

Product: EXCAVATOR

Model: 325C EXCAVATOR JLC

Configuration: 325C & 325C L Excavators JLC00001-UP (MACHINE) POWERED BY 3126 Engine

## Disassembly and Assembly 3126B Engines for Caterpillar Built Machines

Media Number -SEN9581-06

Publication Date -01/08/2018

Date Updated -17/08/2018

i01931442

# Crankshaft Wear Sleeve (Rear) - Remove - If Equipped

SMCS - 1161-011-ZV

## Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	4C-4869	Distorter Ring	1
B	5P-7312	Seal Distorter	1

### Start By:

- Remove the crankshaft rear seal. Refer to Disassembly and Assembly, "Crankshaft Rear Seal - Remove".

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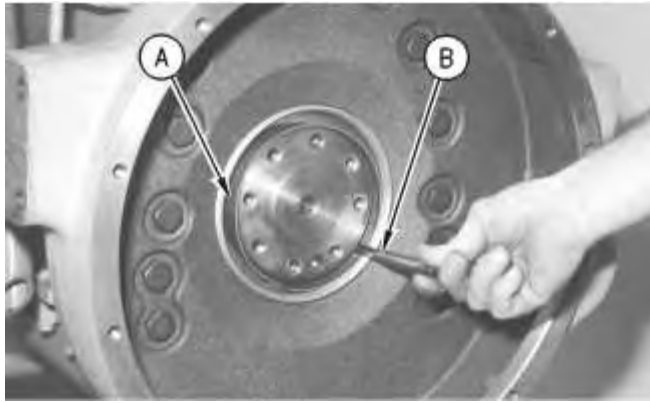
### NOTICE

**Keep all parts clean from contaminants.**

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

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Illustration 1

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**Note:** Wear sleeves are not installed at the factory. The wear sleeve is included with the replacement rear seal.

1. Install Tooling (A) in the bore of the crankshaft rear sleeve.
  2. Install Tooling (B) between Tooling (A) and the crankshaft wear sleeve. Turn Tooling (B) until the edge of Tooling (B) makes a crease in the crankshaft wear sleeve. Make a crease in the crankshaft wear sleeve at two other locations around the crankshaft wear sleeve until the crankshaft wear sleeve is loose.
  3. Remove Tooling (B), Tooling (A), and the crankshaft wear sleeve from the end of the crankshaft.
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Media Number -SEN9581-06

Publication Date -01/08/2018

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i01929732

# Crankshaft Wear Sleeve (Rear) - Install

SMCS - 1161-012-ZV

## Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
C <sup>(1)</sup>	132-8772	Seal Locator	1
D <sup>(1)</sup>	1U-7596	Bolt	2
E <sup>(1)</sup>	1U-7597	Sleeve Ring	1
F <sup>(1)</sup>	1U-7594	Seal Installer	1
G <sup>(1)</sup>	9S-8858	Nut	1

<sup>(1)</sup> Part of the 1U-7598 Seal Installer

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### NOTICE

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1. Ensure that the rear of the crankshaft is thoroughly clean and dry prior to the installation of the crankshaft rear seal.
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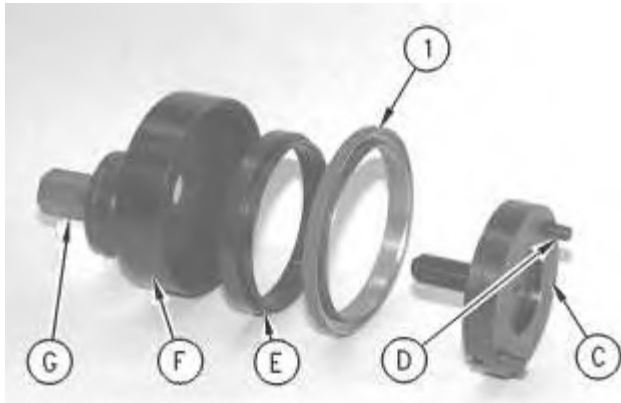


Illustration 1

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2. Fasten Tooling (C) to the rear of the crankshaft with Tooling (D). Hand tighten Tooling (D).
3. Position the crankshaft rear seal and crankshaft rear sleeve (1) on Tooling (C). Position Tooling (E) on Tooling (C).

