

Installation instructions for FC21 Forward Controls for Honda VTX1300

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

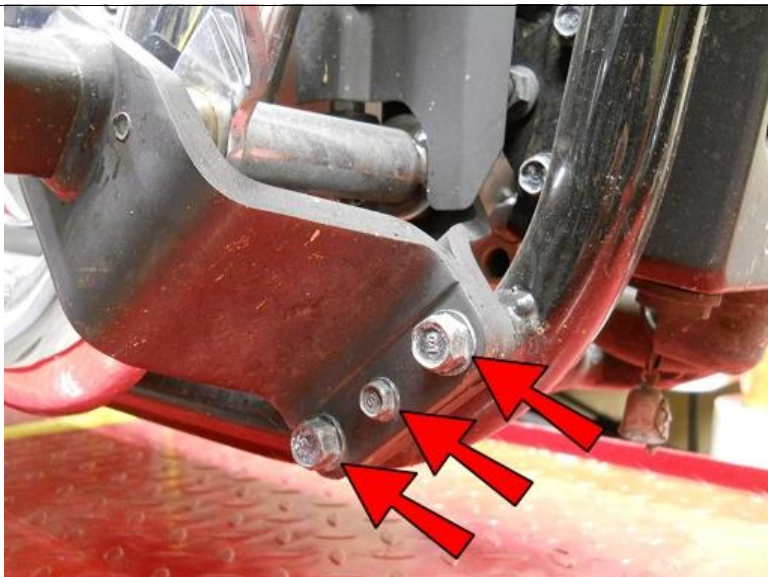
Please read these instructions entirely before starting.

This picture shows the components of the FC21. Parts will be referred to by the names & numbers shown here. If you are missing anything please email RefinedCycle@gmail.com.



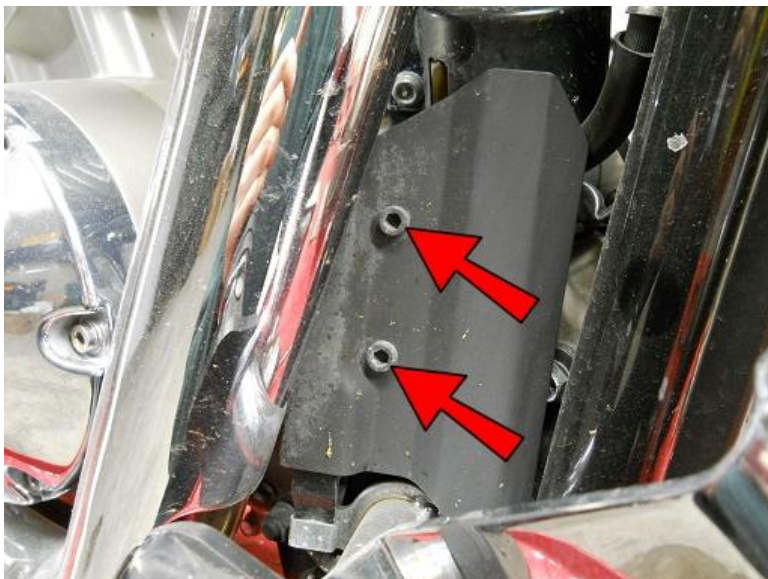
FC21 Components

1) STOF8	18) 1/4" Washer
2) STOF4	19) M6 Washer (qty. 7)
3) ARM21	20) 1/2" Spacer (qty. 4)
4) Brake Pedal	21) Brake Toe Peg
5) ARM20	22) 5/64x1 Cotter Pin
6) FC21 Plate (qty. 2)	23) 5/16" Spherical Rod End (qty. 2)
7) Shifter Linkage	24) M6 Spherical Rod End (qty. 3)
8) M6 Nut (qty. 4)	25) M6-1.0x40 Stud
9) M8 Nut	26) M6-1.0x25 Socket Head Bolt (qty. 4)
10) 5/16-24 Nut (qty. 4)	27) M8-1.25x30 Socket Head Bolt
11) 3/8-16 Nut	28) 3/8-16x2.25 Button Head Bolt
12) 3/8-16 Acorn Nut	29) M10-1.25x70 Socket Head Bolt (qty. 4)
13) Bronze Sleeve (qty. 3)	30) 3/8-16x3 Hex Head Bolt
14) SLV1 (qty. 3)	31) 1/2-20x4 Hex Head Bolt (qty. 2)
15) SLV4 (qty. 3)	32) Shifter Pedal
16) 1/2" Washer (qty. 7)	33) Shifter Toe Peg
17) 5/16" Washer (qty. 3)	

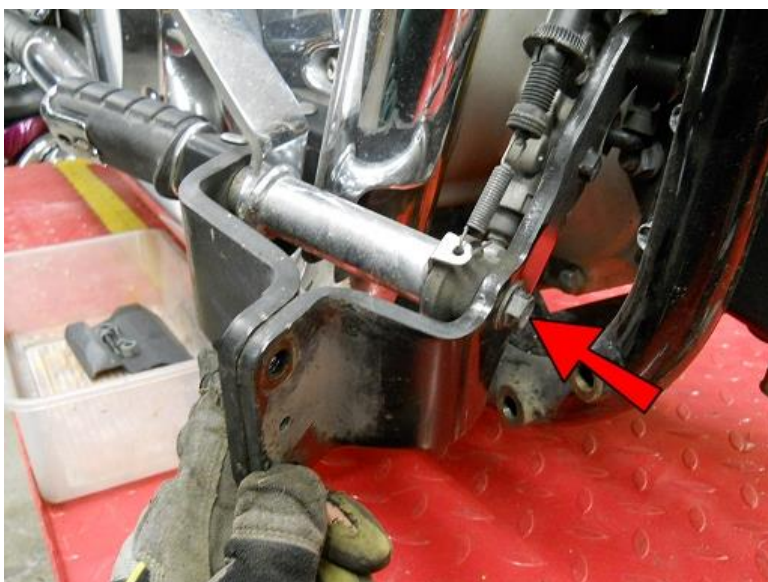


Brake Side...

