

HYDRAULIC HOLD VALVE

OIL FLOW

Neutral

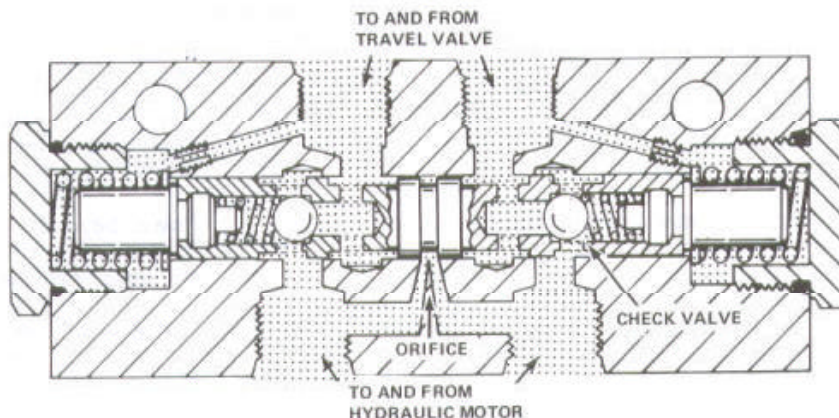
NOTE: The full range hold valve may be a separate body installed between the control valve and motor or may be built into the control valve.

Holding Valve - Spool is centered

There is no hydraulic pressure existing in work ports to and from travel control valve. Therefore, the spool is centered by the springs in the end caps.



Static Oil



OIL FLOW

Forward (Slow to Full Speed)

NOTE: The full range hold valve may be a separate body installed between the control valve and motor or may be built into the control valve.

Holding Valve - Spool is shifted to right, left side check valve opens.

Travel valve directs oil into left port of holding valve. Resistance from check valve, resistance from hydraulic motor, and restricted "Return from Hydraulic Motor" port causes pressure rise through left hand orifice to shift spool to right, compressing spring on right side. This opens the passage for return oil.

If the oil pressure into the hydraulic motor becomes less than the oil pressure out of the hydraulic motor (motor cavitation), the accompanying drop in pressure in the oil supply from the travel valve allows the compressed right spring to shift spool part way to left.

This restricts "Return from Hydraulic Motor" port, preventing cavitation.

The seated check ball in the right side of the spool prevents oil flow.

A small amount of oil can pass through orifices between the motor work ports to prevent hydraulic lock when the spool centers.



Pump Supply Oil



Return Oil

