

Product: EXCAVATOR  
Model: 325C EXCAVATOR BKT  
Configuration: ISJ HEX COMMONALITY CHART BKT00001-UP (MACHINE)

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

Media Number -SEN9581-06

Publication Date -01/08/2018

Date Updated -17/08/2018

i01980480

# Flywheel - Remove and Install

SMCS - 1156-010

## Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7573	Link Bracket	2
B	FT2712	Guide Stud	2

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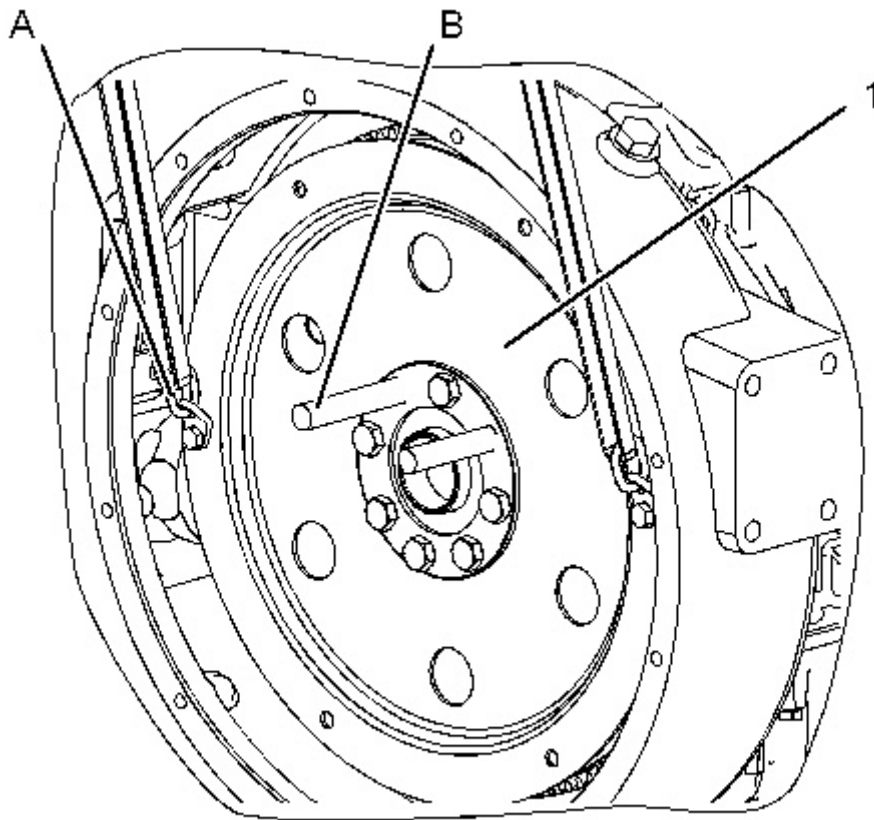


Illustration 1

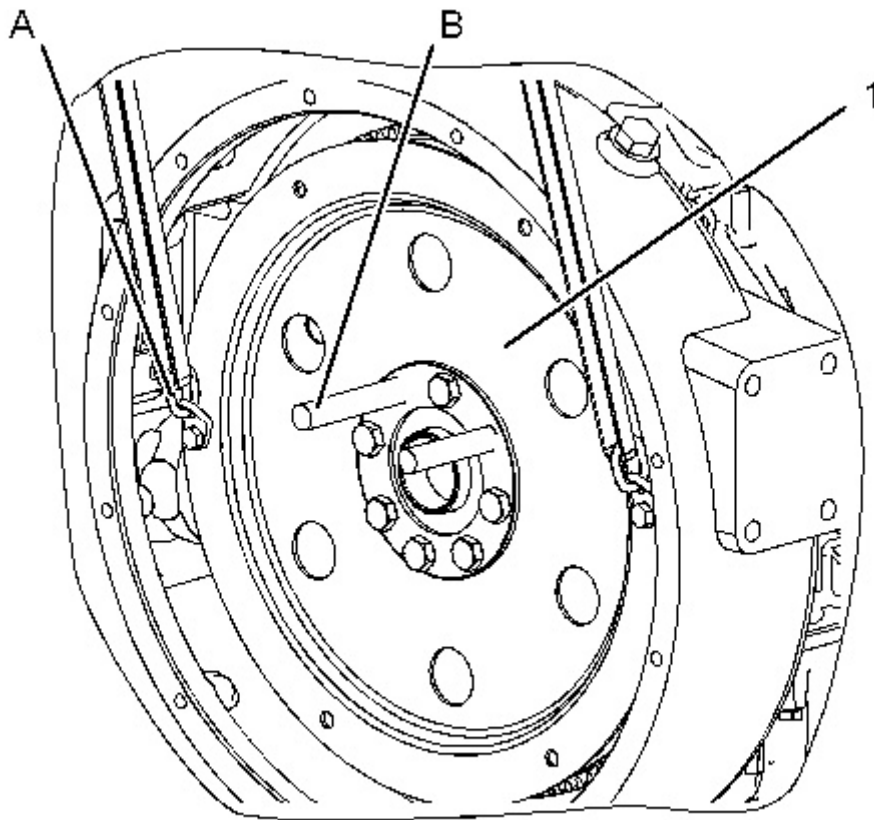
g01026562

1. Install Tooling (A) on the flywheel. Fasten a suitable lifting device to the flywheel. The weight of flywheel (1) is approximately 23 kg (50 lb).
2. Remove two bolts and install Tooling (B). Remove the remaining bolts.
3. Remove flywheel (1).
4. Place the flywheel on a wood block. Use a hammer and a punch in order to remove the flywheel ring gear.

