The AMAL carburettor company has designed this tuning guide to explain and simplify the procedures needed to tune your AMAL carburettor.

Simply follow the simple step by step instructions and use the wheel following steps 1 - 4 checking the reverse for the corrective action needed.

Working great in both colour and grey scale here’s your chance to own your own AMAL tuning guide.
**How To Tune Up**

**PHASES OF AMAL NEEDLE JET CARBURETTER**

**THROTTLE OPENINGS**

<table>
<thead>
<tr>
<th>Up to (\frac{1}{2}) open</th>
<th>(\frac{1}{2}) to (\frac{3}{4}) open</th>
<th>(\frac{3}{4}) to full open</th>
</tr>
</thead>
<tbody>
<tr>
<td>PILOT JET</td>
<td>THROTTLE CUT-AWAY</td>
<td>NEEDLE POSITION</td>
</tr>
<tr>
<td>2\textsuperscript{nd} &amp; 5\textsuperscript{th}</td>
<td>3\textsuperscript{rd}</td>
<td>4\textsuperscript{th}</td>
</tr>
<tr>
<td>1\textsuperscript{st}</td>
<td></td>
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</tbody>
</table>

**SEQUENCE OF TUNING**

**TUNE UP IN THE FOLLOWING ORDER:**

**NOTE:** The Carburetter is automatic throughout the throttle range - the air valve should always be wide open, except when used for starting or until the engine has warmed up. We assume normal petrols are used.

1. **1ST MAIN JET** with throttle in position 1. If at full throttle the engine runs ‘heavily’ the main jet is too large. If at full throttle, by slightly closing the throttle or air valve the engine seems to have better power, the main jet is too small. With a correct sized main jet the engine at full throttle should run evenly and regularly with maximum power. If testing for speed work ensure that the main jet size is sufficient for the mixture to be rich enough to keep the engine cool. To verify this examine the spark plug after taking the first run, declutching and stopping the engine quickly. If the plug body at its end has a cool appearance the mixture is correct, if sooty the mixture is rich. However if there are signs of intense heat, the mixture is too weak and a larger main jet is necessary.

2. **2ND PILOT JET** with throttle in positions 2 & 5. With engine idling too fast, with the twist grip shut off and the throttle shut down. (1) Screw out the throttle adjusting screw until the engine runs slower and begins to falter, then screw pilot air adjusting screw in or out to make engine run regularly and faster. (2) Now gently lower the throttle adjusting screw until the engine runs slower and just begins to falter, adjust the pilot air adjusting screw to get best slow running: If this 2nd adjustment makes the engine run too fast, go over the job again.

3. **3RD THROTTLE CUT-AWAY** with throttle in position 3. If, as you take off from idling position there is objectionable spitting from carburettor, slightly richen the pilot mixture by screwing the air screw sufficiently. If this is unafffective screw back again and fit throttle with a smaller cut-away. If the engine jerks under load and there is no spitting either the jet needle is too high or a larger cut-away is required to cure the richness.

4. **4TH NEEDLE** with throttle in position 4. Try the needle in the lower position, viz, with the clip in the groove at the top. If acceleration is poor and with air valve partially closed results are better, raise the needle by two grooves if this proves too much try lowering needle by one groove. If mixture is still too rich with clip in groove No.1, the needle jet probably wants replacing due to wear. If the needle itself has had several years use, replace this also.

5. **5TH FINALLY** go over the idling again for final touches.

**STEP**

Turn Wheel following steps 1 - 4. Check reverse side for corrective action. Repeat idle setting for final touch.

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1. Make sure that your printer is set to double sided Print. Alternatively print side A then print side B on the reverse side.

2. Carefully cut out Tuning Guide

3. Using a pin fasten the wheel to the marked point making sure that the numbered side is on the inside and the corrective actions are visible through the cut out window.

Carefully cut out Tuning Guide

Make sure that your printer is set to double sided Print. Alternatively print side A then print side B on the reverse side.

Insert Pin Through Here

Side B