

WARNING: the engine does not come with oil in it. Please fill the oil before starting.
The 200cc hardknock requires 9/10 of a quart of oil.

Things needed for assembly. -2 tubes of blue loc-tite. I don't recommend red loc-tite, because it requires heat to remove the nut, and heat can damage painted surfaces, chrome and compromise the strength of metal. -High temp bearing grease. -rubber mallet if you have one. -A sealant for the petcock. Either a liquid gasket sealer that is gasoline resistant or a thread tape that is. (Make sure what ever it is its gas resistant.) -rubber washers/rubber spacers for the gas tank mounting. -Anti-seize compound of your choice -oil for break in and oil change recommended oil is red line 20/50, what ever oil you use

must be made for a motorcycle wet clutch 4 stroke engine. Do not use synthetic to break In, it does not seat seals; only organic based oil can do that.

What's included in kit when you receive it, depending on your options. Your kit will come In 4 separate boxes.







These pictures do not include the engine or front end, because they have already been installed on this kit.

Step 1. Unpack your boxes. Take an inventory to make sure all parts are included. Do not throw any boxes or packaging away until the bike is complete, because often small parts may have fallen loose and still be in a box, or packaging. Remove battery from its box and charge it while assembling your bike. They do not come fully charged. Boxes consist of: Box 1 – frame Box 2 – primary components, as pictured above Box 3 – tires and wheels Box 4 – engine

Step 2 .mounting front suspension

This will be the correct position of the bearings and nut when assembled



Open up your trees as far as they will open



Next grease your bearings

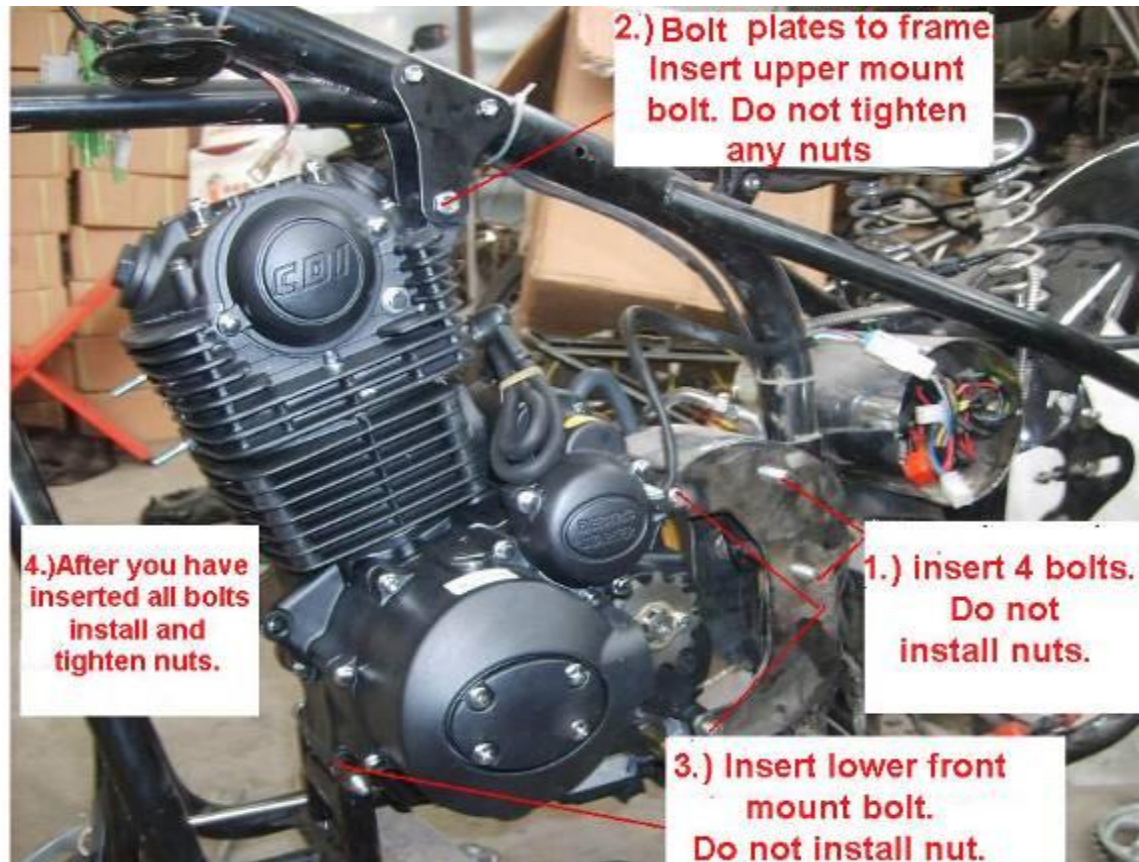


Place your bottom bearing back on the neck bolt. Then take your front suspension and place the neck bolt through the head tube and put your top bearing in the head tube and push down the top triple tree. Then put the top nut on as shown in the "correct placement picture" and tighten it down. It is best to get it as tight as possible. It will loosen up as it seats itself from riding.



Now place your top triple tree back down than take the large head tube bolt. And put it on.
It's a 30mm diameter nut. Do not tighten down you legs yet. You will do this after you align your fender and axle. So they are straight and level.

Step 3. Mounting engine.



There may be a gap on the front lower motor mounts. This is normal during installation. Tighten down the motor mount bolts until there is no gap.

