Avsom

BIKE MOTOR

USERS'MANUAL

General Information:

Please, obey all traffic regulations.
Always wear a helmet while riding.
Remember that you are riding a motorized bicycle and other traffic may not be able to see you.
Even if they do see you, they will not expect that you will be traveling as quickly as you are, and the other traffic will cut out in front of you…guaranteed!
Never operate your motorized bicycle on a pedestrian through way, sidewalk, or bicycle path while the engine is operating.
Never operate your motorized bicycle in an unsafe or disrespectful manner.

SPECIFICATION OF BICYCLE ENGINE KIT

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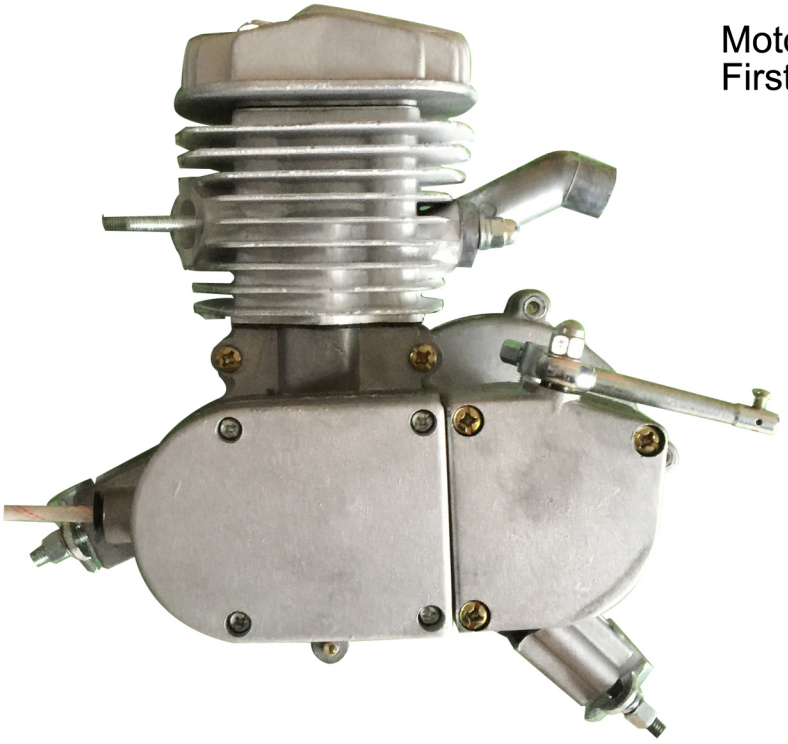
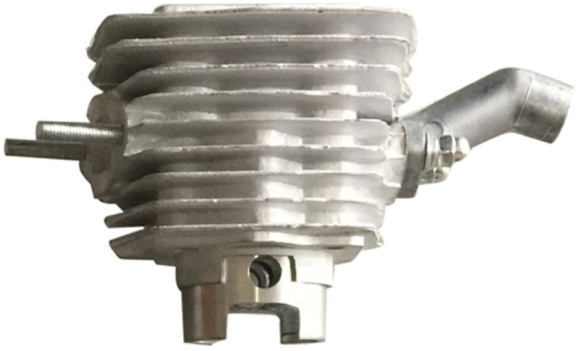
1	TYPE OF ENGINE	50 FEET START TYPE	60 FEET START TYPE	80 FEET START TYPE
2	MODEL OF ENGGINE	SINGLE CYLINDER AIR COOLING 2 STROKE		
3	BORE & STROKE	40MM*38MM=48CC	45MM*40MM=60CC	47MM*40MM=80CC
4	RATED POWER	1.15KW/5000R/MIN	1.5KW/5000R/MIN	2.5KW/5000R/MIN
5	MAX.POWER	1.6KW/6000R/MIN	2KW/6000R/MIN	3.5KW/6000R/MIN
6	IGNITION MODLE	CID		
7	COMPRESSION RATIO	6/0.1		
8	DRIVING RATIO	18/0.1		
9	FUEL	NO.90		
10	LUB.OIL	OIL OF 2 STROKE GASOLINE ENGINE(OR OIL FOR 10W 40.10W/30)		
11	MIXING RATIO OF FUEL AND ENGINE OIL	16:1 FOR THE NEW SETS /20:1 AFTER RUNNING 500KM		
12	TYPE OF SPARKING PLUG	Z4C 14MM		
13	VOLUME OF OIL SONSUMPTION	1.5L/100KM	2.0L/100KM	2.5L/100KM
14	NET WEIGHT OF MAIN SET	6.5KG	7.0KG	7.0KG
15	TYPE OF CLUTCH	FRICTION PLATE DRY		
16	COOLING MODE	NATURAL AIR COOLING		
17	SPEED LIMITATION	30KM/HOUR	35KM/HOUR	38KM/HOUR
18	PACKING	420*320*190MM		

