



# Service Repair Manual

## **Models**

324D L Excavator

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## Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1U-7506	Adapter	1
	8T-4244	Nut	6
	8T-4223	Hard Washer	6
	-	Threaded RodM12 x 1.75 by 250 mm (10 in) long	1
B	8T-0651	Bolt	1
	8T-4167	Hard Washer	1
C	3E-3882	Eyebolt	1
D	1P-1859	Retaining Ring Pliers	1
E	1P-0510	Driver Gp	1
	9S-9152	Bearing Puller Gp	1
F	1P-1861	Retaining Ring Pliers	1

### Start By:

- A. Remove the travel motor. Refer to Disassembly and Assembly, "Travel Motor - Remove".

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### NOTICE

**Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.**

**Refer to Special Publication, NENG2500, "Caterpillar Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Caterpillar products.**

**Dispose of all fluids according to local regulations and mandates.**

- 
1. Thoroughly clean the outside of the travel motor prior to disassembly.
  2. Fasten the travel motor in Tooling (A) in a vertical position. The weight of the travel motor is approximately 60 kg (132 lb).
  3. Put an alignment mark across the head and the body of the travel motor for assembly purposes. The head must be reinstalled in the head's original position on the body of the travel motor.



Illustration 1

g00887295

**Note:** During the removal of head (2) from the travel motor, be careful not to damage the mating surfaces of the components.

 **WARNING**

**Spring force can cause personal injury or death.**

**Do not repair until you have read the Operation and Maintenance Manual.**

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4. Remove bolts (1) .
  5. Remove head (2) from the body of the travel motor.
-

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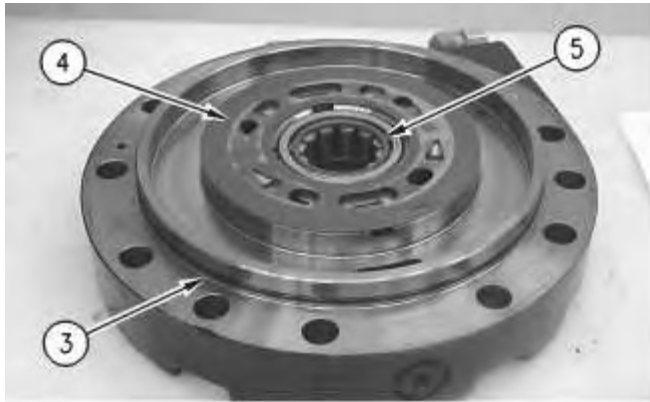


Illustration 2

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6. Remove O-ring seal (3) , port plate (4) , and bearing (5) .

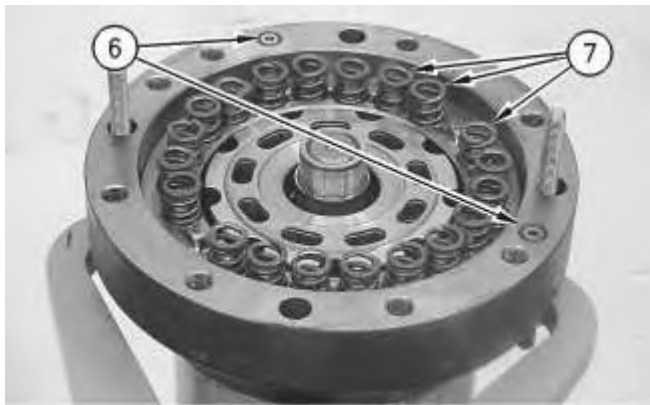


Illustration 3

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7. Remove O-ring seals (6) . Remove springs (7) .