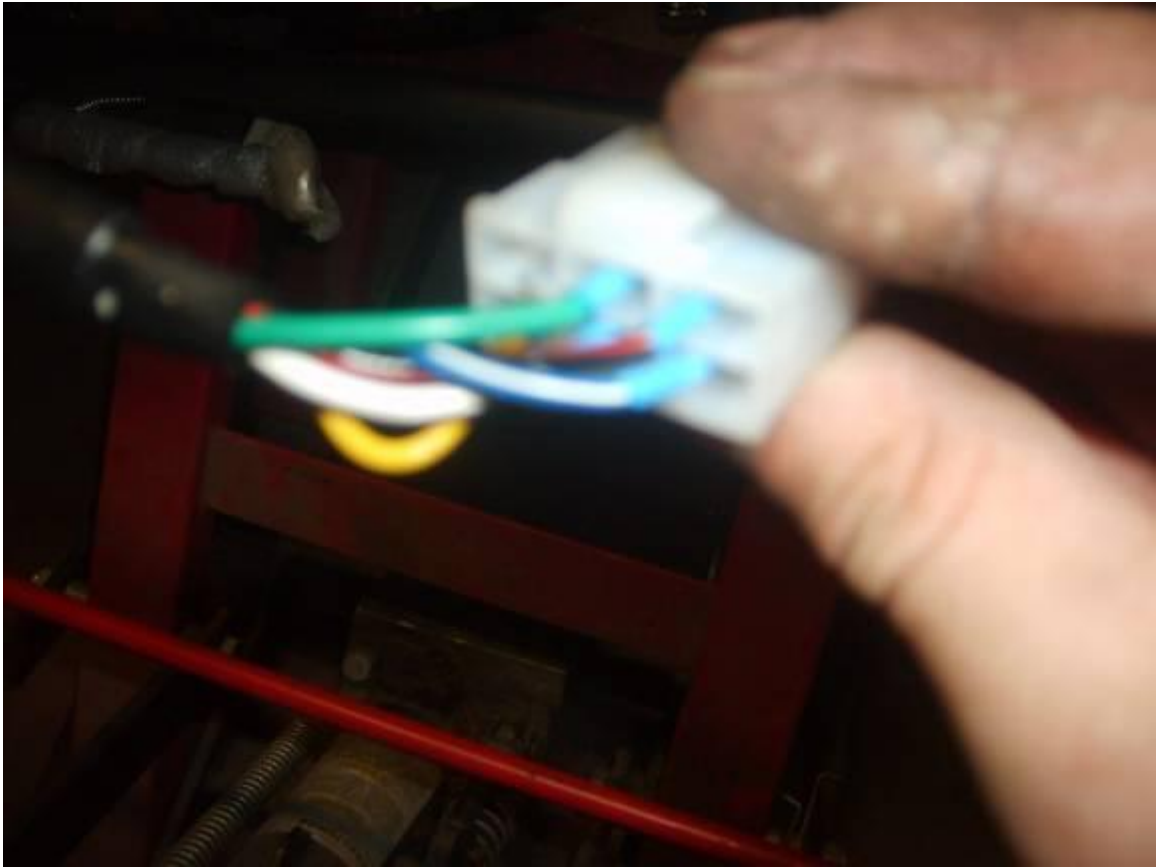
Step 4. Wiring the engine

First install the voltage regulator to the bottom of the engine, directly in front of the rear engine mount.



I chose to remove the plug from the end of the voltage regulator wires. I used a small pointed screw driver to do this.

This is a picture of how the wires are placed in the plug.



After removal of the plug



The next step is to run the wires as hidden as possible up and into the oil can. Then place the wires back into the plug in their correct place. And plug it into the corresponding plug.

Next step is to ground the starter. I grounded my starter to the inside of the rear motor mount using a small nut and bolt. Then run the starter positive into the battery box and connect to the starter solenoid, on the empty side.

Step 5. Mounting front fender. While your legs are still loose enough to move place your front axle through them to get them straight and at correct height alignment. You may need or want to use a tape measure to check all measurements for correct alignment on front suspension. After you get them correct you may now tighten down your triple tree nuts, but I do not recommend you use loc-tite until you place your front wheel on. In the event that your alignment was incorrect it makes it easier to loosen up and move. Only after you are completely sure it's perfect place loc-tite on the triple tree bolts.

These are you're your fender struts. Mount these to your front fender first.



Next step is to mount you fender to the fender tabs on your legs.

It should look like this from underneath when done correctly.



Step 6. Installing risers First is to clean them up so they seat evenly and properly. This is the method I used.





After you remove any excess metal from the riser and riser cap place your risers on the triple tree. You want to tighten them down





But not to a point where they can not be moved. You will need to align them with your bars.



After they are aligned tighten them down and you may now put you bars on and caps on the risers. If you are putting apes on do not over tighten the riser caps down completely until the bars are in a comfortable position for riding because you may chose to reposition them to your comfort after you can sit on the bike.

Step 7. Installing rear fender.

Install rear fender using the two attach bolts in the center of the frame.



install rear fender brace tubes. Note that the fork end of the brace tubes attach to the frame. The left side bracket has the tail light attachment.

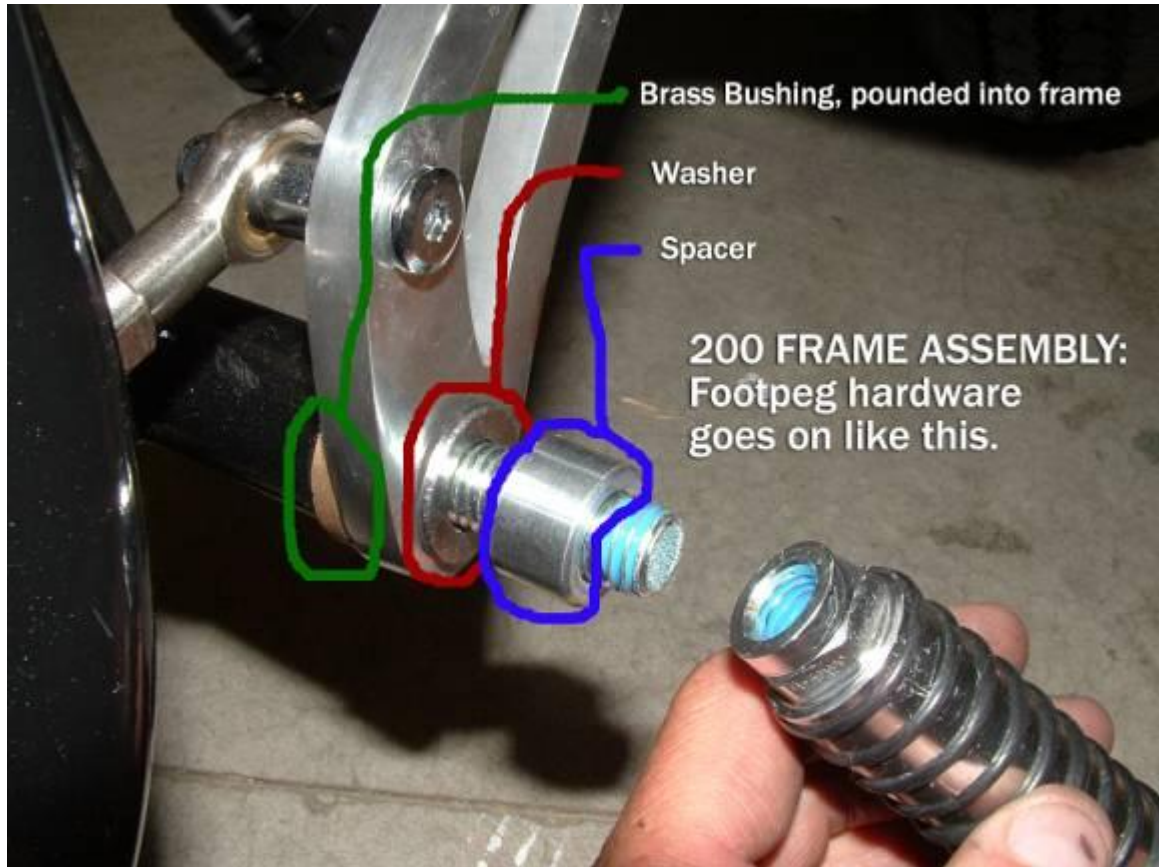


Step 8. Forward controls.

Put in the axle bushings



I use a socket that fits over the nipple on the bushing and GENTLY tap it into place. These are fragile so do not pound on it.



Step 9. Forward control clutch cable installation.







