

Product: TRACK-TYPE TRACTOR

Model: D6K LGP TRACK-TYPE TRACTOR DHA

Configuration: D6K LGP, XL TRACK-TYPE TRACTOR DHA00001-UP (MACHINE) POWERED BY C6.6 Engine

## Disassembly and Assembly C6.6 Engines for Caterpillar Built Machines

Media Number -KENR6081-15

Publication Date -01/03/2014

Date Updated -04/03/2014

i06192499

# Gear Group (Front) - Remove and Install

SMCS - 1206-010

## Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A <sup>(1)</sup>	9U-6198	Crankshaft Turning Tool	1
A <sup>(2)</sup>	9U-7336	Housing	1
	5P-7305	Engine Turning Tool	1
B	230-6284	Timing Pin (Camshaft)	1
C	136-4632	Timing Pin (Crankshaft)	1
	268-1966	Adapter	1

<sup>(1)</sup> The Crankshaft Turning Tool is used on the front pulley.

<sup>(2)</sup> This Tool is used in the aperture for the electric starting motor.

### Start By:

- A. Remove the front cover. Refer to Disassembly and Assembly, "Front Cover - Remove and Install".
- B. Remove the valve mechanism cover. Refer to Disassembly and Assembly, "Valve Mechanism Cover - Remove and Install".

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### NOTICE

**Keep all parts clean from contaminants.**

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

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## **NOTICE**

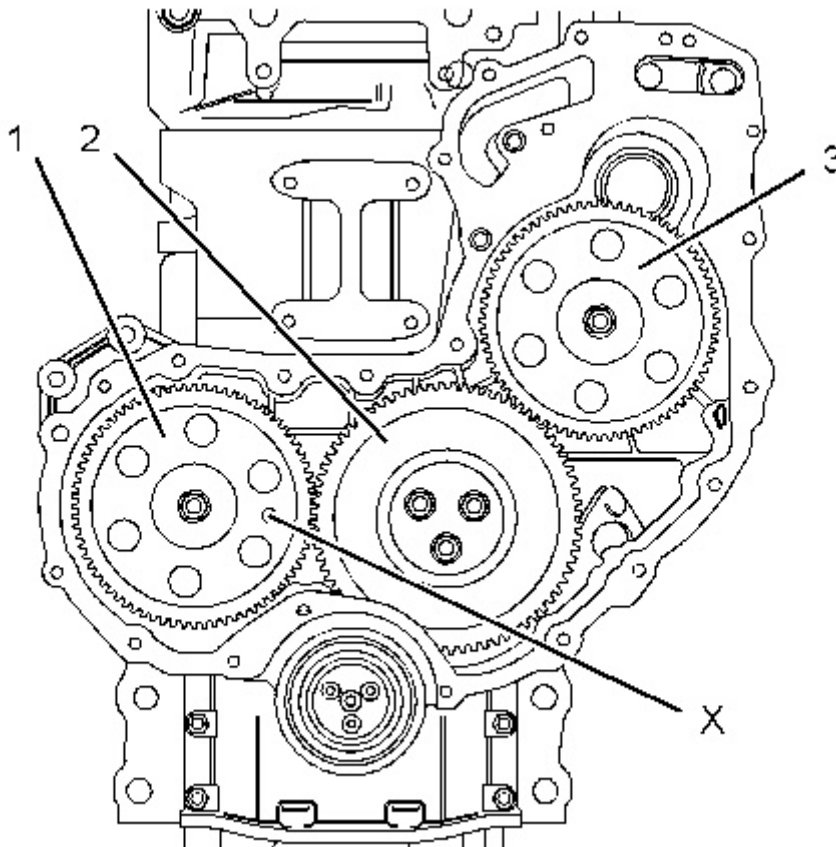
**Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.**

**Dispose of all fluids according to local regulations and mandates.**

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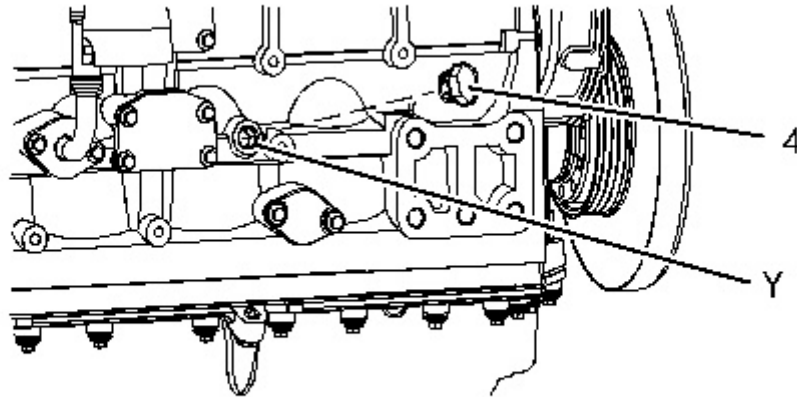
**Note:** Either Tooling (A) can be used. Use the Tooling that is most suitable. Care must be taken in order to ensure that the fuel injection pump timing is not lost during the removal of the front gear group. Carefully follow the procedure in order to remove the gear group.

