

L. E. JURRAS' AUTO MAG

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NEWSLETTER

Official Publication of the Club de Auto Mag Internationale, Inc.

AUTO MAG MISFIRES?

by KENT LOMONT

Properly set up, the Auto Mag will not misfire. For the occasional example that does, here are the areas to investigate. First, I will cover the primary reasons for misfiring in the Auto Mag and then I will outline some of the steps necessary to increase firing pin energy.

The primary cause of misfiring that has come to my attention is the use of loads that pierce primers. A pierced primer will usually leave a small metal tit from the primer cup in the firing pin hole at the bolt face. This piece of metal will cause misfires. I have seen guns with up to five of these pieces of primer cup built up in the firing pin hole. In this condition, the pistol will almost never fire. To remedy this situation, remove the barrel extension from the frame. While holding your left hand close to and in front of the bolt, dry fire two or three times. You can catch these particles in your hand. Then, cock the hammer and push on the firing pin with an allen-wrench to check the firing pin for free movement.

Editor's Note: "These pierced primers need not necessarily be from excessive loads. Make sure that cases are of proper o.a. length and that in the case of the .357 AMP, the shoulder is properly located for optimum headspace. This point will be discussed further in the article. Following, and not exceeding, load data published in this newsletter should not give pierced primers".

I have never seen an Auto Mag that pierced primers due to too sharp a firing pin...although this could happen. All specs being proper, pressures in the 48,000 - 50,000 c.u.p. range have never pierced primers in my experience

with CCI large pistol mag. primers.

Cartridge headspace should be correct. If .44 cases are trimmed too short, they may go into the chamber too far causing misfires. Factory specs call for a length of 1.296"-1.298" for the .44 AMP. I have not experienced misfires until the length of the .44 case was reduced to 1.290". I usually trim after the first firing and full length sizing to 1.296", and experience less than .002" lengthening after a dozen or more full loads. The .357 AMP headspaces on the shoulder and is therefore more difficult to measure for headspace. In practice, I remove the bbl. extension, then remove the bolt from the frame. Take an empty .357 AMP case that has been full length sized, and place it in the chamber. Take the bolt which has been removed from the frame and rotate it

closed by hand on the chambered case, slight resistance is felt. At this point the case is sized enough to just chamber. I then turn the sizing die down another .015" - measured carefully with a caliper. In effect, this is giving the case over .015" excess headspace. Cases sized in this manner will allow the bolt to rotate shut even after the chamber builds powder residue from firing 300 rounds or more. On the other hand, cases sized with minimum headspace will cause bolt rotation difficulties from powder residue after a couple clips of ammo are fired. In order to obtain this .015" headspace it is usually necessary to remove from .005" to .025" from the bottom of the size die. I prefer removing from the die rather than the shell holder because cutting the shell holder weakens

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Rotary Bolt



by LEE E. JURRAS

As you read this issue of the Auto Mag Newsletter, George Nonte and myself will be deep in the heart of Zululand and the Orange Free State, testing Auto Mags. George and I will be in quest of the various antelope species; ranging from the giant Eland, Kudu, Blesbok and Bontebok to the diminutive Steinbok.

This Safari will be strictly a handgun hunt. While I will be using the .357 AMP and .44 AMP exclusively, George will be testing a new Ruger .357 and shooting his 8-3/8" Mod. 29 S&W.

Having personally tested the Auto Mag's under changing field conditions, this particular hunt will be the most extreme. Weather conditions

will vary, and temperatures could range from near zero to 70 degrees above. Shooting ranges from 50 yds. to 200 yds. will be encountered, while the size of game will vary from 1500 lbs. to 15 lbs.

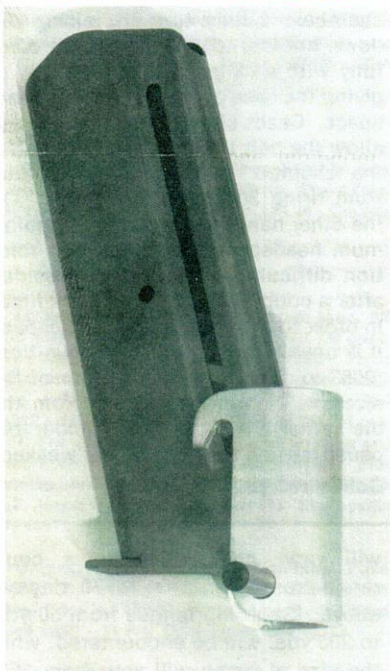
A complete illustrated summary of; accuracy, bullet performance on game, cold weather performance, and general African field use with the Auto Mags will be covered in the July and August issues of this Newsletter.

A trip to California the end of May found Harry Sanford and myself, finalizing reamer and chamber dimensions for the new .41 JMP cartridge. Lab testing will be done this Summer, and I will take a prototype gun to Alaska the last of August for field testing on sheep and goat. In the .41 JMP cartridge, we are looking for a 170 gr. bullet in the 1900 f.p.s. range. If all tests prove satisfactory, I will offer a 100 gun series to match the L.E. Jurras, Custom 100 Series in .357 AMP and .44 AMP caliber's about October or November of this year.

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"Crusty" Kent; Testing Six Auto Mags?



Kent Lomont, Fort Wayne, Indiana, probably holds the dubious distinction of firing over 100,000 rounds of .357 and .44 AMP ammo to date. We believe Kent assisted by four clip loaders, holds the world record of 2300 rounds fired in one hour with one .357 AMP handgun.

AUTO MAG MISFIRES?

