

Product: WHEEL LOADER

Model: 972M XE WHEEL LOADER AN3

Configuration: 972M XE Wheel Loader AN300001-UP (MACHINE) POWERED BY C9.3 Engine

Disassembly and Assembly 966M, 966M Series XE, 972M and 972M Series XE Wheel Loaders

Media Number -UENR5562-08

Publication Date -01/05/2018

Date Updated -24/05/2018

i07322202

Piston Pump (Implement) - Disassemble

SMCS - 5070-015-FD; 5070-015-II; 5070-015; 5084-015; 5084-015-QP

S/N - AN3350-UP

S/N - DZL501-UP

S/N - EJA2701-UP

S/N - FL2701-UP

S/N - GGN20101-UP

S/N - L9S601-UP

S/N - LMM20101-UP

S/N - LSJ2201-UP

S/N - R1Z501-UP

S/N - XCR330-UP

Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1U-9130	Stand Assembly	1
	1U-9129	Plate	1
B	-	M20 x 2.5 threaded rod	2

C	4C-8359	Eyebolt	2
D	1P-0510	Driver Gp	1
E	6V-2012	Depth Gage	1
F	421-5660	Lifting Eye Assembly	2
G	8H-0663	Bearing Puller	1
H	153-3568	Bolt	1

Start By:

- a. Remove the piston pump (implement).

