Product: VIBRATORY COMPACTOR
Model: CS-431B VIBRATORY COMPACTOR 1XF
Configuration: CS-431B VIBRATORY COMPACTOR 1XF00001-UP (MACHINE) POWERED BY T4.236 ENGINE

Disassembly and Assembly
CS-431B & CS-433B/CP-433B VIBRATORY COMPACTORS VEHICLE SYSTE
Media Number -KENR1321-00 **Publication Date -01/07/1989** **Date Updated -10/10/2001**

Hydraulic Propel Motor, Front (CS-433B & CP-433B)

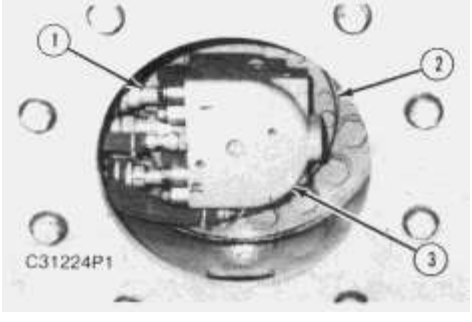
SMCS - 5058-010; 5058-017

Remove And Install Hydraulic Propel Motor, Front (CS-433B & CP-433B)

WARNING

At operating temperature, the oil in the hydraulic oil tank and in the hydraulic system is hot and under pressure. Hot oil can cause burns. Prior to disconnecting any hydraulic lines, release the pressure in the hydraulic system. Stop the engine. Move the hydraulic control levers to all positions to release the pressure in the hydraulic system. Release the pressure in the hydraulic oil tank. Remove the fill cap on the hydraulic oil tank only when it is cool enough to touch with your bare hand. Remove the fill cap slowly to release the pressure in the hydraulic oil tank.

1. Release the pressure in the hydraulic system by moving the hydraulic control levers to all positions. Release the pressure in the hydraulic oil tank by slowly loosening the fill cap.



2. Put identification marks on five hoses (1) that are connected to the hydraulic propel motor for installation purposes. Disconnect the hoses from the motor. Put plugs in the hoses to keep dirt and debris out of the hydraulic system.

3. Put an alignment mark on the hydraulic propel motor and the gear reducer so the motor can be installed in its original position. Remove six bolts (2) that hold the hydraulic propel motor to the gear reducer. Remove hydraulic propel motor (3).

4. Remove the o-ring seal from the hydraulic propel motor. Discard the o-ring seal, and use new parts for replacement.

NOTE: Install the hydraulic propel motor in the reverse order of removal. Tighten bolts (2) that hold the motor to the gear reducer to a torque of 50 N·m (37 lb ft).

5. Fill the hydraulic oil tank to the correct level. See, "Hydraulic Tank" in the Operation & Maintenance Manual for the correct filling procedure.

Disassemble And Assemble Hydraulic Propel Motor, Front (CS-433B & CP-433B)

Start By:

a. remove hydraulic propel motor, front (CS-433B & CP-433B)

NOTE: The procedure which follows shows the hydraulic propel motor and gear reducer removed as a unit.

NOTICE

Bolts of size M10 and smaller, which have been locked with thread lock, must be heated before removal to prevent possible damage.

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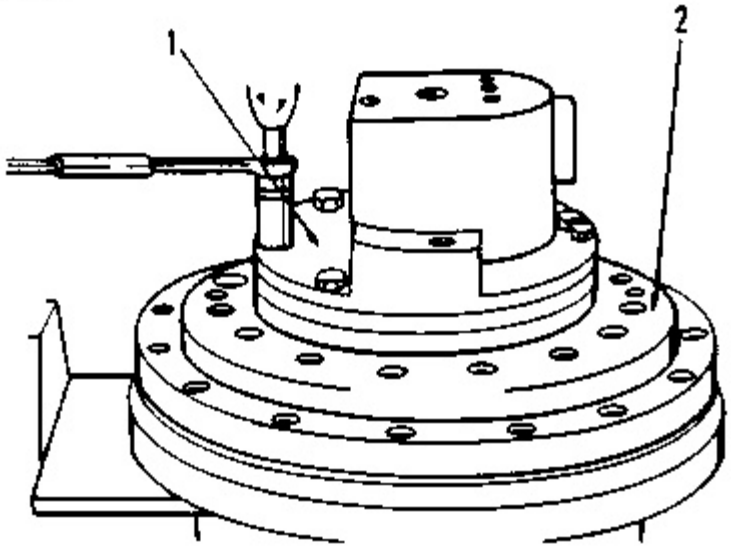
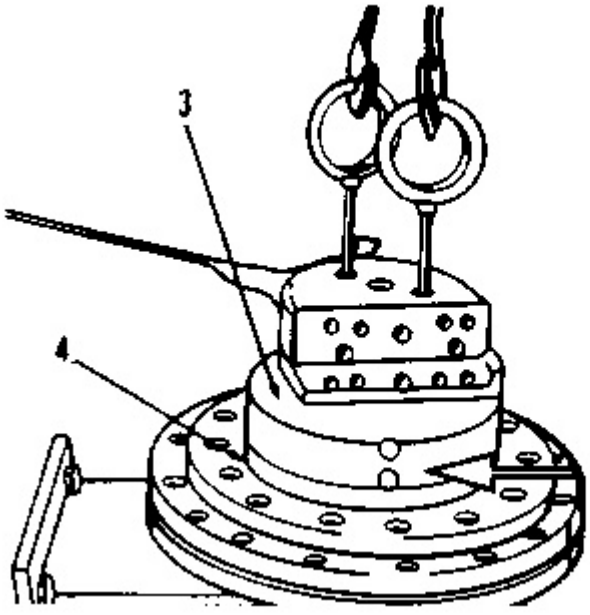


1. Remove six bolts (1) that hold the hydraulic propel motor to gear reducer (2).



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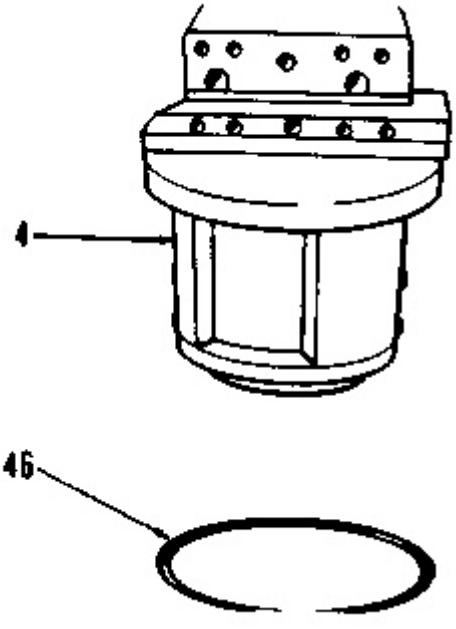
2. Put and alignment mark across control cover (3), housing (4) and the gear reducer for assembly purposes. The components must be reinstalled in their original locations.

3. Install two forged eyebolts of the appropriate size in control cover (3). Fasten a hoist to the hydraulic propel motor, and remove it from the gear reducer.



