



Brock's Performance • 4064 E. Patterson Road • Dayton, OH 45430 • Phone: 937-912-0054 • Fax: 937-912-0062

## ZX-14R (06-17) AIR SHIFTER CYLINDER MOUNTING KIT (#561334) & AIR SHIFTER LEVER CLAMP (#561347) INSTALLATION INSTRUCTIONS

The Brock's Performance Air Shifter Cylinder Mounting Kit & Air Shifter Lever Clamp are designed to bolt on to the ZX-14R OEM upper engine mounting bolt and the OEM shift lever without any modification required.

**CHECK PACKAGE CONTENTS:** The Air Shifter Cylinder Mounting Kit & Air Shifter Lever Clamp are shown in (Figure 1.) The package contents include (#561334 & #561347 are sold separately):

- **Air Shifter Cylinder Mounting Kit (#561334):**

- 1 x Air Shifter Cylinder Bracket
- 1 x Air Shifter Cylinder Adapter Nut
- 1 x M8 x 25mm Socket Head Cap Screw
- 1 x Air Shifter Cylinder Bracket Pin
- 1 x Stainless Steel Sleeve Bearing
- 2 x 8-32 x 1/4 Button Head Cap Screw



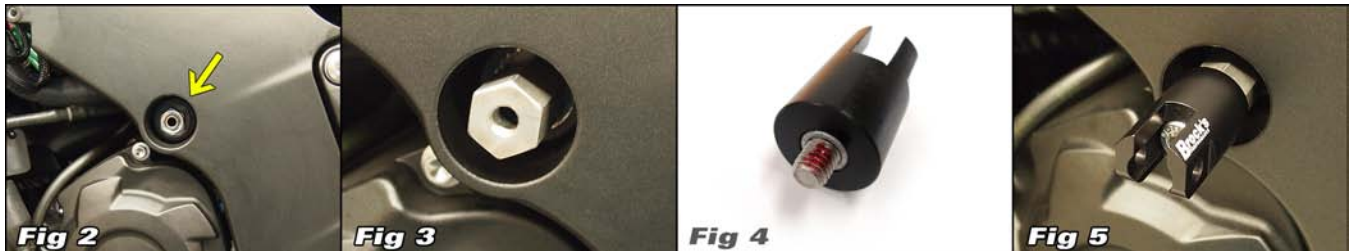
- **Air Shifter Lever Clamp (#561347):**

- 1 x Air Shifter Lever Clamp Front
- 1 x Air Shifter Lever Clamp Back
- 2 x 10-32 X .25in Cup Point Set Screw
- 4 x 8-32 X .50in Flat Socket Head Cap Screw



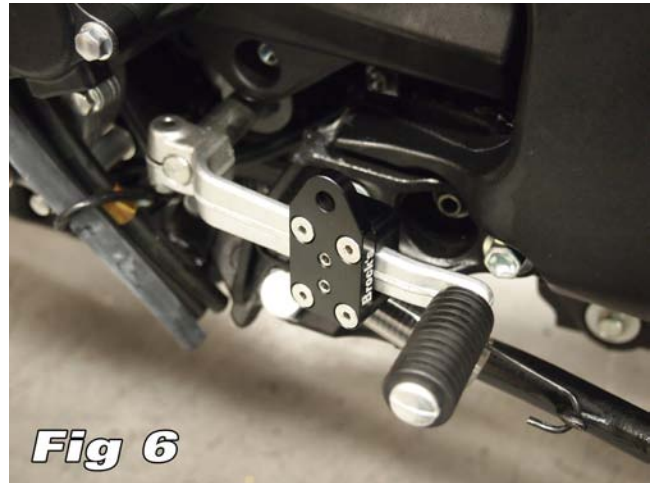
**Fig 1**

**INSTALL CYLINDER BRACKET:** While supporting the upper rear engine mount bolt on the right side, remove nut from the left side. (See figure 2.) Install the adapter nut, torque to 44 ft-lb (59 Nm). (See figure 3.) Be sure to support the engine mount bolt from the opposite side, the bolt head must remain seated in the slot. Insert the bushing onto the bolt and slide it into the cylinder bracket. Apply a drop of red Loctite to secure the bolt. (See figure 4.) Install the cylinder bracket onto the adapter nut and tighten to 50 in-lb (4.2 ft-lb). DO NOT OVERTIGHTEN. The bracket will spin freely when installed. (See figure 5.)



