



Service Repair Manual

Models

312C and 312C L Excavator

Product: EXCAVATOR

Model: 312C EXCAVATOR BNN

Configuration: 312C & 312C L Excavators BNN00001-UP (MACHINE) POWERED BY 3054T Engine

Disassembly and Assembly 312C Excavator Machine Systems

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i03040582

Final Drive and Travel Motor - Disassemble

SMCS - 4050-015; 4351-015

S/N - BNN1-UP

Disassembly Procedure

Table 1

| Required Tools | | | |
|----------------|-------------|---------------------------|-----|
| Tool | Part Number | Part Description | Qty |
| A | 138-7573 | Link Bracket | 3 |
| B | 1P-2420 | Transmission Repair Stand | 1 |
| C | - | Bolt (M6) | 2 |
| D | 1P-0074 | Slide Hammer Puller Gp | 1 |
| | 4C-5666 | Threaded Adapter | 1 |
| | 123-6702 | Backlash Gauge Gp | 1 |
| E | 1P-0510 | Driver Gp | 1 |
| F | 8H-0663 | Bearing Puller Gp | 1 |
| G | 1P-1863 | Retaining Ring Pliers | 1 |
| H | 9U-7346 | Spanner Wrench As | 1 |

Start By:

- A. Remove the final drive and the travel motor. Refer to the Disassembly and Assembly, "Final Drive and 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.



Personal injury can result from hydraulic oil pressure and hot oil.

Hydraulic oil pressure can remain in the hydraulic system after the engine has been stopped. Serious injury can be caused if this pressure is not released before any service is done on the hydraulic system.

Make sure all of the work tools have been lowered to the ground, and the oil is cool before removing any components or lines. Remove the oil filler cap only when the engine is stopped, and the filler cap is cool enough to touch with your bare hand.

1. Thoroughly clean the outside of the travel motor and the final drive prior to disassembly.
 2. Remove the sprocket from the final drive and the travel motor. The weight of the sprocket is approximately 39 kg (86 lb).
 3. Mark the alignment of the travel motor and the final drive for reassembly purposes. The parts must be reinstalled in the original locations.
 4. Steps 5 through 11 are for the removal of the travel counterbalance valve.
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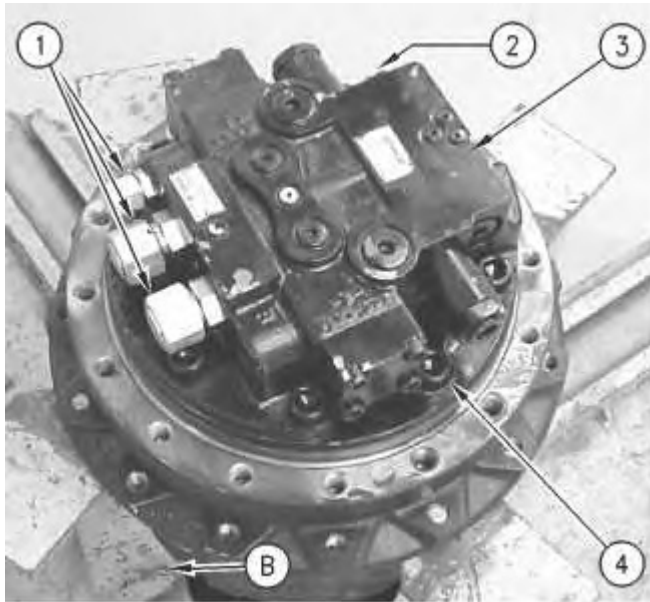


Illustration 1

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5. Use Tooling (A) and a suitable lifting device to position the final drive and the travel motor onto Tooling (B) . The combined weight of the final drive and travel motor is approximately 160 kg (353 lb).
6. Drain the oil from the final drive into a suitable container for storage or for disposal. Refer to Operation and Maintenance Manual, "Capacities (Refill)" for the capacity of the final drive.
7. Remove fittings (1) . Remove plug (2) from travel brake valve (3) .
8. Remove bolts (4) that secure travel brake valve (3) to the final drive.

 **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. Use two persons to remove travel brake valve (3) from the final drive. The weight of travel brake valve (3) is approximately 27 kg (60 lb).
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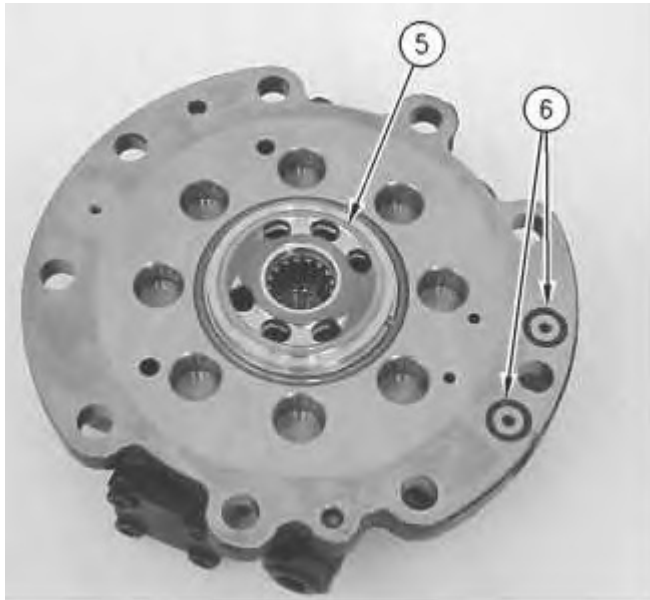


Illustration 2

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10. Remove valve plate (5) and O-ring seal (2) .

