



Overview

Installation

- Rear Wheel Gear - 3
- Motor
- Chain
- Gas Tank
- Carburetor
- Hand Controls
- Wiring

Operation

- Starting Procedure
- Maintenance
- Oil Gas Ratio



PARTS INDEX

Overview

Please take the time to read these instructions before building your project.

Some mechanical ability is required to properly install your engine kit. Some builders can complete the job in a few hours while others may take days. We suggest to take your time and not to rush yourself.

Make sure your bicycle is in good working order before assembly.

The recommended bike frame for install is a standard "V" frame 26" Men's bike. With a tube diameter ranging from 25 mm-29 mm. For oversized frames a bolt thru front motor mount is included (extra spacers or washers may be required). Make sure rims don't exceed 36 spokes or rear sprocket could not be installed.



Standard "V" Frame



Oversize Bolt Thru Mount

Recommended Tools:

Wrenches – 10mm , 12mm , 13mm , 14mm , 15mm , 17mm

drill with bits

Bicycle cone wrench

Philips and flathead screwdrivers

Scissors or Cutter

Metric socket set 10mm – 17mm

Chain Link Breaker

Pliers

Allen Wrench – 5mm, 6mm

Disclaimer:

- Operating this motorized bicycle or bicycle engine kit involves some risk of serious bodily injury . Buyer accepts responsibility for any and all vehicle operation that may lead to personal injury, economic loss, social distress, other losses, costs and damages.

- Seller is not responsible for injuries and/or damages resulting from operating this motorized bicycle or bicycle engine kit.

- Not all motorized bicycles are permitted for road use. Check with your local Vehicle Insurance services for requirements. We do offer any guarantee for legal road use. **Always wear your Helmet**

Rear Wheel Gear Assembly

1. Remove Wheel from Bike, remove coaster brake arm if equipped.
2. *Insert bolts thru Sprocket (Teeth facing inward) then thru 1st Rubber donut*
3. *Cut a slot in 2nd Rubber donut and insert in center of rim.*
4. *Insert thru spokes, 2nd rubber, metal*
5. *Make sure the hole pattern lines up with the bolts before you start placing the washers and nut onto the bolt.*
6. *Then start putting the washers on and tighten the nut a little bit to start the star pattern.*
7. *Start tightening the bolts in a star pattern and continually move around the inside of the wheel and looking at where the sprocket hole is on the outside. Make sure it is centered.*
8. *Make sure it is Tight and true.*



MOUNTING ENGINE

Mount the engine into the frame. This is the front motor mount. Some bikes have a large diameter lower bar and some need clearance for the air box intake so you need to use the parts provided in the kit. Use spacer provided in the kit. This spacer normally would require the drilling of a hole in the frame to bolt the center of the spacer through.

We prefer the method, which is to pull the studs and replace them with longer ones that you can get at your local hardware store. Then, you can use the steel motor mount clamp that came with the kit and not have to drill a hole in your frame. Then cut the excess off.

FITTING CONTROLS

The new style throttle is fitted to the right hand side of the handlebars. Before you slip the throttle onto the handlebars, you'll have to drill a hole using a 5 mm drill bit to locate the plastic throttle location. Put a drop of machine oil into the sheath while you have it apart. Be gentle when installing the throttle. The throttle has a kill switch built into it. Wire one kill switch to the black wire from engine and the other wire to the blue wire from the engine. Pressing kill switch will cut power to the spark plug and stop the engine from running.

Mount the clutch lever

The larger spring is a heat shield for the clutch cable.

Screw in the fuel valve filter combo into the tank and then mount the tank

Mount your coil, use high quality zip ties. Go up and over and also through the holes that normally would have the screws going through them. This is a better method than using the screws that come with the kit. Wire connections: BLUE to BLUE, BLACK to BLACK. White goes to red/yellow wire. Green is ground wire. The white wire is generator and has a ma output of .5A 7.5V. Anything that draws more current connected to the white wire will kill the motor. You can use the white wire to run a 6 volt lamp. If water is allowed to get into the magneto chamber, it will cause the magneto to fuse out.

