



Service Repair Manual

Models

323F L Excavator

Product: EXCAVATOR

Model: 323F L EXCAVATOR XCF

Configuration: 323F L Excavators XCF00001-UP (MACHINE) POWERED BY C7.1 Engine

Disassembly and Assembly

C7.1 Engines for Caterpillar Built Machines

Media Number -UENR4468-15

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i05018957

Crankshaft Main Bearings - Remove and Install - Crankshaft in position

SMCS - 1203-010

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	9U-6198	Crankshaft Turning Tool	1

Start By:

- Remove the engine oil pump. Refer to Disassembly and Assembly, "Engine Oil Pump - Remove" for the correct procedure.
- Remove the crankshaft rear seal. Refer to Disassembly and Assembly, "Crankshaft Rear Seal - Remove" for the correct procedure.

NOTICE

This procedure must only be used to remove and install the main bearing shells with the crankshaft in position.

The removal procedure and the installation procedure must be completed for each pair of main bearing shells before the next pair of main bearing shells are removed.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

1. Ensure that the main bearing cap is marked for the correct location and orientation.
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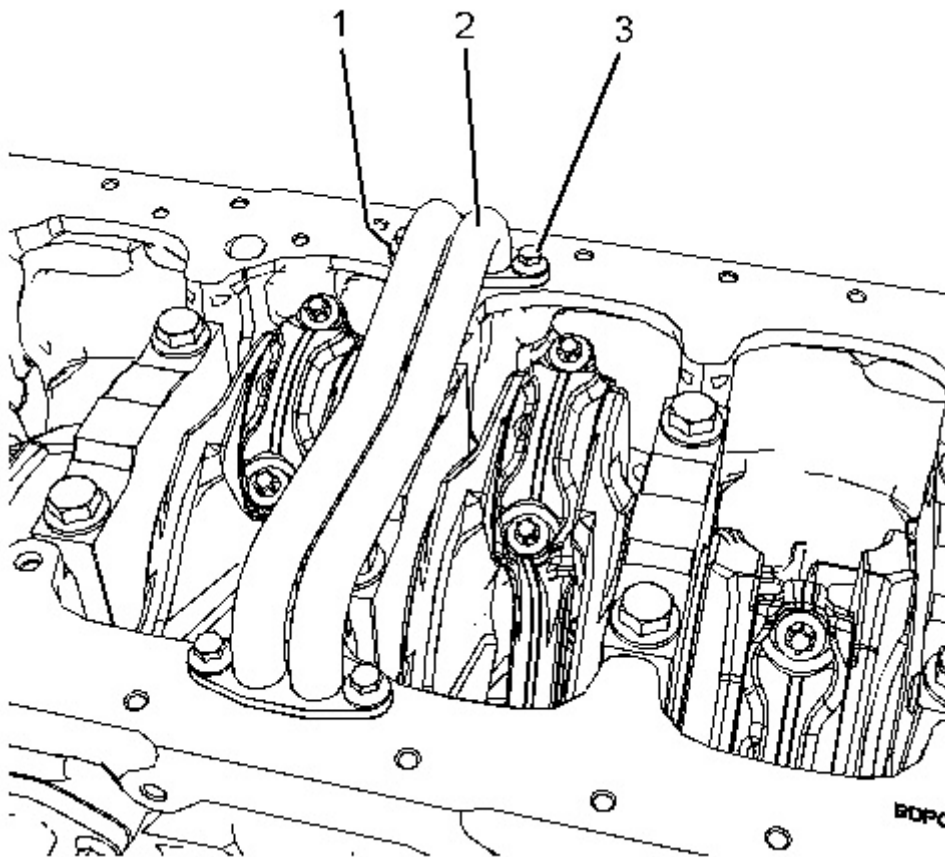