Remove these 3 bolts.



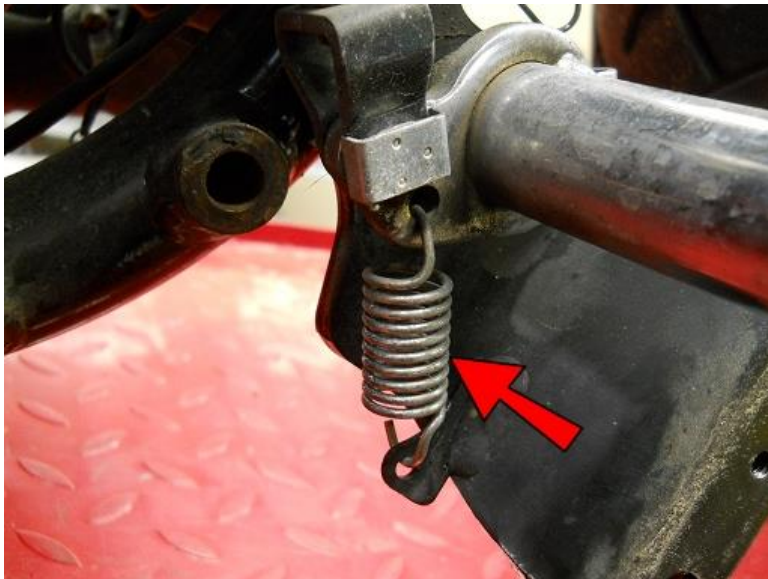
Pull the whole assembly forward and away from the exhaust so you can get to these two bolts, then remove them. Note: There are small spacers behind the brake master cylinder that will fall out when you remove the bolts. Don't lose them, you will need them later.



Remove this bolt.



Unhook just the bottom hook of the brake switch spring.



Using needle nose pliers, remove the bottom hook and then the top hook of the brake return spring.



Turn the brake pedal so that you can get to this cotter pin. Cut and remove it.



Remove this clevis pin to remove the brake pedal.



Drill this hole a little bigger using a 3/8" drill bit.



Place the 3/8x3 Hex Head Bolt into the hole from the back.



Apply some axle grease to all of the SLV1, SLV4, Bronze Sleeves, ARM20 and ARM21.



Insert 2 of the Bronze Sleeves into the ARM21 and the other one into the ARM20.



Now, insert 2 of the SLV1 into the ARM21 and the other one into the ARM20.



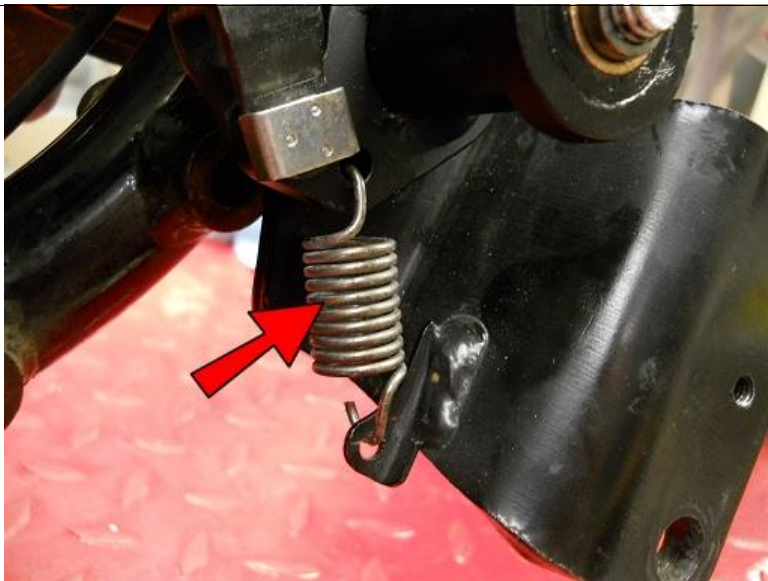
Place the ARM21 onto the 3/8x3 Hex Head Bolt as shown. Clean any excess grease off of the bolt.



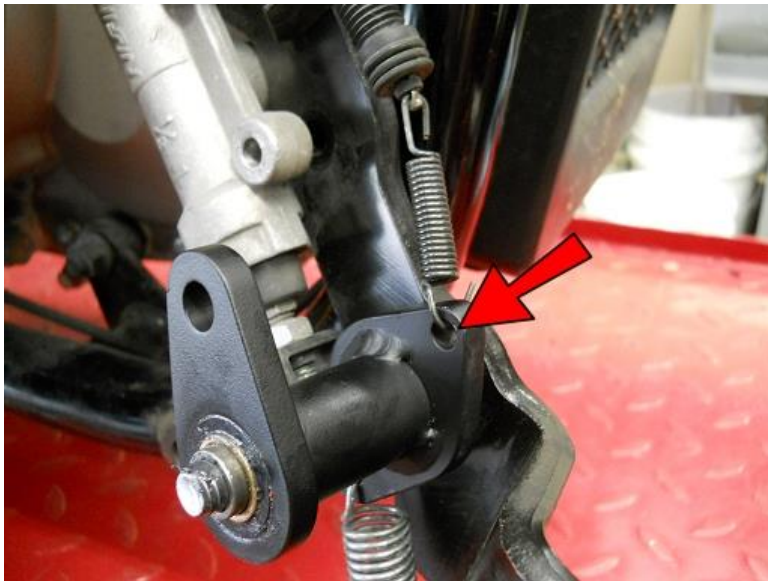
Line up the top of the two holes in the ARM21 with the master cylinder clevis and push in the clevis pin.



