

Electronic Start Gas Engine Kit Installation Manual

Please carefully read through this installation manual before installation!!!

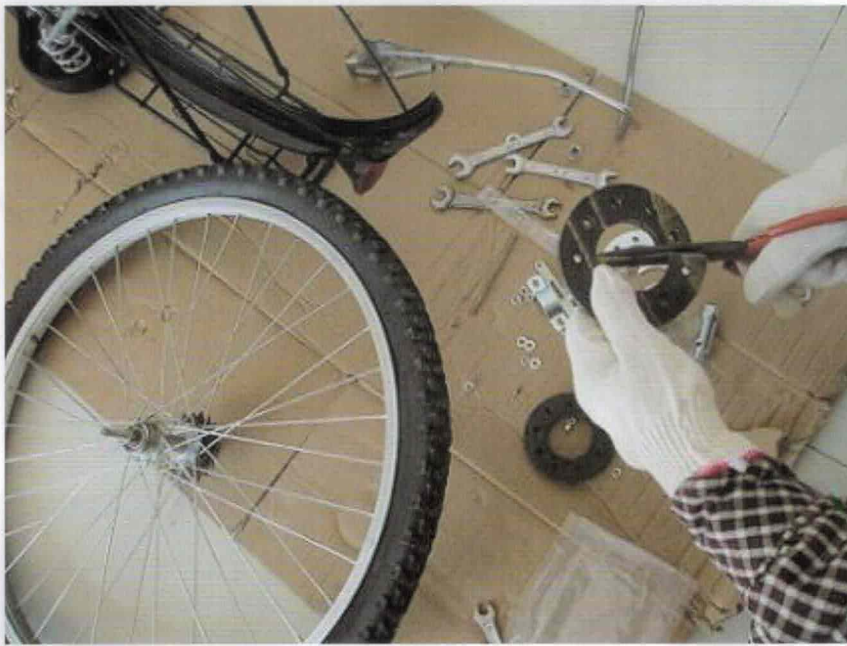
This new 80 model is a multi-purpose gasoline engine kit which can be used for mini go-kart, mini ATV, bicycles, and etc. There are two methods to start the engine, 1) electronic start or 2) pull-start, with automatic centrifugal clutch. This new model has made several improvements on the performance and quality of the engine kit, including higher horse power, lower technical dysfunction rate, and easier operation. Hope you can enjoy this product!



Step 1. Remove the rear wheel of the bicycle.



Step 2. Open the Mounting Hardware and accessories box in bicycles kit and find the accessory package with the black rubber sprocket mount. Cut only 1 of the rubber sprocket from one side.



3. install the rubber bands to the rear axle.



Step 4. Find the dished 48 tooth sprocket with 9 oblong holes, and insert 6*48 internal hex socket cap screws.



Step 1. Remove the rear wheel of the bicycle.

Step 5. Other uncut rubber sprocket with the 48 tooth sprocket , and insert the 9 internal hex socket screws.



Step 2. Open the

Step 6. Align the 9 tooth sprocket to the rear axle and bind with the previously cut rubber sprocket through the internal hex screws.



Step 7. Mount the semi-circle metal sprocket onto the rubber sprocket, and then mount the 6mm flat washer, locking washer, and a nut.



Step 8. Tighten all the bolts!



Step 9. Flip the bicycles and spin the rear wheel. If the wheel or the sprocket wobbles, you will need to tighten the bolts again so that the wheel doesn't wobble.



Step 10. If the rear wheel doesn't wobble, then you are good to install the engine.



Step 11. Before installation of the engine, please remove the chain crank that came with the bicycle.



Step 12. Remove the two pedals and the crank.



Step 13. Install the new chain crank from the engine kit package.



Step 14. Install the pedals that came with the bicycle to the new chain crank.



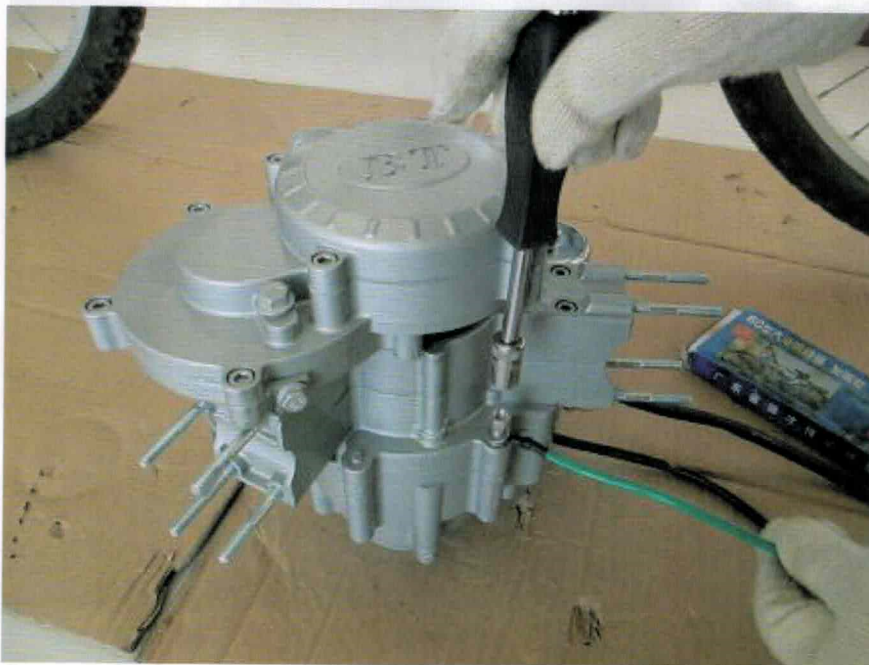
Step 15. Install the original chain to the new chain crank.



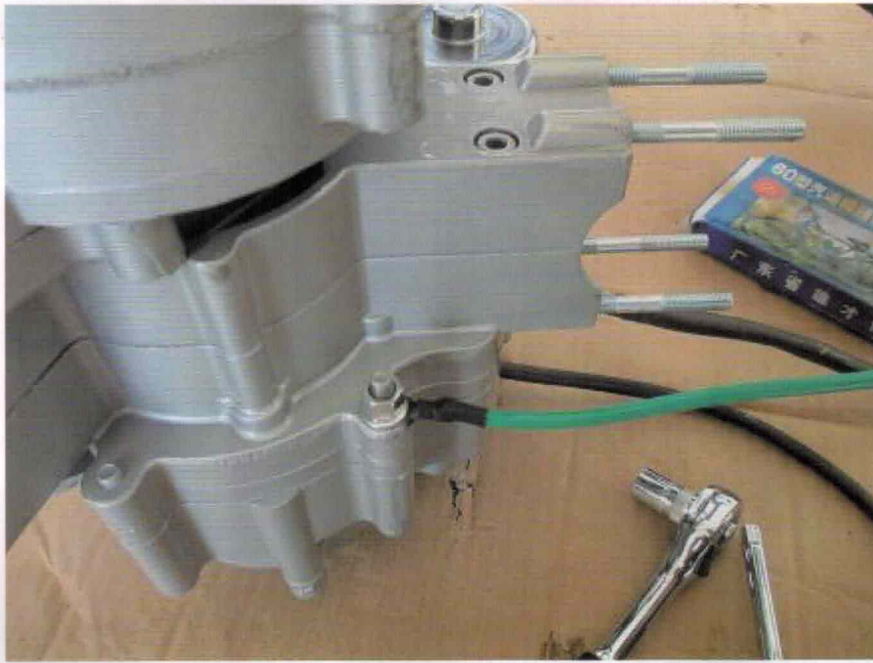
Step 16. Engine installation, find 8 of the 6*55 double headed screws and insert to the front and rear-mount, then tighten the screws.



