

Product: WHEEL TRACTOR

Model: 637E WHEEL TRACTOR 1JB

Configuration: 637E TRACTOR / POWER SHIFT / 1JB00001-UP (MACHINE) POWERED BY 3408 ENGINE

## Disassembly and Assembly 3408E and 3412E Engines for Caterpillar Built Machines

Media Number -SEN1013-11

Publication Date -01/07/2015

Date Updated -22/08/2016

i03335022

### Gear Group (Rear) - Install

SMCS - 1206-012; 1212-012

### Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
B	FT-1342	Guide Bolt	2
C	1P-0524 <sup>(1)</sup>	Drive Plate	1
D	1P-0513 <sup>(1)</sup>	Drive Plate	1

<sup>(1)</sup> Part of the **1P-0520** Driver Group

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#### NOTICE

**Keep all parts clean from contaminants.**

**Contaminants may cause rapid wear and shortened component life.**

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**Note:** There are many possible configurations of the rear gear group and flywheel housing. The following procedure illustrates a typical example.

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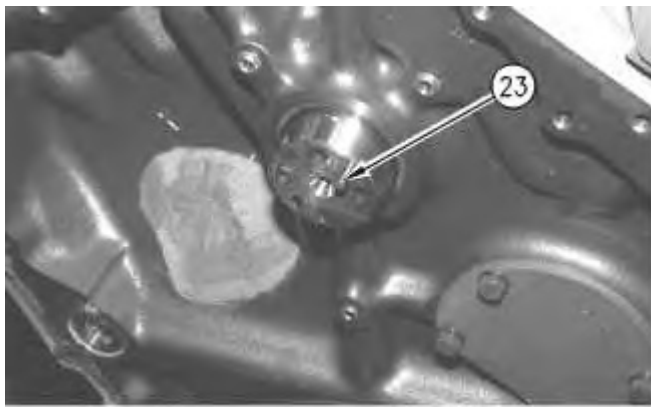


Illustration 1

g00587668

Typical example

1. Install dowel (23) in the camshaft if the dowel was removed.

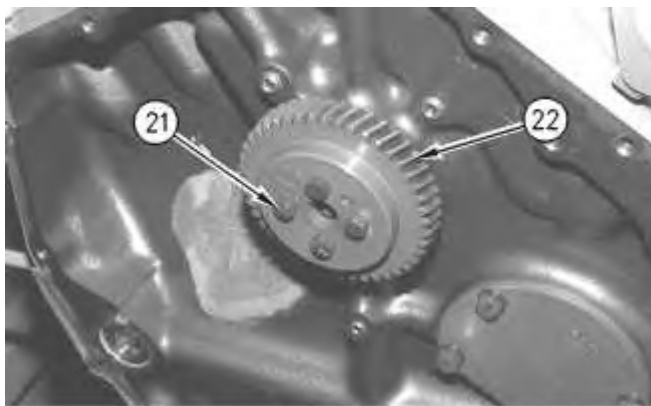


Illustration 2

g00587666

Typical example

2. Install camshaft gear (22) in position on the camshaft. Install four bolts (21).

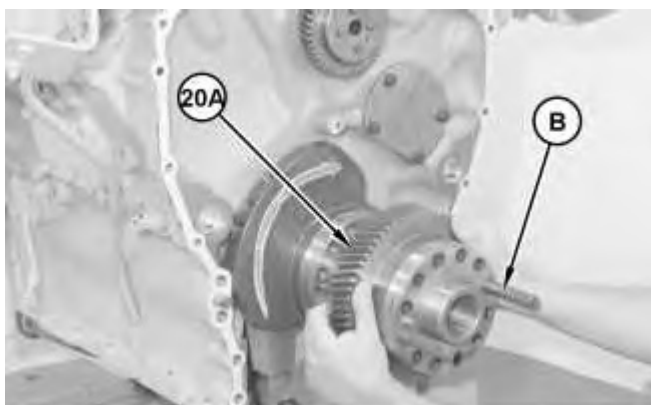


Illustration 3

g01712733

3. Install the O-ring seal on gear (20A).

4. Lightly lubricate the seal on the end of the crankshaft with clean engine oil.
5. Install Tooling (B) in the crankshaft. Install gear (20A).
6. Use the following procedure for assembly of balancer gear (12).

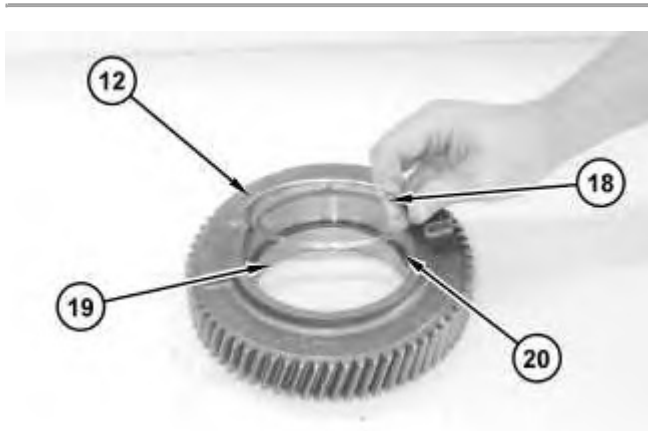


Illustration 4

g01717018

- a. Install ring (20), bearing cup (19), and spacer (18) in balancer gear (12).

