



Service Repair Manual

Models

307C and 307CSB Mini
Hydraulic Excavator

Previous Screen

Product: MINI HYD EXCAVATOR

Model: 307C MINI HYD EXCAVATOR BCM

Configuration: 307C & 307C SB Excavators BCM00001-UP (MACHINE) POWERED BY 4M40 Engine

**Disassembly and Assembly
307C Excavator Machine Systems**

Media Number -REN4029-02

Publication Date -01/03/2005

Date Updated -29/03/2005

i06217139

Final Drive and Travel Motor - Disassemble

SMCS - 4050-015; 4351-015

Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	FT3209	Retainer Nut Wrench As.	1

Start By:

- A. Remove final drive and travel motor assembly.

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, "Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Cat products.

Dispose of all fluids according to local regulations and mandates.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

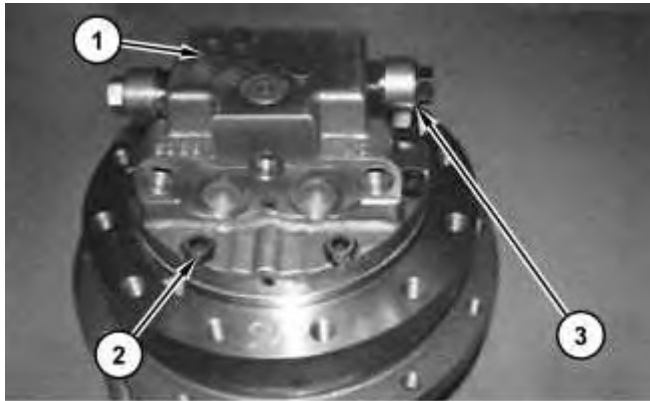


Illustration 1

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1. Remove relief valves (3) . Remove bolts (2) and remove motor cover (1) .

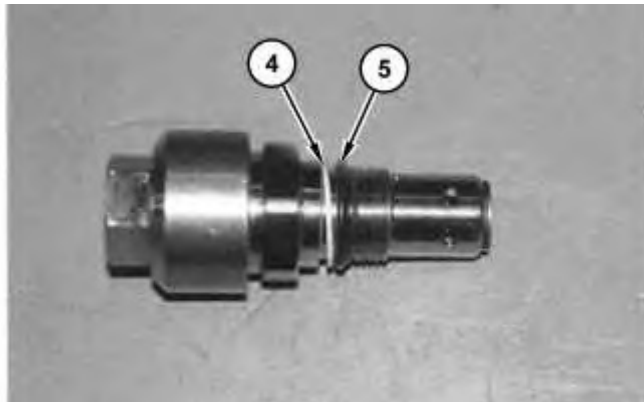


Illustration 2

g02992403

2. Remove backup ring (4) and O-ring seal (5) from relief valves (3) .
-

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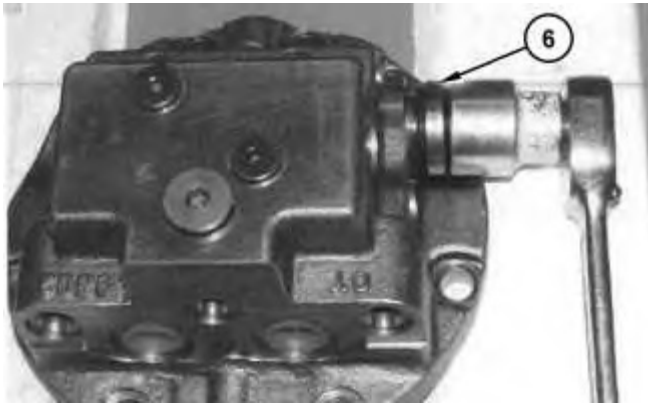


Illustration 3

g02992479

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.