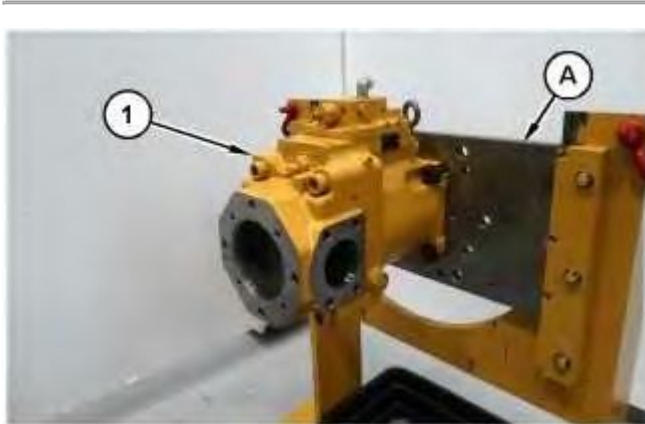


Illustration 1

g06299131

1. Fasten piston pump (1) to Tooling (A). The weight of piston pump (1) is approximately 93 kg (205 lb).

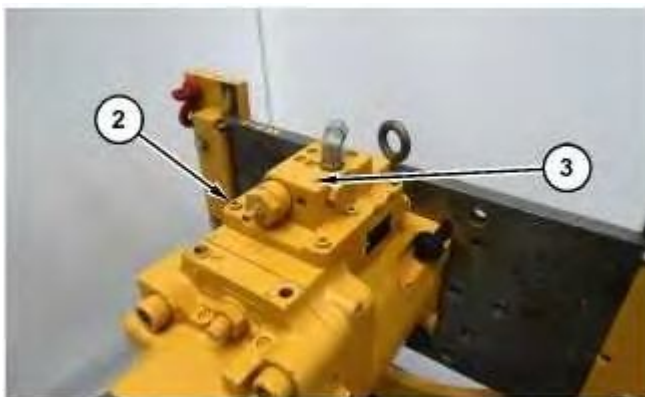


Illustration 2

g06299139

2. Remove bolts (2) and valve assembly (3).

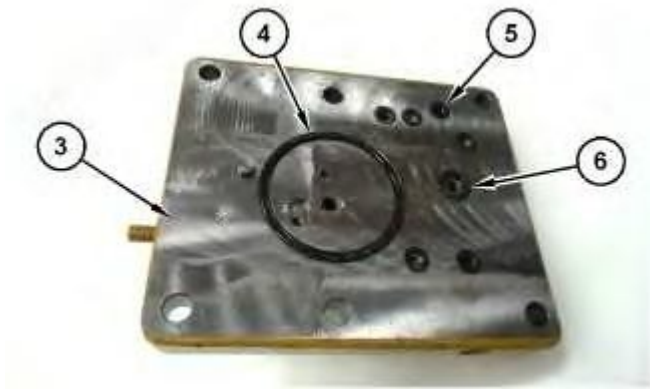


Illustration 3

g06299169

3. Remove O-ring seals (4), (5), and (6) from valve assembly (3).

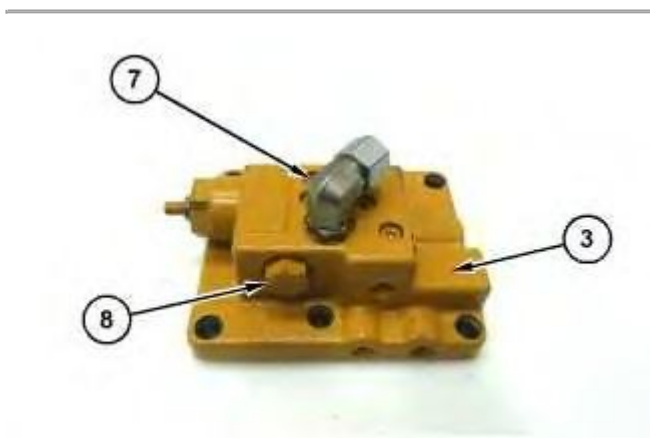


Illustration 4

g06299173

4. Remove elbow (7), plug (8), and the O-ring seals from valve assembly (3).

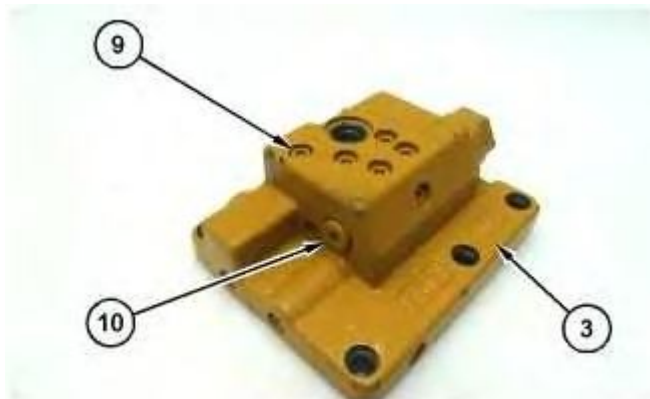


Illustration 5

g06299175