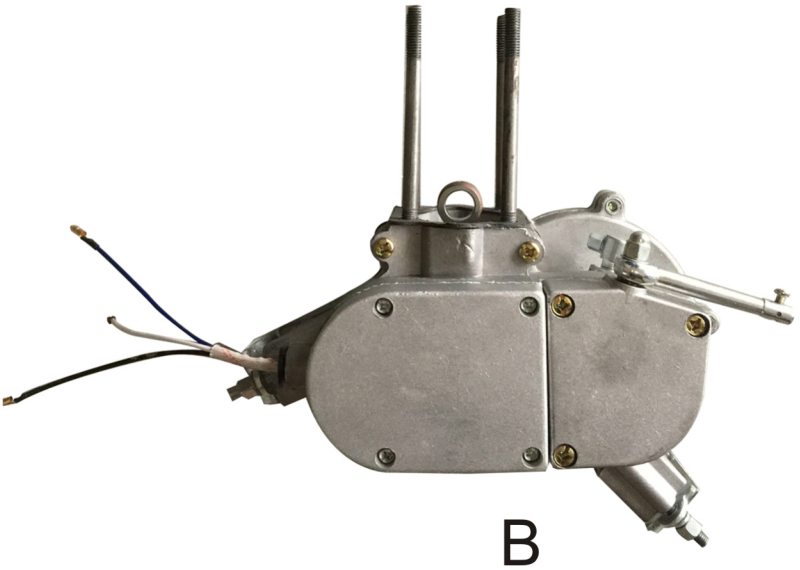


Motor was packaged in different boxes.
Firstly you need to assemble the motor.