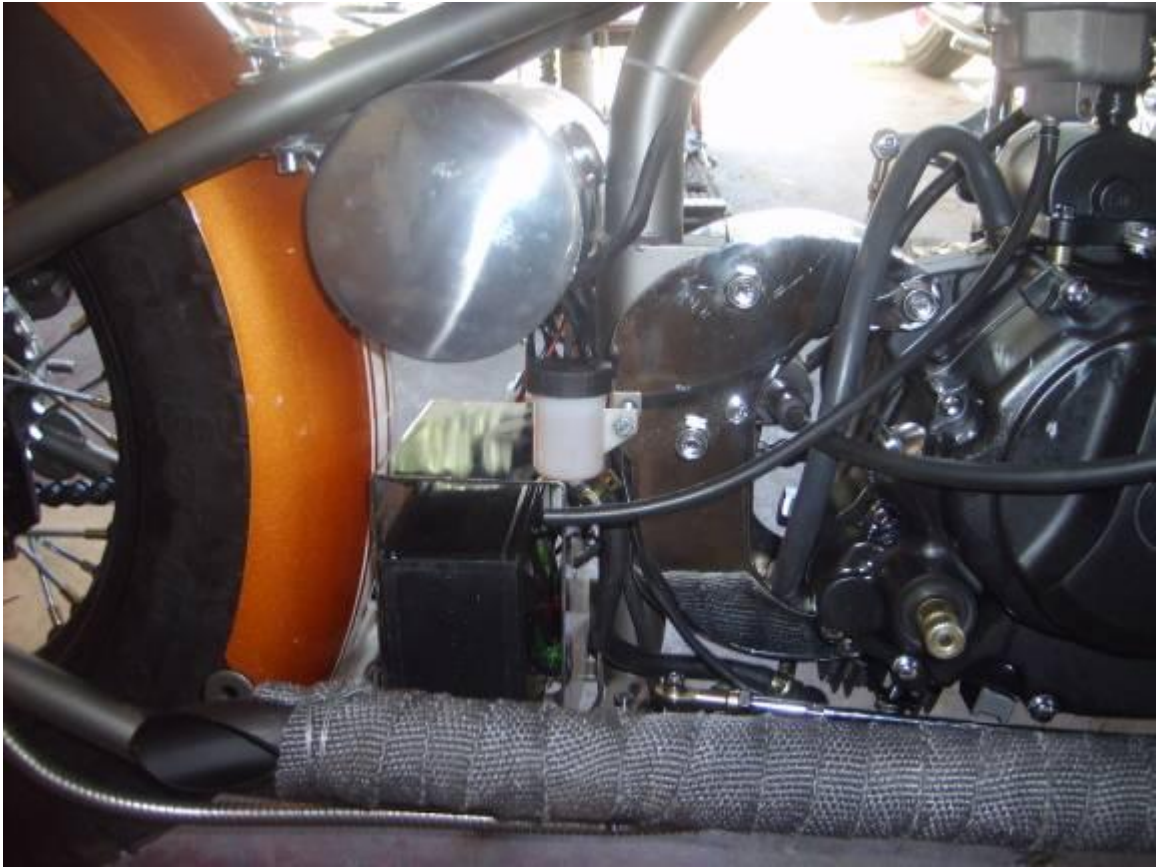
Once you have this together you will need to adjust you cable to engage your clutch properly. To adjust is simply just moving the bolts on the threaded cable adjusters forward until you have proper tension. Do not over tighten or it will cause your clutch to slip or never properly disengage.

Step 10. Forward control rear brake installation

First you will need to install your rear brake master cylinder, and reservoir as you can see in these pictures. The master cylinder mounts near the battery box. You can mount it on top or underneath. If you mount it from the bottom you will not have to bend your brake rod, but you may sacrifice frame clearance this way. It is a matter of preference.



The reservoir can be mounted here



I used a small spacer and nut and bolt to achieve proper clearance and to keep it place as shown here



After installing the master cylinder you need to install the brake rod and springs correct location is illustrated in the next 2 pictures





The rear spring goes through the rear brake light actuator; it has a small hole in it for the spring to go through. When doing this, make sure the spring is not too loose or too tight, or it will not engage the brake light correctly.

Step 10. Installing front tire Brake rotor goes to the left side (jockey shift side) as well as the short axle spacer. Long axle spacer goes on right side. Make sure you have already installed the front fender. If you have already installed the handle bars you may now install the front brakes

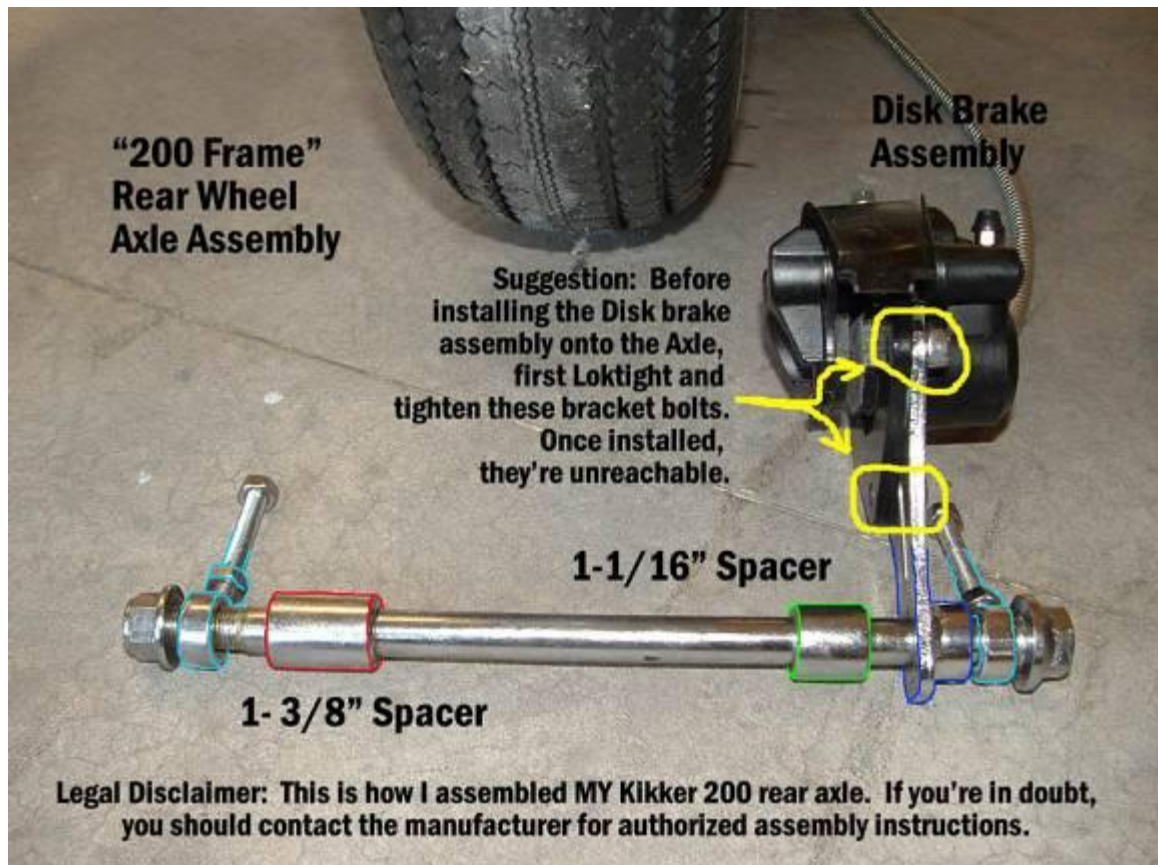
Step 11. Installing front brake Master cylinder and lever go on the right of the handle bars the brake light and starter safety switch plug from the brake lever plug in under the tank. And the caliper go the left side. It's very simple. 2 bolts hold it in place. It should look as it does in the picture.

