

Installation instructions for FC14 Forward Controls for Shadow ACE 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 FC14. Parts will be referred to by the names & numbers shown here. If you are missing anything please email sales@refinedcycle.com.

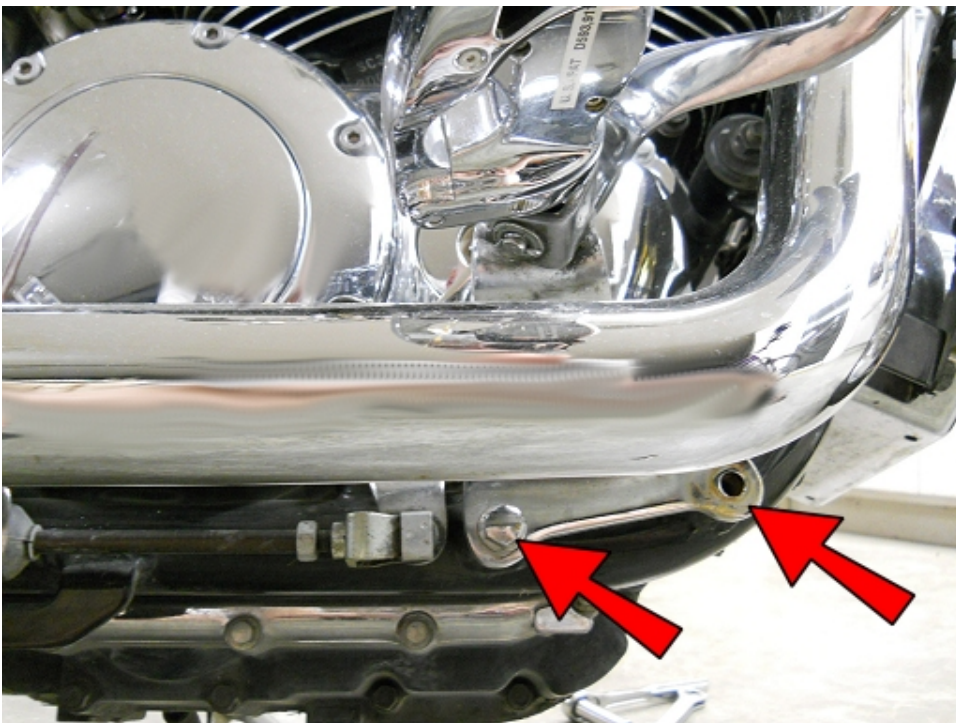


FC14 Components

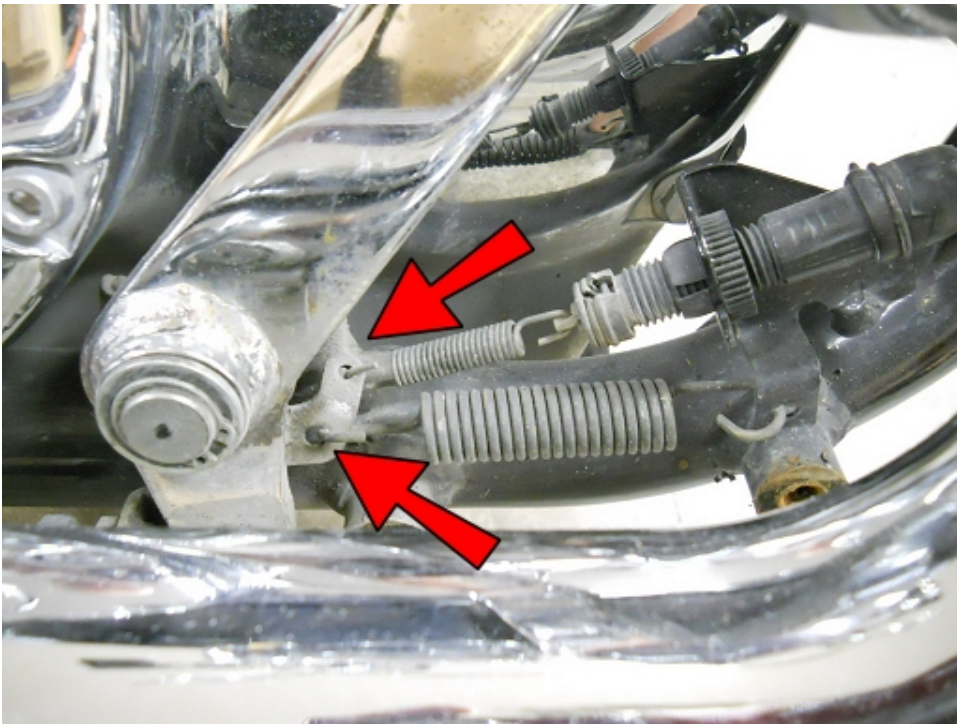
- 1- Brake Pedal
- 2- Shifter Pedal
- 3- STOF4
- 4- Toe peg (qty.2)
- 5- 1/2" Spacer
- 6- ARM14
- 7- FC14-L
- 8- FC14-R
- 9- Shifter Linkage
- 10- SLV1 (qty.2)
- 11- SLV4
- 12- 5/8 x 1/2 Bronze OR Steel Sleeve (qty.2)
- 13- 6-32 Set Screw (qty.2)
- 14- 1/4" Zinc Washer (qty.2)
- 15- 3/8" Nylon Washer
- 16- 5/16" Zinc Washer (qty.3)
- 17- 3/8-16 Acorn Nut
- 18- M6-1.0 Acorn Nut
- 19- ARM2

- 20- 3/8-16x3.5 Flat Head Bolt
- 21- 1/2-20x2.75 Hex head Bolt
- 22- 1/2-20x2.25 Hex Head Bolt
- 23- M8-1.25x40 Socket Head Bolt
- 24- 5/16" Spherical Rod End
- 25- 5/16" Clevis
- 26- M6 Spherical Rod End
- 27- M6-1.0 Left Hand Clevis
- 28- M6-1.0x25 Socket Head Bolt
- 29- 5/16x7/8" Clevis Pin
- 30- M6-1.0x20 Hex Head bolt
- 31- M6 Clevis Pin
- 32- #8-32x9/16 Screw
- 33- 5/16-24 Nut (qty.2)
- 34- M8-1.25 Lock Nut
- 35- M6-1.0 Nut
- 36- #8-32 Nut
- 37- Brake Linkage
- 38- 5/64x1" Cotter Pin (qty.2)
- 39- 3/64x1" Cotter Pin

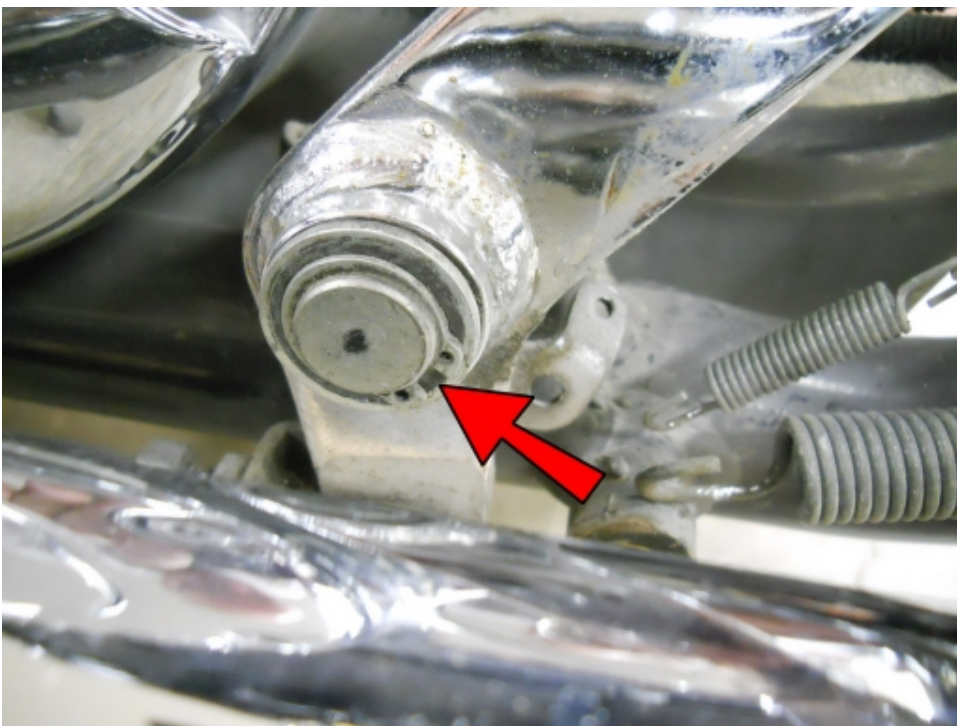
Brake Side...



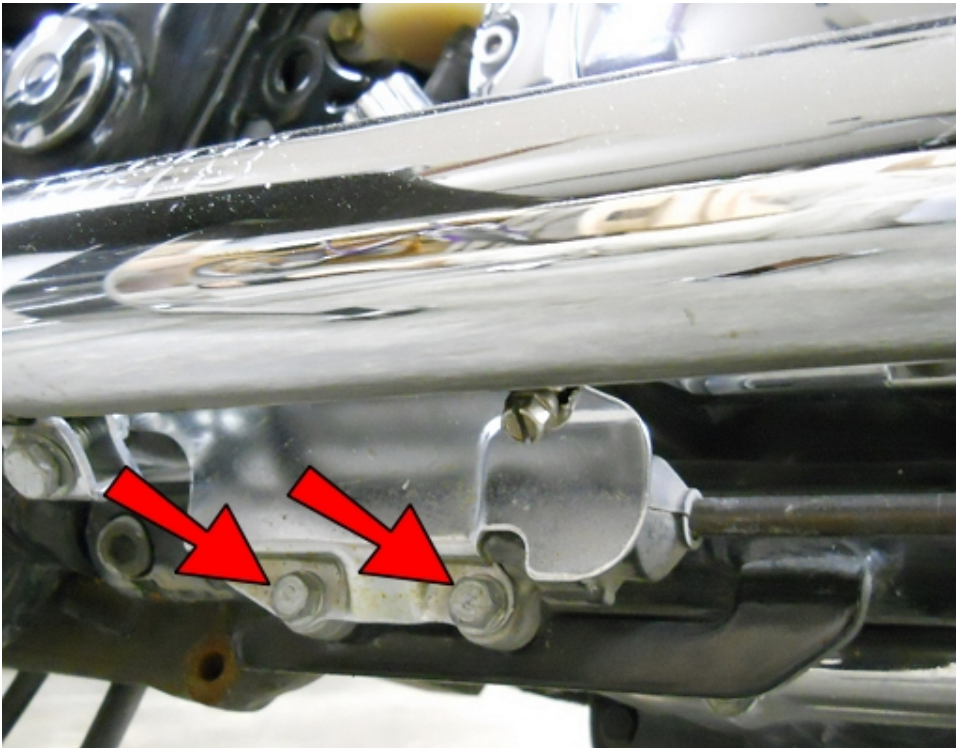
Remove these 2 bolts.



