FORD

Service Manual

Tractors

2600, 3600, 4100, 4600, 5600, 5900, 6600,
6700, 7600, 7700



SE-3660

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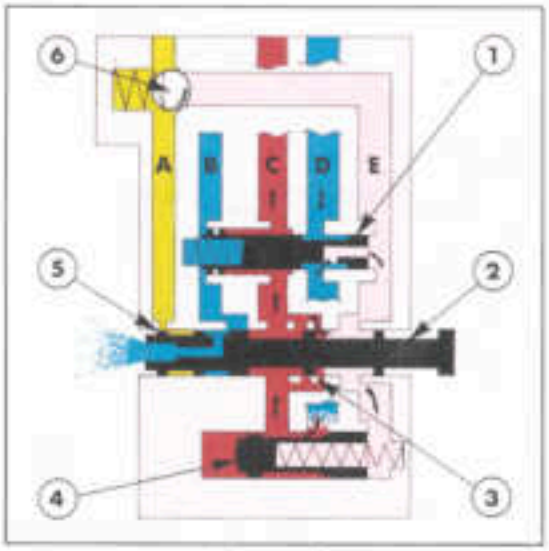


Figure 9
Oil Flow in Neutral

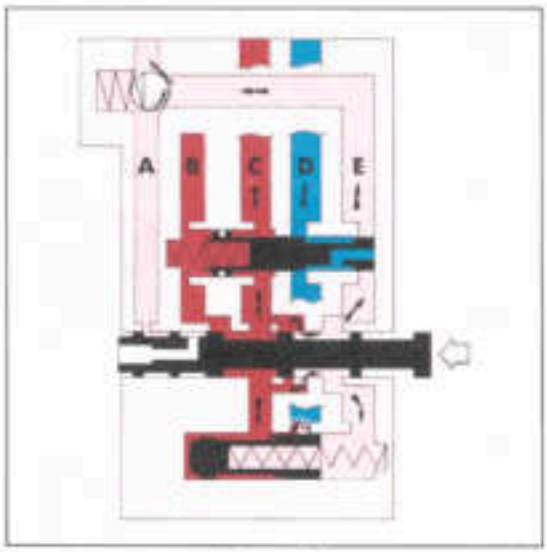


Figure 11
Oil Flow when Slow Raising

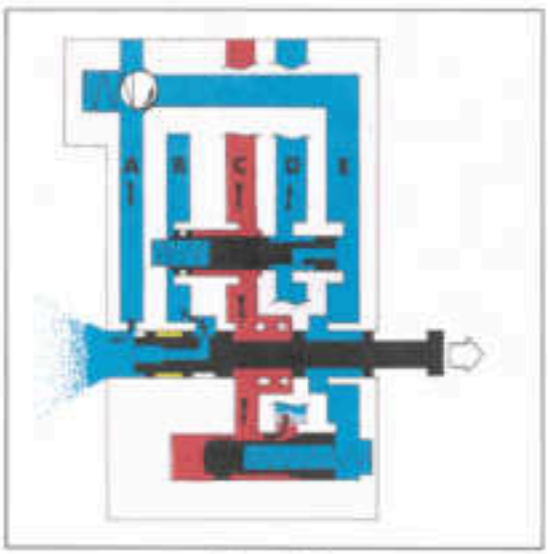


Figure 10
Oil Flow when Lowering

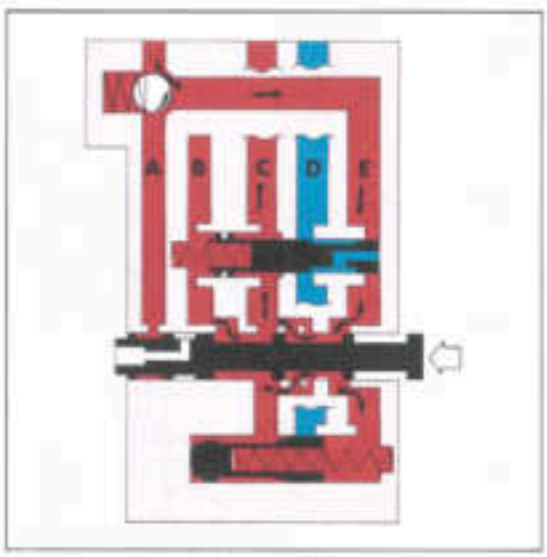


Figure 12
Oil Flow when Fast Raising

OIL FLOW IN LIFT CYLINDER VALVES

Full Flow Oil
Reduced Flow Oil
Reservoir Suction and Exhaust Oil
Trapped Oil

1. Unload Valve
2. Control Valve
3. Control Valve Bushing
4. Feathering Valve
5. Control Valve Front Land
6. Check Valve

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A cross-section of the engine mounted piston type hydraulic pump is shown in Figure 1.

The pump is mounted on a machined face at the rear left-hand side of the engine and is driven by the camshaft, through helical gears, to give a ratio of engine to pump rev/min of 1 : 1·067.

Hydraulic oil is supplied to the pump from the rear axle centre housing through an external pipe which connects to an intake port in the pump cover.

The pumping action is effected by six horizontal pistons which move back and forth in their cylinders being actuated by an offset rotating plate known as a wobble plate.

The wobble plate is mounted on the pump drive shaft and provides a cam action which combined with piston return springs ensures a complete pumping cycle for each piston with every revolution of the pump drive shaft.

OIL FLOW

With reference to Figure 2.

As a return spring forces a piston out of a cylinder, hydraulic oil is sucked through a one-way inlet valve to fill the void behind the piston.

As the wobble plate revolves the piston returns and the oil is forced out of the cylinder through a one-way outlet valve. The pumped oil is transmitted through an external pipe to the base of the rear axle centre housing and from there, via internal passages, to the lift cover.