Illustration 1

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2. Remove bolts (3) from tube assembly (2).
 3. Remove tube assembly (2) from the cylinder block.
 4. Remove gaskets (1) (not shown).
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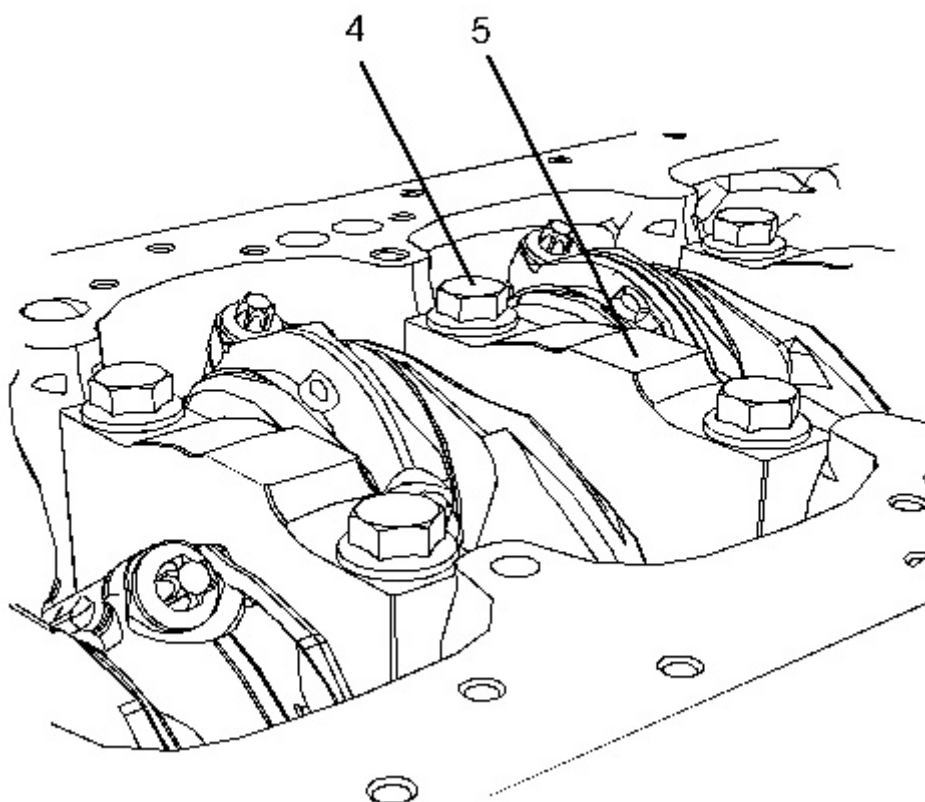


Illustration 2

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5. Remove bolts (4) and remove main bearing cap (5) from the cylinder block.

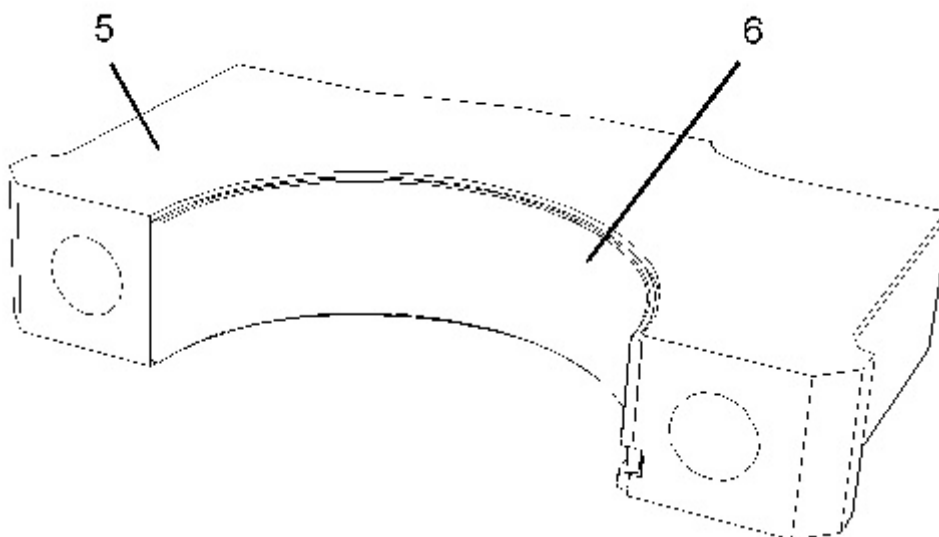


Illustration 3

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6. Remove lower main bearing shell (6) from main bearing cap (5). Keep the main bearing shell and the main bearing cap together.

