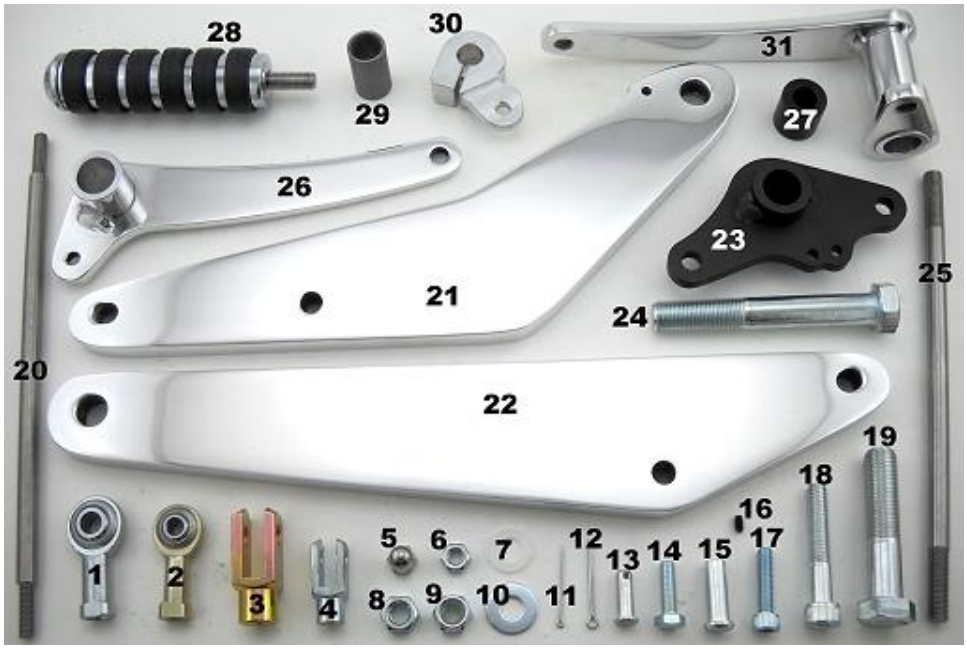
Installation instructions for FC14S Forward Controls for Shadow ACE and Aero 1100

It is highly recommended that you use a thread lock compound such as Loctite brand on all threads to keep them from vibrating loose.

Please read these instructions entirely before starting.

This picture shows the components of the FC14S. Parts will be referred to by the names & numbers shown here. If you are missing anything please email sales@refinedcycle.com.

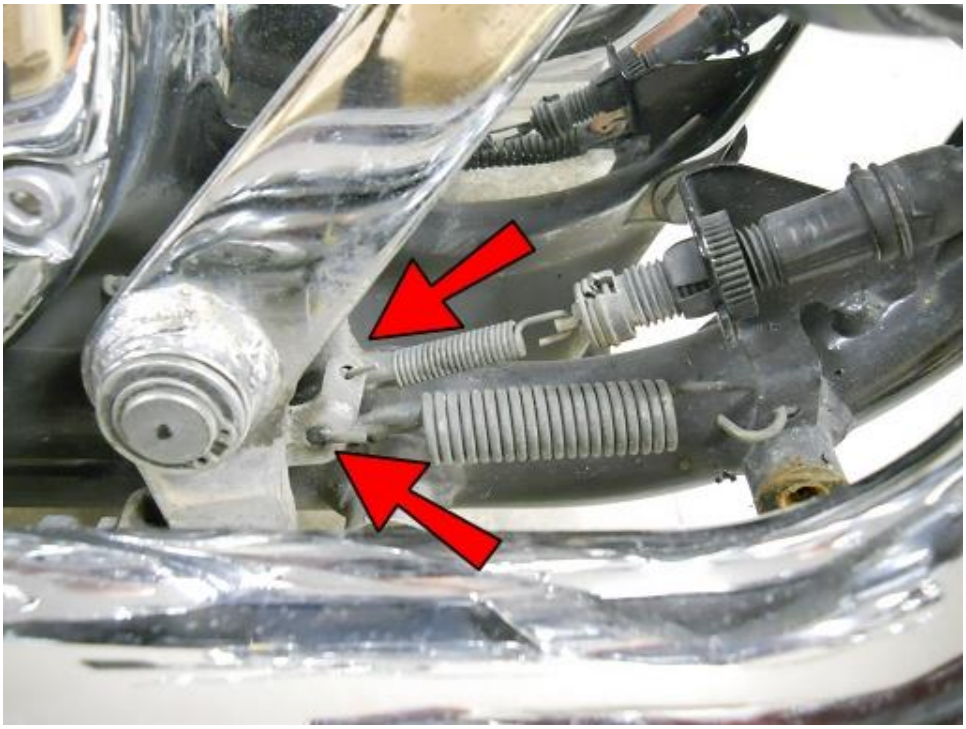


FC14S Components

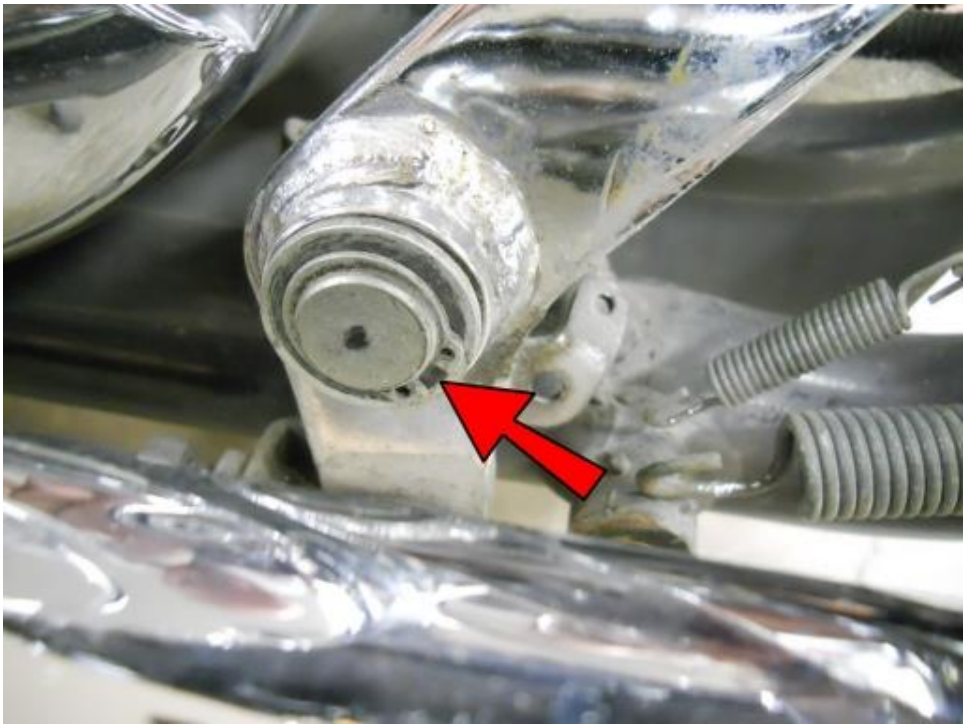
1 - 5/16" Spherical Rod End	17 - M6-1.0x25 Socket head bolt
2 - M6 Spherical Rod End	18 - M8-1.25x45 Socket head bolt
3 - 5/16 Clevis	19 - 1/2-20x2.25 Hex Head Bolt
4 - M6-1.0 Left Hand Clevis	20 - Shift Linkage
5 - M6-1.0 Acorn nut	21 - FC14S Right Side
6 - M6-1.0 Nut	22 - FC14S Left Side
7 - 3/8 Nylon washer	23 - ARM14
8 - 5/16-24 nut (qty. 2)	24 - 1/2-20x3.5 Hex Head Bolt
9 - M8-1.25 Nylock nut	25 - Brake Linkage
10 - 1/4" Washer (qty. 2)	26 - Shifter Pedal
11 - 3/64x1" Cotter Pin	27 - 3/4” Spacer
12 - 5/64x1" Cotter Pin (qty. 2)	28 - Toe peg (qty. 2)
13 - M6 Clevis Pin	29 - SLV4 (qty. 3)
14 - M6-1.0x20 Hex Head bolt	30 - ARM2
15 - 5/16x7/8" Clevis Pin	31 - Brake Pedal
16 - #6-32x1/4 Set screw (qty. 2)	

Brake Side…

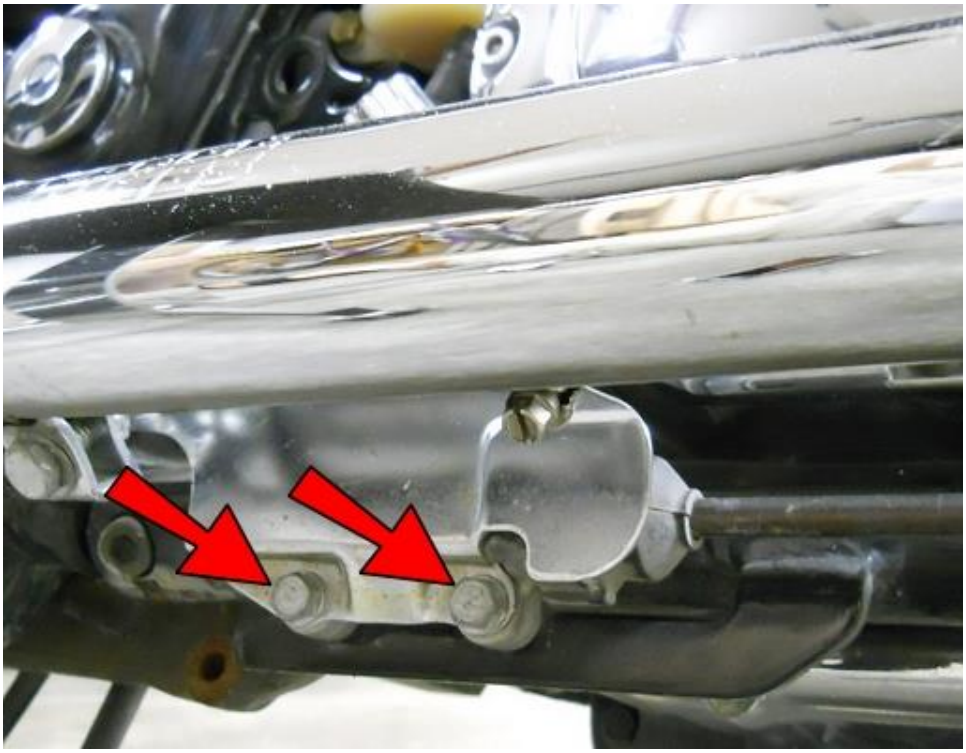
Remove these 2 bolts.



