ADAMS ARMS

CLEAN. COOL. RELIABLE.

PISTON PERFORMANCE

Adams Arms Micro, and Micro Adjustable

Before you start, make sure your 300 BLK barrel is going to work with this kit. For piston length gas systems, there is a length dimension of 3.970" from the center of the gas port to the outside shoulder of the barrel extension that is not consistent through barrel manufacturers.

3.970" max

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 handguard.

4. Remove the flash suppresser or muzzle break along with the crush washer from the barrel.

5. Remove DI gas block assembly.

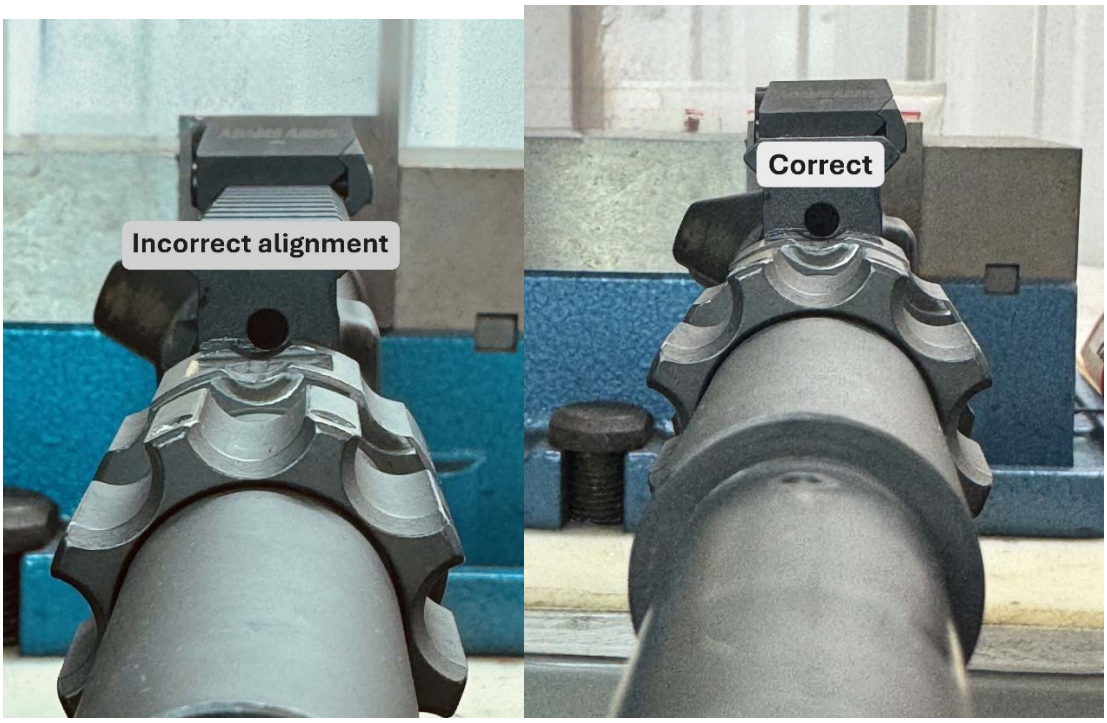
Adjustable Kit Installation

Parts required:

1. Upper receiver
2. Barrel
3. Barrel nut
4. Piston Kit

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



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 (may come in handy if there are any burrs from your previous gas block set screws)
2. gas block shim
3. BCG
4. 1/8th Allen key
5. inch – lbs. Torque Wrench

Assembly

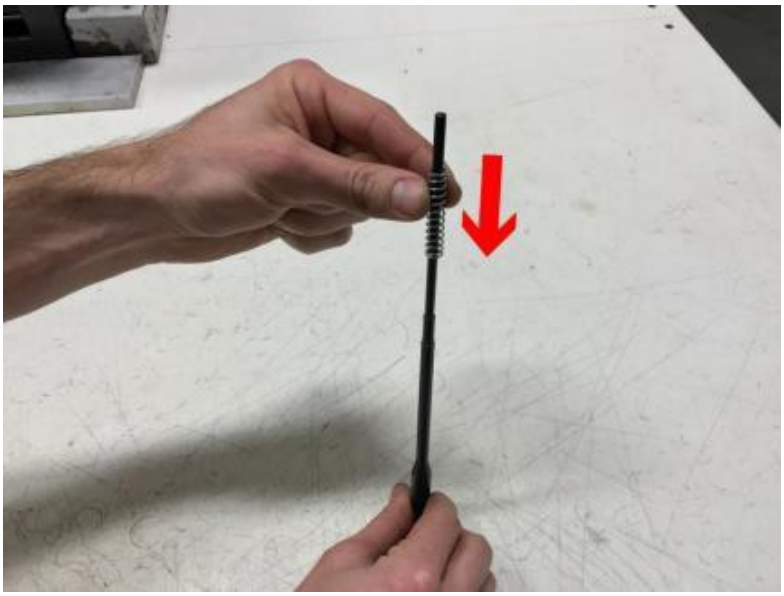
Once the barrel nut is timed, you are ready to install the rest of the piston kit. The Adams Arms piston system is designed to have a gap built into it between the striking face of drive rod, and piston key of the carrier.

