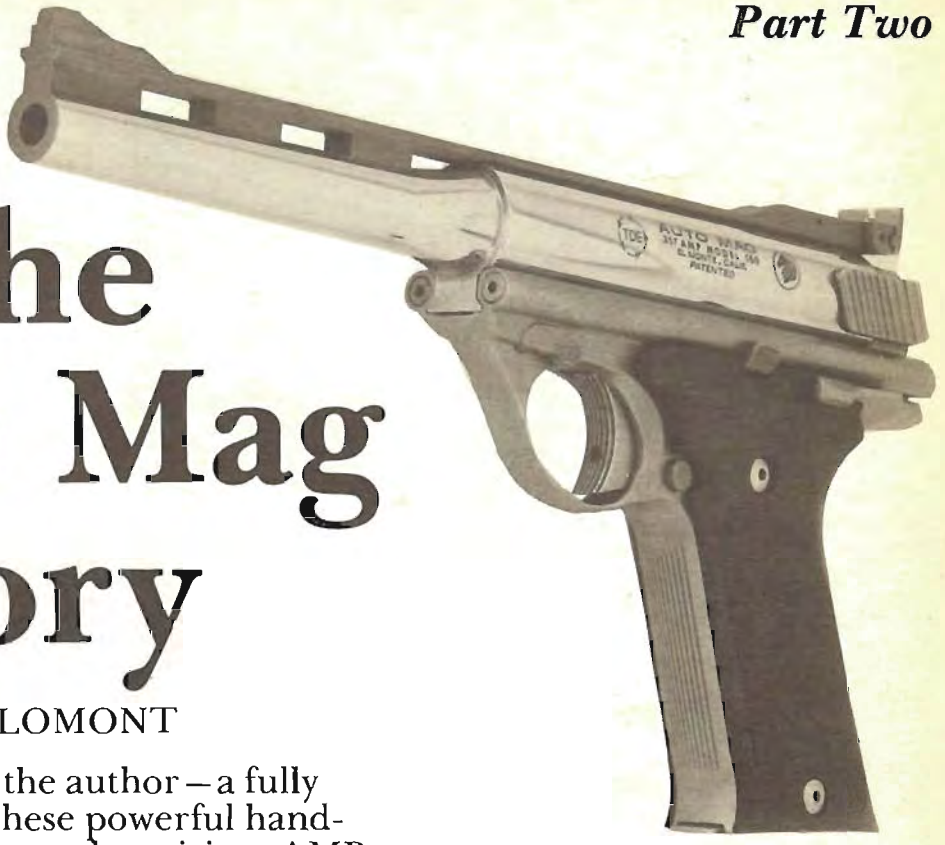
Part Two



The Auto Mag Story

by KENT LOMONT

In this final report the author—a fully qualified expert on these powerful handguns—covers adjusting and servicing, AMP components and their life, desirable modifications, trigger tuning, scoping the pistol, shooting positions, et cetera.

SEVERAL THINGS can be done to the bolt, cocking piece and bolt rotating pin for smooth positive functioning. The bolt contact surface of the rotating pin should be polished to a mirror finish. Chuck the pin in a drill and use 400 grit paper first, then finish with crocus. Bolt rotating pins usually last 1,000 to 3,000 rounds in the 357 and 750 to 1,500 rounds in the 44. They should be examined periodically for cracks in the area of the firing-pin hole. Original pins made from 455 steel and the new 17-4PH have never broken for me, and they're the type I prefer. A few batches of poorly heat-treated rotating pins were made. They break in about 20 rounds, but happily they are easily replaced.

With the bolt in the gun, operating rods out, rotating pin, firing pin and spring in and safety on, move the bolt fore and aft. Note that the firing pin and spring move through the hole in the rotating pin. Eliminate any drag by polishing the hole, the firing pin and the spring. Do not alter the weight of the firing pin or shorten the spring before reading the section on firing pin energy. Note whether the rotating-pin hole is pointing forward or at an upward or downward angle. This is controlled by the flat on the front left of the pin and the way it contacts its mating flat on the integral projection. The pin should enter the projection easily but not allow any rotational movement that will cock the hole up or down to cause drag on the firing pin and spring. It is a good idea to carry a spare, pre-fitted rotating pin.

The spring in the back of the bolt rotates the bolt to the right when it has moved far enough forward to engage the helix. All surfaces of the helix should be polished to a mirror finish, for its starting point and angle provide the precise rotation necessary for easy disengagement from the barrel lugs. However, some guns that open roughly work perfectly. Each gun is, seemingly, a law unto itself.

The entire inside surface of the bolt should be polished and the edges generously radiused if these jobs were not done at the factory. As the bolt unlocks, its bottom rotates on, and then moves rearward, across the top cartridge in the magazine. Therefore, a big radius on the bottom rear edge often aids operating smoothness. All locking lugs should be deburred and polished. A slight radius should be put on the lower rear edge of the bottom two locking lugs because these must ride over the extractor groove of the top cartridge in the magazine. Some magazines hold cartridges at such an angle that these lugs can catch in this groove. Radiusing eliminates this. But don't take off too much! Remember that these are locking lugs. The bolt then should be chucked in a lathe and polished with crocus. If no lathe is available, the bolt can be held in a padded vise and hand polished in minutes. No matter what lubricant is used, the bolt will become scratched in short order when

Molly Lomont holding tapered octagon barrel 22 AMP. This barrel assembly weighs 20.6 oz., which is the required weight for good functioning with 55-gr. bullets.

fired, so it should be periodically taken out and repolished.

The ejector should move easily and smoothly, flush with the bolt face. It should not project beyond the bolt face or it will cause jams as the bolt picks up a cartridge. The ejector needs a strong spring for positive ejection; however, if the spring is too strong it won't allow the almost completely relaxed recoil-rod springs to fully close the action so the bolt can rotate shut. Remember, the ejector must be pushed completely flush with the bolt face before the bolt rotates shut. The ejector should be slightly flattened on the end and be highly polished so that it does not dig into the case head as the bolt rotates shut or picks up a cartridge.

A Critical Area

Extractors, along with the ejector, are most critical areas in regard to positive functioning. Many shooters have experienced cases catching in the ejection port. Several small changes have been made in the extractor and in the position of the hole for the extractor retaining pin. It all has to do with the distance the extractor hook lies from the bolt face and the ejector-spring tension. Chamber an empty sized case and slowly open the bolt. Note that the case mouth rubs along the right side of the chamber and barrel assembly. If the extractor is not near enough to the bolt face and the ejector spring is not strong enough, the case will simply fall out and lie in the port instead of being ejected.

It must be possible to push the hook edge of the extractor outward; even with the inner edge of the recessed bolt head, and have it return, smoothly, all the way in. Careful study of the extractor will show the areas to be ground to increase this movement and the areas to be polished to increase smoothness. The inside edge of the extractor must be smooth to allow easy rotation. It must be angled slightly inward, be close to the bolt face, be heat treated so it will not bend, chip or wear, and it must be able to move inward far enough to get maximum grasp of the case rim. If the extractor face is just .005" too far from the bolt face, the shell will just fall off in the port, causing jams.

The stainless steel springs take a set too quickly and should be changed first thing if ejection difficulties arise, as this is often the case if the extractor is right. Properly set up, the Auto Mag will extract and eject 100% of the time, but this area which has caused many headaches, is one that can be solved only with experience. Extractors usually last 800 to 1500 rounds in the 44 and 1,000 to 3,000 rounds in the 357. I've often run over 1,000 rounds of 357 AMP rapid fire, with friends loading clips, without a single failure to extract and eject—with very hot loads. This gets the gun so hot that the grips start smoking, and the gun must be dunked in water a couple of times to keep it working.

In summary, the case must be held close enough to the bolt face so the ejector can tilt it to the right to rub on the chamber and barrel lugs as the gun opens, yet still have enough spring tension to flip the case out when its mouth clears the port. The case contact area during ejection can profit from a polish, especially the removal of a burr that sometimes exists at the inside front of the ejection port.

