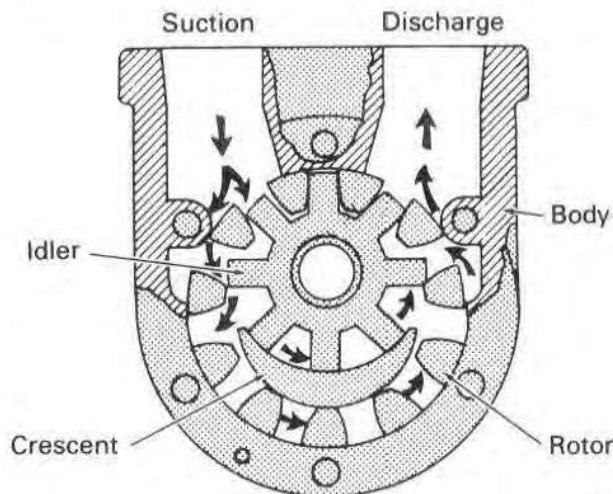


16522

Fig. 11-13 – Fuel Pump Installation

rotation be reversed, there will be a pressure on the seal which will force the seal off its seat as the pump pressure increases.

The pump is an “internal” gear type, Fig. 11-14. Fuel is drawn into the inlet portion to fill a space created by the gear teeth coming out of mesh. The fuel is then trapped in the space between the gear teeth and carried to the outlet side of the pump. There the gears mesh, which forces the fuel from between the gear teeth to flow through the outlet.



16546

Fig. 11-14 – Fuel Pump Operation

The seal is a device to prevent leakage between the stationary pump body and the rotating drive shaft. This is done by providing a perfectly smooth surface on the pump body against which a perfectly smooth surface on the shaft can turn with such small clearance that resistance to fuel flow is great enough that fuel will not leak out and air will not leak in. One face of the seal is spring-loaded to maintain the closest possible fit.

MAINTENANCE

The fuel pump should be serviced at intervals specified in the Scheduled Maintenance Program. Maintenance Instructions for repair and testing of the fuel pump are referenced on the Service Data page.

FUEL FILTER DESCRIPTION

The engine mounted fuel oil filters, Fig. 11-15, are installed at the right front of the engine. Each filter is a disposable type which is screwed directly to a common head.



17162

Fig. 11-15 – Fuel Filter

The filter is composed of a pleated paper element around a perforated metal tube providing an 1100 sq. in. filtering area. The case is an enameled drawn steel shell capable of withstanding internal pressures in excess of 1034 kPa (150 psi). A neoprene gasket attached to the top of the filter ensures sealing.

A tapered cock-type control valve in the head assembly directs the flow of fuel to either or both filters. One filter can be cut out of service to permit replacement without stopping the engine. The inlet and outlet connections are located in the head assembly.

The flow of fuel through the filter is directed and regulated by the position of the control valve. When the control valve lever is set at the center or “BOTH” position, both filters are being used. When it is necessary to change filters, the flow of fuel can be directed through one filter while changing the other one. To do this, the control valve lever is moved to the “L” (left) or “R” (right) position. When the control valve lever is in the “R” position, only the right filter is in use, and the left can be removed. The reverse is true when the control valve lever is in the “L” position.

MAINTENANCE

The filters should be changed at intervals as specified in the Scheduled Maintenance Program, or more frequently as determined by operating experience.

1. To change a filter while the engine is running, move the filter selector lever to the letter representing the opposite filter.
2. Unscrew the filter to be changed, using a strap wrench if necessary.
3. Apply a new filter to the filter head and tighten until the neoprene gasket is sealed.
4. With the engine running, move the selector lever to the position of the filter that was changed and check for leakage.

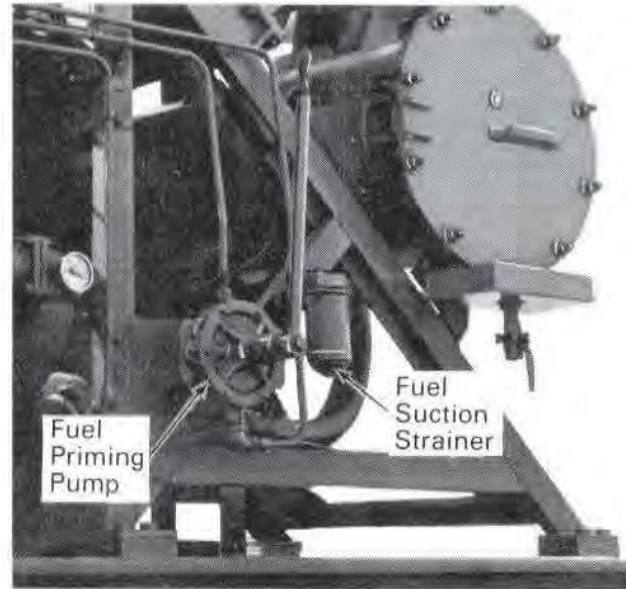
ACCESSORY RACK COMPONENTS

The fuel priming pump and the suction strainer are off-engine components of the fuel system, and are mounted on the accessory rack, Fig. 11-16. The location may vary, based on specific applications, and the arrangement as shown should be considered “typical.”

FUEL PRIMING PUMP

DESCRIPTION

The fuel priming pump is a manually operated pump, which is located on the accessory rack, Fig. 11-16. Its primary function is to prime the fuel system after the engine has been shut down for an extended period of time. The pump has a built-in check valve at the discharge side of the pump which closes when the pump lever is repositioned during the suction stroke.



24138

Fig.11-16 – Accessory Rack Fuel System Components

MAINTENANCE

No scheduled maintenance is required. If the pump is not operating properly, it can be disassembled for inspection by removing the lever, and then separating the shell and lid.

FUEL SUCTION STRAINER

DESCRIPTION

The fuel suction strainer, mounted on the accessory rack, Fig. 11-16, is located in the fuel system to remove foreign material from the fuel being taken from the fuel tank. The strainer contains a mesh element. An exploded view of the strainer is shown in Fig. 11-17. Fuel oil passing through the strainer goes directly to the engine mounted fuel pump.

MAINTENANCE

The fuel suction strainer should be cleaned and inspected at intervals as specified in the Scheduled Maintenance Program, or at shorter time periods, if operating conditions warrant.

1. Remove the bolts holding the strainer shell to the strainer cover, and remove the shell and strainer from the cover. To prevent loss, thread the bolts with washers into the strainer shell threaded openings.
2. Withdraw the mesh element, and discard the oil and sediment held in the strainer shell.