



Handloader

The Journal of Ammunition Reloading

September-October 1974

Number 51

U.S. & Canada, \$1.25

Foreign, \$1.50

**.44 Auto Mag
Bolt And Lever .250-3000 Loads
Effects Of Shotshell Case Condition**

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The Journal of Ammunition Reloading

September-October 1974 Vol. 9-No. 5 Box 30-30, Prescott, Arizona 86301

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FEATURES:

.250 Savage Loads: Bolts and Levers	Bob Hagel	18
Loading The .44 Auto Mag	George Nonte	22
Shotshell Case Condition	Don Zutz	26
Building a Handgun Target Load	Al Miller	30
Pet Loads: .44-40	Ken Waters	32
.25 ACP — Better Than You Think	Clayton Harvey	36
More Plastic Wads	Wallace Labisky	40
Reader Research: .350 Remington Magnum	Steve Thompson	50
.25 Niedner	Cal Darst	51

DEPARTMENTS:

Editorial	6	Loading the Old Ones	14
Tip to Tip	8	Answers Please	17
Reader Bylines	10	Cartridge of the Month	57
Lock, Stock & Barrel	12	ProducTests	63
Propellant Profiles	66		



The HANDLOADER, Copyright 1974, is published bi-monthly by the Wolfe Publishing Company, Inc., P.O. Box 3030, Prescott, Arizona 86301. (Also publisher of Rifle Magazine.) Telephone (602) 445-7810. Second Class Postage paid at Prescott, Arizona, and additional mailing offices. Single copy price of current issue \$1.25. Subscription price: six issues \$6.50; 12 issues \$11.50; 18 issues \$15.50. Outside U.S. possessions and Canada — \$7.50, \$13.50 and \$18.50. Recommended foreign single copy price, \$1.50. Advertising rates furnished on request.

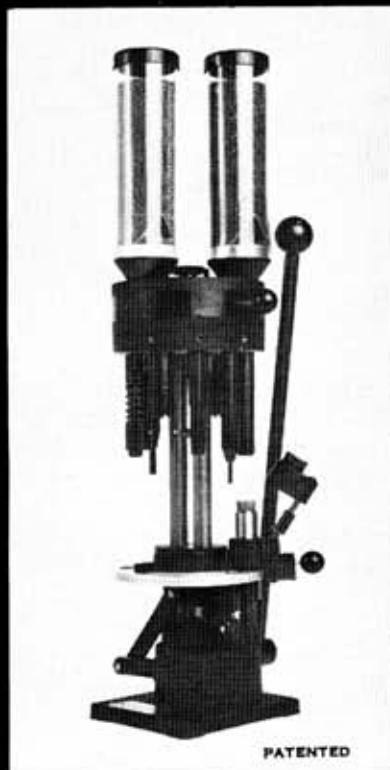
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YOUR SEPTEMBER-OCTOBER COVER

This month's cover provides a closeup inspection of the CCI 200 Large Rifle primers which will ignite many big game loads this fall. Photo by Dick Aldis.

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EDITORIAL

Time To Update Our Armament

THE SECURITY OF THE UNITED STATES would be in sad shape if, in this age of nuclear weapons, globe-spanning missiles, and supersonic aircraft, our military forces were still armed solely with the weapons of World War I — Springfields, Sopwiths and horse-drawn 75mm guns. Yet in the firearms legislation wars, while the opposition employs new strategies and tactics, and uses sophisticated methods of public persuasion, the average gun owner continues to use arguments dating from World War I.

We recently read an editorial in *The American Rifleman* which would bring plaudits and shouts of "That's telling them!" from the readers of any gun magazine. The problem is: That editorial appeared in 1924. An even greater problem is that few current editorials or columns in the various gun publications employ significant thoughts or ideas that weren't included in that editorial of 50 years ago — and it's extremely rare to hear the typical gun owner advance an argument which hasn't been used for a half-century. Of course, neither age nor frequent repetition make a basically sound argument any less valid; but constant use of an argument does cause it to be ignored. *And no matter how sound an argument may be, if it fails to convince, it is a worthless argument.*

The sad truth of the matter is that most of the "pro-gun" arguments and slogans fail to convince — witness the incessant stream of new gun laws which they have failed to stem. Obviously, it's past time to try some new approaches, hoping to find one that will work — that's what we would do with a load that wasn't working properly, no matter how handsome or easy to load it might be. One new approach can be found in a just-published National Shooting Sports Foundation booklet entitled "Gun Registration: Costly Experiment or Crime Cure?"

