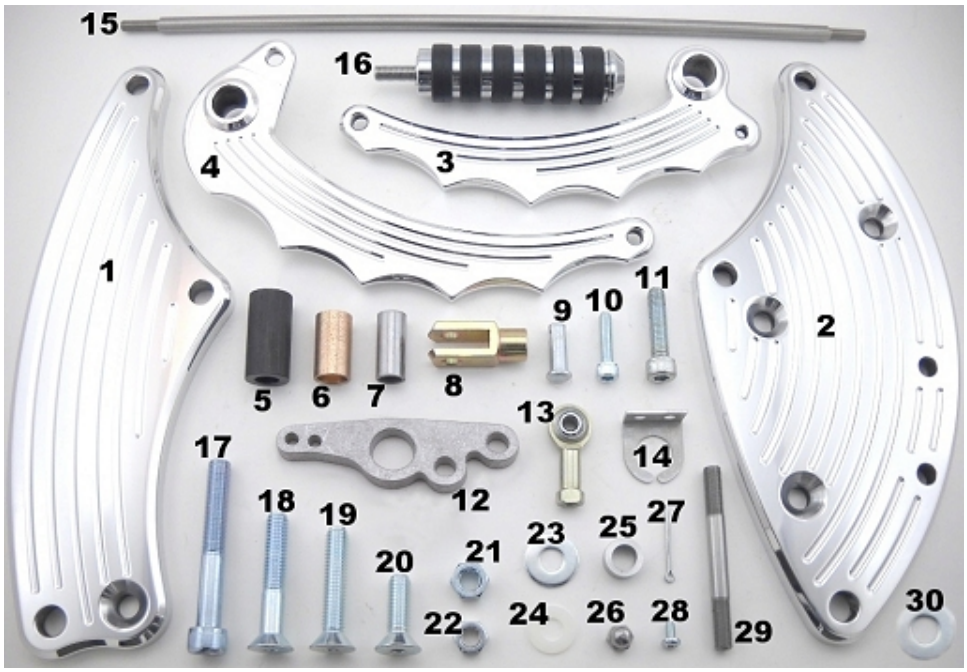
Installation instructions for FC13 Forward Controls for Kawasaki Vulcan 900

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.

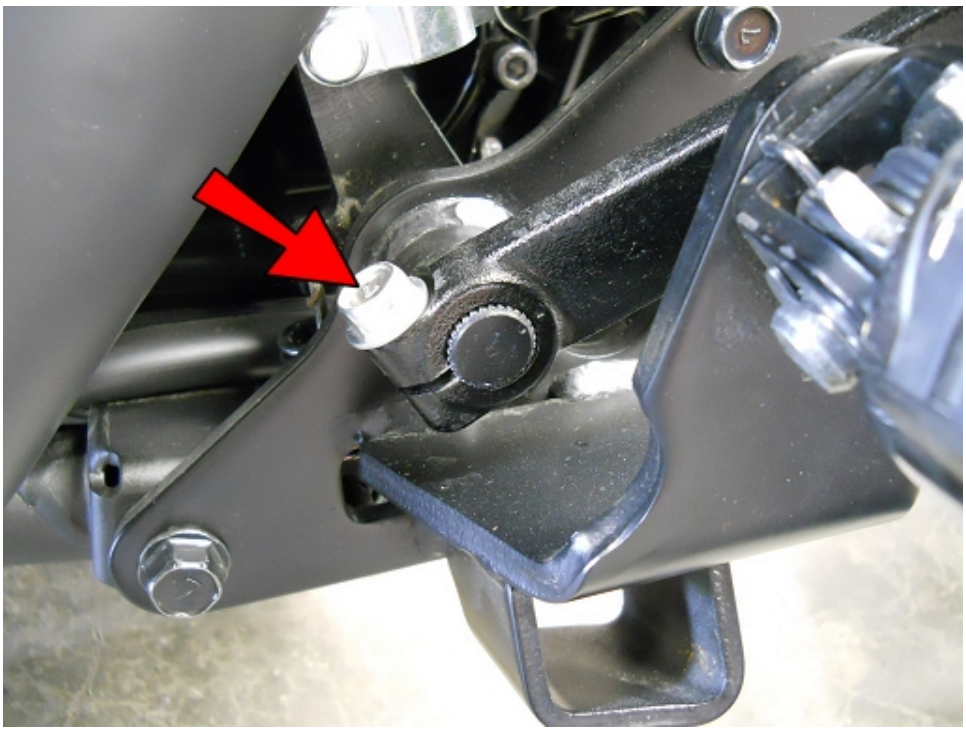
This picture shows the components of the FC13. Parts will be referred to by the names & numbers shown here. If you are missing anything please email refinedcycle@gmail.com .



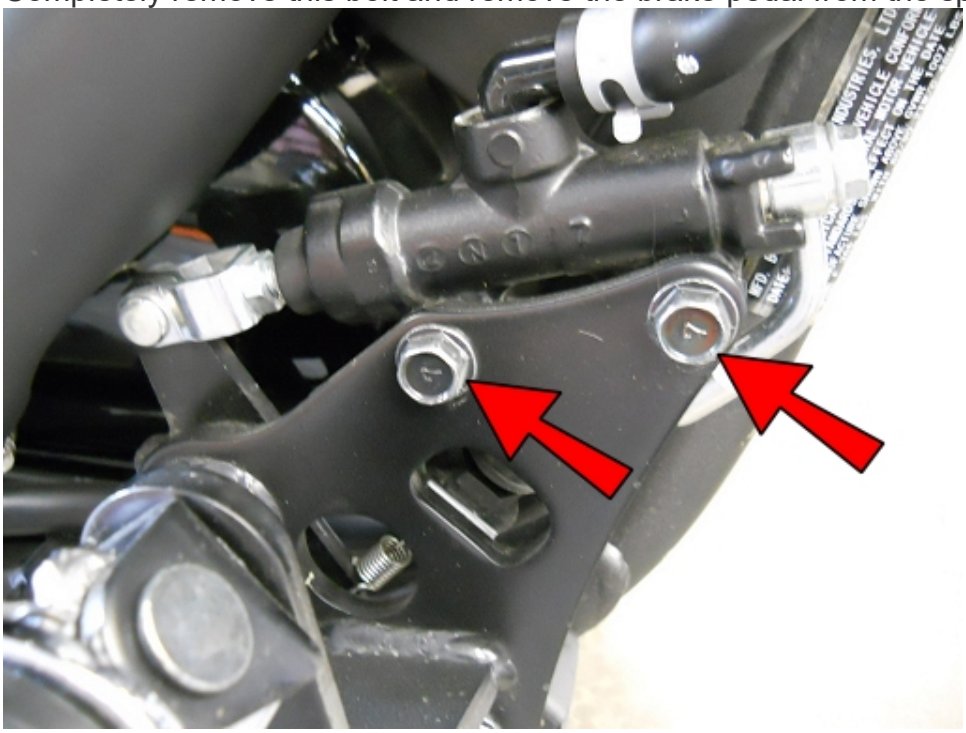
FC13 Components

1- FC13-L	16- Toe Peg (Qty. 2)
2- FC13-R	17- M10-1.25 x 70mm Socket Head Bolt (Qty. 4)
3- Shifter Pedal	18- 3/8-16x2.25 Flat Head Bolt (Qty. 2)
4- Brake Pedal	19- 3/8-16x2 Flat Head Bolt
5- 1.5" Spacer (Qty. 4)	20- 3/8-16x1.25 Flat Head Bolt
6- 5/8”x1/2” Bronze OR Steel Sleeve (Qty. 2)	21- 3/8-16 Nut (Qty. 5)
7- SLV1 (Qty. 2)	22- 5/16-24 Nut (Qty. 2)
8- 5/16 Clevis (Qty. 2)	23- 5/16 Zinc Washer (Qty. 7)
9- 5/16x7/8 Clevis Pin (Qty. 2)	24- 3/8 Nylon Washer (Qty. 2)
10- M6-1.0x25 Socket Head Bolt	25-SPC031 (Qty. 4)
11- M8-1.25x35 Socket Head Bolt (Qty. 2)	26- M6 Acorn Nut
12- ARM16	27- 5/64x1 Cotter pin (Qty. 3)
13- M6 Spherical Rod End	28- #8-32x9/16 Screw (Qty. 3)
14- BSM3	29- Brake Linkage
15- Shifter Linkage	30- 1/2 Zinc Washer

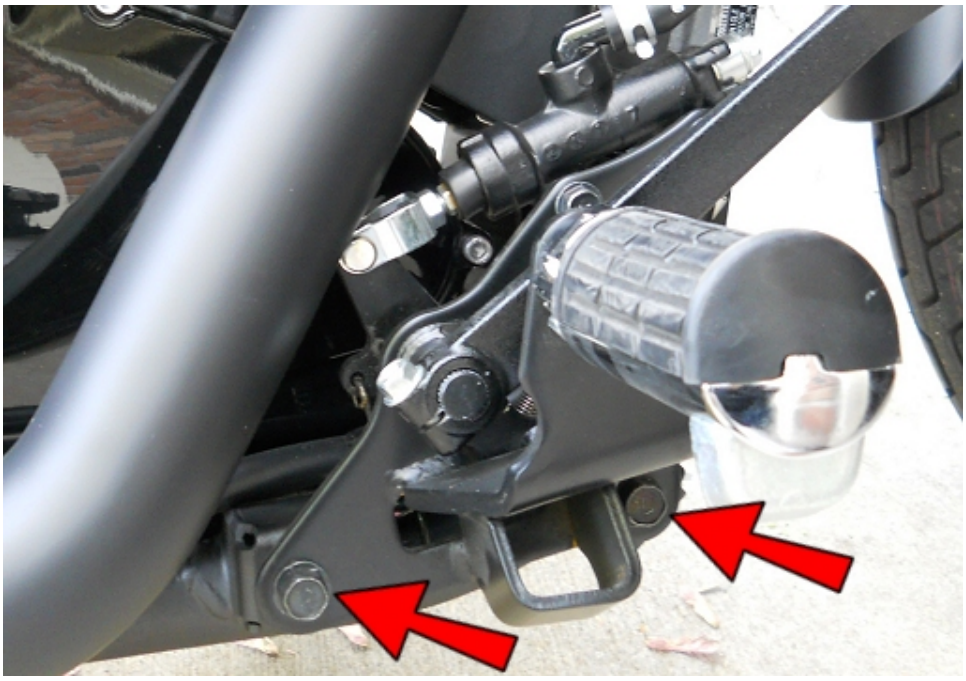
Brake Side…



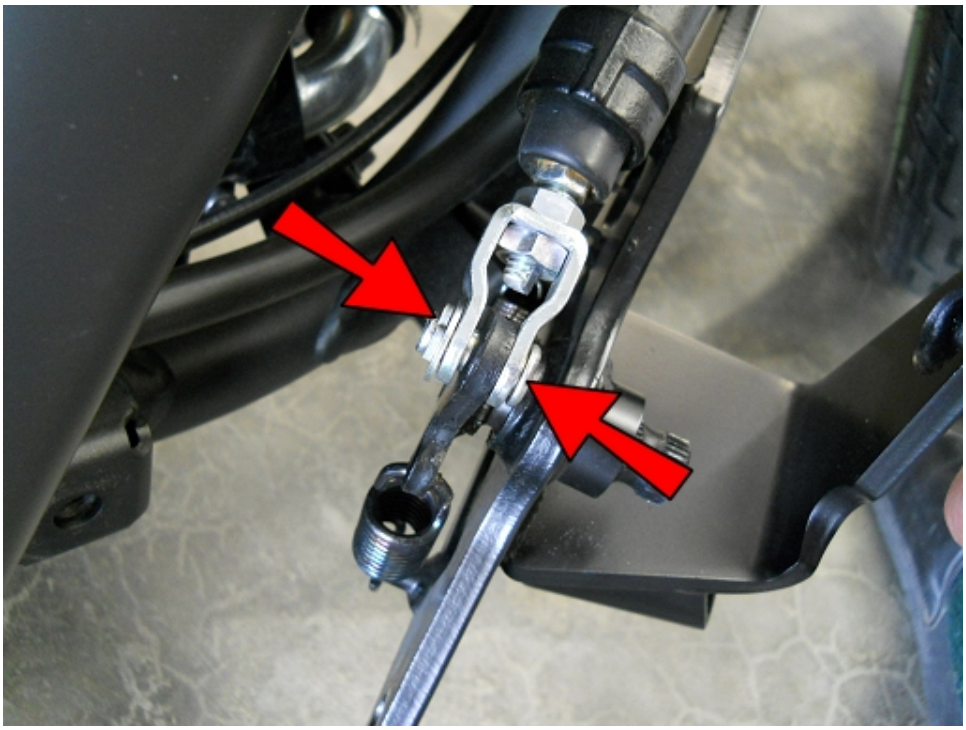
Completely remove this bolt and remove the brake pedal from the spline.



