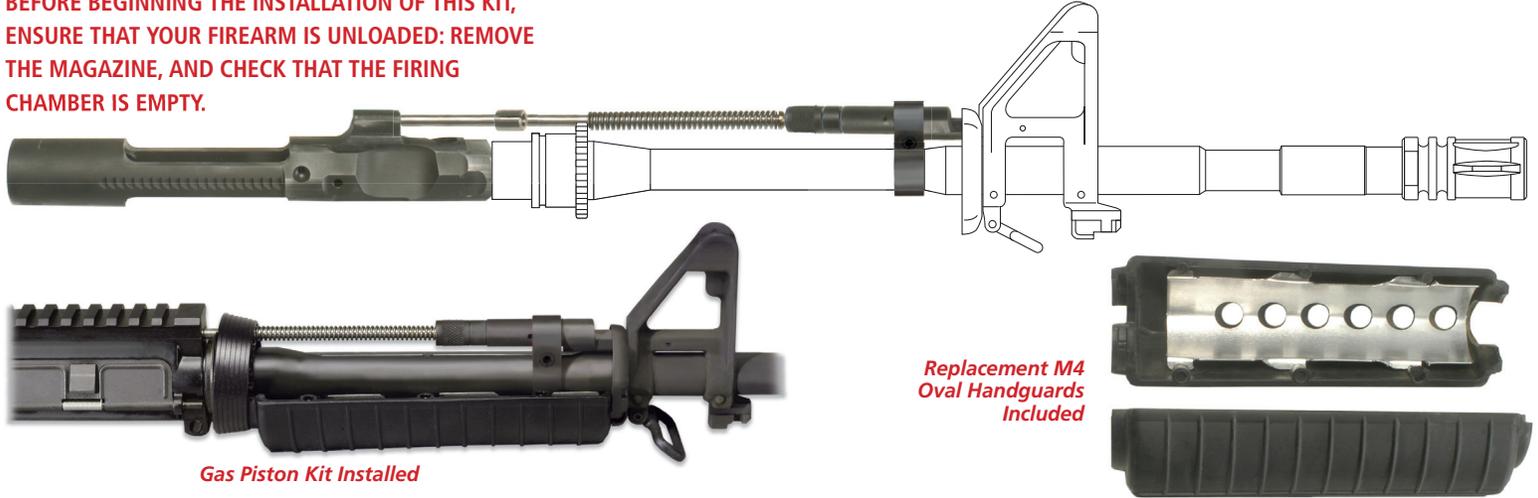




ALWAYS PRACTICE SAFE FIREARMS HANDLING!
IMPROPER HANDLING OR MISUSE OF
FIREARMS MAY RESULT IN PROPERTY DAMAGE,
BODILY INJURY OR DEATH.

**BEFORE BEGINNING THE INSTALLATION OF THIS KIT,
ENSURE THAT YOUR FIREARM IS UNLOADED: REMOVE
THE MAGAZINE, AND CHECK THAT THE FIRING
CHAMBER IS EMPTY.**

BUSHMASTER GAS PISTON RETROFIT CONVERSION KIT INSTALLATION INSTRUCTIONS



Gas Piston Kit Installed

*Replacement M4
Oval Handguards
Included*

INTRODUCTION: The Bushmaster Gas Piston Retrofit Conversion Kit is a Patent-Pending Gas Piston System for MIL-Spec M4 type carbines (Note: MIL-Spec carbines have a barrel diameter not exceeding .875" immediately behind the front sight block). It replaces the original gas impingement system tube and bolt carrier with a robust short-stroke piston and operating rod that is designed to enhance the controllability and reliability of your rifle under adverse conditions. The Gas Piston Retrofit Conversion Kit is designed for easy installation requiring only a few minutes of time. However, if you are not thoroughly familiar with the disassembly and function of this type of rifle, you should have this kit installed in your rifle by a trained armorer or competent gunsmith who is well versed in the AR-15/M16 family of weapons. Such a trained armorer can perform the test-fire procedure to ensure that this kit has been properly installed and is completely functional.