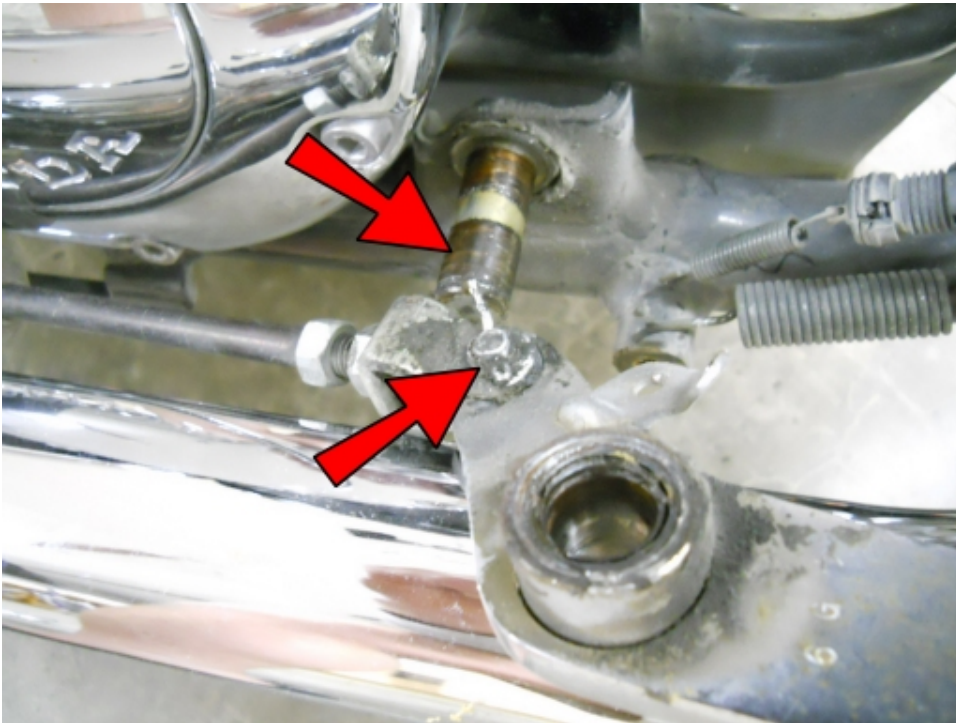
Remove the 2 springs.



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



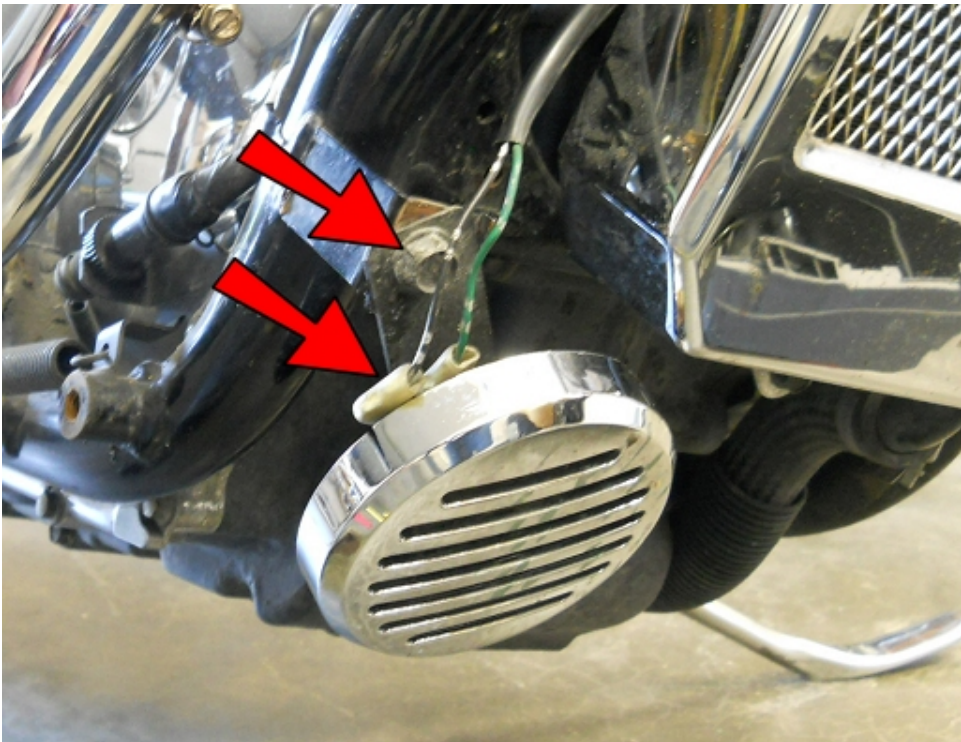
Remove the master cylinder bolts.



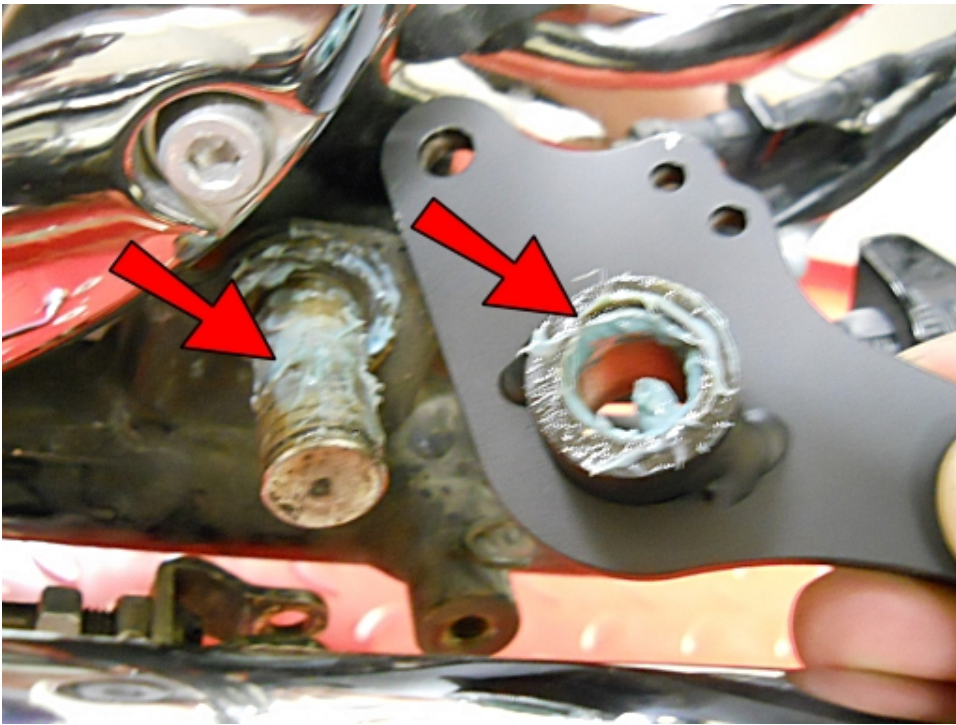
Remove the brake pedal from the shaft. Note: You may have to loosen the exhaust a little. Remove the cotter pin and clevis pin to remove the brake pedal from the linkage.



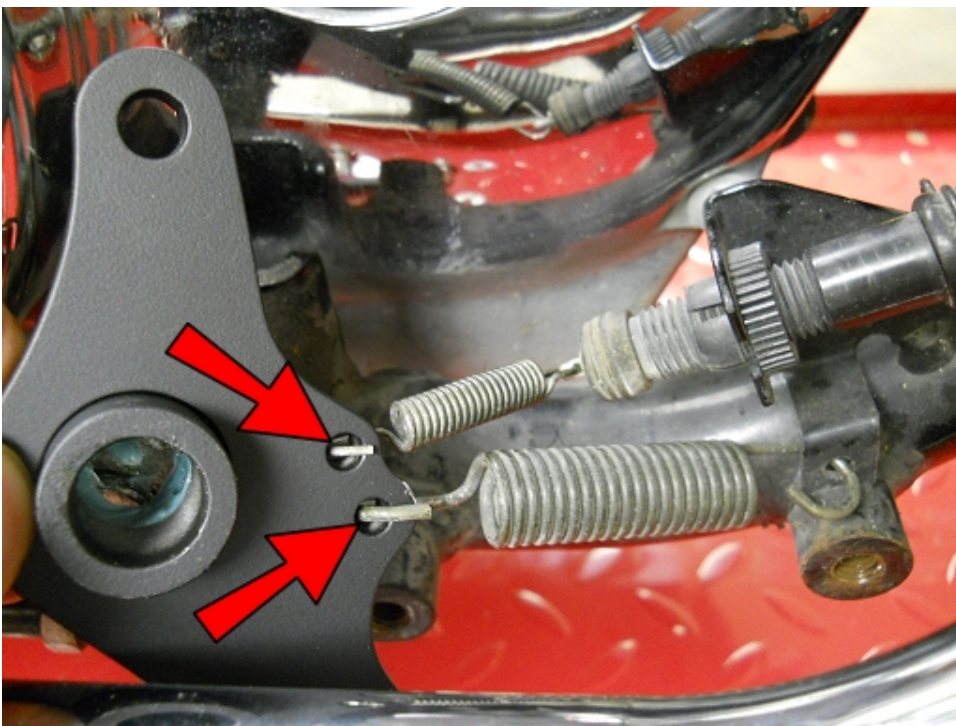
Remove this bolt to remove the horn. Unplug the 2 wires connected to it.