3. Remove cover (6) . Repeat step on the opposite side of the motor cover.

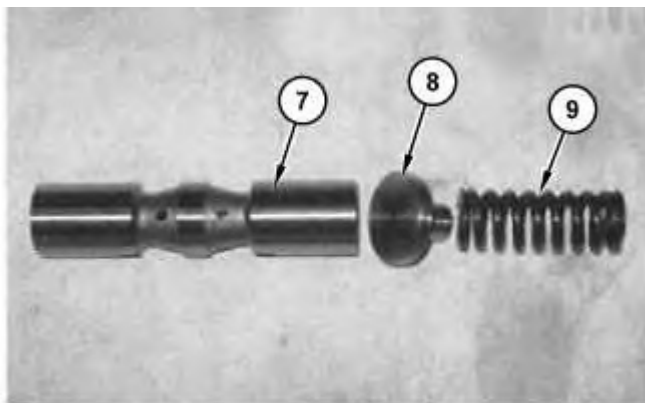


Illustration 4

g02992484

4. Remove spring (9) , pusher (8) and spool (7) from behind cover (6) .

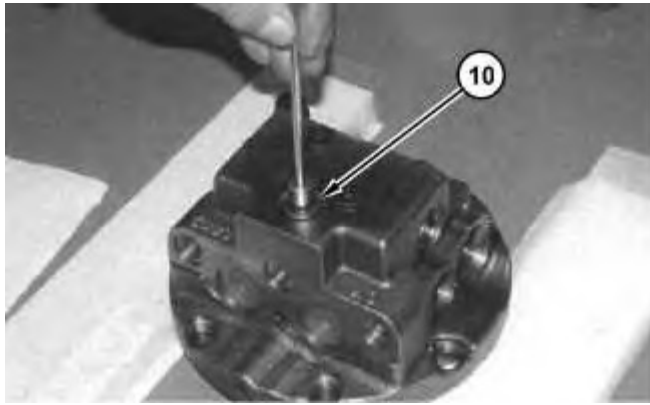


Illustration 5

g02992486

5. Remove plug (10) .

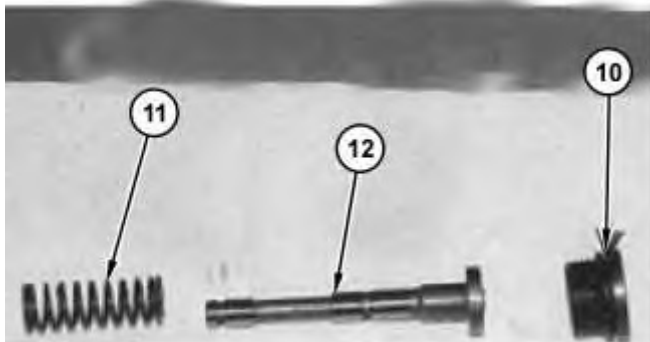


Illustration 6

g02993276

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 spring (11) , spool (12) from under plug (10) .

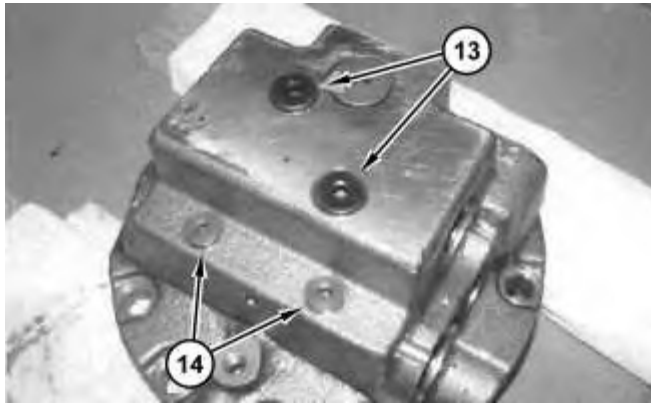


Illustration 7

g02993278

7. Remove plugs (13) and (14) .

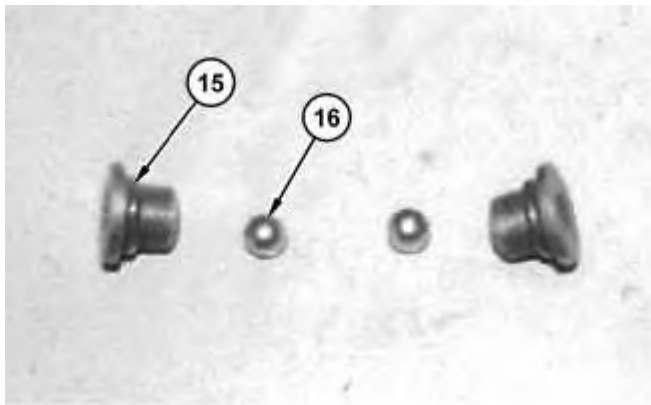


Illustration 8

g02994357

8. Remove O-ring seals (15) from plugs. Remove steel balls (16) from motor cover.

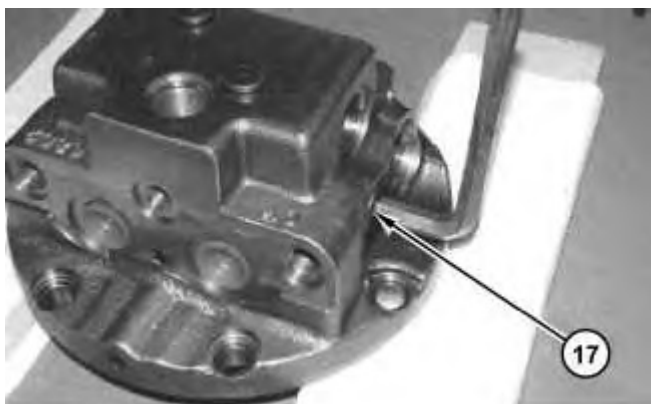


Illustration 9

g02994396

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 (17) from motor cover.