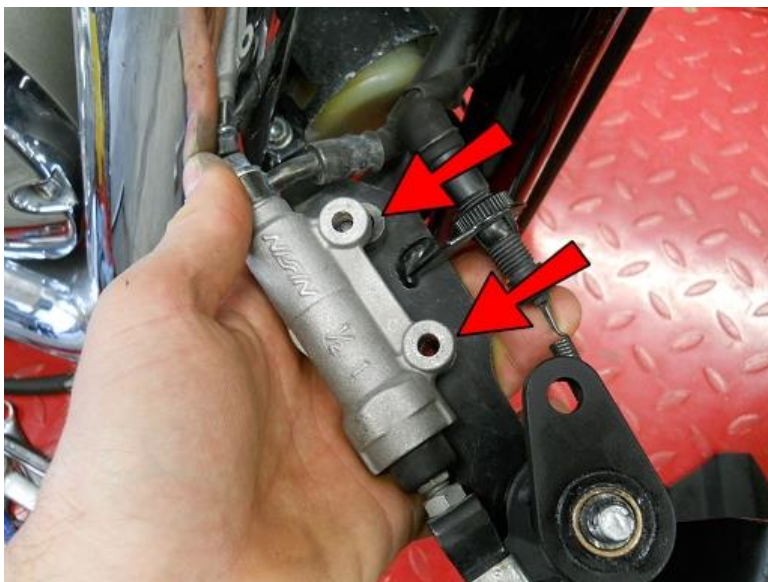
Insert the supplied 5/64x1 Cotter Pin into the clevis pin and separate and bend the ends around to secure.



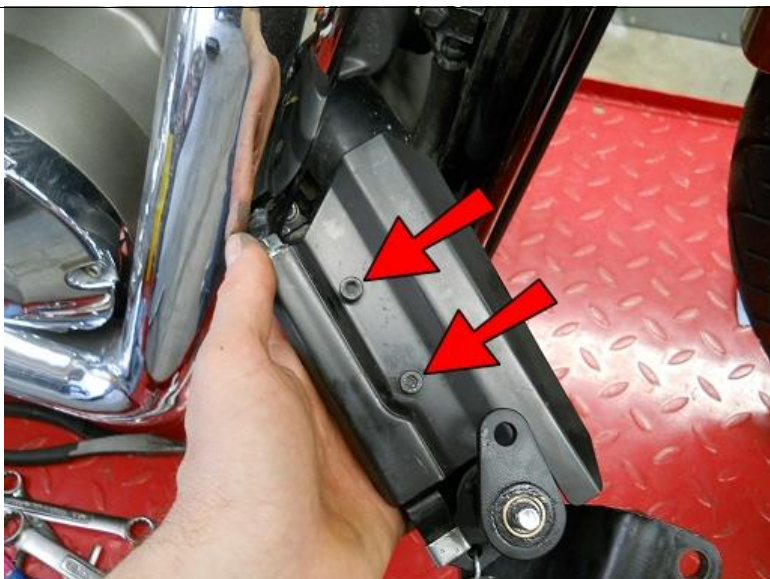
Place the top hook of the brake return spring into the bottom hole of the ARM21 then reattach the bottom hook where it was originally.



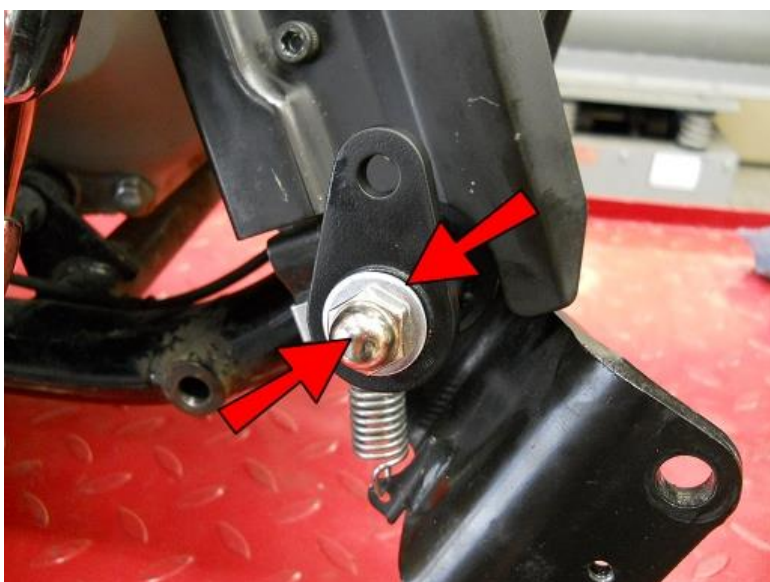
Place the bottom hook of the brake switch spring into this hole of the ARM21.



Hold the entire assembly flat in your hand to make it easier to replace the spacers between the master cylinder and it's mount and line up the holes.



Replace the heat shield and secure with the bolts removed earlier.



Secure the ARM21 with a 5/16" Washer and a 3/8-16 Acorn Nut.



The brake light switch will 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 rotating and releasing the ARM21 a few times. If the brake light works as desired, no adjustment is necessary. If it stays on, 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.



Place a 1/2" Washer onto BOTH of the 1/2-20x4 Hex Head Bolts.

NOTE: If you will be using a foot peg that connects with a clevis like these shown below, add AN ADDITIONAL 1/2" Washer now, otherwise the bolt will be too long for the clevis when you install it later.

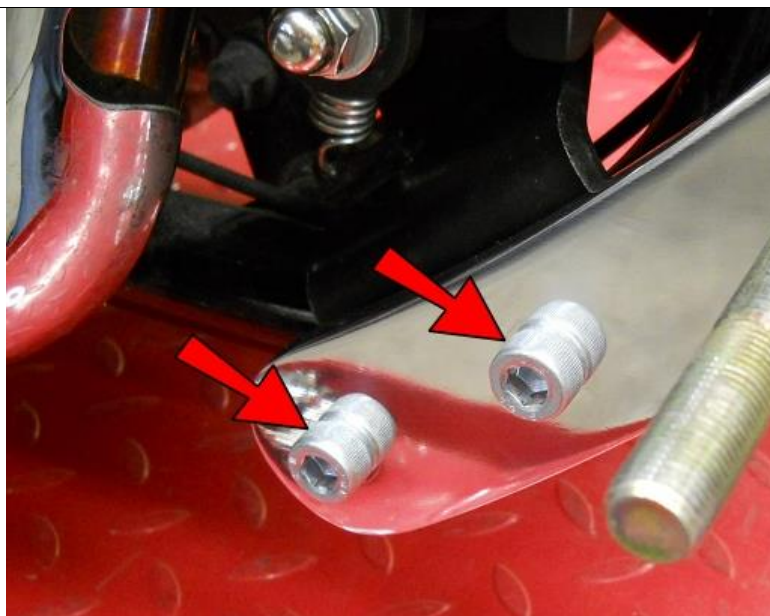


Insert two M10-1.25x70 Socket Head Bolts and a 1/2-20x4 Hex Head Bolt into an FC21 Plate as shown.

