

Product: WHEEL LOADER

Model: 972M XE WHEEL LOADER R1Z

Configuration: 972M XE Wheel Loader R1Z00001-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

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i07322205

### Piston Pump (Implement) - Assemble

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

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

### Assembly 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



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Illustration 1

g06299941

1. Install backup ring (65) and O-ring seal (64) onto stopper (63).



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Illustration 2

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2. Install stopper (63) into the pump body.
  3. Install plugs (62).
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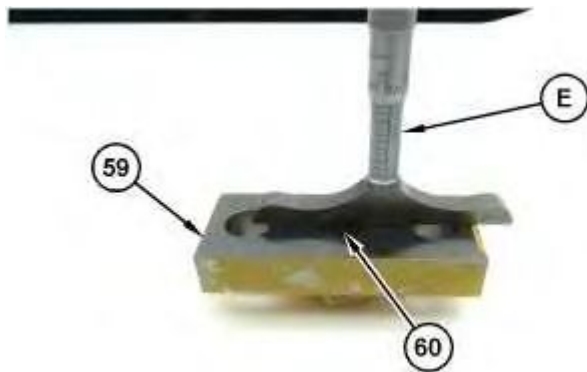


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Illustration 3

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Illustration 4

g06299927

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4. Install setscrew (60) and nut (61) onto cover (59). Use Tooling (E) and adjust setscrew (60) to the height recorded during the disassembly. Tighten nut (61) to a torque of  $240 \pm 24 \text{ N}\cdot\text{m}$  ( $175 \pm 15 \text{ lb ft}$ ).



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Illustration 5

g06299921

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5. Install cover (59) and bolts (58) onto pump body (23). Tighten bolts (58) to a torque of  $330 \pm 33 \text{ N}\cdot\text{m}$  ( $240 \pm 20 \text{ lb ft}$ ).
-