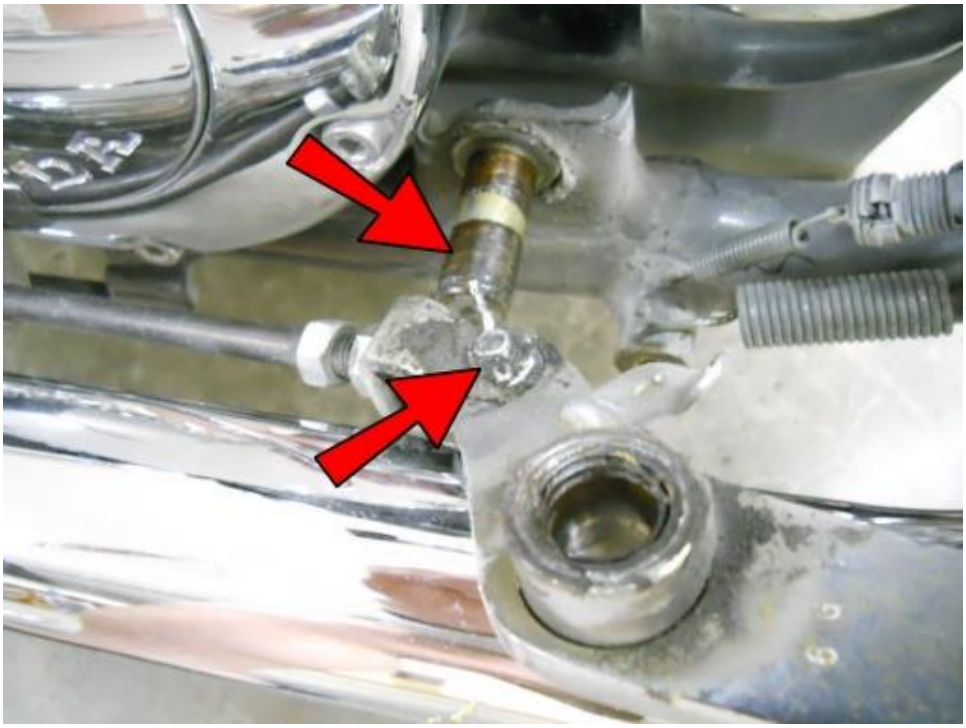
Remove the 2 springs.



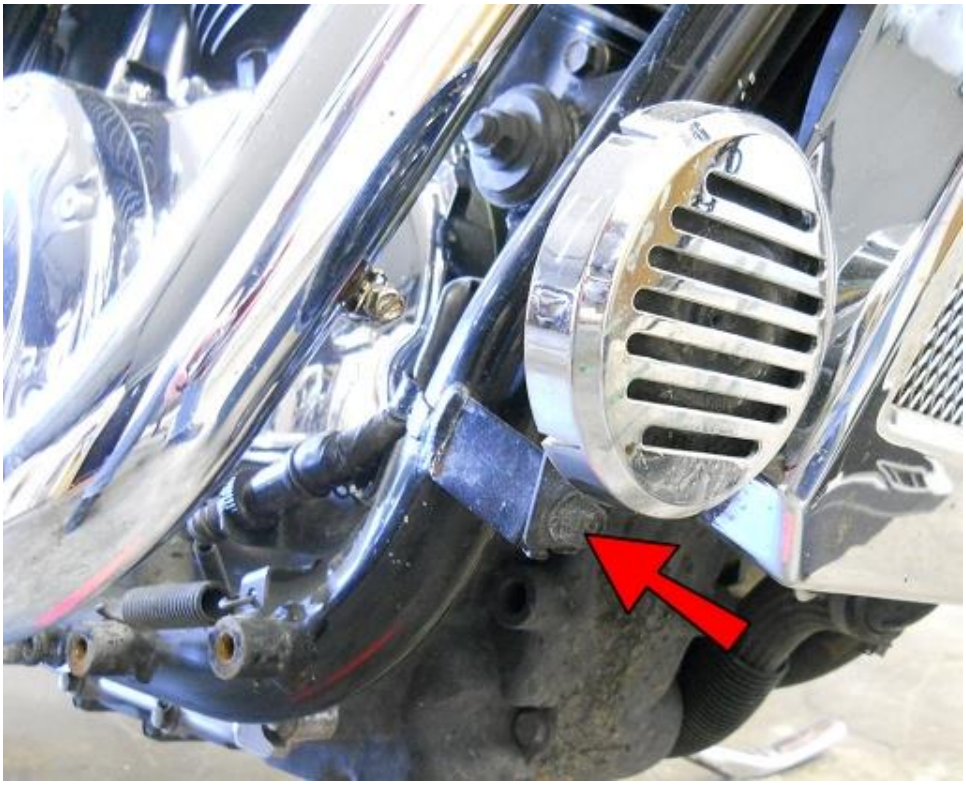
Remove the retaining ring and slide the brake pedal out slightly.



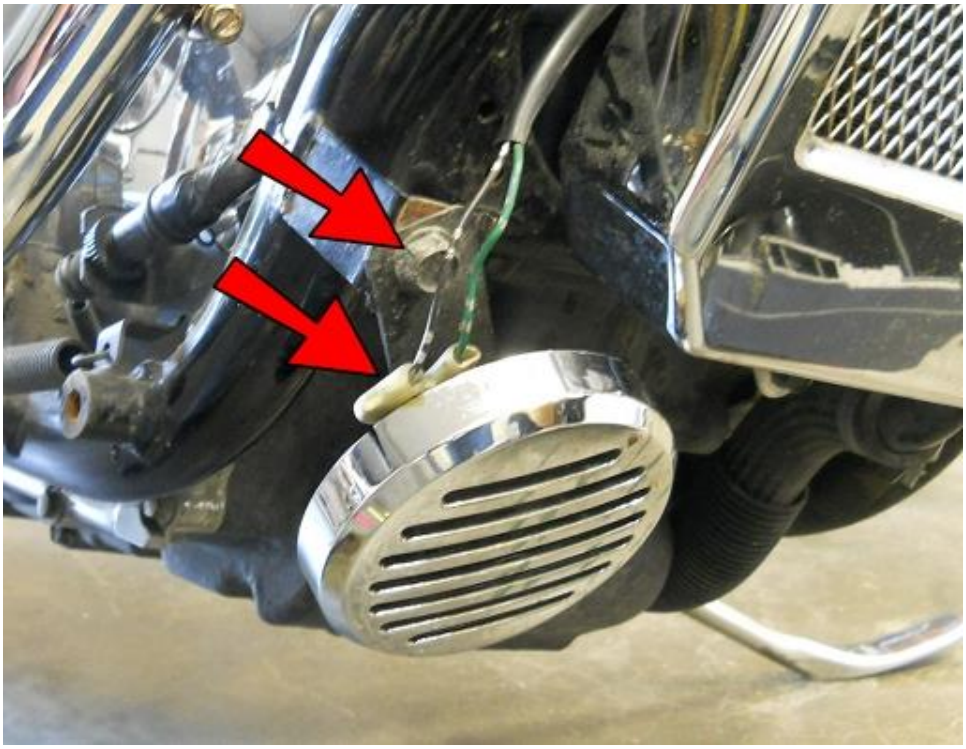
Remove the master cylinder bolts.



