Installation instructions for FC16 Forward Controls for Volusia 800, Boulevard C50 M50

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.

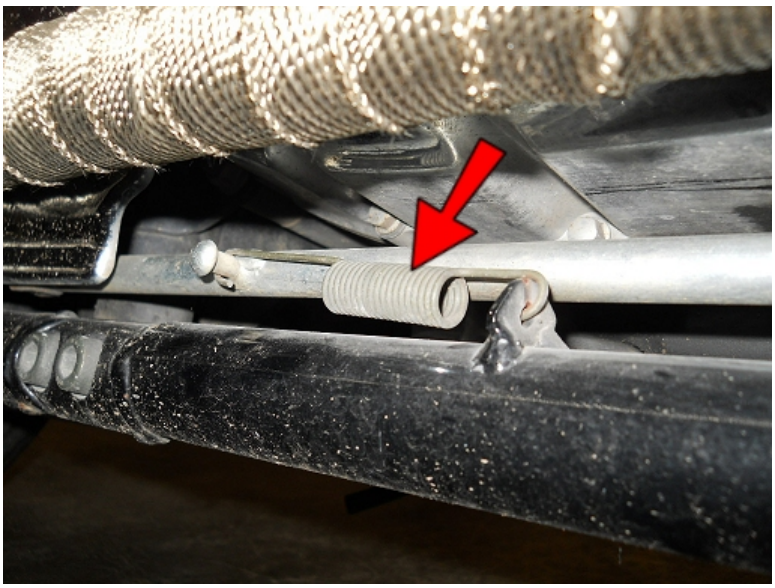
This picture shows the components of the FC16. Parts will be referred to by the names & numbers shown here. If you are missing anything please email RefinedCycle@gmail.com..

FC16 Components

1 - M10-1.25x70 SHCS (qty. 2)	21 - 3/8” Washer (qty. 5)
2 - M10-1.25x100 SHCS	22 - 1/4" Washer
3 - M8-1.25x60 SHCS	23 - M6 Washer
4 - M8-1.25x45 SHCS	24 - FC16 (qty. 2)
5 - Shifter Linkage	25 - 5/16" Spherical Rod End (qty. 2)
6 - Brake Linkage	26 - M6 Spherical Rod End
7 - 1/2-20x3.5 Hex Head Bolt	27 - Shifter Pedal
8 - 1/2-20x2.25 Hex Head Bolt	28 - Brake Pedal
9 - M10-1.25x40 SHCS	29 - ARM15
10 - M8-1.25x35 SHCS	30 - 3/64x1" Cotter Pin
11 - .5” Spacer (now polished, not black)	31 - 5/16-24 nut (qty. 2)
12 - .75” Spacer (now polished, not black)	32 - M8-1.25 Nut (qty. 2)
13 - 1” Spacer (now polished, not black)	33 - M8-1.25 Nylock nut (qty. 3)
14 - SLV1	34 - Toe peg (qty. 2)
15 - SLV4 (qty. 4)	35 - M6 Nut (qty. 2)
17 - 1.5” Spacer (now polished, not black)	36 - M6 Acorn Nut
18 - 2.8” Spacer	37 - M6-1.0x20 Hex Head Bolt
19 - STOF6	38 - M6-1.0x40 Stud
20 - M6 Clevis Pin	

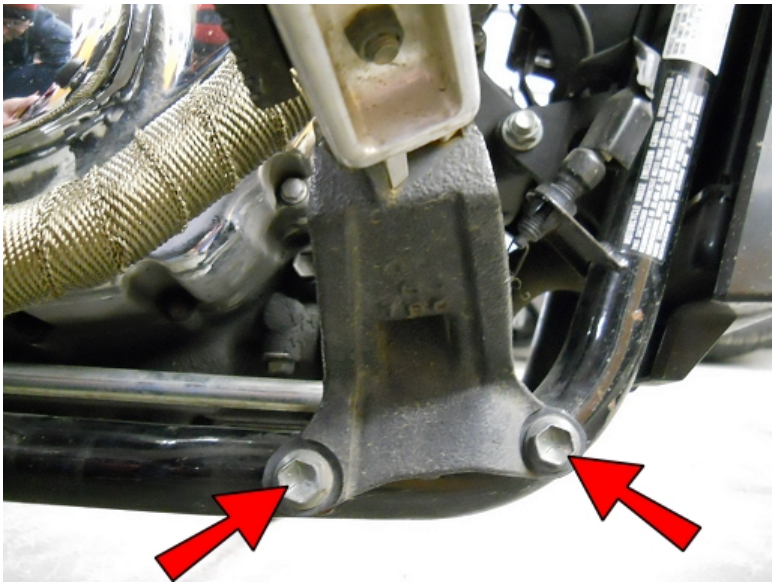
Brake Side…

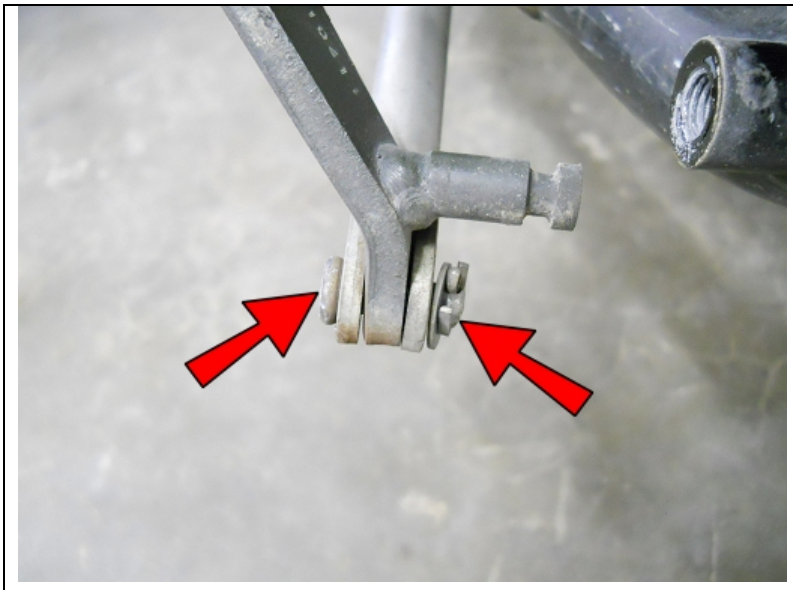
Remove this bolt.



Remove this spring.

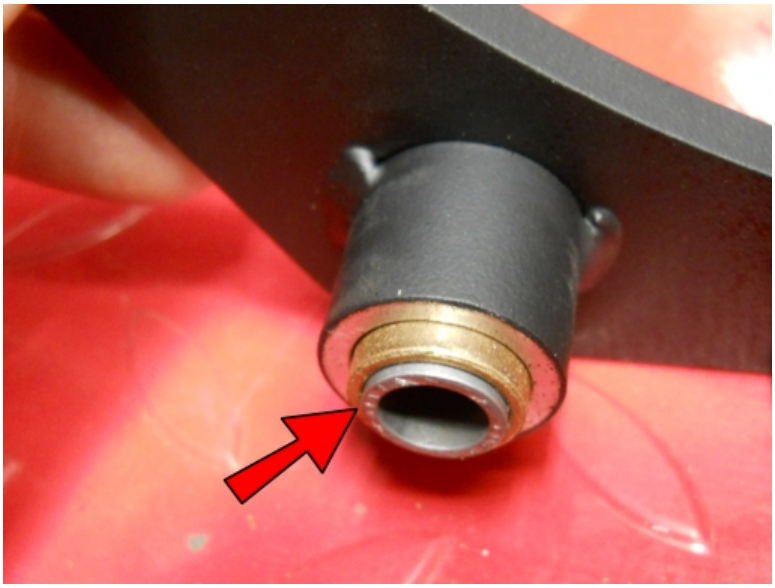
Slide the brake pedal off of the spline.

	Remove only this end of this spring.
	Remove these 2 bolts.
	Slide the foot rest mount off of the spline.

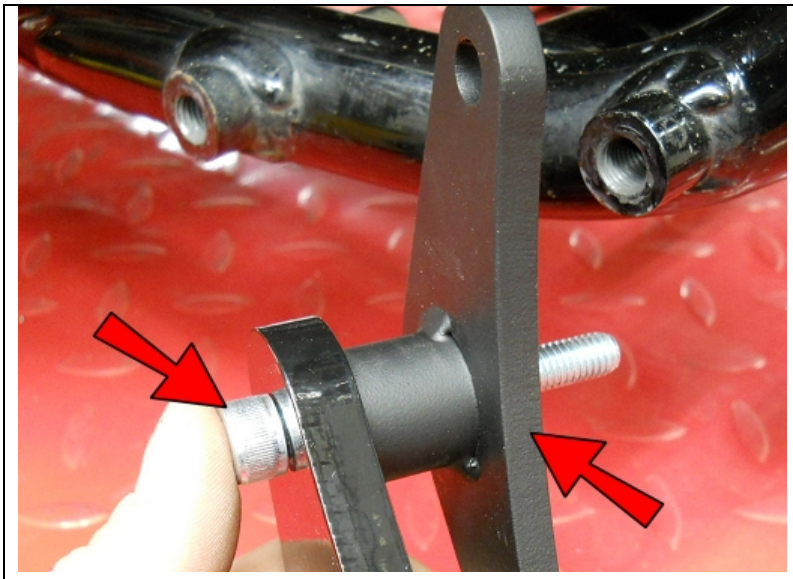


Cut off the cotter pin, then remove the washer and clevis pin and save for later use.