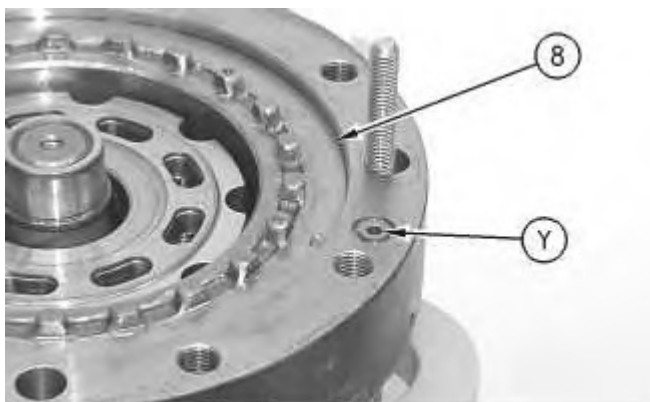


Illustration 4

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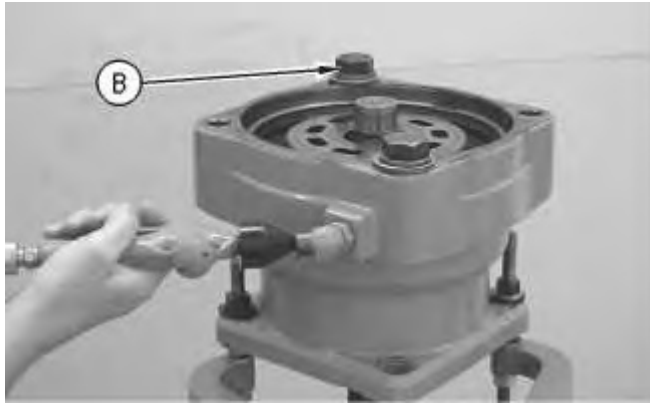


Illustration 5

g00890074

This is an example of the use of Tooling (B) .

8. Place a shop towel over brake piston (8) . Retain brake piston (8) with Tooling (B) . Apply approximately 525 kPa (75 psi) of shop air pressure to brake release Port (Y) . Make sure that the shop air pressure is free of water. Brake piston (8) will move up the piston guide, and out of the piston guide. Remove brake piston (8) from the body of the travel motor.



Illustration 6

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9. Remove seal (9) and backup ring (10) from the brake piston.
10. Remove seal (11) and backup ring (12) from the brake piston.

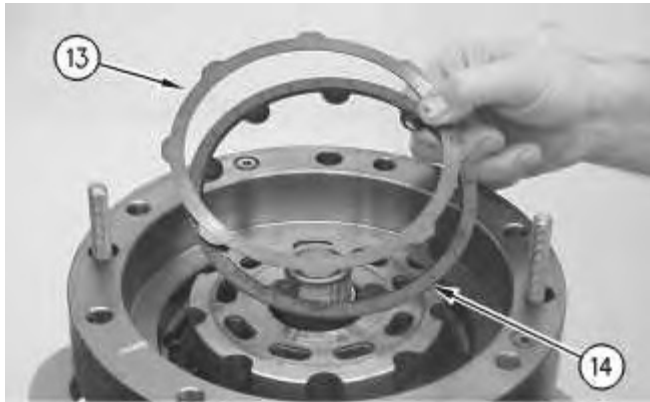


Illustration 7

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11. Remove plates (13) and friction discs (14) .

