

H45

Ford

FORD
EXCAVATOR
REPAIR MANUAL

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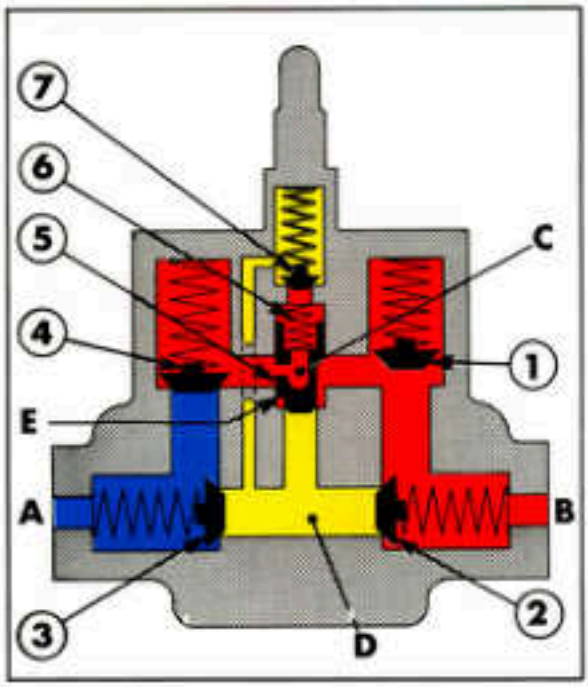