## Installation Procedure

Table 2

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7573	Link Bracket	2
B	FT2712	Guide Stud	2
C	9S-3263	Thread Lock Compound	1



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Illustration 2

g01026562

1. Raise the temperature of the flywheel ring gear. Do not use a torch to heat the flywheel ring gear. Position the flywheel ring gear on the flywheel with the part number toward the crankshaft.
  2. Use a suitable lifting device to position flywheel (1) on Tooling (B). The weight of flywheel (1) is approximately 23 kg (50 lb).
  3. Apply Tooling (C) to the threads of the bolts. Install the bolts. Remove Tooling (B) and install the remaining bolts.
  4. Tighten the bolts evenly to a torque of  $120 \pm 20$  N·m ( $90 \pm 15$  lb ft).
  5. Check the flywheel runout. Refer to Testing and Adjusting, "Flywheel - Inspect" for the correct procedure.
-

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i01980554

# Crankshaft Rear Seal - Remove

SMCS - 1161-011

## Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1U-8145	Drill Bit	1
B	1U-7600	Slide Hammer Puller Gp	1
C	4C-4869	Distorter Ring	1
D	5P-7312	Seal Distorter	1

### Start By:

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

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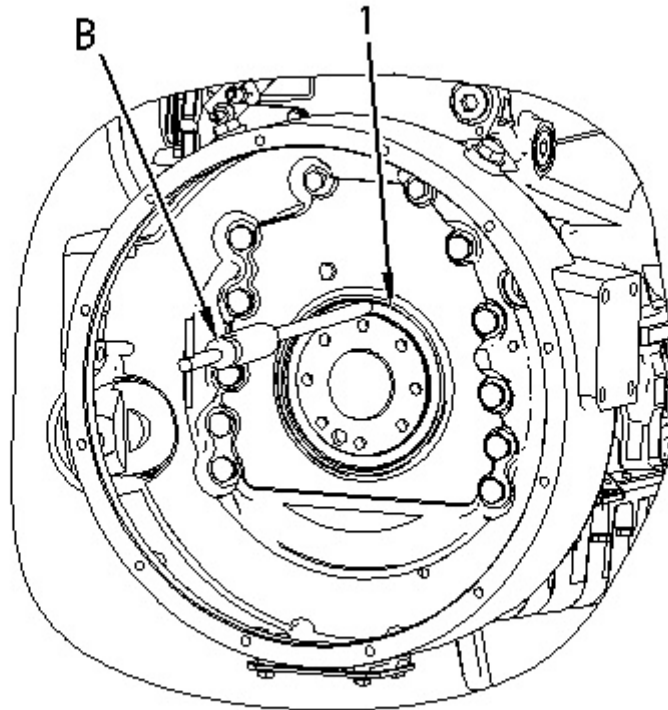
### NOTICE

**Keep all parts clean from contaminants.**

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

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1. Use Tooling (A) to drill three evenly spaced holes in the crankshaft rear seal.
-



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Illustration 1

g00989088

2. Carefully remove crankshaft rear seal (1) by alternating the position of Tooling (B) from hole to hole. This will allow crankshaft rear seal (1) to be removed evenly without damage to the rear flange surface of the crankshaft.

**Note:** New engines from the factory do not have a wear sleeve. Engines with seals that have been replaced will be equipped with a wear sleeve. If the crankshaft of the engine is equipped with a wear sleeve, refer to Disassembly and Assembly, "Crankshaft Wear Sleeve (Rear) - Remove" in order to remove the wear sleeve.

3. Use Tooling (C) and Tooling (D) to remove the wear sleeve (if equipped).
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i01980581

# Crankshaft Rear Seal - Install

SMCS - 1161-012

## Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
E	1U-7598	Seal Installer Gp	1

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### NOTICE

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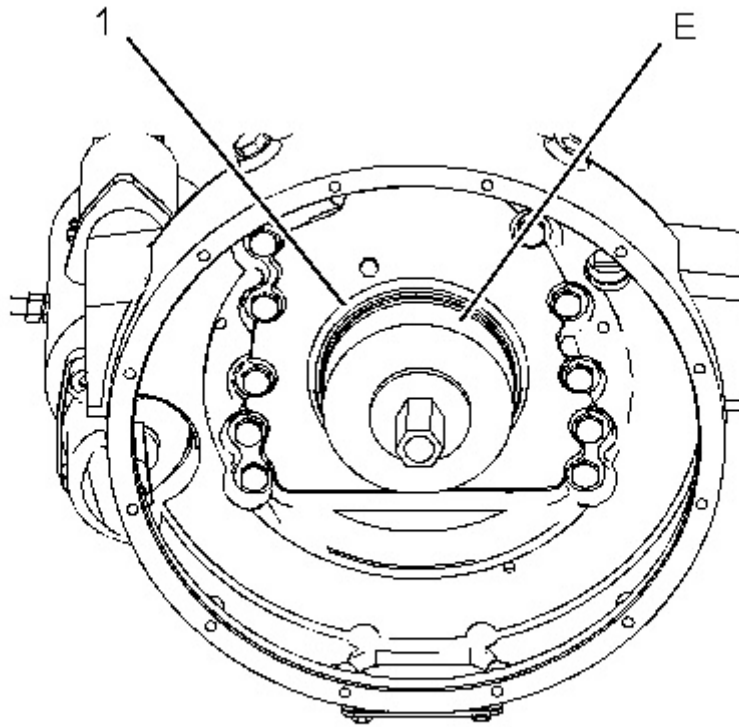
**Contaminants may cause rapid wear and shortened component life.**

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**Note:** Replacement rear seals are supplied with a wear sleeve. This wear sleeve must be installed with the rear seal. New engines from the factory do not have a wear sleeve. Do not install the rear seal if any of the following conditions exist:

- The crankshaft rear seal has been separated from the wear sleeve.
- The rear seal group appears to be damaged.
- The crankshaft rear seal has been lubricated. The seal is designed to be installed dry.

