

Product: TRACK-TYPE TRACTOR

Model: D5K XL TRACK-TYPE TRACTOR WWW

Configuration: D5K XL & LGP Track Type Tractors WWW00001-UP (MACHINE) POWERED BY C4.4 Engine

## Disassembly and Assembly D3K, D4K and D5K Track-Type Tractors Power Train

Media Number -KENR6045-03

Publication Date -01/10/2018

Date Updated -25/10/2018

i05444849

# Piston Pump (Hydrostatic) - Assemble - Right Side

SMCS - 5070-016

## Assembly Procedure

Table 1

Required Tools			
Tools	Part Number	Part Description	Qty
A	1P-1862	Pliers	1
B	1P-1861	Retaining Ring Pliers	1
C	147-3497	Spring Compressor	1
D	9U-5720	Heat Shrink Tube	1
E	135-8292	Alignment Plug	1
F	128-2745	D3/D4 Test Ring	1
F	135-8296	D5 Test Ring	1
G	128-2744	Measuring Bell	1
H	128-2747	Measuring Hub	1

**Note:** Cleanliness is an important factor. Before assembly, all parts should be thoroughly cleaned in cleaning fluid. Allow the parts to air dry. Wiping cloths or rags should not be used to dry parts. Lint may be deposited on the parts which may cause later trouble. Inspect all parts. If any parts are worn or damaged, use new parts for replacement.

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Illustration 1

g00877519

1. Install ring (70) and guide ring (69).

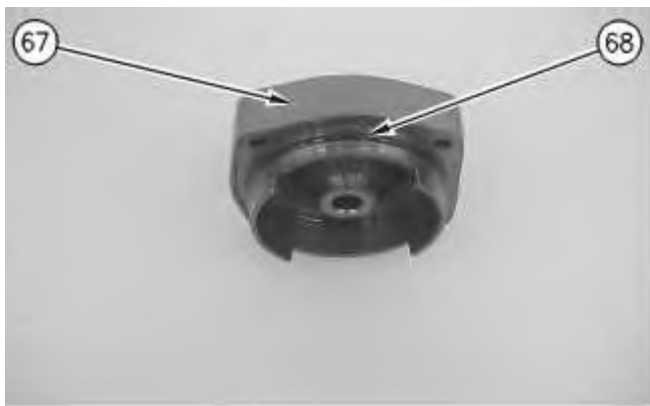


Illustration 2

g00875604

2. Install O-ring seal (68) to cover (67).

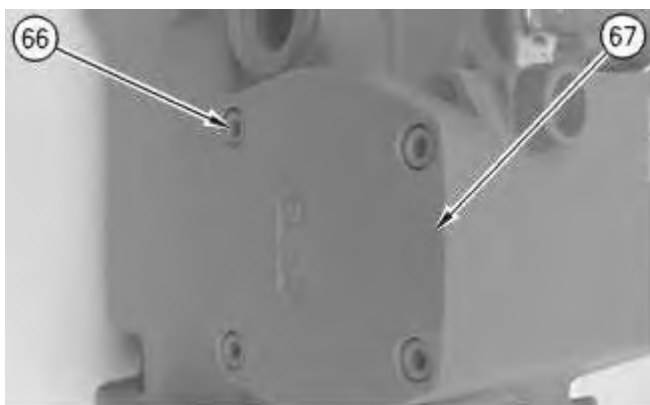


Illustration 3

g00875602

3. Install cover (67) and bolts (66).

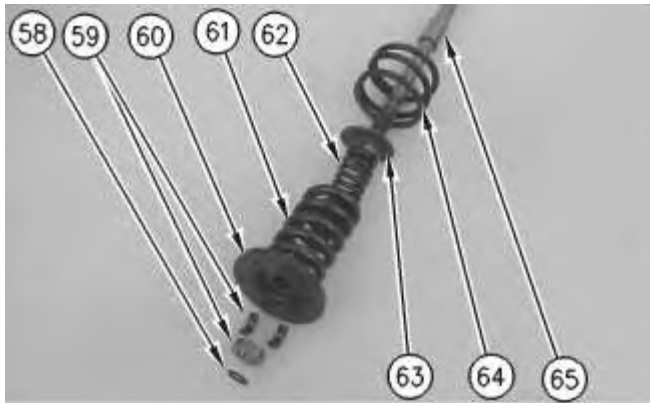


Illustration 4

g00875601

4. Install spring retainer (63) and rod (65). Install springs (61), (62), and (64). Install spring retainer (60). Install O-ring seal (58) and ring assembly (59).