Figure 3

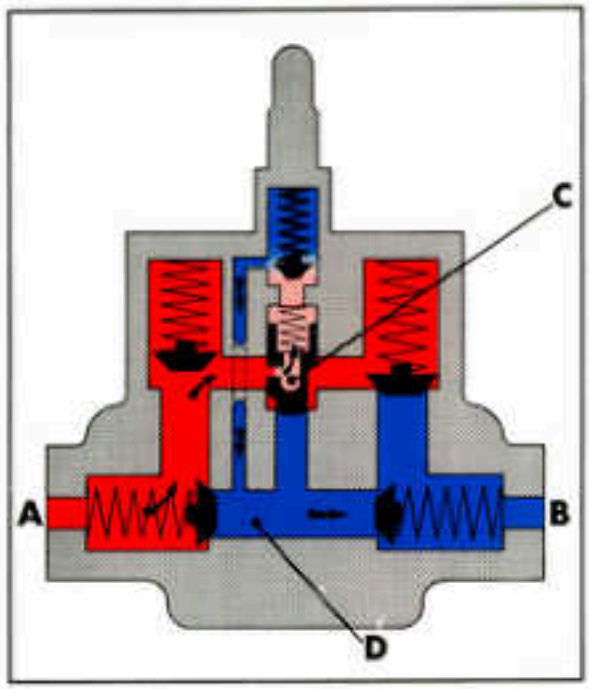


Figure 4

Cross-Line Relief Valve Operation

1. Check Valve
2. Check Valve
3. Check Valve
4. Check Valve
5. Poppet Valve
6. Poppet Valve Return Spring
7. Pilot Valve

High Pressure Oil

Reduced Pressure Oil

Reservoir Suction and Exhaust Oil

Trapped Oil

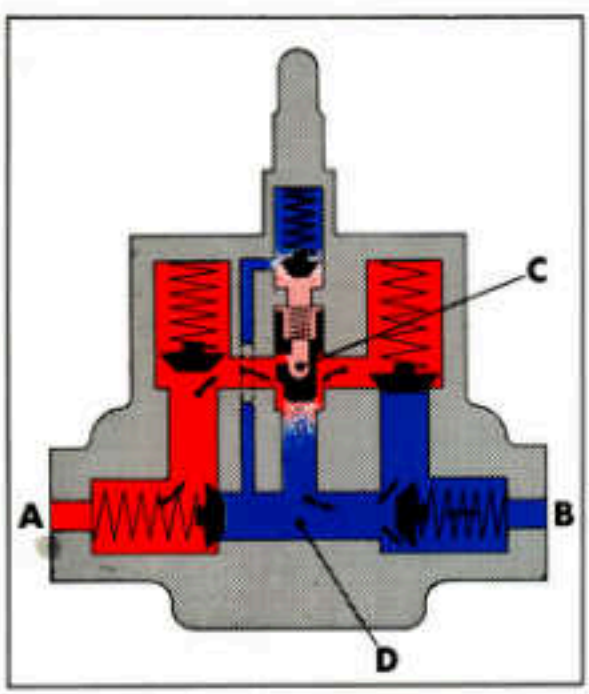


Figure 5

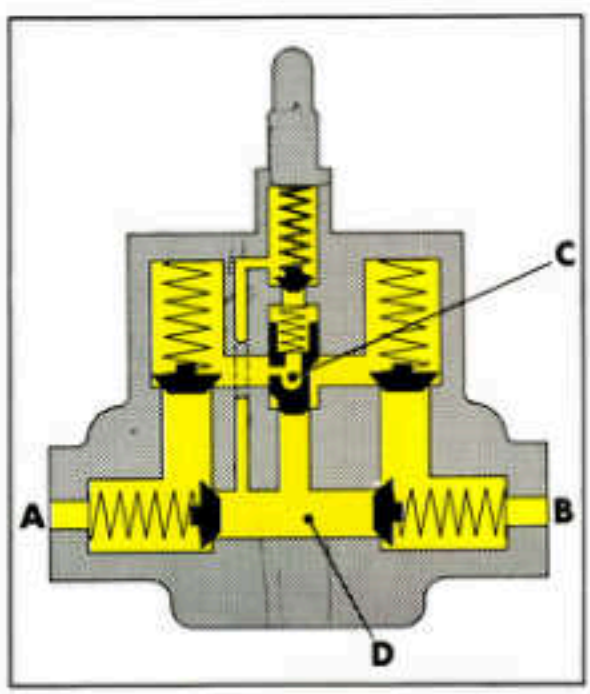


Figure 6

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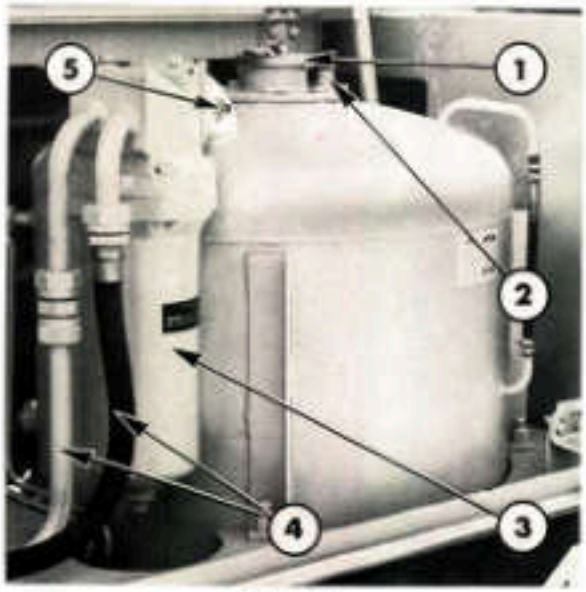


Figure 2
Filter and Reservoir Assembly

1. Filler Cap (with pressure release button in centre)
2. Air Release Plug
3. Filter Assembly
4. Return Oil Tube and Hose
5. Anti-syphon Plug

Pressure is also induced by the thermal expansion of the cold hydraulic oil to operating temperature. The internal pressure within the reservoir aids the oil supply to the hydraulic pumps and also eliminates the possible entry of foreign matter into the reservoir.

The filter assembly, Figure 2, positioned between the reservoir and return oil tubes, contains two paper pleated elements each reinforced with wire mesh. The elements are arranged in parallel and, provided specified filter change intervals are observed, will remove all contaminants from the oil before it enters the reservoir.