This 24-page booklet differs in both approach and content from "traditional" treatises on the subject. The style can best be described as calm, devoid of argumentativeness, almost to the point of blandness; but the arguments are powerful, nonetheless, with enough current crime statistics — on cities and states cited by anti-gun spokesmen as having "effective" gun laws — to conclusively show that registration and licensing laws have not been effective in controlling crime. It also outlines, quite dispassionately, the awesome cost of such programs and some of the tricks with statistics that registration and licensing advocates have used in misleading the public. Most importantly, the booklet only contains arguments which have proven to be effective in convincing the uncommitted — the Second Amendment is never mentioned, for instance.

While the NSSF booklet is designed primarily for the uncommitted, and those who may favor registration/licensing laws, it is of equal value to those who are already convinced of the wrongness of such laws — provided they will study and remember those proven-effective arguments. It's the type of material that's short enough, strong enough and dispassionate enough to give to friends, newspapermen or legislators, for the arguments are sensible and reasonable — and effective. And at the same time, the cost is low enough to distribute them personally — they're available from NSSF, 1075 Post Road, Riverside, Conn. 06878 for 25 cents singly, \$1 for a package of six, or \$45 for 600.

While this little booklet is by no means all that we need to bring our armament up to date, it's a start, for we believe it contains more factual, effective information, in less space, than anything else currently available. — Neal Knox

By GEORGE NONTE

I DON'T KNOW who first described the controversial Auto Mag pistol as "The Aristocrat of Hunting Hand-guns," but it may well have been the ebullient Lee Jurras (president of Super Vel) right after he dropped a New Mexico pronghorn at 217 measured yards with one. At that point, Jurras and I had shot our way (not in the Bonnie and Clyde sense) from St. Louis cross-country to Las Vegas with a pair of Auto Mags, bagging all manner of varmint-type beasties at ranges from sublime to ridiculous, and, of course, missing a few easy shots in the process.

Even though the Auto Mag was introduced a number of years ago, only a few thousand guns have been produced to date. The first few pieces were sold by the original corporation and so marked; the rest by T.D.E., Inc. This is the firm which bought up everything when Auto Mag, Inc. went bankrupt.

The latter instance still raises tears and wails of anguish if the name Auto Mag is mentioned indiscreetly. Many would-be purchasers succumbed to beautiful four-color ads and made cash deposits to obtain a priority delivery date before guns were actually in production. Those who made only the small *first* deposit were lucky, for it went into escrow, and when the firm bankrupted, the full amount was refunded. Those who made additional deposits, some for the full retail price of the moment, had no such protection. That money did not go into escrow, but was spent, and disappeared when the company went into bankruptcy. Those people are just out of luck.

I haven't the vaguest idea how many

people lost on the second deposits — but if those who did would care to let me know, I'll try to compile a list. That won't get anyone's money back, but the information would be interesting to have on file.

In any event, the Auto Mag lives yet. High Standard announced at the '74 NRA Convention that it will market the Auto Mag pistol in both .357 and .44 AMP calibers — with appropriate High Standard Markings but still (for the time being) produced by T.D.E. The guns will retail for about \$500. The response to this announcement and showing of the gun was gratifying to both High Standard and T.D.E., not to mention Harry Sanford, who has nursed the Auto Mag through several years of trial and travail.

Not long ago I visited the small plant in El Monte, California, where it is currently being produced at a rate of 200-250 units per month. Harry Sanford, long-time gunbuff and ardent hunter (sheep grand-slams and the like) runs the operation there. And, Sanford is the man

who originally designed and developed the Auto Mag pistol.