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  
Typical example

g01026625

2. Use Tooling (E) to install crankshaft rear seal (1).

**End By:**

- a. Install the flywheel. Refer to Disassembly and Assembly, "Flywheel - Install".
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i01987820

# **Crankshaft Rear Seal Carrier - Remove and Install**

SMCS - 1161-010-C3

## **Removal Procedure**

### **Start By:**

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

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### **NOTICE**

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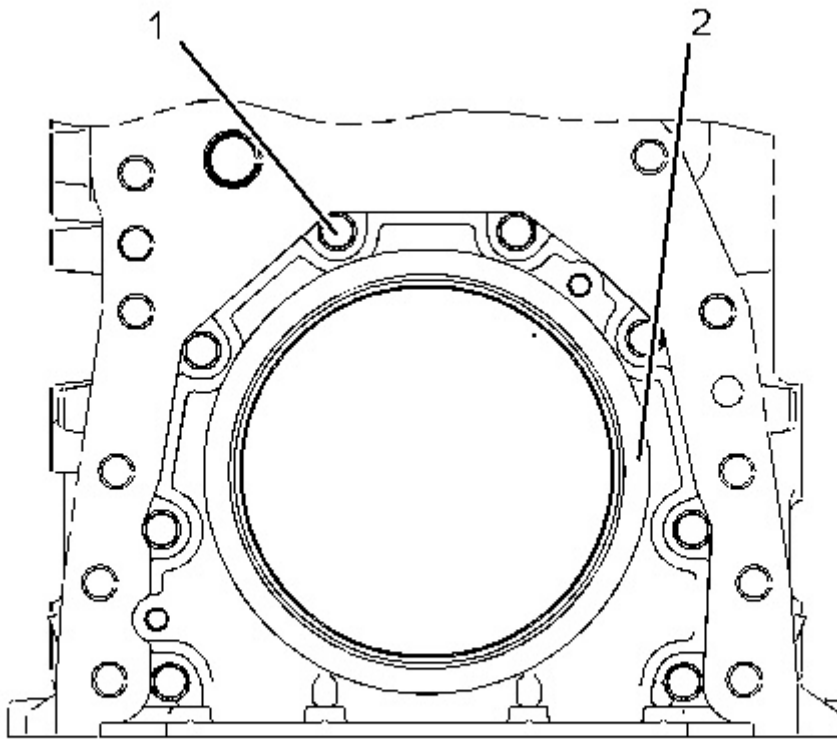


Illustration 1

g01027007

1. Remove bolts (1).
2. Remove rear seal carrier (2).

## Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-8440	Component Cleaner	
B	169-5464	Quick Cure Primer	
C	1U-8846	Gasket Sealant	
D	9S-3263	Thread Lock Compound	

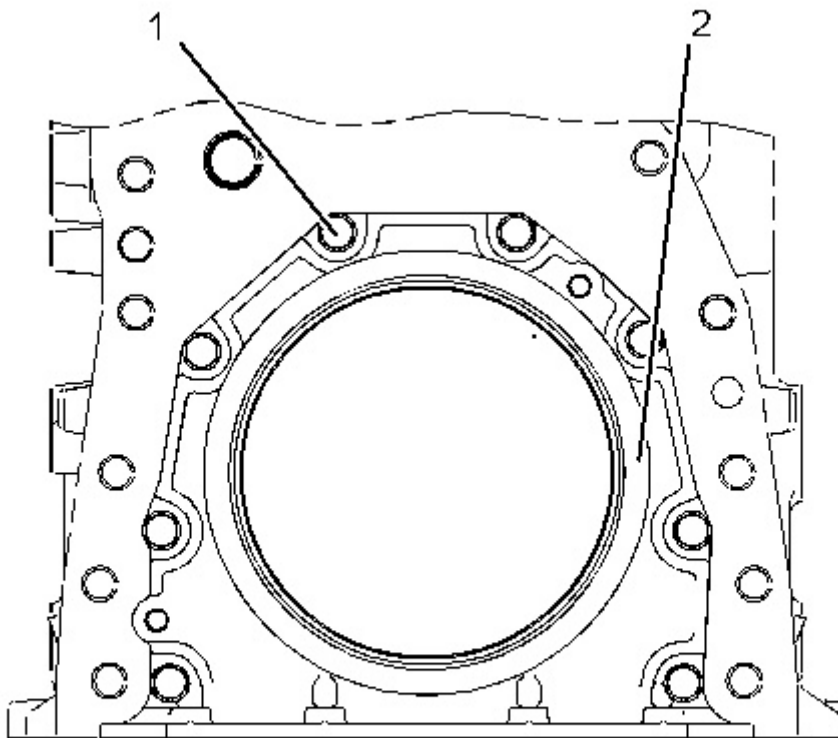
### NOTICE

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Illustration 2

g01027007

1. Clean the joint face of rear seal carrier (2) and the cylinder block with Tooling (A).
2. Apply Tooling (B) to the joint face of rear seal carrier (2). Allow the primer to air dry for three to five minutes.

