HELIO
MOTORIZED BICYCLES

Please be careful not to over tighten the nuts and bolts.They can be broken if forced.
You are working on a bicycle not a truck.

FITTING THE REAR SPROCKET

Cut the rubber isolator ring between the holes in order to fit inside the spokes and around the axle.

Use either scissors or a knife.

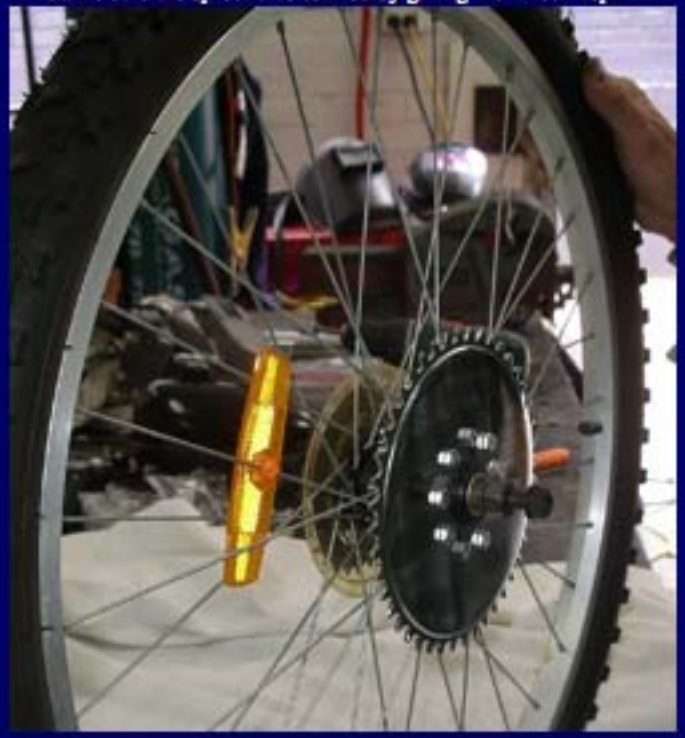
Fit the isolator rings as shown.

Install the steel retainer plates and sprocket as shown.
The sprocket can be installed either side up if there is a problem aligning the chain.
But firstly try it with the convex side up as shown and insert the bolts.

Insert and install the 9 bolts and nuts.
This can be a bit of a juggling act and is probably the most difficult part of the installation.

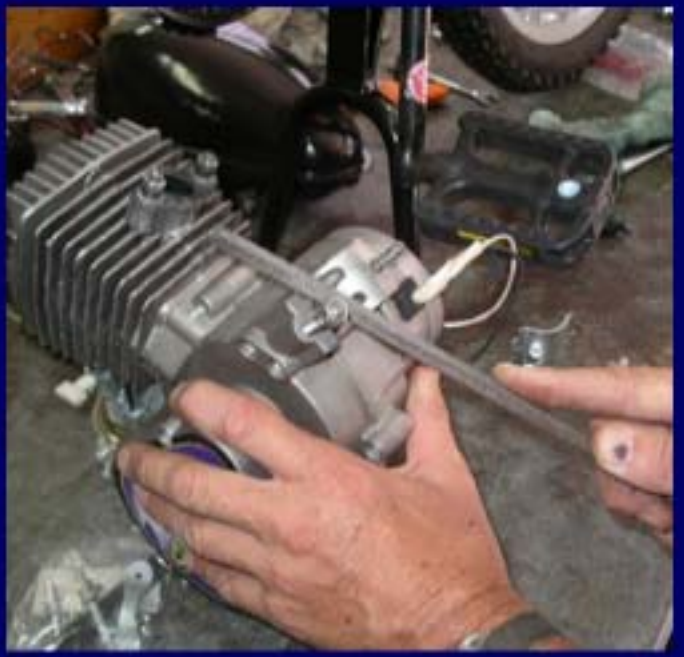
Tighten the nuts in a star fashion to make sure the tension is equal on all sides.
An electric screw driver makes this job a bit easier.