1. Use Tooling (A) in order to rotate the crankshaft so that number one piston is at top dead center on the compression stroke. Refer to System Operation, Testing and Adjusting, "Finding Top Center Position for No.1 Piston".



Typical example

2. Install Tooling (B) through hole (X) in camshaft gear (1) into the front housing. Use Tooling (B) in order to lock the camshaft in the correct position. Refer to System Operation, Testing and Adjusting, "Finding Top Center Position for No.1 Piston".



3. Remove plug (4) from the cylinder block. Install Tooling (C) into hole (Y) in the cylinder block. Use Tooling (C) in order to lock the crankshaft in the correct position. Refer to System Operation, Testing and Adjusting, "Finding Top Center Position for No.1 Piston".

**Note:** Do not use excessive force to install Tooling (C) . Do not use Tooling (C) to hold the crankshaft during repairs.

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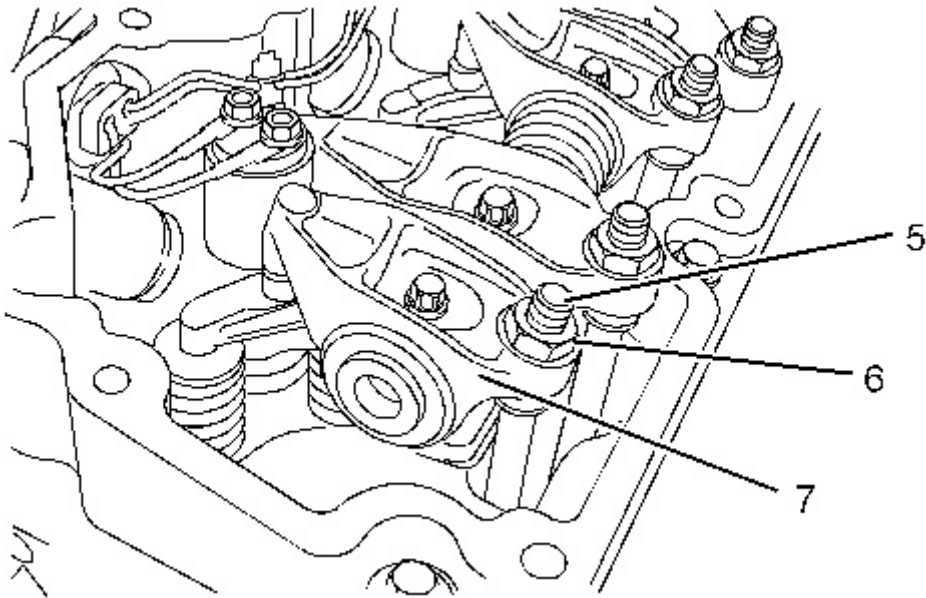


Illustration 3

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4. Loosen nuts (6) on all rocker arms (7) . Unscrew adjusters (5) on all rocker arms (7) until all valves are fully closed.

**Note:** Failure to ensure that ALL adjusters are fully unscrewed can result in contact between the valves and pistons.

5. Apply sufficient pressure to fuel injection pump gear (3) in a counterclockwise direction in order to remove the backlash. Lock the fuel injection pump in this position. Refer to Disassembly and Assembly, "Fuel Pump Gear - Remove" for the correct procedure.

