VOLVO

Construction Equipment

Service Information

Document Title:	Function Group:	Information Type:	Date:
Description	**500**	**Service Information**	**2014/5/29**
Profile:			

Description

SERVICE BRAKES

The machine is provided with an all-hydraulically controlled brake system divided into two circuits, where one of the circuits acts on the front axle brakes and the other circuit on the rear axle brakes.
Both front and rear axles are provided with wet disc brakes.
In addition to this the system consists of hydraulic pump, brake valve and accumulators.
The hydraulic oil pump serves both the brake and servo systems and is fitted in tandem with the steering pump. The oil is drawn from the hydraulic oil tank.
Each circuit has its own accumulator. These are precharged with nitrogen gas and their purpose is to store energy and to safeguard good brake action with a wide margin.
If the pressure in any of the accumulator circuits drops below 9 MPa (1305 psi) for some reason, this is indicated in that the warning lamp for the brake system lights up and the central warning lamp starts to flash and in addition to that a buzzer will sound, if the gear selector control is moved to forward or reverse. If the machine is provided with a display unit (optional equipment) this unit will also display a low brake pressure warning.

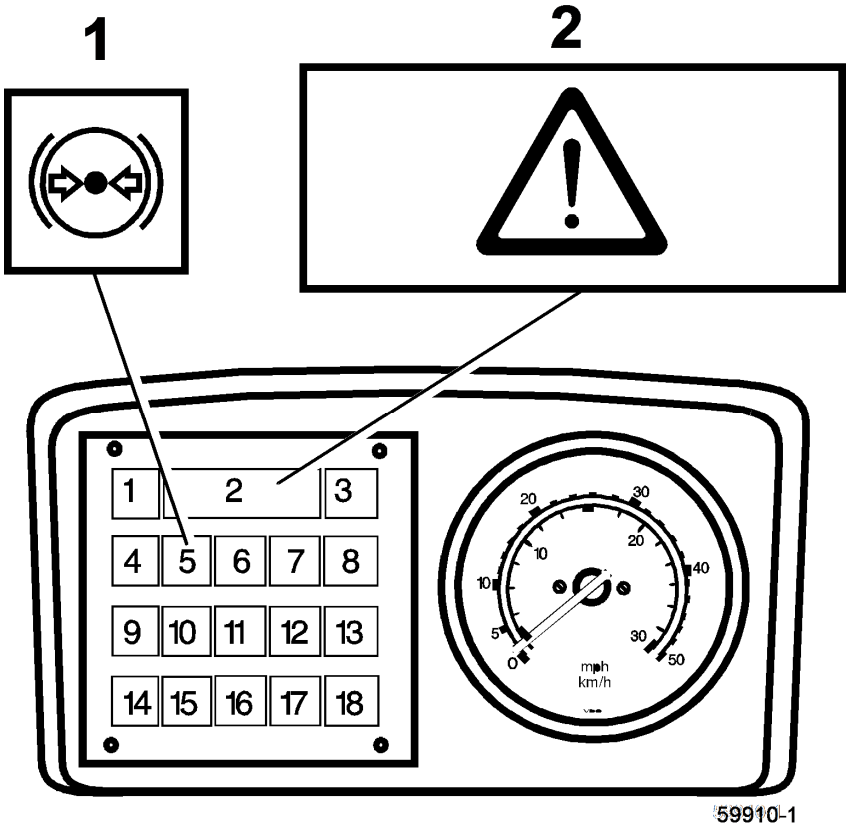


Figure 1
Instrument panel

1. Warning lamp, low brake pressure (LC6)
2. Central warning (LC9)

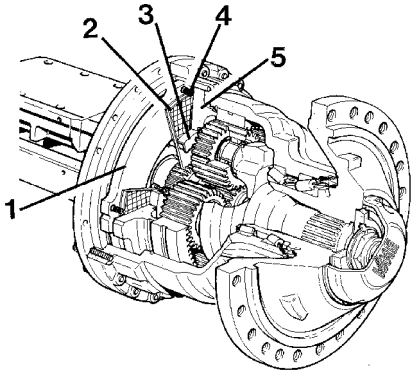
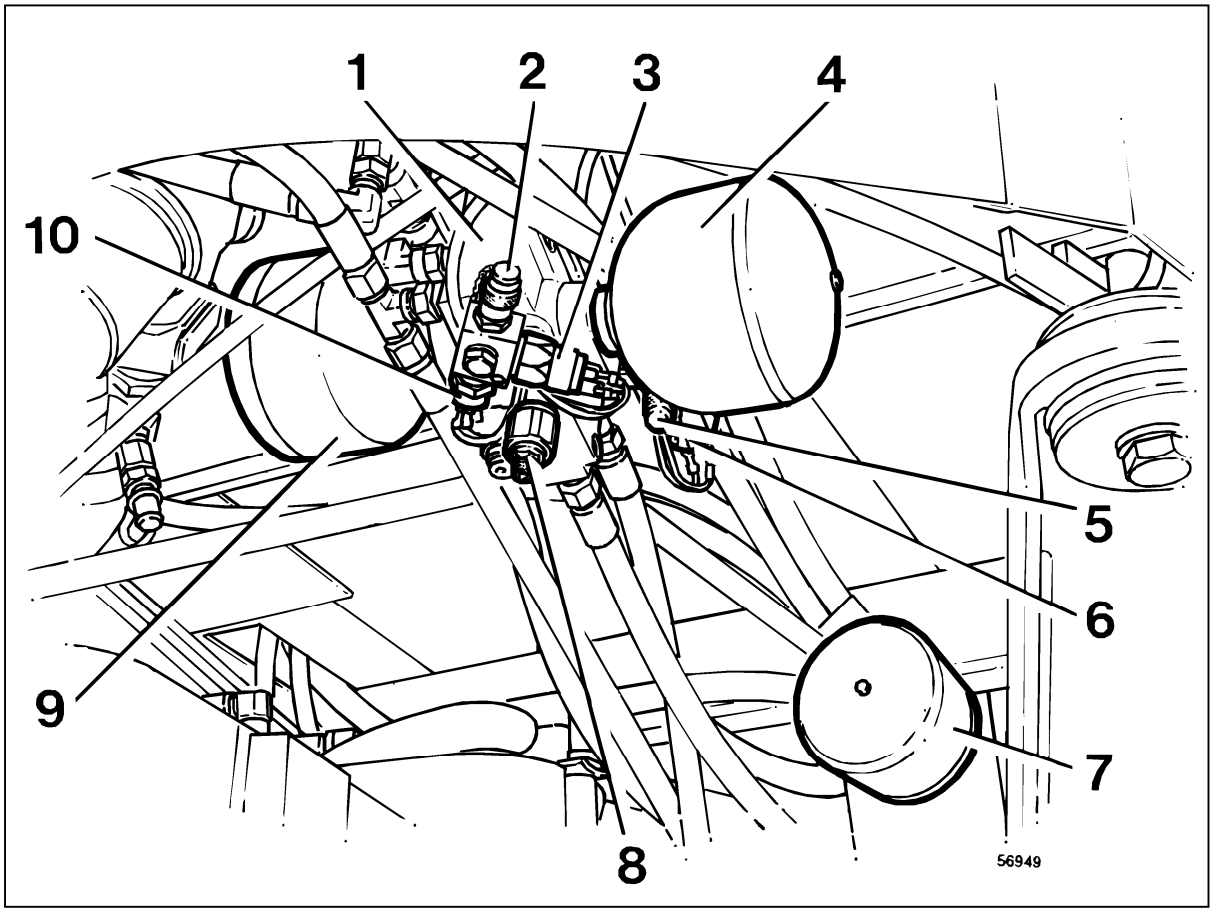


Figure 2
Wet disc brakes (Principle diagram)