Step 17. Find the green colored wire that is the negative electrode of the battery. Connect the green wire to the screw at the bottom of the engine.



Step 18. Connect the wire to the screw, and then tighten with the flat washer, locking washer, and a nut.



Step 19. Adjust the position of the engine to fit the V-frame of the bicycles, and lock the front- and rear-mount to the V-frame with the metal pieces and tight it with washer, nuts, and screws.



Step 20. Please note that starter should not touch the bicycles frame, as shown in the picture in step 20.



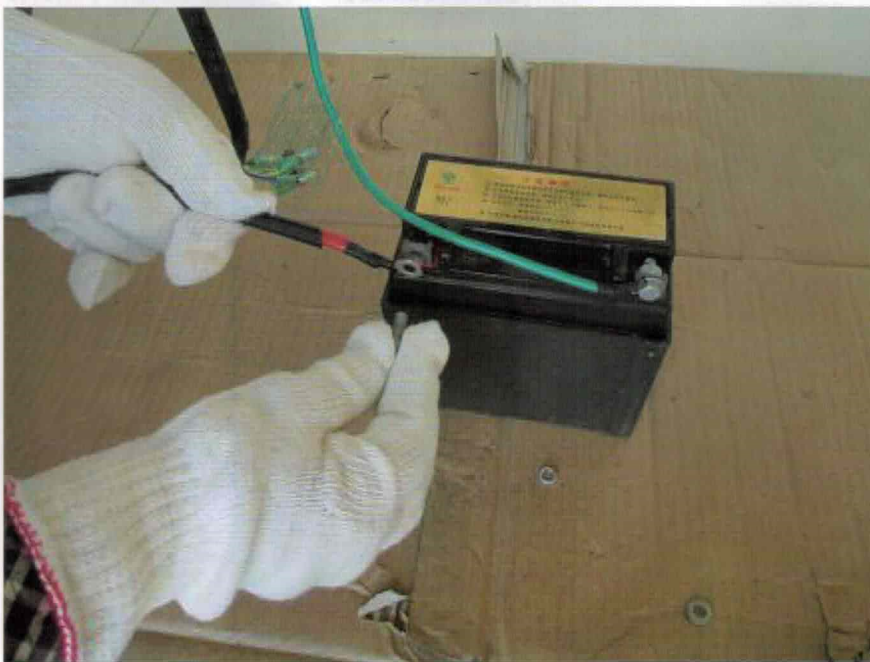
Step 21. Tight the front- and rear mount legs with 8 screws



Step 22. Battery installation, find the battery and battery holder, take the screw and nuts.



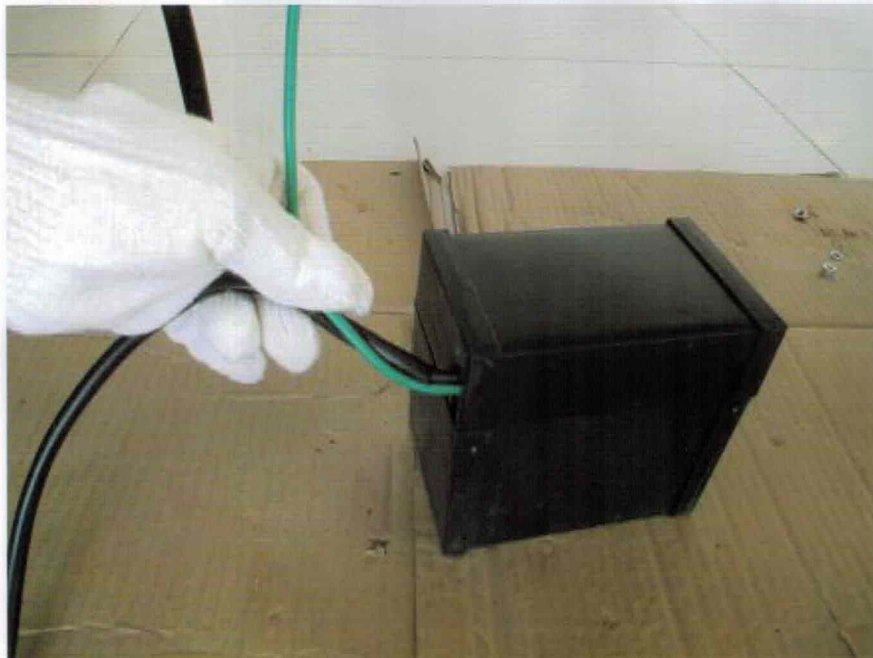
Step 23. Connect the green cord extended from the bottom of the engine to the connector on the battery box.



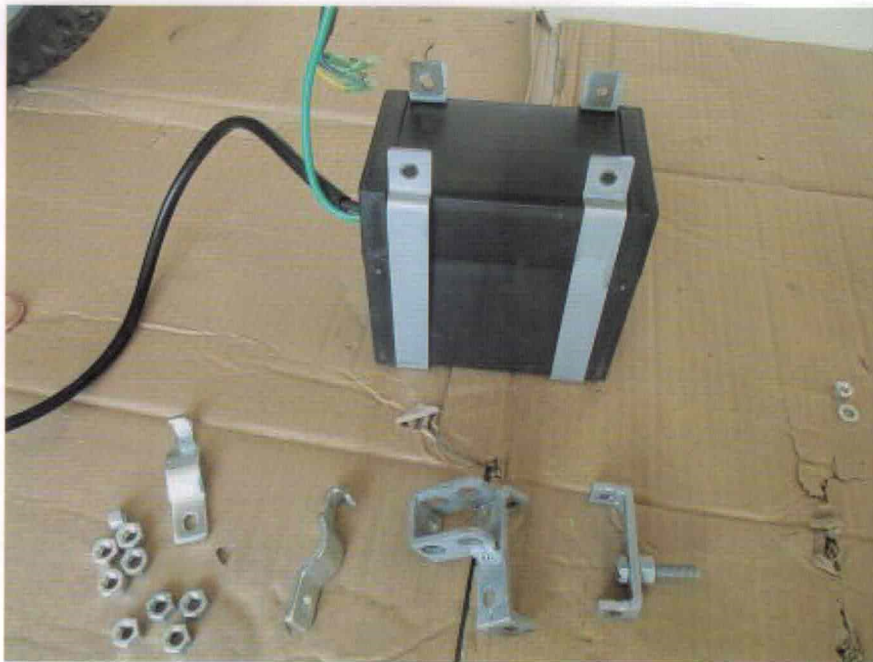
Step 24. Connect the red wire extended from the engine to the battery box, and tighten the screw.