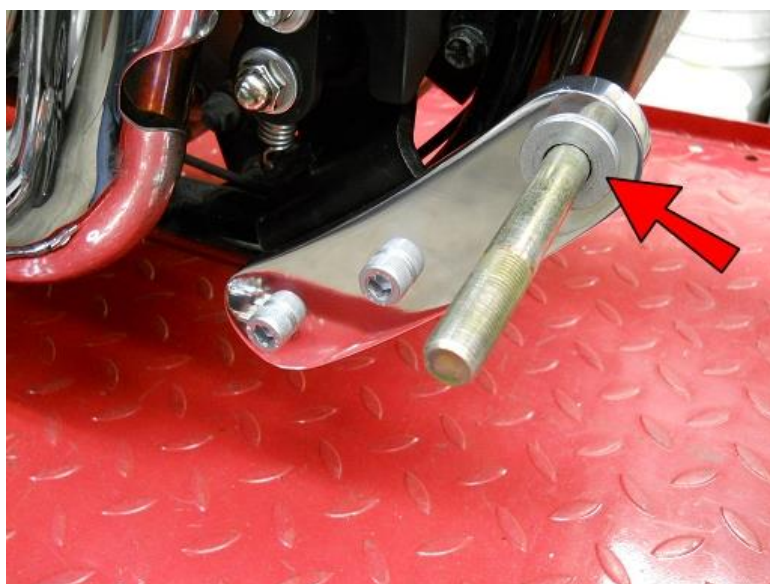
Note: Installing as shown will give you about 6" forward movement from stock position. The FC21 Plate can be installed flipped upside down if you would like the controls about 1/2" farther forward. All linkages will have to be adjusted accordingly to accommodate the difference in pedal location.



Place a 1/2" Spacer onto both of the M10-1.25x70 Socket Head Bolts.



Secure the FC21 Plate through the brake master cylinder mount and to the frame.



Place another 1/2" Washer onto the 1/2-20x4 Hex Head Bolt.



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.



Place two SLV4's into the Brake Pedal.



Slide the Brake Pedal onto the 1/2-20x4 Hex Head Bolt.



Place another 1/2" Washer onto the 1/2-20x4 Hex Head Bolt.



Install a foot peg and tighten. Then make sure the brake pedal rotates freely. If it does not, stop now and figure out why. Note: You should not have to make the foot peg loose for the Pedal to rotate correctly.



Thread an M6-1.0x40 Stud almost half way into an M6 Spherical Rod End.



Thread another M6 Spherical Rod End almost all of the way onto the other end of the M6-1.0x40 Stud.

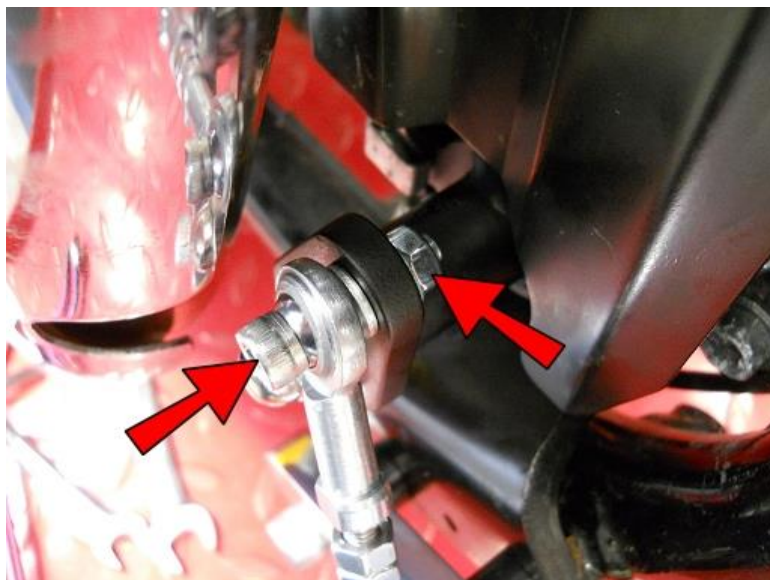
Note: To adjust the Brake Pedal height later, you will adjust how far together these two ends are.



Insert an M6-1.0x25 Socket Head Bolt into one of the M6 Spherical Rod Ends.



Place an M6 Washer on.



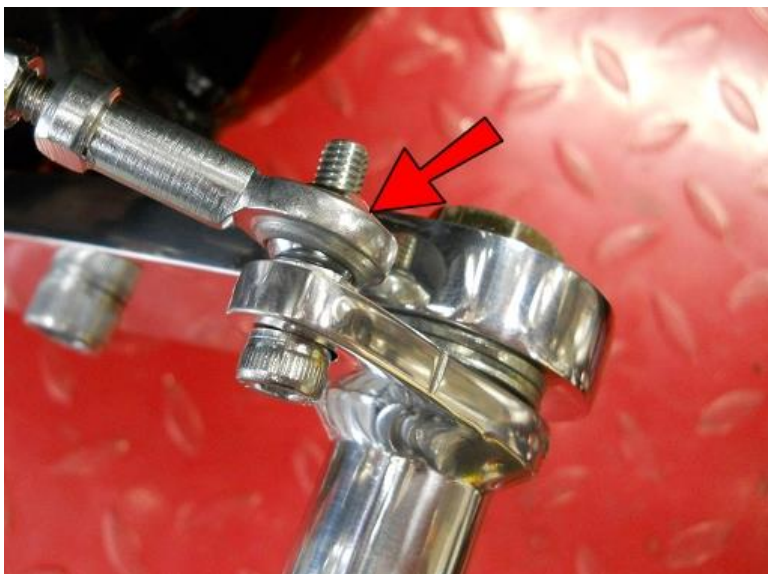
Now insert it into the ARM21, place another M6 Washer on and secure with an M6 Nut.