Interlocking ears affix the cocking piece to the rear of the bolt. There should be almost no play between these units when the bolt is in locked position. To check for this, lock the lug end of the bolt in a padded vise, attach the cocking piece and rotate the bolt into locked position. Now see how much play exists when the cocking piece is tipped upward and downward. Very slight play is OK, but none is better. When the gun is fired the bolt is stopped by the tensioned recoil-rod springs and contact with the bolt-rotating pin. The cocking piece is retained by the operating rods located on the bottom and below the center of the bolt. The tendency, therefore, is for the cocking piece to attempt to bend downward when the pin stops the bolt. Any play between bolt and cocking piece will strain the top ear of the bolt and eventually break it off. The 357 will usually function with the top ear off if the broken piece is left in and is positioned correctly, then heavily lubricated with FS-1265 in the 10,000 viscosity grade. Often it will last for another 1,000 to 1,500 rounds, sometimes more. The 44 will usually last only 400 to 500 rounds with the top ear off and then only with marginal functioning. Properly fitted, the top

Part One of *The Auto Mag Story*, which appeared in our 31st edition, covered the history of the big pistol's background and genesis, the numerous tests made in developing the 357 and 44 Auto Mags; the advent of Lee Jurras and his influence on the project; the materials and their manufacture, the essence of Auto Mag functioning, and so on.

ear will last around 1,500 rounds on the 44 and 3,000 rounds on the 357. I had a couple go over 7,000 rounds before breaking. Poorly fitted, they won't last 500 rounds. We are testing a new bolt material that may eliminate breakage.

Cocking Piece and Hammer

As the cocking piece moves back, it starts cocking the hammer and then slips over it; then, as it slams home it again rubs across the hammer. Sometimes the cocking piece projects down past the bottom of the bolt. This area of the cocking piece can stand some polishing, as can the bolt and cocking piece contact areas of the hammer. Be careful not to remove metal from the hammer or there may not be enough left for the bolt to push it back to full cock. I usually smooth those areas with 400 grit paper and crocus, and sometimes initial contours must be changed slightly with a file. Do not weaken this area or it may break. A small raised section of metal at the bottom of the hammer groove in the cocking piece sometimes prevents the hammer from going fully forward; it should be removed.

The inside of the integral projection in the frame can be polished but use extreme care not to shorten the bolt safety tappet. If the safety is put on while doing this, the tappet can usually be pushed all the way down into the frame. If it cannot, remove the tappet before polishing. General smoothness can be increased by polishing the contact areas on the frame and barrel assembly, being careful to keep them flat. Do not remove too much metal to get all tool marks out or the barrel/frame play may be increased to the point where the bolt will bind as the gun cycles.

Recoil rod springs should be the maximum length that will allow the bolt to come all the way rearward and must be of correct tension. Increase in tension often necessitates increased accelerator throw. Recoil rods and springs benefit from polishing, and the ends of the rods can be radiused for a smoother return to battery. Rough recoil-rod channels in the frame can be polished, but be careful not to remove any metal or the rods may bind as the gun closes. Recoil rods last forever and the springs around 12,000 rounds, after which they are almost worn through, especially at the rear. Frequent lubrication would probably help this, but they are cheap.

Trigger Bar

Trigger bar clearance is another critical area on the Auto Mag. The bolt rotates 22½ degrees from locked to unlocked. Note the small cut on the bottom rear of the bolt and the safety tappet which extends through the center of the integral frame projection that houses the bolt. The safety tappet moves up into the small cut when the bolt has rotated shut. The tappet is held in place by the trigger bar which, in turn, is pushed up by the trigger-bar spring. Therefore, when the bolt rotates open upon firing, it pushes the bolt safety tappet down against the tension of the trigger-bar spring; this pushes the trigger bar down past the point where it could contact the sear if the trigger were pulled. This is the reason I warned against shortening the safety tappet while polishing the inside of the frame projection. If the tappet were shortened, it would not push the trigger bar down far enough to miss the sear when the bolt has rotated to the unlocked position. This might make it possible to fire with an unlocked or partly locked bolt.

To see the effect the bolt safety tappet has on the way the trigger bar and sear assembly work, remove the right grip panel. Note that the trigger bar contacts the sear when the trigger is pulled with the bolt locked. Then push on the muzzle to cause unlocking and note that the tappet pushes the trigger bar down below alignment with the sear. Push on the safety to see how the safety plate pivots down at the forward end, disconnecting the trigger, and up at the rear into a notch in the cocking piece, locking the action shut. The safety also cams the hammer back out of engagement with the sear and positively blocks the hammer.

To check trigger-bar clearance, proceed as follows: with the grips and clip removed, the gun empty, cock the hammer and snap. Next, push on the muzzle, causing partial unlocking, and snap again. While you are doing this, watch how much the bolt rotates. I set up my guns to disconnect when the bolt has barely started to rotate. If the gun can be fired with the bolt more than 1/5th unlocked, adjustment should be made by someone competent to do it. If you want to try it you are on your own, but here's how:

Bolt Adjustment

Remove the right grip. On some guns the trigger bar can be cocked outward slightly at the bottom. Note that as it is cocked inward, the sear-contact portion drops slightly. Sometimes the grips hold the trigger bar in, preventing this outward cocking. Therefore, if the piece was set up for minimum clearance with the right grip off, and if the right grip actually did contact the trigger bar at the bottom and push it in slightly, it could result in a perpetually disconnected trigger when the grips were on. The bottom of the safety plate can also push the trigger bar against the frame, depending on how much clearance exists. I prefer to carefully bend the safety plate in at the bottom to keep the trigger bar from canting outward. Too much bend will bind the trigger bar. Be careful not to break the safety plate, as most are hard. Using the bottom of the safety plate to hold the trigger bar straight and prevent canting out at the bottom often also improves and slightly lightens the trigger pull. Make sure there is no dirt in the safety tappet cut on the bottom of the bolt and, most importantly, make certain that nothing prevents complete upward and downward movement of the trigger bar. Be sure the trigger-bar spring is pushing the bar into complete contact with the tappet.

Two things can be done to effect quicker disconnection of the trigger. One is to substitute a longer safety tappet. An easier way is to carefully file the rear step in the trigger bar until it barely contacts the sear when the bolt is locked. In practice, I file with the gun assembled until the gun disconnects with just a slight rearward movement of the barrel. Of course with the bolt very far back the hammer will hit the cocking piece instead of the firing pin anyway. I then check with the barrel off and the bolt all the way home by rotating the bolt slightly by hand without pulling on the cocking piece. When filing, be careful not to touch the sear. The most working clearance is obtained with the hammer down and the trigger bar wedged as far as it will go. Do the initial filing with the barrel assembly on, as some assemblies hold the bolt back a little and if fitted with the barrel off the trigger may be disconnected with the barrel assembly on. If you goof and go a little too far, things can be made right again by taking a little off the safety tappet. Do not go any finer than necessary or a small bit of dirt in the safety tappet cut, on the rear of the cocking piece or on the barrel assembly, may cause disconnection. Properly set up, the disconnector is very reliable.

The trigger-bar spring on guns under AO6500 is held in by luck! If it bounces out, the bar will drop down below contact with the sear and the trigger will become inoperative. Of course, the piece will fire upside down, but who needs that? The factory installs this spring with a touch of epoxy on its bottom. If you try this, be careful not to glue the spring together or get glue between the trigger bar and frame. If the spring that pushes the sear forward comes out, the sear will not engage the hammer notch and the hammer won't stay cocked. Properly installed, it will not come out. The trigger-bar spring should be slightly smaller at the top end to fit the trigger bar a little tighter, then it would not come out. New frames have a small hole to help retain this spring. This works best of all.

If an Auto Mag is fired from an open bolt, the shooter won't be hurt because the bolt will be stopped by the rotating pin, and that usually cracks it. Sometimes the frame is cracked slightly through the integral projection, the operating rods are bent, the barrel latch broken or bent, and the bottom of the barrel assembly damaged from hard contact with the barrel latch. So . . . if you are unsure about this disconnect business, have someone that knows check it out. It's a routine adjustment for a qualified Auto Mag mechanic.

