



H0015 High Speed Unloader Valve Hydraulic Logic For MK6, SB30 and SB33 Integrated

H0015	Version 2.0	Hydraulics	25-06-03
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System Operation

The tandem pump delivers oil to the high speed load sensed unloader valve, where the two flows can be combined to give high speed operation, or split to give low speed with the second pump flow returning to the oil reservoir.

LOW SPEED / HIGH PRESSURE Mode

In high speed the two oil flows are combined to give a total oil flow of 120l/m. To prevent the engine from overload the working pressure is reduced to 140bar (2000psi).

The pressure limiting is done by opening valve (3) and allowing L/S pressure to be limited by relief valve (5.2).

Increased flow occurs when the high speed valve cartridge (4) is energised allowing the 2nd pump to enter the circuit

DUMP VALVE Optional

Also fitted to this valve may be a solenoid operated dump valve that is activated by the joystick controllers and the emergency stop buttons. This is an **OPTION** for higher levels of safety required for dangerous goods CE machines and PTO Versions.

When the valve is in the de-energised condition load sensed (LS) oil is dumped to tank. When the valve is energised the LS line is blocked to tank therefore allowing the hydraulic system to operate.

General Information

The low speed mode only applies to the lifting arms. The stabiliser legs are always in high speed irrespective of the position of the high/low speed selector mode switch.

When the dump solenoid is de-energised it is fail safe to dump L/S pressure.

When the High speed valve (4) and shutoff valves (3) are de-energised they return to low speed / high pressure therefore allowing the operator to continue operation with heavy containers.

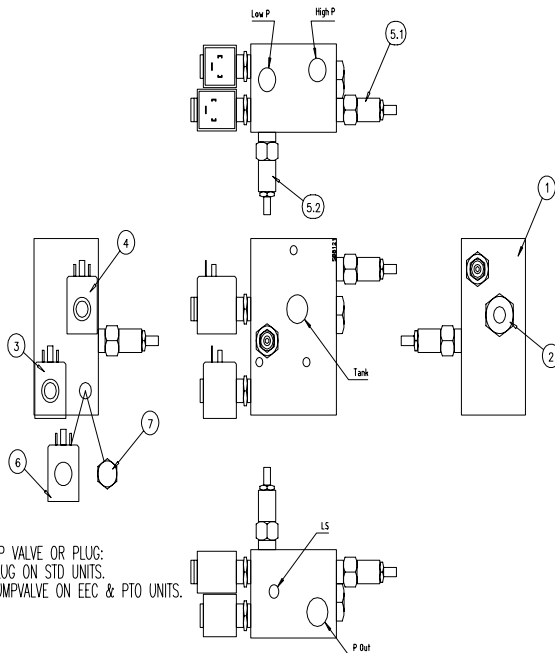
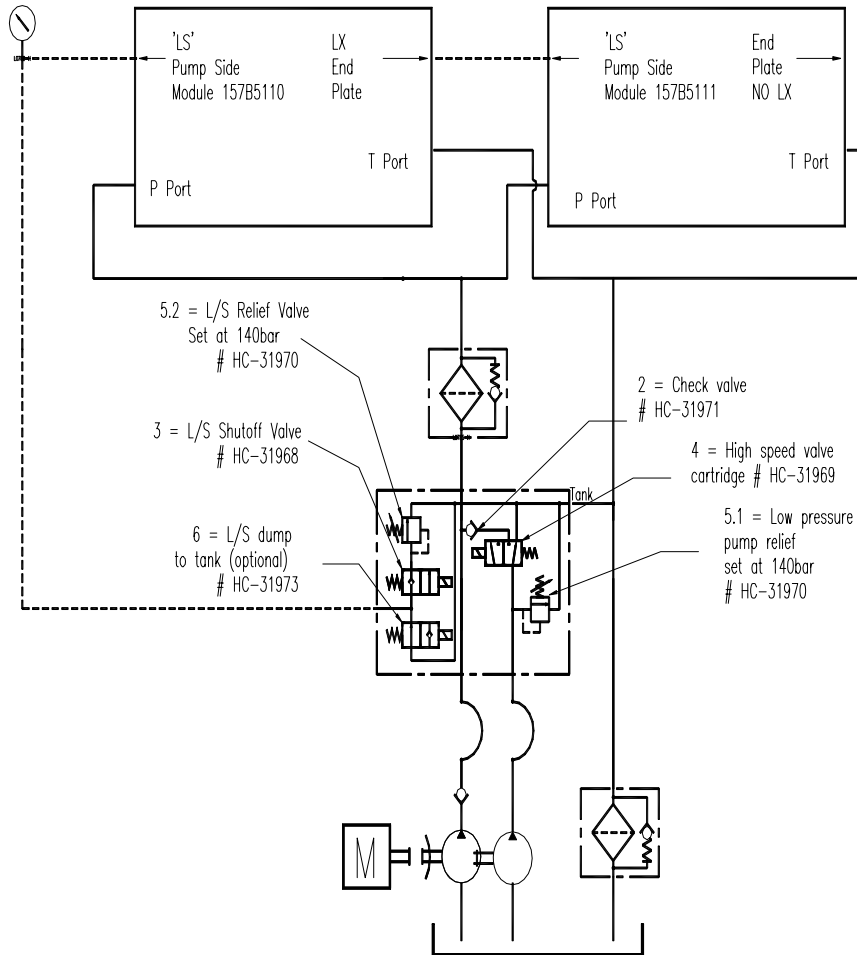
Following is a summary of the logic and function of the "High speed load sense unloader valve".