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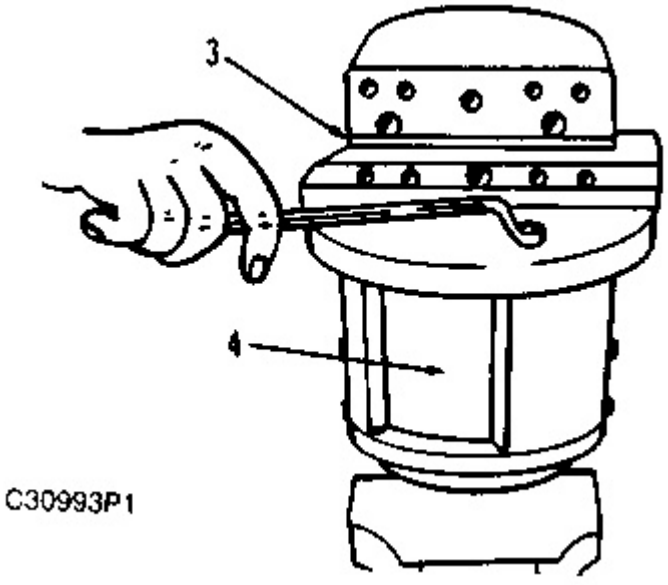
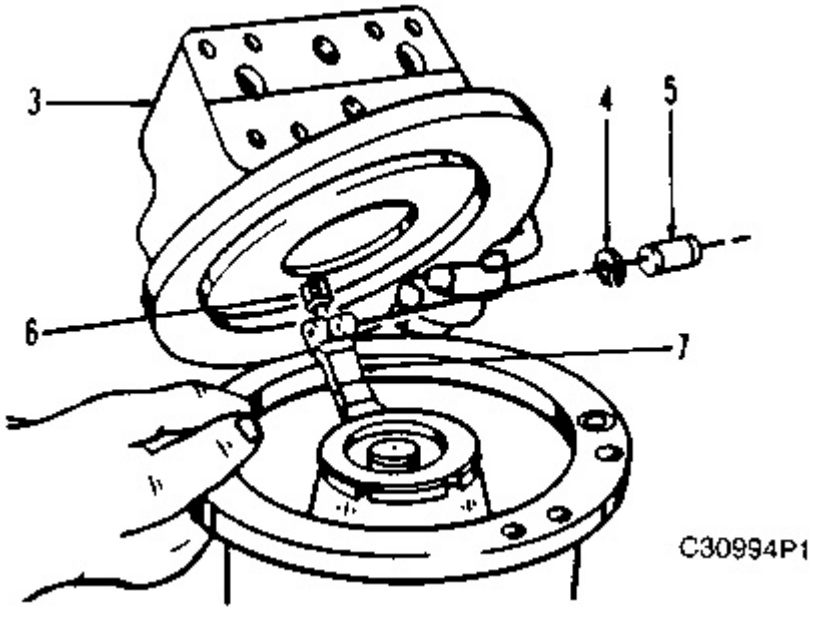
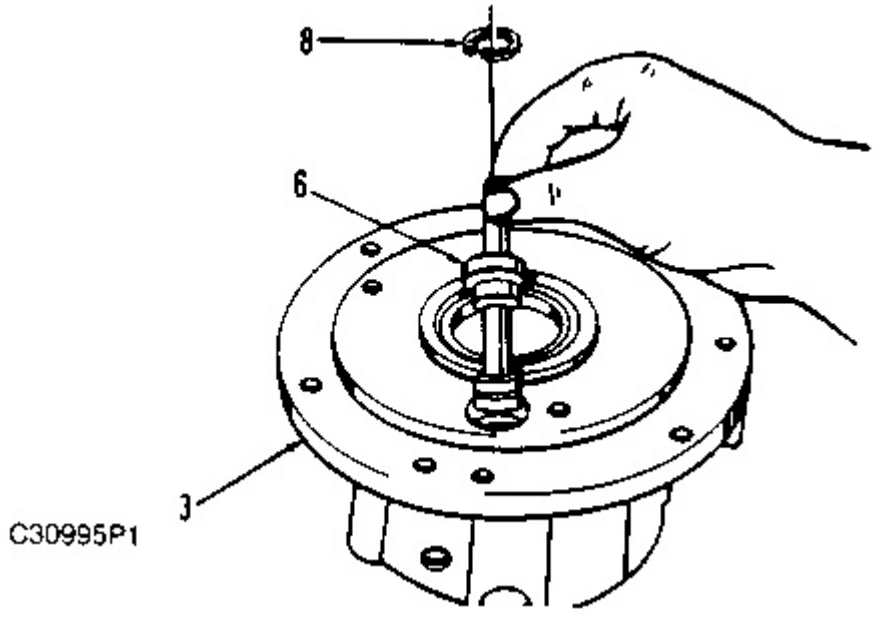
4. Remove o-ring seal (46) from the groove on the outside of housing (4). Discard the o-ring seal, and use new parts for replacement.



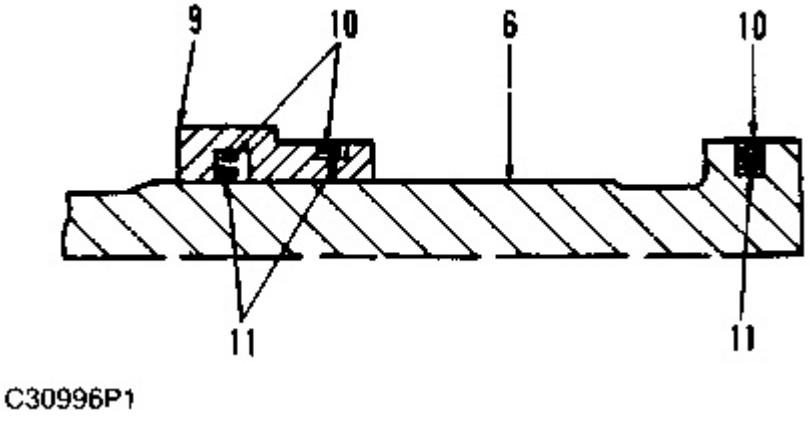
5. Remove the two bolts that hold control cover (3) to housing (4).



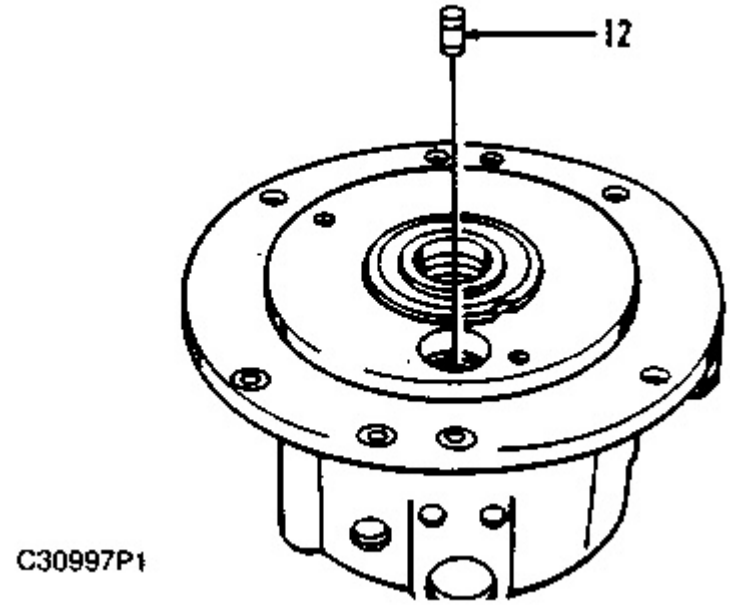
6. Lift control cover (3). Remove retaining ring (4) and pin (5) that hold lever (7) to piston (6). Remove the control cover.



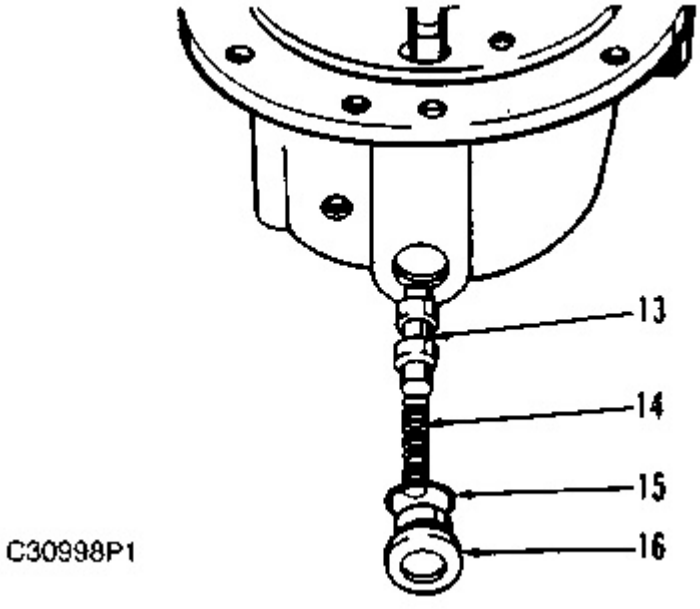
7. Remove retaining ring (8) that holds piston assembly (6) in control cover (3). Remove the piston assembly.



