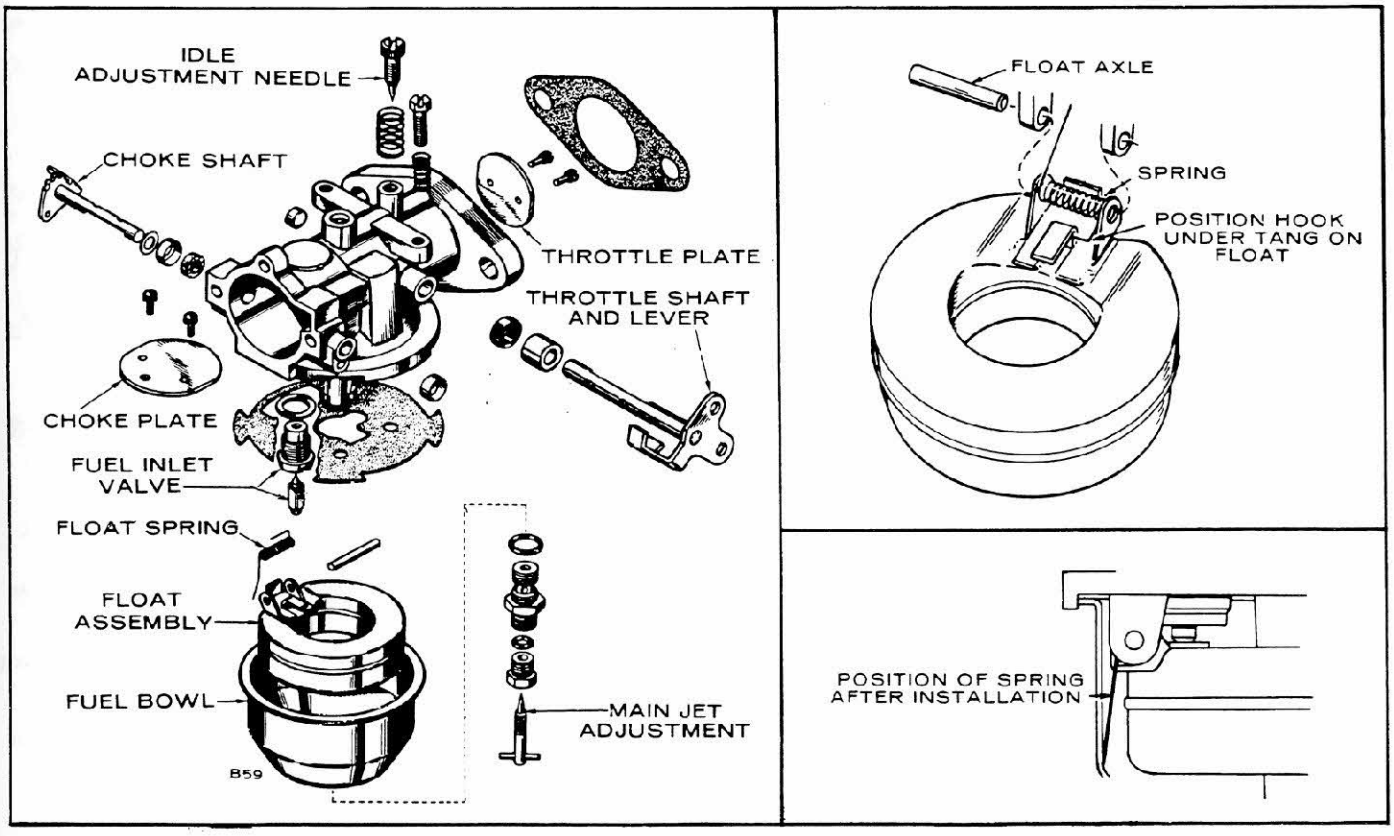

FIGURE 8a. SIDEDRAFT CARBURETOR ASSEMBLY

4. Check the condition of any needle valve not included in repair kit and replace if damaged (Figure 8b). Replace float if loaded with fuel or damaged.
5. Check the choke and throttle shafts for excessive play in their bore, and replace if necessary.
6. Replace old components with new parts included in repair kit.

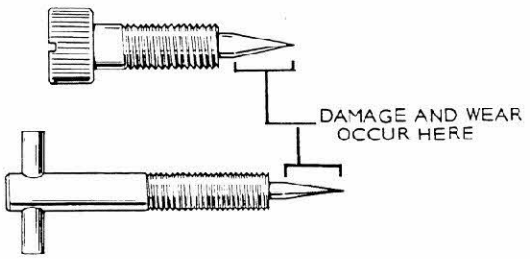

FIGURE 8b. MIXTURE NEEDLE INSPECTION

Reassembly and Installation

1. Install needle valve and seat, fuel bowl gasket, and float assembly. Make sure that all clips and springs are properly placed and that the float moves freely without binding. Check float level and adjust as necessary (see *Float Level Adjustment*).
2. Rejoin upper and lower carburetor sections on downdraft carburetors — fuel bowl and upper carburetor body on sidedraft models.

WARNING ***Fuel leakage is a fire and explosion hazard that might cause severe personal injury or death. Use care when reassembling carburetor. All parts must align perfectly or carburetor will leak fuel.***

The float spring on Zenith sidedraft carburetors rides on the inner face of the fuel bowl. Be sure to catch the end of the spring when reinstalling the bowl (Figure 8a).