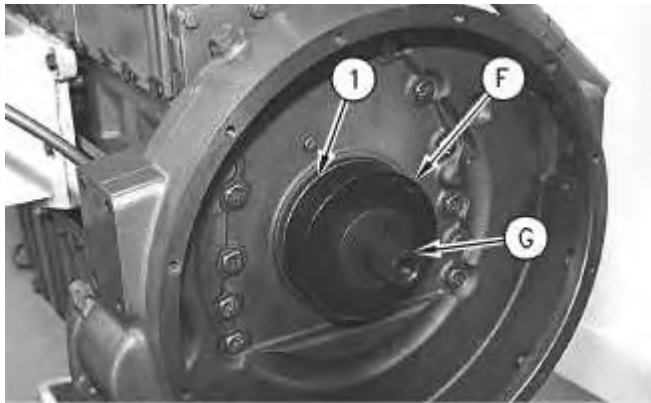


Illustration 2

g01003866

Typical example

4. Position Tooling (F) over Tooling (C) and Tooling (E). Install Tooling (G). Tighten Tooling (G) in order to install the crankshaft rear seal and the crankshaft wear sleeve.
5. Remove Tooling (G), Tooling (F), and Tooling (E). Turn over Tooling (E). Install Tooling (E), Tooling (F), and Tooling (G). Tighten Tooling (G) in order to complete the installation of the crankshaft rear seal and the crankshaft wear sleeve.
6. Remove Tooling (G) and Tooling (F). Check Tooling (E) and Tooling (C). The faces of Tooling (E) and Tooling (C) will be flush if the crankshaft rear seal and the crankshaft wear sleeve are properly installed. Refer to the Specifications module for more information.
7. Remove Tooling (E), Tool (E), and Tooling (C).

**End By:**

- a. Install the flywheel. Refer to Disassembly and Assembly, "Flywheel - Install".

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## Disassembly and Assembly 3126B Engines for Caterpillar Built Machines

Media Number -SEN9581-06

Publication Date -01/08/2018

Date Updated -17/08/2018

i02374834

# Crankshaft - Install

SMCS - 1202-012

## Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	8T-5096	Dial Indicator Group	1

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### NOTICE

**Ensure that the crankshaft main bearing tabs engage with the grooves in the block and the crankshaft main bearing cap.**

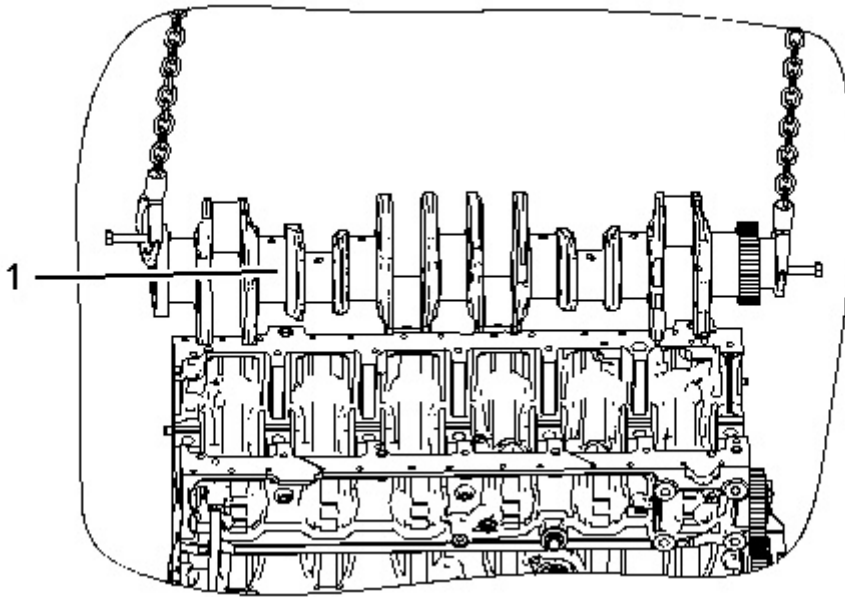
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**Note:** The number six main bearing is the thrust bearing.

1. Clean the bearing surfaces in the cylinder block for the main bearings. Apply clean engine oil on the upper main bearing. Do not put engine oil on the back side of the bearing

surfaces. Install the upper main bearing in the cylinder block. Ensure that the tab on the back side of the bearing engages with the groove in the cylinder block.