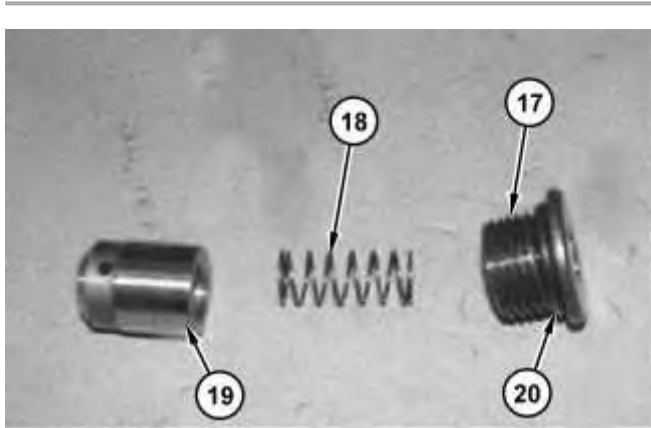


Illustration 10

g02994397

10. Remove spring (18) and poppet (19) from behind plug (17) . Remove O-ring seal (20) from plug (17) . Repeat step on opposite side of the motor cover.

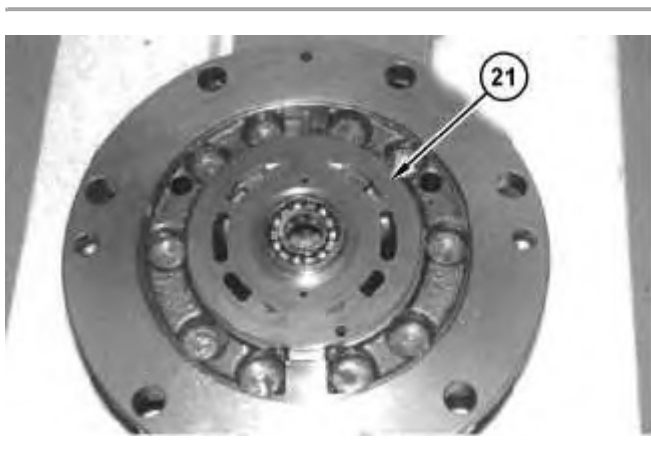


Illustration 11

g02994400

11. Remove valve plate (21) .

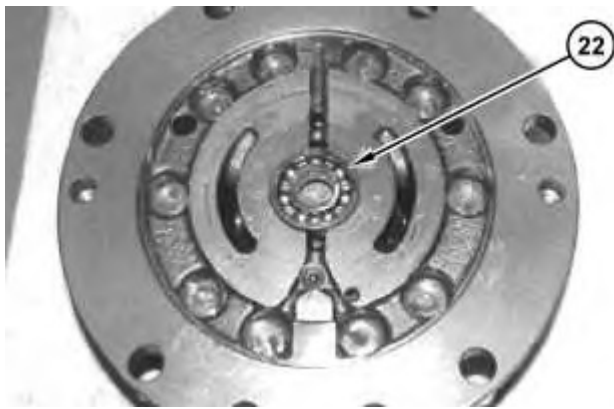


Illustration 12

g02994862

12. Remove bearing (22) .

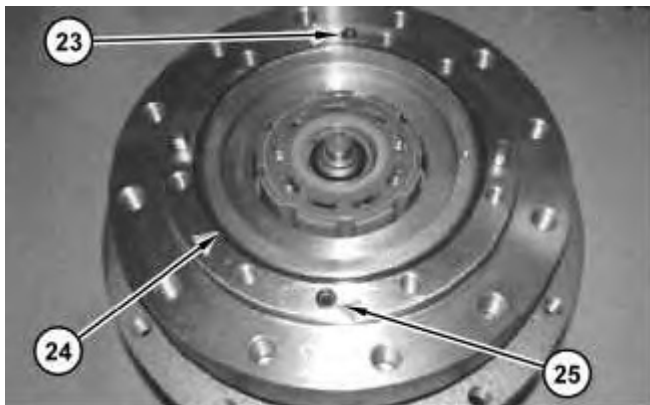
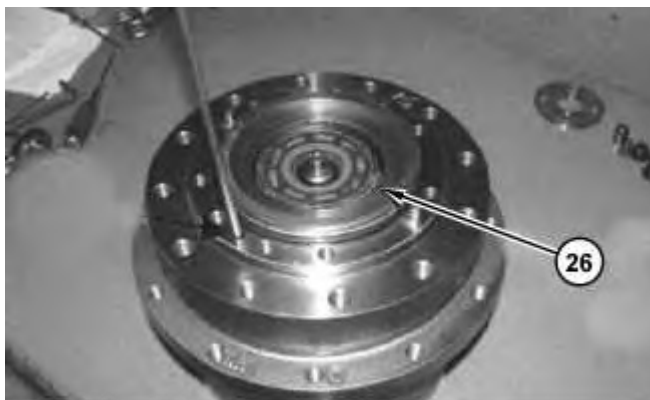


Illustration 13

g02994879

13. Position final drive assembly as shown and remove O-ring seals (23) , (24) , and (25) .



Note: Use caution when using forced air, propelled parts can cause injury.