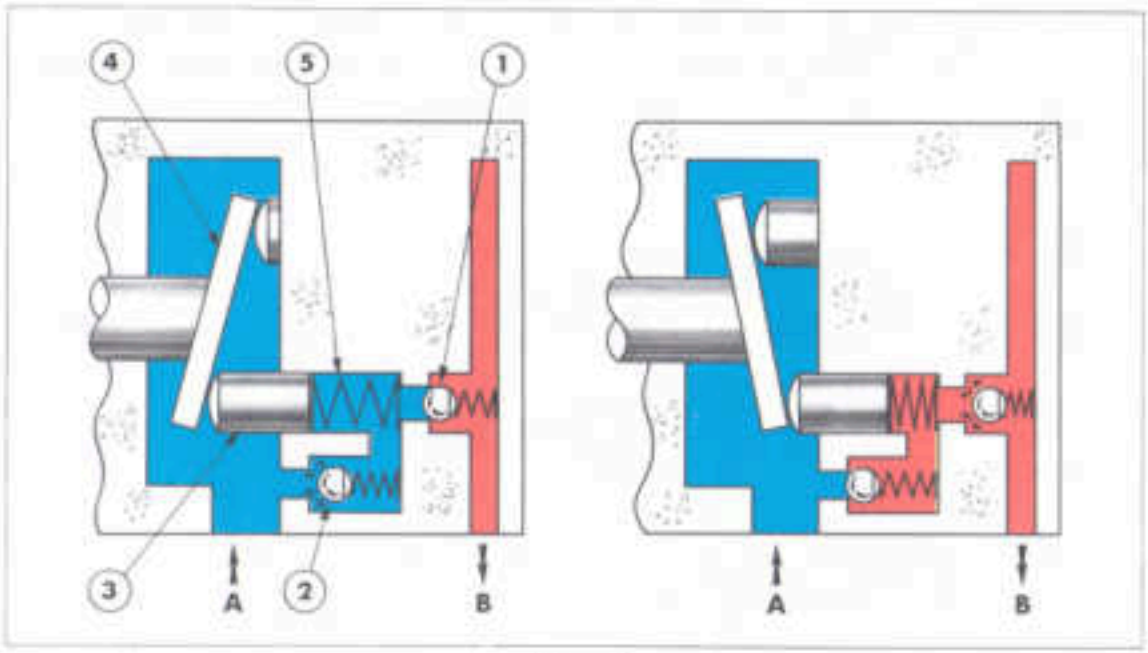


Figure 2
Oil Flow in Hydraulic Piston Type Pump

Pump Pressure Oil

A. From Reservoir

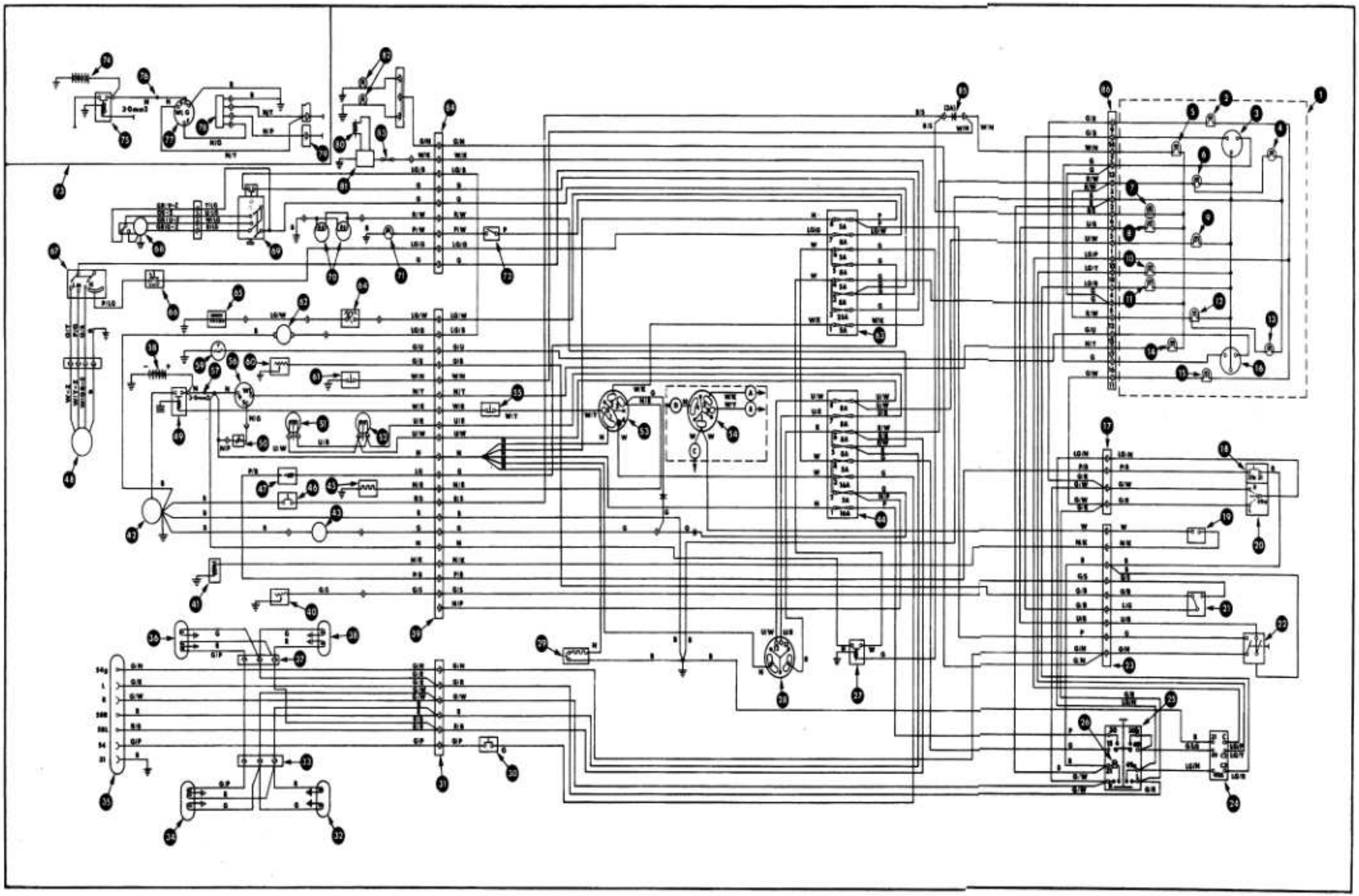
1. Outlet Valve
2. Inlet Valve
3. Piston

Suction Oil

B. To Hydraulic Circuit

4. Wobble Plate
5. Piston Return Spring

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