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Gun Notes: The .45 Colt - Dissolving the Myth, Discovering the Legend

by John Linebaugh

When Colt's Patented Firearms Manufacturing Company came out with the .45 Colt in the Single Action Army or "Peacemaker" model in 1873, little did they realize what they had created. In the following years the gun (and the men who used it, whether for good or bad), would be remembered in story and legend, and yes in MYTH. Secondly, what made the .45 Colt such a great round during the black powder era was, capacity, caliber and bullet weight. These are still its strongest points today thanks to the fine components we have available. Add to that a strong gun capable of fine accuracy and now we can discover the .45 Colt's POTENTIAL..

DISSOLVING THE MYTH

Bear in mind that to discover the potential of any cartridge requires a strong modern well made firearm to contain and fire the round safely. The main argument against the Colt .45 is that there are thousands of "unsafe" Colt SAA blackpowder revolvers out there just waiting with mouths open to swallow your new high pressure reloads. This is a fact of life but I assume the reader of this report is a safe, intelligent person and experienced handloader. This entire report is based on facts proven in the popular and strong Ruger Blackhawks and Bisley models chambered for the .45 Colt Cartridge. I have felt a need for a long time to set the record straight as to the full safe potential of this fine gun and round. This material is not about Colt SAA, Dakotas, or any other import. These are fine guns in their own realm, but require safe, carefully assembled handloads of much LESS PRESSURE than we are talking about in the Ruger Revolvers.

AGAIN, ALL THE INFORMATION IN THIS REPORT PERTAINS ONLY TO NEW MODEL RUGER SINGLE ACTION BISLEY OR BLACKHAWK REVOLVERS.

How strong are the Ruger Blackhawk and Bisley model revolvers? Reports from the prestigious H.P White laboratory prove to us that most American Made revolvers offer approximately 100% safety factor with current Industry standard pressure level ammunition. Example: The .44 magnum is loaded to 40,000 CUP (Copper Units of Pressure). H.P White's lab reports states that the Ruger Super Blackhawk was destroyed in a controlled test at approximately double that pressure. (80,000 CUP) The Smith and Wesson Model 29, also in .44 magnum caliber showed comparable results. Today we have stronger guns chambered for the .44 magnum (Redhawk prime example) but the Model 29 S&W and the Ruger Blackhawk gave life to the .44 magnum cartridge. The strength and design of these guns satisfied the industry at the time (1955) and the standards were set from these firearms. By careful measurement and a little simple mathematics we find that the Ruger Blackhawk in .45 Colt caliber is approximately 80 % as strong as the Blackhawk in .44 magnum caliber. Some may argue that the .45 Colts usually are fitted with fluted cylinders while the new .44 Rugers are nearly all unfluted. Exceptions to this rule are Flatop .44 magnum Rugers, THE GUN THAT WAS MADE FIRST BY RUGER FOR THE .44 MAGNUM ROUND. Lately Ruger has produced some special run of guns in .44 Magnum chambering that again have the fluted cylinder feature. Also a few early Bisleys were fitted with FLUTED cylinders in .44 caliber. However most were unfluted roll marked cylinders. But the most important factor we have found here is there is very little difference in strength between a fluted and non-fluted cylinder. The strength of the cylinder can vary more from the quality of the material and the tensile strength of the part due to different points of hardness. When steel is heat treated it can easily vary a couple of points. This is only a

few thousand pounds of tensile strength but this is likely to mean more to absolute strength than the difference in the design of the part in the argument between "fluted" or NON-Fluted". The important fact is that the initial part (in this case the cylinder) was OVER ENGINEERED to account for these variables. They are amply strong to safely handle any safe load. To DEFINE SAFE: ANY LOAD THAT DOES NOT EXCEED THE INDUSTRY'S RECOMMENDED MAXIMUM OPERATIONAL PRESSURE.. In the case of the .44 magnum, this is 40,000 CUP. Not to exceed 43,500 ABSOLUTE MAXIMUM.

The Ruger Blackhawks and Bisley models chambered for .45 Colt are approximately 80% as strong as the same Ruger chambered for .44 magnum. This means we can load the .45 Colt to 80% of the pressure of the .44 Magnum round and still maintain the 100% safety level. 80% of 40,000 is 32,000.