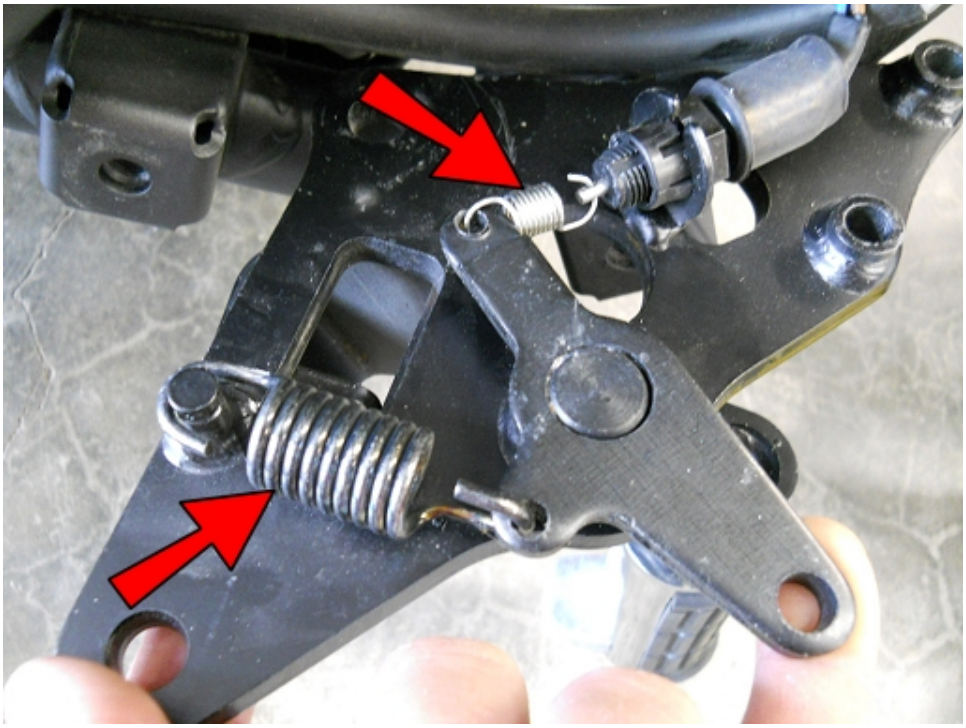
Remove these 2 bolts.



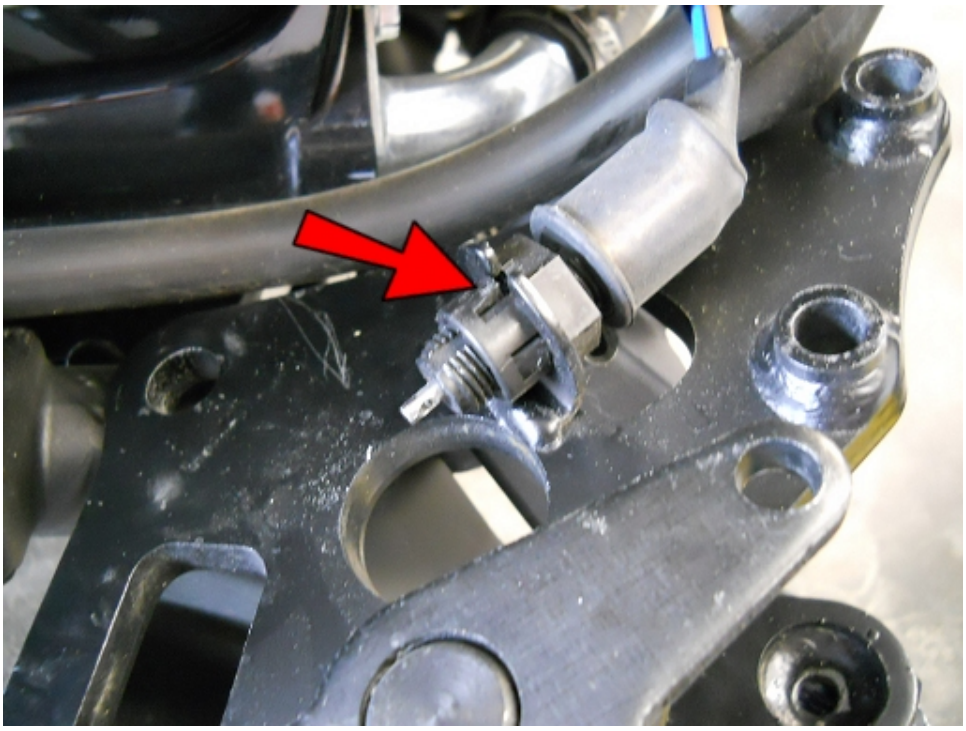
Remove these 2 bolts.



Remove the cotter pin, washer and clevis pin.

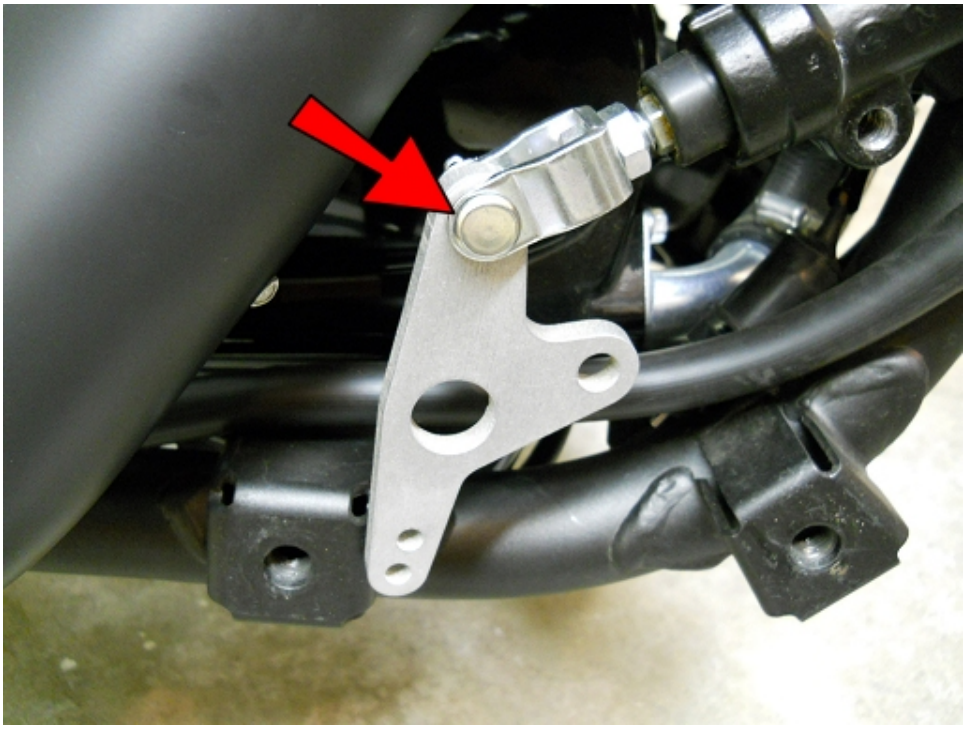


Remove the 2 springs.

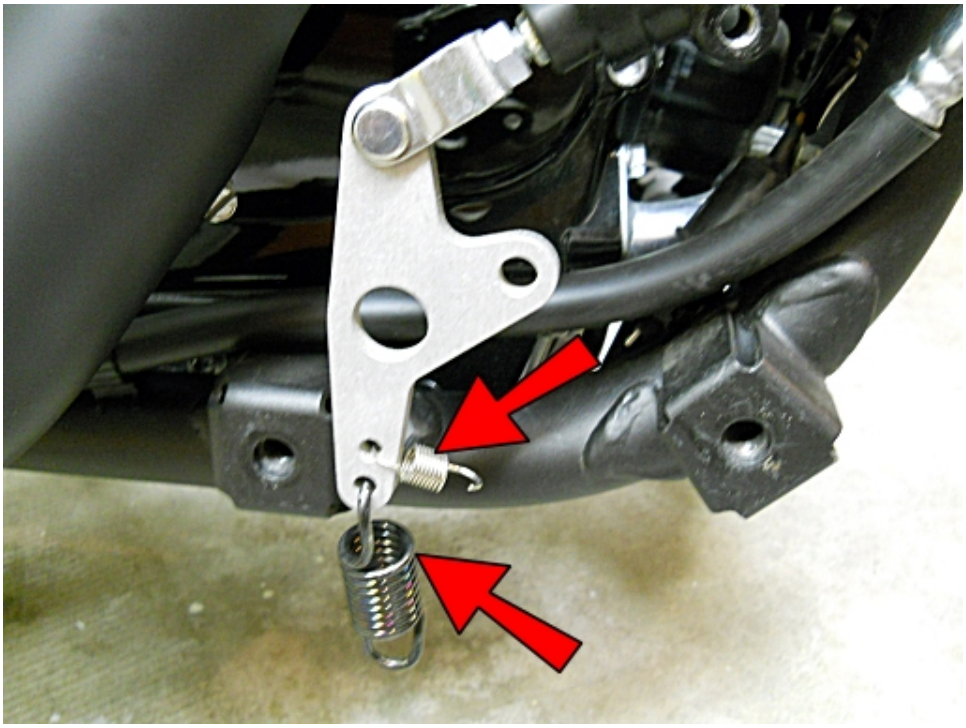


Use a small screwdriver to press in the plastic retaining tabs and remove the brake light switch.

Attach BSM3 to the FC13-R with two #8-32x5/16 Screws.

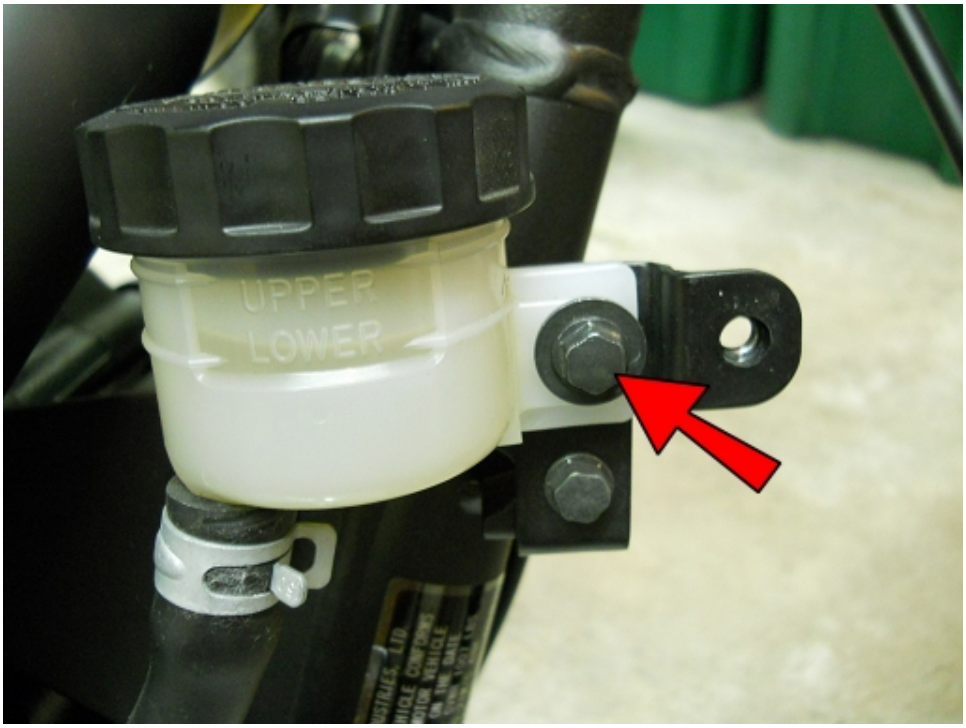


Connect the ARM16 to the master cylinder with the clevis pin previously removed and secure with a new 5/64x1 Cotter Pin. NOTE: PART #12 (ARM16) has changed since these pictures, the short arm has been shortened but everything else is the same.



