

SI Defense .750 I.D. Quad Rail Adjustable Gas Block Installation and Adjustments

Warning: Ensure weapon is unloaded before performing any maintenance or repairs. Remove the magazine and pull charging handle back and lock bolt open. Check to make sure chamber is empty.

This gas block is for use on semi-auto rifles, but should not be used for full-auto applications, short-barreled rifles or AR-15/M16 pistols.

In order to install the SI Defense Gas Block, it will first be necessary to remove the existing flash suppressor or muzzle brake and the existing A1/A2 front sight or gas block.

1. First, remove the pivot and takedown pins and separate the lower and upper assemblies
2. Remove the flash suppressor or muzzle brake.
3. Remove the front sight retainer pins with a hammer and drift or remove set screws from gas block. Note that the pins are tapered and can only be removed by using drift pin to punch them on the small diameter end. Once the pins have been removed, tap the sight on the rear with a plastic mallet to get it started and remove the sight/gas tube assembly.
4. With a 1/16" drift, remove the gas tube roll pin and gas tube. Reinstall these in the SI Defense gas block.
5. Remove the gas adjustment set screw and the 6-32 set screw that will set your gas adjustment screw and insert your gas tube into the gas block. Make sure that the gas port in the gas tube is aligned with the gas port in the block. Using a roll pin holder makes the task easier.
6. Clean the barrel with solvent where the old gas block was mounted and check for burrs or obstructions.
7. Remove set screws on the bottom of the gas block.
8. Install the gas block/gas tube assembly and make sure it is square with the upper assembly. It is very important that the gas block is aligned straight on the barrel. If you have installed a free floating hand guard on a military spec barrel there will 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 (cap) would fit if you were using polymer hand guards. You may have to move the gas block forward towards the muzzle to ensure maximum gas pressure. For added stability, you may apply Loctite 609 (green) between the barrel and gas block to more permanently secure them.
9. Loosely install set screws on bottom of gas block. Once alignment is assured and the gas block is level, tighten the middle screw to retain this position. Check to make sure gas block is level once more. For added stability, you may apply blue Loctite on the set screw threads so that they do not vibrate or loosen out.
10. Loosely install gas adjustment set screw and the 6-32 set screw that will set your gas adjustment screw.

Adjusting the Gas Block

The main purpose of our adjustable gas block is to allow you to adjust the gas pressure to the weapons cycle timing, thereby fine-tuning the bolt timing and velocity, which will result in a smoother shooting rifle. It will help alleviate problematic cycling in suppressed weapons, short-barrelled weapons, different cartridge manufacturers, and too large of a gas port hole. Many rifles are over-gassed and cycle faster than necessary and the resulting "bolt slamming" or feeding issues.

If your rifle is used for law enforcement or military purposes, we recommend the full operational open setting so as not to compromise reliability. Please note that a new rifle or bolt assembly will be tight and need to be broken in. The gas block must be run wide open for approximately 20-200 rounds for a the break-in. Re-adjust gas adjustment screw after 100 rounds.

1. 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.
2. Continue backing the gas adjustment screw out until the bolt holds open consistently on last round lock back.
3. 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.
4. Blue Loctite the gas adjustment screw once you have found the optimal setting.
5. You can permanently set the gas adjustment screw with the 6-32 set screw that sets against the gas adjustment screw threads. This will ensure your gas adjustment screw will not drift out over time. Do not tighten this set screw if you want to make adjustments. Turn the screw in until you feel some resistance and then back it off a full turn. Use blue Loctite when installing the 6-32 screw whether you tighten it or not. Tightening this screw may damage threads on gas adjustment screw and cause block to be stripped after repeated removal and adjustments.

SI Defense, Inc. • 2902 Highway 93 North • Kalispell, Montana 59901
Phone (406) 752-4253 • FAX (406) 755-1302
sales@si-defense.com • www.si-defense.com • www.shop.si-defense.com
Cage Code: 5M9B2



Installation Tools Needed:

- Allen wrench set
- Plastic hammer
- Hammer
- Pin punches
- Roll pin punch
- Vice
- Wrenches
- Blue Loctite

SI Defense Aluminum Quad Rail Adjustable Gas Block .750 I.D.

8-32 x 3/8 gas adjustment
set screw.



6-32 set screw that sets your gas port
adjustment screw into place permanently.
Use blue Loctite when installing



8-32 set screws to set gas block on
your barrel. Use blue Loctite when
tightening these set screws to your
barrel.

