



**CLEAN. COOL. RELIABLE.**

**PISTON PERFORMANCE**

### Adams Arms Micro, and Micro Adjustable

#### Removal of Stock Parts (Impingement System):

1. Remove the upper receiver from the lower receiver.
2. Remove the bolt carrier and charging handle from the receiver.
3. Remove the bolt from the carrier.
4. Remove the gas rings from the bolt using a thin flat edge. Set the bolt and bolt carrier aside for later installation steps.
5. Remove the top and bottom handguards from the barrel by pulling back on the delta ring and pulling the handguards apart. If you don't have standard handguards, remove any handguard(s) that might be on the rifle.
6. Use a 3/4" wrench to remove the flash suppresser or muzzle break along with the crush washer from the barrel.

#### Adjustable Kit Installation

##### Parts required

1. Upper receiver
2. Barrel
3. Barrel nut
4. Piston Kit
5. Bolt carrier parts



## Barrel Nut Alignment

1. The barrel nut needs to be tightened and aligned so that a notch in the barrel nut is perfectly aligned with the opening in the upper receiver for the drive rod

Note – picture shown with barrel removed for clarity



2. Use the drive rod to make sure that the barrel nut notch and receiver opening are properly aligned, by placing the striking end of the drive rod into the upper receiver opening, through the notch in the barrel nut. The middle of the drive rod cup should be perfectly centered with the gas port in the barrel.





- The barrel nut must be perfectly aligned to ensure proper function of the upper. If the barrel nut is not centered it will put pressure on the drive rod and cause it to bind during operation

### **Drive Rod Gapping**

Tools/equipment required

1. Nylon/plastic hammer
2. Feeler gauge/business cards
3. BCG
4. 1/8th allen key / Inch – Lbs Torque Wrench

### **Assembly**

Once the barrel nut is timed, you are ready to install the rest of the piston kit. The Adams Arms piston system is designed to have a gap built into it between the striking face of drive rod, and piston key of the carrier.



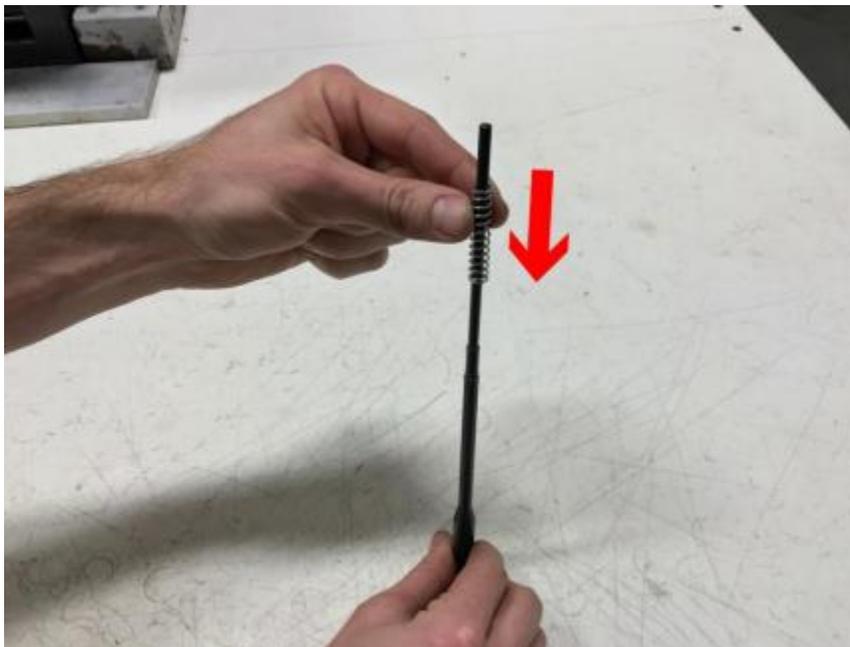
The spec for this gap is .015 - .025 inches. This gap has multiple important functional purposes. It allows for a slight amount of heat growth in the drive rod.

If the gap is too small, or too large, the drive rod, and piston key of the carrier can be damaged and cause malfunctions. Since this gap exists inside of the upper receiver where it cannot be measure, the gap is measured between the back of the gas block and the drive rod cup. If you do not have a feeler gauge, you can measure/estimate the distance using the back edge of the gas block, and shoulder of the barrel.

1. If your bolt has gas ring on it, you will need to remove the gas rings, and install the included bolt spring



2. Slide the spring onto the striking end of the drive rod.



3. The drive rod bushing has a flat side, and a recessed side.



4. Slide the recessed side onto the striking end of the drive rod. Once it has reached the spring, push down on the bushing and twist, compressing the spring and locking the bushing and spring together



5. Your kit will include either an adjustable or non adjustable block. The adjustable block has a teardrop shaped selector on the front of the gas block. The non Adjustable has a smooth face.



6. Remove the gas selector from the gas block. (Adjustable Block Only) The selector is removed by rotating the selector to the right, or left while applying rearward pressure, until the selector slides free.



7. Place the drive rod onto the gas block and slide it onto the barrel



8. Position the gas block so it sits between .026 - .035 off the shoulder of the barrel. Using two business cards to space the gap. This will give you a good starting point for setting the correct gap.

