



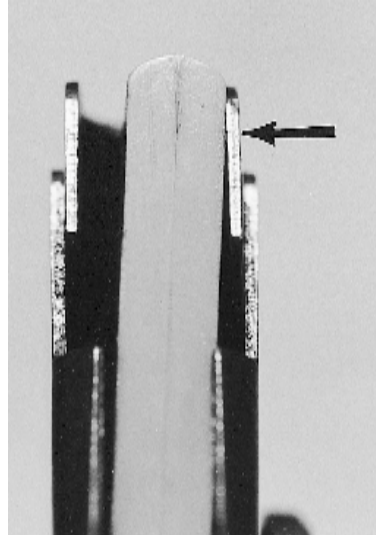
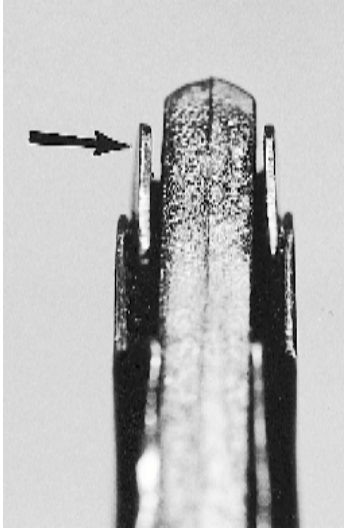
Magazine Adjustments

Models 102-107

You must first recognize if 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.



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

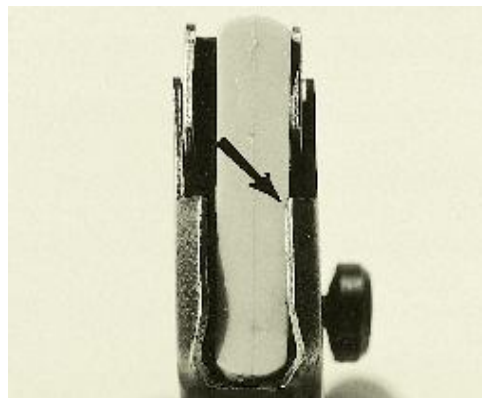
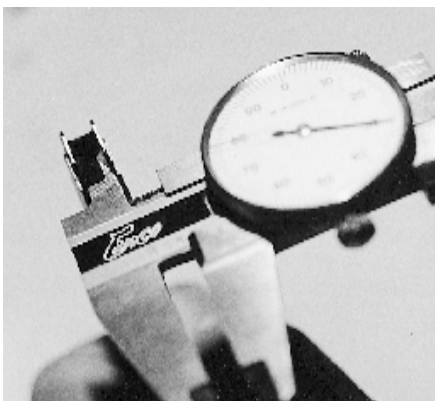
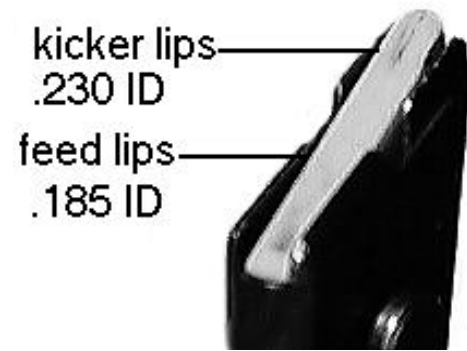
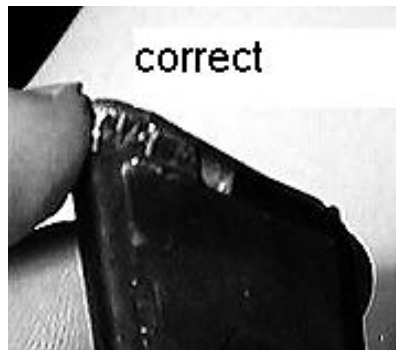


Use quality magazines. Many shooters substitute magazines that don't have enough shell thickness. The easiest spot to check is the front feeding lips. Thicker lips (right, arrow) are better. Thinner lips (left, arrow) can be easily bent. To test a magazine, use your thumb and push hard on the side of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



Oil and work the magazine spring. Small amounts of bluing salts inside the magazine can prevent the ammo from advancing smoothly. We recommend 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

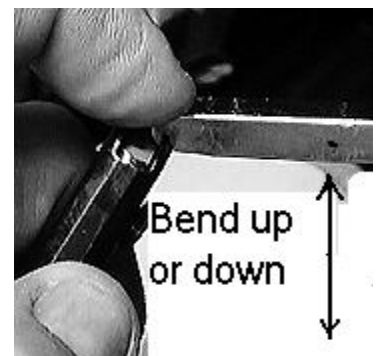
High Standard pistols do not have a feed ramp. The feed angle is controlled by the front of the rear feed lips. The lips should be adjusted so that when upward pressure is placed on the nose of the top bullet in the clip very little or no lead should be visible above the front "kicker" ears. (see pictures) The ID (inside dimensions) shown are approximate.