1. Piston
2. Brake disc
3. Pump rotor
4. Return spring
5. Brake plate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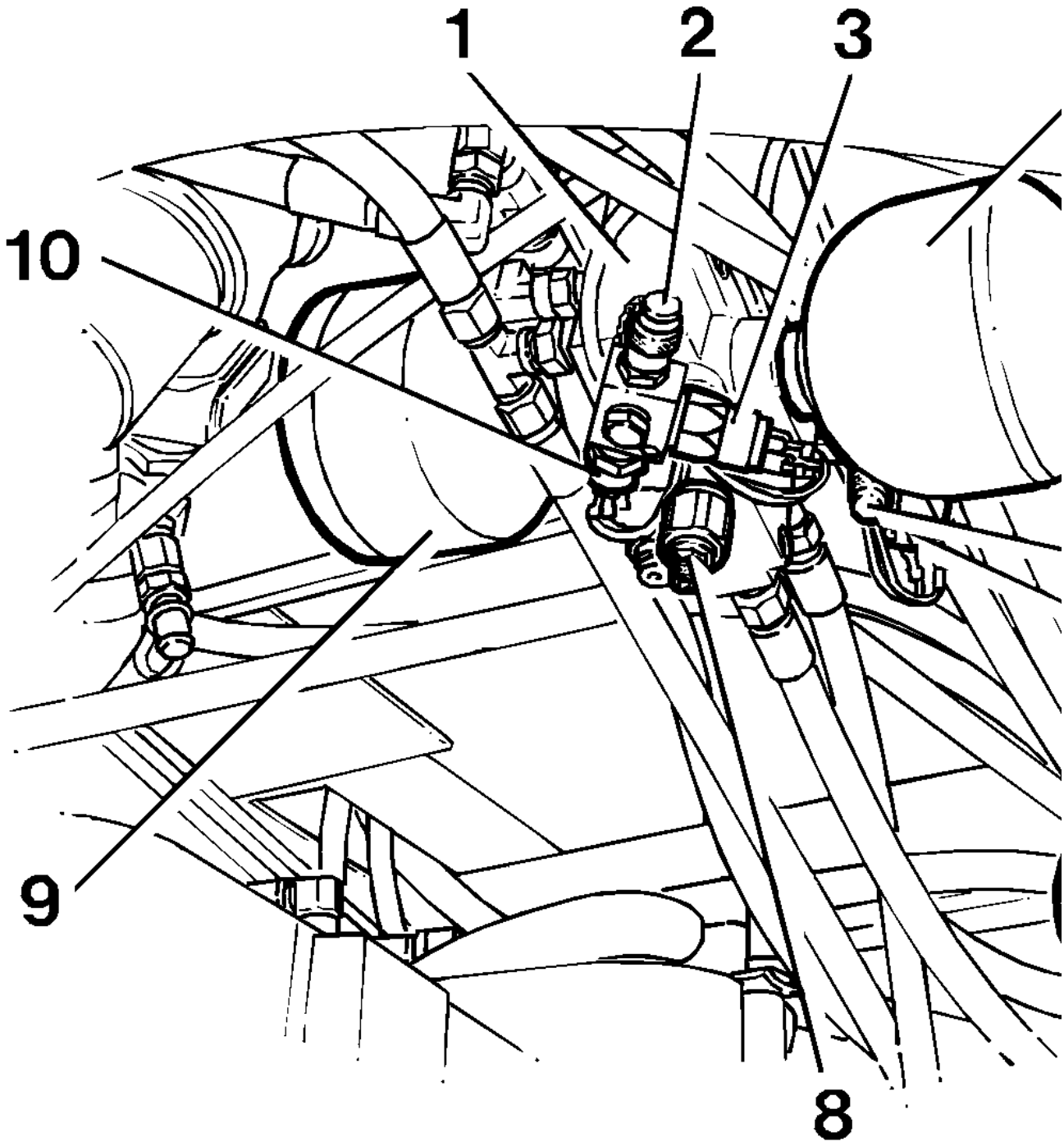

Figure 3
Brake valve

1. Brake valve
2. Pressure outlet for checking output brake pressure to circuit
3. Pressure sensor transmission disengaging (SE2)
4. Accumulator rear circuit (S1)
5. Pressure outlet, unloading pressure
6. Pressure sensor, low brake pressure (SE14)
7. Accumulator for hydraulic parking brake (S3)
8. Adjusting screw unloading pressure
9. Accumulator front circuit (S2)
10. Pressure sensor, stop light (SE29)

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