

Installation instructions for FC5 Forward Controls for Kawasaki Vulcan Classic 1500 FI & 1600, Mean Streak & Suzuki Marauder 1600

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 FC5. Parts will be referred to by the names & numbers shown here. If you are missing anything please email RefinedCycle@gmail.com.



FC5 Components

1- M6-1.0 Acorn nut	16- Toe peg (Qty. 2)
2- 1/4 Zinc washer (Qty. 2)	17- Small aluminum spacer
3- 5/16-24 nut (Qty. 2)	18- 5/8x1/2 Bronze sleeve (Qty. 2)
4- 3/8-16 nut (Qty. 5)	19- 3/8 Nylon washer (Qty. 2)
5- 5/16x7/8 Clevis pin (Qty. 2)	20- 5/16 Zinc washer (Qty. 5)
6- M6-1.0x30 Bolt	21- FC5-L
7- 3/8-16x1.25 Button Head Bolt (Qty. 2)	22- Brake Pedal
8- M8-1.25x30 Bolt (Qty. 2)	23- FC5-R
9- M10-1.25 x 70mm bolt (Qty. 4)	24- ARM3
10- Brake Linkage	25- ARM4
11- Spherical Rod End (Qty. 2)	26- #6-32 Set screw (Qty. 2)
12- Shifter Linkage	27- 5/64x1 Cotter pin (Qty. 3)
13- Shifter Pedal	28- M6-1.0x25 socket head bolt (Qty. 3)
14- .75" Spacer	29- SLV1 (Qty. 2)
15- 1.5" Spacer (Qty. 2)	30- 3/8-16x2 Button Head Bolt (Qty. 2)

NOTE: If you are installing the FC5 Forward Controls on a NON-fuel injected model, you WILL need a 10" longer brake hose (approx. 56"), you will probably need to extend the brake light switch wires and you will NOT need to move the rear brake reservoir.

Brake Side



Remove the 2 bolts that hold the master cylinder.



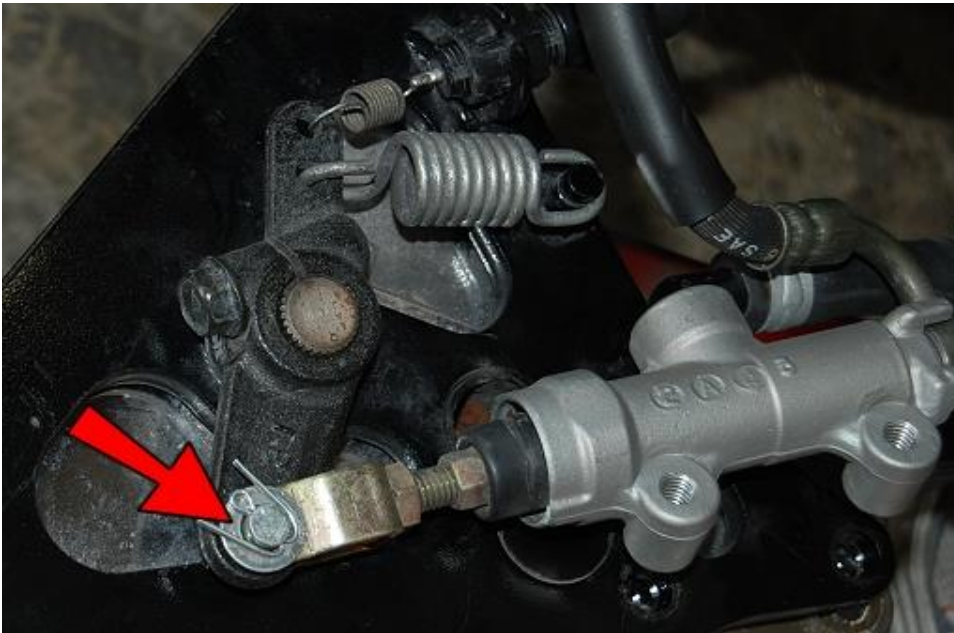
Remove the 2 bolts at the bottom. On the frame tube, behind the rear bolt location there is a hose stay holding the brake hose to the frame tube. Bend that away and remove the hose from it.



Remove the brake reservoir cover.



Remove this bolt.



