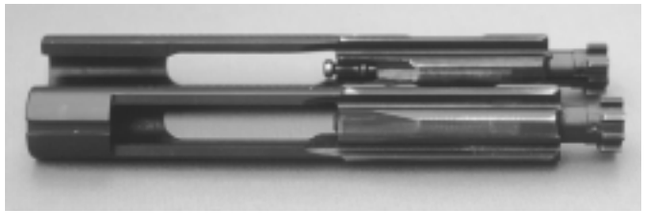
Firing Pins

As a good example of the foregoing, firing pins are either M16 or AR15; the difference is collar size. The M16 pin has a larger collar and, as a result, is a little heavier. If the bolt carrier has a shrouded firing pin area, it will accommodate the large collar pins as well as the small; any carrier that's not shrouded should use only the small collar pins. The larger collar may interfere with some AR15 hammers and cause functioning problems. It's a safer bet to use AR15 firing pins. There will be small variations in firing pin lengths and diameters, but, again, if the pins come from a reputable source they should be within tolerance. Firing pins won't all last forever, and a few pierced primers convert one to a handy toolbox punch.

From left to right: a Quality Parts Co. titanium pin, weight about 68.5 gr.; a Colt® AR15 pin (small collar), weight about 120 gr.; a Prairie River Arms replacement AR15 pin, weight same as Colt®; and an M16 (large collar) which weighs about 125 gr. The large collar pins should only be used in a carrier that has a shrouded pin area. Damage will result from using a large collar in an open carrier.

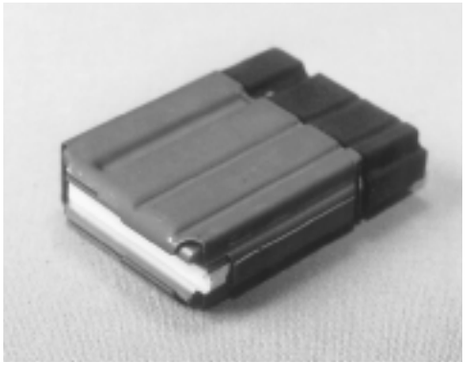


Foreground is a Young® carrier with a shrouded firing pin. Back is a Colt® Sporter™ carrier with an open pin area; if yours looks like this, use only a small collar pin. Order a "semi-automatic" firing pin if you're going through a surplus type parts dealer.

Don't use titanium. It burns. One blown primer center and you now have a very expensive, very light weight pin punch. This is how a pretty new ti pin looked after enduring some pierced primers. It now obviously can cause its own pierces regardless of load pressure, and the same thing, on a lesser scale, can happen to a standard steel pin. If you were willing to pay six times the cost of a steel part, chances are that you could get one of these trick pins and never have a problem, but the trick is that there's no trick: you'd also never know it was there! In the short distance the already light weight steel pin is travelling, the lighter weight titanium part just doesn't make an appreciable difference. Despite high tensile strength, titanium has poor impact resistance; it's relatively inflexible. It's been banned in many motor racing sports for critical uses, such as axles, handlebars, and so on. Repeated stresses eventually cause structural breakdown. G. David Tubb, who is largely credited with the development of titanium firing pins for bolt action rifles (his SpeedLock Systems™), uses steel tip inserts in his products for this very reason. His pins are not a problem, but he's not making one for ARs. Reason: they don't help.

Bolts don't have a tremendous lot of variation, and so there's no saying one is any better than another. I check for firing pin hole size, though, to make sure it is, ideally, toward the small end of the blueprint tolerance, and never over that amount (0.058-0.060). A bolt with an oversized firing pin hole might tend to produce pierced primers at lower cartridge pressure levels, so check it out if you're having chronic episodes. A larger pin hole encircles more primer surface, and can then act more easily like a cookie cutter around the firing pin. Specs call for 0.029 protrusion, so consider that also if you're having a perforation session.

Keep in mind that the rules prohibit the use of a 20 round magazine offhand for a Match Rifle, but only because it extends down too far. The best solution is to simply purchase the newer style "short" Colt® magazines. The plastic floorplate cover can be removed if wanted, but it's just on the safe side of the 3-1/4 inch distance from bore line to be legal as is. Others have modified magazines by cutting and reforming, but that's a chore, not to mention an expense if you have to pay someone to do it. Shown [right] is a new production Colt® with a Sinclair® single shot follower installed.



Magazines don't cost a lot and they don't always work. Recent production Colt® magazines (black plastic follower) are sometimes good, sometimes not, and the same goes for aftermarket. Some have never had a problem with new magazines but I have, and one magazine problem is enough for me, and enough for that magazine and manufacturer. When you can find them, the original type Colt® all metal (metal followers) magazines are probably the most durable and reliable. If you can't find them, buy new Colt® and hope they work. Others that can work well are the Thermold® and USA®. Avoid brand-x, and especially new production brand-x.

Magazines either work or don't and if you find some that work use them and take care of them. There is no magic magazine. This pair of scruffy old Colt®s will, I believe, always work. I bought up a Kroger® sack full at a gun show years ago for two dollars apiece.