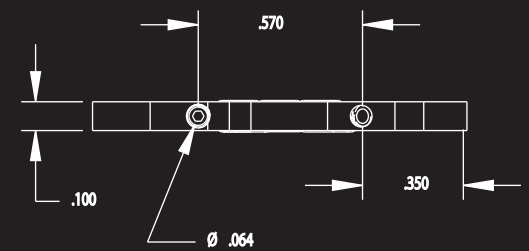
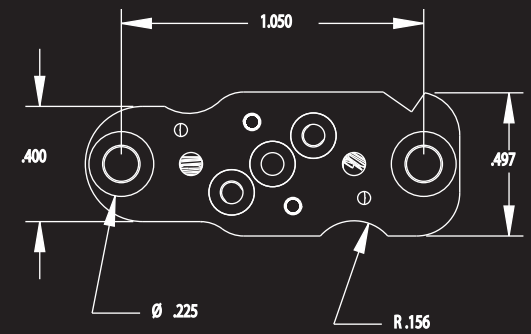
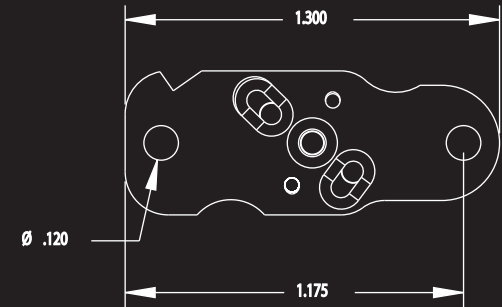
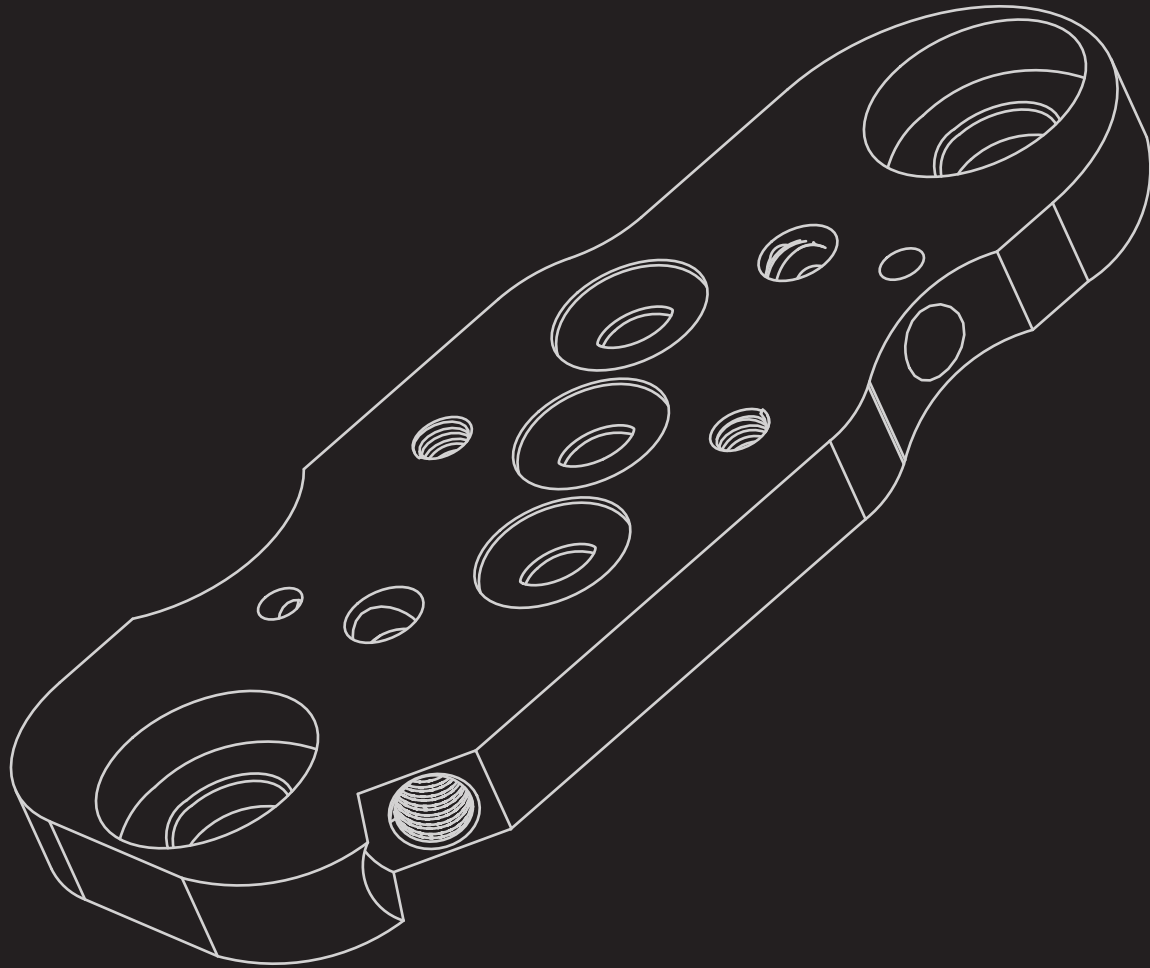


AIR VENT MANIFOLD

Installation and Operation Instructions for Shocker Accessory



GETTING STARTED

If you are unsure about your ability to install the Air Vent Manifold yourself, contact your nearest Smart Parts authorized dealer for professional installation and tuning.