At the plant I saw both .44 and .357 AMP pistols in production, and had an opportunity to talk things over a bit with Sanford. He has done a good bit of detail refinement of the design since those first guns, and functional reliability has been improved. Regarding the gun as being a bit temperamental, Sanford has this to say:

"It's a specialized gun, in much the same way a highly tuned and accurized .38 wadcutter target auto is. A guy will spend several hundred dollars to have built the most accurate wadcutter auto he can get, but he sacrifices reliability in the process. He winds up with a gun that will shoot the X-ring out of the target, but it has to be babied constantly — and even then, it will probably give him at least one alibi (jam) in every match. The Auto Mag is sort of like that, except it's specialized toward maximum power and velocity. To gain those features it sacrifices a few things. It does have some little idiosyncrasies, but I think they are minor when its overall power, velocity, and accuracy are considered. You don't get something for nothing, and while the AMP may not be 100 percent perfect, it still isn't as temperamental as a lot of target guns I've seen and used."

Sanford is right — every design is comprised of a series of tradeoffs: weight vs. power, size vs. accuracy, recoil vs. velocity, cost vs. quality, and so forth. If you want the power offered by the AMP, you can't have it in pocket size; you can't have it in a gun that will handle light loads, semi-auto; and you can't have it with a few other things.

All of which is just leading up to how you can best load for the .44 AMP if you have been fortunate enough to obtain one. Obviously, we have to start with cartridge cases — without those brass hulls, you'll

feeding the .44 AUTO



A single lot of .44 AMP factory loads was produced in Mexico by CDM, a subsidiary of Remington, headstamped "CDM .44 Auto Mag" and packaged as shown.

The Auto Mag pistol has gone through several setbacks during its career, but is currently being manufactured by T.D.E. of El Monte, California, and is now marketed by High Standard. Photo, courtesy of Lee Jurras, Super Vel.



MAG

never fire a shot. Cases aren't any big problem — they just require more time and/or money than any other handgun caliber.

Remington's Mexican subsidiary plant, C.D.M., produced one run of cases and one of loaded ammunition. Both have been available from Pacific International, Inc., 2416-16th St., Sacramento, Calif. 95818, but I believe that the supply of unprimed cases, priced at \$5.50 per 50, has been exhausted. The ammunition, at \$12.50 per 50, with its 240-grain JHP, round-nose bullet, is under-loaded and will not function the guns with complete reliability. Velocities run under 1,200 fps, and pressures around 30,000 c.u.p. However, the cases are of excellent quality, so factory ammo is one source of cases for reloading.

If you have (or can get) fired factory-loaded cases or new CDM brass, the problem is solved. Lacking those sources, though, you'll just have to make your own until Super Vel gets the .44 AMP into production and sells you some cases. Incidentally, by the time you read this, loaded (only) .44 AMP ammunition will be available from Super Vel at \$14.50

per box of 50 rounds — through your dealer, of course.

From the onset, the .44 AMP was designed around the .308 Winchester (7.62mm NATO) case. In fact, in the beginning, all Auto Mag purchasers were forced to form cases from .308 brass. To do this, simply obtain a supply of .308, .243, .30-06, or similar brass of the same head size, and a set of RCBS forming dies. The set contains a file-type form and trim die and the shellholder extension required for use with it, and a neck-reaming die and matching reamer.

Install the shellholder extension in your press (the form/trim die is too short for the standard holder), then adjust the F/T die so the extension bumps solidly against it when the ram is run all the way up. Decap and clean your cases (preferably all of one make and lot), dry, and if they are of military origin, remove the primer-pocket crimp. Swaging is best for the latter, and RCBS makes a good rig for the job.

