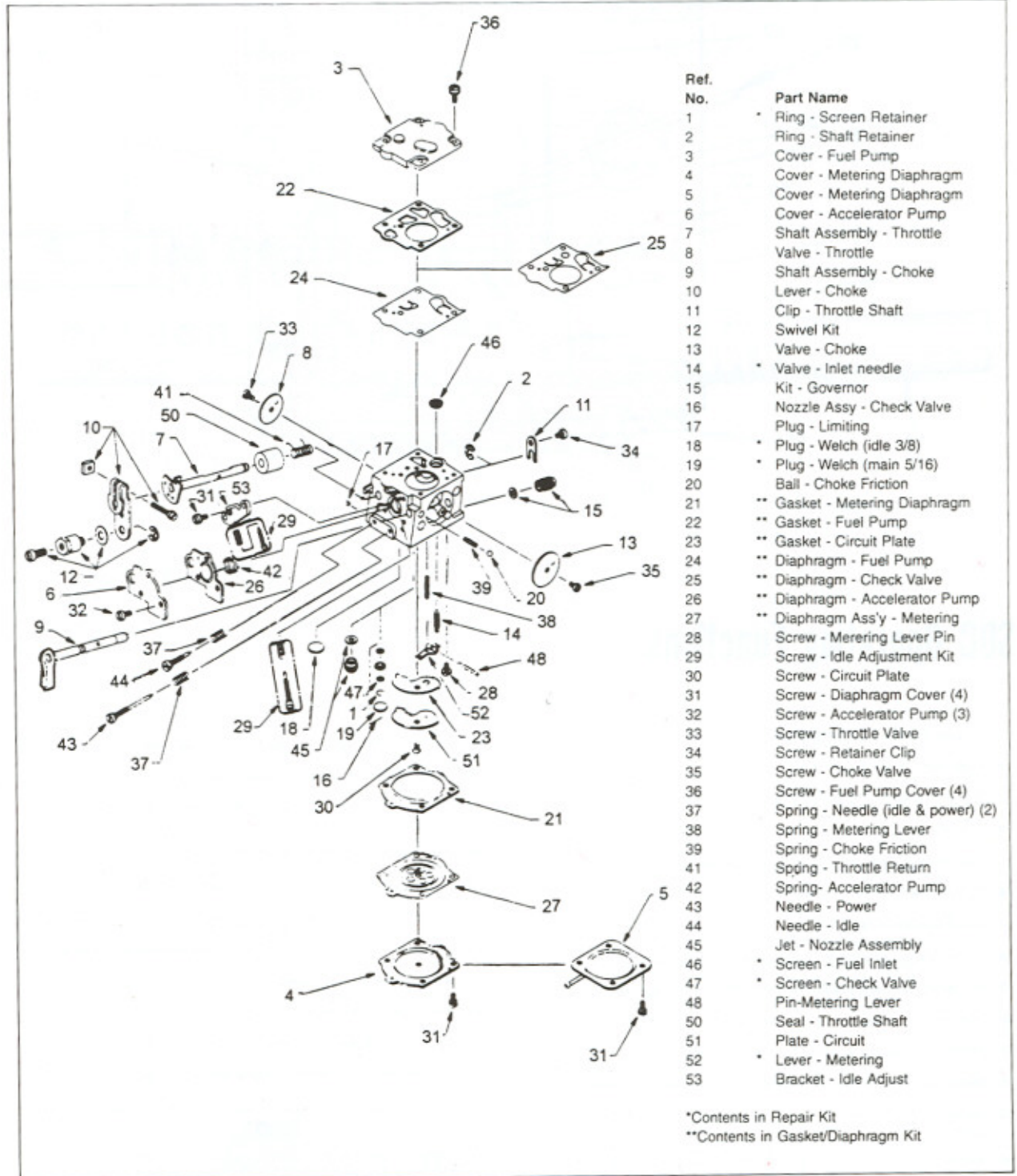
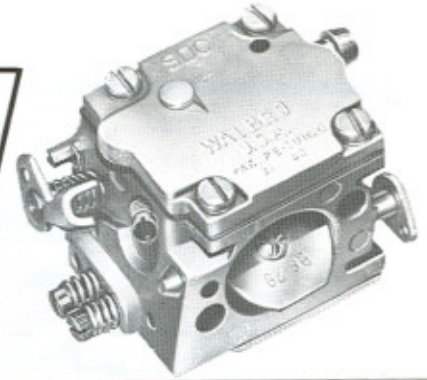
