fps	62,700 PSI

# RIFLE DATA

<b>300 Ruger Compact Magnum</b>				Case: Hornady Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
168 GR. SIE HPBT	AR2206H	.308"	2.820"	50.3	2,803 fps	56,600 PSI	53.5	2,907 fps	61,700 PSI
	AR2208	.308"	2.820"	51.0	2,755 fps	52,900 PSI	54.3	2,890 fps	60,500 PSI
	AR2209	.308"	2.820"	57.3	2,736 fps	47,900 PSI	61.0	2,947 fps	61,200 PSI
178 GR. HDY A-MAX	AR2206H	.308"	2.840"	48.4	2,685 fps	54,000 PSI	51.5	2,793 fps	61,200 PSI
	AR2208	.308"	2.840"	50.0	2,701 fps	55,500 PSI	53.2	2,820 fps	62,300 PSI
	AR2209	.308"	2.840"	56.9	2,729 fps	53,600 PSI	60.5C	2,886 fps	62,200 PSI
180 GR. HDY SP	AR2206H	.308"	2.820"	47.2	2,575 fps	51,900 PSI	50.2	2,711 fps	60,400 PSI
	AR2208	.308"	2.820"	49.4	2,625 fps	54,800 PSI	52.6	2,755 fps	62,700 PSI
	AR2209	.308"	2.820"	56.4	2,648 fps	50,700 PSI	60.0C	2,826 fps	62,600 PSI
200 GR. SFT AF/SS	AR2206H	.308"	2.775"	45.6	2,440 fps	54,600 PSI	48.5	2,546 fps	61,800 PSI
	AR2208	.308"	2.775"	48.3	2,498 fps	57,200 PSI	51.4	2,586 fps	61,700 PSI
	AR2209	.308"	2.775"	55.2	2,544 fps	53,300 PSI	58.7C	2,710 fps	62,600 PSI
C = Compressed load									
<b>300 Remington S.A. Ultra Mag.</b>				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. SPR SP	AR2206H	.308"	2.600"	58.0	3,431 fps	50,600 PSI	62.0	3,663 fps	63,000 PSI
	AR2208	.308"	2.600"	60.5	3,391 fps	51,100 PSI	64.5	3,619 fps	63,200 PSI
125 GR. NOS BT	AR2206H	.308"	2.825"	58.0	3,341 fps	54,700 PSI	62.0	3,557 fps	64,300 PSI
	AR2208	.308"	2.825"	60.0	3,297 fps	52,700 PSI	64.0	3,511 fps	64,200 PSI
	AR2209	.308"	2.825"	65.0	3,172 fps	47,800 PSI	69.0C	3,374 fps	58,300 PSI
130 GR. HDY SP	AR2206H	.308"	2.750"	55.5	3,182 fps	51,700 PSI	59.0	3,360 fps	62,800 PSI
	AR2208	.308"	2.750"	57.5	3,165 fps	53,600 PSI	61.0	3,330 fps	62,600 PSI
	AR2209	.308"	2.750"	65.0	3,198 fps	54,700 PSI	69.0C	3,359 fps	63,500 PSI
135 GR. SIE SP	AR2206H	.308"	2.750"	55.5	3,166 fps	52,700 PSI	59.0	3,340 fps	62,500 PSI
	AR2208	.308"	2.750"	56.5	3,079 fps	52,000 PSI	60.0	3,272 fps	63,100 PSI
	AR2209	.308"	2.750"	63.0	3,090 fps	51,900 PSI	67.0C	3,283 fps	63,500 PSI
150 GR. SPR GSSP	AR2206H	.308"	2.700"	53.0	3,007 fps	55,900 PSI	57.0	3,147 fps	62,800 PSI
	AR2208	.308"	2.700"	55.0	2,967 fps	52,700 PSI	59.0	3,148 fps	63,200 PSI
	AR2209	.308"	2.700"	62.0	2,985 fps	52,600 PSI	65.5C	3,147 fps	62,100 PSI
155 GR. HDY A-MAX	AR2206H	.308"	2.825"	52.0	2,895 fps	50,800 PSI	55.5	3,064 fps	61,700 PSI
	AR2208	.308"	2.825"	54.5	2,925 fps	53,900 PSI	57.7	3,082 fps	63,200 PSI
	AR2209	.308"	2.825"	60.5	2,900 fps	50,200 PSI	64.5	3,112 fps	63,500 PSI

# RIFLE DATA

300 Remington S.A. Ultra Mag.				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
165 GR. NOS PART	AR2206H	.308"	2.825"	50.5	2,827 fps	56,500 PSI	54.0	2,946 fps	63,000 PSI
	AR2208	.308"	2.825"	53.0	2,833 fps	55,400 PSI	56.5	2,967 fps	63,100 PSI
	AR2209	.308"	2.825"	59.0	2,797 fps	50,200 PSI	63.0	2,997 fps	62,900 PSI
168 GR. SIE HPBT	AR2206H	.308"	2.825"	51.0	2,833 fps	57,000 PSI	54.5	2,948 fps	63,100 PSI
	AR2208	.308"	2.825"	53.5	2,835 fps	55,600 PSI	56.5	2,955 fps	62,700 PSI
	AR2209	.308"	2.825"	58.0	2,771 fps	49,500 PSI	62.5	2,985 fps	63,000 PSI
	AR2213SC	.308"	2.825"	64.0	2,801 fps	53,200 PSI	68.0C	2,950 fps	62,600 PSI
175 GR. SIE HPBT	AR2209	.308"	2.825"	59.0	2,806 fps	54,000 PSI	62.5	2,945 fps	62,700 PSI
	AR2213SC	.308"	2.825"	64.0	2,785 fps	54,800 PSI	68.0C	2,924 fps	62,600 PSI
180 GR. SFT SCIR	AR2206H	.308"	2.825"	48.0	2,693 fps	57,000 PSI	51.5	2,823 fps	64,700 PSI
	AR2208	.308"	2.825"	50.0	2,680 fps	53,600 PSI	54.0	2,842 fps	63,600 PSI
	AR2209	.308"	2.825"	58.0	2,772 fps	55,600 PSI	61.6C	2,907 fps	63,500 PSI
190 GR. SIE HPBT	AR2209	.308"	2.825"	56.0	2,660 fps	52,100 PSI	60.0	2,836 fps	62,900 PSI
	AR2213SC	.308"	2.825"	61.0	2,660 fps	54,000 PSI	65.5C	2,811 fps	62,800 PSI
200 GR. NOS PART	AR2209	.308"	2.825"	56.0	2,584 fps	51,600 PSI	59.5C	2,751 fps	63,200 PSI
	AR2213SC	.308"	2.825"	63.0	2,639 fps	55,500 PSI	66.0C	2,755 fps	63,300 PSI
220 GR. HDY RN	AR2209	.308"	2.750"	54.0	2,470 fps	54,200 PSI	58.0	2,608 fps	63,700 PSI
	AR2213SC	.308"	2.750"	60.0	2,497 fps	55,800 PSI	63.5C	2,614 fps	63,500 PSI
				C = Compressed load					
300 Winchester Short Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. SPR SP	Bench Mark 8208	.308"	2.650"	60.3	3,555 fps	54,400 PSI	63.5	3,697 fps	62,400 PSI
	AR2206H	.308"	2.650"	60.0	3,495 fps	56,800 PSI	63.5	3,647 fps	63,600 PSI
	AR2208	.308"	2.650"	62.0	3,454 fps	54,300 PSI	66.0	3,631 fps	63,200 PSI
	AR2209	.308"	2.650"	70.0	3,437 fps	53,500 PSI	74.5C	3,646 fps	63,300 PSI
125 GR. NOS BT	Bench Mark 8208	.308"	2.810"	58.3	3,350 fps	53,600 PSI	62.0	3,496 fps	61,700 PSI
	AR2206H	.308"	2.810"	58.0	3,314 fps	56,600 PSI	61.0	3,431 fps	63,000 PSI
	AR2208	.308"	2.810"	61.0	3,312 fps	54,700 PSI	65.0	3,478 fps	63,100 PSI
	AR2209	.308"	2.810"	69.0	3,332 fps	55,800 PSI	73.0	3,481 fps	63,000 PSI
130 GR. HDY SP	Bench Mark 8208	.308"	2.720"	56.4	3,272 fps	56,600 PSI	60.0	3,391 fps	61,900 PSI
	AR2206H	.308"	2.720"	56.0	3,213 fps	55,700 PSI	58.5	3,318 fps	63,000 PSI
	AR2208	.308"	2.720"	60.0	3,269 fps	58,100 PSI	63.5	3,388 fps	63,500 PSI
	AR2209	.308"	2.720"	67.0	3,237 fps	54,900 PSI	71.0	3,393 fps	63,200 PSI

# RIFLE DATA

300 Winchester Short Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
150 GR. SPR GSSP	Trail Boss	.308"	2.780"	16.3	1,473 fps	26,400 PSI	23.3	1,758 fps	31,600 PSI
	Bench Mark 8208	.308"	2.780"	52.6	2,992 fps	55,800 PSI	56.0	3,115 fps	62,300 PSI
	AR2206H	.308"	2.780"	51.0	2,919 fps	53,400 PSI	54.5	3,078 fps	63,100 PSI
	AR2208	.308"	2.780"	55.0	3,008 fps	56,800 PSI	58.5	3,140 fps	63,800 PSI
	AR2209	.308"	2.780"	63.0	3,040 fps	55,700 PSI	67.0	3,187 fps	63,200 PSI
155 GR. HDY A-MAX	Bench Mark 8208	.308"	2.860"	53.0	2,990 fps	56,800 PSI	56.4	3,110 fps	63,400 PSI
	AR2206H	.308"	2.860"	52.0	2,935 fps	55,800 PSI	55.0	3,061 fps	63,600 PSI
	AR2208	.308"	2.860"	55.0	2,963 fps	54,800 PSI	58.5	3,110 fps	63,600 PSI
	AR2209	.308"	2.860"	63.0	3,014 fps	55,300 PSI	66.5	3,156 fps	63,200 PSI
165 GR. HDY GMX	Bench Mark 8208	.308"	2.840"	48.0	2,743 fps	55,600 PSI	52.0	2,887 fps	63,300 PSI
	AR2206H	.308"	2.840"	47.0	2,700 fps	51,900 PSI	51.0	2,887 fps	63,300 PSI
	AR2208	.308"	2.840"	51.0	2,810 fps	56,700 PSI	54.5	2,948 fps	63,600 PSI
	AR2209	.308"	2.840"	58.0	2,821 fps	52,400 PSI	62.0C	2,986 fps	61,300 PSI
165 GR. NOS PART	Bench Mark 8208	.308"	2.860"	51.1	2,849 fps	55,600 PSI	54.4	2,963 fps	61,700 PSI
	AR2206H	.308"	2.860"	51.0	2,810 fps	55,700 PSI	54.0	2,929 fps	63,200 PSI
	AR2208	.308"	2.860"	54.0	2,859 fps	56,400 PSI	57.5	2,987 fps	63,700 PSI
	AR2209	.308"	2.860"	61.0	2,898 fps	54,800 PSI	65.5	3,047 fps	63,600 PSI
168 GR. SIE HPBT	Bench Mark 8208	.308"	2.840"	51.5	2,853 fps	56,400 PSI	54.8	2,970 fps	63,400 PSI
	AR2209	.308"	2.840"	61.0	2,908 fps	56,000 PSI	64.5	3,034 fps	63,700 PSI
	AR2213SC	.308"	2.840"	65.0	2,848 fps	53,400 PSI	69.5C	3,015 fps	63,200 PSI
175 GR. SIE HPBT	AR2209	.308"	2.860"	61.0	2,839 fps	53,300 PSI	65.0	3,009 fps	63,400 PSI
	AR2213SC	.308"	2.860"	66.0	2,848 fps	55,300 PSI	70.0C	2,980 fps	63,100 PSI
180 GR. NOS E-TIP	AR2209	.308"	2.860"	59.0	2,751 fps	54,900 PSI	63.7C	2,925 fps	63,800 PSI
180 GR. SFT SCIR	AR2209	.308"	2.860"	60.0	2,799 fps	55,700 PSI	64.0	2,950 fps	63,900 PSI
	AR2213SC	.308"	2.860"	65.5	2,775 fps	52,000 PSI	70.0C	2,929 fps	64,000 PSI
190 GR. SIE HPBT	AR2209	.308"	2.860"	57.5	2,736 fps	56,200 PSI	61.0	2,853 fps	63,400 PSI
	AR2213SC	.308"	2.860"	62.0	2,704 fps	53,800 PSI	66.5C	2,858 fps	63,400 PSI
200 GR. SFT SP	AR2209	.308"	2.790"	58.0	2,666 fps	55,000 PSI	62.0	2,792 fps	63,200 PSI
	AR2213SC	.308"	2.790"	63.0	2,678 fps	56,000 PSI	66.5C	2,802 fps	63,700 PSI
	AR2217	.308"	2.790"	70.0	2,660 fps	51,600 PSI	72.0C	2,737 fps	57,200 PSI
208 GR. HDY A-MAX	AR2209	.308"	2.900"	56.4	2,612 fps	55,400 PSI	60.7	2,748 fps	62,800 PSI
	AR2213SC	.308"	2.900"	61.8	2,624 fps	54,800 PSI	66.5C	2,761 fps	62,500 PSI
	AR2217	.308"	2.900"	62.0	2,420 fps	42,900 PSI	69.0C	2,670 fps	55,900 PSI

# RIFLE DATA

300 Winchester Short Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
220 GR. HDY RN	AR2209	.308"	2.830"	54.0	2,476 fps	54,100 PSI	58.0	2,602 fps	63,300 PSI
	AR2213SC	.308"	2.830"	60.0	2,520 fps	55,600 PSI	64.3C	2,646 fps	63,500 PSI
	AR2217	.308"	2.830"	69.0	2,597 fps	57,200 PSI	72.5C	2,689 fps	63,000 PSI
				C = Compressed load					
300 Winchester Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.610"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. SPR SP	AR2206H	.308"	3.215"	60.0	3,381 fps	43,300 CUP	67.0	3,665 fps	51,400 CUP
	AR2208	.308"	3.215"	67.0	3,424 fps	42,900 CUP	72.5	3,660 fps	51,700 CUP
	AR2209	.308"	3.215"	72.0	3,337 fps	39,300 CUP	80.0	3,648 fps	49,400 CUP
	AR2213SC	.308"	3.215"	79.0	3,355 fps	41,500 CUP	84.0C	3,540 fps	48,400 CUP
	AR2217	.308"	3.215"	80.0	3,189 fps	34,700 CUP	85.0C	3,392 fps	42,000 CUP
125 GR. BAR XFB	AR2206H	.308"	3.275"	57.0	3,140 fps	44,200 CUP	62.0	3,347 fps	51,100 CUP
	AR2208	.308"	3.275"	65.0	3,281 fps	45,400 CUP	70.0	3,462 fps	52,700 CUP
	AR2209	.308"	3.275"	68.0	3,250 fps	46,100 CUP	73.0	3,424 fps	51,600 CUP
	AR2213SC	.308"	3.275"	75.0	3,286 fps	47,300 CUP	80.0	3,450 fps	52,000 CUP
	AR2217	.308"	3.275"	80.0	3,260 fps	44,200 CUP	85.0C	3,418 fps	48,700 CUP
130 GR. HDY SP	Bench Mark 8208	.308"	3.300"	60.0	3,202 fps	52,200 PSI	65.0	3,386 fps	62,200 PSI
	AR2206H	.308"	3.300"	58.0	3,187 fps	46,900 CUP	62.0	3,331 fps	52,500 CUP
	AR2208	.308"	3.300"	64.0	3,218 fps	45,600 CUP	68.5	3,398 fps	52,100 CUP
	AR2209	.308"	3.300"	70.0	3,219 fps	45,800 CUP	74.0	3,375 fps	51,600 CUP
	AR2213SC	.308"	3.300"	77.0	3,116 fps	44,900 CUP	82.0C	3,383 fps	51,300 CUP
	AR2217	.308"	3.300"	80.0	3,125 fps	38,900 CUP	85.0C	3,289 fps	45,000 CUP
150 GR. BAR TTSX BT	Bench Mark 8208	.308"	3.325"	57.0	2,925 fps	47,900 PSI	64.0	3,183 fps	61,100 PSI
	AR2206H	.308"	3.325"	57.0	3,006 fps	52,000 PSI	63.0	3,186 fps	59,900 PSI
	AR2209	.308"	3.325"	69.0	3,062 fps	49,600 PSI	74.0C	3,289 fps	60,600 PSI
	AR2213SC	.308"	3.325"	75.0	2,985 fps	46,300 PSI	80.0C	3,182 fps	50,100 PSI
150 GR. SIE SP	Trail Boss	.308"	3.340"	18.0	1,302 fps	18,400 PSI	25.5	1,687 fps	28,600 PSI
	Bench Mark 8208	.308"	3.340"	57.0	2,987 fps	52,600 PSI	61.5	3,156 fps	60,800 PSI
	AR2206H	.308"	3.340"	57.0	2,991 fps	47,300 CUP	61.0	3,124 fps	52,500 CUP
	AR2208	.308"	3.340"	56.0	2,952 fps	43,300 CUP	60.0	3,108 fps	51,400 CUP
	AR2209	.308"	3.340"	68.0	3,052 fps	47,100 CUP	72.0	3,205 fps	52,500 CUP
	AR2213SC	.308"	3.340"	73.0	3,025 fps	45,700 CUP	78.0	3,207 fps	52,700 CUP
	AR2217	.308"	3.340"	80.0	3,004 fps	46,500 CUP	85.0C	3,255 fps	52,200 CUP

# RIFLE DATA

300 Winchester Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.610"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
155 GR. SIE HPBT	Bench Mark 8208	.308"	3.340"	58.0	2,997 fps	55,000 PSI	61.5	3,117 fps	60,700 PSI
	AR2206H	.308"	3.340"	55.0	2,919 fps	43,700 CUP	59.0	3,078 fps	52,200 CUP
	AR2208	.308"	3.340"	55.0	2,897 fps	42,400 CUP	59.7	3,090 fps	52,000 CUP
	AR2209	.308"	3.340"	69.0	3,013 fps	45,100 CUP	74.0	3,215 fps	52,400 CUP
	AR2213SC	.308"	3.340"	74.0	2,964 fps	43,600 CUP	79.0C	3,166 fps	51,500 CUP
	AR2217	.308"	3.340"	80.0	2,992 fps	41,300 CUP	85.0C	3,160 fps	47,400 CUP
165 GR. SPR SP	AR2206H	.308"	3.340"	55.0	2,839 fps	46,700 CUP	59.0	2,977 fps	52,500 CUP
	AR2208	.308"	3.340"	54.0	2,799 fps	43,900 CUP	58.5	2,975 fps	52,900 CUP
	AR2209	.308"	3.340"	66.0	2,910 fps	46,900 CUP	70.0	3,042 fps	51,900 CUP
	AR2213SC	.308"	3.340"	72.0	2,934 fps	47,600 CUP	75.5	3,055 fps	52,200 CUP
	AR2217	.308"	3.340"	79.0	2,957 fps	44,600 CUP	84.0	3,117 fps	51,300 CUP
168 GR. HDY BTHP	AR2206H	.308"	3.340"	55.0	2,843 fps	47,800 CUP	59.0	2,977 fps	52,900 CUP
	AR2208	.308"	3.340"	54.0	2,795 fps	44,300 CUP	58.2	2,964 fps	52,900 CUP
	AR2209	.308"	3.340"	66.0	2,900 fps	45,500 CUP	70.0	3,034 fps	51,000 CUP
	AR2213SC	.308"	3.340"	72.0	2,876 fps	45,100 CUP	75.5	3,023 fps	51,400 CUP
	AR2217	.308"	3.340"	79.0	2,938 fps	44,900 CUP	84.0	3,110 fps	51,000 CUP
175 GR. SIE HPBT	AR2209	.308"	3.300"	66.0	2,832 fps	45,800 CUP	71.0	2,992 fps	52,700 CUP
	AR2213SC	.308"	3.300"	72.0	2,843 fps	46,600 CUP	76.5	3,006 fps	53,100 CUP
	AR2217	.308"	3.300"	77.0	2,820 fps	43,100 CUP	82.0C	3,008 fps	51,800 CUP
180 GR. NOS E-TIP	AR2209	.308"	3.340"	62.1	2,730 fps	52,300 PSI	66.8	2,916 fps	62,600 PSI
	AR2213SC	.308"	3.340"	66.8	2,770 fps	53,300 PSI	71.8C	2,938 fps	61,900 PSI
	AR2217	.308"	3.340"	74.6	2,821 fps	53,300 PSI	79.4C	2,984 fps	62,400 PSI
180 GR. SPR MT-SP	AR2209	.308"	3.285"	63.0	2,787 fps	46,400 CUP	67.0	2,918 fps	53,100 CUP
	AR2213SC	.308"	3.285"	69.0	2,851 fps	48,500 CUP	73.0C	2,966 fps	53,200 CUP
	AR2217	.308"	3.285"	76.0	2,883 fps	46,800 CUP	81.0C	3,042 fps	52,900 CUP
190 GR. HDY BTSP	AR2209	.308"	3.340"	63.0	2,735 fps	46,600 CUP	67.0	2,863 fps	53,400 CUP
	AR2213SC	.308"	3.340"	69.0	2,795 fps	48,400 CUP	73.0C	2,923 fps	53,600 CUP
	AR2217	.308"	3.340"	76.0	2,822 fps	44,900 CUP	81.0C	2,990 fps	52,800 CUP
200 GR. NOS AB	AR2209	.308"	3.340"	60.0	2,576 fps	44,400 CUP	64.4	2,723 fps	51,600 CUP
	AR2213SC	.308"	3.340"	67.0	2,686 fps	49,500 CUP	71.5C	2,785 fps	52,800 CUP
	AR2217	.308"	3.340"	72.0	2,662 fps	44,500 CUP	77.0C	2,826 fps	52,600 CUP
	AR2225	.308"	3.340"	73.0	2,703 fps	44,600 CUP	78.0C	2,872 fps	52,100 CUP
200 GR. NOS PART	AR2209	.308"	3.340"	63.0	2,646 fps	47,800 CUP	66.0	2,753 fps	51,700 CUP
	AR2213SC	.308"	3.340"	67.0	2,686 fps	47,000 CUP	72.0C	2,825 fps	53,100 CUP
	AR2217	.308"	3.340"	74.0	2,725 fps	45,500 CUP	79.0C	2,883 fps	52,800 CUP
	AR2225	.308"	3.340"	79.0	2,798 fps	45,700 CUP	84.0C	2,962 fps	52,300 CUP



# RIFLE DATA

<b>300 Winchester Magnum</b>				Case: Winchester Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.610"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>208 GR. HDY A-MAX</b>	AR2209	.308"	3.420"	60.4	2,655 fps	53,600 PSI	65.7	2,813 fps	62,000 PSI
	AR2213SC	.308"	3.420"	66.5	2,671 fps	53,200 PSI	72.3	2,838 fps	62,000 PSI
	AR2217	.308"	3.420"	71.7	2,650 fps	47,800 PSI	78.0C	2,869 fps	60,200 PSI
	AR2225	.308"	3.420"	74.5	2,717 fps	50,300 PSI	81.0C	2,915 fps	61,300 PSI
<b>220 GR. SIE RN</b>	AR2209	.308"	3.340"	61.0	2,501 fps	46,100 CUP	65.0	2,622 fps	52,300 CUP
	AR2213SC	.308"	3.340"	66.0	2,533 fps	44,900 CUP	71.0	2,685 fps	53,100 CUP
	AR2217	.308"	3.340"	73.0	2,588 fps	44,500 CUP	78.0	2,750 fps	52,000 CUP
	AR2225	.308"	3.340"	76.0	2,646 fps	44,400 CUP	81.0C	2,810 fps	52,400 CUP
<b>230 GR. BER TACT</b>	AR2213SC	.308"	3.395"	64.1	2,527 fps	50,800 PSI	70.3	2,710 fps	61,200 PSI
	AR2217	.308"	3.395"	69.1	2,471 fps	44,200 PSI	76.0C	2,721 fps	58,200 PSI
	AR2225	.308"	3.395"	71.6	2,520 fps	44,700 PSI	77.0C	2,714 fps	55,200 PSI
				C = Compressed load					
<b>300 Weatherby Magnum</b>				Case: Remington Twist: 1:10" Primer: FEDERAL 215M			Barrel length: 24" Trim length: 2.810"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>125 GR. SIE SP</b>	AR2208	.308"	3.475"	65.0	3,386 fps	49,500 CUP	69.0	3,492 fps	53,700 CUP
	AR2209	.308"	3.475"	77.0	3,347 fps	46,300 CUP	82.5	3,547 fps	53,200 CUP
	AR2213SC	.308"	3.475"	84.0	3,322 fps	46,000 CUP	90.0C	3,527 fps	53,100 CUP
<b>130 GR. BAR XLC BT</b>	AR2209	.308"	3.500"	78.0	3,287 fps	46,300 CUP	83.0	3,485 fps	52,800 CUP
	AR2213SC	.308"	3.500"	84.0	3,306 fps	46,200 CUP	89.5C	3,467 fps	53,000 CUP
<b>150 GR. BAR TSX</b>	Trail Boss	.308"	3.580"	19.0	1,334 fps	20,300 CUP	27.5	1,656 fps	28,900 CUP
	AR2206H	.308"	3.570"	57.0	2,926 fps	42,200 CUP	61.5	3,112 fps	54,100 CUP
	AR2208	.308"	3.570"	59.0	2,935 fps	42,200 CUP	64.5	3,155 fps	54,000 CUP
	AR2209	.308"	3.570"	70.0	3,084 fps	44,700 CUP	76.5	3,310 fps	53,800 CUP
	AR2213SC	.308"	3.570"	77.0	3,031 fps	45,200 CUP	84.0C	3,275 fps	52,900 CUP
	AR2217	.308"	3.570"	83.0	3,056 fps	43,500 CUP	88.0C	3,220 fps	49,900 CUP
<b>165 GR. NOS BT</b>	AR2206H	.308"	3.560"	58.0	2,871 fps	48,000 CUP	62.5	3,028 fps	54,200 CUP
	AR2208	.308"	3.560"	58.0	2,873 fps	46,300 CUP	62.0	3,033 fps	54,200 CUP
	AR2209	.308"	3.560"	69.0	2,908 fps	45,400 CUP	74.0	3,074 fps	54,100 CUP
	AR2213SC	.308"	3.560"	75.0	2,934 fps	46,400 CUP	80.2	3,113 fps	54,000 CUP
	AR2217	.308"	3.560"	84.0	3,014 fps	45,600 CUP	89.7C	3,216 fps	54,200 CUP

