SECTION 6C6
DIESEL FUEL INJECTION

CONTENTS

GENERAL DESCRIPTION

FUEL SYSTEM

The 6.2 liter diesel engine fuel system is composed of:

- Fuel tank.
- Mechanical fuel pump.
- Fuel filter with heater and water sensor.
- Injection distributor pump.
- High pressure lines.
- Fuel injection nozzles.
- Filer restriction switch.

Fuel is pulled from the fuel tank by the Mechanical pump which is located on the right side of the engine. It is driven by an eccentric lobe on the camshaft through a push rod. Fuel is then pumped through the filter mounted on front of dash on CK models and under the rear of air cleaner on GP models. The filter removes foreign material which could damage the injection pump or clog the injector nozzle. From the filter, the fuel is pumped to the injection pump.

The 6.2 liter injection pump is mounted on top of the engine under the intake manifold. It is gear driven by 2 gears -- one attached to the front end of the camshaft which drives the second gear that is attached to the end of the injection pump shaft. These 2 gears are the same size and have the same number of teeth; thus, the injection pump shaft turns at the same rate as the camshaft and one-half the speed of the crankshaft. The pump will turn in the opposite direction to that of the camshaft and crankshaft.

The injection pump is a high pressure rotary type pump that directs a metered pressurized fuel through the high pressure tubes to the eight injector nozzles. The eight high pressure lines are all the same length although their shape may be different. This prevents any difference in timing, cylinder to cylinder.

WATER IN FUEL

The diesel engine has a water in fuel warning system allowing the user to guard against water in fuel, which is very critical in diesel engines.

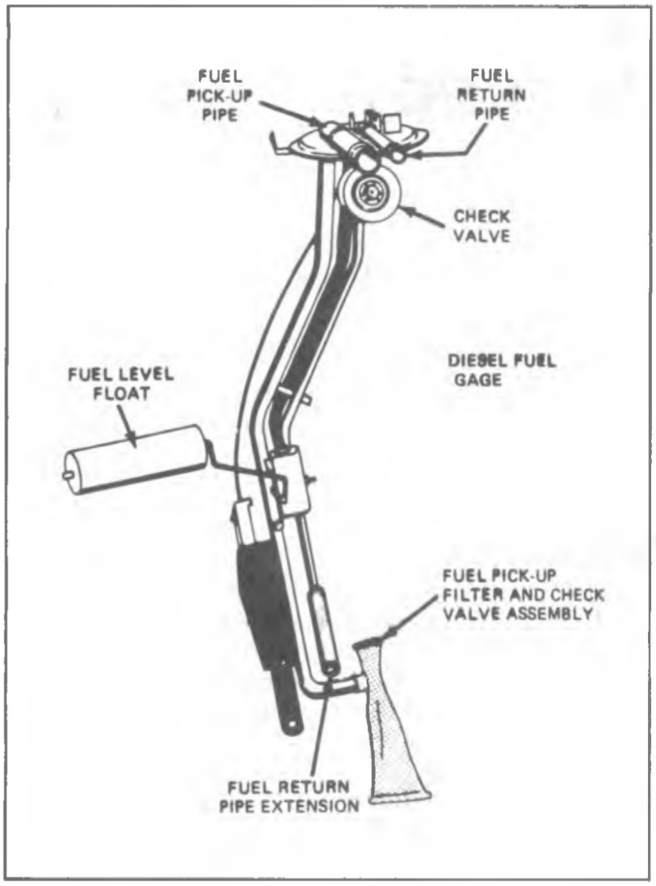

Fig. 6C6-2--Sending Unit

REPLACEMENT FUEL FILTER

The fuel filter on CK models is located on the front of dash.

The fuel filter on G-Van models is mounted on the rear of the inlet manifold under the air cleaner and is accessible by removing the engine cover.