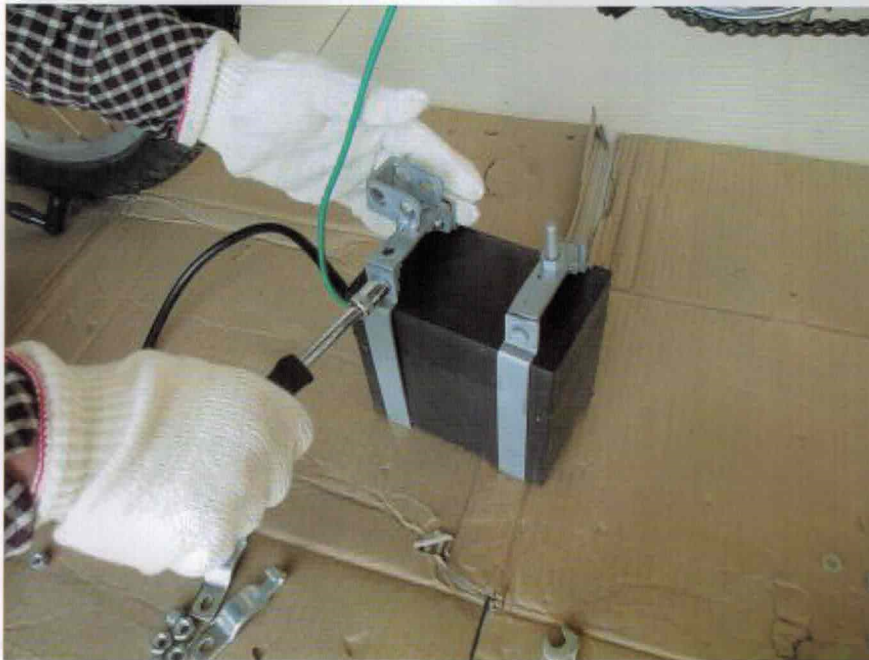
Step 25. Close the cap of the battery box, place the red wire and green wire at the gap of the seal.



Step 26. Find the accessory package for the battery box, the assembly guidance is shown



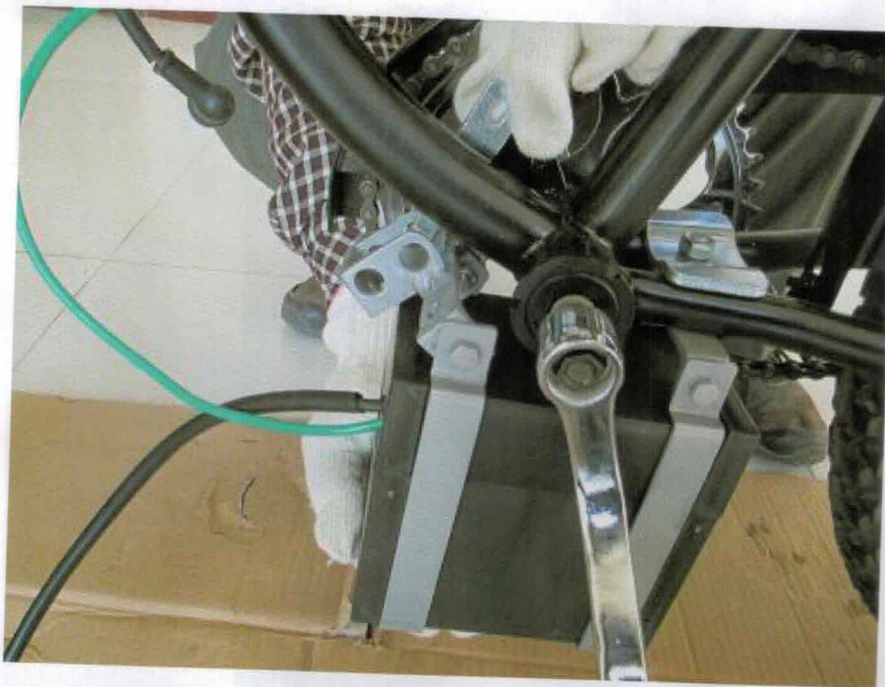
Step 27. Find the M8 bolt sets, install the metal pieces with 4 hole onto the side that the wires come out. Make sure to install the metal piece with 4 holes onto the correct side.



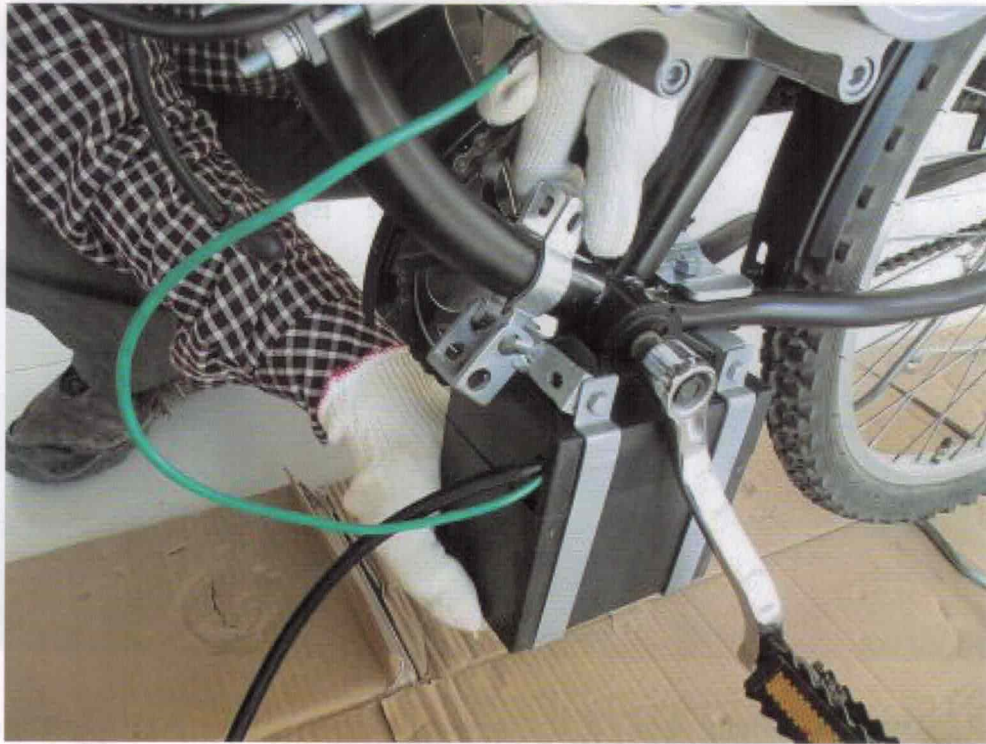
Step 28. Place 4 bolts onto the bicycles frame, don't tighten the bolts right away, it is better to adjust the position and angle first.



Step 29. Find the complementary accessories, attach the metal piece onto the M8 piece with 4 holes and tighten the bolts.



