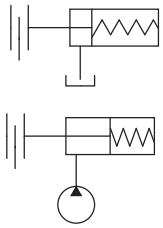
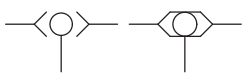
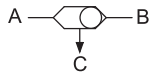
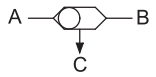
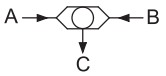
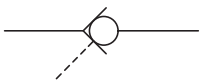
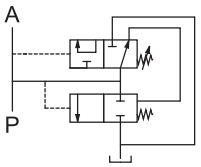
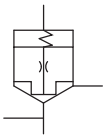
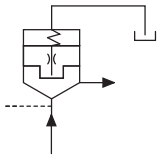
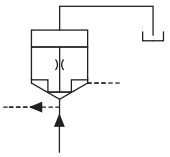
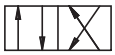
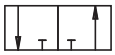
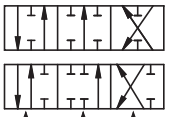
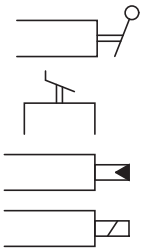
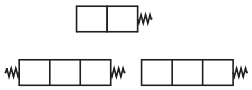
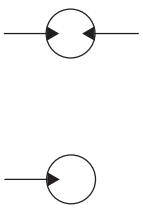
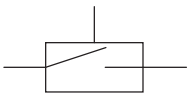
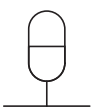
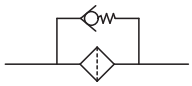
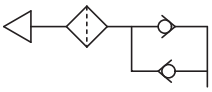
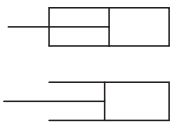
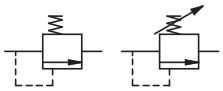
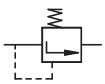
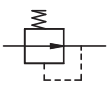
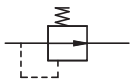
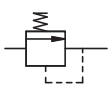
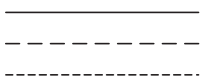
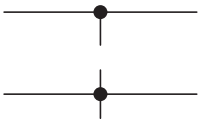
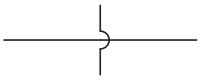
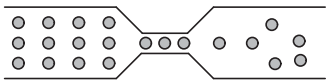
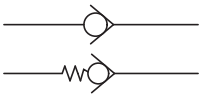
Component	Symbol	Explanation
Brake or clutch		Applied by spring force Released by hydraulic pressure
Shuttle valve		* Two check valve in one block Oil flow achieved by pressure difference between left & right hand side. Pressure A > B :  Pressure A < B :  Pressure A = B : 
Pilot check valve		* One check valve & pilot line in one block. The oil can return when pilot pressure is supplied to open the check valve
Cut-off valve		- Pump oil P < setting value : oil is supplied to A - P > : oil go to tank This valve is used for brake system to charge the certain amount of pressure for accumulator which store the pressure all the time.
Logic valve		* Is combined with piston and orifice. Area difference operates direction control valve Open :  Closed : 

Component	Symbol	Explanation
Direction control valve - 2 Position		For double acting
		For single acting
- 3 Position		For double acting
Methods of operation		Controlling method of direction control valve Hand control lever(manual) Foot control pedal(manual) Hydraulic control by pilot pressure. Electro-magnet control by electricity
		Automatic return control by spring tension.
Motor		Rotating device. - Bi-directional reversible motor : can rotate clockwise or counterclockwise depending on direction of oil supply  - Irreversible motor : rotate one direction only
		Two speed motor
Pressure switch		When oil is supplied, electric connection is made.
Accumulator		Shock absorbing device when the pressure increased suddenly, nitrogen gas is compressed and absorb the shock in system, quickly.

Component	Symbol	Explanation
Filter		Filtering all the dirt in hydraulic system.
With by pass valve		Safety device installed at filter to prevent damage of filter when the filter contaminated.
Cooler		Exhaust the heat of hydraulic oil
Breather		Maintain the pressure inside of hydraulic tank same as atmospheric pressure.
Hydraulic pump 1) Fixed flow pump - Single stage - Two stage 2) Variable flow pump (Piston pump only)	  	Create the oil flow : - One direction  - Both direction, depending on rotation of pump  Discharged amount of pump is flexible depending on the pressure at actuator such as cylinder, and motor. Type of pump - Fixed flow : gear pump, vane pump, piston pump - Variable flow : piston pump
Cylinder		Double acting : retracted and extended by direction of oil supply. Single acting : retracted by weight and extended by oil supply
Pressure control valve - Relief valve - Regulating valve - Reducing valve	  	Safety device to protect hydraulic component such as hose, pipe, cylinder, motor and etc. When the hydraulic system overloaded relief valve is open and circuit oil go to the tank through opened passage.  Relief position Maintain the required pressure all the time to activate system for transmission clutch and etc. by increasing or decreasing the size of overflow passage. It is used for low pressure circuit. When the supplied pressure reaches to required value, oil supply is cut off.  Cut-off position

Component	Symbol	Explanation
Pipe or hose - Main line - Pilot line - Drain or internal leakage		
Connecting lines		Line connected each other : Tee joint or drilled hole
Crossing lines		Line cross over without connection
Station, testing, measurement or power take-off		Line closed or plugged for future usage or special purpose.
Orifice		Reduce size of passage to reduce pressure (Example)  High density (high pressure) Low density (low pressure)
Adjustable orifice		Adjustable(or variable)
Shut off valve		
Check valve - Without spring - With spring		Direction controlling device to prevent reverse flow.  Closed Open and pass
Hydraulic tank		Hydraulic oil storage