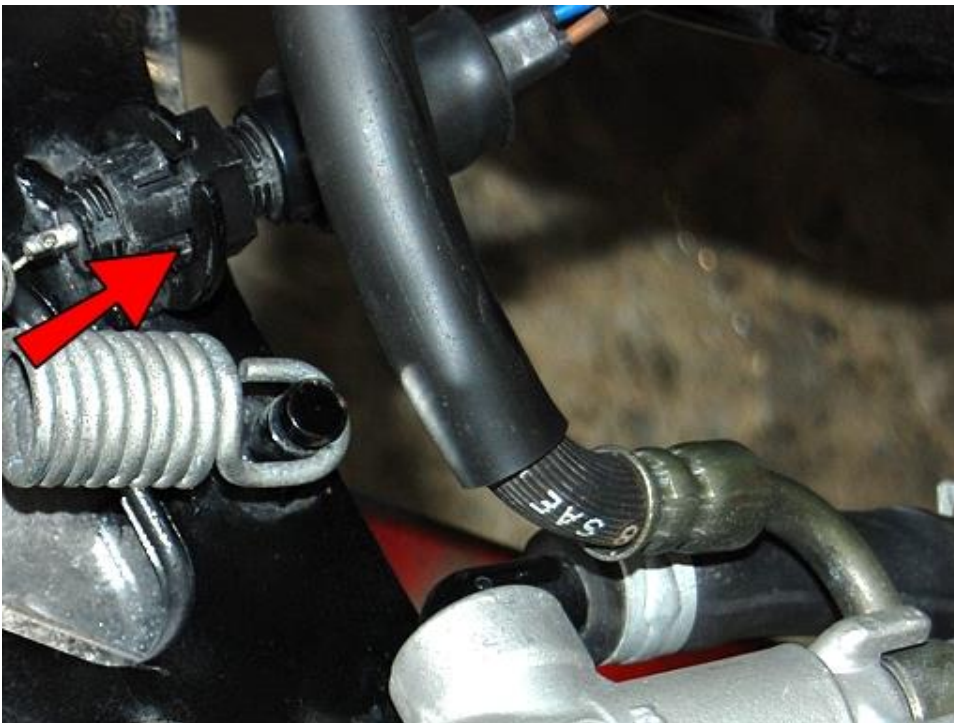
Remove the cotter pin and washer from the master cylinder.



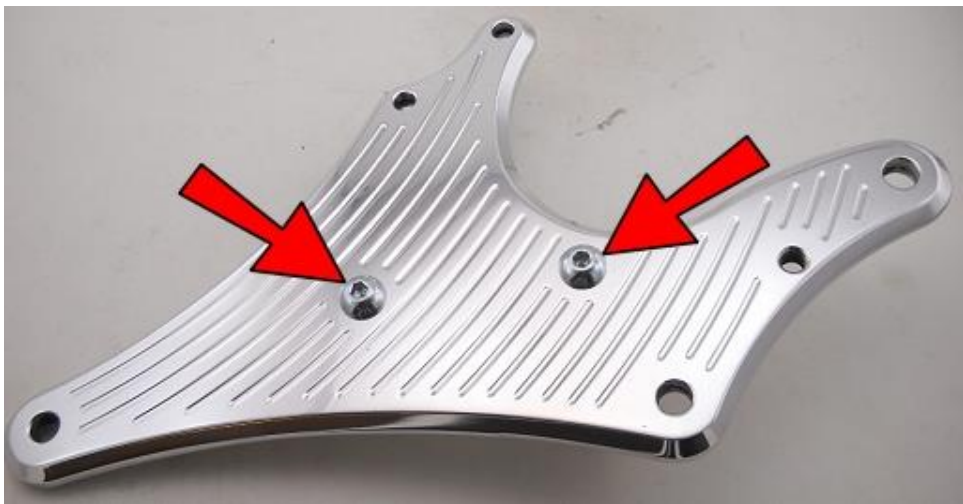
Remove the spring from the brake light switch.



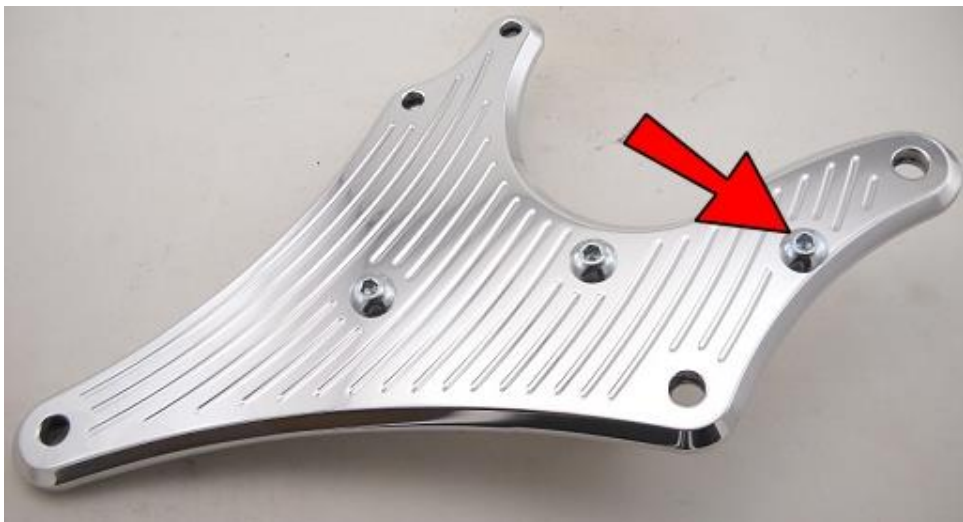
Completely remove this bolt and remove the brake arm from the spline. This will allow the pin holding the master cylinder to fall out and the brake return spring to come off.



Use a flat blade screwdriver to push the holding tabs in on the brake light switch to release it from its mount.