**Note:** Tooling (C) is used on the joint face of rear seal carrier (2). Do not allow the sealant to get into the oil passage in the mounting face of the cylinder block.

3. Apply Tooling (C) to the joint face of rear seal carrier (2). Spread the sealant uniformly. Rear seal carrier (2) must be installed within ten minutes of application of the sealant.
4. Position rear seal carrier (2) on the dowels in the rear of the cylinder block.
5. Apply Tooling (D) on the threads of bolts (1). Install bolts (1) that hold rear seal carrier (2) to the cylinder block.

**End By:**

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

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Media Number -SEN9581-06

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Date Updated -17/08/2018

i04855211

# Flywheel Housing - Remove and Install

SMCS - 1157-010

## Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7573	Link Bracket	2

### Start By:

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

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### NOTICE

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### NOTICE

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

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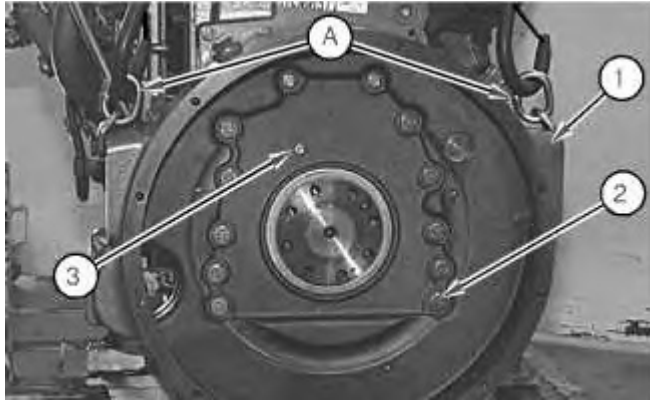


Illustration 1

g01011885

1. Fasten Tooling (A) and a suitable lifting device to flywheel housing (1).
2. Remove bolts (2) and bolt (3) that fastens flywheel housing (1) to the cylinder block.
3. Remove flywheel housing (1). The weight of flywheel housing (1) is approximately 32 kg (70 lb).

## Installation Procedure

Table 2

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7573	Link Bracket	2
B	1U-8846	Gasket Sealant	1

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### NOTICE

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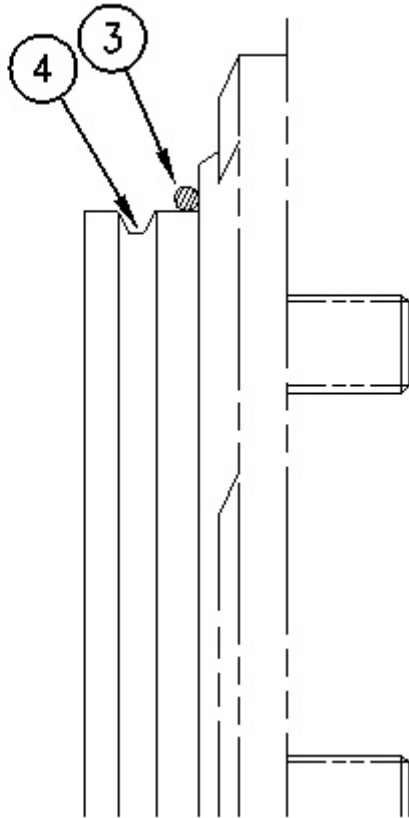


Illustration 2

g00740507

Correct installation of O-ring seal (3). Do not install the O-ring seal in location (4).

**Note:** On wet flywheel housings that have rear seal carriers, ensure that the O-ring seal (3) is installed properly. Improper installation will result in leakage of torque converter oil between the flywheel housing and the cylinder block.

**Note:** Ensure that the mating surface of the flywheel housing and the mounting face of the cylinder block are thoroughly clean.

1. Apply Tooling (B) to the entire mounting face of the flywheel housing prior to installation.

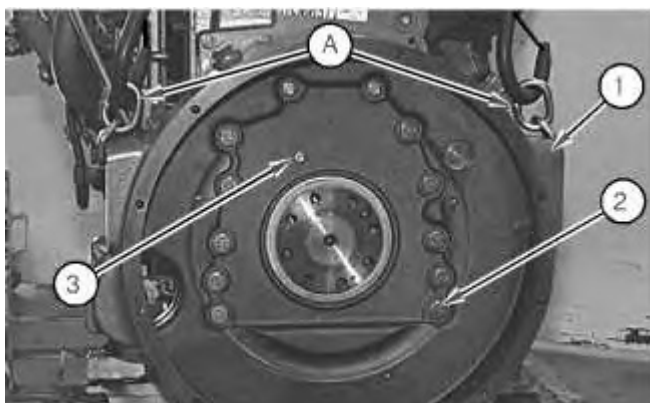


Illustration 3

g01011885

2. Fasten Tooling (A) and a suitable lifting device to flywheel housing (1). Position flywheel housing (1) on the cylinder block. The weight of flywheel housing (1) is approximately 32 kg (70 lb).
3. Install bolts (2) and bolt (3) that fastens flywheel housing (1) to the cylinder block.
4. Remove Tooling (A) and the hoist from flywheel housing (1).
5. Check the flywheel housing runout. Refer to the Systems Operation/Testing and Adjusting, "Flywheel and Flywheel Housing".