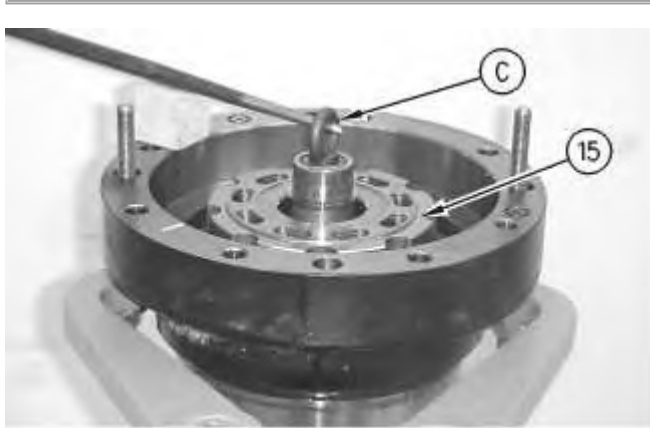


Illustration 8

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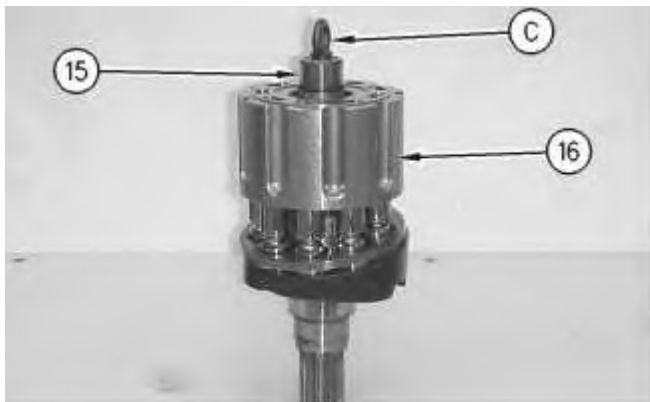


Illustration 9

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12. Install Tooling (C) into shaft (15) . Use a prybar to remove the rotating assembly (16) from the housing.

13. Remove Tooling (C) from shaft (15) .

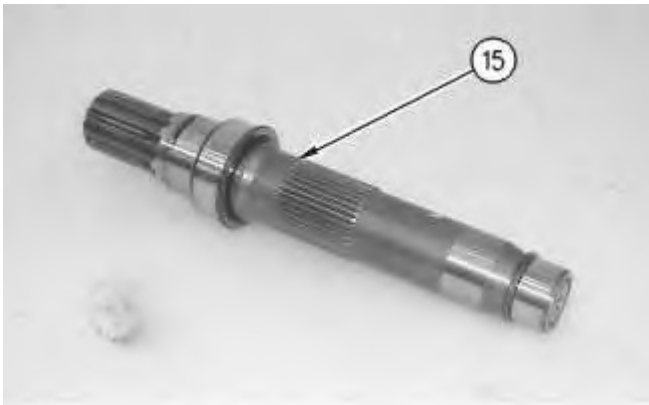


Illustration 10

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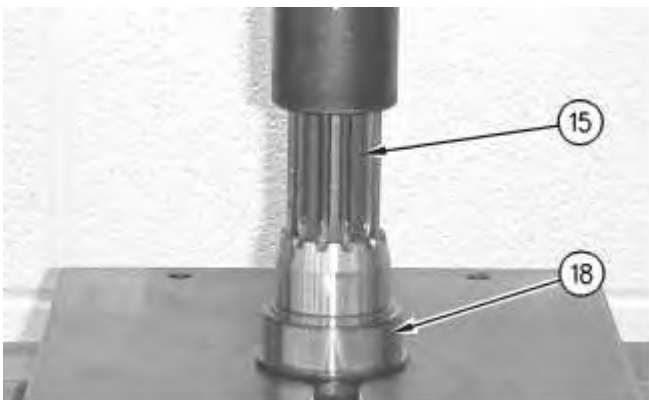
14. Remove shaft (15) from rotating assembly (16) .



Illustration 11

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15. Use Tooling (D) in order to remove retaining ring (17) from shaft (15) .



16. Install shaft (15) into a suitable press. Remove bearing race (18) from the shaft.

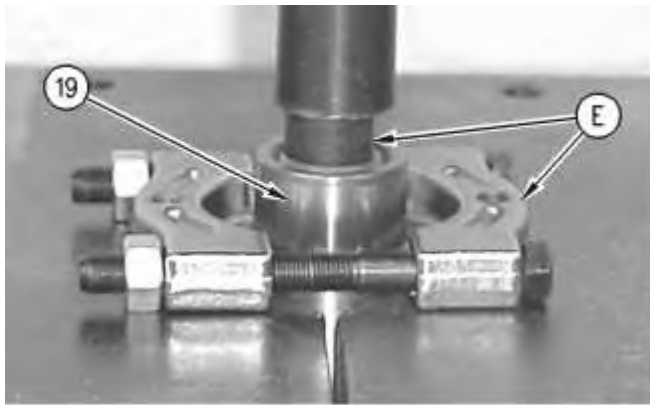


Illustration 13

17. Rotate shaft (15) . Install shaft (15) into a suitable press. Install Tooling (E) . Remove bearing race (19) from shaft (15) .