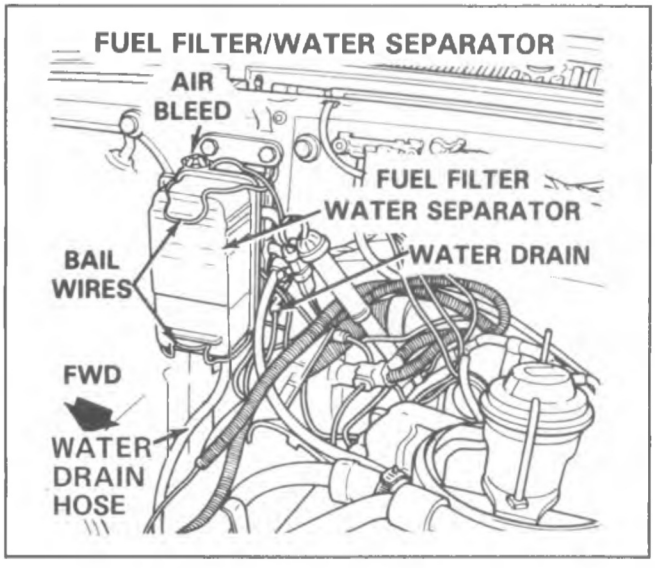

Fig. 6C6-3--Fuel Filter-CK Truck

The fuel filter is easily removed and installed with the use of a screwdriver. To prevent fuel spillage -- drain fuel from the filter by opening both the air bleed and water drain valve allowing fuel to drain out into an appropriate container.

Removal

1. Remove fuel tank cap. This releases any pressure or vacuum in the tank.
2. Disengage both bail wires with a screwdriver.
3. Remove the filter.
4. Clean any dirt off the fuel port sealing surface of the filter adapter and the new filter.
5. Install the new filter -- snap into position with bail wires.
6. Close the water drain valve -- and open the air bleed. Connect a 1/8" I.D. hose to the air bleed port and place the other end into a suitable container.
7. Disconnect fuel injection pump shut off solenoid wire.
8. Crank engine for 10-15 seconds and then wait one minute for the starter motor to cool. Repeat until clear fuel is observed coming from the air bleed.

   NOTICE: If engine is to be cranked, or starting attempted with the air cleaner removed, care must be taken to prevent material from being pulled into the air inlet manifold which could result in engine damage.
9. Close the air bleed, reconnect the injection pump solenoid wire and replace fuel tank cap.
10. Start engine and allow it to idle for 5 minutes.
11. Check fuel filter for leaks.

IDLE SPEED SETTING PROCEDURE (FIGS. 6C6-5 and 6C6-6)

1. All idle speeds are to be set within 25 RPM of specified value.
2. Set parking brake and block drive wheels.
3. Engine must be at normal operating temperature.

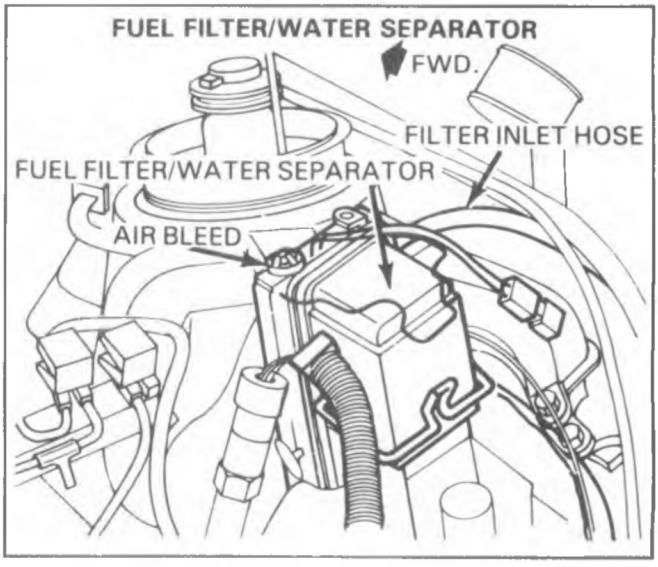

Fig. 6C6-4--Fuel Filter G Van