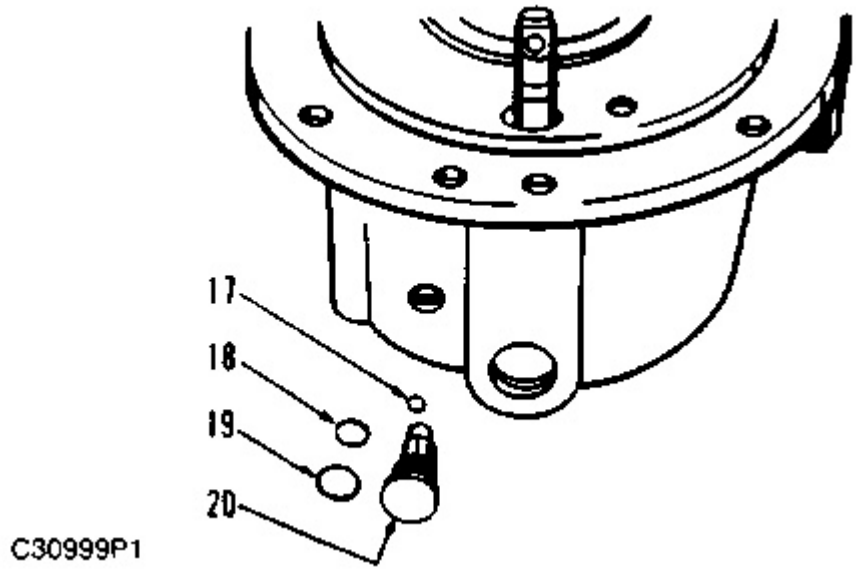
8. Slide bushing (9) off of piston (6). Remove gaskets (10) and o-ring seals (11). Discard the gaskets and the o-ring seals. Use new parts for replacement.



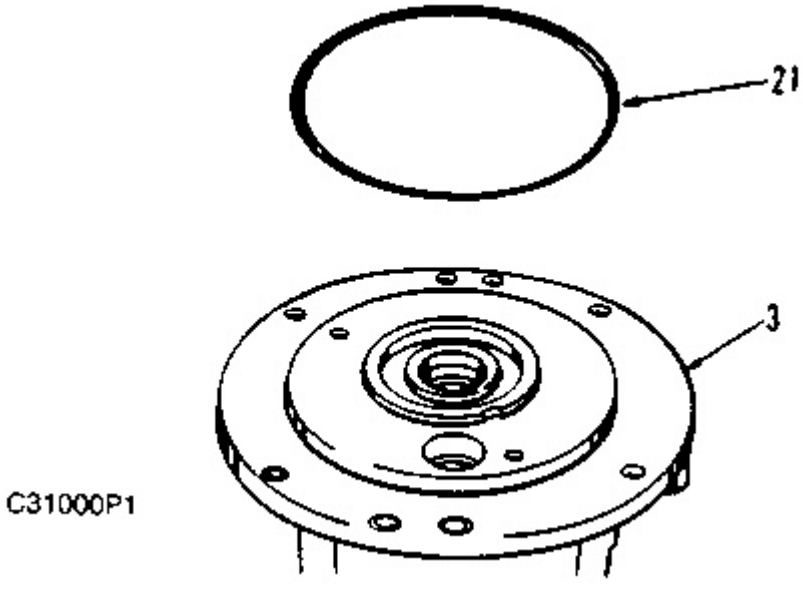
9. Remove nozzle (12) from inside the control cover.



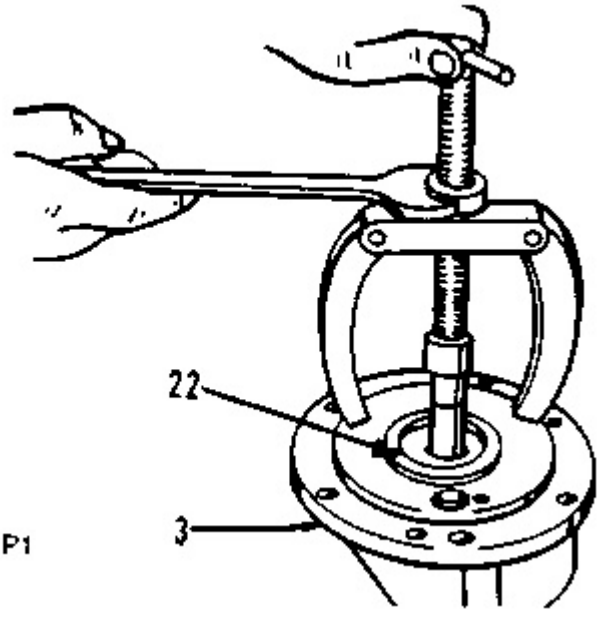
10. Remove plug (16), spring (14) and piston (13) from control cover (3). Remove o-ring seal (15) from the plug. Discard the o-ring seal, and use new parts for replacement.



11. Remove valve housing (20) and ball (17) from the control cover. Remove o-ring seals (18) and (19). Discard the o-ring seals, and use new parts for replacement.



12. Remove o-ring seal (21) from the groove in the end of the control cover (3). Discard the o-ring seal, and use new parts for replacement.



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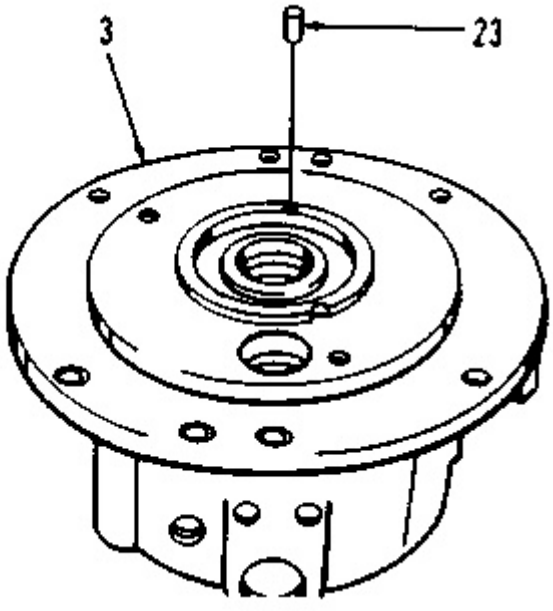
13. Using a suitable puller, remove bearing (22) from control cover (3).



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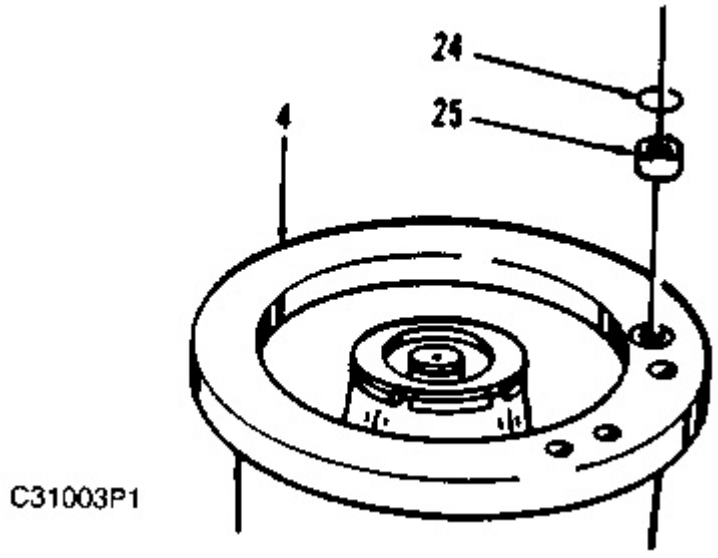
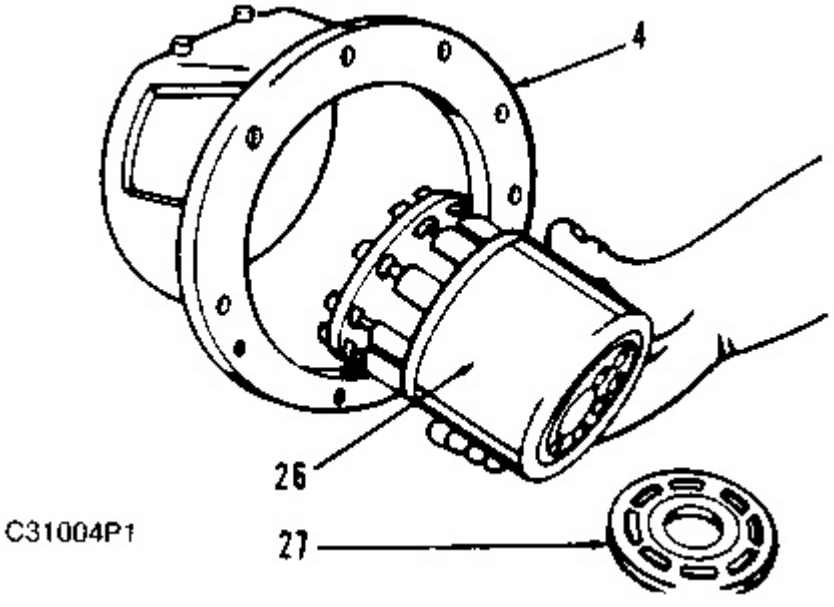
14. Remove pin (23) from control cover (3).