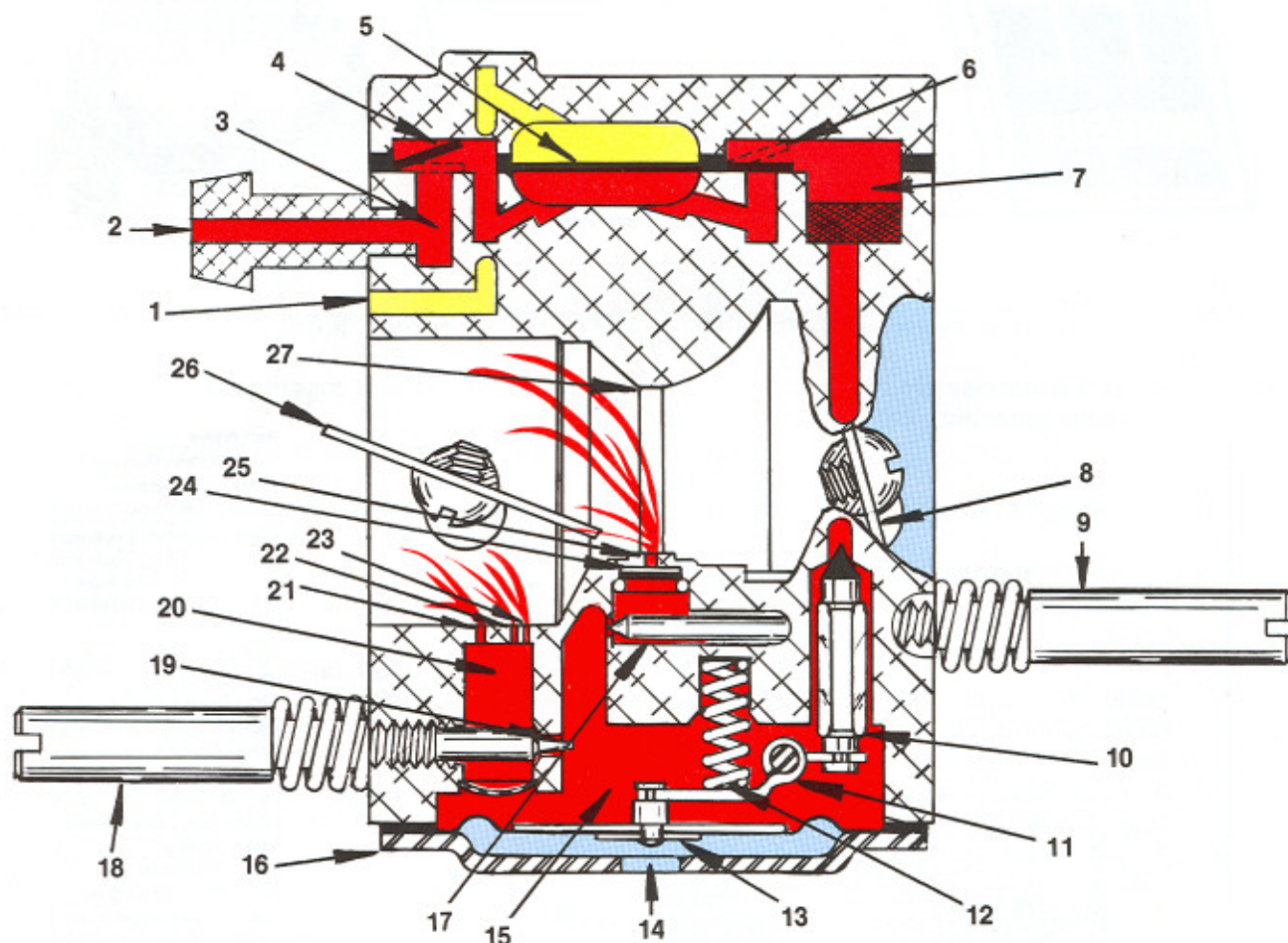




