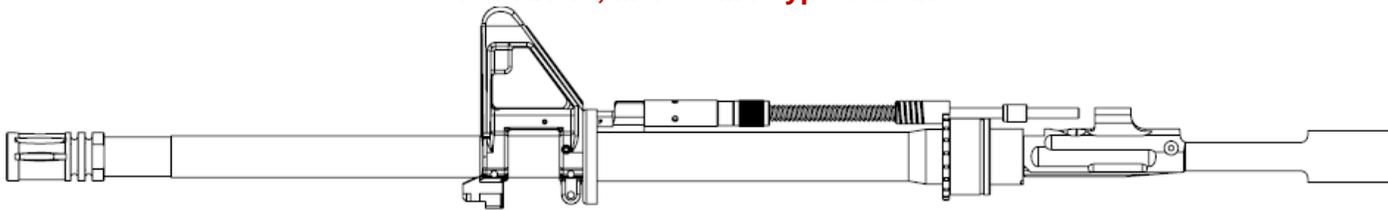


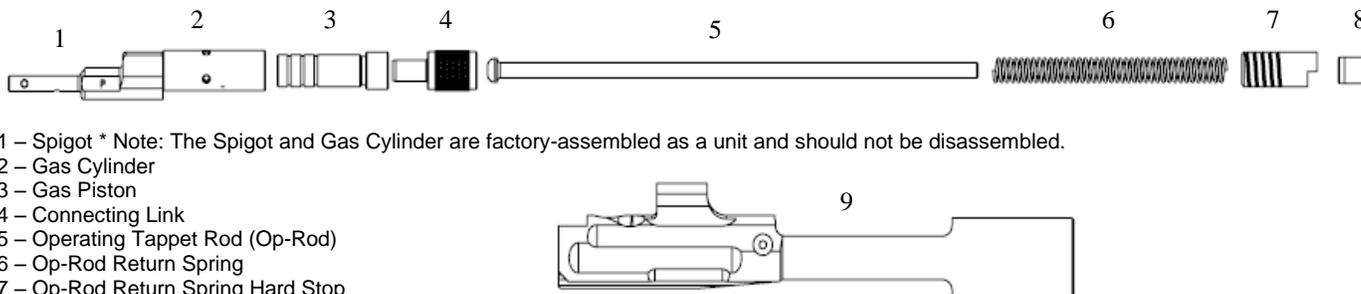
Installation Instructions for the ARES Defense GXR™ Gas Piston Conversion Kit For AR-15, M-16 & M4 Type Carbines



CAUTION: Improper handling or misuse of firearms may result in property damage, bodily injury or death! Always practice safe firearm handling procedures!

INTRODUCTION: The ARES Defense GXR™ is a “drop-in” Gas Piston Conversion Kit for MIL-Spec AR-15, M16 and M4 type carbines. It readily replaces the original direct-gas tube system with a robust short-stroke piston and tappet rod that is designed to enhance the controllability and reliability of the weapon under adverse conditions. While the GXR™ is designed for easy installation requiring only a few minutes of time; a trained armorer or competent gunsmith who is familiar with the AR-15/M16 family of weapons should perform the initial installation of the unit and perform the test-fire procedure to ensure proper assembly and function. As GXR™ models vary depending on barrel lengths and other factors; ensure that the unit description on the original package label matches the host weapon into which it will be installed. (Note: MIL-Spec carbines have a barrel diameter not exceeding .875” immediately behind the front sight block)

Fig. 1 - Description of components included in the GXR™ Gas Piston conversion kit:



- 1 – Spigot * Note: The Spigot and Gas Cylinder are factory-assembled as a unit and should not be disassembled.
- 2 – Gas Cylinder
- 3 – Gas Piston
- 4 – Connecting Link
- 5 – Operating Tappet Rod (Op-Rod)
- 6 – Op-Rod Return Spring
- 7 – Op-Rod Return Spring Hard Stop
- 8 – Op-Rod Receiver Bushing
- 9 – High Performance Bolt Carrier
- 10 – Roll Pin (Not Shown)