The AMP firing pin is of the inertia type, which makes firing-pin weight, spring length and tension critical. If the piece is assembled without the spring or with a spring of too little tension, it can fire as the bolt slams home before locking rotation is achieved. Because the action works violently, the manufacturer has made the firing pin very light and the firing pin spring very strong. So long as the rearward protrusion of the firing pin is adequate and the two mainsprings are of correct tension, firing will occur properly. As the mainsprings are of stainless steel,

Phil Forbing shooting a 30 AMP with 130-gr. HP bullets at 2250 fps.

they take a set at around 2,000 rounds, after which there may be some misfiring. Probably the safest thing to do is to replace the mainsprings.

Primer Types

I have modified my guns to fire rifle primers so I can go to heavier loads in test work without piercing some makes of primers. A pierced primer will usually leave a small bit of metal in the firing-pin hole. These can cause misfires by soaking up firing-pin energy. They can be removed by taking off the barrel assembly and dry firing a couple of times to dislodge them.

I have never had pierced CCI large pistol magnum primers, however. Headspace should also be correct to avoid pierced primers. Cases designed for rifle primers sometimes allow pistol primers to be seated too deeply for reliable ignition.

Never load a round directly into the chamber and drop the bolt under full force. Even if the gun does not fire from this, excess headspace will be created, causing misfires and damaged extractors.

A benefit to all Auto Mags is an increase in firing-pin protrusion through the rear of the cocking piece. I do this by carefully reducing the thickness of the rear face of the rear disc on the firing pin by about .015", thereby increasing protrusion by this amount. This method increases firing-pin energy without danger of firing from an open bolt. Nothing is gained by grinding the front face of the front disc – there is already a lot of protrusion here. For safety's sake, the firing-pin spring should be replaced every 5,000 rounds because it gets worn from going back and forth through the hole in the rotating pin.

Any time the firing mechanism is worked on, fire a round and then look at the primer of the next (unfired) round chambered. It should not be dented. The guns I have set up by shortening the pin have fired over 50,000 rounds and never fired as the piece closed. But it's possible.

Trigger travel prior to sear engagement is adjusted by an Allen screw through the frame above the trigger. Travel after sear release is adjusted by the screw in the front center of the trigger itself. Both adjustments are important and should be Loc-Tited after being set. Older guns used a fine thread, the newer ones a coarser thread with Hylok washers. All will change adjustment with shooting, hence the need for Loc-Tite.

Trigger after-travel set at absolute minimum can lead to decreased hammer energy and misfires. This occurs if the sear is pushed just far enough to release the hammer but not far enough to clear the quarter-cock notch or the portion of the hammer above it. This can be checked by slowly moving the hammer back and forth through its arc while holding the trigger as far back as it will go. Any roughness felt at the quarter-cock notch position could be the result of insufficient sear movement. Roughness should be corrected by slightly turning out the after-travel screw. Better trigger pulls with less after-travel can sometimes be had by carefully grinding a little off of the hammer above the quarter-cock position to prevent the rubbing created by a minimum after-travel setting. Occasionally roughness is caused by the hammer or the mainsprings rubbing, which should be corrected.

Improper adjustment of the trigger pre-travel screw can make the gun inoperative after the first shot because it won't allow the trigger bar to move in front of the sear to push it again. On some guns, if pre-travel is set at absolute minimum, this leads to a condition known in single actions as firing from the "false half-cock" notch. This occurs in the Auto Mag when the pre-travel screw doesn't quite let the sear come all the way forward. Instead of dropping into the bottom of the quarter-cock notch, the sear just contacts the notch's edge hence a pull on the trigger will drop the hammer. To correct this, the pre-travel screw should be turned up slightly. This condition doesn't occur on all Auto Mags, only on those whose sear and quarter-cock edge surfaces are such that they will catch and hold. The Auto Mag *should not* be carried on the quarter-cock notch anyway; its only purpose is to function as a safety catch if the shooter drops the hammer while attempting to cock it or in the event of full-cock notch failure.

Trigger Pull

Trigger pull can be improved by careful stoning of the sear and full-cock notch. This must be done extremely carefully or the piece will not stay fully cocked under the violent forces of recoil. Some lubricants – or too much – used on the sear contact surface will cause the hammer to stay uncocked by over-reducing the friction. In other words, if your Auto Mag won't stay cocked, clean off all lubricants and try again. In any event, be most careful when working on the sear and hammer notch.

As mentioned before, smoothness of operation can be increased by polishing the mating surfaces of barrel assembly and frame. Most of this is best done by wrapping a large file first with 400 grit paper and then emery, and polishing in the direction of barrel movement. The four outer frame contact surfaces of the integral projection can be polished, as can their contact points in the barrel assembly. All tool marks inside the action in the area of the ejection port can be removed. A *slight* radius on the bottom edge of the chamber helps smooth feeding. Don't overdo this or part of the case head above the solid portion (web) may be unsupported, a definite hazard at 50,000 c.u.p. The inside of the chamber can be polished by wrapping a rod with crocus and turning with a drill, and the sides of the lugs by wrapping a small file with emery and working carefully. All of this will materially aid smooth functioning, especially in the 357 AMP. The trigger bar and frame, hold-open device, hammer sides, and the contact areas of all these, as well as the barrel assembly dove-tail and frame contact areas, can likewise be polished. I prefer not to polish the safety and hammer contact areas as this makes the safety too easy to disengage accidentally. Don't polish too much, of course, just remove most of the tool marks.

If the snap ring that holds the safety and the safety plate spacer comes off, the safety can slip far enough out of the frame that the hammer can hit the enlarged portion on its right side. This makes it impossible to cock the hammer until the safety is pushed back in. If the wrong safety plate spacer is installed, one that does not allow .010" clearance between the safety lever shoulder and the frame, problems can occur. Too much clearance may bind the

hammer, not enough clearance may hinder operation of the safety plate and put too much strain on the snap ring, causing it to come off again. I have substituted heavier snap rings here that never come off. The originals are not strong enough. See note 3, page 21 of the original Auto Mag manual. Also note that the sharp edge of the snap ring should be installed away from the gun. If the radius side is outward the ring will snap off too easily.

Loss of the snap ring which retains the pin at the front of the hold-open device gives rise to another problem. Then the hold-open moves out far enough so that the stud on the clip slips past it and does not hold the bolt open after the last shot. This makes the clip difficult to remove because the stud has to be pulled down past the hold-open catch – which is a good way to pull the bottom out of the clip! It is advisable to remove the left grip, hold the hold-open away at the clip contact point and (with your third and fourth hands!) remove the clip. On some guns that part of the hold-open which stops the bolt lightly rubs the left side of its cutout in the frame and does not allow the hold-open to move out even if the snap ring is lost. Guns so fitted will not usually lose the snap ring, either, but must have a high polish at the hold-open and frame contact point to allow easy movement. If the clip stud does not protrude far enough, it will sometimes slip past anyway. Just push it out again. If it is too loose it can be removed and slightly flattened, but this is difficult as it is very hard. The sharp lip on this stud is important because it catches in a matching cut on the hold-open. Some have ground this off and then found that the gun will not stay open after the last shot. Be careful!

