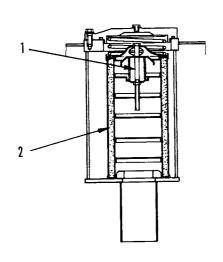
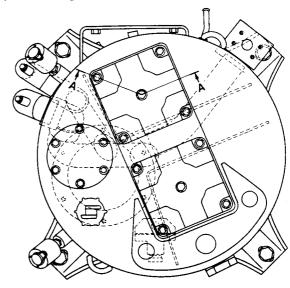
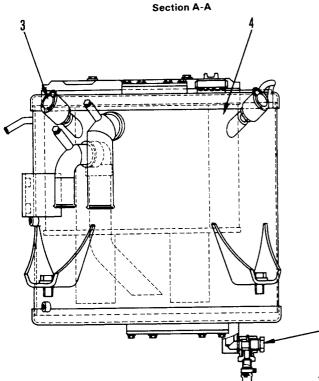
## HYDRAULIC TANK

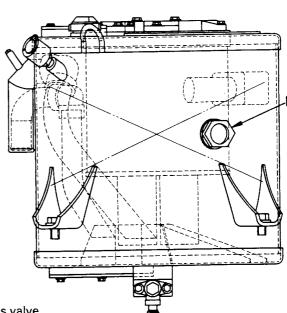
### **Outline**

- The oil from the hydraulic tank is sent from the pump through the control valve to the cylinders. In the return circuit, the oil from various parts merges. Part of it is cooled in the oil cooler, passes through the oil filter (2) and returns to the tank (4).
- The oil filter (2) filters all the oil in the circuit. If the oil filter (2) becomes clogged, a bypass valve (1) acts to allow the oil to return directly to the tank (4). This prevents damage to the filter (2). The bypass valve (1) is also actuated when negative pressure is generated in the circuit.









- 1. Bypass valve
- 2. Oil filter Element
- 3. Breather
- 4. Hydraulic tank
- 5. Drain valve
- 6. Oil level sight gauge

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### OIL FILTER BYPASS VALVE

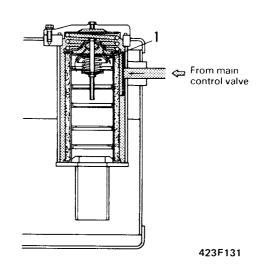
## When the filter is clogged

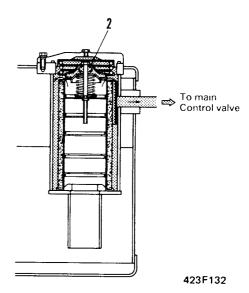
Bypass valve (1) opens and the oil returns directly to the tank without passing through the filter.

Bypass valve set pressure: 1.27 kg/cm<sup>2</sup>

# When negative pressure is formed in the return circuit.

Valve (2) moves up and acts a check valve. Check valve set pressure: 0.26 kg/cm<sup>2</sup>





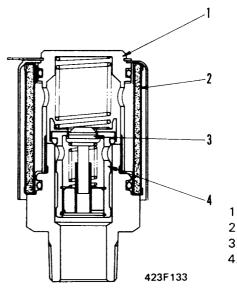
### **BREATHER**

## Preventing negative pressure inside the tank

The tank is a pressurized, sealed type, so negative pressure is formed inside the hydraulic tank when the oil level drops during operations. When this happens, the difference in pressure between the tank and the outside atmospheric pressure opens the poppet (3), and air from the outside is let into the tank to prevent negative pressure.

### Preventing rise in pressure inside the tank

When the hydraulic cylinders are being used, the oil level in the hydraulic circuit changes and the temperature rises. If the hydraulic pressure rises above the set pressure, the breather is actuated to release the hydraulic pressure inside the tank.



- 1. Body
- 2. Filter element
- 3. Poppet
- 4. Sleeve