3. Slide in throttle shaft and install throttle plate, using new screws if furnished in repair kit. Before tightening the screws, the plate must be centered in the bore. To do so, back off the throttle stop screw as necessary and completely close the throttle lever. Seat the plate by tapping with small screwdriver, then tighten screws. Install the choke shaft and plate in the same manner.
4. Install main and idle mixture screw assemblies. Turn in screws until lightly seated and then out the number of turns specified.

CAUTION ***Forcing the mixture adjustment screws tight will damage the needle and seat. Turn in only until light tension is felt.***

5. Reinstall carburetor on engine and connect fuel lines, linkages, and wires.
6. Reset mixture screws according to directions given earlier in this section. Install air cleaner adapter, where used, and air cleaner.

FUEL PUMP TEST

Test the fuel pump by checking the pump outlet pressure. Use the following procedure.

1. Remove the fuel line from the pump outlet and install a pressure gauge.
2. Press the START switch and hold it for several seconds until pressure reading is constant.
3. Pressure reading should be 2-1/2 to 3-1/4 psi (17.2 to 22.4 kPa). If the retension is good, the pressure should stay constant or drop off very slowly.

A low pressure reading with little or no pressure drop indicates a weak or broken diaphragm or diaphragm spring, worn linkage or leaky check valves. If pressure is above maximum, the pump diaphragm is too tight or the diaphragm (or plunger) return spring is too strong. Any of the above conditions are cause for repair or replacement of the pump.

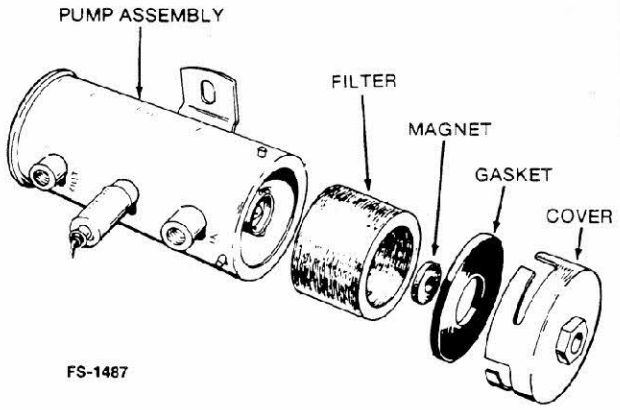

FIGURE 9. REMOVAL OF MAGNET AND FILTER

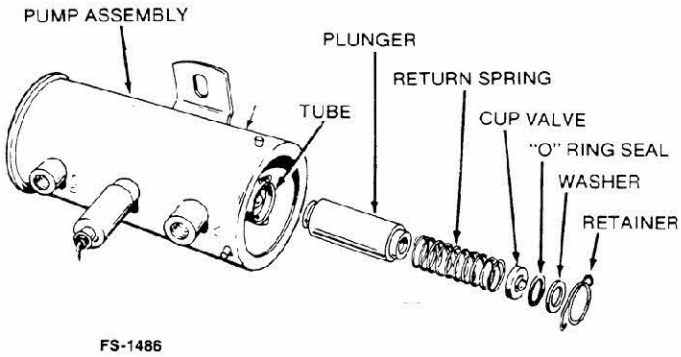

FIGURE 9a. REMOVAL OF PLUNGER ASSEMBLY

ELECTRIC FUEL PUMP

The Facet and Bendix pumps incorporate a hollow stainless steel plunger in a brass cylinder. The plunger has no gland or seal, but is freely fitted. The fluid being pumped provides the seal by filling the small clearance between the plunger and cylinder. Energizing the pump's electric solenoid pulls the plunger downward, compressing the return spring. When the solenoid is de-energized, the return spring drives the plunger back, delivering fuel to the pump outlet.

WARNING ***Do not substitute automotive type electric fuel pumps for standard Onan supplied electric pumps. The output pressure is much higher and can cause carburetor flooding or fuel leakage, creating a fire hazard.***

Fuel Pump Repair

Service of the Facet pump is limited to the bottom cover, filter, plunger tube, and plunger assembly. All parts of the electric system are hermetically sealed in a gas atmosphere and are not serviceable. If electrical failure occurs, replace the pump.

CAUTION ***Do not tamper with the seal at the center of the mounting bracket on the side of the pump as it retains the dry gas which surrounds the electrical system. Electrical system components are not serviceable.***

Use the following procedure for servicing the pump:

1. Using a 5/8-inch wrench, loosen, the pump cover, then remove by hand.
2. Remove the filter, magnet and cover gasket (Figure 9).
3. Using a thin nose pliers, remove the retainer spring from the plunger tube. Remove the washer, O-ring seal, cup valve, plunger spring and plunger from tube (Figure 9a).
4. Wash all parts (except gasket and seal) in parts cleaning solvent. Blow out solvent and dirt with low pressure compressed air. Slosh the pump assembly in cleaning solvent, blow dry and swab the inside of the plunger tube with a cloth wrapped around a stick. If the plunger does not wash clean or has rough spots, gently clean the surface with crocus cloth.

WARNING ***Most parts cleaning solvents are flammable and could cause serious personnel injury if used improperly. Follow the manufacturer's recommendations when cleaning parts.***

5. Insert plunger in tube, buffer spring end first. Check fit by slowly sliding the plunger back and forth in the tube. It should move fully without any tendency to stick. If a click cannot be heard as the plunger is slid from one end to the other, the internal pump assembly is not functioning properly and the pump should be replaced.
6. Install plunger spring, cup valve, O-ring seal and washer. Compress the spring and install the retainer with ends in the side holes of the tube.
7. Check cover gasket and replace if deteriorated. Place cover gasket and magnet in the bottom cover and install filter and cover assembly on pump. Twist cover on by hand and tighten securely with a 5/8-inch wrench.