Illustration 14

18. Remove cam plate (20) from barrel assembly (21) .
-

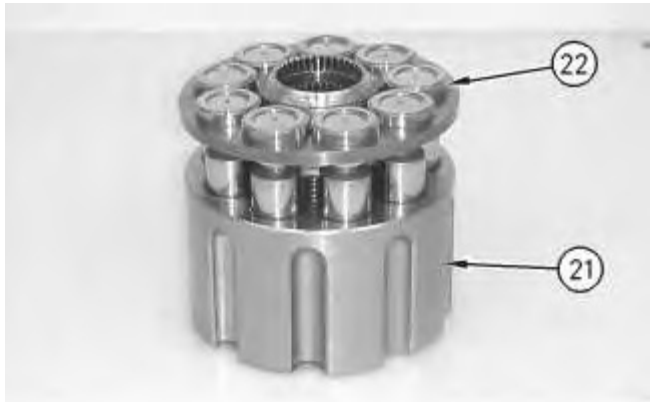


Illustration 15

g00887520

19. Remove piston assemblies and retainer plate (22) from barrel assembly (21) .

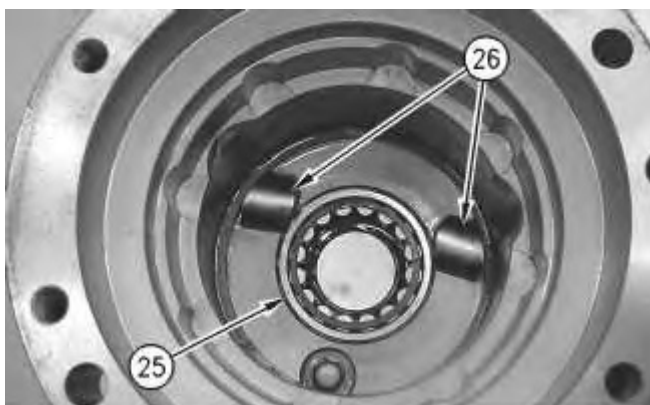
**Note:** Place marks on the pistons and the barrel assembly. The pistons must be returned to the original position.