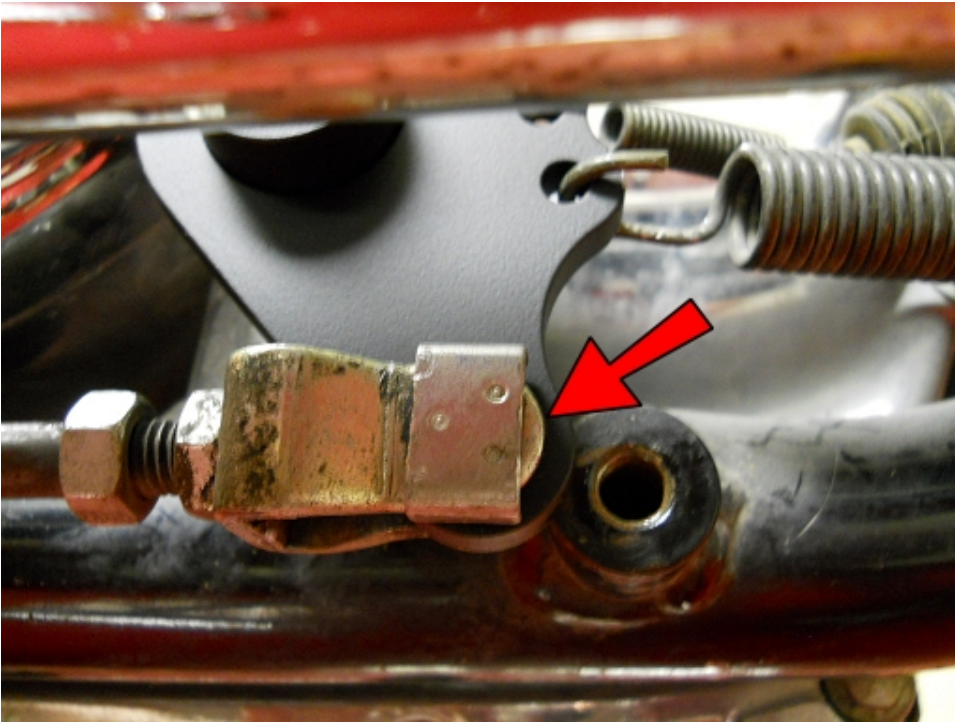
Re-install the horn upside down and reconnect the wires.



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



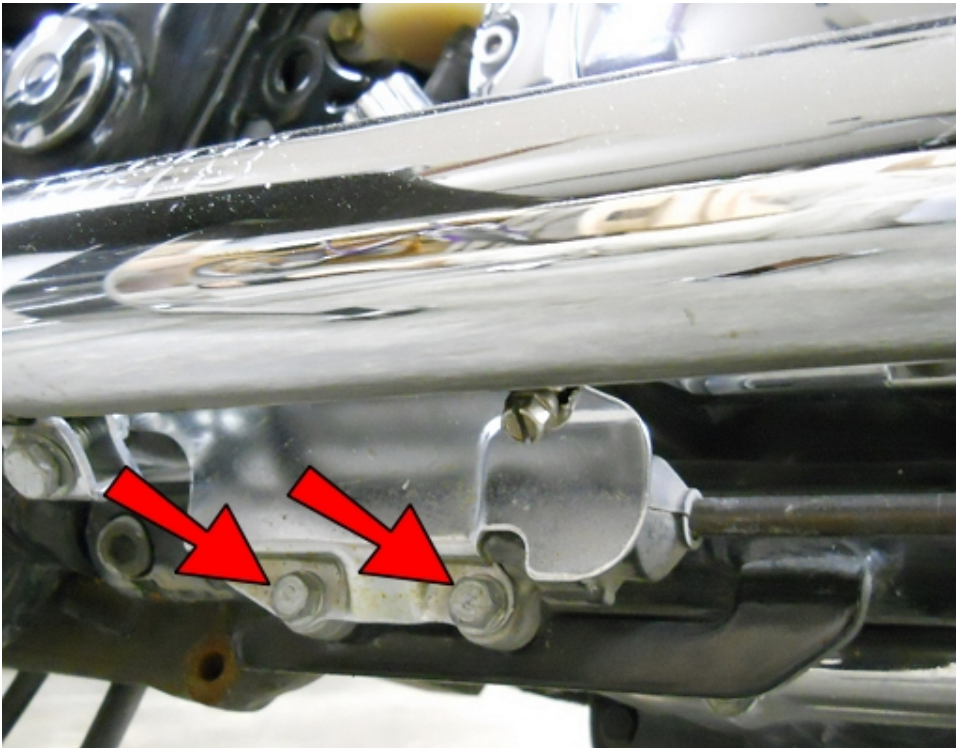
Connect the 2 springs then start the ARM14 onto the end of the shaft.



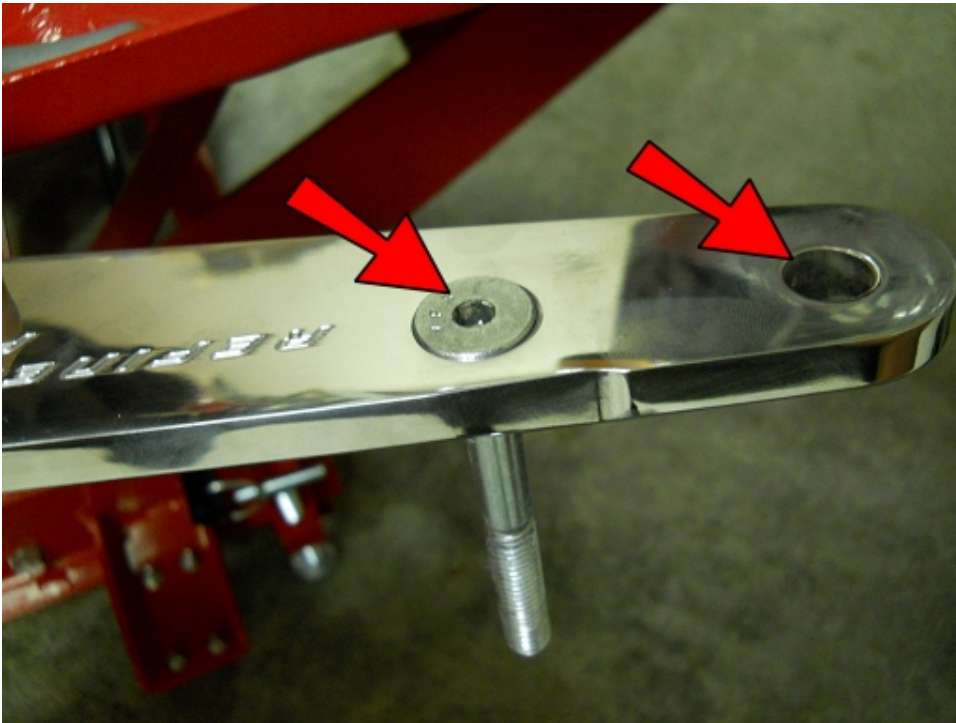
Connect the brake linkage to the ARM14 with the clevis pin removed previously and secure with a new 5/64x1 Cotter Pin. Trim off the excess legs of the Cotter Pin after bending.



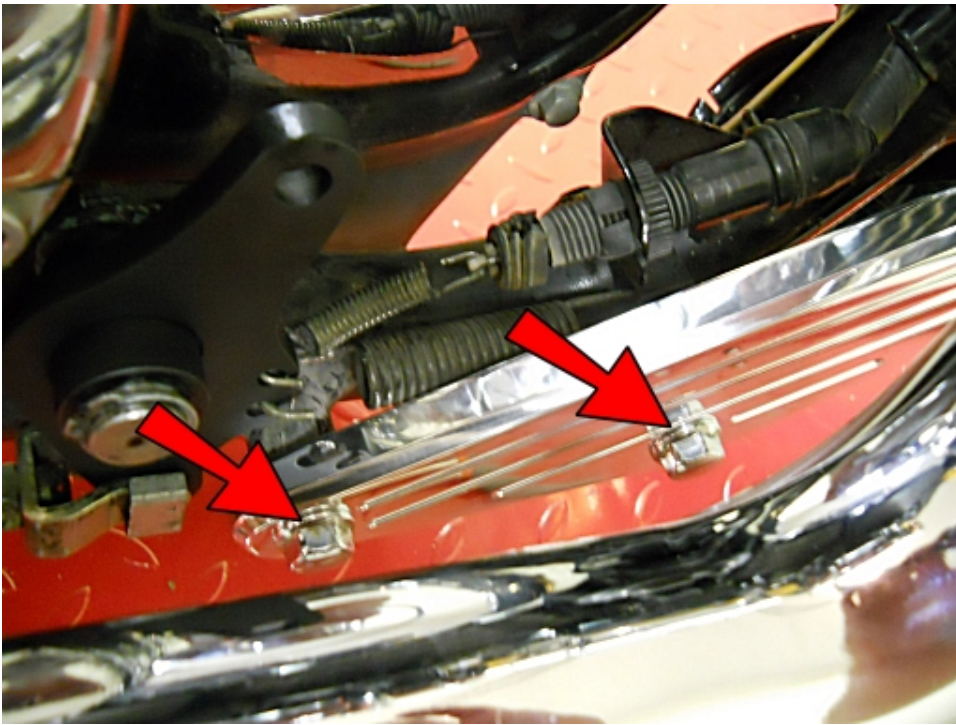
Slide the ARM14 the rest of the way onto the shaft, wipe off the excess grease and secure with the retaining ring removed previously.



Reconnect the master cylinder and heat shield.