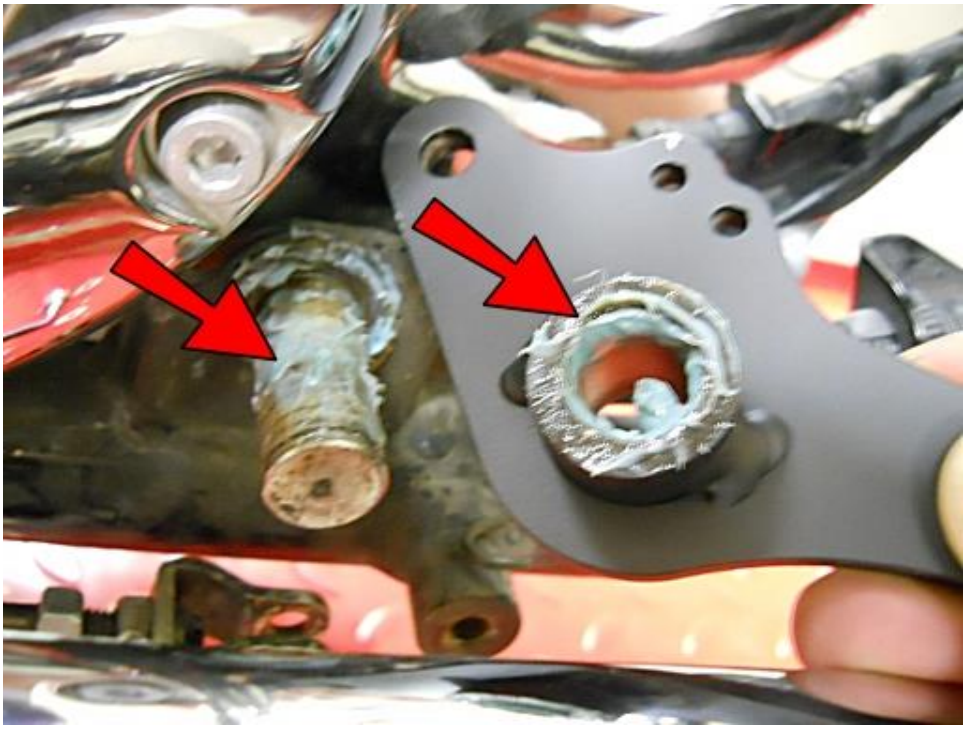
Remove the brake pedal from the shaft. Note: You may have to loosen the exhaust a little. Remove the cotter pin and clevis pin to remove the brake pedal from the linkage.



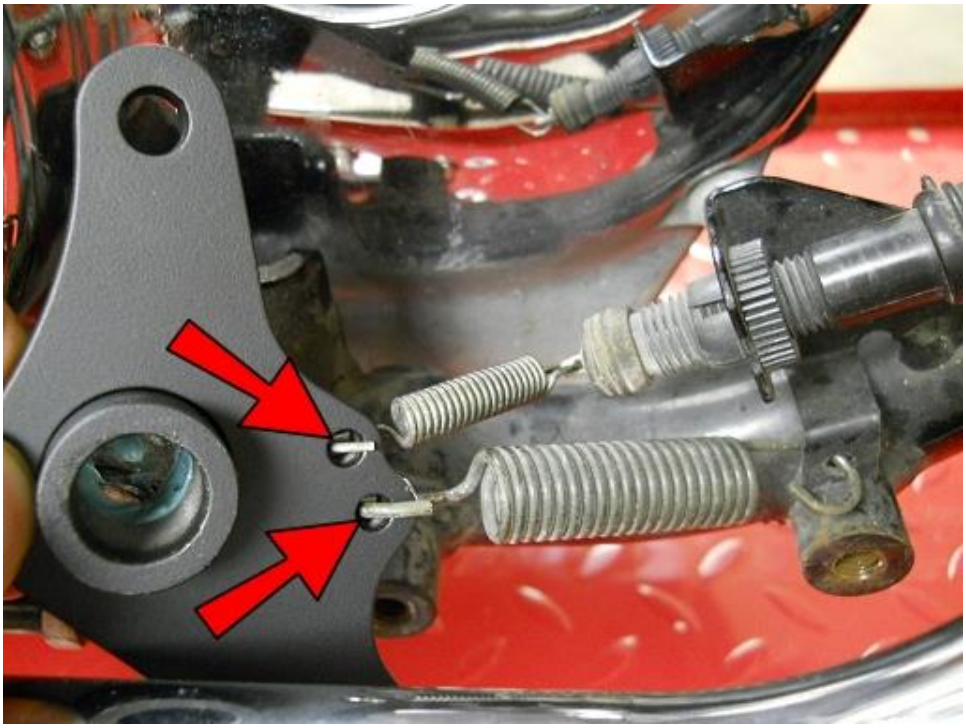
Remove this bolt to remove the horn. Unplug the 2 wires connected to it.



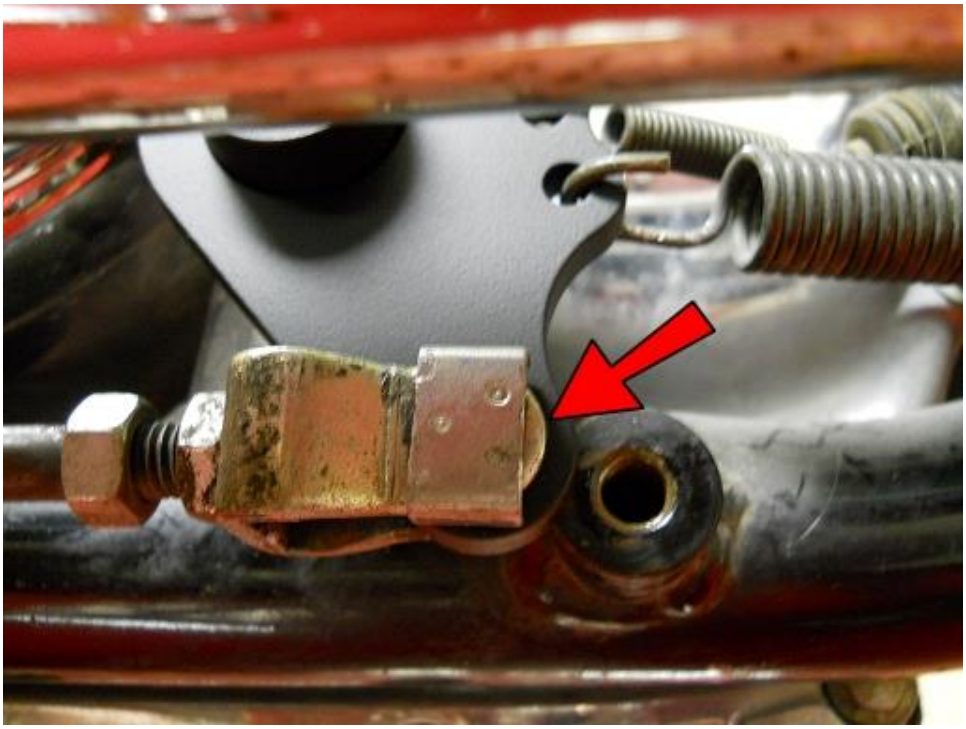
Re-install the horn upside down and reconnect the wires.



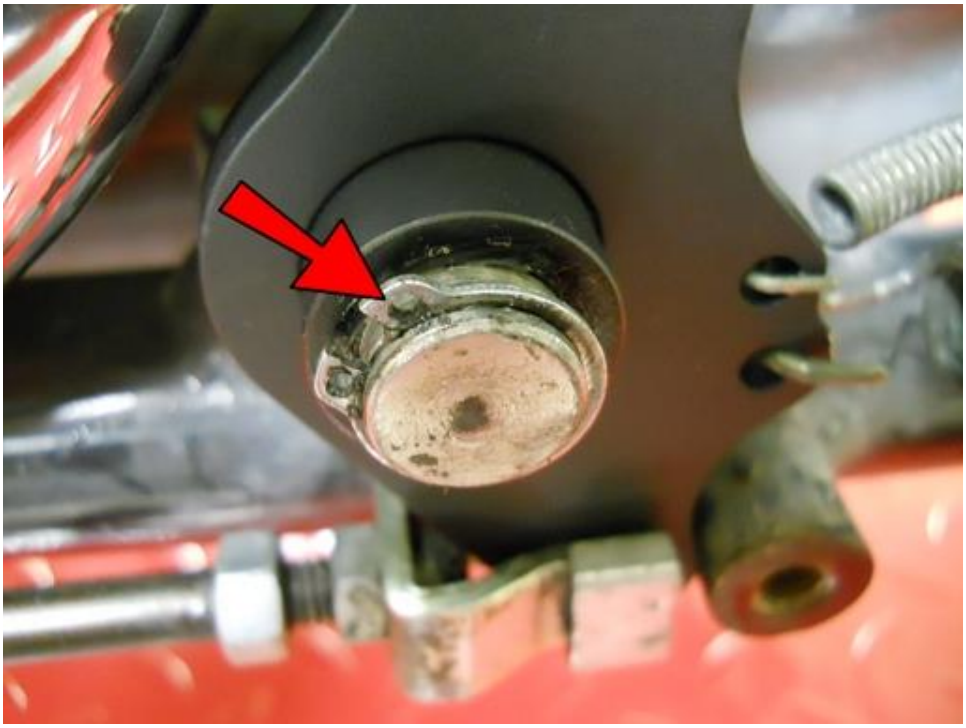
Apply some axle grease or similar to the shaft and to the inside of the hub of the ARM14.