INSTALLATION PROCEDURE

- Step 1** – Remove the ammunition magazine and all ammunition from the weapon.
Visually inspect the chamber to ensure that no ammunition remains in the weapon.
- Step 2** – Remove the handguards, charging handle and bolt carrier group from the weapon observing normal fieldstripping practices.
- Step 3** – Using the proper drift punch and a small hammer, remove the roll pin that secures the gas tube to the front sight block and remove the gas tube from the upper receiver assembly.
- Step 4** – Using a suitable chamber or bore brush made of copper, clean the counter bore located inside the upper receiver housing just above the barrel extension.
- Step 5** – Remove the bolt, cam pin, firing pin and firing pin retaining-pin from the bolt carrier body.
- Step 6** – Remove the 3 gas rings from the bolt.

Note: Set the original handguards, gas tube, bolt carrier and gas rings aside; they will not be used in the conversion process.

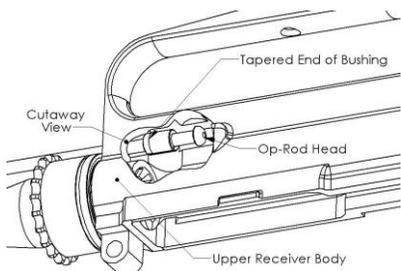


Fig. 2 – Bushing Installation

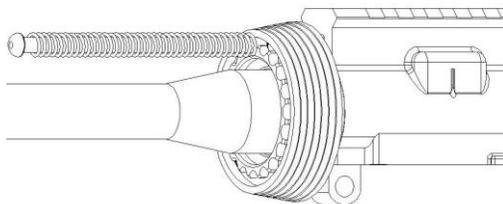


Fig. 3 – Op-Rod & Spring Installation

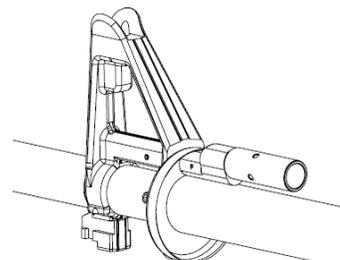


Fig. 4 – Spigot/Gas Cylinder Installation

- Step 7** – Insert the tapered end of the receiver bushing into the counter-bore of the upper receiver and press straight until it stops. The Op-Rod may be temporarily inserted as shown in Fig. 2 to align the bushing.
- Step 8** – Lace the Op-Rod Return Spring onto the Op-Rod and insert it through the front of the Delta Ring and into the upper receiver, as shown in Fig. 3.
- Step 9** – Insert the Spigot/Gas Cylinder Assembly into the gas-tube hole in the front sight block, as shown in Fig. 4 until the roll-pin hole in the Spigot will align with that of the front sight block. Once aligned, insert the roll-pin into the front sight block and use an appropriate punch and small hammer to seat the pin.

