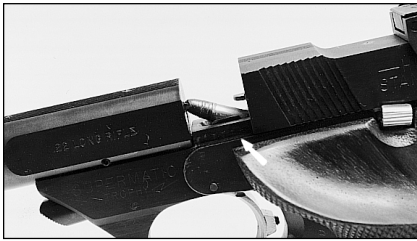
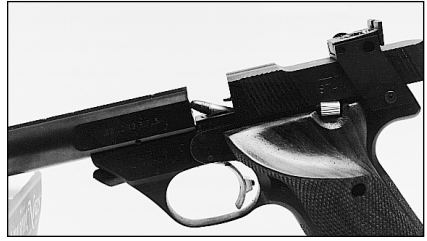


Step 1:

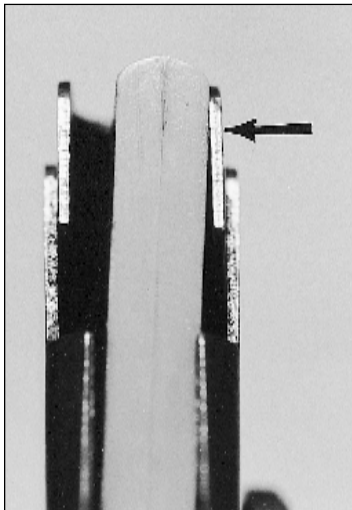
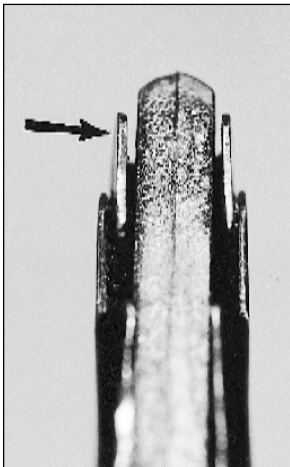
You must first recognize you have a problem. The most common malfunction you're likely to face is a feeding problem, but failures to return to battery, misfires, and hung casings all point to a mismatch between a certain brand of ammo and the magazine. Of course, if you experience one of these problems every 500 rounds, you don't need to worry. But if you have a

problem at least once in a 10-shot magazine, you need to tune the magazine for that ammo brand. If you change brands, you will probably have to adjust the magazines. Aronstein recommends shooters load rounds they are testing for accuracy by hand, one at a time. Once you find a brand/lot that shoots well, then it's time to adjust the magazine to accept that brand/lot. If you shoot different lots, then it's best to have magazines set up to accept each lot. Labeling the magazines for the lots the magazine feeds well is also a good idea.



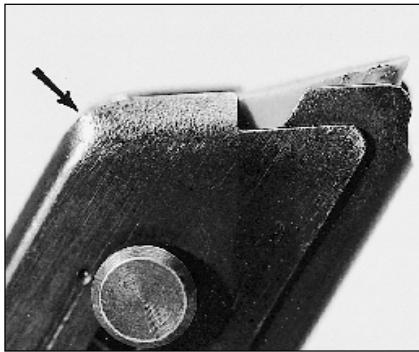
Step 2:

Clean and lightly oil the top of the frame where the slide moves (arrow). This corrects many return-to-battery and cycling problems instantly.



Step 3:

Use quality magazines. Many shooters substitute magazines that don't have the shell thickness Aronstein recommends. The easiest spot to check is the front feeding lips. Thicker lips (right, arrow) are better. Thinner lips (left, arrow) can be easily bent. To test a magazine, use your thumb and push hard on the side of the front lips. If you can bend them, find another magazine.



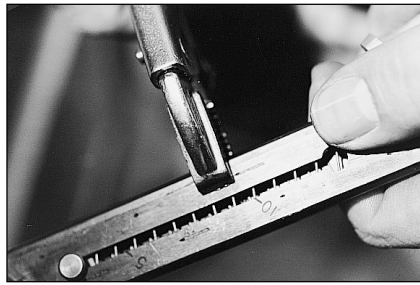
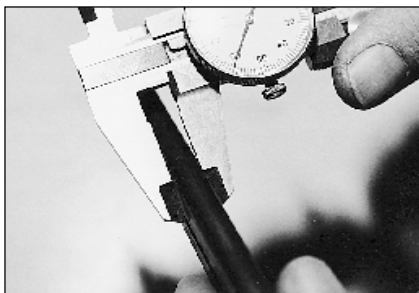
Step 4:

Another way to tell if the magazine will hold adjustments is to check the top of the mag for heat-treating discoloration. The lips of a heat-treated, hardened magazine will appear to be somewhat in the white (arrow) because the hardened area doesn't accept bluing. The hardened steel won't bend as easily.