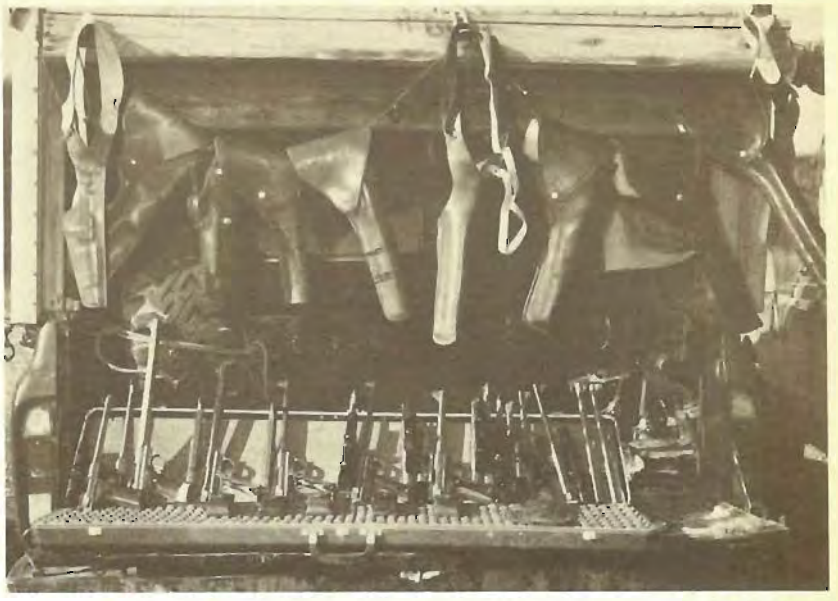
Anything that prevents full rearward movement of the bolt will also make the hold-open inoperative on the last shot simply because it is not going back far enough to engage. Also, remember that the recoil-rod springs are almost completely compressed at total rearward movement of the bolt, so the addition of two or three coils won't allow the bolt to move completely rearward either. Both length and tension of the recoil rod springs are critical.

Note well: When fitting a new bolt be sure to check trigger-bar clearance. The depth and location of the bolt safety tappet cut varies, as does its shape from lot to lot of bolts. Older bolts are deeper and if a newer bolt is fitted it will usually result in a perpetually disconnected trigger until the bolt safety tappet is shortened. Conversely, if the fitting is from shallow to deep cut, the gun could be fired from a partly or completely unlocked bolt, and so must have the trigger worked on. Keep this in mind.

Headspace

Headspace must be correct for positive operation. Be very careful in attempting any adjustments here. What I call lug clearance is important. With the bolt removed from the gun, then inserted into the barrel assembly and rotated to the correct locked position, there should be about .010" to 0.15" forward and rearward play in the barrel-bolt assembly. This is controlled by the bolt-front and rear-barrel contact in relation to barrel-lug and bolt-lug contact. When the bolt contacts the barrel at the same time the bolt lugs contact the barrel lugs, there is no clearance or play. Therefore, a small piece of debris on the contact areas of bolt or barrel will not allow the bolt to shut. I usually correct this by removing a little metal from the front of the bolt radius, but make *sure* this is the problem before removing anything. This should not be checked until at least 50 rounds have been fired to allow the lugs to seat in; also, the lugs will take a little further set as firing proceeds – usually less than .003" in several thousand rounds. Remove the accelerator and block when checking this to eliminate any chance that they are interfering. Occasionally the extractor will interfere here, so it goes without saying that all areas must be absolutely clean to check this. Now let's assume we have the lug clearance correct.

With the gun completely assembled and absolutely clean, cocking-piece contact with the rear of the barrel extension will determine how far forward the bolt can go. Note also that the forward movement of the barrel assembly is controlled by the barrel latch. The replacement of even the barrel latch will affect the headspace relationship if it allows the barrel assembly to move forward or holds it rearward. If the rear of the barrel extension is too long, the bolt will not be able to move far enough forward to rotate shut because it will not clear the barrel lugs. As small amounts of metal are removed from either the rear of the barrel assembly or the front of the cocking piece, a point is reached where the bolt will just rotate shut. The rear of the bolt lugs will just rub the front of the barrel lugs. A bit of foreign material between the cocking piece and barrel extension or on the lugs will prevent bolt rotation to some extent. I remove metal (preferably from the rear of the barrel extension) until there is .008" to .012" clearance between the rear of the barrel assembly and the cocking piece when the cocking piece is pulled back while holding the barrel to prevent unlocking. The lugs now are contacting each other when the cocking piece is pulled rearward and can be pushed .008" to .012" forward before contacting the rear of the extension. If a loaded cartridge is headspaced to hold the bolt back so that its lugs contact the barrel lugs, the piece will function *only* when clean. When dirty from firing only a few rounds, the cartridge will hold the bolt back a few thousandths, preventing bolt rotation as the lugs cannot clear. Proper ammunition must have .008" to .012" more head-space than whatever will just allow the lugs to contact. Then the gun will function, after several hundred rounds, with a slight amount of dirt in it. See the *Handloader's Digest*, 7th ed., for recommendations on how to set ammunition head-space, particularly on the 357 AMP.



A bunch of Auto Mag pistols, some scoped, others not, plus an array of holsters.

The Rear Sight

The Auto Mag rear sight is durable and rugged, but sometimes has too much play, which affects precision shooting. Some play may exist between the rear sight platform and its mortise. This sideways play can usually be eliminated with shims. Sometimes one is necessary where the rear sight pin goes through. Retain the shim by punching a hole in it for the sight retaining pin. Occasionally a shim is required at the narrower front portion; this one can be glued in. I prefer to use a very hard punch and raise a slight burr to eliminate this play if possible. The wide portion of the sight should be longer or another wide portion put toward the front to help eliminate this problem. Make sure the rear sight is free to move up and down after this is done: it may remain up, giving

puzzling high shots. Occasionally the rear sight platform is too wide, causing binding. It can be narrowed slightly. Sometimes the hole through it or the barrel assembly is drilled at an angle, requiring a new and larger hole to line things up again. Remember that the original guns had ribs of C-50 Rockwell Carpenter 455 steel, and are hard to drill. Even those of 17-4PH run C-30 to C-36 and are tough.

Secondly, there is sometimes too much play between the sight platform and blade—the sight may tip rearward an amount equivalent to 6 or 8 MOA. This can be corrected by carefully squeezing the groove for the blade tighter. Do this a little at a time. If squeezed too far the windage adjustment screw may no longer fit, but the groove can be opened up again. Be careful not to impair free movement of the rear-sight blade; this will prevent accurate adjustments.

An occasional load may print so high that the gun cannot be sighted in correctly, especially with the 357. To correct this, remove a small amount from the bottom of the rear sight platform, where the elevation screw goes through, thereby allowing more lowering of the rear sight. Sometimes this necessitates shortening the elevation screw. Do not take so much off the bottom of the platform that all threads are removed.

If more elevation is required than you can get by running the elevation screw in as far as it can go, substitute a longer one. This will probably require relieving the front of the platform slightly.

Magazine Latches

Sometimes the magazine latch becomes so worn from repeated recoil that it allows the magazine to fall out on firing. Cure? Try a new magazine latch. The old 1911 Colt 45 latch can be used in a pinch, but it's actually a little too small. The AMP magazine latch acts as a trigger stop and, if too small, pulling the trigger may tilt it slightly, causing it to lose some of its grip on the clip. If the clip is only partly seated, it won't be fully caught by the latch. A loaded clip needs, usually, a small amount of upward/downward play to clear the latch and let it fully engage. However, I've seen some that were tight yet worked fine. Too much play is bad because it can contribute to bolt over-ride. An undersize clip sometimes allows so much play it can disengage when moved one way or the other. There's a lot of stress on the clip as the bolt rides back over it and then picks up a fresh cartridge under recoil energy, so it must be right. I have had several clips fire over 10,000 rounds apiece without work being needed on the magazine latch.

A semi-automatic gun is only as good as its clip. I've discussed the hit-the-shell-in-the-middle or bolt override syndrome earlier. Just when I think this problem is eliminated, it shows up again.

The Auto Mag has much more recoil than any other semi-automatic handgun. Recoil (primarily in the 44 AMP) causes in the cartridges to tip up at the nose (the nose is in front, they're heavier than the rear, and the rear is enclosed more by the magazine lips) and downward at the base. Sometimes the bolt clears the cartridge base enough to hit the cartridge in the middle. (Anything which prevents complete rearward travel of the bolt gives the same result, but for different reasons, as explained earlier.) The heavier the load or bullet weight, the more pronounced is this tendency. I tried numerous "cures," including working on the front of the clip lips so the nose could not move up through them. But this required altering the bolt so it could still rotate on the partly-closed magazine lips, and that helped a lot. I also noticed that large accelerator throws worked better than small ones on the first few rounds, but with fewer shells in the clip, large throws made this type of jam worse. Several factors seem evident here.