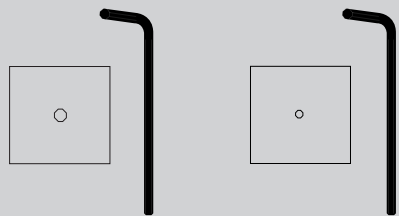
While the Air Vent Manifold looks much like the stock manifold plate, you can see the differences on close inspection. The Air Vent Manifold features a pair of very small setscrews. These two screws can be used to partially block airflow through the plate, restricting the force applied to move the bolt forward or back.

WARNING

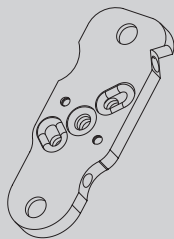
As you look at the plate, one end is more rounded than the other, this is the front end. The adjustment screw closest to the front controls the forward, or closing rate of the bolt, while the screw towards the back controls the rearward, or opening force of the bolt. [FIG. 01, FIG 02]

Remove the hopper and any paintballs from the Shocker SFT before beginning. Please follow the guidelines in the Shocker maintenance manual for depressurizing your marker before disassembling your Shocker. The Shocker SFT must be de-gassed and unloaded before you begin. As with any other tech work, disassemble the Shocker on a clean, flat surface.

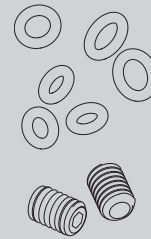
REQUIRED ITEMS FOR INSTALLATION



1/16" Allen Wrench · .035" Allen Wrench



SFT Air Vent Manifold [included]



(2) Exhaust Screws, (6) O-Rings

WARNING

Installing the Air Vent Manifold is of the same difficulty level as replacing the Shocker SFT's solenoid valve. Please read through the entire set of instructions before beginning.

FIG. 01 → RECEIVER SIDE VIEW

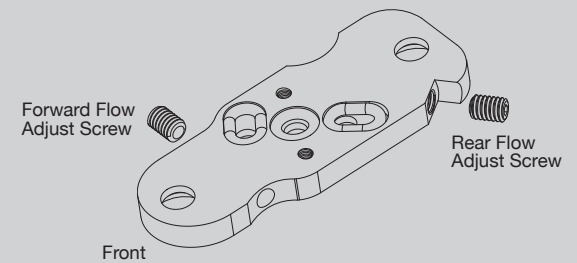


FIG. 02 → SOLENOID SIDE VIEW

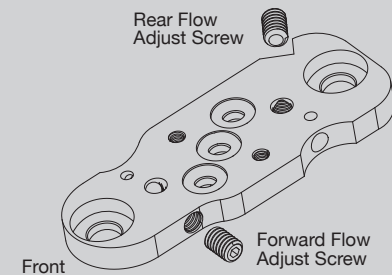
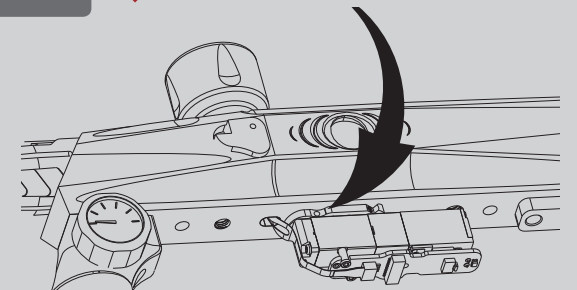


FIG. 03 → AVM PLACEMENT



INSTALLATION INSTRUCTIONS

[PLEASE READ CAREFULLY]

01

Remove the grip frame from the Shocker body. (Refer to the disassembly section in your Shocker owner's manual—an additional hex wrench will be required.)

02

Take a good look at the solenoid valve, and the manifold plate on which it is mounted.

WARNING

The Air Vent Manifold will be installed in the same position as the original manifold plate.

03

WARNING

If your Shocker SFT is equipped with a Vision Eye, carefully unplug the Vision flex strip from the upper circuit board (the circuit board mounted on the solenoid valve.)

04

Unscrew both solenoid mounting screws using a 1/16" Allen Wrench, and gently pull the solenoid valve away from the body.

05

Note the positions of the three round o-rings in the stock manifold plate. Insert the new o-rings in their corresponding positions on the Air Vent Manifold.

06

Using the 1/16" Allen Wrench, remove both screws that are holding the old manifold plate to the Shocker body.

07

Note the positions of the one round and the two oblong o-rings in the stock manifold plate. Insert the new o-rings in their corresponding positions on the Air Vent Manifold. Save the old o-rings as spares.

