CAT® Lift Trucks

Service Manual

Chassis, Mast & Options

EP20K PAC	ETB8C-00011-up
EP25K PAC	ETB8C-50001-up
EP30K PAC	ETB9C-00011-up
EP35K PAC	ETB9C-50001-up

For use with EP20K PAC - EP35K PAC
Controller Service Manual.

99759-6A110

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GENERAL INFORMATION

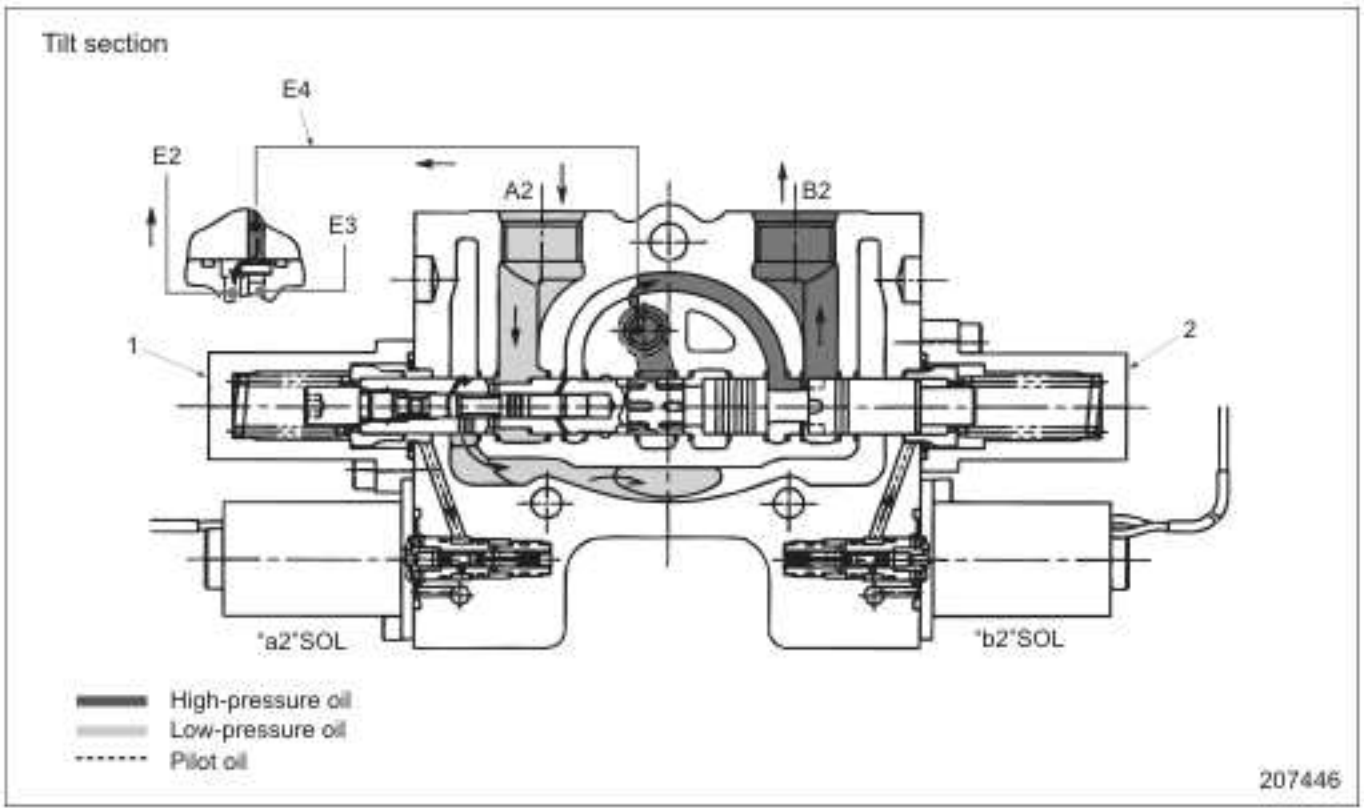
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4. Troubleshooting guide for solenoid control valves

Trouble symptom	Possible cause	Remedy
The pump discharge pressure will not build up	1. Sticky plunger in proportioning solenoid of reducing valve, or sticky shuttle in reducing valve 2. Open in lead wire or in solenoid coil 3. Input current to solenoid too small 4. Unload valve stuck open 5. Spool stuck in flow-divider valve	Disassemble and clean by washing. If the plunger is sticky, replace the solenoid. Repair or replace. Check to make sure that solenoid is drawing specified maximum input current. • Check unload solenoid for action. • Check unload valve for action. Disassemble and clean by washing.
Sticky spool	Sticky plunger in proportioning solenoid of reducing valve, or sticky shuttle in reducing valve.	Disassemble and clean by washing. If plunger is sticky, replace solenoid.