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Editor's Note: Kent Lomont is an exceptional pistolsmith & machinist; he has a tendency to think all AMP owners are. Some of the steps he outlines in this article should be attempted only by one of equal talent.

it and then the die is only set for one shell holder. In the .357 AMP, misfiring starts at around .025" excess headspace on issue guns. Head separations could occur also, but I have never experienced them with the Auto Mag.

Some cartridges, especially those formed from rifle brass and to a lesser extent the CDM brass, require that the primers be set well below the case head when making contact with the bottom of the primer pocket. This means that the firing pin will have further to travel before making primer contact and this sometimes results in misfiring. Primers must be seated to the bottom of the pocket or they may misfire because the firing pin blow will be absorbed as the pin seats the

primer. The method for increasing firing pin energy described later in the article will eliminate trouble from de-seated primers.

Improper adjustment of the trigger overtravel screw can cause misfire. If the screw, located in the front center of the trigger, is turned too far clockwise thereby making trigger overtravel minimum, the quarter cock notch of the hammer may graze the sear and lessen the hammer fall. This can be checked by holding the trigger all the way down and manually, with your thumb, moving the hammer through its arc. If a slight roughness is felt at the quarter cock position - turn the overtravel screw counterclockwise, a little at a time, until this roughness is no longer felt. Then one more turn for good luck. This will allow the trigger bar to push the sear far enough out of the way so that the hammer will not graze it as it falls. (See page 9 of the excellent manual supplied with the pistol).

If a round is placed directly into the chamber and the bolt dropped and the full force of recoil springs, the

round may be pushed too far forward thereby causing misfires. This will also break extractors and theoretically may cause the piece to misfire due to the inertia firing pin. I have never had an Auto Mag fire when doing this, but it does break extractors and give excessively flattened primers because the case gets a running start before hitting the bolt face upon firing. The correct way to manually load a round directly into the chamber is to drop in the round and then gently let the bolt forward by hand, making sure that it rotates shut. If it doesn't, a gentle tap on the rear of the cocking piece with the heel of your hand will usually rotate it home. Be very careful not to fire the pistol with your hand in line with the cocking piece.

Shortening the firing pin spring is the simplest method to obtain increased firing pin energy. The over all length of the firing pin spring is approximately 1.050" to 1.100". Simply cut the spring down until it has just enough force to hold the firing pin all the way to the rear. This usually leaves the spring around .920" - .940" in length. Be very careful not to shorten the spring too much or it will not hold the firing pin in its proper rearward position. This in turn will lessen pin protrusion through the cocking piece, resulting in decreased firing pin energy. Occasionally, an extra long spring is found that cannot compress enough to fire at all, if a very small amount of dirt is allowed to build up on the spring. Shortening the firing pin spring will also increase the chances of having the piece fire when the action closes, since this is an inertia firing pin. I have never had this happen, but keep the possibility in mind when altering the firing mechanism. I test with two shot bursts, since a clip on full auto would be rough on pedestrians. Polish the firing pin in the area where the spring rides and remove burrs from the end of the spring. Additionally, make sure the pin moves smoothly thru the firing pin hole in the bolt. If it does not, polish as neces-

sary. Be very careful not to decrease the diameter of the tip of the firing pin or to increase the clearance of the firing pin through the bolt face unless absolutely necessary. Polishing with 400 grit emery or crocus cloth is usually all that is necessary.

The firing pin has two discs of approximately .285" diameter which act as stops for both the forward and rearward movement. The rear disc controls protrusion through the cocking piece by contact inside the cocking piece. The front disc controls protrusion thru the bolt face by contact with the bolt rotating pin. The thickness of both discs are approximately .035".

There is some variation in the .035" thickness of these discs. I have found some measuring as thin as .030" and others as thick as .042". To increase the protrusion thru the cocking piece, I usually grind the rear disc to a .015" thickness, taking material off the rear face. This usually will increase firing pin protrusion through the cocking piece around .020" and, helps increase firing pin energy without danger of piercing primers.

To increase firing pin protrusion thru the bolt face, I usually cut the front face of the front disc, reducing it approximately .005 - .010". Occasionally however, this could result in pierced primers. It is best left alone if other methods solve the misfiring. Overall length of the firing pins I have measured, ran from 4.170 - 4.180". The longer length occurred in some of the Pasadena, Auto Mags. Incidentally, the Aug Mag firing pin appears indestructible with two I have going over 10,000 rounds each.

If necessary, more firing pin protrusion could be obtained at both bolt face, and cocking piece. This can be obtained by grinding away the surface on the cocking piece that the rear firing pin disc contacts. And, by grinding away the contact surface on the bolt rotating pin that the front disc contacts. I personally have never found either necessary.

This method would lessen the chances of breaking off either disc by making them too thin. However, several firing pins I have modified in this prescribed manner have been subjected to over 5,000 rounds without breakage.

Make sure there is no dirt under the flange on the bolt rotating pin when it is pushed through the hole in the circular integral projection of the frame through which the bolt rides. If there is, the bolt rotating pin will not seal fully and the hole through which the firing pin rides, will not align with the hole in the bolt face, thus causing misalignment or drag on the firing pin. Polish the firing pin along that surface where it rides through the bolt rotating pin, and also polish the hole in the bolt rotating pin.

With the piece assembled, and the action closed, clock the hammer and manually push the firing pin through the cocking piece with an allen-wrench or similar instrument. Make sure the firing pin rides smoothly.

Also, keep in mind that sometimes a pistol will fire normally when the weather is warm but will mis-fire in cold weather. At any rate, normal lube will have a tendency to congeal in cold weather. Keep all lubrication off the firing pin and firing pin spring.

These methods have solved all misfiring problems that have shown up on the Auto Mags that I have owned and modified for others.

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