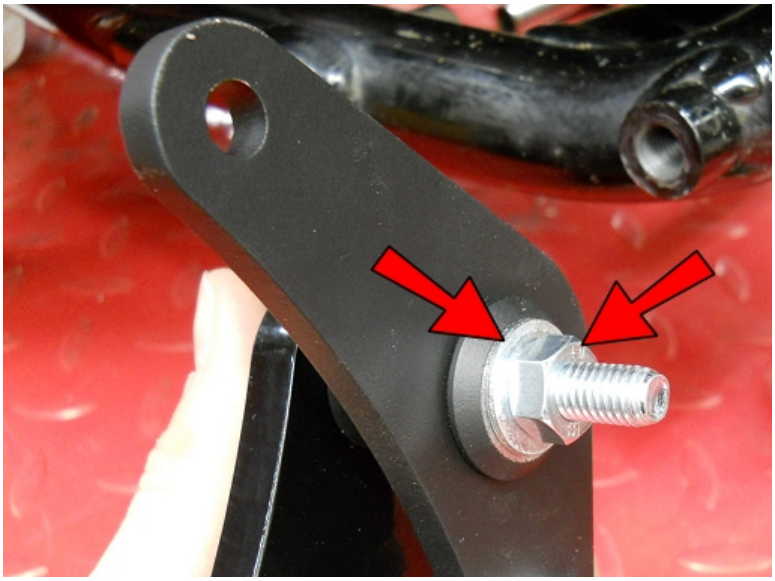
Apply some axle grease to the SLV1 and a SLV4, then insert them into each other.



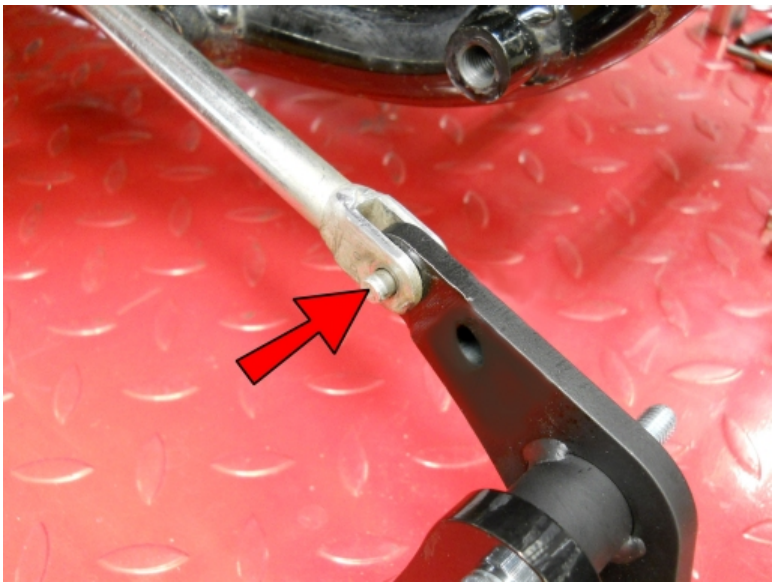
Make sure the inside of the hub of the ARM15 is clear of any debris, then insert the SLV1 and SLV4 into the ARM15.



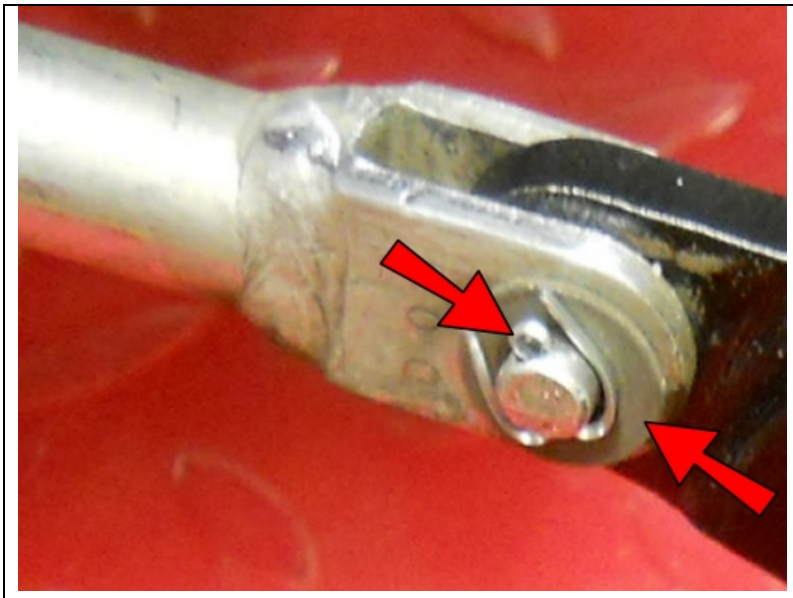
Insert an M8-1.25x60 SHCS into the SMALL hole on the STOF6, then slide the ARM15 on.



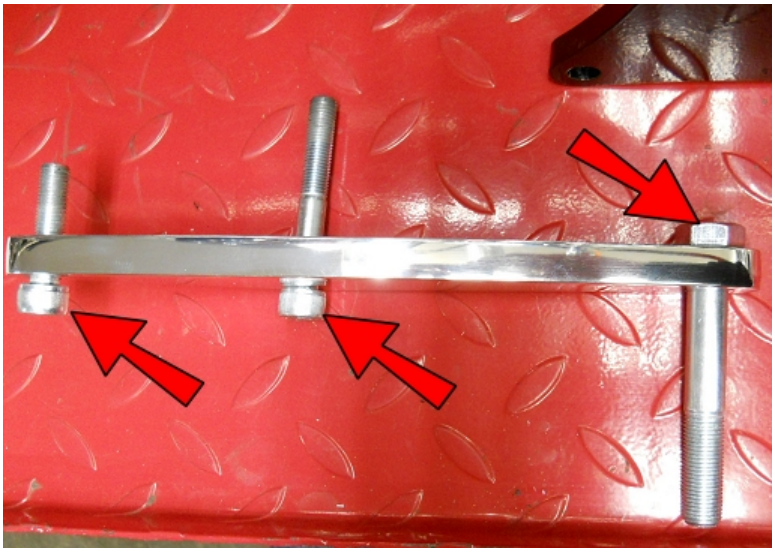
Secure with a 1/4” Washer and an M8 Nut and tighten. (Make SURE the ARM15 rotates freely.)



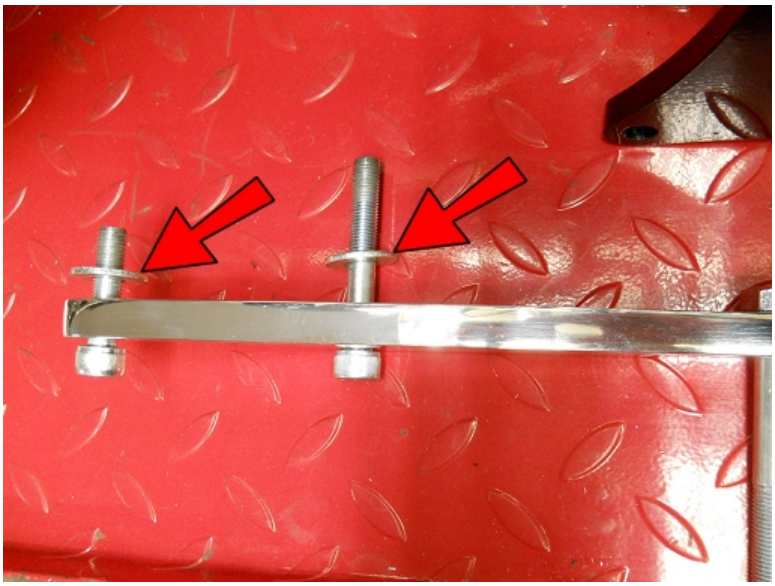
Place the ARM15 into the brake linkage clevis, then insert the clevis pin previously removed.



Place the washer you removed earlier onto the clevis pin and secure with a supplied 3/64x1 Cotter Pin. Trim the “legs” off the cotter pin after bending them around the clevis pin as shown.

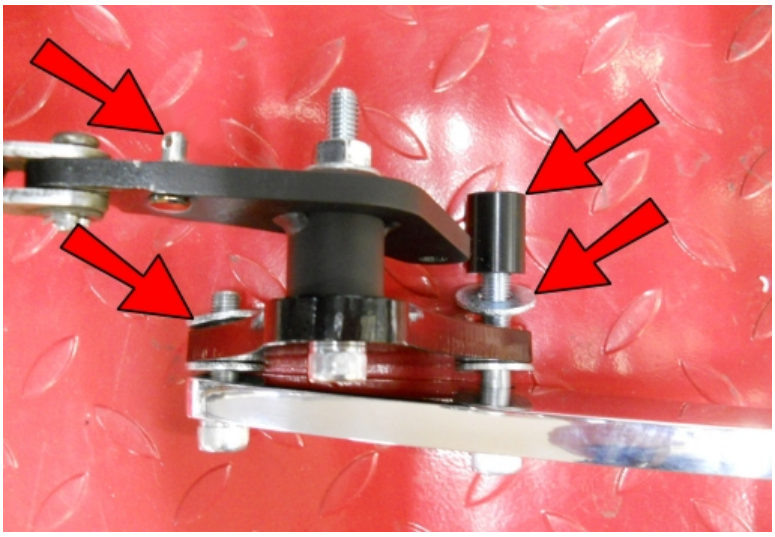


Insert an M10-1.25x40 SHCS, an M10- 1.25x70 SHCS and 1/2-20x3.5” Hex Bolt into an FC16 as shown.