**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

i02370081

# Vibration Damper and Pulley - Remove and Install

SMCS - 1205-010

## Removal Procedure

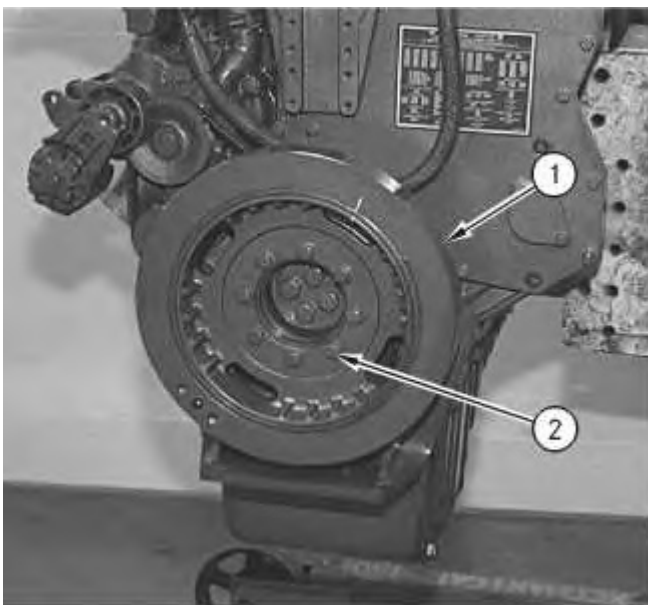


Illustration 1

g00612677

1. Remove bolts (2), crankshaft vibration damper (1), and the spacers from the crankshaft pulley.

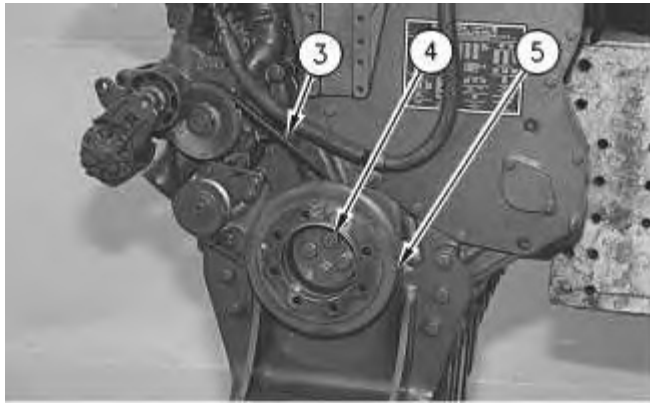


Illustration 2

g00612684

2. Remove belt (3). Refer to Operation and Maintenance Manual, "Belt - Inspect".
3. Remove bolts (4).
4. Remove crankshaft pulley (5).

## Installation Procedure

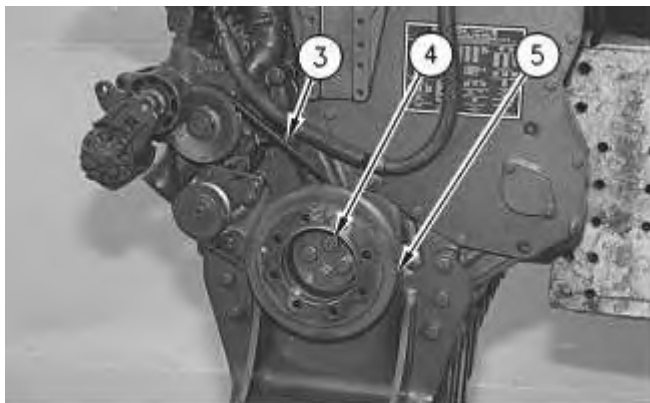


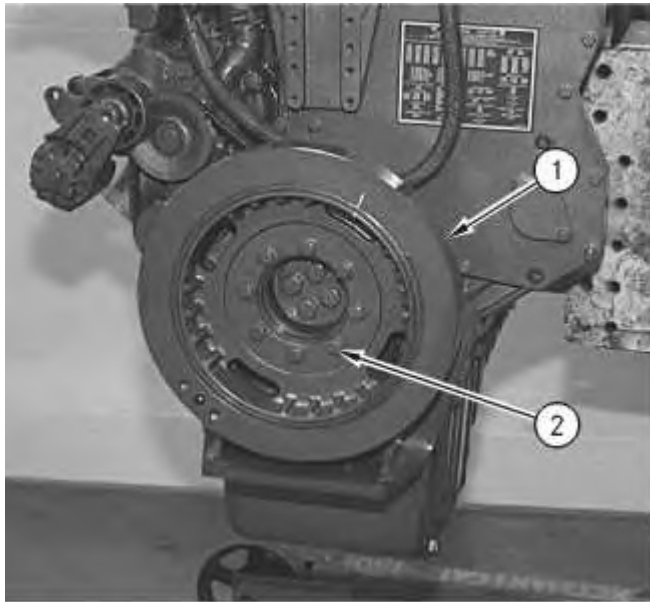
Illustration 3

g00612684

1. Position crankshaft pulley (5) on the crankshaft. Install bolts (4) and tighten the bolts to a torque of  $160 \pm 30$  N·m ( $118 \pm 22$  lb ft).
2. Install belt (3). Refer to Operation and Maintenance Manual, "Belt - Inspect".

**Note:** Check the alignment marks on the rubber vibration dampers for proper alignment. The rubber vibration damper should be replaced if the rubber vibration damper is out of alignment. Refer to Specifications, "Vibration Damper".