Illustration 6

g06299916

6. Install O-ring seals (57) into pump body (23).



Illustration 7

g06299910

7. Install the O-ring seal and adapter (56) into pump body (23).



Illustration 8

g06299901

8. Install plug (55), the O-ring seal, and plug (54) into pump body (23).



Illustration 9

g06299892

9. Install bearing (53) into pump body.

**Note:** Bearing (53) must align with the dowel in the pump body.



Illustration 10

g06299886

10. Install piston (52) into pump body (23).

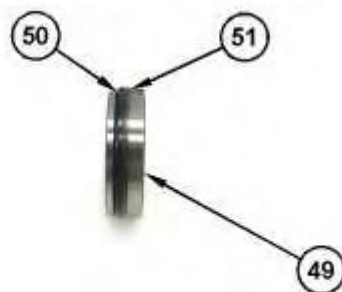


Illustration 11

g06299880

11. Install backup ring (51) and O-ring seal (50) onto stopper (49).

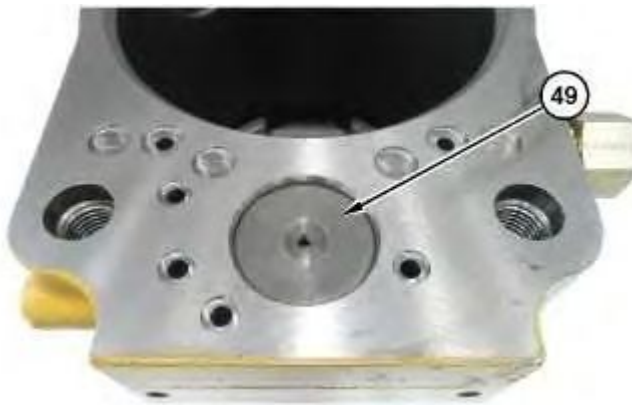


Illustration 12

g06304632

12. Install stopper (49) into the pump body.



Illustration 13

g06299861

13. Install plate (48) onto swashplate assembly (45).



Illustration 14

g06299855

14. Install swashplate assembly (45), O-ring seals (46), and O-ring seals (47) into pump body (23).

**Note:** Ensure that swashplate (45) engages the piston and the bearing properly.

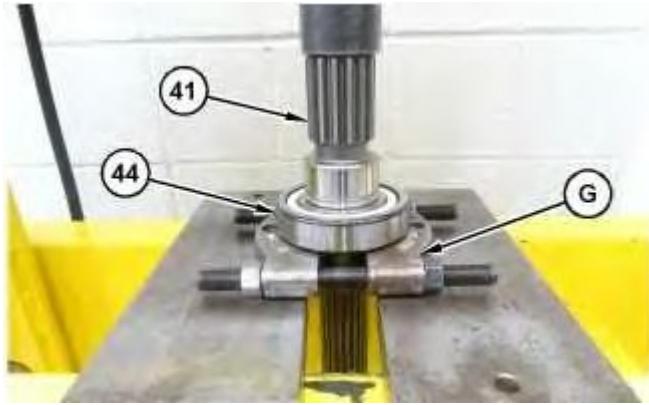


Illustration 15

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15. Use Tooling (G) and a suitable press to install bearing (44) onto shaft assembly (41).



Illustration 16

g06299676

16. Install retaining ring (43) onto shaft assembly (41).



Illustration 17

g06299675

17. Install lip seals (42) into seal carrier (40).
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Illustration 18

g06299674

18. Use a soft faced hammer to install shaft assembly (41) and seal carrier (40) into pump body (23).



Illustration 19

g06299673

19. Install retaining ring (39) into pump body (23).



Illustration 20

g06299671

20. Install springs (38) and bearing (37) onto barrel assembly (36).





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Illustration 21

g06299648

21. Install retainer (35) and pistons (34) onto barrel assembly (36).

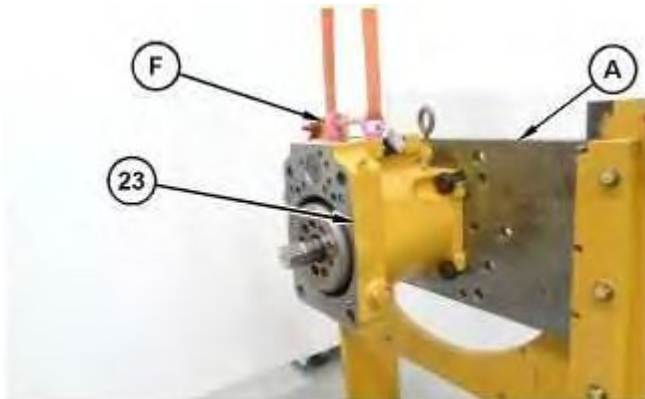


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Illustration 22

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22. Install rotating group (33) into pump body (23).



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Illustration 23

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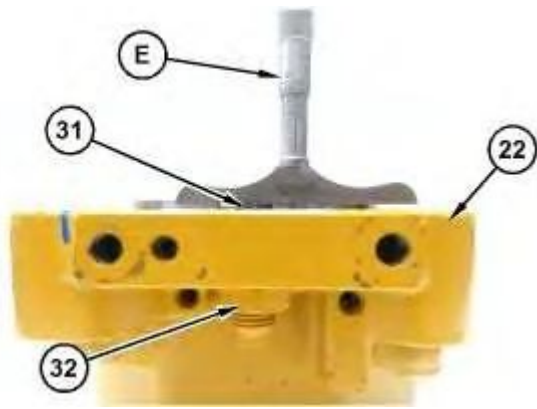


Illustration 24

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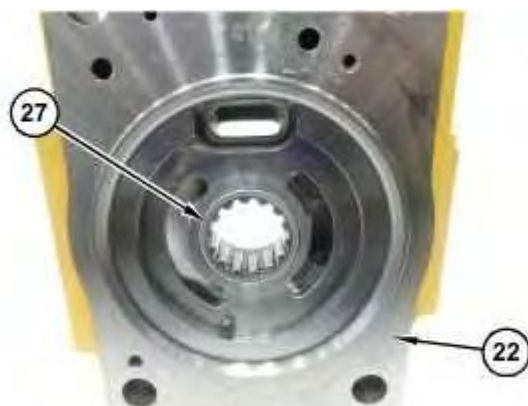
24. Install setscrew (31) and nut (32) onto head (22). Use Tooling (E) and adjust setscrew (31) to the height recorded during the disassembly. Tighten nut (32) to a torque of  $240 \pm 24 \text{ N}\cdot\text{m}$  ( $175 \pm 15 \text{ lb ft}$ ).