CHAIN SAW CARBURETOR STANDARD MODEL SERVICE MANUAL



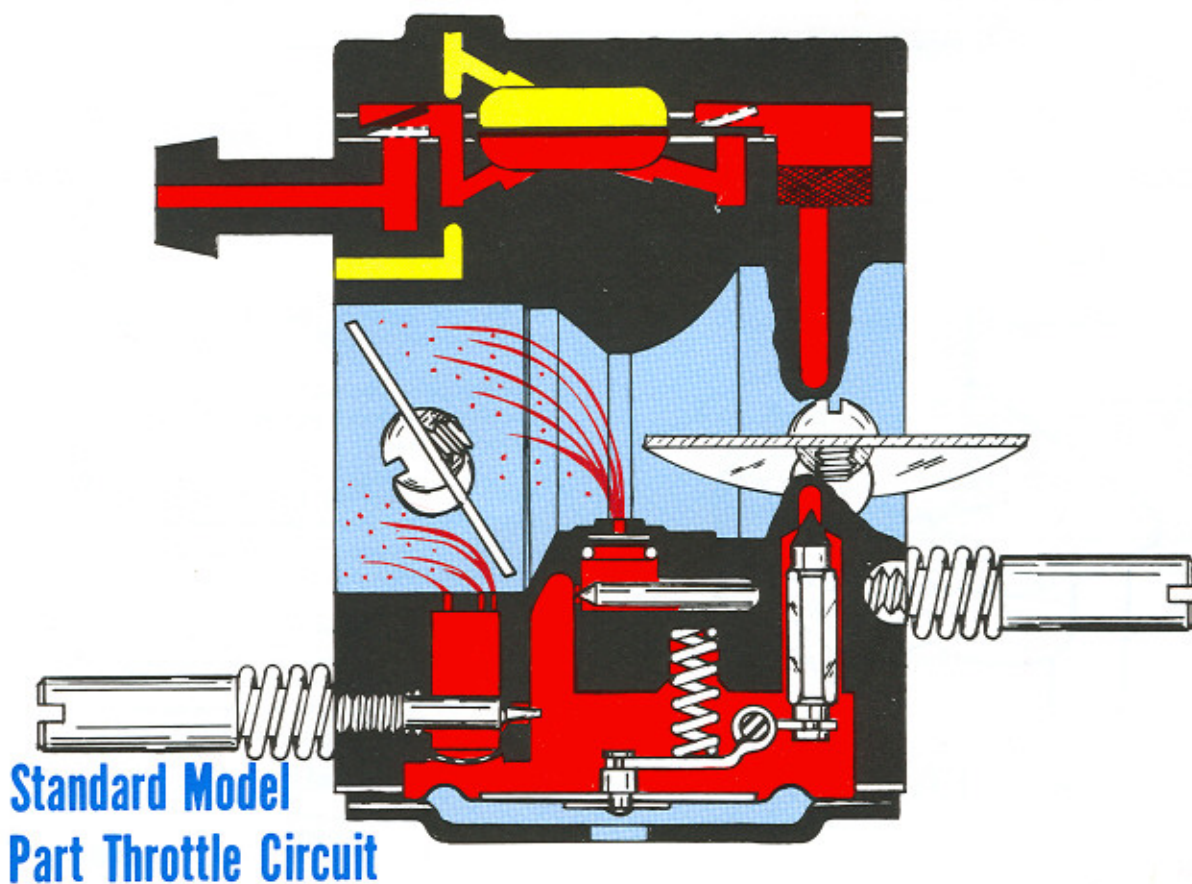