Make sure the sprocket is centred by giving the wheel a spin.



MOUNTING THE MOTOR

You might want to put some tape on the bike frame to stop the frame from getting scratched during the motor installation.
If the front bicycle tube is too large as shown below, the motor can be made to fit by enlarging the hole using a file or dremel.



Alternatively you can use a dremel tool if you happen to have one.
Put a rag in the exhaust outlet to stop bits of metal getting in.

The motor should fit as shown below.

There are many other ways of fitting the motors to over sized frames available on http://motoredbikes.com/
EziRide Cycles have brackets for over sized frames for sale and are on display in the accessories section on our web page.

Fit the front and rear mounting bracket as shown below.
Be careful not to over tighten the nuts.They can be broken if forced.
Some customers like to put a bit of rubber between the motor mounts and the frame to reduce vibrations but is generally not needed with the 48cc and 55cc models.

The photo below shows a nice neat fit.

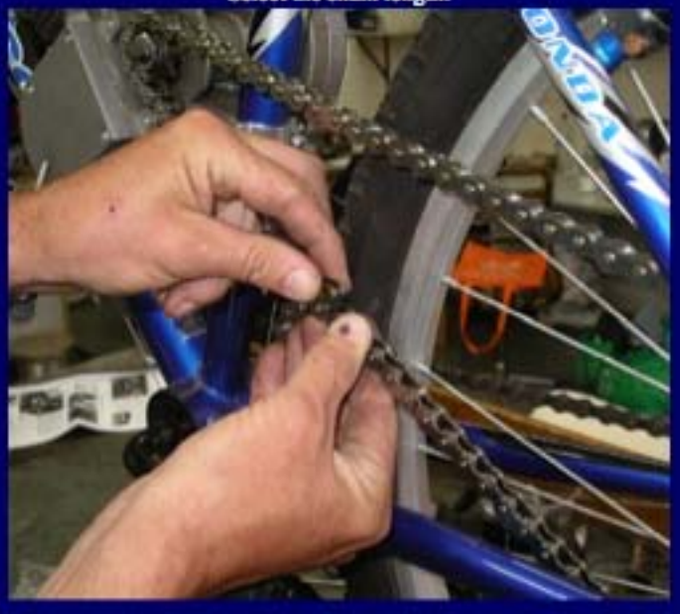
FITTING THE CHAIN

Remove the left hand sprocket cover.