Thread a 3/8-16x1.25 button head bolt all the way into these 2 holes in the FC5-R.



Thread a 3/8-16x2 button head bolt all the way into this hole.



Thread a 3/8-16 nut on here and tighten.



Apply grease to the outside surface of both SLV1's and the inside and outside of both the 5/8x1/2 Bronze Sleeves.



Place a SLV1 into a 5/8x1/2 Bronze Sleeve and insert them into the Brake and Shifter Pedals.



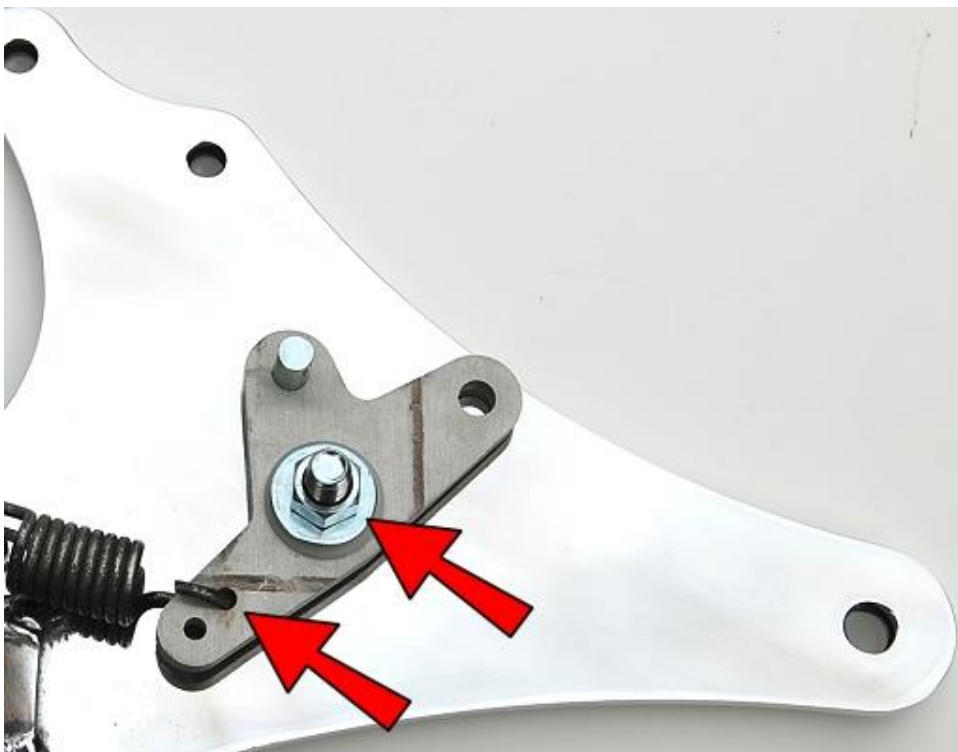
Place the Brake Pedal assembly onto the 3/8-16x2 Button head bolt and secure with a 5/16 zinc washer and a 3/8 nut.



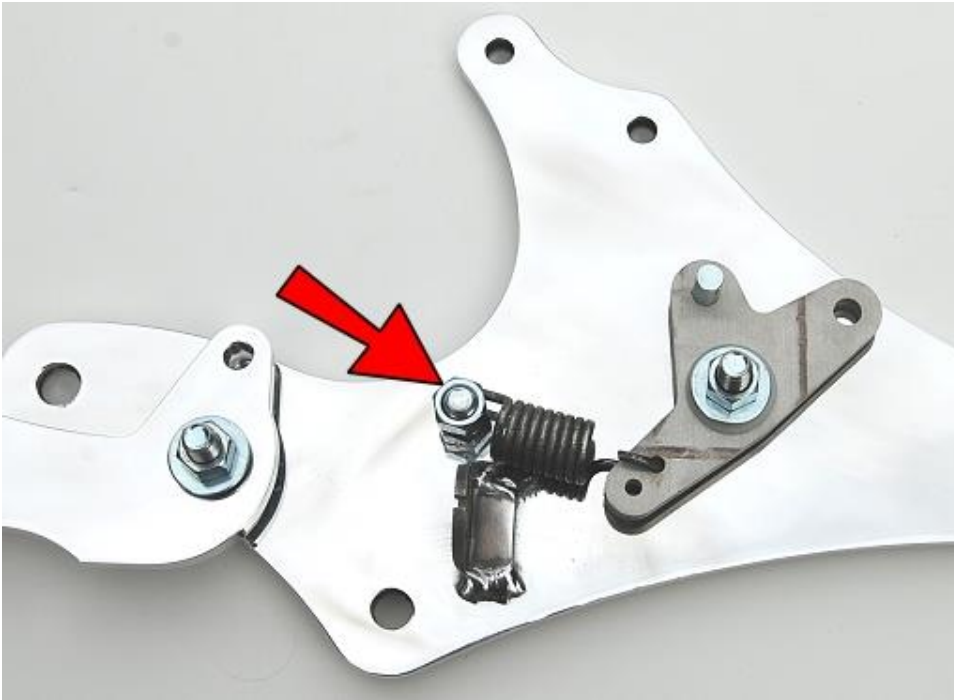
Place TWO 5/16 zinc washers here. Apply a little grease to the outside of the small aluminum spacer and place on top of the washers.