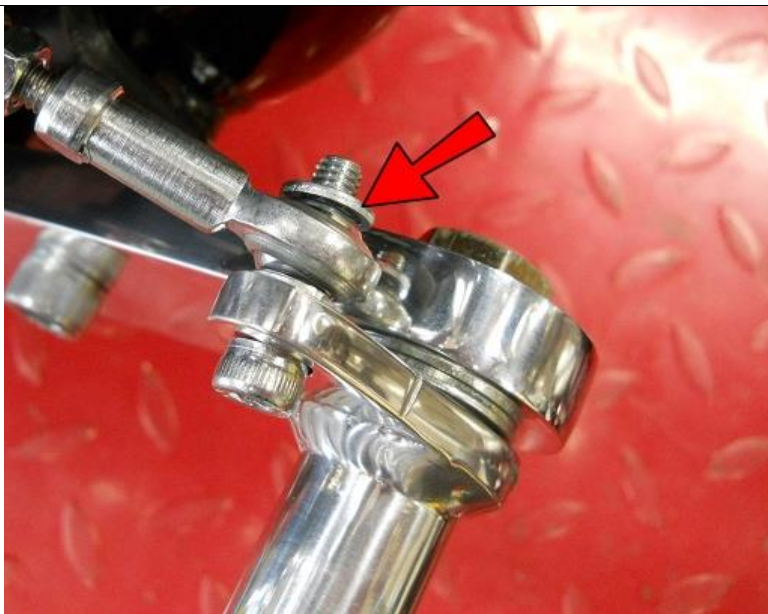
Insert an M6-1.0x25 Socket Head Bolt into the Brake Pedal.



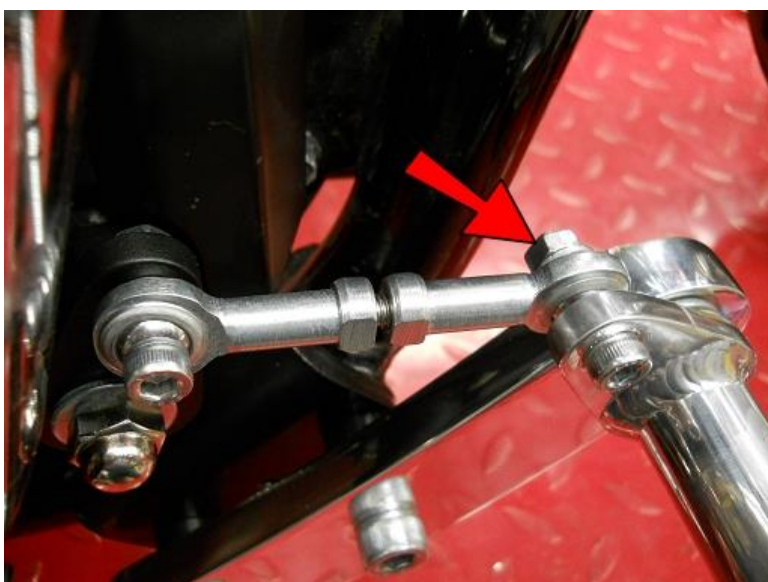
Place an M6 Washer on.



Place the other end of the Linkage onto the M6-1.0x25 Socket Head Bolt.



Place another M6 Washer on.



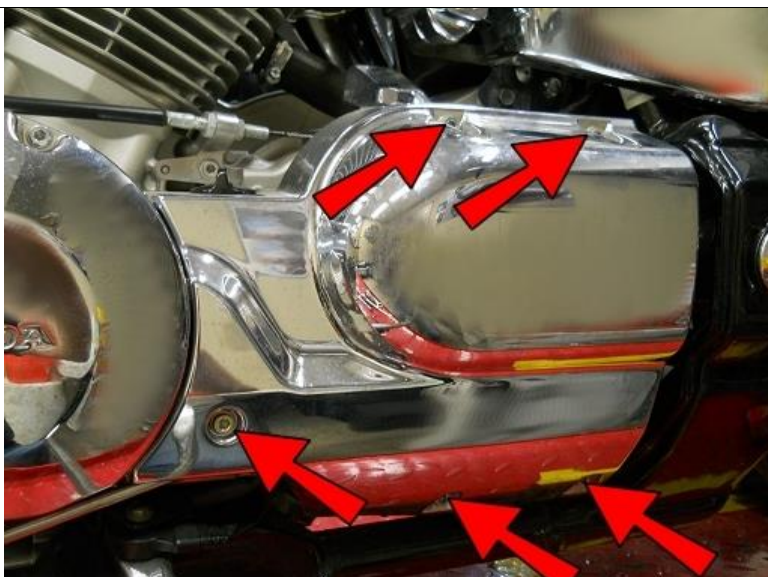
Thread an M6 Nut on and just tighten enough to snug it at this point. Do not use threadlock here yet. (You ARE using threadlock right?)



Install the Brake Toe Peg and secure with a 5/16-24 Nut.