5. Remove plug (10), the O-ring seal, and plugs (9) from valve assembly (3).
-

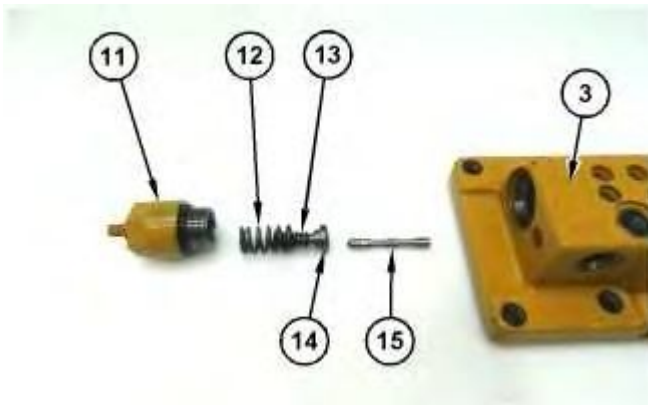


Illustration 6

g06299393

 **WARNING**

Personal injury can result from being struck by parts propelled by a released spring force.

Make sure to wear all necessary protective equipment.

Follow the recommended procedure and use all recommended tooling to release the spring force.

-
6. Remove plug (11), spring (12), spring (13), guide (14), and spool (15) from valve assembly (3).

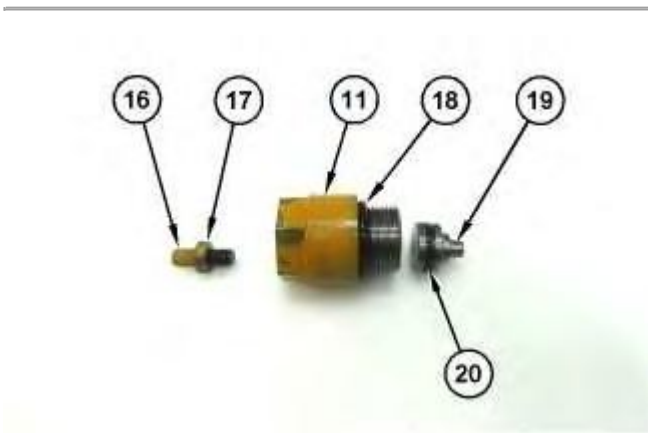


Illustration 7

g06299398

7. Remove screw (16), nut (17), O-ring seal (18), and guide (19) from plug (11).
 8. Remove O-ring seal (20) from guide (19).
-