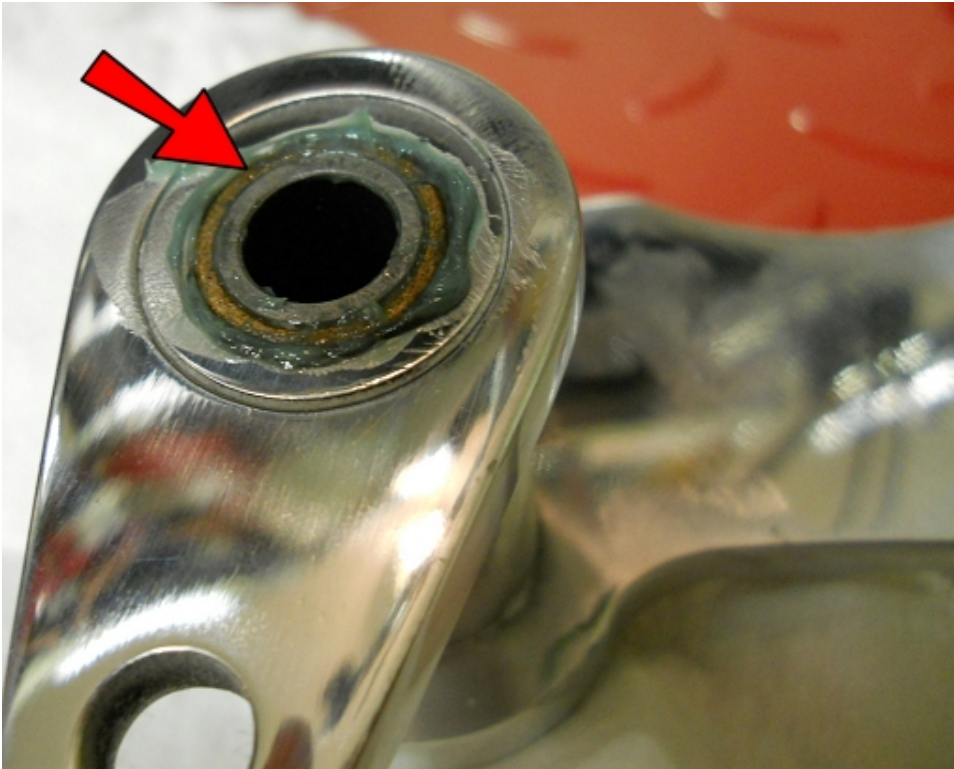
Insert a 3/8-16x3.5" Flat Head Bolt into the countersunk hole and a 1/2-20x2.75" Hex Head Bolt into the other hole on the back side of the FC14-R.



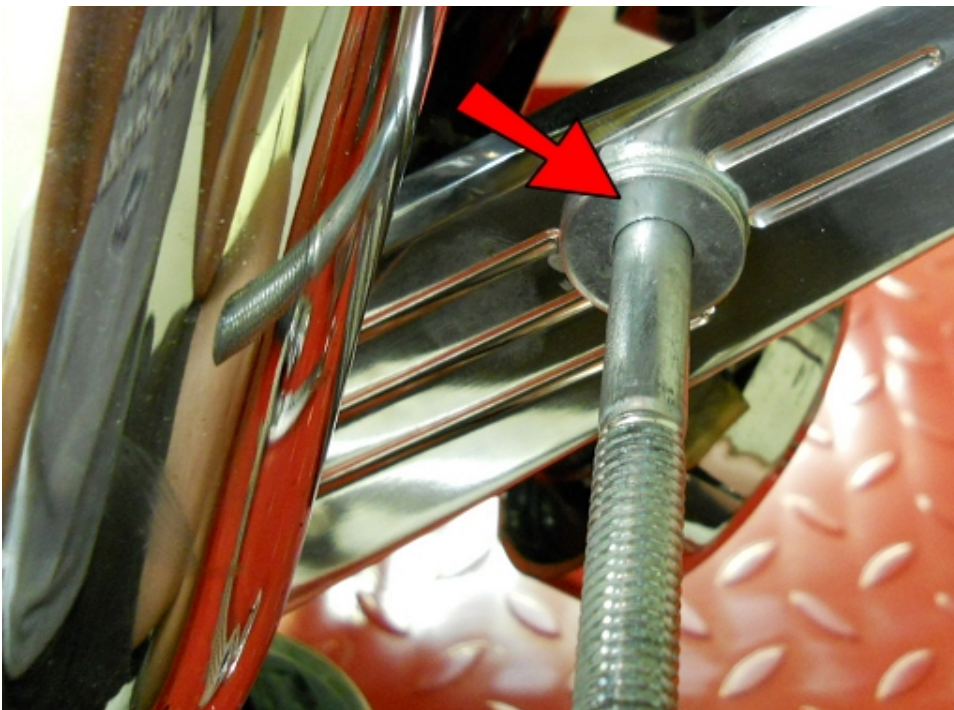
Connect the FC14-R to the frame using the bolts previously removed from these holes.



Apply some axle grease or similar, to the two of the SLV1 and 5/8x1/2 Bronze Sleeves and insert them into each other.



Clean out any polishing compound that may have built up inside the hub of the Brake Pedal and place 2 the sets of sleeves into the Brake Pedal.



Place two 5/16" Zinc Washers onto the 3/8-16x3.5" Flat Head Bolt.



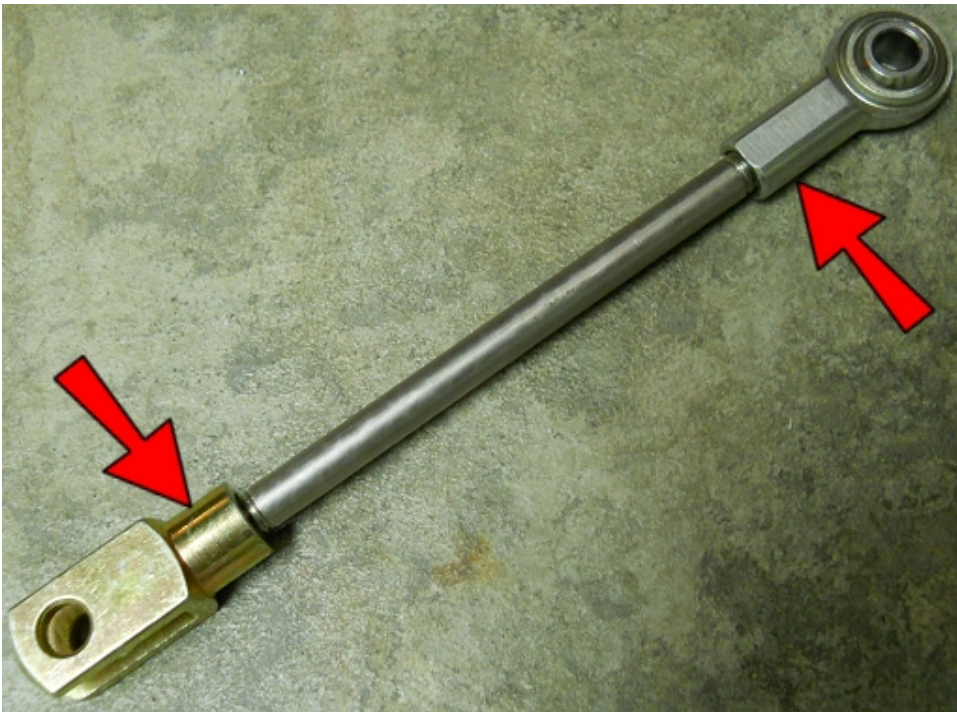
Place the Brake Pedal on and secure with another 5/16" Zinc Washer and a 3/8" Acorn Nut.



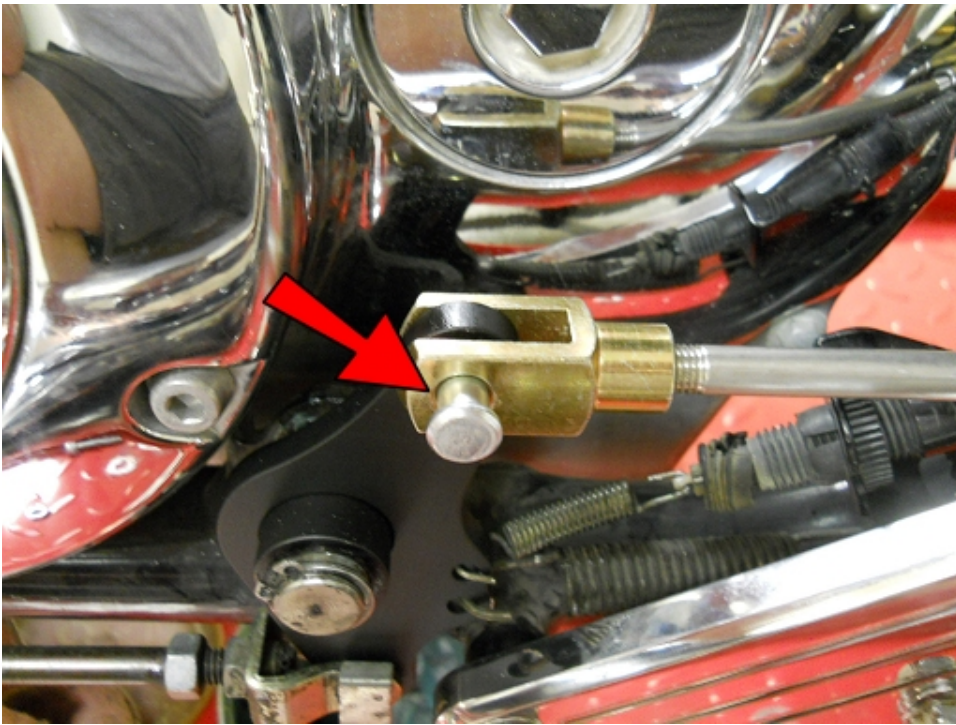
Place a STOF4 onto the 1/2-20x2.75" Bolt.



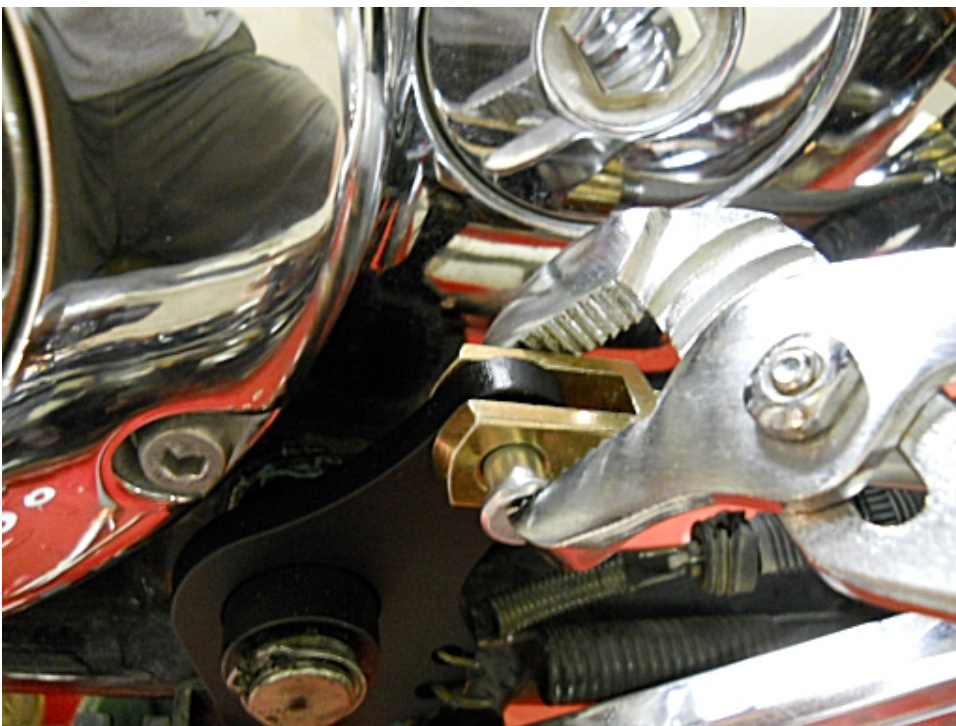
Install a foot peg.