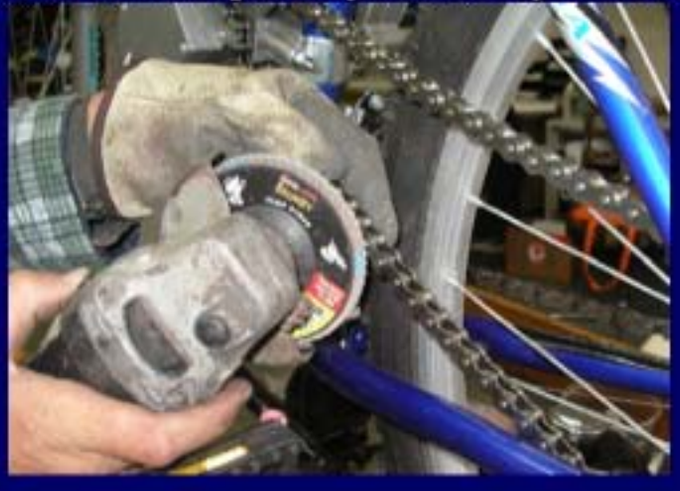
Remove the spark plug

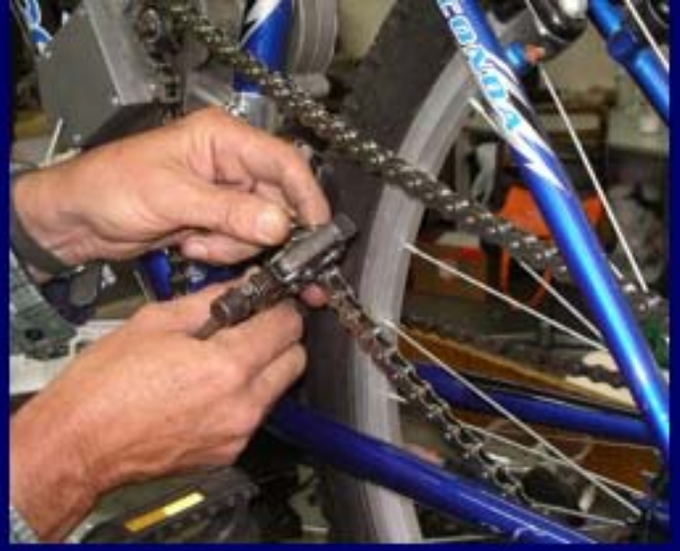
Feed the chain on using a spanner.

Select the chain length.

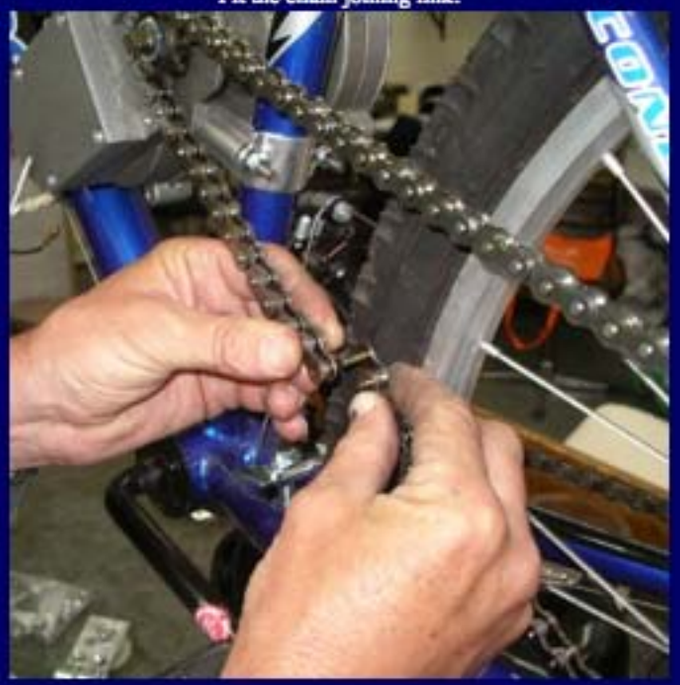


Cut the chain to length.
Better too long than too short. You can always take more links out later on.
The easiest way to do this is with a chain breaking tool but if you don't have one you can use an angle grinder or a chisel.