**INSTALL LEVER CLAMP:** Put the rear portion of the clamp behind the shift lever. Place the front portion of the clamp on the front side of the shift lever; aligning the bolt holes with the rear portion. Secure the front of the clamp to the rear with the (4) flat head screws using a light removable thread locker. (See figure 6.) Install the (2) set screws, but do not tighten them completely. Once the cylinder and clevis have been installed, and you have determined proper position of the lever clamp, you will tighten these down all the way.

**INSTALL AIR CYLINDER:** Install the air cylinder, slide the pin into the bracket, tighten the (2) button head screws and secure using a light removable thread locker. (See figure 7.)



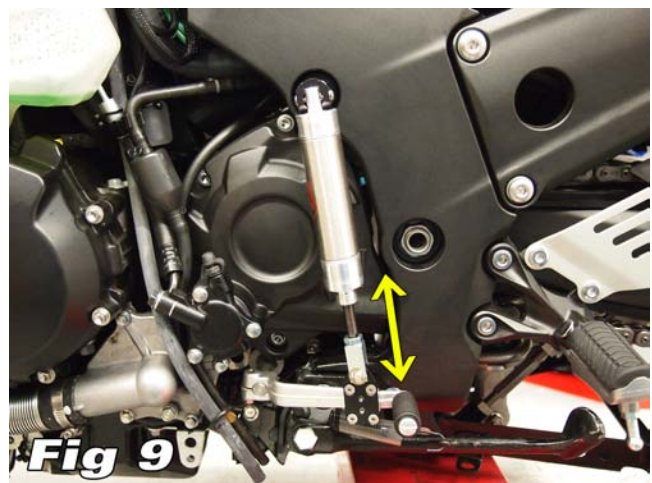
Connect the clevis to the lever clamp with the pin and retaining clips. (See figure 8.)



**FINAL CHECK AND TESTING:** Perform a final verification of the proper shift lever travel. We recommend 3/16 – 1/4 inch away from bottoming out the shift cylinder throughout the entire gear range (up and down). With the engine off and the rear wheel elevated, rock the rear wheel back and forth with your right hand while manually operating the shifter with your left to verify. (See figure 9.)

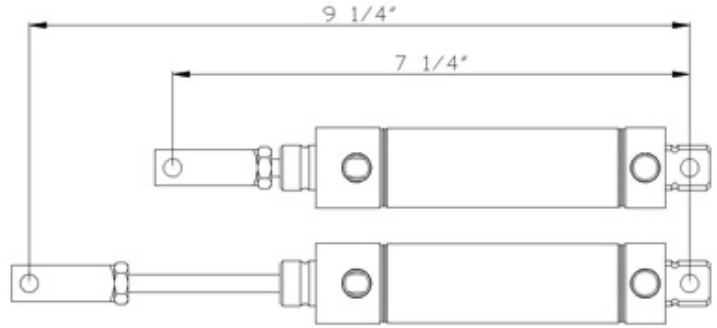
**If there is a loss of travel or bind, investigate the problem - DO NOT OPERATE the machine until the problem is resolved.**

In order to obtain proper clearance, it may be necessary to use a zip-tie on the kickstand spring to pull it away from the air shifter lever clamp, (See figure 8.)

