Single & Dual Valve Hydraulic Contol Units for Models S, D and LA Series Tractors

Service Manual

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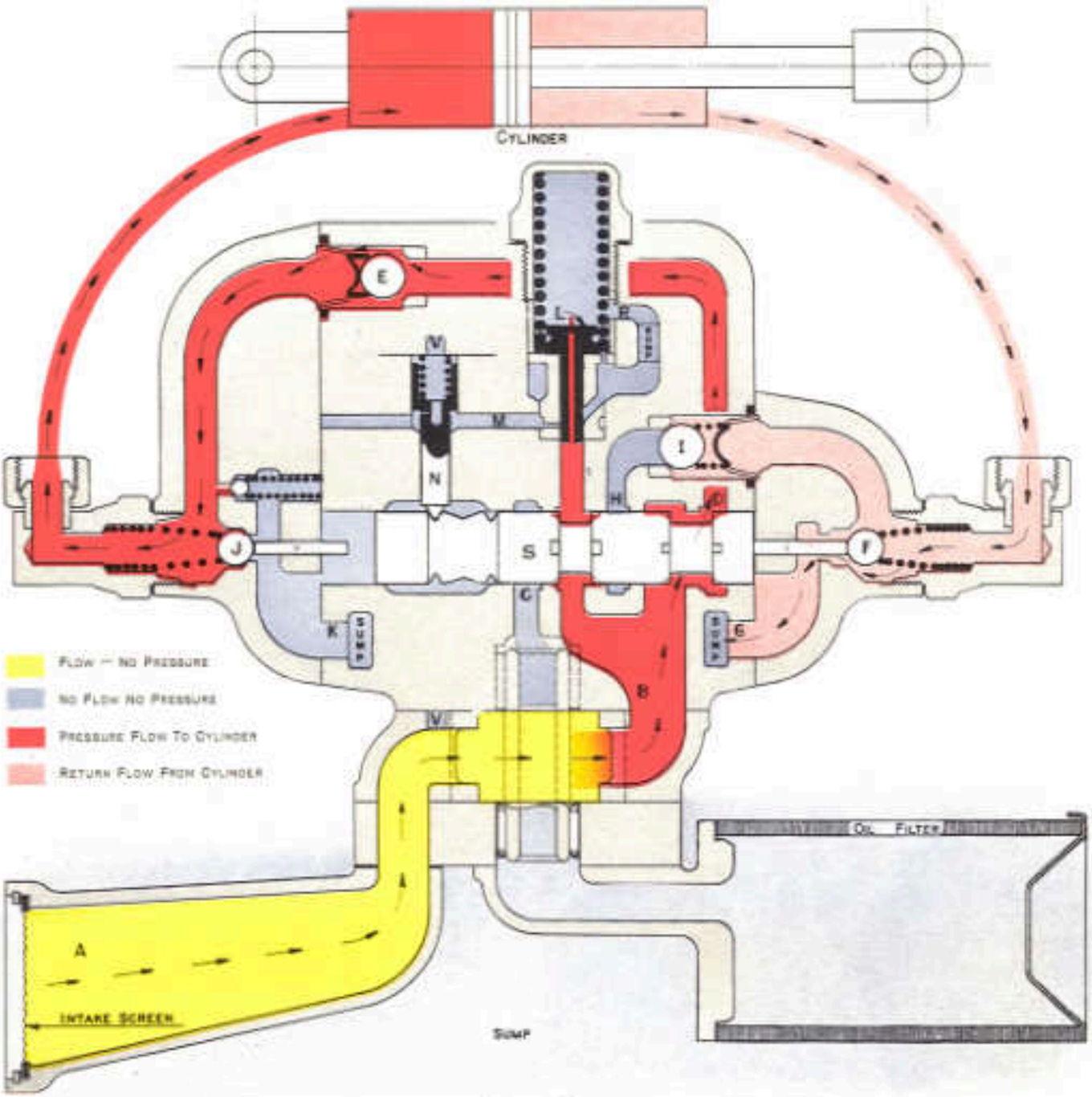


Figure 32.

FAST RAISING

When hand control lever is moved fully forward, **Valve Spool "S"** is moved to the right so shoulder in spool is aligned with **Passage "B" and Port "D." Figure 32.** The valve spool forces **Auxiliary Spool "U"** against **Return Ball "F"** and holds the ball off its seat. Spring loaded **Holding Poppet "N"** retains the valve spool in this position.