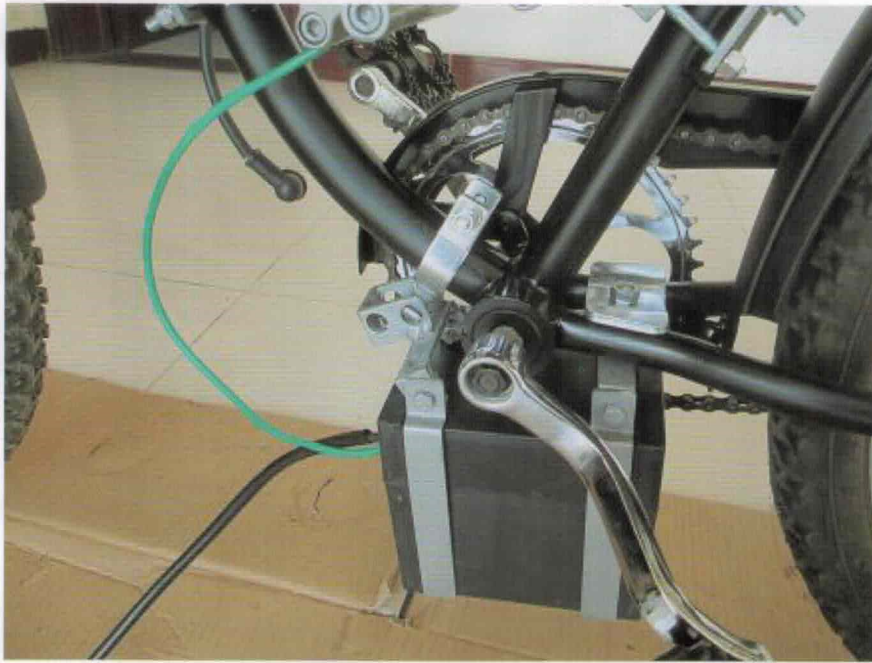
Step 30. Depending on the bicycle model, you may need to adjust the accessories, and align the battery horizontally at the bottom of the frame.



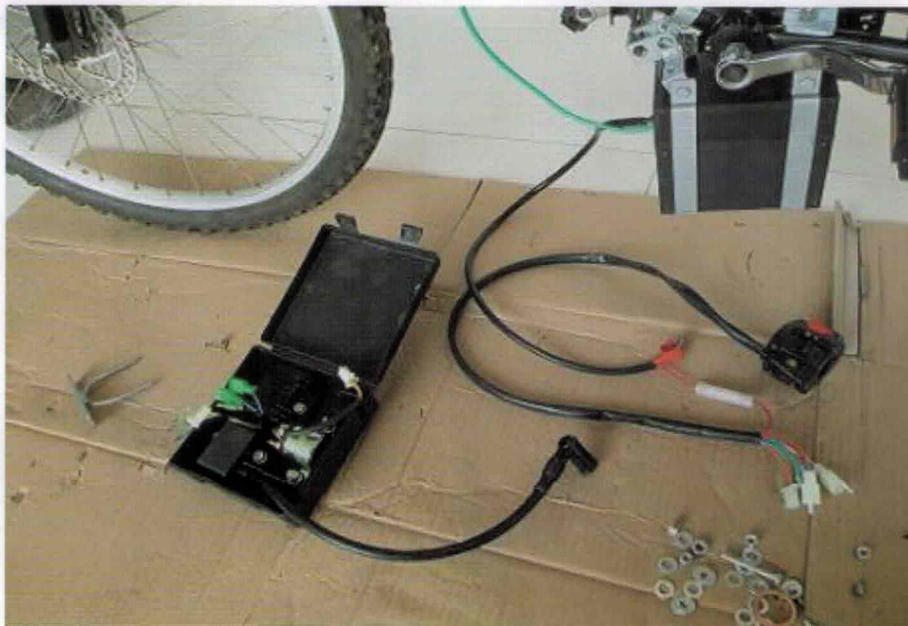
Step 31. Properly position the battery box and fasten the bolts.



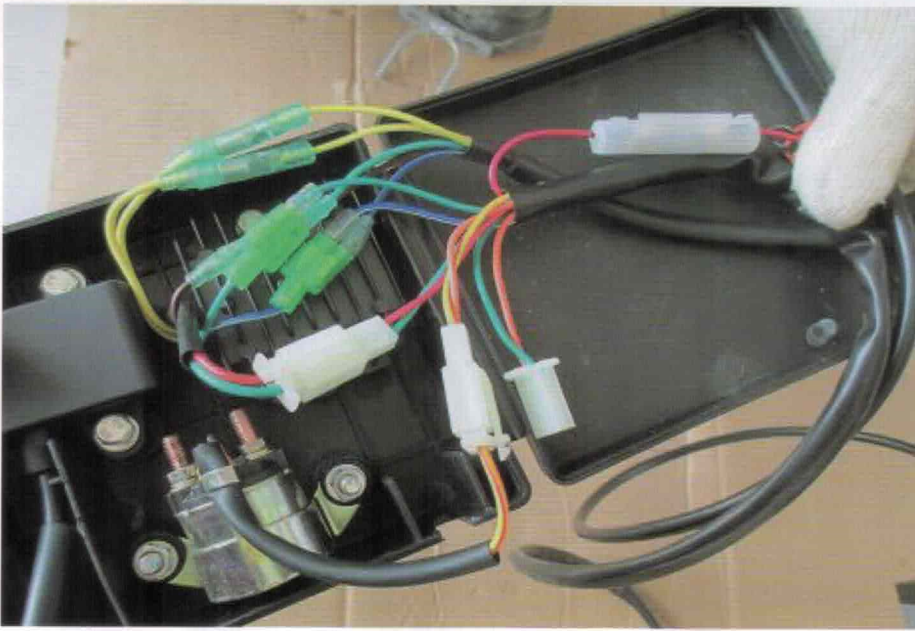
Step 32. Battery box, now we assembly the electrical box.



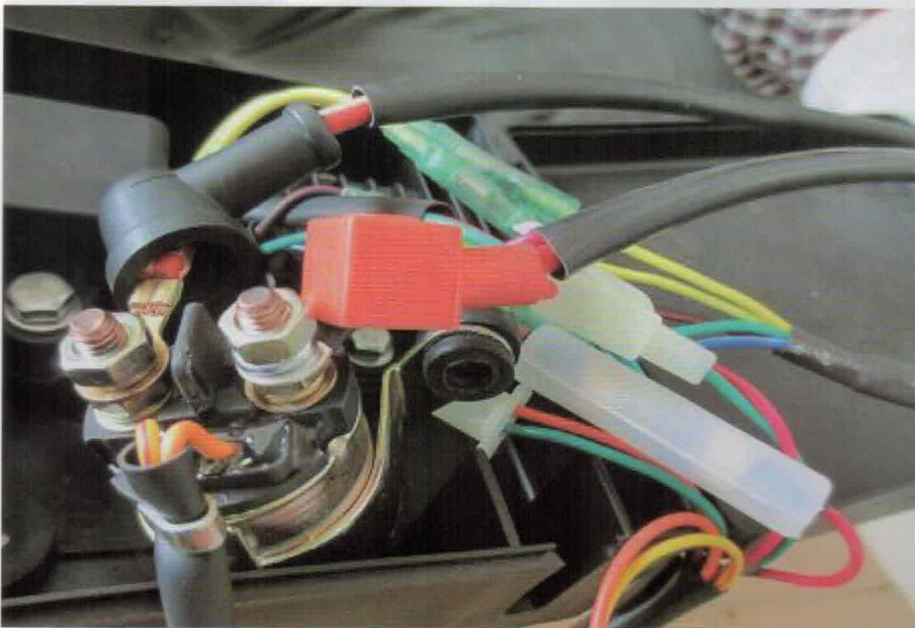
Step 33. The electrical box has several accessories, 12V voltage regulator, ignitor, and spark plug, magneto output, and wires for the electrical box