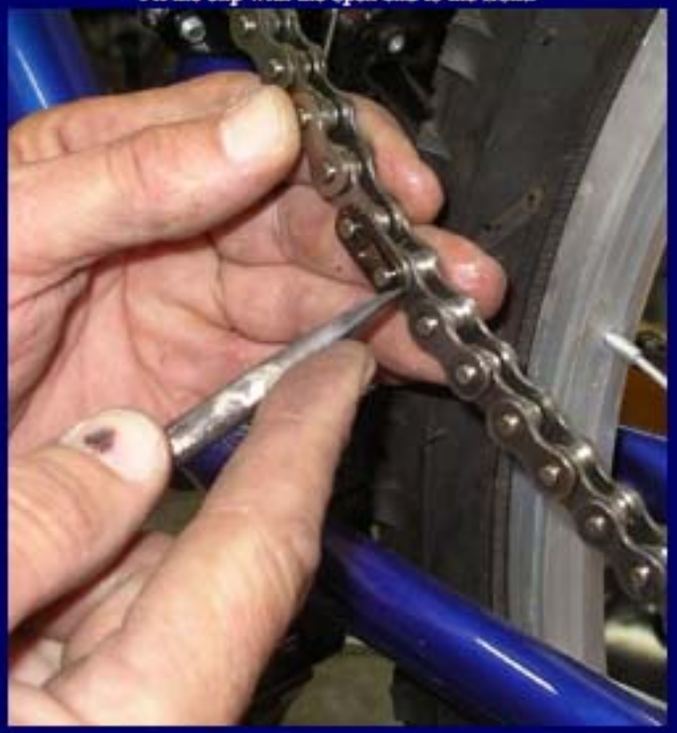




Fit the chain joining link.



Fit the clip with the open end to the front.

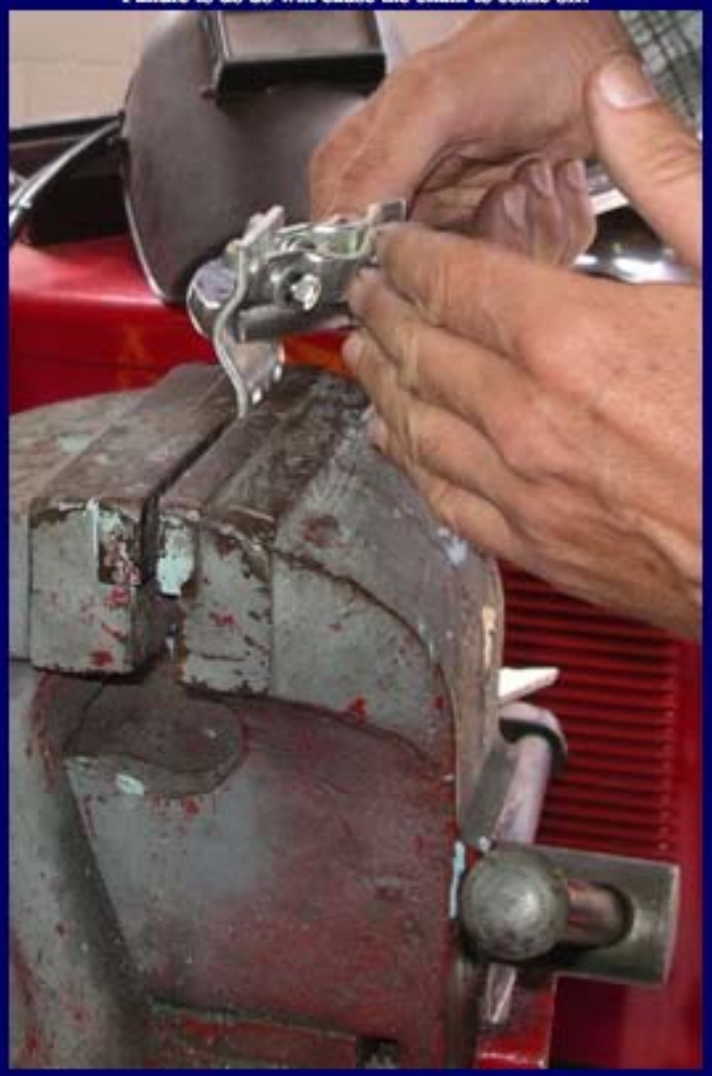


Important

Check the chain alignment.
Make sure that the chain is straight and running smoothly.

INSTALLING THE CHAIN TENSIONER

You may need to bend the chain tensioner so that the nylon wheel lines up correctly with the chain. Failure to do do will cause the chain to come off.



Fit the chain tensioner to the bike frame.

The nylon wheel can be moved up and down to adjust the tension.
The entire chain tensioner can also be moved left to right to adjust the tension.

Movement in the chain should be similar to what is shown in the photos.
Do NOT over tighten the chain.Better to be too loose than too tight.
The chain will stretch a lot for the first couple of hundred kilometers.
You may then need to remove a link.
Eventually the chain will almost stop stretching at all.
Regularly lubricate the chain with chain lube.

