



Service Repair Manual

Models

312D and 312D L Excavator

Product: EXCAVATOR

Model: 312D L EXCAVATOR KES

Configuration: 312D & 312D L Excavators KES00001-UP (MACHINE) POWERED BY C4.2 Engine

Disassembly and Assembly C4.2 Engine for Caterpillar Built Machines

Media Number -KENR8105-04

Publication Date -01/06/2013

Date Updated -12/06/2013

i02743771

Flywheel - Remove

SMCS - 1156-011

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7575	Link Bracket	1
B		Forcing bolts M16 - 2 by 120 mm	2

Start By:

- a. Remove the crankshaft position sensor. Refer to Disassembly and Assembly, "Crankshaft Position Sensor - Remove and Install".
- b. Remove the muffler. Refer to Disassembly and Assembly, "Muffler - Remove and Install".

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

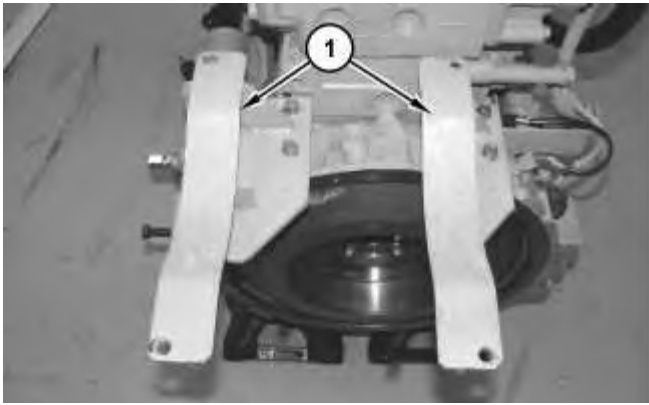


Illustration 1

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1. Remove muffer brackets (1).

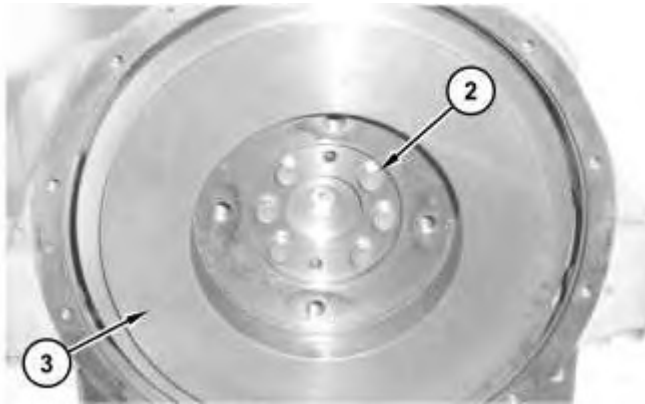


Illustration 2

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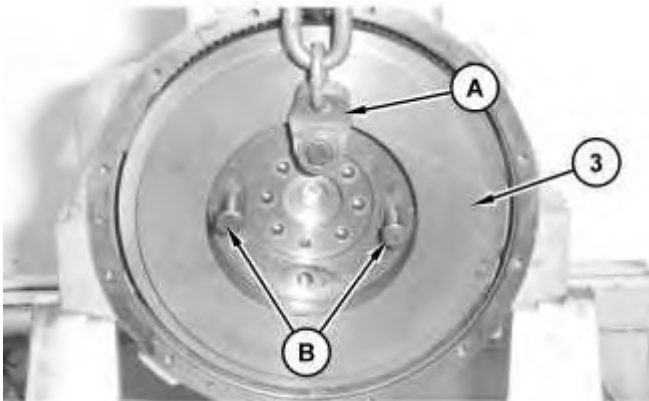


Illustration 3

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2. Remove bolts (2).
3. Install Tooling (A) and a suitable lifting device onto flywheel (3).
4. Use Tooling (B) in order to remove flywheel (3) out of the housing. The weight of flywheel (3) is approximately 50 kg (110 lb).

5. Perform the following procedure in order to remove the flywheel ring gear.

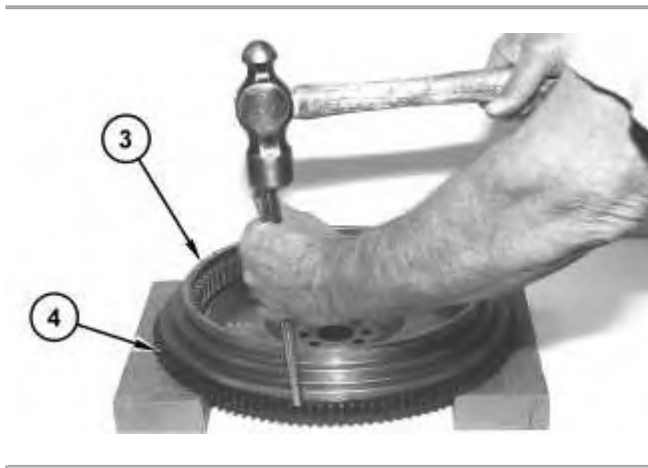


Illustration 4

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Typical Example

- a. Place flywheel (3) and ring gear (4) on suitable cribbing.