**Note:** Spacer (18) must be installed on the deepest side of gear (12) and against ring (20).

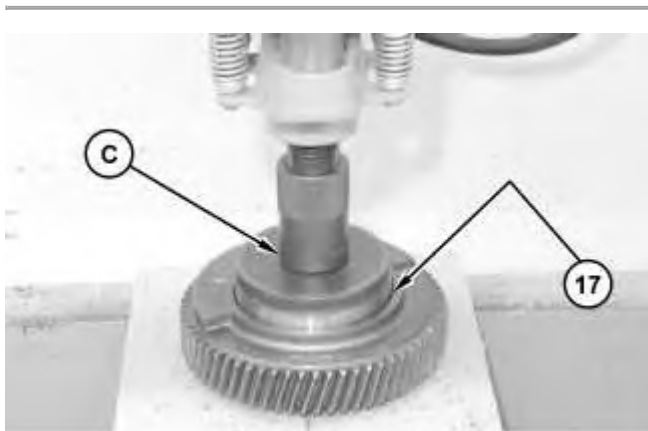


Illustration 5

g01712754

- b. Use a press and Tooling (C) in order to install bearing cup (17). Install bearing cup (17) on the side of the gear that is stamped with the timing mark. Bearing cup (17) should be in contact with the spacer.
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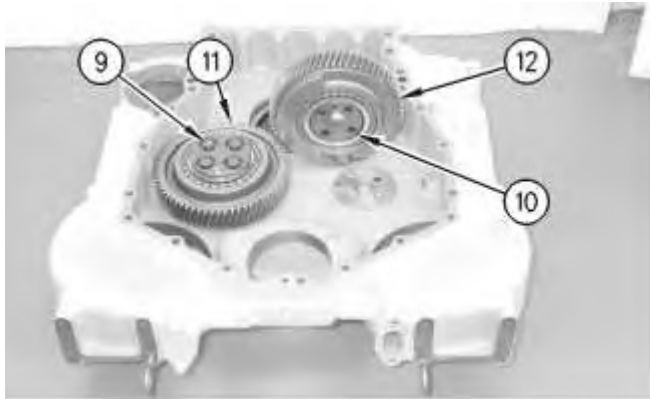
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Illustration 6

g00587608

Typical example

- c. Install bearing (16), spacer (15), bearing (14), and shaft (13) in gear (12).
7. Use the procedure in Step 6 in order to assemble idler gear (11).



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Illustration 7

g00587895

Typical example

8. Place idler gear (11) and balancer gear (12) in position on the flywheel housing. Make sure that the oil holes in shafts (10) are in alignment with the holes that are in the flywheel housing.
- Note:** Install balancer gear (12) with the timing mark toward the flywheel housing.
9. Install bolts (9).
  10. Use the following procedure in order to assemble adapter assemblies (1).
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Illustration 8

g00586910

Typical example

- a. If the bearing race was removed, install race (8). Install race (8) in adapter assembly (1) until the race makes contact with the counterbore.

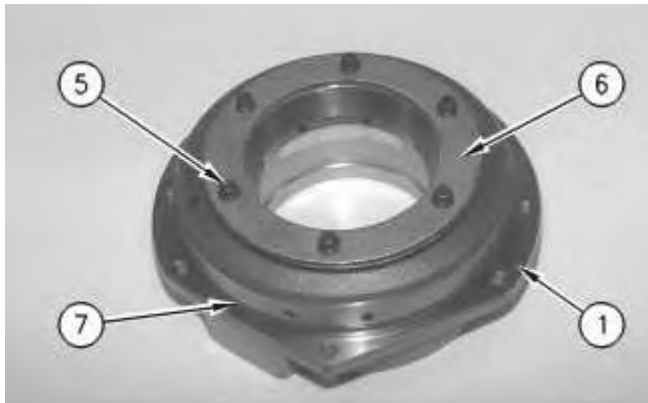


Illustration 9

g00586907

Typical example

- b. Install ring (6), bolts (5), and O-ring seal (7) on adapter assembly (1).



Illustration 10

g01712644

- c. Heat bearing (3) to 135 °C (275 °F) for approximately 30 minutes.

- d. Install bearing (3) on gear (2) until the bearing makes contact with the counterbore.



Illustration 11  
Typical example

g00588013

- e. Install gear (2) and the bearing in adapter assembly (1).

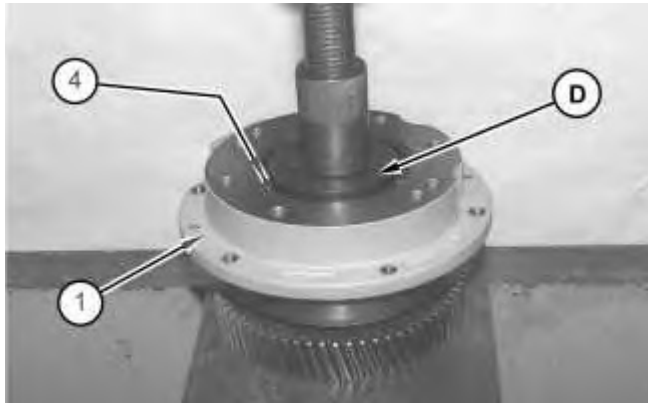


Illustration 12

g01712873

- f. Use a press and Tooling (D) in order to install bearing (4) in adapter assembly (1). Install the bearing until the bearing makes contact with the counterbore.

**End By:**

- a. Install the flywheel housing. Refer to Disassembly and Assembly, "Flywheel Housing - Remove and Install".
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## Disassembly and Assembly 3408E and 3412E Engines for Caterpillar Built Machines

Media Number -SEN1013-11

Publication Date -01/07/2015

Date Updated -22/08/2016

i04406249

### Flywheel - Remove

SMCS - 1156-011

### Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	FT-1341	Bracket Assembly	1
	1B-3623	Bolt	2
B	FT-1342	Guide Bolt	2
C	138-7575	Link Bracket	1

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#### NOTICE

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