

Product: EXCAVATOR

Model: 231D EXCAVATOR 1NK

Configuration: 231D EXCAVATOR 1NK00001-UP (MACHINE) POWERED BY 3208 ENGINE

Disassembly and Assembly 225D & 231D EXCAVATORS VEHICLE SYSTEMS

Media Number -SEN4784-00

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SEN47840032

Double Pump (Bent-Axis Piston)

SMCS - 5070-015; 5070-016; 5070-010

Remove And Install Double Pump (Bent-Axis Piston)

Tools Needed		A	B
8S9906	Ratchet Assembly	1	
5P9736	Link Bracket		1



WARNING

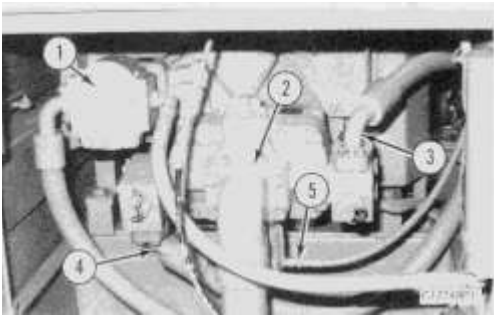
Always release the oil pressure in the main hydraulic system before disconnecting or removing any oil lines connected to the main hydraulic system.



WARNING

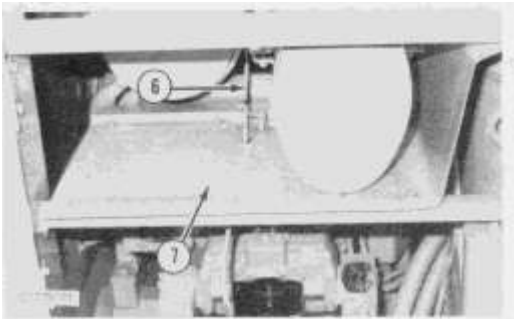
Always lower the bucket to the ground before the performance of any service work.

1. Drain the oil from the hydraulic tank.



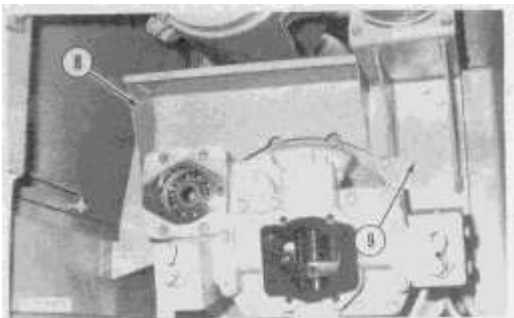
NOTE: Identify all hoses and lines. Put caps or plugs on the hoses, lines, and in the ports to keep foreign material out of the system.

2. Disconnect two hose assemblies from pilot system pump (1). Remove two bolts and pilot system pump (1).
3. Remove four bolts, loosen a hose clamp and remove tube assembly (2).
4. Disconnect hose assemblies (3), (4) and hose assembly (5) if the machine is equipped with a hammer or increased lift.

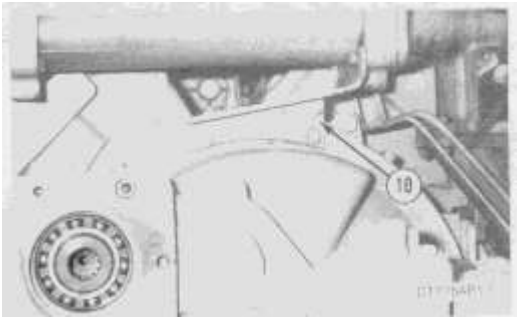


Typical Example

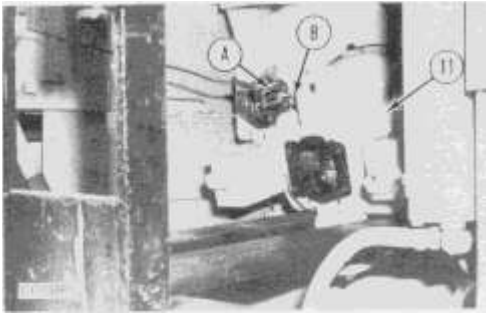
5. Remove the bolts and shield (7). Disconnect the clamp holding cable (6) and move the cable out of the way.



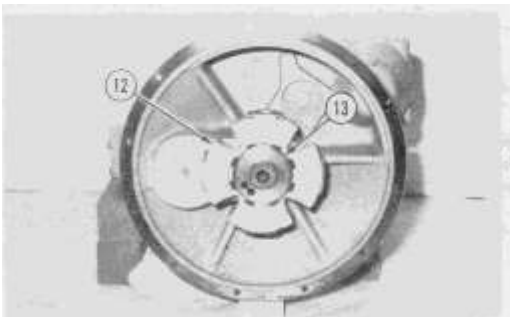
6. Remove the bolts and brackets (8) and (9).



7. Remove four bolts and bracket (10).



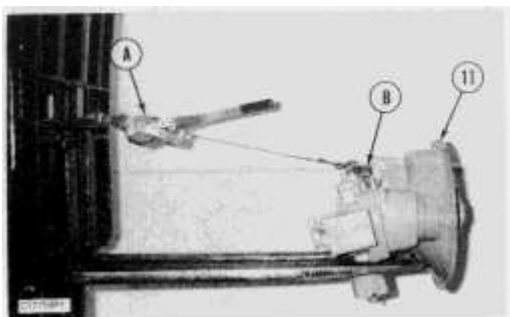
8. Fasten link bracket (B) to double pump (11). Position a lift truck directly under double pump (11). Fasten one end of tool (A) to ratchet assembly (B) and the other end of the lift truck. Remove the bolts that fasten the double pump to the flywheel housing and use tool (A) and the lift truck to slowly remove the double pump from the machine. The weight of the double pump is **125 Kg (275 lb)**.