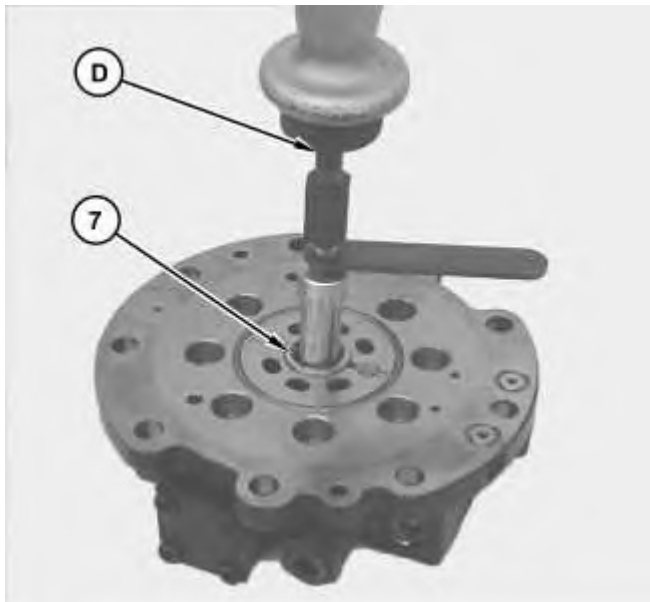


Illustration 3

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11. Use Tooling (D) to remove bearing (7) .

Disassembly of the Travel Counterbalance Valve



Illustration 4

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! 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.

1. Position the counterbalance valve, as shown. Remove plug (8) and adapter (9) .



Illustration 5

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(8) Plug

(9) Adapter

2. Remove spring (10) and spool (11) .

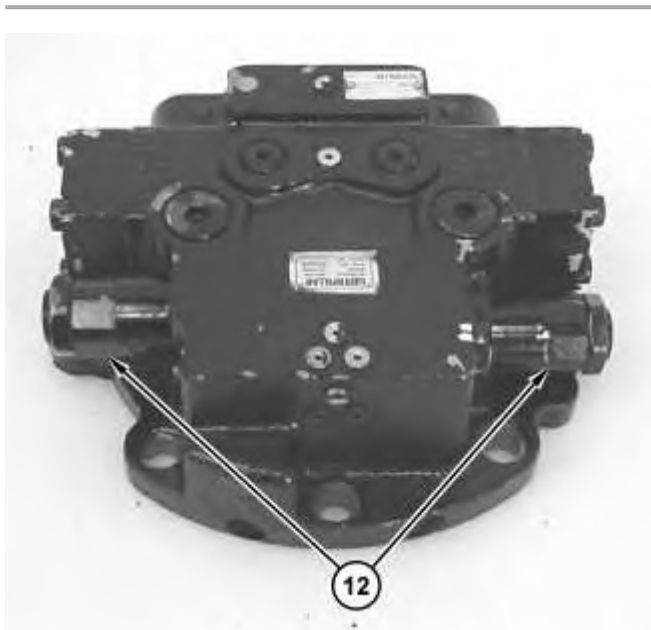


Illustration 6

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3. Remove relief valve assemblies (12) .

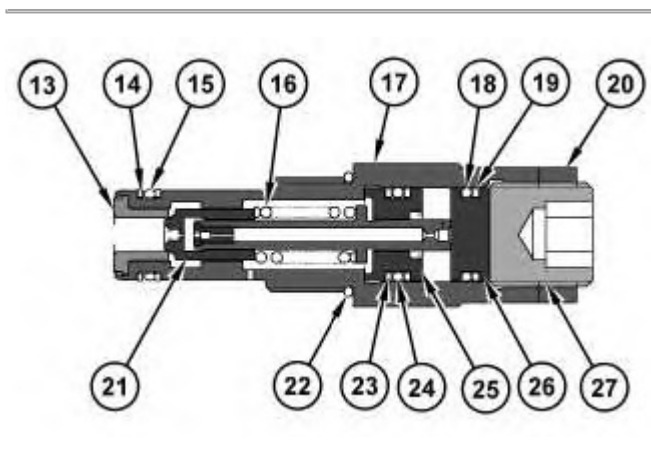


Illustration 7

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 **WARNING**

Sudden release of spring force can cause injury.

To prevent the possibility of injury, follow the procedure to relieve the spring pressure.

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