

LEAKAGE CHECK

If the pressure check and time cycle adjustments do not correct the difficulty, a leakage check on all the functions should be performed.

Place all hydraulic function controls in neutral, run the tractor engine at 1900 rpm and check all return pipes from each function individually for heating. If the valves in any one function are leaking, the return pipe from that function will be too hot to hold. If heating in one of the functions is detected, remove the return pipe and measure the leakage. Leakage should not exceed 1/2 pint per minute per function. If leakage should be in excess of 1/2 pint per minute, stop the tractor engine. Then, disassemble and check the control valves of the unit for foreign material or excessive wear.

TRANSMISSION PUMP AND SURGE PRESSURE RELIEF VALVE CHECKS

To check operation of the transmission pump, measure its output. To do so, place transmission gearshift lever and all hydraulic function controls in neutral position. Disconnect oil pipe (inlet to main pump) at the connection on the oil filter relief valve housing. Plug the oil pipe to the main hydraulic pump to prevent oil leaking back from the main pump and oil cooler.

Remove connector. Install 160 psi gauge with gate valve as shown in Fig. 240-10-3. Place clean container under assembly and open gate valve.

With clutch disengaged, start the tractor engine and run at 1900 rpm. Engage the clutch and check oil discharge for 15 seconds. Discharge should be one gallon during this period.

Partially close the gate valve to restrict the flow of oil until a reading of 50 psi is recorded on the gauge. Discharge should be one gallon every 15 seconds. If the oil discharge falls off,

remove and check the transmission pump outlet block gasket and outlet tube O-rings for damage (see Section 260 of this manual).

Close the gate valve to restrict the flow of oil until 90 to 130 psi is recorded on the gauge. At this point, the surge pressure relief valve, located in the oil filter relief valve housing, should open and the flow of oil should reduce to

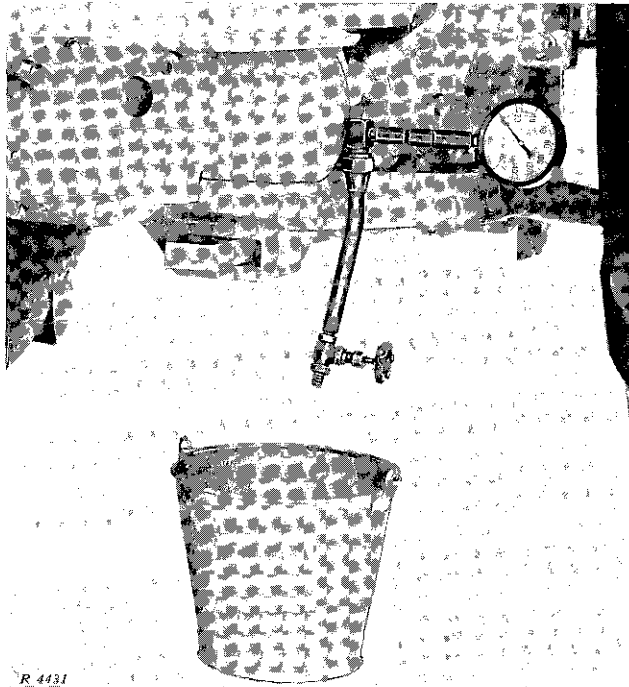


Fig. 240-10-3-160 psi Gauge and Gate Valve Installed

zero or practically zero. If leakage is excessive, check the surge pressure relief valve for indication of leaking due to foreign material or wear.

Stop the engine. Remove JDE-28 Speed Indicator Adapter and 3000 psi gauge. Install tachometer drive cable to tachometer housing.

Remove 160 psi gauge and gate valve. Remove oil pipe plug, connect main pump inlet oil pipe to connector on oil filter relief valve housing and tighten.

Section 250

HYDRAULIC SUPPLY SYSTEM

Group 5

DESCRIPTION AND OPERATION

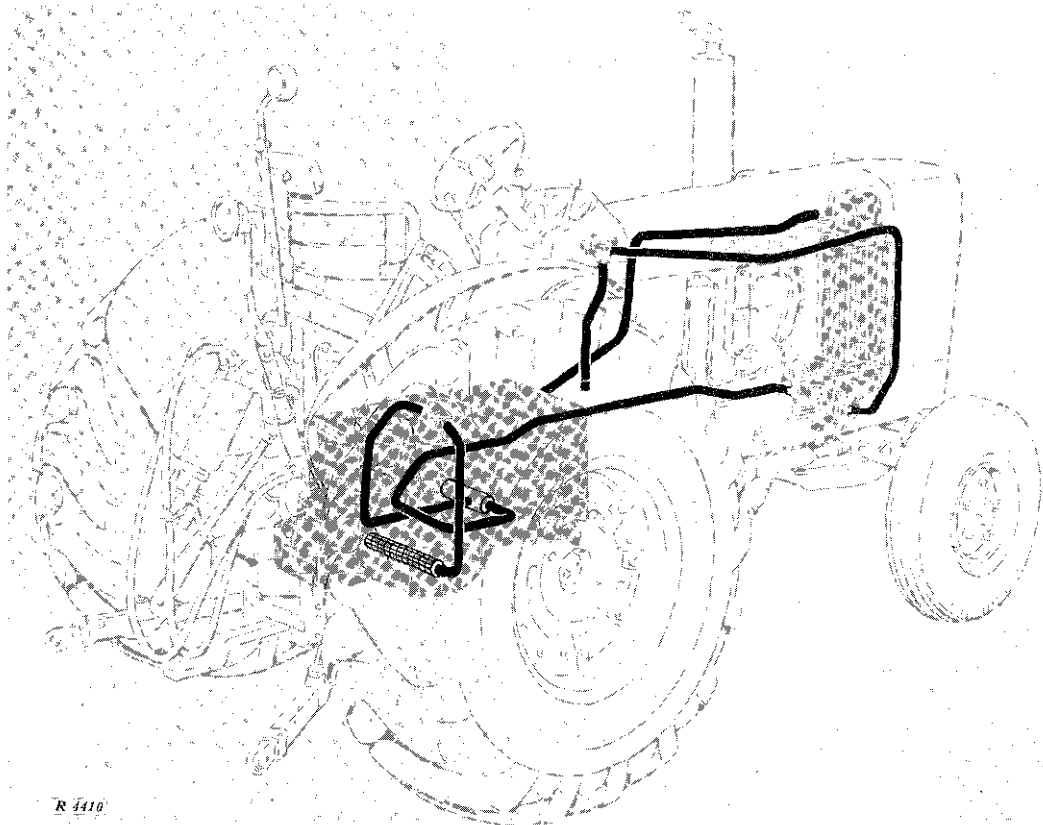


Fig. 250-5-1—Location of Hydraulic Supply System

DESCRIPTION

The hydraulic supply system (Fig. 250-5-1) consists of the reservoir (transmission case), oil filter, oil filter relief valve, surge pressure relief valve, check valve, oil cooler, pipes, connections, and junction block.

Oil is lifted from the reservoir by the transmission pump. The oil is then forced through the

check valve and oil filter to the inlet side of the main hydraulic pump. The check valve prevents return oil from the functions from draining into the reservoir.

Heat generated within the hydraulic system is dissipated by a core-type oil cooler mounted ahead of the main radiator core.