

### INLET LINE CHECK VALVE (Units Without Hi-Lo Shift or Reverser)

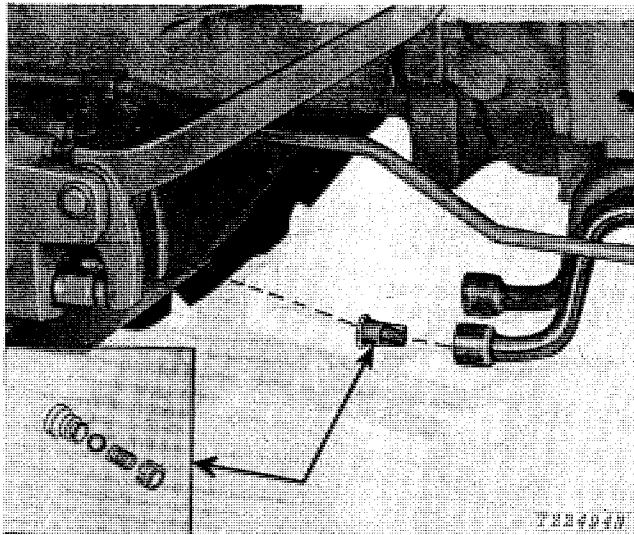


Fig. 3-Inlet Line Check Valve

A check valve (Fig. 3) in the main pump inlet line prevents oil from returning to the transmission pump when the pump is not functioning. Under most operating conditions a supply of oil is then available for the main pump on demand.

To repair check valve, remove oil line retainer from clutch housing. Disconnect line at main pump and move line forward. Pull check valve assembly from line.

Check valve seat for wear or damage.

Check valve spring for proper resiliency. Spring free length is 1/2 inch. Spring compressed length is 5/16 inch at 5 to 6 ozs. pressure.

When installing lines, place retainer over lines before plugging it into the clutch housing.

### PRESSURE CONTROL VALVE

The pressure control valve (Figs. 4, 5) acts as a flow divider, giving priority to the power steering system.

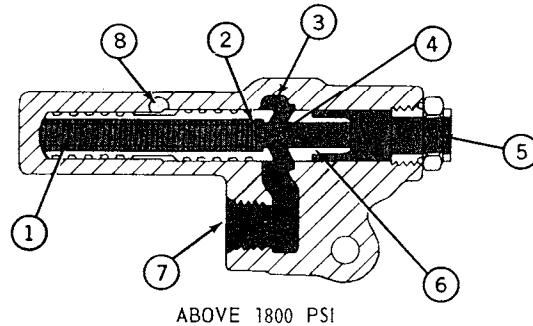
#### Operation

When there is no demand for pressure oil and the main pump is in "standby", pressure is equal at both ends of the valve. A low-pressure leak-off cavity in the middle of the valve prevents hydraulic lock.

A demand for pressure oil by steering or by a hydraulic function when the demand is greater than what the main pump can provide, will cause a pressure drop in front of the valve. Spring pressure at the

rear of the valve then moves the valve forward to restrict the function outlet and direct pressure oil to steering.

When the pump rebuilds to operating pressure, the valve is moved rearward and all functions are again equally pressurized.



ABOVE 1800 PSI

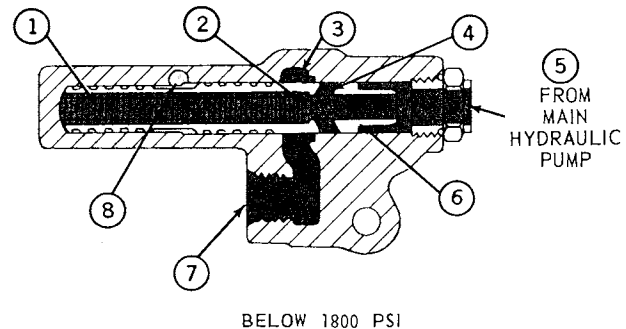
■ HIGH PRESSURE

▨ LOW PRESSURE

T14010

- 1—Pressure Control Valve Spring
- 2—Shims
- 3—Outlet to Rockshaft
- 4—Orifice
- 5—Pressure Oil Inlet
- 6—Pressure Control Valve
- 7—Outlet to Selective Control Valve
- 8—Bleed Passage to Transmission Reservoir