14. Apply shop air to brake piston oil port and remove brake piston (26) from body casing.

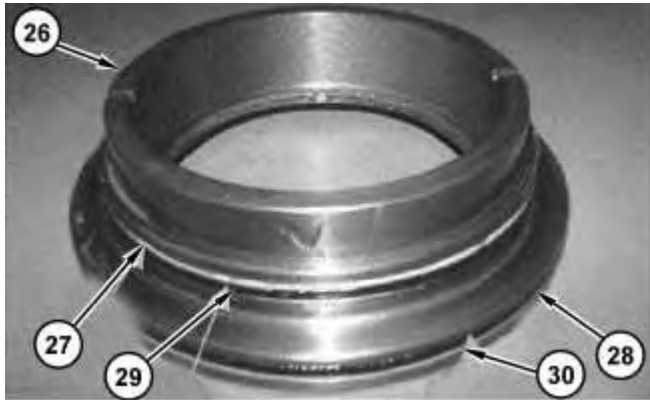


Illustration 15

15. Remove backup rings (27) and (30) . Remove O-ring seals (28) and (29) from brake piston (26) .

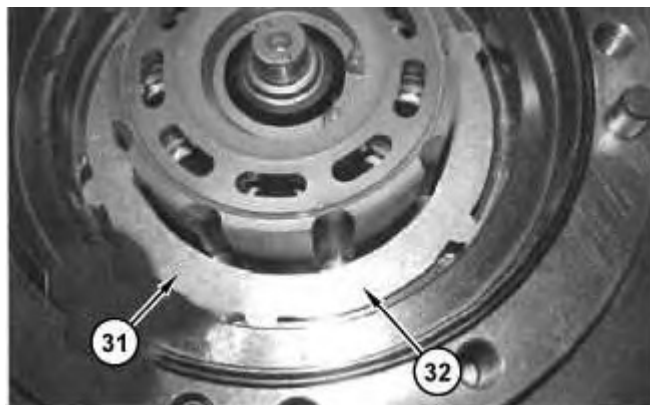


Illustration 16

16. Remove friction plates (31) and steel plates (32) .

Note: Do not remove cylinder barrel during this step.

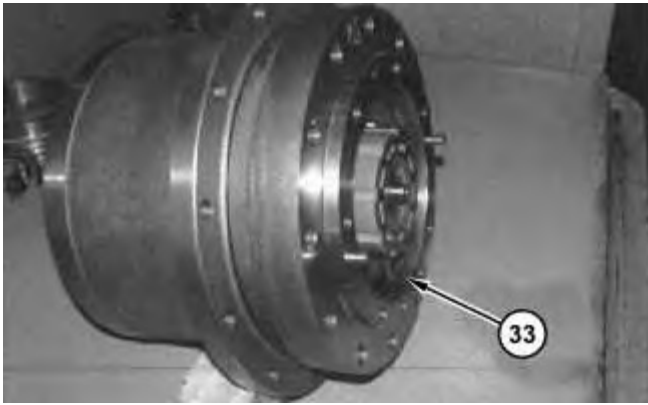


Illustration 17

g02995142

17. Position final drive assembly as shown. Remove barrel assembly (33) .



Illustration 18

g02995496

Note: During reassembly, the retainer, piston assemblies, and cylinder barrel must be installed in the original locations. For this purpose, record the original positions of the parts before and during disassembling process.

18. Remove retainer (34) with piston assemblies (35) from cylinder barrel (33) . Remove the piston assemblies (35) from the retainer (34) .

