32acp Pardini Magazine & Functioning Adjustments

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Magazines 101

Semi-auto magazines all have some similarities and differences.

Rimless cases really only require a lip in the rear 1/3 to 1/2 of the magazine and then openings for the round to come up thru the lips into the beech face as the nose of the bullet moves into the chamber.

The photo shows 45acp 1911 magazine lips , but the principle is the same for all rimless cartridge magazines.

- The left magazine is a stock GI 1911 magazine. You can see the lips taper from back to front and the case has to move around .650 forward to clear them and come up into the breech face. It will work fine with hardball, but semi-wadcutter (SWC) ammunition is shorter and shaped differently. The cartridge will stub into the feed ramp because it cannot get out of the magazine lips into the breech face as the case moves forward.
- The center magazine is a commercial SWC magazine with relieved magazine lips to allow the case to move into the breech face sooner. That way the case moves up as it moves forward and will allow the shorter, blunt SWC bullet to move up the feedramp.
- The right magazine is from a different manufacturer, but accomplishes the same task with slightly different dimensions.



Magazines 101

Rimmed cartridges are more problematic.

The rims are larger than the bodies, so as the rim rests on the cartridge below, the nose of the bullet points down. The more rounds you have, the lower the nose of the top round. Rimfire magazines generally address this by having the nose of the follower higher than the base, thus forcing the bullet noses up. Additionally, you must ensure the rim of each successive round in the magazine is in front of the round beneath it, or the top round cannot get out of the magazine. That is why 22LR magazines always are slanted, even if the grip is straight (i.e. Ruger 22/45). You also must have a design that effectively has to feed two different diameters at the same time (rim and case diameters). 22LR magazines do this with separate fingers at the front of the magazine to control the nose of the bullet and ramps at the end of the lips for the rim to run up into the breech face. As the bolt moves forward, the guide fingers guide the bullet onto the barrel feedramp and the magazine feedramps guide the rim up into the breechface.



Pardini tried to make one magazine that would feed both rimmed and rimless cases and generally succeeded.
BUT, you wouldn't be here if your 32acp Pardini didn't have feeding issues (I did say "generally succeeded").
I was referred to a TargetTalk Forum- https://www.targettalk.org/viewtopic.php?f=10&t=47934. Folks there were discussing feeding issues with 32acp Pardinis and the consensus was to replace the 32 magazine springs with 22 magazine springs. This makes good sense as the 22 springs are stronger and will lift the case better and sooner. The malfunction in the picture is from the bolt not catching the rim of the case and trying to chamber it from the middle of the case.



There was also a picture and brief reference on the Forum about reforming the magazine lips around a 9/32 drill shank, but no real details.

Only tap when arrows point.



Go back and look at Slide #2. This "Standup" malfunction is part from the bolt not engaging the rim and part from the magazine not controlling the case correctly. The lips are too wide and don't control the nose of the bullet. Ideally there should be Bullet Guide Fingers ala 22LR magazines.

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Pardini had a good idea putting the Rim Feedramps inside the magazine and the bullet feedramp on the front rather than on the barrel. That way the Rim Feedramps also act as bullet nose guides (kinda). If we compare the overall and (what I call) feed lengths of 32 S&W Long and 32acp, you see the 32 S&W Long has an effective feedlength that is about .080 longer than 32acp.





Please forgive my diagrams, I get and make them as I need. The Feedlengths are different from the OAL, in that the 32 S&W WC will hit the feedramp sooner than the 32acp RN, even though their OAL's are close to the same. That means the 32acp must move farther forward before it can start up the feedramp. This means the feedlips must control it longer than the 32 S&W.

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You can see the feed angle also changes with the number of rounds in the magazine. The front magazine has one round, the rear one five. Remember what I said about rim stacking in Magazines 101? This is worse with the 32 S&W. The 32acp is semi-rimmed, but the big reason for the different angles is spring tension from the follower. You can see in the front magazine that the rim of the case is lower and (if the magazine spring is slow) why the bolt might not catch the rim and malfunction.

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In Slide #4, I referenced a Forum Thread about reforming the magazine lips around a 9/32 drill shank. As I looked at it, I decided that you couldn't really form it around the drill, but you would use the drill as a gauge to reduce the opening between the feedlips. Here is a before and after of one of the magazines that I modified before test firing for function. The difference is kind of subtle and my photos are what I could get. The change is only around .020-.030". The change makes the case sit lower and holds the case (slightly) longer, as it moves up the feedramp.

Pardini 32 S&W/ 32 ACP Extractors

OK, this isn't really a magazine issue, but it does cause malfunctions.

See the gap between the extractor and the case rim? This means the ejector must push the case forward until it hits the extractor, before the case will turn and start to eject. If the other side of the case rim comes out of the breechface first, the case will fail to eject. The "Quick & Dirty" cure is to smack the end of the extractor with a hammer and fold it over, closer to the breechface. The "Correct" cure involves welding/soldering material onto inner face of the extractor and refitting or weld/redrill pivot pin hole or fabricate a whole new extractor.



If the rim comes out of breechface before the extractorcontacts rim, the case will not eject

Somebody out there with a Waterjet or EDM Shop should make replacement extractors (Hint, Hint)

I recently made a new barrel for a friend's Pardini 32acp (see my Pardini 32acp PowerPoint for details). She also gave me 5 magazines that were giving her malfunctions and asked me to see what could be done. I eventually tried the 9/32 drill and hammer process from Slide #4 & 7 on two of them. I was reluctant to do more as undoing the hammer and drill peening would be impossible, if it didn't work. And it would be difficult to get the same result consistently. I test fired her new barrel with the modified magazines and was successful. So I decided to make a forming mandrel like the ones we used to reshape 1911 magazines before manufacturers started making SWC magazines (see Slide #2). This way I wouldn't have to worry about trying to make them all the same. I will give details on its fabrication in a later slide.







You can see how it is supposed to work, but I need a little more clearance at the top, so the edges hit before the top.



You can see the magazine body fits over the mandrel, then the upper and lower caps are installed. Adjust the setscrews in lower cap until the upper cap rests on the sides of the magazine lips.





Crush fixture <u>GENTLY(!)</u> in vise and check with 9/32 drill shank until proper adjustment of the setcrews is achieved and drill shank slides between magazine lips. Drill shank should be able to pass upwards thru magazine lips when moved forward of ejector.



Now check each one of your magazines to verify it will lock into pistol and that the ejector still clears the bolt. As you bend the lips in, the ejector moves in too. If the magazine won't lock in or if the ejector drags make adjustments by bending or filing contact points.

Making your own mandrel

I am not a Draftsman and I don't have CAD (Sorry). Here is a sketch of the parts with dimensions. Check your magazines before using my dimensions.