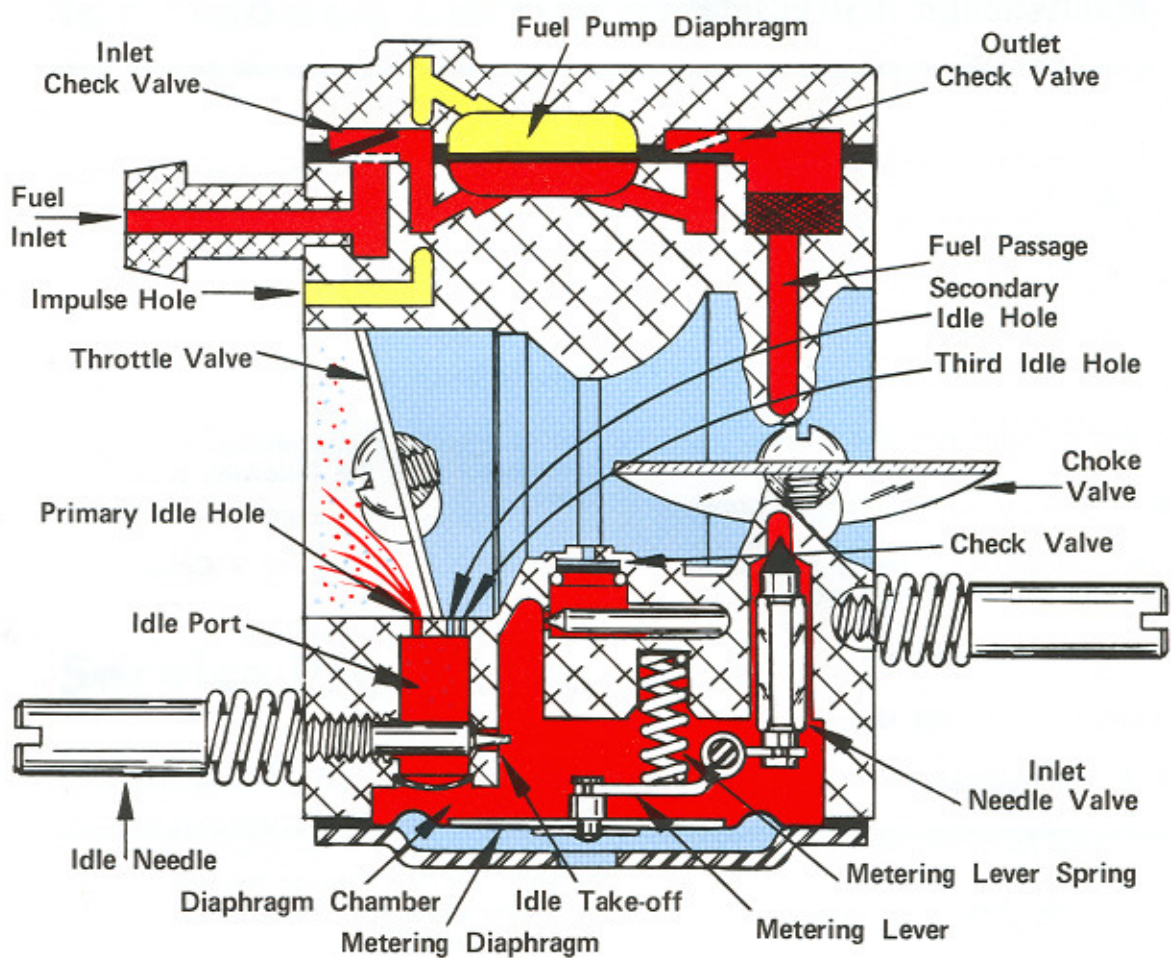
Standard Model Starting Circuit