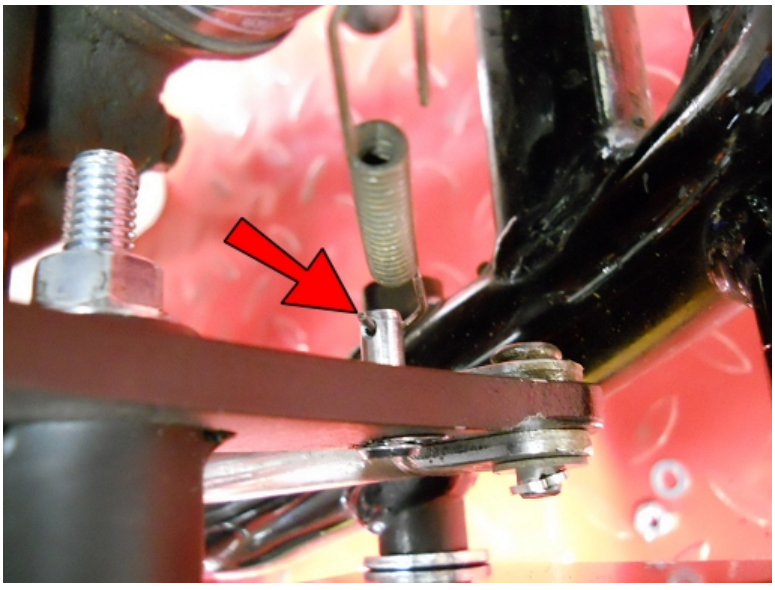


Slide a 3/8” Washer on both of the M10 SHCS.

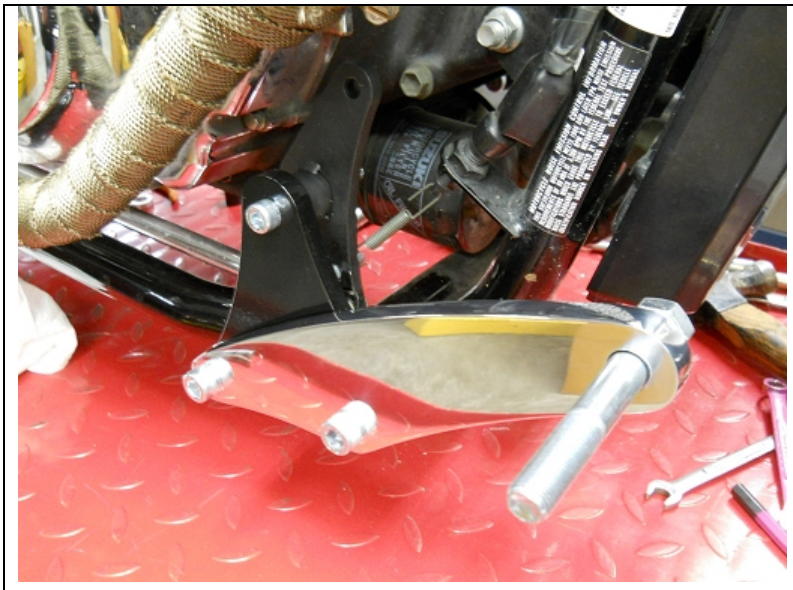
Place the 2 assemblies together by inserting the M10 SHCS into the STOF6.



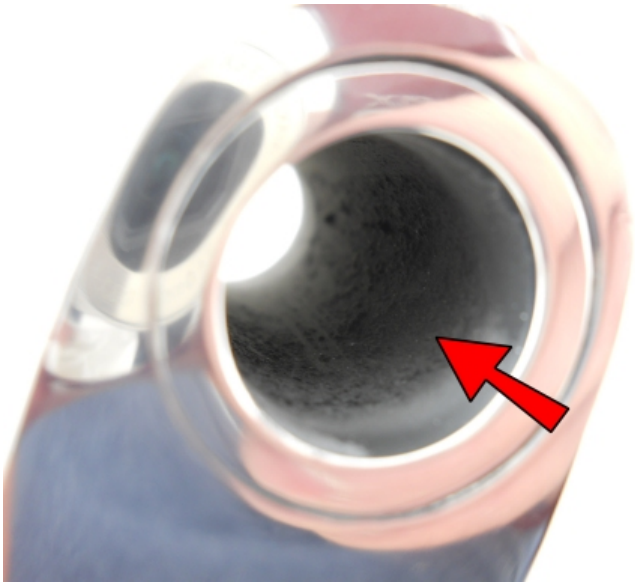
Now slide another 3/8 Washer onto both of the M10 SHCS, then slide a 1” Spacer onto the longer M10 SHCS. Next, insert an M6 Clevis Pin into the hole of the ARM15, near the brake linkage clevis.



Bring the entire assembly up, rotate the linkage to the bottom and hook the brake switch spring into the clevis pin inserted in the previous step.



Now install the entire assembly by threading the two M10 SHCS into the frame and tighten.

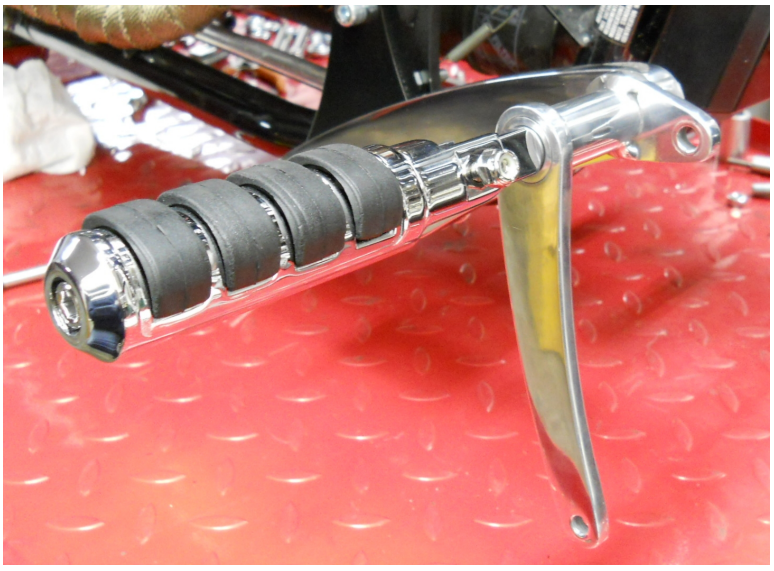


The inside of the Brake Pedal will likely have some polishing compound residue. Use a cloth or paper towel and make sure the inside is ABSOLUTELY clean. This will affect how well your Brake Pedal will rotate. After cleaning, put a little grease in there

Apply grease to 2 more of the SLV4.

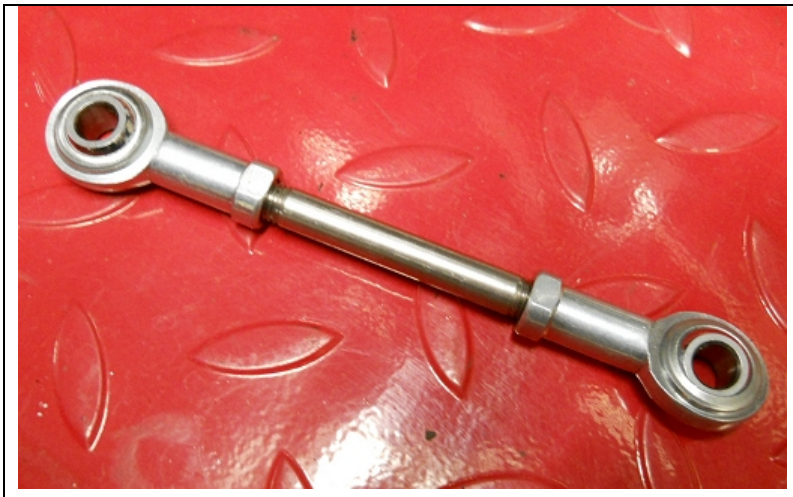
Insert both SLV4 into the Brake Pedal and wipe excess grease off of the outside front and back.

Place the Brake Pedal onto the 1/2” Bolt and wipe any excess grease off of the bolt.



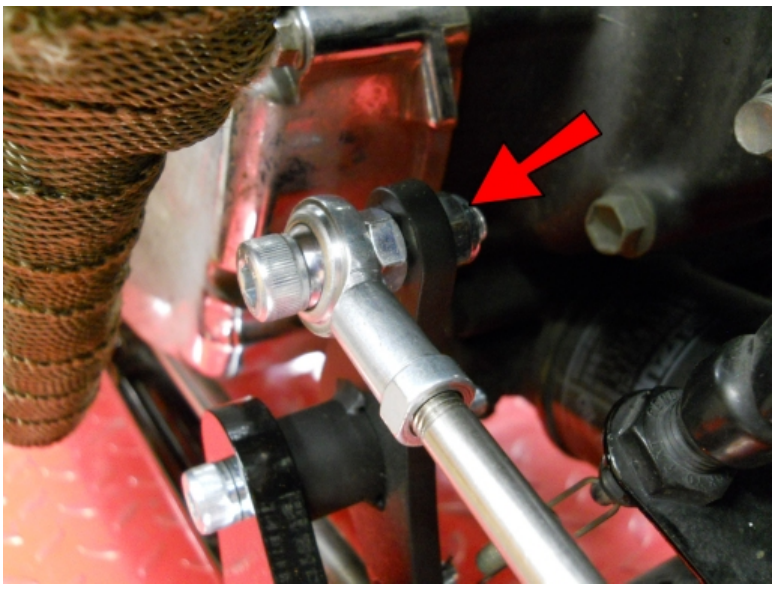
Thread a Foot Peg onto the 1/2” Bolt and tighten.