Insert a clevis pin into the front of the ARM4 as shown.



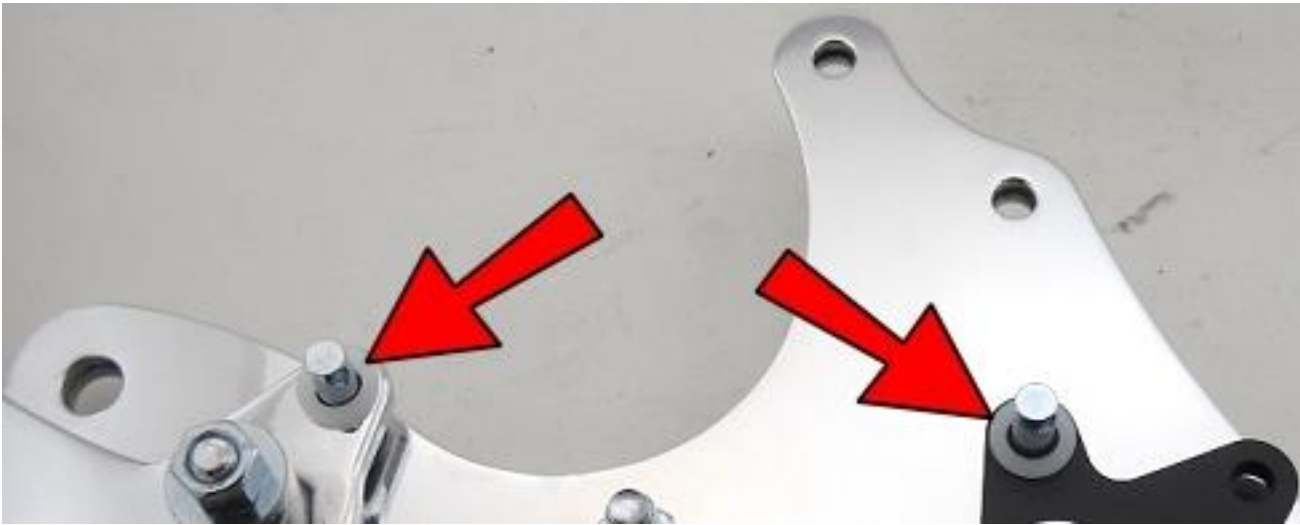
Hook the brake return spring on as shown. Place the ARM4 onto the spacer. Put a 5/16 zinc washer and a 3/8 nut on but ONLY "finger tighten" it at this point.



Hook the other end of the brake return spring on as shown and secure with a 3/8 nut.



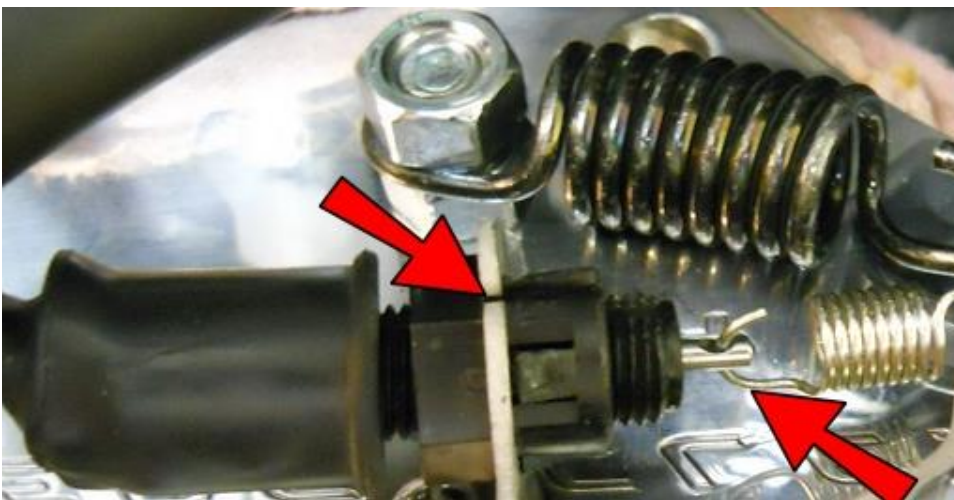
Rotate the brake pedal as far as it will go counter clockwise and insert a clevis pin into the front side of the brake pedal.



