

The Much-Maligned Raven

By John Siers a/k/a "Gunsmith Jack"

Most gunsmiths rarely get to see a Raven MP-25 (or its nearly-identical predecessor, the P-25) let alone work on one. Raven Arms went out of business after fire destroyed the Raven plant in 1991, and while the MP-25 continued to be produced for a short while by Phoenix, it was out of production before the end of the century. The gun is generally held in low regard by the shooting sports community, and since used-but-functional Ravens can be found on the market for less than \$100, it is hardly worth the money to have a gunsmith repair one of them.

I'm mostly retired, and have tried to keep my gunsmith business small so that it is still more fun than work. I don't have a retail store front and I don't do much advertising, so most of my business comes from gun store referrals or long-time customers. As a result, I have time to



spend on gunsmith projects that won't bring me much money but are interesting and fun. I've looked at a lot of the so-called "Ring of Fire" guns – Bryco, Jennings, Lorcin, etc. and find that I like the Raven best. For some time now I've been running a little "Raven Rescue" operation in my shop, buying these guns in sad, sorry condition in bundles from pawnshops and other gun dealers, often paying as little as \$15 per gun. Parts are readily available from various sources, so I clean them, fix them, and pretty them up for resale. They usually bring from \$70 to \$90 dollars apiece. I could say that I'm making money at it, but only if I count my time to be worth about \$5.00 an hour. But it's fun, I like the little Ravens and I get to have a lot of fun test-firing them.

If you've never worked on one of these and think you'd like to try it, here's a short course we'll call "Raven 101." I'll refer to the MP-25 but the older P-25 is similar enough that it makes no difference from a gunsmith standpoint.

The Raven MP-25 is a striker-fired, blowback-operated pistol in .25 ACP. It came out as the P-25 in 1970, and was the first pistol to use an injection-molded zinc alloy called Zamak for both frame and slide, a process later adopted by other companies making cheap semiauto pistols. Gun gurus claim this alloy is not very durable; but there are an awful lot of Ravens still in service after many years of use (and abuse) and thousands of rounds of ammo fired. They may not look pretty, but they are still functional.

The basic MP-25 design is really simple, with a complete tear-down producing around 20 parts (excluding the grips and grip screws – see photo).

You start the tear-down by depressing the slide latch/striker-spring cap in the rear of the slide, which lets you lift the rear of the slide and take it forward off the gun. Watch out at this point, because the latch and striker spring may want to go into orbit (to use a Bob Dunlap expression). Taking the grips off leaves the frame and most of the action parts open to view, and at that point you want to make sure that various other parts including the safety, the disconnecter, the sear and sear spring do not also fall / fly off and disappear. Simply popping the disconnecter off the side will cause the sear to launch itself into space with its spring right behind it.



The Raven fire-control system consists of a single trigger bar and a disconnecter that is mounted externally on the right side of the frame. The sear and sear spring mount vertically in a well in the center of the frame. The disconnecter retains the sear and is itself retained by the right grip, which also keeps the trigger bar in alignment with the disconnecter. Without the grip, the trigger bar can slip outside the disconnecter.



On the left side of the frame you will find the safety, which blocks the sear when placed in the safe position. Older models have a sliding-bar safety with the detent being a small bump molded into the frame. Newer guns (as shown in this picture) will have a rotating-disk safety with a ball-bearing and spring detent in the frame. In both cases, the safety is retained against the frame by the left grip. Both versions work the same way to block the sear, but the newer version also blocks the slide so that the gun cannot be cycled to load or unload unless the safety is in the "Fire" position. With the older models, I've had problems with the safety bar rubbing against the slide, so that when the slide cycles back (on firing) it drags the safety bar back with it, setting it to "safe" and stopping the gun from firing again. This can usually be fixed by making sure the safety bar is straight and has no burrs, sharp edges, or other protrusions that can catch on the slide.



The MP-25's extractor is mounted on top of the slide, pinned in place retaining the extractor spring. It looks wider and heavier than it needs to be, but it seems to be well designed and functional. I have never had extract / eject problems with a Raven whose extractor was in place, undamaged, and not clogged by crud. The striker has lots of positive protrusion, and serves as the ejector when the slide comes fully to the rear (see picture).



The gun tends to throw brass nearly straight up and only slightly to the rear. If there's a low ceiling or roof over your shooting station, you can expect the gun to rain brass down on your head; but out in the open, you usually wind up with a neat scattering of brass directly behind you. In my opinion, the mark of a good extractor / ejector system is how consistently the gun throws brass, and the Raven scores pretty high in that category.