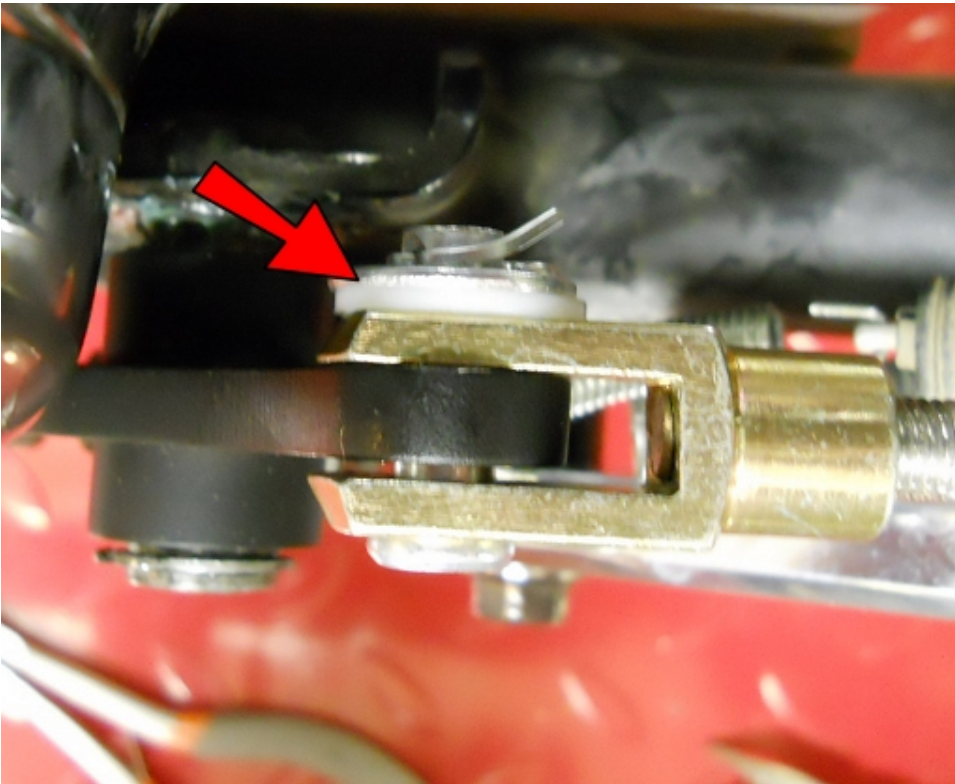
Thread a 5/16" Clevis End and a 5/16" Spherical Rod End onto the Brake Linkage.



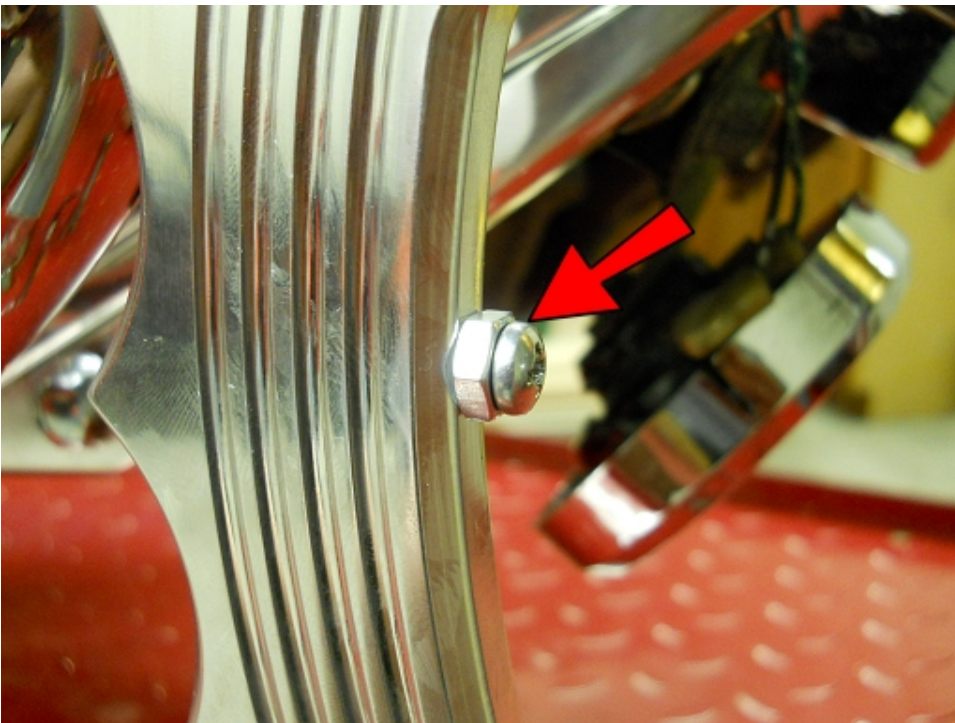
Place the Clevis end of the Linkage onto the ARM14 and start a 5/16" x 7/8" Clevis Pin.



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



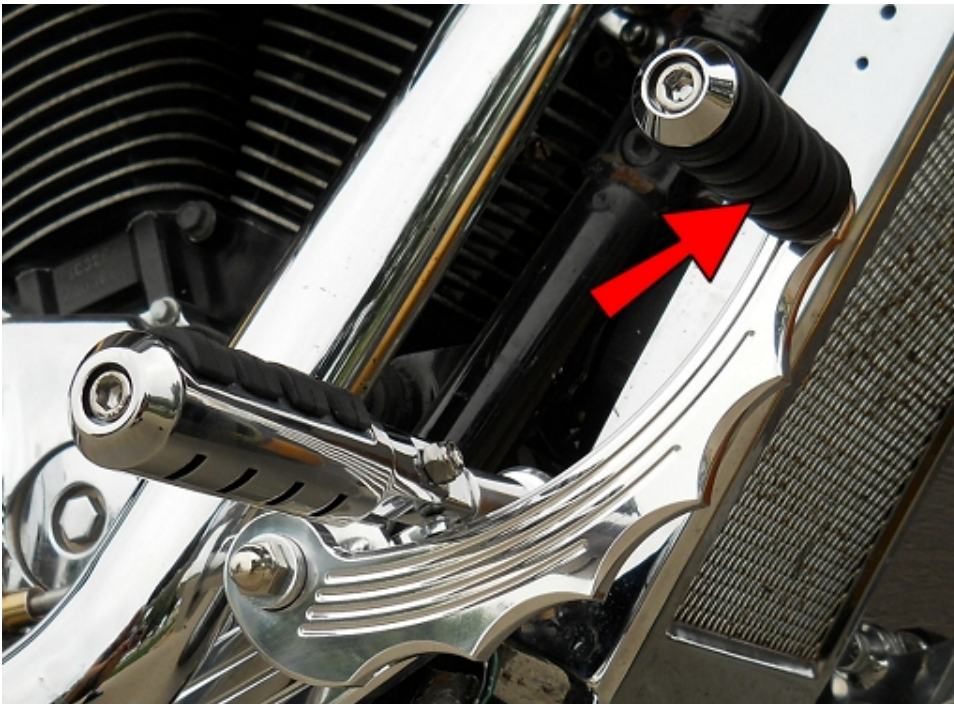
Secure with a 3/8" Nylon Washer, 1/4" Zinc Washer and 5/64x1 Cotter Pin. Trim the legs of the Cotter Pin.



Thread #8-32 Nut onto a #8-32x9/16" Screw and thread into the Brake Pedal.



Insert an M8-1.25x40 Socket Head Bolt into the Brake Pedal.



Install a Toe Peg into the Brake Pedal and secure with a 5/16" Nut.



Place a 1/2" Spacer and the Brake Linkage onto the M8-1.25x40 Socket Head Bolt, and secure with an M8 Lock Nut.

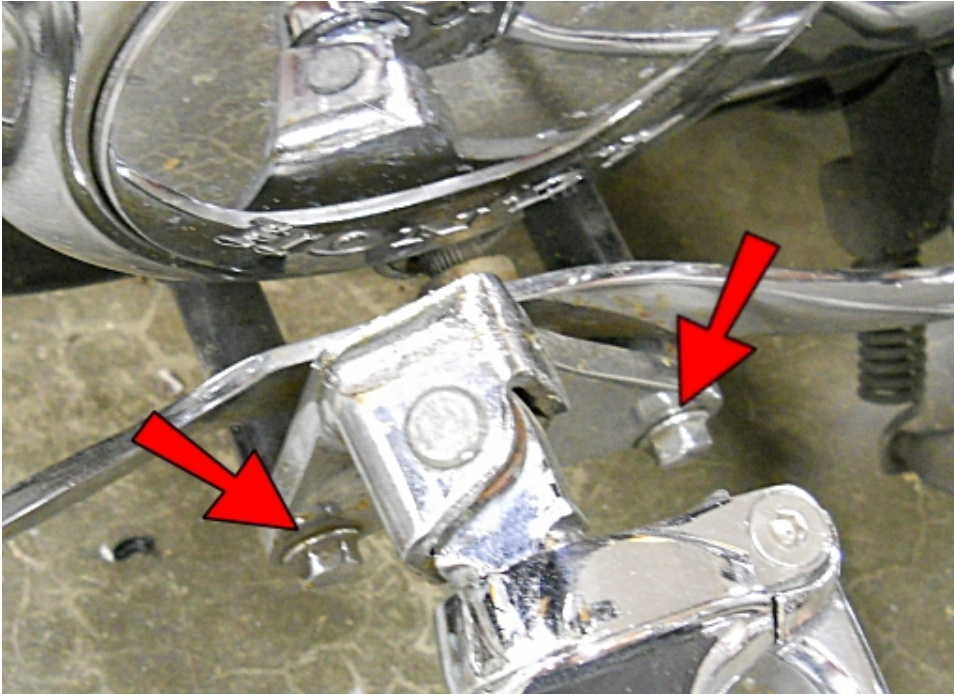
Note: The #8 Screw in the Brake Pedal should rest against the foot peg and there should be NO play in the linkage. If there is any play, remove the linkage from the Brake Pedal and turn the Spherical Rod End farther onto the Linkage to tighten. After adjustment is complete, make sure the M8 bolt and nut holding the linkage to the Brake Pedal is VERY tight.