Illustration 5

g00875599

## **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.**

5. Use Tooling (A) and a suitable press in order to install retaining ring (57).

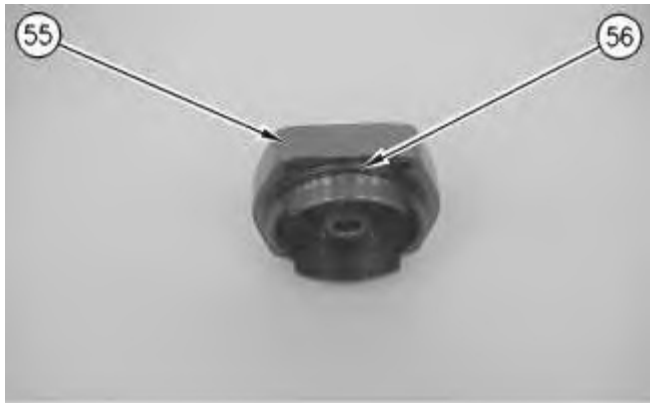


Illustration 6

g00875573

6. Install O-ring seal (56) to cover (55).

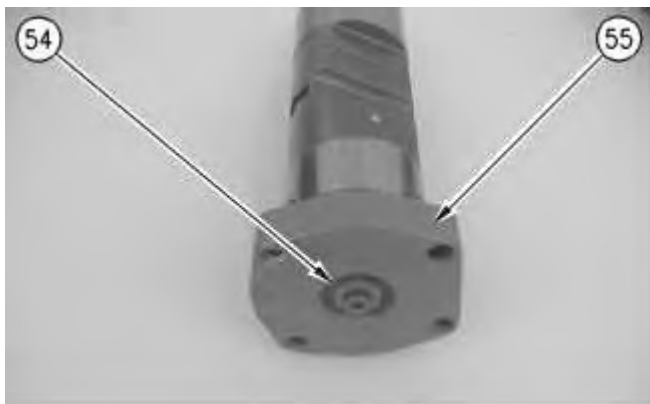


Illustration 7

g00875571

7. Install cover (55) and nut (54).

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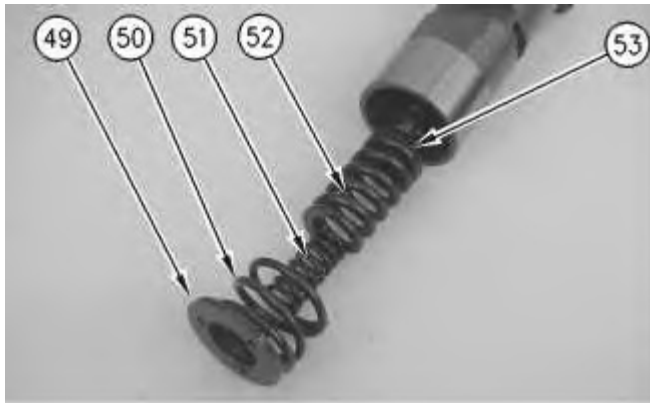


Illustration 8

g00875570

8. Install spring retainer (53). Install springs (50), (51), and (52). Install spring retainer (49).



Illustration 9

g00875569

 **WARNING**

**Personal injury can result from parts and/or covers under spring pressure.**

**Spring force will be released when covers are removed.**

**Be prepared to hold spring loaded covers as the bolts are loosened.**

9. Use Tooling (C) and a suitable press in order to Install ring assembly (48).

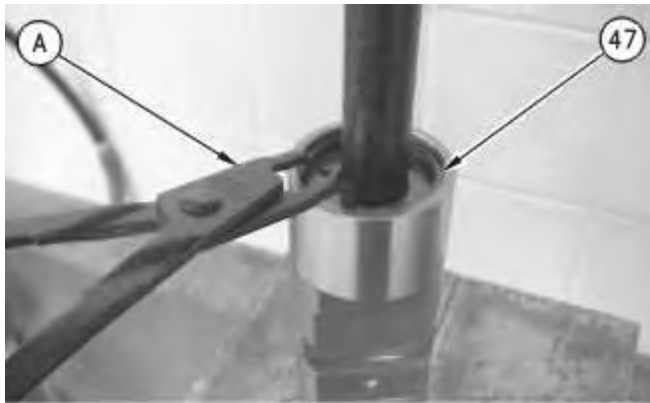


Illustration 10

g00875568

 **WARNING**

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10. Use Tooling (A) and a suitable press in order to install retaining ring (47).