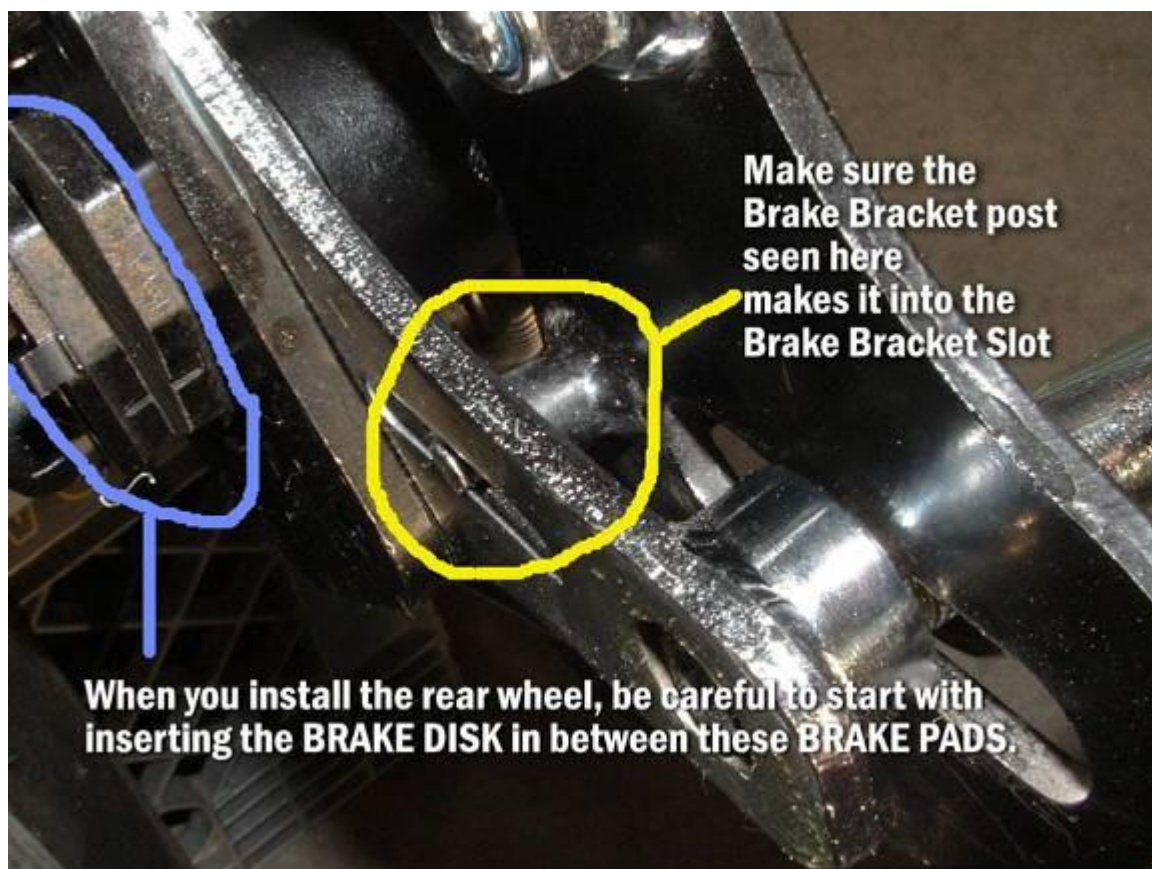


Step 12. Install rear tire and rear brake I found this to be one of the most difficult tasks of assembly and believe it was much easier to do with an extra person.

First place your brake caliper in the correct place on the frame and slide your axle in far enough to hold it in place, then put your spacer on the end of the axle, just covering the threads. While putting the tire in place then pushing the axle through the wheel hub while leaving enough space put the chain side spacer in place. I used a small pry bar wrapped in cloth to pull open the frame to get the space on this side in place. Place the axle lock nut on the axle but do not tighten.

You do not need to remove axle adjusters to assemble this picture is simply for illustration purposes to show the correct location of the rear assembly.

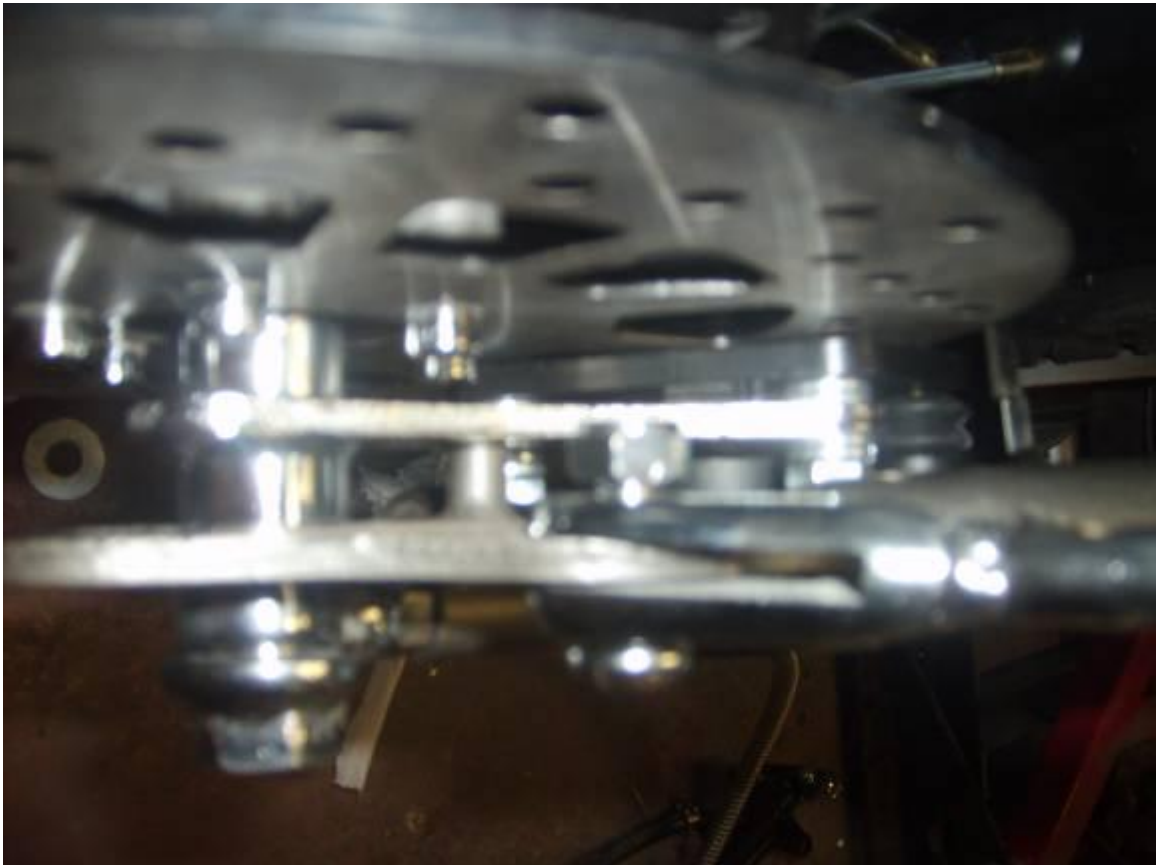




Make sure the
Brake Bracket post
seen here
makes it into the
Brake Bracket Slot

When you install the rear wheel, be careful to start with
inserting the BRAKE DISK in between these BRAKE PADS.