Should the elements become severely restricted due to the element change interval being ignored, a by-pass system allows oil to pass the filter elements and maintain an oil supply to the pump assemblies. Oil flow through the filter elements and by-pass system is shown in Figure 3.

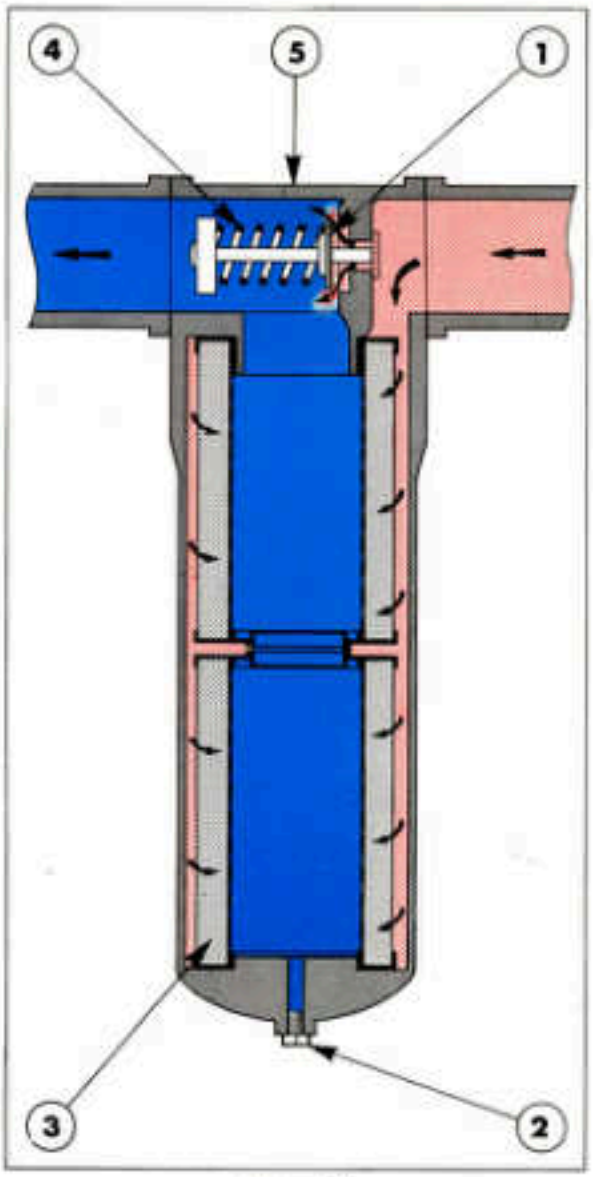


Figure 3
Oil Flow By-Passing Filter Elements

1. By-Pass Valve
2. Drain Plug
3. Filter Element(s)
4. By-Pass Valve Return Spring
5. Filter Head Assembly

The filter housing is vertically mounted and allows contaminants filtered by the elements to fall to the bottom of the cannister. A drain plug positioned on the lower level of the cannister allows all such contaminants to be collectively drained periodically. The cannister can also be completely drained prior to filter replacement.