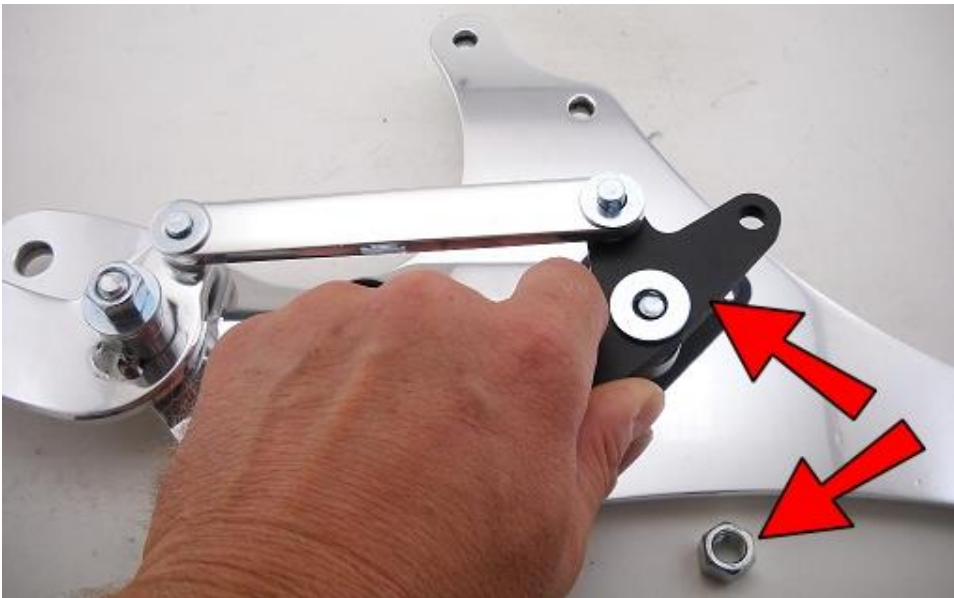
Rotate the pedal back around and put a 3/8 nylon washer on both clevis pins.



Attach the brake linkage to the two clevis pins and secure with 1/4" washers and cotter pins.



On the brake light switch, thread the adjustment nut almost all the way on and insert it into the mount. Reconnect its spring to the switch and the other small hole on the ARM4. Turn the key on and actuate the brake lever to make sure the brake light is working properly. You may need to fine tune later when everything is finished.



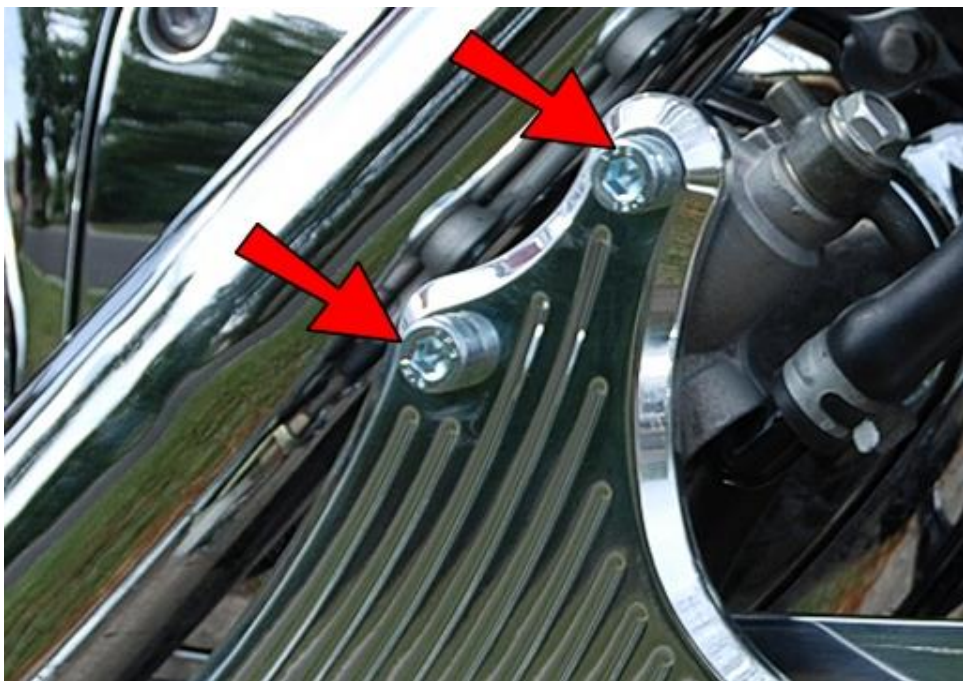
While holding everything in place, remove the 3/8 nut that you previously only finger tightened and pull the ARM4 off of the spacer to allow room to reattach the master cylinder.