Illustration 8

g06299476

9. Remove the 2 top bolts (21).

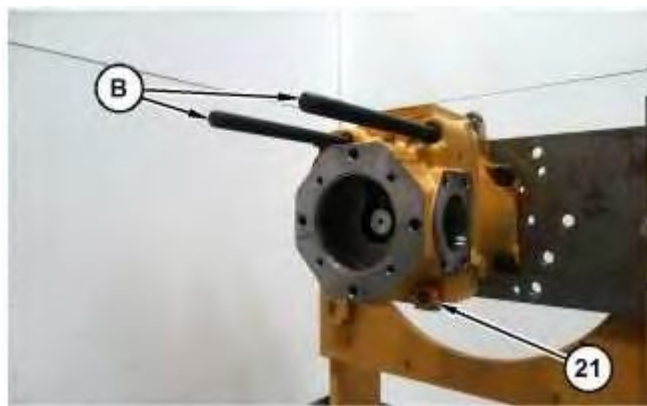


Illustration 9

g06299480



Personal injury can result from being struck by parts propelled by a released spring force.

Make sure to wear all necessary protective equipment.

Follow the recommended procedure and use all recommended tooling to release the spring force.

10. Install Tooling (B) and remove the remaining 2 bolts (21).

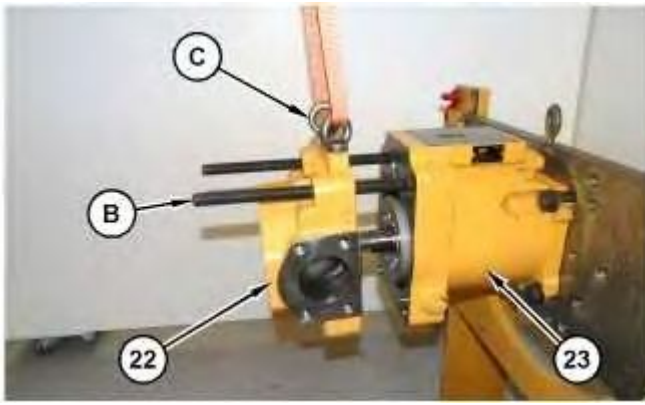


Illustration 10

g06299506

11. Use Tooling (C) and a suitable lifting device to remove head (22) from pump body (23). Head (22) weighs approximately 32 kg (70 lb).
12. Remove Tooling (B) from pump body (23).