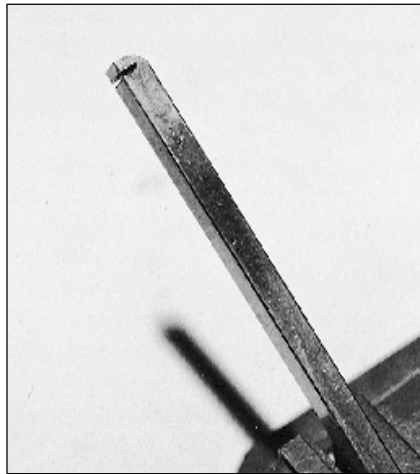
Step 5:

Oil and work the magazine spring. Small amounts of bluing salts inside the magazine can prevent the ammo from advancing smoothly. Aronstein recommends Marvel Mystery Oil because it neutralizes any remaining salts left on the metal. Often, the shooter feels the presence of these salts inside the magazine shaft as rough spots. Working the spring up and down the magazine will point to problem areas, and the oil will break them up. Remove excess oil as necessary once you've finished.



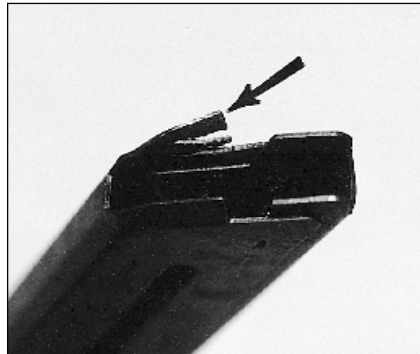
Step 7 (left):

If the magazine is thicker than 0.360 inches, use a pair of Vise Grips along its length to lightly squeeze the thickness down. If several spots on the mag are out of spec, then you may place the magazine in a small vise and squeeze it down gently along its length. Aronstein cautions shooters to use gentle pressure when making this modification.



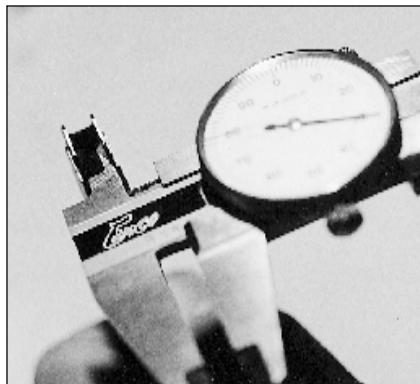
Step 8 (left):

Build a lip-adjustment tool out of $\frac{1}{4}$ -inch by $\frac{1}{2}$ -inch bar stock. About $\frac{1}{8}$ inch from the end of the tool, use a hacksaw to cut a $\frac{1}{4}$ -inch-deep slot in the steel. Round the tool head so that it fits over the magazine lips but still rotates down into the magazine. (Another option is to call High Standard and pester them into making the lip-adjustment tool as a catalog item. Then you won't have to build it.)



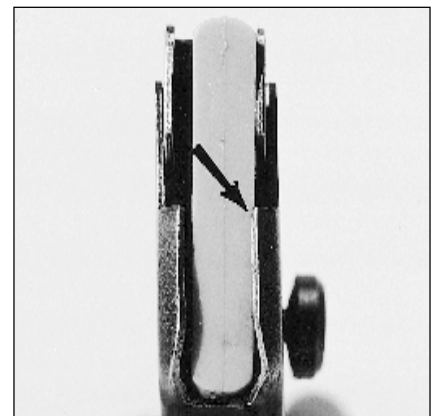
Step 9 (left):

If you don't want to build the tool or pester HS, then use needle-nose pliers instead. Aronstein points out, however, that pliers require a gentle touch. The hardened magazine lips are brittle and may break (arrow).



Step 10 (left and below):

Gauge the inside of the front of the rear lips of the magazine. The dimension should be at 0.185 inch to start.



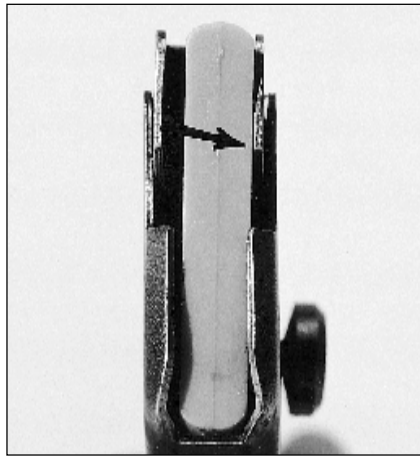
Step 6 (left):

Measure the external dimension of the magazine shell. If it's wider than 0.360 inch, it may not feed into the magazine well properly.