Variations in clip-spring tension cause great differences in functioning, as does general smoothness of clip operation. Too little tension allows cartridges to move downward (under recoil) easily, and too much tips the nose up. Both conditions let the bolt hit the cartridge middle. However, by carefully altering some of the above characteristics, most 44s can be made fairly reliable with all but the heaviest bullets at maximum velocity. This problem is almost non-existent in the 357.

All clips benefit from the following operations: The feed lips should be slightly rounded and polished to reduce the force required to strip a shell. The top of the follower should be polished and its front end radiused more than on production clips. Sides and ends of the follower can be polished, as well as the inside of the clip, the clip spring and the channel through which the stud projects. Make sure the follower moves up far enough to let the stud push the hold-open device all the way up for good contact. When everything is polished clean, lightly lubricate all parts with a good silicone spray before reassembling. Many 44 Auto Mag shooters keep two cartridges under the magazine spring, reducing the capacity to only 5 rounds, and then use only 4 rounds in the clip to improve functioning. Clip springs deteriorate with use and should be periodically checked for tension.

Occasionally, especially with heavy loads, the clip latch will disengage during recoil. Usually this occurs when the magazine-latch plunger dose not engage the hole in the magazine latch correctly. The hole may be too small or off center. Or the spring in the latch is too weak or binding in its hole in the frame. If this happens, check it out.

Before getting alarmed over all of these tune up and repair tips, realize that there are about as many for the Colt 45 ACP, a military arm that's been around for over 60 years. The Auto Mag operates at over twice the pressure, is much more accurate, and has been in existence only a little over 6 years. Generally, it's several times as difficult to get acceptable functioning from the 44 than the 357, and in my opinion the 357 is the king.

When pondering any problem, it is better to do a lot of thinking and little work until the problem is fully understood. This usually saves doing the work over and buying a lot of parts not really needed.

Cleaning and Lubrication

As with most firearms, the Auto Mag must be clean and properly lubricated to work well. Sand is especially detrimental; a slight amount in the action will stop functioning immediately. The chamber must be clean to allow easy closing for positive bolt rotation and easy extraction. I always carry a chamber brush. Incorrect powders are the main cause of dirty chamber difficulties. Ball powders become especially dirty at cold temperatures but are superior at normal temperatures. Lubricants that partly dissolve ball powders are mandatory for functioning in cold weather. The accelerator and accelerator block areas must be clean and lubricated. The lug areas and bolt face are particular trouble spots because of ball powder fouling or from brass particles collecting. Fouling also builds up where the bolt contacts the inside of the barrel assembly—keep clean and lightly oiled. Pay special attention to keeping the extractor clean; use a small stiff brush. Clean the bolt, the bolt face, and any other areas that show fouling. Lightly lubricate between the accelerator and pad, on the rotation pin, on the surfaces of the bolt, on the outside of the integral frame projection, and on all frame, bolt and barrel assembly contact surfaces.

About every 1,000 rounds the bolt should be cleaned and repolished as necessary. The cocking piece interior should be cleaned thoroughly, then literally filled with lubricant before reassembly. It should then be good for another 1,000 shots. Keep the clip clean inside and lightly oiled. Carry spare clips in a pouch, under your clothing if possible, to keep out dirt. This requirement for cleanliness is the main reason the Auto Mag should be carried in a closed-top holster or shoulder rig.

Use only vegetable or synthetic-base oils on the AMP. Mineral-based oils result in gummy operation, and many may gall the mteal quickly. A clean smooth gun will, with mineral oil lube, often function normally for a few clips, then becomes very rough. Mineral oil does not seem to wet the surface and tends to congeal in little droplets. Many, perhaps most, auto, gun and household oils are petroleum (mineral) based. Castor bean or synthetic oils are generally satisfactory if they wet the surface. Some heavy-duty brake fluids seem to work okay, others don't. High molecular weight polyalkylene glycols work well, correct viscosity being dependent upon temperature.

In the 7th ed. *Handloader's Digest* I said that Dow Corning's Fluorosilicone Fluid FS-1265 in the 1,000 viscosity grade was very good, and that I would test it in cold weather. I have, but even the 300 viscosity grade becomes too viscous for good cold-

44 AMP in full recoil has special 25" twist tapered-octagon barrel weighing 47 ozs.

weather functioning. For cold weather I now always use the 1,000 or 10,000 viscosity type in the bolt area, and the 300 grade very lightly on the operating rods. I use Klotz Two-Cycle Motor Oil for the rest except the firing-pin spring. This works well in all temperatures down to zero. Below zero I use only Klotz, and then very lightly. I also favor the Dow Corning 1,000 viscosity type for the accelerator in warm weather. Never oil the firing-pin spring, especially in cold weather, and don't use a heavy oil inside the clip when its cold. Klotz oil costs around $3 a quart from Klotz Special Formula Products (Box 1342, Fort Wayne, IN 46801), and is the best all-round Auto Mag all-temperature oil I have tested. It also seems to dissolve ball powder residue, at least in part! The oil supplied with the pistol, supposedly Castrol-R motorcycle oil, is very good for prolonged warm weather shooting, but unsuitable in cold weather.

Proper cleaning tools for the Auto Mag are: a big bristle brush similar to the military 45 cal. brushes sold by surplus stores (used to flow a lot of solvent in floating dirt out); a military M-16 chamber brush for removing residue in the barrel-lug area; a stiff brass barrel-brush; a sturdy rod with tip to hold cleaning patches; a toothbrush for the bolt face, extractor and other areas. A readily-obtained solvent is Coleman fuel, which dissolves vegetable-base oil without leaving much film and is better than Hoppe's No. 9, though Hoppe's can be used to clean the barrel. The barrel will soon become copper washed, like centerfire rifles, from the pressures and velocities generated in the Auto Mag. This can be removed with 28% ammonia or one of the bore-cleaning pastes, though I don't find this jacket fouling hurts handgun accuracy. I don't bother to remove it.

I would like to receive a sample of any lubricant found good by other Auto Mag shooters. I'll then report this information, as well as the test results obtained with it, in the Auto Mag Newsletter.

Scoping the AMP

There are three major concerns when scoping the Auto Mag: the base must stay on the barrel, the rings must stay in the base, and the scope must stay in the rings. The only method I've ever seen that will positively hold the base on the barrel is by attachment with two or three 10x32, or, preferably ¼x28 screws. Two work on the 357, the 44 needs 3, but three is best on both. If you want to drill an extra hole, 8x36s can be used in place of the 10x32s.

Location of the holes will vary, depending on the base length selected and its position. Any holes behind the locking lug area are better drilled clear through, using screws that project full depth. These can be cut off and filed flush with the action after thorough tightening. Do *not* drill holes over the locking lugs or over the bolt-lug recess (directly in front of the barrel lugs) because of the thinness of this section. Holes over the chamber portion can be drilled about .375" deep. Measure carefully and *don't* go through. On ventilated-rib barrels, drill through the rib supports and into the barrel, but not over .075" deep; again, *don't* go through. After test firing to make sure the base does not have to be milled to a different contour to allow sighting in, use Loc-Tite on all screws. I always use Allen cap screws as they can be pulled tighter and can be removed much easier than conventional screws.

Before doing any drilling, assemble the scope in the rings, put it on the base and place the unit on the barrel. Position it carefully and check clearances, making sure the scope doesn't hit the sights, stands clear of the muzzle blast, and allows easy maniuplation of the hammer. If adequate clearance exists, most bases can be milled out to fit over the rib. Note that rib width varies, especially between the 6½" and longer barrels. Make sure there is adequate thickness to countersink the screwheads; if not, make sure the screws will not hit the scope or rings. Two-piece bases can be used, but they're harder to line up and aren't as satisfactory as the one-piece.