# RIFLE DATA

<b>300 Weatherby Magnum</b>				Case: Remington Twist: 1:10" Primer: FEDERAL 215M			Barrel length: 24" Trim length: 2.810"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>168 GR. NOS E-TIP</b>	AR2206H	.308"	3.590"	55.0	2,773 fps	47,000 CUP	60.0	2,968 fps	54,500 CUP
	AR2208	.308"	3.590"	59.0	2,854 fps	48,000 CUP	63.5	2,999 fps	53,800 CUP
	AR2209	.308"	3.590"	66.0	2,898 fps	46,900 CUP	72.5	3,099 fps	53,800 CUP
	AR2213SC	.308"	3.590"	74.0	2,865 fps	43,700 CUP	81.0C	3,107 fps	54,200 CUP
	AR2217	.308"	3.590"	82.0	2,959 fps	44,100 CUP	88.0C	3,197 fps	53,700 CUP
<b>180 GR. NOS E-TIP</b>	AR2209	.308"	3.590"	64.0	2,783 fps	47,100 CUP	70.0	2,968 fps	54,100 CUP
	AR2213SC	.308"	3.590"	71.0	2,772 fps	46,700 CUP	78.0	2,977 fps	53,300 CUP
	AR2217	.308"	3.590"	79.0	2,861 fps	46,300 CUP	85.0C	3,054 fps	53,900 CUP
<b>180 GR. SPR BTSP</b>	AR2209	.308"	3.560"	69.0	2,876 fps	44,600 CUP	73.5	3,022 fps	54,000 CUP
	AR2213SC	.308"	3.560"	76.0	2,910 fps	45,300 CUP	81.5	3,096 fps	54,000 CUP
	AR2217	.308"	3.560"	83.0	2,971 fps	43,800 CUP	88.5C	3,151 fps	53,500 CUP
<b>180 GR. WIN FS</b>	AR2209	.308"	3.560"	67.0	2,813 fps	46,500 CUP	72.0	2,974 fps	54,600 CUP
	AR2213SC	.308"	3.560"	74.0	2,892 fps	50,200 CUP	79.0	3,013 fps	54,600 CUP
	AR2217	.308"	3.560"	78.0	2,921 fps	47,800 CUP	83.0C	3,111 fps	54,600 CUP
<b>200 GR. NOS AB</b>	AR2213SC	.308"	3.590"	70.0	2,702 fps	49,300 CUP	75.0	2,839 fps	54,400 CUP
	AR2217	.308"	3.590"	77.0	2,709 fps	45,800 CUP	83.0C	2,884 fps	53,700 CUP
	AR2225	.308"	3.590"	79.0	2,753 fps	45,800 CUP	84.5C	2,942 fps	53,100 CUP
<b>200 GR. SFT</b>	AR2209	.308"	3.510"	66.0	2,706 fps	45,800 CUP	71.0	2,866 fps	54,300 CUP
	AR2213SC	.308"	3.510"	72.0	2,708 fps	44,700 CUP	77.5	2,869 fps	52,900 CUP
	AR2217	.308"	3.510"	79.0	2,766 fps	43,200 CUP	85.0C	2,963 fps	53,400 CUP
	AR2225	.308"	3.510"	80.0	2,764 fps	46,100 CUP	85.5C	2,981 fps	54,400 CUP
<b>220 GR. HDY RN</b>	AR2209	.308"	3.565"	66.0	2,599 fps	45,900 CUP	70.0	2,725 fps	53,800 CUP
	AR2213SC	.308"	3.565"	71.0	2,630 fps	47,200 CUP	75.7	2,766 fps	54,500 CUP
	AR2217	.308"	3.565"	77.0	2,670 fps	45,100 CUP	82.5	2,833 fps	53,400 CUP
	AR2225	.308"	3.565"	79.0	2,679 fps	45,900 CUP	84.0C	2,853 fps	54,000 CUP
				C = Compressed load					
<b>300 Remington Ultra Mag</b>				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>130 GR. BAR XLC BT</b>	AR2209	.308"	3.550"	87.0	3,436 fps	54,000 PSI	93.0	3,638 fps	63,000 PSI
	AR2213SC	.308"	3.550"	93.0	3,330 fps	51,200 PSI	99.5	3,579 fps	62,800 PSI
	AR2217	.308"	3.550"	100.0	3,349 fps	50,900 PSI	107.0C	3,615 fps	63,500 PSI

# RIFLE DATA

300 Remington Ultra Mag				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
140 GR. BAR XBT	AR2213SC	.308"	3.555"	87.0	3,258 fps	55,100 PSI	93.0	3,447 fps	63,600 PSI
	AR2217	.308"	3.555"	95.0	3,326 fps	56,900 PSI	101.0	3,470 fps	63,100 PSI
	AR2225	.308"	3.555"	97.0	3,282 fps	52,100 PSI	103.5C	3,493 fps	61,400 PSI
150 GR. SIE SPBT	AR2213SC	.308"	3.530"	90.0	3,243 fps	55,100 PSI	94.0	3,408 fps	62,900 PSI
	AR2217	.308"	3.530"	98.0	3,258 fps	53,100 PSI	102.0	3,457 fps	62,900 PSI
	AR2225	.308"	3.530"	100.0	3,343 fps	52,600 PSI	106.0C	3,531 fps	60,800 PSI
165 GR. SFT SP	AR2213SC	.308"	3.530"	85.0	3,057 fps	52,300 PSI	90.0	3,255 fps	62,100 PSI
	AR2217	.308"	3.530"	94.0	3,135 fps	53,300 PSI	98.0	3,321 fps	62,500 PSI
	AR2225	.308"	3.530"	97.0	3,241 fps	54,200 PSI	103.0C	3,414 fps	62,300 PSI
180 GR. BAR TTSX BT	AR2213SC	.308"	3.600"	77.0	2,956 fps	57,400 PSI	83.0	3,098 fps	63,300 PSI
	AR2217	.308"	3.600"	81.5	2,890 fps	53,900 PSI	89.0	3,083 fps	60,600 PSI
	AR2225	.308"	3.600"	86.0	2,973 fps	53,200 PSI	92.0	3,159 fps	62,600 PSI
	AR2218	.308"	3.600"	97.0	2,977 fps	55,800 PSI	103.5C	3,101 fps	62,000 PSI
180 GR. SPR SPBT	AR2213SC	.308"	3.530"	84.0	2,997 fps	54,000 PSI	89.0	3,167 fps	62,500 PSI
	AR2217	.308"	3.530"	91.0	3,018 fps	52,300 PSI	96.0	3,218 fps	62,800 PSI
	AR2225	.308"	3.530"	94.0	3,182 fps	58,400 PSI	100.5C	3,300 fps	62,400 PSI
	AR2218	.308"	3.530"	103.0	3,005 fps	53,700 PSI	108.0C	3,159 fps	62,100 PSI
190 GR. HDY SPBT	AR2213SC	.308"	3.555"	80.0	2,892 fps	53,000 PSI	85.0	3,069 fps	62,500 PSI
	AR2217	.308"	3.555"	88.0	2,971 fps	54,900 PSI	93.0	3,130 fps	63,500 PSI
	AR2225	.308"	3.555"	90.0	3,069 fps	56,500 PSI	96.0	3,204 fps	62,500 PSI
	AR2218	.308"	3.555"	100.0	2,938 fps	54,900 PSI	105.0C	3,085 fps	63,000 PSI
200 GR. BAR XFB	AR2217	.308"	3.555"	80.0	2,767 fps	57,400 PSI	83.0	2,850 fps	62,800 PSI
	AR2225	.308"	3.555"	81.0	2,852 fps	56,200 PSI	86.0	2,988 fps	62,800 PSI
	AR2218	.308"	3.555"	92.0	2,767 fps	56,100 PSI	98.0C	2,910 fps	63,100 PSI
200 GR. NOS AB	AR2213SC	.308"	3.600"	79.0	2,787 fps	54,700 PSI	85.0	2,953 fps	63,600 PSI
	AR2217	.308"	3.600"	87.0	2,839 fps	56,000 PSI	92.5	2,975 fps	62,800 PSI
	AR2225	.308"	3.600"	89.0	2,904 fps	56,400 PSI	95.5C	3,048 fps	62,400 PSI
	AR2218	.308"	3.600"	96.0	2,762 fps	49,700 PSI	102.0C	2,950 fps	58,900 PSI
220 GR. NOS PART	AR2217	.308"	3.530"	83.0	2,704 fps	54,500 PSI	89.0	2,863 fps	63,500 PSI
	AR2225	.308"	3.530"	84.0	2,800 fps	56,600 PSI	89.0	2,905 fps	61,900 PSI
	AR2218	.308"	3.530"	95.0	2,699 fps	54,000 PSI	100.5C	2,850 fps	62,500 PSI

C = Compressed load

# RIFLE DATA

30-378 Weatherby				Case: Weatherby			Barrel length: 26"		
				Twist: 1:10"			Trim length: 2.903"		
				Primer: FEDERAL 215 M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
150 GR. SIE SPBT	AR2213SC	.308"	3.600"	100.0	3,449 fps	49,100 CUP	104.0	3,555 fps	53,900 CUP
	AR2217	.308"	3.600"	110.0	3,464 fps	46,000 CUP	114.0	3,598 fps	52,400 CUP
	AR2225	.308"	3.600"	113.0	3,490 fps	44,900 CUP	119.0C	3,690 fps	52,400 CUP
165 GR. SFT SP	AR2213SC	.308"	3.600"	95.0	3,202 fps	46,600 CUP	100.5	3,391 fps	53,800 CUP
	AR2217	.308"	3.600"	106.0	3,285 fps	45,500 CUP	112.0	3,495 fps	55,000 CUP
	AR2225	.308"	3.600"	109.0	3,305 fps	42,800 CUP	116.0C	3,559 fps	53,400 CUP
168 GR. NOS E-TIP	AR2213SC	.308"	3.740"	93.0	3,152 fps	46,400 CUP	101.0	3,341 fps	52,400 CUP
	AR2217	.308"	3.740"	97.5	3,094 fps	43,800 CUP	106.0	3,341 fps	53,400 CUP
	AR2225	.308"	3.740"	98.0	3,127 fps	43,500 CUP	109.0C	3,444 fps	51,600 CUP
180 GR. NOS E-TIP	AR2213SC	.308"	3.740"	92.1	3,092 fps	46,700 CUP	98.0	3,222 fps	52,600 CUP
	AR2217	.308"	3.740"	95.7	3,033 fps	45,100 CUP	104.0	3,282 fps	52,600 CUP
	AR2225	.308"	3.740"	96.5	3,087 fps	46,000 CUP	106.0C	3,336 fps	53,900 CUP
	AR2218	.308"	3.740"	105.3	2,958 fps	41,700 CUP	117.0	3,237 fps	50,400 CUP
180 GR. SPR SPBT	AR2213SC	.308"	3.600"	94.0	3,134 fps	46,600 CUP	100.0	3,301 fps	54,500 CUP
	AR2217	.308"	3.600"	105.0	3,213 fps	45,200 CUP	111.0	3,412 fps	54,300 CUP
	AR2225	.308"	3.600"	107.0	3,228 fps	43,200 CUP	113.0C	3,460 fps	54,700 CUP
	AR2218	.308"	3.600"	116.0	3,089 fps	40,400 CUP	120.0C	3,229 fps	47,100 CUP
190 GR. HDY SPBT	AR2217	.308"	3.625"	102.0	3,154 fps	46,500 CUP	108.0	3,316 fps	54,800 CUP
	AR2225	.308"	3.625"	105.0	3,154 fps	43,600 CUP	111.5C	3,374 fps	54,500 CUP
	AR2218	.308"	3.625"	115.0	3,113 fps	45,700 CUP	120.0C	3,243 fps	50,900 CUP
200 GR. BAR XFB	AR2218	.308"	3.645"	111.0	3,134 fps	52,300 CUP	117.0C	3,227 fps	54,800 CUP
200 GR. NOS AB	AR2217	.308"	3.650"	95.0	2,966 fps	46,100 CUP	101.5	3,130 fps	53,800 CUP
	AR2225	.308"	3.650"	98.0	2,992 fps	44,900 CUP	105.0C	3,209 fps	52,600 CUP
	AR2218	.308"	3.650"	106.0	2,958 fps	43,700 CUP	113.0C	3,142 fps	49,600 CUP
220 GR. NOS PART	AR2217	.308"	3.600"	99.0	2,965 fps	47,800 CUP	104.0	3,084 fps	53,700 CUP
	AR2225	.308"	3.600"	101.0	2,954 fps	44,700 CUP	107.5	3,155 fps	55,000 CUP
	AR2218	.308"	3.600"	115.0	3,047 fps	48,300 CUP	118.5C	3,145 fps	53,700 CUP

C = Compressed load

# RIFLE DATA

7.62 x 39mm Russian				Case: Midway Twist: 1:9.45" Primer: CCI 200			Barrel length: 24" Trim length: 1.518"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
108 GR. BAR RRLP FB	AR2205	.310"	2.210"	15.0	1,526 fps	26,100 CUP	17.6	1,907 fps	41,000 CUP
	AR2207	.310"	2.210"	23.3	2,155 fps	38,300 CUP	25.0	2,310 fps	42,300 CUP
	AR2219	.310"	2.210"	25.7	1,974 fps	34,500 CUP	28.5C	2,199 fps	41,200 CUP
	Bench Mark 2	.310"	2.210"	25.0	1,826 fps	32,200 CUP	28.5C	2,118 fps	38,700 CUP
125 GR. SPR SP	AR2207	.311"	2.150"	24.5	2,190 fps	34,200 CUP	26.5	2,378 fps	40,400 CUP
	AR2219	.311"	2.150"	28.0	2,210 fps	32,900 CUP	29.0	2,323 fps	35,400 CUP
	AR2206H	.311"	2.150"	28.0	2,171 fps	29,900 CUP	29.0	2,249 fps	33,600 CUP
150 GR. HDY SP	AR2207	.312"	2.220"	22.5	1,947 fps	33,600 CUP	24.5	2,122 fps	39,800 CUP
	AR2219	.312"	2.220"	27.0	2,084 fps	34,200 CUP	28.5	2,192 fps	40,400 CUP
	AR2206H	.312"	2.220"	27.0	2,080 fps	33,600 CUP	28.0	2,154 fps	39,300 CUP
				C = Compressed load					
310 Cadet (Martini Action)				Case: - Twist: - Primer: -			Barrel length: 22" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. LEAD	AR2205	-	-	-	-	-	11.0	1,500 fps	-
120 GR.	AR2205	-	-	-	-	-	9.0	1,270 fps	-
32-20 Winchester (32-20 WCF)				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
80 GR.	AR2205	-	-	-	-	-	16.0	2,150 fps	-
100 GR.	AR2205	-	-	-	-	-	14.0	1,950 fps	-
115 GR.	AR2205	-	-	-	-	-	13.0	1,800 fps	-
115 GR. LEAD	AP70N	-	-	-	-	-	4.0	1,260 fps	-
125 GR LEAD	AP70N	-	-	-	-	-	3.7	1,225 fps	-

# RIFLE DATA

7.7 x 58mm Japanese				Case: Norma Twist: 1:9.75" Primer: REMINGTON 9 1/2			Barrel length: 26" Trim length: 2.260"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
150 GR. SIE SP	AR2206H	.311"	3.050"	41.0	2,337 fps	-	44.0	2,529 fps	-
	AR2209	.311"	3.050"	48.0	2,330 fps	-	51.0	2,514 fps	-
	AR2213SC	.311"	3.050"	50.0	2,180 fps	-	55.0	2,445 fps	-
180 GR. SIE SP	AR2206H	.311"	3.150"	37.0	2,060 fps	-	40.0	2,230 fps	-
	AR2209	.311"	3.150"	44.0	2,090 fps	-	47.0	2,309 fps	-
	AR2213SC	.311"	3.150"	46.0	2,011 fps	-	50.0	2,233 fps	-
303 British				Case: Remington Twist: 1:10" Primer: FEDERAL 210			Barrel length: 24" Trim length: 2.212"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
125 GR. SPR SP	Bench Mark 8208	.311"	2.915"	39.0	2,708 fps	38,400 CUP	43.0	2,886 fps	43,100 CUP
	AR2206H	.311"	2.915"	41.0	2,791 fps	42,400 CUP	45.0	2,931 fps	43,700 CUP
	AR2208	.311"	2.915"	45.0	2,766 fps	39,200 CUP	48.0	2,883 fps	42,100 CUP
150 GR. HDY SP	Bench Mark 8208	.312"	2.995"	34.0	2,392 fps	37,700 CUP	36.7	2,515 fps	41,300 CUP
	AR2206H	.312"	2.995"	36.0	2,447 fps	40,300 CUP	40.0	2,627 fps	43,600 CUP
	AR2208	.312"	2.995"	39.0	2,458 fps	39,600 CUP	43.0	2,656 fps	42,700 CUP
174 GR. SIE HPBT	AR2206H	.311"	3.075"	34.0	2,262 fps	38,800 CUP	38.0	2,446 fps	43,600 CUP
	AR2208	.311"	3.075"	38.0	2,345 fps	38,800 CUP	42.0	2,509 fps	43,800 CUP
	AR2209	.311"	3.075"	43.0	2,266 fps	35,400 CUP	48.0C	2,517 fps	41,900 CUP
180 GR. SIE SP	Bench Mark 8208	.311"	3.075"	31.0	2,108 fps	34,900 CUP	35.0	2,325 fps	43,300 CUP
	AR2206H	.311"	3.075"	34.0	2,178 fps	35,200 CUP	38.0	2,400 fps	43,500 CUP
	AR2208	.311"	3.075"	37.0	2,282 fps	38,200 CUP	41.0	2,440 fps	43,400 CUP
	AR2209	.311"	3.075"	44.0	2,295 fps	35,700 CUP	48.0C	2,500 fps	43,800 CUP
215 GR. REM SP	AR2208	.311"	3.069"	37.0	2,130 fps	39,800 PSI	39.5	2,265 fps	48,900 PSI
	AR2209	.311"	3.069"	42.0	2,045 fps	32,650 PSI	45.0C	2,185 fps	39,550 PSI
				C = Compressed load					
7.65 x 53mm Mauser				Case: Norma Twist: 1:9.8" Primer: FEDERAL 210			Barrel length: 29" Trim length: 2.080"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
150 GR. HDY SP	AR2206H	.312"	2.815"	39.5	2,341 fps	-	43.0	2,597 fps	-
	AR2209	.312"	2.815"	45.0	2,347 fps	-	49.0	2,614 fps	-



# RIFLE DATA

7.65 x 53mm Mauser				Case: Norma Twist: 1:9.8" Primer: FEDERAL 210			Barrel length: 29" Trim length: 2.080"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
174 GR. HDY RN	AR2206H	.312"	2.850"	37.0	2,072 fps	-	40.0	2,351 fps	-
	AR2209	.312"	2.850"	43.0	2,266 fps	-	47.0	2,454 fps	-
	AR2213SC	.312"	2.850"	-	-	-	53.0	2,456 fps	-
32 Winchester Special				Case: Winchester Twist: 1:16" Primer: CCI 200			Barrel length: 20" Trim length: 2.030"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
165 GR. HDY FTX	Bench Mark 2	.321"	2.565"	27.2	2,020 fps	31,100 CUP	29.6	2,162 fps	36,800 CUP
	Bench Mark 8208	.321"	2.565"	30.2	2,118 fps	32,500 CUP	32.8	2,290 fps	36,500 CUP
	AR2206H	.321"	2.565"	30.6	2,147 fps	31,300 CUP	33.3	2,315 fps	36,200 CUP
	AR2208	.321"	2.565"	31.8	2,084 fps	29,700 CUP	34.6	2,290 fps	35,500 CUP
170 GR. HDY JFP	AR2219	.321"	2.565"	30.0	2,111 fps	32,100 CUP	32.3	2,263 fps	36,800 CUP
	Bench Mark 2	.321"	2.565"	30.0	2,005 fps	29,900 CUP	32.5	2,175 fps	36,600 CUP
	Bench Mark 8208	.321"	2.565"	30.7	2,126 fps	30,400 CUP	33.4	2,307 fps	36,200 CUP
	AR2206H	.321"	2.565"	32.0	2,122 fps	30,800 CUP	34.5	2,283 fps	36,100 CUP
	AR2208	.321"	2.565"	34.0	2,096 fps	30,800 CUP	37.0C	2,271 fps	36,400 CUP
				C = Compressed load					
32-40 Winchester				Case: Winchester Twist: 1:16" Primer: REMINGTON 2 1/2			Barrel length: 24" Trim length: 2.120"		
<b>NOTE:</b> See Single Action Rifle section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
170 GR.	AR2207	-	-	-	-	-	19.0	1,650 fps	-
	AR2206	-	-	-	-	-	26.0	1,825 fps	-

# RIFLE DATA

8 x 57mm Mauser				Case: Remington Twist: 1:9.5" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.230"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
125 GR. HDY SP	Bench Mark 2	.323"	2.880"	43.5	2,728 fps	36,400 CUP	49.8	3,068 fps	49,700 CUP
	Bench Mark 8208	.323"	2.880"	48.0	2,907 fps	41,500 CUP	52.2	3,139 fps	48,700 CUP
	AR2206H	.323"	2.880"	47.0	2,843 fps	37,300 CUP	53.5	3,208 fps	49,400 CUP
	AR2208	.323"	2.880"	47.0	2,730 fps	36,600 CUP	54.0	3,092 fps	48,100 CUP
150 GR. HDY SP	Bench Mark 2	.323"	2.950"	42.5	2,577 fps	36,900 CUP	47.5	2,860 fps	48,800 CUP
	Bench Mark 8208	.323"	2.950"	44.1	2,648 fps	40,600 CUP	48.0	2,861 fps	48,300 CUP
	AR2206H	.323"	2.950"	44.0	2,619 fps	37,200 CUP	51.0	2,987 fps	49,500 CUP
	AR2208	.323"	2.950"	45.5	2,561 fps	37,500 CUP	52.4C	2,896 fps	49,000 CUP
160 GR. BAR TTSX BT	Bench Mark 2	.323"	3.010"	43.1	2,558 fps	42,500 CUP	46.6	2,726 fps	49,300 CUP
	Bench Mark 8208	.323"	3.010"	42.0	2,486 fps	37,200 CUP	46.5C	2,758 fps	48,300 CUP
	AR2206H	.323"	3.010"	44.0	2,603 fps	39,200 CUP	48.5C	2,821 fps	47,700 CUP
	AR2208	.323"	3.010"	45.0	2,503 fps	36,100 CUP	49.0C	2,727 fps	43,600 CUP
170 GR. HDY RN	Bench Mark 2	.323"	2.825"	41.0	2,397 fps	37,100 CUP	46.6	2,679 fps	49,100 CUP
	Bench Mark 8208	.323"	2.825"	44.2	2,575 fps	41,400 CUP	47.0	2,696 fps	48,000 CUP
	AR2206H	.323"	2.825"	40.0	2,306 fps	37,400 CUP	49.0	2,769 fps	48,700 CUP
	AR2208	.323"	2.825"	43.0	2,362 fps	36,700 CUP	50.5	2,700 fps	48,700 CUP
175 GR. SIE SP	Bench Mark 2	.323"	3.100"	41.0	2,414 fps	37,100 CUP	46.2	2,657 fps	48,400 CUP
	Bench Mark 8208	.323"	3.100"	43.7	2,537 fps	41,400 CUP	46.5	2,667 fps	46,600 CUP
	AR2206H	.323"	3.100"	40.0	2,387 fps	36,800 CUP	49.4	2,762 fps	48,300 CUP
	AR2208	.323"	3.100"	43.0	2,418 fps	37,200 CUP	50.5	2,716 fps	48,500 CUP
180 GR. BAR TSX	Bench Mark 2	.323"	2.960"	34.0	2,104 fps	37,200 CUP	42.0	2,466 fps	48,800 CUP
	Bench Mark 8208	.323"	2.960"	41.8	2,459 fps	43,300 CUP	44.5	2,572 fps	48,300 CUP
	AR2206H	.323"	2.960"	39.0	2,259 fps	36,800 CUP	46.0C	2,565 fps	48,700 CUP
	AR2208	.323"	2.960"	41.0	2,256 fps	35,800 CUP	47.8C	2,570 fps	48,400 CUP
180 GR. NOS BT	Bench Mark 2	.323"	3.020"	39.0	2,304 fps	36,800 CUP	44.5	2,586 fps	48,900 CUP
	Bench Mark 8208	.323"	3.020"	43.0	2,479 fps	41,300 CUP	45.7	2,619 fps	47,900 CUP
	AR2206H	.323"	3.020"	41.0	2,387 fps	36,300 CUP	47.7	2,691 fps	49,300 CUP
	AR2208	.323"	3.020"	42.0	2,309 fps	36,600 CUP	48.8	2,641 fps	49,400 CUP
200 GR. SPR SP	Bench Mark 8208	.323"	2.970"	41.4	2,325 fps	39,900 CUP	44.0	2,459 fps	47,600 CUP
	AR2206H	.323"	2.970"	38.0	2,240 fps	36,800 CUP	45.4	2,539 fps	49,200 CUP
	AR2208	.323"	2.970"	40.5	2,183 fps	36,900 CUP	47.5	2,511 fps	49,100 CUP
	AR2209	.323"	2.970"	49.0	2,276 fps	35,900 CUP	54.0C	2,522 fps	44,800 CUP
220 GR. HDY SP	Bench Mark 8208	.323"	2.970"	41.5	2,249 fps	40,000 CUP	44.1	2,348 fps	47,500 CUP
	AR2206H	.323"	2.970"	40.0	2,178 fps	37,200 CUP	45.2	2,420 fps	48,800 CUP
	AR2208	.323"	2.970"	39.0	2,055 fps	36,800 CUP	46.8	2,390 fps	48,800 CUP

C = Compressed load

# RIFLE DATA

8 x 68mm Schuler				Case: - Twist: - Primer: -			Barrel length: 26" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
125 GR.	AR2209	-	-	-	-	-	73.0	3,300 fps	-
150 GR.	AR2209	-	-	-	-	-	70.0	3,100 fps	-
170 GR.	AR2209	-	-	-	-	-	68.0	2,950 fps	-
220 GR.	AR2209	-	-	-	-	-	62.0	2,650 fps	-
325 Winchester Short Magnum				Case: Winchester Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
150 GR. HDY SP	Bench Mark 2	.323"	2.810"	57.0	3,074 fps	50,200 PSI	60.5	3,253 fps	62,400 PSI
	Bench Mark 8208	.323"	2.810"	56.1	3,059 fps	55,400 PSI	59.7	3,171 fps	61,000 PSI
	AR2206H	.323"	2.810"	60.0	3,156 fps	53,600 PSI	63.5	3,313 fps	63,300 PSI
	AR2208	.323"	2.810"	61.0	3,137 fps	54,200 PSI	65.0	3,305 fps	63,600 PSI
	AR2209	.323"	2.810"	69.0	3,138 fps	51,600 PSI	73.5C	3,345 fps	63,700 PSI
	AR2213SC	.323"	2.810"	71.0	2,945 fps	44,100 PSI	75.0C	3,115 fps	52,800 PSI
175 GR. SIE SP	Bench Mark 2	.323"	2.855"	51.0	2,743 fps	54,000 PSI	53.7	2,863 fps	62,700 PSI
	Bench Mark 8208	.323"	2.855"	52.6	2,793 fps	54,300 PSI	56.0	2,923 fps	62,800 PSI
	AR2206H	.323"	2.855"	57.5	2,858 fps	54,100 PSI	61.0	3,000 fps	62,900 PSI
	AR2208	.323"	2.855"	58.0	2,862 fps	55,400 PSI	61.0	2,975 fps	62,300 PSI
	AR2209	.323"	2.855"	64.5	2,835 fps	51,100 PSI	68.0C	3,024 fps	63,400 PSI
	AR2213SC	.323"	2.855"	70.0	2,819 fps	51,400 PSI	73.0C	2,960 fps	61,400 PSI
180 GR. NOS BT	Bench Mark 8208	.323"	2.840"	51.5	2,743 fps	54,900 PSI	54.8	2,855 fps	60,800 PSI
	AR2206H	.323"	2.840"	52.5	2,732 fps	55,100 PSI	54.6	2,820 fps	60,300 PSI
	AR2208	.323"	2.840"	55.0	2,770 fps	56,500 PSI	58.0	2,873 fps	62,700 PSI
	AR2209	.323"	2.840"	61.8	2,794 fps	52,500 PSI	65.5	2,957 fps	62,200 PSI
	AR2213SC	.323"	2.840"	62.0	2,776 fps	52,900 PSI	65.8C	2,930 fps	62,800 PSI
195 GR. HDY SP	Bench Mark 8208	.323"	2.855"	50.3	2,617 fps	55,900 PSI	53.5	2,728 fps	62,600 PSI
	AR2206H	.323"	2.855"	53.0	2,648 fps	55,000 PSI	56.0	2,763 fps	62,500 PSI
	AR2208	.323"	2.855"	54.0	2,661 fps	55,500 PSI	57.3	2,782 fps	62,800 PSI
	AR2209	.323"	2.855"	61.0	2,712 fps	54,400 PSI	64.5	2,837 fps	62,300 PSI
	AR2213SC	.323"	2.855"	66.3	2,704 fps	54,600 PSI	70.5C	2,835 fps	63,000 PSI
200 GR. BAR XLC	AR2206H	.323"	2.860"	54.0	2,662 fps	58,400 PSI	57.3	2,739 fps	62,200 PSI
	AR2208	.323"	2.860"	55.5	2,642 fps	55,100 PSI	59.0	2,762 fps	62,300 PSI
	AR2209	.323"	2.860"	63.0	2,689 fps	52,500 PSI	67.0	2,843 fps	62,900 PSI

