# **CATERPILLAR®**

## Service Repair Manual

## **Models**

312C and 312C L Excavator

Model: 312C EXCAVATOR FDS

Configuration: 312C & 312C L Excavators FDS00301-UP (MACHINE) POWERED BY 3064 Engine

### Disassembly and Assembly

#### 3064 and 3066 Engines for Caterpillar Built Machines

Media Number -SENR5553-10

Publication Date -01/05/2012

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i01615420

## Gear Group (Front) - Install - Idler Gear Only

**SMCS - 1206-012** 

#### **Installation Procedure**

Table 1

Required Tools				
Tool	Part Number	Part Description	Qty	
A	1P-0510	Driver Group	1	

#### **NOTICE**

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

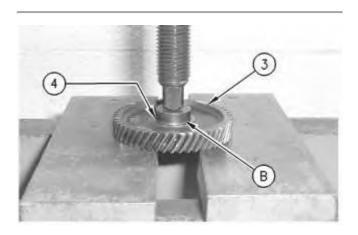


Illustration 1 g00611570

1. Use Tool (A) to install a new bushing (4) (not shown), if the bushing was removed.

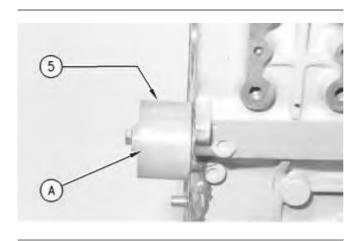


Illustration 2 g00611572

2. Install idler shaft (5) onto the cylinder block.

**Note:** When the idler shaft is installed, ensure that the oil hole of the shaft is up. If necessary, cool the idler shaft to 0 °C (32 °F) before installation. The temperature of the idler shaft is lowered in order to ease the installation of the idler shaft.

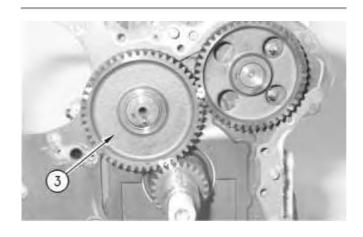


Illustration 3 g00611569

**Note:** Ensure that the marks on the timing gears are in alignment. Align the fuel injection drive gear with the "33" mark with the "3" mark on idler gear. Make an alignment of the "2" mark on the camshaft gear with the "22" mark on the idler gear. Align the "1" mark on the crankshaft gear with the "11" mark on the idler gear. The No. 1 cylinder is at the top center position when these marks are in alignment.

3. Install idler gear (3) onto the idler shaft.

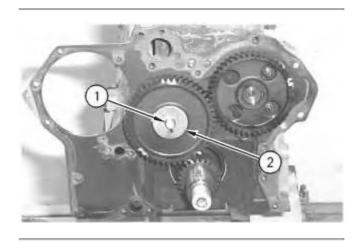


Illustration 4

g00611568

- 4. Install thrust plate (2) onto the idler shaft.
- 5. Install the washer and idler gear bolt (1) onto thrust plate (2). Tighten idler gear bolt (1) to a torque of  $34 \pm 5 \text{ N} \cdot \text{m}$  (25 ± 4 lb ft).

Note: For more information, refer to Specifications, "Gear Group (Front)".

**Note:** See the following list for the installation of the other gears in the front gear group.

- In order to install the camshaft gear, refer to Disassembly and Assembly, "Camshaft Install".
- In order to install the fuel injection pump gear, refer to Disassembly and Assembly, "Fuel Injection Pump Install".
- In order to install the gear from the engine oil pump, refer to Disassembly and Assembly, "Engine Oil Pump Install".
- In order to install the crankshaft front gear, refer to Disassembly and Assembly, "Crankshaft Gear Remove and Install".

**End By:** Install the front housing. Refer to Disassembly and Assembly, "Housing (Front) - Install".

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Configuration: 312C & 312C L Excavators FDS00301-UP (MACHINE) POWERED BY 3064 Engine

## **Disassembly and Assembly**3064 and 3066 Engines for Caterpillar Built Machines

Media Number -SENR5553-10

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#### **Housing (Front) - Remove**

SMCS - 1151-011

#### **Removal Procedure**

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1P-0510	Driver Group	1

#### **Start By:**

- A. Remove the alternator. Refer to Disassembly and Assembly, "Alternator Remove and Install".
- B. Remove the water pump. Refer to Disassembly and Assembly, "Water Pump Remove".
- C. Remove the crankshaft pulley. Refer to Disassembly and Assembly, "Crankshaft Pulley Remove and Install".
- D. Remove the fuel injection pump. Refer to Disassembly and Assembly, "Fuel Injection Pump Remove".

# NOTICE Keep all parts clean from contaminants. Contaminants may cause rapid wear and shortened component life.

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