The scope must not slip in the rings despite the terrific strain of recoil. Rings that hold even heavier scopes on the 460 Weatherby allow slippage on the Auto Mag. On the Auto Mag scopes slip *forward* from recoil. This shows that the recoil forces are greater than the forces exerted on the scope when the barrel assembly is abruptly stopped by the frame lug, which would tend to make the scope move rearward. I have found no commerical rings that will hold a scope on the 44 for more than 500 rounds or for more than 1,000 rounds on the 357, even when epoxied, *unless* one of the following two things is done. The first is the use of an extra pair of backup rings epoxied into position behind the primary rings which are attached to the bases. This increases the surface area of contact and will hold for many thousands of rounds—which is much longer than any scope will last. The second method is to position the scope so that the rear ring makes full contact with the rear bell on the scope. The rear inside surface of the contact ring can be radiused or bellied to match the contour on the scope to eliminate marring. This method is harder on the scope because it puts most of the strain on the rear of the scope. Scopes will hold in Weaver rings on the 44 S&W Magnum for over 25,000 full power rounds, with just the use of Loc-Tite and epoxy, but not anywhere near that long on the Auto Mag.

Next, the rings must hold the base, and nothing works better than Weaver rings and bases which combine strength and light weight. Conetrol rings are held by cone-shaped screws which enter matching holes in studs projecting from the bottom of the rings. The cones pull out to an unacceptable extent after some 500 rounds on the 44 and 1,500 on the 357. The split rings, held together at top by beautifully machined caps, hold up well on rifles but quickly pull apart on the Auto Mag. If Conetrol mounts are to be used, specify one-piece rings. This will necessitate bending the rear one open to get it around the scope tube, but if done carefully this will work satisfactorily, and it makes one of the neatest looking scope rings for the AMP. Use the one-piece base made for the 336 Marlin. The Conetrol should be used only on the 357 AMP and only if less than 1,500 rounds are anticipated. Redfield and Buehler rings hold up well and will last almost twice as long as the Conetrol before pulling out of the bases. When choosing the Weaver, use a one-piece 6" base. I prefer number 58.

Tests with the mount Dave Pence and I designed indicate it is the best, but it's expensive to make. It was covered early in this article, so will not be described again.

The most satisfactory scope is the Leupold M8-2X and their most durable crosshair is the tapered one. I prefer the duplex reticle for reasons explained in the long-range shooting section. Other scopes can be used but no other matches the light weight, sharp image and ruggedness of the M8-2X. The Leupold will usually hold up for 500 to 1,000 rounds on the 44 and 1,000 to 2,000 on the 357, at which point the reticle will shoot loose or the glass will break. The scope can be factory repaired (at this writing) for under $20, a small percentage of the ammo cost required to damage it.

See my earlier section on tuning for information on barrel weights and accelerator modifications required to assure functioning on scoped guns, as well as the comments on Mag-Na-Porting.

Long Range Shooting

Long-range handgun shooting is the ultimate test of gun, ammo and shooter. It's a game, pure and simple, but a helluva lot of fun. Many guns and loads that shoot well at close range are worthless at long range. But not the 357 Auto Mag – it is the most accurate, easiest to hit with and spot, repeating handgun-cartridge combination available today.

Many rounds fired from bench rest through scoped revolvers have shown that all three S&W Magnum calibers are capable, with good ammo, of an occasional one-inch group at 100 yards, the average being 3 to 4 inches. The larger calibers show more extreme long-range accuracy than the smaller; the 44 Magnum is best, the 41 a close second and the 357 a poor third. Sure, the 357 has shot its share of inch groups at 100, but as the range reaches toward the 700-yard mark the larger calibers show more accuracy and spotability. Loading for even 3-inch accuracy is critical, and not all batches of ammo will attain it. Almost any alloy with the correct bullet design and powder charge will stay under 6 inches at 100 yards.

Both calibers in the Auto Mag are more accurate than the revolvers, as shown by many tests, but the difference in accuracy is not readily apparent under field conditions. Like the Magnum revolvers, the 44 AMP is more accurate than the 357 AMP, but the difference is not nearly as great as in the revolvers. The main reason is that in the revolver the jump from cylinder to forcing cone damages the smaller sixgun bullets proportionally more than the larger ones. The Auto Mag does not suffer from this.

Some of the best all-round long-range loads for the Magnum revolvers are with 250-, 220- and 173-gr. Keith-type bullets loaded to 1450 fps from the S&W 8 3/8" with H-110 powder in the 44, 41 and 357 Magnum respectively. These maximum working loads,with no wind and good light, will all stay on a man-size target at a full 600 yards once sight hold-over is doped.

The difference in long-range field accuracy between the 44 Mag and the 44 AMP is negligible with best loads in each. The 180-gr. bullet in the 44s shoot flatter than the Keith style, but is not as accurate or as easy to spot at ranges over 250 yards. The same goes for the 170-gr. compared to the 220-gr. Keith in the 41. The long-range trajectory for the 44 Mag, 41 Mag, 357 Mag, 44 AMP and 41 AMP can be considered identical for all practical purposes.

The 357 AMP shoots just twice as flat as do those cited above! It is a long-range shooter's delight for the flatter trajectory makes holding over much easier, which thereby greatly enhances hitting ability. Targets that can be hit only 2 or 3 times out of 6 with the other AMPs and Magnums can be hit repeatedly with the 357 AMP.

I included a chart in Part One giving remaining velocity and drop for many of the best long-range loads in the various Magnum handguns, including the still-to-come 22, 25 and 30 AMPs. Generally the 22 and 25 AMP will shoot 4 times as flat as the 44, the 30 AMP three times as flat, the 357 twice as flat, and the 41 around 20% flatter. This means that long-range hitting should be easiest with the smaller calibers. But remember these are rough generalities. The 30 AMP can be spotted and is even flatter shooting than the 357 AMP, but impacts of the 22 and 25 are harder to see, which complicates long-range shooting.

The 44s should be chosen where maximum power is necessary. If the game is dangerous, two handguns of adequate power should always be carried. Where maximum power and reliability are required, the 44 Magnum revolver is still without peer as far as I am concerned. For non-dangerous game, particularly where long-range shots may be offered, the 357 AMP is the best handgun choice possible if the shooter takes the time to become fully familiar with it. The 357 AMP drops only around 8" at 200 yards when sighted in at 100. Careful shooters, using the heavier bullets, should be able to down game the size of elk and moose, if only selected shots are taken. Lee Jurras has killed several head of African game, a moose, and an antelope at a witnessed 217 yards – all with the 137-gr. Super Vel bullet at 1900 fps from the 6½" 357 AMP. If this antelope kill sounds like a long shot, remember that Jurras has banged away thousands of handgun shots annually for a good many years, and he's a hell of a good field shot.

Sights and Sighting

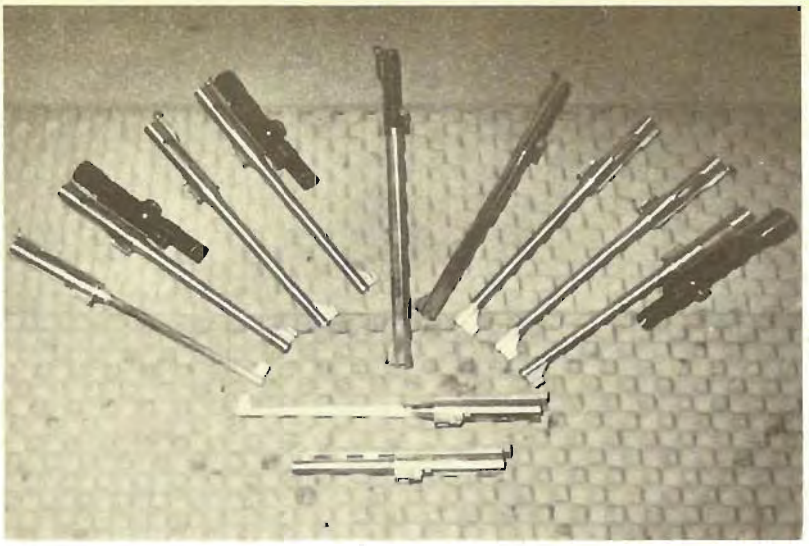
I normally sight all S&W Magnum handguns dead on at 100 yeards. This usually puts the bullets up 1½" at 25 yards, 2½" at 50 and around 3" at 65, impacts then decreasing until zero at 100. They will then shoot slightly low at ranges of 10 to 20 feet and dead on at 30 to 40 feet. These figures, note, are roughly *halved* for the 357 AMP. As ranges are increased over the 100-yard mark, the front sight is held up over the rear notch and the target perched on top. Some advocate holding the sights normally and aiming over the target. Not so, because the barrel hides the target. How can you aim at and hit something you cannot see? Holding up the front sight keeps the target visible. Holding up the entire front blade of the 357 AMP puts the point of impact at around 600 yards, half of the blade puts it on at about 350, and so on. The correct amount of sight to hold at various ranges must be learned by trial and error. Long-range shooting is possible only where terrain and light permit spotting impacts so the bullets can be "walked" onto the target.