(picture for reference only)

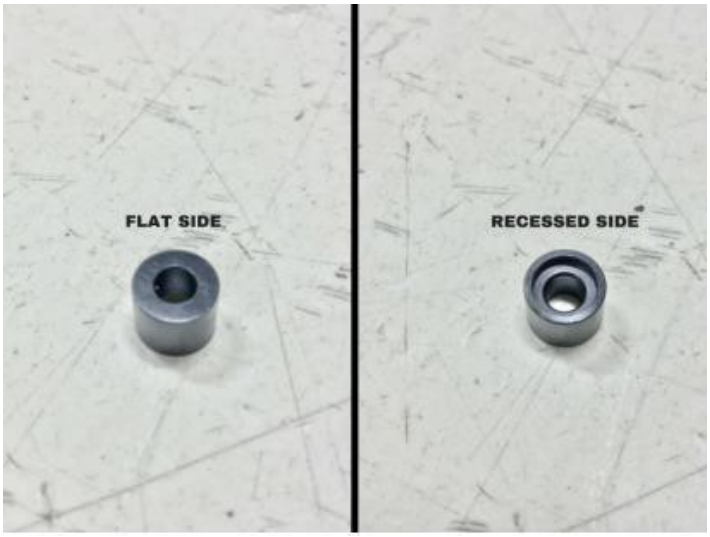
The spec for this gap is .015 - .025 inches. This gap has multiple important functional purposes. It allows for a slight amount of heat growth in the drive rod. The use of the included gas block shim allows for this gap.

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



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



3. 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

4. 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.

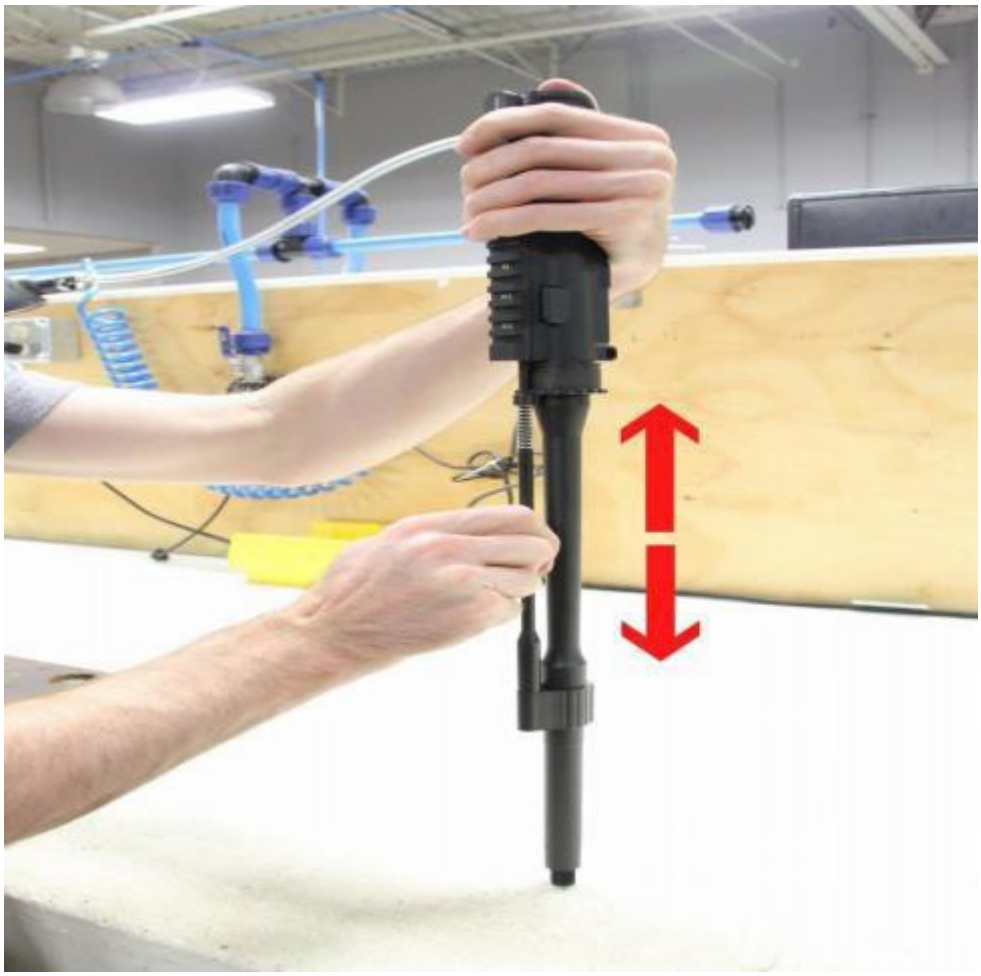
5. Place the gas block shim on the barrel. Slide the drive rod onto the gas block and slide it onto the barrel, capturing the spacer to the gas block shoulder.

6. It is imperative that your barrel is dimpled for the gas block set screw, and in the correct position. It is located on the opposite side of the barrel of the gas port, in the exact same position away from the shoulder (.300")
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.

With the upper assembly laying on the table, and gas block positioned, tighten one of the set screws- the dimple in the barrel will help center the gas block.

7. 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.

8. 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 small gap between the drive rod and carrier.



9. 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 .025" 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 your gas port and barrel dimple dimensions are correct, the gap should fall within the given tolerance. If the gap is larger than .025", chances are that your barrel is not going to work correctly with the 300 BLK kit. Misfires and bending of the drive rod may occur.

10. 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.

11. Once the gas block is properly aligned, put blue Loctite on the threads and tighten all the set screws to the appropriate torque spec of 57 Inch/pounds – (do NOT exceed spec.)

12. Once the screws are tight, re-check the drive rod gap.

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.