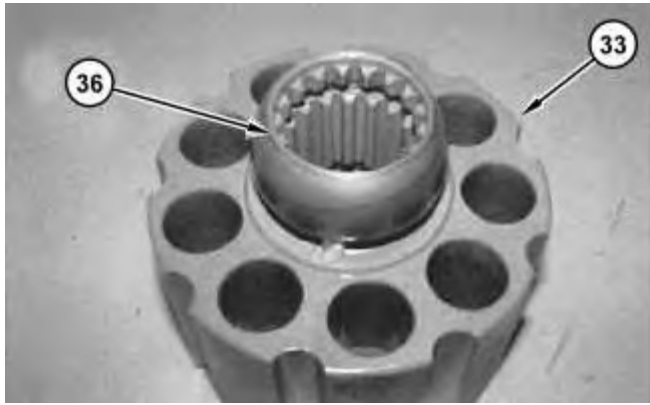


Illustration 19

g02995497

19. Remove retainer ball (36) from cylinder barrel (33) .

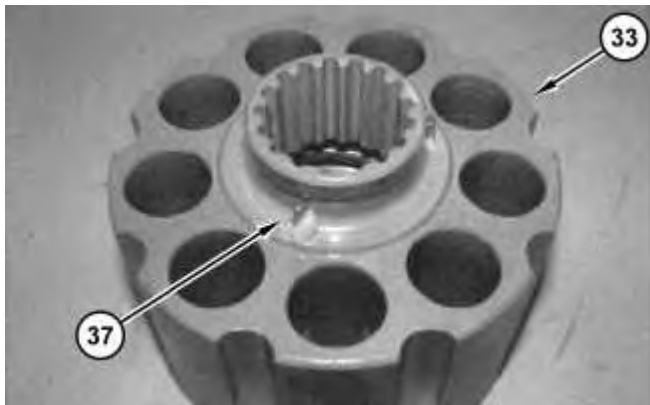


Illustration 20

g02995518

20. Remove three pins (37) from cylinder barrel (33) .

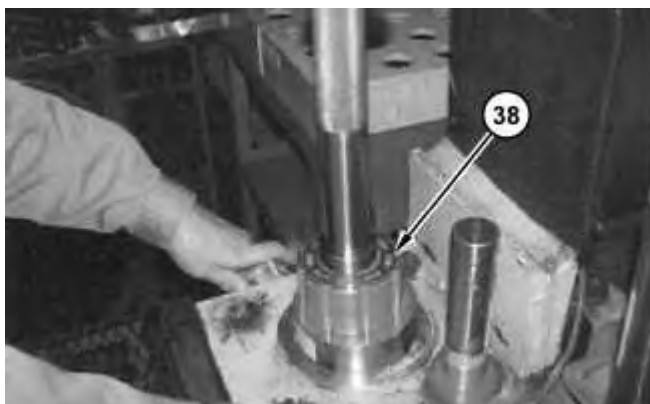


Illustration 21

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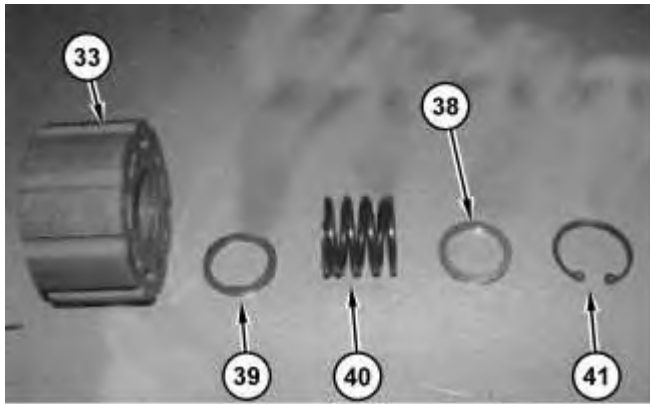


Illustration 22

g02996378

! 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.

21. Use a suitable press to apply pressure to plate (38) and remove snap ring (41) . Release pressure from plate (38) . Remove plate (38) , spring (40) and plate (39) from cylinder barrel (33) .