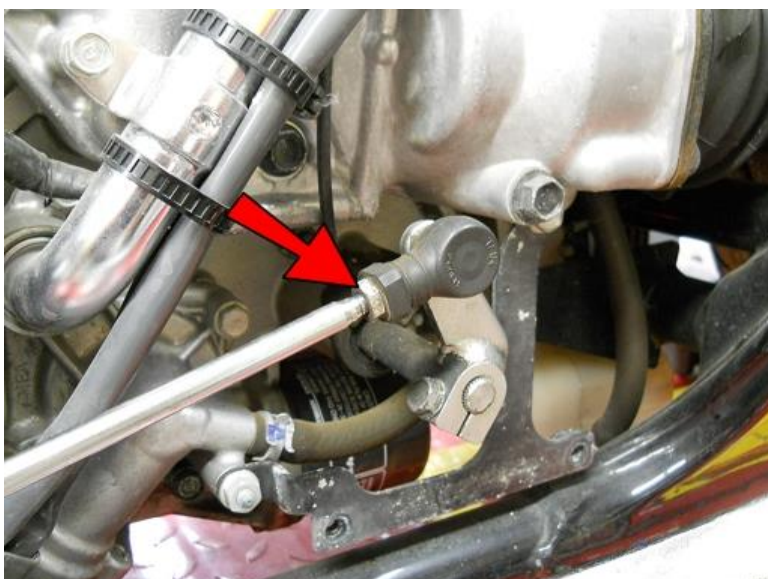
At this time you should sit on the bike (if it is secure) and test that the Brake Pedal height is at your desired angle. If not, remove the M6 Nut and Washer that you only snugged and thread the M6 Spherical Rod End farther on or off of the M6-1.0x40 Stud as applicable. When all adjustment is made, threadlock and tighten the connection.

This completes the Brake Side.

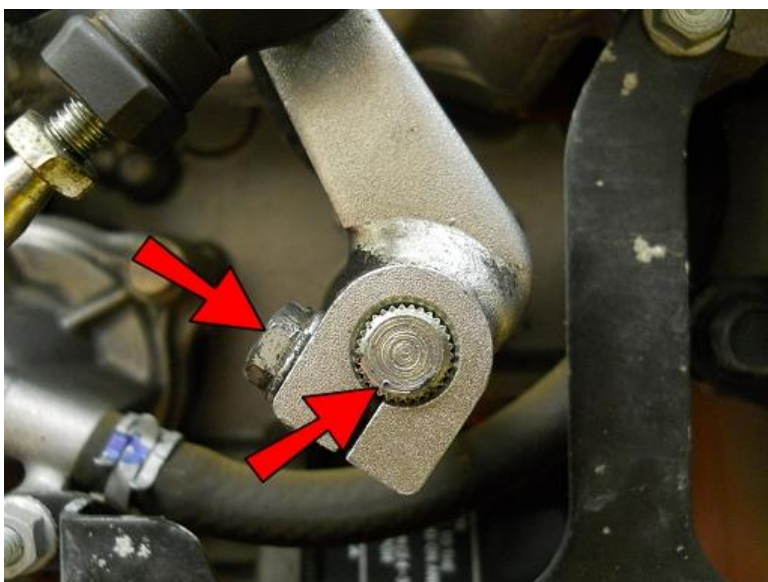


Shifter Side...

Lower the kickstand, remove these 5 bolts and pull off the chrome cover.



Loosen this nut and thread it the rest of the way onto the linkage rod. (It is a LEFT HAND thread.)

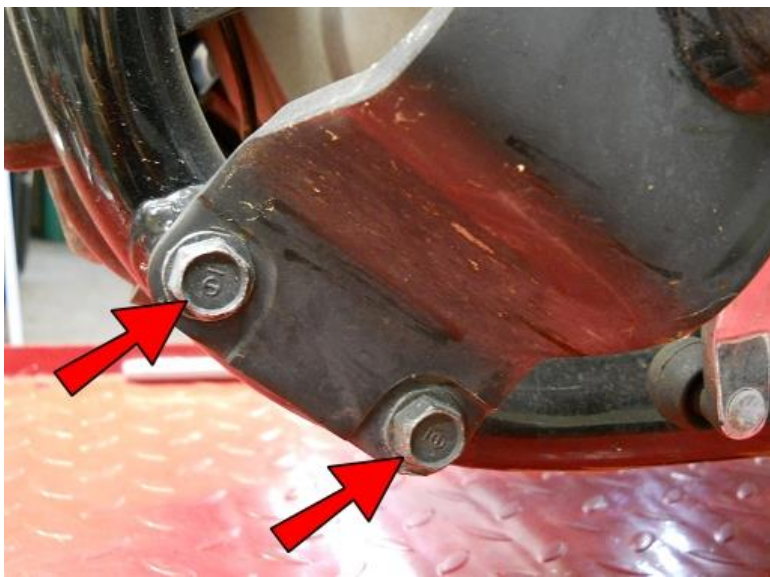


Observe the small dot on the end of the splined shaft and make sure it is lined up with the split in the shifter arm. IF it is not, remove the clamping bolt, slide the shifter arm off the splined shaft, rotate the shifter arm to line it up, then replace and tighten the clamping bolt.

Note: If you decide to flip the controls over for the 6.5" position, you MAY find that the shifter arm needs to be rotated one tooth counter-clockwise for optimal Shifter Pedal position, but you may not need to move it at all.



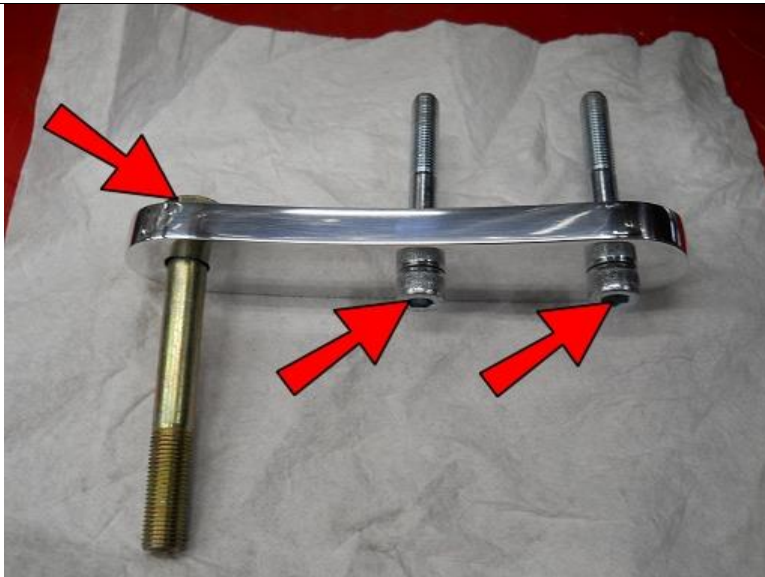
Loosen this nut and thread it the rest of the way onto the linkage rod. Twist the shifter linkage to thread it out to remove it.