Part list of motor

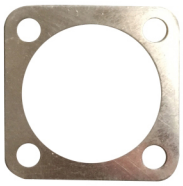


A



B

C



D

E

F

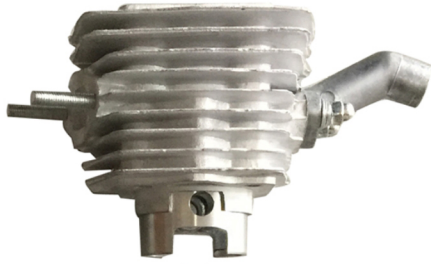
G

H

I

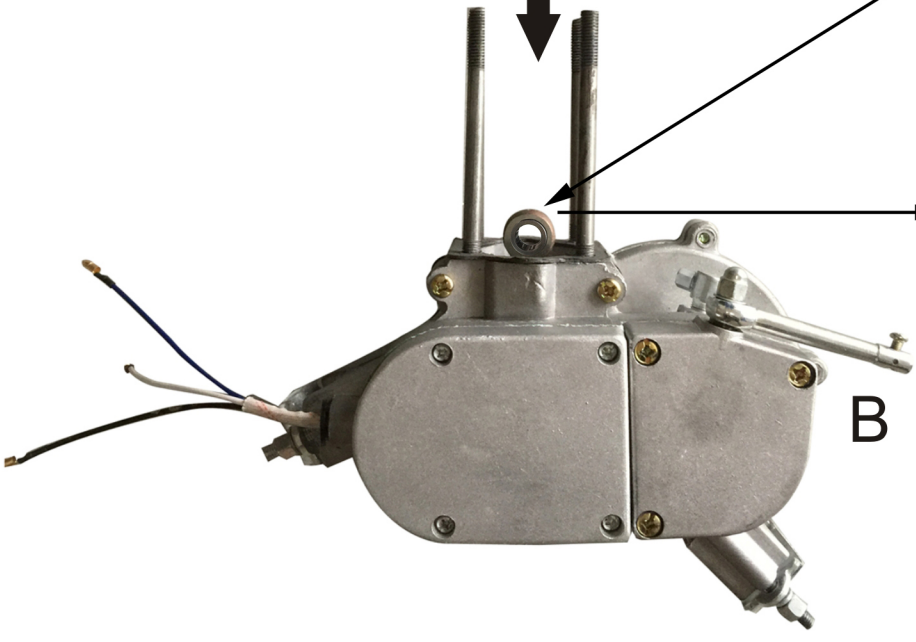
J

STEP 1

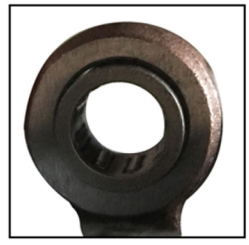


A

H

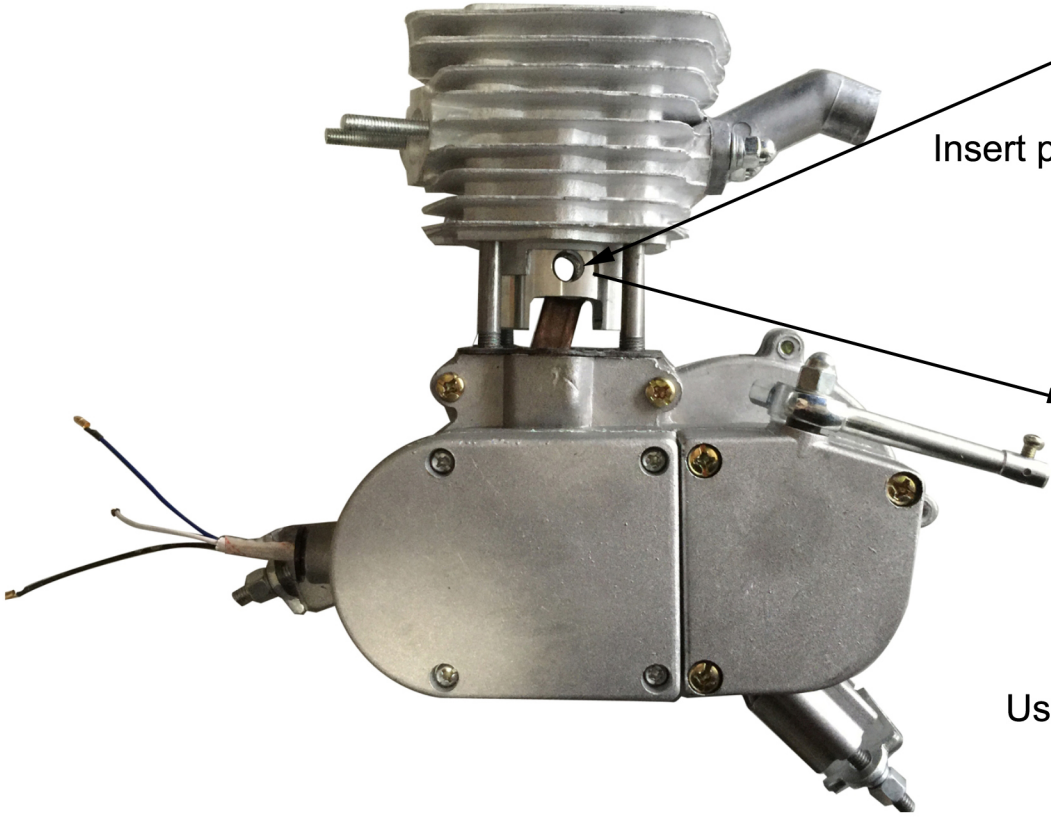


B



Set part H into the ring of part B (arrow) as picture show

STEP 2



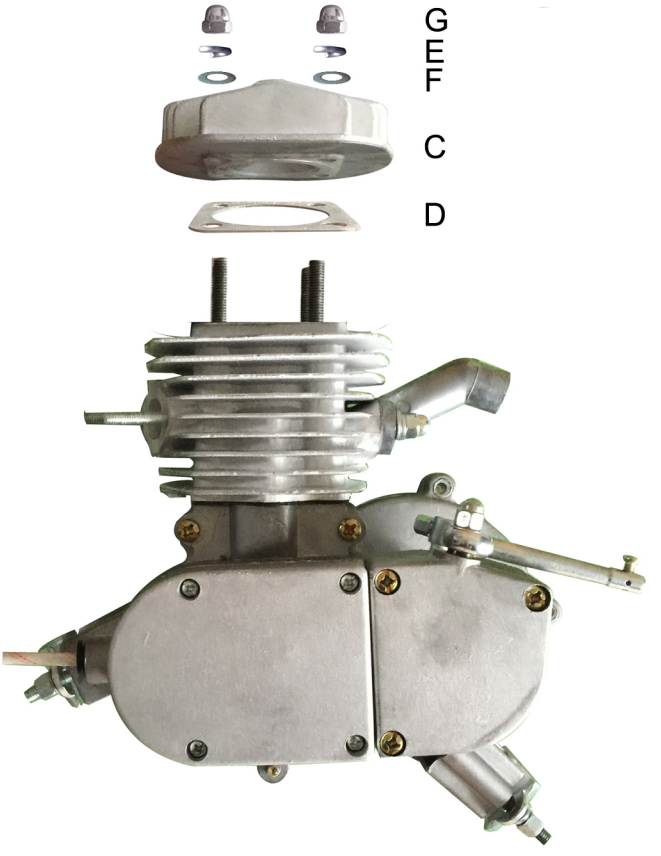
J

Insert part J into the hole of part A

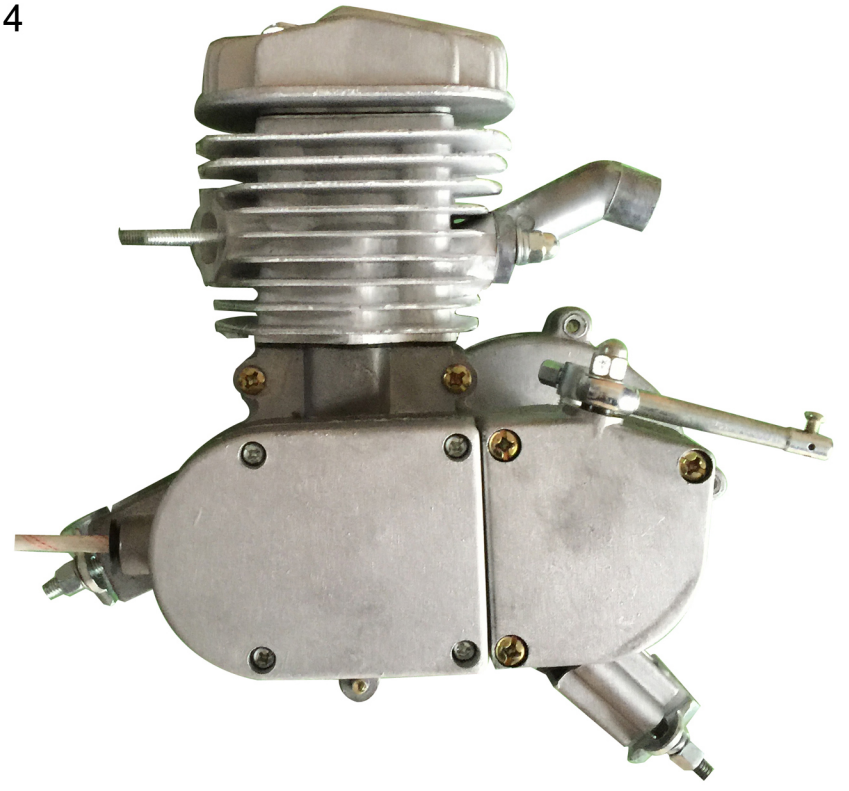
I

Use part I to fasten part G

STEP 3



STEP 4



Engine Kit Installation Instructions

Installation:
Mechanical aptitude is essential for successful installation.
Most 24" or 26" bicycle with diamond frame and a horizontal top tube should have sufficient pace to mount the engine

Step 1: The rear wheel sprocket shall be mounted first!