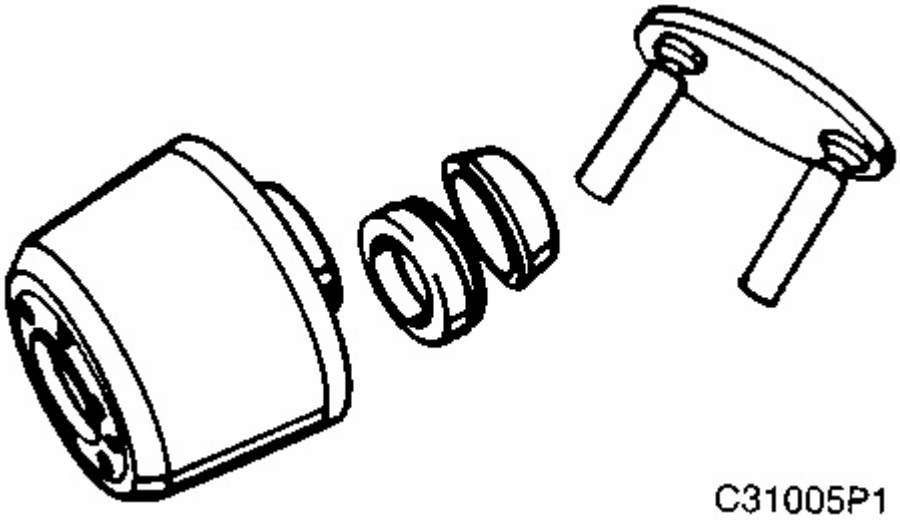


15. Remove o-ring seal (24) and ring (25) from the bore in housing (4). Discard o-ring seal (24), and use new parts for replacement.

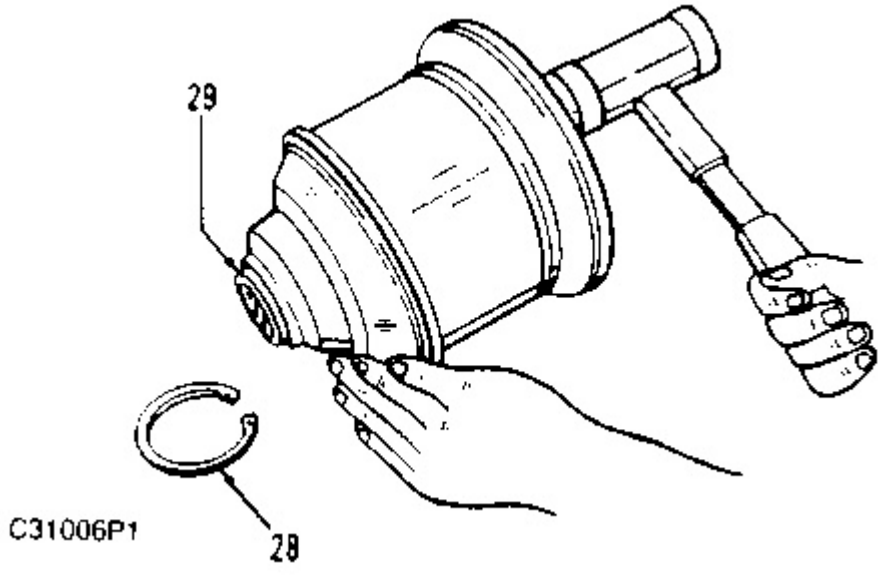


16. Lift disc (27) away from transmission (26).

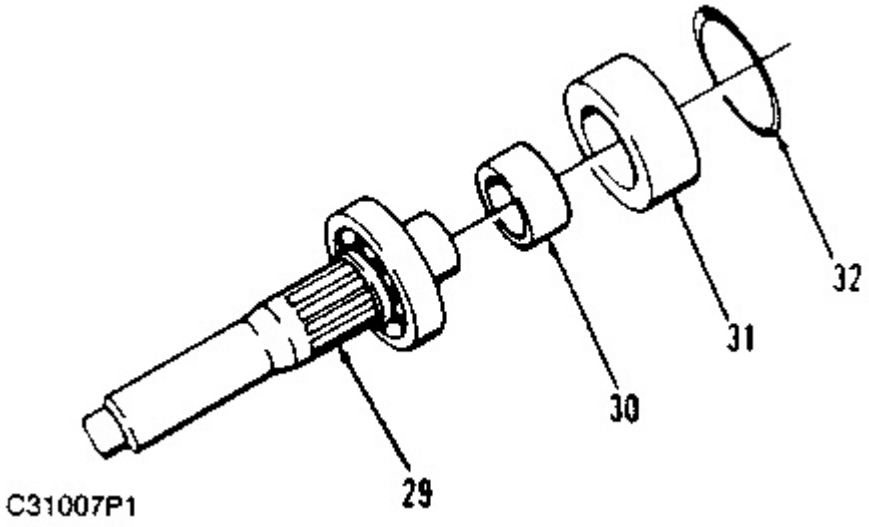
17. Remove transmission (26) from inside housing (4).



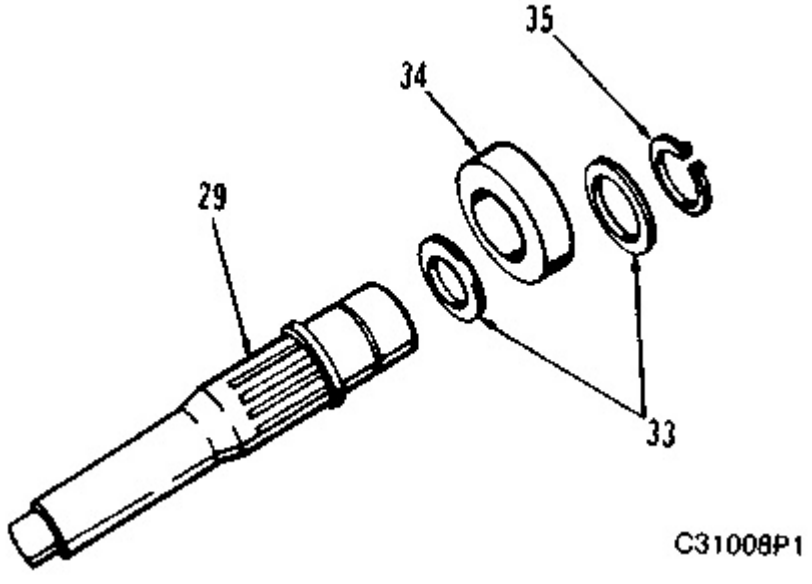
18. Separate the components of the transmission as shown.



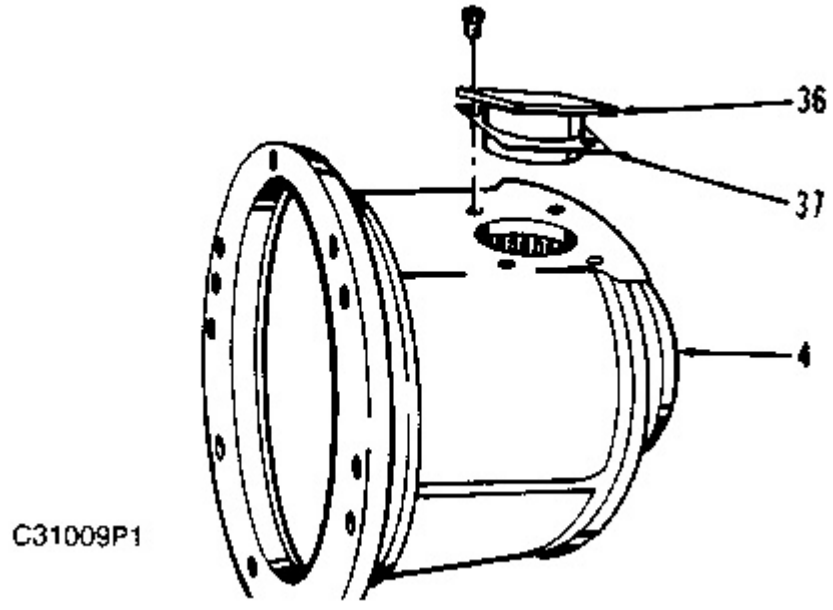
19. Remove retaining ring (28). Remove shaft (29) from the housing with a soft faced hammer in the direction shown.



20. Remove cover ring (31), shaft seal (30) and o-ring seal (32) from the end of shaft (29). Discard o-ring seal (32), and use new parts for replacement.

