SDC Operating Functions

1. Engine Impulse: Actuates Fuel Pump Diaphragm No. 5.
4. Inlet Valve: Opens on demand from Fuel Pump.
6. Outlet Check Valve: Forced open by pump pressure.
7. Filter Screen: Filters fuel.
8. Choke Valve: Closes air passage at starting position.
10. Inlet Needle Valve: Lifts off seat to allow fuel entry.
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: Adjust 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.
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.
Trouble Shooting Guide

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

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

3. Adjustments - Idle and Main needles, 1 turn off seat - Tune from rich side by 1/16 turn, gradually.

4. Ignition - Spark plugs - Change if back-fire or preignition is a problem.

5. Fuel Mixture - Use 18 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

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 one (1) turn open and the idle (low speed) needle one (1) turn 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.)
Service Procedure for Flooded Carburetors

CAUSE
1. Metering lever set too high
2. Dirt under Inlet Needle Valve
3. Welch Plugs leaking
4. Metering Lever Spring not seated on dimple in Metering Lever
5. Fuel Pump Diaphragm leaking

REMEDY
See adjusting meter lever page 6
Remove and clean
Replace, being careful not to damage ports when removing plugs
Remove lever and re-install spring
Remove and replace with new diaphragm

Service Procedure for Lean Carburetors

CAUSE
1. Dirt in Idle Main Channels
2. Metering Lever set too low
3. Hole in Metering Diaphragm
4. Pulse line from Crankcase to carburetor plugged
5. Leaky Manifold Gaskets
6. Leaky Nozzle Check Valve
7. Fuel Pump Diaphragm Check valves worn
8. Dirty Fuel Inlet Screen
9. Faulty Fuel Delivery System to carburetor
10. Leaky Accelerator Pump Diaphragm

REMEDY
Disassemble carburetor & clean
See adjusting meter lever page 6
Replace Diaphragm
Remove obstruction
Replace Gaskets
Replace Check Valve with Kit
Replace Fuel Pump Diaphragm
Remove Fuel Pump Cover & Clean
Check complete Fuel Delivery System from Pickup in Fuel Tank to carburetor Fuel Inlet for cracks, dirt, etc. Replace fuel line or Pickup Filter when necessary
Replace Diaphragm

TIGHTEN ALL SCREWS

WALBRO CORPORATION
CASS CITY, MICHIGAN
SDC 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. Four Metering Diaphragm Cover Screws
4. Metering Diaphragm, being careful to unhook it from Metering Lever
5. Metering Lever Pin Screw
6. Metering Lever & Inlet Needle
7. Main & Idle Needles
8. Main & Idle Welch Plugs
9. Throttle Shaft Retaining Ring
10. Throttle Valve
11. Throttle Shaft & Return Spring

For Accelerator Pump version the above operations plus the following must be done:
12. Accelerator Pump Screws & Cover
13. Accelerator Pump Diaphragm
14. Accelerator Pump Spring

Wash all component parts with clean gasoline and blow off with compressed air, being SURE compressed air is not blown through nozzle check valve & screen. This will damage the small rubber valve under the Check Valve Seat & Screen Assembly.
Reverse the above for assembly.

ADJUSTING THE METERING LEVER

Metering lever should just touch straight edge.

With metering diaphragm cover (4 screws) and metering diaphragm 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 short straight-edge across two bosses on chamber floor as illustrated. Metering lever should just touch the straight-edge. Slight pressure will bend needle valve end up or down.
3. Gasket must be assembled next to the body.
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.