# RIFLE DATA

<b>325 Winchester Short Magnum</b>				Case: Winchester			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.090"		
				Primer: WINCHESTER LRM					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>220 GR. SFT SP</b>	AR2206H	.323"	2.845"	49.5	2,438 fps	54,800 PSI	52.5	2,556 fps	63,100 PSI
	AR2208	.323"	2.845"	50.8	2,448 fps	55,800 PSI	54.0	2,569 fps	62,400 PSI
	AR2209	.323"	2.845"	58.3	2,518 fps	52,700 PSI	62.0	2,649 fps	62,400 PSI
	AR2213SC	.323"	2.845"	63.0	2,491 fps	52,200 PSI	67.0C	2,638 fps	61,300 PSI
				C = Compressed load					
<b>8mm Remington Magnum</b>				Case: Remington			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.840"		
				Primer: REMINGTON 9 1/2 M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>150 GR. SPR SP</b>	AR2208	.323"	3.550"	71.0	3,253 fps	46,100 CUP	75.0	3,403 fps	52,600 CUP
	AR2209	.323"	3.550"	79.0	3,242 fps	45,700 CUP	83.5	3,401 fps	52,500 CUP
	AR2213SC	.323"	3.550"	88.0	3,268 fps	47,200 CUP	92.0C	3,378 fps	51,500 CUP
<b>175 GR. SIE SP</b>	AR2209	.323"	3.600"	72.0	2,930 fps	45,300 CUP	77.0	3,141 fps	52,300 CUP
	AR2213SC	.323"	3.600"	81.0	3,031 fps	47,300 CUP	86.5	3,162 fps	52,800 CUP
<b>180 GR. BAR TSX</b>	AR2213SC	.323"	3.600"	73.0	2,858 fps	47,400 CUP	79.5	3,035 fps	52,000 CUP
	AR2217	.323"	3.600"	81.0	2,912 fps	46,100 CUP	89.0C	3,099 fps	52,400 CUP
<b>200 GR. NOS PART</b>	AR2209	.323"	3.600"	70.0	2,820 fps	47,300 CUP	74.0	2,950 fps	52,200 CUP
	AR2213SC	.323"	3.600"	77.0	2,819 fps	47,400 CUP	81.5	2,944 fps	52,000 CUP
	AR2217	.323"	3.600"	86.0	2,825 fps	45,300 CUP	89.0C	2,920 fps	48,100 CUP
<b>220 GR. HDY SP</b>	AR2209	.323"	3.600"	70.0	2,690 fps	48,200 CUP	74.0	2,824 fps	52,100 CUP
	AR2213SC	.323"	3.600"	76.0	2,685 fps	46,700 CUP	80.5	2,816 fps	52,100 CUP
	AR2217	.323"	3.600"	85.0	2,726 fps	46,700 CUP	88.0C	2,817 fps	49,300 CUP
				C = Compressed load					
<b>338 Marlin Express</b>				Case: Hornady			Barrel length: 24"		
				Twist: 1:12"			Trim length: 1.910"		
				Primer: WINCHESTER LRM					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>200 GR. HDY FTX</b>	Bench Mark 2	.338"	2.590"	36.0	2,198 fps	42,200 PSI	38.2	2,281 fps	44,800 PSI
	Bench Mark 8208	.338"	2.590"	37.8	2,228 fps	40,700 PSI	40.2	2,322 fps	44,000 PSI
	AR2206H	.338"	2.590"	35.7	2,170 fps	38,900 PSI	38.0	2,309 fps	45,400 PSI
	AR2208	.338"	2.590"	40.0	2,224 fps	41,600 PSI	42.5	2,326 fps	44,600 PSI

# RIFLE DATA

338 Federal				Case: Federal Twist: 1:10" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
160 GR. BAR TTSX	AR2207	.338"	2.840"	40.2	2,756 fps	53,600 PSI	42.8	2,884 fps	61,500 PSI
	AR2219	.338"	2.840"	44.6	2,761 fps	52,400 PSI	48.5C	2,937 fps	61,800 PSI
	Bench Mark 2	.338"	2.840"	45.1	2,725 fps	47,900 PSI	49.0C	2,894 fps	56,200 PSI
	Bench Mark 8208	.338"	2.840"	46.0	2,733 fps	46,500 PSI	50.0C	2,910 fps	54,700 PSI
180 GR. NOS AB	AR2219	.338"	2.810"	41.0	2,514 fps	46,000 PSI	45.5C	2,743 fps	59,700 PSI
	Bench Mark 2	.338"	2.810"	42.0	2,532 fps	47,900 PSI	47.0C	2,768 fps	61,300 PSI
	Bench Mark 8208	.338"	2.810"	44.6	2,641 fps	49,600 PSI	48.5C	2,811 fps	59,900 PSI
	AR2206H	.338"	2.810"	43.0	2,486 fps	42,400 PSI	47.0C	2,682 fps	50,800 PSI
185 GR. BAR TSX	AR2219	.338"	2.800"	39.0	2,447 fps	49,400 PSI	43.3C	2,645 fps	59,700 PSI
	Bench Mark 2	.338"	2.800"	39.0	2,416 fps	48,000 PSI	44.0C	2,637 fps	60,100 PSI
	Bench Mark 8208	.338"	2.800"	44.2	2,601 fps	51,800 PSI	47.0C	2,721 fps	59,500 PSI
	AR2206H	.338"	2.800"	42.0	2,456 fps	45,400 PSI	46.5C	2,690 fps	58,200 PSI
	AR2208	.338"	2.800"	42.0	2,364 fps	43,000 PSI	47.0C	2,607 fps	54,700 PSI
200 GR. HDY SP	AR2219	.338"	2.810"	40.0	2,412 fps	49,500 PSI	44.5	2,596 fps	59,300 PSI
	Bench Mark 2	.338"	2.810"	40.0	2,309 fps	43,200 PSI	45.0C	2,584 fps	59,700 PSI
	Bench Mark 8208	.338"	2.810"	44.0	2,504 fps	50,200 PSI	47.0C	2,657 fps	60,300 PSI
	AR2206H	.338"	2.810"	42.0	2,350 fps	42,600 PSI	47.0C	2,597 fps	55,100 PSI
	AR2208	.338"	2.810"	42.0	2,264 fps	40,400 PSI	47.0C	2,510 fps	52,100 PSI
210 GR. SFT SCIR	AR2219	.338"	2.820"	38.0	2,296 fps	45,900 PSI	42.3C	2,511 fps	59,200 PSI
	Bench Mark 2	.338"	2.820"	38.0	2,277 fps	45,900 PSI	43.0C	2,514 fps	60,800 PSI
	Bench Mark 8208	.338"	2.820"	40.7	2,402 fps	52,000 PSI	43.3C	2,508 fps	59,400 PSI
	AR2206H	.338"	2.820"	40.0	2,281 fps	41,600 PSI	45.0C	2,551 fps	58,100 PSI
	AR2208	.338"	2.820"	41.0	2,248 fps	42,000 PSI	46.0C	2,503 fps	56,500 PSI
215 GR. SIE SP	AR2219	.338"	2.810"	38.0	2,305 fps	50,400 PSI	43.0	2,504 fps	60,300 PSI
	Bench Mark 2	.338"	2.810"	39.0	2,286 fps	47,200 PSI	43.3	2,487 fps	60,000 PSI
	Bench Mark 8208	.338"	2.810"	41.9	2,396 fps	50,500 PSI	44.6	2,519 fps	59,400 PSI
	AR2206H	.338"	2.810"	41.0	2,297 fps	43,500 PSI	46.0C	2,539 fps	57,600 PSI
	AR2208	.338"	2.810"	41.0	2,216 fps	41,000 PSI	46.0C	2,452 fps	53,100 PSI
225 GR. SFT SP	AR2219	.338"	2.750"	37.0	2,204 fps	52,700 PSI	41.0	2,357 fps	60,000 PSI
	Bench Mark 2	.338"	2.750"	38.0	2,150 fps	46,600 PSI	42.8	2,365 fps	59,500 PSI
	Bench Mark 8208	.338"	2.750"	40.5	2,283 fps	52,400 PSI	43.1	2,394 fps	60,500 PSI
	AR2206H	.338"	2.750"	40.0	2,167 fps	42,900 PSI	45.3C	2,445 fps	60,000 PSI
	AR2208	.338"	2.750"	41.0	2,149 fps	43,100 PSI	46.0C	2,410 fps	57,900 PSI

C = Compressed load

# RIFLE DATA

338-06				Case: Winchester			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.484"		
				Primer: CCI 200					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
160 GR. BAR X	AR2219	.338"	3.150"	50.0	2,870 fps	55,200 PSI	55.0	3,074 fps	62,800 PSI
	Bench Mark 2	.338"	3.150"	51.0	2,859 fps	50,300 PSI	56.8	3,103 fps	63,600 PSI
	AR2206H	.338"	3.150"	53.0	2,901 fps	50,600 PSI	58.0C	3,112 fps	62,200 PSI
	AR2208	.338"	3.150"	56.0	2,924 fps	51,200 PSI	60.0C	3,063 fps	57,900 PSI
175 GR. BAR X	AR2219	.338"	3.130"	48.0	2,717 fps	49,700 PSI	52.2	2,902 fps	62,000 PSI
	Bench Mark 2	.338"	3.130"	49.0	2,731 fps	51,700 PSI	53.7	2,921 fps	63,100 PSI
	AR2206H	.338"	3.130"	51.0	2,774 fps	51,200 PSI	56.0	2,981 fps	63,300 PSI
	AR2208	.338"	3.130"	55.0	2,841 fps	55,100 PSI	59.0C	2,982 fps	63,000 PSI
180 GR. NOS BT	AR2219	.338"	3.250"	49.0	2,738 fps	52,000 PSI	53.0	2,916 fps	63,000 PSI
	Bench Mark 2	.338"	3.250"	50.0	2,763 fps	53,700 PSI	54.2	2,925 fps	63,400 PSI
	Bench Mark 8208	.338"	3.250"	48.0	2,681 fps	50,000 PSI	53.3	2,897 fps	63,000 PSI
	AR2206H	.338"	3.250"	51.0	2,735 fps	49,600 PSI	55.0	2,933 fps	62,700 PSI
	AR2208	.338"	3.250"	54.0	2,782 fps	51,000 PSI	58.5C	2,961 fps	62,000 PSI
185 GR. BAR TSX	Bench Mark 8208	.338"	3.250"	47.0	2,596 fps	50,800 PSI	52.0	2,797 fps	62,000 PSI
185 GR. BAR X BT	AR2219	.338"	3.130"	47.0	2,669 fps	52,900 PSI	50.5	2,823 fps	62,400 PSI
	Bench Mark 2	.338"	3.130"	47.0	2,629 fps	50,400 PSI	51.3	2,826 fps	62,700 PSI
	AR2206H	.338"	3.130"	49.0	2,671 fps	51,000 PSI	53.5	2,865 fps	62,900 PSI
	AR2208	.338"	3.130"	52.0	2,723 fps	54,000 PSI	56.0	2,867 fps	62,300 PSI
200 GR. HDY SP	AR2219	.338"	3.310"	47.0	2,583 fps	53,600 PSI	50.9	2,724 fps	61,900 PSI
	Bench Mark 2	.338"	3.310"	48.0	2,569 fps	52,400 PSI	52.2	2,725 fps	61,000 PSI
	Bench Mark 8208	.338"	3.310"	49.0	2,624 fps	55,200 PSI	52.8	2,751 fps	62,000 PSI
	AR2206H	.338"	3.310"	50.0	2,628 fps	52,900 PSI	54.0	2,787 fps	63,300 PSI
	AR2208	.338"	3.310"	52.0	2,622 fps	51,500 PSI	56.5	2,807 fps	63,100 PSI
	AR2209	.338"	3.310"	58.0	2,593 fps	47,800 PSI	62.0C	2,729 fps	54,300 PSI
210 GR. NOS PART	Bench Mark 8208	.338"	3.240"	45.0	2,457 fps	54,300 PSI	48.5	2,598 fps	61,500 PSI
	AR2206H	.338"	3.240"	47.0	2,480 fps	49,900 PSI	51.7	2,685 fps	62,900 PSI
	AR2208	.338"	3.240"	50.0	2,545 fps	52,400 PSI	53.9	2,701 fps	62,400 PSI
	AR2209	.338"	3.240"	58.0	2,598 fps	52,200 PSI	62.0C	2,753 fps	61,800 PSI
215 GR. SIE SBT	Bench Mark 8208	.338"	3.240"	46.0	2,459 fps	52,500 PSI	50.5	2,641 fps	63,400 PSI
	AR2206H	.338"	3.240"	48.0	2,503 fps	51,200 PSI	51.9	2,675 fps	62,600 PSI
	AR2208	.338"	3.240"	50.0	2,510 fps	50,200 PSI	54.5	2,700 fps	62,400 PSI
	AR2209	.338"	3.240"	58.0	2,573 fps	50,600 PSI	62.0C	2,727 fps	59,900 PSI
225 GR. SPR SPBT	Bench Mark 8208	.338"	3.240"	44.0	2,362 fps	52,700 PSI	48.3	2,532 fps	62,500 PSI
	AR2206H	.338"	3.240"	46.0	2,410 fps	51,200 PSI	49.8	2,577 fps	63,000 PSI
	AR2208	.338"	3.240"	48.0	2,441 fps	52,100 PSI	52.0	2,599 fps	62,700 PSI
	AR2209	.338"	3.240"	55.0	2,481 fps	52,100 PSI	59.5C	2,649 fps	62,700 PSI



# RIFLE DATA

338-06				Case: Winchester Twist: 1:10" Primer: CCI 200			Barrel length: 24" Trim length: 2.484"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. HDY SP	AR2208	.338"	3.300"	46.0	2,248 fps	51,300 PSI	50.0	2,405 fps	62,100 PSI
	AR2209	.338"	3.300"	55.0	2,366 fps	51,700 PSI	59.8	2,540 fps	63,400 PSI
				C = Compressed load					
338 Ruger Compact Magnum				Case: Homady Twist: 1:10" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
160 GR. BAR TTSX	Bench Mark 8208	.338"	2.830"	52.4	2,848 fps	45,800 PSI	57.0C	3,101 fps	62,900 PSI
	AR2206H	.338"	2.830"	52.0	2,858 fps	50,200 PSI	58.0C	3,117 fps	63,100 PSI
	AR2208	.338"	2.830"	53.0	2,771 fps	46,800 PSI	59.5C	3,067 fps	62,200 PSI
180 GR. NOS AB	Bench Mark 8208	.338"	2.830"	50.8	2,769 fps	52,600 PSI	54.6	2,919 fps	61,900 PSI
	AR2206H	.338"	2.830"	50.0	2,736 fps	52,200 PSI	55.0C	2,923 fps	61,200 PSI
	AR2208	.338"	2.830"	51.0	2,682 fps	50,000 PSI	56.7C	2,909 fps	62,200 PSI
185 GR. BAR TSX	Bench Mark 8208	.038"	2.800"	51.2	2,732 fps	53,400 PSI	54.5C	2,868 fps	62,700 PSI
	AR2206H	.338"	2.800"	50.0	2,649 fps	49,400 PSI	54.8C	2,852 fps	60,600 PSI
	AR2208	.338"	2.800"	51.0	2,602 fps	48,000 PSI	57.0C	2,867 fps	62,900 PSI
200 GR. HDY SP	Bench Mark 8208	.338"	2.830"	50.8	2,655 fps	55,300 PSI	54.0	2,759 fps	60,900 PSI
	AR2206H	.338"	2.830"	50.0	2,627 fps	55,400 PSI	55.3	2,803 fps	63,600 PSI
	AR2208	.338"	2.830"	51.0	2,572 fps	51,300 PSI	57.0C	2,798 fps	64,000 PSI
210 GR. SFT SCIR	AR2206H	.338"	2.830"	47.0	2,514 fps	54,200 PSI	52.0C	2,665 fps	60,800 PSI
	AR2208	.338"	2.830"	48.0	2,457 fps	49,800 PSI	53.0C	2,662 fps	62,300 PSI
215 GR. SIE SPBT	Bench Mark 8208	.338"	2.830"	48.4	2,540 fps	57,600 PSI	51.0	2,620 fps	61,500 PSI
	AR2206H	.338"	2.830"	46.0	2,460 fps	51,600 PSI	51.0	2,639 fps	61,900 PSI
	AR2208	.338"	2.830"	48.0	2,465 fps	52,000 PSI	53.5C	2,658 fps	62,900 PSI
225 GR. HDY IB	Bench Mark 8208	.338"	2.830"	48.2	2,465 fps	54,200 PSI	51.3	2,587 fps	62,600 PSI
	AR2206H	.338"	2.830"	47.0	2,465 fps	56,800 PSI	52.3	2,619 fps	63,300 PSI
	AR2208	.338"	2.830"	48.0	2,403 fps	50,500 PSI	53.3	2,601 fps	62,200 PSI
250 GR. SFT AF/SS	Bench Mark 8208	.338"	2.730"	44.9	2,258 fps	56,500 PSI	47.3	2,321 fps	59,400 PSI
	AR2206H	.338"	2.730"	41.0	2,158 fps	50,500 PSI	45.8C	2,355 fps	63,100 PSI
	AR2208	.338"	2.730"	44.0	2,192 fps	51,500 PSI	48.8C	2,352 fps	61,400 PSI
				C = Compressed load					

# RIFLE DATA

338 Winchester Magnum				Case: Winchester			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.490"		
				Primer: WINCHESTER LRM					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
160 GR. BAR TTSX	Bench Mark 8208	.338"	3.325"	58.0	3,023 fps	47,000 CUP	64.0	3,198 fps	51,900 CUP
	AR2206H	.338"	3.325"	60.0	3,057 fps	45,000 CUP	67.0	3,271 fps	51,600 CUP
	AR2208	.338"	3.325"	62.0	2,984 fps	41,600 CUP	68.5	3,196 fps	51,100 CUP
180 GR. NOS BT	AR2206H	.338"	3.340"	58.0	2,893 fps	45,100 CUP	64.0	3,066 fps	52,300 CUP
	AR2208	.338"	3.340"	57.0	2,871 fps	45,500 CUP	63.5	3,087 fps	53,200 CUP
	AR2209	.338"	3.340"	69.0	2,928 fps	41,200 CUP	74.5	3,157 fps	52,200 CUP
	AR2213SC	.338"	3.340"	70.0	2,776 fps	35,200 CUP	78.0C	3,067 fps	49,100 CUP
185 GR. BAR TSX	AR2206H	.338"	3.290"	56.0	2,764 fps	46,600 CUP	59.5	2,901 fps	52,300 CUP
	AR2208	.338"	3.290"	60.0	2,831 fps	47,200 CUP	65.0	3,013 fps	52,900 CUP
	AR2209	.338"	3.290"	69.6	2,896 fps	47,500 CUP	74.0C	3,048 fps	52,800 CUP
200 GR. SPR SP	AR2206H	.338"	3.300"	56.0	2,702 fps	44,700 CUP	62.0	2,877 fps	52,600 CUP
	AR2208	.338"	3.300"	53.0	2,597 fps	39,100 CUP	58.5	2,805 fps	51,100 CUP
	AR2209	.338"	3.300"	65.0	2,695 fps	39,900 CUP	72.5	2,969 fps	52,200 CUP
	AR2213SC	.338"	3.300"	70.0	2,703 fps	41,300 CUP	77.5C	2,965 fps	52,400 CUP
210 GR. NOS PART	AR2206H	.338"	3.280"	54.0	2,609 fps	44,100 CUP	60.0	2,788 fps	53,000 CUP
	AR2208	.338"	3.280"	53.0	2,577 fps	41,800 CUP	58.5	2,784 fps	52,500 CUP
	AR2209	.338"	3.280"	63.0	2,618 fps	41,500 CUP	70.0	2,855 fps	51,800 CUP
	AR2213SC	.338"	3.280"	68.0	2,648 fps	42,600 CUP	75.5C	2,888 fps	52,300 CUP
225 GR. HDY SP	AR2206H	.338"	3.340"	53.0	2,505 fps	43,000 CUP	59.0	2,688 fps	52,400 CUP
	AR2208	.338"	3.340"	52.0	2,481 fps	41,500 CUP	57.5	2,680 fps	52,700 CUP
	AR2209	.338"	3.340"	63.0	2,571 fps	41,100 CUP	69.5	2,785 fps	51,700 CUP
	AR2213SC	.338"	3.340"	67.0	2,542 fps	40,200 CUP	74.5C	2,792 fps	52,000 CUP
250 GR. HDY SP	AR2209	.338"	3.340"	61.0	2,448 fps	42,000 CUP	67.5	2,657 fps	51,900 CUP
	AR2213SC	.338"	3.340"	64.0	2,424 fps	41,900 CUP	71.5C	2,655 fps	52,300 CUP
	AR2217	.338"	3.340"	72.0	2,512 fps	41,500 CUP	76.0C	2,622 fps	46,500 CUP
265 GR. BAR TTSX BT	AR2209	.338"	3.450"	55.8	2,287 fps	48,400 CUP	59.4	2,409 fps	52,200 CUP
	AR2213SC	.338"	3.450"	60.3	2,236 fps	44,000 CUP	67.0C	2,434 fps	52,500 CUP
275 GR. SPR SP	AR2209	.338"	3.340"	57.0	2,259 fps	41,100 CUP	63.5	2,447 fps	52,100 CUP
	AR2213SC	.338"	3.340"	62.0	2,304 fps	42,600 CUP	69.0	2,502 fps	52,300 CUP
	AR2217	.338"	3.340"	70.0	2,402 fps	43,400 CUP	76.0C	2,564 fps	51,100 CUP
300 GR. SIE HPBT	AR2209	.338"	3.340"	56.0	2,202 fps	44,000 CUP	61.5	2,362 fps	52,600 CUP
	AR2213SC	.338"	3.340"	63.0	2,255 fps	45,900 CUP	69.0C	2,422 fps	52,800 CUP
	AR2217	.338"	3.340"	66.0	2,241 fps	42,200 CUP	70.0C	2,347 fps	46,900 CUP

C = Compressed load

# RIFLE DATA

340 Weatherby Magnum				Case: Weatherby Twist: 1:10" Primer: FEDERAL 215			Barrel length: 26" Trim length: 2.815"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
200 GR. SPR SP	AR2209	.338"	3.560"	77.0	2,777 fps	-	80.0	2,994 fps	-
	AR2213SC	.338"	3.560"	85.0	2,837 fps	-	90.0	3,040 fps	-
225 GR. HDY SP	AR2209	.338"	3.655"	75.0	2,707 fps	-	78.0	2,866 fps	-
	AR2213SC	.338"	3.655"	81.0	2,620 fps	-	86.0	2,889 fps	-
250 GR. SIE SPBT	AR2209	.338"	3.560"	73.0	2,570 fps	-	76.0	2,724 fps	-
	AR2213SC	.338"	3.560"	78.0	2,487 fps	-	83.0	2,784 fps	-
275 GR. SPR SP	AR2209	.338"	3.560"	71.0	2,460 fps	-	74.0	2,575 fps	-
	AR2213SC	.338"	3.560"	75.0	2,377 fps	-	80.0	2,569 fps	-
338 Lapua Magnum				Case: Norma Twist: 1:9" Primer: FEDERAL 215M			Barrel length: 24" Trim length: 2.714"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
160 GR. BAR TTSX	AR2209	.338"	3.565"	89.3	3,348 fps	54,100 PSI	95.0	3,511 fps	61,800 PSI
	AR2213SC	.338"	3.565"	98.5	3,290 fps	52,900 PSI	104.8C	3,472 fps	61,200 PSI
185 GR. BAR TSX	AR2209	.338"	3.530"	85.0	3,120 fps	53,200 PSI	90.4	3,311 fps	63,400 PSI
	AR2213SC	.338"	3.530"	93.7	3,085 fps	52,500 PSI	100.0	3,281 fps	61,500 PSI
	AR2217	.338"	3.530"	100.0	3,051 fps	49,300 PSI	106.0C	3,218 fps	57,300 PSI
200 GR. SPR SP	AR2209	.338"	3.525"	79.0	2,925 fps	45,900 CUP	85.5	3,099 fps	52,500 CUP
	AR2213SC	.338"	3.525"	83.0	2,855 fps	44,900 CUP	92.0	3,086 fps	53,200 CUP
	AR2217	.338"	3.525"	92.0	2,854 fps	42,300 CUP	102.0C	3,116 fps	52,500 CUP
	AR2225	.338"	3.525"	96.0	2,928 fps	43,700 CUP	104.0C	3,189 fps	52,600 CUP
210 GR. NOS PART	AR2209	.338"	3.525"	76.0	2,834 fps	47,000 CUP	82.0	3,005 fps	52,200 CUP
	AR2213SC	.338"	3.525"	80.0	2,735 fps	44,600 CUP	89.0	3,006 fps	53,000 CUP
	AR2217	.338"	3.525"	90.0	2,800 fps	42,900 CUP	99.5	3,052 fps	52,500 CUP
	AR2225	.338"	3.525"	92.0	2,846 fps	42,100 CUP	102.0C	3,142 fps	52,600 CUP
215 GR. SIE SPBT	AR2209	.338"	3.550"	76.0	2,791 fps	45,000 CUP	84.0	3,015 fps	52,800 CUP
	AR2213SC	.338"	3.550"	82.0	2,763 fps	44,500 CUP	91.0	2,997 fps	53,000 CUP
	AR2217	.338"	3.550"	92.0	2,809 fps	43,500 CUP	102.0C	3,068 fps	53,000 CUP
	AR2225	.338"	3.550"	94.0	2,849 fps	43,700 CUP	104.0C	3,125 fps	51,900 CUP
225 GR. NOS PART	AR2209	.338"	3.550"	74.0	2,715 fps	45,200 CUP	82.5	2,936 fps	52,800 CUP
	AR2213SC	.338"	3.550"	80.0	2,699 fps	44,000 CUP	89.6	2,918 fps	52,900 CUP
	AR2217	.338"	3.550"	91.0	2,713 fps	42,100 CUP	101.0C	2,995 fps	53,100 CUP
	AR2225	.338"	3.550"	92.0	2,744 fps	41,200 CUP	102.0C	3,040 fps	52,300 CUP