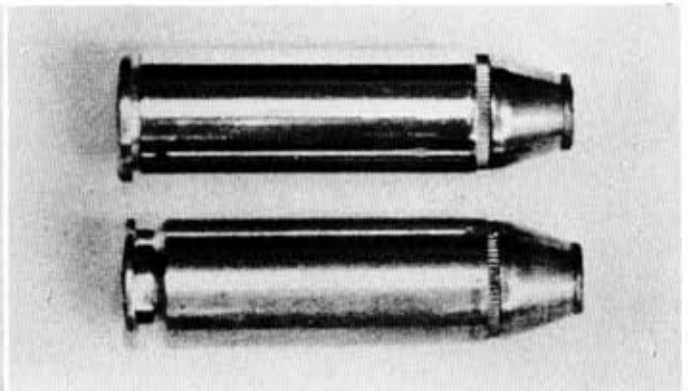
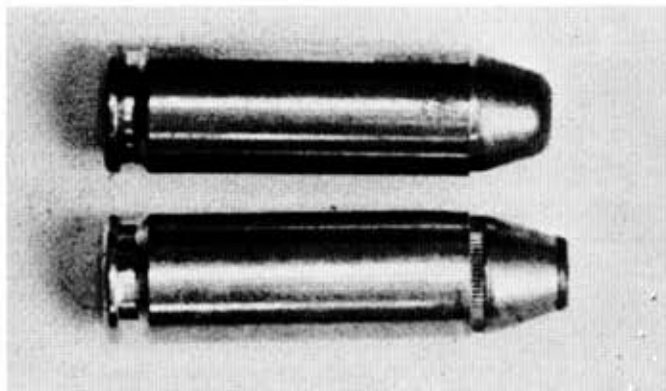
Run a case fully into the F/T die, then lop off the bulk of the excess (protruding beyond the top of the die) with a fine-cut hacksaw; about 32 teeth per inch makes

for a nice, smooth cut. True up the new case mouth by running a flat file across the die mouth, until it cuts no more brass. The die is hard enough the file won't damage it. In the interest of neatness you might lightly chamfer the inside of the case mouth while it is still in the die, but it isn't necessary yet. Repeat the process until you've got enough cases rough-formed and trimmed to make it worthwhile to go to the next step.

Incidentally, if you've a drill press, the trimming operation can be speeded up immensely by investing in a Forster power case trimmer. Set it up on the drill press to produce a case length of 1.298-inch, and 10 or 12 cases per minute can be trimmed with hardly any effort.

Next, chamfer the outer edge of the case mouth lightly to remove filing burrs. If they aren't removed at this point, some will be folded over in the next operation, making the neck look a bit messy. Wipe cases clean of chips and filings for the same reason.

Now, go back to a standard shellholder, and adjust the reaming die in the press to bump the holder. Fix a tap-wrench or



The Super Vel .44 AMP 180-grain loadings [both lower cartridges] are shown for comparison with the CDM loading, left, and standard .44

Magnum, right. The CDM round is under-loaded and will not operate the Auto Mag with complete reliability.