Pictures to Left

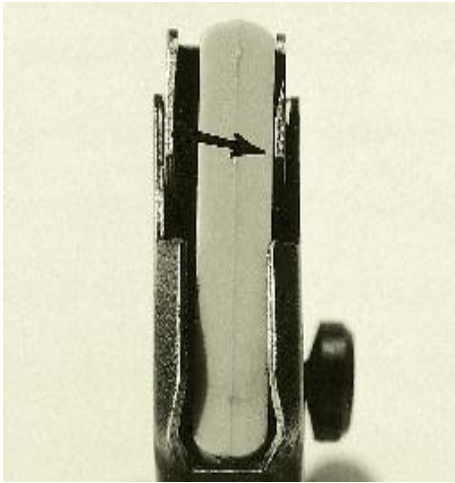
Gauge the inside of the front of the rear lips of the magazine. The dimension should be at 0.185 inch to start.

Adjust the front of the rear lips of the magazine as needed. Keep the lips parallel. To adjust, place the cut in the adjusting tool firmly on the feed lip(s) with the edge of the tool even with the front edge of the lip as shown in the picture.

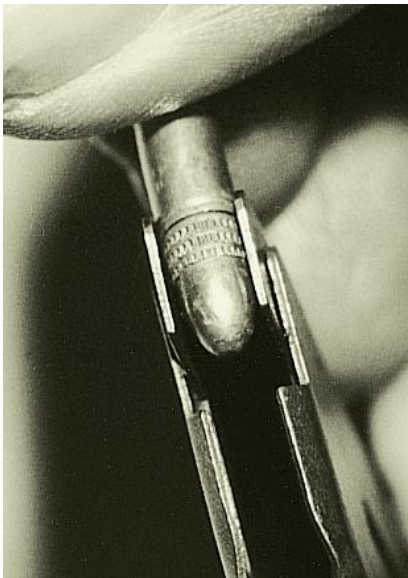


Hold the tool firmly against the lip with the index finger of the hand holding the clip while rotating the tool up or down with the other hand. Bending the lips in (rotating the tool end upward in the picture) will lower the feed angle and opening the lips (rotating the tool end downward) will raise the feed angle.

Bend each lip equally a small amount and test the bullet position as shown above. If too much bullet is exposed the bullet will feed high into the top of the chamber. If the lips are bent down too much the bullet may jam or, at least, shave lead on the bottom of the chamber. Over-bending or excessive adjusting may eventually cause the lips to break, so go slowly and when the clips feed reliably leave them alone. If the lips are bent down far enough to change the distance between the rear lips such that they restrict slide movement, file an equal amount off each lip such that the slide moves freely between the lips.

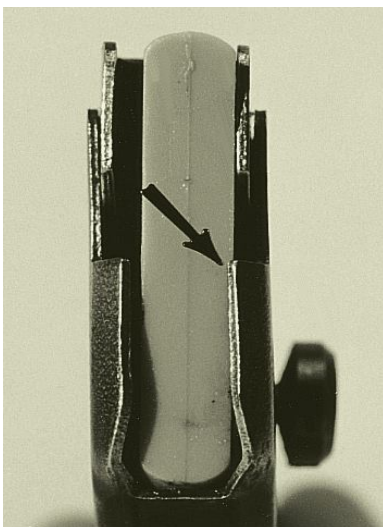
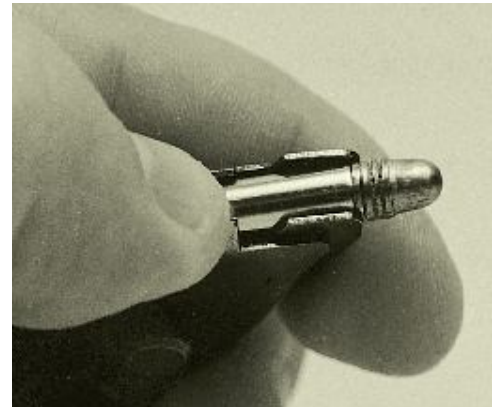


Gauge the inside of the rear of the front lips of the magazine. The dimension should be 0.230 inch. Adjust the rear of the front lips of the magazine as needed. Keep the lips parallel.

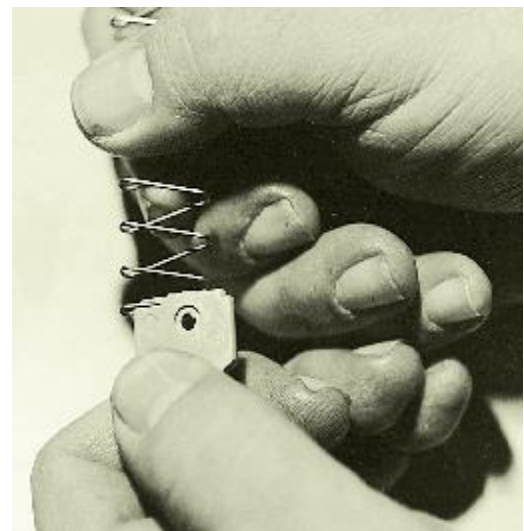


Check that the bullet itself slips freely between the front lips. The bullet shouldn't stick, but there shouldn't be excessive space between the bullet and lips either. To check for too much space, try to wiggle the case back and forth. If there's play, tighten the lips.

