Forklift Hydraulic Control Valve

Forklift Hydraulic Control Valves - The control valve is a tool that directs the fluid to the actuator. This tool will consist of cast iron or steel spool that is positioned within a housing. The spool slides to various places inside the housing. Intersecting grooves and channels route the fluid based on the spool's location.

The spool is centrally situated, help in place with springs. In this particular location, the supply fluid can be blocked and returned to the tank. If the spool is slid to a direction, the hydraulic fluid is directed to an actuator and provides a return path from the actuator to tank. If the spool is moved to the other direction, the supply and return paths are switched. As soon as the spool is enabled to return to the neutral or center place, the actuator fluid paths become blocked, locking it into place.

The directional control is usually made to be stackable. They normally have a valve per hydraulic cylinder and one fluid input that supplies all the valves within the stack.

Tolerances are maintained extremely tightly, in order to tackle the higher pressures and to prevent leaking. The spools would often have a clearance in the housing no less than 25 Ã?â??Ã?Âµm or a thousandth of an inch. In order to avoid jamming the valve's extremely sensitive parts and distorting the valve, the valve block will be mounted to the machine' frame with a 3-point pattern.

Mechanical levers, solenoids or a hydraulic pilot pressure might 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 is generally a stack of off the shelf directional control valves chosen by flow performance and capacity. Several valves are designed to be on-off, whereas others are designed to be proportional, as in flow rate proportional to valve position. The control valve is among the most sensitive and costly components of a hydraulic circuit.