#### Disassembly and Assembly MAIN CONTROL VALVE SUPPLEMENT FOR 325, 325 L AND 325 N EXCAV Media Number -SENR5462-00 Publication Date -01/05/1992 Date Updated -11/10/2001

## **Main Control Valve**

SMCS - 5451-016; 5451-015

### **Disassemble Main Control Valve**

Start By:

**a.** remove main control valve<sup>\*</sup>

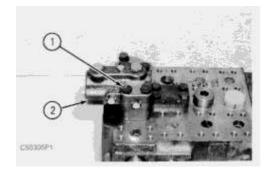
NOTE: The weight of the main control valve is 190 kg (420 lb)

1. Thoroughly clean the outside of the main control valve prior to disassembling it.

#### NOTICE

Put identification marks on all components of the main control valve as they are being removed. All parts must be reinstalled in their original locations. Do not damage any of the internal parts during removal. A damaged valve component will result in oil leakage and affect valve performance. Keep all internal parts of the valve clean and lubricated.

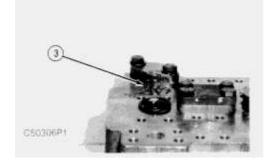
2. Remove and disassemble pressure control valve (2) as follows:



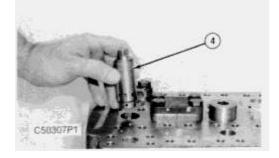
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There is spring force against pressure control valve (2). When four bolts (1) that hold the pressure control valve in place are removed, the spring force will be released. To prevent possible personal injury, hold pressure control valve (2) in place by hand as bolts (1) are being removed.

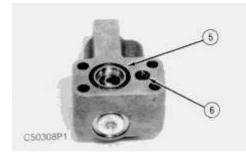
**a.** While holding pressure control valve (2) in place by hand, slowly remove four bolts (1). Remove pressure control valve (2) from the main valve body.



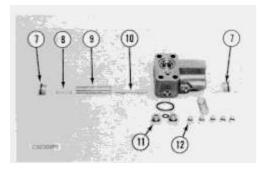
**b.** Remove spring (3) from the main valve body.



c. Remove valve assembly (4) from the main valve body.

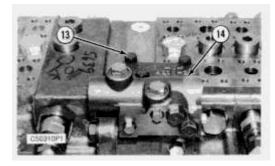


d. Remove O-ring seals (5) and (6) from the pressure control valve body.

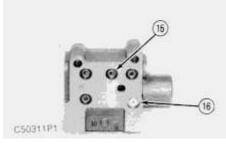


Exploded View Of Pressure Control Valve

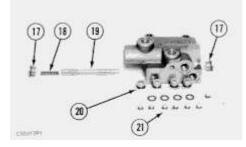
**e.** Remove plug (7) from each end of the valve body. Remove spring (8), valve (9), and spool (10) from the valve body. If necessary, remove two plugs (11) and five plugs (12) from the valve body. Remove the O-ring seal from each plug.



- 3. Remove and disassemble pressure control valve (14) as follows:
- **a.** Remove three bolts (13) and pressure control valve (14) from the main valve body.

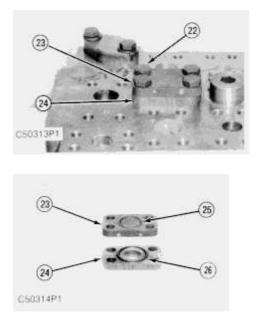


**b.** Remove O-ring seals (15) from the valve body. Remove plug (16) from the valve body.



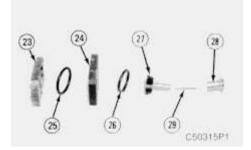
Exploded View Of Pressure Control Valve

**c.** Remove two plugs (17), spring (18) and spool (19) from the valve body. If necessary, remove four plugs (20) and six plugs (21) from the valve body. Remove the O-ring seal from each plug.

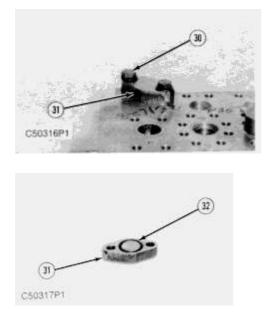


4. Remove the check valve assembly from the main valve body as follows:

**a.** Remove four bolts (22) and plates (23) and (24) from the main valve body. Remove O-ring seal (25) from plate (23). Remove O-ring seal (26) from plate (24).