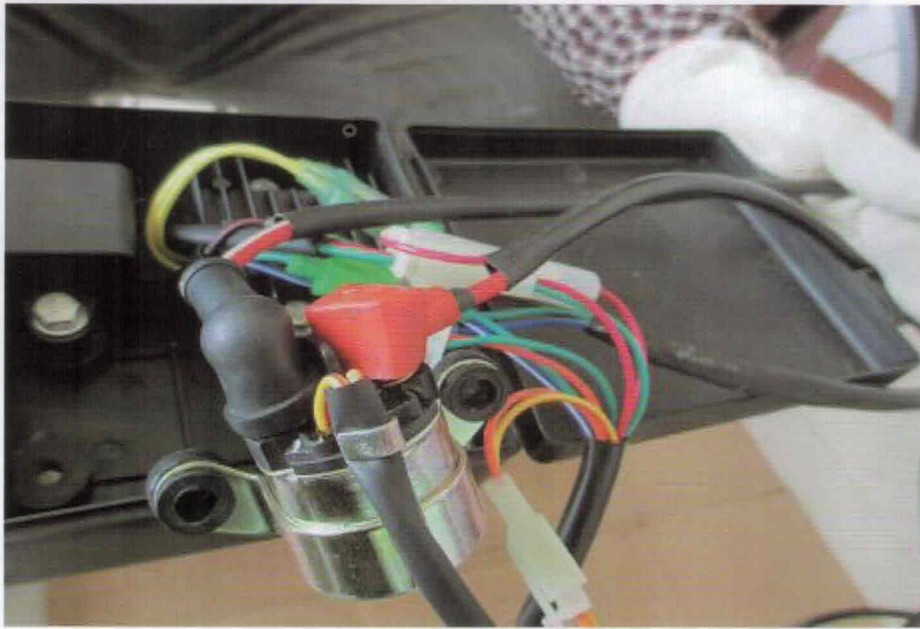
Step 34. The installation is straight forward. Connect the wires with the same color. Make sure to connect the wires all the way to avoid short cut and voltage leakage. There are two more extra cords (green and orange) for the horn and the headlamp.



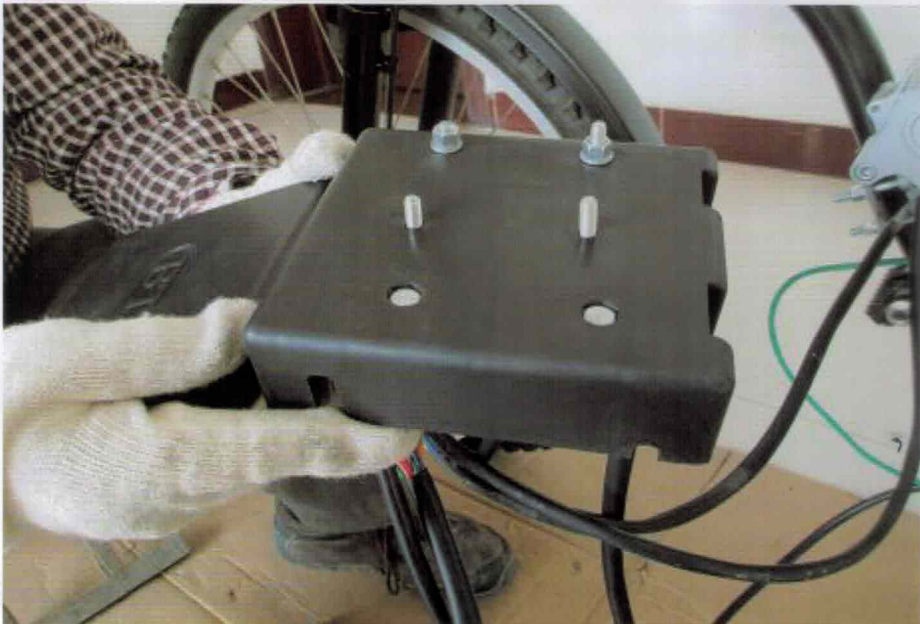
Step 35. Connect the red and white wire extended from the ignitor to the left side of the relay at the black protective overlay



Step 36. Connect the red wire from extended from the battery to the right side of the relay, tighten the bolts, and cover the insulating cap.



Step 37. Install the stationary support to anchor the battery box. Select the appropriate bolts to the bottom of the electrical box, and install the support.



Step 38. Install the support, and put the flat pad and spring cushion



Step 39. Align the cord cords at the electrical cap gap, close the cap and close the cap. Clip the buckles and tighten the caps.



Step 40. Assemble the electrical box to the rear frame of the bicycles. The electrical box should be facing up, stationery support facing down. Bu the bicycle model shown in the picture is a special case where the electrical box can only be installed facing down. Once the electrical box is properly aligned, wrap the frame and electrical box together with tape



Step 41. Find an appropriate spot to drill a hole on the right side of the handlebar, with 5 mm drill



Step 42. Assemble the throttle cable to the handle bar.



Step 43. The throttle cables enter the throttle at the elbow thread, and connect with the switch on the throttle, and then tighten the elbow thread.



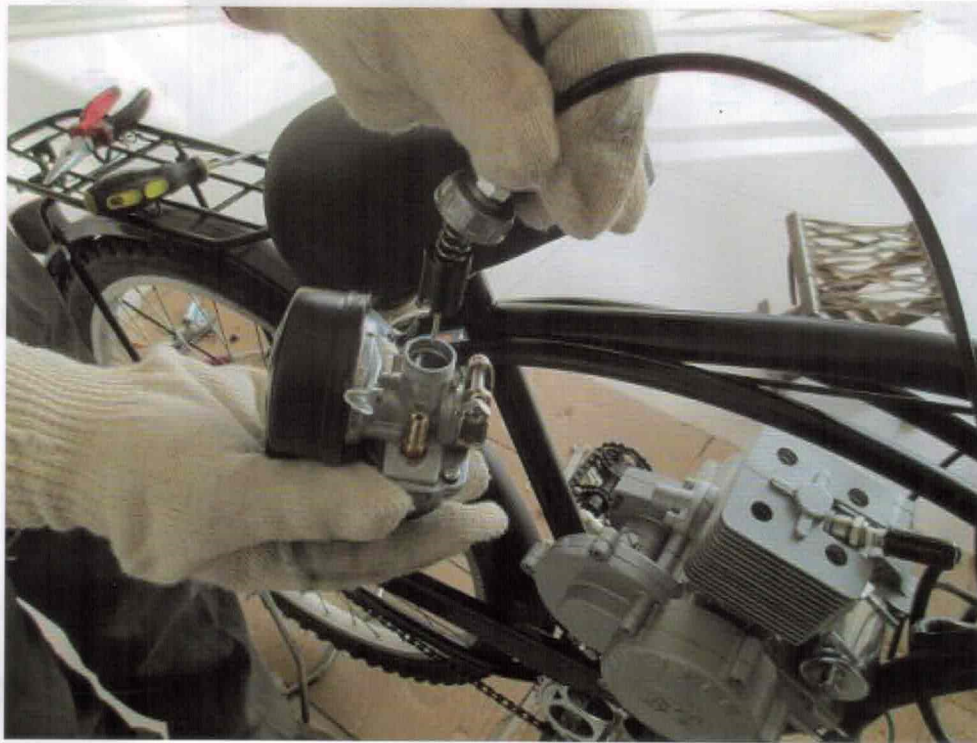
Step 44. The throttle cable should be installed onto the right side of the handle bar. Align the bulging metal piece with the drilled hole, and complete the top and bottom parts together and tight them by two screws.