Illustration 16

g00887558

20. Remove ball (23) and springs (24) .



21. Remove bearing (25) .
22. Remove keys (26) and locating pins (not shown) from the body of the travel motor.

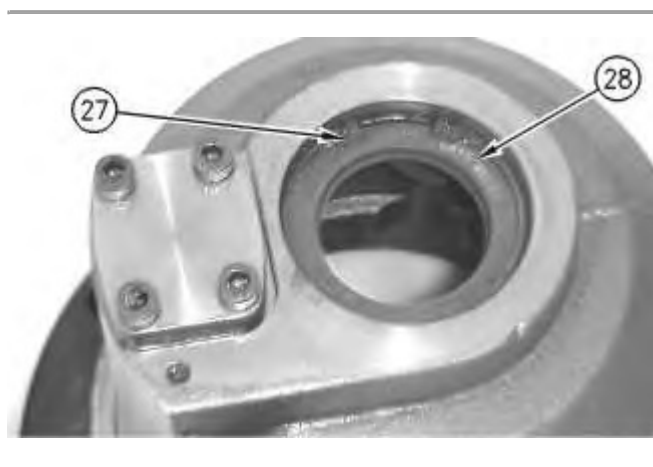


Illustration 18

g00887589

23. Rotate the housing. Use Tooling (F) in order to remove retaining ring (27) .
24. Remove seal (28) .

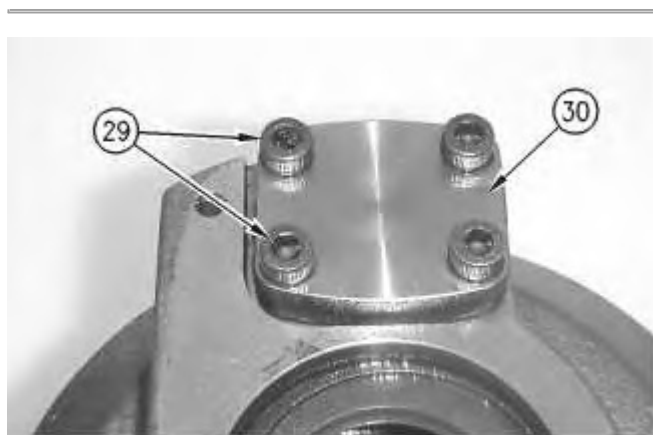


Illustration 19

g00887619

25. Remove bolts (29) and cover (30) .
-



Illustration 20

g00887729

26. Remove seal (31) and backup ring (32) .



Illustration 21

g00887754

27. Remove piston actuator (33) and seal (34) .



Illustration 22

g00887762

28. Remove O-ring seal (35) from the housing of the travel motor.

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Product: EXCAVATOR

Model: 324D L EXCAVATOR GPK

Configuration: 324D L Excavator GPK00001-UP (MACHINE) POWERED BY C7 Engine

## Disassembly and Assembly

### 324D, 325D, 326D and 329D Excavators and 329D MHPU Mobile Hydraulic Power Unit Machine Systems

Media Number -REN8646-22

Publication Date -01/02/2015

Date Updated -12/09/2018

i07505849

## Travel Motor - Disassemble

SMCS - 4351-015

S/N - GPK1-UP

## Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1P-2420	Transmission Repair Stand	1
	FT-0957	Positioning Gp	4
B	-	M16x2 Threaded Rod	3
	8T-1757	Nut	6
	9X-8268	Washer	6
C	421-5662	Lifting Eye Assembly	1
D	421-5663	Lifting Eye Assembly	2
E	1U-9895	Crossblock	1
	3H-0465	Push-Puller Plate	2
	8T-0298	Bolt	2

### Start By:

- a. Remove the travel motor.
-

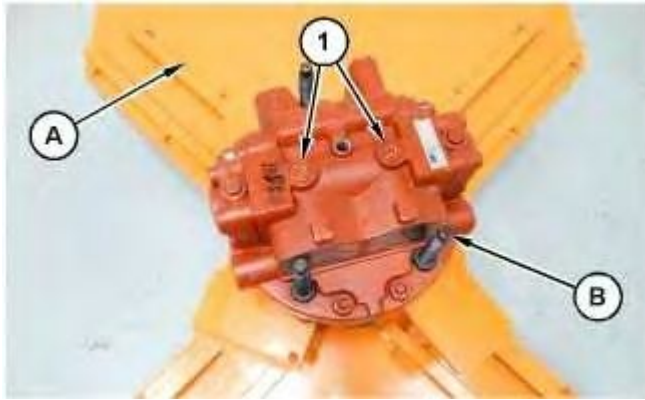


Illustration 1

g06341880

1. Attach the travel motor to Tooling (A) and (B). The weight of the travel motor is approximately 70 kg (154 lb).
2. Remove plugs (1) and the O-ring seals.