Hang the previously removed springs on the ARM16.

Remove this bolt to remove the reservoir cover.

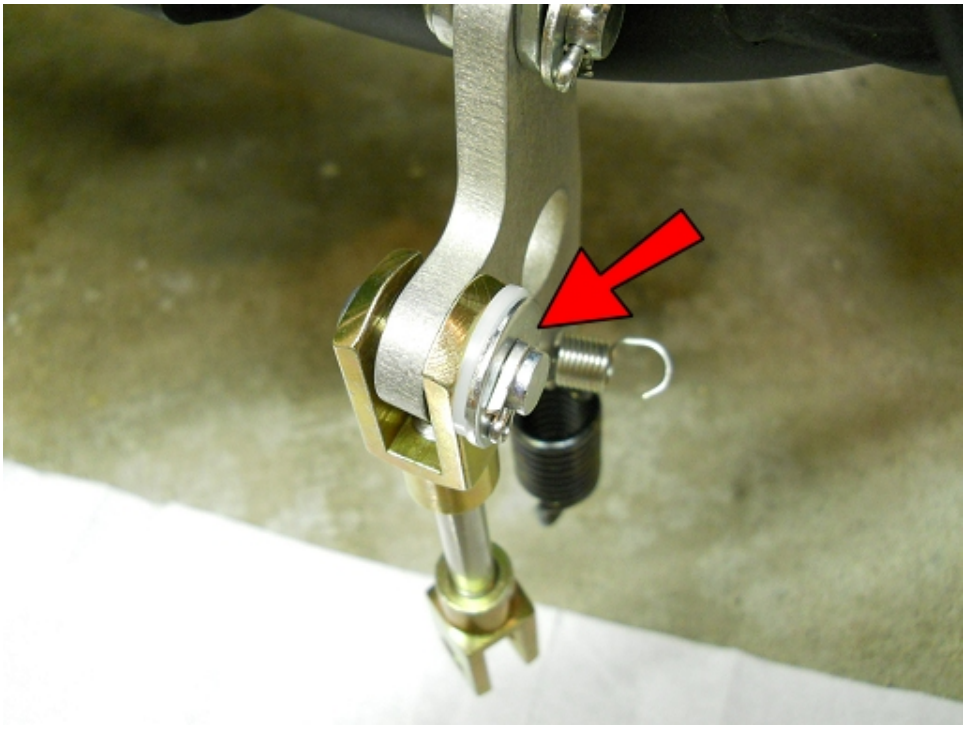


Remove this bolt to remove the reservoir.

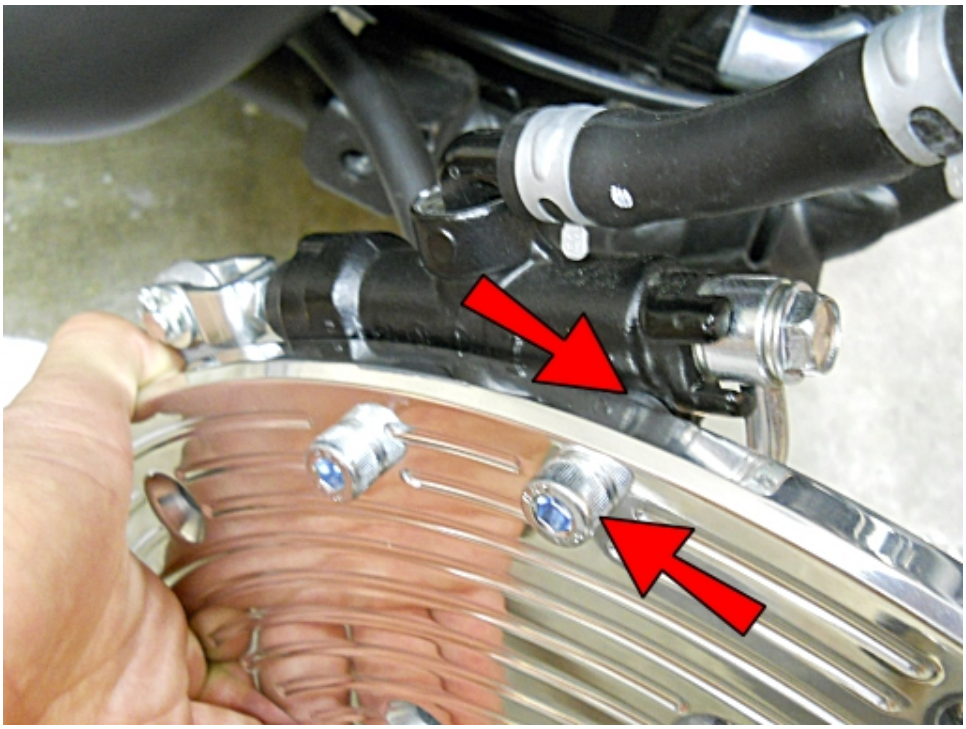

Remove the brake light switch from the retaining clip on the frame, reroute the wire to the front and pull out as much extra length from behind the tank as possible.

Thread the 5/16” Clevis ends onto the Brake Linkage.

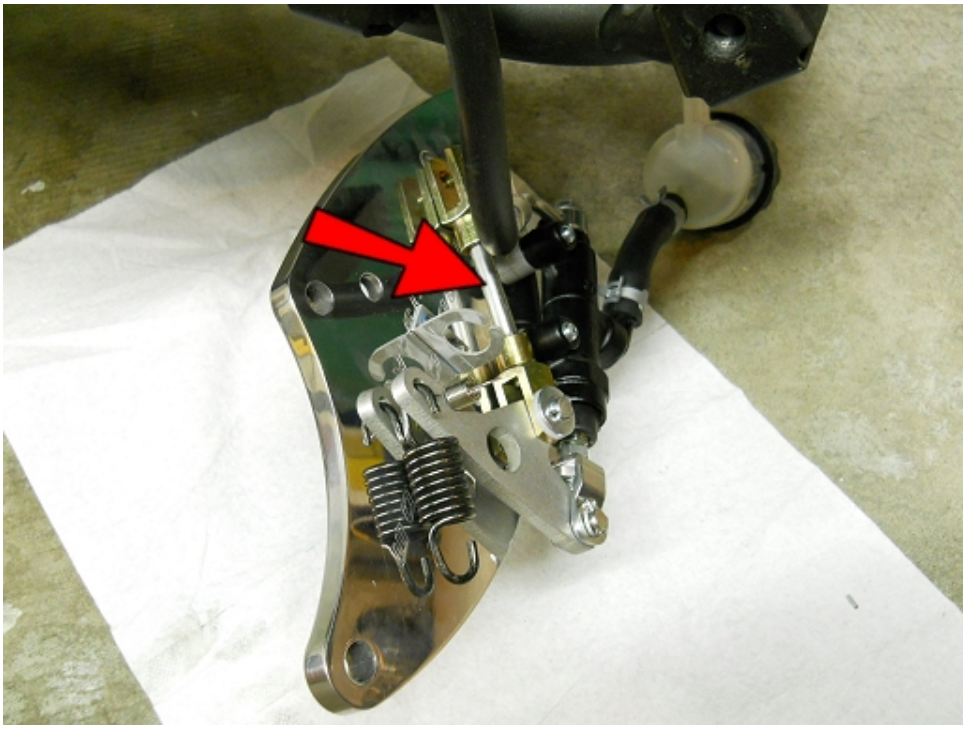
Important Note: After the brakes are assembled, there must be no play in the Linkage for the brake to operate correctly. If you find the brake hard to apply or they don’t feel like they are stopping correctly, you will need to come back and tighten the linkage shown above by threading the linkage rod farther into the 5/16” Clevises. However, do not thread it too far in so that the brakes don’t fully release. It might be a trial and error process to get it just right…..but it’s worth the effort!



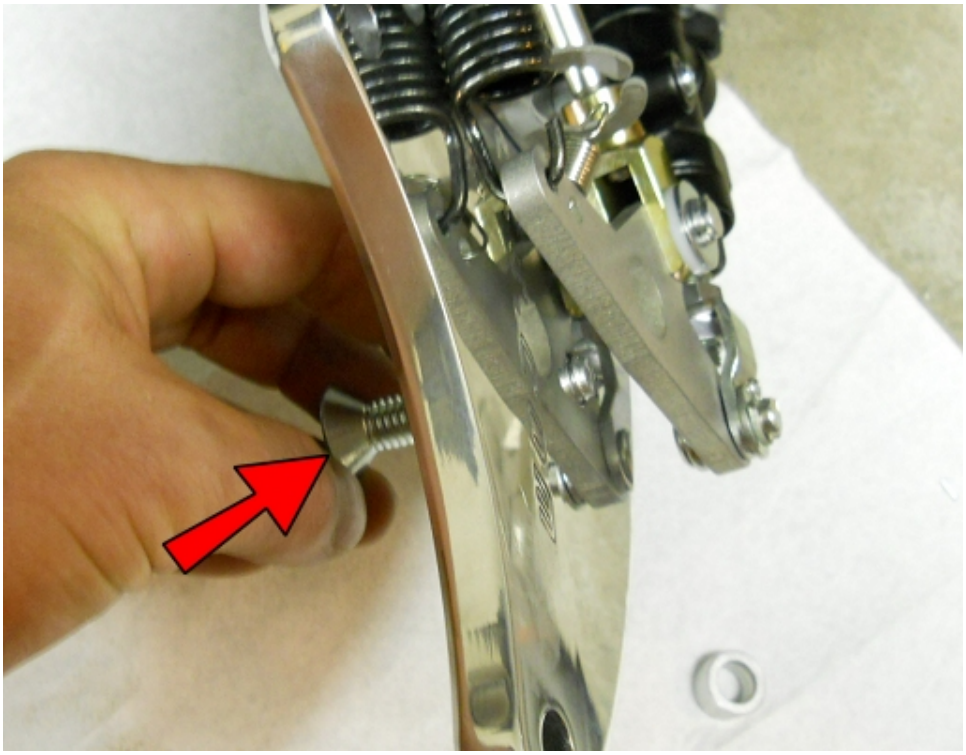
Connect the Brake Linkage to the ARM16 with a 5/16x7/8 Clevis Pin and secure with a 3/8” Nylon Washer, 5/16” Zinc Washer and 5/64x1 Cotter Pin. Trim the legs of the Cotter Pin.
(Make sure the both sets of Cotter Pins and Washers are on the back, toward the bike.)



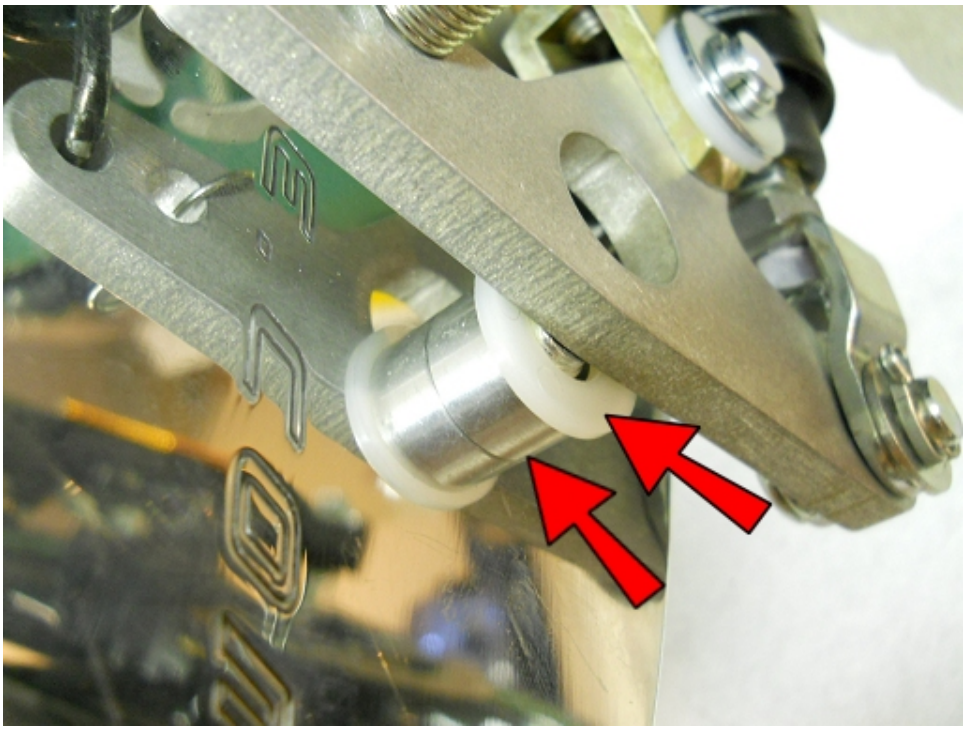
Attach the master cylinder with two M8-1.25x35 SHCS and two SPC031. (The SPC031 go on the back side, between the FC13-R and the master cylinder.)