To check our findings we again turned to H.P White Labs and their findings paralleled ours. Ruger Blackhawks in .45 Colt caliber were destroyed in controlled test conditions at approximately 60,000 CUP pressure levels.

We went further on our own here and purposely destroyed several cylinders with loads that were later pressure tested in Industry Standard Pressure barrels that proved pressures were in the area of 60,000 CUP. Now that we know just how strong the guns are we are working with perhaps you figure you can heat up the a loads a bit. Such "logical thinking" jaspers will get a REAL LOAD. Overloading often times does no visible harm, but stress and fatigue go unnoticed till something lets go. In this era when shooters and hunters are looked

but stress and fatigue go unnoticed till something lets go. In this era when shooters and hunters are looked over very critically we need safe responsible hunters, shooters and HANDLOADERS. THIS MEANS YOU!

FRAME STRENGTH

Here at Linebaugh Custom Sixguns we build some of the most powerful handguns in the world. All of our guns at this time are built exclusively on the Ruger Blackhawk frames. (Ruger Super Blackhawk, Blackhawk and Bisley models are all identical. All frames in the new model that was introduced in 1973 are the same.) In all of my findings the first part to let go in a revolver is the cylinder. I have tested cylinders from purposely bulging them to total destruction. In all cases the frames were not damaged until the cylinder totally failed. When a firearm is fired there is pressure on the base of the bullet to propel it out the barrel. There is an equal rearward thrust against the case head and thus transferred onto the action of the firearm. This is known as CASE HEAD THRUST. Case head thrust is CHAMBER PRESSURE x THE SURFACE AREA OF THE DIAMETER OF THE REAR OF THE CHAMBER. I won't go into great detail but a 45 Colt at 32,000 CUP chamber pressure exerts just under 3 tons of pressure on the back of the frame. A .44 magnum at 40,000 CUP chamber pressure exerts just over 3 tons of pressure on the back of the frame. Basically the same.

When we fire one of our .475 or .500 caliber revolvers we hit the Ruger frame with approximately 5 tons of pressure, (thrust). This duplicates the thrust of a .458 Win Mag. In testing and building over 200 major caliber revolvers on Ruger frames we have never yet had a frame move,stretch or bend. They are very tough. The cylinder is the first part to let go.

PRESSURE SIGNS IN SIXGUN CARTRIDGES

When I first met Ross Seyfried in 1982, I would have to say that him being "skeptical" of my claims about my .45 Colt turning his .44 magnum into a white mouse were an "understatement". Ross welcomed me to his home but was at best "distant and cold". The ultimate slap in my face was when he refused to shoot my test guns. The #1 gun being a converted Seville in 7 1/2" barrel length and #2 gun a 6" Abilene, both fitted with SPECIAL OVERSIZE 6 SHOT CYLINDERS. If memory serves me correctly he made a statement on this order. QUOTE: I want to see you shoot them first. I'm going to stand over behind the barn and when the parts and pieces quit falling I'll come out and see what's left of you and the gun. I've never seen a man blown up before, this will be fun. UNQUOTE.

After firing a gun full Ross realized all was well. He came over and inspected the gun and pushed the empty cases out with the ejector rod. Every case and primer was inspected with his trained eye. A look of unbelief overcame him. What is this load again he asked hoping to catch me lying. A 315 gr Keith style slug at 1550 fps was my reply. And what do you estimate the pressure at? Approximately 55,000 CUP was my reply. His look of unbelief turned to something bordering on disgust. After a chronograph session which proved my velocity claims Ross looked lost for words. Accuracy at 100 yards from sandbags were in the 3" to 4" range. Loads tested that day were 260 gr Keiths at 1750 fps, a 280 Keith at 1680 fps and the previously mentioned 315 gr Keith slug from NEI moulds going an honest 1550 fps. We shot these velocities over Ross's personal chronograph so he knew I wasn't lying or stacking the deck. After 3 hours of this he leveled with me and spoke. "Linebaugh, I thought for months you were a nut. I still do but I can't argue with what I see here. I expected poorly constructed guns, extreme high pressure signs, bulged guns and badly leaded bores and poor accuracy. Instead I see excellent accuracy, quality workmanship, full claimed velocities, clean barrels and most of all, the cases simply fall out of the chambers and pressure signs on the case and primer are non-existent. What gives here?" I've been happy to report to Ross since then that his actions have been repeated by dozens of other amazed sixgunners in the last 9 years since that warm spring morning in 1982. The .45 Colt case is just as strong as any handgun case on the market. Especially in the Federal brand. I have proof load data here from Hornadys pressure barrel that goes over 62,000 CUP. I have shot this load hundreds of times in my special 5 shot custom revolvers and with our tight chambers case life is excellent. And primer pockets remain tight till the case is discarded due to split necks. This comes from repeated crimping and case mouth belling. The Winchester case will stand the pressure fine, but will begin to get sticky in the chambers after a couple of shots. This is not a weakness in the design of the case, it simply lacks the springy nature of the excellent Federal case. The Remington case is about half a good as the Winchester case. It's amply strong for any loads that can be safely used in any Ruger revolver, but I don't use them personally.