Fig. 4-Position of Pressure Control Valve above 1800 psi



BELOW 1800 PSI

■ HIGH PRESSURE

▨ LOW PRESSURE

T14011

- 1—Pressure Control Valve Spring
- 2—Shims
- 3—Outlet to Rockshaft
- 4—Orifice
- 5—Pressure Oil Inlet
- 6—Pressure Control Valve
- 7—Outlet to Selective Control Valve
- 8—Bleed Passage to Transmission Reservoir

Fig. 5-Position of Pressure Control Valve below 1800 psi

## Tests

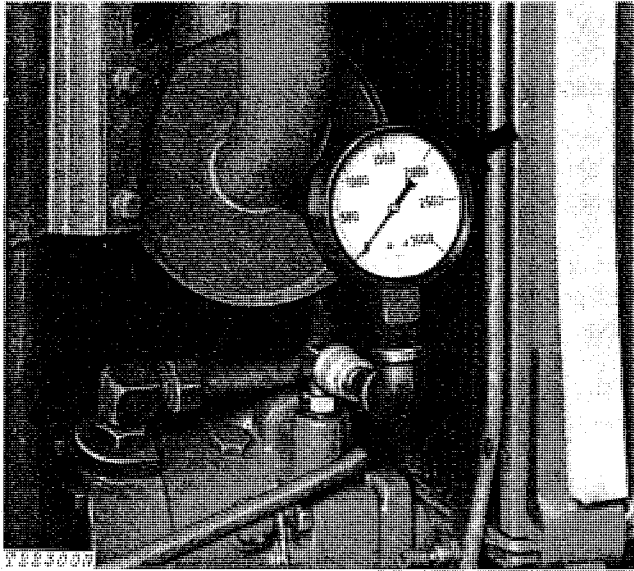


Fig. 6-Pressure Gauge Installed in Main Hydraulic Pump

Install a 0 - 3000 psi pressure gauge (Fig. 6) and a jumper hose in the breakaway couplers.

Start engine and adjust speed to 1900 rpm. Set stroke control valve to adjust main hydraulic pump standby pressure to 1500 psi for this test.

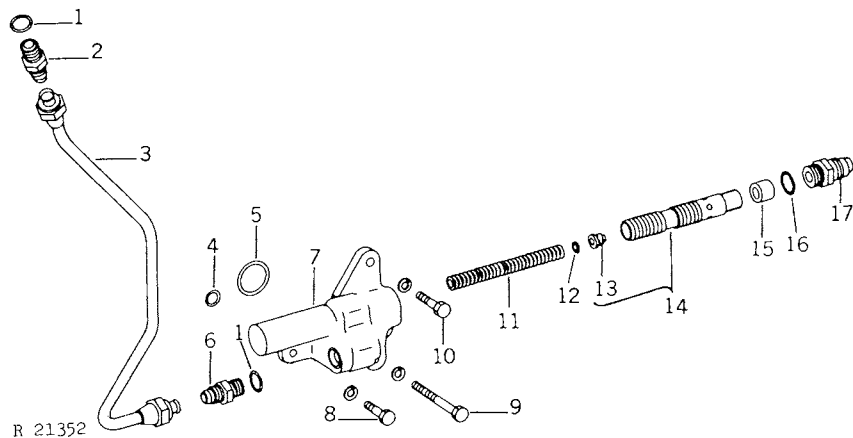
Operate either rockshaft or selective control valve lever. If the function operates, there is a malfunction in the pressure control valve. Service the pressure control valve.

Either lower the rockshaft, then place the rockshaft control lever in the raised position or retract the remote cylinder and place the selective control valve lever in an extend position.

Adjust the stroke control valve to raise pump pressure until the function starts to operate. The reading on the pressure gauge should be that of the pressure control valve operating pressure of 1700 to 1800 psi. Add or deduct shims in the pressure control valve to obtain this pressure.

Re-adjust the stroke control valve to specified standby pressure.

## Repair



1—O-Ring  
 2—Connector  
 3—Oil Line  
 4—O-Ring  
 5—O-Ring  
 6—Connector

7—Housing  
 8—Cap Screw  
 9—Cap Screw  
 10—Cap Screw  
 11—Spring  
 12—Shim, .030"

13—Orifice  
 14—Valve  
 15—Stop  
 16—O-Ring  
 17—Connector

Fig. 7-Pressure Control Valve