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Illustration 4

g00612677

3. Install the spacers and crankshaft vibration damper (1). Install bolts (2) and tighten to a torque of  $55 \pm 10 \text{ N}\cdot\text{m}$  ( $40 \pm 7 \text{ lb ft}$ ).
  4. Adjust the tension of the belt. Refer to Specifications, "Belt Tension Chart".
-

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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

i01982085

### Crankshaft Front Seal - Remove

SMCS - 1160-011

### Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1U-7600	Slide Hammer Puller	1
B	1U-8145	Drill Bit	1

#### Start By:

- Remove the vibration damper and the pulley. Refer to Disassembly and Assembly, "Vibration Damper and Pulley - Remove and Install".

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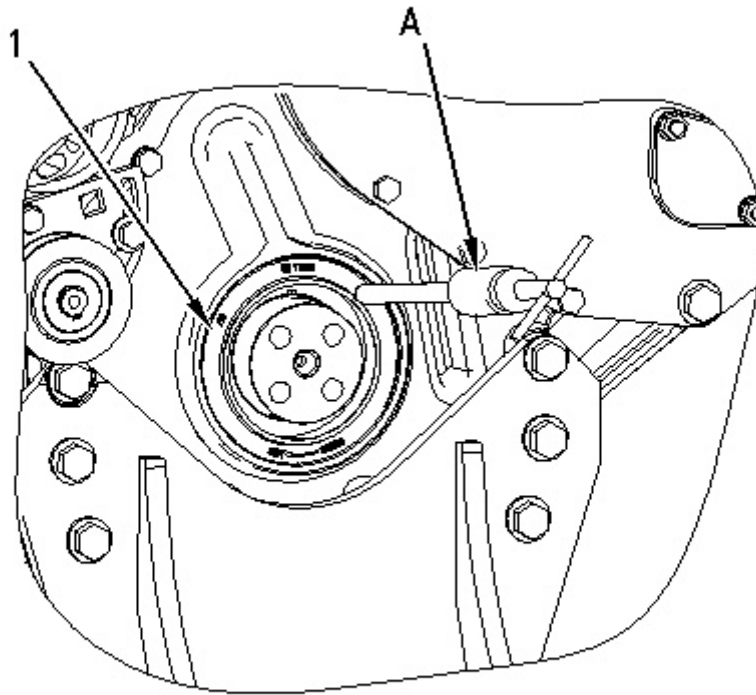
#### NOTICE

**Keep all parts clean from contaminants.**

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

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Illustration 1

g00989224

1. Use Tooling (B) and carefully drill three evenly spaced holes in crankshaft front seal (1).
  2. Alternate between the drilled holes and use Tooling (A) to remove crankshaft front seal (1).
-

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

Media Number -SEN9581-06

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i01982092

# Crankshaft Front Seal - Install

SMCS - 1160-012

## Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
C	1U-7430	Front Seal Installer	1

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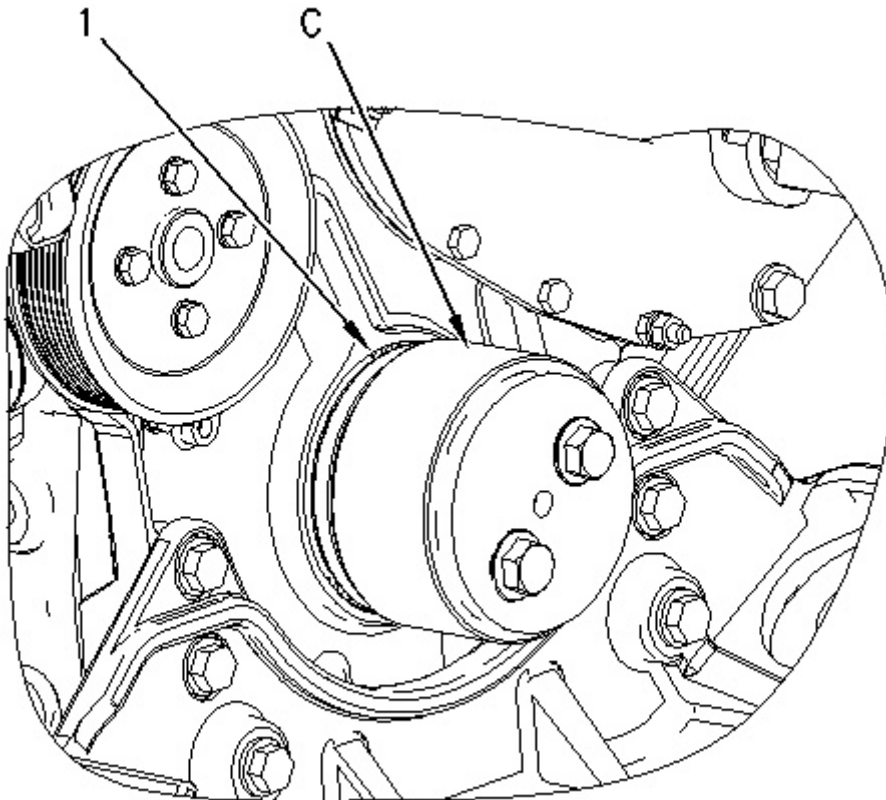
### NOTICE

**Keep all parts clean from contaminants.**

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Illustration 1

g00989228

1. Use Tooling (C) to install crankshaft front seal (1).

**Note:** The crankshaft seal is designed to be installed dry.

**End By:**

- a. Install the vibration damper and the pulley. Refer to Disassembly and Assembly, "Vibration Damper and Pulley - Remove and Install".
-

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

Media Number -SEN9581-06

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i01379367

### **Front Cover - Remove**

SMCS - 1166-011

### **Removal Procedure**

#### **Start By:**

- a. Remove the alternator. Refer to Disassembly and Assembly, "Alternator - Remove and Install".

