START UP
1. Always remove Tube(A) at the check valve first before fueling. The fuel tank is pressurized and you need to relieve the pressure first. Disconnect Tube(B) at the filter and fill the tank. Reconnect Tube(A) and (B).
2. From the fully closed (clockwise) position, turn the needle valves counter clockwise as follows.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Needle Valve</th>
<th>Intermediate Needle</th>
<th>Hover Needle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hover</td>
<td>1.75 open</td>
<td>1.75 -1.50</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>1.25 open</td>
<td>0.75 -0.50</td>
<td></td>
</tr>
<tr>
<td>Full</td>
<td>1.25 open</td>
<td>1.25 -0.75</td>
<td></td>
</tr>
</tbody>
</table>

3. Close the throttle to the idle position and connect the glow plug driver. The engine is now ready for starting.

BREAK-IN
It is not necessary to mount this engine on a stand for break-in. However, the engine should be adjusted slightly on the rich setting for the first few flights to ensure proper break-in. Always use a good quality fuel which contains 15 ~30% nitromethane and an oil content of 20 ~23% low viscosity oil.

NEEDLE VALVE ADJUSTMENT
1. Set needles as described in START-UP.
2. Start the engine and check idle. Adjust as needed.
3. Lift helicopter into a hover and check for the correct rotor RPM recommended by the kit manufacturer. Once this is done take note of the amount of smoke being produced by the muffler. The mixture is correct for hover when there is a steady stream of smoke being produced.
4. Land the helicopter for approximately 20~30 second Lift the helicopter into a hover again taking note of the transition from idle to hover. If the engine exhibits a large amount of smoke and the throttle response is sluggish, you will need to adjust the idle and/or hover needle leaner to achieve a smooth transition. If the engine detonates and the smoke is inconsistent or a small amount is produced, the mixture is too lean.
5. The high speed needle refines the fuel mixture for forward flights without affecting the hovering adjustment. After the engine is started and warmed up, lift off into a hover and check that the engine is running smoothly with a good trail of smoke. If everything is fine, open the throttle and enter forward flight. Take note of the amount of smoke like we did in a hover adjustment. It is correct when you see a noticeable steady smoke trail. Adjust the high-speed needle valve to obtain a slightly rich but consistent setting.

STopping THE ENGINE
1. Fully close the throttle barrel to stop the engine.
2. As soon as the engine stops running, be sure that a fuel line clamp is used in Tube(B) to prevent fuel from flowing into the engine.
3. On the final flight of the day, the fuel line clamp should be used to stop the engine in order to prevent rust and corrosion.

FUEL AND GLOW PLUG
We have found that the fuel and glow plugs listed below will give the best engine performance.

- Fuel: Powermaster 30% Special Heli Blend
- Cool Power 30% Special Heli Blend
- Glow Plug: YS #2 Enya #3 OS #8

IMPORTANT!
Silicone rubber is used in many parts of the YS engine. Use only glow fuel of methanol for cleaning. Gasoline and other volatile solutions will damage silicone if used.
WARRANTY
Strict quality control is implemented by our factory in all phases, from parts manufacturing to final assembly. If performance deteriorates or a part fails due to a manufacturing error, YS engine will repair or replace the engine at no charge in the period of one year from date of purchase. Warranty does not cover normal maintenance. Should the engine be modified, incorrectly assembled or abused, there will be a normal charge for parts and labor.

Specifications may be changed without prior notice. 2008 OCT