The Myth of The "Weak" .45 Colt Case

There has been so much written about the "weak" .45 Colt case. This probably started when The Grand Old Man of the Shooting game, Elmer Keith made this statement in his excellent book "Sixguns." "While shooting a 300 gr 45/90 rifle bullet in my .45 Colt SAA with 35 grains of black. Finally a weak .45 Colt case head blew off with this load. The gas blew the loading gate off the gun breaking its shank and cutting through the flesh of my trigger finger. From this experience I decided the bullet was a bit heavy for the thin cases and thin chamber walls of the cylinders. I cut one band and groove from the mould leaving it to cast a 260 gr flat point bullet. This worked very well with 40 grains of black. It was a very good game killer and flatter in trajectory curve than the 300 grain slug with 35 grains of black" (Sixguns by Keith page 129)

"weak". The only thing weak is their limited research on the subject. The cartridge case in any firearm is simply a gasket to seal the hot gases away from the shooter and the firearm. Yes, it's critical that this component be of best quality and design. But overall the firearm itself contains the pressure. The reason the .45 Colt case bulges is the chambers in NEARLY ALL modern .45 Colts are grossly oversize. The case simply has to stretch beyond its elastic limit to reach the support of the chambers of the firearm. The modern .45 Colt case measures .476 diameter at the case head web area. Most modern chambers run from .486 upwards to .490. This means the new case has to expand from .010 to .014 to seal the chamber and be supported by the firearm. It is then resized and the process repeated till the case fails. And fail it will, and more than likely prematurely due to overworking. Modern MAGNUM brass will do the same if fired in too large a chamber.

prematurely due to overworking. Modern MAGNUM brass will do the same if fired in too large a chamber. Shooting a .44 magnum round in .45 colt chamber (NOTE; THIS IS A PRACTICE I DEFINITELY DO NOT RECOMMEND) will bear this out. Cartridge brass does not have the tensile strength of modern steels. IT'S MERELY A GASKET.

Another trend I have seen lately is the loading up of the new Rifles being chambered for the .45 Colt. Namely the Winchester 94 angle eject. The same writers that are now loading the rifles to a before unheard of pressure level of 40,000 CUP in this caliber are the same ones that belittle and talk down the .45 Colt in a sixgun. Does the weak case that limits the Sixguns abilities suddenly transform into a magical wonderall of magnum strength when chambered in one of these lever action wonders? I find their investigation of the facts at hand less than complete. I have rebarreled a few 94s in .45 Colt that had chambers so oversize than factory ammo would split cases and separate heads upon the first firing. Factory ammo is loaded to around 13,000 CUP even though the industry standard is 15,900 CUP. Personally I prefer shooting my heavy loads in well made sixguns rather than the current trend of rifles out there chambered in .45 Colt.

Overall we can dismiss the myth that the .45 Colt case of modern solid head manufacture is weak. We now understand the faults of the guns chambered for this fine round and will next try to explain how to get the best out of your stock Ruger Blackhawk. Over the years I've read several articles about this guns potential. Most of the load data was guess work. All the theories here have worked successfully for myself and hundreds of handloaders across this great land for nearly 10 years now. All the findings and pressure data in this report are proven safe and valid through years of use by hundreds of customers and Reputable Industry Standard Pressure Testing Laboratories

THE PRACTICE OF ASSEMBLING SAFE HANDLOADS IS YOUR TOTAL RESPONSIBILITY...

