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For installation instructions and video assistance, please visit:  
<http://www.zoombicycles.com/installation>

**Parts Checklist, What's included:**

Box A

- 1 x Box of 80cc Class (66cc True Displacement) ZB-JET80-SR Complete Top End Assembly
- 1 x Push Clutch Lever
- 1 x Heavy Duty 415 Chain
- 1 x Chain Guard
- 1 x Throttle Cable (Adjustable)
- 1 x Exhaust Muffler (Heat shielded and racing tuned)
- 1 x Exhaust Muffler Support Clamp
- 1 x Adjustable Bearing Chain Tensioner
- 1 x Dished 44 Tooth sprocket with 9 oblong holes
- 1 x NT Speed Carburetor (racing tuned)

Box B

- 1 x 80cc Class ZB-JET80-SR Complete Bottom End Assembly
- 1 x Box of Mounting Hardware and accessories (includes the following)
  - 9 x Sets of Mounting Bolts, Washers and Nylock Locking Nuts for the Sprocket Assembly
  - 2 x Rubber Sprocket Mounts
  - 3 x Semi-circle Metal Sprocket Mounts
  - 4 x Nylock Gas Tank Mounting Nuts
  - 1 x Inline Soft Plastic Fuel Filter
  - 1 x Gas Fuel Valve with Nylon Fuel Filter and Fibre Washer
  - 1 x Chain Guard Fasteners
  - 2 x Fuel Tank Fasteners
  - 1 x Large Frame Tube Adapter mounting plate with U Bolt and Engine Adapter Bolts.

Box C

- 1 x 2.0L (1/2 Gallon) Glossy Black Finish Gas Tank
- 1 x Spring Loaded Gas Tank Cap
- 1 x High Quality Fuel Grade Line
- 1 x Thottle Assembly with built in Kill Switch and Matching Grip
- 1 x CDI (Capacitor Discharge Ignition) Module with mounting assembly
- 1 x ZB-JET80-SR Top End Assembly Pack (includes the following)
  - 1 x Aluminum Head Gasket
  - 1 x Cylinder Base Gasket
  - 1 x Spark Plug
  - 1 x Japanese Needle Bearing Cage
  - 1 x Wrist Pin
  - 4 x Lock Washer Set

**\*\*\*IMPORTANT NOTE\*\*\***

Operating motorized bicycles 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 or use of any motorized racing bicycle engine parts or accessories. Not all motorized bicycles are permitted for road use. Check with your local Vehicle Insurance services for requirements. We do not offer any guarantee for legal road use. All of the ZoomBicycles gasoline operated products are NOT compliant with Environmental Protection Agency ( E.P.A. ) or California Air Resources Board (C.A.R.B) for the use on/off Public roads. Upon purchase, the purchaser agrees to use products for racing (closed-course competition) only and NOT for on/off public roads.