If caliper alignment is incorrect you may need to use washers or spacers to correct the alignment as pictured here in the caliper bracket. Four 10mm lock washers were used to get proper caliper alignment here, two on each side of the caliper mounting bracket, along with longer bolts.





Step 13 Chain installation.

Your axle adjusters/chain adjusters, should be adjusted so the axle is as far forward as it will go.
The chains are very tight new and it makes it difficult to get the chain on if the axle isn't completely forward.

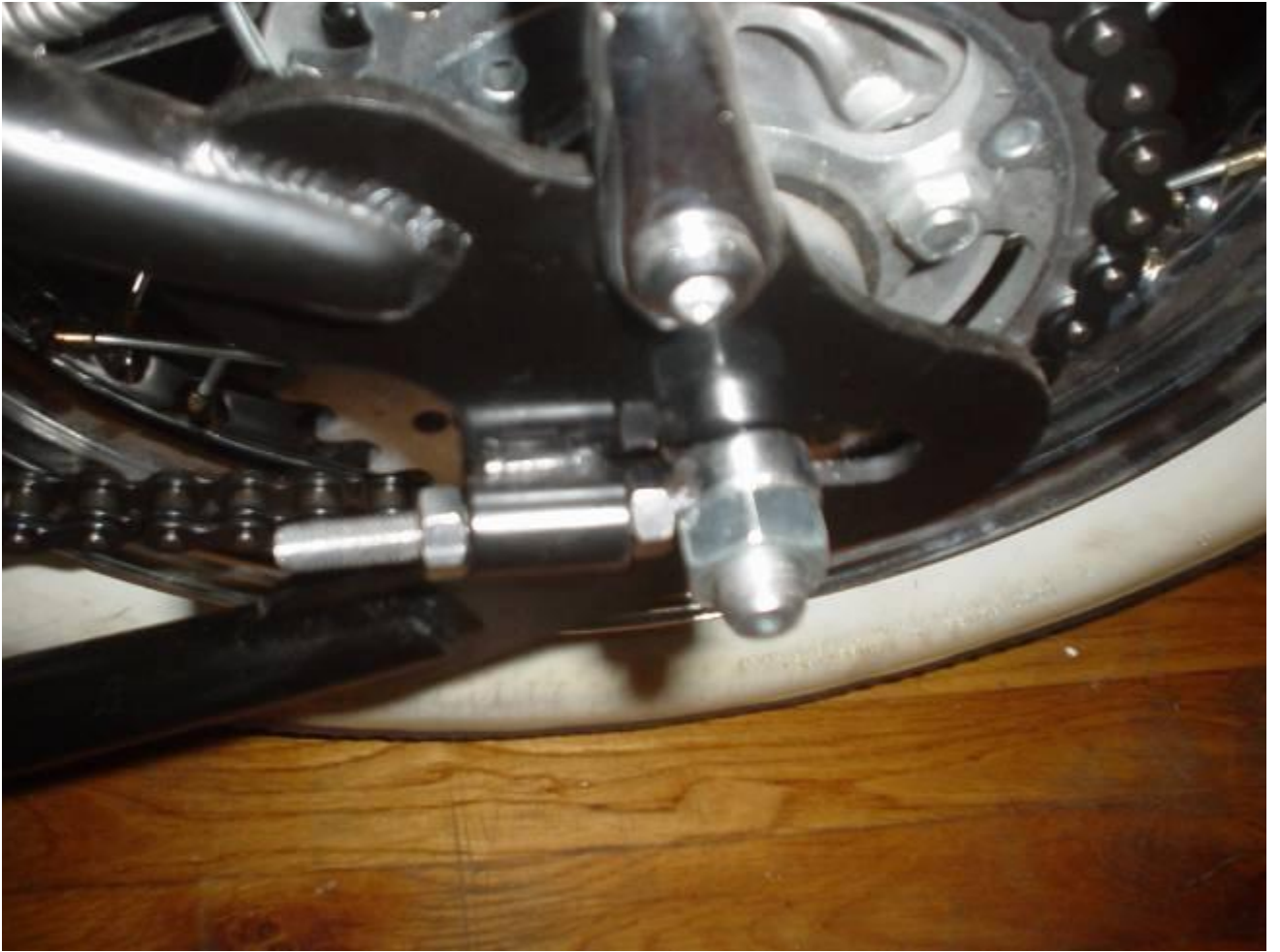
The tool. Lawn mower starter rope.



OK, now I will show you how I did it. First lay out your stuff.



Then adjust/move the back wheel all the way forward.



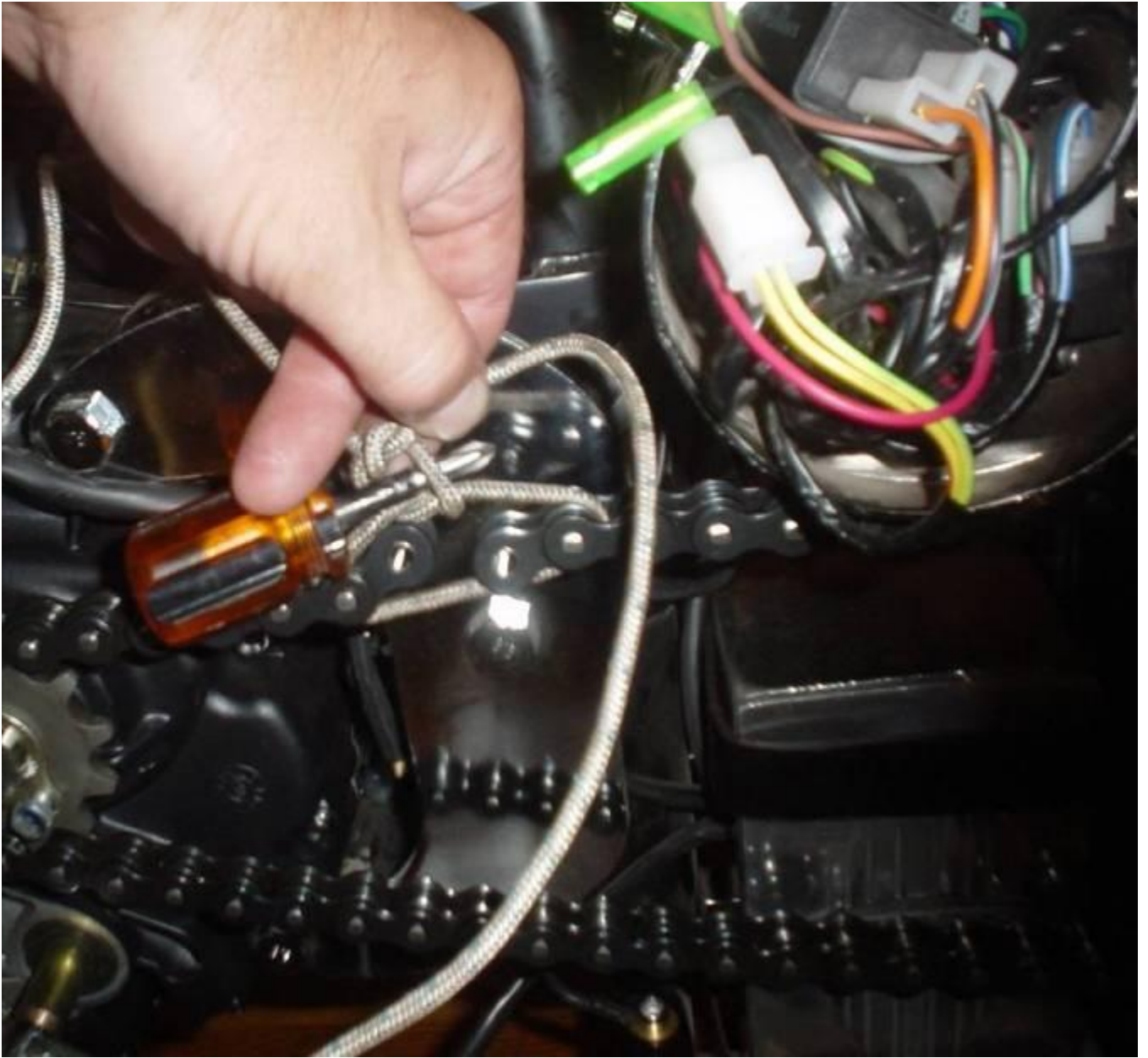
Step 1: Hold chain ends together.



