Hydraulic Control Valve for Forklift

Forklift Hydraulic Control Valves - The control valve is actually a tool which directs the fluid to the actuator. This device will include steel or cast iron spool that is situated inside of housing. The spool slides to various locations within the housing. Intersecting grooves and channels route the fluid based on the spool's position.

The spool is centrally located, help in place with springs. In this particular position, the supply fluid could be blocked and returned to the tank. When the spool is slid to one side, the hydraulic fluid is directed to an actuator and provides a return path from the actuator to tank. If the spool is transferred to the other side, the return and supply paths are switched. Once the spool is enabled to return to the center or neutral place, the actuator fluid paths become blocked, locking it into place.

Typically, directional control valves are made so as to be stackable. They normally have a valve for each and every hydraulic cylinder and a fluid input which supplies all the valves in the stack.

Tolerances are maintained really tightly, so as to tackle the higher pressures and so as to avoid leaking. The spools will usually have a clearance inside the housing no less than 25 Ã‚Âµm or a thousandth of an inch. So as to prevent distorting the valve block and jamming the valve's extremely sensitive parts, the valve block will be mounted to the machine' frame with a 3-point pattern.

Mechanical levers, solenoids or a hydraulic pilot pressure may actuate or push the spool right or left. A seal enables a portion of the spool to protrude outside the housing where it is easy to get to to the actuator.

The main valve block controls the stack of directional control valves by capacity and flow performance. Several of these valves are designed to be proportional, like a valve position to the proportional flow rate, while other valves are designed to be on-off. The control valve is amongst the most sensitive and expensive parts of a hydraulic circuit.