## 2 Stroke Engine Trouble Shooting Guide

<u>SYMPTOMS</u>	<u>POSSIBLE CAUSES AND SOLUTIONS</u>
<p><b>Engine Not Starting</b></p>	<ol style="list-style-type: none"> <li>1. <b>Carburetor Choke:</b> Keep choke lever down if the engine is cold. If it is hot keep the choke lever up.</li> <li>2. <b>Possible flooded engine:</b> Try starting the engine with the throttle completely open. If this does not work go to step 3.</li> <li>3. <b>Check the spark plug:</b> Replace the spark plug if the electrode is black and worn. Check the spark by laying the spark plug with the CDI coil connected on the head fins while pedaling fast. Keep the back wheel lifted up to get a faster speed. If you see a spark keep pedaling to clear up a possible flooded cylinder. Re-install the plug. If engine does not start go to step 4.</li> <li>4. (A) <b>CDI Coil Unit:</b> Check the blue and black wire connections. If everything is connected properly with no loose connections go to step 5.</li> </ol>
<p><b>No Spark</b></p>	<ol style="list-style-type: none"> <li>4. (B) <b>CDI Coil Unit:</b> Remove the kill switch wire and see if the spark plug has spark. Check for a broken plug wire. If there is still no spark then replace the CDI coil ignite unit with a new one.</li> <li>5. <b>Disconnect the kill switch wires</b> and try starting the engine. If spark plug now has spark look for an unwanted ground in the circuit of the kill switch. If spark plug has no spark then go to step 6.</li> <li>6. <b>Check Magneto</b> with an OHM meter. Look for a measurement of approximately 300 to 350 ohms across the blue and black wires. Check for any loose screws and/or high corrosion. If the coil is open or shorted, replace it. If magneto coil is good and there is still no spark go to step 7.</li> <li>7. <b>Replace the external CDI ignite unit.</b> If there is still no spark replace both the spark plug and the magneto.</li> </ol>
<p><b>Good Spark But Engine Will Not Start</b></p>	<ol style="list-style-type: none"> <li>8. <b>Check for fuel restrictions.</b> Clean the air filter by removing the line at the carburetor and check for fuel flow. Clean the filter on the tank valve. Make sure that it is not too rich with 2 stroke oil. Standard ratio with a new engine is 16:1 and then 25:1 with an engine with 300 km or more. If gas is old replace with new oil/gas mix. If it still does not start go to step 9.</li> <li>9. <b>Possible Flooded engine:</b> Refer to step 2. If the engine is not flooded, give a quick squirt of starting fluid at the air cleaner opening. If engine still does not start go to step 10.</li> <li>10. <b>Check your throttle cable.</b> Make sure it is moving the slide valve up and down in the carburetor. If still does not start go to step 11.</li> <li>11. <b>Check for any air leaks</b> at the carburetor intake manifold tube. Check to see any loose manifold nuts or damaged intake gasket. Clean clogged or dirty air cleaner if not done so yet. Check to see if the engine does not have fuel in the bottom of the crankcase. This happens when the carburetor float gets stuck and drips down fuel. Remove the engine and place it upside down to drain any unwanted gas from the crankcase and reinstall. If still does not start go to step 12.</li> <li>12. <b>Check the crankcase for possible air leaks.</b> Check the left and right oil seals on the ends of the crankshaft to see if correctly installed in front of bearings. Push the piston to the lowest position and connect exhaust and intake ports do a hand held compression pump can be used in the spark plug hole to see if any air escapes from the crankcase. Be careful not to use too much pressure as it can blow out the oil seals. If the crankcase gasket is leaking, replace with a new one. If no air leaks are found and the engine still does not start go to step 13.</li> </ol>

	<p><b>13. Run a cylinder compression check by removing the spark plug and installing a small engine compression gage. Plug the exhaust and intake ports with a custom made flat plate. Use a hand held electric drill or an air wrench to turn the crankshaft at the magneto nut. Note: If the engine turns over easily with the spark plug installed or a compression gage seated in the plug hole this means you have a blown head gasket, broken rings, or a possible hole in the top of the piston. You will now need to remove the 4 head bolts and head to make further checks. Note: If compression is good and no problem is found then proceed to step 14.</b></p> <p><b>14. Replace/rebuild the carburetor and correctly set the idle speed adjustment. If you still have problems starting the engine then it is recommended to consult with a qualified engine mechanic as it is possible that somewhere along the trouble shooting process something had been over looked.</b></p>
<p><b>Engine Back Fires And Has Trouble Starting</b></p>	<p><b>Check your magneto rotor for being on backwards. With the piston positioned at the top dead center, the crankshaft key must be at 1 o'clock position. The two rotor dentures need to be practically parallel with the two magneto arms. If it is not this way remove the rotor and turn it over.</b></p>
<p><b>Engine Does Not Reach Max. RPM</b></p>	<p><b>There are a few reasons this could be happening. Check for a clogged muffler and exhaust port. Check for any fuel restrictions, low compression, poor ignition spark, too much oil in gas. Try cleaning the carburetor jets and filter; as well as check for a possible crankcase leak or leaking oil seal.</b></p>
<p><b>Engine Has High RPM But Low Pulling Power</b></p>	<p><b>Check clutch gear wheel for worn or greasy clutch pads. Replace worn clutch pads and adjust as required.</b></p>
<p><b>Engine Idle Is Too Fast Or Too Slow</b></p>	<p><b>Adjust the idle screw air fuel mixture settings. Adjust the cable stroke slide valve adjustment at the top of the carburetor. NOTE: Some early made carburetors do not have this feature.</b></p>
<p><b>Engine Has High Pitched Squeal</b></p>	<p><b>Check for a bent clutch rod. Check your clutch adjustment.</b></p>
<p><b>Clutch Will Not Release</b></p>	<p><b>With the clutch engaged check for 1/16" slight free play on the left side of the engine clutch arm to insure correct adjustment. Remove the clutch cover on right side of the engine and check for possible stuck clutch plate or bent clutch rod.</b></p>
<p><b>Engine Will Not Spin Over When Clutch Lever Is Released While Pedaling</b></p>	<p><b>Clutch cable may be adjusted too tightly. Check for 1/16" free play in the clutch arm on the left side of the engine. When clutch is engaged the clutch arm on the left side of the engine should be setting in an approximate parallel line up with the side of the engine. Remove the clutch cover and check to see if the clutch plate is stuck open in the disengaged position.</b></p>