Note: The lower main bearing shell is a plain bearing that has no oil holes.

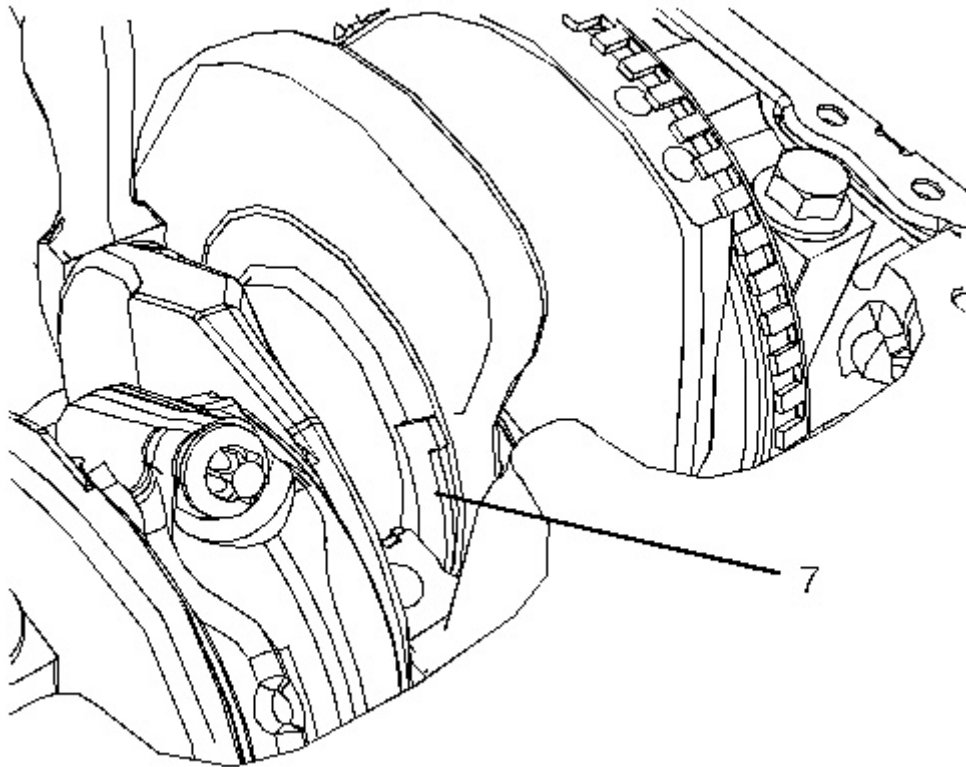


Illustration 4

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7. For number six main bearing, remove two thrust washers (7) from the cylinder block. In order to remove thrust washers (7), use Tooling (A) to rotate the crankshaft in the correct direction. If necessary, push the crankshaft toward the front of the engine or push the crankshaft toward the rear of the engine while you rotate the crankshaft, in order to aid removal.

Note: The thrust washers have a locating tab at one end.