While going over this report, CONSTANTLY BEAR IN MIND THAT THESE RESULTS, VELOCITIES AND ALL LOAD DATA WERE ESTABLISHED WHILE USING THE MODERN RUGER SINGLE ACTION REVOLVERS ONLY !!!

We have dismissed the use of any other style or model of revolver. We recommend the use of ONLY NEW MODERN MANUFACTURE SOLID HEAD DESIGN CASES ONLY NEW MODERN MANUFACTURE SOLID HEAD DESIGN CASES. It is not our intent to 'Magnumize" (a word and term I detest and one the fine old .45 Colt is so far above) this fine cartridge sixgun combination. It is only our intent to load this much misunderstood and underestimated cartridge to its SAFE, FULL POTENTIAL, and share our findings with other interested shooters. Much data in the past has been at best, guess work. I'm proud to say our record and findings have been backed up by Laboratory controlled Pressure tested data.

POWER

Many may think we are in a power race. This is not my intent. I simply like the big bore revolvers because they are a BIGGER HAMMER. They can deliver a bigger slug with less pressure than the next smaller round can. This means less breech pressure, less felt recoil, less wear and erosion on the sixgun itself, less noise and blast and more enjoyable shooting. After comparing our ballistics maybe you will figure so little is to be gained over the .44 magnum with a .45 Colt why should I bother to go to the bigger caliber. Hardly a day goes by here at the shop that we don't receive a call or letter from a handgun hunter who asks why does the old reliable .45 Colt hit a harder blow than lesser caliber sixguns, even with moderate velocity loads. The answer is caliber and bullet weight. These are the only CONSTANTS we have in external ballistics. Velocity is a constantly diminishing variable. Velocity and foot pounds of energy look good on paper. We feel a much more reliable formula that tells the true results on game is John Taylor's Knock Out Formula

> Caliber x Bullet weight x velocity divided by 7000
>
> .430 x 240 gr x 1400 fps = 20.6 KO
> .452 x 260 gr x 1400 fps = 23.5 KO

I have personally taken about 10 antelope and 1 mule deer with a .45 Colt. My wife has taken around 6 antelope and 5 mule deer with her .45 Colt. She uses a 4 3/4" Seville and the handload is a 260 Keith cast at 900 fps. This load will shoot lengthwise of antelope and mule deer at 100 yards. In my estimation it kills as well as the .270, 30-06 class rifles if the shots are placed properly. If I were hunting heavier game I'd step up the velocity to 1200 fps and in extreme circumstances, (elk, hogs, bear) go to the 310 gr cast slug. This load, 310 at 1200 will go through elk like so much air. These loads can be managed by anyone who is serious about handgunning big game. My wife is 5' 1" and goes about 100 lbs with her gun on. She likes the power the .45 gives her with a minimum of recoil and blast. She has hunted with me for 15 years now and is a very serious handgun shooter. I think the .45 Colt has a lot to do with this as it gives her big bore power without big bore recoil and blast. My sons also shoot the .45 Colt a lot and I had the pleasure to watch my oldest son at age 14 take a nice mule deer buck this year with a 5 1/2" Colt SAA at about 90 yards range. The load, 260 Keith at 900 fps. Its plain, no bells or whistles, but it works every time.

COMPONENTS

In a technical sense the .45 Colt is a big caliber, large capacity case that must operate at low chamber pressure compared to many magnum rounds. The fact that it has more capacity allows this to happen. In general loadings the .45 Colt will do anything the .44 magnum will do with about 6000 to 10,000 CUP less chamber pressure, depending on the load and bullet weight used. With standard weight slugs the difference is not as wide as it is with heavy slugs. This is the same rule that applys to calibers in rifles. A 250 gr slug is unheard of in a 7 mm mag, but neck the same case to .338 and the 250 gr slug is perfectly balanced. But like magnum cartridges the secret behind the .45 Colt's potential is the powder used to drive the slugs. For years

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Hercules 2400 was considered to be the finest magnum handgun powder available. Pressure data has shown that this is not true and the finest sixgun powders available today for heavy handloads are Hodgdon's H-110 and Winchester's WW-296. These powders are basically the same and can be fully interchanged as to charge weights. I've probably shot over 50 lbs of WW-296 in all my testing and twice that much H-110. I feel H-110 is kinder to lead bullets than W296 but H-110 does vary from lot to lot more than W296. I have never seen a "hot" or fast can of H-110 but have used some that was a grain or 2 slower than normal. The only way you can tell this is with Pressure equipment or a chronograph. With these powders VELOCITY MEANS PRESSURE. If you're not getting normal velocities, your powder is slow and not generating normal pressure. By working up carefully 1/2 gr at a time till your normal velocity is acquired you can continue to use these slow cans of powder. NEVER EXCEED OUR RECOMMENDED VELOCITIES...