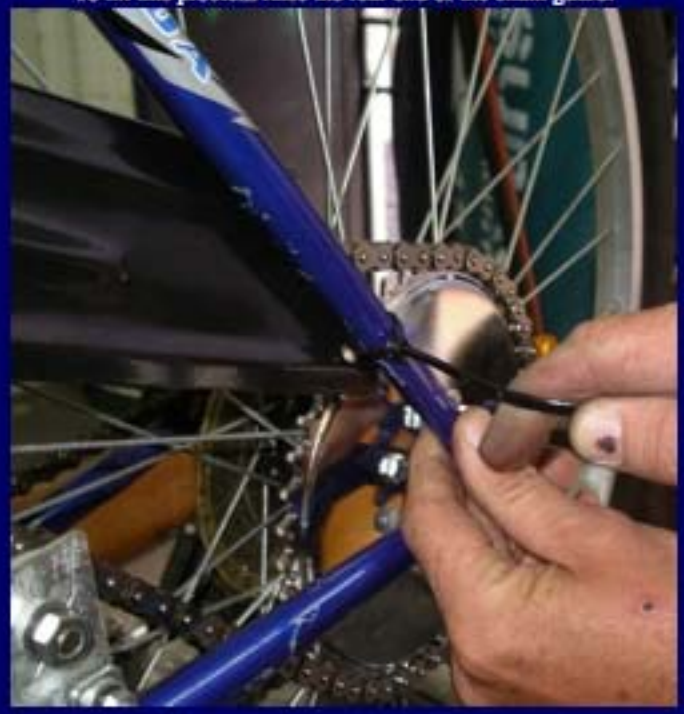
FITTING THE CHAIN GUARD

Fit the left hand end of the chain guard to the bolt at the rear of the small sprocket cover.

If the chain guard hits the tyre cut the chain guard to fit with tin snips .

Then clean up the rough bits with a file.

Fit the right hand end of the chain guard to the frame with a cable tie.
If you hear a knocking sound at the rear of the bike it may be the chain hitting the chain guard.
To fix this problem raise the rear end of the chain guard.



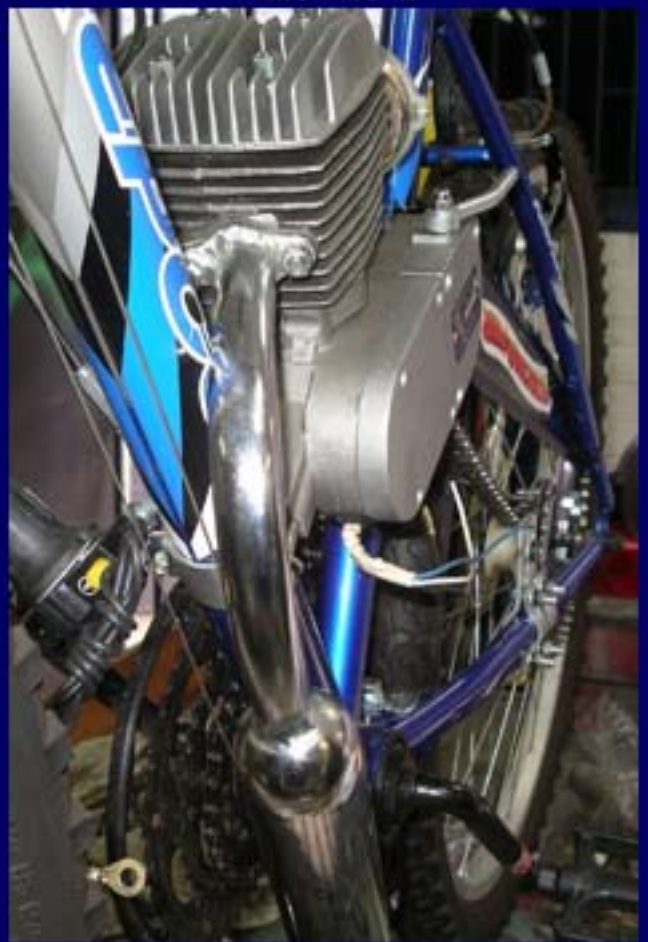
FITTING THE EXHAUST PIPE

Bolt the exhaust pipe with the gasket to the cylinder.