Step 45. Check if the throttle is properly positioned, and if the handle bar moves smoothly.



Step 46. Remove the throttle assembly cap from carburetor, and then slide out the component. Place the cable into the hole of the throttle cable cap. Slide the spring over the end of the cable. Do not mistaken the direction of the throttle valve.



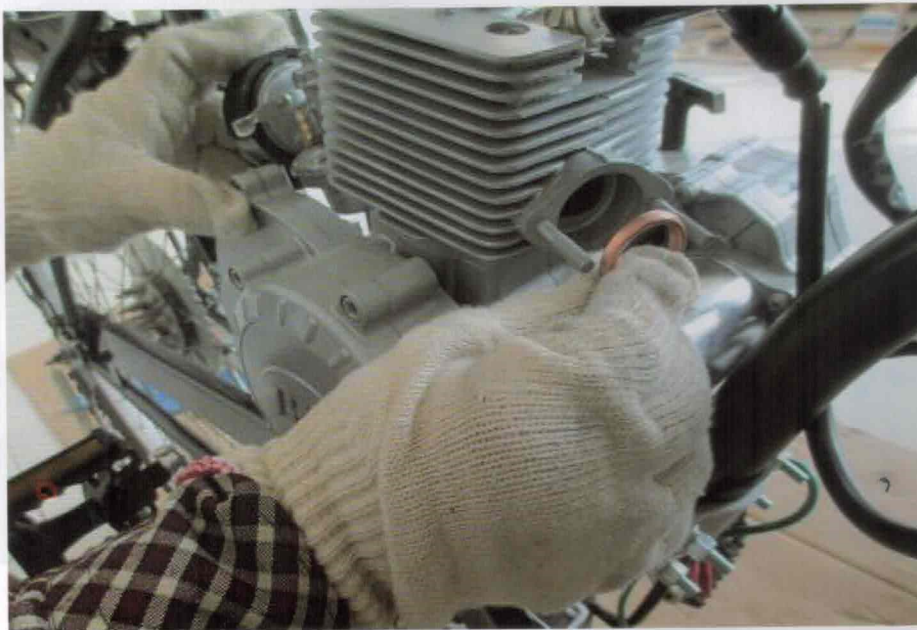
Step 47. Try to drag the throttle cable, to see if the cable moves smoothly. If everything is okay, install the carburetor onto the engine



Step 48. Adjust the throttle cable to the right distance and tighten the cap back into the carburetor.



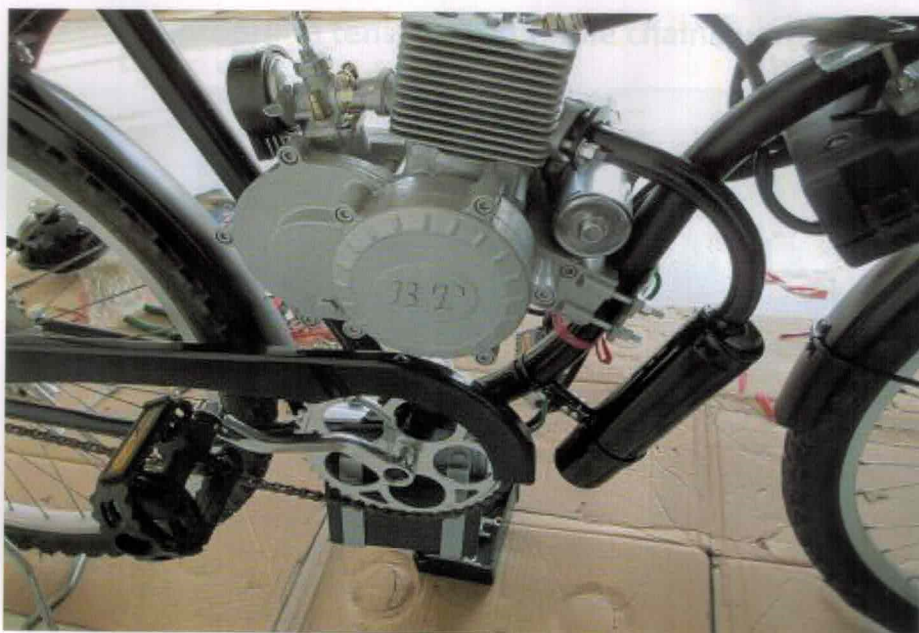
Step 49. Install the exhaust gasket, the curve side of the exhaust gasket facing towards of the engine, flat side of the gasket facing outwards, and then install the muffler.



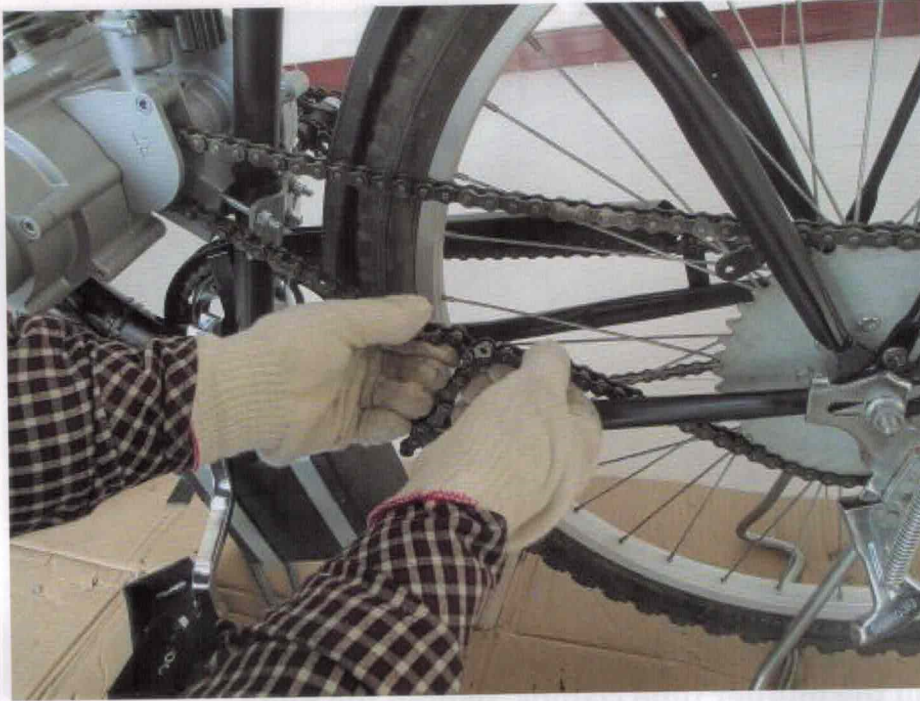
Step 50. Place the muffler into the exhaust, slide on a locking washer then a ten mm nut. Adjust the muffler appropriately and tighten the bolts snugly.