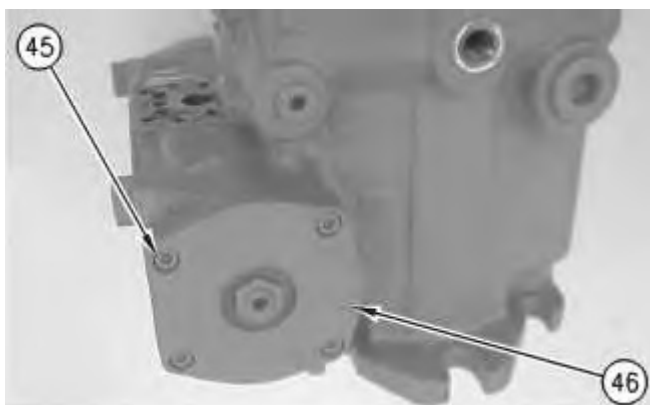


Illustration 11

g00875567

11. Install servo valve (46) and bolts (45).

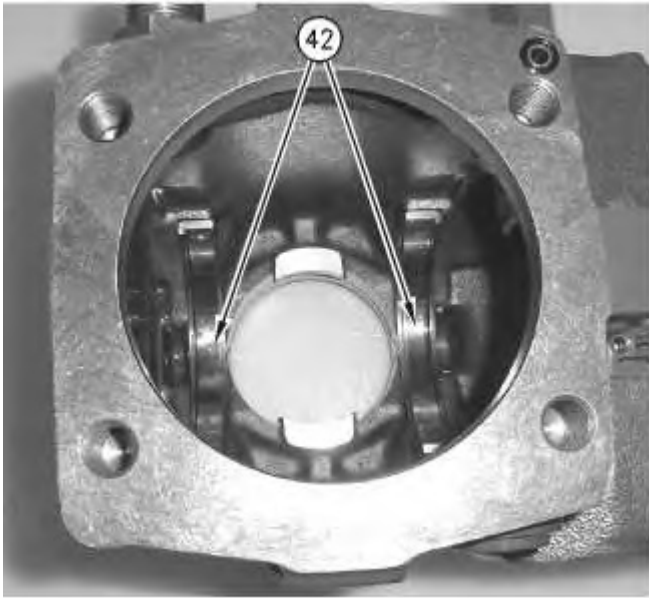


Illustration 12

g00875539

12. Install bearings (42).

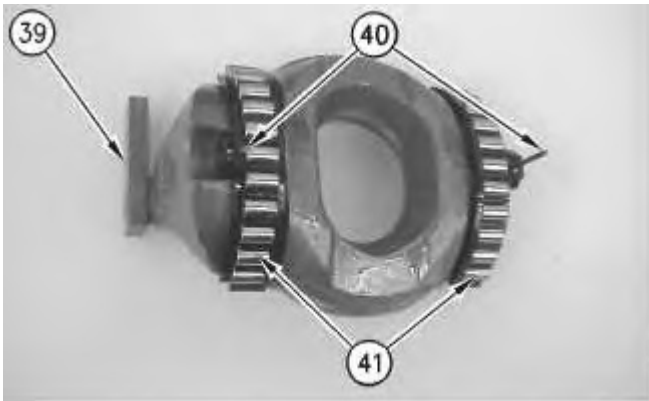


Illustration 13

g00875538

13. Install bearings (41), rods (40), and slide (39).



Illustration 14

g00875537

14. Install swashplate assembly (38).

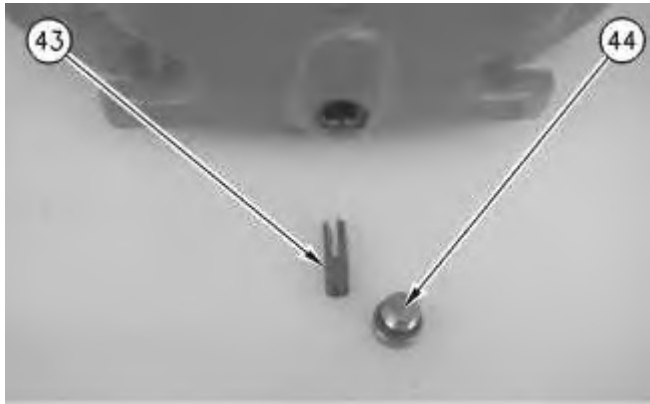


Illustration 15

g00875564

15. Install joint pin (43) and plug assembly (44).
16. Repeat Step 15 for the opposite side.

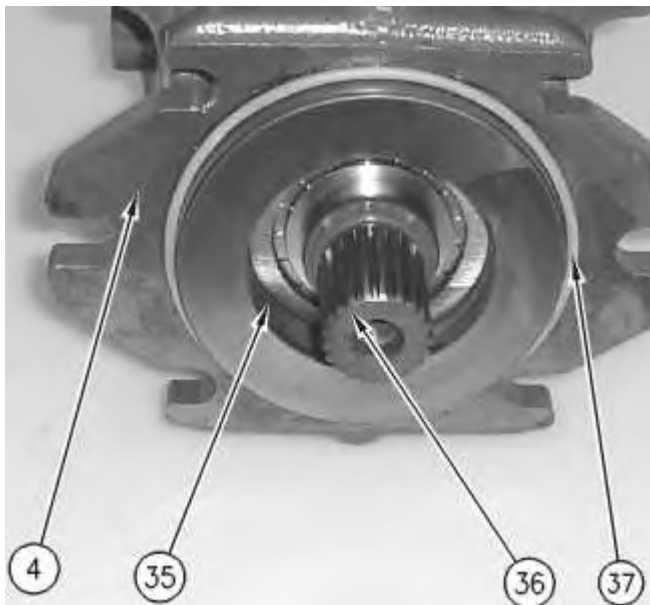


Illustration 16

g00875224

17. Install Tooling (D) over shaft assembly (36) in order to protect the shaft during installation. Install shaft assembly (36) and O-ring seal (37) to housing (4). Remove Tooling (D) after installation.
  18. Install retaining ring (35) to housing (4).
-



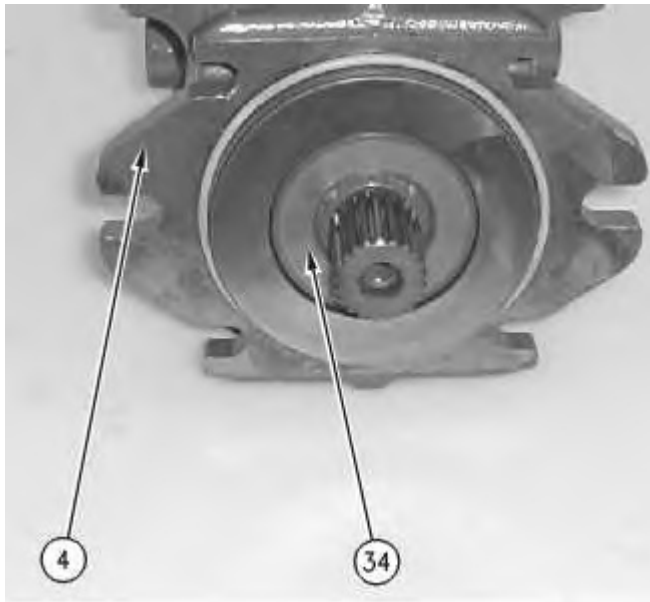


Illustration 17

g00875220

19. Install seal (34) to housing (4).



Illustration 18

g00875204

**! WARNING**

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

20. Install retaining ring (33) to housing (4).

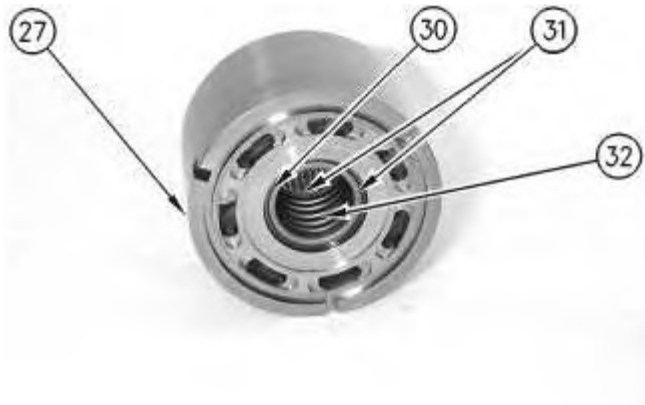


Illustration 19

g00875827

**! WARNING**

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

21. Install washer (31), spring (32) and washer (31) in barrel assembly (27).
22. Install retaining ring (30).
23. Use the following steps in order to determine the correct shim thickness on the rotating group.

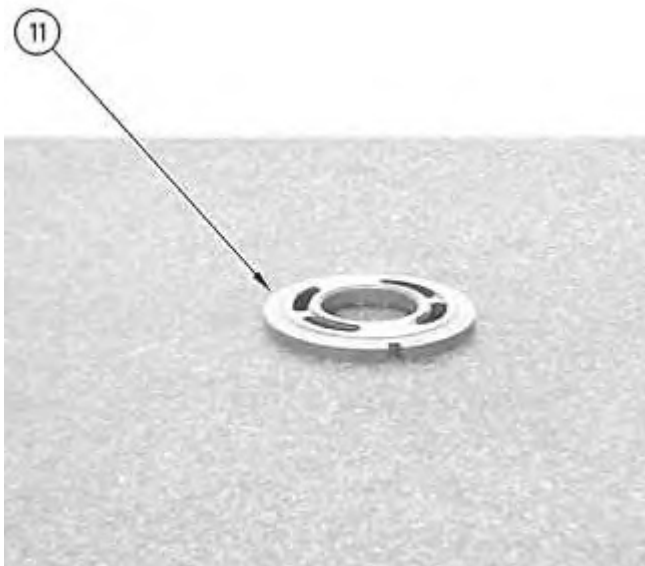


Illustration 20

g00875829

- a. Place port plate (11) onto a surface plate. The flat side of the port plate should rest on the surface plate.