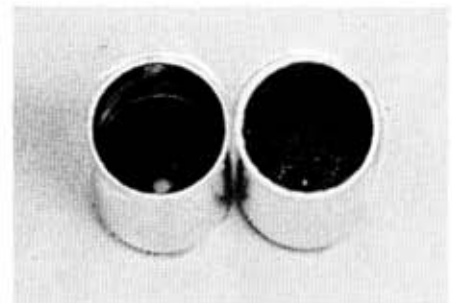
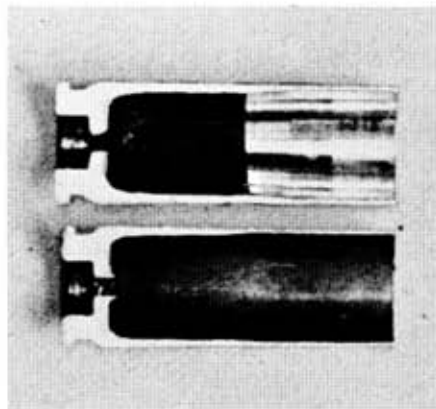
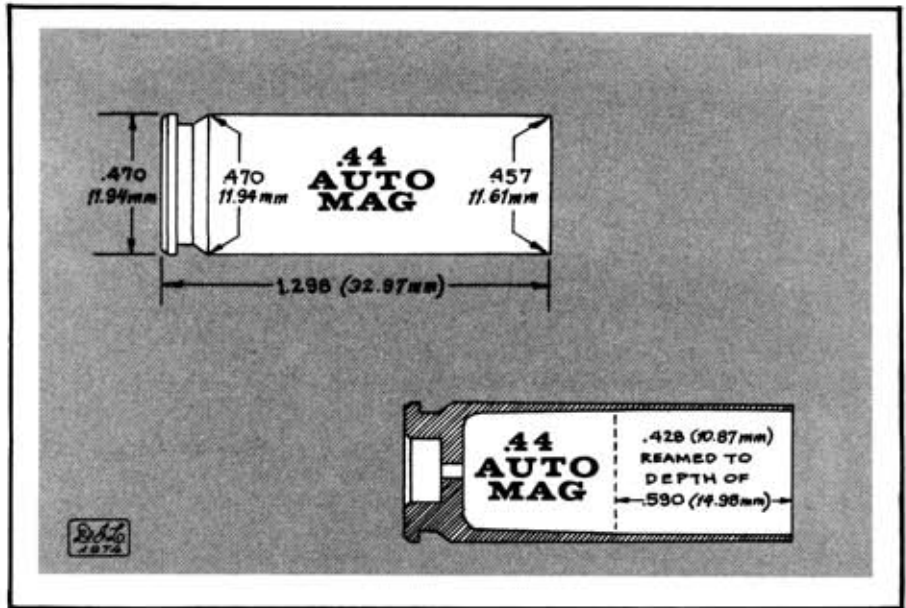
similar T-type handle to the shank of the RCBS reamer, and wipe the reamer cutting edges and flutes clean.

Run a trimmed case fully into the reaming die, then insert the reamer — carefully, to avoid ruining the cutting edges — into the top of the die. Exert just enough downward pressure on the reamer to make it bite into the brass, and twist it by hand three or four turns; pull it out and clear the chips from the flutes with an old toothbrush. Re-insert the reamer and repeat the operation until the case neck is reamed deep enough to accept the bullets you'll be using. Actually, it's better to ream to a point .550-inch below the mouth so that any bullet up to 240-250 grains may be used — though some shooters prefer to go less deep, leaving a slight shoulder against which the base of the bullet used can rest when seated. Take your choice.

If you've a large number of cases to form, the idea of chucking the reamer in an electric drill, to cut down on muscle work, might be appealing. RCBS recommends against this — and I can vouch for the fact that it is easy to ruin the reamer quickly that way. If you insist on trying it, okay, but have a spare reamer at hand to finish the job.

With the reaming job finished, dump the chips out of the case, then chamfer the inside of the mouth — lightly on the latter, for the .44 AMP headspaces there — just barely enough to knock off the sharp edge.

Annealing case mouths isn't normally recommended at this point, but I prefer to do it, especially if the job was begun with fired cases. Trimming back to a length of 1.298-inch cuts away all the original neck anneal, and places the new neck in an area of the case that is by



The case above left, has been formed from 7.62mm NATO brass and properly reamed; it is shown for comparison with a factory CDM case. Both cases directly above, were formed from 7.62mm brass while the case at left has been reamed to proper neck thickness, and the case at right has not, illustrating excessive neck thickness. After forming from .308 brass, the neck should also be annealed since brass from this area of the .308 case has not been properly annealed in manufacture.