Step 51. Install the muffler tube clamps, tighten the bolts.



Step 52. Place the connector pin onto one end of the heavy duty chain, and rotate the chain crank slowly, the chain will slowly move into the bicycles frame. Check if the length of the heavy duty chain is appropriate. Remove pieces of the chain if it is too long.



Step 53. Adjust the length of the chain to the appropriate length, and remove the extra length.



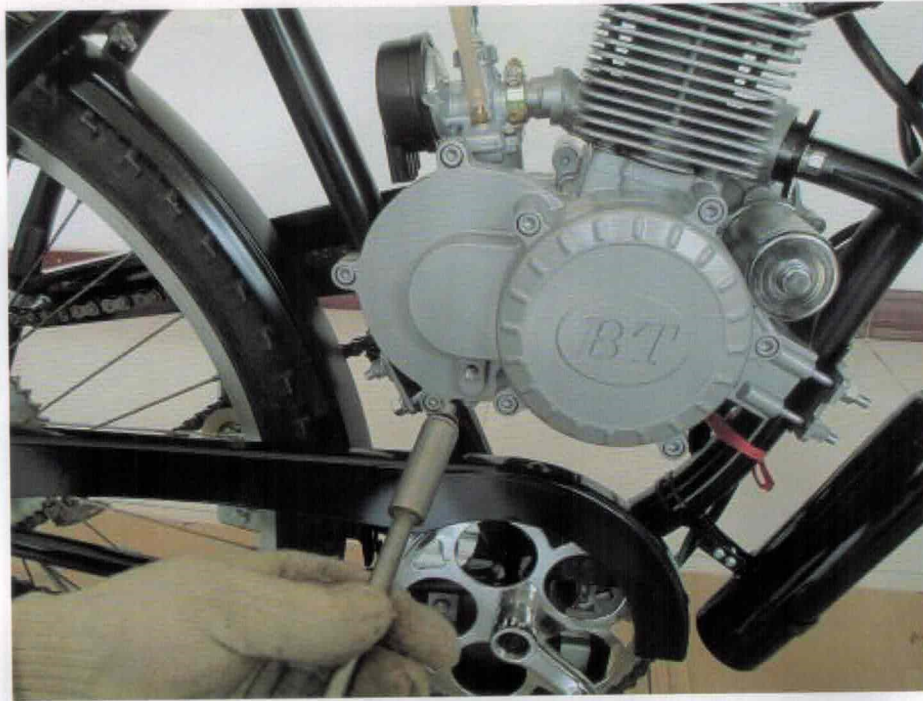
Step 54. Install the heavy duty chain, and then install the adjustable bearing chain tensioner. Make sure that the gear wheel of the engine, the adjustable chain tensioner, and the 44 tooth sprocket are aligned.



Step 55. Adjust the bearing chain tensioner, and make sure the chain has the appropriate tension. Install the chain guard.



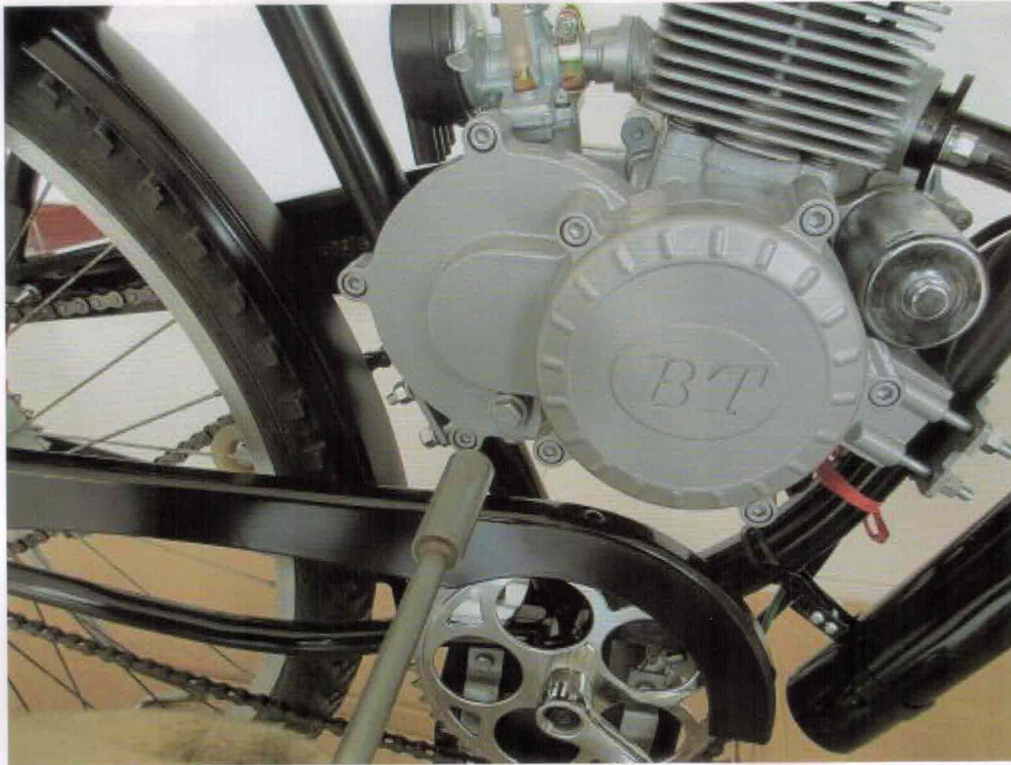
Step 56. After the engine set is properly installed, double check the components to make sure everything is installed properly. Prepare for the engine start. Remove the M8 bolts of the gear wheel from the engine, and add 4-stroke motorcycle oil.



Step 57. Add 120 mL of 4-stroke motorcycle oil.



Step 58. After adding the 4-stroke motorcycle oil, tighten the bolts back onto the engine.



Step 59. Mix the oil and gasoline as 1:20 ratio, and then transfer to the gas tank. Turn on the fuel petcock valve.



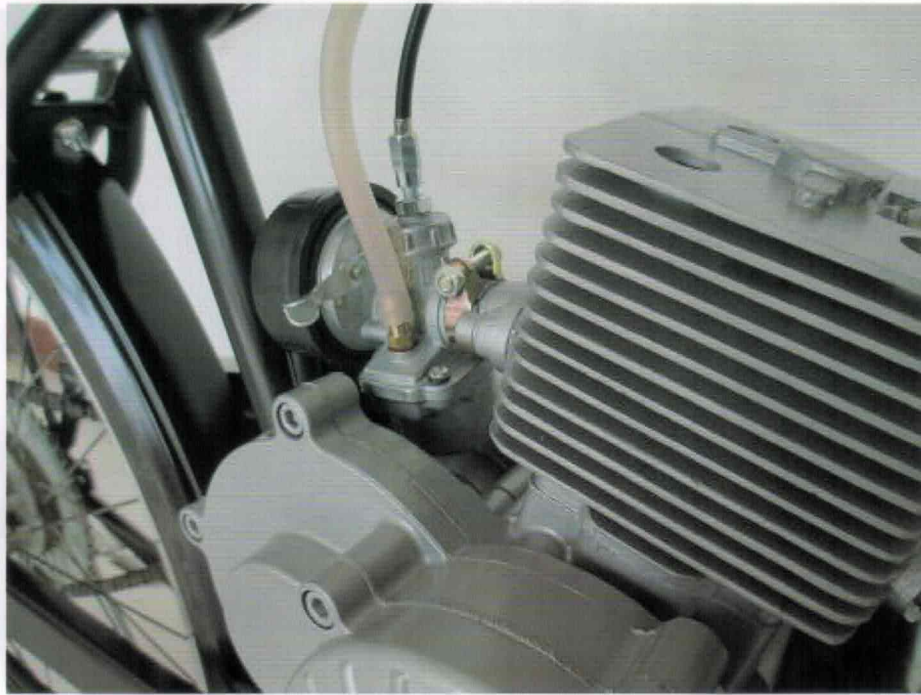
Step 60 Before starting the engine, close the throttle to facilitate the engine start.