# RIFLE DATA

338 Lapua Magnum				Case: Norma			Barrel length: 24"		
				Twist: 1:9"			Trim length: 2.714"		
				Primer: FEDERAL 215M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. HDY SP	AR2209	.338"	3.550"	74.0	2,615 fps	48,300 CUP	78.0	2,742 fps	52,300 CUP
	AR2213SC	.338"	3.550"	79.0	2,600 fps	46,100 CUP	85.0	2,740 fps	52,200 CUP
	AR2217	.338"	3.550"	88.0	2,567 fps	41,400 CUP	98.0C	2,838 fps	52,800 CUP
	AR2225	.338"	3.550"	90.0	2,620 fps	43,200 CUP	98.0C	2,853 fps	52,000 CUP
265 GR. BAR TTSX BT	AR2213SC	.338"	3.685"	74.6	2,518 fps	54,400 PSI	79.4	2,642 fps	61,600 PSI
	AR2217	.338"	3.685"	77.7	2,510 fps	52,800 PSI	83.6	2,656 fps	61,100 PSI
	AR2225	.338"	3.685"	76.4	2,483 fps	50,400 PSI	83.0	2,660 fps	60,600 PSI
275 GR. SFT SP	AR2213SC	.338"	3.460"	71.0	2,349 fps	42,800 CUP	79.0	2,572 fps	52,800 CUP
	AR2217	.338"	3.460"	83.0	2,444 fps	43,500 CUP	91.5C	2,648 fps	52,600 CUP
	AR2225	.338"	3.460"	80.0	2,421 fps	41,800 CUP	89.0	2,671 fps	52,700 CUP
300 GR. SIE HPBT	AR2213SC	.338"	3.600"	71.0	2,307 fps	44,400 CUP	79.0	2,511 fps	53,100 CUP
	AR2217	.338"	3.600"	83.0	2,383 fps	43,200 CUP	92.0C	2,590 fps	53,000 CUP
	AR2225	.338"	3.600"	85.0	2,376 fps	41,100 CUP	94.0C	2,654 fps	53,400 CUP
				C = Compressed load					
338 Remington Ultra Mag				Case: Remington			Barrel length: 24"		
				Twist: 1:10"			Trim length: 2.750"		
				Primer: REMINGTON 9 1/2M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
185 GR. BAR TSX	AR2209	.338"	3.550"	82.0	3,037 fps	51,400 PSI	89.0	3,274 fps	63,800 PSI
	AR2213SC	.338"	3.550"	91.0	3,040 fps	52,000 PSI	97.0	3,232 fps	62,100 PSI
	AR2217	.338"	3.550"	96.0	3,068 fps	52,300 PSI	102.0C	3,241 fps	61,500 PSI
200 GR. SPR SP	AR2209	.338"	3.590"	84.0	3,011 fps	55,400 PSI	89.5	3,156 fps	63,000 PSI
	AR2213SC	.338"	3.590"	91.0	2,979 fps	54,500 PSI	96.5	3,138 fps	63,000 PSI
	AR2217	.338"	3.590"	96.0	2,944 fps	48,300 PSI	102.0C	3,127 fps	58,600 PSI
210 GR. NOS PART	AR2209	.338"	3.540"	82.0	2,941 fps	53,700 PSI	87.0	3,107 fps	62,900 PSI
	AR2213SC	.338"	3.540"	89.0	2,913 fps	54,600 PSI	94.5	3,084 fps	63,100 PSI
	AR2217	.338"	3.540"	96.0	2,952 fps	51,200 PSI	102.0C	3,153 fps	62,900 PSI
215 GR. SIE SPBT	AR2209	.338"	3.590"	83.0	2,940 fps	54,100 PSI	88.0	3,088 fps	62,700 PSI
	AR2213SC	.338"	3.590"	89.0	2,881 fps	51,800 PSI	94.5	3,057 fps	62,800 PSI
	AR2217	.338"	3.590"	96.0	2,947 fps	51,800 PSI	102.0C	3,127 fps	62,800 PSI
225 GR. NOS PART	AR2209	.338"	3.550"	81.0	2,832 fps	54,200 PSI	86.0	2,976 fps	62,600 PSI
	AR2213SC	.338"	3.550"	88.0	2,825 fps	54,400 PSI	93.5	2,977 fps	63,000 PSI
	AR2217	.338"	3.550"	94.0	2,860 fps	51,400 PSI	100.0C	3,058 fps	63,000 PSI
	AR2225	.338"	3.550"	97.0	2,662 fps	52,800 PSI	103.0C	3,055 fps	61,100 PSI

# RIFLE DATA

338 Remington Ultra Mag				Case: Remington Twist: 1:10" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.750"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. HDY SP	AR2209	.338"	3.580"	78.0	2,698 fps	55,700 PSI	83.0	2,820 fps	63,000 PSI
	AR2213SC	.338"	3.580"	84.0	2,662 fps	50,000 PSI	90.0	2,858 fps	62,500 PSI
	AR2217	.338"	3.580"	92.0	2,756 fps	52,400 PSI	98.0C	2,923 fps	62,400 PSI
	AR2225	.338"	3.580"	95.0	2,798 fps	54,600 PSI	101.0C	2,964 fps	64,500 PSI
275 GR. SFT SP	AR2209	.338"	3.490"	73.0	2,507 fps	54,800 PSI	78.0	2,650 fps	62,900 PSI
	AR2213SC	.338"	3.490"	81.0	2,570 fps	55,000 PSI	86.0	2,693 fps	62,500 PSI
	AR2217	.338"	3.490"	86.0	2,602 fps	54,800 PSI	91.0C	2,729 fps	62,700 PSI
	AR2225	.338"	3.490"	88.0	2,649 fps	57,900 PSI	94.0C	2,764 fps	63,100 PSI
300 GR. SIE HPBT	AR2217	.338"	3.580"	82.0	2,443 fps	51,900 PSI	88.5C	2,619 fps	62,500 PSI
	AR2225	.338"	3.580"	84.0	2,501 fps	53,900 PSI	90.5C	2,662 fps	62,200 PSI
				C = Compressed load					
338-378 Weatherby Magnum				Case: Weatherby Twist: 1:10" Primer: FEDERAL 215M			Barrel length: 26" Trim length: 2.903"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
160 GR. BAR XFB	AR2209	.338"	3.650"	99.0	3,387 fps	46,600 CUP	106.0	3,610 fps	53,600 CUP
	AR2213SC	.338"	3.650"	107.0	3,357 fps	47,200 CUP	114.0	3,583 fps	53,500 CUP
	AR2217	.338"	3.650"	116.0	3,374 fps	46,100 CUP	120.0C	3,478 fps	49,200 CUP
175 GR. BAR XFB	AR2209	.338"	3.700"	96.0	3,265 fps	46,500 CUP	102.0	3,478 fps	54,000 CUP
	AR2213SC	.338"	3.700"	103.0	3,200 fps	46,800 CUP	110.0	3,399 fps	53,600 CUP
	AR2217	.338"	3.700"	113.0	3,250 fps	45,600 CUP	120.0C	3,413 fps	51,200 CUP
185 GR. BAR XBTC	AR2209	.338"	3.700"	94.0	3,183 fps	45,600 CUP	100.5	3,368 fps	53,800 CUP
	AR2213SC	.338"	3.700"	102.0	3,212 fps	48,600 CUP	109.0	3,399 fps	54,000 CUP
	AR2217	.338"	3.700"	113.0	3,264 fps	47,700 CUP	120.0C	3,435 fps	53,100 CUP
	AR2225	.338"	3.700"	119.0	3,331 fps	45,900 CUP	123.0C	3,432 fps	48,800 CUP
200 GR. SPR SP	AR2209	.338"	3.740"	92.0	3,046 fps	46,000 CUP	98.5	3,260 fps	54,100 CUP
	AR2213SC	.338"	3.740"	98.0	2,977 fps	43,200 CUP	105.0	3,217 fps	53,700 CUP
	AR2217	.338"	3.740"	110.0	3,138 fps	46,200 CUP	117.0C	3,350 fps	54,000 CUP
	AR2225	.338"	3.740"	116.0	3,227 fps	46,300 CUP	123.0C	3,400 fps	51,400 CUP
210 GR. NOS PART	AR2209	.338"	3.740"	91.0	3,011 fps	47,400 CUP	96.5	3,176 fps	54,000 CUP
	AR2213SC	.338"	3.740"	97.0	2,955 fps	46,500 CUP	103.0	3,154 fps	54,000 CUP
	AR2217	.338"	3.740"	106.0	2,981 fps	44,500 CUP	113.0	3,192 fps	53,500 CUP
	AR2225	.338"	3.740"	116.0	3,184 fps	48,000 CUP	123.0C	3,362 fps	54,000 CUP

# RIFLE DATA

<b>338-378 Weatherby Magnum</b>				<b>Case: Weatherby</b>			<b>Barrel length: 26"</b>		
				<b>Twist: 1:10"</b>			<b>Trim length: 2.903"</b>		
				<b>Primer: FEDERAL 215M</b>					
				<b>Start loads</b>			<b>Maximum loads</b>		
<b>Bullet</b>	<b>Powder</b>	<b>Bullet Diam.</b>	<b>C.O.L.</b>	<b>Grs.</b>	<b>Velocity</b>	<b>Pressure</b>	<b>Grs.</b>	<b>Velocity</b>	<b>Pressure</b>
<b>215 GR. SIE SPBT</b>	AR2209	.338"	3.740"	90.0	3,025 fps	49,700 CUP	96.0	3,143 fps	53,900 CUP
	AR2213SC	.338"	3.740"	98.0	2,979 fps	48,300 CUP	104.0	3,140 fps	53,800 CUP
	AR2217	.338"	3.740"	105.0	2,958 fps	45,700 CUP	112.0	3,155 fps	54,000 CUP
	AR2225	.338"	3.740"	115.0	3,149 fps	46,800 CUP	122.0C	3,331 fps	53,900 CUP
<b>225 GR. NOS PART</b>	AR2209	.338"	3.700"	90.0	2,974 fps	48,000 CUP	95.5	3,100 fps	53,900 CUP
	AR2213SC	.338"	3.700"	98.0	2,948 fps	47,500 CUP	104.0	3,107 fps	54,000 CUP
	AR2217	.338"	3.700"	104.0	2,940 fps	46,000 CUP	111.0	3,112 fps	53,800 CUP
	AR2225	.338"	3.700"	112.0	3,039 fps	45,900 CUP	119.0C	3,244 fps	54,300 CUP
<b>250 GR. HDY SP</b>	AR2213SC	.338"	3.660"	95.0	2,785 fps	46,500 CUP	101.0	2,951 fps	53,800 CUP
	AR2217	.338"	3.660"	102.0	2,795 fps	43,900 CUP	109.0	2,989 fps	53,900 CUP
	AR2225	.338"	3.660"	108.0	2,881 fps	43,800 CUP	115.0C	3,072 fps	52,300 CUP
<b>265 GR. BAR TTSX BT</b>	AR2213SC	.338"	3.900"	94.0	2,802 fps	49,000 CUP	99.0	2,898 fps	52,300 CUP
	AR2217	.338"	3.900"	96.5	2,701 fps	42,200 CUP	105.0	2,932 fps	53,100 CUP
	AR2225	.338"	3.900"	95.4	2,680 fps	41,100 CUP	106.0C	2,970 fps	51,200 CUP
<b>275 GR. SFT SP</b>	AR2213SC	.338"	3.640"	92.0	2,666 fps	48,000 CUP	98.0	2,800 fps	53,900 CUP
	AR2217	.338"	3.640"	100.0	2,688 fps	45,100 CUP	106.0	2,837 fps	53,700 CUP
	AR2225	.338"	3.640"	104.0	2,707 fps	41,600 CUP	110.5C	2,934 fps	52,500 CUP
	AR2218	.338"	3.640"	116.0	2,752 fps	46,000 CUP	120.0C	2,843 fps	51,000 CUP
<b>300 GR. SIE HPBT</b>	AR2213SC	.338"	3.750"	89.0	2,596 fps	48,800 CUP	95.0	2,718 fps	54,000 CUP
	AR2217	.338"	3.750"	92.0	2,506 fps	41,300 CUP	101.5	2,747 fps	54,000 CUP
	AR2225	.338"	3.750"	100.0	2,604 fps	41,900 CUP	106.5	2,818 fps	53,000 CUP
				C = Compressed load					
<b>348 Winchester</b>				<b>Case: Winchester</b>			<b>Barrel length: 24"</b>		
				<b>Twist: 1:12"</b>			<b>Trim length: 2.245"</b>		
				<b>Primer: CCI 200</b>					
				<b>Start loads</b>			<b>Maximum loads</b>		
<b>Bullet</b>	<b>Powder</b>	<b>Bullet Diam.</b>	<b>C.O.L.</b>	<b>Grs.</b>	<b>Velocity</b>	<b>Pressure</b>	<b>Grs.</b>	<b>Velocity</b>	<b>Pressure</b>
<b>200 GR. HDY JFP</b>	Bench Mark 2	.348"	2.810"	48.0	2,402 fps	30,700 CUP	52.0	2,552 fps	36,200 CUP
	Bench Mark 8208	.348"	2.810"	48.0	2,418 fps	30,900 CUP	53.0	2,579 fps	36,500 CUP
	AR2206H	.348"	2.810"	51.0	2,419 fps	29,700 CUP	55.0	2,591 fps	35,500 CUP
	AR2208	.348"	2.810"	53.0	2,389 fps	29,300 CUP	58.0	2,605 fps	35,800 CUP
	AR2209	.348"	2.810"	61.0	2,382 fps	27,500 CUP	66.0	2,630 fps	35,900 CUP
	AR2213SC	.348"	2.810"	65.0	2,316 fps	26,500 CUP	68.5C	2,467 fps	31,600 CUP



# RIFLE DATA

348 Winchester				Case: Winchester Twist: 1:12" Primer: CCI 200			Barrel length: 24" Trim length: 2.245"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. BAR FN	Bench Mark 2	.348"	2.760"	44.0	2,087 fps	31,300 CUP	47.5	2,221 fps	35,800 CUP
	AR2206H	.348"	2.760"	45.0	2,074 fps	29,200 CUP	50.0	2,278 fps	36,500 CUP
	AR2208	.348"	2.760"	47.0	2,086 fps	28,800 CUP	52.0	2,283 fps	36,100 CUP
	AR2209	.348"	2.760"	55.0	2,157 fps	31,000 CUP	59.5	2,328 fps	35,700 CUP
	AR2213SC	.348"	2.760"	60.0	2,117 fps	29,800 CUP	65.0C	2,299 fps	35,800 CUP
				C = Compressed load					
357 Magnum				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SPM			Barrel length: 18.5" Trim length: 1.285"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
110 GR. HDY XTP	AP70N	.357"	1.590"	7.5	1,585 fps	35,100 CUP	8.0	1,670 fps	40,000 CUP
	AR2205	.357"	1.590"	18.9	2,072 fps	29,600 CUP	21.0	2,233 fps	35,500 CUP
125 GR. HDY XTP	AP70N	.357"	1.590"	7.1	1,423 fps	34,900 CUP	7.6	1,526 fps	39,600 CUP
	AR2205	.357"	1.590"	18.0	1,955 fps	34,400 CUP	20.0	2,122 fps	42,000 CUP
140 GR. HDY XTP	AP70N	.357"	1.590"	6.5	1,282 fps	34,800 CUP	7.0	1,356 fps	40,200 CUP
	AR2205	.357"	1.590"	16.2	1,798 fps	33,100 CUP	18.0	1,930 fps	42,600 CUP
150 GR. NOS JFP	AP70N	.357"	1.590"	6.2	1,096 fps	32,800 CUP	6.7	1,323 fps	39,900 CUP
	AR2205	.357"	1.590"	15.0	1,663 fps	33,100 CUP	16.5	1,775 fps	36,700 CUP
158 GR. CAST LSWC	AP50N	.358"	1.610"	-	-	-	5.3	1,200 fps	32,900 PSI
	AP70N	.358"	1.610"	-	-	-	6.5	1,345 fps	34,200 PSI
	AR2205	.358"	1.610"	10.5	1,288 fps	15,400 CUP	11.5	1,382 fps	17,800 CUP
158 GR. HDY XTP	AP70N	.357"	1.580"	5.8	1,059 fps	32,100 CUP	6.3	1,147 fps	39,300 CUP
	AR2205	.357"	1.580"	14.5	1,578 fps	34,600 CUP	16.0	1,668 fps	42,600 CUP
170 GR. SIE JHC	AR2205	.357"	1.580"	13.0	1,442 fps	32,300 CUP	14.5	1,535 fps	41,200 CUP
180 GR. NOS PART	AR2205	.357"	1.575"	12.7	1,185 fps	36,900 CUP	13.7	1,325 fps	40,900 CUP

# RIFLE DATA

35 Remington				Case: Remington Twist: 1:16" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 1.910"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. SPR FN	AR2207	.358"	2.470"	28.0	1,971 fps	28,600 CUP	32.0	2,172 fps	33,000 CUP
	AR2219	.358"	2.470"	31.0	1,901 fps	28,200 CUP	35.0	2,104 fps	33,100 CUP
	Bench Mark 2	.358"	2.470"	32.5	1,865 fps	29,300 CUP	35.5	2,034 fps	32,300 CUP
	Bench Mark 8208	.358"	2.470"	33.0	1,915 fps	30,900 CUP	37.0	2,074 fps	33,900 CUP
	AR2206H	.358"	2.470"	35.0	1,991 fps	27,500 CUP	39.0	2,232 fps	33,100 CUP
	AR2208	.358"	2.470"	37.0	1,972 fps	27,200 CUP	40.5	2,196 fps	32,500 CUP
200 GR. HDY FTX	Bench Mark 8208	.358"	2.540"	33.2	1,799 fps	28,800 CUP	35.3	1,932 fps	32,000 CUP
	AR2206H	.358"	2.540"	33.8	1,839 fps	30,000 CUP	36.0C	1,959 fps	31,900 CUP
	AR2208	.358"	2.540"	36.0	1,845 fps	29,800 CUP	38.3C	1,963 fps	32,000 CUP
200 GR. HDY RN	AR2207	.358"	2.510"	27.0	1,816 fps	26,700 CUP	30.5	1,999 fps	31,700 CUP
	AR2219	.358"	2.510"	31.0	1,866 fps	28,500 CUP	33.8	1,987 fps	33,100 CUP
	Bench Mark 2	.358"	2.510"	32.5	1,847 fps	29,400 CUP	35.5	1,984 fps	32,600 CUP
	Bench Mark 8208	.358"	2.510"	33.0	1,872 fps	31,000 CUP	36.6	1,997 fps	33,600 CUP
	AR2206H	.358"	2.510"	35.0	1,920 fps	26,100 CUP	38.5	2,110 fps	32,300 CUP
	AR2208	.358"	2.510"	36.0	1,966 fps	28,800 CUP	39.5	2,139 fps	33,300 CUP
220 GR. SPR FN	AR2207	.358"	2.470"	26.0	1,744 fps	30,400 CUP	29.0	1,867 fps	33,400 CUP
	AR2219	.358"	2.470"	29.0	1,692 fps	26,100 CUP	32.5	1,870 fps	32,600 CUP
	Bench Mark 2	.358"	2.470"	31.0	1,725 fps	30,600 CUP	34.0	1,865 fps	33,300 CUP
	Bench Mark 8208	.358"	2.470"	31.0	1,679 fps	30,500 CUP	34.8	1,932 fps	34,500 CUP
	AR2206H	.358"	2.470"	33.0	1,848 fps	29,000 CUP	36.3	2,010 fps	33,600 CUP
	AR2208	.358"	2.470"	34.0	1,803 fps	27,800 CUP	38.0	1,998 fps	33,300 CUP
				C = Compressed load					
356 Winchester				Case: Winchester Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 20" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. SPR FP	AR2205	.358"	2.565"	24.0	1,878 fps	-	30.0	2,238 fps	-
	AR2207	.358"	2.565"	40.0	2,441 fps	-	43.0	2,600 fps	-
	AR2219	.358"	2.565"	44.0	2,360 fps	-	47.0	2,552 fps	-
	AR2206H	.358"	2.565"	46.0	2,360 fps	-	49.0	2,535 fps	-
200 GR. SIE RN	AR2207	.358"	2.550"	37.0	2,201 fps	-	40.0	2,383 fps	-
	AR2219	.358"	2.550"	41.0	2,199 fps	-	44.0	2,340 fps	-
	AR2206H	.358"	2.550"	43.0	2,170 fps	-	46.0	2,338 fps	-

# RIFLE DATA

356 Winchester				Case: Winchester Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 20" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. HDY RN	AR2207	.358"	2.775"	34.0	1,879 fps	-	37.0	2,133 fps	-
	AR2219	.358"	2.775"	38.0	1,866 fps	-	41.0	2,106 fps	-
	AR2206H	.358"	2.775"	40.0	1,919 fps	-	43.0	2,128 fps	-
358 Winchester				Case: Winchester Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 26" Trim length: 2.005"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. BAR X	AR2219	.358"	2.700"	40.0	2,380 fps	46,900 CUP	44.0	2,522 fps	49,700 CUP
	Bench Mark 2	.358"	2.700"	43.0	2,419 fps	44,900 CUP	47.0	2,574 fps	50,300 CUP
	AR2206H	.358"	2.700"	44.0	2,408 fps	41,500 CUP	48.0C	2,603 fps	49,900 CUP
	AR2208	.358"	2.700"	47.0	2,442 fps	42,500 CUP	51.0C	2,594 fps	48,200 CUP
200 GR. HDY SP	AR2219	.358"	2.650"	40.0	2,306 fps	45,400 CUP	44.8	2,491 fps	49,400 CUP
	Bench Mark 2	.358"	2.650"	42.0	2,319 fps	42,700 CUP	46.2	2,494 fps	50,000 CUP
	AR2206H	.358"	2.650"	44.0	2,316 fps	40,200 CUP	48.0C	2,519 fps	49,800 CUP
	AR2208	.358"	2.650"	47.0	2,376 fps	41,100 CUP	51.0C	2,527 fps	47,900 CUP
220 GR. SPR FN SP	AR2219	.358"	2.560"	40.0	2,243 fps	45,700 CUP	44.0	2,371 fps	49,300 CUP
	Bench Mark 2	.358"	2.560"	41.0	2,184 fps	39,400 CUP	45.0	2,361 fps	49,500 CUP
	AR2206H	.358"	2.560"	43.0	2,227 fps	41,500 CUP	47.5C	2,421 fps	50,200 CUP
	AR2208	.358"	2.560"	46.0	2,226 fps	42,800 CUP	50.0C	2,445 fps	50,300 CUP
225 GR. SIE BTSP	AR2219	.358"	2.770"	41.0	2,275 fps	46,000 CUP	43.0	2,372 fps	50,300 CUP
	Bench Mark 2	.358"	2.770"	40.0	2,211 fps	44,200 CUP	44.0	2,354 fps	50,600 CUP
	AR2206H	.358"	2.770"	42.0	2,223 fps	41,700 CUP	46.5	2,422 fps	50,300 CUP
	AR2208	.358"	2.770"	45.0	2,254 fps	40,700 CUP	49.0	2,451 fps	50,600 CUP
250 GR. NOS PART	AR2219	.358"	2.760"	38.0	2,095 fps	43,500 CUP	42.5	2,260 fps	49,900 CUP
	Bench Mark 2	.358"	2.760"	38.0	2,030 fps	39,800 CUP	42.0	2,176 fps	49,400 CUP
	AR2206H	.358"	2.760"	40.0	2,057 fps	40,400 CUP	44.5C	2,257 fps	50,500 CUP
	AR2208	.358"	2.760"	43.0	2,119 fps	39,500 CUP	47.0C	2,278 fps	48,600 CUP
				C = Compressed load					

# RIFLE DATA

35 Whelen				Case: Remington			Barrel length: 24"		
				Twist: 1:16"			Trim length: 2.484"		
				Primer: REMINGTON 9 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. SPR FP	AR2219	.358"	3.045"	55.0	2,707 fps	44,000 CUP	58.0	2,829 fps	48,500 CUP
	Bench Mark 8208	.358"	3.040"	56.0	2,736 fps	42,600 CUP	60.0C	2,891 fps	47,500 CUP
	AR2206H	.358"	3.045"	56.0	2,649 fps	40,000 CUP	60.0	2,798 fps	46,800 CUP
	AR2208	.358"	3.045"	54.0	2,609 fps	39,900 CUP	60.0C	2,764 fps	42,500 CUP
200 GR. SIE RN	AR2219	.358"	3.050"	52.0	2,540 fps	42,600 CUP	56.0	2,691 fps	48,500 CUP
	Bench Mark 8208	.358"	3.050"	53.0	2,579 fps	41,300 CUP	59.0C	2,802 fps	48,900 CUP
	AR2206H	.358"	3.050"	54.0	2,544 fps	43,500 CUP	57.0	2,689 fps	49,000 CUP
	AR2208	.358"	3.050"	52.0	2,508 fps	40,400 CUP	57.0	2,653 fps	42,300 CUP
220 GR. SPR FP	AR2219	.358"	3.045"	50.0	2,392 fps	43,500 CUP	54.0	2,566 fps	49,500 CUP
	Bench Mark 8208	.358"	3.045"	49.5	2,397 fps	42,600 CUP	55.0	2,623 fps	50,200 CUP
	AR2206H	.358"	3.045"	51.0	2,461 fps	44,000 CUP	55.0	2,588 fps	50,000 CUP
225 GR. SIE SBT	Bench Mark 8208	.358"	3.175"	49.5	2,409 fps	40,500 CUP	55.0C	2,618 fps	49,600 CUP
	AR2206H	.358"	3.175"	49.5	2,404 fps	40,900 CUP	55.0C	2,611 fps	49,200 CUP
	AR2208	.358"	3.175"	51.0	2,442 fps	43,500 CUP	56.0	2,588 fps	46,400 CUP
250 GR. HDY SP	AR2219	.358"	3.290"	48.0	2,249 fps	44,000 CUP	52.0	2,398 fps	48,500 CUP
	Bench Mark 8208	.358"	3.290"	49.0	2,311 fps	44,000 CUP	54.3C	2,515 fps	50,300 CUP
	AR2206H	.358"	3.290"	49.0	2,330 fps	43,700 CUP	53.0	2,455 fps	50,000 CUP
	AR2208	.358"	3.290"	50.0	2,348 fps	44,900 CUP	55.0	2,486 fps	49,900 CUP
				C = Compressed load					
350 Remington Magnum				Case: Remington			Barrel length: 26"		
				Twist: 1:16"			Trim length: 2.160"		
				Primer: REMINGTON 9 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. SPR FP	AR2207	.358"	2.740"	48.0	2,622 fps	35,400 CUP	51.0	2,808 fps	48,000 CUP
	AR2219	.358"	2.740"	53.0	2,688 fps	43,000 CUP	58.0	2,894 fps	50,300 CUP
	AR2206H	.358"	2.740"	56.0	2,696 fps	39,000 CUP	61.0	3,015 fps	52,300 CUP
200 GR. HDY SP	AR2207	.358"	2.740"	45.0	2,382 fps	34,200 CUP	48.0	2,512 fps	44,100 CUP
	AR2219	.358"	2.740"	50.0	2,427 fps	39,700 CUP	55.0	2,684 fps	49,300 CUP
	AR2206H	.358"	2.740"	54.5	2,625 fps	37,800 CUP	59.0	2,822 fps	52,100 CUP
220 GR. SPR FP	AR2207	.358"	2.740"	43.0	2,304 fps	36,600 CUP	46.0	2,423 fps	48,500 CUP
	AR2219	.358"	2.740"	48.0	2,293 fps	39,200 CUP	52.0	2,473 fps	49,300 CUP
	AR2206H	.358"	2.740"	51.5	2,534 fps	37,200 CUP	56.0	2,651 fps	51,200 CUP

# RIFLE DATA

<b>350 Remington Magnum</b>				Case: Remington Twist: 1:16" Primer: REMINGTON 9 1/2			Barrel length: 26" Trim length: 2.160"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. HDY SP	AR2207	.358"	2.930"	39.0	2,069 fps	34,800 CUP	42.0	2,190 fps	45,900 CUP
	AR2219	.358"	2.930"	45.0	2,092 fps	42,000 CUP	49.0	2,333 fps	51,600 CUP
	AR2206H	.358"	2.930"	49.5	2,225 fps	37,800 CUP	54.0	2,497 fps	53,200 CUP
<b>358 Norma Magnum</b>				Case: Norma Twist: 1:16" Primer: FEDERAL 215			Barrel length: 24" Trim length: 2.498"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
180 GR. SPR FP	AR2209	.358"	3.340"	75.0	2,894 fps	-	79.0	3,017 fps	-
200 GR. HDY SP	AR2209	.358"	3.140"	74.0	2,852 fps	-	78.0	2,984 fps	-
250 GR. NOS PART	AR2206H	.358"	3.300"	61.0	2,544 fps	-	65.0	2,736 fps	-
	AR2209	.358"	3.300"	71.0	2,634 fps	-	75.0	2,778 fps	-
<b>358 Shooting Times Alaskan</b>				Case: Remington (reformed) Twist: 1:12" Primer: FEDERAL 215			Barrel length: 24" Trim length: 2.845"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
225 GR. NOS PART	AR2209	.358"	3.670"	82.0	2,951 fps	-	87.0	3,119 fps	-
250 GR. NOS PART	AR2209	.358"	3.670"	79.0	2,688 fps	-	84.0	2,933 fps	-
	AR2213SC	.358"	3.670"	85.0	2,720 fps	-	90.0	2,984 fps	-
	AR2217	.358"	3.670"	85.0	2,740 fps	-	90.0	2,810 fps	-
<b>9 x 57mm Mauser</b>				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR.	AR2206	-	-	-	-	-	45.0	2,250 fps	-
	AR2208	-	-	-	-	-	49.0	2,250 fps	-
280 GR.	AR2206	-	-	-	-	-	41.5	2,100 fps	-
	AR2208	-	-	-	-	-	45.0	2,100 fps	-

