



# Service Repair Manual

## **Models**

# 312D Excavator

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Product: EXCAVATOR

Model: 312D EXCAVATOR DLP

Configuration: 312D Excavator DLP00001-UP (MACHINE) POWERED BY C4.2 Engine

## Disassembly and Assembly 312D and 313D Excavators Machine Systems

Media Number -KENR6402-05

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# Final Drive and Travel Motor - Disassemble

SMCS - 4050-015; 4351-015

## 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	8T-6699	Bolts	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 Disassembly and Assembly Manual , "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, "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.**

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**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.**

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1. Thoroughly clean the outside of the final drive and travel motor prior to disassembly.
  2. Remove the sprocket from the final drive and the travel motor. The weight of the sprocket is approximately 39 kg (85 lb).
  3. Mark the alignment of the final drive and travel motor for reassembly purposes. The parts must be reinstalled in the original locations.
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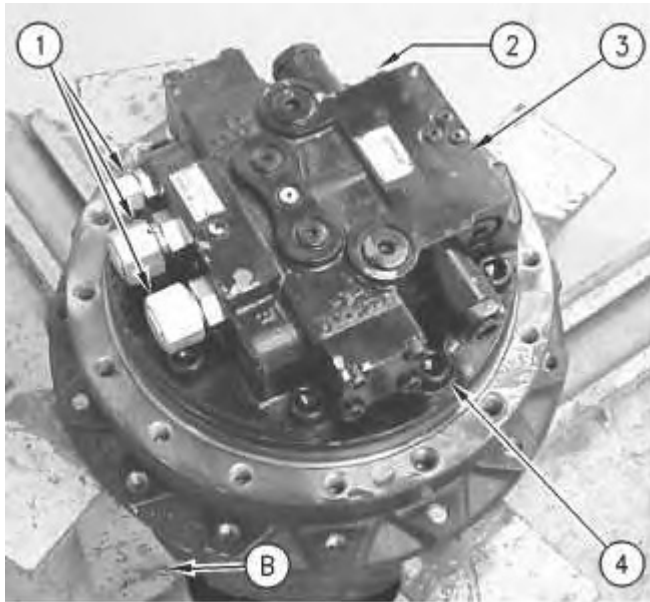
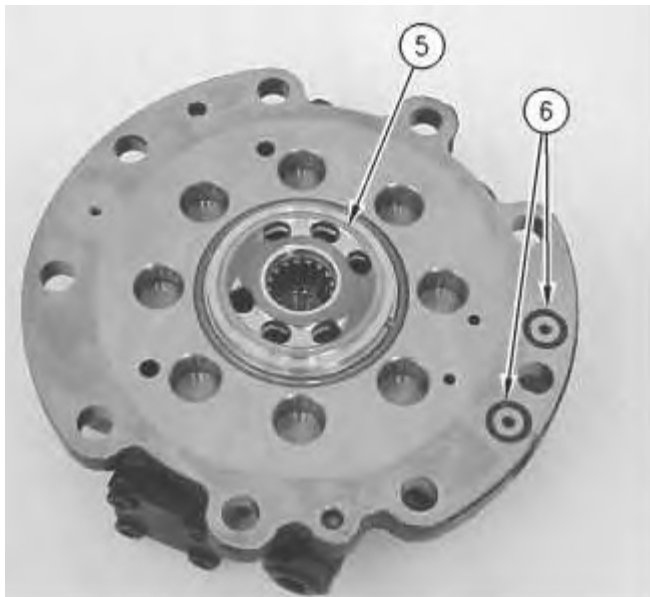


Illustration 1

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4. 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 170 kg (375 lb).
5. 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.
6. Remove fittings (1). Remove fittings (2) from traction control valve (3).
7. Remove nine bolts (4) that secure traction control valve (3) to the final drive.
8. Use two persons to remove traction control valve (3) from the final drive. The weight of travel brake valve (3) is approximately 27 kg (60 lb).