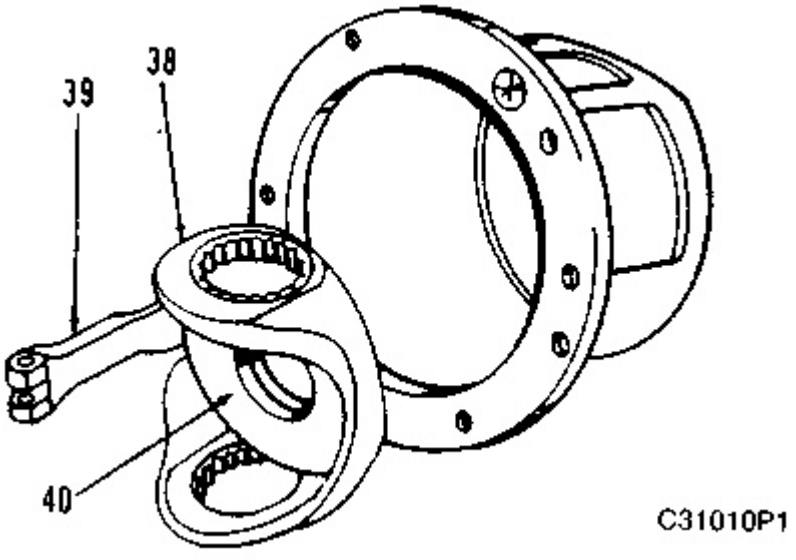


21. Remove retaining ring (35), washers (33) and bearing (34) from shaft (29).

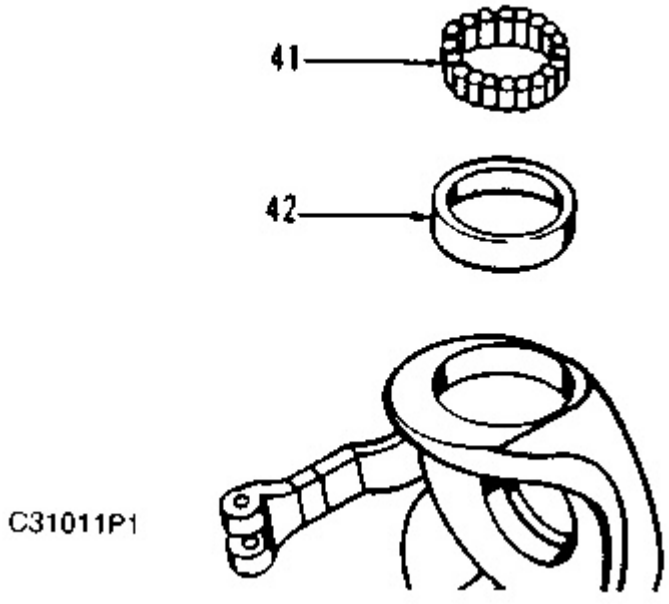


22. Remove the bolts that hold two bearing journals (36) to housing (4).

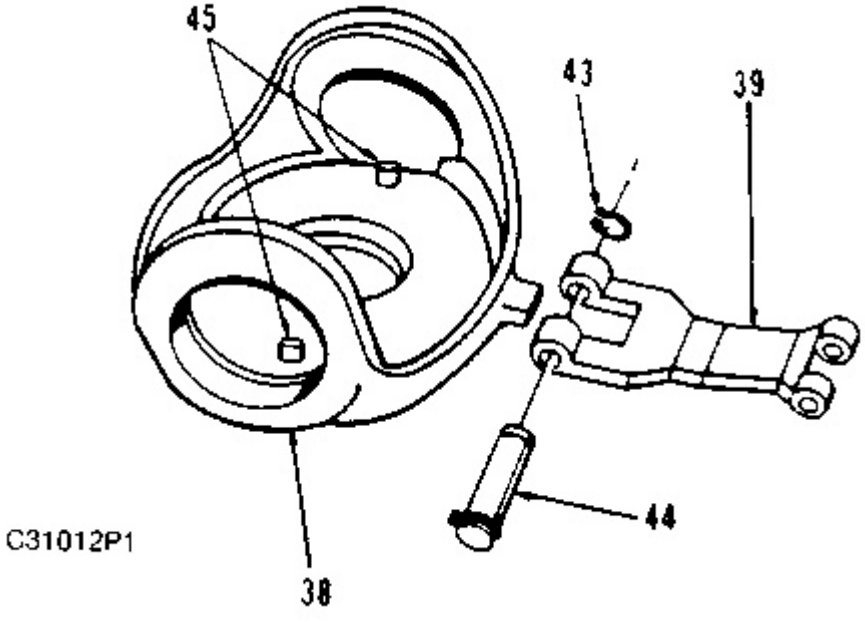
23. Remove both bearing journals with a press. Remove spacers (37).



24. Remove swing frame (38) together with lever (39) and disc (40). Remove disc (40) from lever (38).



25. Remove rollers (41) and bearing races (42) from the swing frame.



26. Remove retaining ring (43) and pin (44) that hold lever (39) to swing frame (38).

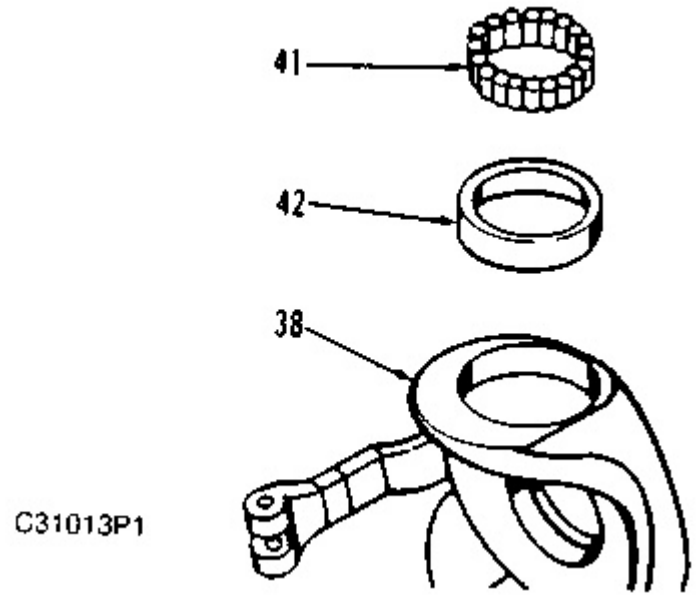
27. Remove two cylinder pins (45) from swing frame (38).

NOTE: The following steps are for the assembly of the hydraulic propel motor.

28. Thoroughly clean all parts of the hydraulic propel motor prior to assembly. Inspect the parts for damage or excessive wear. Guideline For Reusable Parts, "Piston Pumps And Motors", Form No., SEBF8032-01 can be used to determine the reusability of the parts. Prior to assembly, put a thin coat of clean hydraulic oil on all parts of the hydraulic propel motor.

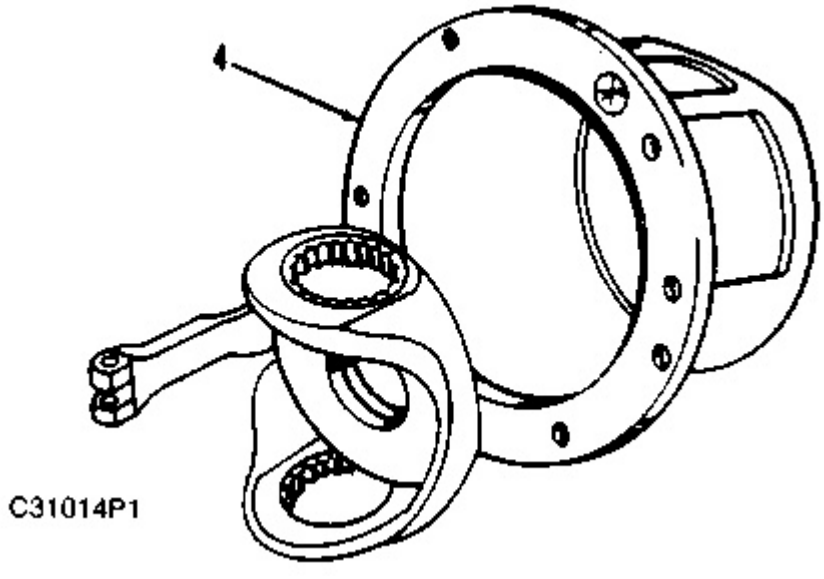
29. Put a thin coat of 9S3263 Thread Lock on two cylinder pins (45). Install the two cylinder pins in swing frame (38).