Remove these 2 bolts to remove the left side control.



Thread the original shifter linkage back into the shifter arm on the spline where you removed it from. (Left Hand End). Now Thread an M6 Spherical Rod End onto the other end as shown.

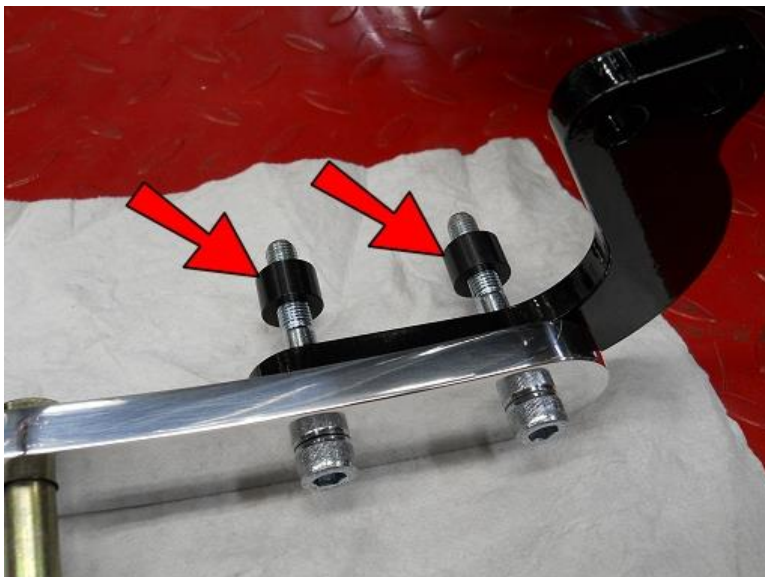


Insert two M10-1.25x70 Socket Head Bolts and a 1/2-20x4 Hex Head Bolt into an FC21 Plate as shown.

NOTE: Don't forget to add an additional 1/2" Washer before inserting the 1/2-20x4 Hex Head Bolt if you will be using a clevis for your foot peg



Place the STOF8 onto the two M10-1.25x70 Socket Head Bolts.



Slide 1/2" Spacers onto the two M10-1.25x70 Socket Head Bolts.



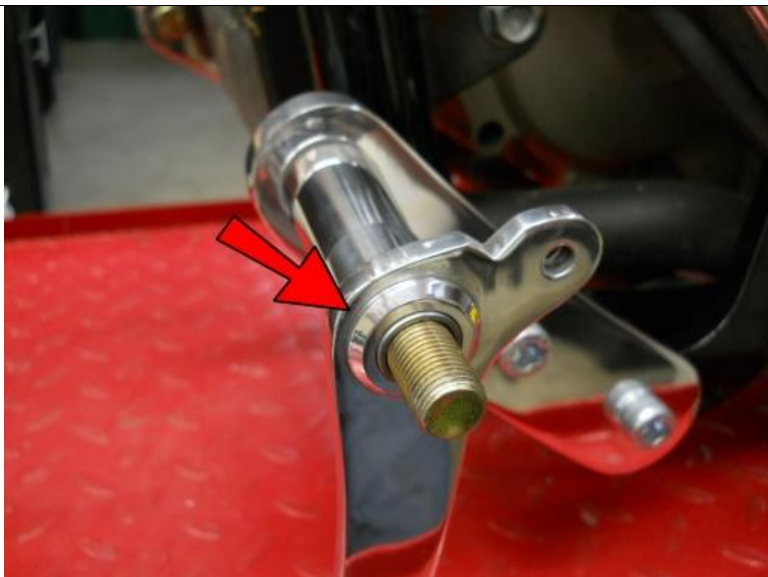
Secure the assembly to the frame and slide a STOF4 on as shown.



Clean the Shifter Pedal as you did with the brake side and grease.



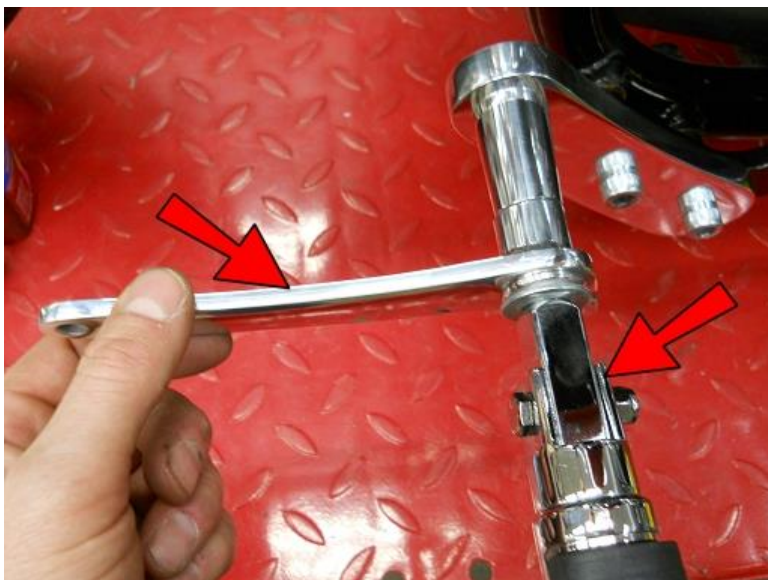
Insert an SLV4.



Place the Shifter Pedal onto the bolt.



Place a 1/2" Washer on.



Install a foot peg and tighten. Then make sure the Shifter Pedal rotates freely. If it does not, stop now and correct.