Complete disassembly and reassembly of a Raven poses no special challenges. With a design this simple, there's not much that can go wrong with the gun. Most of the issues I've seen with the "rescue" guns involve damaged or missing parts. Broken grips are common, and the grips are important because they serve to retain the safety and the disconnecter. Of all the parts of the gun, good grips are becoming the hardest to find. There are lots of used grips out there, but some of them are barely in serviceable condition, if at all. New reproduction grips are available but cost enough money to drive the price up out of what people are willing to pay for a Raven. I think what I need to do is to find a local geek with a 3-D printer, give him a good set of Raven grips to map and model, and see what he can do. Meanwhile, some Ravens came equipped with wood grips, so maybe I'll try making some myself out in my woodworking shop. They are simple enough that blanks can be cut out with a scroll saw and fitted from there.



The Raven magazine can be disassembled, even though the base plate is staked on. You just need to depress and captivate the spring through the witness hole, then tilt the follower to take it out. After that, the spring comes out easily.

As for the other parts, they are available from the usual suppliers and don't cost that much. There's no particular part that fails often, so I sometimes cannibalize one gun to get parts for another – easy to do when you are buying them in lots and some of them look more salvageable than others. There are three springs that I always examine carefully and replace if needed: the recoil spring, the striker spring, and the sear spring. I

usually don't run into issues with the trigger spring, extractor spring, or the magazine catch spring, but those are readily available as well.

The sights on the Raven are nothing special, and like many guns designed for pocket carry, they are molded into the slide. Putting any better sights on the gun would be a machine-shop project at best, and I'm not sure how well that zinc alloy reacts to machining. In any case, the Raven is intended to be a short-range point-and-shoot gun, and the existing sights are adequate for the purpose. With one that has a good, clean bore it is possible to put together decent seven-yard groups.

Likewise, the trigger on the Raven isn't likely to win much praise from target shooters. It is generally soft and squishy, with a good bit of take-up. That being said, it is usually consistent and breaks cleanly. The magazine catch is pinned into the frame at the bottom of the magazine well and has its own spring. It's made of a fairly soft alloy, and I sometimes get guns with that part broken off. Fortunately, replacements are cheap and readily available.

One important caveat for working on this gun: a couple of other "Ring of Fire" companies (Bryco/Jennings and Lorcin) went out of business after numerous product liability suits alleging unsafe design. Most of the cases centered around the trigger / disconnecter / sear design, alleging that there was "insufficient clearance" between trigger bar and disconnecter and the gun would fire when dropped. Raven (and successor Phoenix Arms which continued to produce the MP-25) suffered no such allegations; but there have been a couple of documented cases of accidental discharge involving Ravens. In those cases, it was noted that the sear had been damaged ***or deliberately modified*** (possibly by some wannabe gunsmith trying to do a "trigger job") which reduced the engagement of the striker and sear. Supposedly, this caused the gun to discharge when the safety was moved to the fire position.

The safety blocks the sear, and the earliest (sliding safety) Raven design will allow the slide to be racked with the safety ON. If the safety is then taken off and the sear is defective, you can wind up having a "war of the springs" in which the fully-compressed striker spring is fighting against the uncompressed (and much smaller) sear spring. If the sear engagement is even slightly negative, the striker spring is likely to win. The sear will be pushed down and the striker will be released. The picture shows how the sear engages the striker in the gun.



The later model safety will not allow the slide to be racked unless the safety is in the FIRE position. That doesn't mean the problem goes away – it just means a gun with a

damaged or modified sear may fire immediately when racked or not fire at all if the sear can't engage the striker at the rear of the stroke. As a gunsmith working on one of these, the best way to make sure that the problem doesn't occur is to examine the sear and striker carefully, make sure they engage properly and that the engagement is "neutral to slightly positive" as Bob so often says. If damaged or modified in any way, the parts should be replaced. You also need to replace the springs in question if there is any hint that they are worn out or damaged – especially the sear spring. Beyond that... well, limit your "trigger jobs" on Ravens to polishing up the trigger, trigger bar, and disconnect. Stay away from the sear and striker in that regard.

Many Ravens were made with a chromed finish, and those have mostly held up pretty well. Those that had the regular painted black finish don't usually look nearly as good; but the good news is that if you strip the finish off, that zinc alloy seems to take very well to spray-on finishes like Duracoat. With a little imagination, you can come up with some really unique-looking Ravens.

So there you have it – the "Raven 101" course. You still might never get to work on one of these, but you might want to give them a little more consideration the next time you see one sitting lonely and unloved on a table at a gun show. As guns go, they're not as bad as some people make them out to be, and can actually be fun little shooters for very little money.