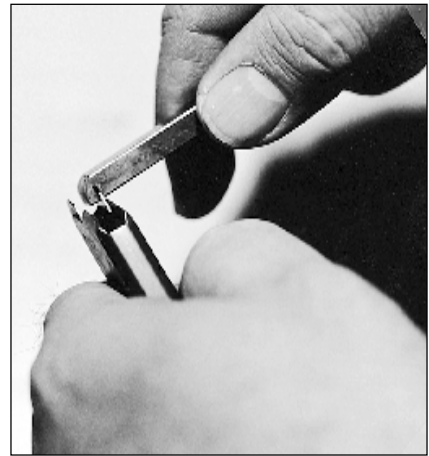
Handgun Upgrade



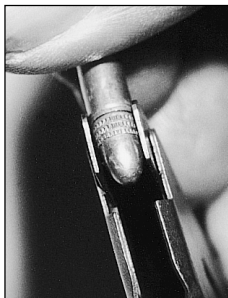
Step 11: Adjust the front of the rear lips of the magazine as needed. Keep the lips parallel.



Step 12: Mike the inside of the rear of the front lips of the magazine. The dimension should be 0.230 inch.

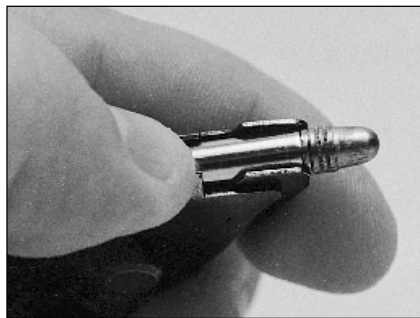


Step 13: Adjust the rear of the front lips of the magazine as needed. Keep the lips parallel.



Step 14: Check that the bullet itself slips freely between the front lips. The bullet shouldn't stick, but there shouldn't be excessive space between the bullet and lips

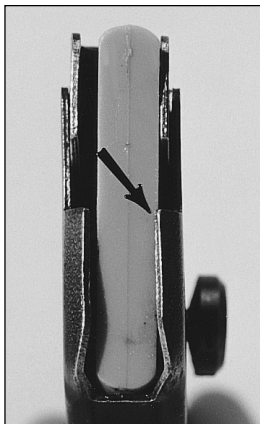
either. To check for too much space, try to wiggle the case back and forth. If there's play, tighten the lips.



Step 15: Try to strip a round out of the magazine. The round shouldn't stick or bind.



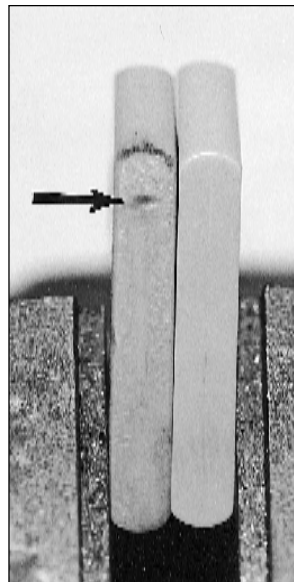
Step 16: Function test the gun. Here, Aronstein is shooting into a bullet trap with an angled backstop.



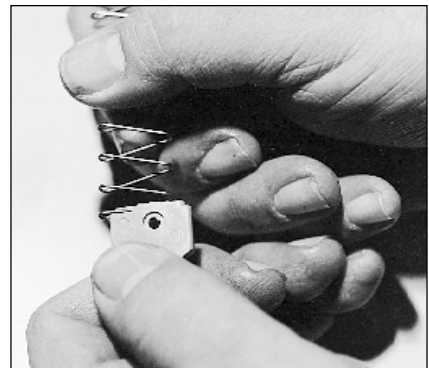
Step 17: If the bullets feed too high, pinch down the width of the front rear lips. If the bullets feed too low, open the same dimension slightly.



Step 18: If you have trouble with a certain brand of ammunition, check the overall lengths of the rounds. Because the cartridges tend to run long, Remington Target is particularly troublesome. Also, Eley ammo, because of the coating on the bullet, will sometimes not feed properly in cold weather.



Step 19: Maintain the magazine properly. Disassemble it and oil the parts thoroughly. Look for signs of wear, such as the indentation on the follower (left). Such indentations change how the bullet fits in the magazine, so replacing the follower is necessary. The follower costs \$4.50.



Step 20: Reassemble the magazine properly. The follower fits into the end of the spring that has only a half coil. The spring should slip easily over the follower.