

## **JP Adjustable Gas System:** *.936 bore aluminum, stainless steel*

### **Parts Included:**

- .936 bore gas block
- Three (3) 8-32 x 1/2" socket head cap screws
- One (1) 6-32 x 3/8" stainless set screw
- 1/16 hex key
- 5/64" x 1/2" roll pin

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### **Installation Instructions**

#### **CAUTION: REMOVE MAGAZINE AND VISUALLY CHECK CHAMBER TO VERIFY THAT WEAPON IS CLEAR.**

This gas block is designed for use on large contour barrels from .935" to about one inch at the gas block position. Most commonly available bull barrels are .935", which is what this gas block should fit with little or no modification. When installing, it will be necessary to have a very solidly mounted padded vice to prevent damage to the barrel.

If you are installing this device on a barrel that is already in assembly in your upper, first remove the takedown pins and separate the lower and upper assemblies to make the job easier. In your vice, securely lock the section of barrel between the front sight or existing gas block and muzzle, and then remove the flash suppressor or muzzle brake if present. It may even be necessary to apply heat with a propane torch to the flash suppressor if it is secured too tightly. Remove the existing front sight/gas manifold piece or gas block.

With a 1/16" drift, remove the gas tube roll pin and gas tube from the existing gas block or front sight. Remove the 6-32 gas adjustment screw from the side of the JP Gas Block, and install the gas tube and roll pin in the JP Gas Block. It may be helpful to slightly enlarge the pinhole on the side that you insert the roll pin to make it easier to start. Make sure that the gas port in the gas tube is aligned with the gas port in the block. Now, run a 6-32 tap into the gas screw hole to blend the gas tube into the tapped hole and allow the screw to fully engage the hole.

With the gas tube installed, slide the JP gas block on the gas port collar of the barrel. Tighten the center clamp screw on the gas block so that the gas block is hand tight but can still be rotated and squared to the receiver. On a flat-top rifle, using a couple of small level blocks is an easy way to get perfect alignment of components while mounted in the vice. Alternately, you can place the complete upper assembly upside down on a smooth, flat surface like a counter top and allow it to tilt forward to align the front edge of the upper receiver rail and the front edge of the gas block, allowing the gas block to come into alignment with the receiver. Once level, tighten the middle clamp screw to retain this position. Then, sequentially tighten the three clamp screws to fully secure the gas block. As an option for added stability, you may apply Loctite 609 (green) between the barrel and gas block to more permanently secure them.

## ***Gas Block Setup***

The main purpose of our adjustable gas block is to allow you to adjust the port pressure to the operating system, thereby fine-tuning the bolt velocity, which will result in a smoother shooting rifle especially if you already have a JP Recoil Eliminator. Additionally, the JP Gas Block is also useful in obtaining optimum port pressure on otherwise difficult to run setups, such as suppressed weapons, short-barreled weapons, or unusual chamberings for nonstandard cartridges. Most rifles cycle faster than necessary and the resulting "bolt slamming" effect is a noticeable part of the recoil impulse. To adjust for your load, turn the gas adjustment screw in all the way to close it off. Then, back it out about two full turns, and load one round in the magazine and fire. If the bolt holds open, the gas block is set. If the bolt does not stay open, it is short-stroking and the valve should be opened about another half turn. Continue backing the gas adjustment screw out until the bolt holds open consistently on last round lock back. Test this again with one round in the magazine.

Remember, if you change ammo, the rifle may not cycle reliably and should be tested again with any ammunition that you intend to use in actual competition. If you must use untried ammo, back out the valve several turns to ensure full cycling. You may want to Loctite the valve screw. It is also possible to shut the valve completely if you want to cycle the rifle manually for any reason.

If your rifle is used for law enforcement or military purposes, we recommend the full open setting so as not to compromise reliability. A new rifle or bolt assembly will have a great deal of friction between the gas rings and carrier and may require a break-in period during which the gas block must be run wide open for complete cycle. As the path through our gas block is a bit longer than a standard front sight manifold, it is a bit less efficient initially, and a new rifle with an extremely stiff bolt may not cycle completely until broken in. It helps to polish the bore of the carrier on a new bolt to reduce friction and mate the parts.

Our large bore gas blocks feature a Picatinny quick-detach point for any accessory you may wish to use on that point such as flash lights, lasers or electronic sights. We offer a quick-detach, height-adjustable front sight featuring a 7/8" globe with sixteen interchangeable inserts that is compatible with the original handle sight as well as many other quick-detach rear sights on the market. Call us with any questions you may have.

***THANKS FOR YOUR BUSINESS!***