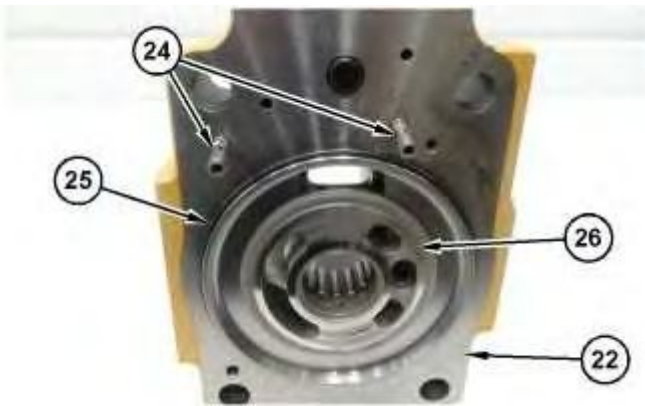


Illustration 11

g06299511

13. Remove valve assemblies (24), O-ring seal (25), and control plate (26) from head (22).

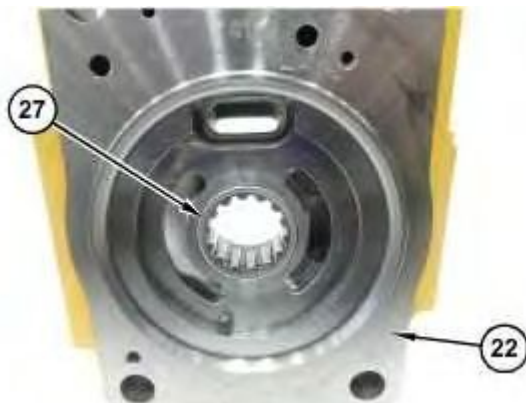


Illustration 12

g06299514

14. Use Tooling (D) to remove bearing (27) from head (22).

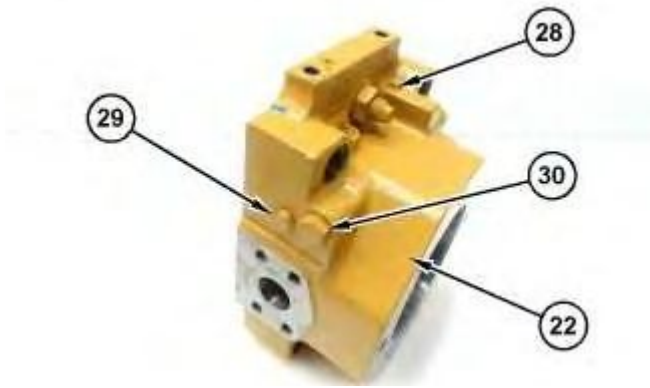


Illustration 13

g06299533

15. Remove plugs (28).
16. Remove plug (29), plug (30), and the O-ring seals from head (22).

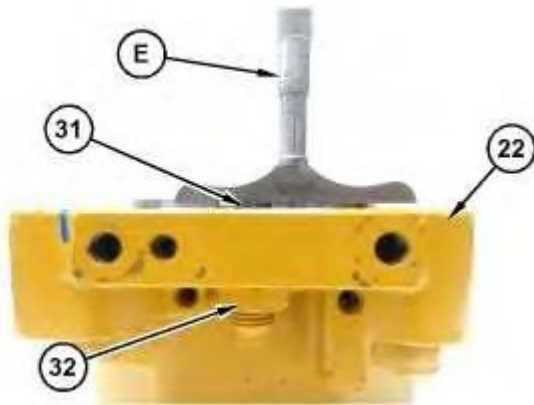


Illustration 14

g06299534

17. Use Tooling (E) to measure the height of setscrew (31) for assembly purposes.
18. Remove nut (32) and setscrew (31) from head (22).

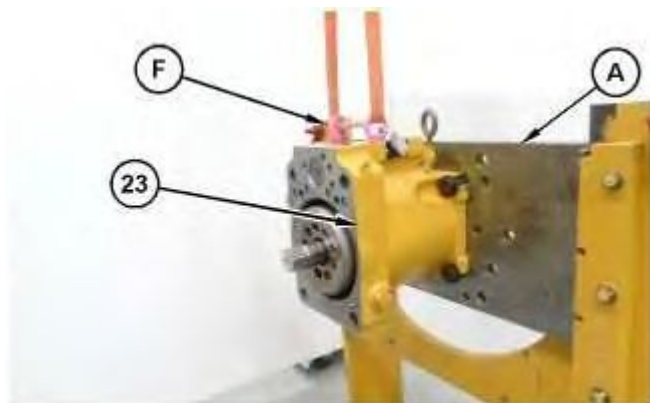


Illustration 15

g06299578

19. Use Tooling (F) and a suitable lifting device to remove pump body (23) from Tooling (A). Pump body (23) weighs approximately 60 kg (133 lb).