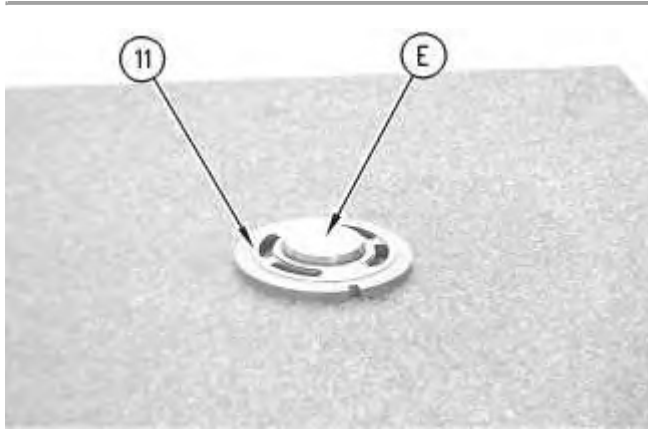


Illustration 21

g00875830

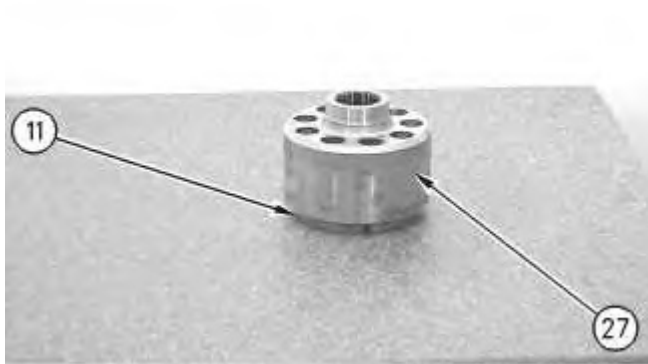


Illustration 22

g00875832

- b. Place Tooling (E) on the inside diameter of port plate (11). The chamfered side faces upward.
- c. Install barrel assembly (27) onto Tooling (E) and port plate (11).



Illustration 23

g00875866

- d. Install Tooling (F) on top of the barrel assembly (27), as shown.

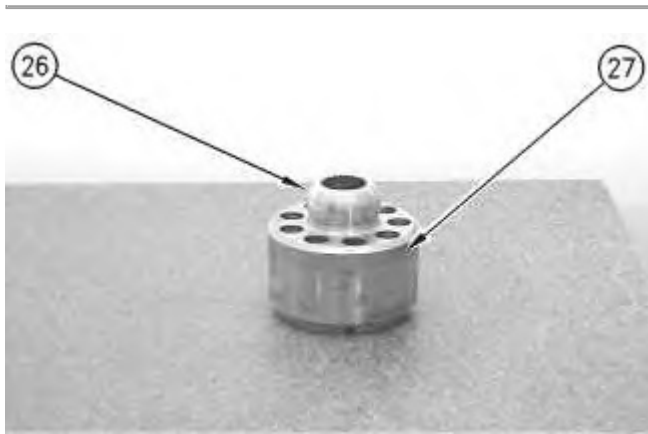


Illustration 24

g00875874

- e. Make sure that all the springs and shims have been removed from ball joint (26). Install the ball joint over Tooling (F).

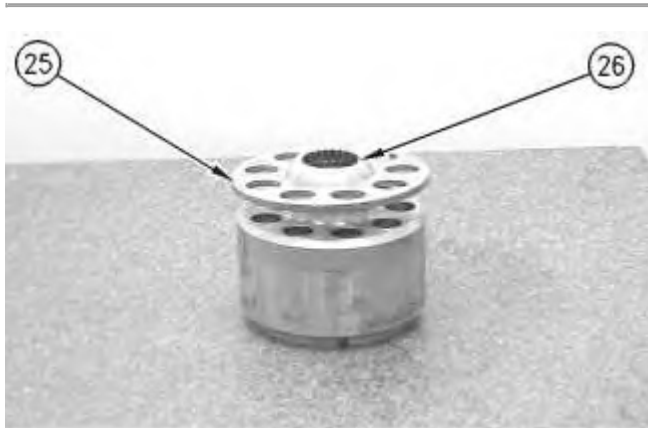


Illustration 25

g00875876

- f. Install retainer plate (G) onto ball joint (H).

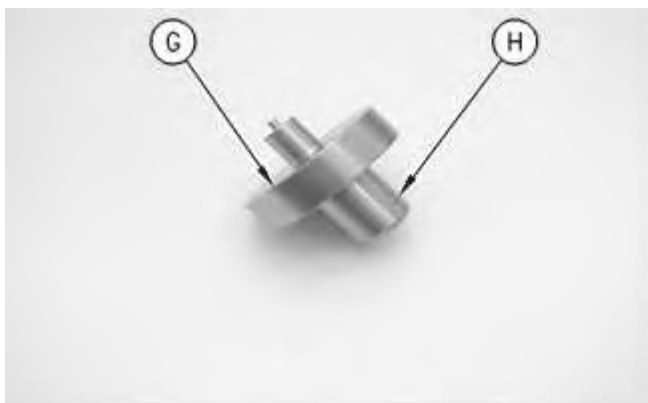


Illustration 26

g00875877

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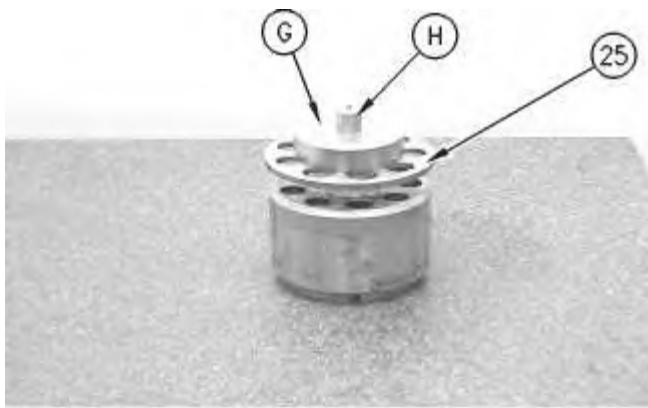


Illustration 27

g00875879

- g. Bolt Tooling (G) and Tooling (H) together. Place Tooling (G) and (H) on top of the retainer plate (25), as shown.