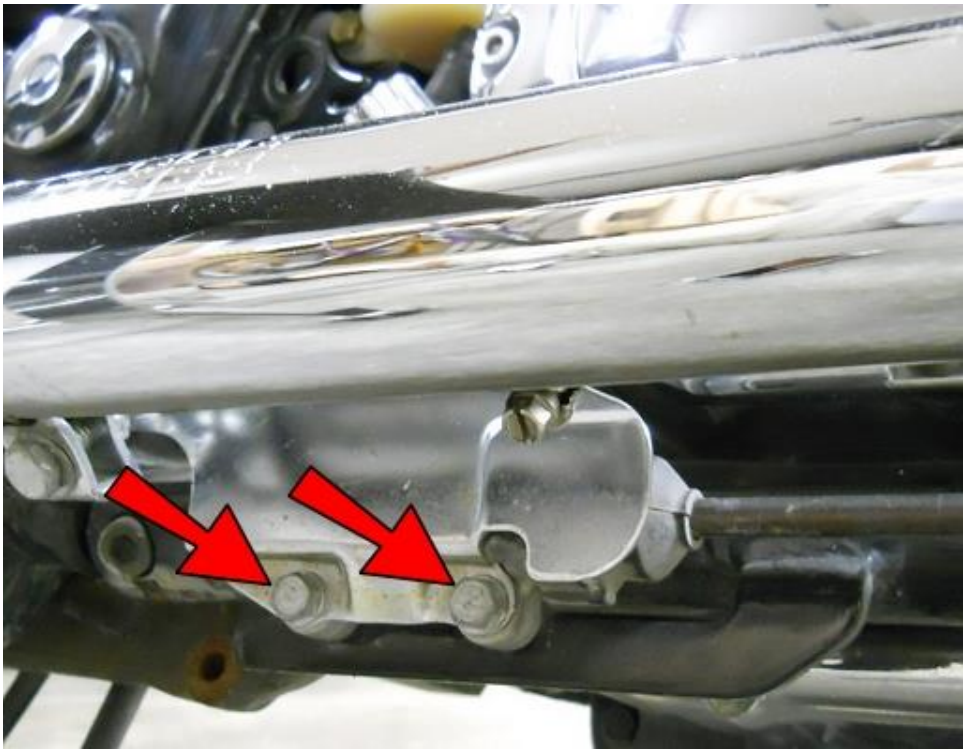
Connect the 2 springs then start the ARM14 onto the end of the shaft.



Connect the brake linkage to the ARM14 with the clevis pin removed previously and secure with a new 5/64x1 Cotter Pin. Trim off the excess legs of the Cotter Pin after bending.

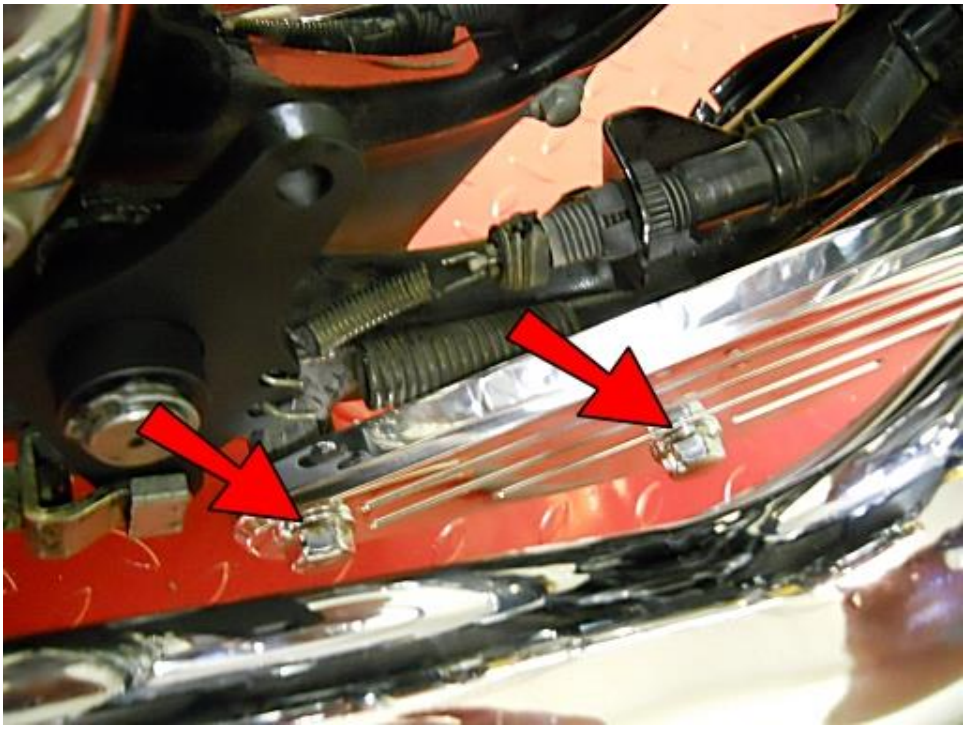


Slide the ARM14 the rest of the way onto the shaft, wipe off the excess grease and secure with the retaining ring removed previously.

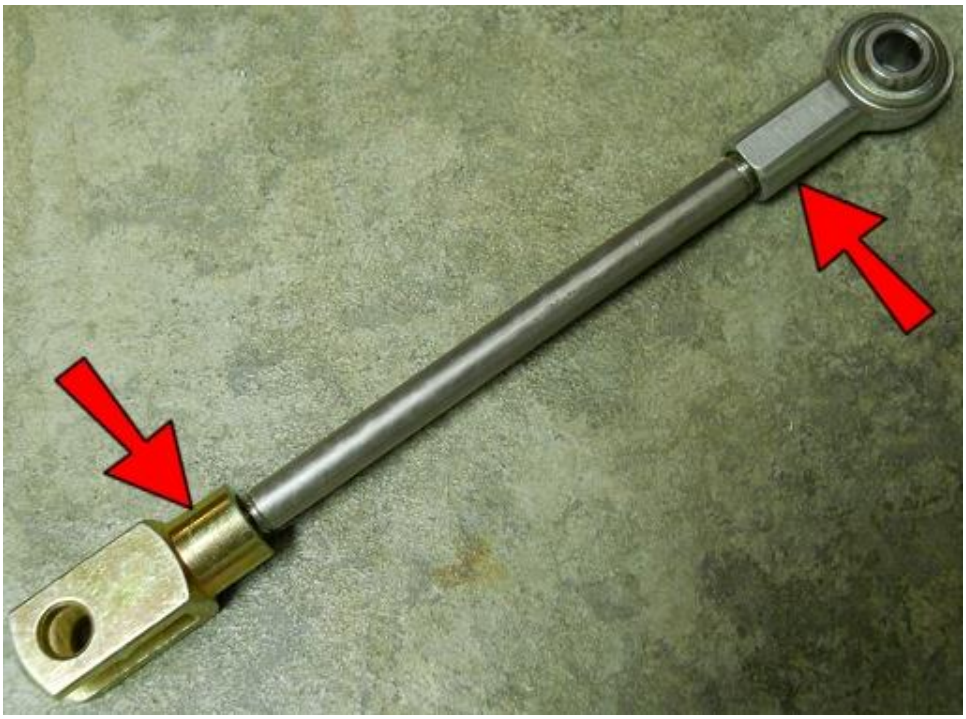


Reconnect the master cylinder and heat shield.

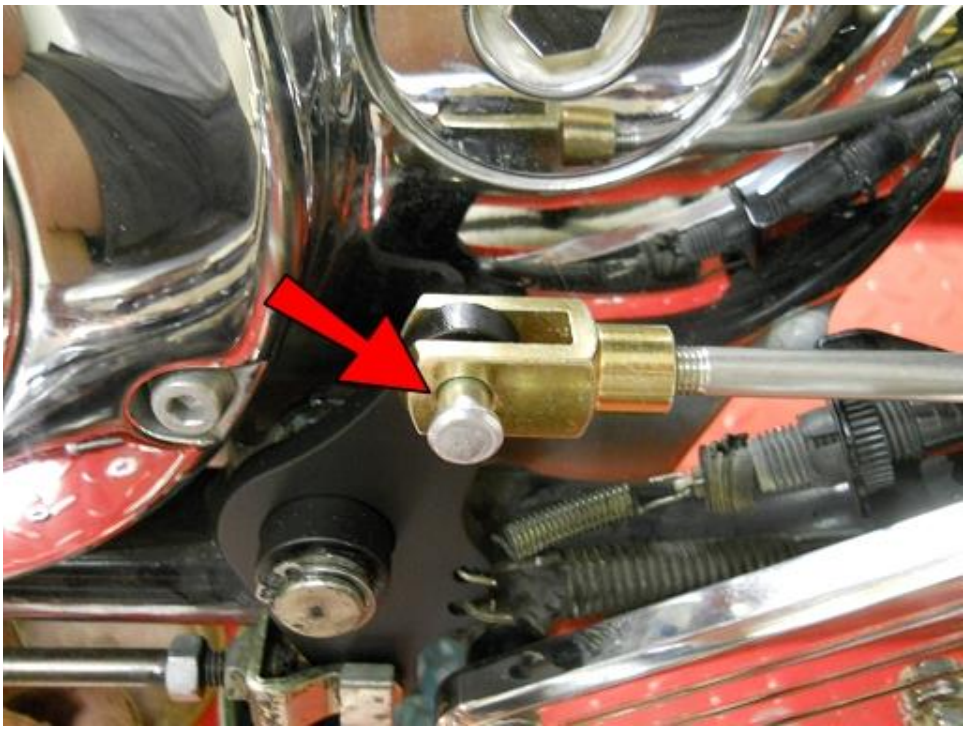
Insert a 1/2-20x3.5” Hex Head Bolt into the back side of the FC14-R.



Connect the FC14-R to the frame using the bolts previously removed from these holes.