Illustration 2

g06344110

3. Remove plug (2) and the O-ring seal. Repeat for the opposite side.



Illustration 3

g06341912

## **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.**

---

4. Remove plug (2A) and the O-ring seal. Repeat for the opposite side.



Illustration 4

g06341915

5. Remove spring (3).



Illustration 5

g06341917

6. Remove spool (4).
-

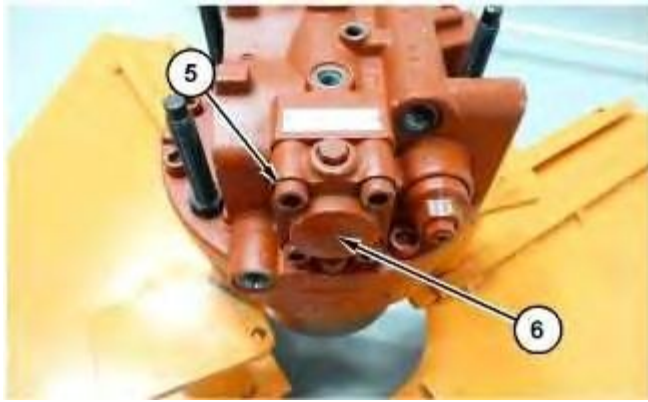


Illustration 6

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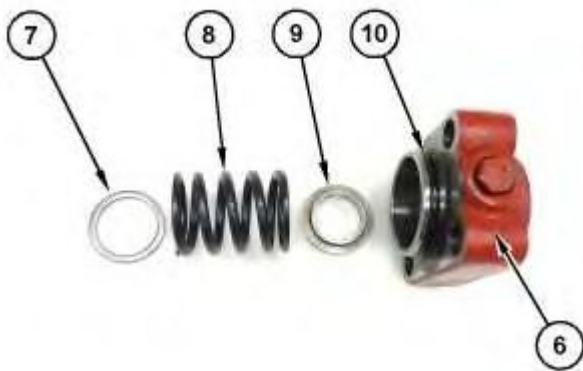


Illustration 7

g06342000

 **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.**

- 
7. Remove bolts (5) and cap (6). Repeat for the opposite side.
  8. Remove O-ring seal (10) from cap (6). Remove guide (9), spring (8), and washer (7) from the head assembly. Repeat for the opposite side.
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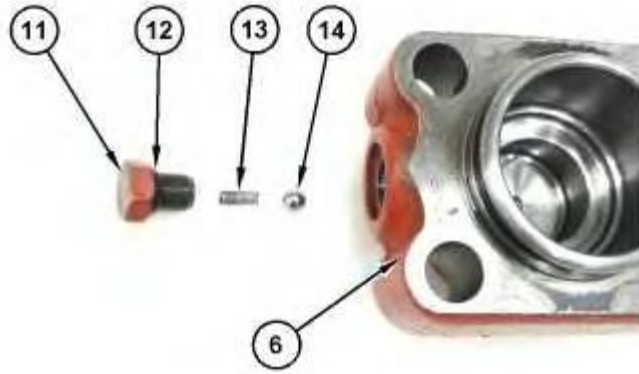


Illustration 8

g06342005

## **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.**

9. Remove plug (11), O-ring seal (12), spring (13), and ball (14) from cap (6). Repeat for the other cap.



Illustration 9

g06342009

10. Remove spool (15).



Illustration 10

g06343314



Illustration 11

g06343315

11. Remove relief valve (16). Remove O-ring seal (17) from relief valve (16).
12. Repeat for the opposite side.

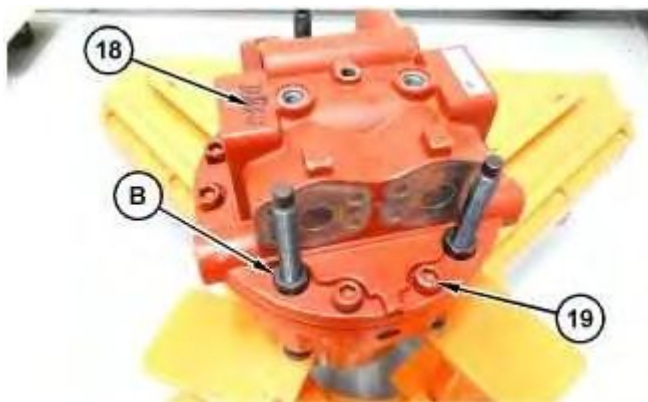


Illustration 12

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**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.**