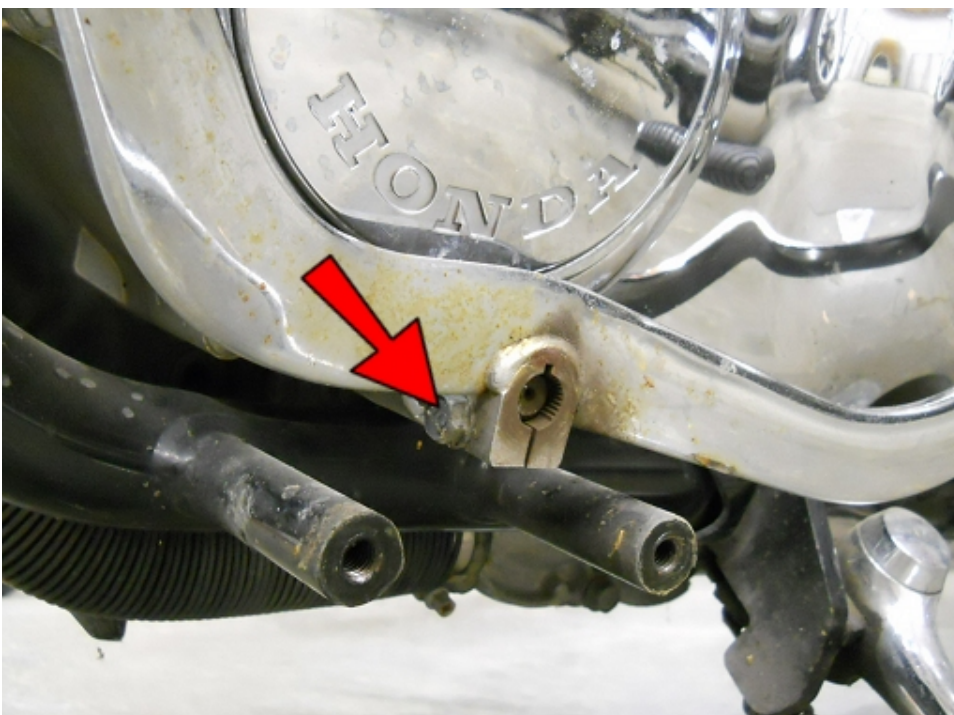
The brake light switch may need to be adjusted. Do this by turning the adjustment wheel. Hold the brake light switch in one hand to keep it from turning, while turning the wheel. If the spring tension is too tight, your brake light will be on all of the time. If it is too loose, it will not come on when 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.

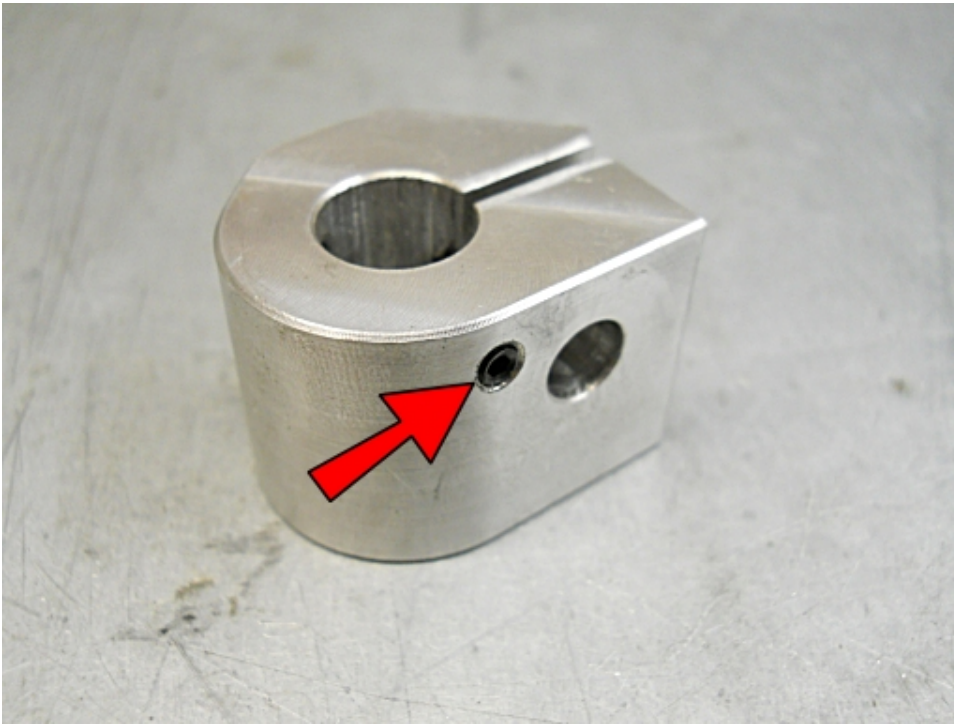
Shifter Side...



Remove these 2 bolts.



Remove this bolt and remove the shifter pedal.



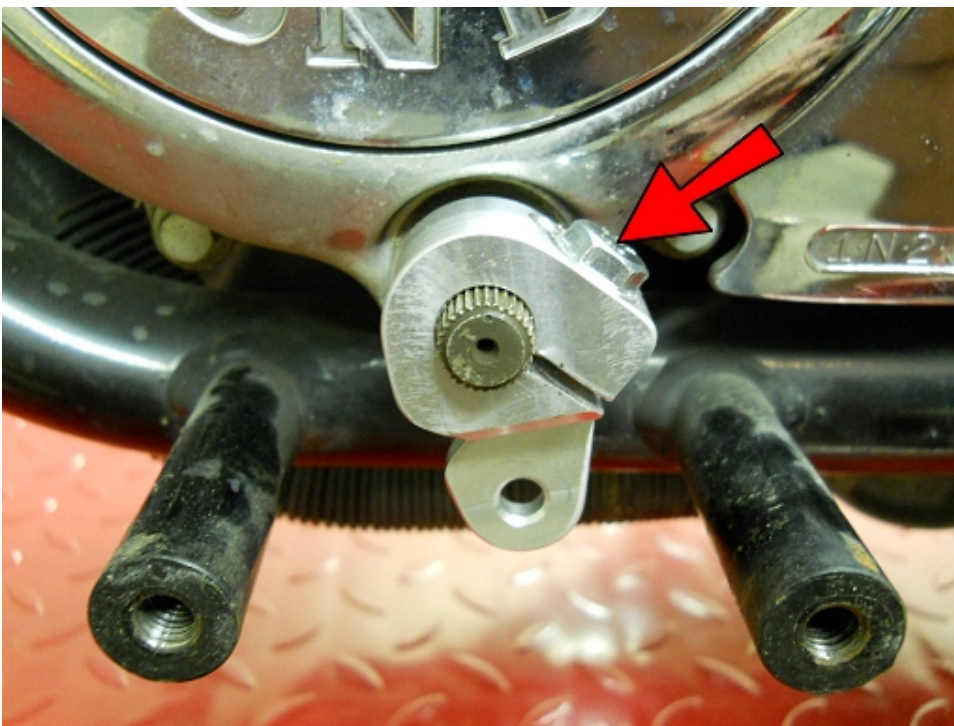
Start the two #6-32 Set Screws in the holes in the ARM2 but do not let them protrude through the inside of the large hole.



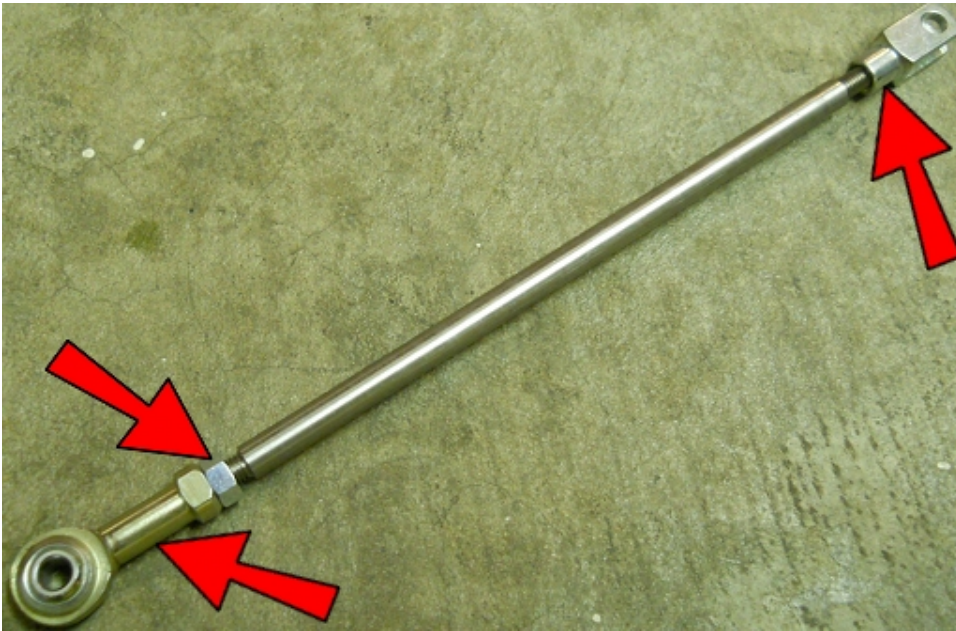
Drive a large flat head screwdriver just slightly into the slot of the ARM2 to spread it apart to make it easier to put onto the shifter spline.