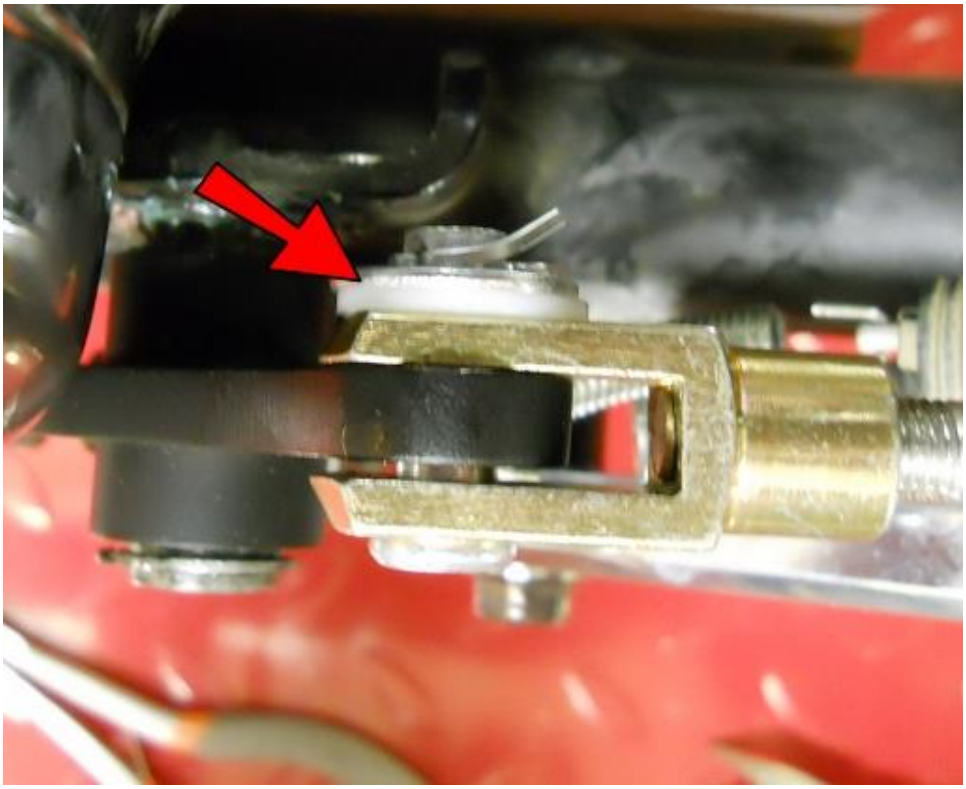


Thread a 5/16” Clevis End and a 5/16” Spherical Rod End onto the Brake Linkage.

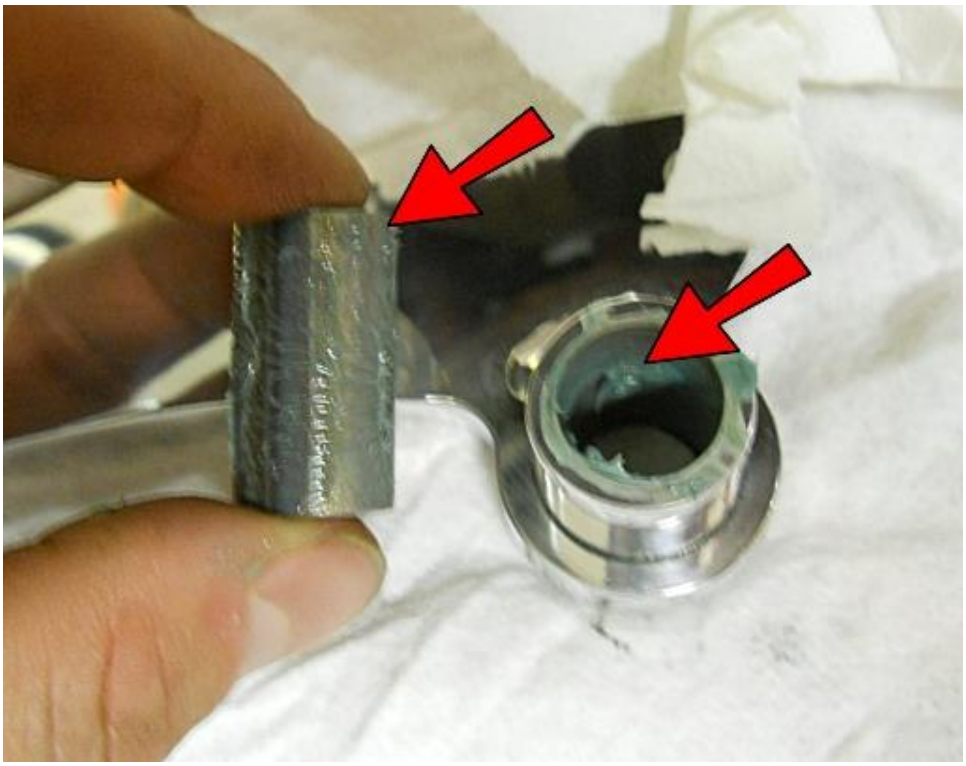


Place the Clevis end of the Linkage onto the ARM14 and start a 5/16” x 7/8” Clevis Pin.

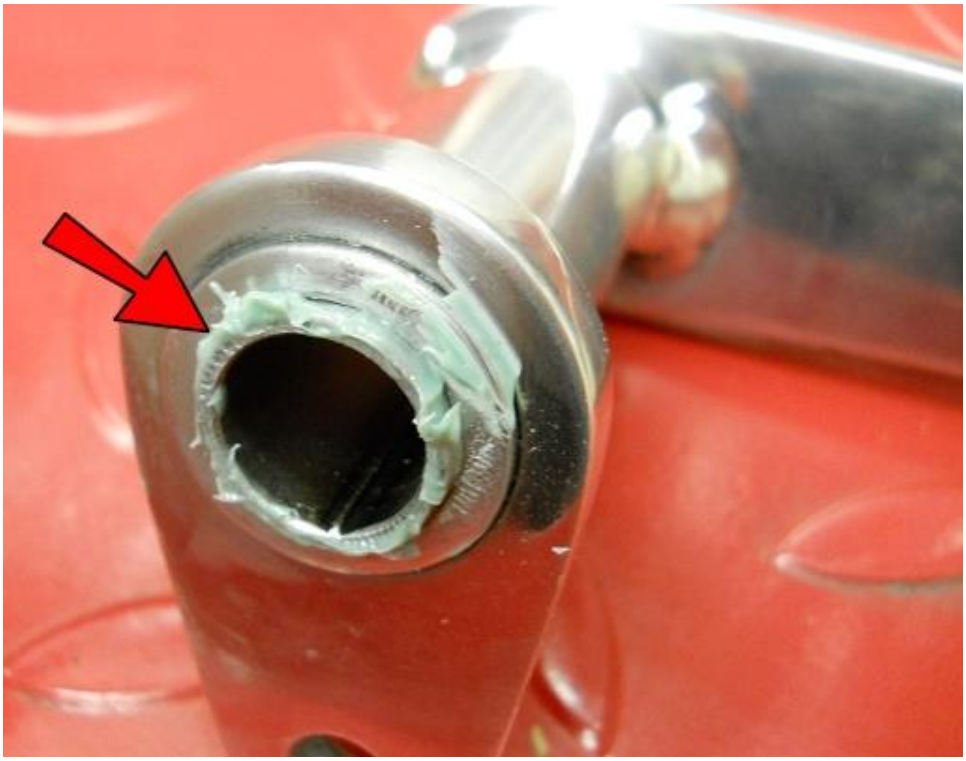
Use pliers to push the pin all the way into the hole.



Secure with a 3/8” Nylon Washer, 1/4” Zinc Washer and 5/64x1 Cotter Pin. Trim the legs of the Cotter Pin.



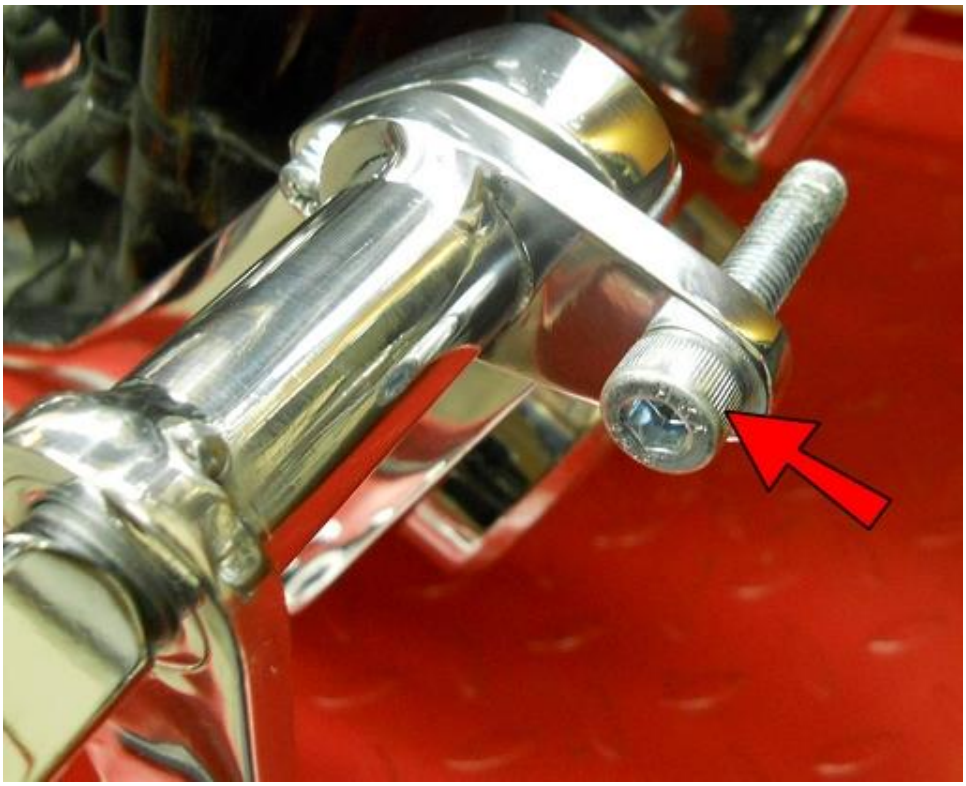
Clean out any polishing compound that may have built up inside the hubs of the Brake & Shifter Pedals and apply some axle grease or similar, to the inside of the hubs and the outside of the all 3 SLV4's.