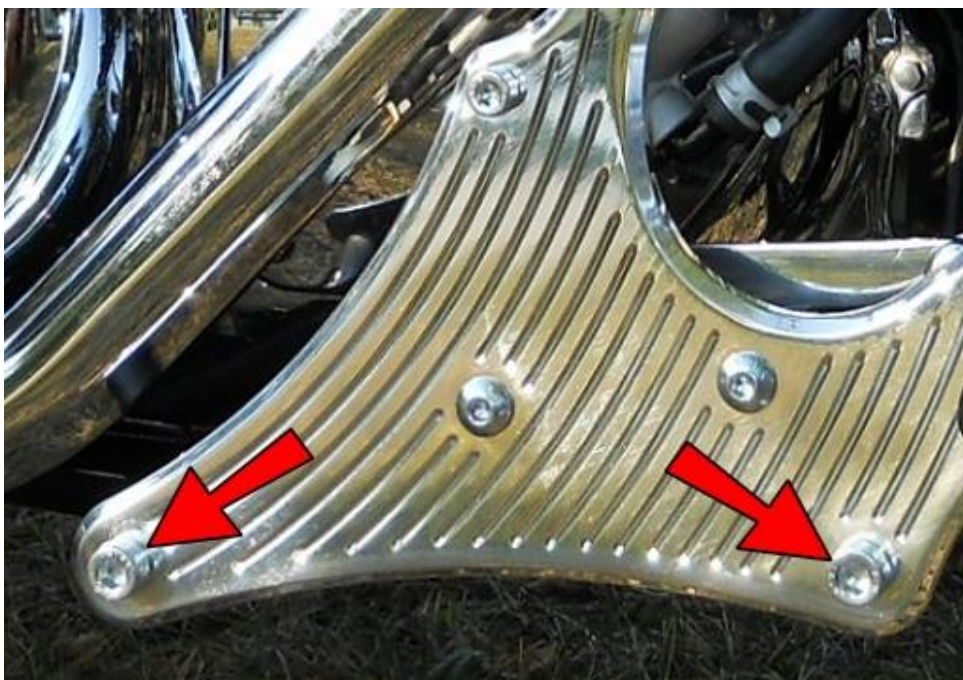
Connect the master cylinder to the ARM4 with the clevis pin removed earlier and secure with a washer and cotter pin.



Now work the ARM4 back onto the spacer and secure with the 3/8 nut.



Attach the master cylinder to the FC5-R with M8-1.25x30 socket head bolts.



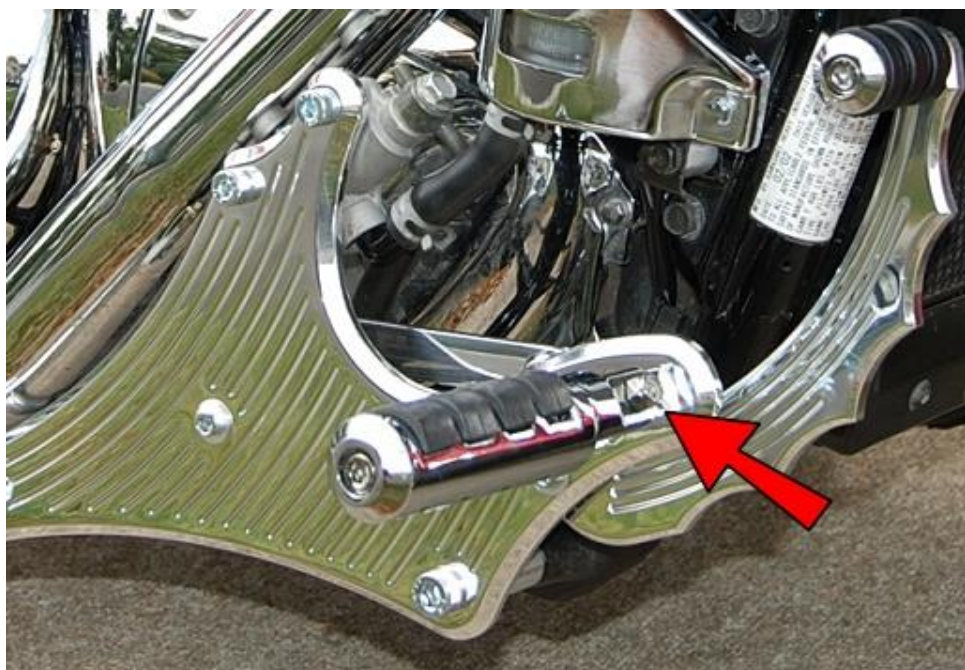
Attach the FC5-R to the bike on the original mounts using 1.5" spacers between the FC5-R and the frame and secure with M10-1.25x70 socket head bolts.



Reattach the brake reservoir to the frame using a .75" spacer and an M6-1.0x30 bolt then reattach the brake reservoir cover. Note: We have had a couple of oddball bikes (literally less than 1%) that required an adapter bracket to relocate the reservoir. Please contact us if you think you may need this bracket.



Install a toe peg onto the brake pedal and secure with a 5/16 nut.



Install a foot peg. This side is complete.

