

Systems Operation

Implement Hydraulic System

FIG. 27: The implement hydraulic system provides a metered flow of pressurized oil. Quick couplers distribute the pressurized oil to the implements. The pressurized oil is used in order to operate the implements.

The implement hydraulic system has the following features:

- Closed center
- Load sensing
- Pressure and flow compensating
- Load Independent Flow Division (LIFD)

When the flow demand of the implements exceeds the output of the hydraulic pump, the LIFD system will reduce flow to each of the active circuits. The flow from each circuit will be reduced by the same percentage of the flow that is commanded.

The new implement hydraulic system is controlled with electronics. The Tractor Management Center (TMC) allows the operator to precisely control the flow rate and detent time for each individual hydraulic control valve.

The tractors utilize a new elevated oil reservoir in addition to the common sump. The elevated oil reservoir ensures that the hydraulic pump for the implement hydraulic system has a steady supply of oil regardless of the pump demand or slope of the tractor.

A load sensing relief valve is used in order to limit the maximum system pressure. The compensator valve serves as a backup to the load sensing relief valve for limiting the maximum system pressure.

Three-Point Hitch

FIG. 28: The three-point hitch is used in order to mount implements to the tractor.

The three-point hitch utilizes an electro-hydraulic system in order to operate the linkage. The standard three-point hitch is equipped with a quick hitch. The lift capacity of the three-point hitch is 7257 kg (16,000 lb).

The draft control operates in response to the engine speed.

The system for slip control allows the three-point hitch to raise in response to slippage between the ground and the Mobil-trac system belts.

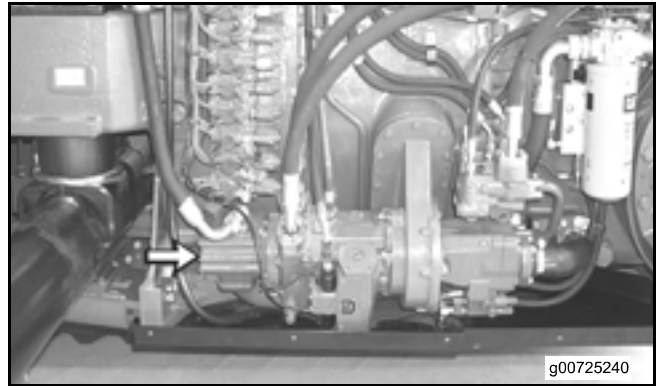


FIG. 27

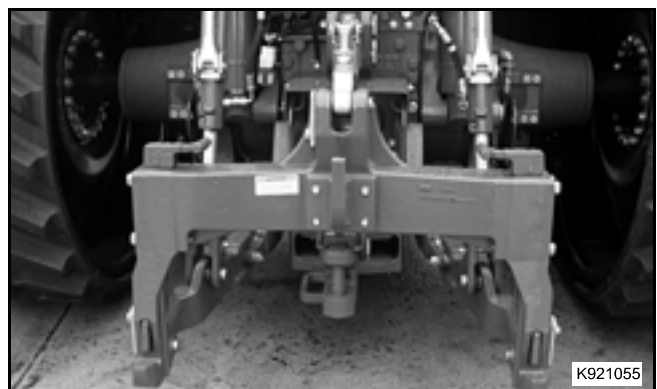


FIG. 28

Steerable Three-Point Hitch

FIG. 29: The Challenger MT700 Series Tractors may be equipped with a steerable three-point hitch. The steerable three-point hitch provides assistance to the tractor's differential steering system while a mounted implement is working in the ground.

Hydraulic cylinders that are attached to the draft arms provide the steering. The lift capacity of the steerable three-point hitch is 7257 kg (16,000 lb).

The Tractor Management Center (TMC) allows the operator to precisely control the various functions of the standard three-point hitch and the steerable three-point hitch.

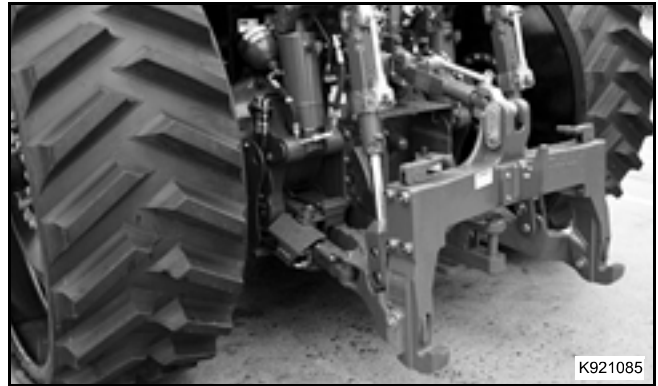


FIG. 29