Oil under pressure, indicated by dark red, flows from pump through **Passage "B,"** past shoulder in spool, and through **Port "D."**

From **Port "D,"** oil enters passage where it forces **Outlet Ball "E"** off its seat. Oil flows to cylinder where it exerts force against cylinder piston and thereby extends the piston rod. The piston forces oil out opposite end of cylinder, past **Return Ball "F,"** and into sump through **Passage "G."**

When lifting operation is completed, oil pressure increases until **Relief Valve Plunger "L"** is raised. Oil under pressure then flows through **Passage "M"** and raises **Holding Poppet "N",** releasing valve spool. The spring pressing against **Return Ball "F"** forces auxiliary spool and valve spool back into neutral position, blocking **Port "D".**

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HYDRAULIC PUMP DRIVE

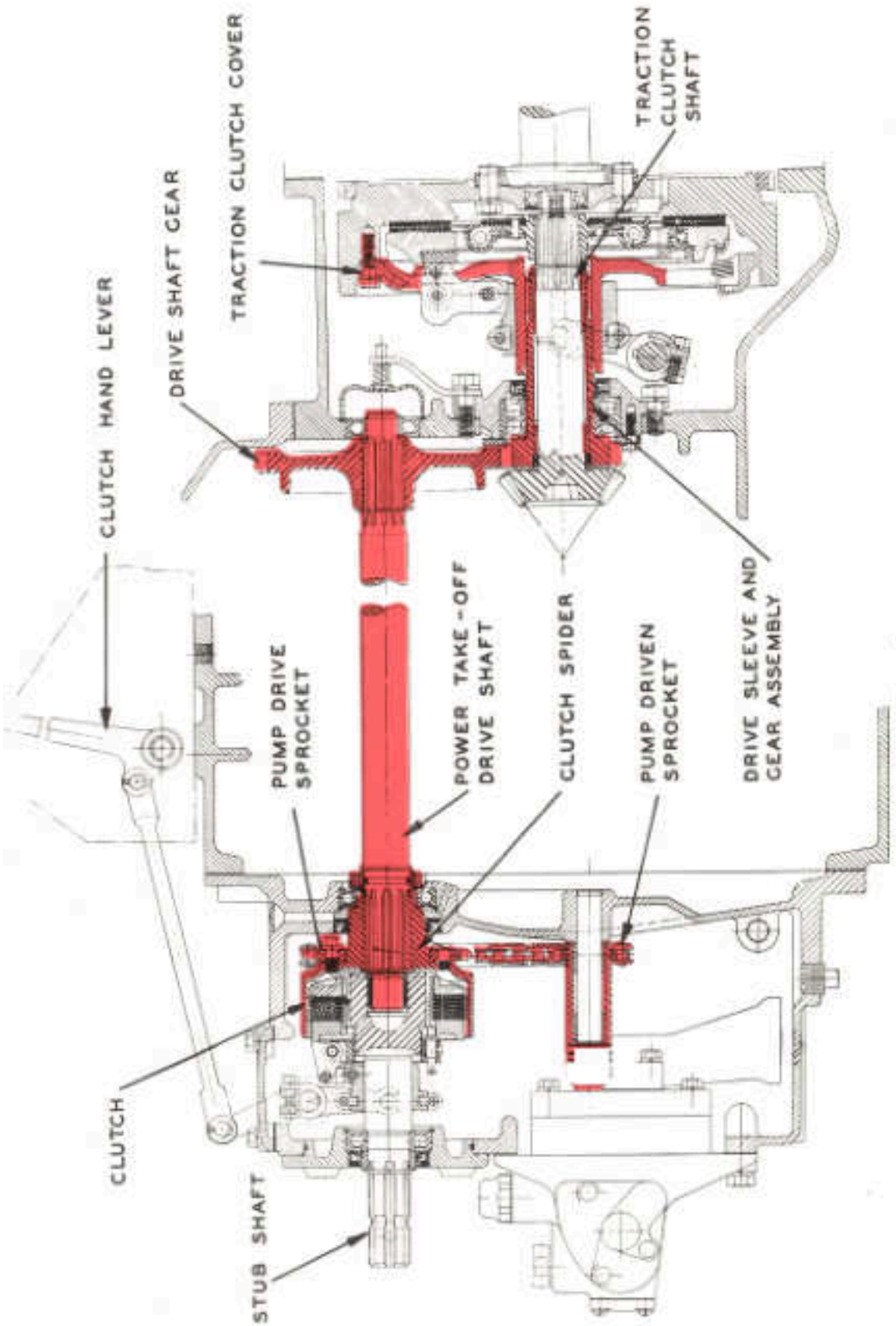


Figure 7.

Figure 7 traces in red the drive for the hydraulic pump as used on the S and D Series Tractors. The pump operates whenever the tractor engine is running and is completely independent of the traction clutch, the transmission, and the power take-off clutch.

The pump on the Model LA Tractor is driven in a similar manner, with the exception that its motion is stopped when the traction clutch is released or when the power take-off is shifted out of gear.

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