# **CATERPILLAR®**

## Service Repair Manual

## Models

## 924F Wheel Loader

Product: WHEEL LOADER
Model: 924F WHEEL LOADER 5NN
Configuration: 924F Wheel Loader 5NN00001-UP (MACHINE) POWERED BY 3114 Engine

Disassembly and Assembly 446 and 446B Backhoe Loaders, Lexion 450 Combine, 3114 and 3116 Engines, IT18F Integrated Toolcarrier, D6M Track-Type Tractor and 928F, 950F and 950G Wheel Loaders

Media Number -SENR3611-18

Publication Date -01/05/2009

Date Updated -27/05/2009

i03706818

## **Crankshaft Main Bearings - Remove**

SMCS - 1203-011

### **Removal Procedure**

Table 1					
Required Tools					
Tool	Part Number	Part Description	Qty		
A	2P-5518	Bearing Tool	1		

#### **Start By:**

- a. Remove the engine balancer shaft on 3114 engines. Refer to Disassembly and Assembly, "Engine Balancer Shaft Remove and Install".
- b. Remove the engine oil pump. Refer to Disassembly and Assembly, "Engine Oil Pump Remove".

#### NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

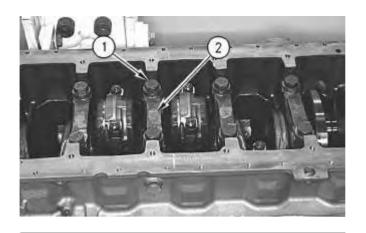


Illustration 1

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- 1. Remove bolts (1) that hold crankshaft main bearing cap (2). Remove crankshaft main bearing cap (2).
- 2. Remove the lower half of the crankshaft main bearing from crankshaft main bearing cap (2).

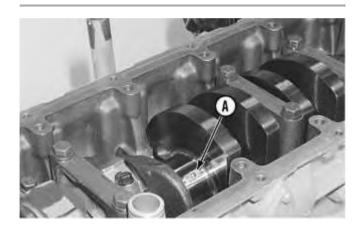


Illustration 2

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#### NOTICE

If the crankshaft is turned in the wrong direction, the tab of the crankshaft main bearing will be pushed between the crankshaft and the cylinder block. this can cause damage to either or both the crankshaft and the cylinder block.

**Note:** Some crankshaft main bearing journals do not have an oil hole. Place a thin piece of soft material that will not damage the journal against the end of the bearing. Ensure that the material is on the opposite side of the bearing tab. Hit the bearing with the soft material until the bearing tab is free from the bearing tab groove in the cylinder block.

3. Use the following steps in order to remove the upper half of crankshaft main bearings:

- a. Turn the crankshaft until Tooling (A) can be installed in the crankshaft journal. Install Tooling (A).
- b. Turn the crankshaft in order to remove the upper half of the crankshaft main bearing. In order to get the tab out first, the crankshaft must be turned in the correct direction.
- c. Check the condition of the crankshaft main bearings. Refer to the Guideline For Reusable Parts, SEBF8009, "Main and Connecting Rod Bearings" and Guideline For Reusable Parts, SEBV0544, "Engine Bearings and Crankshafts".

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## **Crankshaft Main Bearings - Install**

SMCS - 1203-012

### **Installation Procedure**

Table 1					
Required Tools					
Tool	Part Number	Part Description	Qty		
A	2P-5518	Bearing Tool	1		
В	8T-5096	Dial Indicator Group	1		

#### NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

**Note:** For information on the reusability of the crankshaft main bearings, refer to the Guideline For Reusable Parts And Salvage Operations, SEBF8009, "Main and Connecting Rod Bearings".

**Note:** Place clean engine oil on the crankshaft main bearings prior to assembly. The tabs on the back side of the crankshaft main bearings must fit in the grooves of main bearing caps and the cylinder block.

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