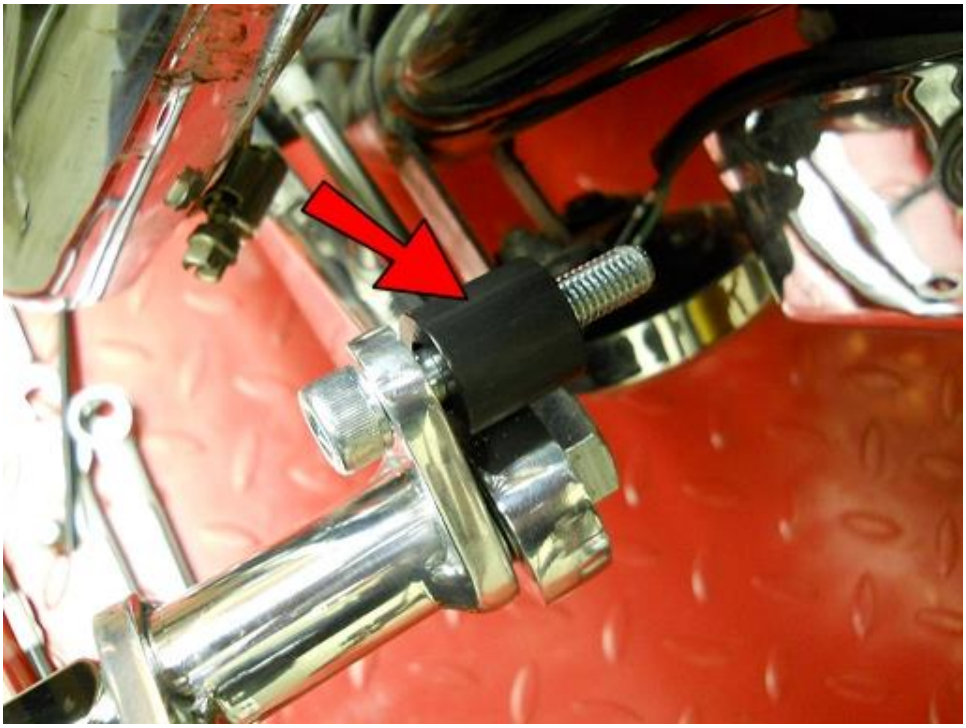
Place 2 the SLV4's into the Brake Pedal and 1 SLV4 into the Shifter Pedal.

Place the Brake Pedal onto the 1/2-20x3.5” Hex Head Bolt and thread the foot peg on and tighten, making sure to rotate the foot peg to the desired angle first.

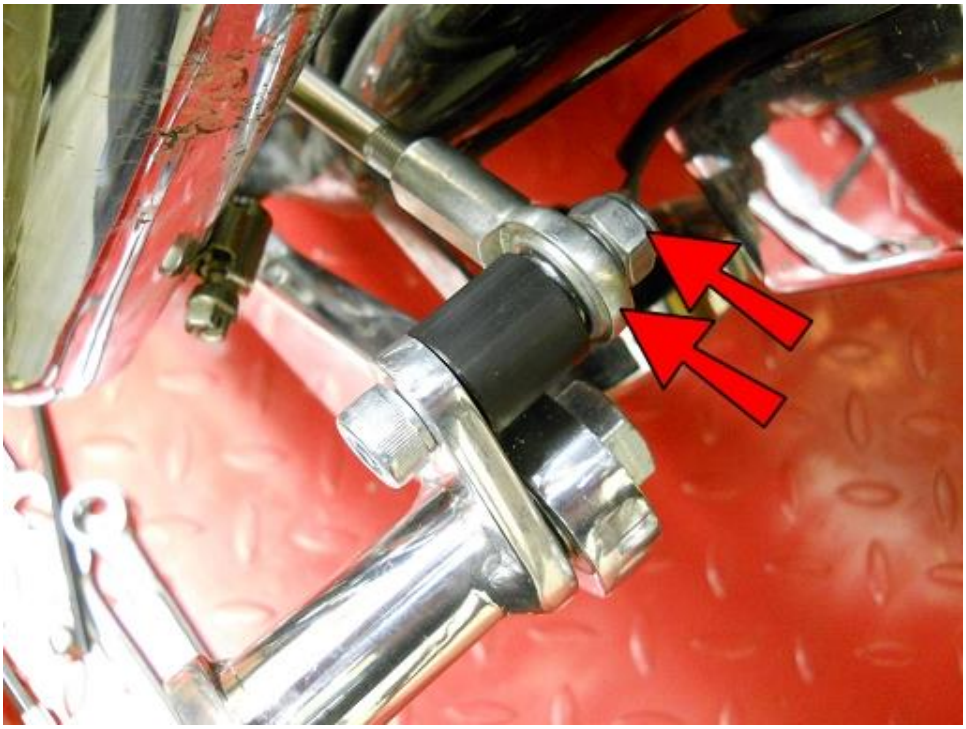
Note: It is very important that the Brake Pedal rotate completely freely. If you rotate the Pedal up it should easily fall back down at this point. IF NOT, STOP and correct this before proceding or your brakes could lock up on you while riding!



Insert an M8-1.25x45 Socket Head Bolt into the Brake Pedal.



Place a 3/4” Spacer onto the M8-1.25x45 Socket Head Bolt.



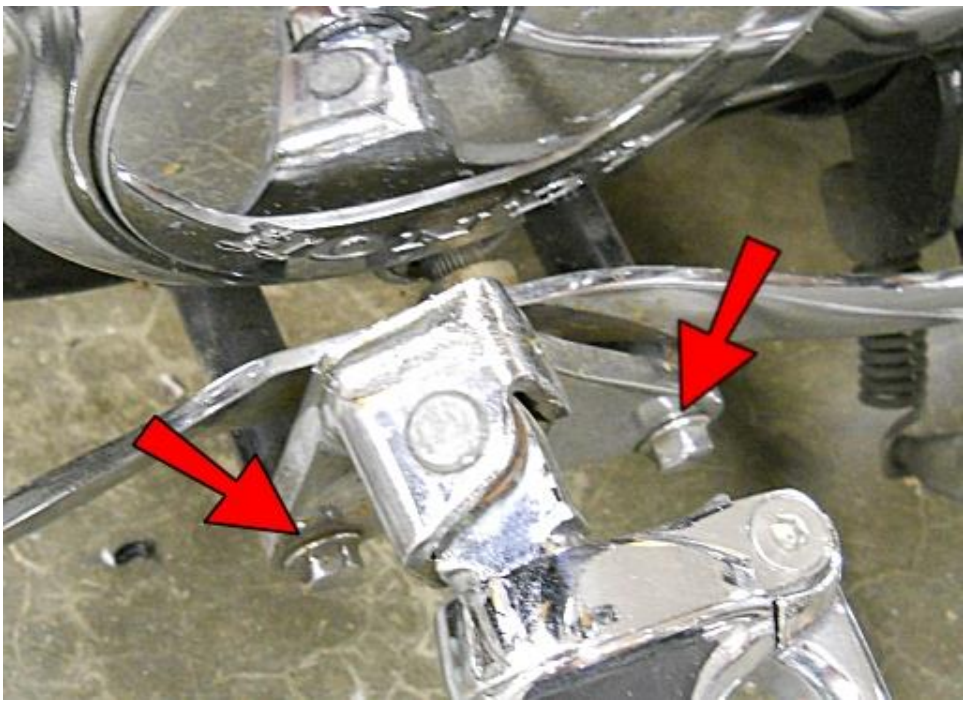
Place the Brake Linkage onto the M8-1.25x45 Socket Head Bolt and secure with an M8 Lock Nut.

Note: Make sure the M8 bolt and nut holding the linkage to the Brake Pedal is VERY tight or there will be a lot of play in the brake.

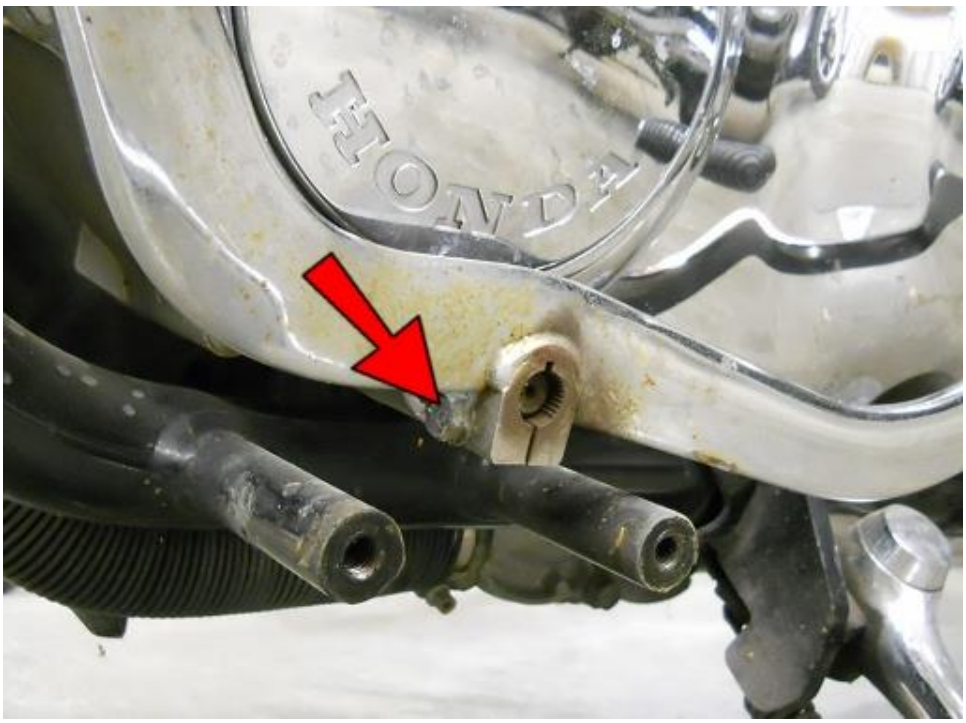
Install a Toe Peg into the Brake Pedal and secure with a 5/16” Nut. Do this on the Shifter Pedal also.

