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; -) PLEASE CHECK ATTATCH PDF FILE OF USER MANUEL AND:
HERE IS MY OWN LINK BELOW FOR INSTALLATION
INSTALLATION PICTURE :

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http://images.andale.com/f2/126/120/7998022/1083469981866_PIC2.jpg

OR YOU CAN CHECK ON other dealer web : <http://www.simpsonmotorbikes.com/articles.html>

PLEASE READ THESE INSTRUCTIONS BEFORE INSTALLATION



48 cc Bike Engine Kit:

and

80 cc Bike Engine Kit:

2 cycle 48cc or 80cc Gas Engine w/mounting clamps:

Chrome Exhaust muffler w/gasket and hanger:

Black painted Tear Drop Fuel Tank w/ cap shut off valve and mounting brackets:

415 heavy duty chain

50 tooth Chrome Sprocket w / 9 hole mounting package

Drive Chain idler: Carburetor assembly and gas line: CD Ignition assembly:

Left hand Lever Clutch handle: Right hand throttle: Red button kill switch

Extra spark plug , Extra head gasket and engine service tools:

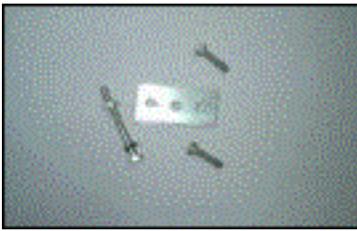
Adapter plate for engine mounting to large dia. bike frames

Instruction manual and parts booklet

Note: Mechanical aptitude and ability is required to perform this installation. Many “do it yourself” backyard mechanics will find this project rewarding. A love of bicycles and small engines is the only required catalyst for this project. However, installation is sometimes best done by a professional auto or motorcycle mechanic. Older style bikes with 1 inch dia. steel 70 degree included angle frames require less modifications to install the engine than do the later Taiwan bikes with large dia. frames. We do not recommend what bike to use, but the old Sears Cruiser or Schwinn SS cruiser or Trek Cruiser with coaster brakes are reported on the Internet to work well. A rewarding joy and challenge is found in designing a custom installation of your own. Remember, a quality installation is paramount to safe usage and long term rider satisfaction. Have fun and good luck on your motorized bike project. Happy trails:

STEP #1 Mounting Engine to your Bicycle

1. The engine mounts in the bike frame “Vee” above the peddle wheel sprocket. (see above pic.)
2. Consider using Masking or Duct Tape on the front down-tube & seat tube of your bicycle to protect the paint finish while test fitting the engine to your donor bike.
3. If the distance between the two bars exceeds the engine mounting span then additional spacers or welded brackets are required. It is suggested that the engine be mounted on the seat tube first and then fitted to the front tube. See figure 1.



See **Figure 1**.

This adapter plate is included in kit.



— **Bike with large front frame tube:** Use 1/4" thick 1-1/8" x 2-1/2" steel plate with one hole in the center for a bolt to go through a drilled hole in tube frame and two holes for cap screws to go into engine block. Additional spacers maybe required depending on the donor bike.

Figure # 1

4. If the rear frame tube from the seat down to the pedal sprocket is too small to fit the rear engine mount, a rubber shim can be made from an old bicycle rubber inner tube. This also helps reduce engine vibration.

6. After the desired engine location is determined mount the engine to frame. Lock nuts and or use of Loctite is recommended to avoid loosening due to vibration. **Note: All threads on hardware nuts and bolts are metric.**

Chain Sprocket Installation:

The Drive Chain Sprocket mounts on left side of the rear wheel against the spokes dish side in. The sprocket must fit over the hub in a perpendicular plane with the axle. This insures that your rear chain sprocket spins true with the rear bike wheel. ***NOTE:** On some older bike axle hubs like on coaster brake models it may be required to slightly enlarge the sprocket center hole to obtain a flush, and concentric fit next to the spokes. This is best done on a engine lathe by a professional machinist.. . It is also recommended that the rear wheel be re-spoked to 12 to 14ga. spoke wires to insure long life. Most any Bike shop can do this operation for you. Applying thread adhesive and equal tightening of the sprocket bolts. This keeps the chain sprocket true with axle and free from wobble while spinning. With bike upside down spin wheel and check sprocket for wobble. The chain can jump off the sprocket if the sprocket installation is done incorrectly.