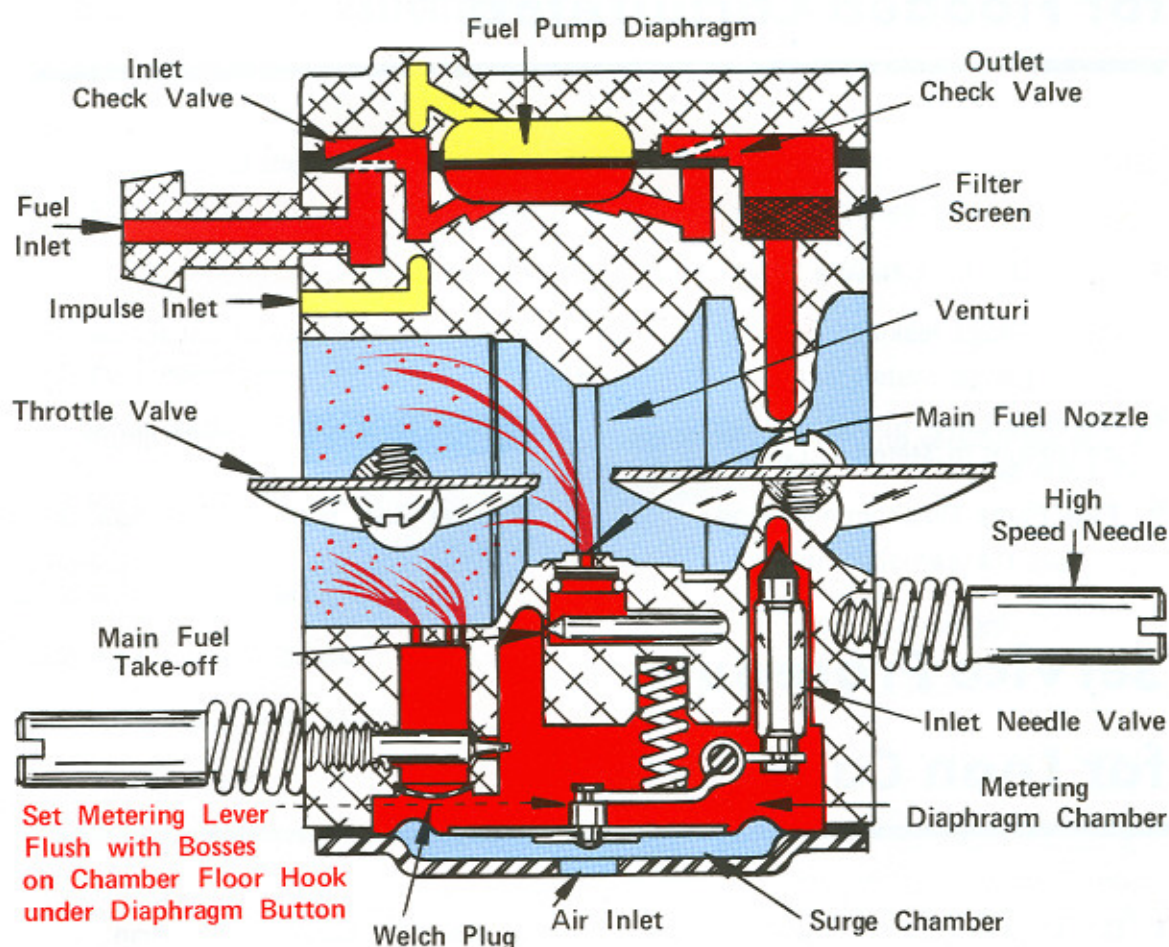
SDC Operating Functions

- | | |
|---|--|
| 1 Engine Impulse: Actuates Fuel Pump Diaphragm No. 5. | 15 Metering Chamber: Fuel reservoir, feeds to idle and nozzle holes. |
| 2 Fuel Inlet: Fuel drawn from Tank. | 16 Cover: Protects Metering Diaphragm. |
| 3 Surge Chamber: Dampens Fuel Flow. | 17 Nozzle Well: Fuel is drawn in from Metering Chamber at high speed. |
| 4 Inlet Valve: Opens on demand from Fuel Pump. | 18 Idle Needle: Adjust for fuel richness to 3 Idle holes. |
| 5 Fuel Pump: Responds to engine impulse force. | 19 Idle Take-off: Fuel entry for Idle and Part Throttle holes. |
| 6 Outlet Check Valve: Forced open by pump pressure. | 20 Idle Port: Fuel reservoir for Idle and Part Throttle holes. |
| 7 Filter Screen: Filters fuel. | 21 Primary Idle Hole: Only fuel source to engine at Idle position. |
| 8 Choke Valve: Closes air passage at starting position. | 22 Second Idle Hole: Allows additional fuel flow on acceleration. |
| 9 Hi Speed Needle: Adjust for fuel richness at high speeds. | 23 Third Idle Hole: Increases fuel flow at Part Throttle. |
| 10 Inlet Needle Valve: Lifts off seat to allow fuel entry. | 24 Nozzle Check Valve: Engine vacuum draws valve open. |
| 11 Metering Lever: Lifts Inlet Needle off seat. | 25 Nozzle: Increases fuel discharge for high speeds. |
| 12 Metering Lever Spring: Transmits force to Metering Lever. | 26 Throttle Valve: Regulates engine speed as it exposes Primary, Second and Third Idle holes, then Nozzle for fuel delivery. |
| 13 Metering Diaphragm: Drawn up by vacuum to activate Metering Lever. | 27 Venturi: Increases air velocity at Nozzle, creating a suction to draw fuel into Throttle Bore passage to engine intake. |
| 14 Atmospheric Vent: Allows air pressure against Metering Diaphragm. | |

