

(5) Fill power steering pump with power steering fluid Part No. 2084329 or equivalent.

(6) Start engine and turn steering wheel several times from stop to stop to bleed the system of air. Stop engine, check oil level and correct if necessary.

### Hose Installation

When either hose is reinstalled or replaced, it is essential that the following precautions are observed;

(1) Avoid sharp bends in a large section of hose (about 5 inch radius is recommended).

(2) Hose must remain at least 1 inch away from all pulleys, battery case and brake lines and 2 inches away from exhaust manifold.

(3) Sponge sleeves must be installed where hose contacts composition or metal.

(4) Tighten pump end hose fitting to 290 inch-pounds, and gear end fitting to 230 inch-pounds.

## POWER STEERING PUMPS

### INDEX

	Page
Flow Control Valve	
.94 Model .....	27
General Information .....	21
Oil Seal Replacement	
.94 Model .....	23
Reconditioning	
.94 Model .....	23

	Page
Service Diagnosis .....	22
Service Procedures .....	22
Specifications .....	48
Tightening References .....	49
Tool Identification .....	50

### GENERAL INFORMATION

Hydraulic pressure is provided for the power steering gear in the vehicle by the .94 model belt driven power steering pump.

The .94 pump can be identified by the pressure hose attachment at the rear of pump and the "ham can" shaped reservoir (Fig. 1). Rectangular pumping vanes carried by a shaft driven rotor, move the fluid from the intake to the pressure cavities of the cam ring. As the rotor begins to rotate, centrifugal force throws the vanes against the inside surface of the cam ring to pick up residual oil which is forced into the high pressure area. As more oil is picked up by the vanes, oil is forced into the cavities of the thrust plate, through two cross-over holes in the cam ring and pressure plate which empty into the high pressure

area between the pressure plate and the housing end plate.

Filling the high pressure area causes oil to flow under the vanes in the slots of the rotor forcing the vanes to follow the inside oval surface of the cam ring. As the vanes rotate to the small area of the cam ring, oil is forced out from between the vanes.

A flow control valve permits a regulated amount of oil to return to the intake side of the pump when excess output is generated during high speed operation. This reduces the power requirements to drive the pump and minimizes temperature build-up.

Oil coolers are used on some vehicles equipped with high performance engines and special axle ratios that require high engine revolutions. **Coolers are not required on standard equipment vehicles.**

When steering conditions exceed maximum pressure requirements, such as turning the wheels against the stops, the pressure built up in the steering gear also exerts pressure on the spring end of the flow control valve. This end of the valve houses the pressure relief valve on the .94 model. High pressure lifts the relief valve ball from its seat and allows oil to flow through a trigger orifice located in the outlet fitting of the .94 pump. This reduces pressure on the spring end of the valve which then opens and allows the oil to return to the intake side of the pump. This action limits maximum pressure output of the pump to a safe level.

Under normal operating conditions, the pressure requirements of the pump are below maximum, causing the pressure relief ball and the flow control valve to remain closed.

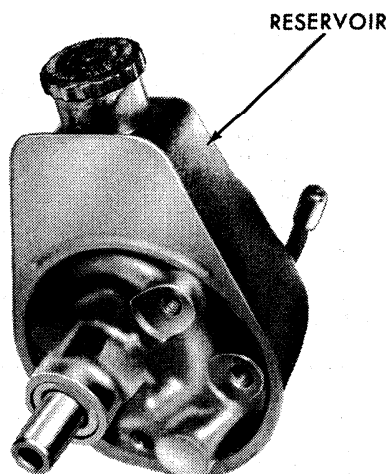


Fig. 1—.94 Pump

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