# RIFLE DATA

9.3 x 62mm Mauser				Case: Norma Twist: 1:10" Primer: CCI 200			Barrel length: 24" Trim length: 2.431"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. BAR TSX	AR2206H	.366"	3.200"	51.0	2,221 fps	37,000 CUP	57.0C	2,484 fps	48,700 CUP
	AR2208	.366"	3.200"	52.0	2,199 fps	33,900 CUP	58.0C	2,436 fps	47,200 CUP
270 GR. SPR SP	AR2206H	.366"	3.280"	52.0	2,244 fps	39,800 CUP	56.5	2,406 fps	48,000 CUP
	AR2208	.366"	3.280"	55.0	2,290 fps	40,100 CUP	59.5	2,440 fps	48,100 CUP
	AR2209	.366"	3.280"	63.0	2,322 fps	38,500 CUP	67.0C	2,438 fps	44,600 CUP
286 GR. NOS PART	AR2206H	.366"	3.225"	51.0	2,131 fps	39,000 CUP	55.5	2,331 fps	47,800 CUP
	AR2208	.366"	3.225"	55.0	2,242 fps	39,800 CUP	59.0C	2,350 fps	47,500 CUP
	AR2209	.366"	3.225"	64.0	2,321 fps	40,800 CUP	67.0C	2,407 fps	46,300 CUP
300 GR. SFT SP	AR2206H	.366"	3.150"	47.0	1,979 fps	40,200 CUP	52.0	2,133 fps	48,200 CUP
	AR2208	.366"	3.150"	52.0	2,083 fps	42,000 CUP	56.0	2,194 fps	47,800 CUP
	AR2209	.366"	3.150"	60.0	2,142 fps	40,000 CUP	64.0C	2,288 fps	48,100 CUP
				C = Compressed load					
9.3 x 64mm Brennecke				Case: - Twist: - Primer: -			Barrel length: 26" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
231-234 GR.	AR2208	-	-	-	-	-	68.0	2,700 fps	-
	AR2209	-	-	-	-	-	73.0	2,700 fps	-
258 GR.	AR2208	-	-	-	-	-	66.5	2,500 fps	-
	AR2209	-	-	-	-	-	70.5	2,500 fps	-
285-286 GR.	AR2208	-	-	-	-	-	63.0	2,300 fps	-
	AR2209	-	-	-	-	-	67.5	2,300 fps	-
293 GR.	AR2208	-	-	-	-	-	62.0	2,250 fps	-
	AR2209	-	-	-	-	-	67.0	2,250 fps	-
9.3 x 74Rmm				Case: Norma Twist: 1:14" Primer: CCI 200			Barrel length: 24" Trim length: 2.931"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. BAR TSX FB	AR2206H	.366"	3.700"	44.0	2,033 fps	39,000 CUP	48.0	2,155 fps	42,300 CUP
	AR2208	.366"	3.700"	48.0	2,096 fps	39,000 CUP	52.0	2,211 fps	42,400 CUP
	AR2209	.366"	3.700"	59.0	2,150 fps	37,100 CUP	64.5C	2,330 fps	41,800 CUP
270 GR. SPR SP	AR2208	.366"	3.665"	50.0	2,107 fps	36,500 CUP	54.5	2,257 fps	42,000 CUP
	AR2209	.366"	3.665"	64.0	2,292 fps	36,200 CUP	68.0C	2,403 fps	41,600 CUP



# RIFLE DATA

9.3 x 74Rmm				Case: Norma Twist: 1:14" Primer: CCI 200			Barrel length: 24" Trim length: 2.931"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
286 GR. NOS PART	AR2208	.366"	3.700"	51.0	2,125 fps	38,200 CUP	54.0	2,200 fps	41,800 CUP
	AR2209	.366"	3.700"	61.5	2,211 fps	36,800 CUP	65.5C	2,323 fps	41,500 CUP
	AR2213SC	.366"	3.700"	66.0	2,119 fps	33,400 CUP	70.0C	2,232 fps	36,800 CUP
300 GR. SFT SP	AR2209	.366"	3.640"	58.0	2,111 fps	38,900 CUP	62.0C	2,210 fps	42,100 CUP
	AR2213SC	.366"	3.640"	61.0	1,939 fps	31,900 CUP	67.0C	2,128 fps	40,400 CUP
				C = Compressed load					
38-55 Winchester				Case: Winchester Twist: 1:18" Primer: CCI 200			Barrel length: 24" Trim length: 2.075"		
NOTE: See Single Action Rifle section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
255 GR. BAR JFP	AR2207	.375"	2.620"	24.0	1,554 fps	21,400 CUP	28.0	1,788 fps	26,700 CUP
	AR2219	.375"	2.620"	27.0	1,603 fps	25,500 CUP	33.0	1,830 fps	28,200 CUP
375 Winchester				Case: Winchester Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.010"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. SIE JFP	AR2207	.375"	2.530"	35.0	2,288 fps	36,900 CUP	38.0C	2,480 fps	50,600 CUP
	AR2219	.375"	2.530"	39.0	2,223 fps	35,300 CUP	42.0C	2,419 fps	46,900 CUP
220 GR. HDY JFP	AR2207	.375"	2.500"	31.0	2,067 fps	33,700 CUP	34.0	2,233 fps	49,300 CUP
	AR2219	.375"	2.500"	35.0	2,029 fps	35,700 CUP	38.5C	2,236 fps	48,900 CUP
				C = Compressed load					
376 STEYR				Case: Homady Twist: 1:12" Primer: FEDERAL 215M			Barrel length: 24" Trim length: 2.350"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
210 GR. BAR XFB	AR2219	.375"	3.100"	63.0	2,864 fps	50,900 PSI	67.5	3,011 fps	59,800 PSI
	Bench Mark 2	.375"	3.100"	63.0	2,774 fps	45,000 PSI	68.0	2,943 fps	54,000 PSI
	AR2206H	.375"	3.100"	64.0	2,765 fps	45,200 PSI	68.0C	2,891 fps	50,600 PSI
	AR2208	.375"	3.100"	65.0	2,668 fps	40,800 PSI	68.0C	2,764 fps	44,800 PSI

# RIFLE DATA

<b>376 STEYR</b>				Case: Hornady Twist: 1:12" Primer: FEDERAL 215M			Barrel length: 24" Trim length: 2.350"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>225 GR. HDY SP</b>	AR2219	.375"	3.070"	58.0	2,704 fps	53,100 PSI	63.0	2,839 fps	59,900 PSI
	Bench Mark 2	.375"	3.070"	62.0	2,730 fps	50,600 PSI	67.0C	2,890 fps	59,700 PSI
	AR2206H	.375"	3.070"	64.0	2,767 fps	51,000 PSI	68.0C	2,892 fps	58,200 PSI
	AR2208	.375"	3.070"	64.0	2,628 fps	45,600 PSI	68.0C	2,767 fps	52,400 PSI
<b>235 GR. SPR SP</b>	AR2219	.375"	3.060"	59.0	2,709 fps	58,000 PSI	63.0	2,795 fps	59,900 PSI
	Bench Mark 2	.375"	3.060"	62.0	2,689 fps	50,900 PSI	66.5	2,835 fps	59,900 PSI
	AR2206H	.375"	3.060"	64.0	2,708 fps	50,100 PSI	68.0C	2,846 fps	59,000 PSI
	AR2208	.375"	3.060"	64.0	2,618 fps	47,200 PSI	68.0C	2,735 fps	52,300 PSI
<b>250 GR. SIE SP</b>	AR2219	.375"	3.110"	56.0	2,570 fps	55,700 PSI	60.5	2,683 fps	60,100 PSI
	Bench Mark 2	.375"	3.110"	59.0	2,573 fps	51,200 PSI	63.5	2,714 fps	60,100 PSI
	AR2206H	.375"	3.110"	60.0	2,582 fps	48,600 PSI	65.0	2,732 fps	59,800 PSI
	AR2208	.375"	3.110"	64.0	2,589 fps	51,200 PSI	68.0C	2,713 fps	58,000 PSI
<b>260 GR. NOS PART</b>	AR2219	.375"	3.100"	52.0	2,405 fps	54,900 PSI	56.0	2,511 fps	60,200 PSI
	Bench Mark 2	.375"	3.100"	57.0	2,453 fps	51,400 PSI	60.5	2,584 fps	59,700 PSI
	AR2206H	.375"	3.100"	59.0	2,500 fps	53,800 PSI	62.5	2,613 fps	59,400 PSI
	AR2208	.375"	3.100"	62.0	2,466 fps	49,100 PSI	67.5C	2,651 fps	60,000 PSI
<b>270 GR. HDY SP</b>	AR2219	.375"	3.060"	53.0	2,382 fps	50,800 PSI	57.0	2,517 fps	59,600 PSI
	Bench Mark 2	.375"	3.060"	55.0	2,400 fps	50,500 PSI	59.0	2,549 fps	59,500 PSI
	AR2206H	.375"	3.060"	58.0	2,459 fps	52,700 PSI	62.0C	2,580 fps	59,400 PSI
	AR2208	.375"	3.060"	61.0	2,446 fps	50,000 PSI	65.5C	2,610 fps	60,100 PSI
<b>300 GR. SFT SP</b>	AR2219	.375"	3.080"	52.0	2,236 fps	53,600 PSI	55.0	2,322 fps	60,000 PSI
	Bench Mark 2	.375"	3.080"	52.0	2,176 fps	49,000 PSI	56.5	2,343 fps	59,900 PSI
	AR2206H	.375"	3.080"	55.0	2,248 fps	51,900 PSI	59.5	2,388 fps	60,200 PSI
	AR2208	.375"	3.080"	58.0	2,255 fps	50,000 PSI	62.5C	2,410 fps	59,700 PSI
				C = Compressed load					
<b>375 H &amp; H Magnum</b>				Case: Winchester Twist: 1:12" Primer: FEDERAL 215 M			Barrel length: 24" Trim length: 2.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>200 GR. SIE JFP</b>	Bench Mark 8208	.375"	3.350"	69.0	2,910 fps	47,700 CUP	75.5	3,079 fps	50,200 CUP
	AR2206H	.375"	3.350"	67.0	2,828 fps	42,300 CUP	78.5	3,116 fps	48,700 CUP
	AR2208	.375"	3.350"	65.0	2,839 fps	41,900 CUP	76.0	3,121 fps	50,300 CUP

# RIFLE DATA

375 H & H Magnum				Case: Winchester Twist: 1:12" Primer: FEDERAL 215 M			Barrel length: 24" Trim length: 2.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
235 GR. SPR SP	Trail Boss	.375"	3.600"	19.0	1,091 fps	-	26.3	1,144 fps	-
	Bench Mark 8208	.375"	3.600"	61.0	2,632 fps	45,400 CUP	67.0	2,793 fps	50,900 CUP
	AR2206H	.375"	3.600"	69.0	2,743 fps	44,300 CUP	74.0	2,895 fps	50,400 CUP
	AR2208	.375"	3.600"	65.0	2,684 fps	46,700 CUP	70.0	2,819 fps	51,200 CUP
250 GR. SFT SP	Bench Mark 8208	.375"	3.555"	58.0	2,500 fps	45,600 CUP	62.2	2,609 fps	49,900 CUP
	AR2206H	.375"	3.555"	64.0	2,574 fps	44,800 CUP	69.0	2,696 fps	49,700 CUP
	AR2208	.375"	3.555"	62.0	2,531 fps	43,900 CUP	66.5	2,642 fps	49,700 CUP
	AR2209	.375"	3.555"	78.0	2,620 fps	41,500 CUP	83.0C	2,733 fps	44,900 CUP
260 GR. NOS PART	AR2209	.375"	3.580"	70.0	2,551 fps	47,300 CUP	78.0	2,702 fps	51,700 CUP
	AR2213SC	.375"	3.580"	76.0	2,470 fps	43,700 CUP	83.0C	2,622 fps	47,800 CUP
270 GR. BAR TSX	AR2208	.375"	3.550"	58.0	2,369 fps	46,400 CUP	65.0	2,521 fps	50,000 CUP
	AR2209	.375"	3.550"	69.0	2,263 fps	38,300 CUP	75.0C	2,465 fps	42,800 CUP
300 GR. SIE SPBT	AR2206H	.375"	3.600"	61.0	2,411 fps	46,800 CUP	65.0	2,505 fps	50,400 CUP
	AR2208	.375"	3.600"	58.0	2,345 fps	45,200 CUP	62.0	2,454 fps	49,300 CUP
	AR2209	.375"	3.600"	77.0	2,539 fps	45,400 CUP	81.5C	2,645 fps	49,500 CUP
				C = Compressed load					
375 Ruger				Case: Hornady Twist: 1:12" Primer: WINCHESTER LRM			Barrel length: 24" Trim length: 2.580"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
225 GR. HDY SP	AR2208	.375"	3.320"	74.1	2,934 fps	50,300 PSI	78.0	3,085 fps	60,400 PSI
235 GR. BAR TSX	AR2206H	.375"	3.280"	66.7	2,768 fps	52,800 PSI	71.0	2,882 fps	58,500 PSI
	AR2208	.375"	3.280"	69.1	2,709 fps	48,600 PSI	73.5	2,885 fps	59,600 PSI
250 GR. SFT SP	AR2208	.375"	3.270"	67.7	2,657 fps	53,200 PSI	72.0	2,773 fps	59,000 PSI
	AR2209	.375"	3.270"	77.5	2,675 fps	51,400 PSI	82.5	2,834 fps	59,000 PSI
260 GR. NOS AB	AR2208	.375"	3.320"	67.3	2,618 fps	52,200 PSI	71.6	2,749 fps	59,200 PSI
	AR2209	.375"	3.320"	78.0	2,681 fps	50,800 PSI	83.5C	2,837 fps	60,100 PSI
270 GR. HDY SP	AR2209	.375"	3.310"	78.5	2,614 fps	47,800 PSI	83.5C	2,783 fps	58,400 PSI
300 GR. HDY RN	AR2209	.375"	3.280"	75.9	2,510 fps	48,300 PSI	80.7	2,660 fps	59,600 PSI
	AR2213SC	.375"	3.280"	82.7	2,457 fps	48,100 PSI	88.0C	2,611 fps	57,800 PSI
350 GR. BAR TSX FB	AR2209	.375"	3.295"	62.1	2,142 fps	50,900 PSI	66.9C	2,281 fps	59,200 PSI
				C = Compressed load					

# RIFLE DATA

<b>375 Weatherby Magnum</b>				Case: Weatherby Twist: 1:12" Primer: FEDERAL 215M			Barrel length: 24" Trim length: 2.850"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>210 GR. BAR XFB</b>	AR2206H	.375"	3.585"	69.0	2,824 fps	48,500 CUP	74.0	2,945 fps	53,500 CUP
	AR2208	.375"	3.585"	70.0	2,782 fps	48,700 CUP	75.0	2,900 fps	53,100 CUP
	AR2209	.375"	3.585"	91.0	3,018 fps	49,600 CUP	95.5C	3,110 fps	52,900 CUP
	AR2213SC	.375"	3.585"	95.0	2,862 fps	43,000 CUP	98.0C	2,938 fps	46,100 CUP
<b>225 GR. HDY SP</b>	AR2206H	.375"	3.585"	69.0	2,789 fps	50,300 CUP	73.5	2,896 fps	53,100 CUP
	AR2208	.375"	3.585"	70.0	2,713 fps	47,600 CUP	74.5	2,850 fps	53,500 CUP
	AR2209	.375"	3.585"	89.0	2,939 fps	48,300 CUP	94.5	3,070 fps	53,400 CUP
	AR2213SC	.375"	3.585"	96.0	2,870 fps	46,000 CUP	99.0C	2,957 fps	49,600 CUP
<b>235 GR. SPR SP</b>	AR2206H	.375"	3.585"	69.0	2,742 fps	50,700 CUP	73.3	2,834 fps	53,100 CUP
	AR2208	.375"	3.585"	69.0	2,669 fps	47,200 CUP	73.5	2,774 fps	52,700 CUP
	AR2209	.375"	3.585"	85.0	2,811 fps	46,400 CUP	90.5	2,952 fps	52,600 CUP
	AR2213SC	.375"	3.585"	94.0	2,813 fps	45,900 CUP	99.0C	2,912 fps	50,500 CUP
<b>250 GR. SIE SPBT</b>	AR2209	.375"	3.600"	83.0	2,765 fps	47,600 CUP	88.0	2,873 fps	52,300 CUP
	AR2213SC	.375"	3.600"	91.0	2,741 fps	46,900 CUP	97.0C	2,871 fps	52,500 CUP
<b>260 GR. NOS PART</b>	AR2209	.375"	3.585"	83.0	2,724 fps	50,800 CUP	88.0	2,818 fps	53,300 CUP
	AR2213SC	.375"	3.585"	90.0	2,692 fps	48,300 CUP	96.0C	2,810 fps	53,200 CUP
<b>270 GR. HDY SP</b>	AR2209	.375"	3.600"	83.0	2,708 fps	49,000 CUP	88.0	2,787 fps	52,800 CUP
	AR2213SC	.375"	3.600"	90.0	2,631 fps	46,900 CUP	96.0C	2,787 fps	53,600 CUP
<b>285 GR. SPR GSSP</b>	AR2209	.375"	3.580"	81.0	2,617 fps	49,800 CUP	86.5C	2,734 fps	53,400 CUP
	AR2213SC	.375"	3.580"	89.0	2,605 fps	48,600 CUP	94.5C	2,725 fps	53,600 CUP
<b>300 GR. SFT SP</b>	AR2209	.375"	3.560"	80.0	2,544 fps	49,100 CUP	85.0	2,642 fps	53,500 CUP
	AR2213SC	.375"	3.560"	87.0	2,498 fps	47,500 CUP	93.0C	2,649 fps	54,200 CUP

C = Compressed load

<b>375 Remington Ultra Mag</b>				Case: Remington Twist: 1:12" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>210 GR. BAR XFB</b>	AR2208	.375"	3.600"	85.0	3,110 fps	54,700 PSI	91.0	3,271 fps	63,100 PSI
	AR2209	.375"	3.600"	96.0	3,078 fps	52,100 PSI	102.5	3,293 fps	63,300 PSI
<b>225 GR. HDY SP</b>	AR2209	.375"	3.560"	95.0	3,027 fps	52,200 PSI	101.0	3,214 fps	62,800 PSI
	AR2213SC	.375"	3.560"	105.0	3,062 fps	56,200 PSI	108.0C	3,137 fps	60,600 PSI
<b>235 GR. SPR SP</b>	AR2209	.375"	3.550"	94.0	3,000 fps	54,600 PSI	100.0	3,163 fps	63,500 PSI
	AR2213SC	.375"	3.550"	102.0	2,957 fps	53,800 PSI	108.0C	3,111 fps	62,800 PSI
<b>250 GR. BAR XFB</b>	AR2209	.375"	3.600"	89.0	2,842 fps	52,800 PSI	94.5	3,010 fps	62,700 PSI
	AR2213SC	.375"	3.600"	98.0	2,850 fps	55,100 PSI	103.0	3,090 fps	62,700 PSI

# RIFLE DATA

<b>375 Remington Ultra Mag</b>				Case: Remington Twist: 1:12" Primer: REMINGTON 9 1/2M			Barrel length: 24" Trim length: 2.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
260 GR. NOS PART	AR2209	.375"	3.570"	88.0	2,819 fps	56,300 PSI	92.5	2,935 fps	62,900 PSI
	AR2213SC	.375"	3.570"	95.0	2,767 fps	54,100 PSI	101.0	2,923 fps	62,900 PSI
270 GR. HDY SP	AR2209	.375"	3.550"	90.0	2,767 fps	52,400 PSI	95.0	2,932 fps	62,600 PSI
	AR2213SC	.375"	3.550"	99.0	2,779 fps	54,200 PSI	104.0C	2,922 fps	62,900 PSI
285 GR. SPR GSSP	AR2209	.375"	3.570"	88.0	2,724 fps	57,500 PSI	92.5	2,836 fps	62,600 PSI
	AR2213SC	.375"	3.570"	96.0	2,706 fps	55,500 PSI	101.0	2,830 fps	62,900 PSI
300 GR. SFT SP	AR2209	.375"	3.550"	85.0	2,598 fps	54,400 PSI	90.0	2,733 fps	62,700 PSI
	AR2213SC	.375"	3.550"	92.0	2,593 fps	54,600 PSI	97.0	2,719 fps	62,500 PSI
	AR2217	.375"	3.550"	103.0	2,628 fps	54,000 PSI	105.0C	2,678 fps	57,600 PSI
				C = Compressed load					
<b>378 Weatherby Magnum</b>				Case: Weatherby Twist: 1:12" Primer: FEDERAL 215			Barrel length: 26" Trim length: 2.903"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
235 GR. SPR SP	AR2209	.375"	3.645"	102.0	3,003 fps	-	109.0	3,224 fps	-
	AR2213SC	.375"	3.645"	107.0	2,972 fps	-	117.0	3,202 fps	-
270 GR. HDY SP	AR2209	.375"	3.645"	99.0	2,779 fps	-	105.0	3,091 fps	-
	AR2213SC	.375"	3.645"	105.0	2,724 fps	-	115.0	3,102 fps	-
300 GR. NOS PART	AR2209	.375"	3.680"	95.0	2,595 fps	-	100.0	2,940 fps	-
	AR2213SC	.375"	3.680"	102.0	2,624 fps	-	112.0	2,926 fps	-
<b>38-40 Winchester (38-40 WCF)</b>				Case: - Twist: - Primer: -			Barrel length: 26" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
130 GR.	AR2205	-	-	-	-	-	28.0	2,000 fps	-
180 GR.	AR2205	-	-	-	-	-	24.5	1,750 fps	-

# RIFLE DATA

404 Jeffrey				Case: -			Barrel length: 26"		
				Twist: -			Trim length: -		
				Primer: -					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
400 GR.	AR2206	-	-	-	-	-	63.0	2,100 fps	-
	AR2208	-	-	-	-	-	71.0	2,100 fps	-
	AR2209	-	-	-	-	-	80.0	2,100 fps	-
405 Winchester				Case: Hornady			Barrel length: 24"		
				Twist: 1:14"			Trim length: 2.573"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
300 GR. BAR TSX FB	Bench Mark 2	.411"	3.200"	45.0	1,879 fps	34,400 PSI	50.0	2,077 fps	43,000 PSI
	Bench Mark 8208	.411"	3.200"	46.0	1,915 fps	36,700 PSI	51.2	2,101 fps	43,500 PSI
	AR2206H	.411"	3.200"	48.0	1,945 fps	35,500 PSI	53.5C	2,157 fps	44,500 PSI
	AR2208	.411"	3.200"	50.0	1,899 fps	35,200 PSI	55.0C	2,083 fps	42,500 PSI
300 GR. HDY FP	AR2207	.411"	3.085"	37.5	1,925 fps	32,300 PSI	41.5	2,091 fps	43,000 PSI
	AR2219	.411"	3.085"	44.0	1,996 fps	34,800 PSI	49.0	2,150 fps	41,200 PSI
	Bench Mark 2	.411"	3.085"	53.0	2,206 fps	34,100 PSI	59.0	2,404 fps	42,200 PSI
	Bench Mark 8208	.411"	3.085"	50.0	2,086 fps	36,500 PSI	56.0	2,260 fps	42,900 PSI
	AR2206H	.411"	3.085"	53.0	2,114 fps	33,200 PSI	59.0	2,300 fps	40,000 PSI
	AR2208	.411"	3.085"	55.0	2,079 fps	32,600 PSI	61.0	2,275 fps	41,200 PSI
400 GR. WDLGH RNSN	AR2207	.411"	3.230"	33.0	1,582 fps	33,600 PSI	36.5	1,718 fps	43,400 PSI
	Bench Mark 8208	.411"	3.230"	39.0	1,652 fps	36,700 PSI	43.0	1,784 fps	42,900 PSI
	AR2206H	.411"	3.230"	45.5	1,801 fps	37,100 PSI	50.5	1,945 fps	44,900 PSI
	AR2208	.411"	3.230"	48.0	1,790 fps	37,000 PSI	52.0	1,928 fps	44,300 PSI
				C = Compressed load					
416 Remington Magnum				Case: Remington			Barrel length: 24"		
				Twist: 1:14"			Trim length: 2.840"		
				Primer: REMINGTON 9 1/2 M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
300 GR. BAR TSX	Bench Mark 8208	.416"	3.600"	74.0	2,600 fps	44,200 CUP	78.5	2,725 fps	52,700 CUP
	AR2206H	.416"	3.600"	75.0	2,631 fps	43,700 CUP	80.5	2,779 fps	50,300 CUP
	AR2208	.416"	3.600"	79.0	2,610 fps	42,900 CUP	84.0C	2,745 fps	48,600 CUP
350 GR. SPR SP	Trail Boss	.416"	3.590"	20.0	913 fps	19,700 CUP	29.0	1,143 fps	29,900 CUP
	Bench Mark 8208	.416"	3.590"	71.0	2,409 fps	44,600 CUP	77.0	2,551 fps	52,700 CUP
	AR2206H	.416"	3.590"	75.0	2,476 fps	45,000 CUP	80.0	2,601 fps	52,200 CUP
	AR2208	.416"	3.590"	77.0	2,519 fps	46,900 CUP	82.0	2,622 fps	52,400 CUP

# RIFLE DATA

<b>416 Remington Magnum</b>				Case: Remington Twist: 1:14" Primer: REMINGTON 9 1/2 M			Barrel length: 24" Trim length: 2.840"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
400 GR. HDY JRN	Bench Mark 8208	.416"	3.560"	68.0	2,233 fps	46,100 CUP	73.0	2,348 fps	52,800 CUP
	AR2206H	.416"	3.560"	71.0	2,268 fps	46,100 CUP	76.0	2,391 fps	53,300 CUP
	AR2208	.416"	3.560"	72.0	2,276 fps	46,300 CUP	77.0	2,407 fps	53,000 CUP
	AR2209	.416"	3.560"	85.0	2,305 fps	41,400 CUP	88.0C	2,395 fps	46,400 CUP
				C = Compressed load					
<b>416 Rigby</b>				Case: Norma Twist: 1:16.5" Primer: FEDERAL 215M			Barrel length: 24" Trim length: 2.890"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
300 GR. BAR TSX	AR2209	.416"	3.630"	92.0	2,577 fps	35,700 CUP	99.0	2,776 fps	42,900 CUP
	AR2213SC	.416"	3.630"	102.0	2,555 fps	34,900 CUP	109.5	2,725 fps	40,600 CUP
325 GR. BAR XFB	AR2209	.416"	3.660"	94.0	2,549 fps	37,600 CUP	99.0	2,660 fps	43,600 CUP
	AR2213SC	.416"	3.660"	102.0	2,522 fps	37,700 CUP	107.0	2,631 fps	43,700 CUP
350 GR. SPR SP	Trail Boss	.416"	3.640"	25.0	1,139 fps	-	35.0	1,354 fps	-
	AR2209	.416"	3.640"	94.0	2,507 fps	38,000 CUP	99.0	2,641 fps	43,400 CUP
	AR2213SC	.416"	3.640"	101.0	2,459 fps	37,100 CUP	107.0	2,609 fps	43,000 CUP
	AR2217	.416"	3.640"	112.0	2,479 fps	37,400 CUP	116.0C	2,551 fps	39,900 CUP
400 GR. HDY SP	AR2209	.416"	3.700"	89.0	2,333 fps	38,500 CUP	94.0	2,456 fps	43,500 CUP
	AR2213SC	.416"	3.700"	97.0	2,321 fps	38,500 CUP	102.0	2,432 fps	43,300 CUP
	AR2217	.416"	3.700"	110.0	2,371 fps	37,500 CUP	116.0C	2,470 fps	42,200 CUP
				C = Compressed load					
<b>416 Weatherby Magnum</b>				Case: Weatherby Twist: 1:14" Primer: FEDERAL 215			Barrel length: 24" Trim length: 2.903"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
300 GR. BAR XFB	AR2209	.416"	3.780"	117.0	2,917 fps	-	122.0	3,051 fps	-
350 GR. BAR XFB	AR2209	.416"	3.780"	112.0	2,728 fps	-	118.0	2,891 fps	-
400 GR. HDY RN	AR2209	.416"	3.780"	105.0	2,564 fps	-	110.0	2,687 fps	-
	AR2213SC	.416"	3.780"	116.0	2,625 fps	-	120.0	2,703 fps	-
	AR2217	.416"	3.780"	116.0	2,348 fps	-	120.0	2,419 fps	-