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"b2" Solenoid Operation in Spool Switching (Tilt Forward)

To facilitate understanding of the following description, also refer to the hydraulic system schematic diagram for the "tilt forward" state (drawing No. 207456A) on page 9-74.

Activation of the proportional electromagnetic pressure control valve on the "b2" SOL side results in the generation of pilot pressure in cap 2, which exceeds the force of spring in cap 1 and pushes the spool to the left.

Oil from the control channel lifts the load check valve and flows through cylinder port B2 to the bottom side of the tilt cylinder. At the same time, oil flows to the high-pressure selector through oil passage E4.

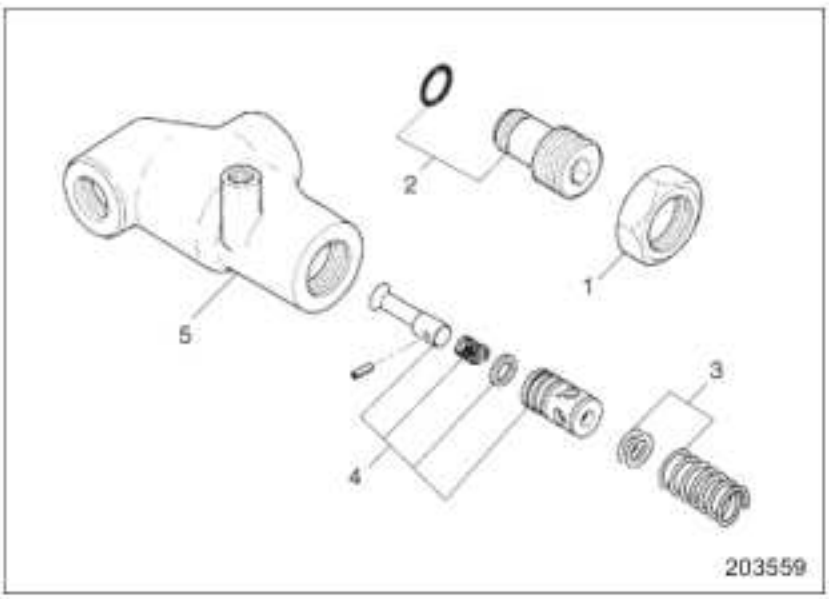
In this process, pressure travels from the control channel to the damper chamber, and pushes the tilt lock valve to the left against the spring force. As a result, the oil passage to the low-pressure channel opens to allow oil from the rod side to flow into the low-pressure channel through cylinder port A2.

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Flow Regulator Valve

Procedures and Suggestions for Disassembly and Reassembly

Disassembly

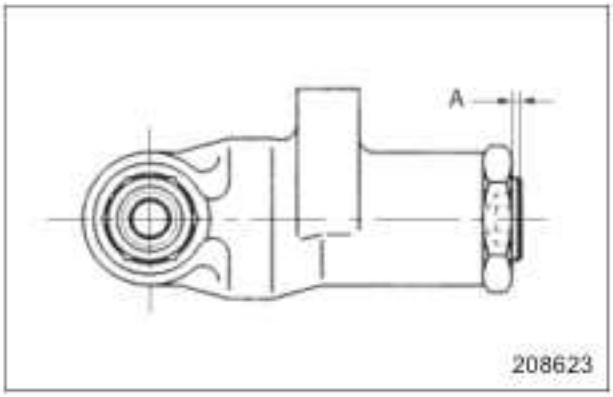


Sequence

1 Lock nut
2 Plug, O-ring
3 Spring, Shims
4 Piston, Pin, Washer, Spring, Valve
5 Valve body

Start by:

Measure and note the dimension A in the drawing to facilitate reassembly.



Inspection after disassembly

1. Check the spring for fatigue.
2. Check the seat and sliding faces of the valve and piston.
3. Check the sliding surfaces of the piston and valve body for damage.

NOTE

Replace the flow regulator valve as an assembly if any defect is found.

Reassembly

(1) Follow the disassembly procedure in reverse, making sure that dimension A is the same as it was before disassembly.

(2) When repair work is complete, measure the fork lowering speed. If it is out of specification, adjust it by turning plug 2. For the on-machine adjustment method, see page 9-71.

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