Forklift Hydraulic Control Valve

Hydraulic Control Valve for Forklift - The control valve is a device that directs the fluid to the actuator. This device would include steel or cast iron spool that is situated within a housing. The spool slides to different places in the housing. Intersecting channels and grooves route the fluid based on the spool's location.

The spool is centrally positioned, help in place with springs. In this particular location, the supply fluid could be blocked and returned to the tank. If the spool is slid to a direction, the hydraulic fluid is routed to an actuator and provides a return path from the actuator to tank. When the spool is moved 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 position.

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

Tolerances are maintained extremely tightly, in order to deal with the higher pressures and in order to prevent leaking. The spools will normally have a clearance in the housing no less than 25 Ã?â??Ã?Åµm or a thousandth of an inch. To be able 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.

The position of the spool could be actuated by mechanical levers, hydraulic pilot pressure, or solenoids which push the spool left or right. A seal enables a part of the spool to stick out the housing where it is easy to get to to the actuator.

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