VELOCITY AND PRESSURE COMPARISONS SHOWING THE SUPERIORITY OF H-110 AND W 296 OVER OTHER COMMONLY USED POWDERS IN THE .45 COLT. 7" TEST BBL.

BULLET	POWDER	GRAINS	VELOCITY	CUP
260 GR. LEAD SWC	H-110	27	1459 FPS	30,600
260 GR. LEAD SWC	H-4227	26	1377 FPS	30,600
260 GR. LEAD SWC	# 2400	20.5	1294 FPS	29,800
260 GR. LEAD SWC	HS-6	16	1259 FPS	30,800
260 GR. LEAD SWC	UNIQUE	12	1199 FPS	30,000
310 GR LEAD SWC	H-I10	23	1330 FPS	30,000
310 GR LEAD SWC	H-4227	23	1176 FPS	29,400
310 GR LEAD SWC	# 2400	19	1172 FPS	29,400
310 GR LEAD SWC	HS-6	14	1119 FPS	30,400
310 GR LEAD SWC	UNIQUE	11	998 FPS	29,200

I've used the following slugs because they handle 98% of my shooting requirements. Heavier slugs can be used but are not needed and will make the powders listed with burning rates faster than H-110 and WW 296 act even more radically. Too heavy a slug, seated too deeply in the case can cause #2400 to act like Unique and Unique to act like Bullseye. Small increases in powder charges can result in dramatic pressure jumps. For any serious heavy handloads I use only H-110 and WW 296 powders. These are the 2 most stable powders we have for this reloading application. Our pressure testing has proven both powders to be absolutely stable up to 60,000 CUP. Steady, smooth and no pressure spikes. Other powders can be used but great caution is advised..

THE FOLLOWING LOAD DATA IS TO BE USED ONLY IN RUGER SINGLE ACTION REVOLVERS. WE THE PUBLISHER ASSUME NO RESPONSIBILITY FOR THE RESULTS OBTAINED FROM THIS PRINTED DATA OR THE HANDLOADS ASSEMBLED USING THIS DATA. SAFE HANDLOADING PRACTICES ARE YOUR RESPONSIBILITY.

STARTING LOADS					MAXIMUM LOADS			
BULLET	POWDER	GRS	VEL	CUP	POWDER	GRS	VEL	CUP
225 JHP	H-110	28	1400		H-110	30	1500	28,000
225 JHP	H 4227	26	1310	23500	H4227	28	1426	28800
225 JHP	HS 6	15	1244	24400	HS 6	17	1309	28200
225 JHP	UNIQUE	11.5	1170	24400	UNIQUE	12.5	1301	29,400

This slug is good for up to deer sized game. I much prefer cast slugs of 260 gr or heavier. Do not depend on this JHP slug or any other bullet of this design to give deep penetration. No matter how heavy it is.

Starting Loads					Maximum Loads			
Bullet	Powder	Grs.	Vel.	CUP	Powder	Grs.	Vel.	CUP
260 cast	H-110	25.5	1364	24,800	H-110	27	1459	30,600

260 cast	H 4227	24	1180	24.800	H 4227	25.5	1340	30,000
260 cast	#2400	19	1165	24,800	#2400	20.5	1294	29,800
260 cast	HS-6	14	1130	25.000	HS-6	15	1225	30,000
260 cast	Unique	10.5	1050	24,800	Unique	12	1199	30,000

This data can be used with the 240 gr. Sierra JHP, 250 XTP and 260 Speer JHP

Starting Loads					Maximum Loads			
Bullet	Powder	Grs.	Vel.	CUP	Powder	Grs.	Vel.	CUP
310 cast	H-110	21.5	1109	24,400	H-110	23.5	1316	32,000
310 cast	H 4227	21	1016	24.900	H 4227	22.5	1164	30,000
310 cast	#2400	17	1013	24.400	#2400	19	1172	29,400
310 cast	HS-6	12.5	994	25.000	HS-6	13.5	1043	29,800