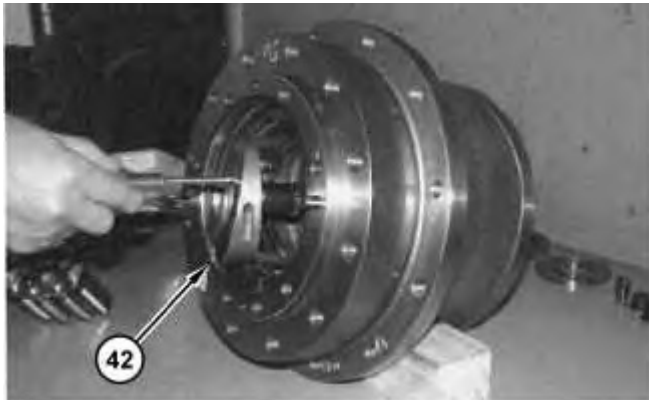


Illustration 23

g02996380

22. Remove swash plate (42) .

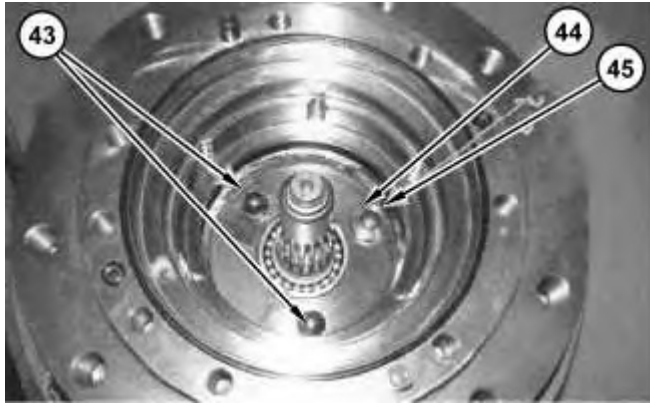


Illustration 24

g02996497

23. Remove steel balls (43) , piston assembly (44) , and spring (45) .



Illustration 25

g02996501

24. Position gear casing as shown. Remove bolts (46) and washers (47) .

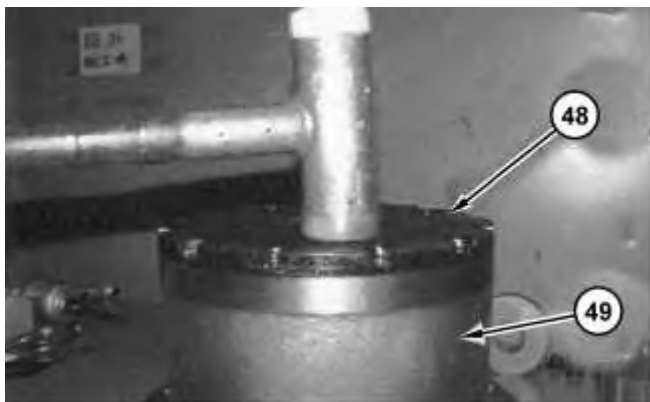


Illustration 26

g02996503



Illustration 27

g02996537

Plate shown from bottom with fill and drain plugs removed.