If your spark plug has one of those crowns screwed onto it, remove it. Remove the 3 screws from the counter shaft side cover and also remove the spark plug. Remove clip from master link of chain and then thread chain up and over counter shaft sprocket by rotating the sprocket using tool. Having the spark plug removed allows engine to be turned easily to thread chain. Put some grease on the shaft and in the hole.

Cut chain to length and using the master link to put chain back together. Do not cut chain too short! Install Idler pulley. Make sure you grease the plastic wheel metal shaft. Do not over tighten chain.

Install chain guard. Use some snips to cut cover at the rear if needed. Use a good zip tie at the rear and the extra long bolt for the counter shaft cover will hold the front. With the heavy duty chain, it is a good idea to knock the points off the top of the small 9 tooth drive sprocket to allow free travel of the chain over the sprocket teeth. You can do this with a file or grinder when cover plate is removed.

If you ever need a new chain and can't buy the 415 chain locally, you can buy BMX stunt chain from any good bicycle shop.

Install exhaust pipe. If you need to bend the pipe some so it will not hit the frame or bolts, clamp the pipe into wood blocks and bend. Do not bend exhaust mounted to engine. If you do, you will not bend the exhaust, you will break the motor. Exhaust pipe is very strong, much stronger than the 2 mounting studs on motor.

CARBURETOR INSTALLATION

Assemble the needle, spring, keeper, slide and cable in the carburetor. Insert the slide in the carburetor housing, rotating it until it meets its groove and falls in place. Hook up the throttle twist grip. The carburetor slide should raise almost an inch while the grip twists almost a half a turn. You can take the slack in your throttle cable of y taping the grip end gap and applying heat shrink tubing to firm up the hook up. Install the carburetor on the intake manifold.

Once the carburetor is on and tight, you are ready to connect the tank line to the carburetor. A high quality fuel filter is a super way to go. Mix your oil with the gas before adding to tank. Fuel up the bike and go for a cruise. Enjoy.

This is a brand new motor and you need to take it easy for the first 3 gas tanks in accordance with the break-in procedure

NOTE: During run in, keep drive chain snug. Keep the mix ratio at 16:1 for 3 tanks and keep your speed down to a maximum of 20 mph's. Also, do not run your motor more than 30 minute periods.

WARNING: Do not operate engine without kill switch installed. It could result in personal injury if an emergency stop is required. The only other way of stopping the engine is by releasing the clutch lever with bike brakes on and engine at slowest idle. This is not recommended.

MAINTENANCE ROUTINE

CLUTCH: Remove right side cover from engine, Place a small dab of grease at gear mesh area, replace cover.

CARBURETOR: Depending on dusty riding conditions, clean air filter every 5 to 20 hours of operation by removing 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 riding check exhaust pipe for excessive oil and carbon build-up. Be sure to use supplied support strap to secure muffler to a solid anchor point on bike frame or engine.

CHAIN: Every time the bike is ridden, check the tension of the drive chain by: Rolling the bicycle forward to remove the slack from the bottom of the chain, and find the center and push downward on the top of the chain while measuring the deflection, tighten chain if the deflection is more than 15mm. Low speed rattle can be eliminated with the application of graphite grease to chain.

HEAD BOLTS: Tighten all fasteners after each 5 hours of operation. It's most important to check cylinder head bolts: tighten in an X pattern to 12 lbs. of torque. Check head bolts before every ride, vibration can cause them to loosen and you could blow your head gasket.

RIGHT SIDE GEARS: Remove cover plate and apply a small amount of grease on gear train. Regular greasing will help reduce wear and tear and keep your gear train quiet.

GENERAL INFORMATION:

Obey all traffic regulations. Always wear an approved helmet while riding. Remember you are riding a motorized bicycle and other traffic may not be able to see you. Never ride your bike on a pedestrian thoroughfare or pathway while the engine is running. Never ride your motorized bike in an unsafe manner. Check your local and state laws before riding on streets.

OIL AND GAS MIXING RATIO:

The engine is a 2 stroke design, therefore a gas to oil mixture is necessary. During the first 1-2 gas tanks break-in period, the ratio is 16 parts gas to 1 part 2 stroke oil (8 oz per Gallon). After the break-in period, the ratio is increased to 32 parts gas and 1 part 2 stroke oil (4 oz per Gallon).