Illustration 25

g06299533

25. Install plugs (28) into head (22). Tighten plugs (28) to a torque of  $18 \text{ N}\cdot\text{m}$  ( $160 \text{ lb in}$ ).
26. Install the O-ring seal and plug (30) into head (22). Tighten plug (30) to a torque of  $60 \pm 6 \text{ N}\cdot\text{m}$  ( $45 \pm 4 \text{ lb ft}$ ).
27. Install the O-ring seal and plug (29) into head (22). Tighten plug (29) to a torque of  $12 \pm 1 \text{ N}\cdot\text{m}$  ( $105 \pm 5 \text{ lb in}$ ).



28. Use Tooling (D) to install bearing (27) into head (22).

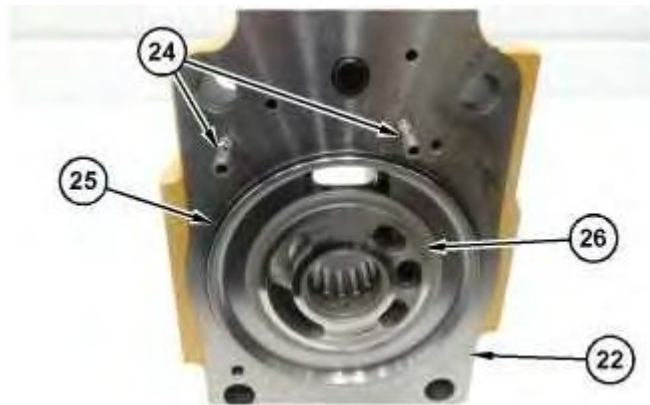


Illustration 27

29. Install control plate (26), O-ring seal (25), and valve assemblies (24) onto head (22).

**Note:** Valve assemblies (24) can fall out easily.

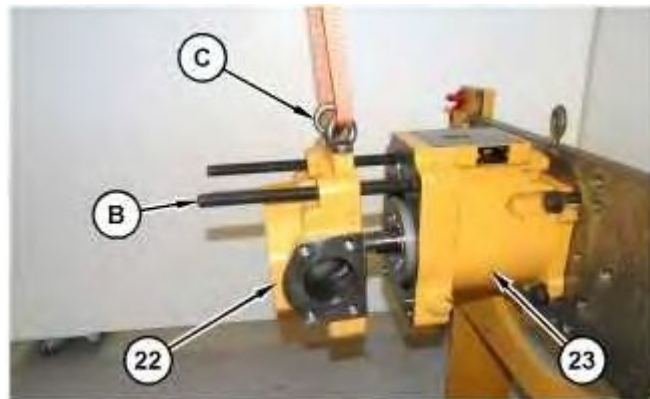


Illustration 28

30. Install Tooling (B) into pump body (23).
31. Use Tooling (C) and a suitable lifting device to install head (22) onto pump body (23). Head (22) weighs approximately 32 kg (70 lb).
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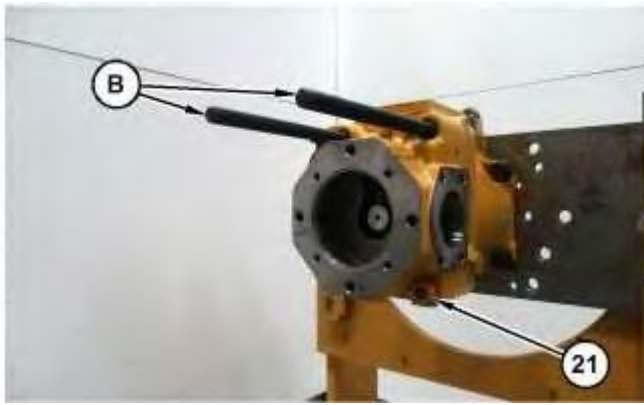