30. Connect lever (39) to the swing frame with pin (44) and retaining ring (43).

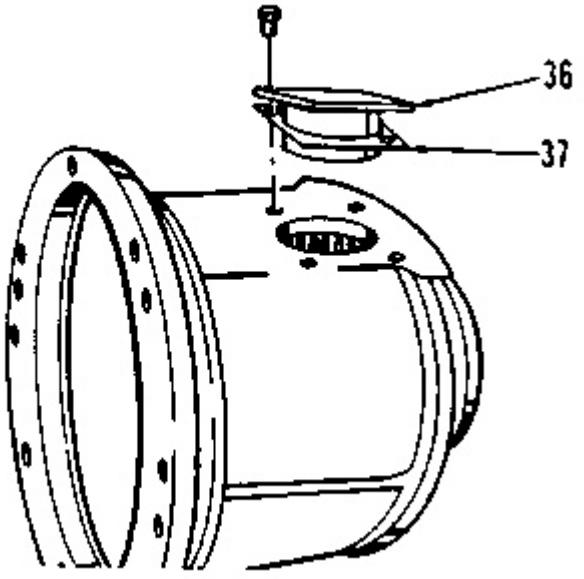


31. Install two bearing races (42) in swing frame (38). Be sure the bearing races are installed squarely in the bores.

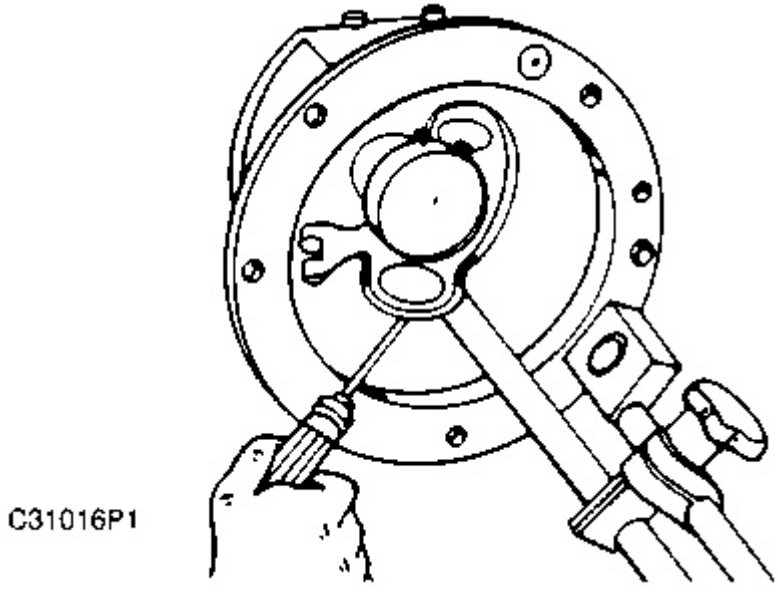
32. Install one set of rollers (41) in each bearing race (42). Use 5P0960 Multipurpose Grease to hold the rollers in position.



33. Put the swing frame assembly in position in housing (4). During installation of the swing frame in the housing, do not let the rollers fall out of the bearing races.



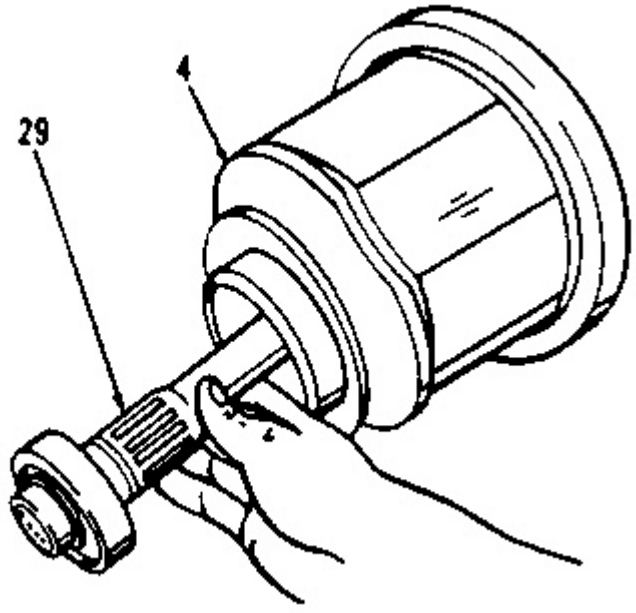
34. Put a thin coat of 7M7456 Bearing Mount on the sealing surfaces and in the tapped holes in housing (4). Lower the temperature of both bearing journals (36). Install spacers (37) and bearing journals (36) in housing (4). Install the bolts that hold the bearing journals, and tighten them to a torque of 10 N·m (8 lb ft).



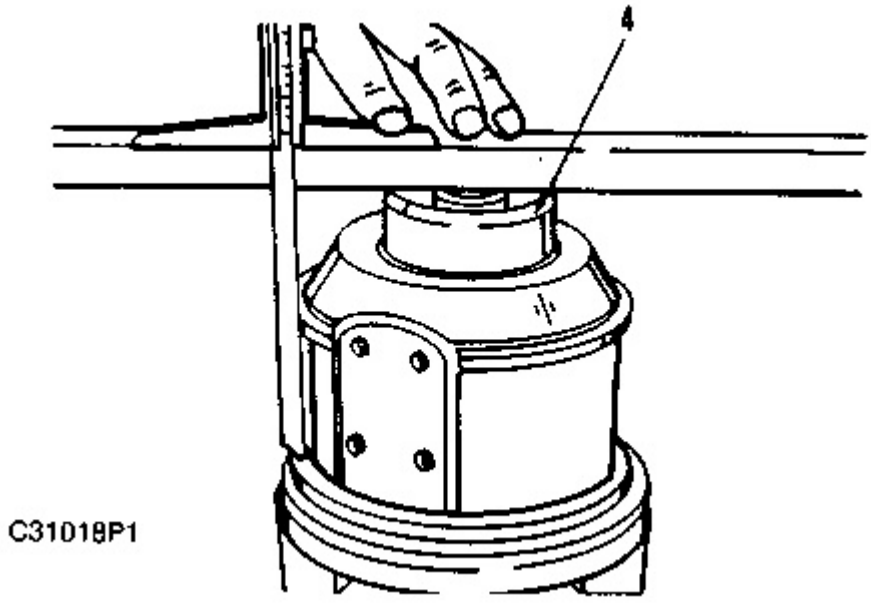
35. Using a dial indicator, measure the side-to-side end play of the swing frame. Measure the end play along the axis formed by the two bearing journals (36). The maximum total end play should not be more than .30 mm (.012 in). If the end play exceeds the maximum, bearing journals (36) must be removed. Replace spacers (37) with thicker spacers to decrease the end play.

36. Install inside spacer (33) on shaft (29). Heat bearing (34) to a maximum temperature of 95°C (203°F), and install it on shaft (29). Be sure the bearing is fully installed and is square with the shaft.

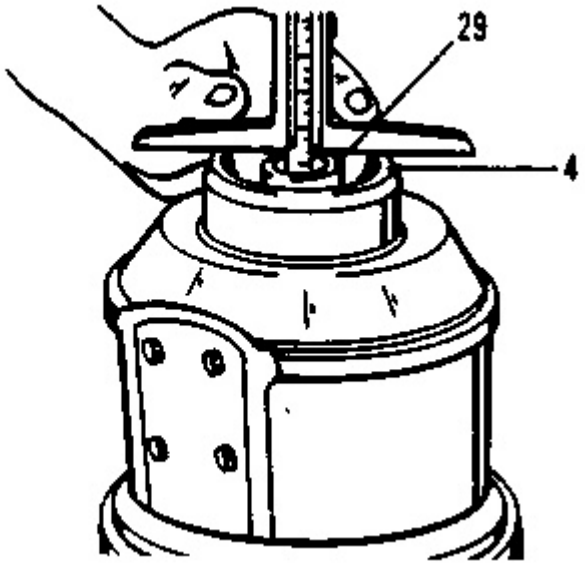
37. Install outside spacer (33) and retaining ring (35).



38. Install shaft (29) in housing (4) as shown. If necessary, use a soft faced hammer to install the shaft. Be sure the bearing on shaft (29) is seated correctly in the housing.



39. Measure the distance from the front face of housing (4) to the mounting flange as shown. Record this as dimension (A).