High Speed Load Sense (LS) Unloader Valve Logic

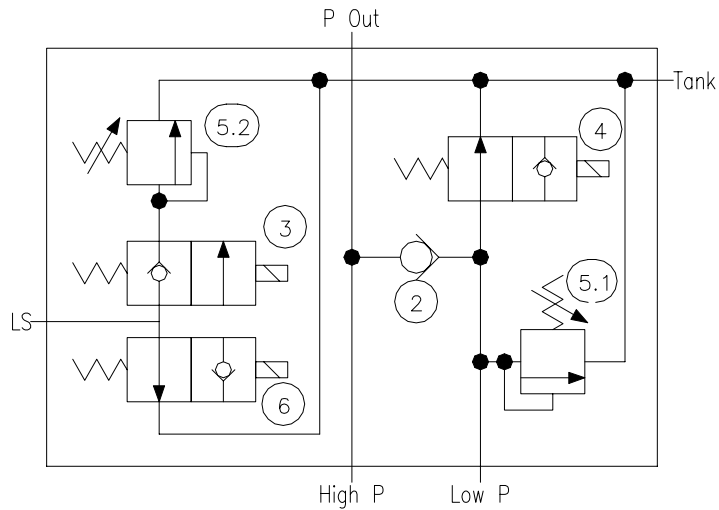
Speed Mode	"High speed"	"Low Speed"
Operating oil flow	120l/min	60l/min
Operating Pressure	140bar (2000psi)@ valve No 3	280bar (4000psi)@ Danfoss PVG32
		No 157B5110
No of pumps operating	2 x Pumps	1 x Pump (second pump
		to tank)



High speed Solenoid (No 4)	Energised	De-energised
High Speed relief (No 2)	140bar (2000psi)	Not Active
Load Sense shutoff (No 5)	Energised	De-energised
Load Sense Relief (No 3)	140bar (2000psi)	Not Active
EHF's	Bypassed. (Not Active)	Active



DUMP VALVE OR PLUG:
* PLUG ON STD UNITS.
* DUMPVALVE ON EEC & PTO UNITS.



7	HC-31977	Plug Cavity Type: CP08-20	1.00	EA	Blind Plug
6	HC-31973	Cartridge EEC Type SX203N-H12	1.00	EA	Dump Valve (NO)
5.2	HC-31970	Cartridge Type 1DR30-P20S	1.00	EA	LS Relief 2000Psi
5.1	HC-31970	Cartridge Type 1DR30-P20S	1.00	EA	Low Pressure Relief 2000Psi
4	HC-31969	Cartridge Type S501N-H12	1.00	EA	High Speed Valve (NO)
3	HC-31968	Cartridge Type SX204N-H12	1.00	EA	LS Shut Off Valve (NC)
2	HC-31971	Cartridge Type 3CA80-1.5S	1.00	EA	Check Valve
1	HC-31975	Manifold Type: SB8121	1.00	EA	Manifold Block
Item	Part No	Description	Qty	Unit	Notes