Step 61. When starting the engine, the power switch should be on the "☀" position, turn the throttle grip 1/3, and press the yellow start button. Release the button after engine started



Step 62. After the engine has started, slowly open the throttle valve. Let the engine run for a few minutes, then adjust the carburetor idle screw. Do not let the engine shut off.



Step 63. Pull start: spin the pull handle 120 degree, hold it tight, and pull a short portion out until you experience a resistant force, stop pulling.



Step 64. Once you feel the resistance, pull the string sharply. Try again if the engine doesn't start, but don't damage the pull start.



Step 65. If the engine has just turn off, or it is very easy to start the engine, then you don't need to shut the throttle, just press the yellow start button. To shut off the engine, turn the switch back to "•".



80 model engine precautions:

- 1. The break-in period of the engine is 1000 KM**
- 2. Use hybrid fuel, mix the oil and gasoline thoroughly, and then add to gas tank.**
- 3. Be aware of the quality of the 2-stroke engine oil, use good quality engine oil to improve the life time of the engine.**
- 4. Use 20:1 gasoline and oil ratio for the first 1000 km**
- 5. Use 25:1 gasoline and oil ratio after 1000 km**
- 6. Do not carry other passengers, commodities, or travel at high speed during the break-in period of the engine.**
- 7. For the new engines, work the engine consistently for 30 mins, and then shut of the engine for a while to cool the engine. Then, restart the engine to ride the bicycles**
- 8. After the break-in period of the engine, engine can be worked for long hours, could also carry others.**
- 9. Change the motorcycle oil after the break-in period (1000km), and then change the motorcycle oil every 3000km. use 4-stroke motorcycle oil.**
- 10. Do not slam the acceleration when the engine is cold, avoid fast temperature increase of the engine to prevent engine damage**
- 11. Perform frequent check up on the chain and bolts.**
- 12. Ride the bicycle with precautions, drive safe and slow.**

Technical parameters and Performance

1. Engine model: Single-cylinder, Air-cooled crankcase scavenging two stroke gasoline engine
2. Cylinder diameter and height 47*40 mm
3. Stroke Capacity: 70cc
4. Pressure ratio 7:1
5. Cooling mode: natural wind cool
6. Engine rating: 5 horsepower (6000 cycle/min)
7. Ignition method: Contactless electrical ignition
8. Clutch: oil centrifugal clutch
9. Total rotational transport ratio: 16:1
10. Engine weight: 16 kg (including everything in the package)
11. Gas tank capacity: 3 liters
12. Spark plug model: 4135
13. Starting system: electrical start, pull start
14. Fuel type: 90 grade and above gasoline mixed with 2-stroke synthetic oil
15. Hybrid ratio: within 1000 km 20:1, above 1000 km 25:1
16. Speed limit: 50 km/hour on horizontal ground.



1. Spark Plug



2. Cylinder Body



3. Piston



4. Piston Ring



5. Wrist Pin



6. Wrist Pin Bearing



7. Crankshaft & Connecting Rod



8. Engine Body L & R Casting



9. Engine Side Cover



10. Sprocket Cover



11. Gear Box Cover



12. Clutch Side Cover



13. Clutch Plate



14. Drive Shaft



15. 10T Engine Sprocket



16. Piston G Clip



17. Lock Nut



18. Sealed Ball Bearing



19. Crankcase Bearing



20. Crankshaft with Oil Sealed



21. Spline Shaft with Oil Sealed



22. Automatic Clutch



23. 1/2 Moon keyway



24. Clutch Lock nut



25. Generator Coil



26. Outer Rotor



27. CDI Capacitor Discharge Ignition



28. Voltage Regulator



29. Starting Relay



30. Starting Motor



31. Starting Chain Wheel



32. Starting Motor Chain Wheel



33. Starting Motor Chain



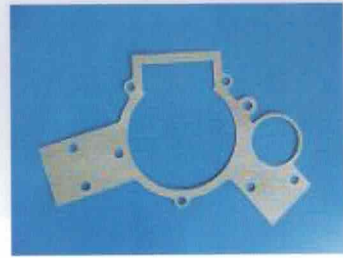
34. Starting Chain Deflector



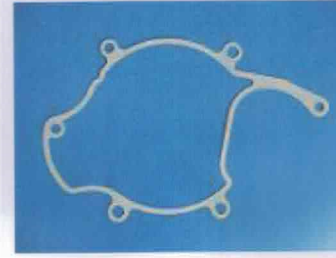
35. Small Spline Shaft with Oil Sealed



36. Clutch Needle Bearing



37. Gasket-1



38. Gasket-2



39. Gasket-3



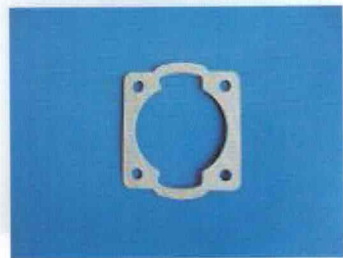
40. Gasket-4



41. Gasket-5



42. Gasket-6



43. Gasket - 7



44. Gasket-8



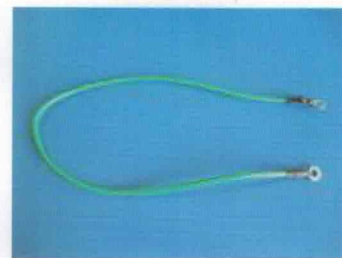
45. Gasket-9



46. Battery



47. Throttle Switch



48. Ground Cable



49. Throttle Handle Grips



50. Throttle Cable



51. Carburetor



52. 44T Sprocket



53. 415 Heavy Duty Chain



54. Idler Pulley - Bearing



55. Pull Start Module



56. Pull Start Cup



57. Sprocket Mounting Kit



58. Exhaust Muffler



59. Wide Pedal Crank



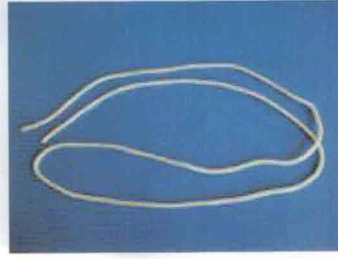
60. Engine Mount



61. Pull Start Handle



62. Pull Start Pulley



63. Pull Start Rope



64. 3L Fuel Tank with Cap



65. Chain Guard



66. Pull Start Spring