# **CATERPILLAR®**

## Service Repair Manual

### **Models**

5130 MINING EXCAVATOR

Model: 5130 MINING EXCAVATOR 7TJ

Configuration: 5130 EXCAVATOR 7TJ00001-UP (MACHINE) POWERED BY 3508 ENGINE

## Disassembly and Assembly 3508 ENGINE FOR 5130 EXCAVATOR

Media Number -SENR5558-00

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SENR55580024

#### **Crankshaft Front Seal & Wear Sleeve**

**SMCS -** 1160-011; 1160-012

#### Remove Crankshaft Front Seal & Wear Sleeve

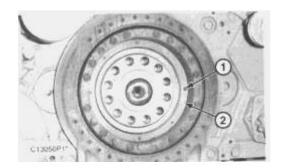
Tools Needed			В
5P7409	Distorter	1	
6V3143	Distorter Adapter		1

#### Start By:

a. remove crankshaft pulley and vibration damper

#### **NOTICE**

Any time the crankshaft seal is removed from the wear sleeve, a new sleeve and seal must be installed as a set. If the old seal is put back on the sleeve, the seal will leak.



1. Remove four bolts (1) from adapter (2), and install two 5/16" - 13 NC forcing screws in the adapter to remove it from the drive housing.



2. Remove O-ring seal (4) and crankshaft seal (3) from adapter (2).



Typical Example

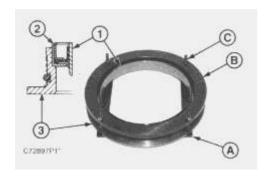
- **3.** Install tool (B) in the adapter bore as shown.
- **4.** Install tool (A) between tool (B) and wear sleeve (5). Turn tool (A) until the edge of the tool makes a flat place (crease) in the wear sleeve. Do this several places around the wear sleeve until the sleeve can be removed from the end of the crankshaft by hand.

### **Install Crankshaft Front Seal & Wear Sleeve**

	Tools Needed	Α	В	C	D	Ε	F	G
6V4002	Forcing Bracket	2 -				0		
6V4001	Forcing Ring		1					
1D4716	Nut (5/16" - 18 NC)			4				
6V4003	Locator				1			
2N5006	Bolt [1" - 14 NF X 2.5 in. (63.50 mm) long]				2			
	Guide Bolts [5/16" -18 NC X 4 in. (101.6 mm long)					4		
6V4977	Installer						1	
988858	Nut		6K					1

#### NOTICE

Any time the crankshaft seal is removed from the wear sleeve, a new sleeve and seal must be installed as a unit. If the old seal is put back on the sleeve, the seal will leak.



**1.** Install adapter (3) on tooling (A) as shown.

#### NOTICE

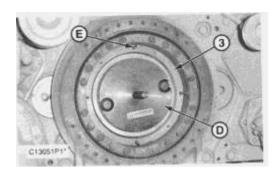
If the crankshaft seal and wear sleeve come apart during installation, the seal and sleeve become scrap, and a new seal and sleeve must be used as a replacement.

**NOTE:** The front seal and wear sleeve cannot be exchanged with the rear seal and wear sleeve. There are grooves in the sealing lip of the seals that direct the oil back into the crankcase as the crankshaft turns. An exchange of front and rear seals would pump the oil out of the crankcase.

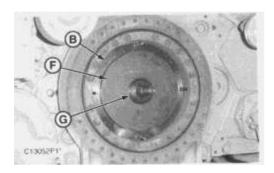
- **2.** Put crankshaft seal (2) and wear sleeve (1) as a unit in position on adapter (3). Make sure the lip of the seal is up as shown. Install the O-ring seal on adapter (3).
- **3.** Install tool (B) over the studs of tooling (A). Install nuts (C), and tighten the nuts evenly until the seal is against the bottom of the adapter bore.
- **4.** Remove nuts (C), tool (B) and tooling (A) from the adapter.

**NOTE:** Do not put engine oil on seal during installation. Lubrication of the seal at installation can be a false indication of leakage at a later time.

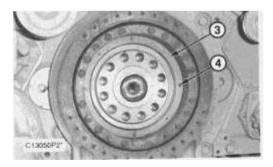
- **5.** Clean the outer surface of the crankshaft with **6V1541 Quick Cure Primer**. Put **9S3265 Retaining Compound** on the outside diameter of the crankshaft and the inside diameter of the wear sleeve.
- **6.** Put clean engine oil on the adapter O-ring seal.



- 7. Install tooling (D) on the end of the crankshaft.
- **8.** Install guide bolts (E) in the drive housing. Put adapter (3) in position on guide bolts (E) and over tooling (D). Make sure the wear sleeve makes contact with the end of the crankshaft.



- **9.** Install tool (B) over the small outside diameter of tool (F) until tool (B) is against the shoulder on tool (F).
- **10.** Install tooling (B) and (F) as a unit on the guide bolts and over the locator.
- **11.** Put clean **1P0808 All Purpose Lubricant** on the face of nut (G), and install nut (G) on the locator. Tighten nut (G) until the wear sleeve and adapter are in position.
- **12.** Remove the tooling from the engine.



**13.** Install bolts (4) to hold adapter (3) in position.

End By:

a. install crankshaft pulley and vibration damper

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