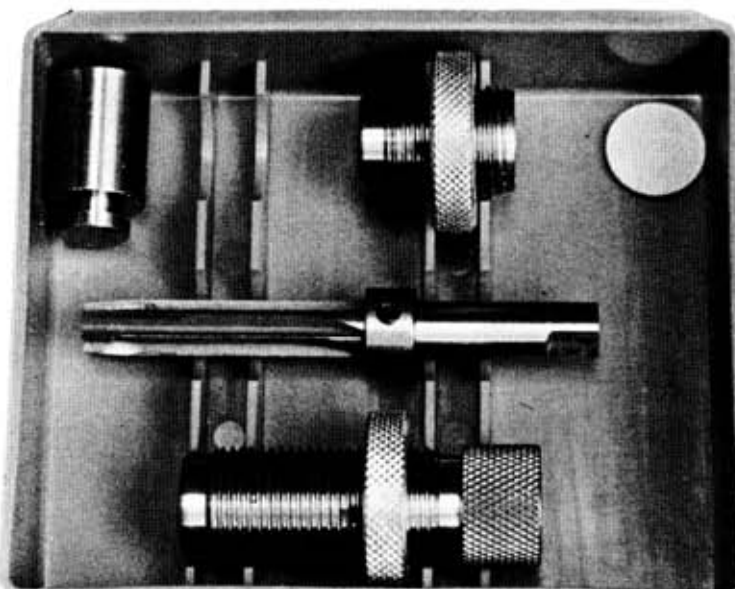
intent much harder than necks should be. This will produce relatively short case life, terminated by split necks if not annealed.

Use your favorite annealing method —

you can lubricate the mouth of the case and then hold it by the base with the mouth immersed in molten lead (about 650 degrees F.) until the base starts getting uncomfortable to handle and then remove the case. Some like to stand the cases in a pan with water covering the bases. The case mouth is then heated with a torch until it's a cherry red and then toppled over in the water. A mechanized method of annealing cases was given in *Handloader* 46 in an article by Fred Whitlock. Whatever your method, strive for uniformity from case to case, and don't let the heads get too hot.

Finish up by thoroughly washing and drying the formed cases, or by tumbling them in a good cleaning and polishing

A .44 AMP forming die set is available from RCBS and includes a reaming die and reamer, file-type trim die, and shellholder extension. Note the stop collar to adjust correct reaming depth.



medium. I prefer tumbling in the J&G Rifle Ranch tumbler with ground nut hulls and rouge, which produces a beautifully clean and shiny case, and also cleans the primer pockets quite well.

All this effort — and it isn't really that hard — will have produced a good supply of .44 AMP cases equal to the factory product that came from C.D.M. They'll not only feed your .44 Auto Mag well when properly loaded, but will serve as the basis for making .357 AMP cases, should you ever be in need of any. And, at least as of this writing, no .357 AMP cartridges have ever been factory-produced. This deplorable lack of a fine cartridge will soon be corrected, for Super Vel intends offering the .357 AMP as a standard round later this year.

Once all that is done, load them as if you were simply starting with new, unprimed cases. Pick your bullet, powder, charge and primer from the accompanying load data table. Note that relatively few powder and load choices are given, and that there is little emphasis on heavy bullets. Anything over 200 grains won't give the velocity of which this cartridge is capable, and which gives it its great versatility and flat trajectory. Barrel groove diameter is .431-inch, but Super Vel bullets measure .429, original C.D.M. factory loads contain .430 bullets. The .429 bullets make for better pressure/velocity relationships, and perform best.

Bullets should be cannelured to allow a moderate crimp. This, along with very tight fit in the case neck, is required to produce adequate bullet pull for good initial powder combustion. Both are also necessary to keep the bullet from shifting in the case under recoil forces and feeding impacts.

As resized and ready for loading, inside diameter of case necks should be no larger than .427. If your expander plug makes them larger, polish it down. New C.D.M. cases require no expansion, just

flaring of the mouth to permit starting bullets.

When using the heavier charges of ball-type powders, note how full they fill the case, and take care to not slosh any of it out during handling. Ball powder splashes almost like water, especially in a big, straight case like the .44 AMP. Top performance requires 100 percent-density loads, with at least moderate compression of the charge by the seated bullet.

Note the paucity of light or mid-range loads. Being designed for high-power loads, and of recoil operation, the AMP pistol requires high recoil energy in order to function correctly — therefore, it's better to stay away from light loads. Any load producing chamber pressures less than about 42,000 c.u.p. with 180-grain or heavier bullets cannot be relied upon for positive functioning. Some individual guns require 44-45,000 c.u.p. Put another way, a 240-grain bullet needs to be pushed above 1,200 fps in order to drive the gun correctly.