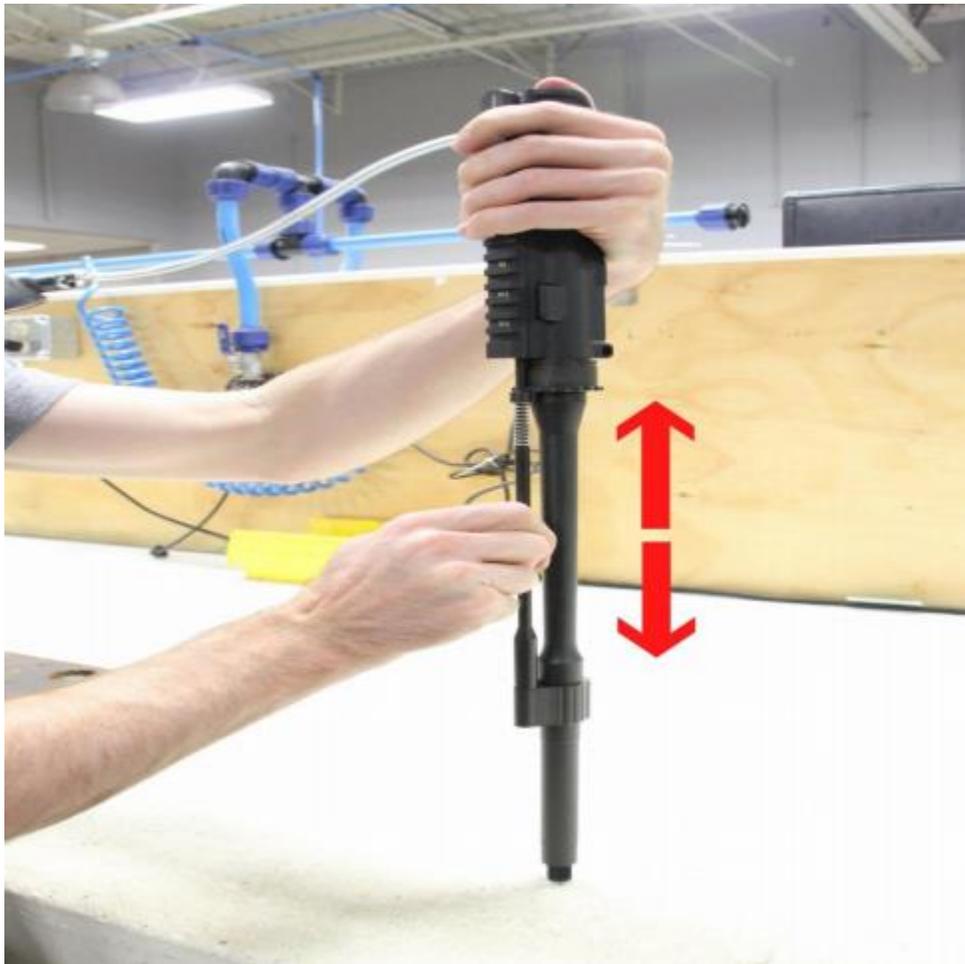


9. With the upper assembly laying on the table, and gas block positioned, put slight downward pressure on the barrel while holding the gas block in position. Tighten one of the set screws, enough to hold the block in place, but not enough to prevent you from repositioning the block with light hammer taps.

10. Insert the bolt carrier group into the upper. With one hand, grasp the upper receiver, holding the bolt carrier group in battery with your thumb, and stand the assembly up with the muzzle resting on the table.



11. While you continue to hold the bolt carrier group in battery, use your free hand to move the drive rod up and down, ensuring that there is a gap between the drive rod and carrier.



12. Use your feeler gauge to measure the space between the back of the gas block and drive rod cup, ensuring that the space is between .015 and 0.25. A standard business card is about .011. If you do not have a feeler gauge you can use two business cards pressed tight together.



If the gap is larger than .025, use light hammer taps on the face of the gas block, to move the gas block backwards and close the gap. If the gap is less than .015, use light hammer taps on the back of the gas block to move it forward and increase the gap size. After making adjustments, re-measure with the gapping tool. Repeat process as necessary until the gap is correct.



13. Remove the bolt carrier group

### Section 3

#### Gas Block Alignment

##### Tools/equipment required

1. Plastic or Nylon hammer

##### Assembly

Gas block alignment is crucial for several reasons. First, it helps ensure that the gas block is completely covering the gas port in the barrel. Second, in the same way that a barrel nut that is not properly aligned will cause the drive rod to bind, a crooked gas block will also cause drive rod binding.

1. The first step in aligning the gas block has already been taken during the gapping process, when the upper was laid on the table and the set screw is tightened while putting downward pressure on the barrel. As long as this was done on a level surface, it creates a good starting point. Look down the top of the upper receiver over the top of the gas block to see if it is visually canted to one side or the other.

2. If the gas block is canted, use light hammer taps with a nylon or plastic hammer on the side of the gas block to bring it into alignment

3. Ensure that the drive rod can slide freely. To do this, grasp the upper in one hand, with the muzzle resting on the table. Pull the drive rod up towards the upper receiver. You will feel resistance from the drive rod spring, but the drive rod should not bind or stick. When you release the drive rod it should spring back down into position.



Note – some drive rods may not be perfectly straight, which can result in failing the binding test. However in these cases, you should be able to rotate the drive rod to find a free spot where it will drop correctly. As long as there is a position in the 360 degrees which a drive rod can rotate, that allows the drive rod to drop freely, it is passable.



4. Once the gas block is properly aligned, tighten all the set screws to the appropriate torque spec of 87 Inch-lbs
5. Once the screws are tight, re-check the drive rod gap.
6. (Adjustable only) Once the piston kit is completely installed on the upper, reinstall the gas selector.



#### Section 4

#### Gas Adjustments

The Adjustable block has 5 positions, starting at full gas with the selector all way to the left, to 11% open on the last position.