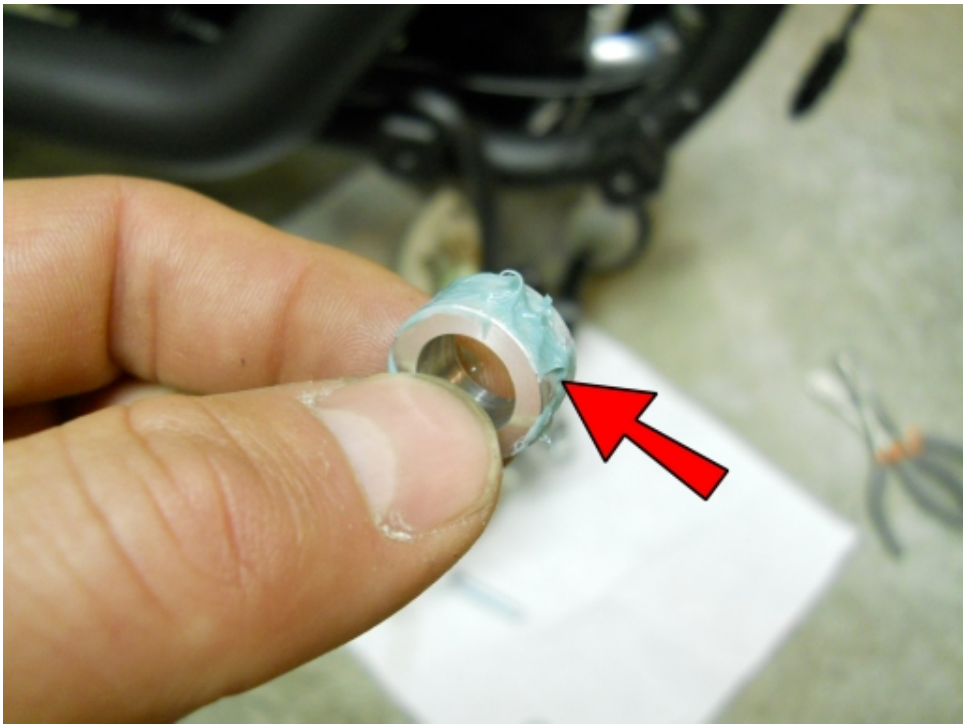
Let the assembly hang down and arrange the Brake Linkage as shown.



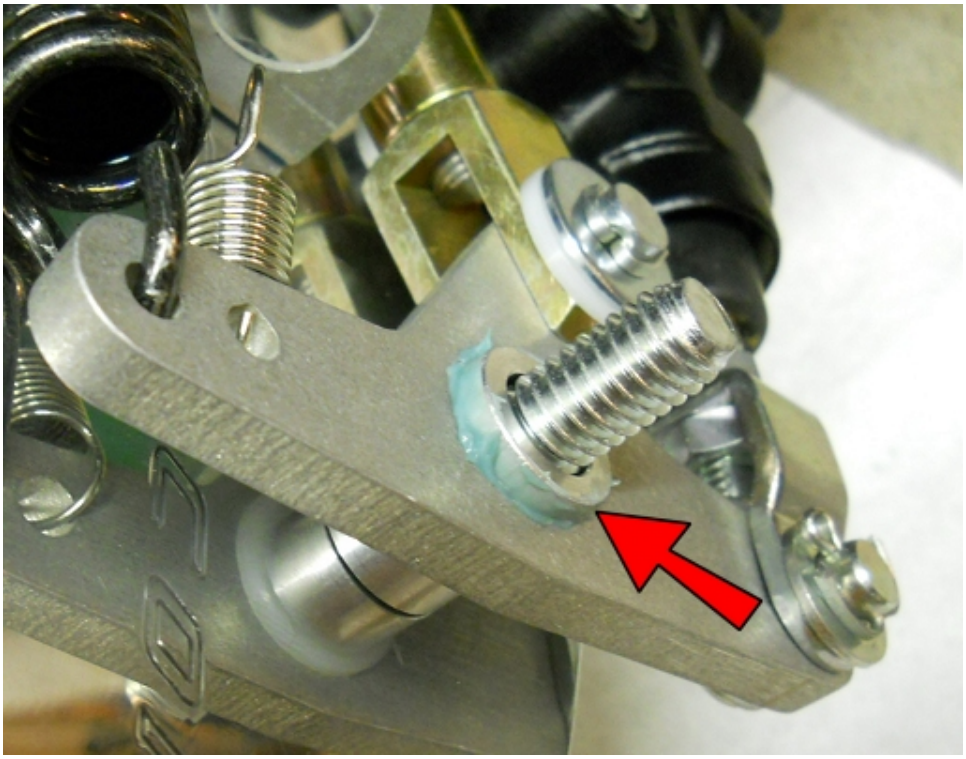
Insert a 3/8-16x2 Flat Head Bolt here, just partially, so that it barely protrudes through the hole.



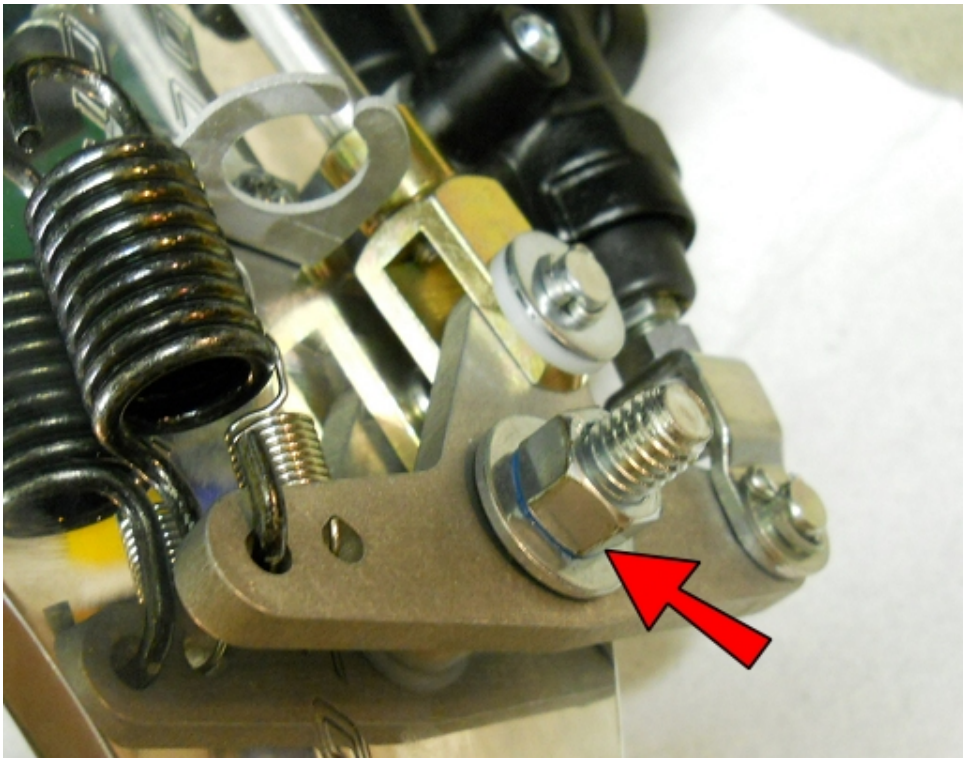
Place an SPC031 and a 5/16” Zinc Washer onto the Flat Heat Bolt.



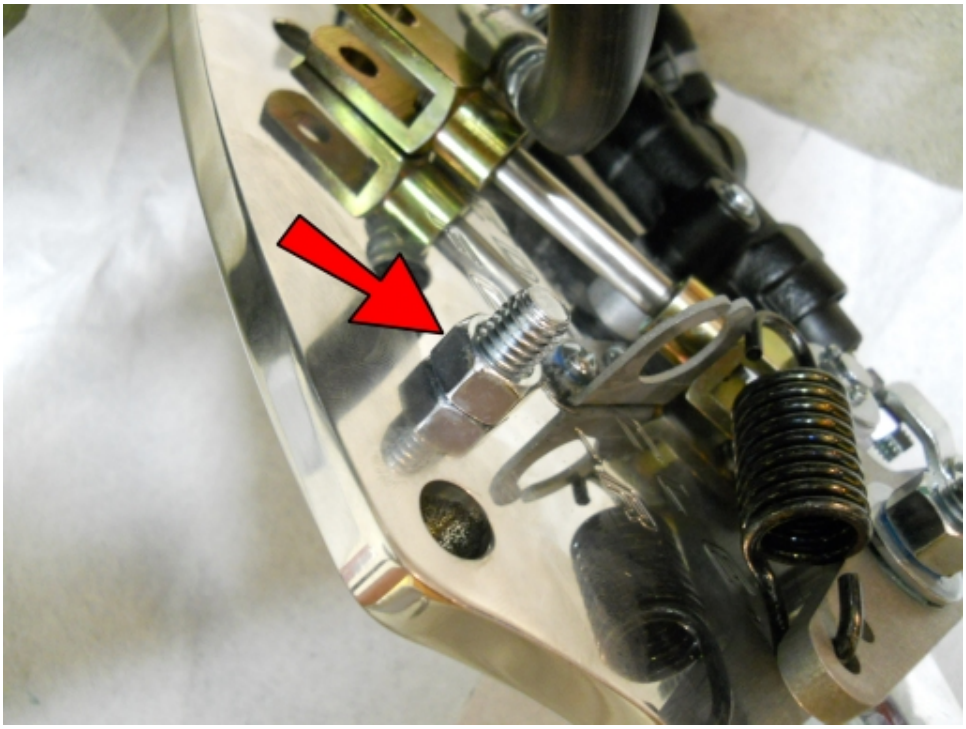
Apply axle grease or similar to an SPC031.



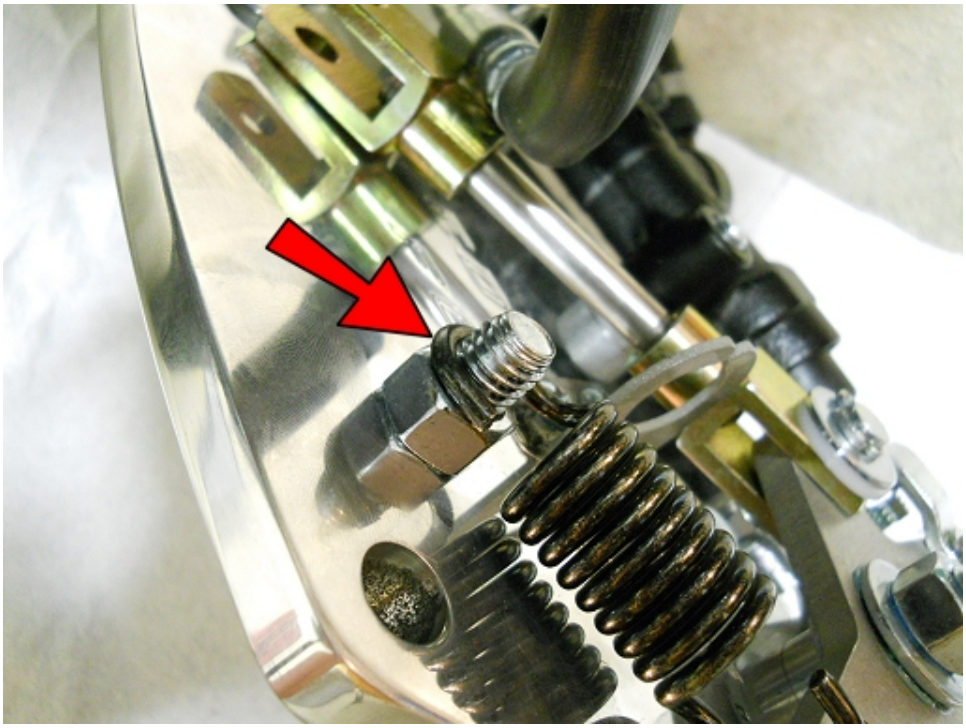
Place the greased SPC031 into the ARM16, line it up with the Flat Head Bolt and push the Bolt in the rest of the way.