Illustration 28

g00875881

- h. Use a Vernier scale or a similar tool in order to measure the dimension in Step 23i.

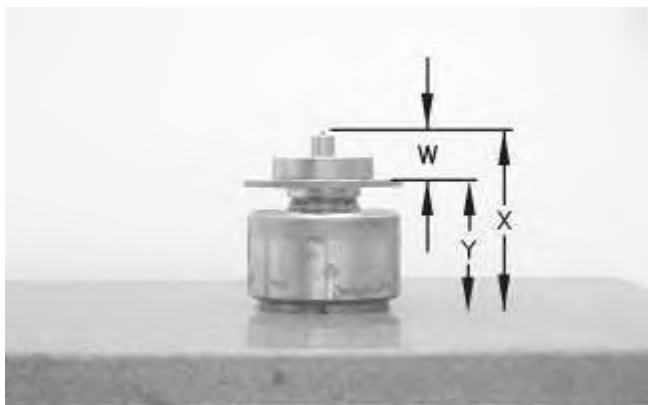


Illustration 29

g00586062

- i. Measure the distance from the top of the surface plate to the top of Tooling (G). Record this dimension as Dimension (X). Measure the distance from the top of

Tooling (G) to the top of retainer plate (25). Record this dimension as Dimension (W).

Table 2

CALCULATION
Subtract Dimension (W) from Dimension (X) in order to obtain Dimension (Y).
Dimension (Y) is the Lift Off Height.

**Note:** The Lift-Off height is  $100.06 + 0.0$  &  $- 0.2$  mm ( $3.9393 + 0.0 - 0.0079$  inch) for standard machines. Call this height Dimension (Z).

**Note:** The Lift-Off height is  $108.70 + 0.0$  &  $- 0.2$  mm ( $4.2795 + 0.0 - 0.0079$  inch) for standard machines. Call this height Dimension (Z).

Table 3

CALCULATION
Subtract Dimension (Y) from Dimension (Z) in order to obtain the thickness of shim (29). This will provide the correct Lift Off Height.

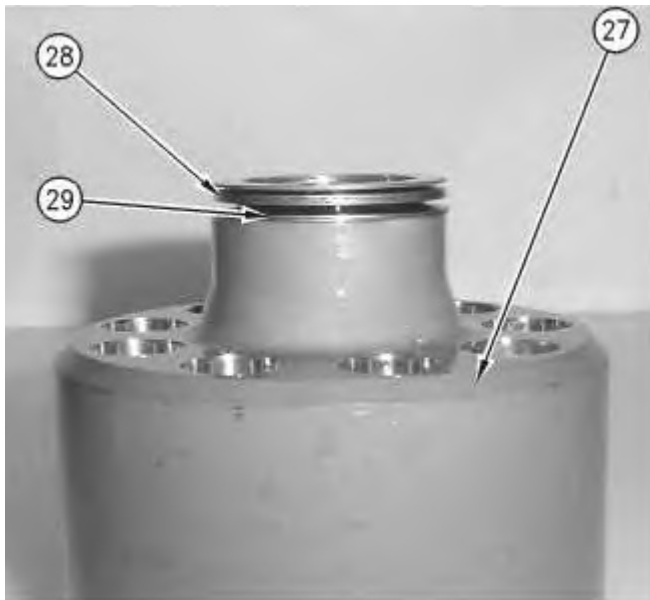
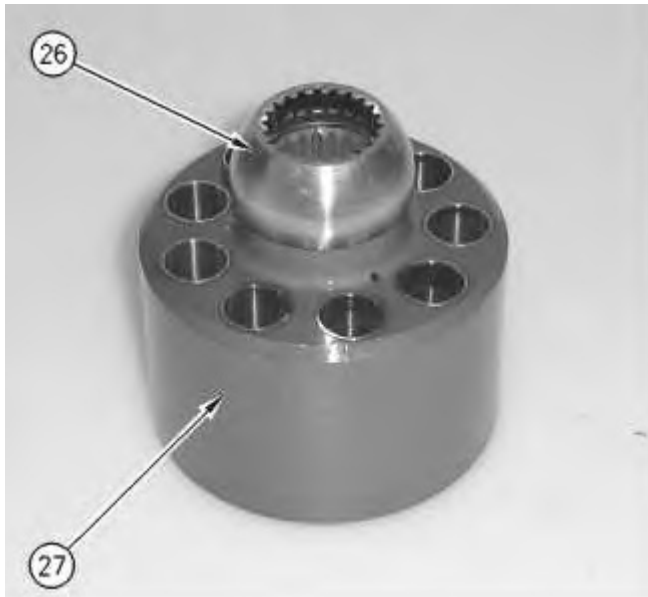


Illustration 30

g00875186

24. Install shim (29). Refer to Step 23i for the correct size. Install spring assembly (28) in the correct sequence.

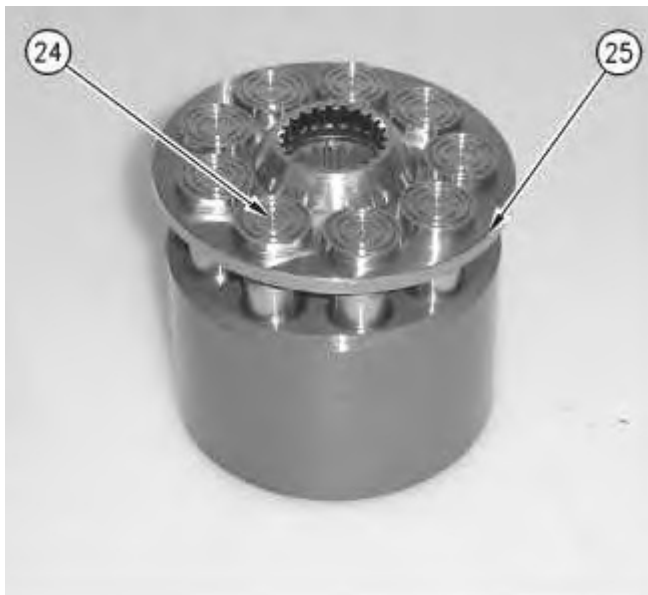


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Illustration 31

g00875182

25. Install ball joint (26) on the shim and barrel assembly (27).



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Illustration 32

g00875175

26. Install pistons (24) and retainer plate (25).
-



Illustration 33

g00875902

27. Wrap a piece of nylon string around the pistons, as shown.



Illustration 34

g00875903

28. Lower rotating assembly (23) into the pump. Use the nylon string in order to hold the assembly together during installation. Remove the nylon string.
-