Illustration 29

g06299480



Illustration 30

g06299476

 **WARNING**

**Improper assembly of parts that are spring loaded can cause bodily injury.**

**To prevent possible injury, follow the established assembly procedure and wear protective equipment.**

- 
32. Install lower 2 bolts (21). Remove Tooling (B).
  33. Install the 2 top bolts (21).
  34. Tighten bolts (21) to a torque of  $430 \pm 43 \text{ N}\cdot\text{m}$  ( $315 \pm 30 \text{ lb ft}$ ).
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Illustration 31

g06299398

35. Install O-ring seal (20) onto guide (19).
36. Install guide (19), O-ring seal (18), nut (17), and screw (16) into plug (11).  
Tighten nut (17) to a torque of  $16 \pm 1 \text{ N}\cdot\text{m}$  ( $140 \pm 8 \text{ lb in}$ ).

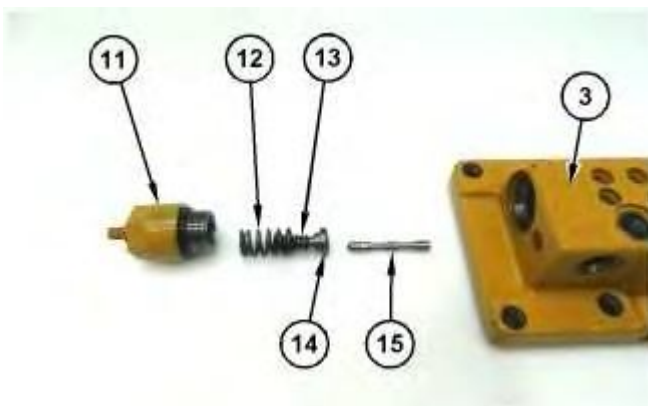


Illustration 32

g06299393



**Improper assembly of parts that are spring loaded can cause bodily injury.**

**To prevent possible injury, follow the established assembly procedure and wear protective equipment.**

37. Install spool (15), guide (14), spring (13), spring (12), and plug (11) into valve assembly (3).  
Tighten valve assembly (3) to a torque of  $170 \pm 17 \text{ N}\cdot\text{m}$  ( $125 \pm 12 \text{ lb ft}$ ).

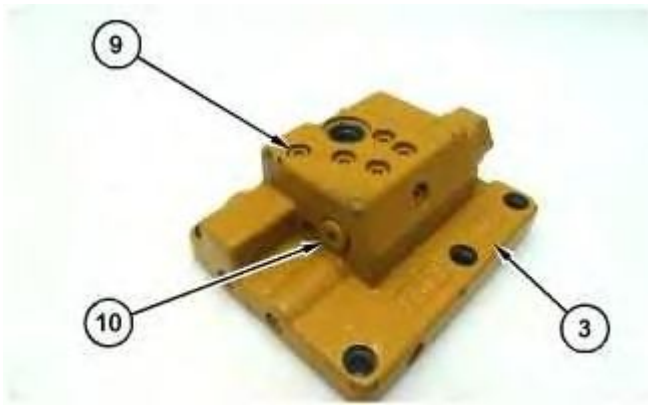


Illustration 33

g06299175

1. Install plugs (9) into valve assembly (3). Tighten plugs (9) to a torque of 18 N·m (160 lb in).
2. Install The O-ring seal and plug (10) into from valve assembly (3). Tighten plug (10) to a torque of 17 N·m (150 lb in).