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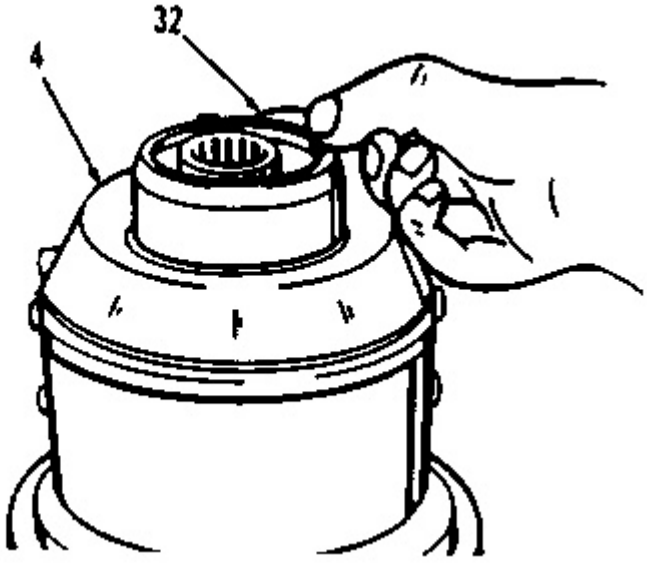
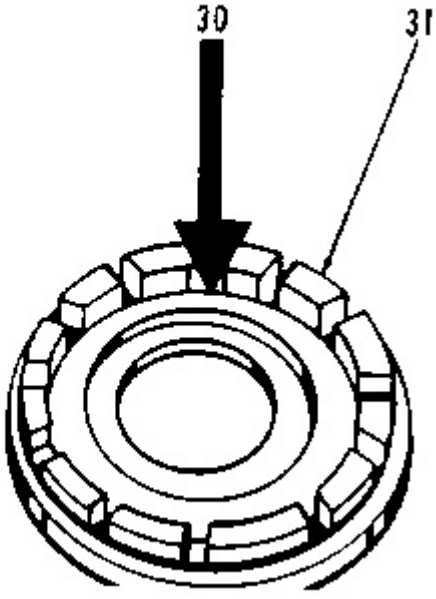
40. Measure the distance from the front face of housing (4) to the top of shaft (29). Record this as dimension (B).

41. Subtract dimension (B) from dimension (A). The difference should be 178.0 + .2 mm (7.01 + .08 in). If the difference is not correct, remove shaft (29) from housing (4). Disassemble the shaft, and replace inside spacer (33) with a spacer of a different thickness until the correct measurement is achieved.



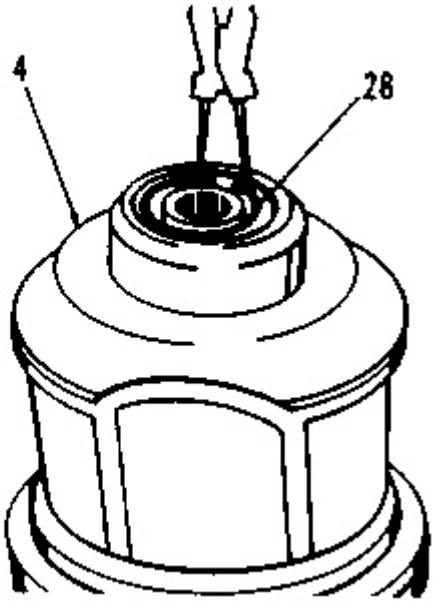
C31020P1

42. Install a new o-ring seal (32) in housing (4).



C31021P1

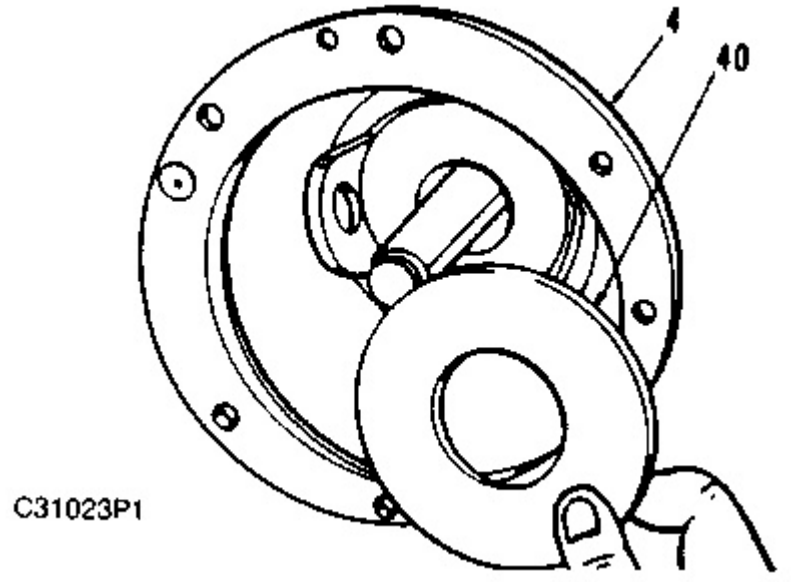
43. Install a new shaft seal (30) in cover ring (31). Install the seal with the open side facing toward the inside of housing (4) when installed.

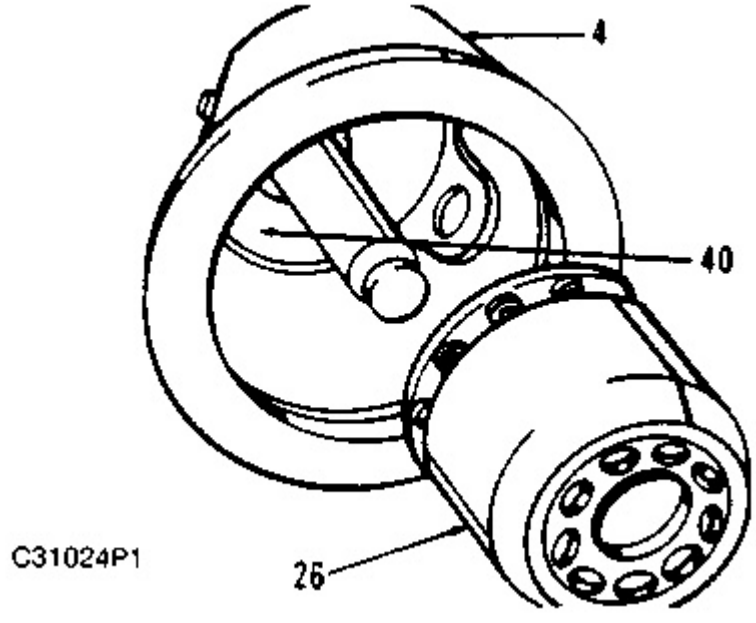


C31022P1

44. Install the shaft seal and cover ring assembly in housing (4). Install retaining ring (28) that holds it.

45. Put clean hydraulic oil on the components of transmission (26). Assemble the components of the transmission as shown in Photo C31005P1.

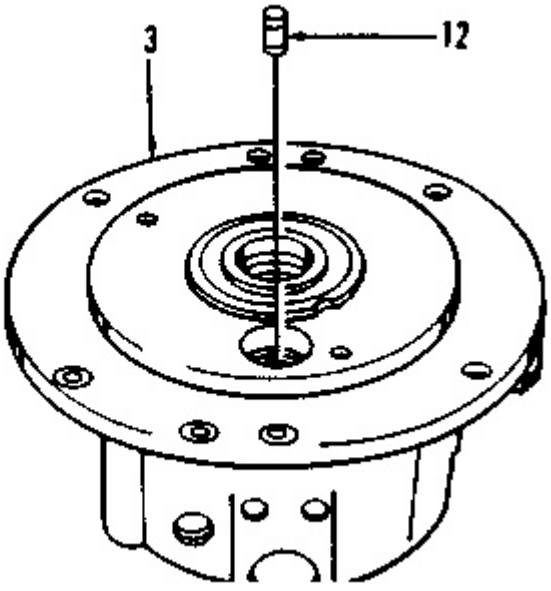




46. Install disc (40) in housing (4). Install the disc with the polished side facing toward transmission (26) when installed.

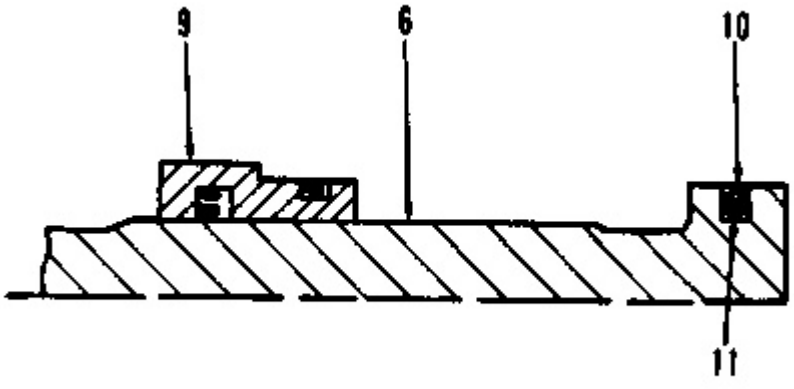
47. Install transmission (26) in housing (4).