Note: It is very important that the Brake Pedal rotate completely freely. If you rotate the Pedal up it should easily move back down at this point. IF NOT, STOP and correct this before proceeding or your brakes might not release while riding!



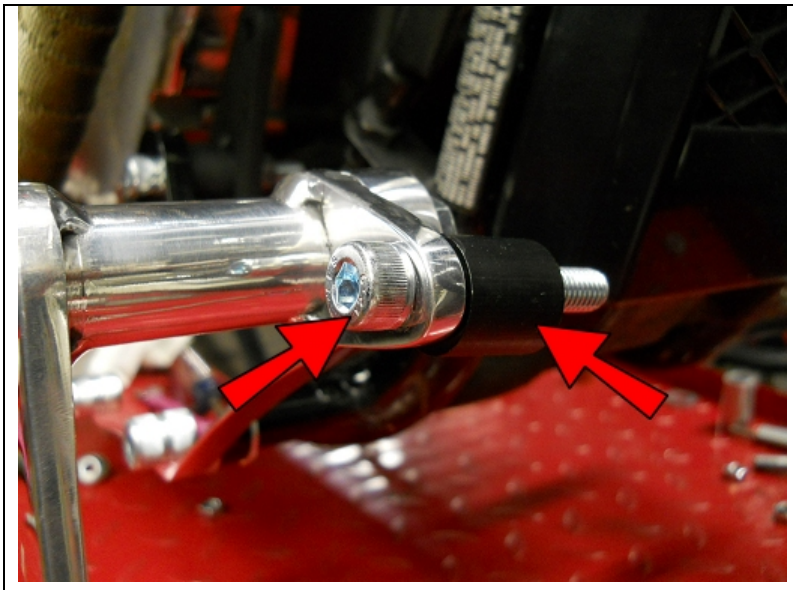
Thread a 5/16” Spherical Rod End most of the way on to the Brake Linkage.

Insert an M8-1.25x60 SHCS into one end and thread an M8 Nut all the way on and tighten.

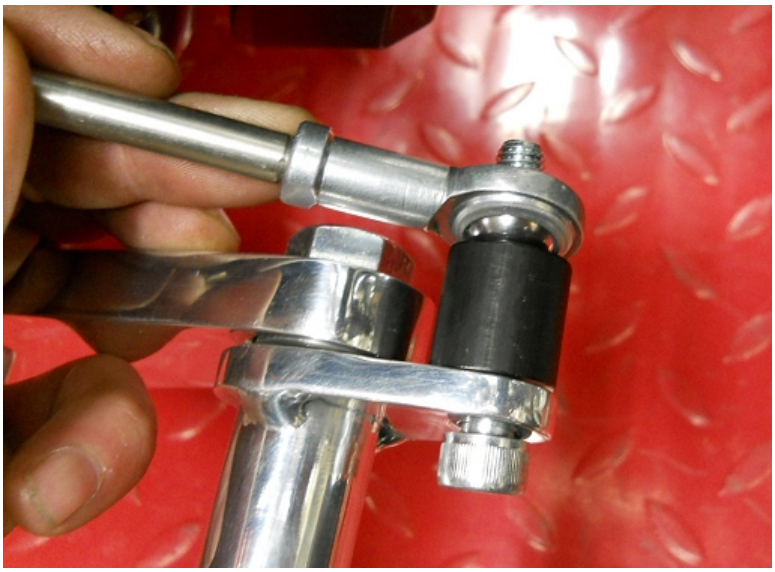


Insert that end into the ARM15 and secure with an M8 Lock Nut.

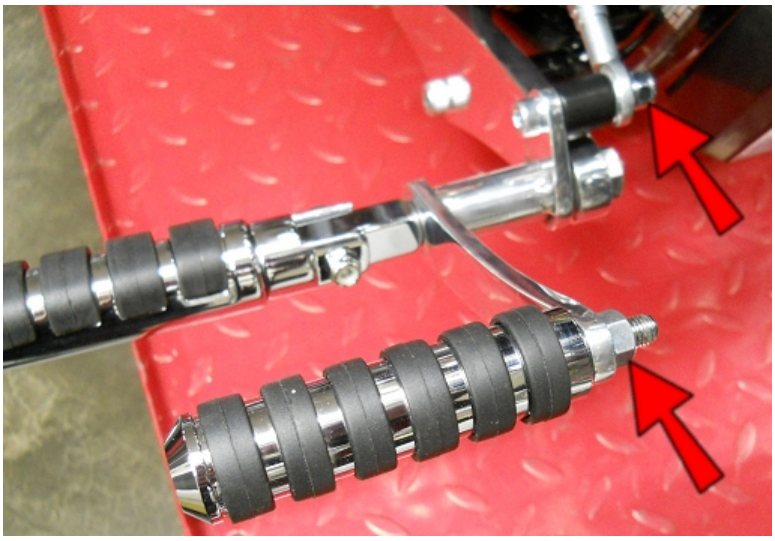
Note: Use a thread lock compound on Lock nuts also, but make sure the Brake Pedal is at your desired angle first.



Insert an M8-1.25x45 SHCS into the Brake Pedal, then slide a .75” Spacer onto the back.

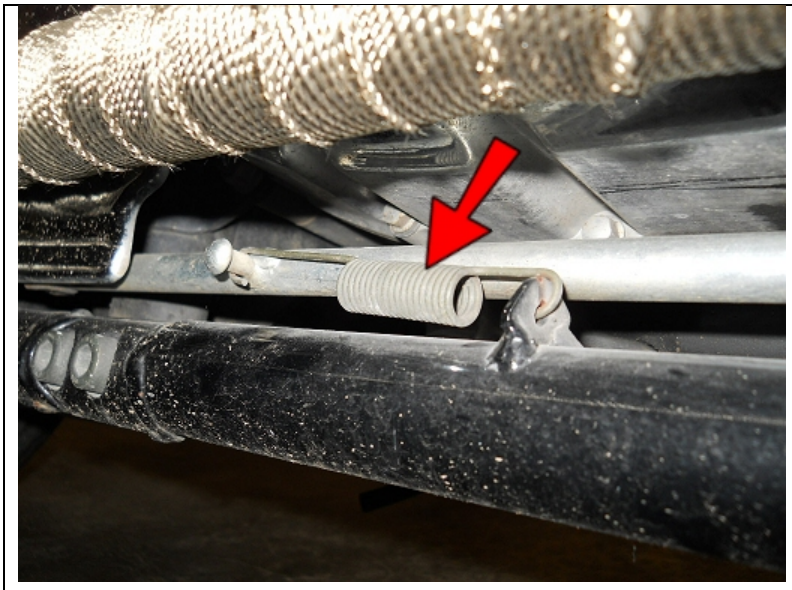


Rotate the Brake Pedal up into place and connect the Linkage.

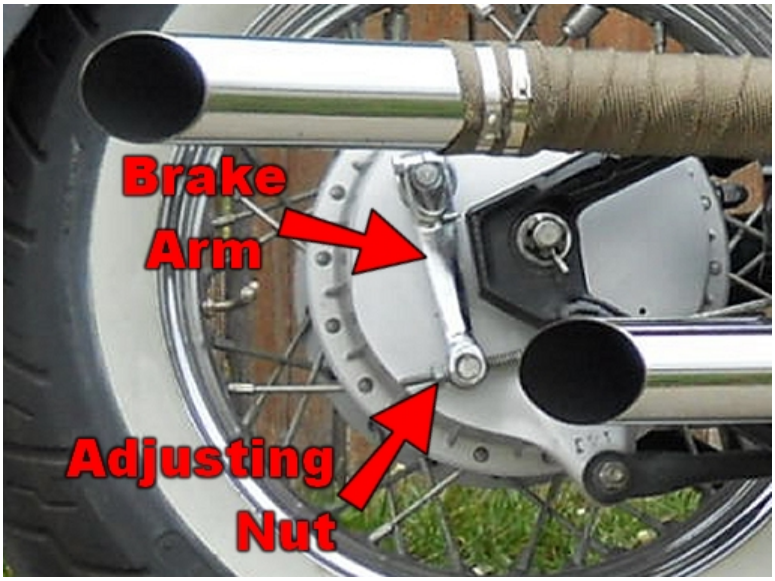


Secure the front end of the Linkage with an M8 Lock Nut, then attach the Toe Peg to the Brake Pedal and secure with a 5/16” Nut.

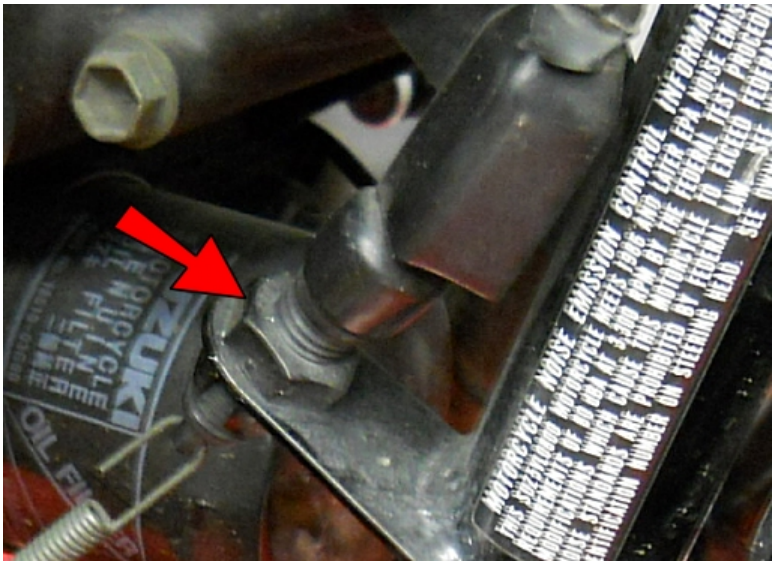
Note: If you want to adjust the Brake Pedal angle, remove the Linkage from the Brake Pedal and thread the Linkage farther into or out of the Spherical Rod Ends. Make sure there is enough Linkage rod threaded in to make a secure connection. Also, make sure the M8 SHCS and Nut holding the Linkage to the Brake Pedal is very tight or there will be a lot of play in the brake.