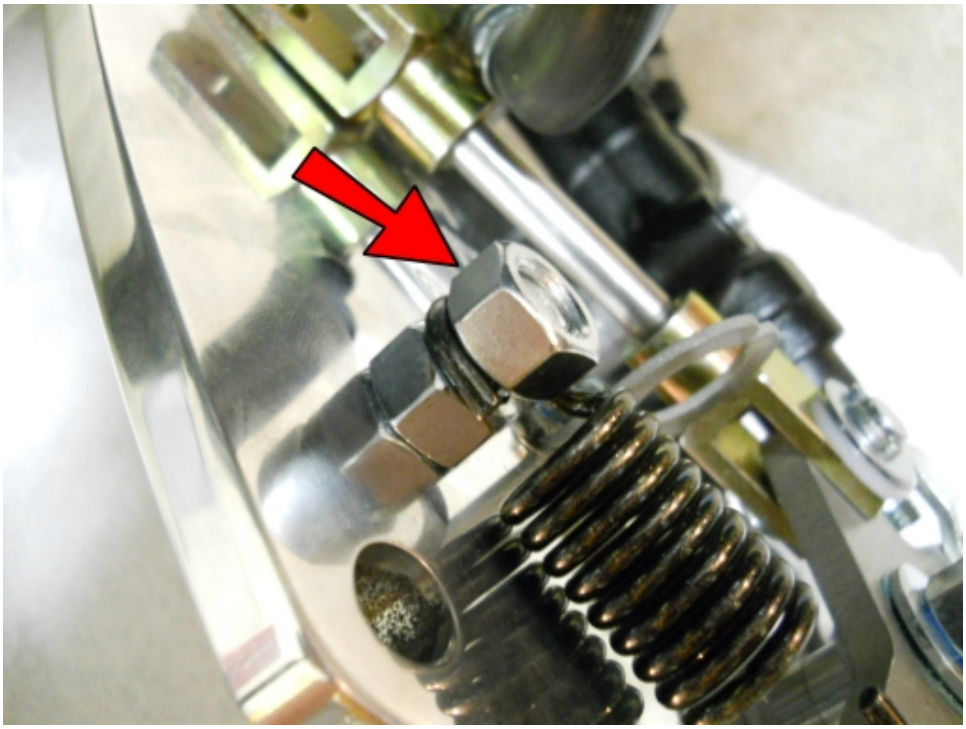
Secure with another 5/16” Zinc Washer and a 3/8” Nut.



Insert a 3/8-16x1.25 Flat Head Bolt here and secure with a 3/8” Nut.

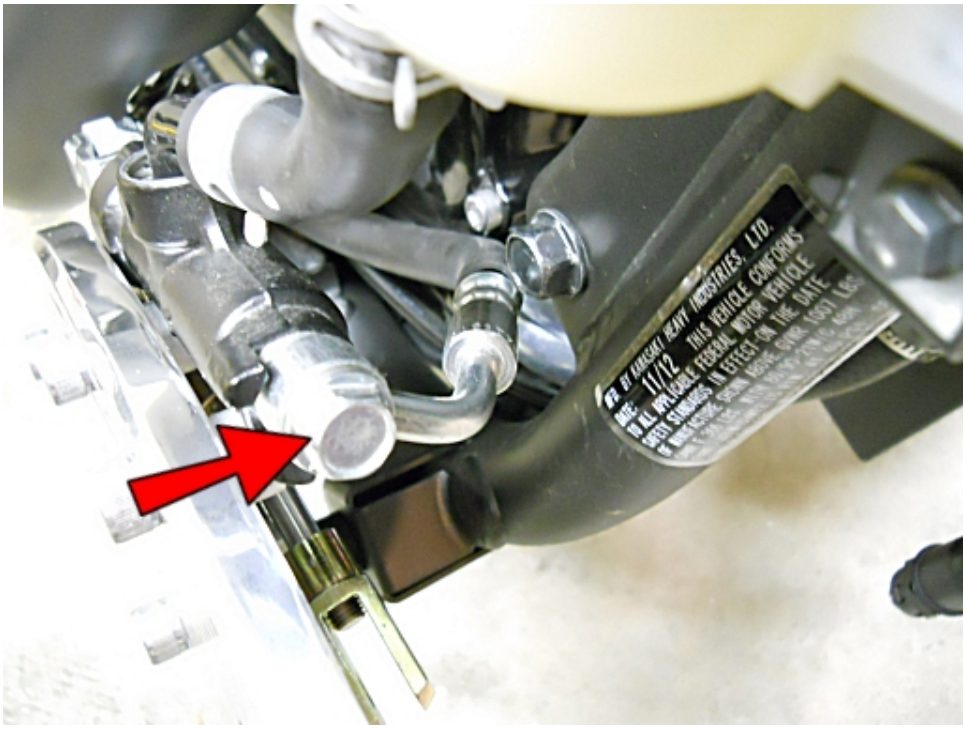


Hook the other end of the large spring onto the Flat Head Bolt.

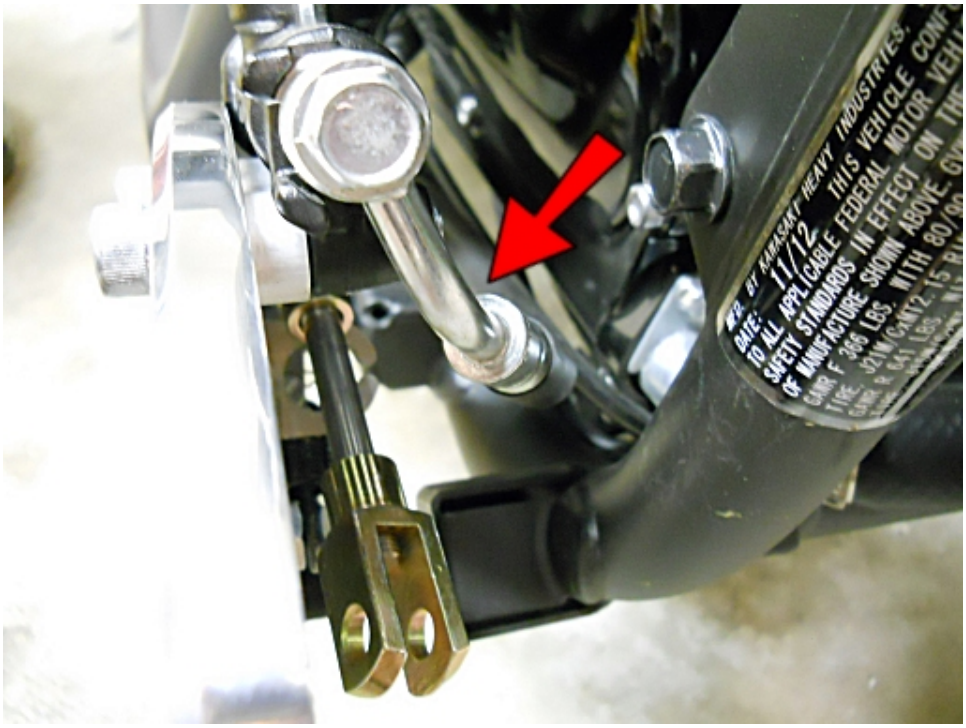


Secure with another 3/8” Nut.

(Note: This next step is temporary, so don't use a thread lock compound on this step.)
Using two, M10-1.25x70 Bolts and two SPC150, mount the assembly to the frame and snug the bolts but don't completely tighten them.



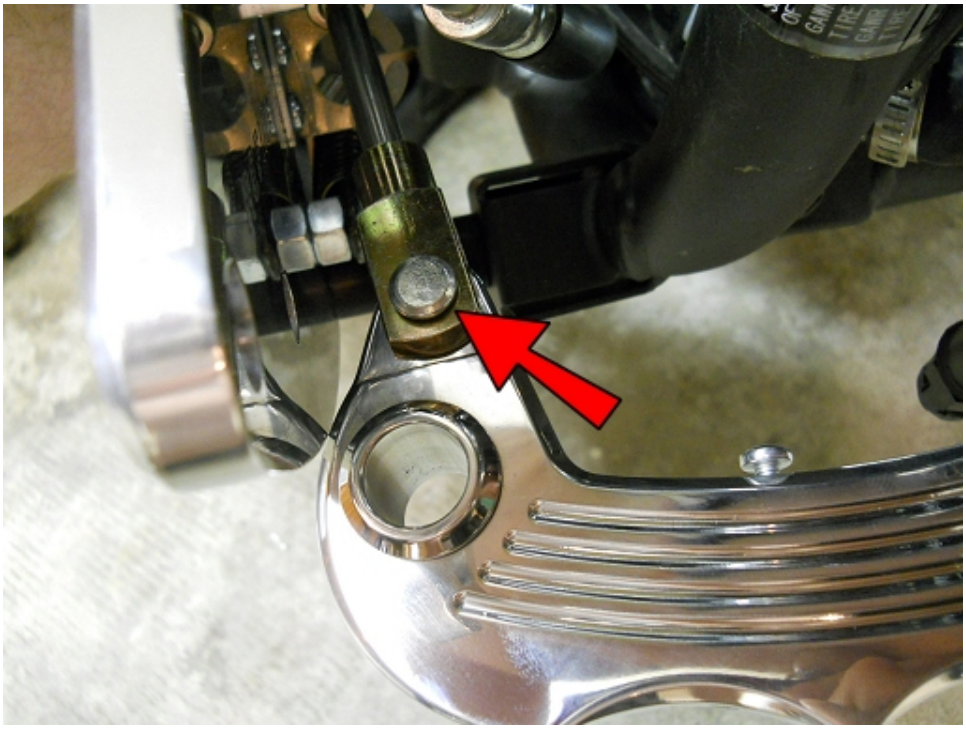
Barely loosen the banjo bolt just enough to rotate the brake line. Do not loosen it too much or air will get in the line. Hold the bolt head from loosening any more while you rotate the line up until it hits the motor mount bolt.



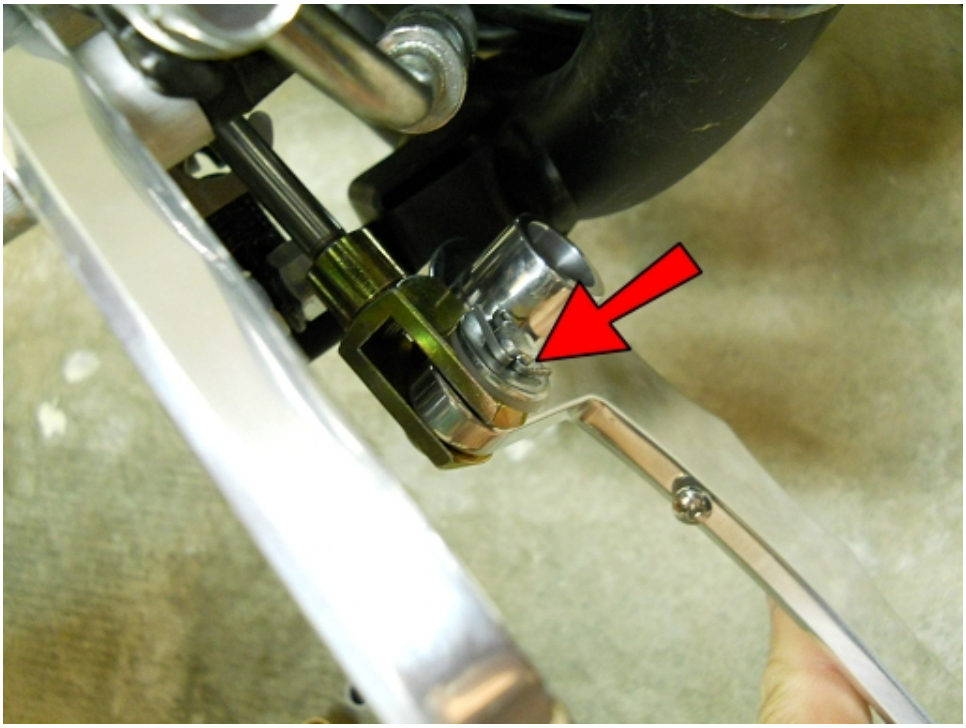
Retighten the banjo bolt, allowing the line to rotate back down to the position shown. The new position allows room for the brake linkage.