08

Install the new manifold plate. The oval shaped o-ring grooves will face the Shocker body. Make sure that the rounded side of the plate points towards the barrel end of the marker. Use firm pressure, but do not over-tighten the manifold plate screws.

09

Replace solenoid and screws using the 1/16" Allen wrench. Use only a gentle tightness on these screws.

WARNING

DO NOT OVERTIGHTEN THE SCREWS OR YOU WILL STRIP THE MANIFOLD PLATE.

10

Reattach the Vision flex strip with the metal contacts facing away from the Shocker SFT body.

11

Reassemble your Shocker.

WARNING

Be careful not to overstress the solenoid mounting screws when aligning the body and grip frame, or to pinch the wiring harness inside the grip frame.



ADJUSTMENT THEORY

When you are making adjustments, **screwing the forward screw in clockwise will soften the force used to close the bolt**, allowing the Shocker to be more gentle on paint. If you are experiencing paint breakage in the breech or back of the barrel or simply want to reduce recoil, turn this adjuster screw in further for softer closing force. **Screwing the rear screw in clockwise will soften the force applied to open the bolt after each shot.**

Significant reduction of the forward air flow may require a corresponding increase in the Shocker's Dwell setting (see Shocker manual) to maintain proper velocity. Most players will want to adjust both directions about the same amount, so the recoil has an even feel—just as strong forward as back—however, the Air Vent Manifold gives you the ability to tune to what you like best. **As you adjust, remember that softening the pressure is slowing bolt movement, which will ultimately reduce your maximum rate of fire—so only restrict the gas flow as much as is needed to achieve the feel you want.**

Thread locking compound is applied to the adjustment screws at the factory. If, after multiple adjustments the screws turn freely, you may wish to relock your final setting with a tiny drop of blue Locktite 242 or equivalent thread locking compound applied to the edge of the screw.

The adjusters work by restricting gas flow.

FIG. 04 → Turn Clockwise to Decrease Flow

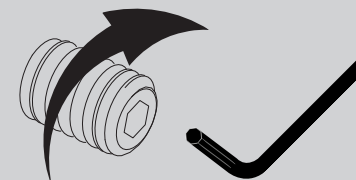
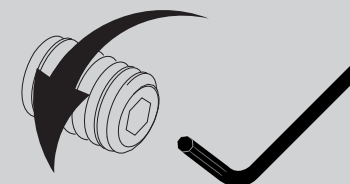


FIG. 05 → Turn Counterclockwise to Increase Flow.



ADJUSTMENT METHODS

Changing the setting of either adjustment screw does not require complete disassembly of the Shocker SFT. Follow these steps to make an adjustment.

With both adjustment screws backed out all the way, the Shocker SFT will operate as with the stock plate. Turning the screws in (clockwise) will restrict gas flow.

01

Remove the hopper and paint, and de-gas the marker as you did during installation.

02

Loosen the grip frame screws enough to separate the Shocker SFT body and grip frame only far enough to expose the Air Vent Manifold (approximately three full turns)

WARNING

Be very careful to support both the body and grip frame so that they do not flex and strain the solenoid mount screws.

03

Using the 0.035 inch Allen Wrench, adjust one or both of the Air Vent Manifold adjustment screws.

WARNING

Forward bolt movement is adjusted from the right side of the Shocker SFT [FIG. 06], rear bolt movement is adjusted from the left side of the Shocker [FIG. 07]

04

Close the grip frame and body back together, and tighten the grip frame screws.

WARNING

Take care not to pinch the wiring harness inside the grip frame. If necessary, remove the Shocker SFT's grips and guide the wiring harness from below.

05

Utilizing proper paintball safety procedures (goggles designed for paintball, a safe area, etc.) test fire the Shocker SFT, and decide if you should make further adjustments.

06

Repeat from step 1 until you are pleased with your newly custom tuned Shocker SFT. When you have achieved your final adjustments, you may wish to use the tip of the 0.035 inch Allen Wrench to apply a tiny amount of temporary thread locking compound (Blue Loctite 242 or equivalent) to the edge of the adjuster screws if the factory applied thread locker has worn away.

FIG. 06 → FORWARD FLOW ADJUSTMENT

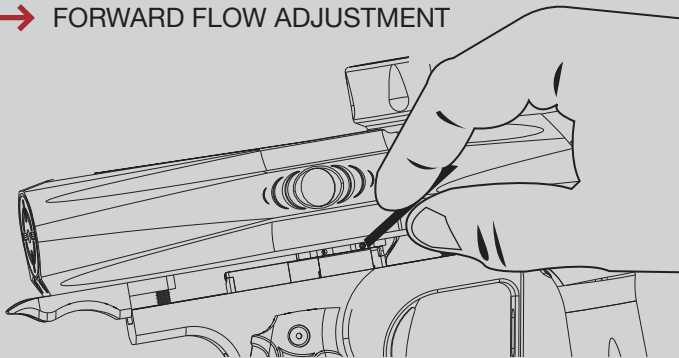


FIG. 07 → REAR FLOW ADJUSTMENT