# RIFLE DATA

44-40 Winchester (44-40 WCF)				Case: Winchester Twist: 1:36" Primer: WINCHESTER LP			Barrel length: 20" Trim length: 1.295"		
<b>WARNING:</b> Data only for use in Winchester Model 92 & 94, Marlin Model 1894 and Remington Model 14.5 rifles in excellent condition. Either slug the bore to determine appropriate bullet diameters or use .427" bullets only. Do not use .429" bullets without first checking barrel bore size.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. LEAD RNFP	AS30N	.428"	1.600"	4.2	845 fps	8,200 PSI	5.0	924 fps	11,700 PSI
	AP70N	.428"	1.600"	6.6	950 fps	10,000 PSI	7.3	1,069 fps	11,100 PSI
200 GR. LSWC CAST	AR2205	.428"	1.620"	18.0	1,050 fps	7,500 PSI	24.0	1,450 fps	21,400 PSI
215 GR. LSWC CAST	AR2205	.428"	1.573"	18.0	1,130 fps	13,100 PSI	22.0	1,380 fps	22,750 PSI
240 GR. LSWC CAST	AR2205	.430"	1.630"	17.0	1,050 fps	14,300 PSI	20.0	1,360 fps	29,200 PSI
44 Remington Magnum				Case: Winchester Twist: 1:38" Primer: REMINGTON 2 1/2			Barrel length: 20" Trim length: 1.280"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
165 GR. LRNFP CAST	AS30N	.430"	1.500"	4.4	949 fps	8,500 CUP	5.5	1,147 fps	15,500 CUP
	AP70N	.430"	1.500"	6.5	1,009 fps	7,700 CUP	7.2	1,138 fps	11,500 CUP
180 GR. HDY XTP	AR2205	.430"	1.600"	27.5	2,005 fps	24,000 CUP	29.0	2,114 fps	31,200 CUP
185 GR. LRNFP CAST	AS30N	.430"	1.540"	4.2	859 fps	8,900 CUP	6.0	1,162 fps	18,400 CUP
	AP70N	.430"	1.540"	6.4	993 fps	8,400 CUP	7.4	1,180 fps	12,600 CUP
200 GR. LRNFP CAST	AS30N	.430"	1.570"	4.2	874 fps	8,500 CUP	6.4	1,172 fps	20,200 CUP
	AP70N	.430"	1.570"	6.8	1,065 fps	10,500 CUP	7.8	1,209 fps	15,400 CUP
200 GR. NOS JHP	AR2205	.429"	1.600"	25.0	1,840 fps	29,800 CUP	27.0	1,982 fps	37,800 CUP
210 GR. SIE JHC	AR2205	.430"	1.600"	25.0	1,843 fps	29,200 CUP	27.0	1,970 fps	37,600 CUP
225 GR. HDY FTX	AR2205	.430"	1.665"	19.8	1,330 fps	26,800 PSI	22.0	1,484 fps	34,500 PSI
225 GR. SPR JHP	AR2205	.429"	1.575"	23.0	1,721 fps	27,400 CUP	25.5	1,897 fps	35,700 CUP
240 GR. LSWC CAST	AS30N	.430"	1.620"	4.3	839 fps	14,000 CUP	6.2	1,062 fps	21,800 CUP
	AP70N	.430"	1.620"	6.5	927 fps	11,700 CUP	10.2	1,374 fps	37,500 CUP
240 GR. NOS JHP	AR2205	.429"	1.600"	22.0	1,624 fps	28,400 CUP	24.0	1,778 fps	36,100 CUP
240GR. SPR SP	AP70N	.429"	1.600"	8.0	1,005 fps	13,900 PSI	10.0	1,275 fps	35,900 PSI
	AP100	.429"	1.600"	11.0	1,210 fps	16,000 PSI	13.0	1,440 fps	33,200 PSI
	AR2205	.429"	1.600"	19.0	1,195 fps	10,200 PSI	24.0C	1,620 fps	27,000 PSI
270 GR. SPR GDSP	AR2205	.429"	1.600"	20.5	1,476 fps	28,400 CUP	22.5	1,638 fps	37,400 CUP
280 GR. SFT JHP	AR2205	.430"	1.700"	20.0	1,354 fps	27,600 CUP	22.0	1,544 fps	37,800 CUP
300 GR. HDY XTP	AR2205	.430"	1.600"	18.0	1,318 fps	30,600 CUP	20.0	1,452 fps	38,600 CUP
				C = Compressed load					

# RIFLE DATA

444 Marlin				Case: Remington			Barrel length: 24"		
				Twist: 1:38"			Trim length: 2.215"		
				Primer: REMINGTON 9 1/2					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. BAR XFB	AR2207	.429"	2.550"	46.0	2,309 fps	34,400 CUP	51.2C	2,566 fps	42,900 CUP
	AR2219	.429"	2.550"	50.0	2,139 fps	30,200 CUP	52.0C	2,206 fps	33,600 CUP
	Bench Mark 2	.429"	2.550"	50.0	2,040 fps	27,600 CUP	54.0	2,212 fps	35,800 CUP
225 GR. BAR XFB	AR2207	.429"	2.550"	42.2	2,107 fps	32,300 CUP	46.9	2,361 fps	42,300 CUP
	AR2219	.429"	2.550"	47.0	2,029 fps	33,400 CUP	50.0C	2,144 fps	37,000 CUP
	Bench Mark 2	.429"	2.550"	49.0	2,028 fps	34,500 CUP	52.0C	2,127 fps	38,100 CUP
240 GR. SIE JHP	AR2207	.430"	2.535"	44.0	2,206 fps	36,100 CUP	49.2C	2,499 fps	42,100 CUP
	AR2219	.430"	2.535"	49.5	2,049 fps	31,400 CUP	52.0C	2,185 fps	35,900 CUP
	Bench Mark 2	.430"	2.535"	51.0	2,042 fps	31,600 CUP	55.0C	2,234 fps	40,600 CUP
	AR2206H	.430"	2.535"	51.0	1,999 fps	29,600 CUP	53.0C	2,069 fps	33,100 CUP
260 GR. FA JFP	AR2207	.430"	2.550"	41.0	2,016 fps	35,600 CUP	45.5	2,194 fps	40,900 CUP
	AR2219	.430"	2.550"	47.0	1,944 fps	33,400 CUP	52.0C	2,159 fps	41,400 CUP
	AR2206H	.430"	2.550"	50.0	1,913 fps	32,700 CUP	53.0C	2,057 fps	36,800 CUP
265 GR. HDY JFP	AR2207	.430"	2.550"	42.0	2,034 fps	31,100 CUP	47.0	2,273 fps	41,100 CUP
	AR2219	.430"	2.550"	47.0	1,991 fps	33,200 CUP	52.0C	2,164 fps	38,300 CUP
	Bench Mark 2	.430"	2.550"	49.0	1,911 fps	31,000 CUP	53.0C	2,139 fps	40,700 CUP
	Bench Mark 8208	.430"	2.550"	51.0	2,030 fps	34,700 CUP	53.5C	2,135 fps	39,100 CUP
	AR2206H	.430"	2.550"	50.0	1,944 fps	29,300 CUP	53.0C	2,080 fps	34,800 CUP
270 GR. SPR JFP	AR2207	.429"	2.540"	42.0	2,092 fps	34,900 CUP	46.5	2,261 fps	41,400 CUP
	AR2219	.429"	2.540"	47.0	1,973 fps	31,700 CUP	52.0C	2,169 fps	38,100 CUP
	Bench Mark 2	.429"	2.540"	50.0	1,978 fps	33,500 CUP	54.0C	2,166 fps	41,700 CUP
	Bench Mark 8208	.430"	2.540"	51.0	2,019 fps	34,300 CUP	53.5C	2,107 fps	38,300 CUP
	AR2206H	.429"	2.540"	50.0	1,950 fps	29,300 CUP	53.0C	2,080 fps	33,400 CUP
275 GR. BAR FP	AR2207	.430"	2.520"	40.0	1,973 fps	33,500 CUP	44.5	2,172 fps	41,800 CUP
	AR2219	.430"	2.520"	46.0	1,930 fps	33,800 CUP	51.0C	2,146 fps	43,100 CUP
	Bench Mark 2	.430"	2.520"	48.0	1,930 fps	35,900 CUP	51.0C	2,069 fps	42,300 CUP
	AR2206H	.430"	2.520"	47.0	1,780 fps	27,100 CUP	52.0C	2,021 fps	36,200 CUP
280 GR. SFT HP	AR2207	.430"	2.620"	38.0	1,938 fps	37,300 CUP	42.5	2,108 fps	42,300 CUP
	AR2219	.430"	2.620"	44.5	1,901 fps	33,400 CUP	49.5	2,120 fps	42,400 CUP
	Bench Mark 2	.430"	2.620"	46.0	1,935 fps	38,300 CUP	49.5C	2,070 fps	42,600 CUP
	Bench Mark 8208	.430"	2.620"	48.0	1,942 fps	35,900 CUP	52.0	2,099 fps	41,600 CUP
	AR2206H	.430"	2.620"	47.0	1,875 fps	30,300 CUP	52.0C	2,089 fps	37,600 CUP
	AR2208	.430"	2.620"	49.0	1,914 fps	33,000 CUP	52.0C	2,025 fps	36,800 CUP

# RIFLE DATA

444 Marlin				Case: Remington Twist: 1:38" Primer: REMINGTON 9 1/2			Barrel length: 24" Trim length: 2.215"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
300 GR. SFT HP	AR2207	.430"	2.620"	38.5	1,917 fps	36,200 CUP	42.5	2,082 fps	42,500 CUP
	AR2219	.430"	2.620"	43.0	1,776 fps	30,600 CUP	48.0	2,038 fps	42,600 CUP
	Bench Mark 2	.430"	2.620"	46.0	1,899 fps	36,200 CUP	48.5	1,993 fps	41,900 CUP
	Bench Mark 8208	.430"	2.620"	46.0	1,829 fps	35,700 CUP	49.0	2,029 fps	41,600 CUP
	AR2206H	.430"	2.620"	47.0	1,839 fps	33,600 CUP	50.0C	1,931 fps	35,600 CUP
	AR2208	.430"	2.620"	47.0	1,784 fps	30,700 CUP	50.0C	1,914 fps	35,700 CUP
				C = Compressed load					
45-70 Government (Trapdoor Rifles)				Case: Winchester Twist: 1:20" Primer: CCI 200			Barrel length: 24" Trim length: 2.100"		
<p><b>NOTE:</b> See Single Action Rifle section for more loads with lead bullets..  <b>WARNING:</b> This data is intended for Springfield "Trapdoor" 1886, rolling block and antique replica rifles. Pressure limit 28,000 PSI/CUP <b>NOTE:</b> See Single Action Rifle section for more loads with lead bullets.</p>									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. BAR TSX FN	AR2207	.458"	2.525"	45.9	1,994 fps	21,600 PSI	48.3	2,118 fps	26,200 PSI
	AR2219	.458"	2.525"	48.3	1,849 fps	19,900 PSI	53.3	2,080 fps	26,100 PSI
	Bench Mark 2	.458"	2.525"	51.5	1,852 fps	19,800 PSI	56.2	2,085 fps	27,300 PSI
	Bench Mark 8208	.458"	2.525"	52.1	1,801 fps	18,000 PSI	57.8	2,106 fps	27,000 PSI
	AR2206H	.458"	2.525"	53.8	1,925 fps	22,000 PSI	60.0C	2,112 fps	26,600 PSI
	AR2208	.458"	2.525"	56.3	1,846 fps	19,200 PSI	62.5C	2,102 fps	26,100 PSI
300 GR. SIE HP	AR2207	.458"	2.525"	45.0	1,807 fps	16,700 CUP	55.0	2,221 fps	27,600 CUP
	Bench Mark 1	.458"	2.540"	48.0	1,700 fps	18,900 PSI	54.0	2,000 fps	27,900 PSI
	AR2219	.458"	2.525"	54.0	1,850 fps	18,100 CUP	60.0	2,142 fps	28,000 CUP
	Bench Mark 2	.458"	2.525"	59.5	1,907 fps	19,400 CUP	63.5C	2,113 fps	27,400 CUP
	Bench Mark 8208	.458"	2.525"	54.0	1,728 fps	18,800 CUP	60.0	2,023 fps	25,400 CUP
	AR2206	.458"	2.540"	54.0	1,730 fps	18,600 PSI	60.0	2,030 fps	27,200 PSI
	AR2206H	.458"	2.525"	58.0	1,805 fps	16,500 CUP	62.0C	1,974 fps	21,000 CUP
	AR2208	.458"	2.525"	57.0	1,770 fps	16,300 CUP	63.0C	2,020 fps	23,800 CUP
325 GR. HDY FTX	AR2219	.458"	2.590"	36.5	1,401 fps	17,100 CUP	51.5	1,951 fps	26,000 CUP
	Bench Mark 8208	.458"	2.590"	48.5	1,618 fps	18,400 CUP	56.8C	1,936 fps	25,800 CUP
	AR2206H	.458"	2.590"	41.8	1,327 fps	13,700 CUP	53.3C	1,834 fps	23,500 CUP

# RIFLE DATA

<b>45-70 Government (Trapdoor Rifles)</b>	<b>Case:</b> Winchester	<b>Barrel length:</b> 24"
	<b>Twist:</b> 1:20"	<b>Trim length:</b> 2.100"
	<b>Primer:</b> CCI 200	

**NOTE:** See Single Action Rifle section for more loads with lead bullets..

**WARNING:** This data is intended for Springfield "Trapdoor" 1886, rolling block and antique replica rifles. Pressure limit 28,000 PSI/CUP **NOTE:** See Single Action Rifle section for more loads with lead bullets.

Bullet	Powder	Bullet Diam.	C.O.L.	Start loads			Maximum loads		
				Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>400 GR. SPR JFP</b>	AR2207	.458"	2.535"	38.0	1,580 fps	21,700 PSI	44.0	1,740 fps	26,700 PSI
	Bench Mark 1	.458"	2.535"	-	-	-	46.0	1,665 fps	26,800 PSI
	AR2206	.458"	2.535"	46.0	1,510 fps	18,700 PSI	52.0	1,770 fps	27,600 PSI
	AR2208	.458"	2.535"	48.0	1,485 fps	18,600 PSI	54.0	1,760 fps	26,500 PSI
				C = Compressed load					

<b>45-70 Government (Lever Actions)</b>	<b>Case:</b> Winchester	<b>Barrel length:</b> 24"
	<b>Twist:</b> 1:20"	<b>Trim length:</b> 2.100"
	<b>Primer:</b> CCI 200	

**WARNING:** This data is intended for lever action rifles like the Marlin 1895. Pressure limit 40,000 PSI/CUP

Bullet	Powder	Bullet Diam.	C.O.L.	Start loads			Maximum loads		
				Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
<b>250 GR. BAR TSX FN</b>	AR2207	.458"	2.525"	49.4	2,152 fps	26,400 PSI	56.5C	2,487 fps	38,700 PSI
	AR2219	.458"	2.525"	53.3	2,080 fps	26,100 PSI	61.9C	2,423 fps	38,100 PSI
	Bench Mark 2	.458"	2.525"	56.2	2,085 fps	27,300 PSI	62.5C	2,298 fps	34,000 PSI
	Bench Mark 8208	.458"	2.525"	54.3	1,897 fps	20,600 PSI	64.1C	2,308 fps	32,700 PSI
<b>300 GR. SIE HP</b>	AR2207	.458"	2.525"	55.0	2,221 fps	27,600 CUP	60.0	2,424 fps	40,000 CUP
	AR2219	.458"	2.525"	57.0	2,002 fps	21,400 CUP	63.0C	2,252 fps	32,600 CUP
	Bench Mark 8208	.458"	2.525"	60.0	2,023 fps	25,400 CUP	65.0C	2,240 fps	32,900 CUP
<b>325 GR. HDY FTX</b>	AR2219	.458"	2.590"	51.5	1,951 fps	26,000 CUP	59.4C	2,250 fps	37,600 CUP
<b>350 GR. HDY JRN</b>	AR2207	.458"	2.540"	48.5	2,036 fps	32,200 CUP	54.0	2,191 fps	39,300 CUP
	Bench Mark 2	.458"	2.540"	56.0	1,886 fps	26,900 CUP	60.0C	2,092 fps	39,300 CUP
	Bench Mark 8208	.458"	2.540"	55.0	1,930 fps	26,800 CUP	61.0C	2,152 fps	36,200 CUP
	AR2206H	.458"	2.540"	53.0	1,784 fps	21,700 CUP	59.0C	2,045 fps	32,900 CUP
	AR2208	.458"	2.540"	54.0	1,786 fps	21,800 CUP	60.0C	2,013 fps	29,500 CUP
<b>400 GR. SPR JFP</b>	AR2207	.458"	2.540"	46.0	1,854 fps	29,500 CUP	50.5	2,002 fps	39,400 CUP
	Bench Mark 1	.458"	2.540"	48.0	1,755 fps	29,700 PSI	52.0	1,950 fps	39,900 PSI
	AR2219	.458"	2.540"	50.0	1,767 fps	23,700 CUP	55.0C	1,984 fps	39,200 CUP
	Bench Mark 2	.458"	2.540"	55.0	1,856 fps	29,600 CUP	58.5C	1,986 fps	40,000 CUP
	AR2206	.458"	2.540"	52.0	1,770 fps	27,600 PSI	56.0C	1,935 fps	34,800 PSI
	AR2206H	.458"	2.540"	50.0	1,614 fps	19,200 CUP	55.0C	1,859 fps	26,500 CUP
	AR2208	.458"	2.540"	50.0	1,655 fps	18,600 CUP	55.0C	1,845 fps	25,000 CUP
				C = Compressed load					

# RIFLE DATA

<b>45-70 Government (Modern Rifles)</b>	<b>Case:</b> Winchester	<b>Barrel length:</b> 24"
	<b>Twist:</b> 1:20"	<b>Trim length:</b> 2.100"
	<b>Primer:</b> CCI 200	

**WARNING:** This data is for use in Ruger No. 1 and No. 3 single shots, Browning Model 1885 single shot and Siamese Mauser bolt action rifles. Pressure limit 50,000 PSI/CUP

Bullet	Powder	Bullet Diam.	C.O.L.	Start loads			Maximum loads		
				Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. BAR TSX FN	AR2207	.458"	2.525"	51.9	2,260 fps	29,500 PSI	60.0C	2,607 fps	44,600 PSI
300 GR. BAR TTSX	AR2207	.458"	2.775"	53.0	2,346 fps	39,800 CUP	56.0C	2,445 fps	46,700 CUP
300 GR. SIE HP	AR2207	.458"	2.525"	59.5	2,394 fps	37,300 CUP	63.0	2,532 fps	50,000 CUP
325 GR. HDY FTX	AR2207	.458"	2.650"	52.0	2,242 fps	37,700 CUP	56.0C	2,378 fps	46,500 CUP
	AR2219	.458"	2.650"	59.4	2,250 fps	37,600 CUP	63.0C	2,375 fps	45,900 CUP
350 GR. HDY JRN	AR2207	.458"	2.540"	50.5	2,104 fps	35,100 CUP	56.0	2,300 fps	50,000 CUP
	AR2219	.458"	2.540"	52.0	1,898 fps	25,800 CUP	57.0C	2,143 fps	41,100 CUP
400 GR. SPR JFP	AR2207	.458"	2.540"	48.0	1,915 fps	31,800 CUP	53.0	2,108 fps	49,100 CUP
	Bench Mark 1	.458"	2.540"	-	-	-	54.0	2,030 fps	44,800 PSI
	Bench Mark 2	.458"	2.540"	-	-	-	60.0C	2,130 fps	47,600 PSI
	AR2206	.458"	2.540"	-	-	-	58.0C	2,040 fps	40,200 PSI

C = Compressed load

<b>WWG 457 Mag</b>	<b>Case:</b> Wild West Guns	<b>Barrel length:</b> 22"
	<b>Twist:</b> 1:20"	<b>Trim length:</b> 2.100"
	<b>Primer:</b> CCI 200	

Bullet	Powder	Bullet Diam.	C.O.L.	Start loads			Maximum loads		
				Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
300 GR. REM. JHP	AR2207	.458"	2.660"	56.7	2,296 fps	39,300 CUP	58.2	2,361 fps	43,200 CUP
	AR2219	.458"	2.660"	61.5	2,224 fps	36,400 CUP	64.0C	2,364 fps	42,500 CUP
350 GR. KODIAK	AR2207	.458"	2.660"	51.8	2,069 fps	37,200 CUP	53.8	2,172 fps	44,000 CUP
	AR2219	.458"	2.660"	58.0	2,092 fps	36,300 CUP	60.0C	2,191 fps	43,000 CUP
400 GR. BEAR CRK LD	AR2205	.458"	2.650"	-	-	-	27.0	1,422 fps	24,000 CUP
405 GR. KODIAK	AR2207	.458"	2.650"	44.0	1,818 fps	38,600 CUP	47.2	1,925 fps	43,000 CUP
	AR2219	.458"	2.650"	51.0	1,870 fps	37,200 CUP	53.2	1,975 fps	43,500 CUP
405 GR. REM JFP	AR2207	.458"	2.660"	48.8	1,926 fps	37,800 CUP	508.0	2,002 fps	43,700 CUP
	AR2219	.458"	2.660"	54.5	1,957 fps	39,900 CUP	57.0	2,045 fps	43,400 CUP

C = Compressed load

<b>45-90 Winchester</b>	<b>Case:</b> -	<b>Barrel length:</b> 24"
	<b>Twist:</b> -	<b>Trim length:</b> -
	<b>Primer:</b> -	

Bullet	Powder	Bullet Diam.	C.O.L.	Start loads			Maximum loads		
				Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
300 GR.	AR2207	-	-	-	-	-	36.5	1,500 fps	-

# RIFLE DATA

<b>45-90 Winchester</b>				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
400 GR.	AR2207	-	-	-	-	-	30.5	1,350 fps	-
<b>577/450 Martini Henry</b>				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
400 GR. LEAD	AR2207	-	-	-	-	-	37.0	1,300 fps	-
<b>450 Nitro Express</b>				Case: - Twist: - Primer: -			Barrel length: 24" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
500 GR.	AR2208	-	-	-	-	-	84.0	2,150 fps	-
	AR2209	-	-	-	-	-	100.0	2,150 fps	-
<b>450 Marlin</b>				Case: Homady Twist: 1:20" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. BAR XFN	AR2207	.458"	2.510"	51.0	2,253 fps	33,600 PSI	57.0C	2,509 fps	42,200 PSI
300 GR. NOS PART	AR2207	.458"	2.510"	48.0	2,116 fps	33,900 PSI	53.0	2,321 fps	42,200 PSI
	AR2219	.458"	2.510"	56.0	2,160 fps	32,900 PSI	59.0C	2,289 fps	37,300 PSI
350 GR. HDY JFP	AR2207	.458"	2.530"	43.0	1,939 fps	35,700 PSI	48.5	2,119 fps	42,200 PSI
	AR2219	.458"	2.530"	53.0	2,043 fps	36,500 PSI	58.0C	2,196 fps	42,300 PSI
	Bench Mark 2	.458"	2.530"	56.0	2,004 fps	33,300 PSI	59.0C	2,129 fps	38,600 PSI
400 GR. SPR JFP	AR2207	.458"	2.520"	41.0	1,872 fps	41,200 PSI	45.5	1,958 fps	42,600 PSI
	AR2219	.458"	2.520"	48.0	1,862 fps	34,800 PSI	52.5C	2,023 fps	41,900 PSI
	Bench Mark 2	.458"	2.520"	50.0	1,811 fps	33,000 PSI	55.0C	2,010 fps	42,500 PSI
	AR2206H	.458"	2.520"	51.0	1,817 fps	34,700 PSI	56.0C	1,986 fps	42,000 PSI
	AR2208	.458"	2.520"	54.0	1,803 fps	33,500 PSI	57.0C	1,910 fps	38,000 PSI
				C = Compressed load					

# RIFLE DATA

458 Winchester Magnum				Case: Winchester Twist: 1:14" Primer: CCI 250			Barrel length: 24" Trim length: 2.490"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. BAR TSX FN	AR2207	.458"	2.950"	68.0	2,683 fps	36,100 CUP	76.0C	2,952 fps	50,600 CUP
	AR2219	.458"	2.950"	75.0	2,707 fps	40,600 CUP	81.0C	2,876 fps	51,000 CUP
300 GR. BAR TSX	AR2207	.458"	3.200"	68.0	2,565 fps	40,300 CUP	76.0C	2,793 fps	51,300 CUP
	AR2219	.458"	3.200"	77.0	2,584 fps	41,300 CUP	83.0C	2,753 fps	50,500 CUP
	Bench Mark 2	.458"	3.200"	74.0	2,355 fps	30,600 CUP	80.0C	2,507 fps	32,600 CUP
300 GR. BAR TTSX BT	AR2207	.458"	3.300"	68.0	2,591 fps	40,900 CUP	72.5C	2,720 fps	49,100 CUP
	AR2219	.458"	3.300"	71.0	2,447 fps	36,900 CUP	75.0C	2,561 fps	41,200 CUP
300 GR. MEI LFP	Trail Boss	.458"	2.885"	19.0	1,187 fps	10,800 CUP	23.0	1,282 fps	13,200 CUP
350 GR. SPR SP	AR2207	.458"	3.105"	67.0	2,426 fps	44,700 CUP	72.0C	2,548 fps	51,600 CUP
	AR2219	.458"	3.105"	75.0	2,469 fps	40,900 CUP	80.0C	2,589 fps	49,400 CUP
	Bench Mark 2	.458"	3.105"	71.0	2,250 fps	33,500 CUP	79.0C	2,468 fps	42,400 CUP
	Bench Mark 8208	.458"	3.105"	74.0	2,365 fps	35,800 CUP	77.0C	2,452 fps	37,700 CUP
	AR2206H	.458"	3.105"	77.0	2,419 fps	34,600 CUP	80.0C	2,496 fps	38,700 CUP
385 GR. CAST LRN	Trail Boss	.458"	3.000"	16.0	1,020 fps	12,100 CUP	19.0	1,123 fps	16,100 CUP
400 GR. SFT SP	AR2207	.458"	3.220"	61.0	2,197 fps	44,000 CUP	67.0	2,323 fps	51,000 CUP
	AR2219	.458"	3.220"	68.5	2,211 fps	36,500 CUP	76.0C	2,407 fps	51,100 CUP
	Bench Mark 2	.458"	3.220"	70.0	2,138 fps	33,500 CUP	78.0C	2,343 fps	46,600 CUP
	Bench Mark 8208	.458"	3.220"	73.0	2,269 fps	37,100 CUP	77.0C	2,362 fps	44,300 CUP
	AR2206H	.458"	3.220"	72.0	2,214 fps	33,100 CUP	77.0C	2,349 fps	42,500 CUP
	AR2208	.458"	3.220"	74.0	2,246 fps	34,500 CUP	77.0C	2,310 fps	38,800 CUP
405 GR. CAST LFP	Trail Boss	.458"	2.910"	18.0	1,040 fps	14,500 CUP	21.0	1,082 fps	17,100 CUP
450 GR. SFT SP	AR2207	.458"	3.340"	56.5	2,001 fps	44,700 CUP	60.0	2,092 fps	50,800 CUP
	AR2219	.458"	3.340"	67.0	2,139 fps	43,700 CUP	71.0C	2,220 fps	51,000 CUP
	Bench Mark 2	.458"	3.340"	70.0	2,090 fps	41,600 CUP	75.0C	2,220 fps	48,200 CUP
	Bench Mark 8208	.458"	3.340"	71.0	2,146 fps	40,800 CUP	75.0C	2,235 fps	48,300 CUP
	AR2206H	.458"	3.340"	70.0	2,108 fps	36,100 CUP	74.0C	2,205 fps	43,000 CUP
	AR2208	.458"	3.340"	70.0	2,083 fps	34,200 CUP	74.0C	2,195 fps	41,600 CUP
485 GR. MEI LFP	Trail Boss	.458"	2.925"	13.0	860 fps	15,500 CUP	19.0	962 fps	22,700 CUP
500 GR. HDY JRN	AR2207	.458"	3.310"	53.0	1,887 fps	48,700 CUP	58.5	1,987 fps	51,100 CUP
	AR2219	.458"	3.310"	62.5	1,935 fps	39,400 CUP	69.5C	2,109 fps	52,000 CUP
	Bench Mark 2	.458"	3.310"	68.0	2,017 fps	42,300 CUP	73.0C	2,123 fps	50,300 CUP
	Bench Mark 8208	.458"	3.310"	67.0	1,993 fps	39,400 CUP	73.5C	2,140 fps	49,700 CUP
	AR2206H	.458"	3.310"	70.0	2,068 fps	42,000 CUP	74.0C	2,161 fps	50,300 CUP
	AR2208	.458"	3.310"	70.0	2,056 fps	39,400 CUP	74.0C	2,152 fps	48,100 CUP