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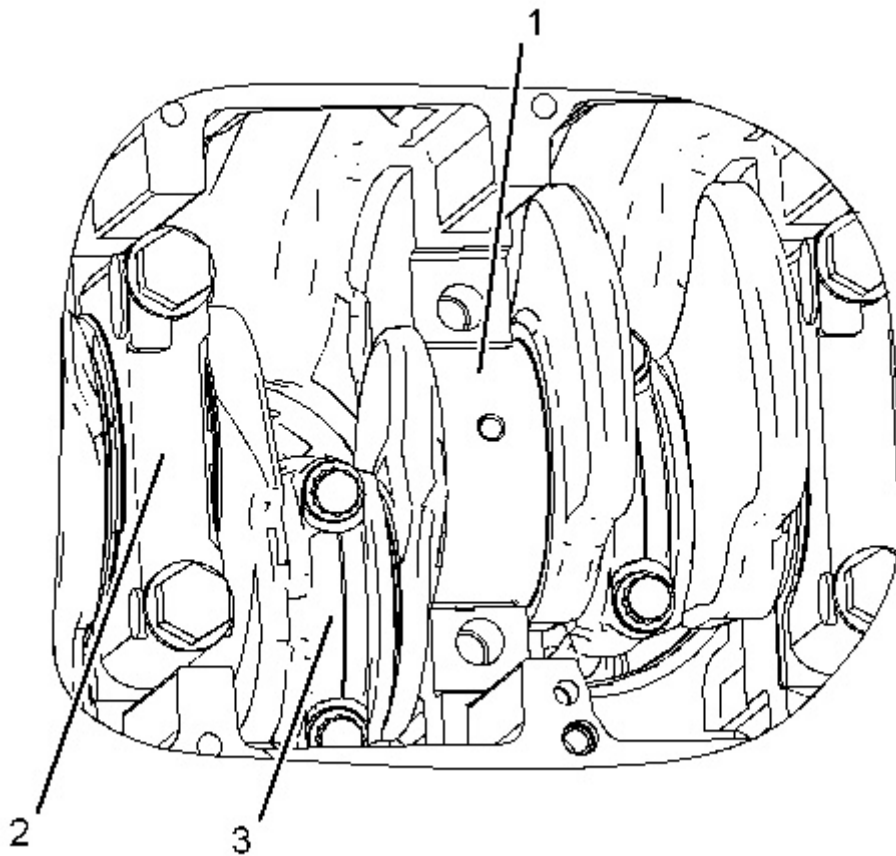


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Illustration 1

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2. Put clean engine oil on the journals of the crankshaft bearing. Attach a suitable lifting device to crankshaft (1). The weight of crankshaft (1) is approximately 60 kg (132 lb). Carefully install the crankshaft in the cylinder block.
  3. Clean the bearing surface of the main bearing caps. Install the lower main bearing in the crankshaft main bearing caps. Ensure that the tab on the back side of the bearing engages with the groove in the main bearing cap. Apply clean engine oil on the lower main bearing. Do not put engine oil on the back side of the bearing surfaces.
  4. Install crankshaft main bearing caps with the part numbers toward the right hand side of the cylinder block. The numbers should start at the front of the engine. Place clean engine oil or Molyube on the bolt threads and the washers.
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Illustration 2

g01028042

5. Install the bolts for main bearing caps (2). Tighten the bolts to a torque of  $54 \pm 7$  N·m ( $40 \pm 5$  lb ft).
6. Turn the bolts for an additional  $90 \pm 5$  degrees ( $1/4$  turn).
7. Install connecting rod caps (3). Refer to Disassembly and Assembly, "Pistons and Connecting Rods - Install".
8. Check the end play of crankshaft (1) with Tooling (A). The end play must be 0.07 to 0.32 mm (0.003 to 0.013 inch).

**End By:**

- a. Install the front housing. Refer to Disassembly and Assembly, "Housing (Front) - Install".
  - b. Install the engine oil pump. Refer to Disassembly and Assembly, "Engine Oil Pump - Install".
  - c. Install the flywheel housing. Refer to Disassembly and Assembly, "Flywheel Housing - Remove and Install".
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## Disassembly and Assembly 3126B Engines for Caterpillar Built Machines

Media Number -SEN9581-06

Publication Date -01/08/2018

Date Updated -17/08/2018

i01984006

# Crankshaft Gear - Remove and Install

SMCS - 1204-010-GE

## Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	8B-7551	Bearing Puller	1
	8B-7549	Puller Leg	2
	3H-0465	Push-Puller Plate	4
	6B-6682	Full Nut	2
	8B-7560	Step Plate	1
	1P-0820	Hydraulic Puller	1
	9U-6600	Hand Hydraulic Pump	1

### Start By:

- a. Remove the crankshaft. Refer to Disassembly and Assembly, "Crankshaft - Remove".