Standard Model Idle Speed Circuit



Standard Model High Speed Circuit



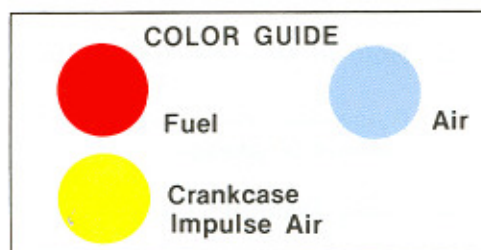
Trouble Shooting Guide

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 1/8 turn, gradually.
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.

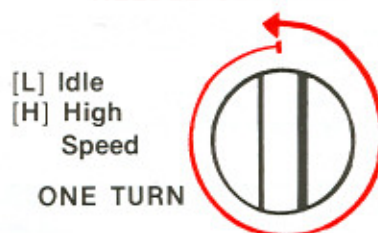
TIGHTEN ALL SCREWS

NEEDLE SETTINGS

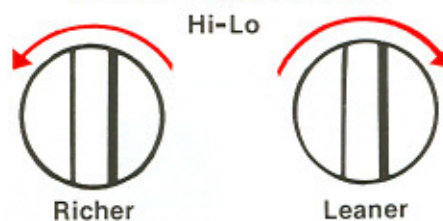
The power and idle needles control the lubrication received by the engine. Adjustments should be done carefully. Start by turning the needles all the way in (do not force them). Set Power (high speed) needle one (1) turn open and the idle (low speed) needle one (1) turn open. This puts both slightly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



NEEDLE SETTINGS



NEEDLE ADJUSTMENTS



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



Walbro
Engine Management
Aftermarket Division

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.

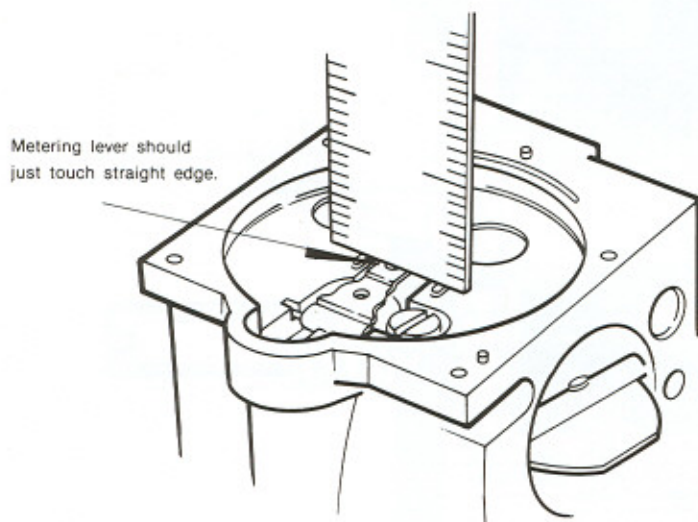
Disassemble the Following Part in Sequence

- | | |
|---|---|
| 1. Four Fuel Pump Cover Screws | 11. Throttle Shaft & Return Spring |
| 2. Fuel Pump Diaphragm and Gasket | For Accelerator Pump version the above operations plus the following must be done: |
| 3. Four Metering Diaphragm Cover Screws | 12. Accelerator Pump Screws & Cover |
| 4. Metering Diaphragm, being careful to unhook it from Metering Lever | 13. Accelerator Pump Diaphragm |
| 5. Metering Lever Pin Screw | 14. Accelerator Pump Spring |
| 6. Metering Lever & Inlet Needle | |
| 7. Main & Idle Needles | |
| 8. Main & Idle Welch Plugs | |
| 9. Throttle Shaft Retaining Ring | |
| 10. Throttle Valve | |

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



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.