Remove the rear wheel from the bicycle.	
Sprocket:	
Remove the rear wheel sprocket and associated mounting accessories from the bag	Slit one of the rubber washer as shown. This is to allow the rubber washer to go around the rear wheel shaft.

Insert the rubber washers as shown	Δ Mount the sprocket to the rear wheel as shown. Δ Do not over-tighten and make sure that the sprocket is exactly perpendicular to the axis of the wheel. Δ Reinstall the rear wheel to bicycle.

Next: The Carburetor

Remove valve mechanism from the carburetor.
Insert throttle cable through screw cap. Insert spring return and attached end of cable to valve plunger.
Line up the cable and spring.
Run cable down to engine; Replace above mechanism into the carburetor.

Next: The Engine:

◆The engine is designed to fit between the down tube and the seat tube of a standard diamond frame bicycle. Other types of bicycle may require slight modifications.

◆Position the engine so that when the exhaust silencer is installed, it points towards the ground nearly parallel to the down tube.

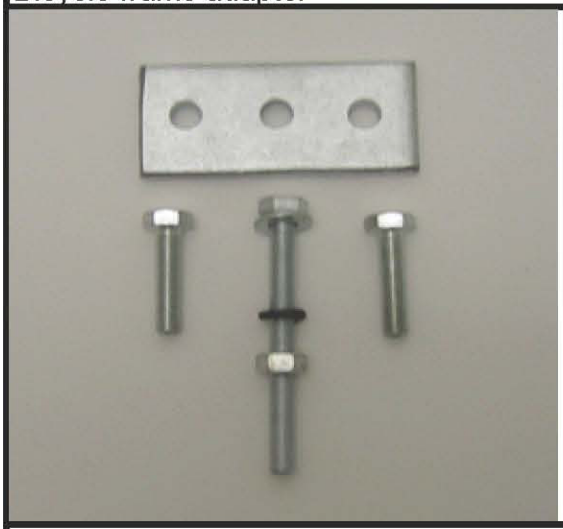
◆The exhaust silencer needs to be removed to tighten the mounting nuts.

So when positioning the engine, there is no need to tighten the exhaust silencer to the engine.

NOTE: If the bicycle frame tubing is too large then you will have to use the bicycle frame adapter.

(metal plate with 3 holes in the same plastic bag there are 3 bolts; 2 that go into the motor and one longer one that goes through the bike frame then through the motor mount)

As shown on photos below

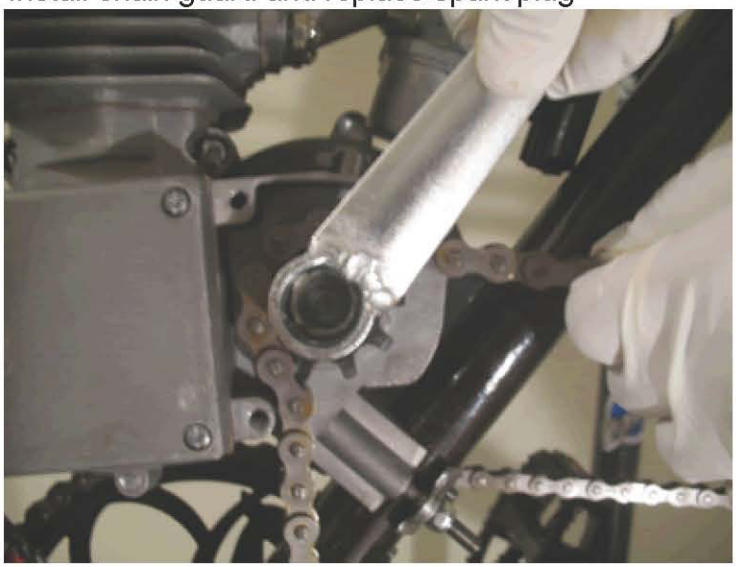
Bicycle frame adapter	Insert the 2 shortst bolts in to the motor
	
Bicycle frame adapter installed to the engine	◆Place the engine on the bicycle frame as shown on photo ◆Mark the area of the center hole of the bicycle frame adapter, you will need to drill a hole through the bike frame on that area.

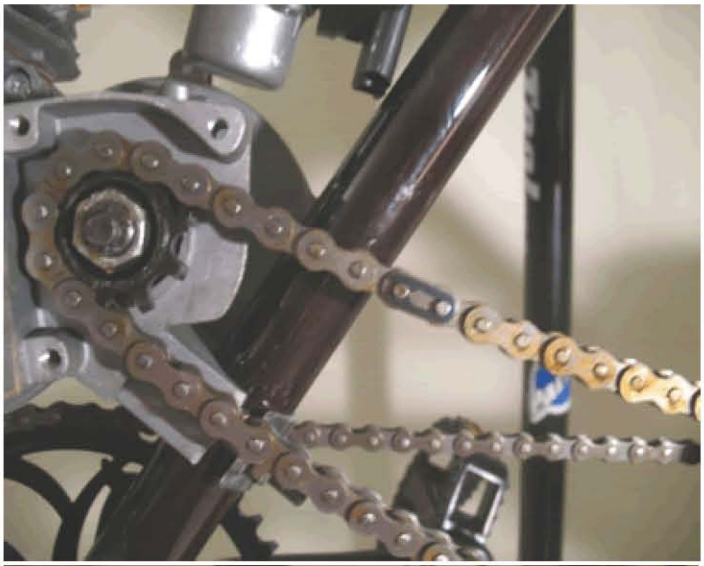
The longer bolt goes through the bike frame then through the motor mount) As shown on photos below:

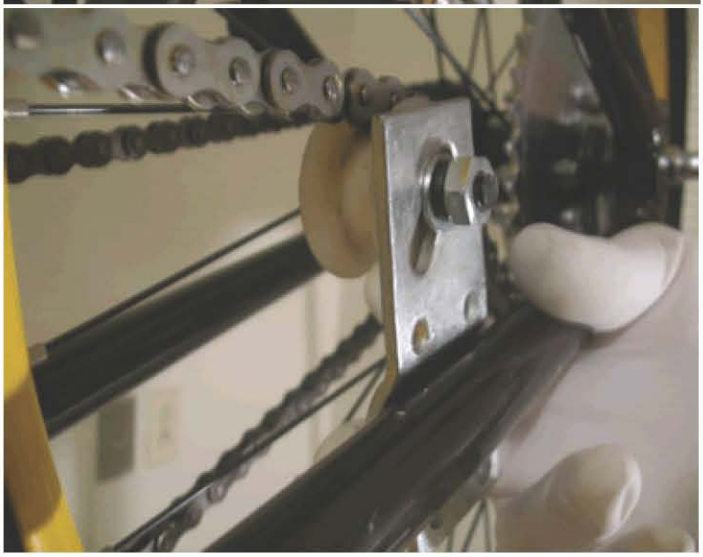
NEXT: Chain drive:

Remove chain cover and spark plug.	Break chain and feed into drive sprocket on engine. Use box spanner provided to crank chain around drive sprocket. Remove excess chain and reconnect.

Install chain guide pulley.
Do not over-tension the chain.
Install chain guard and replace spark plug







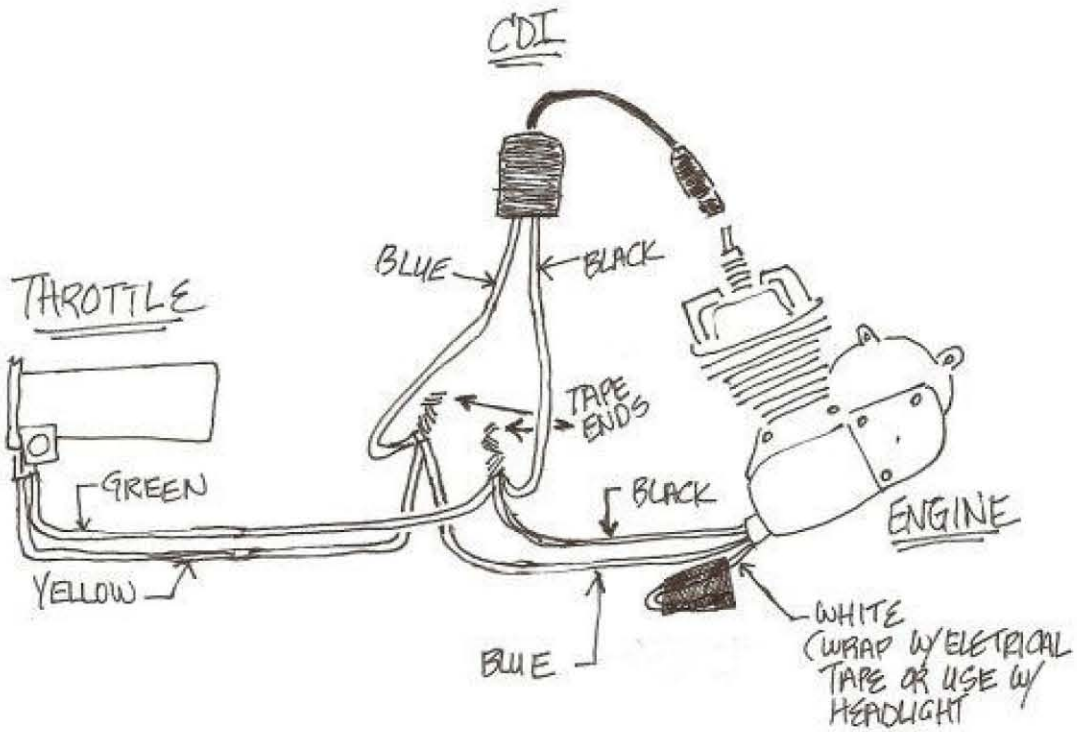
Next: CDI Electrical Wiring Connections

There have been many questions and confusion about how to set-up the wiring on a bicycle engine.

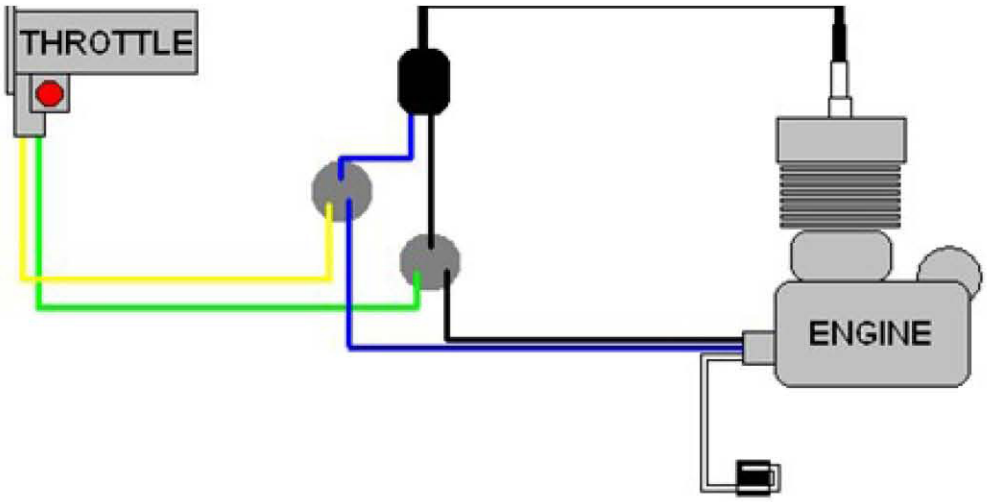
The picture below was sent to me by a customer of mine (thank you Dan) after I had explained to him how it should be done. I since asked him if it would be alright to post it up here for everyone to see because he did such a great job at drawing what I normally spend time writing.