9. Remove valve plate (5) and O-ring seal (6).

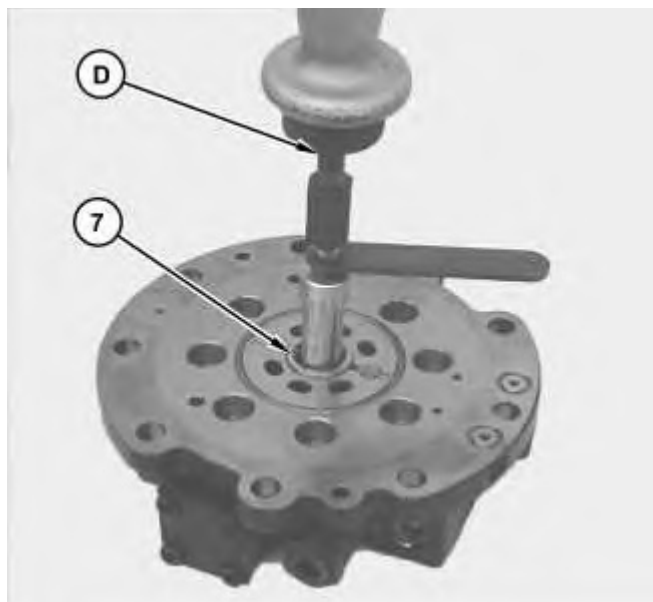


Illustration 3

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

### Disassembly of the Counterbalance Valve



Illustration 4

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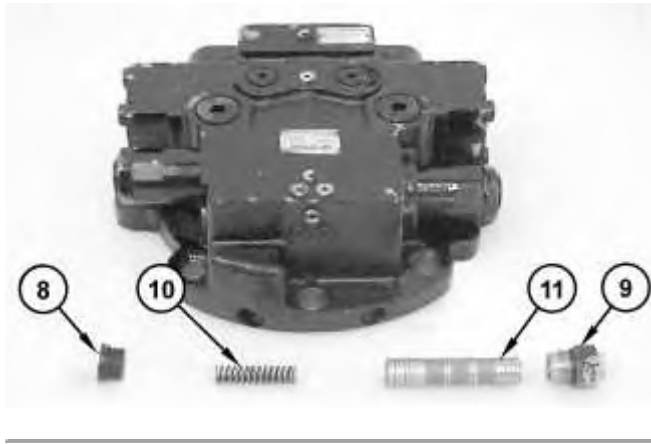


Illustration 5

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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.**

1. Position the counterbalance valve, as shown. Remove plug (8) and adapter (9).
2. Remove spring (10) and spool (11).



Illustration 6

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3. Remove relief valve assemblies (12).

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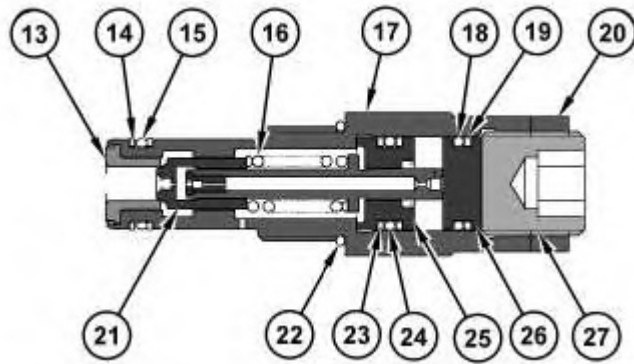


Illustration 7

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**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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4. Remove seat (13). Seat (13) is pressed onto valve (17). Use new parts if seat (13) or valve (17) is damaged. Do not disassemble these components. Make sure that you reuse the other component.
  5. Remove backup ring (14) and O-ring seal (15).
  6. Remove O-ring seal (22).
  7. Remove nut (20).
  8. Remove screw (27).
  9. Remove stopper (26). Remove backup ring (19) and O-ring seal (18) from stopper (19).
  10. Remove valve (21), piston (25), and spring (16) from the housing.
  11. Remove backup ring (23) and O-ring seal (24) from piston (25).
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