

any condition can be caused by leaking hydraulic circuits or sticking valves.

Therefore, unless the condition is obvious, like no drive in "D" range first gear only, the transmission should never be disassembled until hydraulic pressure tests have been performed.

### HYDRAULIC PRESSURE TESTS

Pressure testing is a very important step in the diagnostic procedure. These tests usually reveal the cause of most transmission problems.

Before performing pressure tests, be certain that fluid level and condition, and control linkage adjustments have been checked and approved. Fluid must be at operating temperature (150 to 200 degrees F.).

Install an engine tachometer, raise vehicle on hoist which allows rear wheels to turn, and position tachometer so it can be read under the vehicle.

Disconnect throttle rod and shift rod from transmission levers so they can be controlled under the vehicle.

Attach 100 psi gauges (C-3292) to ports required for test being conducted. A 300 psi gauge (C-3293) is required for "reverse" pressure test at rear servo.

Test port locations are shown in (Figs. 1 and 2).

#### Test One (Selector in "1")

- (1) Attach gauges to "line" and "rear servo" ports.
- (2) Operate engine at 1000 rpm for test.
- (3) Move selector lever on transmission all the way forward ("1" position).
- (4) Read pressures on both gauges as throttle lever on transmission is moved from full forward position to full rearward position.
- (5) Line pressure should read 54 to 60 psi with throttle lever forward and gradually increase, as lever is moved rearward, to 90 to 96 psi.

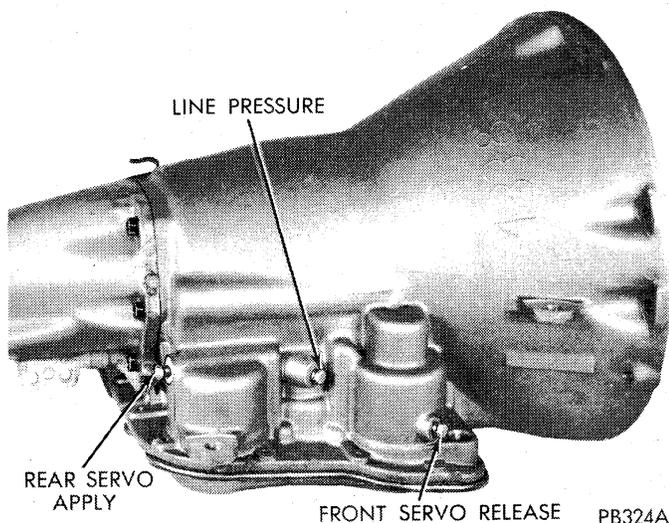


Fig. 1—Pressure Test Locations (Right Side of Case)

(6) Rear servo pressure should read the same as line pressure within 3 psi.

(7) This tests pump output, pressure regulation, and condition of rear clutch and rear servo hydraulic circuits.

#### Test Two (Selector in "2")

- (1) Attach gauge to "line pressure" port and "tee" into rear cooler line fitting to read "lubrication" pressure.
- (2) Operate engine at 1000 rpm for test.
- (3) Move selector lever on transmission one "detent" rearward from full forward position. This is selector "2" position.
- (4) Read pressures on both gauges as throttle lever on transmission is moved from full forward position to full rearward position.
- (5) Line pressure should read 54 to 60 psi with throttle lever forward and gradually increase, as lever is moved rearward, to 90 to 96 psi.
- (6) Lubrication pressure should be 5 to 15 psi with lever forward and 10 to 30 psi with lever rearward.
- (7) This tests pump output, pressure regulation, and condition of rear clutch and lubrication hydraulic circuits.

#### Test Three (Selector in "D")

- (1) Attach gauges to "line" and "front servo release" ports.
- (2) Operate engine at 1600 rpm for test.
- (3) Move selector lever on transmission two "detents" rearward from full forward position. This is selector "D" position.
- (4) Read pressures on both gauges as throttle lever on transmission is moved from full forward position to full rearward position.
- (5) Line pressure should read 54 to 60 psi with throttle lever forward and gradually increase, as lever is moved rearward.

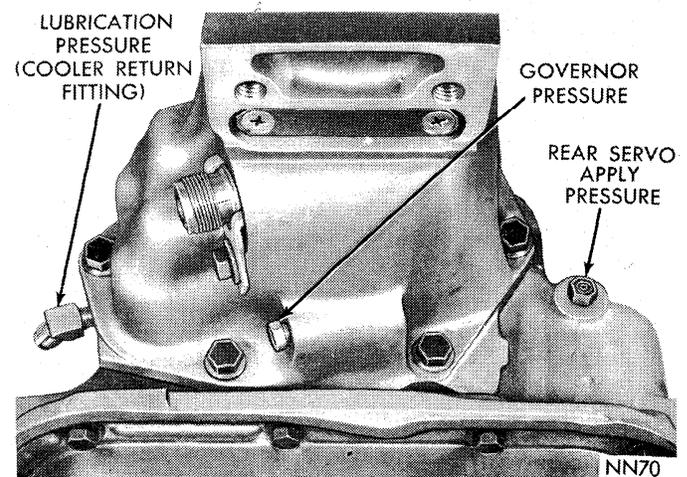


Fig. 2—Pressure Test Locations (Rear End of Case)