48. Install ring (25) and a new o-ring seal (24) in housing (4).



C31025P1

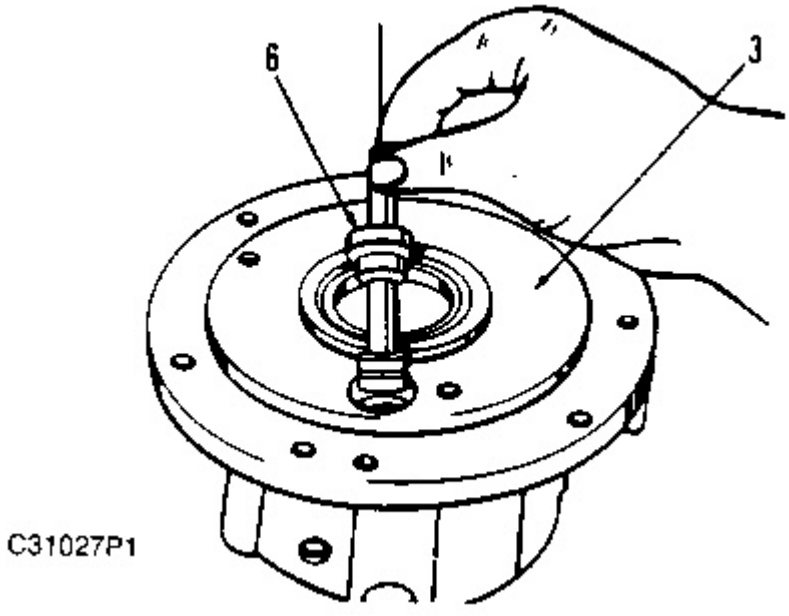
49. Put a thin coat of 7M7456 Bearing Mount on nozzle (12). Install the nozzle in control cover (3) as shown.



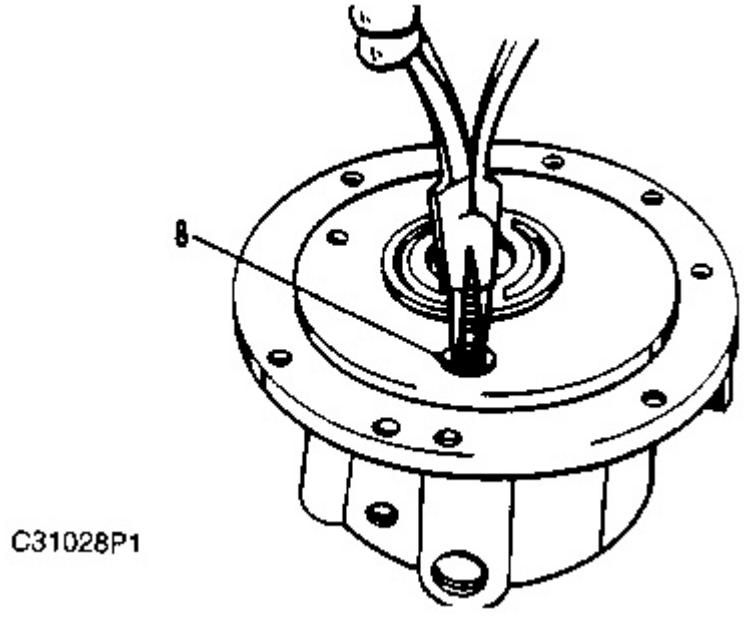
C31026P1

50. Install the gaskets and o-ring seals on bushing (9) as shown. Install the bushing on piston (6).

51. Heat gaskets (10) and (11) in warm oil. Install the gaskets on piston (6) as shown. Be sure the gaskets stay in position on the piston until they are cool.



52. Install piston assembly (6) in control cover (3).

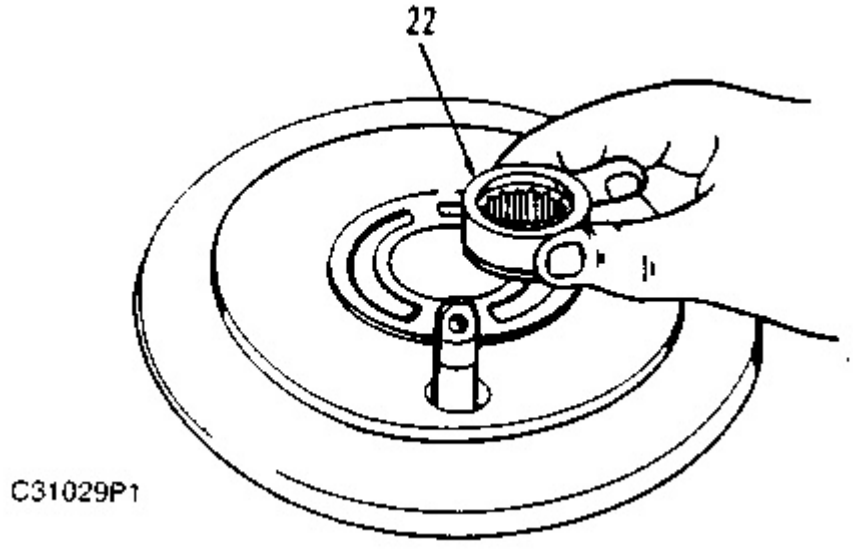


53. Install retaining ring (8) that holds piston assembly (6) in the control cover.

54. Install new o-ring seals (18) and (19) on valve housing (20). Install ball (17) and valve housing (20) in control cover (3).

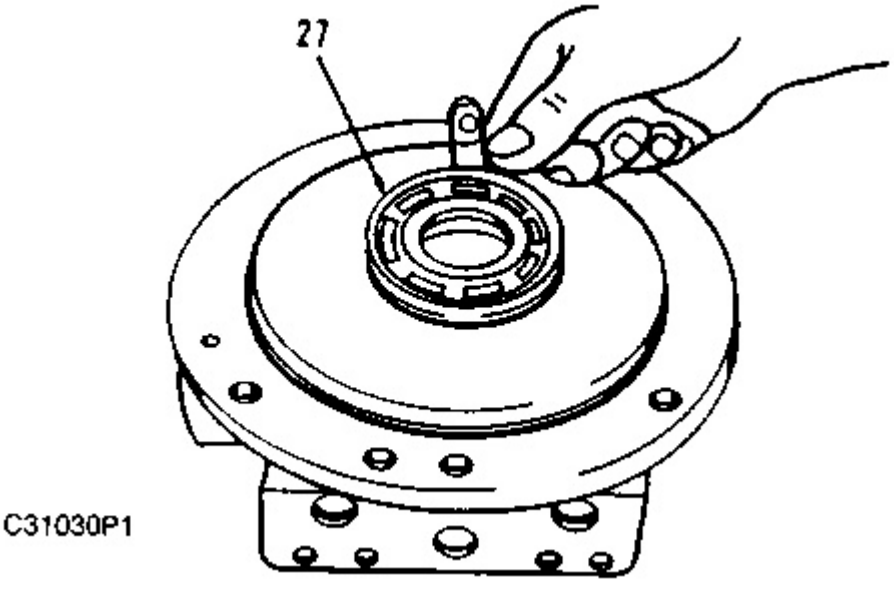
55. Install piston (13) and spring (14) in the control cover. Install a new o-ring seal (15) on plug (16). Install the plug in the control cover.

56. Put a thin coat of 9S3263 Thread Lock on pin (23). Install the pin in control cover (3) with the flat side of the pin facing toward the center of the control cover.



57. Install bearing (22) in the control cover.

58. Install a new o-ring seal (21) in the groove on the end of control cover (3).



59. Put a thin coat of 5P0960 Multipurpose Grease on the smooth surface of disc (27). Position the greased side of the disc against the control cover. The grease will hold the disc in position.

60. Put control cover (3) in its original position on housing (4) as shown. Connect lever (7) to piston (6) with pin (5) and retaining ring (4).

61. Fasten the control cover to the housing with two bolts. Tighten the bolts to a torque of 26 N·m (19 lb ft).

62. Install a new o-ring seal (46) in the groove on the outside of housing (4).

63. Fasten a hoist to the hydraulic propel motor, and put it in its original position on the gear reducer. Install the six bolts that hold it. Tighten the bolts to a torque of 50 N·m (37 lb ft).

End By:

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