1. Rotate sprocket on hub to allow clearance for mounting bolts that must come through the spokes..
2. If not pre sliced, cut the rubber isolator to the center, in order to fit INSIDE the spokes and around axle. Install the split steel retainer plates next to the rubber isolator and on the opposite side of the spokes. Secure with 9 bolts compressing the chain sprocket to the spokes. Note: 2 rubber isolators may be needed on both sides of sprocket for chain alignment on some older non-coaster brake bikes like made in China.
3. The Chain Sprocket on the Wheel must align with the Chain Sprocket on the Engine.
4. The wheel chain sprocket is mounted with teeth-out and dish-in next to spokes. **SEE FIG. #2**

Note: **Mount Sprocket bight chrome dished out side next to spokes:**

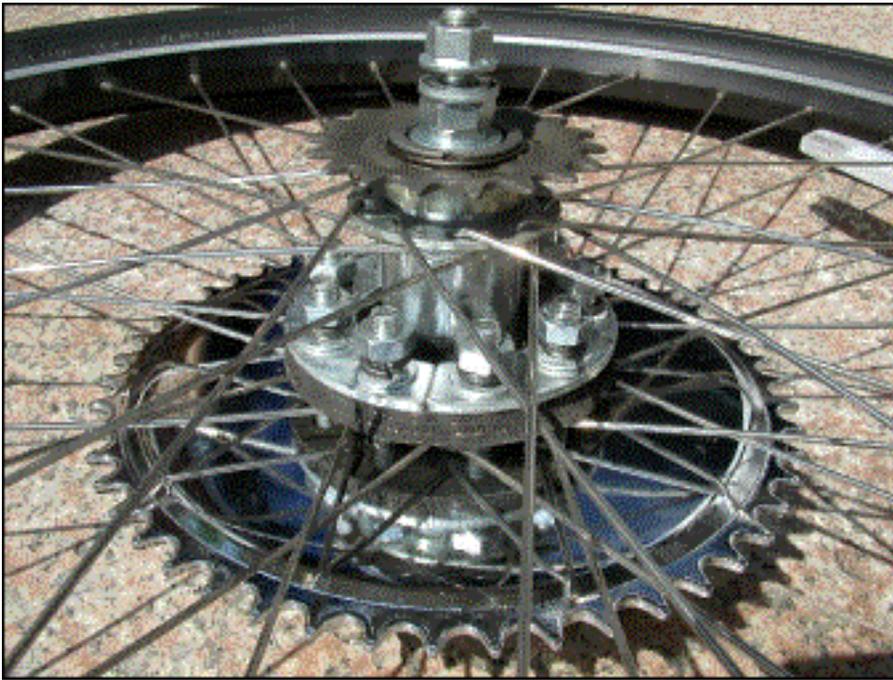
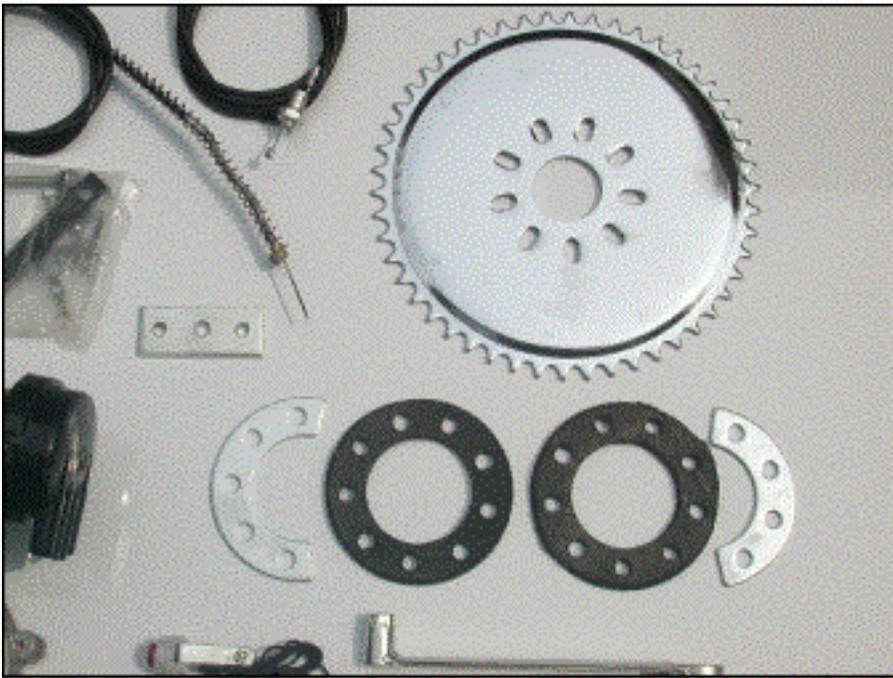
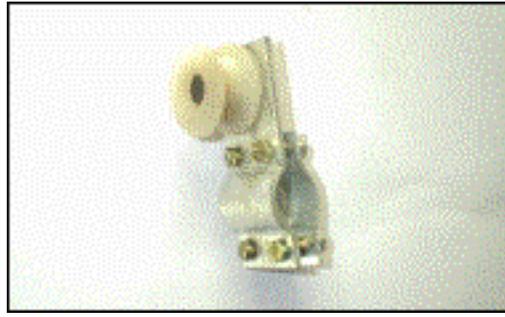