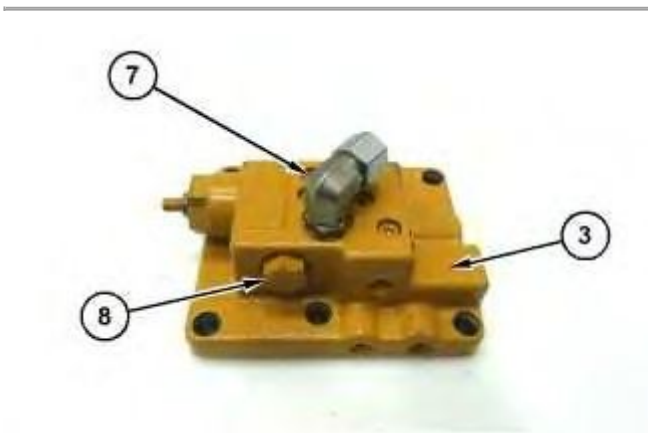


Illustration 34

g06299173

3. Install the O-ring seals, plug (8), and elbow (7) into valve assembly (3).

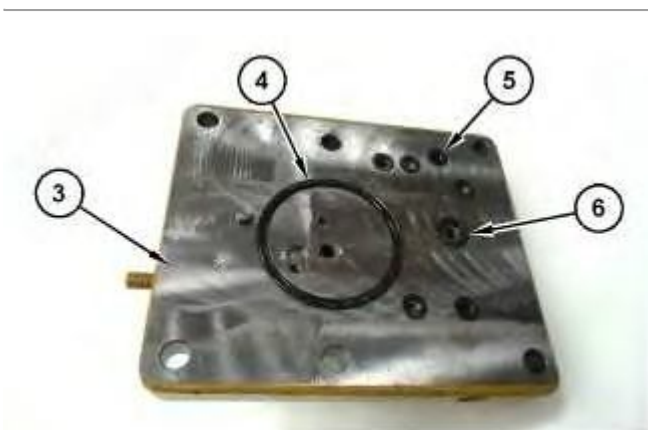


Illustration 35

g06299169

4. Install O-ring seals (6), (5), and (4) onto valve assembly (3).

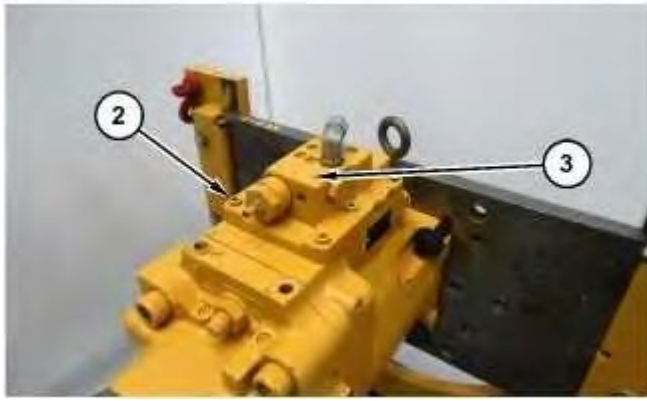


Illustration 36

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5. Install valve assembly (3) and bolts (2). Tighten bolts (2) to a torque of 29 N·m (255 lb in).

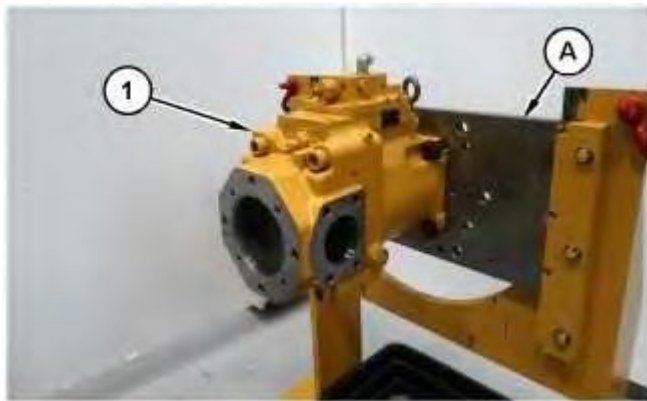


Illustration 37

g06299131

6. Remove piston pump (1) from Tooling (A). The weight of piston pump (1) is approximately 93 kg (205 lb).

**End By:**

- a. Install the piston pump (implement).
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