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13. Remove the nuts of Tooling (B). Remove bolts (19) from head assembly (18).
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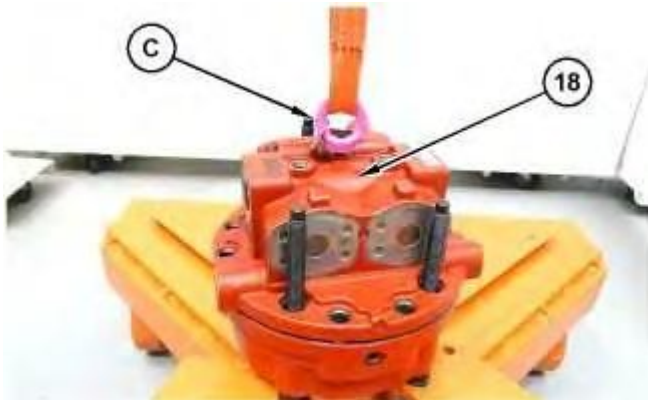


Illustration 13

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14. Use Tooling (C) and a suitable lifting device to remove head assembly (18). The weight of head assembly (18) is approximately 21 kg (47 lb).
- 



Illustration 14

g06343374

15. Remove control plate (20) and bearing (21) from head assembly (18).
-



Illustration 15

g06343381

16. Remove pins (22) and springs (23).
17. Remove O-ring seals (24) and (25).



Illustration 16

g06343383

18. Use Tooling (D) and a suitable lifting device to remove housing assembly (26) from Tooling (A) and place on a suitable bench.



Illustration 17

g06343417

## **WARNING**

**To avoid personal injury, always wear eye and face protection when using pressurized air.**

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19. Attach Tooling (E) to housing (26). Use air pressure to unseat brake piston (27). Remove Tooling (E) and brake piston (27).



Illustration 18

g06343437

20. Remove back up rings (28) and O-ring seals (29) from brake piston (27).



Illustration 19

g06343462

21. Remove brake piston guide (30).
-



Illustration 20

g06343464

22. Remove O-ring seal (31) from brake piston guide (30).



Illustration 21

g06343466



Illustration 22

g06343469

**Note:** Note the orientation of friction discs (32) and plates (33) for assembly purposes.

23. Remove friction discs (32) and plates (33).



Illustration 23

g06343638

24. Remove rotating group (34) from housing (26).



Illustration 24

g06343777

25. Remove pistons (35) and retainer (36) from barrel (37).



Illustration 25

g06343783

26. Remove hold down ball (38) and springs (39) from barrel (37).



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Illustration 26

g06343786

27. Remove swashplate (40) from housing (26).

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Illustration 27

g06343788



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Illustration 28

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28. Remove pistons (41).

29. Remove springs (42) and shaft (43).

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**Suggest:**

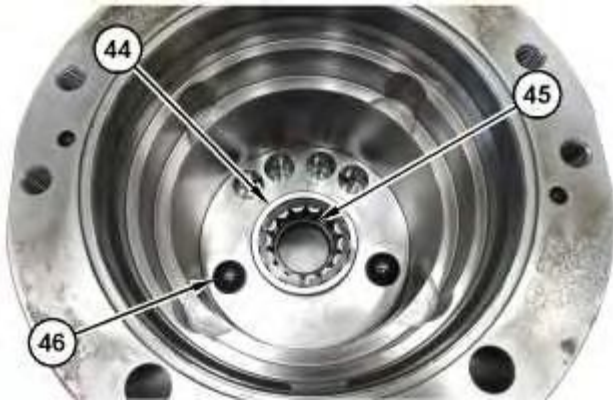
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Illustration 29

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30. Remove balls (46).

31. Remove bearing (44) and lip seal (45).

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