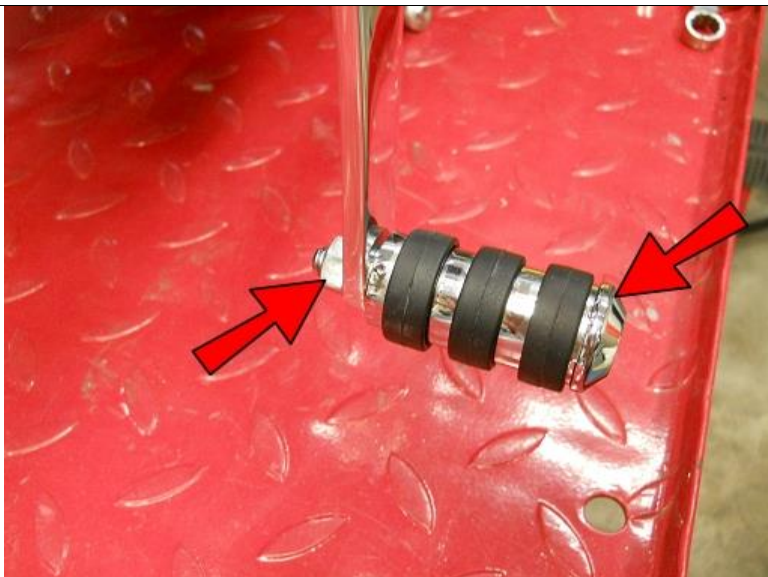
Insert a 3/8-16x2.25 Button Head Bolt into the ARM20 that you previously installed the sleeves into.



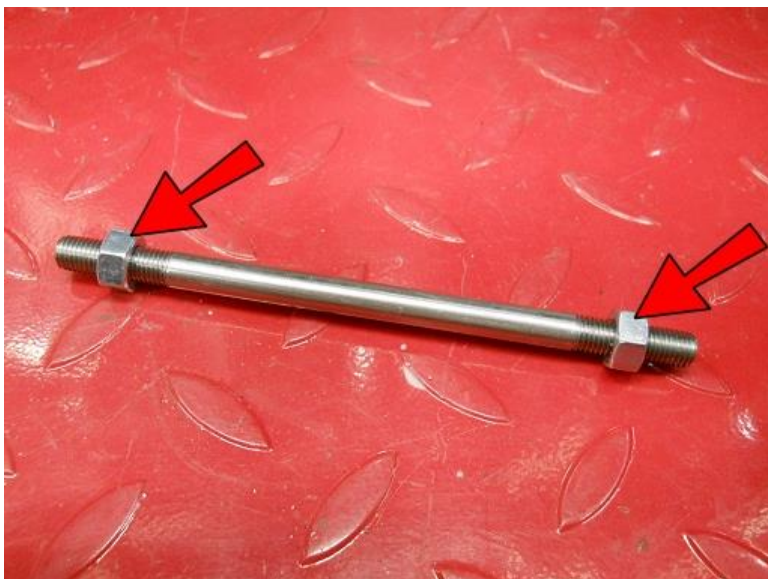
Place a 5/16" Washer onto the bolt.



Connect to the top hole of the STOF8, clean any excess grease off of the bolt and secure with a 5/16" Washer and a 3/8-16 Nut.



Install the Shifter Toe Peg and secure with a 5/16-24 Nut.



Thread 5/16-24 Nuts about half way onto both ends of the supplied Shifter Linkage.



Then thread on 5/16" Spherical Rod Ends.



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



Place TWO M6 Washers onto the bolt.



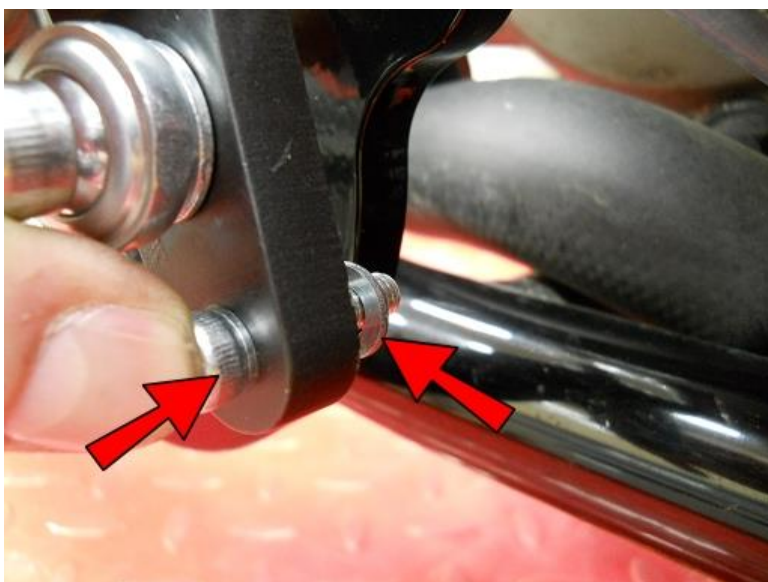
Place one end of the Shifter Linkage onto the bolt and secure with an M6 Nut.



Insert an M8-1.25x30 Socket Head Bolt into the other end of the linkage then slide a 1/4" Washer onto the bolt.



Connect to the middle hole of the ARM20 and secure with an M8 Nut.



Insert an M6-1.0x25 Socket Head Bolt into the bottom hole of the ARM20 then slide an M6 Washer onto the bolt.



Pull the M6-1.0x25 Socket Head Bolt back out just enough to give you room to place the end of the original linkage onto the bolt and secure with an M6 Nut. Note: Make sure the M6 Washer does not fall off when you are doing this.



Adjust the Shifter Pedal height with the original linkage. Make sure there is enough thread in both ends for a secure connection. If you need more adjustment, you can remove the front linkage from the Pedal and adjust it as well, then reconnect. After the height is adjusted to the desired position, tighten the nuts against ALL of the Spherical Rod Ends.



Replace the chrome cover and secure.

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!