Clean out any polishing compound that may have built up inside the hubs of the Brake Pedal and Shifter Pedal.

Thread a #8-32 Screw all of the way into the Brake Pedal.



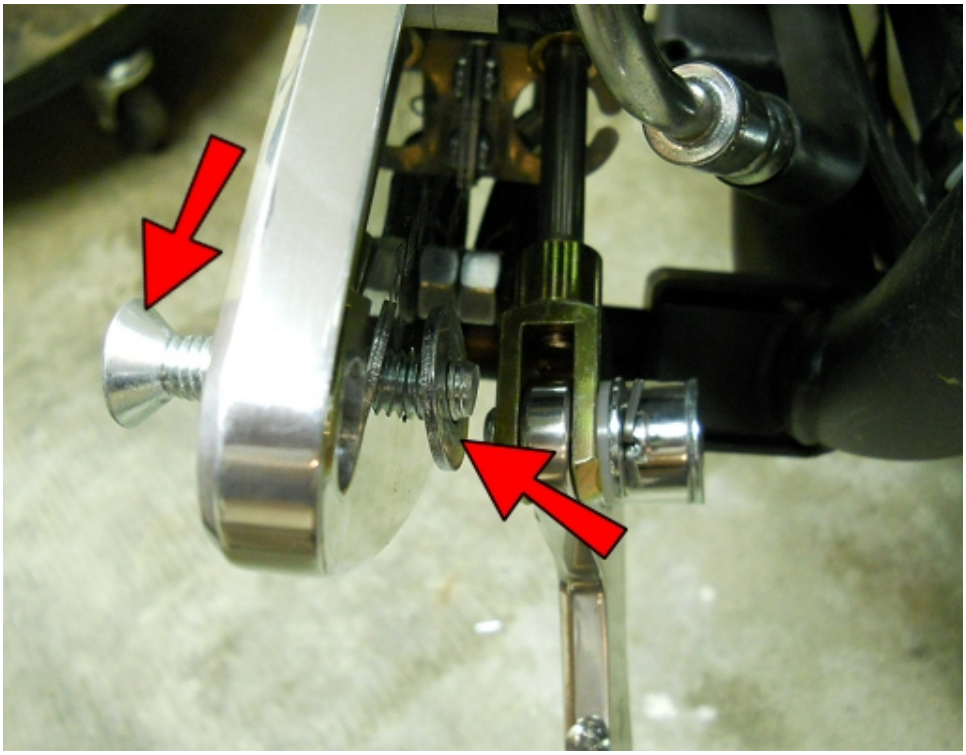
Rotate the 5/16 Clevis horizontal, insert the Brake Pedal and drop in a 5/16x7/8 Clevis Pin.



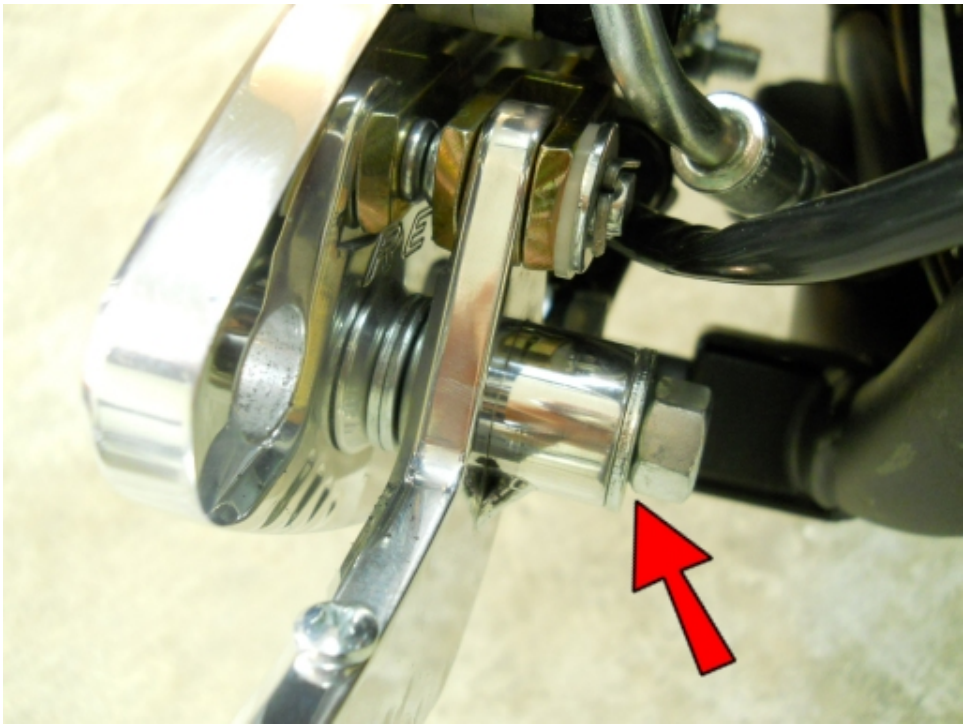
Rotate everything back to vertical and secure the Brake Pedal with a 3/8” Nylon Washer, 5/16” Zinc Washer and 5/64x1 Cotter Pin. Trim the legs of the Cotter Pin.

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

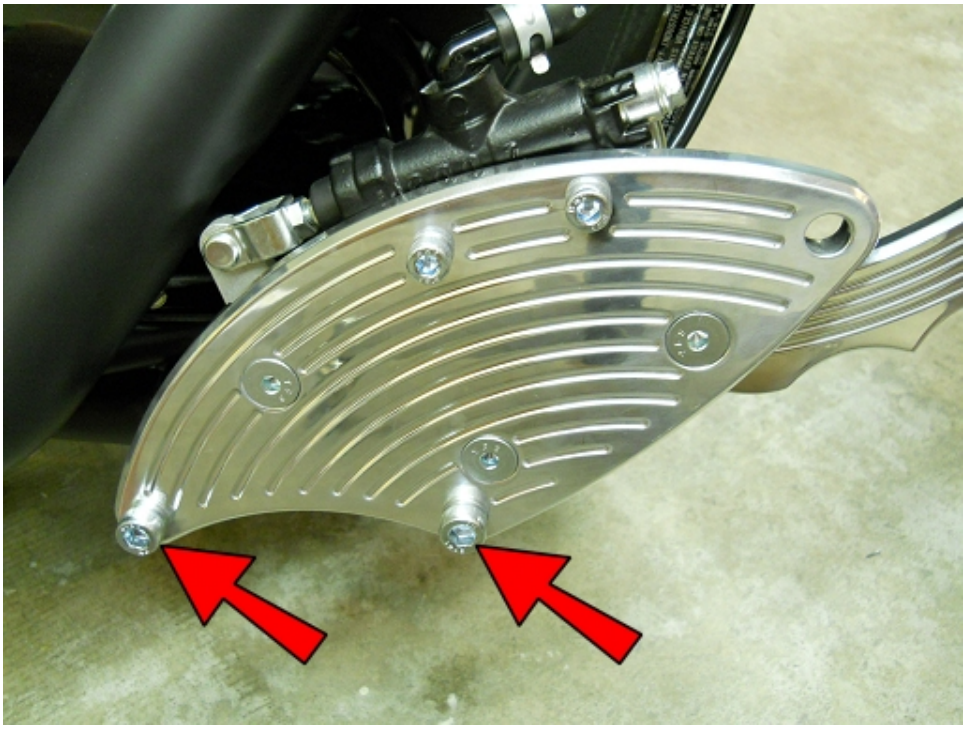
Place 1 set of the sleeves into the Brake Pedal hub and 1 set into the Shifter Pedal hub and set the Shifter Pedal aside.



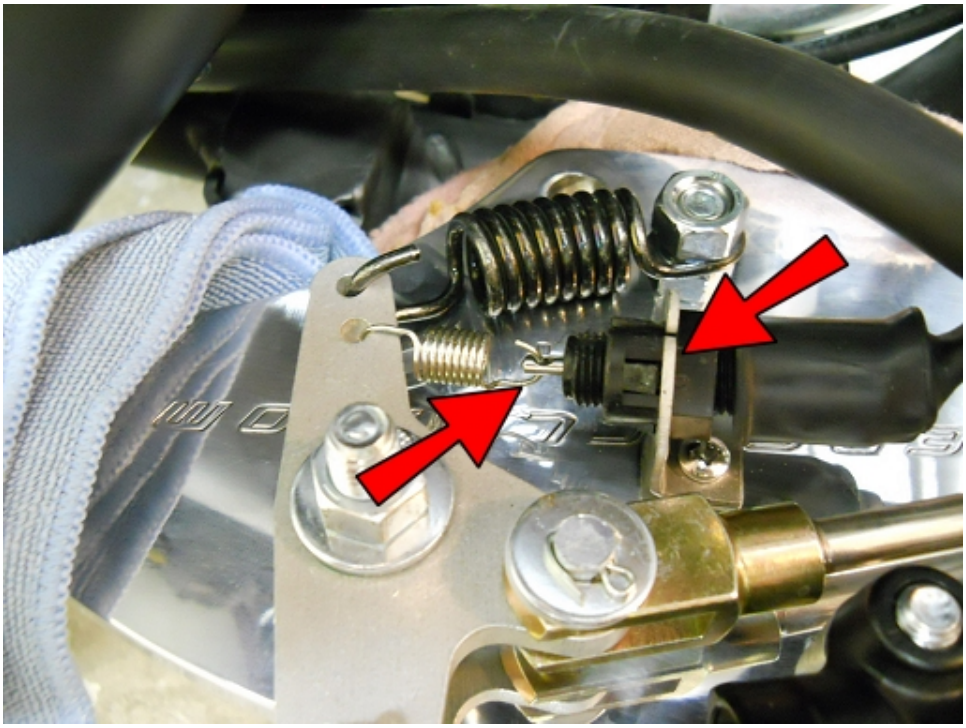
Insert a 2 1/4” Flat Head Bolt until it just protrudes through and place a 5/16” Zinc Washer onto the bolt on the back side.



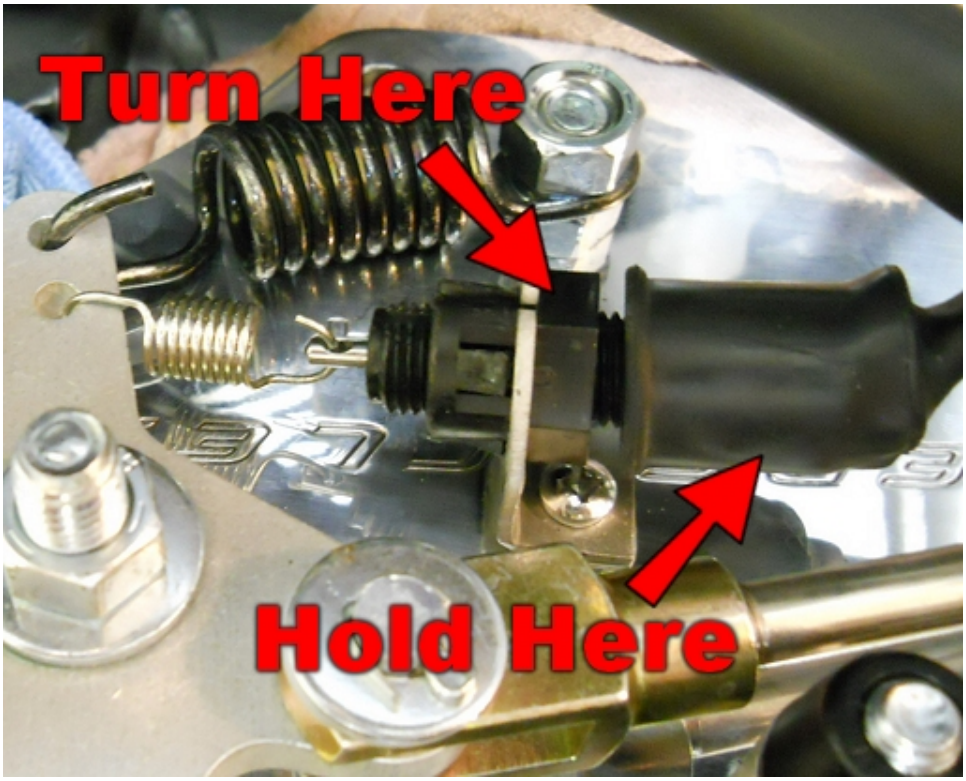
Place the Brake Pedal onto the bolt and secure with another 5/16” Zinc Washer and 3/8” Nut.