Illustration 16

g06299579

20. Remove rotating group (33) from pump body (23).



Illustration 17

g06299648

21. Remove pistons (34) and retainer (35) from barrel assembly (36).



Illustration 18

g06299671

22. Remove bearing (37) and springs (38) from barrel assembly (36).



Illustration 19

g06299673

23. Remove retaining ring (39) from pump body (23).



Illustration 20

g06299674

24. Use a soft faced hammer to remove seal carrier (40) and shaft assembly (41) from pump body (23).



Illustration 21

g06299675

25. Remove lip seals (42) from seal carrier (40).
-



Illustration 22

g06299676

26. Remove retaining ring (43) from shaft assembly (41).

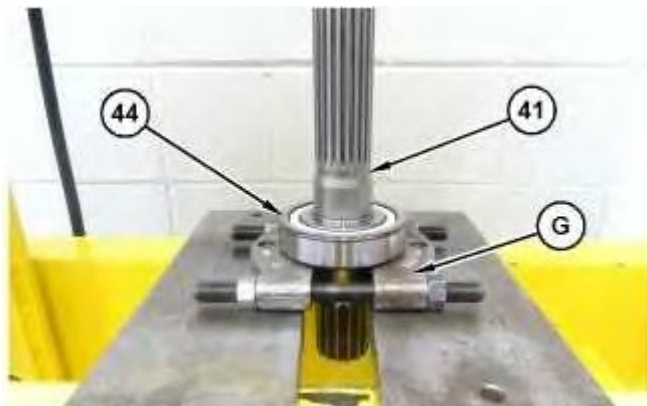


Illustration 23

g06299677

27. Use Tooling (G) and a suitable press to remove bearing (44) from shaft assembly (41).



Illustration 24

g06299855

28. Remove swashplate assembly (45), O-ring seals (46), and O-ring seals (47) from pump body (23).
-



Illustration 25

g06299861

29. Remove plate (48) from swashplate assembly (45).

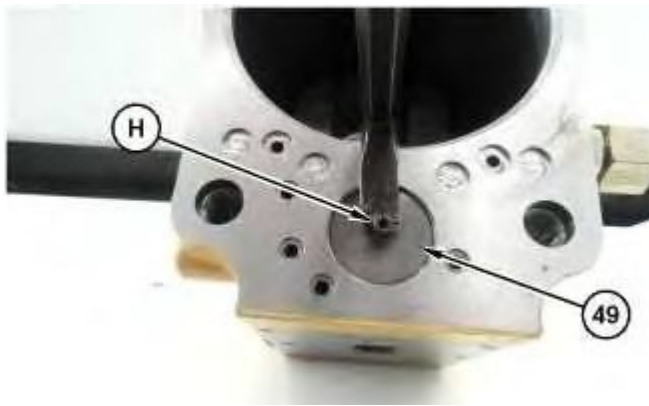


Illustration 26

g06299871

30. Use Tooling (H) to remove stopper (49) from the pump body.

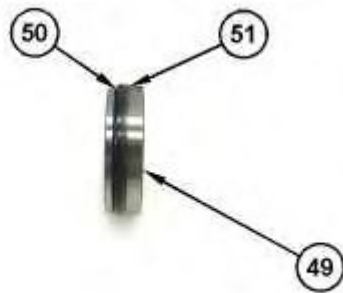


Illustration 27

g06299880

31. Remove O-ring seal (50) and backup ring (51) from stopper (49).
-



Illustration 28

g06299886

32. Remove piston (52) from pump body (23).



Illustration 29

g06299892

33. Remove bearing (53) the from pump body.



Illustration 30

g06299901

34. Remove plug (54), the O-ring seal, and plug (55) from pump body (23).



Illustration 31

g06299910

35. Remove adapter (56) and the O-ring seal from pump body (23).



Illustration 32

g06299916

36. Remove O-ring seals (57) from pump body (23).



Illustration 33

g06299921

37. Remove bolts (58) and cover (59) from pump body (23).

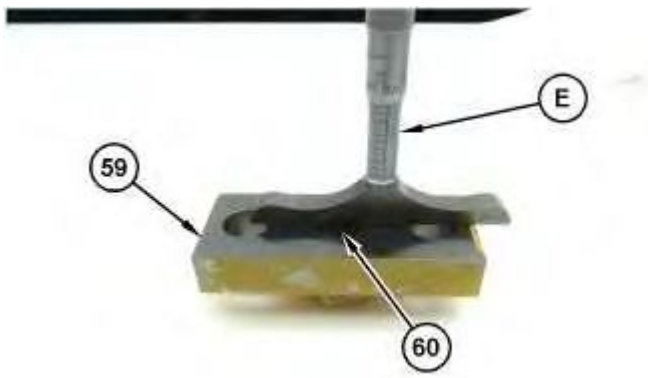


Illustration 34

g06299927

38. Use Tooling (E) to measure the height of setscrew (60) for assembly purposes.



Illustration 35

g06299933

39. Remove nut (61) and setscrew (60) from cover (59).

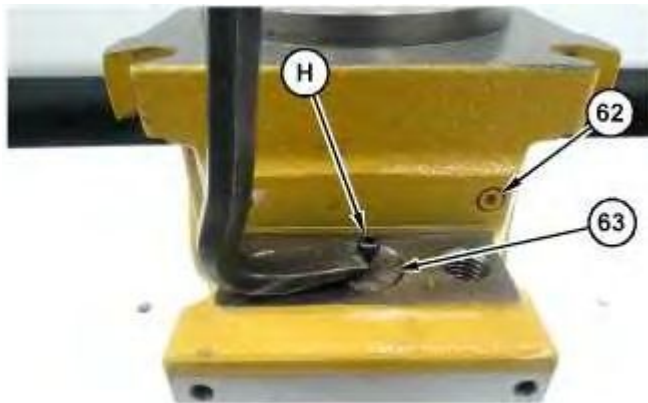


Illustration 36

g06299938

40. Use Tooling (H) to remove stopper (62) from the pump body.
41. Remove plugs (62).

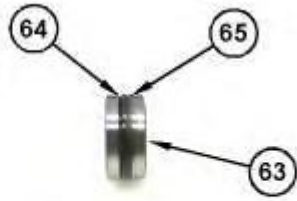


Illustration 37

g06299941

42. Remove O-ring seal (64) and backup ring (65) from stopper (63).

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i05337984

Piston Pump (Implement) - Assemble

SMCS - 5070-016; 5070-016-FD; 5070-016-II; 5084-016-QP; 5084-016

S/N - A8P1-UP

S/N - AN31-UP

S/N - B8P1-UP

S/N - DYC1-UP

S/N - DZL1-UP

S/N - EDW1-UP

S/N - EJA1-2700

S/N - FL21-700

S/N - GGN1-20100

S/N - JPR1-UP

S/N - KJP1-UP

S/N - L9S1-600

S/N - LMM1-20100

S/N - LSJ1-2200

S/N - M5S1-UP

S/N - P6C1-UP

S/N - R1Z1-UP

S/N - XCR1-UP

Assembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	421-5661	Lifting Eye Assembly	2
C	1P-0510	Driver Gp	1
D	-	Loctite 242	-
E	6V-2055	Grease	1

1. Lubricate all sliding surfaces, radial O-ring seals, lip seals, shaft, and bearings lightly with hydraulic oil prior to assembly.