THIS DATA CAN ALSO BE USED WITH 300 GR SIERRA, HORNADY XTP & SPEER BULLETS.
JACKETED BULLETS WILL RUN MUCH SLOWER VELOCITIES DUE TO FRICTION.
DO NOT INCREASE POWDER CHARGES TO GAIN THIS VELOCITY BACK

Starting Load					Maximum Load			
Bullet	Powder	Gr.	Vel.	CUP	Powder	Gr.	Vel.	CUP
350 JSP	H-110	20	924	24,400	H-110	21	1092	31,000

THIS DATA CAN ALSO BE USED WITH CAST LEAD SLUGS OF EQUAL WEIGHT.
350 GRAIN SLUGS ARE THE HEAVIEST WE RECOMMEND IN THE .45 COLT.
THIS IS ABOUT THE BALANCE POINT OF THIS ROUND.

THE 7" PRESSURE BARREL USED TO OBTAIN THE ABOVE VELOCITIES AND PRESSURE DATA IS MEASURED FROM THE MUZZLE TO THE BREECH. THIS WOULD DUPLICATE A 5 1/2' REVOLVER. BEFORE LOADING WITH THIS DATA BE SURE YOUR FIREARM IS IN PERFECT MECHANICAL CONDITION. BE SURE YOU'RE READING THE LOADING DATA PROPERLY AND YOUR COMPONENTS ARE CORRECT. EITHER LARGE STANDARD OR LARGE MAGNUM PISTOL PRIMERS ARE SUITABLE FOR THESE LOADS.

THIS LOAD DATA TO BE USED "0 N L Y" IN MODERN RUGER SINGLE ACTION REVOLVERS

PERSONAL NOTES AND EXPERIENCES;

When we first started seriously experimenting with the .45 Colt cartridge and sixguns chambered for this round we had several problems and almost started to believe what we had read about its shortcomings. Our first early guns were Colt SAA and Dakotas. We loaded these guns using H-110 and WW 296 exclusively and our most popular slug at that time was the old 250 Hornady JHP. This is a very accurate slug but very soft and will fail badly on big game. Since we were limited in the strength of these guns we approached all loads very carefully. Loads were accurate and consistent but necessarily low in velocity.

Our next test vehicles were the fine old Abilene models in .45 Colt. Only about 500 of these guns were made in this caliber by the New York firm. It went bankrupt and what was left of this outfit became Seville and El Dorado. When the Seville arms became available we soon went to work on these. The Abilene and Seville both were bored with minimum Industry standard chambers. the diameter being .483 but the chamber throats were still oversize at .457 diameter. This was a help with proper size chambers and the strength the guns offered over the Colts was the biggest breakthrough we had so far. Before in all other loadings the chambers and throats were so oversize that our powder charges, (especially H-110 and WW 296) would not even begin to burn properly with the recommended charges the load manuals printed. The tighter guns helped this somewhat but performance was still at best 3rd rate.

After reaching maximum full power load levels listed by said manuals, all looked well so we continued to work up our powder charges. (All experimenting in this area was with H-110) The heaviest load we could find for the 250 Hornady JHP and H-110 was 25 gr. At this level our velocity was around 1200 fps. At 26 gr. we hit a tight

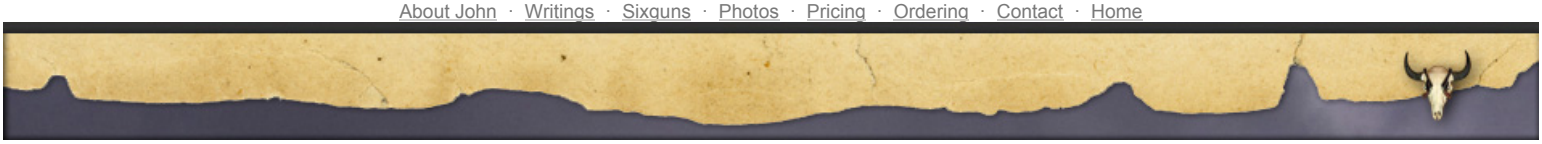
spot. Velocity was erratic and blast warned us something wasn't happy. At 27 gr we simply got more of the same. We stopped and pondered. After lengthy deliberation we went on to 28 gr of H-110 behind the 250 Hornady. Velocity came up, the hollow blast sound we were getting disappeared and turned into a deep cracking sound. Things overall smoothed right out. At 29 gr the guns really came to life and settled down. (ALL THIS DATA WAS SHOT IN SEVILLE AND ABILENE REVOLVERS)