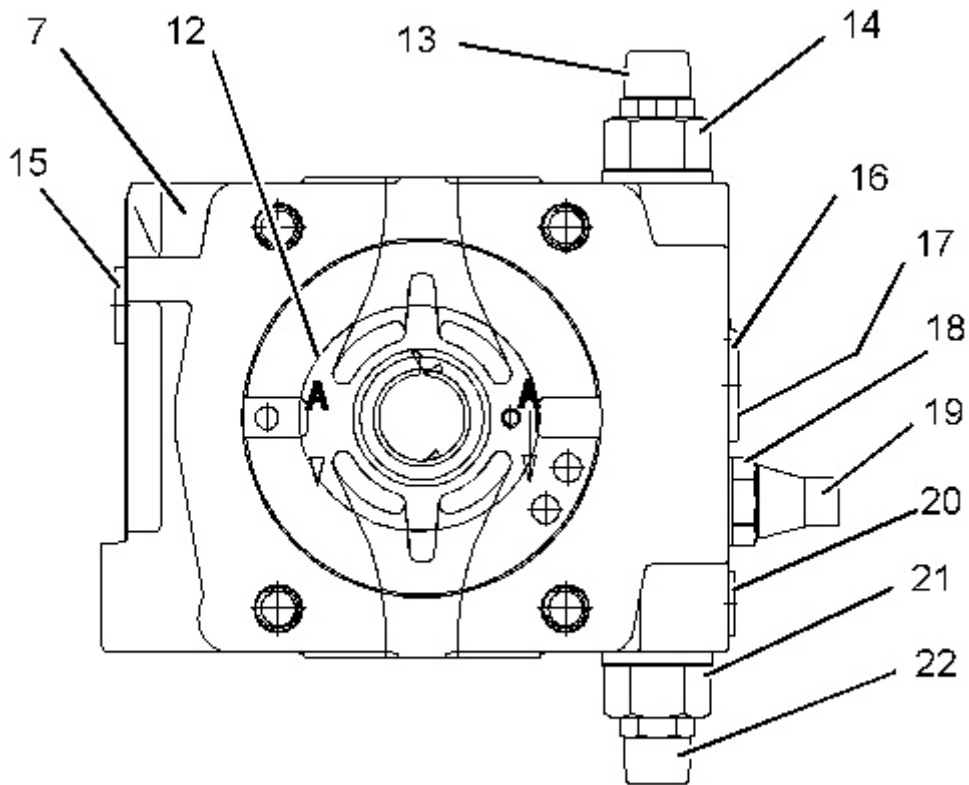


Illustration 35

g01387582

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29. Install the O-ring seals, O-ring seal (12), valve (21), dust cap (22), plug (20), valve (18), dust cap (19), plugs (17), plug (16), valve (14), dust cap (13), and plug (15).

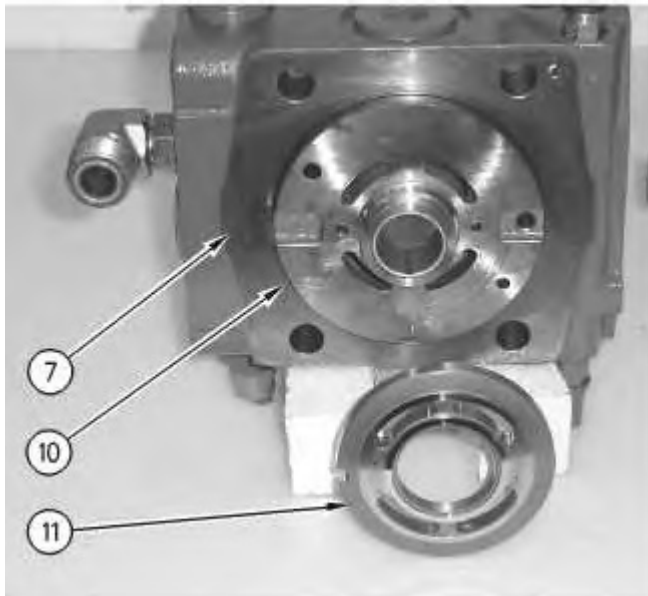


Illustration 36

g00875055

30. Install port plate (11) to head (7).
31. Install O-ring seal (9) to head (7).

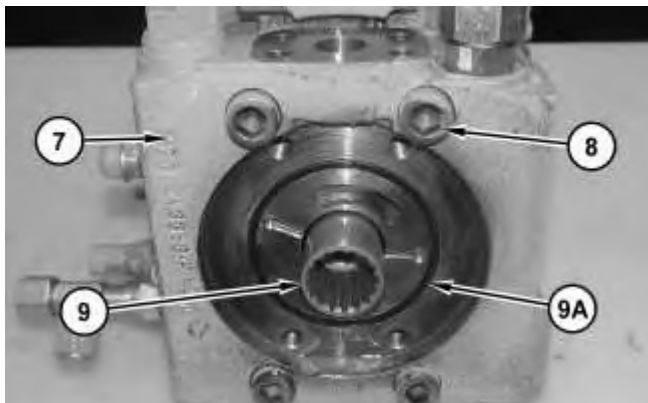


Illustration 37

g01284387

32. Install coupler (9).
33. Install head (7) onto the housing.
34. Install bolts (8) to head (7).
35. Install O-ring seal (9A).