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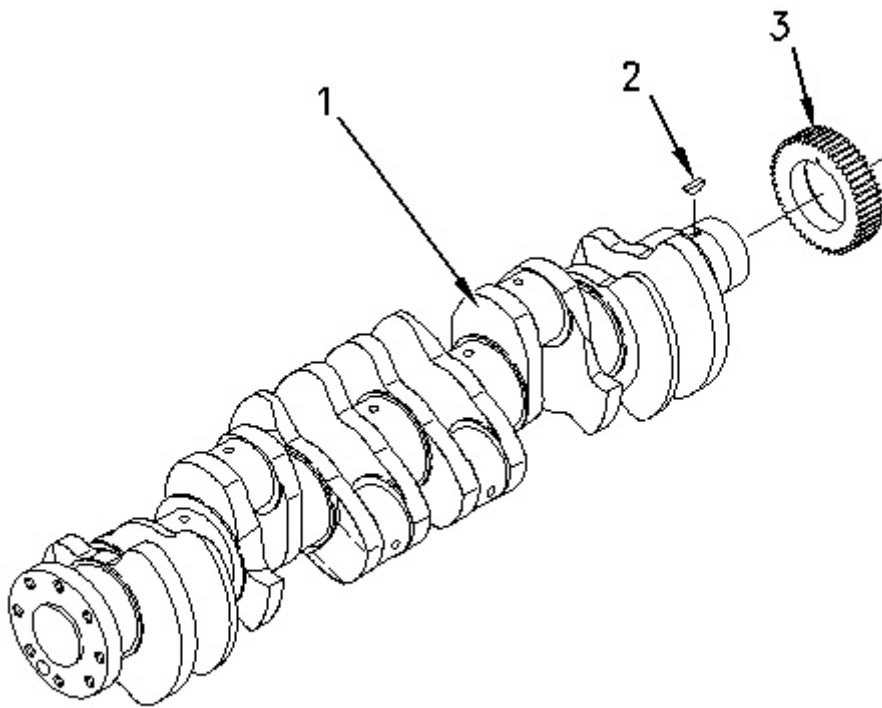
### NOTICE

**Keep all parts clean from contaminants.**

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Illustration 1

g00988783

1. Use Tooling (A) in order to remove crankshaft gear (3) from crankshaft (1).
2. Remove woodruff key (2).

## Installation Procedure

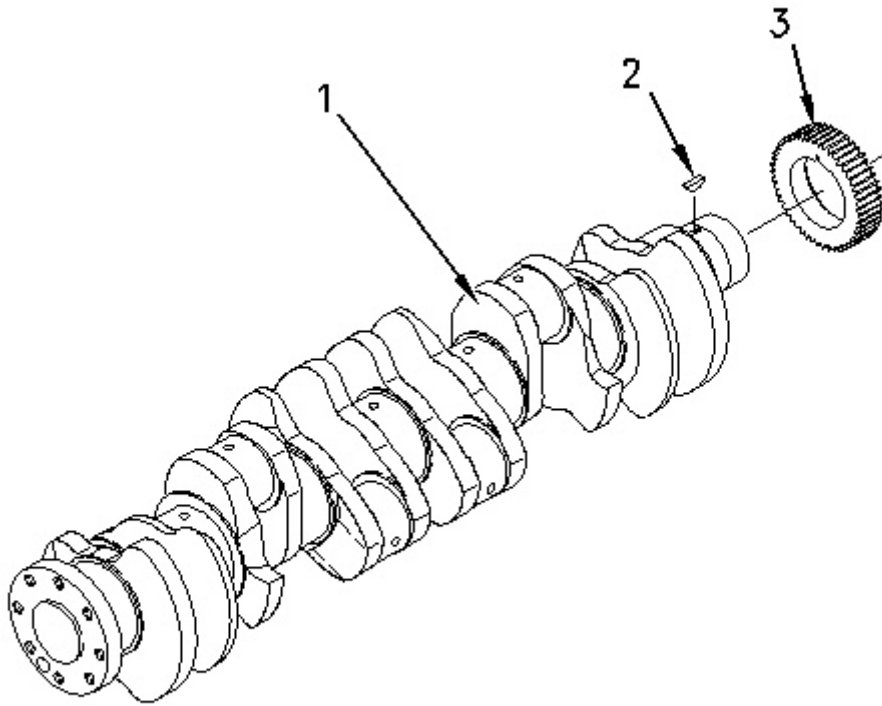
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### NOTICE

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Illustration 2

g00988783

1. Position woodruff key (2) in crankshaft (1).



**WARNING**

**Hot oil and hot components can cause personal injury. Do not allow hot oil or hot components to contact the skin.**

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2. Raise the temperature of crankshaft gear (3). Install crankshaft gear (3) on crankshaft (1).

**End By:**

- a. Install the crankshaft. Refer to Disassembly and Assembly, "Crankshaft - Install".
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