What we were experiencing was a load density problem and a lack of resistance because of too large of throats, cylinder gap, etc., to make the slow burning H-110 work properly. We turned from JHP to cast lead slugs. Most of our problems completely disappeared. We soon found that lead slugs would duplicate jacketed slugs velocity with about 2 grains less powder. We also found that powder charges that were safe with jacketed slugs were too heavy for lead bullets. The jacketed slugs simply don't seal up in the bore like the much superior cast lead slugs. If a particular gun showed sluggish signs we went from a .452 dia slug to a .454 thus creating more resistance, and better seal in the throats of the cylinder. We soon learned that TOLERANCES were very important. We started with setting back the barrels a thread and closing the barrel/cylinder gap to under .002 instead of the common factory gap of .006 plus. This alone can boost velocity over 100 fps without changing the load. We next went to smaller chambers and .454 chamber throats. This combination with a proper size .451 barrel and tight .002 cylinder gap made the .45 Colt more than we could ever hope for.

Since this load data and report is about Ruger Single actions lets take a look at these. The Rugers are undoubtedly the strongest most well thought out modern sixguns in the world. They are an engineering marvel but why they won't tighten up their tolerances and chamber proper size charge holes in the cylinder is beyond me. Ruger .45 Colt chambers are BIG. I have seen and measured hundreds of them and they are .486 to .490 in dia. This is the maximum allowed by the industry. The camber throats are .457 to .458. Recently the new Bisley models had .455 throats but the chambers are still oversize. If you wish to shoot your Ruger AS IS, here are a few ideas that will help you. Remember we need resistance to make the H-110 to work properly so for best results use the cast lead slugs. Heavier slugs work better than lighter slugs and bigger slugs (in diameter) work better than smaller slugs. If I were shooting a stock Ruger with big chambers and throats I would use a 260 Keith cast and the 310 Keith or 320 LBT cast slugs exclusively. I would size these to .452 and try them with our recommended charges of H-110. If all is well your velocity should be close to ours and accuracy in the 1 1/2" range at 25 yards. If your not satisfied with this I would use the same slugs but size them to .454 dia. Bullets should be in the 15 to 20 Brinnell range. DO NOT MAKE THEM TOO HARD. Too hard a bullet (with high antimony content) is a joke and suited only for special purposes. I shoot straight wheel weights / water dropped. This gives me about 18 to 20 hardness. PLENTY HARD, but yet soft enough to form to the bore properly and seal right. Bullet lube, anything that is soft and gooie. If it resembles a crayon, that's all its good for. The oversize .454 slug will fill the gap between the .457 throats and the .452 barrel. (most Rugers have .451 - .452 barrel diameter) A reliable chronograph is the most valuable tool a handloader can own. By knowing and keeping an eye on velocity you have a good idea if your getting results or just noise. Velocity and pressure go hand in hand. With H-110 and WW296 if you get a gain in velocity, you're getting an equal gain in pressure. For this reason your charge weights may vary from ours, but as long as you do not EXCEED our recommended velocities with each bullet weight you will not be exceeding our recommended maximum pressures. We have shot a couple hundred stock Rugers here, and out of the box most will shoot under 1 1/2" at 25 yards with good handloads using properly sized cast slugs and heavy charges of H-110 or WW 296.

My personal loads include only 3 loads that I have settled on for all my handgun shooting. All are safe in Rugers and have been recommended to hundreds of shooters, All report good results and accuracy.

Powder	Gr.	Bullet	Velocity	Use
WW 231	8 gr.	260 cast	900 fps	defense/plinker/big game
HS 6	13 gr	260 cast	1050 fps	big game
HS 6	13 gr	310/320 cast	1000 fps	big game
H-110	24	260 cast	1280 fps	big game
H-110	24	310/320 cast	1250 fps	big game/ dangerous game



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