PRESSURE FEED CARBURETOR (TILLOTSON TYPE)

A. General Description

Fuel is pumped into the float bowl under pressure. Fuel enters at the top of the carburetor float bowl. The primary lever should be 13/32" ± 1/64" from top of float bowl cover shoulder. Measure by inverting cover.

B. Fuel Level

Fuel level is approximately correct when 11/16" below bowl rim. Float is positioned on valve stem. A level, constantly higher than normal, requires careful valve and seat cleaning or replacement. To replace inlet valve and seat assembly, see "Disassembly", following.

Before starting engine, check for proper fuel supply in tank and make preliminary high and slow speed mixture adjustments.

Disassembly, Pressure Feed

If carburetor foams through air vent in float bowl cover, it is due to an air leak. If engine runs lean after proper adjustment of main adjustment screws, it may be due to clogged screen in top of carburetor float bowl cover beneath elbow. Complete the following for disassembly:

1. Remove float bowl cover, lower (primary) float lever pin and lever, allowing upper (secondary) lever to be pivoted back.
2. Remove inlet needle (loose) and seat (right hand thread) with screwdriver or 3/8" socket wrench, depending upon motor model.
   NOTE: A leaking needle and seat would cause hard starting after engine was stopped.
3. Remove float by tipping carburetor upside down.
4. Remove idle restriction tube. Motors with volumetric controlled idle adjustment (adjusts both air and fuel) have a plug over top which must first be removed with screwdriver.
5. Remove welch plug over idle by-pass chamber with sharp center punch, driving welch plug through, and pry off.
6. Remove shutter by removing screw and lockwasher which hold shutter to throttle shaft. Pull shaft out from top, then remove return spring and throttle shaft.
7. Remove lead plugs with sharp center punch.

Cleaning Carburetor

1. Insert proper size drill, held in a pin vise (tool to hold extremely small drills, in passages). (Refer to Carburetor Drill Chart, following.) Be sure that passages are clean and free of restrictions which impair operation.
2. Place carburetor body in a carburetor cleaning solution for a short period of time to remove all dirt, gum and varnish which may have accumulated. Carburetor cleaners are available through automotive supply stores.
3. After removing carburetor from cleaning solution, rinse thoroughly in clean solvent and blow off with compressed air. Be sure to blow through all passages, orifices and nozzles.

Reassembly, Pressure Feed

1. Check float for deterioration, saturation and loss of sealer.
2. Place float in float bowl on top of float needle.
3. Screw needle seat (nylon or neoprene) in place. Set needle in seat with upper (secondary) float lever over pin.
4. Replace lower (primary) lever and pin.
   (Note in reference to inverted assembled float bowl cover: Primary lever should gauge 13-32" [plus or minus 1/64"] from face of shoulder. Bend primary lever to get correct dimension, as shown in Figure 6. Be sure needle does not stick in seat. Tip until upright, and needle should move freely on actuating lower [primary] lever.)
5. Install new gasket and fasten cover to bowl. Replace idle restriction tube. Check for correct size and full passage on volumetric control carburetors.
6. Replace cover plug.
7. Replace throttle shaft in the following manner:
   a. Insert shaft in body (slot in bottom).
   b. Place shutter in position and secure with screw and lockwasher.
   c. Replace throttle return stop lever and screw.
   d. Place return spring in position so that throttle shutter will close from spring tension.
   e. Replace discharge nozzle cleanout hole screw (or lead shot).
   f. Replace lead shot removed from passages and welch plug over idle by-pass.
   g. Replace idle adjustment screw and spring.
8. Replace packing in packing gland, packing gland nut and high speed adjustment screw.

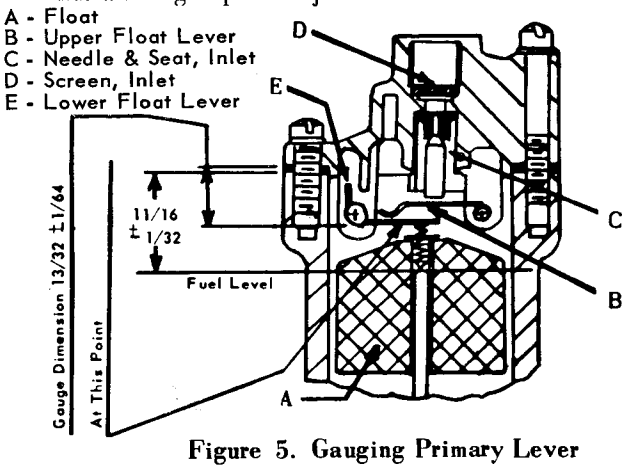

Figure 5. Gauging Primary Lever