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



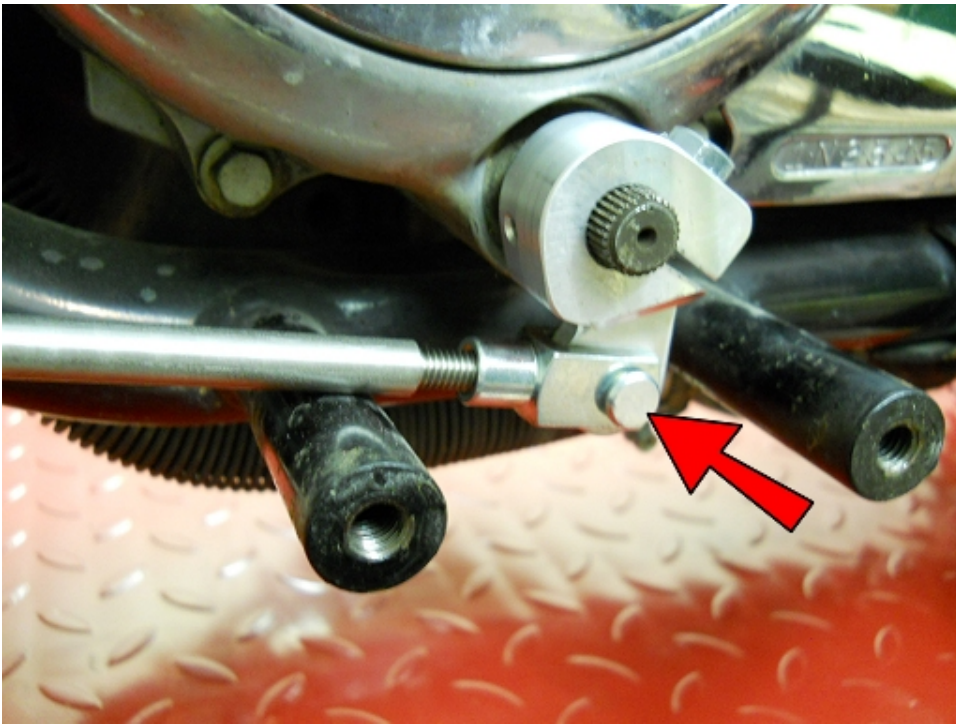
Place the ARM2 onto the spline at about a 5 o'clock position (slightly toward the rear) and line up the bolt hole on top of the ARM2 with the groove in the spline. Note: The end of the spline shaft will not come flush with the edge of the ARM2. Remove the screwdriver and secure tightly with an M6-1.0x20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



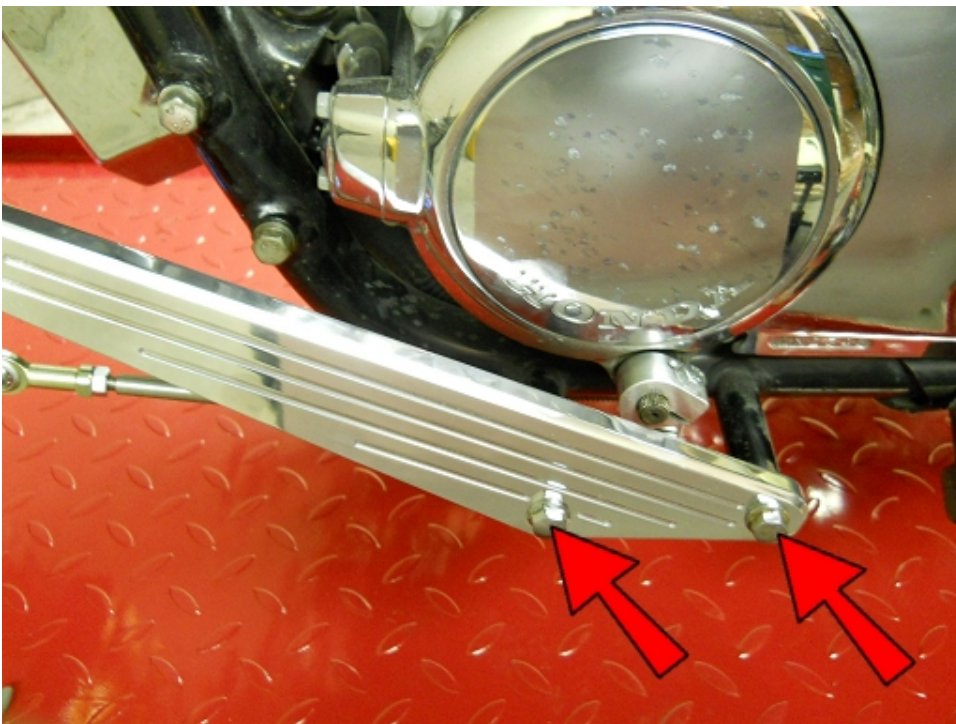
Thread an M6 Nut and an M6 Spherical Rod End onto the right hand threaded end of the Shifter Linkage and a Left Hand M6 Clevis onto the left hand threaded end.



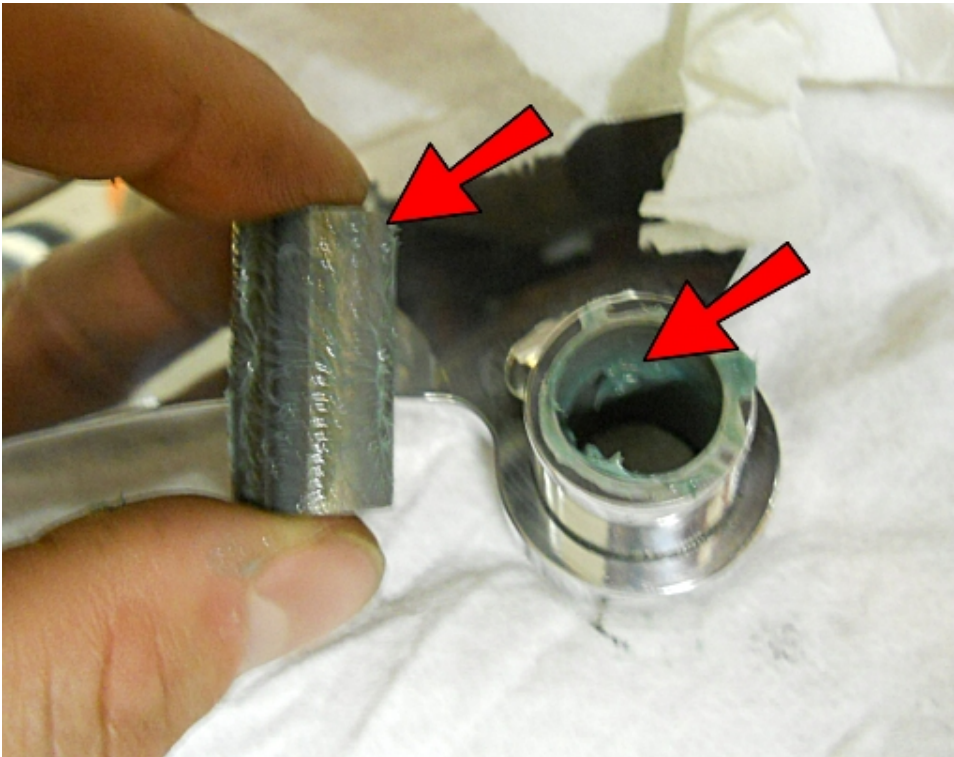
NOTE: Only thread the linkage end in as far in as the threaded area of the clevis, so it does not protrude into the area that the clevis rotates or you will not be able to shift correctly and you will break your shifter linkage.



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.



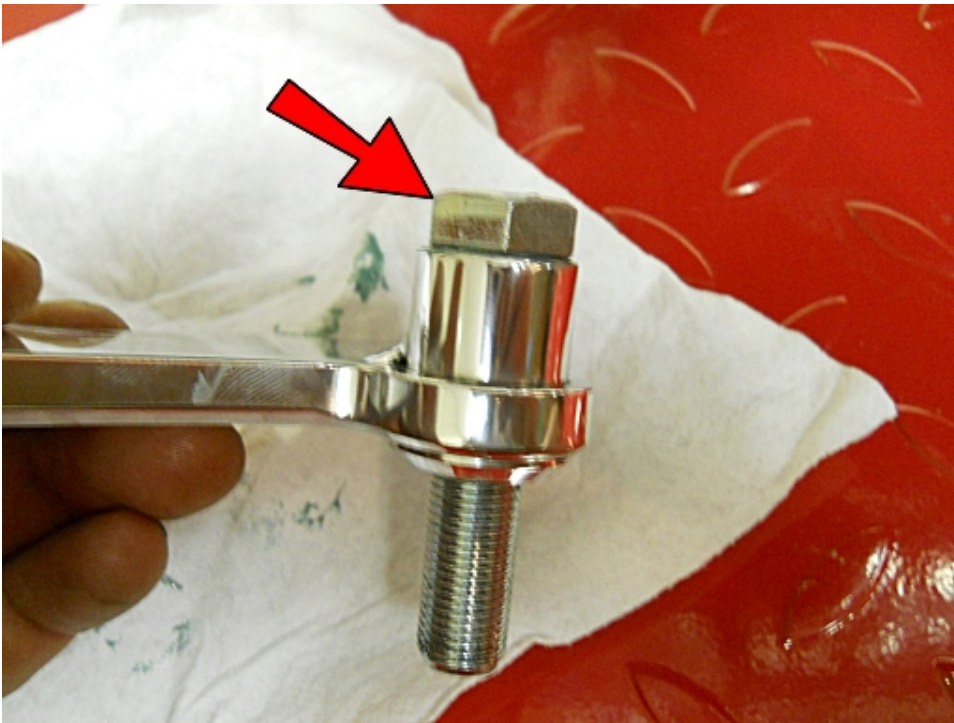
Connect the FC14-L to the frame with the 2 bolts removed previously.



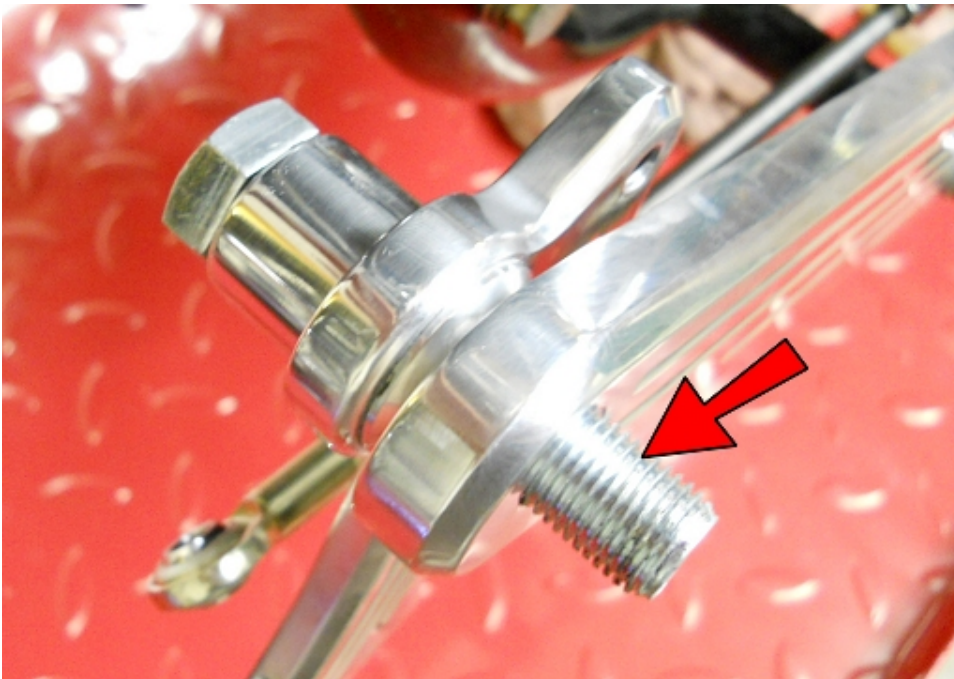
Clean out any polishing compound that may have built up inside the hub of the Shifter Pedal and apply some axle grease or similar, to the inside of the hub and the outside of the SLV4.



