HYDRAULIC SEED DRIVE

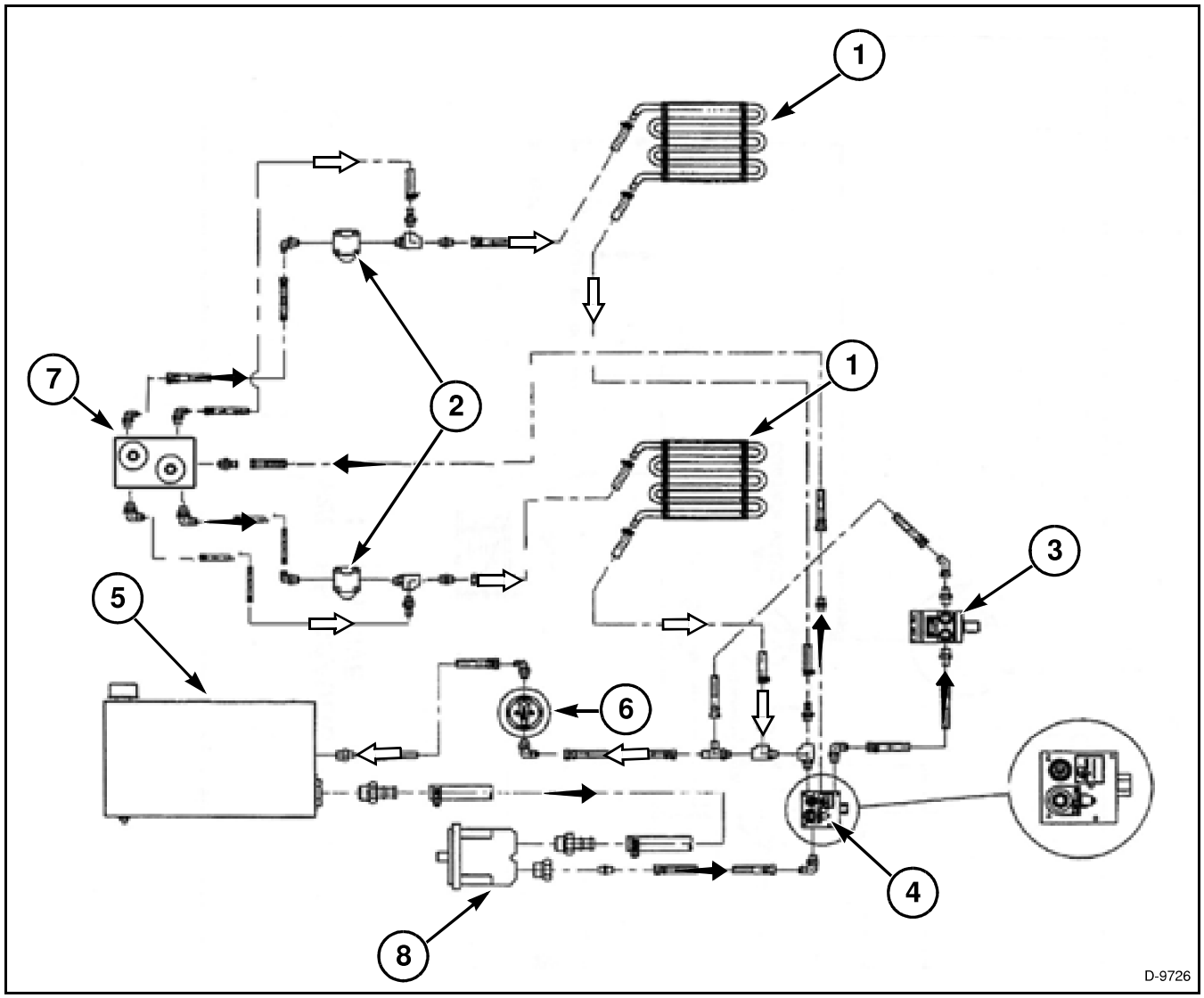

FIG. 13

FIG. 13: Hydraulic Seed Drive

(1) Fluid Cooler

(2) Blower Motor

(3) Seed Drive Motor

(4) Motor Control Valve

(5) Hydraulic Tank

(6) Oil Filter

(7) Flow Control Valve

(8) PTO Pump

The oil flows from the hydraulic tank (5) to the PTO pump (8) and leaves the PTO pump at a flow of 38 lpm (10 gpm). The oil then enters the motor control valve (4) at port P. The motor control valve has a relief valve pressure of 172.4 bar (2500 psi) and the excess oil exits out port T and goes through the oil filter (6) and back to the hydraulic tank.

At the motor controller valve (4) the PMW is set to allow the desired flow out of port A and into the seed drive motor (3). There is a compensator in the motor controller valve to allow constant flow to the seed drive motor and then exits to the oil filter and hydraulic tank. The excess oil in the motor controller valve (4) will bypass to port B and enters the flow control valve (7). With the needle valves in the flow control valve set to the desired pressure, the oil exits out the L REG and R REG ports and enters the blower motors (2). The blower motor control valve has a bypass of 13.8 bar (200 psi) and the excess oil exits out the L BYP and R BYP port and bypasses the blower motors. The bypass oil and the oil from the blower motor enters the oil coolers (1). The oil then goes through the oil filter and into the hydraulic tank.