Note: Mark the orientation of ring gear (4) on flywheel (3) for assembly purposes.



Always wear protective gloves when handling parts that have been heated.

- b. Raise the temperature of ring gear (4) uniformly.
- c. Remove the ring gear (4) by tapping ring gear (4) all the way around flywheel (3).
- d. Reposition flywheel (3) in order to remove ring gear (4).

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i02744399

Flywheel - Install

SMCS - 1156-012

Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7575	Link Bracket	1

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.



WARNING

Always wear protective gloves when handling parts that have been heated.

1. Perform the following procedure, if the ring gear was removed from the flywheel:
 - a. Raise the temperature of the ring gear 149 °C (300 °F).

- b. Use a suitable press in order to install the ring gear onto the flywheel.

Note: Prior to the installation of the flywheel, refer to Specifications, "Flywheel" for information on checking the flywheel assembly for flatness.

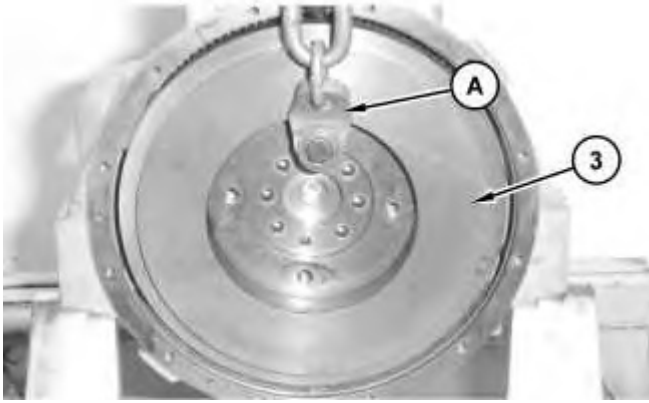


Illustration 1

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2. Install Tooling (A) and a suitable lifting device onto flywheel (3).
3. Install flywheel (3). The weight of flywheel (3) is approximately 50 kg (110 lb).

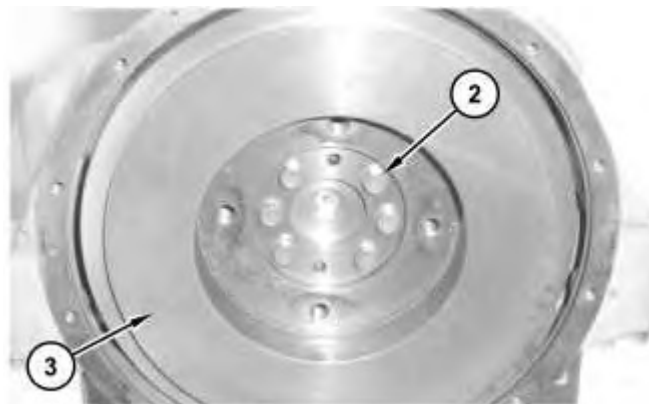


Illustration 2

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4. Install bolts (2) in order to secure flywheel (3) onto the crankshaft. Tighten bolts (2) to a torque of 83 ± 5 N·m (61 ± 4 lb ft).
 5. Remove Tooling (A) from flywheel (3).
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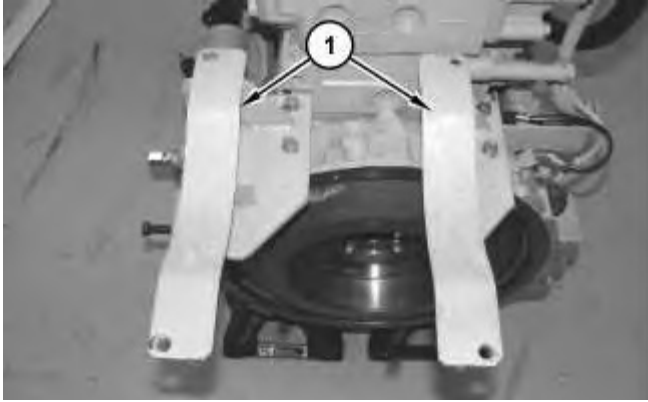


Illustration 3

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6. Install muffler brackets (1).
7. Check the flywheel runout. Refer to Testing and Adjusting, "Flywheel Housing - Inspect" for more information on flywheel runout.

End By:

- a. Install the muffler. Refer to Disassembly and Assembly, "Muffler - Remove and Install".
- b. Install the crankshaft position sensor. Refer to Disassembly and Assembly, "Crankshaft Position Sensor - Remove and Install".

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