C = Compressed load



# RIFLE DATA

460 Weatherby Magnum				Case: Weatherby Twist: 1:16" Primer: FEDERAL 215			Barrel length: 26" Trim length: 2.903"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
350 GR. HDY RN	AR2206H	.458"	3.355"	100.0	2,514 fps	-	110.0	2,760 fps	-
	AR2209	.458"	3.355"	115.0	2,595 fps	-	120.0	2,737 fps	-
	AR2213SC	.458"	3.355"	118.0	2,481 fps	-	128.0	2,678 fps	-
400 GR. BAR XFB	AR2206H	.458"	3.710"	97.0	2,404 fps	-	107.0	2,589 fps	-
	AR2209	.458"	3.710"	112.0	2,431 fps	-	118.0	2,610 fps	-
	AR2213SC	.458"	3.710"	117.0	2,434 fps	-	127.0	2,565 fps	-
500 GR. HDY RN	AR2206H	.458"	3.710"	95.0	2,314 fps	-	105.0	2,478 fps	-
	AR2209	.458"	3.710"	108.0	2,371 fps	-	115.0	2,508 fps	-
	AR2213SC	.458"	3.710"	116.0	2,386 fps	-	126.0	2,469 fps	-
600 GR. BAR RN	AR2209	.458"	3.710"	98.0	2,292 fps	-	104.0	2,439 fps	-
	AR2213SC	.458"	3.710"	110.0	2,302 fps	-	115.0	2,457 fps	-
470 Nitro Express				Case: Homady Twist: 1:20" Primer: FEDERAL 215M			Barrel length: 24" Trim length: 3.240"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
500 GR. WDLGH RN	Trail Boss	.475"	3.875"	-	-	-	45.5	1,257 fps	26,500 PSI
	AR2209	.475"	3.875"	95.0	2,134 fps	36,900 PSI	100.0	2,234 fps	41,700 PSI
	AR2213SC	.475"	3.875"	108.0	2,184 fps	38,000 PSI	112.0	2,247 fps	40,800 PSI
	AR2217	.475"	3.875"	118.0	2,172 fps	33,900 PSI	124.0C	2,300 fps	40,500 PSI
	AR2225	.475"	3.875"	118.0	2,088 fps	30,600 PSI	125.0C	2,202 fps	34,800 PSI
				C = Compressed load					
50 Alaskan				Case: Starline Twist: 1:20" Primer: CCI 200			Barrel length: 22" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
435 GR. LFN W/GC	AR2207	.510"	2.460"	57.0	1,912 fps	26,100 CUP	62.0	2,089 fps	35,500 CUP
	AR2219	.510"	2.460"	62.0	1,856 fps	25,500 CUP	66.0	1,994 fps	33,800 CUP
450 GR. BAR FP	AR2207	.510"	2.420"	52.0	1,772 fps	24,700 CUP	56.0	1,940 fps	35,300 CUP
	AR2219	.510"	2.420"	57.0	1,732 fps	26,200 CUP	60.5	1,876 fps	34,600 CUP
	Bench Mark 2	.510"	2.420"	59.0	1,718 fps	26,400 CUP	63.0	1,878 fps	35,100 CUP
500 GR. JFP	AR2207	.510"	2.500"	51.0	1,719 fps	28,600 CUP	55.0	1,854 fps	34,500 CUP
	AR2219	.510"	2.500"	56.0	1,674 fps	25,900 CUP	59.5	1,819 fps	33,900 CUP

# RIFLE DATA

50 Alaskan				Case: Starline Twist: 1:20" Primer: CCI 200			Barrel length: 22" Trim length: 2.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
525 GR. LFN W/GC	AR2207	.510"	2.520"	51.0	1,724 fps	27,300 CUP	55.0	1,852 fps	34,800 CUP
	AR2219	.510"	2.520"	56.0	1,691 fps	27,100 CUP	60.0	1,823 fps	34,200 CUP
	Bench Mark 2	.510"	2.520"	59.0	1,694 fps	25,800 CUP	63.0	1,820 fps	34,300 CUP
500 CYRUS				Case: Dakota Arms Twist: 1:20" Primer: FEDERAL 215M			Barrel length: 24" Trim length: 2.230"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
325 GR. BAR XPB	AR2207	.500"	2.895"	75.0	2,622 fps	47,000 CUP	80.0	2,724 fps	51,800 CUP
	AR2219	.500"	2.895"	85.0	2,607 fps	45,700 CUP	90.0C	2,722 fps	48,700 CUP
	Bench Mark 2	.500"	2.895"	86.0	2,572 fps	42,500 CUP	92.0C	2,720 fps	48,400 CUP
350 GR. SIE JHP	AR2219	.500"	2.655"	84.0	2,535 fps	45,500 CUP	90.0	2,654 fps	49,700 CUP
	Bench Mark 2	.500"	2.665"	87.0	2,539 fps	44,000 CUP	93.0C	2,653 fps	49,100 CUP
	AR2206H	.500"	2.655"	89.0	2,447 fps	39,800 CUP	95.0C	2,623 fps	46,900 CUP
400 GR. LEAD Conical w/GC	Trail Boss	.500"	2.710"	25.0	1,283 fps	28,800 CUP	30.0C	1,388 fps	34,500 CUP
400 GR. SIE JSP	AR2219	.500"	2.800"	80.4	2,317 fps	39,600 CUP	85.5	2,455 fps	46,200 CUP
	Bench Mark 2	.500"	2.800"	83.0	2,339 fps	39,800 CUP	89.0	2,501 fps	48,300 CUP
	AR2206H	.500"	2.800"	87.0	2,302 fps	37,100 CUP	93.0C	2,470 fps	43,700 CUP
	AR2208	.500"	2.800"	87.5	2,222 fps	35,300 CUP	93.0C	2,386 fps	40,500 CUP
450 GR. LSWC w/GC	Trail Boss	.501"	2.670"	23.0	1,189 fps	-	28.0C	1,275 fps	29,600 CUP
500 GR. HDY JFP MAG	AR2219	.500"	2.900"	74.3	2,111 fps	41,600 CUP	79.0	2,251 fps	52,000 CUP
	Bench Mark 2	.500"	2.900"	75.0	2,111 fps	42,800 CUP	81.5	2,250 fps	52,300 CUP
	AR2206H	.500"	2.900"	82.0	2,148 fps	40,600 CUP	87.0C	2,291 fps	49,100 CUP
	AR2208	.500"	2.900"	82.7	2,102 fps	39,100 CUP	88.0C	2,242 fps	46,500 CUP
				C = Compressed load					
500 Jeffrey				Case: - Twist: - Primer: -			Barrel length: 45" Trim length: -		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
500 GR.	AR2206	-	-	-	-	-	96.0	2,300 fps	-

# RIFLE DATA

500 Nitro Express 3"				Case: Homady			Barrel length: 24"		
				Twist: 1:15"			Trim length: 2.990"		
				Primer: FEDERAL 215M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
570 GR. HDY DGX	AR2209	.510"	3.740"	98.8	2,001 fps	33,800 PSI	106.3	2,188 fps	42,700 PSI
	AR2213SC	.510"	3.740"	106.0	1,989 fps	34,000 PSI	114.0C	2,145 fps	40,900 PSI
				C = Compressed load					
50 Browning Machine Gun				Case: FNB			Barrel length: 45"		
				Twist: 1:16.5"			Trim length: 3.900"		
				Primer: CCI 35, 50 BMG					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
655 GR. ADI FMJ	AR2218	.510"	5.450"	-	-	-	248.0	3,029 fps	-
750 GR. HDY A-MAX	AR2218	.510"	5.450"	-	-	-	233.0	2,800 fps	-
800 GR. BAR SOLID	AR2218	.510"	5.630"	-	-	-	225.0	2,725 fps	-

# SINGLE ACTION DATA

Due to its popularity, we again present a separate section for Single Action Data. Many of these loads were developed through an extensive program by the Hodgdon Powder Company Inc. of the USA, to whom we are indebted for their contribution.

**NEVER EXCEED THE MAXIMUM RECOMMENDED LOADS.**

## Introduction

Velocities for all cartridges listed are limited by the SAAMI maximum allowable pressures. Minimum loads are also established by pressure, since loads with very low pressure may fail to function in very cold weather, resulting in a bullet becoming lodged in the bore (please see the Warnings section of this guide). The average loss in velocity from the listed pressure barrel data when using a 4<sup>5</sup>/<sub>8</sub> inch barreled revolver is 175 fps. A 7<sup>1</sup>/<sub>2</sub> inch revolver will lose approximately 50 f.p.s. Carabines will generally develop velocities similar to those listed in the data. Some carbine/cartridge combinations will exceed the velocities listed. Because of a wide variation in bullet diameter, chamber diameter, cylinder gap, case capacity and manufacturing variations in primers and powder, we suggest that you chronograph loads from your own firearms.

## DO NOT LOAD BELOW MINIMUM RECOMMENDATIONS.

Doing so could result in a bullet stuck in the bore.

## Long Range Rifle Data

The loads listed below are representative of common calibres used. As there are so many cartridges that could be used, only a few are shown.

## DO NOT USE ANY FILLER MATERIAL WITH THESE LOADS,

as fillers can alter pressure and velocities decidedly. Velocities are limited to approximately 1,600 fps due to excessive leading at higher velocities. Use flat point bullets in tubular magazines.

## Shotgun

Any load suitable for trap or skeet is suitable for Single Action shooting. Shot loads of <sup>7</sup>/<sub>8</sub> oz., 1 oz. and 1<sup>1</sup>/<sub>8</sub> oz. are all that is required. Heavier loads generate more recoil and are, at best, unpleasant to shoot and, at worst, add time to your score. The loads included in this guide were selected for their performance and for component availability.

## Remember:

1. Smooth shells come out of a double-barrelled shotgun better than ribbed shells.
2. NO STEEL SHOT.
3. NO SHOT LARGER THAN #4. Size 6, 7<sup>1</sup>/<sub>2</sub> and 8 are most common.
4. CHECK YOUR RELOADS IN YOUR FIREARM FOR PROPER FUNCTION.

\*Damascus barrels should be considered unsafe with ANY powder.



# SINGLE ACTION RIFLE DATA

<b>25-20 Winchester (25-20 WCF)</b>				Case: Remington Twist: 1:14" Primer: WINCHESTER SR			Barrel length: 24" Trim length: 1.320"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
71 GR. LRNFP	AR2205	.258"	1.545"	6.0	1,146 fps	13,700 CUP	7.0	1,346 fps	18,200 CUP
85 GR. LRNFP	AR2205	.258"	1.600"	6.0	1,129 fps	18,500 CUP	7.0	1,317 fps	20,500 CUP
<b>30-30 Winchester</b>				Case: Winchester Twist: 1:12" Primer: WINCHESTER LR			Barrel length: 24" Trim length: 2.030"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
150GR. RCBS LSP (w/GCK)	AP100	.309"	2.524"	8.0	1,245 fps	12,900 PSI	12.0	1,685 fps	32,300 PSI
	AR2205	.309"	2.524"	15.0	1,600 fps	15,900 PSI	19.0	1,970 fps	31,900 PSI
	AR2207	.309"	2.524"	16.0	1,490 fps	14,200 PSI	21.0	1,880 fps	22,700 PSI
160 GR. CAST LFN	Trail Boss	.308"	2.485"	6.5	997 fps	20,500 CUP	9.0	1,195 fps	29,100 CUP
	AR2207	.308"	2.485"	15.0	1,420 fps	15,000 CUP	17.0	1,616 fps	20,600 CUP
	AR2206H	.308"	2.485"	17.5	1,351 fps	15,200 CUP	21.0	1,562 fps	23,100 CUP
<b>32-40 Winchester</b>				Case: Winchester Twist: 1:16" Primer: REMINGTON 2 1/2			Barrel length: 24" Trim length: 2.120"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
196 GR. HOCH	Trail Boss	.324"	2.555"	5.0	833 fps	12,500 CUP	6.0	935 fps	25,300 CUP
	AR2205	.324"	2.555"	-	-	-	13.0	1,367 fps	18,000 CUP
202 GR. POPE	AR2205	.324"	2.555"	-	-	-	14.0	1,376 fps	15,900 CUP
204 GR. MILLER	AR2205	.324"	2.555"	-	-	-	13.5	1,367 fps	16,300 CUP
<b>38-55 Winchester</b>				Case: Winchester Twist: 1:18" Primer: CCI 200			Barrel length: 24" Trim length: 2.075"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
250 GR. LYMAN CAST	Trail Boss	.376"	2.500"	6.0	842 fps	20,300 CUP	7.0	911 fps	25,600 CUP
	AR2207	.376"	2.500"	18.5	1,408 fps	17,100 CUP	24.0	1,740 fps	26,200 CUP
	AR2219	.376"	2.500"	24.0	1,534 fps	22,500 CUP	27.0	1,692 fps	27,600 CUP
	AR2206H	.376"	2.500"	21.0	1,197 fps	18,200 CUP	26.0	1,600 fps	26,500 CUP

# SINGLE ACTION RIFLE DATA

40-65 Winchester				Case: Winchester			Barrel length: 24"		
				Twist: 1:16"			Trim length: 2.095"		
				Primer: WINCHESTER LR					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
400 GR. LRNFP	Trail Boss	.409"	2.780"	11.0	889 fps	20,000 CUP	12.0	915 fps	21,200 CUP
	AR2205	.409"	2.780"	20.0	1,277 fps	18,900 CUP	23.0	1,410 fps	24,900 CUP
	AR2207	.409"	2.780"	28.0	1,441 fps	21,200 CUP	31.0	1,572 fps	24,700 CUP
	AR2219	.409"	2.780"	30.5	1,398 fps	19,200 CUP	33.0	1,520 fps	23,900 CUP
	Bench Mark 2	.409"	2.780"	29.0	1,321 fps	18,800 CUP	32.5	1,491 fps	25,000 CUP
	Bench Mark 8208	.409"	2.780"	30.8	1,409 fps	24,300 CUP	32.4	1,462 fps	25,100 CUP
	AR2206H	.409"	2.780"	33.0	1,423 fps	19,700 CUP	36.0	1,554 fps	24,200 CUP
	AR2208	.409"	2.780"	35.0	1,438 fps	20,100 CUP	38.0	1,558 fps	24,800 CUP
45-70 Government (Trapdoor Rifles)				Case: Winchester			Barrel length: 24"		
				Twist: 1:20"			Trim length: 2.100"		
				Primer: CCI 200					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
300 GR. CAST LFP	Trail Boss	.458"	2.465"	14.0	1,199 fps	19,400 CUP	16.5	1,285 fps	20,900 CUP
	AR2207	.458"	2.465"	30.0	1,390 fps	14,400 CUP	35.5	1,641 fps	16,100 CUP
	Bench Mark 2	.458"	2.465"	54.0	1,788 fps	18,300 CUP	58.0	1,940 fps	21,900 CUP
	Bench Mark 8208	.458"	2.465"	51.2	1,723 fps	19,500 CUP	55.0	1,924 fps	24,700 CUP
	AR2206H	.458"	2.465"	45.0	1,572 fps	14,400 CUP	51.0	1,703 fps	15,500 CUP
	AR2208	.458"	2.465"	45.0	1,599 fps	17,800 CUP	55.0	1,880 fps	20,600 CUP
385 GR. CAST LFP	Trail Boss	.458"	2.505"	14.0	1,075 fps	19,400 CUP	16.0	1,142 fps	23,200 CUP
	AR2207	.458"	2.505"	28.0	1,302 fps	13,300 CUP	32.0	1,483 fps	14,700 CUP
	Bench Mark 2	.458"	2.505"	50.0	1,621 fps	16,300 CUP	53.0	1,779 fps	21,300 CUP
	AR2206H	.458"	2.505"	35.0	1,280 fps	11,900 CUP	42.0	1,526 fps	23,100 CUP
	AR2208	.458"	2.505"	42.5	1,537 fps	15,400 CUP	52.5	1,805 fps	21,800 CUP
405 GR. CAST LFP	Trail Boss	.458"	2.540"	12.0	971 fps	24,500 CUP	13.0	1,007 fps	25,600 CUP
	AR2207	.458"	2.540"	27.0	1,251 fps	14,200 CUP	31.0	1,459 fps	17,100 CUP
	Bench Mark 2	.458"	2.540"	47.0	1,564 fps	17,100 CUP	50.0	1,695 fps	22,600 CUP
	Bench Mark 8208	.458"	2.540"	47.9	1,637 fps	21,800 CUP	51.0	1,727 fps	23,600 CUP
	AR2206H	.458"	2.540"	40.0	1,424 fps	14,900 CUP	48.0	1,645 fps	18,900 CUP
	AR2208	.458"	2.540"	40.0	1,392 fps	15,600 CUP	50.0	1,718 fps	20,900 CUP
485 GR. CAST LFP	Trail Boss	.458"	2.540"	8.0	699 fps	17,100 CUP	10.0	804 fps	23,300 CUP
	AR2207	.458"	2.540"	28.0	1,279 fps	16,400 CUP	32.0	1,434 fps	20,400 CUP
	Bench Mark 2	.458"	2.540"	38.0	1,290 fps	15,600 CUP	43.0	1,503 fps	23,400 CUP

# SINGLE ACTION RIFLE DATA

45-120 Sharps				Case: Bell Twist: 1:18" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 3.240"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
350 GR. LY #457122	Trail Boss	.458"	3.700"	29.0	1,320 fps	20,500 CUP	32.0	1,371 fps	24,400 CUP
	AR2207	.458"	3.700"	46.0	1,783 fps	22,500 CUP	49.0	1,903 fps	27,500 CUP
	AR2219	.458"	3.700"	50.0	1,717 fps	21,000 CUP	53.0	1,874 fps	27,700 CUP
	Bench Mark 2	.458"	3.700"	53.0	1,809 fps	24,700 CUP	57.0	1,922 fps	26,800 CUP
	AR2206H	.458"	3.700"	59.0	1,875 fps	24,800 CUP	64.0	2,031 fps	26,900 CUP
405 GR. LY #457193	Trail Boss	.458"	3.730"	26.0	1,156 fps	18,300 CUP	30.0	1,252 fps	25,500 CUP
	AR2207	.458"	3.730"	45.0	1,708 fps	24,700 CUP	48.0	1,818 fps	27,200 CUP
	AR2219	.458"	3.730"	49.0	1,665 fps	23,200 CUP	52.5	1,793 fps	27,900 CUP
	Bench Mark 2	.458"	3.730"	53.0	1,805 fps	26,500 CUP	58.0	1,917 fps	27,200 CUP
	AR2206H	.458"	3.730"	58.0	1,849 fps	26,000 CUP	64.0	2,012 fps	28,300 CUP
	AR2208	.458"	3.730"	59.0	1,763 fps	24,200 CUP	63.0	1,858 fps	28,200 CUP
500 GR. LY #457125	Trail Boss	.458"	3.290"	26.0	1,050 fps	20,100 CUP	29.0	1,105 fps	24,300 CUP
	AR2207	.458"	3.920"	42.0	1,523 fps	25,200 CUP	46.5	1,650 fps	28,300 CUP
	AR2219	.458"	3.920"	48.0	1,568 fps	25,400 CUP	52.0	1,695 fps	28,300 CUP
	Bench Mark 2	.458"	3.920"	50.0	1,607 fps	26,600 CUP	54.5	1,747 fps	28,200 CUP
	AR2206H	.458"	3.920"	54.0	1,641 fps	24,400 CUP	60.0	1,809 fps	28,500 CUP
	AR2208	.458"	3.920"	56.0	1,618 fps	24,200 CUP	61.0	1,737 fps	27,900 CUP
50-140 Sharps				Case: Bell Twist: 1:22" Primer: FEDERAL 210M			Barrel length: 24" Trim length: 3.230"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
425 GR. LY #515141	AR2208	.512"	3.800"	95.0	2,127 fps	23,600 CUP	102.5	2,294 fps	28,100 CUP
	AR2209	.512"	3.800"	105.0	2,033 fps	21,600 CUP	114.0	2,242 fps	26,700 CUP
	AR2213SC	.512"	3.800"	118.0	2,079 fps	22,800 CUP	125.0	2,209 fps	26,300 CUP
515 GR. LY #515142	AR2208	.512"	3.750"	87.0	1,958 fps	24,000 CUP	95.0	2,088 fps	27,900 CUP
	AR2209	.512"	3.750"	101.0	1,916 fps	22,000 CUP	108.0	2,091 fps	27,200 CUP
	AR2213SC	.512"	3.750"	112.0	1,956 fps	23,200 CUP	118.0	2,085 fps	27,500 CUP



# SINGLE ACTION PISTOL DATA

<b>32 H&amp;R Magnum</b>				Case: Federal Twist: 1:16" Primer: FEDERAL 100			Barrel length: 5" Trim length: 1.070"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
83 GR. BERB HBWC	AP70N	.314"	1.095"	2.9	911 fps	14,600 CUP	3.4	1,043 fps	20,000 CUP
	AR2205	.314"	1.095"	8.3	1,024 fps	16,800 CUP	9.3	1,133 fps	19,900 CUP
90 GR. HDY LSWC	Trail Boss	.314"	1.350"	2.4	751 fps	10,700 CUP	2.8	785 fps	11,300 CUP
	AP70N	.314"	1.350"	3.0	819 fps	8,400 CUP	3.2	908 fps	11,500 CUP
<b>32-20 Winchester</b>				Case: Remington Twist: 1:20" Primer: WINCHESTER SP			Barrel length: 5.5" Trim length: 1.305"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
90 GR. CAST LRNFP	Trail Boss	.314"	1.490"	2.5	785 fps	11,400 CUP	2.8	830 fps	13,900 CUP
115 GR. CAST LRNFP	Trail Boss	.314"	1.580"	2.2	642 fps	11,300 CUP	2.5	707 fps	15,300 CUP
	AP70N	.314"	1.580"	3.0	808 fps	14,200 CUP	3.2	869 fps	16,000 CUP
<b>38 Short Colt</b>				Case: Starline Twist: 1:16" Primer: FEDERAL 100M			Barrel length: 7.5" Trim length: 0.755"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
93 GR. AA206 LRN	Trail Boss	.359"	1.005"	1.7	575 fps	-	2.0	674 fps	-
	AS30N	.359"	1.005"	1.8	634 fps	7,000 CUP	2.1	778 fps	7,300 CUP
	AP70N	.359"	1.005"	2.9	634 fps	-	3.4	775 fps	-
135 GR. AA202 LFP	Trail Boss	.358"	1.135"	1.5	490 fps	-	1.7	526 fps	-
	AS30N	.358"	1.135"	1.8	648 fps	-	2.1	731 fps	-
	AP70N	.358"	1.135"	2.4	624 fps	-	2.8	771 fps	-
<b>38 Long Colt</b>				Case: Starline Twist: 1:16" Primer: FEDERAL 100M			Barrel length: 7.5" Trim length: 1.012"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
125 GR. LRN	Trail Boss	.358"	1.400"	2.0	622 fps	-	2.4	705 fps	-
	AS30N	.358"	1.400"	2.0	631 fps	-	2.5	765 fps	-
	AP70N	.358"	1.400"	3.2	626 fps	-	3.7	772 fps	-
150 GR. LRN	Trail Boss	.358"	1.390"	1.8	541 fps	-	2.0	575 fps	-
	AS30N	.358"	1.390"	2.0	624 fps	-	2.6	744 fps	-
	AP70N	.358"	1.390"	3.0	631 fps	-	3.5	769 fps	-

# SINGLE ACTION PISTOL DATA

38 Special				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SP			Barrel length: 7.7" Trim length: 1.145"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
90 GR. CAST LRNFP	Trail Boss	.359"	1.325"	3.0	740 fps	7,800 PSI	5.0	904 fps	8,100 PSI
	AS30N	.359"	1.325"	2.5	705 fps	7,900 PSI	3.0	938 fps	11,400 PSI
125 GR. CAST LRNFP	Trail Boss	.358"	1.445"	3.0	753 fps	11,600 PSI	5.3	952 fps	13,400 PSI
	AS30N	.358"	1.445"	2.5	810 fps	8,400 CUP	3.5	978 fps	16,900 CUP
	AP70N	.358"	1.445"	4.3	872 fps	8,700 CUP	4.7	1,036 fps	16,800 CUP
125 GR. LRN	AP50N	.356"	1.270"	4.0	905 fps	7,900 PSI	5.0	1,130 fps	11,100 PSI
130 GR. MEI CAST LRNFP	AS30N	.358"	1.460"	3.0	828 fps	12,500 PSI	3.5	924 fps	16,100 PSI
	AP70N	.358"	1.460"	4.7	957 fps	13,500 PSI	5.2	1,056 fps	16,000 PSI
135 GR. CAST LRNFP	AS30N	.358"	1.418"	2.6	767 fps	11,400 CUP	3.3	910 fps	16,200 CUP
	AP70N	.358"	1.418"	4.1	924 fps	13,400 CUP	4.6	1,025 fps	16,900 CUP
135 GR. CAST LWC	AP50N *	.358"	1.278"	2.8	645 fps	9,450 PSI	3.5	845 fps	16,900 PSI
	AP70N *	.358"	1.278"	3.5	575 fps	8,200 PSI	4.7	940 fps	17,000 PSI
138 GR. CAST LWC	AP50N *	.357"	1.280"	3.0	710 fps	10,100 PSI	3.5	835 fps	17,500 PSI
140 GR. HDY COWBOY	Trail Boss	.358"	1.450"	3.0	697 fps	11,200 PSI	3.7	806 fps	13,400 PSI
	AS30N	.358"	1.450"	2.5	706 fps	10,700 PSI	3.4	862 fps	16,200 PSI
	AP70N	.358"	1.450"	4.4	889 fps	12,800 PSI	4.9	1,009 fps	15,600 PSI
148 GR. CAST LWC	AP50N *	.358"	1.293"	2.8	650 fps	10,100 PSI	3.2	755 fps	13,000 PSI
	AP70N *	.358"	1.293"	3.5	585 fps	8,800 PSI	4.5	845 fps	14,700 PSI
148 GR. HDY LHBWC	Trail Boss	.358"	1.160"	2.0	625 fps	15,100 PSI	2.3	675 fps	15,700 PSI
	AS30N	.358"	1.160"	2.3	784 fps	10,900 CUP	2.5	836 fps	13,200 CUP
	AP70N	.358"	1.160"	2.9	709 fps	7,400 CUP	3.8	940 fps	15,600 CUP
158 GR. CAST LSWC	Trail Boss	.357"	1.475"	2.7	661 fps	11,400 PSI	4.2	804 fps	13,700 PSI
	AS30N	.358"	1.475"	2.8	812 fps	12,900 CUP	3.1	871 fps	15,100 CUP
	AP50N *	.358"	1.470"	3.2	660 fps	8,200 PSI	3.8	800 fps	16,600 PSI
	AP70N	.358"	1.475"	3.5	756 fps	9,600 CUP	4.5	974 fps	16,700 CUP
	AR2205	.358"	1.475"	9.0	887 fps	12,100 CUP	10.0	983 fps	15,700 CUP