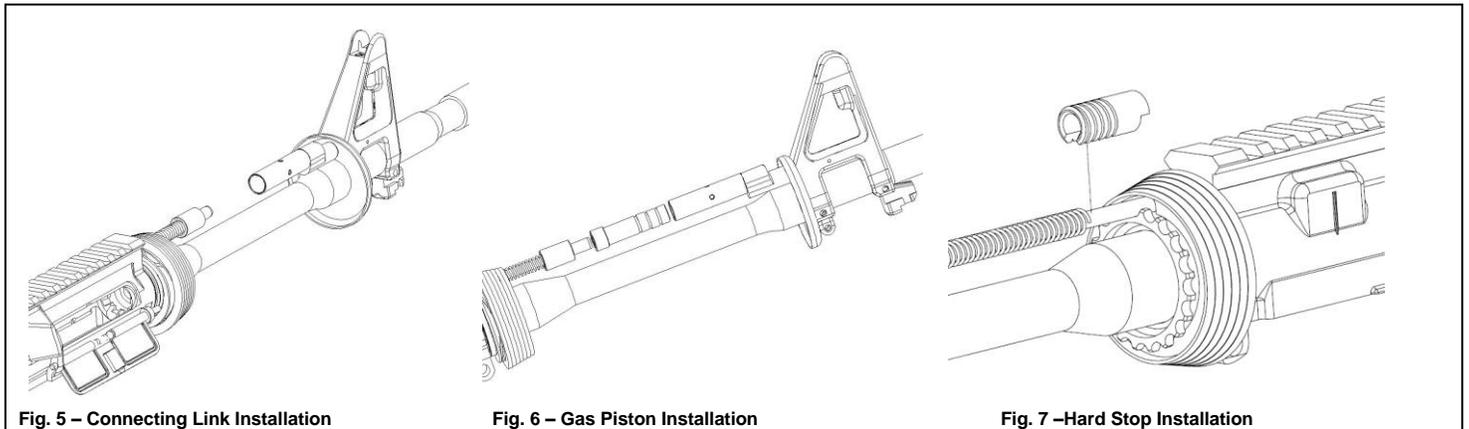


Fig. 5 – Connecting Link Installation

Fig. 6 – Gas Piston Installation

Fig. 7 –Hard Stop Installation

- Step 10** – Compress the Op-Rod and Op-Rod Spring rearward into the receiver and place the Connecting Link over the Op-Rod as shown in Fig. 5.
- Step 11** – Grasp the knurled surface of the Connecting Link and draw the assembly rearward a sufficient distance to permit the rear of the piston to be placed over the small end of the Connecting Link, as depicted in Fig. 6. Once this is accomplished, align the front of the Gas Piston and guide it into the Gas Cylinder. Allow the entire assembly to move forward under its spring force until it stops. Apply two drops of Break Free CLP to the gas vents in the Cylinder and exercise the Gas Piston assembly to check for free movement; the operation should be smooth with no binding or impedance other than that of the Op-Rod Spring.
- Step 12** – Reassemble the bolt, cam pin, firing pin and firing pin retaining-pin into the high-performance bolt carrier provided with your GXR-35™ piston kit. Lubricate with Break Free CLP and install the charging handle and bolt carrier assembly into the upper receiver, and then close the receivers with the rear takedown pin.
- Step 13** – With the bolt carrier in its forward most position, pull back on the Op-Rod (using the knurled surface of the Connecting Link for traction) until it touches the bolt carrier. There **MUST** be a small gap (approximately the thickness of a dime) between the Piston and Connecting Link.
- Step 14** – Install the Op-Rod Spring Hard Stop by pulling the return spring forward (towards the muzzle) until you are able to drop the Hard Stop over the Op-Rod as Shown in Fig.7. Once Hard Stop is installed, slowly release spring until it seats inside the counter bore of the Hard stop.
- Step 15** – If gap is satisfactory, charge the weapon several times to check for normal function. Bolt Carrier operation should be smooth with no abnormal resistance.
- Step 16** – Re-install handguards. **Assembly is complete.**

TEST FIRING PROCEDURE

- Step 1** – Place the weapon on SAFE.
- Step 2** – Put a single cartridge into an empty magazine and with the muzzle pointed in a safe direction, insert the magazine into the weapon.
- Step 3** – Chamber the weapon with the charging handle, set the selector to FIRE and shoot the weapon. The brass should eject and the bolt should lock open automatically with the bolt catch.
- Step 4** – If bolt locks open, then repeat the procedure using 3 rounds in the magazine. If operation is normal, unit is functioning correctly and larger quantities of ammunition may be fired.

TROUBLESHOOTING

If the unit fails to operate correctly, unload the weapon and set to SAFE. Review the procedures and ensure that installation was performed correctly and that the GXR™ model installed matches the host weapon, i.e. barrel length, etc. If installation is correct and unit still fails, contact the manufacturer for further assistance.

WARRANTY

The Magnuson-Moss Act does not require a manufacturer of a consumer product to give a written warranty. It does provide that if a written warranty is given, it must be designated as “limited” or as “full” and sets minimum standards for a “full” warranty. Rather than attempt to comply with the provisions of the Magnuson-Moss Act and the vagaries of implied warranties as they vary from state to state, Ares Defense Systems, Inc. has elected to not provide a written warranty for its products; however, it wishes to assure its customers of its continued interest in providing excellent product support and service to its customers.

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