Shifter Side



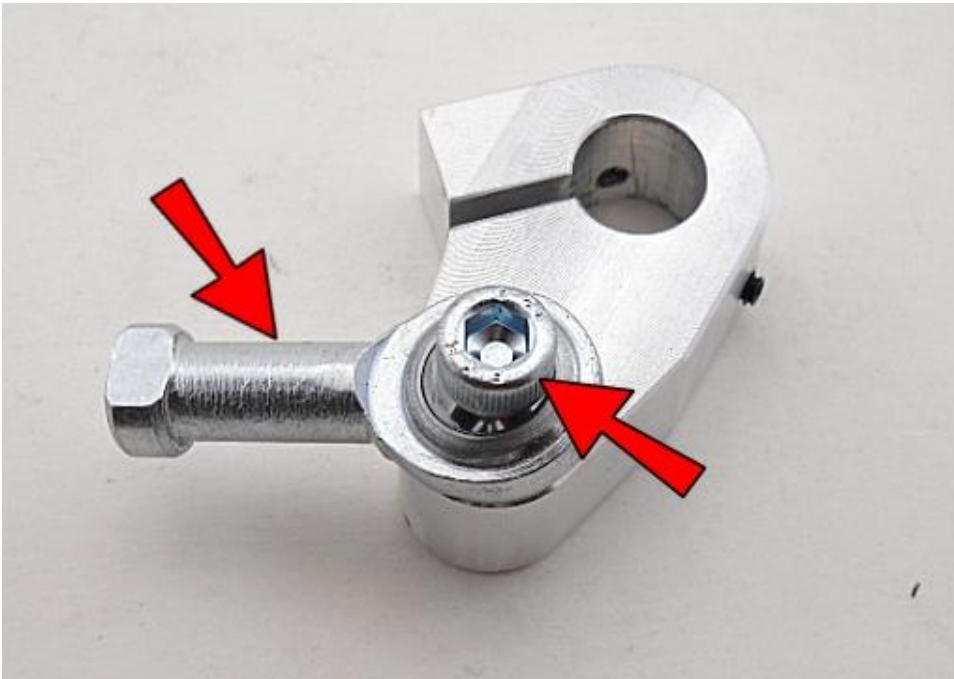
Remove these bolts.



Completely remove the shifter pedal spline bolt and remove the shifter pedal from the spline.



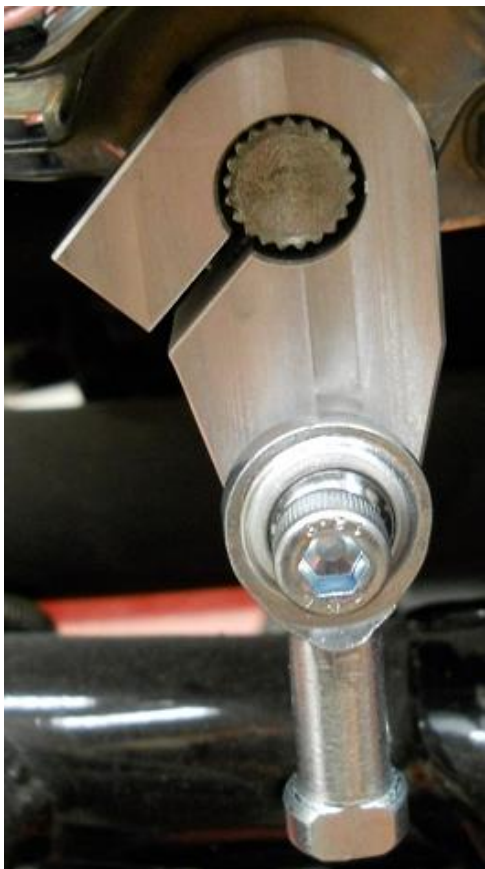
Start the two #6-32 set screws in the small threaded holes of the ARM3 being careful not to let them protrude through yet.



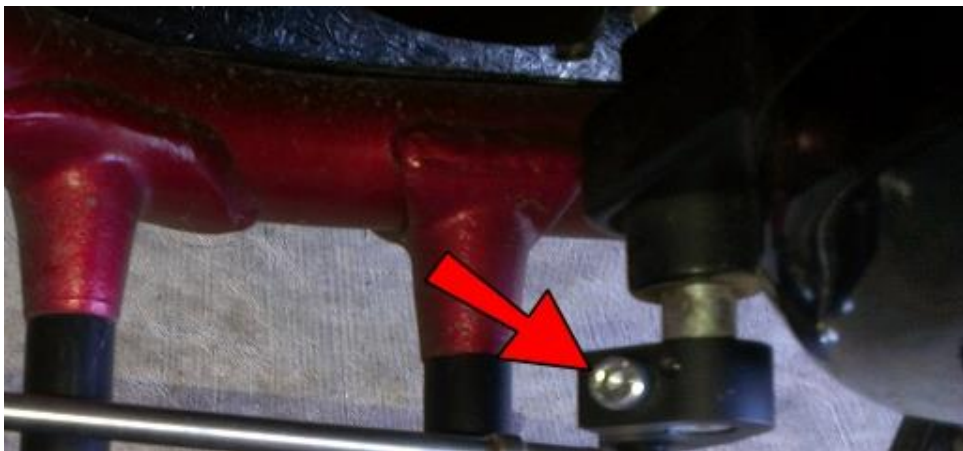
Connect a Spherical Rod End to the ARM3 using an M6-1.0x25 socket head bolt.