The brake light switch may need to be adjusted. Do this by turning the adjustment wheel. Hold the brake light switch in one hand to keep it from turning, while turning the wheel. If the spring tension is too tight, your brake light will be on all of the time. If it is too lose, it will not come on when the brake is applied. To test, turn your key on and observe your brake light while pressing and releasing the brake pedal a few times. If the brake light works as desired, no adjustment is necessary. If it stays on all the time, turn the adjustment wheel to loosen the spring tension on the brake light switch and retry. If it does not come on at all, tighten the tension on the brake light switch. With a little trial and error you will find the right position.

Shifter Side…



Remove these 2 bolts.

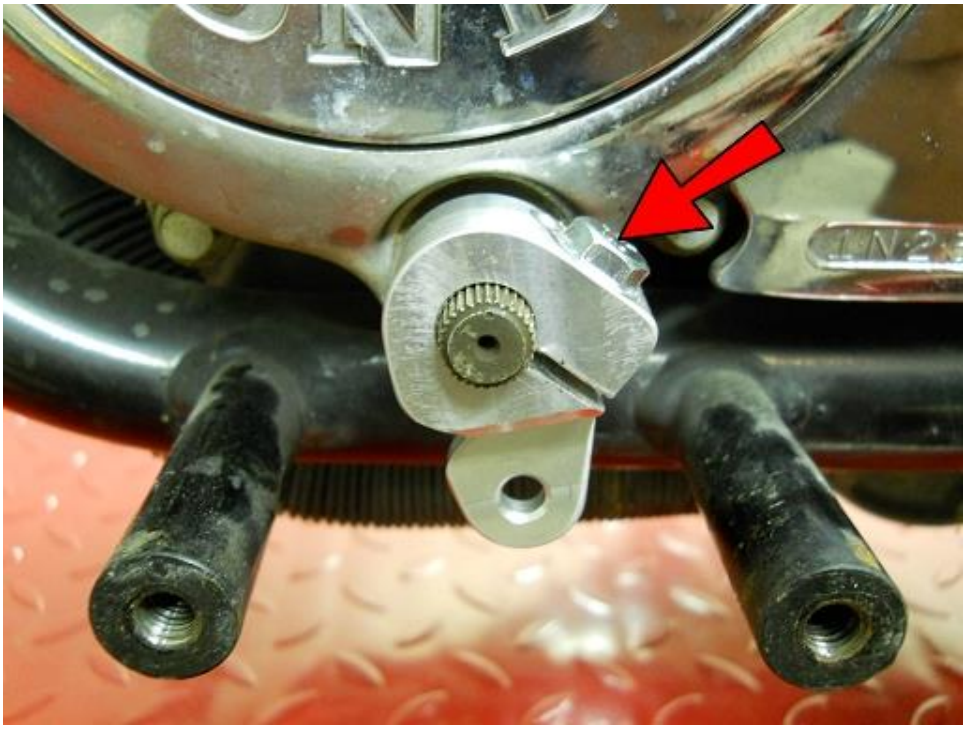


Remove this bolt and remove the shifter pedal.

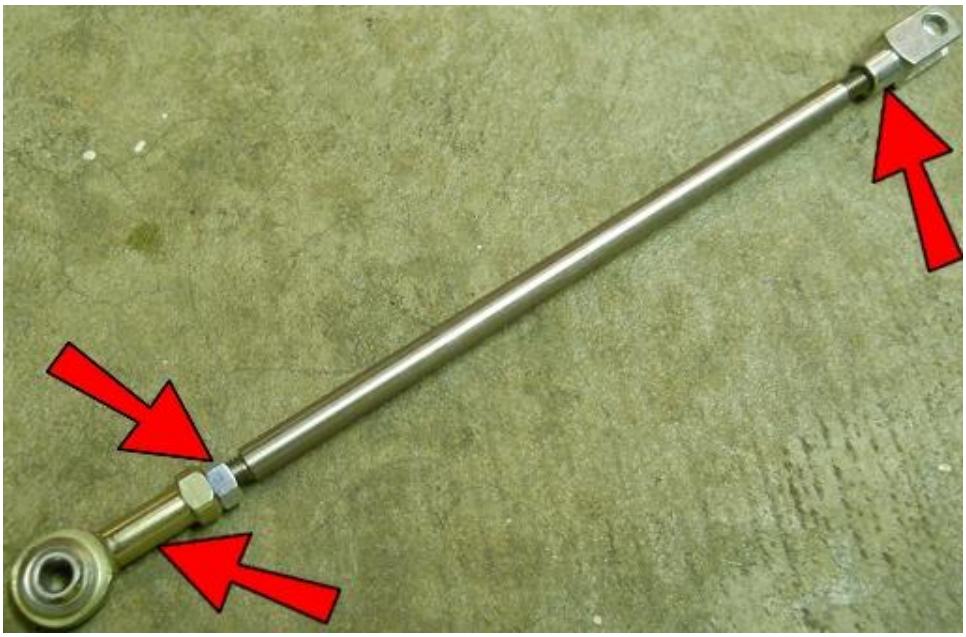
Start the two #6-32 Set Screws in the holes in the ARM2 but do not let them protrude through the inside of the large hole.

Drive a large flat head screwdriver just slightly into the slot of the ARM2 to spread it apart to make it easier to put onto the shifter spline.

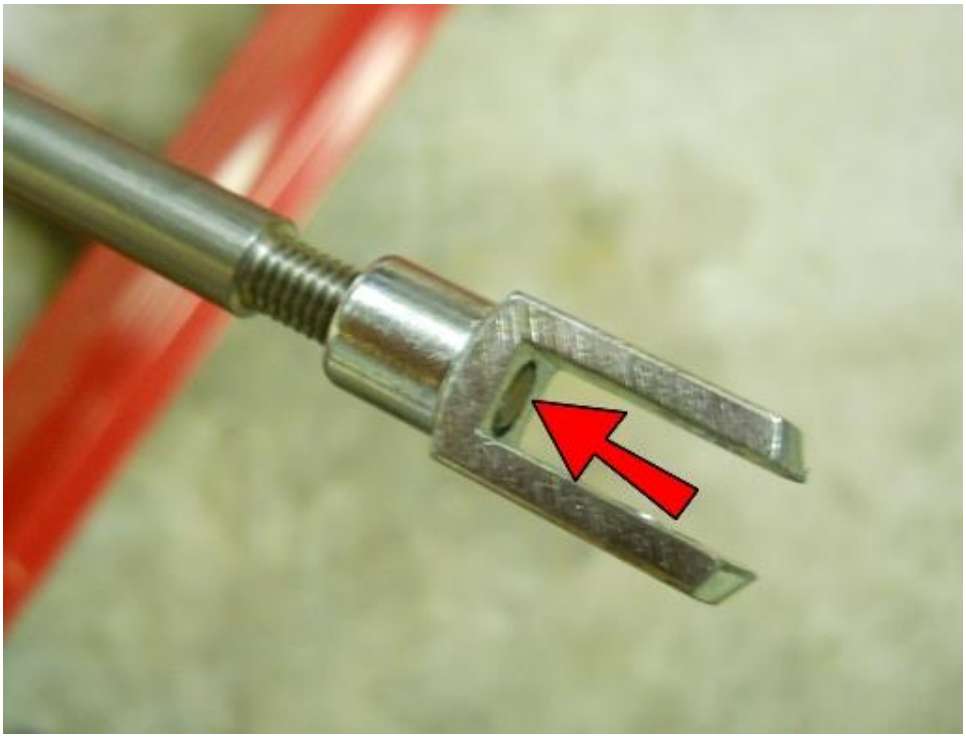
Angle the screwdriver out a bit to allow room for installation.



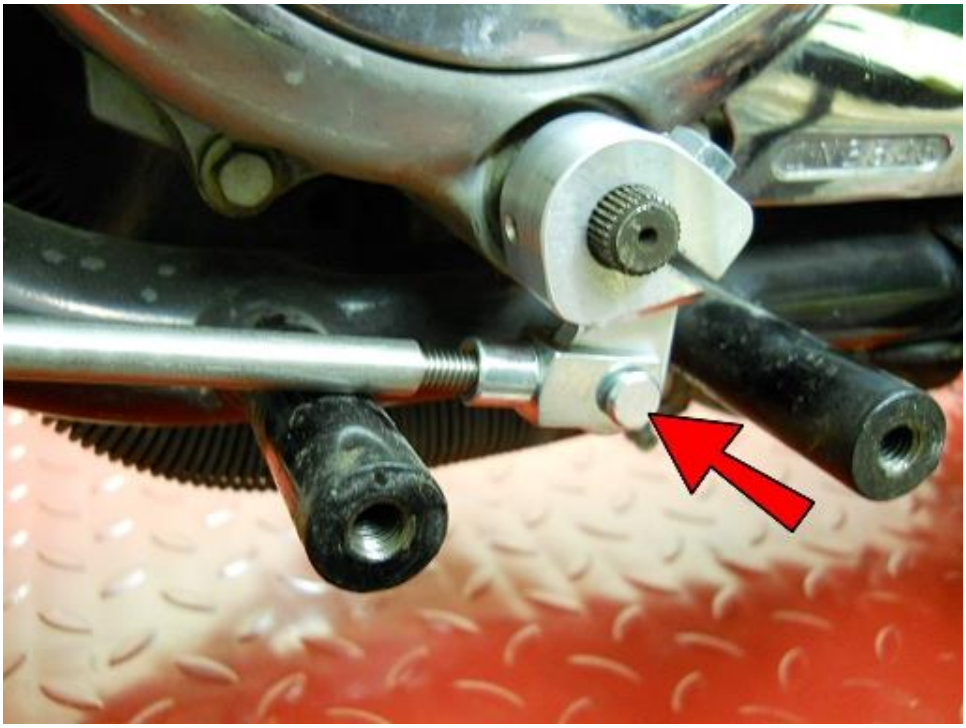
Place the ARM2 onto the spline at about a 5 o'clock poisition (slightly toward the rear) and line up the bolt hole on top of the ARM2 with the groove in the spline. Note: The end of the spline shaft will not come flush with the edge of the ARM2. Remove the screwdriver and secure tightly with an M6-1.0x20 Hex Head bolt. Now tighten the Set Screws.