Remove the M10-1.25x70 Bolts and SPC150 that were temporarily installed earlier.

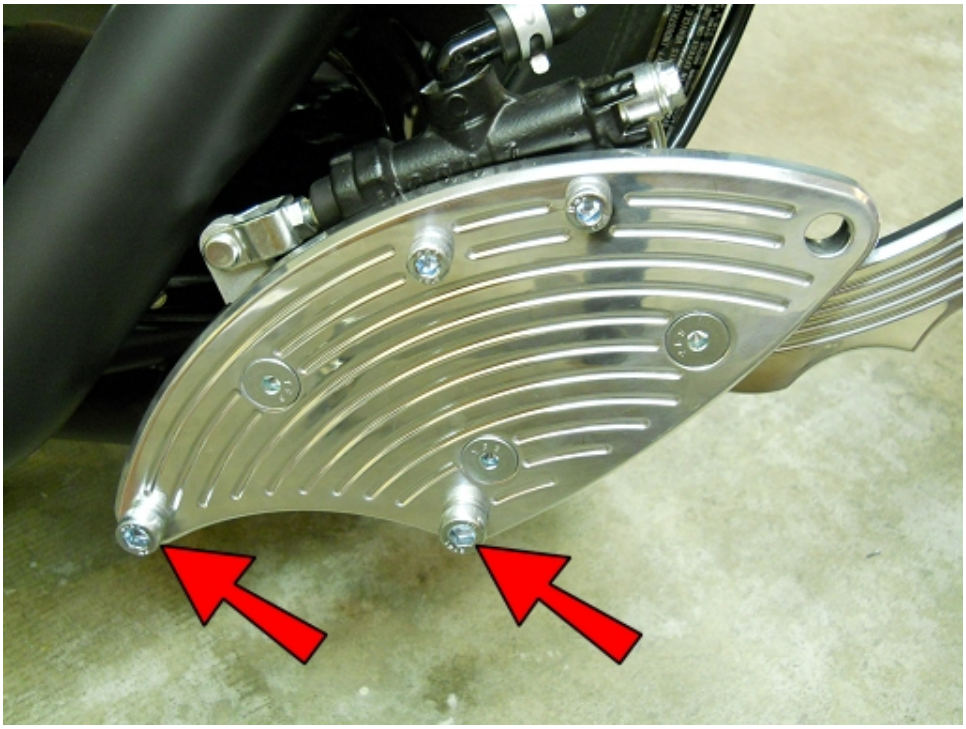


Insert the brake light switch into its new mount and connect the spring to the end of it.



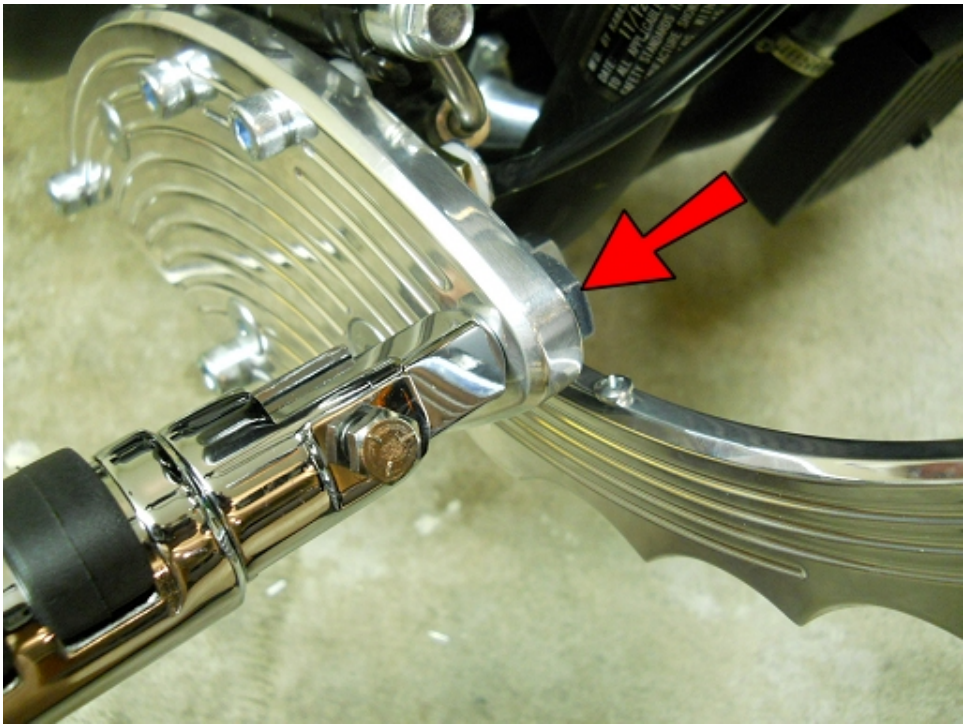
The brake light switch will need to be adjusted. Do this by turning the adjustment nut. Hold the brake light switch in one hand to keep it from turning, while using a wrench to turn the nut. If the spring tension is too tight, your brake light will be on all of the time. If it is too lose, it will not 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.



Reconnect the FC13-R with the M10-1.25x70 Bolts and SPC150 and secure permanently.

Attach the Brake Peg to the threaded top hole of the Brake Pedal and secure with a 5/16” Nut.



Place the 1/2” Zinc Washer onto the foot peg bolt and install the foot peg.

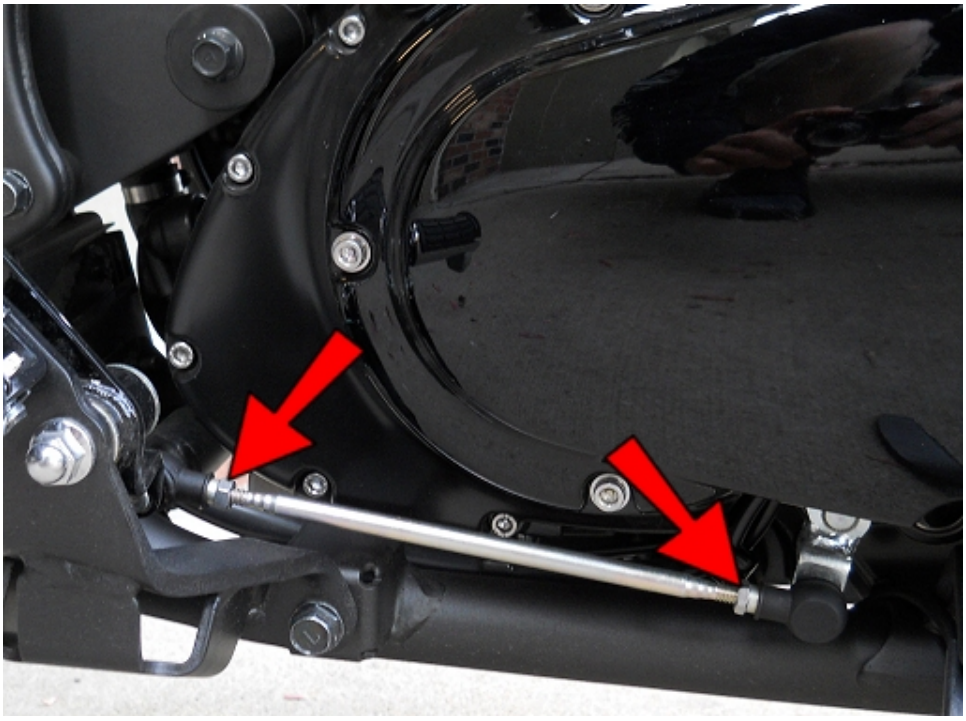
Make sure the foot peg bolt is rotated so that the Brake Pedal Stop Screw hits a FLAT of the hex head and not a point.

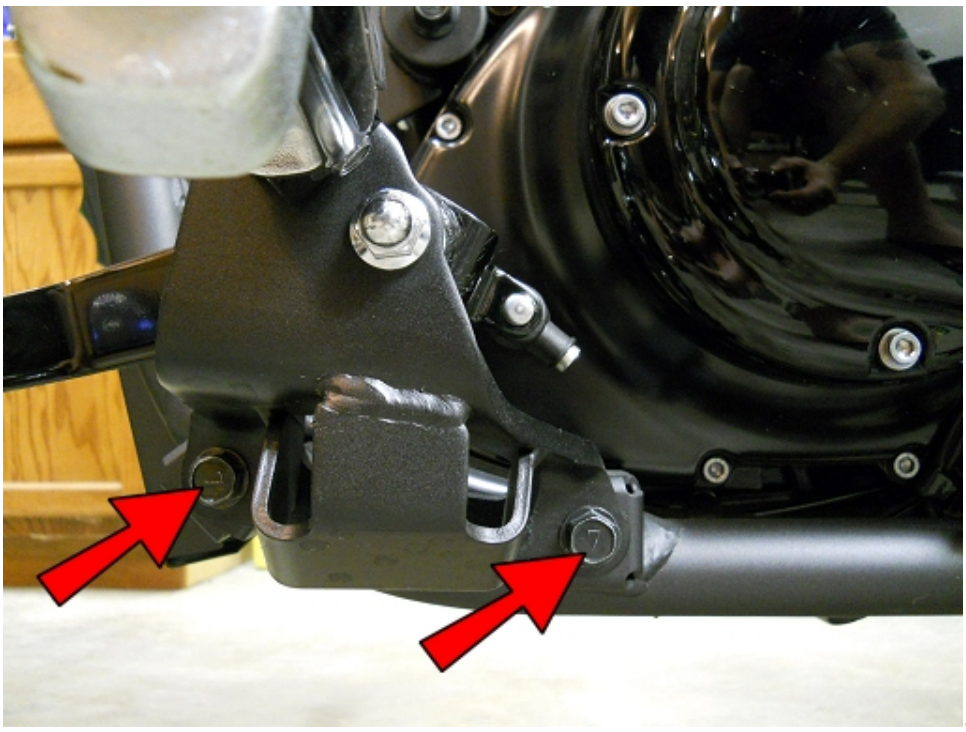
Rotate the reservoir hose at this connection so the reservoir lines back up against the frame at its mount hole.

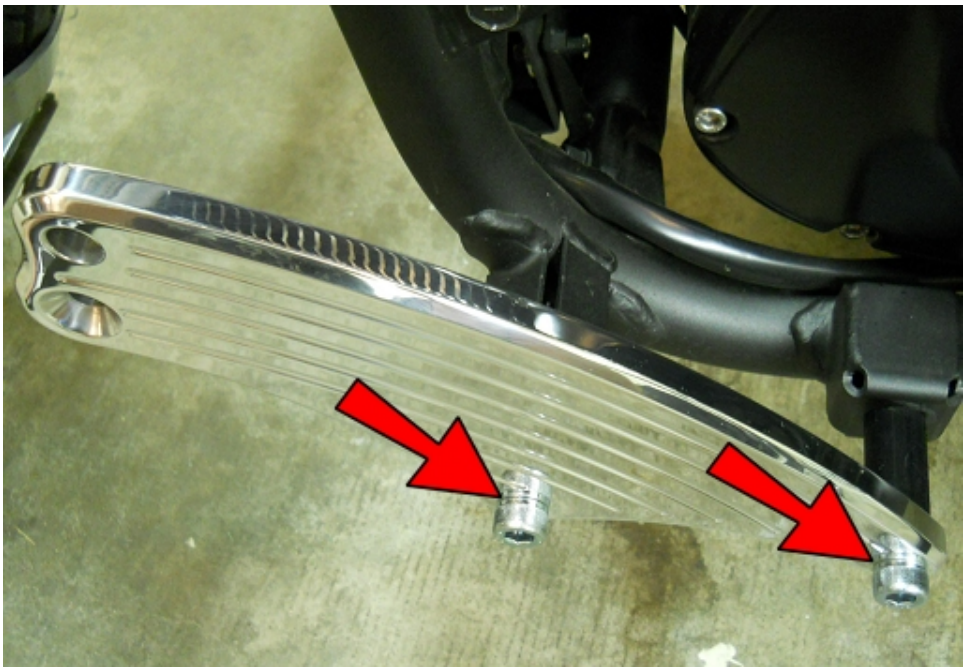
Reinstall the reservoir.