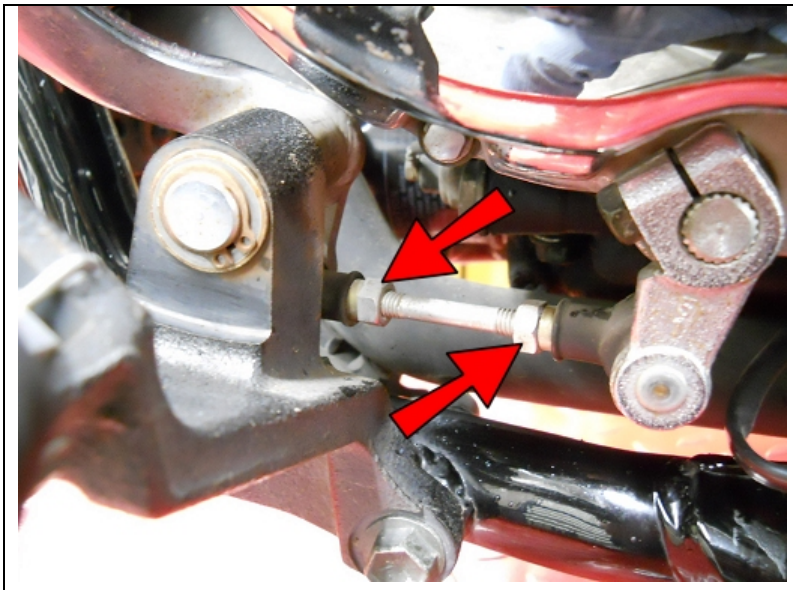
Put this spring back on the linkage.



Adjust the brakes. You want enough tension to allow a small, comfortable amount of movement at the brake pedal but if you adjust them too tight it will keep the brakes from releasing fully. To adjust, go to the rear wheel, push the brake arm toward the front of the bike with one hand to release the tension on it and tighten or loosen the brake rod adjusting nut with the other hand r a wrench, as needed.

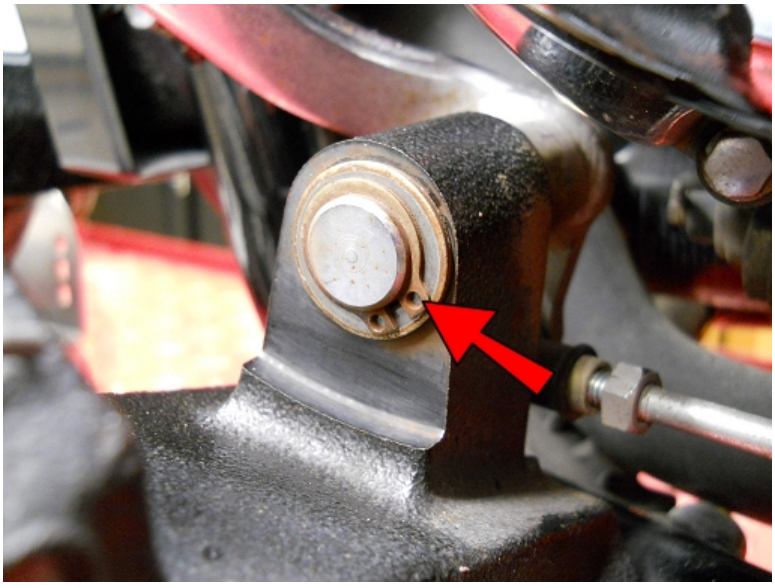


The brake light switch may need to be adjusted. Do this by turning the adjustment nut. Hold the brake light switch in one hand to keep it from turning, while turning the nut with a wrench. If the spring tension is too tight, your brake light will be on all of the time. If it is too lose, it will not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

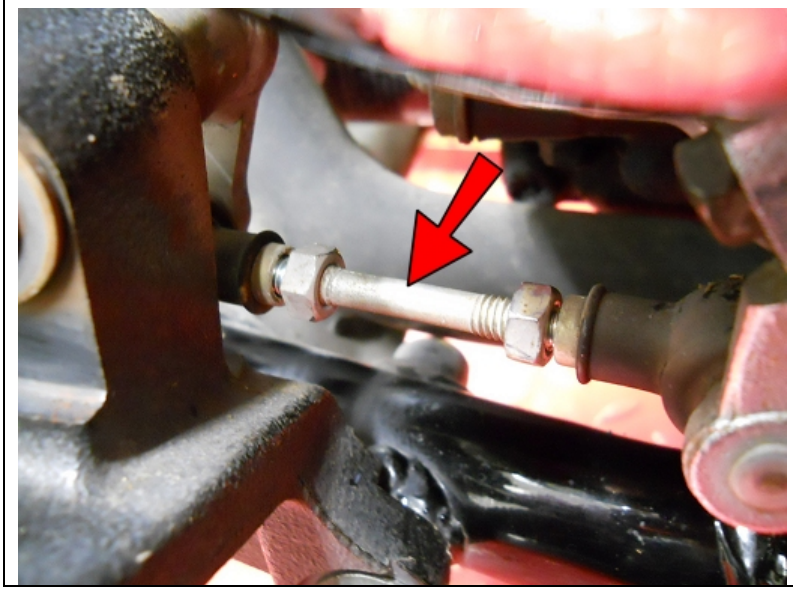


Shifter Side…

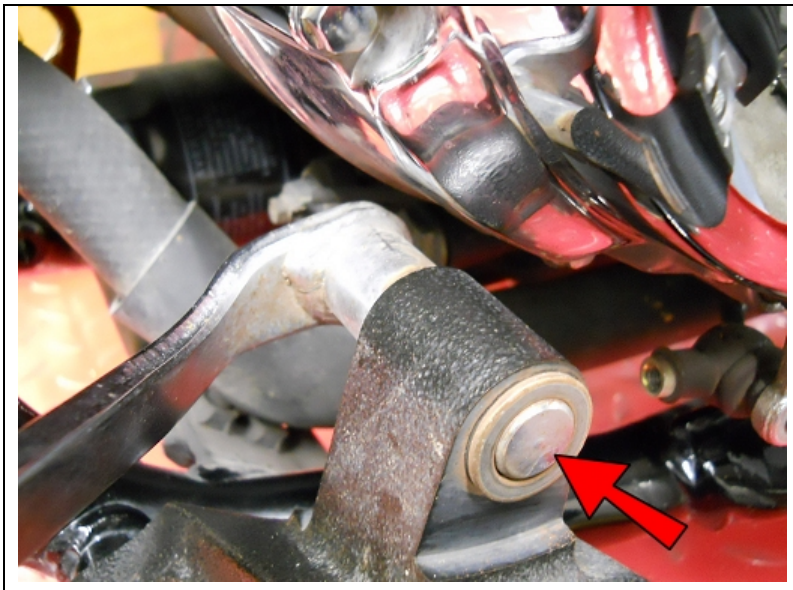
Loosen these nuts.



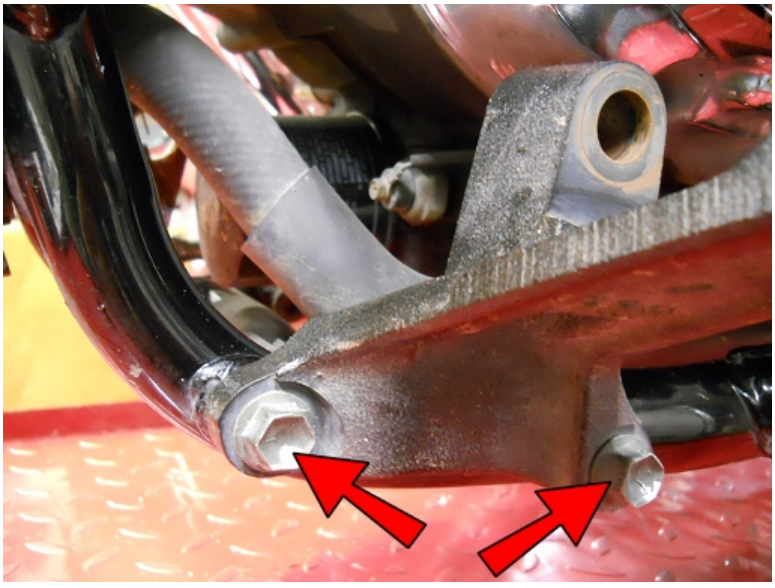
Remove this retaining ring.