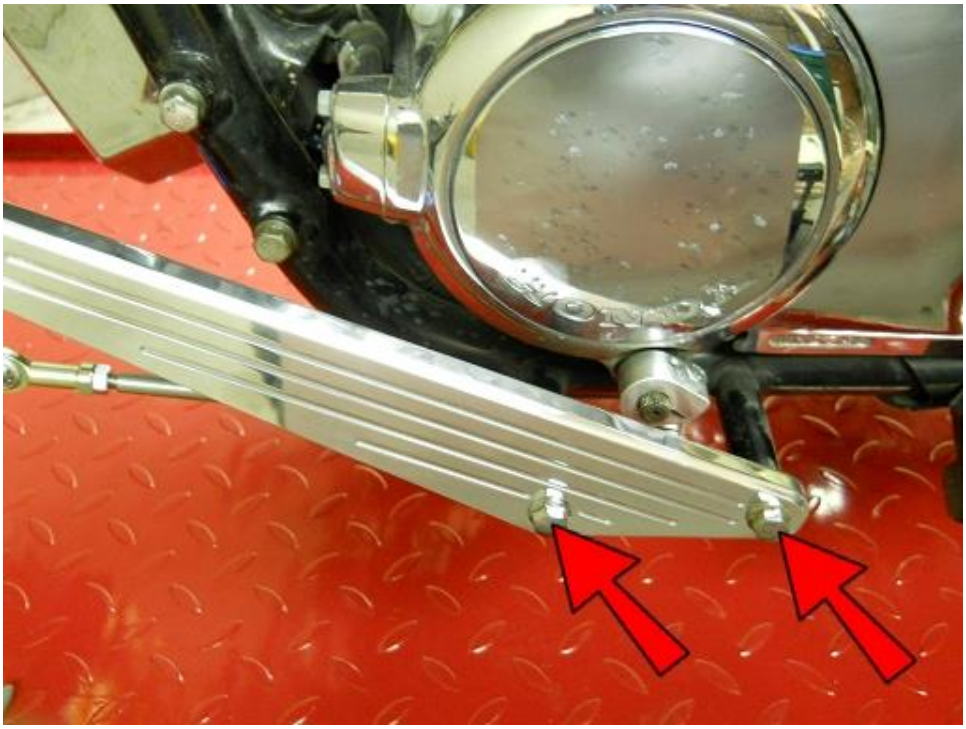
Thread an M6 Nut and an M6 Spherical Rod End onto the right hand threaded end of the Shifter Linkage and a Left Hand M6 Clevis onto the left hand threaded end.



NOTE: Only thread the linkage end in as far in as the threaded area of the clevis, so it does not protrude into the area that the clevis rotates or you will not be able to shift correctly and you will break your shifter linkage.

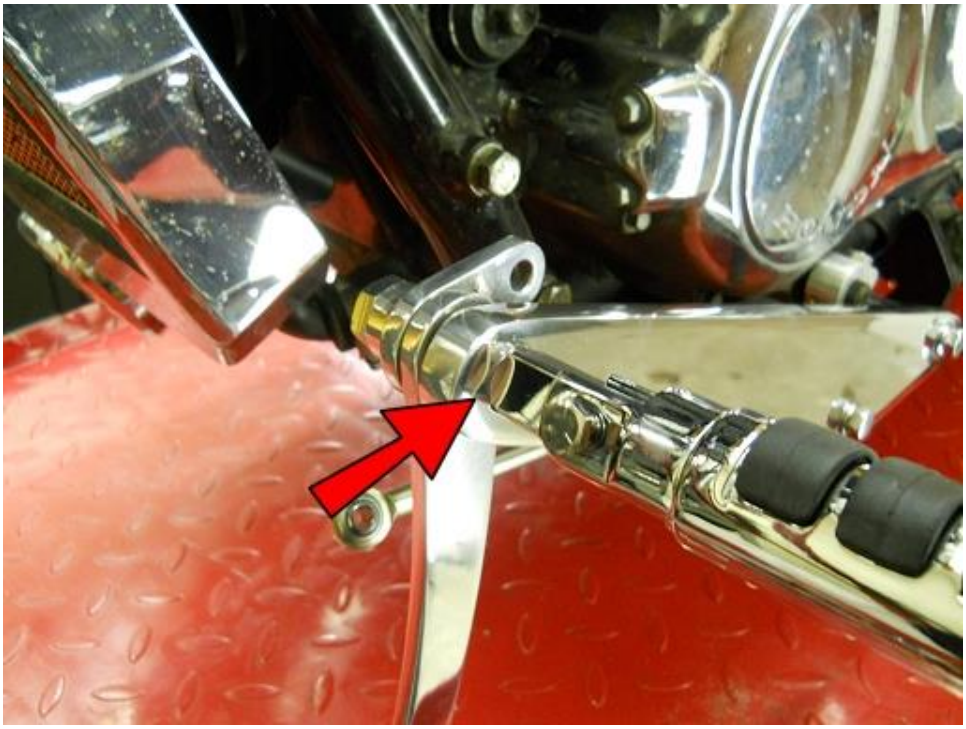


Connect the Shifter Linkage to the ARM2 with an M6 Clevis Pin and secure with a 1/4” Zinc Washer and 3/64x1 Cotter Pin.



Connect the FC14-L to the frame with the 2 bolts removed previously.

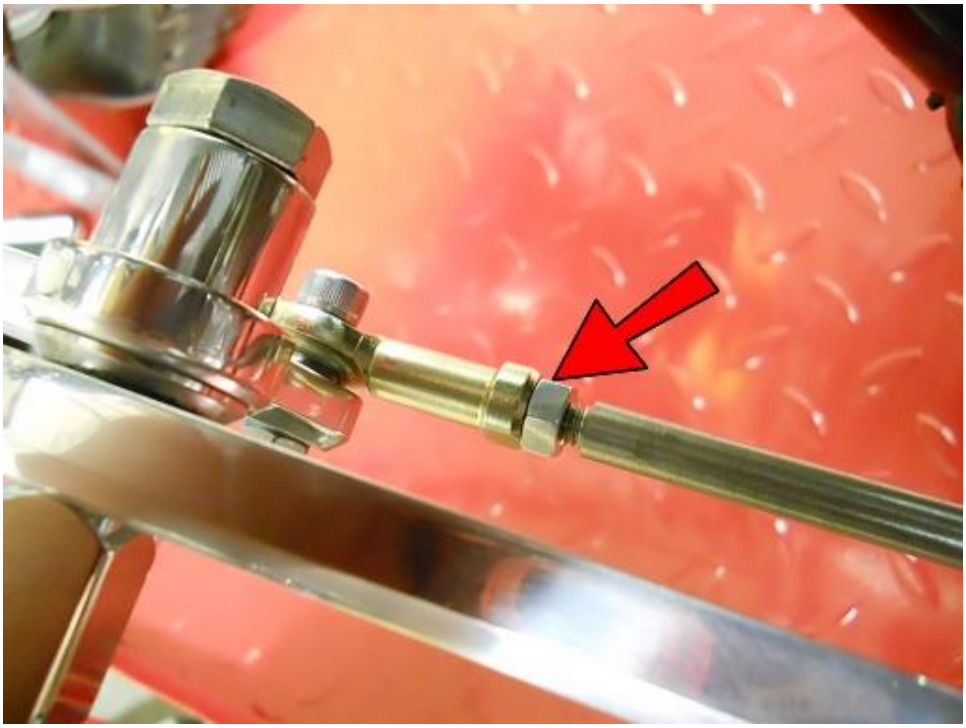
Insert a 1/2-20x2.25” Hex Head Bolt into the back side of the Shifter Pedal.



Insert the Shifter Pedal assembly into the back side of the FC14-L and thread the foot peg on and tighten, making sure to rotate the foot peg to the desired angle first. Make sure the Pedal rotates freely.

Insert an M6-1.0x25 Socket Head Bolt into the Linkage.

Connect the Linkage to the Shifter Pedal and secure with an M6 Acorn Nut.



Adjust the Shifter Pedal height by turning the linkage one way or the other. After the height is adjusted to the desired position, tighten the nut against the Spherical Rod End.

That’s it! It is recommended that at this point you double check that ALL connections are tight and take the bike for a test ride and make any other adjustments necessary for the optimal position of your shifter and brake pedals.

Enjoy the ride!