9. Remove element (12) and hub assembly (13).

NOTE: The following steps are for the installation of the double pump.

10. Install hub assembly (13) and element (12) in the double pump.



11. Fasten tool (B) to double pump (11). Position a lift truck under double pump (11). Fasten one end of tool (A) to the lift truck and the other end to tool (B).
 12. Install two 3/8" NC guide pins in the engine flywheel housing. Use the lift truck to move the double pump into position. Use the guide pins to locate the pump on the flywheel housing. Install two bolts to hold the pump in position.
 13. Install bracket (10) and the four bolts.
 14. Install bracket (9) and the remaining bolts.
 15. Install bracket (8).
 16. Install governor control cable (6) and shield (7).
 17. Connect hose assemblies (3), (4) and (5). Install tube assembly (2) and tighten the hose clamps and the four bolts.
 18. Install pilot system pump (1). Connect the two hydraulic hoses.
- NOTE:** Do not start the engine unless the pump is filled with oil.
19. Fill the double pump with hydraulic oil.
 20. Fill the hydraulic tank with oil to the correct level.

NOTICE

Perform Scheduled Oil Sampling on oil wetted compartments after performing service work to check for contaminants left in the system following repair. Contaminants put into the system may cause rapid wear and shortened component life.

Disassemble Double Pump (Bent-Axis Piston)

Tools Needed		A	B	C	D	E	F	G
8T0643	Bolt (M10 x 1.5 -80 mm long)	2						
8B7548	Puller Assembly-Bearing		1		1			1
8B7552	Forcing Bolt [5/8"-18x305 mm (12 in.) long]		1					
1B4206	Nut (5/8" - 18)		1					
5P4808	Cap		2					
8B7550	Leg-Push/Puller		2					
8T9165	Angle Block As. (Large)		1					
8T9166	Angle Block As. (Small)		1					
8T9161	Adapter-Thread (12 mm)		1		1			
8T9164	Plate-Puller		1					
8T0289	Bolt (M5 x 0.8 20 mm long)		7					
8T4185	Bolt (M10 x 1.5 x 50 mm long)			2				
8H0660	Bearing Puller					1		
5P4758	Pliers As.-Int.						1	

Tools Needed		H
8B7548	Puller Assembly-Bearing	1
8T9162	Adapter (10 mm)	1

Start By:

a. remove pump

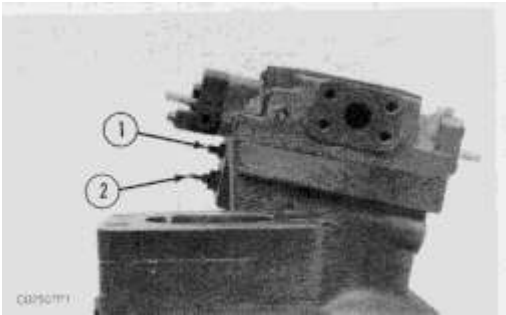
NOTICE

Keep all parts clean from contaminants. Contaminants put into the system may cause rapid wear and shortened component life.

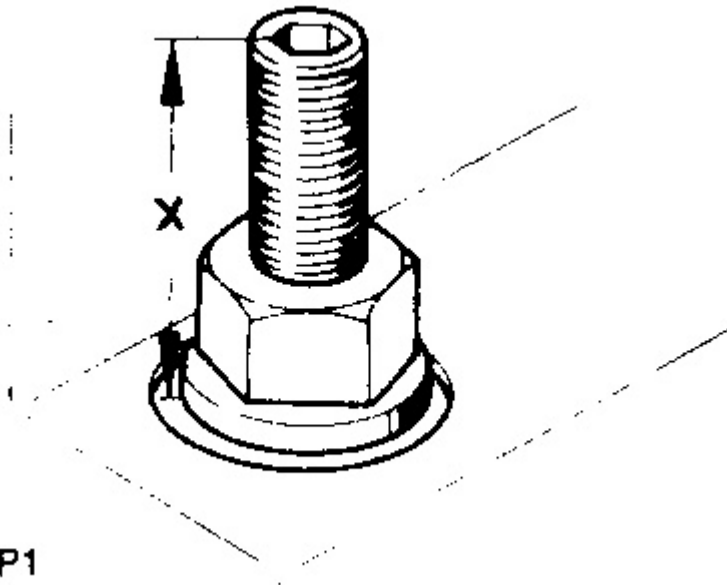
1. Cover all pump openings, and clean the outside of the pump thoroughly.

NOTICE

There are four external adjustment screws on this pump. All four adjustment screws have protective covers to prevent tampering or accidental adjustment. The covers will be destroyed and will need to be replaced if they are removed. The covers should be removed only when necessary for proper pump disassembly. Changes should be made to the adjustment screws only by trained personnel or poor vehicle performance will result.



2. Remove the plastic covers from power adjustment screw (2) and torque adjustment screw (1).



3. Measure the height (dimension X) of torque adjustment screw (1) from the machined surface under the locking nut to the top of the screw. Record the dimension.
 4. Measure the height of power adjustment screw (2) from the pump housing surface to the top of the screw. Record the dimension.
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