Standard Model - Starting Circuit

WB Operating Functions

2. Fuel Inlet: Fuel drawn from tank.
4. Inlet Valve: Opens on demand from fuel pump.
6. Outlet Check Valve: Forced open by pump pressure.
7. Filter Screen: Filters fuel.
8. Check Valve: Closes air passage at starting position.
10. Inlet Needle Valve: Lifts off seat to allow fuel entry.
12. Metering Lever Spring: Transmits force to metering lever.
13. Metering Diaphragm: Drawn up by vacuum to activate metering lever.
15. Metering Chamber: Fuel reservoir feeds to idle and nozzle holes.
17. Nozzle Well: Fuel is drawn in from metering chamber at high speed.
18. Idle Needle: Adjusts for fuel richness to 3 idle holes.
21. Primary Idle Hole: Only fuel source to engine at idle position.
22. Second Idle Hole: Allows additional fuel flow on acceleration.
23. Third Idle Hole: Increases fuel flow at part throttle.
26. Throttle Valve: Regulates engine speed as it exposes primary, second, and third idle holes, then nozzle for fuel delivery.
27. Venturi: Increases air velocity at nozzle, creating a suction to draw fuel into throttle bore passage to engine intake.
**Standard Model - High Speed Circuit**

**Needle Settings**

The power and idle needles control the lubrication received by the engine. Adjustments should be done carefully. Start by turning the needles all the way in (do not force them). Set Power (high speed) needle 1/4 turn open and the idle (low speed) needle 1 1/2 turns open. This puts both slightly on the rich side and leaner adjustments can be made as needed. (Too lean an adjustment can cause improper lubrication.)

**Trouble Shooting Guide**

1. **Fuel Source** - In-tank filter, lines, fittings — check for leaks or obstructions, venting and air filter.

2. **Choke and Throttle** - Check mechanical linkage and sebace - Look for ice, kinks, etc.

3. **Basic Adjustments** - Idle and Main needles, 1/4 turn off seat - Tune from rich side by 1/8 turn, gradually, leaning the mixture. **CAUTION**: Excessive lean mixture can damage the engine.

4. **Ignition** - Spark plugs - Change if back-fire or preignition - when timed correctly, white plugs mean fuel is too lean, black - too rich, chocolate brown = normal.

5. **Fuel Mixture** - Use 16 to 1 or as recommended by engine manufacturer.

6. **Tighten all screws on the carburetor** - tighten all mounting bolts - check for cracks or leaks at flanges and manifolds.

**NEEDLE SETTINGS**

- **[L] Idle**
- **[H] High Speed**

ONE TURN

**NEEDLE ADJUSTMENTS**

- **Hi-Lo**
- **Richer**
- **Leaner**

**COLOR GUIDE**

- **Red**: Fuel
- **Blue**: Air
- **Yellow**: Crankcase Impulse Air

**TIGHTEN ALL SCREWS**

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Service Procedure
for Flooded Carburetors

<table>
<thead>
<tr>
<th>CAUSE</th>
<th>REMEDY</th>
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<tbody>
<tr>
<td>1</td>
<td>Metering Lever set too high</td>
</tr>
<tr>
<td>2</td>
<td>Dirt under Inlet Needle Valve</td>
</tr>
<tr>
<td>3</td>
<td>Circuit Plate and Gasket leaking</td>
</tr>
<tr>
<td>4</td>
<td>Metering Lever Spring not seated on dimple in Metering Lever</td>
</tr>
<tr>
<td>5</td>
<td>Fuel Pump Diaphragm leaking</td>
</tr>
</tbody>
</table>

Service Procedure
for Lean Carburetors

<table>
<thead>
<tr>
<th>CAUSE</th>
<th>REMEDY</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Dirt in idle Main Channels</td>
</tr>
<tr>
<td>2</td>
<td>Metering Lever set too low</td>
</tr>
<tr>
<td>3</td>
<td>Hole in Metering Diaphragm</td>
</tr>
<tr>
<td>4</td>
<td>Pulse line from Crankcase to carburetor plugged</td>
</tr>
<tr>
<td>5</td>
<td>Leaky Manifold Gaskets</td>
</tr>
<tr>
<td>6</td>
<td>Leaky Nozzle Check Valve</td>
</tr>
<tr>
<td>7</td>
<td>Fuel Pump Diaphragm Check valves worn</td>
</tr>
<tr>
<td>8</td>
<td>Dirty Fuel Inlet Screen</td>
</tr>
<tr>
<td>9</td>
<td>Faulty Fuel Delivery System to carburetor</td>
</tr>
</tbody>
</table>

TIGHTEN ALL SCREWS

WALBRO CORPORATION
CASS CITY, MICHIGAN
WB Maintenance Instructions

Before Disassembly

Clean the outside of the carburetor of all dirt and foreign material and clear a working area for disassembly.

Disassemble the Following Part in Sequence

1. Four Fuel Pump Cover Screws
2. Fuel Pump Diaphragm and Gasket
3. Inlet Screen
4. Four Metering Diaphragm Cover Screws
5. Metering Diaphragm, being careful to unhook it from Metering Lever
6. Metering Lever Pin Screw
7. Metering Lever & Inlet Needle
8. Two Flat Headed Screws
9. Circuit Plate
10. Diaphragm & Gasket

Wash all component parts with clean gasoline and blow off with compressed air.

Reverse the above for assembly.

If the choke friction spring and ball, or the choke shaft or valve need replacing, remove choke valve from the shaft. With your finger, cover the hole through which the choke shaft can be seen. Then pull out the shaft. Remove the ball and the spring from the hole. The choke friction ball should be perfectly round. If the throttle shaft is to be replaced, remove the screw and the throttle valve (butterfly); also the screw and the throttle stop. Pull the throttle shaft and lever assembly out of the carburetor body. Do not lose the throttle-return spring.

INSPECTION: For best results, first soak all the metal parts in a regular fuel mix, not a “carburetor cleaner solution”.

Examine the inlet needle, lever and spring, looking for needle wear at the tip and also at the lever contact area. Replace worn parts.

Cracked gaskets, and torn, frayed or porous diaphragms must be replaced. It is best to replace all the gaskets and diaphragms. The carburetor is not repairable if it has a damaged or worn-out main jet, inlet needle valve seat, or a damaged body casting.

ADJUSTING THE METERING LEVER

With metering diaphragm cover (4 screws), metering diaphragm, and gasket removed:

1. Make sure the metering lever spring is seated in its hole in the chamber floor and under the dimple in the metering lever.
2. Place a straight-edge across carburetor body casting, as illustrated. Metering lever should be 3/64 to 1/16 below straight-edge. Slight pressure will bend needle valve end up or down.
3. Gasket must be assembled next to body as shown.
4. Special care should be taken to make sure that the metering lever is assembled to the hook on the diaphragm and the inlet valve to prevent malfunctioning of the carburetor.