



**CAUTION: REMOVE MAGAZINE AND VISUALLY CHECK CHAMBER TO ENSURE THAT FIREARM IS UNLOADED.**

The purpose of these instructions is to outline the disassembly and maintenance of the **JP EnhancedBolt™** assembly and carrier groups. Naturally, such maintenance is merely a part of the larger process of upper assembly and complete rifle maintenance, which cannot be covered here in its entirety. Refer to your rifle owner's manual or one of the many quality print or online AR resources.

To disassemble the carrier group, first remove it from the upper assembly. Then, locate and remove the firing pin retainer pin (see graphic above). With this removed, the firing pin, cam pin and bolt assembly (in that order) can then be easily removed as shown. Reverse this process to install a new bolt assembly and components. During reassembly, remember that the bolt must be extended when reinserting the bolt carrier into the receiver.

### INSPECTION OF CRITICAL PARTS

During or after every cleaning, certain components and surfaces of the bolt group should be inspected for wear and damage. *JP EnhancedBolts* will show significantly less wear over time than standard bolts, but to ensure proper function, inspection of the following is still recommended as part of regular servicing:

- **Bolt assembly body:** cracks around the cam pin hole and locking lugs, excessive pitting of the bolt face, pitting extending to the firing pin hole (While some gas erosion is acceptable, excessive erosion in this area is an indication of firing overpressure rounds or reloading brass that is no longer serviceable.)

- **Ejector in the bolt face:** sloppy movement, poor spring tension (Test this by pushing and releasing the pin to gauge its movement. The ejector should sit flush or slightly below the lug face. If it is proud, this is a sign that the ejector retainer pin is failing and should be replaced.)
- **Firing pin:** blunt or fractured tip, bent shaft or cracked anvil end
- **Firing pin retainer pin:** bent or broken legs, general bad wear
- **Cam pin:** cracks, excessive wear or chipping
- **Extractor:** chipping, broken edges on the hook that engages the cartridge rim
- **JP Enhanced Gas Rings:** bent, broken or missing rings (Be aware that due to the design and production of our gas rings, they will not pass the traditional bolt drop test even when new, but this is intentional and does not indicate reduced functionality. For more on our gas rings, see our website and archive of instruction sheets.)

## DISASSEMBLY

Normal servicing of the rifle doesn't require a complete disassembly of the bolt. Generally, you should not need to remove the extractor, ejector or gas rings unless you intend to replace these components as part of long-term maintenance or are experiencing failures that may require closer inspection of these parts. Depending on use, expect to replace the extractor, extractor spring, gas rings on the bolt assembly and ejector spring, approximately every 2,000 to 5,000 rounds as needed.

Once you have removed the extractor, ejector and gas rings, the reassembly process should be largely self-evident, though the ejector in particular will be somewhat trickier to reassemble than it was to take apart. If you find yourself needing to perform these operations frequently, specialized tools are available to make the job quicker and easier.

To remove the extractor, use an appropriately sized punch to drive out the extractor pin. On most of our bolts, this pin can be driven out in either direction, but be aware that on some iterations of our .308 bolts, the pin can only be inserted/removed from one direction. With the pin out, the extractor will then be easily removable and should retain the extractor spring, which need not be separated from the extractor. While the extractor is disassembled, press the top of the extractor spring to test for function. This spring will have a rubber insert, and in the case of our current generation of .308 bolts with Enhanced Extractor, a rubber o-ring as well. Certain older iterations of our .308 bolts may have no rubber insert or perhaps a second smaller spring inside the primary.

The ejector can be removed by using a smaller punch to drive out the roll pin that retains the ejector components. Be aware that the ejector and ejector spring are held under tension by this pin, so point the bolt face away from your eyes and take care not to lose these parts while removing the pin.

Finally, all current *EnhancedBolts* use a spiral ring design, which can be removed by also forcing one end of the ring out of the channel and rotating the rings the rest of the way. Older bolts may use standard 3-piece gas rings, which can be removed by using a pick or small-tipped tool to force one end of the ring out of the gas ring channel and repeating for the other two rings.