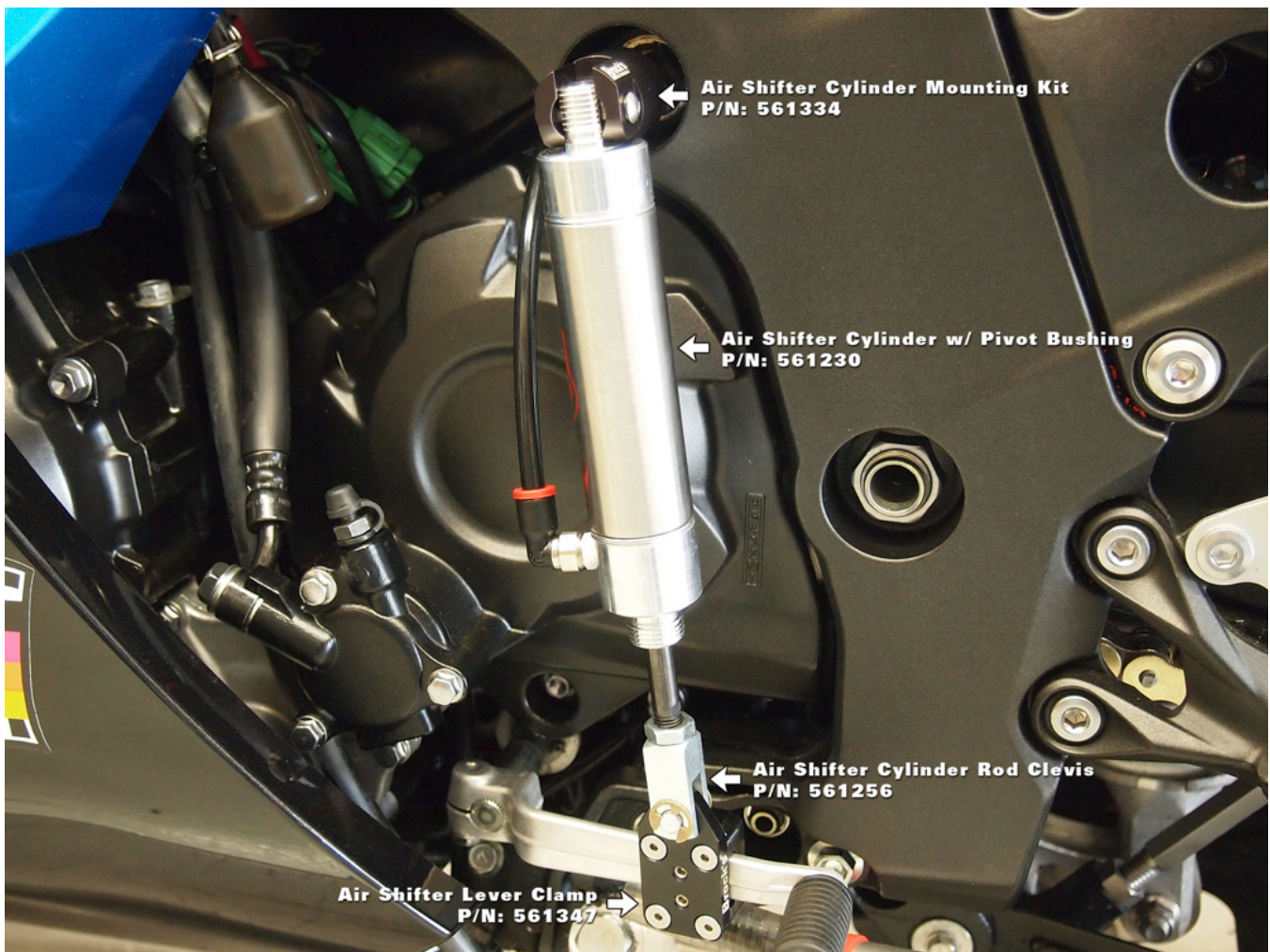


**NOTE ABOUT AIR CYLINDER SIZE:**

This kit is designed for a 2-inch stroke air cylinder with a mounted length of 8 1/4 inches. Cylinder lengths would be 7 1/4 inches retracted to 9 1/4 inches extended, centering the stroke of the cylinder with the shift lever at rest. The position of the shift lever may need to be adjusted to obtain these dimensions, consult a service manual for shift lever adjustment procedure.



**Reference for Air Shifter Cylinder Measurement**



**All Brock's Performance products are designed for closed-course racetrack use ONLY!**

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