Product:
JPGS-1,
JPGS-2B,
JPGS-2S

JP ENTERPRISES

JP ADJUSTABLE GAS SYSTEM

.750 bore railed aluminum / stainless steel

PARTS INCLUDED

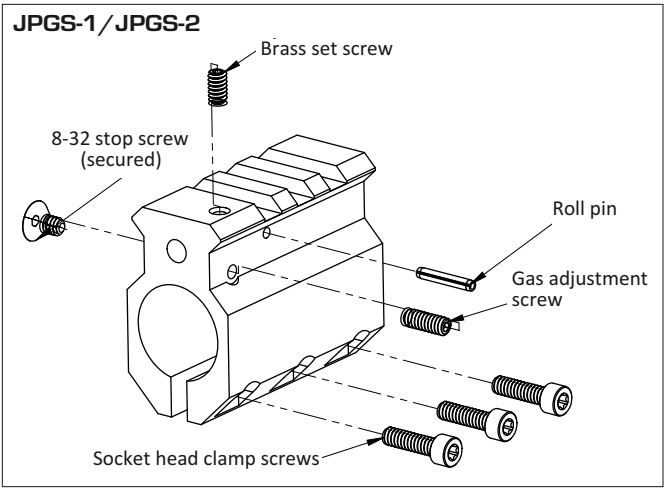
- .750 bore gas block
- Three (3) 8-32 x 1/2" socket head cap screws
- One (1) 6-32 x 3/8" set screw
- One (1) 6-32 x 1/4" brass set screw
- One (1) 8-32 x 1/4" flat head stop screw (secured in place)
- 5/64 hex key
- 5/64" x 1/2" roll pin

CAUTION:

REMOVE THE MAGAZINE AND VISUALLY CHECK THE CHAMBER TO ENSURE THAT YOUR FIREARM IS UNLOADED.

This small-bore JP Gas Block is designed for use on barrels with a .750 gas block journal and should fit with little or no modification needed. We strongly encourage you to read through these instructions once before beginning the installation process paying particular attention to the "Securing the Gas Block" section below.

The JPGS-1 aluminum version of the gas block will give fine service on semi-automatic rifles with standard barrel lengths but should not be used for full-auto applications, short-barreled rifles or AR-15/M16 pistols. Use the JPGS-2 steel version for those applications, as it will tolerate the high temperature without erosion.



P.O. Box 378, Hugo, MN 55038 | Voice: 651-426-9196 | Fax: 651-426-2472

INSTALLATION

1. 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. To prevent damage to the barrel, begin by securely locking a padded vise around the section of barrel between the front sight and muzzle, and then remove the flash suppressor or muzzle brake. It may be necessary to apply heat with a propane torch to the flash suppressor if it is too tight to remove otherwise.

2. Remove the existing front sight/gas manifold piece or gas block by tapping it with a plastic mallet to start.

3. If you intend to reuse the original gas tube, remove the gas tube roll pin securing it in the existing gas block or front sight using a 1/16" drift.

4. Making sure that the gas adjustment set screw is not installed in the gas block, insert the gas tube and secure it using the gas tube roll pin supplied. One side of the gas block has a pin hole enlarged to facilitate starting the pin. It may be necessary to run an 8-32 bottoming tap into the screw hole before installing the adjustment set screw due to it abutting the bottom of the gas tube.

5. Before installing the gas block on the barrel, check for any burrs or raised areas around the gas block journal that might have been left by any previous installations. If any of this area is flared above the surface, it will be very difficult or impossible to install the gas block. Use a file to remove any problem areas.

6. With the gas tube installed, slide the tube through the gas tube hole in the upper receiver until the gas block butts up against the shoulder behind the gas port collar of the barrel.

7. Ensure that the gas block is square with the upper receiver by laying the upper on a flat surface so that the receiver rail and gas block rail are parallel.

8. This gas block is designed to replace a standard military front sight assembly. If you have installed a free floating hand guard on a military spec. barrel, there should be approximately a .025" gap between the back of the gas block and the shoulder on the barrel. This gap is where the forward

hand guard retainer would fit if you were using a military hand guard and is important to the proper alignment between the gas block and gas port.

At this point, test the gas block with compressed air to ensure proper alignment. With the bolt inserted and closed, push the air nozzle up to the muzzle and apply air while moving the gas block around until you hear maximum flow.

9. Using the provided wrench, install the socket head screws to retain the gas block's position. Initially, install the screws only finger tight. Then, go back and tighten each bit by bit to 32 inch-pounds of torque. As an option for added stability, you can apply Loctite® 609 between the barrel and gas block to more permanently secure them. If you use thread locker, make sure the surfaces have been cleaned with solvent. Before use, allow the thread locker to set up according to the product instructions.

GAS BLOCK SETUP

Most rifles cycle faster than is necessary, and the resulting "bolt slamming" effect is a noticeable part of the recoil impulse. The main purpose of our adjustable gas blocks is to allow adjustment of 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 or JP Compensator. Additionally, the JP Adjustable Gas System is useful in obtaining optimum port pressure on otherwise difficult to run setups such as suppressed weapons, short-barreled weapons, or nonstandard cartridges. These steps will walk you through setting your gas block for the particular load you'll be using.

1. Begin by turning the gas adjustment screw in all the way to close off the valve. The symptoms of too much gas and too little gas can actually appear similar enough to be mistaken for each other at times. So, to determine the optimum gas setting, you'll want to start out at a setting that is definitely too low and work up from there.

2. Back the adjustment screw out ½ a turn. Load a single round into the magazine, chamber it, and fire. If the bolt doesn't open at all, open it another ½ turn and try again. Most likely, the bolt will short stroke at this setting. Assuming that is the case, clear the rifle before proceeding.

3. Back the screw out by another ¼ turn and fire again. Repeat this sequence until the carrier locks open after the round has been fired. Verify this

setting with a few more rounds. If the bolt consistently locks back, you've effectively found the optimum gas setting, though you may want to open the valve another ¼ to ½ turn for reliability, especially if you expect to shoot different or unknown loads.

4. Insert the brass set screw in the top hole as indicated in the diagram and tighten it down against the adjustment screw. Tension provided by this screw will securely retain the adjustment screw, but make sure to loosen it before changing the adjustment setting of the gas block.

   Though most likely unnecessary, you can also apply a small drop of Loctite® 242 to the adjustment set screw, but do not add Loctite® to the brass screw.

Keep in mind that the gas block has been set for the specific ammo you've tested it with and still may not cycle reliably or optimally with other loads due to their different pressures. Make sure to test the valve setting with any ammunition you intend to use in competition. If your rifle is used for law enforcement or military purposes, we recommend running your rifle with the gas valve fully open so as not to compromise reliability.

Also, be aware that new bolt assemblies and carriers will have more friction in their relationship than parts that have worn in. These may require a break-in period when the gas block valve will have to be set further open until the friction between the parts is reduced. It helps to polish the bore of the carrier on a new bolt to reduce friction and mate the parts.

THANKS FOR YOUR BUSINESS!