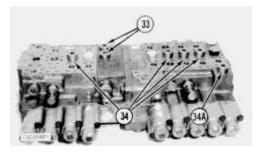


**b.** Remove pilot (27), spring (29) and check valve (28) from the main valve body.



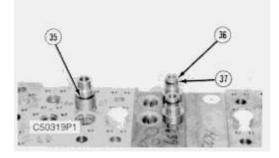
**NOTE:** Plate (31) is only for manufacturing purposes.

**5.** Remove two bolts (30) and the washers and plate (31) from the main valve body. Remove Oring seal (32) from plate (31).

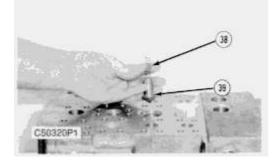


6. Remove the two check valves and five load check valves as follows:

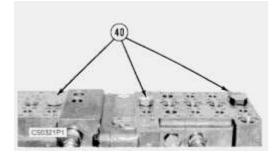
**a.** Remove two plugs (33) from the main valve body. Remove four plugs (34) and one plug (34A) from the main valve bodies.



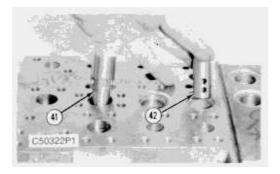
**b.** Remove O-ring seal (35) from each plug (34). Remove O-ring seal (37) and back-up ring (36) from each plug (33).



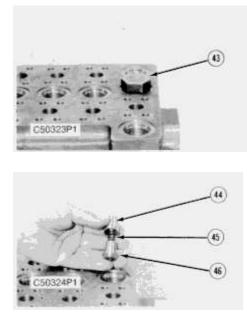
c. Remove spring (38) and plunger (39) for each check valve and load check valve.



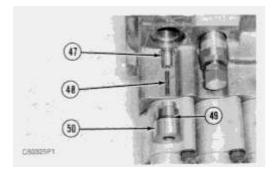
7. Remove three plugs (40) from the main valve bodies. Remove the O-ring seal from each plug.



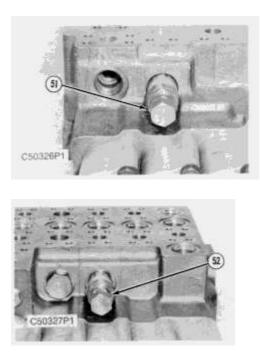
8. Remove sleeve (41) and sleeve (42) from the main valve body.



**9.** Remove the check valve from the main valve body. Remove plug (43). Remove sleeve bearing (44), spring (45) and valve (46). Remove the O-ring seal from plug (43).



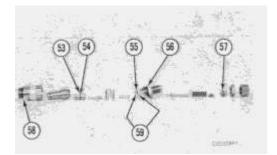
**10.** Remove plug (50), spring (48) and check valve (47) from the main valve body. Remove Oring seal (49) from the plug.



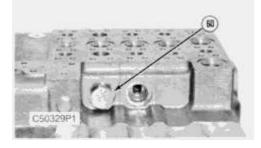
11. Remove line relief valves (51) and (52) from the main valve bodies.

**12.** Disassemble line relief valves (51) and (52) as follows:

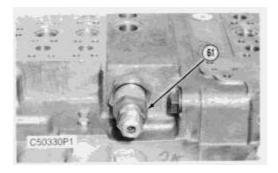
**NOTE:** Only the O-ring seals and back-up rings are serviceable in the line relief valves (51) and (52). However the line relief valves can be disassembled for cleaning.



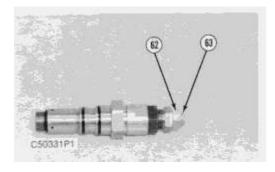
- a. Disassemble the line relief valves as shown. Remove O-ring seal (58) from the adapter.
- **b.** Remove back-up ring (53) and O-ring seal (54) from the valve.
- c. Remove O-ring seal (55) and two back-up rings (59) from the seat.
- **d.** Remove O-ring seal (57) from the piston.



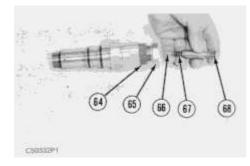
13. Remove plug (60) from the main valve body. Remove the O-ring seal from the plug.



- 14. Remove main relief valve (61) from the main valve body.
- **15.** Disassemble main relief valve (61) as follows:

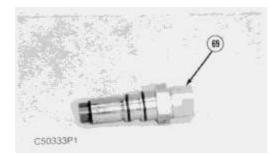


**a.** Remove nut (62), the washer and plunger assembly (63) from the adjuster.



**b.** Remove piston (68), spring (67) and valve (66) from adjuster (65).

**c.** Loosen nut (64), and remove adjuster (65) from the valve group. Remove the O-ring seal from each end of the adjuster.



d. Remove insert (69) from the valve body. Remove the two O-ring seals from the insert.



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