25. Use a plastic hammer to loosen the sealant bond. Separate the cover (48) and the gear casing (49)

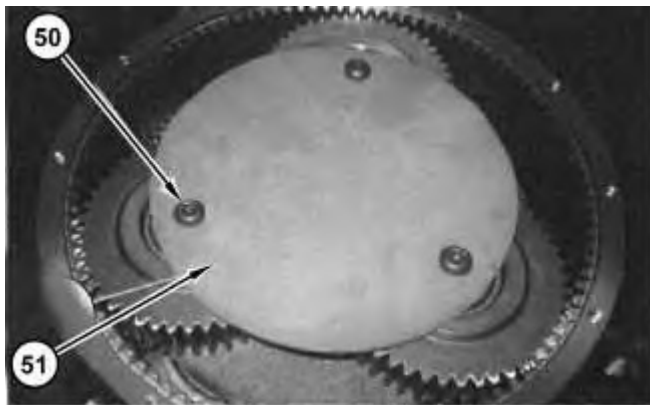


Illustration 28

g02996738

26. Remove bolts (50) and thrust plate (51) .



27. Remove sun gear (52) , three planetary gears (53) , and three bearings (54) .

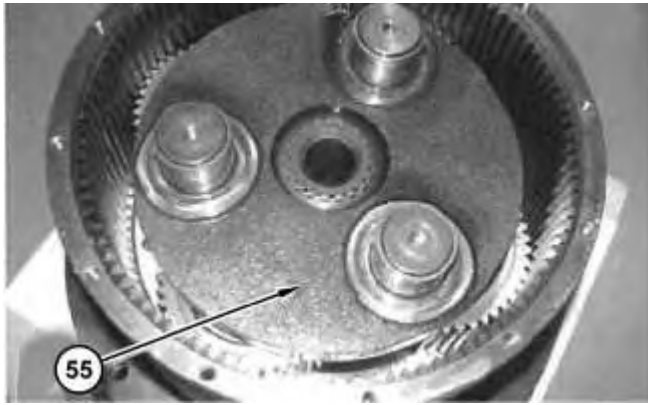


Illustration 30

28. Remove carrier (55) .

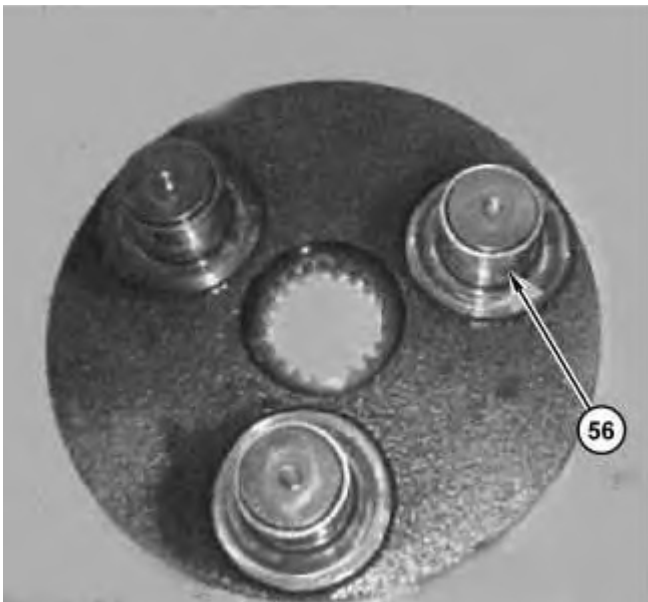


Illustration 31

29. If necessary, remove the three inner wheels (56) from the carrier.
-

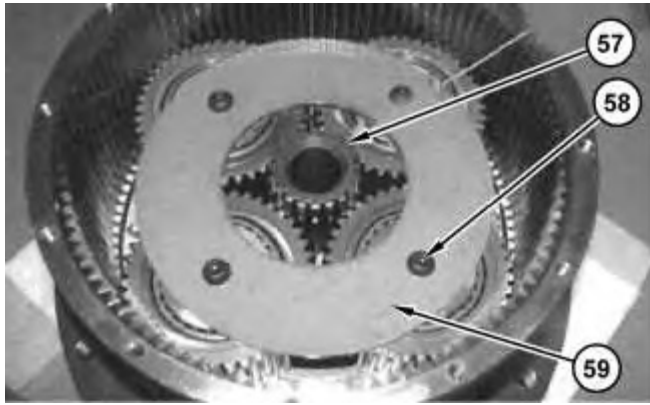


Illustration 32

g02997283

30. Remove sun gear (57) . Remove bolts (58) and thrust plate (59) .

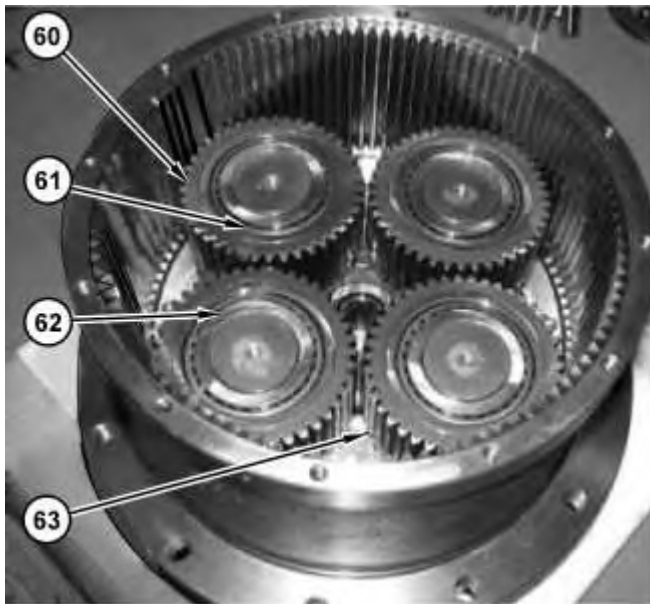


Illustration 33

g02997287

31. Remove four planetary gears (60) , four bearings (61) , four bushings (62) and four plates (63) .

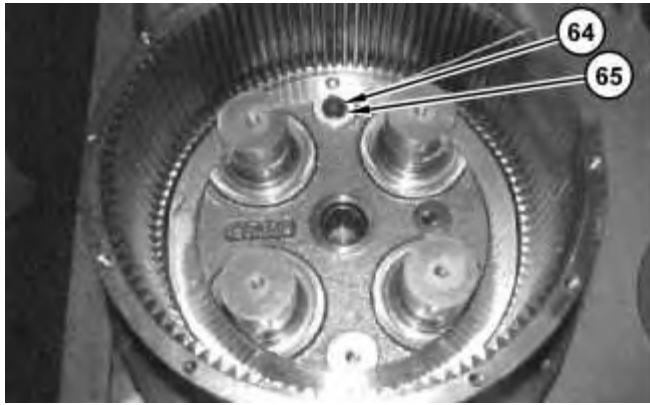


Illustration 34

g02997291

32. Remove bolt (64) and washer (65) .

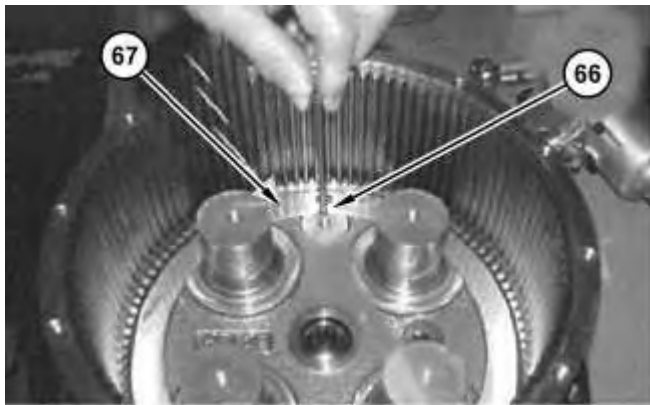


Illustration 35

g02997294

33. Use a magnet to remove the pin (66)

Note: If pin is difficult to remove with magnet, follow the procedure listed.

- a. Cover the screw hole with a piece of adhesive tape or a magnetic plate.
- b. Drill a 3 mm (0.125 inch) hole in the pin (66) .
- c. Thread a small screw into the hole drilled in the pin. Use necessary force to remove the pin by grabbing onto the screw and pulling upwards.