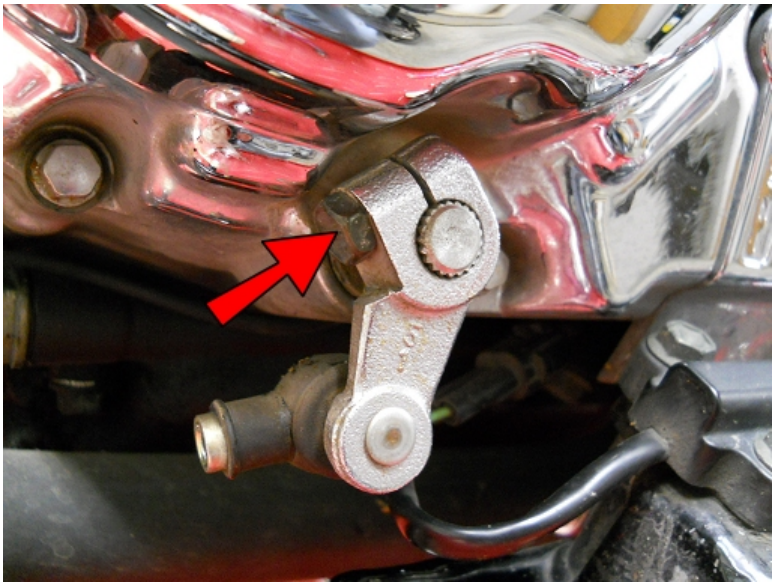
Twist the shifter linkage to remove it.



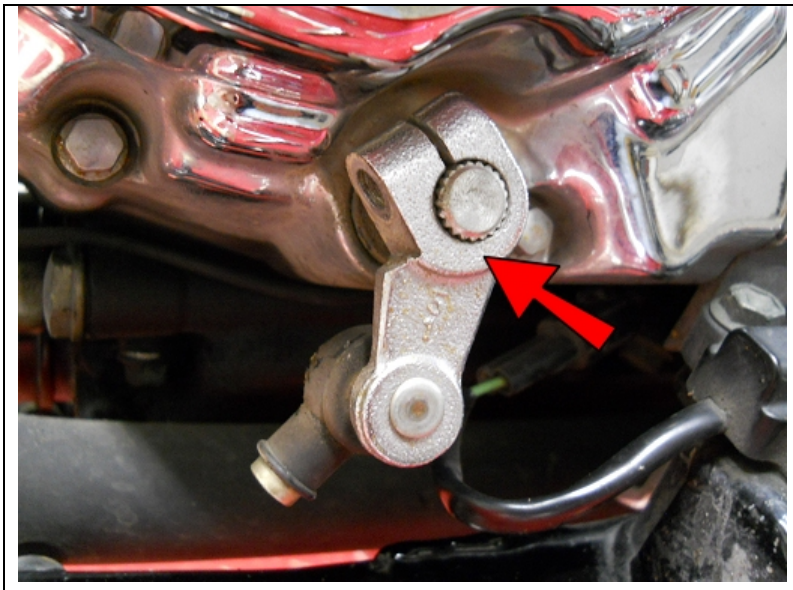
Slide the shifter pedal out to remove it.



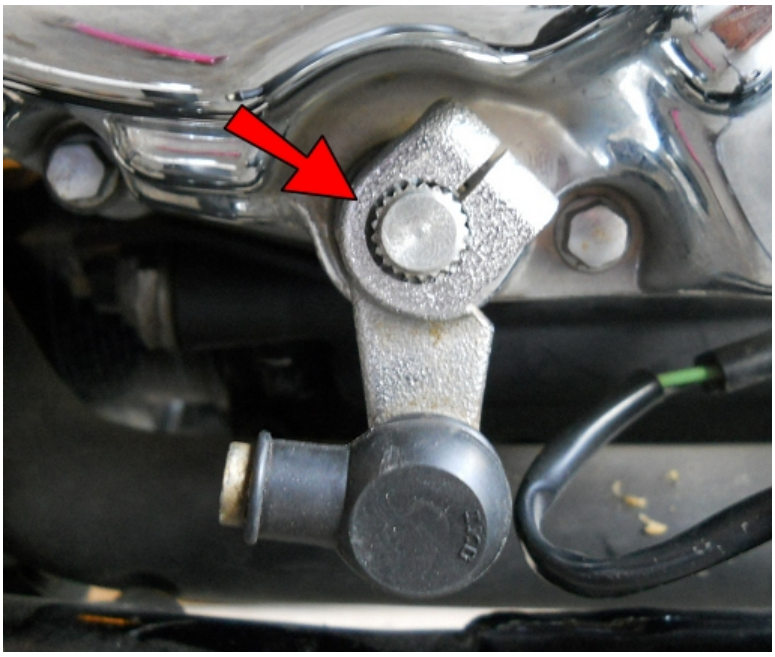
Remove these 2 bolts.



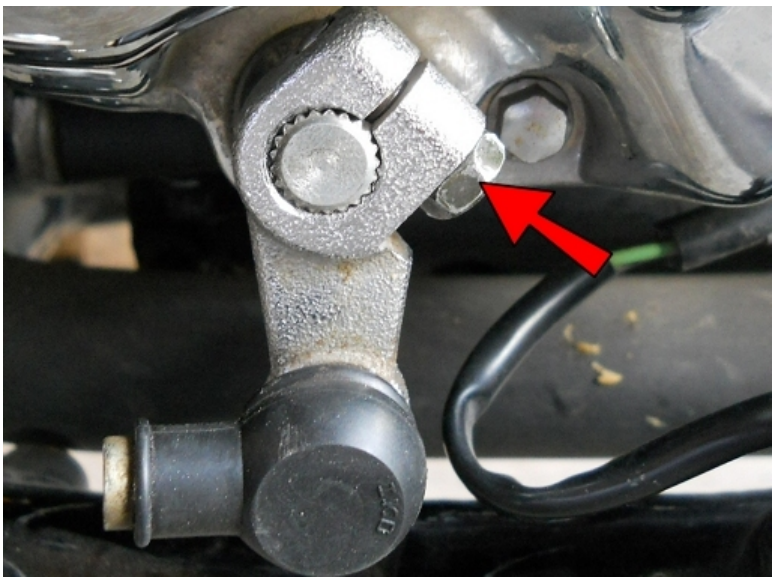
Remove this bolt.



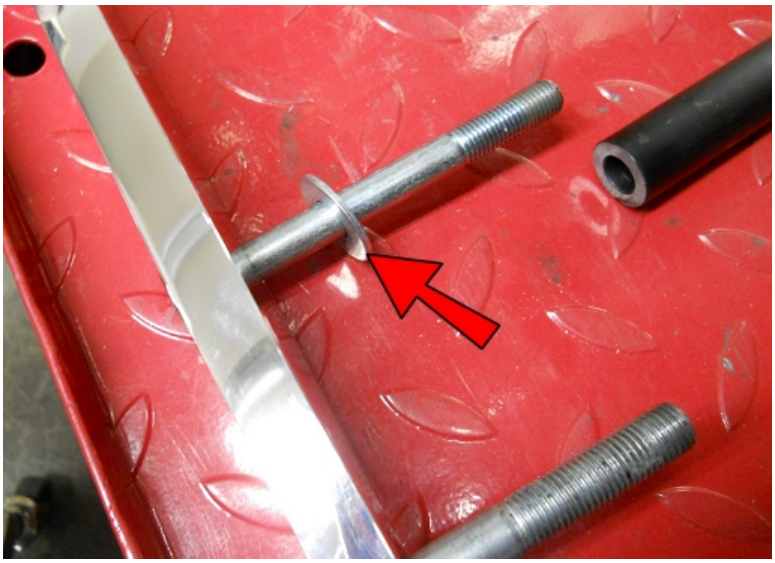
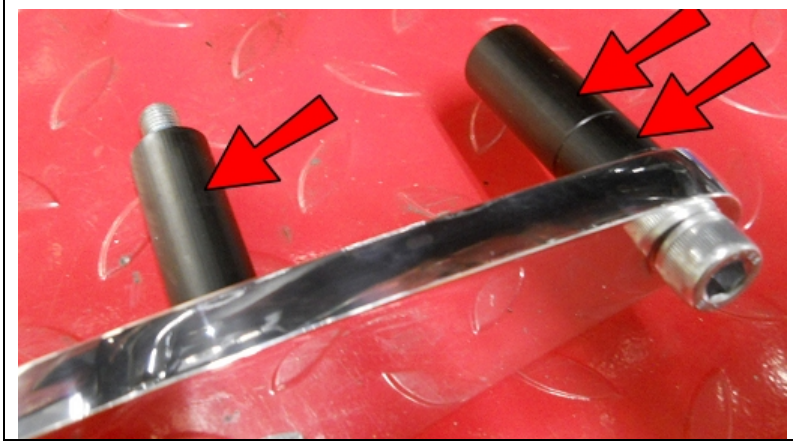
Slide the shifter arm off of the spline.



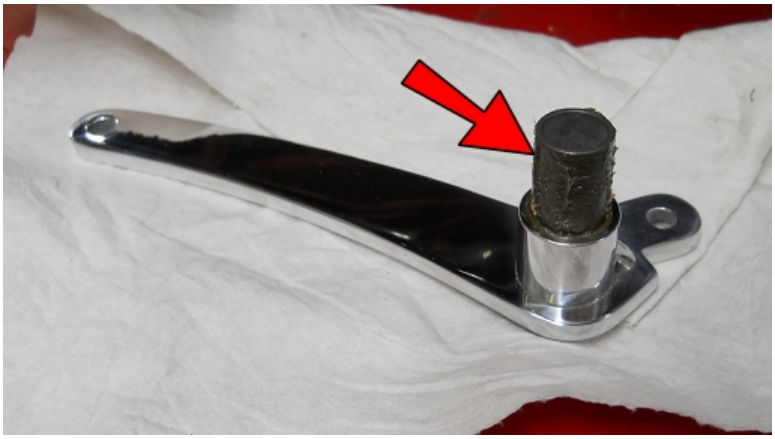
Flip the shifter arm so that the ball joint is on the outside now, then orient it at about 6 o’clock as shown and slide it back onto the spline.