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



Function test the gun. 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.



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.

1). What is the proper procedure for adjusting or "tuning" the magazines of the High Standard Military grip style pistols? What tools and instruments are required? Please explain the process in detail.

The purpose of tuning a High Standard magazine is to make sure that the dimensions of the magazine are roughly within specs and to bend the feed lips in or out to achieve the proper feed angle. The proper feed angle is the one that assures that the nose of the bullet enters the chamber mouth without catching on the bottom or top edge of the chamber mouth. The specs, procedure and tools required are outlined in the accompanying "magazine adjustment" documents.

2). Do you adjust the magazines to the specific pistol or to a specific brand of ammunition? Meaning, do you have to have magazines adjusted for each pistol or for each brand or type of ammunition you want to shoot in a specific pistol?

I use CCI Standard Velocity ammunition when adjusting magazines and find that if the magazine is adjusted to properly feed that ammunition all other brands will feed as well. CCI SV is about .020" longer in overall dimension than most other commonly used brands.

3) Is it true that a High Standard magazine will function perfectly in one pistol, but will not function in another, even if it is the same style pistol?

Assuming that all other impediments to feeding are resolved, a properly adjusted magazine should work in any and all "big button" guns of similar grip angle. Some of the other impediments to proper feeding may be an improperly fitted extractor, burrs on the breech face, sharp edges on the chamber mouth, broken or burred firing pins, missing or extremely weak firing pin return springs etc. Another impediment to swapping magazines between guns may be if one of the guns has an after-market barrel. High Standard barrels are a nominal .895" diameter. I have seen several after-market or custom barrels that are .900" in diameter. These barrels will sit higher on the frame than a factory barrel thereby offering a higher feed angle to the magazine. Combine this with a sharp edge on the "match chambered" chamber mouth and you are courting jams with bottom of the chamber scraping off and raising a ridge of lead big enough to stop the round from fully chambering. You can ease the problem by slightly radiusing the bottom edge of the chamber mouth to avoid the sharp edge digging into the soft lead of the bullet and opening up the feed lips slightly to increase the feed angle.

4). Is it true that you must adjust the High Standard magazine for each type of ammunition you wish to shoot?

Nope! See number 2 above.

5) How often do the High Standard magazines need to be adjusted? Meaning that once the magazine has been properly adjusted correctly, how long will the magazine stay in adjustment? Will the "lips" of the magazine lose their adjustment eventually?

The lips on a High Standard magazine (either old High Standard or new Houston) will hold their adjustment forever assuming that you don't drop the magazine on the lips or drive over it with your car. The non-High Standard replacement magazines will almost certainly lose their adjustment in very short order especially if you load more than 5 rounds in them.

6) Why are the High Standard magazines so sensitive, that they need to be adjusted so precisely?

It's not that the magazines are sensitive, it's that the barrel doesn't have a feed ramp. Guns such as the Ruger MK II or S&W model 41 with feed ramps don't have to worry about how high the nose of the bullet is as it exits the feed lips. Magazines for guns with feed ramps are designed to hold the nose of the round down until it hits the feed ramp and then let the round slide up the ramp and into the chamber. With no feed ramp, controlling the angle of the nose of the bullet becomes the job assigned to the geometry of the feed lips; hence, the need for adjusting.

7) Are the old original High Standard magazines, the magazines that have a "large" number 5 and 10 or a "small" number 5 and 10, better than the new [Houston] High Standard magazines or the "after market" magazines? Which is best for the Military grip style pistol?

Old High Standard magazines are always the better choice regardless of size of the number, or whether the bottom is metal or plastic. The size of the cartridge count number is insignificant and is merely the result of different manufacturing runs. They both work. Early (manufactured before 2005) Houston High Standard magazines have a couple of dimensional variances from the old ones that may cause problems. They sit a little lower in the frame and the amount varies from magazine to magazine particularly in the plastic bottom version. The release point on the feed lips on the early Houston magazines is often too far forward but that is easily cured. If you insert an original magazine in an old gun and, using calipers, measure the distance from the front top corner of the rear feed lips to the back of the barrel you will get a measurement of about .800". If you do the same with a early Houston magazine in an old gun you will get a measurement of .760". This short dimension causes a jam such that the nose of the bullet is fully in the chamber and resting against the top of the chamber, the bottom of the bullet will be resting against the bottom of the chamber mouth and the rim of the case is still being held by the feed lips. As the slide tries to push the bullet forward the last few ten thousandths, the round will become jammed solidly against the top of the chamber bending the bullet and tying up the gun. How to cure it? File the feed lips back until the measurement is at least .780". Then adjust the lips as outlined in my instructions. On the Houston magazines are prone to breakage I prefer and recommend only the metal bottom version of the Houston magazines. They cost about \$5 more than the plastic bottom versions but are well worth it. 12/16/03