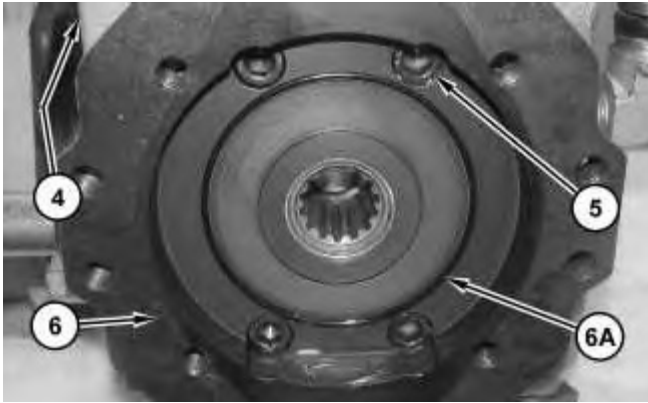


Illustration 38

g01284508

36. Install flange (6) to housing (4).
37. Install bolts (5) and O-ring seal (6A) to flange (6).

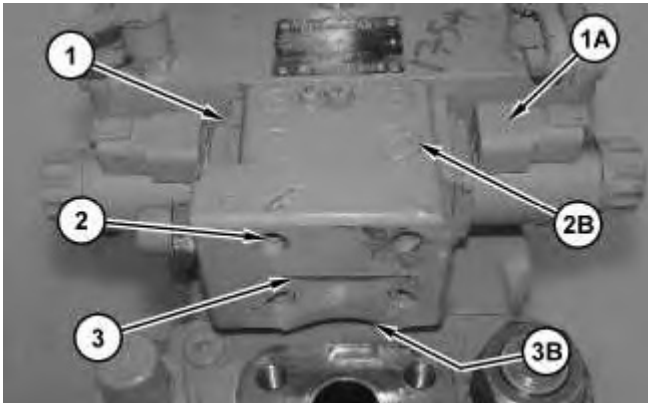


Illustration 39

g01284385

38. Install the bevel washers, the O-ring seals, solenoids (1A), and bolts (1).
39. Install servo valve (2B) and bolts (3B).
40. Install the gasket, cover (3), and bolts (2).

**End By:**

- a. Install the piston pump. Refer to Disassembly and Assembly, "Piston Pump (Hydrostatic) - Install".
-

Product: TRACK-TYPE TRACTOR

Model: D5K XL TRACK-TYPE TRACTOR WWW

Configuration: D5K XL & LGP Track Type Tractors WWW00001-UP (MACHINE) POWERED BY C4.4 Engine

## Disassembly and Assembly D3K, D4K and D5K Track-Type Tractors Power Train

Media Number -KENR6045-03

Publication Date -01/10/2018

Date Updated -25/10/2018

i05444871

# Piston Pump (Hydrostatic) - Assemble - Left Side

SMCS - 5070-016

## Assembly Procedure

Table 1

Required Tools			
Tools	Part Number	Part Description	Qty
A	1P-1862	Pliers	1
B	1P-1861	Retaining Ring Pliers	1
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E	135-8292	Alignment Plug	1
F	128-2745	D3/D4 Test Ring	1
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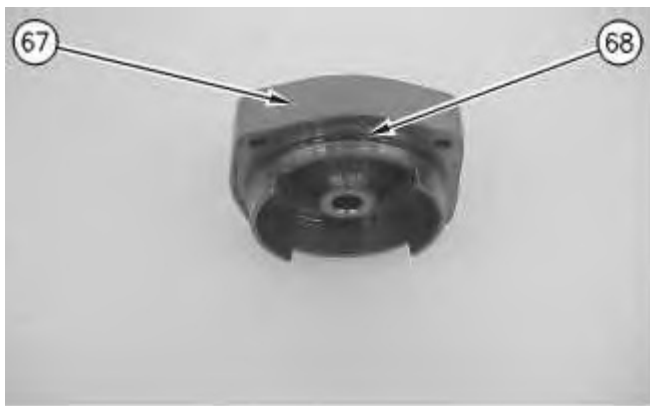


Illustration 2

g00875604

2. Install O-ring seal (68) to cover (67).

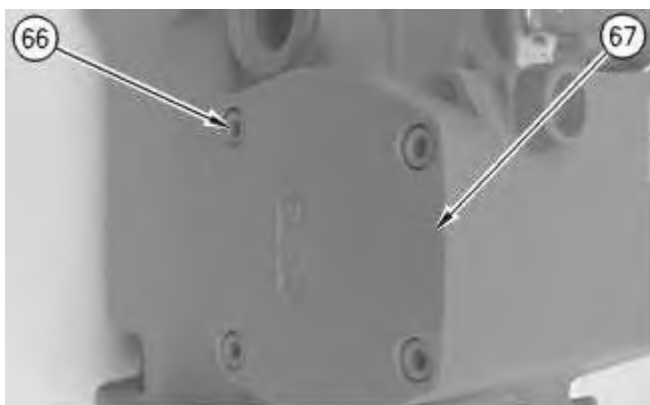


Illustration 3

g00875602

3. Install cover (67) and bolts (66).

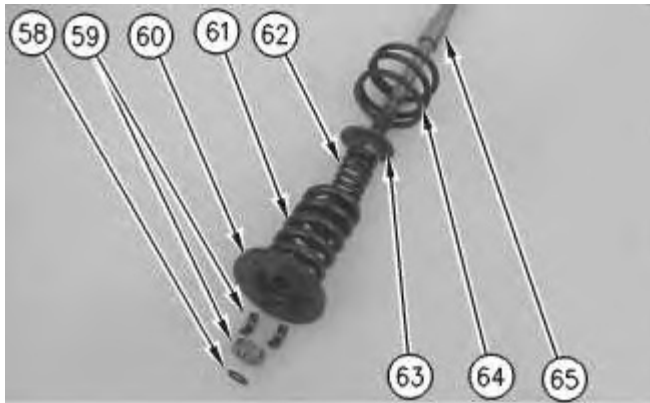


Illustration 4

g00875601

4. Install spring retainer (63) and rod (65). Install springs (61), (62), and (64). Install spring retainer (60). Install O-ring seal (58) and ring assembly (59).



Illustration 5

g00875599

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5. Use Tooling (A) and a suitable press in order to install retaining ring (57).