I would write it out, but the picture is pretty much self-explanatory...if you still have questions, please let me know.

As they say..."a picture is worth a thousand words" and in this case it is.

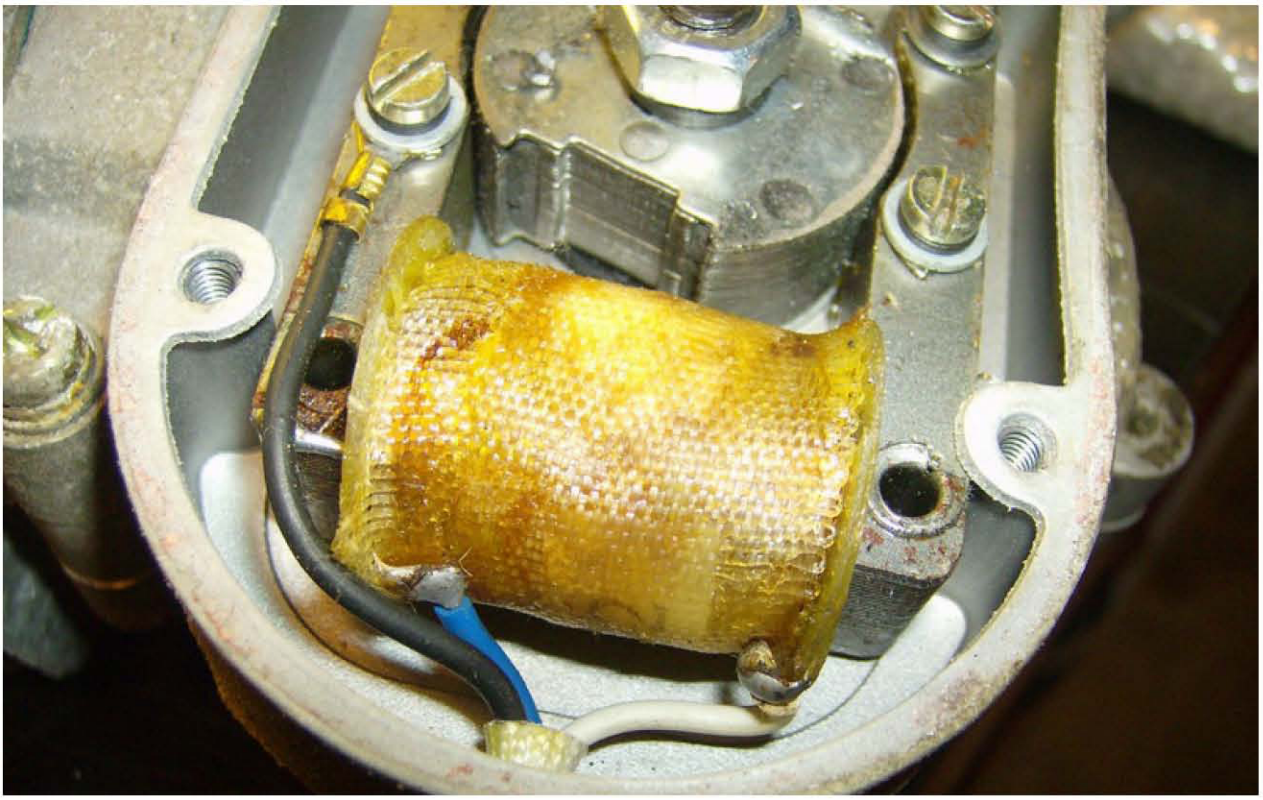


Upon seeing this picture, another person sent me the picture below. Lyle hadn't even placed an order yet when he sent the picture that he made, but he did get his CH80 a few days later. It turned out very nice and between these two pictures I don't think it would be possible for anyone to have questions still ...thanks for the picture Lyle.



There have also been a few people out there that have lost their spark. This is usually due to excess moisture getting into the area of the coil...water and electricity don't mix well, lol.
Since many of us take time and pride in having our wiring all wrapped up nice and pretty I've posted the below pictures to show how the wiring connects onto the coil itself.