Step 2: Insert tool into links as shown.



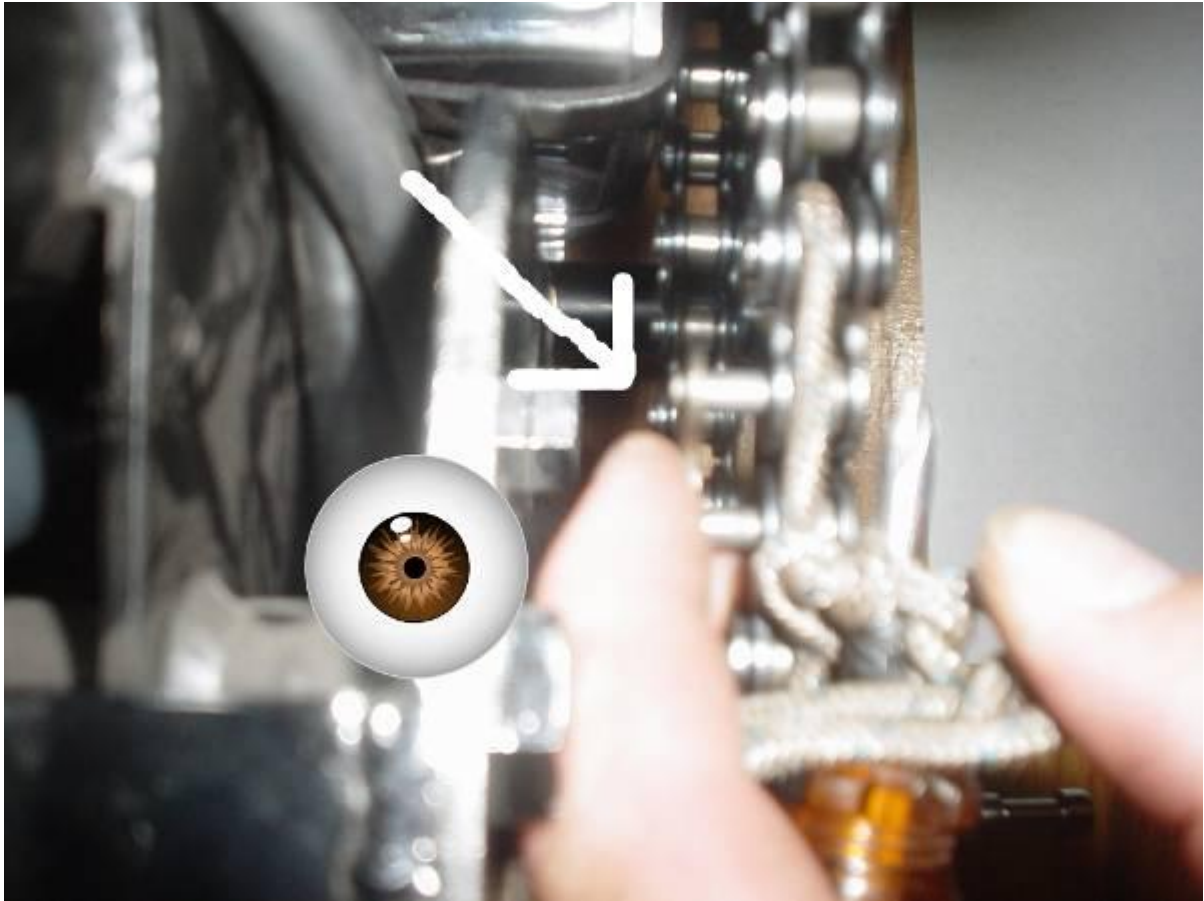
Step 3: Tie a knot in the rope and insert a stubby or something short and strong.
(Get your thing out of there. That's gross.)



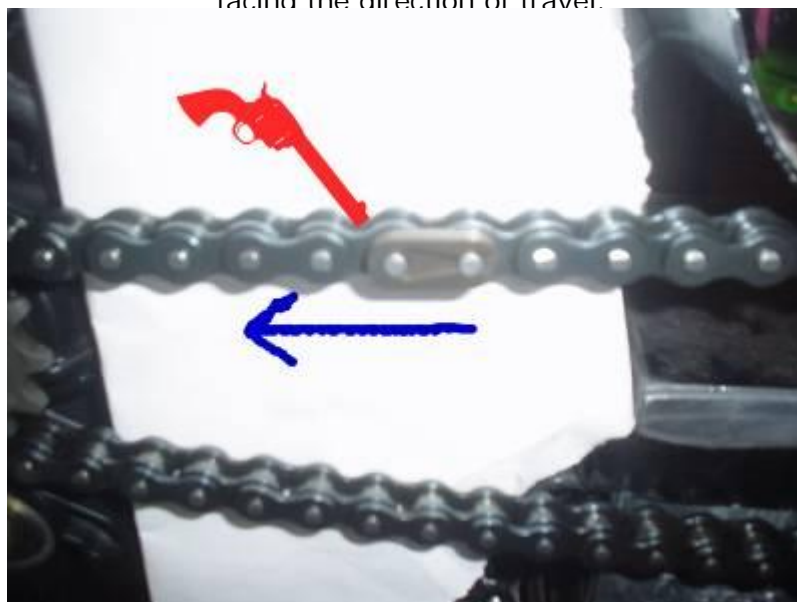
Step 4: Twist the rope until the links come together.



Step 5: Insert the master link from the back side.



Step 6: Install your master link clips making sure that the closed end of the clip is facing the direction of travel.



Now you can extract the special tool and you're done. I have used rope like this for years. It comes in handy
For those who choose to walk it on, the rear sprocket has a small chain guard on it; it may get damaged during the walk on.

Step14. Installing carb

The carburetor comes with gaskets, to install it just requires placing it there and bolting it on.
This is the correct position and placement for the carb and manifold.



You may remove the hose that comes pre-installed in the carb if you choose. The nipple the hose is on, on the top is the gas line IN line. Next is installing the throttle cable and slide into the carb.



After putting the throttle cable through the retainer cap, pull as much free cable down as possible. You now will need to place the spring on. Than place the cable with the spring in the slide.