Bushmaster Gas Piston Retrofit Kit Components:



- 1 Solid Striker Bolt Carrier
- 2 Operating Rod Receiver Bushing
- 3 Operating Rod Return Spring
- 4 Operating Tappet Rod
- 5 Connecting Link
- 6 Gas Piston
- 7 Gas Piston Housing / Barrel Clamp
- 8 Gas Piston Housing & Spigot Spring – Note: the Gas Piston Housing is comprised of the Spigot (fits into Gas Block) and the Gas Cylinder. These are factory assembled as a unit, and should not be disassembled. The Spigot Spring is inserted into the Gas Block. A new Roll Pin is included.
- 9 M4 Handguard Set (not shown at actual size) – Note that Lower Handguard Half has Double Heatshield, and Upper Handguard Half has the Single Heatshield. This is required for clearance over Gas Piston Housing and Clamp.

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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. Remove the Bolt, Cam Pin, Firing Pin and Firing Pin Retaining Pin from the Bolt Carrier Body. Remove the 3 Gas Rings from the Bolt – they are not required for function with a Gas Piston System. Set the original Handguards, Gas Tube, Bolt Carrier and Gas Rings aside. They will not be used in the Gas Piston Conversion Kit assembly.

STEP 3: Using a small drift punch and hammer, drive out the Roll Pin that secures the Gas Tube to the Front Sight/Gas Block and remove the Gas Tube from the Upper Receiver Assembly.

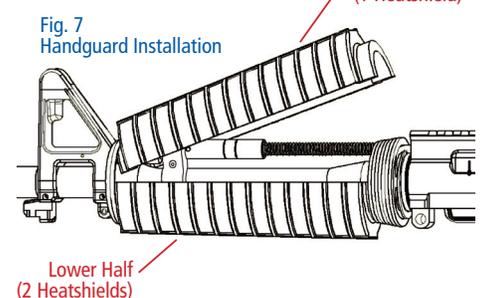
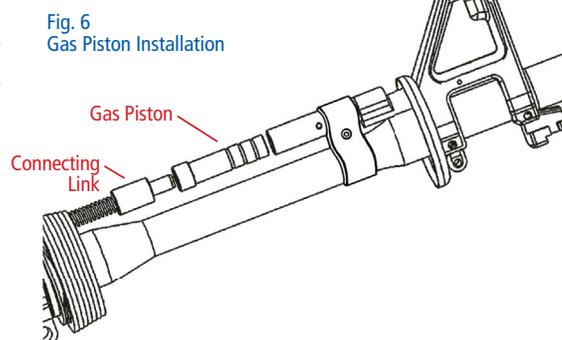
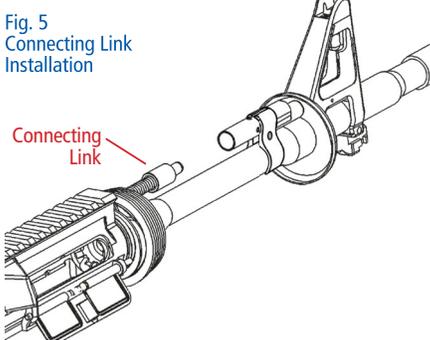
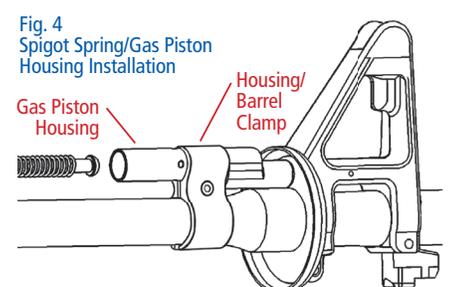
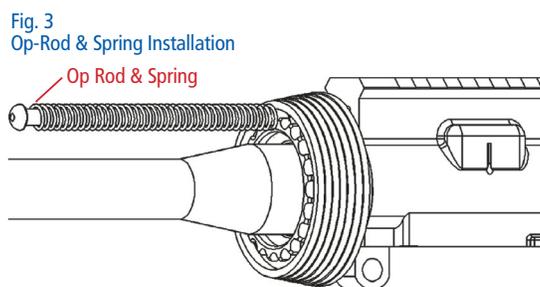
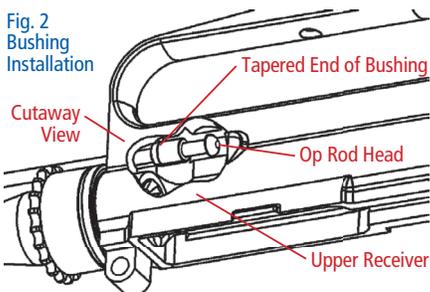
STEP 4: Using a suitable Chamber or Bore Brush made of copper, clean the Counter Bore located inside the Upper Receiver Housing (just above the Barrel Extension).