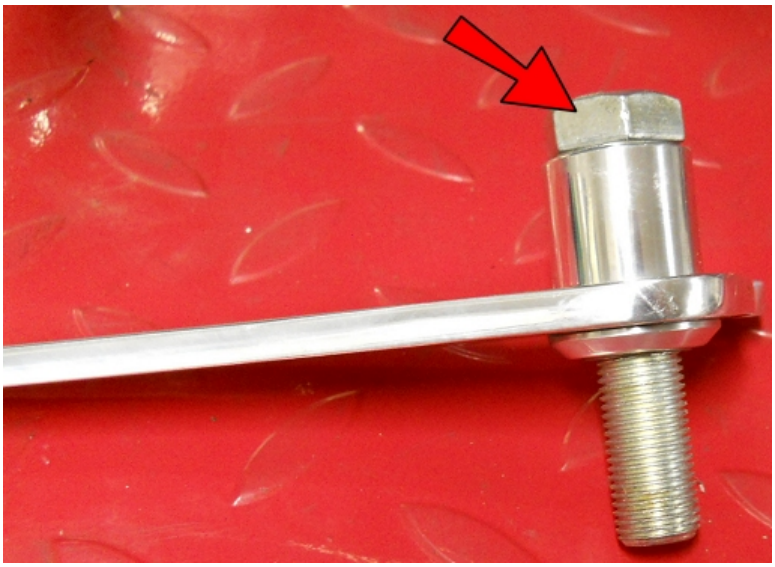
Replace this bolt and tighten. The bolt fits into a groove in the spline so you may have to slightly move the arm in or out to line up the bolt and groove.

	Insert an M10-1.25x100 SHCS here.
	Insert an M10-1.25x70 SHCS here.
	Slide a 3/8” Washer onto the M10-1.25x100 SHCS.
	Slide a 2.8” Spacer onto the M10-1.25x100 SHCS and slide a .5" and 1.5” Spacer onto the M10-1.25x70 SHCS.

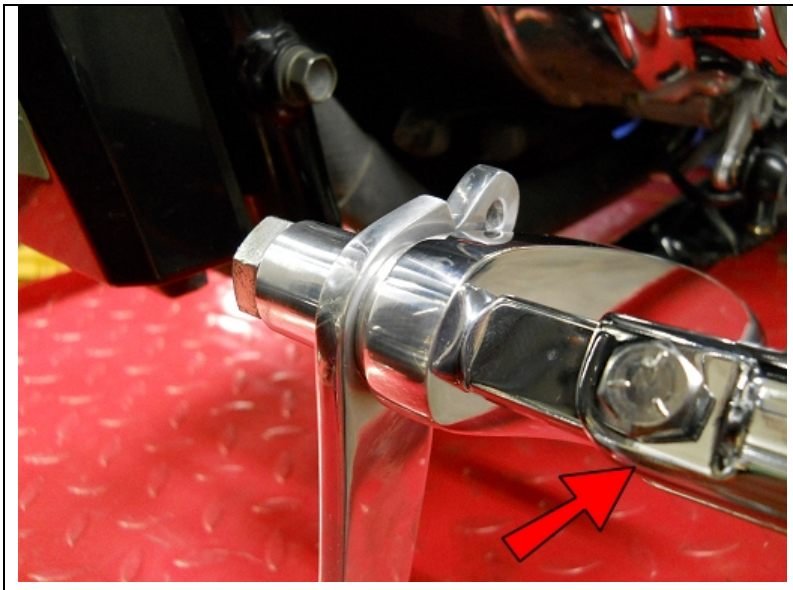
Connect the FC16 to the frame and tighten.



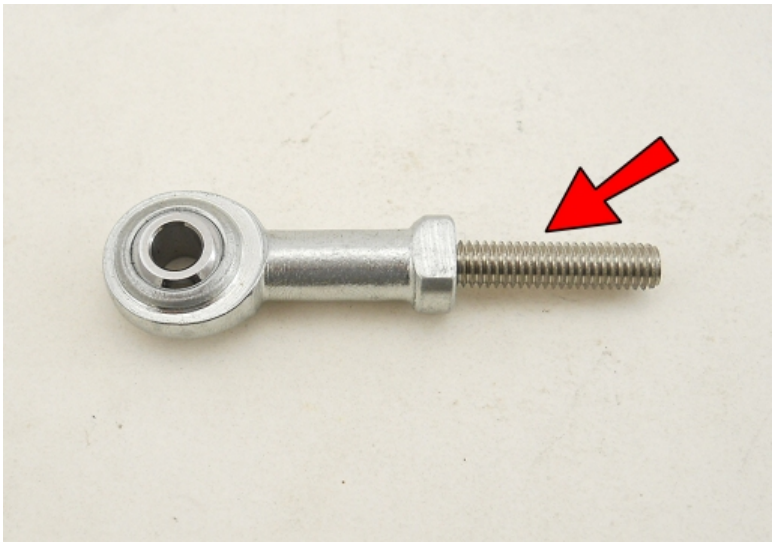
Apply grease to an SLV4, then insert it into the Shifter Pedal and wipe the excess grease off of the outside front and back.



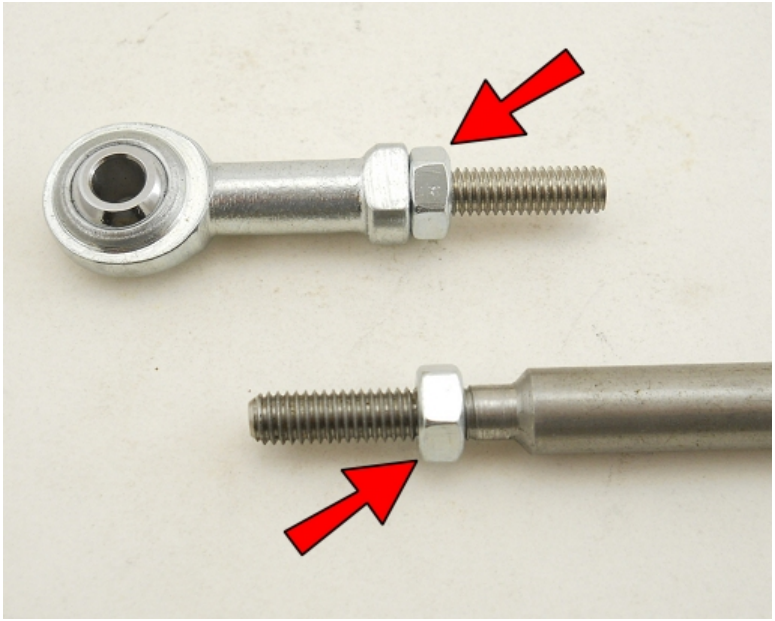
Insert a 1/2-20x2.25 Bolt into the Shifter Pedal.



Insert the Shifter Pedal assembly into the back side of the FC16 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.

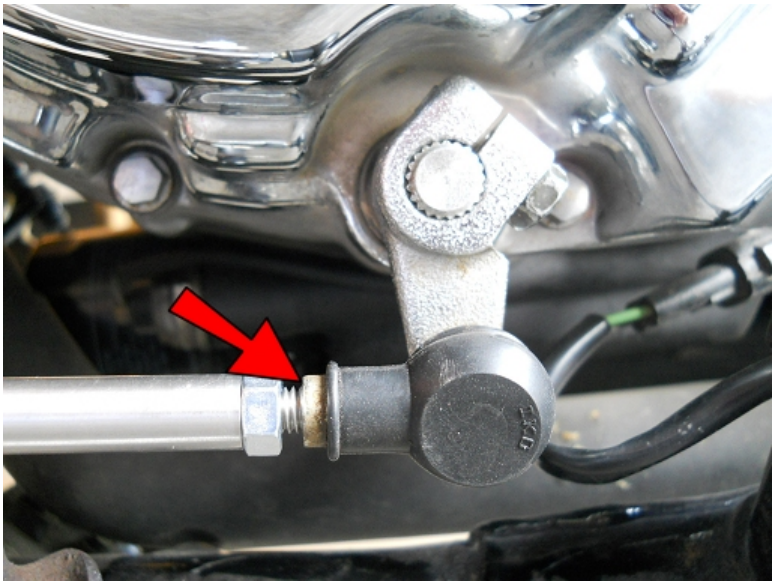


Thread the M6-1.0 Stud a little less than half way into the M6 Spherical Rod End.

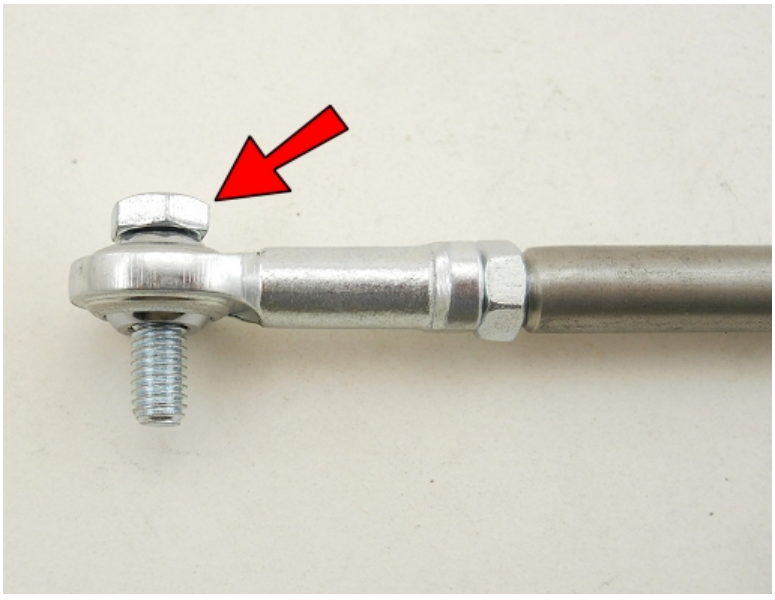


Thread an M6 nut all of the way onto the new Shifter Linkage and the M6 Spherical Rod End.