Two front sight modifications help long-range hold over. First, paint on one to three bars across the blade to give reference points. Second, paint two lines down each side of the front ramp, so spaced that one line is visible just inside the rear sight on each side. These lines help to avoid canting when the ramp is held up. If necessary, because of sight height or trajectory, horizontal hold-over lines can be put on the barrel as well. These lines can be painted on with nail polish or airplane enamel, using a toothpick as a brush, or they can be made of reflective tape. Tape the blade or ramp and use a razor blade to cut away the excess. Degrease with lighter fluid before attaching the tape. Barrel lines are not needed on the 357 AMP because long-range shooting with it involves, at most, holding up the blade only on the 8½" and perhaps half of the ramp on the 6½".

It is important that open sights be seen as sharply as possible, for any small misalignment is magnified many times at the target. The sights should be visually sharp and the target blurred, as the eye won't accommodate near and far objects at the same time. Misaligning the sights only .035" equals one foot per 100 yards with the 6½" barrel, and .040" per foot with the 8½". The shorter the sight radius, the less sight must be held up for a given angle. This error difference is the reason many find long barrels easier to shoot accurately than the short.

A useful accessory for sharpening the sights and target is the Merit optical attachment, cost about $15. It consists of a small iris with apertures adjustable from .020" to .156". It fastens to the shooter's glasses by means of a small suction cup, giving the same effect a small peep sight does, giving better definition to near and far objects. It's an invaluable aid for ammo testing and sighting in, but it is not practical for game shooting.

The AMP manual gives sight adjustments as one MOA (minute of angle) per click, meaning that the point of impact should move about one inch per click at 100 yards. The actual amount of sight correction on the Auto Mag is given in the accompanying Sight Chart. For general shooting these figures can be rounded off to ½" per click for elevation and one inch for windage. A *clockwise* turn of the elevation and windage screws moves bullet impact up and left respectively. To help remember the directions here's a "CLUE." C = clockwise; L = left and U = up. The



Eleven Auto Mag barrels. From left—pair of 22s, two 30s, single 44, another 44, a pair of 30s, a single 25 and, below, another 25 and a 44.

Sight Chart also gives the height of the blade and the blade-plus-ramp for all barrel lengths, plus the correction in feet that hold over to the bottom of the blade and blade-plus-ramp provides at various ranges.

Scoped handguns, though fine for long-range shooting at stationary targets, are not so good on moving ones. The Leupold M8-2X with duplex crosshair (my favorite), can be used as a rangefinder. There are 12" per 100 yards between the CH intersection and the start of the heavy wire at top or bottom. Thus a groundhog about a foot high and just filling that 12" space would be 100 yards away. If it fills half of this space it would be 200 yards away, and so on. Animals vary in size but this illustrates the principle.

This same reticle makes long-range hold over comparatively easy because of the reference points offered by the intersection of the heavy and fine wires. I usually sight the M8-2X dead on at 100 yards using the place where the fine wire meets the heavy one in the top half of the field for my aiming point. Then with the 357 AMP and a 137-gr. load, a center crosshair hold is usually dead on at 275 yards and on at 400 yards with the crosshairs held above or higher.

A scoped AMP will be most appreciated by those working up accurate loads or by one who suffers from poor vision. Scopes are also good in poor light. In the field a scope will probably increase hits for an average shooter, but I would expect a master shot to connect on stationary targets equally well with either open sighted or scoped guns, and connect more often on moving targets using open sights.

In any event, to become proficient at long range you must become familiar with the correct method of sight hold over: have an accurate, flat-shooting gun and cartridge plus good sights,and you must be able to make the damn thing go off on target. In other words, shoot from a steady position!

Shooting Positions

The classic one-hand shooting position is hardly useful for testing ammo, and is rarely used under field conditions. Others are as fast or faster to assume, offer greater steadiness, faster aimed repeat shots, and are easier to learn. One should, however, become fairly proficient with the one-hand position because sometimes it is necessary to shoot this way; but most times two hands will be used. Here's how.

Grasp the gun in the shooting hand naturally. Wrap your other hand around your gun hand, being careful to stay clear of moving parts. Push forward slightly with the trigger hand and, at the same time, backward with the non-gun hand. Properly done, this is very steady so long as this push-pull business does not produce shakiness.

An interesting accessory that will almost double long-range two-hand hitting ability is the "Deadeye" (Deadeye Assc., PO Box 1687, Opelousas, LA 70570), $29.95 plus $1.25 handling at this writing, a skeletonized plastic shoulder stock from which a length of threaded rod projects with a ball on the end. This ball snaps into a socket on a strap that fastens around the gun hand's wrist. A carrying handle can be used as a chin rest to further help steady shooting. Shouldered like a rifle, the gun is held in the standard two-hand hold, but with Deadeye both hands pull rearward, increasing pressure on the shoulder stock. Deadeye is rather slow to get into action and has a tendency to chafe the wrist with prolonged shooting.

Probably the most useful assist to two-hand shooting is the lanyard. On a right-handed shooter the lanyard should go over the head, under the right arm and out to the gun butt. This is much steadier than the often seen position with the lanyard around the neck only. The lanyard should be attached to the gun, not the shooter's wrist or thumb. I prefer a small sliding keeper on the gun end of the lanyard which can be tightened up around the gun butt at a point where the lanyard will ride in the crease below the thumb joint. Length should be adjustable to suit the shooter. I use two lengths. The first permits full arm extension for maximum sighting radius and ease of movement for moving targets. The second length is shorter. It decreases sighting radius and is less suitable for moving targets, but is much steadier. The shooter's non-gun arm is bent, with elbow pressing into his side and, if posisble, against his hipbone. The gun hand is placed in the palm of the other hand with the shooter's chin pressed into his gun-side shoulder. The gun hand is then supported by the tension of the lanyard and by resting on the palm of the other hand which is supported by a line of bone running right down to the ground. Head movement is stopped by chin contact with the shoulder. Years ago, with 10 grains of Unique and the 250-gr. Keith bullet in the 8⅜" S&W, I could hit a small can four out of 5 times at 76 yards using this method. It is very accurate! When shooting offhand, take advantage of anything to obtain steadiness. Movie actors hit because it is in the script. You will hit because you're steady.

The kneeling position is fairly steady, fast to assume, and can be used with Deadeye or lanyard. Where time and terrain permit, sitting is much steadier. The lanyard can be worn while hunting but be careful not to snag a tree and get hung. Don't wear it on horseback unless it is constructed of material that will break before you do. Also, do not carry your gun attached to the lanyard or you may snag a branch, flip out the gun and dent your skull, or—even worse, the gun! In any long-range handgun shooting, keep your head back to increase eye distance from the sights. This will permit better focus on the sigbts and target at the same time, especially as the eyes lose their powers of accommodation with age.