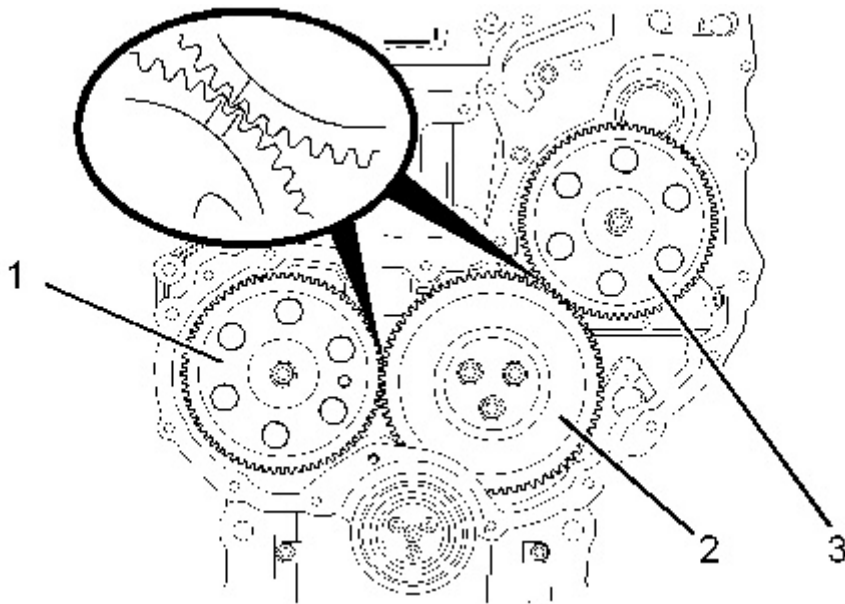


Illustration 4

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Typical example

6. Mark gears (1) , (2) and (3) in order to show alignment. Refer to Illustration 4.

**Note:** Identification will ensure that the gears can be installed in the original alignment.

7. Remove fuel pump gear (3) . Refer to Disassembly and Assembly, "Fuel Pump Gear - Remove and Install" for the correct procedure.

8. Remove camshaft gear (1) . Refer to Disassembly and Assembly, "Camshaft Gear - Remove and Install".

9. Remove idler gear (2) . Refer to Disassembly and Assembly, "Idler Gear - Remove and Install".

## Installation Procedure

Table 2

Required Tools			
Tool	Part Number	Part Description	Qty
B	230-6284	Timing Pin (Camshaft)	1
C	136-4632	Timing Pin (Crankshaft)	1
	268-1966	Adapter	1

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### NOTICE

**Keep all parts clean from contaminants.**

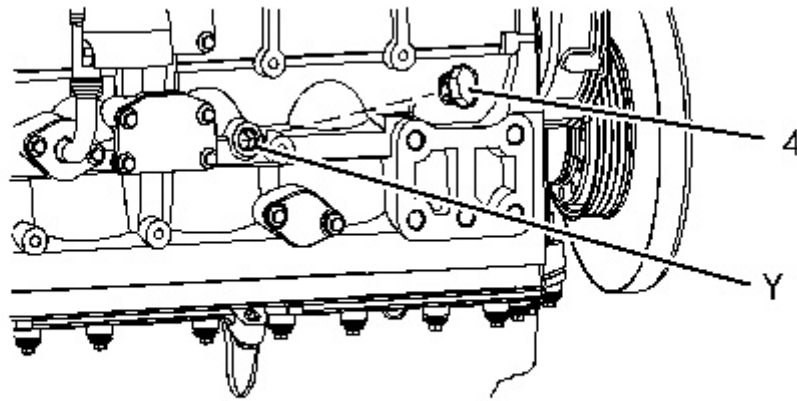
**Contaminants may cause rapid wear and shortened component life.**

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**Note:** The fuel injection pump must remain locked until the procedure instructs you to unlock the fuel injection pump.

1. Ensure that number one piston is at top dead center on the compression stroke. Refer to System Operation, Testing and Adjusting, "Finding Top Center for No. 1 Piston".

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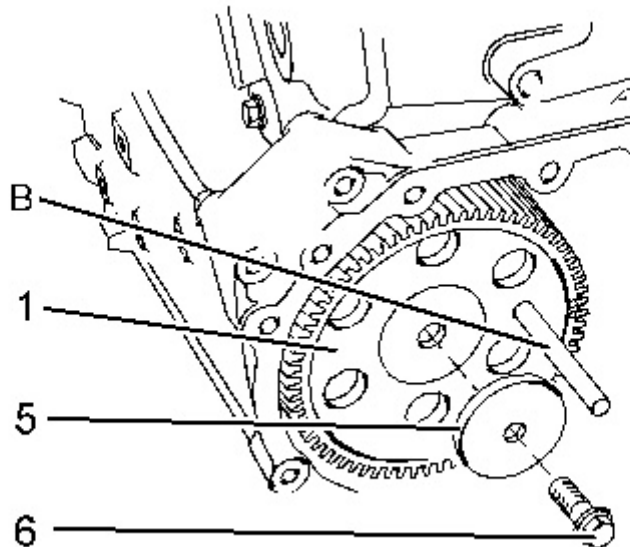
Illustration 5

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2. If necessary, install Tooling (C) into hole (Y) in the cylinder block. Use Tooling (C) in order to lock the crankshaft in the correct position. Refer to System Operation, Testing and Adjusting, "Finding Top Center Position for No.1 Piston".

**Note:** Do not use excessive force to install Tooling (C) . Do not use Tooling (C) to hold the crankshaft during repairs.

3. Ensure that all of the components of the front gear group are clean and free from wear of damage. If necessary, replace any components that are worn or damaged.



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Illustration 6

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