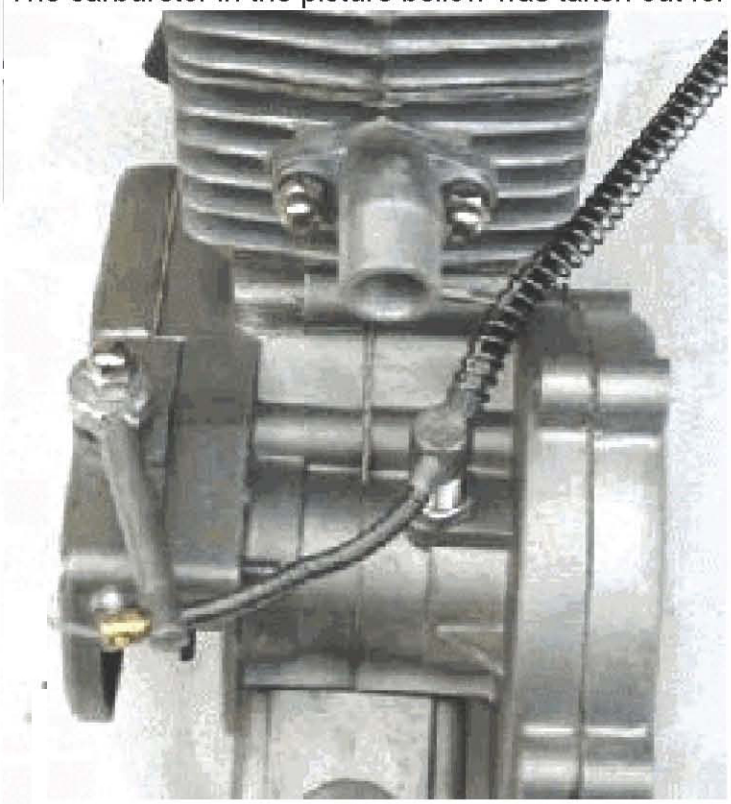
It is a lot easier to hit the connections with a soldering iron to remove the wires from the coil, then remove the coil and re-attach the wires. Someone has recently done this but couldn't recall which wire went where so now I've put pictures up to show so anyone should be able to do this. When you are putting the new coil in place, it helps to use a piece of a business card between the magnet and the coil to keep some slight spacing in there...don't forget to remove it after you've tightened down the coil though.

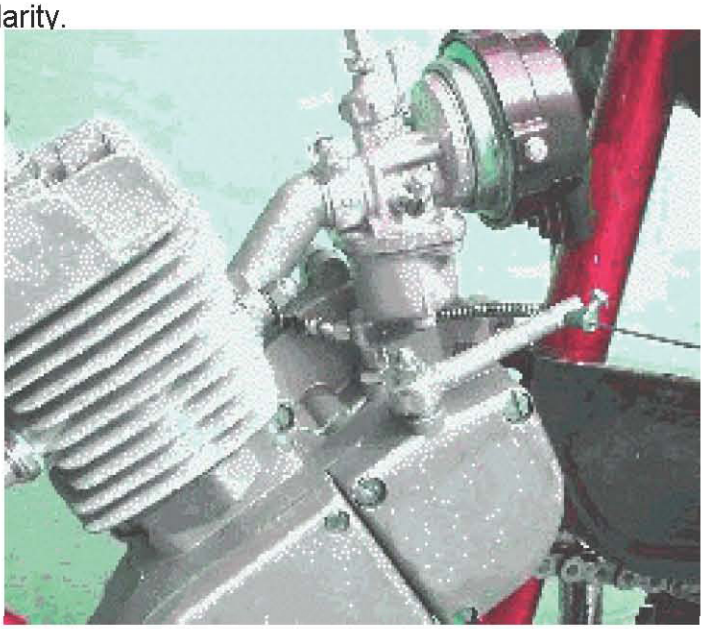


Next: Clutch

Install clutch lever under left handle brake lever.
Run cable down to engine.
Insert heat protective spring (bigger spring wire) over cable.
Insert cable through anchor pivot.
Insert spring return over clutch cable. Tighten cable to clutch lever on engine, ensuring that slack just .
taken out

The carburetor in the picture bellow was taken out for clarity.





The completed installation should look like this.

Next: Throttle

Remove existing right handle grip and replace with twist throttle.
Existing brake lever loosen and shifted to facilitate installation of twist throttle
Replace brake lever in its original position after installation of the twist throttle

Next: Fuel tank

Finally, mount the fuel tank over the top tube.
Tighten the fuel valve to the tank.
Cut supply fuel line to length and connect fuel valve to carburetor.

Ready to go

Secure loose cables to frame of bicycle with cable tie (not done in pictures).
Fill fuel and lubricant mixture in accordance with recommendation on the manual.
Compress the clutch and start cycling bike as normal. When sufficient speed is reached, release the clutch. This will start the engine.
To stop, compress and engage the clutch lever. Brake as normal.
To stop the engine, choke the carburetor completely with the lever on the carburetor.
Alternatively, press the kill switch which is provided. When engine is not running shut of fuel valve completely.

1.IMPORTANT: PLEASE READ THIS: Gas and Oil Mixture for Fuel ratio
The engine is a 2 cycle design, therefore, a gasoline/oil mixture is necessary. During the break-in period (1st gallon of fuel), the ratio for 48cc is 25 parts gasoline to 1 part oil. Break in ratio for 80cc is 20 to 1. After the break-in period, the ratio is increased to 30 to 35 parts gasoline to 1 part oil.

*NOTE: Use only Synthetic 2 Stroke Oil to insure proper engine lubrication.

WARNING!

Remember safety

1. Wipe up any spilled fuel. NEVER fuel a hot engine or smoke while fueling. This could result in sudden fire, personal injury. Always move your motorized bike at least 10 feet from any fueling area before attempting to start it. Never leave the tank fuel cap off after fueling as rain water will contaminate the fuel and cause engine failure.

2. Open the fuel valve. Small lever pointed down with fuel line is in the open position.

3. Depress the small round cap plunger, (Tickle button), to prime carburetor. Located on left side of the carburetor next to the idle adjust screw. One or two times is enough.

4. Lift choke lever to the upward position. This is the small lever on the right side of the carburetor. All the way Up the choke is on. All the way Down the choke is off. Moveprogressively downward to off position during engine warm up period.