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#### **NOTICE**

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

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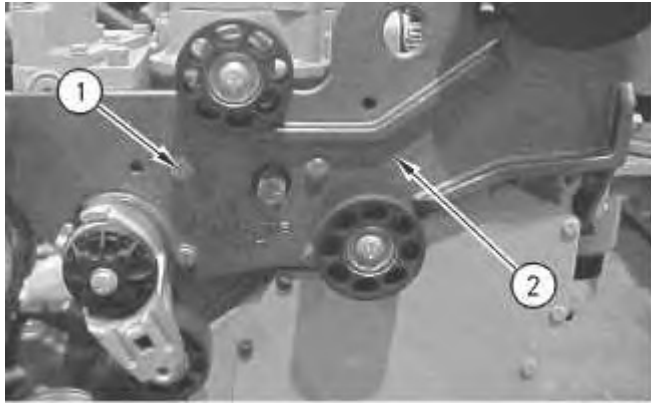


Illustration 1

g00728351

1. Remove four bolts (1) that fasten bracket (2) on the front of the engine.

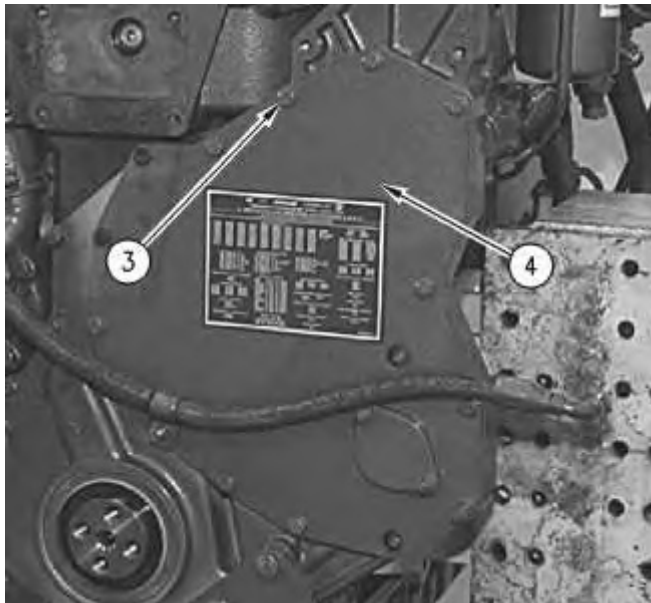


Illustration 2

g00728369

2. Remove the bolts (3) and front cover (4) from the front housing.
-

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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

i01379400

## **Front Cover - Install**

SMCS - 1166-012

## **Installation Procedure**

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### **NOTICE**

**Keep all parts clean from contaminants.**

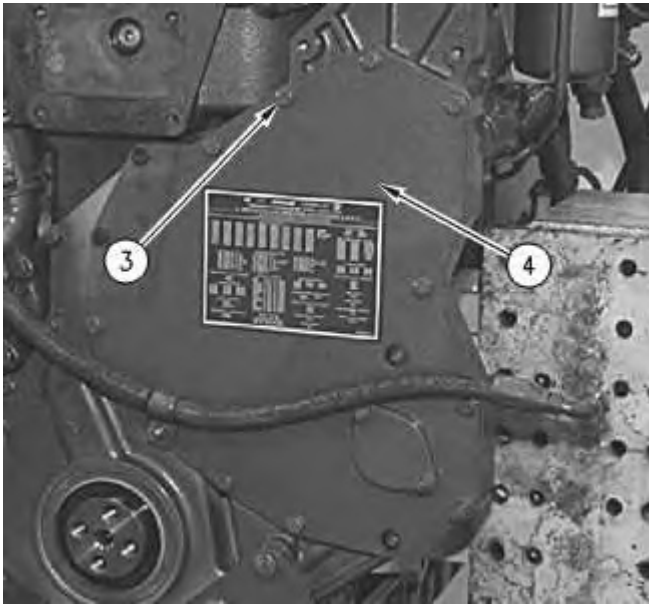
**Contaminants may cause rapid wear and shortened component life.**

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**Note:** The rear face of the cover and the front face of the housing must be clean.

1. Inspect the condition of the housing cover gasket. Replace the gasket, if necessary.
-



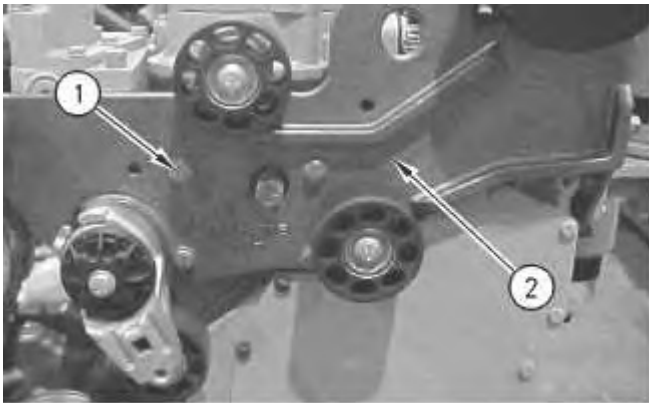


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Illustration 1

g00728369

2. Install the housing cover gasket.
3. Position front cover (4) on the front housing. Install the bolts (3) on front cover (4).