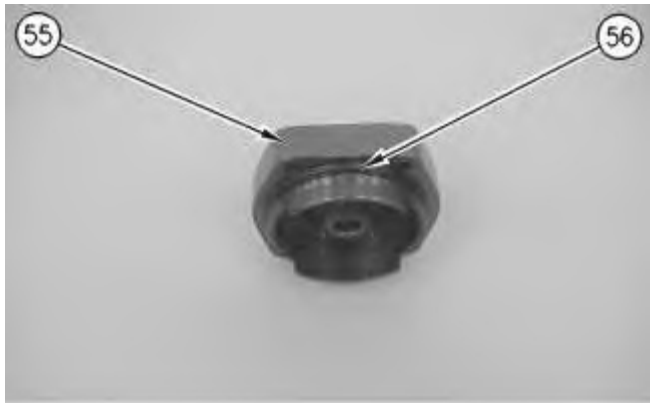


Illustration 6

g00875573

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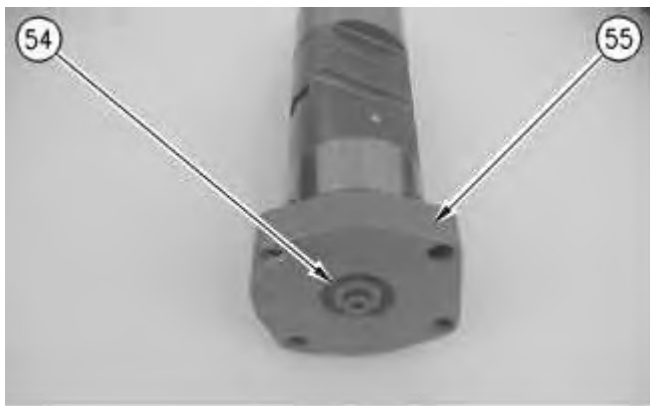


Illustration 7

g00875571

7. Install cover (55) and nut (54).

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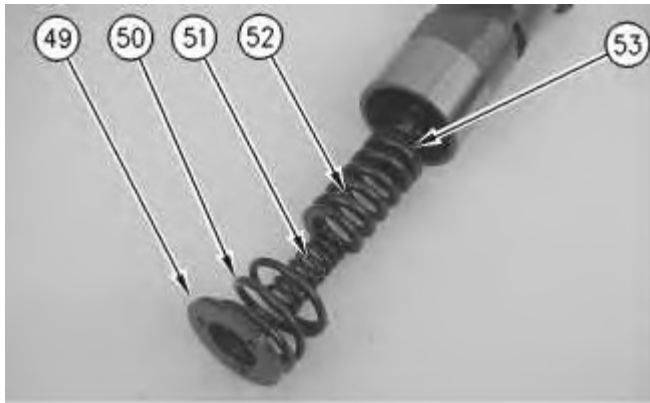


Illustration 8

g00875570

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g00875569

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9. Use Tooling (C) and a suitable press in order to Install ring assembly (48).





Illustration 10

g00875568

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10. Use Tooling (A) and a suitable press in order to install retaining ring (47).

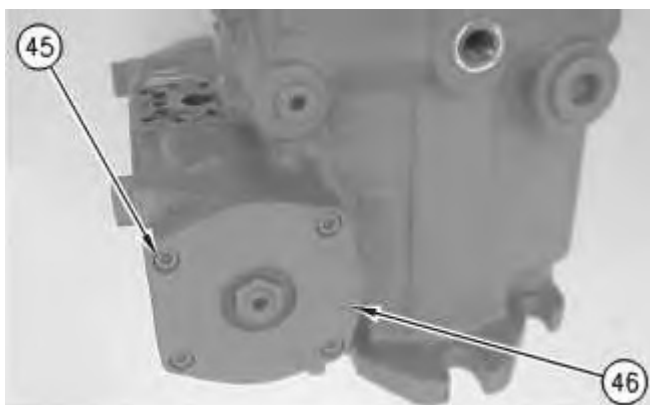


Illustration 11

g00875567

11. Install servo valve (46) and bolts (45).

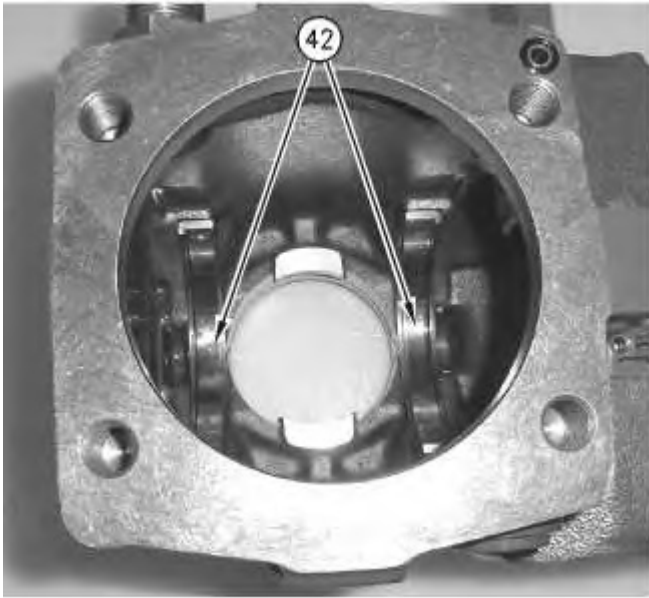


Illustration 12

g00875539

12. Install bearings (42).

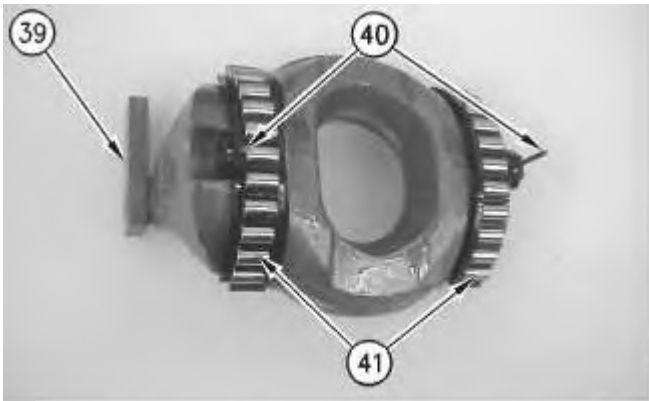


Illustration 13

g00875538

13. Install bearings (41), rods (40), and slide (39).



Illustration 14

g00875537

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