Don't over tighten the bolts.

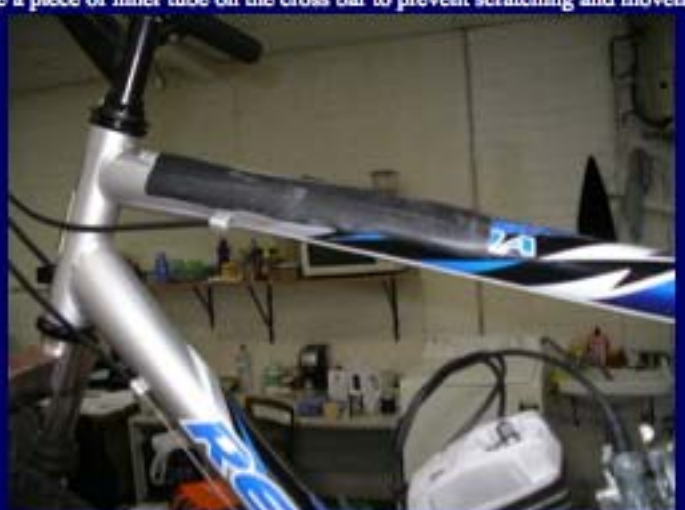
If the pipe won't clear the front tube a little bit of gentle persuasion might be required.
Don't bend the pipe anymore than is required as it may effect the motors performance.
Don't try to bend the pipe whilst it's bolted to the motor.

That's fixed it.



FITTING THE PETROL TANK

Before fitting the tank wash it out with petrol.This will remove any gunk.
Place a piece of inner tube on the cross bar to prevent scratching and movement.



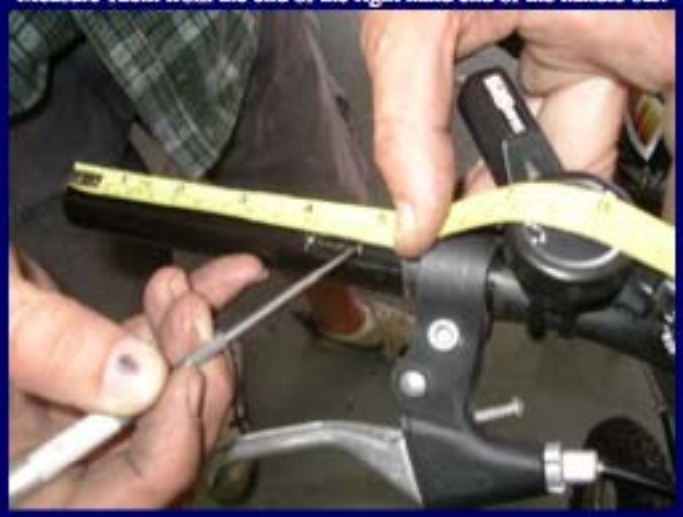
Wrap a couple of inches of plumbers tape around the tread of the fuel cock.This will help prevent it from leaking.
Then screw the fuel cock in to the tank.

Fit the CDI unit to the frame using a cable tie or the steel brackets that are supplied with the kit.
Mount the CDI unit as far away from the motor as the spark plug lead will allow.This keep the CDI away from the heat of the motor and the exhaust.
Fit the spark plug and attach the spark plug lead.