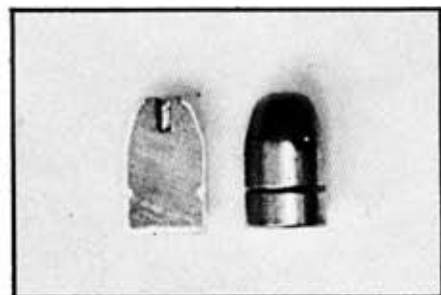
When seating bullets, work to an overall cartridge length of no more than 1.610-1.615 inches. A little less is okay if necessary because of short bullet length, but more will cause jamming in the magazine.

It is essential that bullets be fully seated first, then crimped as a separate operation. Set the crimp die to remove all the initial mouth flare, then turn the mouth in for a moderate to heavy roll crimp as shown.

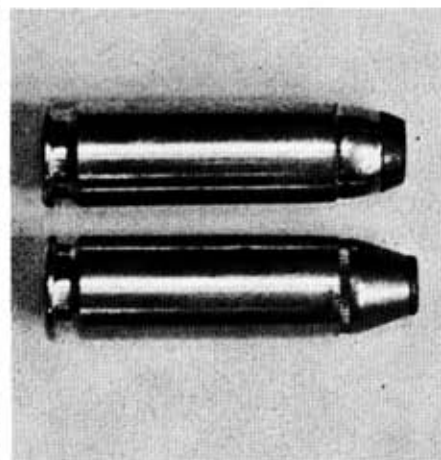
If cases lengthen with extended firing, trim them back to 1.298-1.296 inches. Don't try to cheat by making them shorter; you'll just set up an excess

headspace condition. Case life is normally good (at least until you lose them in the grass) with either factory or home-brewed brass — but if necks begin to split, anneal the rest of the lot before they let go, too.

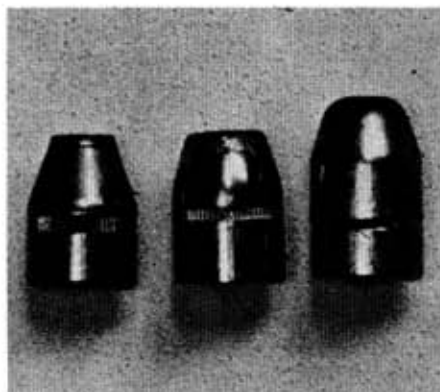
The .44 AMP pistol and cartridge were designed for a specific purpose — to produce the maximum power obtainable from a big-bore autoloader for hunting. They do that very well, so don't try to make them do things never intended. Keep that thought in mind, load carefully, shoot close, and they will serve you well. ●



At right is a 240-grain JHP bullet pulled from a CDM factory round while the same bullet is shown sectioned at left.



At top is a 240-grain Speer test load shown for comparison with a standard Super Vel 180-grain load. Loads must produce at least 42,000 c.u.p. chamber pressure to function the Auto Mag properly.



These bullets, suited to the .44 AMP, from left, are the Super Vel 180-grain JSP, Speer 220-grain JSP and original CDM 240-grain JHP.

Loads for the .44 Auto Mag

Powder/Charge	Bullet	Velocity, fps	Pressure, c.u.p.	
24.0/630	180 SV	1,675	43,000	
33.0/296	180 SV	1,880	47,000	
30.0/H-110*	180 SV	1,890	50,000	
25.0/296	240 Sp.	1,515	43,000	
24.0/2400	240 Sp.	1,480	43,000	
Factory Load	22.0/2400	240 JSP	1,175	26,000

All of the above loads were assembled with CDM cases and CCI 350 primers. All loads are full-charge and have produced proper cycling in a large number of guns. Loads four and five may be increased slightly, by perhaps one full grain without exceeding safe pressures, but the velocity gain will be relatively small. Note the low pressure and velocity levels of the factory load.

*Caution: Load three is only for current-production H-110 powder, H-110 lots of several years ago are hotter and will produce excessive pressures with this charge weight. If in doubt, cut back five grains to start.