(Tip: use some lubricant or anti-seize on the slide to help maintain free motion of the slide)

This picture shows the correct placement of the throttle cable in the slide



It will look like this when properly put together



Next step is to place the slide in the carb. There is a small nipple guide the carb slide must align with to move freely. Look down the barrel to see this nipple. When the slide is properly in place it will rest approximately $\frac{1}{2}$ inch below the neck of the barrel. Now screw the cap down. (Tip: when you first start the bike, if it revs high with little or no throttle response it is most likely because the slide is in the incorrect position)

Step13. Installing the jockey shifter

The top bracket mounts horizontally on the electric starter cover.



Attach all linkage, and the transmission spline bracket must mount perfectly horizontally or the small Allen head will hit your chain cover and not allow you shift through all the gears.
As shown in this picture



When finished it should look like this



Step 14. Installing pet-cock and gas tank. (tip: put about one quart of as in tank before installation and swoosh it around and dump out to remove any debris that may clog your carb and install a fuel filter is a must)

On the tank threads you should use a sealer, to keep the pet-cock nut from leaking. I use a liquid gasket sealer purchased from an auto parts store that is gasoline resistant. Place the pet cock on as shown but keep the lever facing out to the right as shown in the picture.



To avoid over tightening of gas tank tabs and cracking the welds, I use spacers and rubber washers.

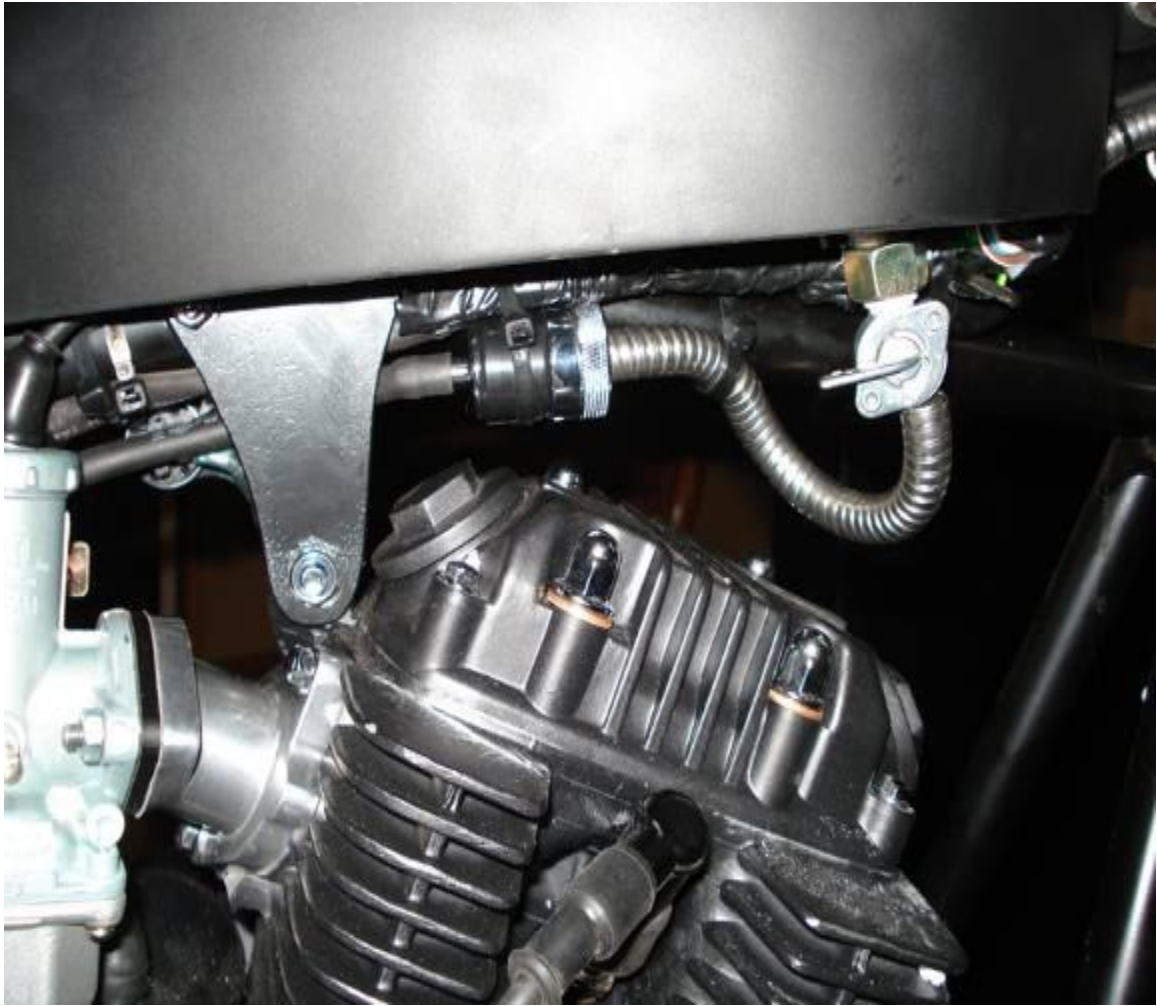


Do not over tighten the nut and bolts. Tighten them enough to hold the tank in place correctly but not as to crank it down hard.





Gas tank on with an inline fuel filter





Step 16. Install exhaust. Place the small exhaust gasket (35mm ring made of metal and paper) in the head. Place exhaust on fasten both nuts to the exhaust studs, and mount the rear end of the exhaust to a tab on the frame with nut, bolt , rubber washer and metal washer.