Connect the blue CDI wire to the blue motor wire.
Connect the black CDI wire to the black motor wire.
Connect the red wire from the kill switch to the white wire from the motor.
Connect the black wire from the kill switch to the motor or the frame.

INSTALLING THE THROTTLE

Remove the existing handle bar grips.
Measure 12cm from the end of the right hand end of the handle bar.



Centre punch the position.

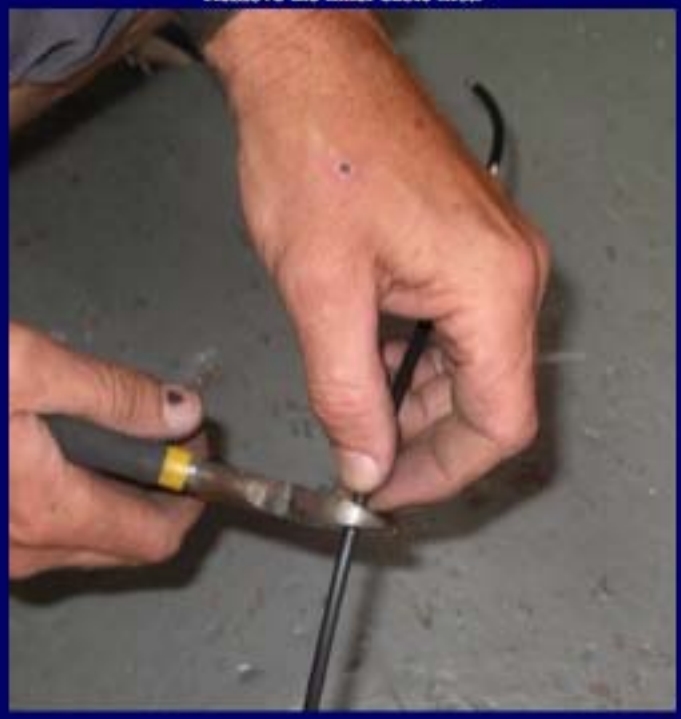
Drill the hole.

Fit the throttle cable to the carburetor.
Allow the throttle cable to run freely.
Do not bend the cable to any sharp angles as this may cause the cable to jam on or off and reduce the cables life.

INSTALLING THE CLUTCH LEVER

Drill out the clutch cable adjusting lug to a size that will allow chrome end of the clutch cable to fit inside.

Cut the clutch cable housing to the correct length.
Remove the inner cable first.



Fit the clutch cable and springs as shown below.
This cable will stretch a lot for the first 2 hundred kilometers and will have to be adjusted often after which time it will rarely stretch.

Soldier the clutch cable in the spot where you want to cut it.This will stop it from fraying.

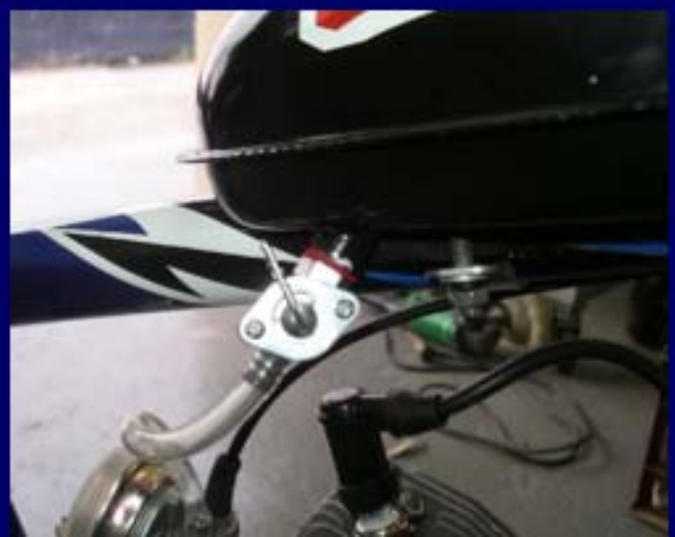
Cut the cable to the desired length.