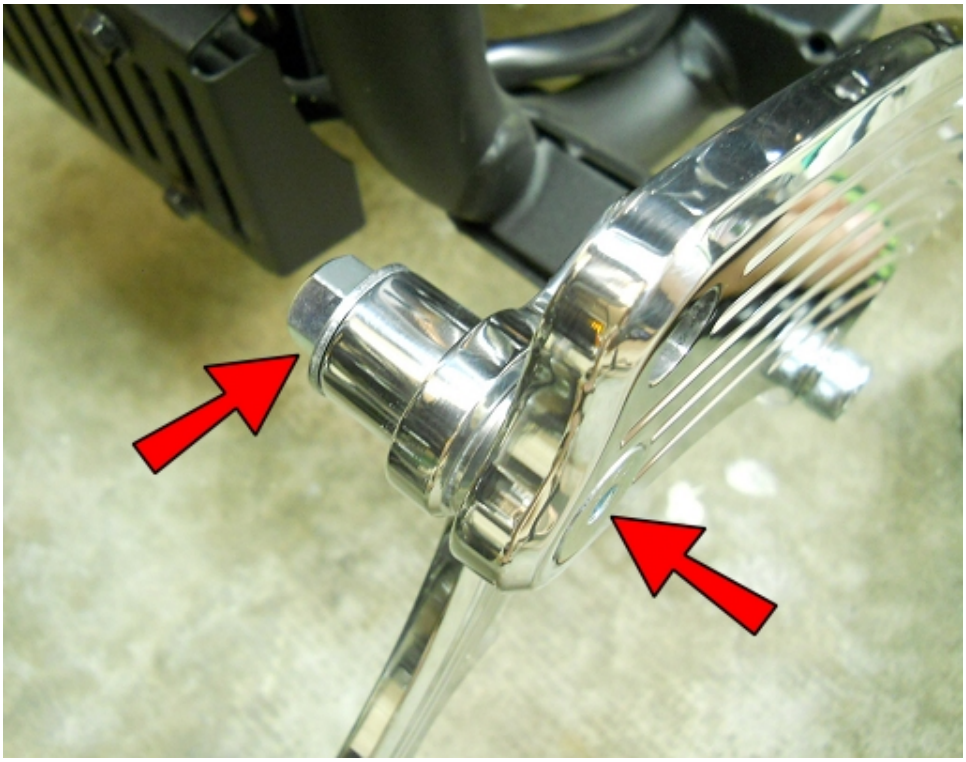
Reinstall the reservoir cover.

Shifter Side…

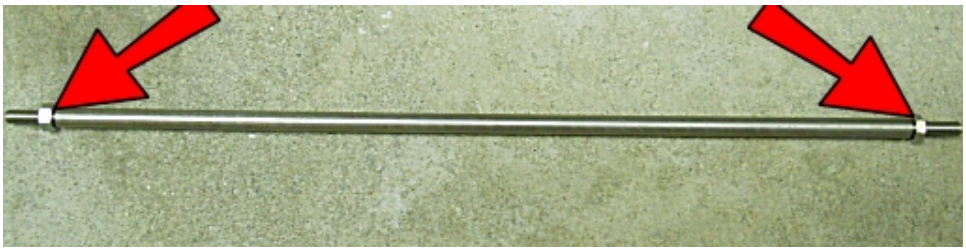

Loosen the linkage locking nuts and remove the linkage. Note: The rear is left hand threaded


.
Remove these bolts.


Connect the FC13-L with two, M10-1.25x70 Bolts and two SPC150, and secure.

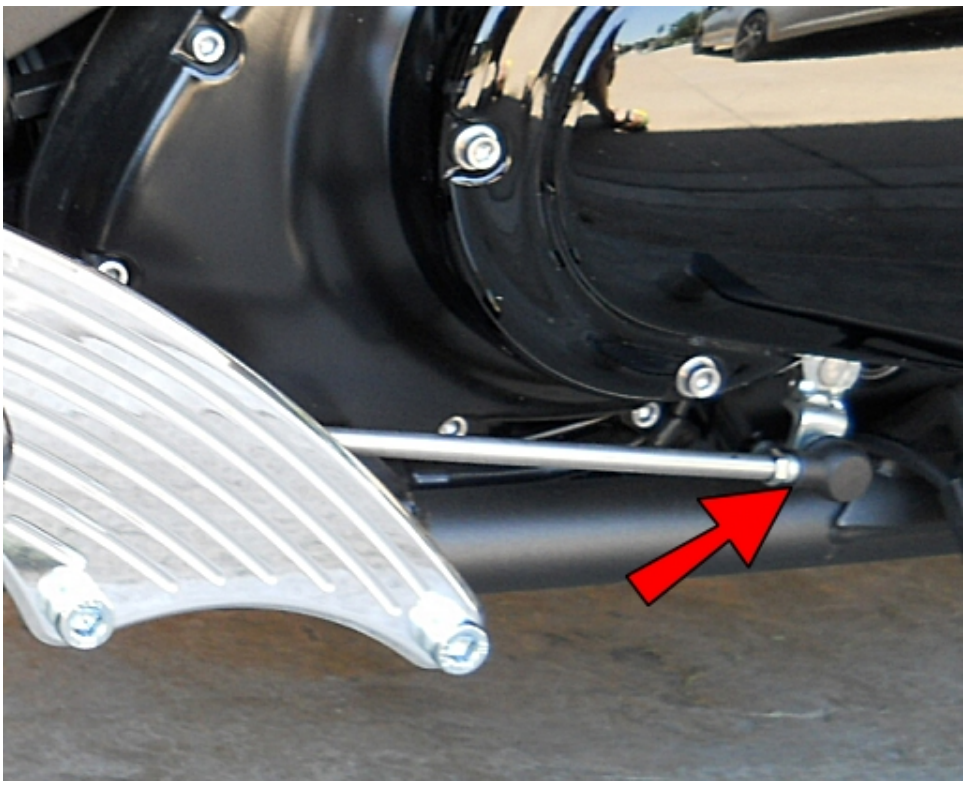


Connect the Shifter Pedal (with previously installed sleeves in the hub) using a 2 1/4” Flat Head Bolt and secure with a 5/16” Zinc Washer and 3/8” Nut. Then install a foot peg.

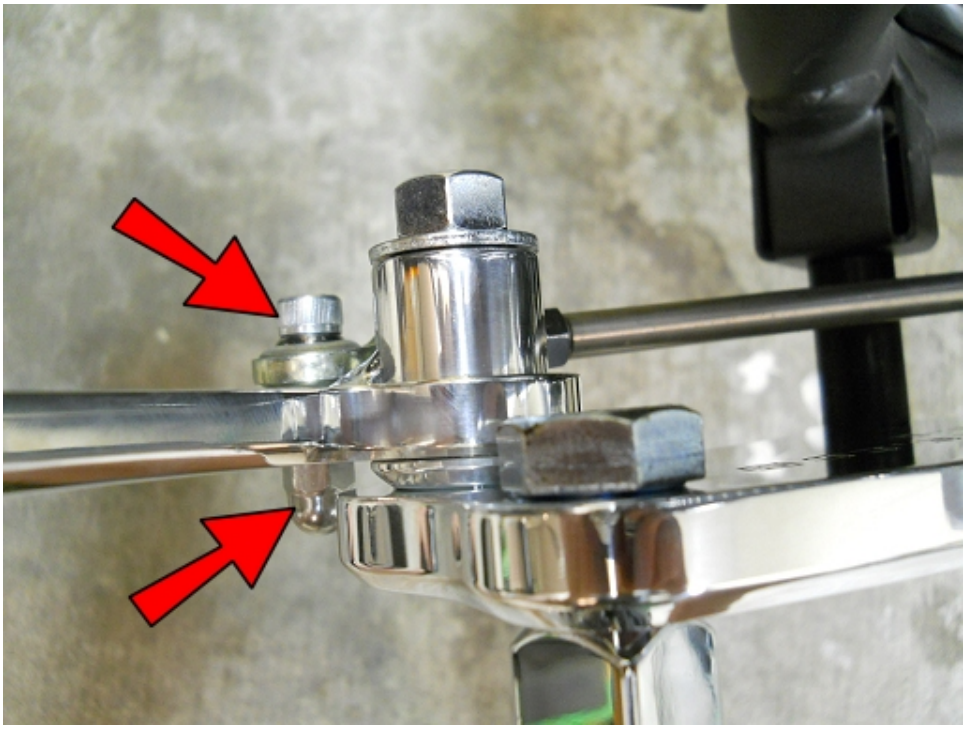


Remove the linkage locking nuts from the original shifter linkage and install them onto the new Shifter Linkage. Remember, one end is left hand threaded.

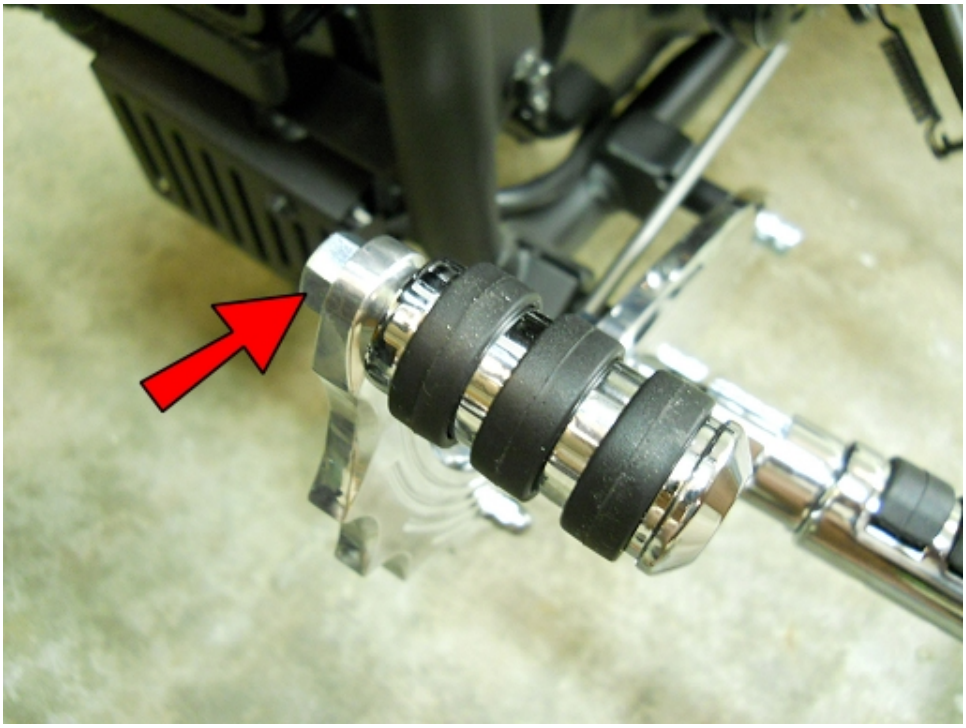
Thread a M6 Spherical Rod End onto the right hand threaded end of the Linkage.



Thread the other end into the ball joint.



Connect the other end to the Shifter Pedal with an M6-1.0x25 Socket Head Bolt and secure with an M6 Acorn Nut.



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

Adjust the Shifter Pedal height by turning it one way or the other. After the height is adjusted to the desired position, tighten the nuts against the ends, at both ends of the linkage.

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!