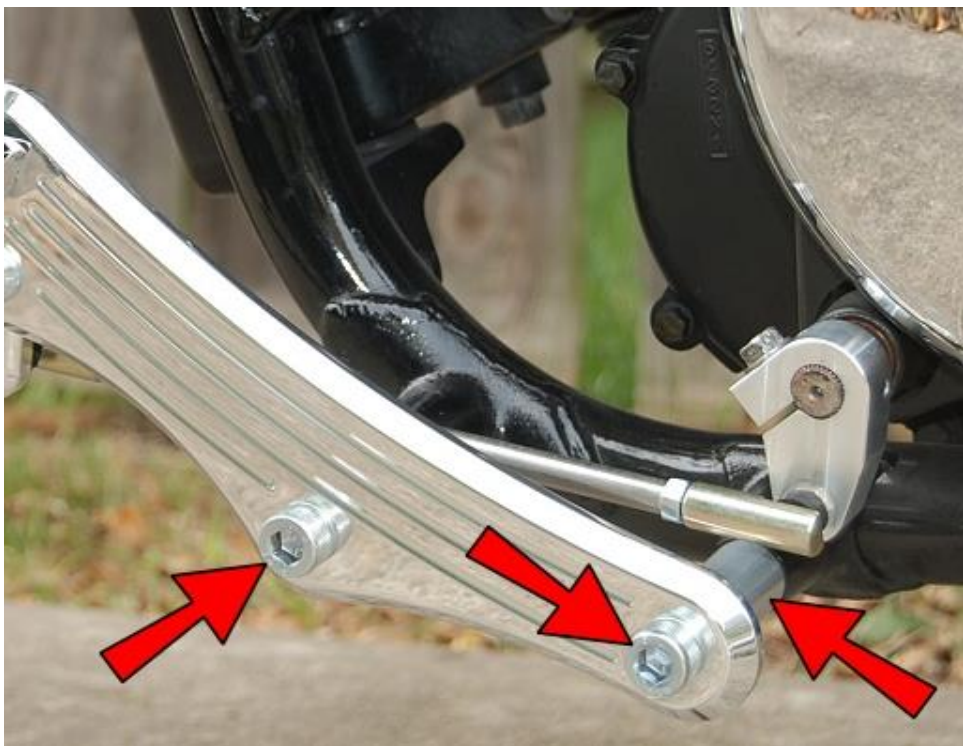
Hold the ARM3 firmly and insert a large flat head screw driver into the slot and carefully tap the screwdriver handle on a hard surface to spread the slot apart. The goal here is to spread the hole just far enough apart to easily slide the ARM3 onto the shifter spline.



With the screwdriver still in place, slide the ARM3 onto the shifter spline and orient the ARM3 pointing down and just slightly to the right as shown. Line up the bolt hole on the top of the ARM3 with the groove in the spline and remove the flat screwdriver.



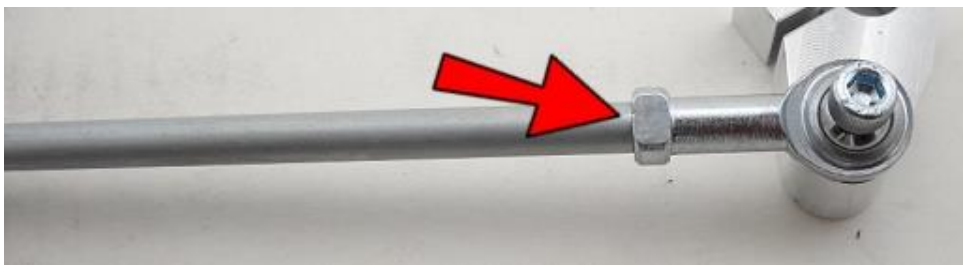
Insert an M6-1.0x25 socket head into the top hole of the ARM3 and tighten it all the way, then tighten the 2 set screws in the ARM3. Note: It is important to tighten the clamping bolt **BEFORE** the set screws, so it seats properly and gets a good grip on the spline.



Using 1.5" spacers and M10-1.25x70 bolts, install the FC5-L to the frame.



Thread a Spherical Rod End onto the shift linkage.



Thread the Shifter Linkage into the Spherical Rod End connected to the ARM3.



Thread a 3/8-16x2 button head bolt all the way into this hole.



Install a foot peg onto the FC5-L.



Place the Shifter Pedal (with sleeves inserted earlier) onto the 3/8-16x2 button head bolt.



Secure with a 5/16 zinc washer and 3/8 nut.



Connect the shifter linkage to the back of the Shifter pedal using an M6-1.0x25 socket head bolt and secure with an M6-1.0 acorn nut.



Install the toe peg onto the shifter pedal and secure with a 5/16 nut.

With the Shifter Linkage threaded as far into the Spherical Rod Ends as it will go, the Shifter Pedal will be at its lowest possible position. If you want it higher, remove the linkage from the pedal and unthread the Spherical Rod End a couple of turns at one or both ends, then re-install the linkage. Make sure enough of the rod is threaded into both ends to allow a secure connection.

If you want the Shifter Pedal lower, you can remove the M6 bolt and loosen the set screws from the ARM3 and rotate it slightly to bring the pedal down, then retighten.

With the key on, make sure the brake light works as intended by actuating the Brake Pedal a couple of times. If it does not, adjust the brake light switch with the adjustment nut, as previously shown above in picture A.

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!

