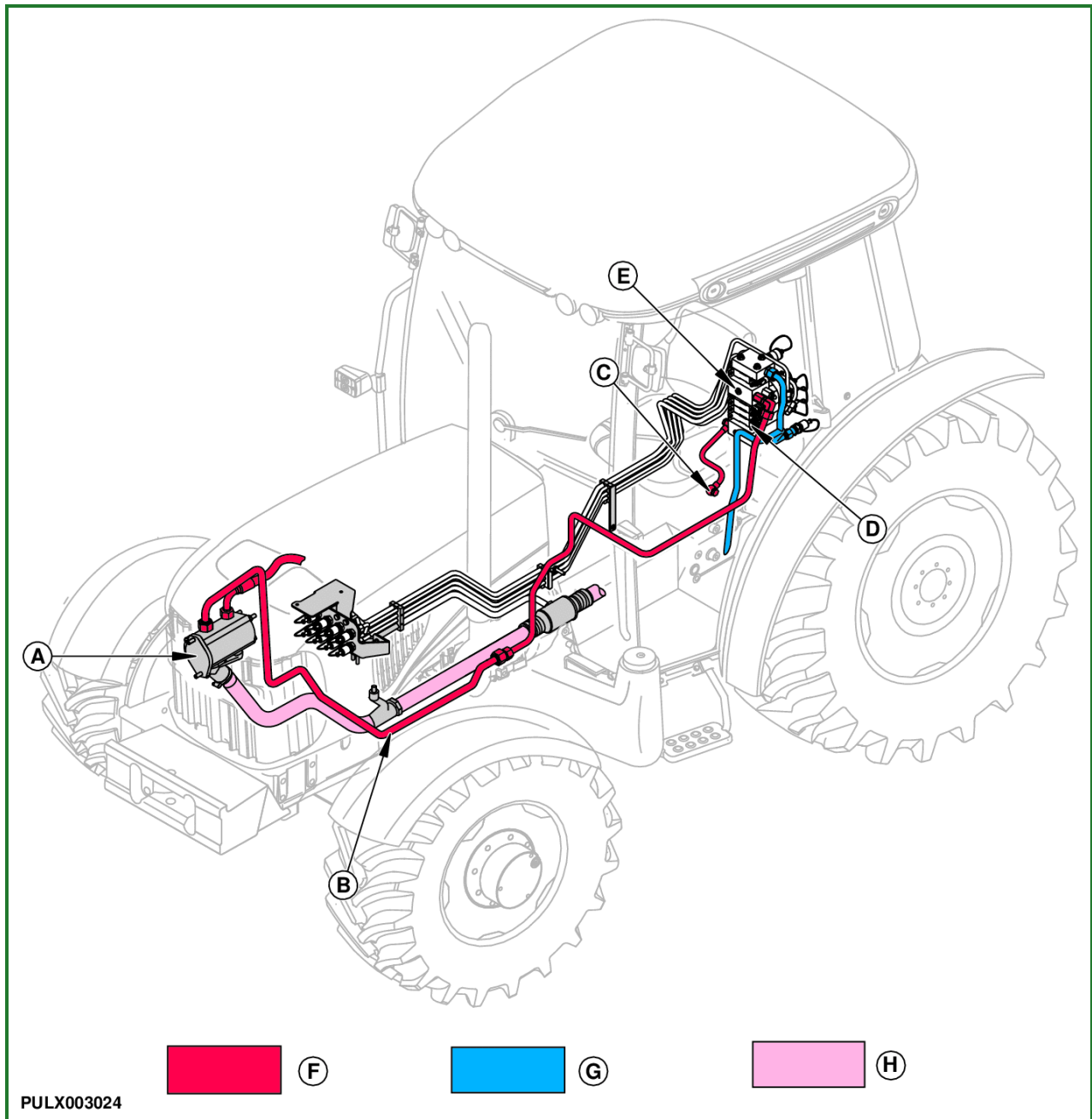


Hydraulic System Operation



PULX003024-UN: Hydraulic system operation

LEGEND:

- A - Hydraulic pump
- B - Supply line
- C - Supply line to hitch
- D - Selective control valves
- E - Flow divider valve
- F - High pressure oil
- G - Neutral oil
- H - Suction oil

FUNCTION:

The hydraulic system provides:

- Hydraulic power to the selective control valves.
- Hydraulic power for hitch operation.

MAJOR COMPONENTS:

- Hydraulic pump
- Hitch
- Flow divider valve
- Supply line to SCVs
- Supply line to hitch

PUMP CAPACITIES:

Pump (hydraulic system)

- 46.9 L/min (12.4 U.S.gal./min)
- 59.6 L/min (15.8 U.S.gal./min) optional
- 20 L/min (5.3 gpm), 3rd optional hydraulic pump (F and V tractors only)

Pump (steering system)

- 12 ccm (0.75 cu.in.)

THEORY OF OPERATION:

The hydraulic pump assembly (A) contains two pumps, one for the hydraulic system and one for the steering system.

The hydraulic system is equipped with external-gear, constant-displacement pumps. The steering system pump provides hydraulic power to the power steering system and, on the 40 km/h (25 mph) version with hydraulic Hi-Lo, the front-wheel drive clutch, if equipped.

The hydraulic system pump provides hydraulic power for hitch operation and to selective control valves (D), passing through flow divider (E). The hitch is category I/II with draft sensing through the center link.

The hydraulic system uses an open-center design. This means that pressurized oil flows continuously through the valves and lines as long as the valves are in neutral position. This continuous oil flow requires an open return path to the reservoir.

The transmission case of the tractor serves as a reservoir for the hydraulic oil. Proper level must be maintained for adequate transmission lubrication and oil supply to the hydraulic pump (A).

Oil flows from the outlet side of the hydraulic pump, through pressure line (B) to flow divider (E). Flow divider controls oil to hitch and to SCVs (D). A relief valve limits hydraulic system pressure to a range of 18000 to 18500 kPa (180 to 185 bar; 2610 to 2680 psi). If the system encounters sufficient resistance to oil flow due to a heavy load or restriction, the relief valve opens allowing oil to return to the reservoir.

When hydraulic system in neutral, the hitch control valve passes oil to the sump. When the control valve is actuated by movement of control lever or by the draft sensing linkage, oil passes to or from the hitch cylinder, raising or lowering the 3-point hitch.

NOTE:

See Section 260 for *Steering System Operation and Brake System Operation* . See this Group for *Hydraulic Pump Operation* , *SCV Operation and Hitch Operation* .

The flow divider control knob is used to adjust the oil flow, from the hydraulic pump, between the hitch and SCVs.

Turn flow divider control knob clockwise to supply 90% of oil to hitch, SCVs I, II, III and 10% of oil to SCV IV.