

### **JP Adjustable Gas System:** *M15 adjustable gas block, .936 bore*

#### **Parts Included:**

- Large bore gas block
- Three (3) 10-32 x 1/4" stainless set screws
- One (1) 6-32 x 1/4" 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 MAKE SURE THAT FIREARM IS UNLOADED.**

This gas block is designed for use on large contour barrels, .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. 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 too secure. 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. Install the gas tube and roll pin in the JP gas block. It may be helpful to slightly enlarge the pin hole 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.

Due to the large diameter bore of this gas block, we opted to put the valve set screw through the top. You may decide not to use the valve option on your rifle in which case you do not have to perform the next modification on your gas tube. The JP gas block will function just fine as a non-adjustable assembly and still provide the quick-detach feature for our front sight. If you decide to take advantage of the adjustment feature, you must drill and tap a hole corresponding to the set screw valve entering the top of the block. After installing the gas tube in the block, select a #36 numerical or 7/64 fractional drill and drill a hole through the top of the gas tube using the block as a guide. Then, tap the hole through the top of the block into the tube with a 6-32 tap. The set screw can now be driven into the gas tube to restrict the gas flow allowing you to fine-tune your rifles bolt velocity.

Now, try to slide the JP gas block on the gas port collar of the barrel. If it is too tight and will not slide on with a few light taps from a plastic mallet, you may need to remove a couple thousandths of material from the block; a brake hone will perform that function easily. We have tried to achieve a fairly precise fit for the industry standard dimension but barrels may vary. The block must fit well so as not to leak too, though some leakage is normal. If the fit of the block is no problem, proceed to the permanent installation of the block. Remove the gas valve and look through the hole to ensure perfect alignment of the gas port and hole in the block. 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. This allows the gas block to come into alignment with the receiver. Once level, insert the middle set screw to retain this position. The rear set screw is a "dog point" type and you should mark and drill a 1/8" hole for this feature to engage the barrel, ensuring that the block will not migrate forward when the barrel heats up enough to soften the Loc-Tite. Next, coat the barrel with Loc-Tite 609 (green) and install all the set screws. We would also recommend drilling detents for the front two screws, using Loc-Tite 271 (red) on the set screws.

### ***Gas Block Setup***

The purpose of our adjustable gas block is to allow you to adjust the bolt velocity, which will result in a smoother shooting rifle especially if you already have a JP Recoil Eliminator. 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 to open until 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 also may want to Loc-Tite 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.

The gas block features a Picatiny quick-detach point for any accessory you may wish to use on that point such as flash lights, lasers, electronic sights. We offer a quick-detach, height-adjustable front sight featuring a 7/8-inch globe with sixteen interchangeable inserts that is compatible with the original handle sight.

***THANKS FOR YOUR BUSINESS!***