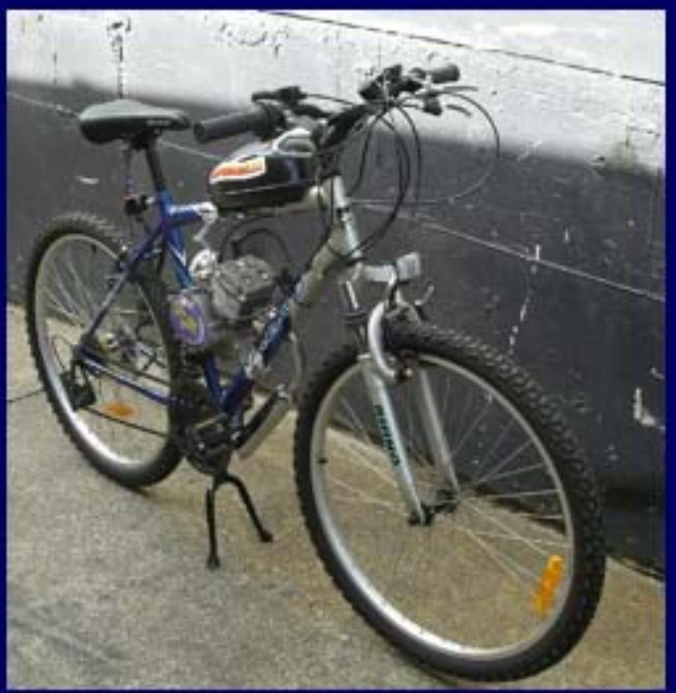
Put a cable tie on the clutch cable as shown below.

FITTING THE FUEL LINE

Cut the fuel line to length making sure to keep it clear of the motor and exhaust.
Heat the fuel line in boiling water.

Fit the fuel line to the carburetor and fuel cock.





The motor installation is now finished.

MIXING YOUR 2 STROKE PETROL

During the run in period of the next 500 kilometers run your motor on an 18 to 1 ratio.
In a petrol can mix 3.6 litres on unleaded petrol with 200mls of 2 stroke oil.
Shake the can well to mix the oil and petrol.
Then put some fuel in the tank.Don't fill it all the way to the top.

(After the run in period of 500 kilometers you can change the mix to 20 to 1 which is 4 litres of unleaded petrol to 200 mls of 2 stroke oil.)

YOU ARE NOW READY FOR YOUR FIRST RIDE

Put on your helmet and shoes.
Turn on the fuel.
You probably won't need to use the choke.
Engage the clutch. (pull in the clutch lever)
Pedal the bike to about 5 KPH and release the clutch and keep pedaling until the motor starts.
Use a small amout of throttle when starting the motor.

The idle speed may now need to be adjusted.
Screw the idle screw on the left hand side of the carburettor in or out as required until you get the desired idling speed.

If the motor doesn't start check that the wiring is correct and that there is spark at the spark plug.
Check that there is petrol getting in to the carby.
The motor was bench tested in the factory and should start.

When you first run the motor it won't be very powerful.These motors are very tight.
After a few kilometers the motor will start to run in and the motor will increase in power.
This will continue to improve dramatically over the next 500 kilometer during the run in period.
Even after the run in period the motor will continue to improve.

During the run in period take it easy on the motor.
Don't over rev the motor.You can cause permanent damage which will affect the performance and life of the motor.
Don't run the motor for more than 1/2 an hour at a time before letting it cool down before re-starting. it.
Almost everything will stretch or come loose during the run in period.So after every ride give the bike a good once over with a spanner.Things will settle down after the run in period of 500 kilometers.
You can estimate how many kilometers you have done by calculating that for every litre you use you will have done about 50 kilometers or you can buy a mechanical speedo from EziRide Cycles that has a trip meter.
Modern computerised speedos may not work on motorised bicycles as the CDI unit can interfere with it.