

the electrical solenoids 17 are energized, the charge pressure will shift the spool in the control valve 20 allowing pressure fluid to flow through the lock valve 42 and to the side shift quick couplers 18 or the optional rear auxiliary quick couplers 5. Return fluid from the side shift quick couplers 18 or rear auxiliary quick couplers 5 flows to the hydraulic filter 36.

**NOTE:** If equipped with the rear auxiliary hydraulics (Example: Rear Stabilizers), the rear auxiliary quick couplers 5 must be disconnected to make the side shift quick couplers 18 function (Example: Planer) or the side shift quick couplers 18 disconnected to make the rear auxiliary quick couplers 5 function.

Charge fluid flows through the port block 43 to the charge filter 40. The charge filter 40 has a by-pass valve 39 to allow fluid flow when the fluid will not go through the filter element (plugged). The differential pressure switch 38, fluid temperature sensor 41 and charge pressure sensor 38 are connected (electrically) to the operating system unit.

The fluid flows through the charge filter 40 to the charge relief valve 48 on the hydrostatic pumps 45. The charge fluid goes to the displacement control valve 46 and also supplies fluid for cooling and lubrication of the hydrostatic pumps 45 and motors 7.

The displacement control valves 46 angle the swash plates with charge pressure for forward and reverse travel. When the swash plates in the hydrostatic pumps 45 are angled, in either direction, the pumps 45 force fluid (drive pressure) to the hydrostatic motors 7. The motors 7 turn and push the low pressure fluid back to the pumps 45 to be used again.

The hydrostatic pumps 45 contain four high pressure relief/replenishing valves 49. The high pressure relief/replenishing valves 49 have a dual function. In neutral the valve cartridges 49 are pushed off their seats to allow fluid flow from the charge loop to cool, lubricate and replenish the pumps 45 and motors 7. In forward travel the fluid has a higher pressure than charge fluid. This pressure forces the high pressure relief/replenishing valves 49 to close to make the "drive pressure loop". The high pressure relief valves 49 will open allowing drive pressure to relieve into the charge loop to protect the system. The case drain from the hydrostatic pumps 45 goes internally to the hydraulic pump 52.

The hydrostatic motors 7 are a "roller-geroler" type. The case drain fluid from the right motor 7 goes to the tee fitting on the pump 45. Case drain fluid from the left motor 7 flows to the reservoir 1. The check valves 6 keep back pressure on the charge fluid for correct steering operation.

There are tow valves 51 located in the hydrostatic pumps 45. The tow valves 51 can be opened to move the loader a short distance, if the loader cannot move under its own power.

## HIGH FLOW OPERATION

To use the high flow operation; first, engage the high flow switch which will energize the electrical solenoid 31. Then engage the front auxiliary controls which will energize the solenoids 11 and selective valve 13 and the following functions happen:

With the electrical solenoid 31 energized the relief valve 31, in the control valve 20, will