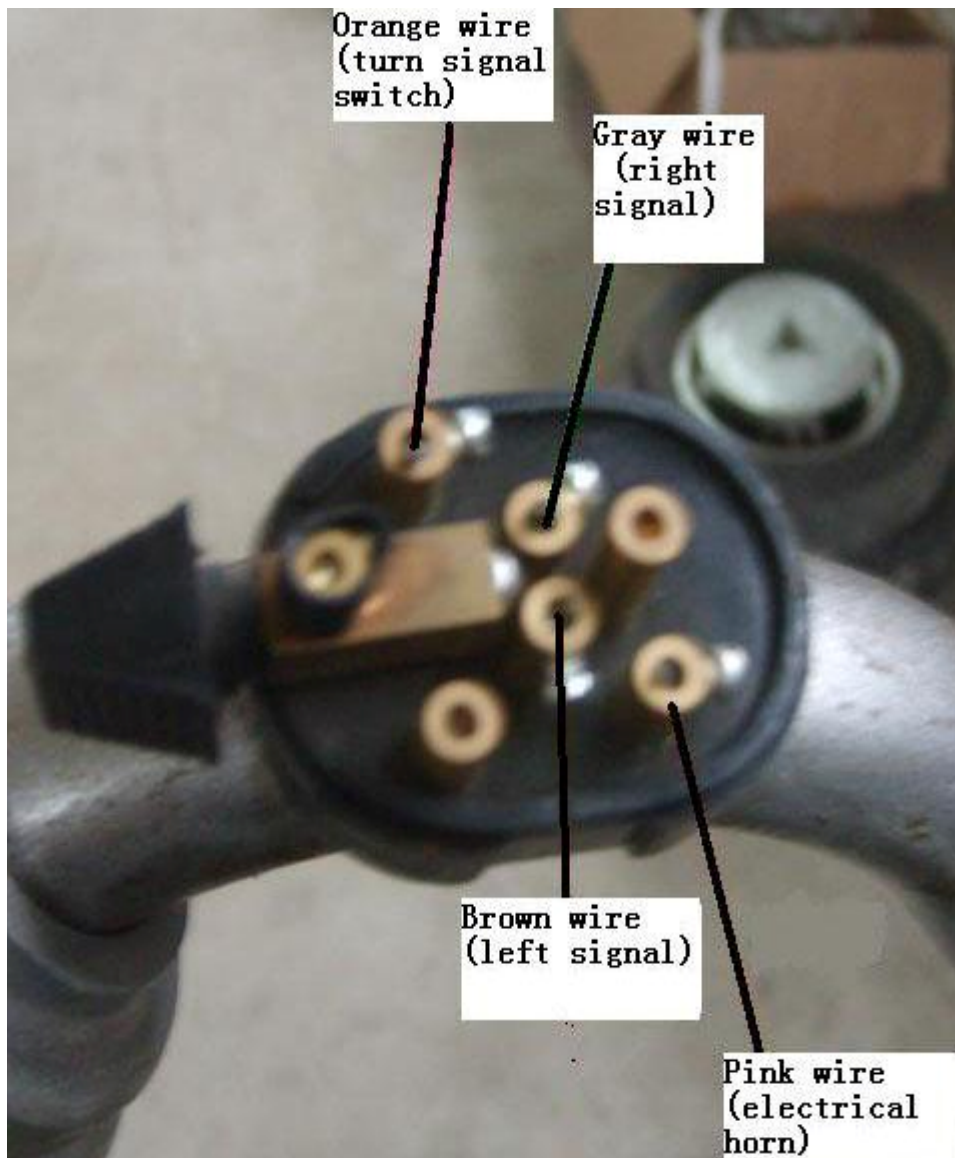
Step 17. Install kicker pedal and arm. Loosen up the nut on it push in on the spline shaft, make sure its vertical and tighten it as much as possible without breaking the nut or stripping it out.

You may now install your fuel line from pet-cock to carburetor. Step 18. Head light
After installing the Allen head nuts, the two bolts on the head light bracket should be tightened firmly after the correct alignment is found.

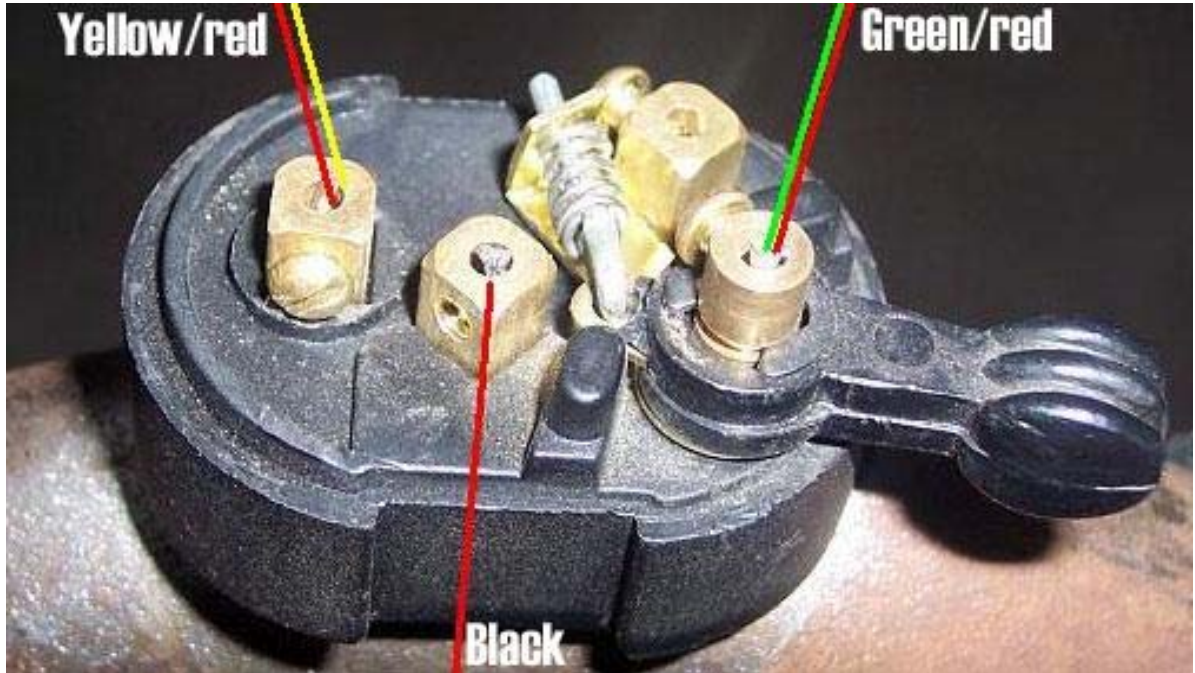


The head light plugs into the corresponding plug under the tank.

Step 19. Switches Signal and horn switch as shown



Kill and start as shown.



Step 20. Turn signals

Front turn signals-Mount to suspension with supplied bracket and plug in under the tank

Rear turn signals-Mount to the rear frame with included bracket and plug into corresponding plugs in the faux oil tank

As you can see in the picture of this bike the placement of the signals, but it truly is a choice of preference.

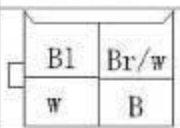
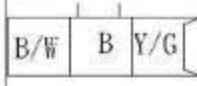
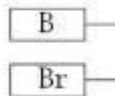
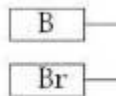
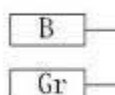
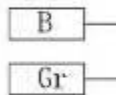
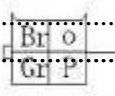
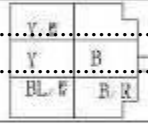



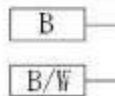



Step 21. Installing rear light It plugs into the faux oil tank and mounts as shown in this picture



200CC WIRING INSTRUCTION

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WIRING HARNESSSES NEAR GAS TANK	CODE	GOES TO	WIRING HARNESSSES INSIDE OIL TANK AND BATTERY CASE	CODE	GOES TO
	A	HEAD LIGHT		II	TAIL LIGHT
	B	FRONT LEFT TURN SIGNAL		I	REAR LEFT TURN SIGNAL
	C	FRONT RIGHT TURN SIGNAL		J	REAR RIGHT TURN SIGNAL
	D	LEFT HANDLEBAR SWITCH		K	MAGNETO
	E	RIGHT HANDLEBAR SWITCH	RELAY	L	STARTER
	F	BRAKE SWITCH		M	ENGINE BATTERY CASE "+" ON BATTERY
	G	SPEEDOMETER		N	ENGINE BATTERY CASE "- " ON BATTERY

* GROUNDING WIRE: PUT THE TAG OF THE GROUNDING WIRE BETWEEN THE REGULATOR MOUNTING STUD AND PLATE UNDER THE ENGINE

1.W:White 2.B: Black 3.BL: Blue 4.Gr:Gray 5.Br: Brown
6.Y:Yellow 7.G:Green 8.P: Pink 9. □ :Orange 10.R:Red

These Assembly Instructions have been gathered and put together by Micah at Eastside Oldschool