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Illustration 2

g00728351

4. Position bracket (2) on the front of the engine.
5. Install four bolts (1) that fasten bracket (2) on the engine.

**End By:**

- a. Install the alternator. Refer to Disassembly and Assembly, "Alternator - Remove and Install".
-

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

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i01983906

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

SMCS - 1151-011

### **Removal Procedure**

#### **Start By:**

- a. Remove the crankshaft front seal. Refer to Disassembly and Assembly, "Crankshaft Front Seal - Remove".
- b. Remove the camshaft. Refer to Disassembly and Assembly, "Camshaft - Remove".

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#### **NOTICE**

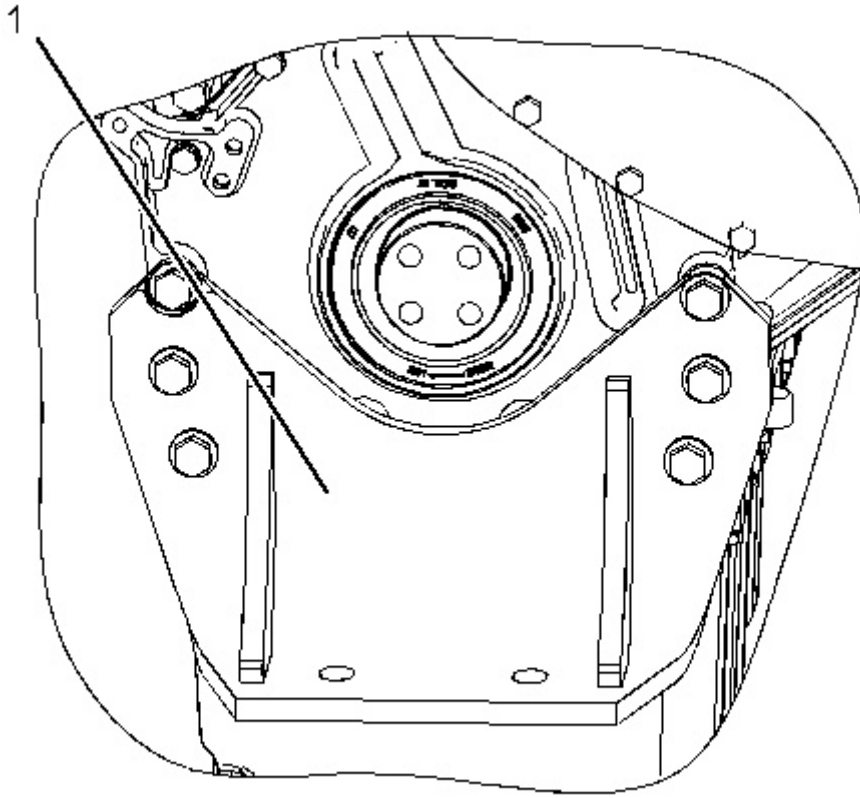
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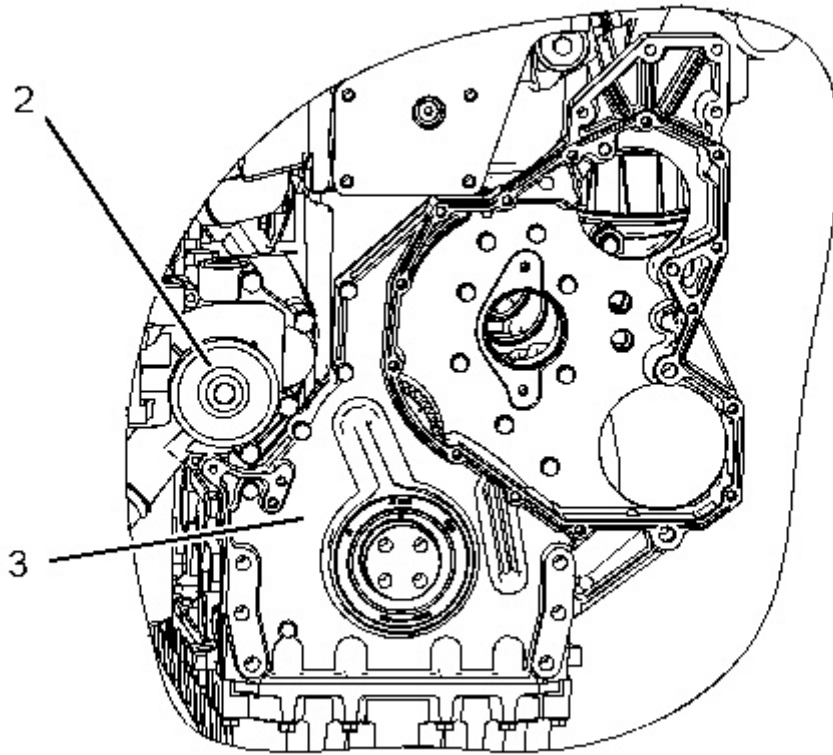


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Illustration 1

g01028154

1. Remove front engine support (1).
-



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Illustration 2

g01028155

2. Remove belt tightener (2).
  3. Remove front housing (3).
-

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

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Date Updated -17/08/2018

i01983976

## Housing (Front) - Install

SMCS - 1151-012

## Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	8T-9011	Component Cleaner	1
B	4C-9500	Quick Cure Primer	1
C	1U-8846	Gasket Sealant	1

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