5. Pull the handlebar clutch lever inward, to disengage the engine from the rear wheel.

6. Pedal; (down hill if possible for first start)

7. Let out the clutch lever all the way out and continuing to pedal. The result is a direct engine hook up with the rear wheel via chain and sprocket and the engine will now start spinning, Pedal until motor

starts. Accelerate slowly at first.

8. Twist throttle to increase speed, reverse twist throttle to decrease speed. To stop, disengage clutch and apply brakes. To accelerate, pedal and release clutch while opening throttle.

9. Adjust choke to the smoothest engine running position.

10. After warm up push choke lever all the way down. If engine races too fast, or too slow, pull clutch lever and lock in the notched catch, stop and adjust engine rpm.

11. If the rpm needs adjusting, turn the idle adjust screw (left side of carburetor) in or out slowly to obtain the proper idle speed of about 1400 rpm +/- 100 rpmTo correctly break the engine in, Do not exceed 15 mph or 30 min. continual running for the first 50 miles during engine brake in. Engine will develop more power after break in.

12. To stop the engine, push Kill switch and turn off gas valve at tank. Turning off the gas will prevent fuel from being siphoned from tank. Warning Note: Never leave the tank gas valve in “open” position” when engine is not running or the bike is in storage.

13. After or before each ride check all mounting fasteners, including hd. bolts, axle and brakes.

14. Warning Note: Engine lock up or piston seizure due to improper gas / oil mixture will not be covered by factory warranty. This the responsibility of the owner / operator to make sure the gas and oil is mixed correctly.

frequently Asked Questions

Can I install the bicycle engine kit on a mountain bike?
Yes, you can convert your regular mountain bike into a motorized bike.

Are parts available for the bicycle engine kit?
Yes, parts are available as well as upgrade parts!

Does the bicycle motor kit comes with everything I need to put on my bike?
Yes, this bicycle motor kit comes with absolutely everything you need

Do I need a driver license to ride a motorize bike?
In most states you don’t need a driver license to ride the motorized bicycle, but the law are different in some states. We recommend that you check in you state.

Does this bicycle engine kit fit all size bikes?
No, this type of bicycle motors kit was design for 26’inches bikes and some24 inch frame size bikes

Maintenance Routine

Clutch.

a) Remove right side cover from engine.
b) Place a small dab of grease at ear mesh area.
c) Replace cover.

Carburetor

Depending on dusty riding conditions, clean air filter every 5 to 20 hours of operation by removing the filter cover to access the screen and element. Wash element with a degreasing agent. Be sure element is completely dry before re-assembly.

Spark Plug

Remove spark plug and inspect for excess carbon build up. Clean, re-gap to .6mm - .7mm if necessary. Check plug after every 20 hours of operation. A suitable replacement plug is NGK BP-6L if you can find it. Otherwise, go for the NGK B-6L. The NGK R7-HS is also recommended for better performance and smoother idling.

Exhaust system

After 20 hours of operation check exhaust pipe for excessive oil and carbon build-up. Be sure to use supplied support strap to secure exhaust muffler to solid anchor point on bike frame or engine.

a) Remove exhaust pipe cap by loosening the retaining screw.
b) Pull cap and baffle out of pipe.
c) Clean with degreaser, rinse and dry.
d) Re-assemble

Note:

Excessive periods of low speed operation, idling or leaving fuel petcock in the “on” position during shut down periods may cause the pipe to become clogged with unburned fuel.

Chain

Every time bike is ridden check the tension of the drive chain by:

a) Rolling to bicycle forward to remove slack from the bottom of the chain.
b) Find center & push downward on the top of chain while measuring the deflection.
c) Tighten chain if deflection is more than 15mm.
d) Low speed “chain rattle” can be eliminated with the application of graphite grease to chain.

Head Bolts

Tighten all fasteners after each five hours of operation. It's most important to check cylinder head bolts: tighten in an X pattern to 12 ft/lb. using a torque wrench. A twopiece cylinder and head design engine requires head bolts be kept tight.

Important:

Check head bolts before each and every ride, vibration can cause them to loosen and blow a head gasket. ***Caution: Do not over torque or head bolts may break off.***

Right side gears

Remove cover plate and keep small amount of heavy grease on gear train.

Do not over grease as leaks will occur and also may adversely affect clutch operation. Regular greasing if required will help reduce gear wear and keep gear train quiet.

General Information

Obey all traffic regulations. Always wear an approved helmet whilst riding. Remember that you are riding a motorized bicycle and other traffic may not be able to see you. Never operate your motorized bicycle on a pedestrian thoroughfare or pathway whilst the engine is operation. Never operate you motorized bicycle in an unsafe manner.

CHECK YOUR LOCAL AND STATE LAWS BEFORE RIDING ON STREETS.

Please read this petrol and oil mixture ratio.

The engine is a 2-stroke design; therefore a petrol/oil mixture is necessary. First 3 tanks of gas use 6 ounces of 2-stroke oil to 1 gallon of gas. After the first 3 tanks, use 4 ounces of oil to 1 gallon of gas.

USE 93 GRADE (PREMIUM) GASOLINE. Be sure to mix fuel and oil before adding to tank. Do not add separately.

Do not exceed 20km/h during break in period. Speed may be increased to 35km/h after the first 500km.

Use only high-grade 2-stroke motorcycle oil to ensure proper engine lubrication.

WARING:

Remember safety first. Wipe up any spilt fuel. Never refuel a hot engine or smoke whilst refueling. This could result in fire and personal injury. Always move your motorized bike at least 3 meters from any refueling area before attempting to start it. Never leave the tank fuel cap off after refueling as rainwater could contaminate the fuel and cause engine failure.

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