\* 4" Vented Barrel

357 Magnum				Case: Winchester Twist: 1:18.75" Primer: WINCHESTER SPM			Barrel length: 10" Trim length: 1.285"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Gr.	Velocity	Pressure	Gr.	Velocity	Pressure
90 GR. CAST LRNFP	Trail Boss	.359"	1.560"	3.5	969 fps	6,800 CUP	5.0	1,121 fps	10,700 CUP
	AS30N	.359"	1.560"	2.7	780 fps	6,000 CUP	3.5	1,106 fps	12,500 CUP

# SINGLE ACTION PISTOL DATA

<b>357 Magnum</b>				Case: Winchester			Barrel length: 10"		
				Twist: 1:18.75"			Trim length: 1.285"		
				Primer: WINCHESTER SPM					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
125 GR. CAST LRNFP	Trail Boss	.358"	1.580"	3.5	874 fps	14,900 CUP	5.3	1,035 fps	17,900 CUP
	AS30N	.358"	1.580"	3.5	984 fps	11,900 CUP	5.3	1,260 fps	33,000 CUP
	AP70N	.358"	1.580"	4.8	1,046 fps	11,000 CUP	6.8	1,401 fps	34,200 CUP
135 GR. CAST LRNFP	AS30N	.358"	1.580"	3.4	914 fps	12,200 CUP	5.1	1,207 fps	30,200 CUP
	AP70N	.358"	1.580"	4.8	986 fps	11,700 CUP	6.5	1,314 fps	27,800 CUP
135 GR. CAST LWC	AP50N *	.358"	-	4.0	870 fps	16,700 PSI	5.2	1,065 fps	31,900 PSI
138 GR. CAST LWC	AP50N *	.357"	1.420"	4.0	855 fps	13,700 PSI	5.0	1,050 fps	33,700 PSI
140 GR. HDY CBOY	AP70N	.358"	1.550"	3.3	767 fps	8,800 PSI	3.9	902 fps	10,600 PSI
148 GR. CAST LWC	AP50N *	.358"	1.410"	4.0	835 fps	12,700 PSI	5.0	1,005 fps	28,500 PSI
148 GR. HDY LHBWC	AP70N	.358"	1.290"	3.5	880 fps	13,700 CUP	4.0	989 fps	17,700 CUP
150 GR. CAST LSWC	AP50N *	.358"	1.615"	4.0	800 fps	13,300 PSI	5.0	960 fps	23,900 PSI
158 GR. CAST LSWC	Trail Boss	.357"	1.610"	3.2	754 fps	16,500 CUP	4.2	865 fps	20,400 CUP
	AS30N	.358"	1.610"	3.2	867 fps	14,400 CUP	4.6	1,079 fps	33,600 CUP
	AP50N *	.358"	1.610"	5.0	925 fps	21,800 PSI	5.8	1,030 fps	33,000 PSI
	AP70N	.358"	1.610"	4.0	890 fps	15,700 CUP	6.2	1,247 fps	33,400 CUP
* 4" Vented Barrel									
<b>38-40 Winchester</b>				Case: Winchester			Barrel length: 5.5"		
				Twist: 1:36"			Trim length: 1.295"		
				Primer: WINCHESTER LP					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
140 GR. CAST LRNFP	AS30N	.401"	1.600"	4.0	778 fps	4,900 PSI	5.0	960 fps	10,100 PSI
180 GR. CAST LRNFP	Trail Boss	.401"	1.600"	4.5	694 fps	7,300 PSI	5.5	800 fps	9,900 PSI
	AS30N	.401"	1.600"	4.7	760 fps	8,700 PSI	5.5	889 fps	13,500 PSI
	AP70N	.401"	1.600"	6.9	813 fps	8,200 PSI	7.5	955 fps	11,900 PSI
<b>44 Colt</b>				Case: Starline			Barrel length: 8"		
				Twist: 1:20"			Trim length: 1.090"		
				Primer: FEDERAL 150M					
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
165 GR. LEAD RNFP	Trail Boss	.430"	1.310"	3.3	698 fps	5,400 CUP	4.5	844 fps	9,700 CUP
	AS30N	.430"	1.310"	3.0	705 fps	6,600 CUP	4.2	944 fps	9,000 CUP
185 GR. LEAD RNFP	Trail Boss	.430"	1.350"	3.2	643 fps	5,600 CUP	4.0	751 fps	9,600 CUP
	AS30N	.430"	1.350"	3.0	692 fps	5,800 CUP	4.2	893 fps	9,600 CUP

# SINGLE ACTION PISTOL DATA

44 Colt				Case: Starline Twist: 1:20" Primer: FEDERAL 150M			Barrel length: 8" Trim length: 1.090"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. LEAD RNFP	Trail Boss	.430"	1.370"	3.0	595 fps	4,800 CUP	3.9	711 fps	9,300 CUP
	AS30N	.430"	1.370"	3.2	710 fps	6,100 CUP	3.9	831 fps	10,000 CUP
	AP70N	.430"	1.370"	4.8	762 fps	6,100 CUP	5.7	927 fps	9,900 CUP
240 GR. LEAD RNFP	Trail Boss	.430"	1.380"	3.0	563 fps	6,800 CUP	3.4	625 fps	9,000 CUP
	AS30N	.430"	1.380"	4.0	706 fps	6,800 CUP	4.7	818 fps	9,500 CUP
	AP70N	.430"	1.380"	4.5	769 fps	6,400 CUP	5.2	870 fps	10,400 CUP
44 Russian				Case: Starline Twist: 1:20" Primer: WINCHESTER LP			Barrel length: 5" Trim length: 0.960"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
165 GR. LRNFP	Trail Boss	.430"	1.165"	3.3	742 fps	7,600 CUP	4.5	878 fps	11,600 CUP
	AS30N	.430"	1.165"	3.0	776 fps	7,300 CUP	4.0	979 fps	11,100 CUP
200 GR. LRNFP	Trail Boss	.430"	1.245"	3.0	647 fps	7,900 CUP	3.9	747 fps	10,400 CUP
	AS30N	.430"	1.245"	3.2	747 fps	8,000 CUP	3.7	837 fps	11,100 CUP
	AP70N	.430"	1.245"	4.8	816 fps	8,100 CUP	5.7	970 fps	11,500 CUP
240 GR. LRNFP	Trail Boss	.430"	1.275"	3.0	604 fps	8,800 CUP	3.5	661 fps	10,000 CUP
	AS30N	.430"	1.275"	3.0	711 fps	9,400 CUP	3.5	769 fps	10,700 CUP
	AP70N	.430"	1.275"	3.8	679 fps	6,400 CUP	4.6	841 fps	11,000 CUP
44 S&W Special				Case: Starline Twist: 1:20" Primer: WINCHESTER LP			Barrel length: 8" Trim length: 1.155"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
165 GR. CAST LRNFP	Trail Boss	.430"	1.365"	4.8	865 fps	10,700 CUP	7.0	1,005 fps	12,100 CUP
	AS30N	.430"	1.365"	3.6	836 fps	6,000 CUP	4.6	1,009 fps	13,400 CUP
	AP70N	.430"	1.365"	5.5	851 fps	5,700 CUP	6.3	1,042 fps	10,900 CUP
185 GR. CAST LRNFP	Trail Boss	.430"	1.400"	4.5	791 fps	10,400 CUP	6.6	944 fps	12,600 CUP
	AS30N	.430"	1.400"	3.5	810 fps	7,800 CUP	4.2	930 fps	13,200 CUP
	AP70N	.430"	1.400"	5.4	823 fps	7,700 CUP	6.4	1,031 fps	13,900 CUP
200 GR. CAST LRNFP	Trail Boss	.430"	1.450"	4.3	757 fps	8,700 CUP	6.3	885 fps	13,200 CUP
	AS30N	.430"	1.450"	3.5	748 fps	7,800 CUP	4.5	891 fps	14,000 CUP
	AP70N	.430"	1.450"	5.5	802 fps	8,200 CUP	6.5	960 fps	12,900 CUP
	AR2205	.430"	1.450"	13.0	879 fps	8,600 CUP	15.0	1,051 fps	13,100 CUP

# SINGLE ACTION PISTOL DATA

44 S&W Special				Case: Starline Twist: 1:20" Primer: WINCHESTER LP			Barrel length: 8" Trim length: 1.155"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
220 GR. BERB FP	Trail Boss	.430"	1.460"	4.0	633 fps	7,300 CUP	5.1	766 fps	12,800 CUP
	AS30N	.430"	1.460"	3.7	638 fps	7,800 CUP	4.4	774 fps	13,600 CUP
	AP70N	.430"	1.460"	5.7	748 fps	8,700 CUP	6.5	918 fps	13,700 CUP
240 GR. CAST LSWC	Trail Boss	.430"	1.450"	4.0	673 fps	9,700 CUP	5.2	763 fps	11,700 CUP
	AS30N	.430"	1.450"	3.2	669 fps	9,000 CUP	4.0	771 fps	13,500 CUP
	AP70N	.430"	1.450"	4.9	721 fps	8,000 CUP	5.6	873 fps	13,300 CUP
44-40 Winchester (44-40 WCF)				Case: Winchester Twist: 1:36" Primer: WINCHESTER LP			Barrel length: 6" Trim length: 1.295"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
160 GR. CAST LFP	AS30N	.430"	1.600"	4.2	747 fps	7,400 PSI	5.5	916 fps	12,700 PSI
200 GR. CAST LRNFP	Trail Boss	.430"	1.600"	5.5	723 fps	7,800 PSI	6.5	826 fps	11,900 PSI
	AS30N	.430"	1.600"	4.2	648 fps	8,200 PSI	5.0	765 fps	11,700 PSI
	AP70N	.430"	1.600"	6.6	722 fps	10,000 PSI	7.3	777 fps	11,100 PSI
200 GR. CAST LSWC	AP50N	.428"	1.620"	5.5	755 fps	4,200 PSI	6.5	920 fps	8,900 PSI
215 GR. CAST LSWC	AP50N	.428"	1.620"	5.3	765 fps	4,450 PSI	6.4	940 fps	13,800 PSI
44 Remington Magnum				Case: Winchester Twist: 1:20" Primer: REMINGTON 2 1/2			Barrel length: 8.275" Trim length: 1.280"		
NOTE: See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
165 GR. LRNFP CAST	Trail Boss	.430"	1.500"	6.0	960 fps	17,200 PSI	8.0	1,086 fps	18,800 PSI
	AS30N	.430"	1.500"	4.4	910 fps	8,500 CUP	5.5	1,064 fps	15,500 CUP
	AP70N	.430"	1.500"	6.5	918 fps	7,700 CUP	7.2	1,059 fps	11,500 CUP
185 GR. LRNFP CAST	Trail Boss	.430"	1.540"	6.2	936 fps	19,500 PSI	7.8	1,050 fps	21,100 PSI
	AS30N	.430"	1.540"	4.2	839 fps	8,900 CUP	6.0	1,043 fps	18,400 CUP
	AP70N	.430"	1.540"	6.4	919 fps	8,400 CUP	7.4	1,070 fps	12,600 CUP
200 GR. LRNFP CAST	Trail Boss	.430"	1.570"	6.1	890 fps	17,900 PSI	7.7	988 fps	20,700 PSI
	AS30N	.430"	1.570"	4.2	785 fps	8,500 CUP	6.4	1,028 fps	20,200 CUP
	AP70N	.430"	1.570"	6.8	897 fps	10,500 CUP	7.8	1,045 fps	15,400 CUP
220 GR. BERB FP	AP70N	.430"	1.610"	7.3	839 fps	12,200 PSI	9.0	1,104 fps	21,200 PSI

# SINGLE ACTION PISTOL DATA

<b>44 Remington Magnum</b>				Case: Winchester Twist: 1:20" Primer: REMINGTON 2 1/2			Barrel length: 8.275" Trim length: 1.280"		
NOTE: See Single Action Pistol section for more loads with lead bullets.									
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
240 GR. LSWC CAST	Trail Boss	.430"	1.620"	6.0	828 fps	19,100 PSI	7.3	917 fps	21,600 PSI
	AS30N	.430"	1.620"	4.3	759 fps	14,000 CUP	6.2	940 fps	21,800 CUP
	AP70N	.430"	1.620"	6.5	852 fps	11,700 CUP	10.2	1,276 fps	37,500 CUP
	AR2205	.430"	1.620"	23.0	1,345 fps	24,100 PSI	25.0	1,480 fps	30,000 PSI
<b>45 S&amp;W (Schofield)</b>				Case: Starline Twist: 1:16" Primer: WINCHESTER LP			Barrel length: 5" Trim length: 1.095"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
200 GR. LRNFP	Trail Boss	.452"	1.430"	4.0	684 fps	9,000 CUP	5.0	791 fps	13,200 CUP
	AS30N	.452"	1.430"	4.0	733 fps	8,300 CUP	5.0	845 fps	13,100 CUP
	AP70N	.452"	1.430"	6.0	773 fps	9,100 CUP	7.0	938 fps	13,100 CUP
230 GR. LRNFP	Trail Boss	.452"	1.430"	4.0	649 fps	9,000 CUP	5.0	739 fps	13,000 CUP
	AS30N	.452"	1.430"	4.0	697 fps	9,400 CUP	4.7	783 fps	13,600 CUP
	AP70N	.452"	1.430"	5.5	738 fps	9,400 CUP	6.0	816 fps	11,400 CUP
250 GR. LRNFP	Trail Boss	.452"	1.430"	3.5	537 fps	7,300 CUP	4.8	685 fps	13,200 CUP
	AS30N	.452"	1.430"	4.0	674 fps	11,000 CUP	4.2	710 fps	12,500 CUP
	AP70N	.452"	1.430"	6.0	724 fps	9,900 CUP	6.3	830 fps	13,800 CUP
<b>45 Colt</b>				Case: Winchester Twist: 1:16" Primer: WINCHESTER LP			Barrel length: 7.25" Trim length: 1.280"		
				Start loads			Maximum loads		
Bullet	Powder	Bullet Diam.	C.O.L.	Grs.	Velocity	Pressure	Grs.	Velocity	Pressure
160 GR. CAST LRNFP	Trail Boss	.452"	1.500"	7.0	903 fps	8,100 PSI	8.5	1,018 fps	10,800 PSI
	AS30N	.452"	1.500"	5.0	907 fps	7,500 CUP	6.4	1,083 fps	13,500 CUP
	AP70N	.452"	1.500"	6.5	798 fps	7,400 CUP	9.5	1,197 fps	12,900 CUP
180 GR. CAST LRNFP	Trail Boss	.452"	1.540"	6.0	818 fps	9,400 PSI	7.3	935 fps	12,700 PSI
	AS30N	.452"	1.540"	4.8	840 fps	7,900 CUP	6.0	1,016 fps	13,800 CUP
	AP70N	.452"	1.540"	6.5	791 fps	7,100 CUP	9.2	1,161 fps	13,900 CUP
200 GR. CAST LRNFP	Trail Boss	.452"	1.600"	5.5	706 fps	8,000 PSI	6.5	855 fps	11,000 PSI
	AS30N	.452"	1.600"	4.6	777 fps	5,900 CUP	5.9	931 fps	13,100 CUP
	AP70N	.452"	1.600"	6.4	749 fps	5,700 CUP	8.8	1,067 fps	13,600 CUP
200 GR. CAST LSWC	AP50N	.452"	1.639"	5.5	750 fps	7,600 PSI	7.0	995 fps	12,300 PSI

# SINGLE ACTION PISTOL DATA

<b>45 Colt</b>				<b>Case: Winchester</b>			<b>Barrel length: 7.25"</b>		
				<b>Twist: 1:16"</b>			<b>Trim length: 1.280"</b>		
				<b>Primer: WINCHESTER LP</b>					
				<b>Start loads</b>			<b>Maximum loads</b>		
<b>Bullet</b>	<b>Powder</b>	<b>Bullet Diam.</b>	<b>C.O.L.</b>	<b>Grs.</b>	<b>Velocity</b>	<b>Pressure</b>	<b>Grs.</b>	<b>Velocity</b>	<b>Pressure</b>
<b>215 GR. CAST LRNFP</b>	Trail Boss	.452"	1.650"	5.5	725 fps	8,100 PSI	6.5	820 fps	10,300 PSI
	AS30N	.452"	1.650"	4.6	754 fps	6,400 CUP	5.7	889 fps	13,400 CUP
	AP70N	.452"	1.650"	6.8	777 fps	6,300 CUP	8.6	1,001 fps	13,800 CUP
<b>230 GR. CAST LRNFP</b>	Trail Boss	.452"	1.580"	5.5	685 fps	9,100 PSI	6.5	802 fps	12,400 PSI
	AS30N	.452"	1.580"	4.4	734 fps	7,600 CUP	5.4	865 fps	13,900 CUP
	AP70N	.452"	1.580"	6.5	761 fps	7,600 CUP	8.1	975 fps	13,800 CUP
<b>250 GR. CAST LRNFP</b>	Trail Boss	.452"	1.600"	4.5	606 fps	8,800 PSI	5.8	727 fps	12,700 PSI
	AS30N	.452"	1.600"	4.2	713 fps	8,500 CUP	5.1	817 fps	13,400 CUP
	AP70N	.452"	1.600"	6.5	742 fps	9,200 CUP	7.8	941 fps	13,000 CUP
<b>255 GR. CAST LSWC</b>	AP50N	.452"	1.622"	6.0	750 fps	7,900 PSI	7.0	895 fps	11,500 PSI
	AP70N	.452"	1.622"	8.0	825 fps	10,300 PSI	8.5	905 fps	13,100 PSI
	AP100	.452"	1.622"	-	-	-	11.0	835 fps	10,800 PSI



# SINGLE ACTION SHOTGUN DATA

12 GAUGE 2 3/4" REMINGTON STS, NITRO 27, OR GUN CLUB PLASTIC SHELLS					
Barrel: 30" Full Choke					
28g (1 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	16.8	1,125 fps	6,600 LUP	Rem. TGT 12	Rem. 209P
	17.9	1,180 fps	7,400 LUP	Rem. TGT 12	Rem. 209P
	18.9	1,235 fps	8,100 LUP	Rem. TGT 12	Rem. 209P
	19.9	1,290 fps	8,800 LUP	Rem. TGT 12	Rem. 209P
	15.7	1,125 fps	7,100 LUP	WAA12SL	Win. 209
	17.0	1,180 fps	8,200 LUP	WAA12SL	Win. 209
	18.4	1,235 fps	9,500 LUP	WAA12SL	Win. 209
	19.8	1,290 fps	10,700 LUP	WAA12SL	Win. 209
AS50N	20.2	1,180 fps	6,800 LUP	Rem. TGT 12	Rem. 209P
	20.9	1,235 fps	7,700 LUP	Rem. TGT 12	Rem. 209P
	21.4	1,290 fps	8,900 LUP	Rem. TGT 12	Rem. 209P
	18.4	1,180 fps	7,100 LUP	WAA12SL	Win. 209
	20.1	1,235 fps	8,600 LUP	WAA12SL	Win. 209
	21.0	1,290 fps	10,000 LUP	WAA12SL	Win. 209
32g (1 1/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	16.9	1,090 fps	6,900 LUP	Rem. Fig. 8	Rem. 209P
	18.0	1,145 fps	7,900 LUP	Rem. Fig. 8	Rem. 209P
	19.2	1,200 fps	9,000 LUP	Rem. Fig. 8	Rem. 209P
	16.6	1,090 fps	7,700 LUP	WAA12	Rem. 209P
	17.7	1,145 fps	9,000 LUP	WAA12	Rem. 209P
	18.8	1,200 fps	10,300 LUP	WAA12	Rem. 209P
AS50N	18.6	1,090 fps	6,400 LUP	Rem. Fig. 8	Rem. 209P
	19.6	1,145 fps	7,000 LUP	Rem. Fig. 8	Rem. 209P
	20.9	1,200 fps	7,500 LUP	Rem. Fig. 8	Rem. 209P
	21.7	1,255 fps	9,100 LUP	Rem. Fig. 8	Rem. 209P
	18.3	1,090 fps	7,000 LUP	WAA12	Rem. 209P
	18.8	1,145 fps	7,600 LUP	WAA12	Rem. 209P
	19.7	1,200 fps	8,700 LUP	WAA12	Rem. 209P
	20.9	1,255 fps	10,400 LUP	WAA12	Rem. 209P
AP70N	22.5	1,200 fps	8,900 PSI	Rem. Fig. 8	Win. 209
	23.7	1,255 fps	9,900 PSI	Rem. Fig. 8	Win. 209
	25.0	1,310 fps	10,800 PSI	Rem. Fig. 8	Win. 209
	21.5	1,200 fps	9,800 PSI	WAA12	Win. 209
	23.0	1,255 fps	10,700 PSI	WAA12	Win. 209

# SINGLE ACTION SHOTGUN DATA

12 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS					
Barrel: 30" Full Choke					
28g (1 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	17.6	1,125 fps	6,400 LUP	Purple PC	Rem. 209P
	18.6	1,180 fps	6,800 LUP	Purple PC	Rem. 209P
	19.5	1,235 fps	7,200 LUP	Purple PC	Rem. 209P
	20.5	1,290 fps	7,600 LUP	Purple PC	Rem. 209P
	16.6	1,125 fps	6,700 LUP	Rem. TGT 12	CCI 209
	17.7	1,180 fps	7,700 LUP	Rem. TGT 12	CCI 209
	18.7	1,235 fps	8,500 LUP	Rem. TGT 12	CCI 209
	19.8	1,290 fps	9,500 LUP	Rem. TGT 12	CCI 209
	16.0	1,125 fps	7,400 LUP	WAA12SL	Win. 209
	17.2	1,180 fps	8,300 LUP	WAA12SL	Win. 209
	18.5	1,235 fps	9,200 LUP	WAA12SL	Win. 209
	19.8	1,290 fps	10,200 LUP	WAA12SL	Win. 209
AS50N	20.8	1,180 fps	5,900 LUP	Rem. TGT 12	Rem. 209P
	21.5	1,235 fps	7,100 LUP	Rem. TGT 12	Rem. 209P
	22.3	1,290 fps	7,800 LUP	Rem. TGT 12	Rem. 209P
	19.2	1,180 fps	6,700 LUP	WAA12SL	CCI 209
	18.9	1,180 fps	6,900 LUP	WAA12SL	Win. 209
	20.4	1,235 fps	8,300 LUP	WAA12SL	Win. 209
	20.6	1,235 fps	7,500 LUP	WAA12SL	CCI 209
	22.3	1,290 fps	8,800 LUP	WAA12SL	CCI 209
	21.3	1,290 fps	8,900 LUP	WAA12SL	Win. 209
32g (1 1/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS30N	16.2	1,090 fps	7,200 LUP	Fed. 12S3	CCI 209
	17.6	1,145 fps	8,700 LUP	Fed. 12S3	CCI 209
	19.0	1,200 fps	10,100 LUP	Fed. 12S3	CCI 209
	17.1	1,090 fps	7,200 LUP	Red PC	Rem. 209P
	18.4	1,145 fps	7,800 LUP	Red PC	Rem. 209P
	19.6	1,200 fps	8,400 LUP	Red PC	Rem. 209P
	16.0	1,090 fps	7,700 LUP	Rem. Fig. 8	Win. 209
	17.0	1,145 fps	8,500 LUP	Rem. Fig. 8	Win. 209
	18.1	1,200 fps	9,400 LUP	Rem. Fig. 8	Win. 209
	16.1	1,090 fps	7,700 LUP	WAA12	Win. 209
	17.3	1,145 fps	8,800 LUP	WAA12	Win. 209
	18.2	1,200 fps	9,800 LUP	WAA12	Win. 209
AS50N	19.2	1,145 fps	7,900 LUP	Fed. 12S3	CCI 209
	20.0	1,200 fps	8,300 LUP	Fed. 12S3	CCI 209
	21.6	1,255 fps	10,200 LUP	Fed. 12S3	CCI 209
	18.3	1,090 fps	6,800 LUP	Red PC	Win. 209

# SINGLE ACTION SHOTGUN DATA

## 12 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS

Barrel: 30" Full Choke

32g (1 1/8 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	21.6	1,255 fps	10,200 LUP	Fed. 12S3	CCI 209
	18.3	1,090 fps	6,800 LUP	Red PC	Win. 209
	18.9	1,145 fps	7,200 LUP	Red PC	Win. 209
	20.2	1,200 fps	8,300 LUP	Red PC	Win. 209
	21.3	1,255 fps	9,700 LUP	Red PC	Win. 209
	20.1	1,145 fps	6,300 LUP	Rem. Fig. 8	Rem. 209P
	21.1	1,200 fps	7,700 LUP	Rem. Fig. 8	Rem. 209P
	22.1	1,255 fps	8,000 LUP	Rem. Fig. 8	Rem. 209P
	17.6	1,090 fps	7,400 LUP	WAA12	Win. 209
	18.1	1,145 fps	8,300 LUP	WAA12	Win. 209
	19.2	1,200 fps	9,600 LUP	WAA12	Win. 209
21.3	1,255 fps	10,800 LUP	WAA12	Win. 209	
AP70N	22.5	1,200 fps	9,000 PSI	Rem. Fig. 8	Win. 209
	23.5	1,255 fps	10,000 PSI	Rem. Fig. 8	Win. 209
	24.5	1,310 fps	10,700 PSI	Rem. Fig. 8	Win. 209
	22.0	1,200 fps	10,000 PSI	WAA12	Win. 209
	22.7	1,255 fps	10,600 PSI	WAA12	Win. 209

## 16 GAUGE 2 3/4" REMINGTON SP PLASTIC SHELLS

Barrel: 28" Full Choke

28g (1 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	18.5	1,165 fps	8,800 PSI	Rem. SP16	Win. 209
	19.8	1,220 fps	9,900 PSI	Rem. SP16	Win. 209
	20.5	1,275 fps	10,400 PSI	Rem. SP16	Win. 209
	18.5	1,165 fps	9,000 PSI	WAA16	Win. 209
	19.5	1,220 fps	9,900 PSI	WAA16	Win. 209
	20.5	1,275 fps	10,400 PSI	WAA16	Win. 209

## 16 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS

Barrel: 28" Full Choke

28g (1 oz.) LEAD shot

Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AP70N	19.0	1,165 fps	9,200 PSI	WAA16	Win. 209
	20.0	1,220 fps	10,300 PSI	WAA16	Win. 209
	20.7	1,275 fps	11,000 PSI	WAA16	Win. 209

# SINGLE ACTION SHOTGUN DATA

20 GAUGE 2 3/4" REMINGTON RXP, PREMIER AND STS PLASTIC SHELLS					
Barrel: 26" Full Choke					
24g (7/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	14.0	1,200 fps	10,700 PSI	RXP20	Rem. 209P
	14.0	1,200 fps	11,900 PSI	WAA20	Win. 209
AP70N	15.8	1,200 fps	9,900 PSI	Rem. RXP20	Rem. 209P
	15.8	1,200 fps	9,600 PSI	WAA20	Win. 209

20 GAUGE 2 3/4" WINCHESTER COMPRESSION - FORMED AA & HS TYPE PLASTIC SHELLS					
Barrel: 26" Full Choke					
24g (7/8 oz.) LEAD shot					
Powder	Weight (grains)	Velocity	Pressure	Wad type	Primer type
AS50N	14.0	1,200 fps	11,800 PSI	WAA20	Win. 209
AP70N	15.5	1,200 fps	10,200 PSI	WAA20	Win. 209















**IN THE BATTLE SINCE 1888**





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The ADI World-Class Powders Handloaders' Guide is available at gun shops where ADI World-Class powders are sold.

**For handloading information:**

Australian Munitions will respond to written enquiries only, with safe and technically accurate advice.

Send your enquiries to: [reload.support@adi-powders.com.au](mailto:reload.support@adi-powders.com.au)

By mail to: Reloading Enquiries, Australian Munitions, Private Bag No 1, Mulwala, New South Wales 2647, Australia or fax to: +61 (0)3 5744 1873.

Visit us at: [www.adi-powders.com.au](http://www.adi-powders.com.au)

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ADI World-Class powders are sold at major gun shops.

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