CENTRAL FILL BLOWER

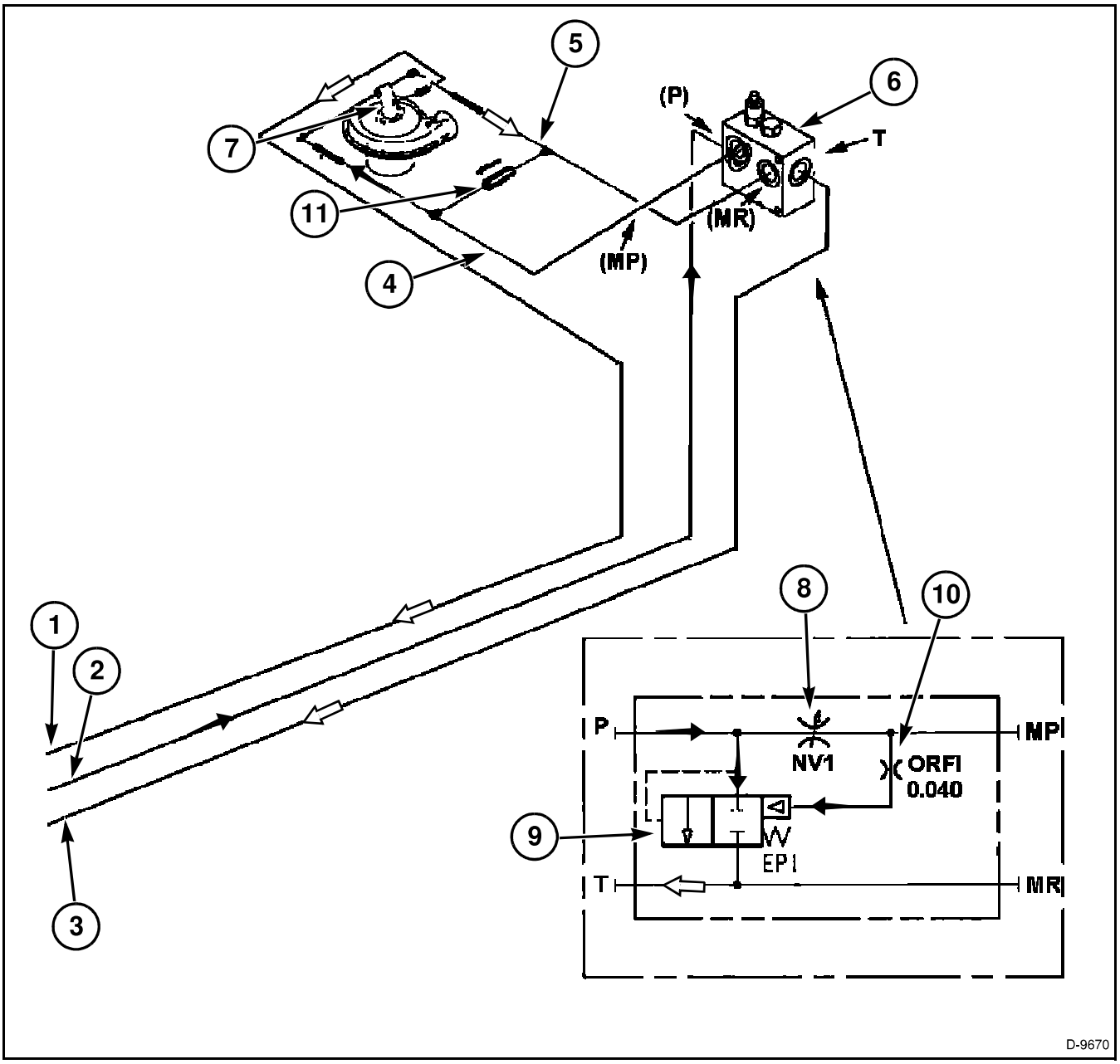

FIG. 14

FIG. 14: Central Fill Blower Circuit

(1) Case Drain Hose (Zero Return Port)

(2) Pressure Hose (P)

(3) Return Hose (T)

(4) Motor Pressure (MP)

(5) Motor Return (MR)

(6) Blower Control Valve

The oil flows from the tractor at 45.4 lpm (12 gpm), through the pressure hose (2), and into port P of the blower control valve (6). The blower control valve is used to keep the motor (7) and blower from over speeding. Adjust to maintain 50.8 to 55.9 cm (20 to 22 in) of water column in the hoppers. With the needle valve (8) set at 83.3 lpm (22 gpm) the excess oil will go to the flow control valve (9). The flow control valve will open when the pressure exceeds the pressure coming from the fixed orifice (10) after the oil passes the needle valve. The oil that passes through the flow control valve will exit out the return hose (3). After the oil is pressurized at the fixed orifice, the oil will exit the blower control valve and pressurize at the one directional check valve (11). The oil will then enter the blower motor (7) and exit out the motor return line (5), into the blower control valve, and out the return hose. The case drain line (1) returns internal leakage and case oil.