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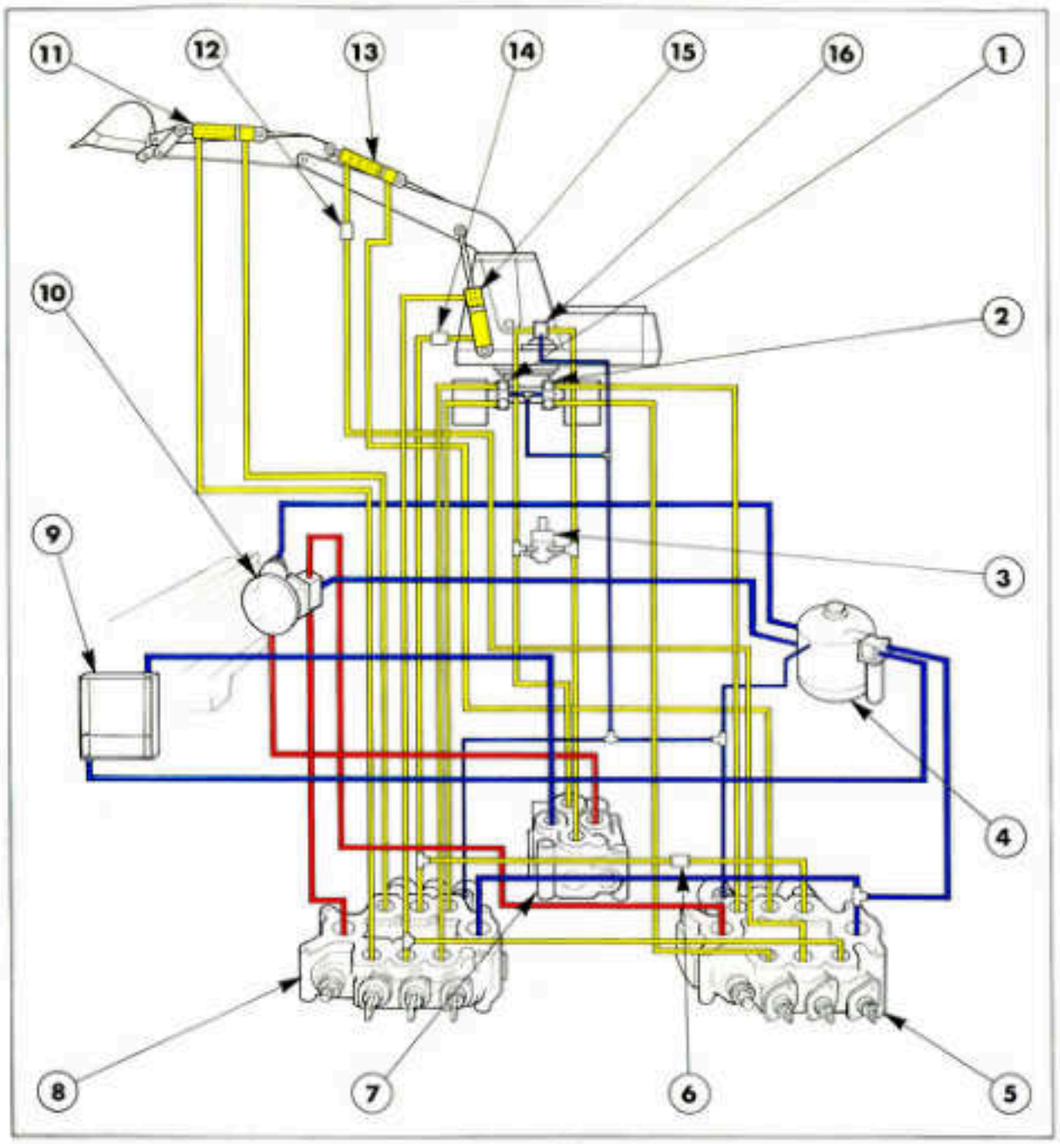


Figure 7
Excavator Hydraulic Circuit Schematic

1. Travel Motor
2. Travel Motor
3. Swing Motor Cross-Line Relief Valve
4. Reservoir
5. Left-Hand Main Control Valve
6. Check Valve
7. Swing Circuit Control Valve
8. Right-Hand Main Control Valve
9. Oil Cooler
10. Hydraulic Pump
11. Bucket Cylinder
12. Drop Restrictor
13. Crowd Cylinder
14. Drop Restrictor
15. Lift Cylinder
16. Swing Motor

Pressure Oil
Return/Exhaust Oil
Trapped Oil

Figure 8 Overleaf

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