Where a backrest is available, sitting is the best all-round long-range position. Many people sit up too straight to realize its full benefit. Sit down and scoot your hips far enough ahead that when the wrists are supported between your knees, your eyes will line up with the sights. Dig in your heels and push back slightly against the backrest. Grasp the gun in the standard two-hand position, arms fully extended. Pull your wrists against your drawn up and slightly pressed together knees. Your arms now form a truss locked between your knees. Your body will be steadied by the pressure your legs are exerting against the backrest. If possible, lean your head against the rest. The name of the game is to rest anything you can, and your head is just as important as your gun. Be careful not to shoot off any portion of your anatomy. Watch the barrel cylinder gap on revolvers for flying goodies and watch any part that moves on a semi-automatic. I am glad Elmer Keith never invested a reclining crotch position, as I'm sure it would have adversely affected the population of new shooters, especially with Magnum handguns. The sitting position is actually better for long-range ammo test-

ing than most bench rest setups because the gun can recoil without interference. If no backrest is available, the gun can be held one-handed and the off arm used for body support.

The next position which I find particularly useful for shooting down-hill, is one of Keith's favorites. The right-handed shooter lies on his left side, feet toward the target. His left leg is fully extended, right foot placed flat on the ground and against his left leg in the most comfortable position. Body weight is partly supported by his left arm. The gun hand is pressed into the hollow on the right side of his knee. Again, be careful not to shoot your knee and watch the barrel/cylinder gap. In this position left-handed Auto Mag shooters must hold the gun high enough that the brass clears the leg. If any large-cuffed coat is worn, often the AMP bolt will catch on it. Be careful, as the piece will close and catch the cuff so hard it takes three hands and an elephant to release its affectionate embrace.

The straight prone position has three major disadvantages: the muzzle blast is terrific because the gun is so close to the ears and ground, the sighting radius is very short, and the neck is strained. I don't like to shoot prone.

The steadiest long-range position is what I call the prone B.S. (for backside) position. I also get a 10% kick-back for all shooters visiting the chiropractor after using this position for more than 10 minutes! Rather than trying to explain it, look at the illustrations. Notice the very long sighting plane permitted here. Also note that the gun is solidly rested. The shooting arm should be pressed firmly against the hip. Don't try this one with short barrels without using extreme care. For me, this position is very steady.

Many of the steadiest positions cannot be used in rough country because of obstructions. The two-hand offhand position is the most often used when hunting because it is the fastest to assume, allows easy lead on running game, and allows visibility over obstructions. However, for charging bullseyes, malicious rocks and half-mile distant lakes, the firing point can often be chosen with the best shooting position in mind.

A good long-range handgun should be flat shooting to reduce holdover, powerful enough to permit spotting, accurate, have good balance, fast locktime, good sights and, of paramount importance, have good trigger pull. Longer barrels are advantageous because the long distance between sights reduces aiming errors and they are usually heavier at the muzzle, which increases steadiness. They also offer more velocity and flatter trajectory. The disadvantages of longer barrels are bulk and increased barrel time, which makes them slightly more susceptible to load and holding variations. A pulled shot will usually go wilder with the long barrel than with the short, because the bullet gets out of the short one before the muzzle has moved as far as with the longer barrel. Long and short are almost equal in good light. Older eyes sometimes do better with shorter distances between sights and hence with shorter barrels.

After a lot of shooting at long range with the 44 and 357 AMP, and all other Magnum revolvers, I feel that the 357 AMP with the 8½" barrel is superior to all production calibers. For me, the 10½" is slightly less steady than the 8½", and I like the sights on the 8½" better than those on the 6½" for long range. Of course, everyone has his druthers and I will probably change my mind tomorrow! If non-production calibers are included, the 30 AMP with the 130-gr. spitzer at 2200 fps is even better than the 357 AMP.

Leather and other Accessories

Lee Jurras and Associates is the exclusive distributor of the fine Safariland holsters – shoulder types for all barrel lengths, right and left-hand, and an open-top belt holster for the 6½". All are available lined or plain. Their clip pouch is a must for that spare magazine. It is practically indestructible.

Bianchi used to make the best hip holster for the Auto Mag. This one had half-flap top construction, was fully lined, and was compartmented for a spare clip. It fully protected the sights and hammer and allowed carrying with the hammer cocked and on safety because the flap blocked the hammer. It is not currently available. Bianchi now offers the 16L holster for the 6½", 8½" and 10½" (on special order only). It has a full-flap top, is lined, and offers full protection for the pistol. The Bianchi large size X15 shoulder holster fits the Auto Mag very well and is available for 6½" and 8½" barrels.

A shoulder holster is, perhaps, the best bet for hunting, but I prefer the hip holster as I find it much more comfortable when walking in rough country. The shoulder holster is harder to put the gun into, which makes for real pain when walking and continually pulling the pistol out to plink.

What I'd like to see is a full flap-top, lined holster, made to wear on the right hip but with an extra belt loop allowing it to be carried on the left hip in front of the hip bone and slightly angled across the body. This holster should have a clip pouch, a sheath for cleaning and knock-out rod, and a small pocket for spare fitted extractor, rotation pin, lubricant and a couple of punches and snap rings.

Becoming tired of loading clip magazines the hard way, I talked Clint Teeters into designing a follower depressor. We had a couple made and everyone with an Auto Mag who saw them wanted one so we began marketing them. They make loading the clip fast and easy, and they're also handy when cleaning the inside of the clip and for tuning. They hold the follower down while polishing or cleaning and can also be used to move the follower up and down to check its action for smoothness.

Two years ago Clint made me beautiful walnut grips for one of my Auto Mags, but they split in less than 500 rounds. He then made me a laminated set, which Lee Jurras liked so much he used them on all his custom guns. These provide a steadier hold than the polyurethane grips furnished.

When fitting grips several areas must be watched as there have been manufacturing changes on some parts located under the grips. Make sure the safety does not touch the rear of the left grip panel; that the grips don't bear on the hold-open assembly of the left panel (about 3/32" of up and down movement is necessary here); and that the grips do not interfere with trigger bar movement, particularly where the trigger bar is bent to the right of the trigger. Some screws shot loose and the grips cracked in this area. Small rubber "o" rings under the screws (supplied with each pair of grips) eliminated this problem.

Larry Kelley at Mag-Na-Port Arms can now blue the rear sight blade on older Auto Mags, a worthwhile operation that permits a much better sight picture. Cost today, $7.50 plus postage.

Lee Jurras and Associates market a snap ring tool – a useful item for installing snap rings on the hold open device or safety lever. It's $10.95, but worth every penny.

Summary

The Auto Mag is the first of a new breed – it operates at rifle pressures, is capable of rifle-class accuracy, is remarkably powerful for a handgun, and its's a repeater.

Its mechanical sophistication and stainless construction make it expensive. When Mag-Na-Ported it recoils noticeably less than the big Magnum revolvers. The 44 AMP gains around 300 fps over the 44 Magnum and the 357 AMP is around 500 fps faster than the 357 Magnum. With maximum loads in each, the Auto Mag is capable of much faster aimed repeat shots than the revolver, an important consideration when hunting.

This great increase in performance sacrifices two things to the revolver – reliability and durability. However, I believe its expense and idiosyncrasies, especially in 357 AMP, are well justified for those really requiring performance – the handgun hunter.

Surprisingly, in the short, stormy seven years since the first functioning prototype, the Auto Mag is being manufactured in quantity – almost entirely in-plant by the original designer – and has a fantastic distributor. Incidentally, Harry Sanford now holds the patent for the Auto Mag, number 288, 757, issued on October 23, 1973.

Let us hope that the manufacture of these fascinating handguns can be continued and that with experience they will be improved until they are as reliable as the old Colt 45 automatic. One's first reaction to the Auto Mag is often indifference, but fanciers of fine handguns, especially powerful and accurate ones, are finding that the Auto Mag becomes more beautiful the longer it is looked upon, and more impressive the more it is used.

Ask Lee Jurras.

And thanks, Harry Sanford! ●