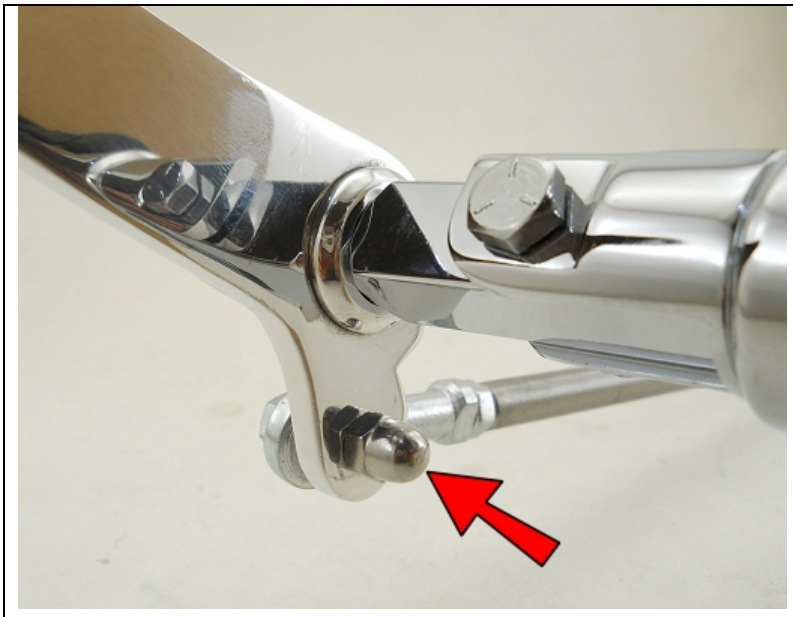
Thread the M6 Spherical Rod End into the female end of the Shifter Linkage and tighten the M6 nut against the Linkage.



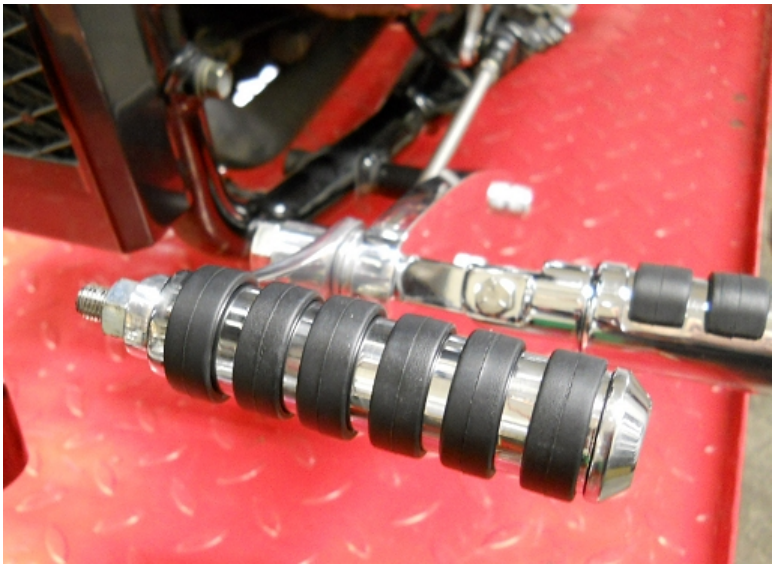
Thread the male end of the Linkage as far as it will go into the ball joint on the shifter arm.



Insert an M6-1.0x20 Hex Head Bolt into the M6 Spherical Rod End.

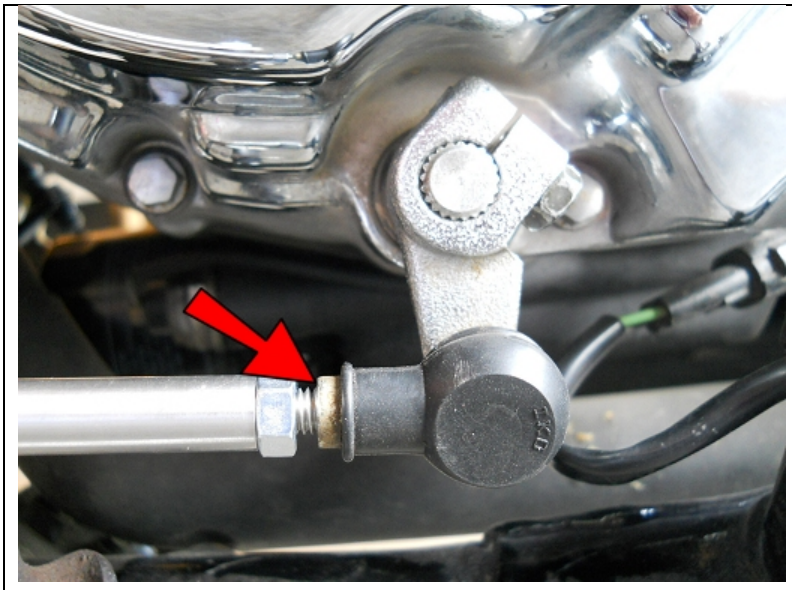


Connect the Linkage to the Shifter Pedal and thread on an M6 Acorn Nut but don't do a final tightening yet. (In other words no Loctite yet.)

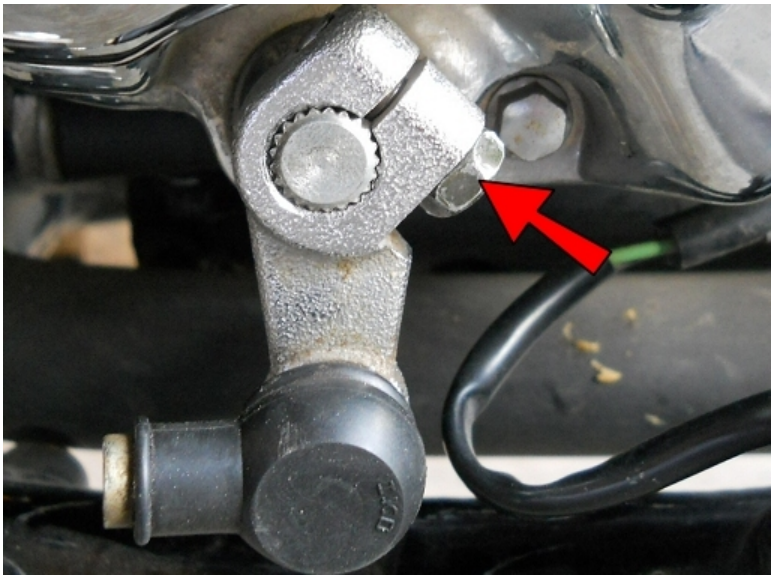


Attach the Toe Peg to the Shifter Pedal and secure with a 5/16" Nut.

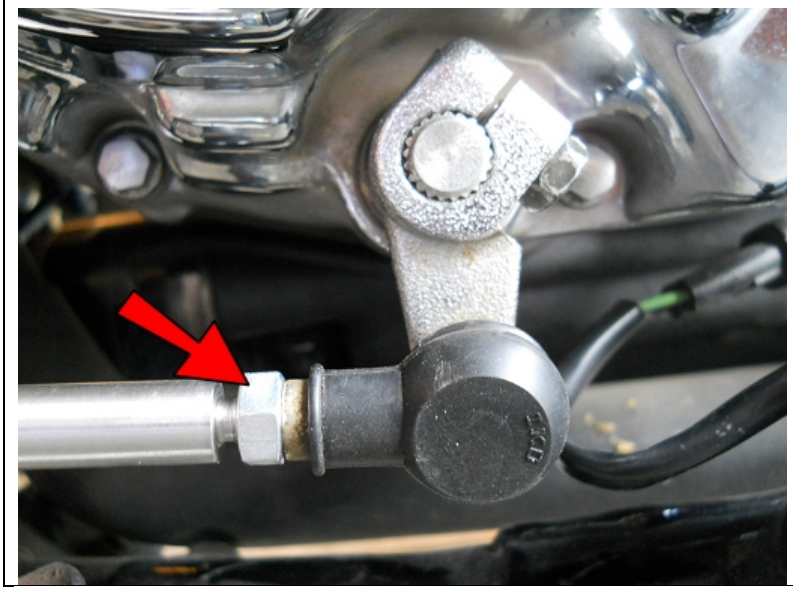
The Shifter Pedal is now at its lowest possible point, which will be too low for most people. There are 2 ways to make adjustments…..



One way is to disconnect the Linkage from the Shifter Pedal and turn the linkage OUT of the ball joint a few turns and/or out of the M6 Spherical Rod End. Make sure there is enough Linkage rod threaded in to both ends make a secure connection.



If the previous step does not provide a sufficient angle of the Shifter Pedal, remove the bolt from the shifter arm, slide it off the spline and rotate it clockwise one or two teeth and reinstall the bolt.



Once you have adjusted and tested the angle, make sure to go back and secure the M6 Acorn Nut on the Shifter Pedal and the M6 Nuts on the Linkage to lock everything in place.

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!