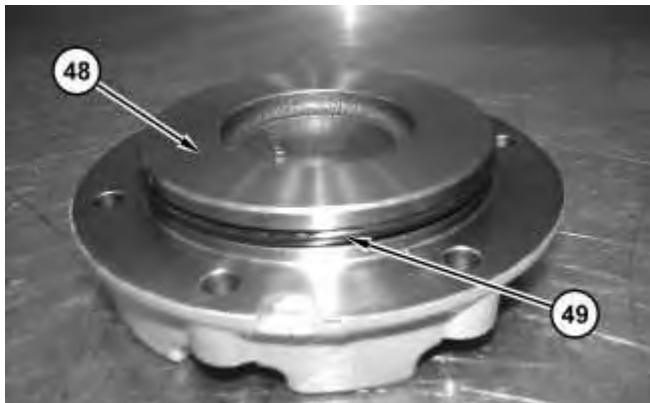


Illustration 1

g03578617

2. Install O-ring seal (49) onto cover (48).



Illustration 2

g03578628

3. Install cover (48) and bolts (47). Tighten bolts (47) to a torque of 28 ± 7 N·m (21 ± 5 lb ft).

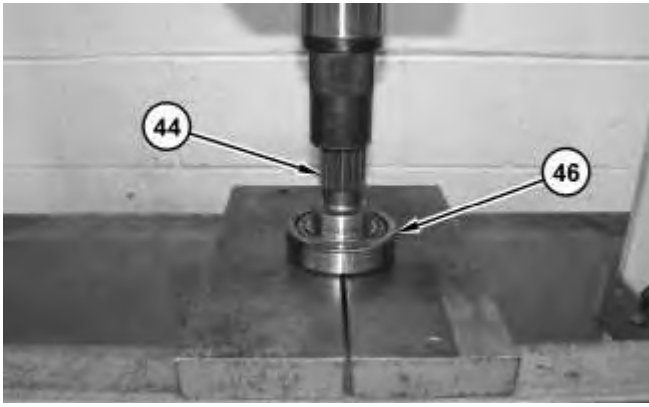


Illustration 3

g03578856

4. Use a suitable press to install bearing (46) onto shaft assembly (44).



Illustration 4

g03578676

5. Install retaining ring (45) onto shaft assembly (44).



Illustration 5

g03578576

6. Install shaft assembly (44) into pump housing (15).
-

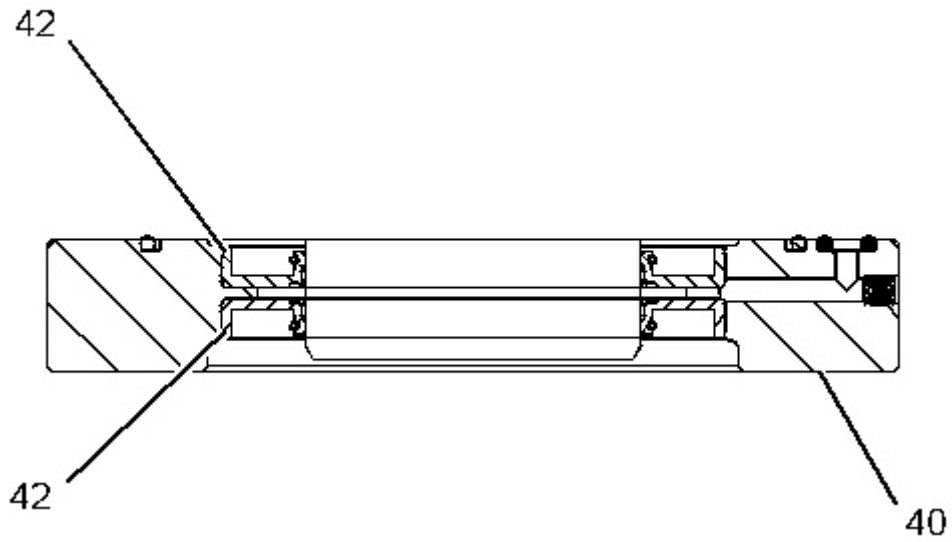


Illustration 6

g03578863

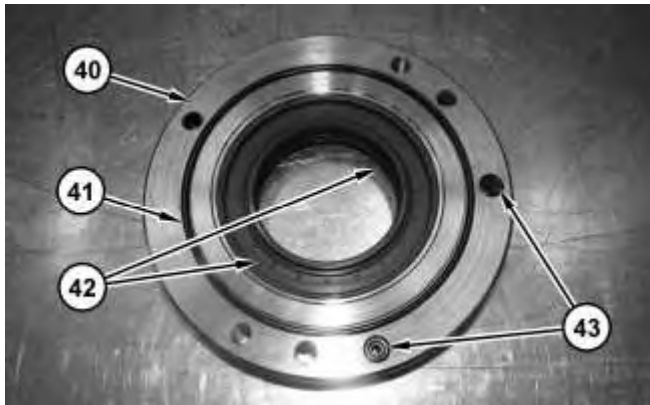


Illustration 7

g03578559

7. Use Tooling (C) to install lip seals (42).
8. Install O-ring seal (41) and O-ring seals (43) onto seal retainer (40).



Illustration 8

g03578877

9. Apply Tooling (D) onto bolts (39).
10. Install seal retainer (40) and bolts (39) onto pump housing (15). Tighten bolts (39) to a torque of $28 \pm 7 \text{ N}\cdot\text{m}$ ($20 \pm 5 \text{ lb ft}$).

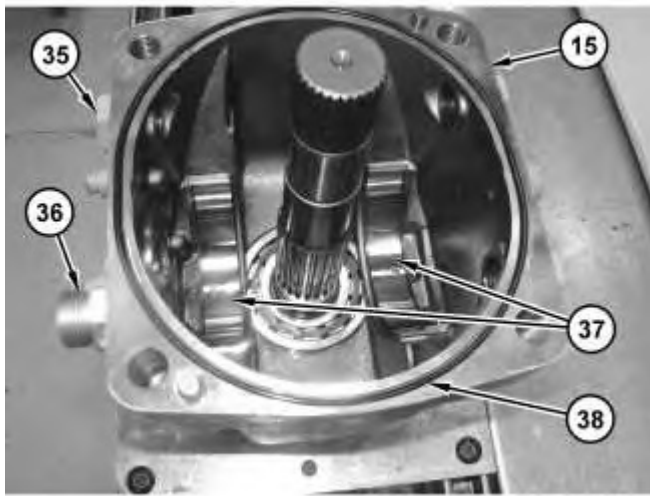


Illustration 9

g03578416

11. Install plugs (35), adapter (36), and the O-ring seals into pump housing (15).
12. Install bearing cups (37) and O-ring seal (38) into pump housing (15).