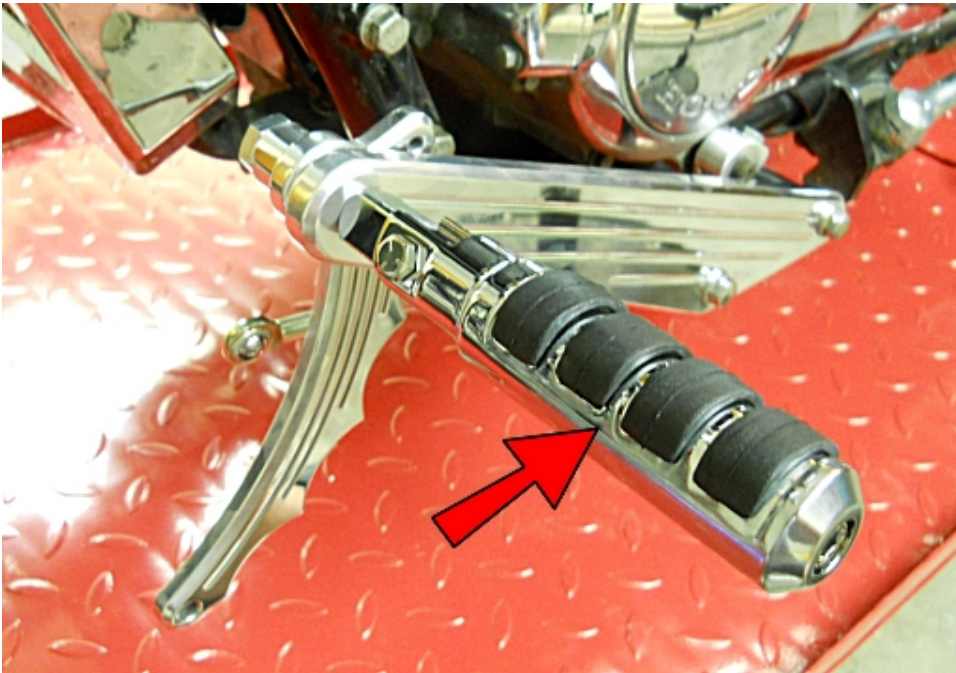
Insert the SLV4 into the Shifter Pedal and wipe off the excess grease.



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

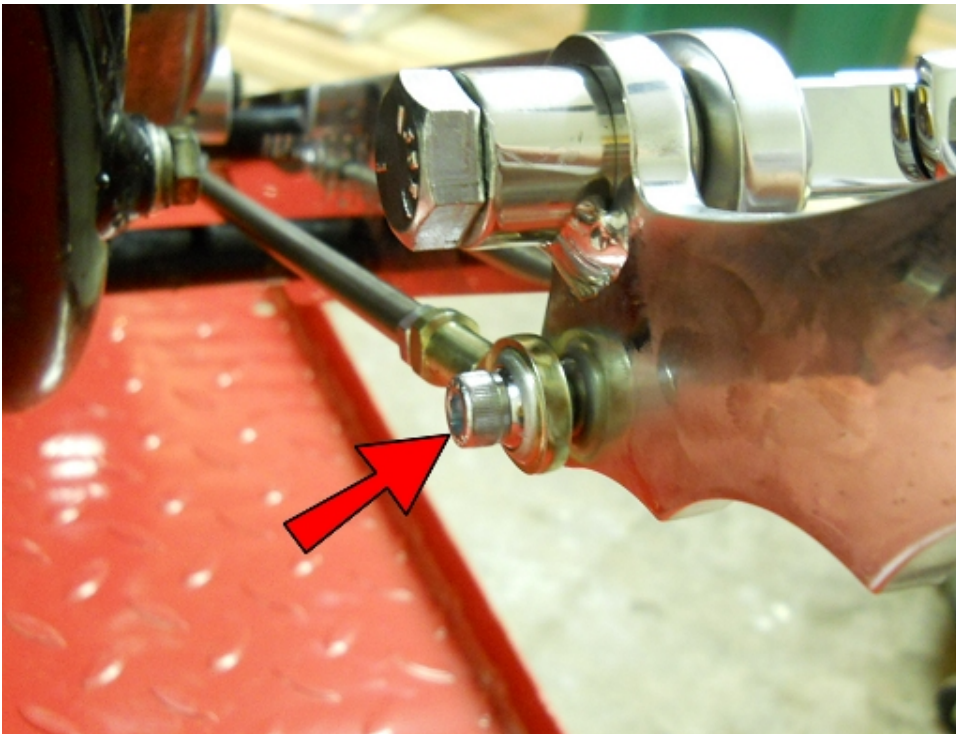


Insert the Shifter Pedal assembly into the FC14-L.

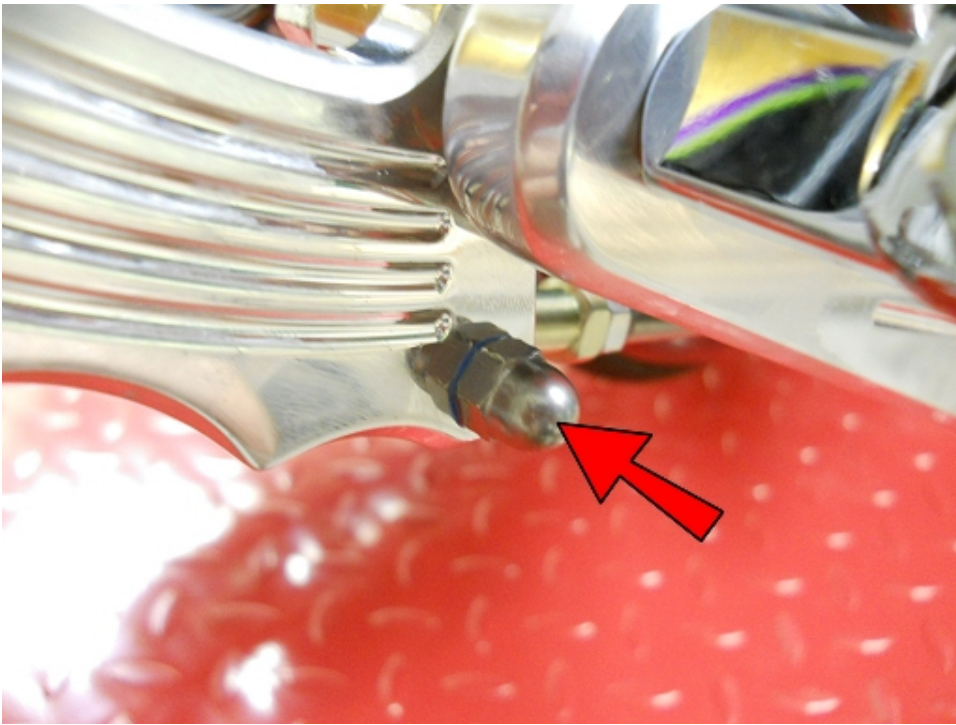


Install a foot peg.

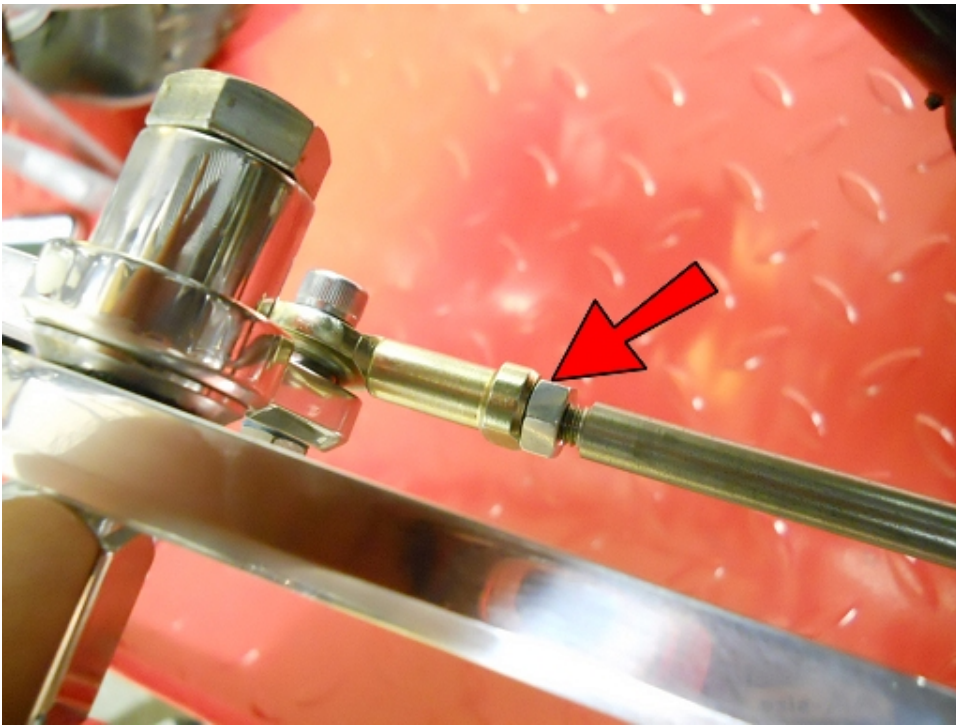
Attach the Toe Peg to the threaded top hole of the Shifter Pedal and secure with a 5/16" Nut.



Connect the Linkage to the Shifter Pedal with an M6-1.0x25 Socket Head Bolt.



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!