Figure #2 ... 9 slot- Chain Wheel Sprocket Installation for 36
spoke wheels

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Chain Idler assembly

The drive chain can be shortened to the correct length. Special tools are required to remove and replace the master link when shortening the chain by removing links. Ideally, both your **pedal drive chain** and your **engine drive chain** should have the same tension.

A. Remove left rear cover plate from engine. This is the plate next to and under the clutch swing arm.

Use supplied spark-plug wrench to turn engine crankshaft sprocket to feed chain around it. Do not pry sprocket with a screwdriver or similar object.

B. Fit chain, measure and remove excess links to assure proper length. Proper length is when top side of drive chain has $\frac{1}{4}$ inch to $\frac{1}{2}$ " deflection with the bottom side of the chain loop tight.

Reconnect the master link, and replace cover plate on engine.

C. Chain tension adjustments can be made by moving rear wheel. If both chains can be made to have equal tension then installing the idler assembly will not be necessary. Mount the chain idler on the wheel strut if the engine drive chain cannot be made as tight as the pedal chain.

D. Install chain safety guard by attaching to engine and wheel axle struts.



CD Ignition Coil and Engine Kill Switch installation

- A) Mount CD ignition coil on bike frame, close enough to attach coil wire to spark plug. Mount as far away from exhaust pipe as possible to avoid heat damage to semiconductors in CDI module.
- B) Attach CD ignition coil wires to same identical color coded wires coming from engine.
- C) Install Engine Kill Switch on the handlebar or use kill switch on left hand grip. Only one is needed, but 2 are supplied. Attach kill switch wire to white wire coming from engine. This will ground ignition and stop the engine when the red button on the kill switch is activated.
- D) Route all wires away from engine exhaust heat. Secure wires with a plastic tie straps.

***!WARNING!** Operation of engine without stop or kill switch installed could result in personal injury if an emergency stop is required! The only alternate non recommended way of killing the engine is by releasing the clutch lever with bike brakes on and engine at slowest idle. **YOU SHOULD CONNECT THE KILL SWITCH WIRE TO "BLUE " COLOR WIRE AND 6-VOLT HEAD LIGHT TO WHITE &BLACK !**



Handle bar eng. Kill switch



CDI ignition coil



Left hand Clutch lever



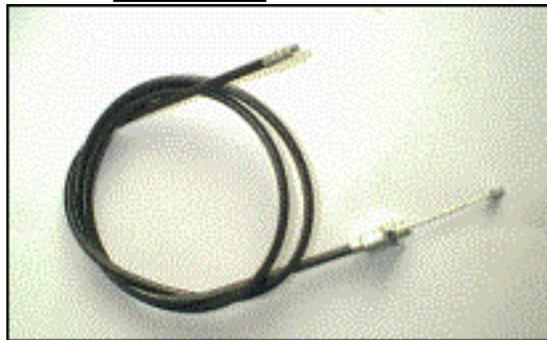
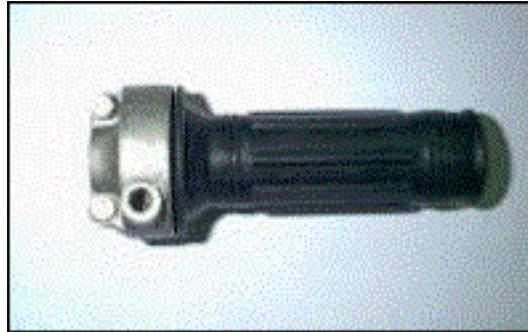
Clutch cable w/spring

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Clutch cable installation and adjustment

- A) Install clutch lever to left side of handlebar and attach cable end to lever.
- B) Route clutch cable through the ball-mount on motor with the big spring around the cable jacket and ahead of the ball mount. The big spring serves as a cable heat shield.
- C) Insert cable wire through small spring and route through clutch arm and attach brass cable-end and screw. Adjust cable tension to allow very slight play in lever. Handlebar clutch lever must be in the released or outward position to complete this operation.

Carburetor and Throttle Installation



Carburetor

Throttle

Throttle Cable

Procedure for attaching throttle cable to carburetor throttle slide: The small stop on the cable wire slides through the long groove of the carburetor brass cylinder slide. It held in a slot at the end of the cylinder.