Illustration 10

g03578445

13. Install actuators (32), retainers (34), and bolts (33) onto swashplate (30). Tighten bolts (33) to a torque of $12 \pm 3 \text{ N}\cdot\text{m}$ ($106.2 \pm 26.6 \text{ lb in}$).
-

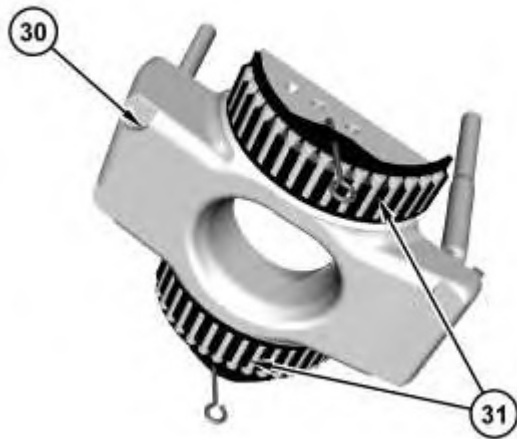


Illustration 11

g03578442

14. Install bearing assemblies (31) onto swashplate (30).
-

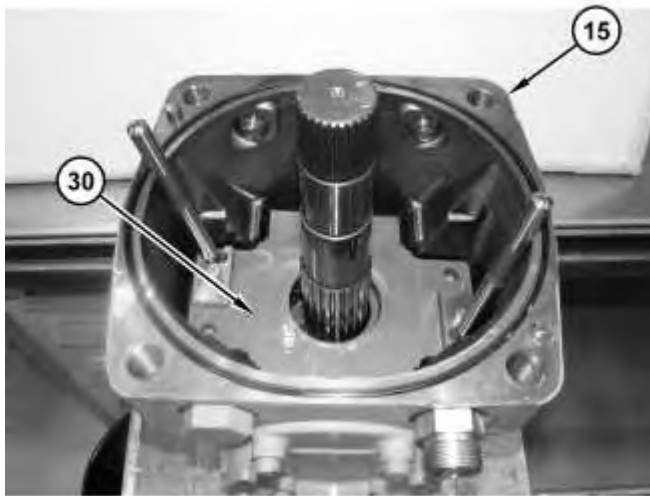


Illustration 12

g03578356

15. Install swashplate (30) into pump body (15).

Note: Ensure that the pins on the bearings align with the holes in pump body (15).

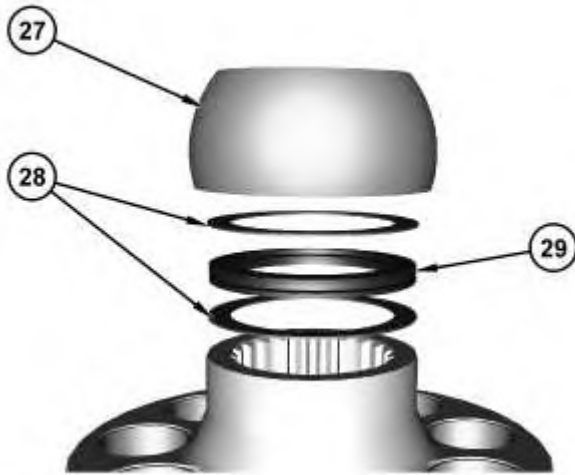


Illustration 13

g03578318

16. Install spacers (28), spring set (29) and hold-down ball (27) onto the barrel assembly.
-

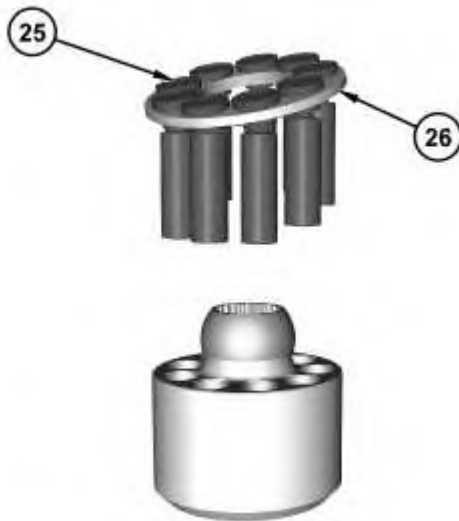


Illustration 14

g03578278

17. Install pistons (25) and retainer (26) onto the barrel assembly.
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