34. Using tooling (A) , remove the ring nut (67) from the body casing.

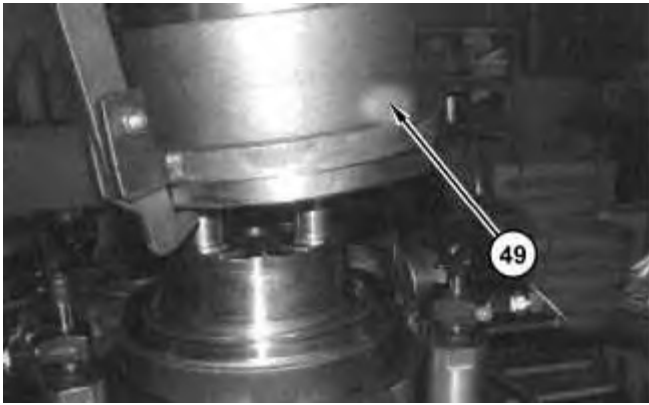


Illustration 36

g02997296

35. Use a suitable lifting device in order to remove the gear casing (50) from the body casing.



Illustration 37

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36. Remove angular bearing (68) from the gear casing.

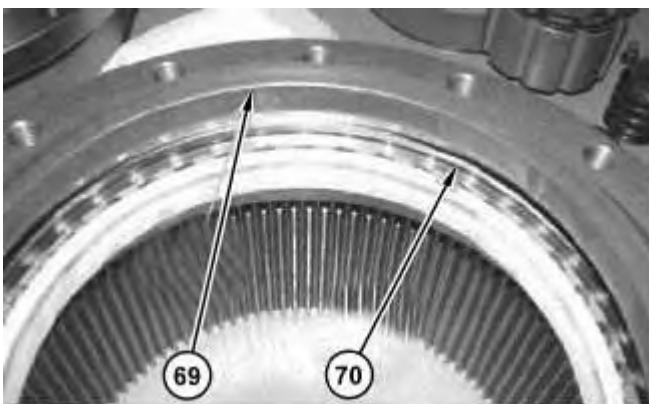


Illustration 38

g02998858

37. Position gear casing upside down. Remove floating seal (69) and angular bearing (70) from the gear casing.



Illustration 39

g02998859

38. Remove floating seal (73) from the body casing (74). Tap the body casing with a plastic hammer to remove shaft (71) and bearing (72) from the body casing (74).

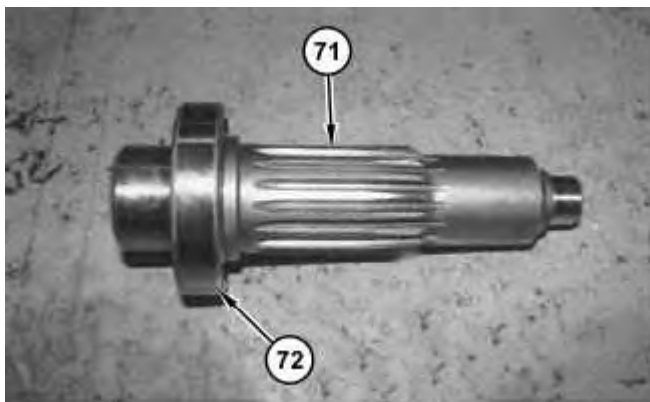


Illustration 40

g02998862

39. If necessary, remove the bearing (72) from the shaft (71).



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Model: 307C MINI HYD EXCAVATOR BCM

Configuration: 307C & 307C SB Excavators BCM00001-UP (MACHINE) POWERED BY 4M40 Engine

Disassembly and Assembly 307C Excavator Machine Systems

Media Number -REN4029-02

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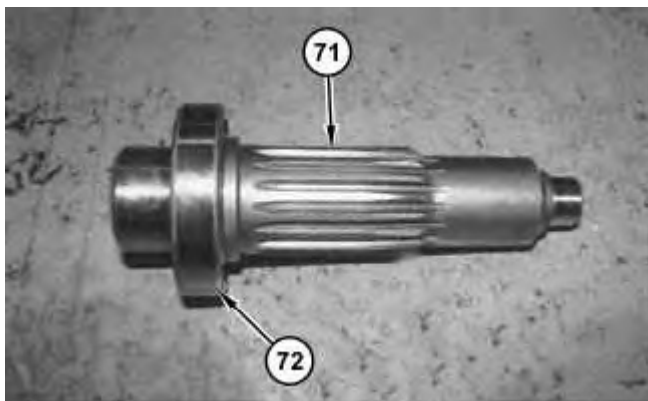
Final Drive and Travel Motor - Assemble

SMCS - 4050-016; 4351-016

Assembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	-	Loctite 242	-
B	-	Loctite High Flex Film	-
C	FT3209	Retainer Nut Wrench As.	1
D	FT3208	Retainer Nut Wrench	1
E	9S-7353	Torque Wrench	1
F	6V-2055	Grease	1



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