(Note component positions in pictures:)

The spring is placed inside the cylinder slide and is compressed when the throttle is twisted. Be sure it is seated all the way inside the cylinder. The spring then forces the throttle to return. For this to work properly the throttle must twist freely on the handle bar in both directions prior to the cable being installed.

A) Install twist grip throttle on right side of handlebar end. On some bike handle bars it may be necessary to ream out the handle ID to fit the bar so that the throttle will twist freely.

B) After installing cable inside the carburetor mount it on engine intake tube and tighten clamp screw. Mount carburetor as level as possible. **Note:** The air/fuel mixture screw should be preset at 4.5 turns counter clockwise from the totally closed position.

***NOTE: Do not** back-off screw more than 4.5 turns or vibration may loosen the screw and cause it to fall out. If this situation occurs, stop engine immediately and replace mixture screw.

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Fuel Tank installation

A) Attach fuel petcock to tank. Use Teflon tape to seal threads. Careful not to strip threads.

B) Mount tank on bike top crossover frame with two supplied brackets and nuts.

C) Attach fuel line from tank to carburetor.

***NOTE:** Filters are contained in the petcock and in the carburetor brass inlet.

MAINTENANCE SECTION

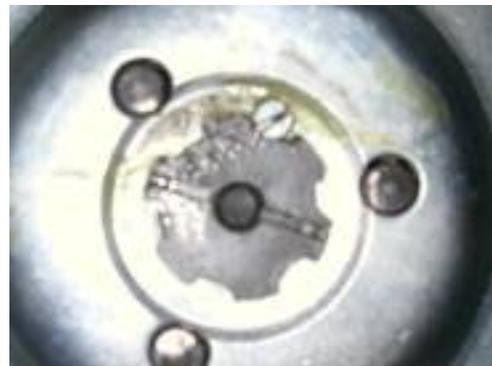
#1 step C should say remove small Phillips screw locking the clutch adjuster. D. Then pull clutch lever in to adjust clutch nut this releases the tension on clutch plate and adjustment can be done with ease finger turn nut in or out as required to set .G. reinstall Phillips screw in locking plate. You have done a really nice job on the instructions. On page 2 bottom of the page may need step 5 . Most wheels only need one rubber spacer on the inside of the wheel as the sprocket has to lay flush with the outer hub flange. very few wheels will need both rubber spacers

1. How to Adjust Clutch if signs of slipping or squealing are encountered :

- A) Disengage handlebar clutch.
- B) Remove right side cover from engine and then remove small locking screw on center flat nut.
- C) Pull clutch lever inward to lock catch position.
- D) Tighten flat slotted nut in center of clutch plate clockwise until snug.
- E) Back off flat nut $\frac{1}{4}$ turn counterclockwise. Release clutch lever and check for slight clutch arm $\frac{1}{16}$ " free-play on opposite side of engine. Readjust if required. Then re-install small locking screw.
- G). Good idea to place a small gob of grease at gear mesh area. Then replace cover.



Adjust Nut



Clutch

2. Carburetor

After every 5 hours of operation check the adjustment of the mixture screw by rotating screw clockwise until seated and then rotate screw 4½ turns back counterclockwise. 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 such as Simple Green™ or Purple Stuff™. Be sure element is completely dry before re-assembly.

MAINTENANCE SECTION Continued:

#3. Spark Plug

Remove spark plug and inspect for excess carbon build up. Clean, re-gap to .028- .034 of an inch if necessary. Check plug after every 20 hours of operation. New spark plugs are available from your selling dealer. Be careful using aftermarket spark plugs as heat range and threads differ greatly.

#4. 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 a 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

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***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.

#5. 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 the center and push downward on the top of chain while measuring the deflection.

C) Tighten chain if deflection is more than ½ inch.

#6. Head Bolts Tighten all fasteners after each five hours of operation. Most important to check Cylinder head bolts : Tighten in a X pattern to 12 ft/lb. using a torque wrench. A two piece 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. (Twisted or broken head bolts due to over tightening is not covered by warranty.)

#7. 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 a helmet while 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 through way or sidewalk while the engine is operating. Never operate your motorized bicycle in an unsafe manner. **Check local and state laws before riding on streets. WARNING! ALWAYS wear a helmet while riding.**

Motorized Bicycle Starting and Operating instructions:

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 first: 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.** Move progressively downward to off position during engine warm up period.

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

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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 rpm

To correctly break the engine in, Do not exceed 15 mph or 30 min. continual running

for the first 50 miles during engine break 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.