STEP 5: Insert the tapered end of the Receiver Bushing into the counter-bore of the Upper Receiver and press straight until it stops (see Figure 2). The Operating Rod may be temporarily inserted as shown to help align the Receiver Bushing during this step.

STEP 6: Slide the Operating Rod Return Spring onto the Operating Rod and insert that assembly through the front of the Delta Ring and into the Upper Receiver (as shown in Fig. 3).

STEP 7: Insert the Spigot Spring, and then the Gas Piston Housing into the Gas Tube hole in the Front Sight/Gas Block (as shown in Fig. 4). The Spigot Spring should be compressed by pushing the Spigot forward until the Roll Pin hole in the Spigot will align with the hole of the Front Sight/Gas Block. (Note: The purpose of the Spigot Spring is to handle the impact loading of the Operating Rod during counter-recoil, instead of transmitting this loading to the Roll Pin). Once aligned, insert the new Roll Pin into the Front Sight/Gas Block and use a small drift punch and hammer to seat the Roll Pin.

STEP 8: Once the Gas Piston Housing is pinned in place, assemble the pieces of the Gas Piston Housing / Barrel Clamp around both. Insert the Allen Head Screw and tighten. (Note: Loctite can be used on the screw to prevent it from "shooting loose"). Make sure, when positioning the Clamp, not to block the gas vent holes in the Gas Piston Housing (see Fig. 4).



More Instruction Steps on Back Panel:

Installation Procedures Continued:

STEP 9: Compress the Operating Rod and Spring rearward into the Receiver and place the Connecting Link over the Operating Rod as shown in Fig. 5.

STEP 10: 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 to 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 (or other suitable firearms lubricant) to the gas vents in the Cylinder and check the Gas Piston Assembly for free movement. The operation should be smooth with no binding or impedance other than that of the Operating Rod Spring.

STEP 11: Reassemble the Bolt, Cam Pin, Firing Pin and Firing Pin Retaining Pin into the High Performance Bolt Carrier provided with your Bushmaster Gas Piston Kit. Lubricate and install the Charging Handle and Bolt Carrier Assembly into the Upper Receiver, and then close the Receivers with the Rear Takedown Pin.

STEP 12: With the Bolt Carrier in its forward most position, pull back on the Operating 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. 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 13: Install the supplied Handguards as shown in Fig. 7. The Handguard half with the double liner must go on the bottom. Assembly is complete.

Test Firing Procedure:

STEP 9: Place the weapon on SAFE.

STEP 9: Put a single cartridge into an empty magazine and with the muzzle pointed in a safe direction, insert the magazine into the weapon.

STEP 9: 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 9: 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 Bushmaster Gas Piston Kit installed matches the host weapon, i.e. barrel length, diameter, etc. If installation is correct and unit still fails, contact Bushmaster Customer Service for further assistance.



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