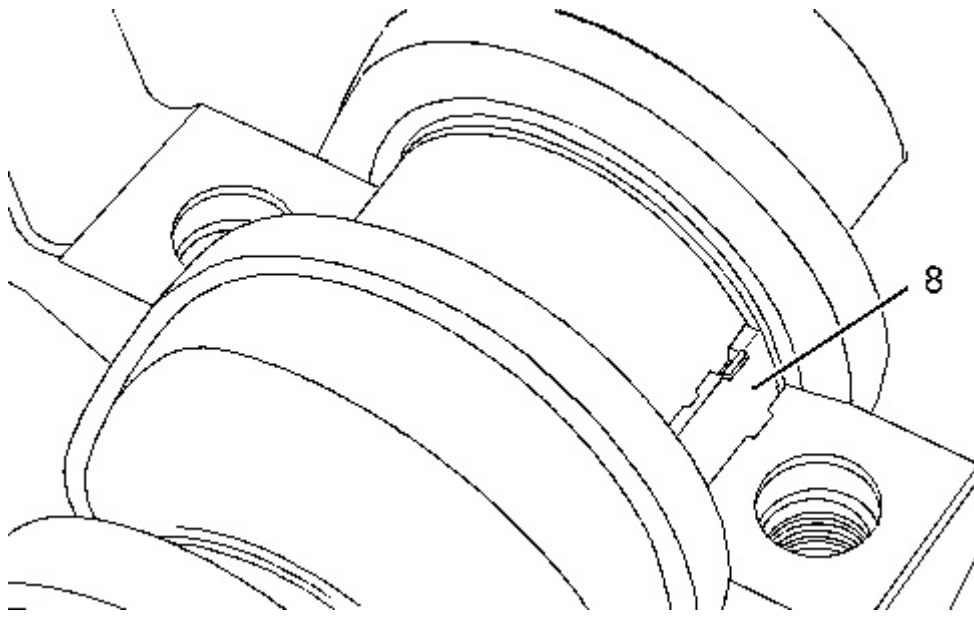


Illustration 5

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8. Push out upper main bearing shell (8) with a suitable tool from the side opposite the locating tab. Carefully rotate the crankshaft while you push on the bearing shell. Remove upper main bearing shell (8) from the cylinder block. Keep the bearing shells together.

Note: The upper main bearing shell has a groove and two oil holes.

Installation Procedure

Table 2

Required Tools			
Tool	Part Number	Part Description	Qty
B	8T-3052	Degree Wheel	1
C	8T-5096	Dial Indicator Gp	1
	-	Magnetic Base and Stand	1

NOTICE

This procedure must only be used to remove and install the main bearing shells with the crankshaft in position.

The removal procedure and the installation procedure must be completed for each pair of main bearing shells before the next pair of main bearing shells are removed.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

1. Ensure that the main bearing shells are clean and free from wear and damage. If necessary, replace the main bearing shells.

Note: If the main bearing shells are replaced, check whether oversize main bearing shells were previously installed. If the thrust washers are replaced, check whether oversize thrust washers were previously installed.

2. Clean the journals of the crankshaft. Inspect the journals of the crankshaft for damage. If necessary, replace the crankshaft or recondition the crankshaft.
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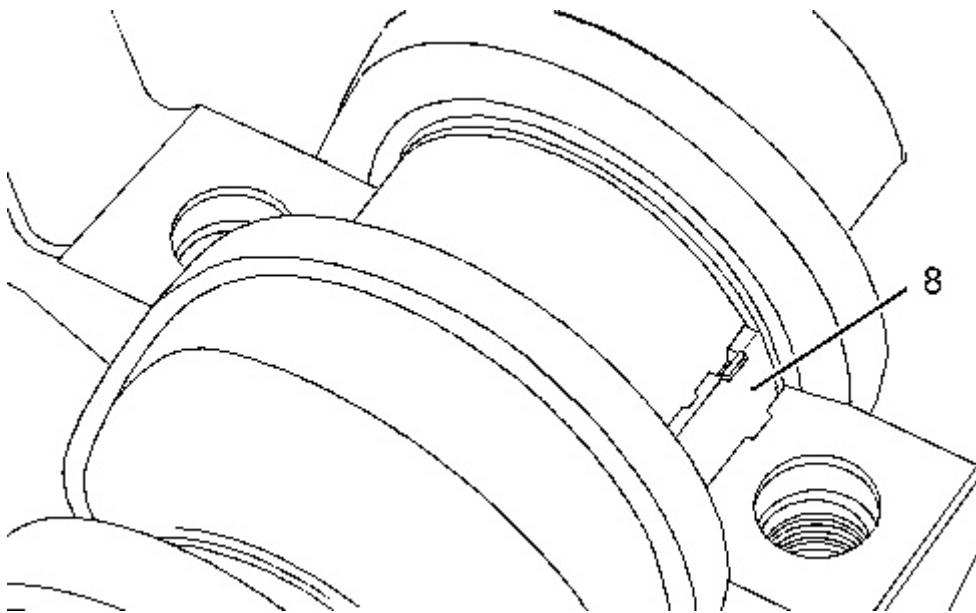


Illustration 6

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3. Lubricate the crankshaft journal and upper main bearing shell (8) with clean engine oil. Slide upper main bearing shell (8) into position between the crankshaft journal and the cylinder block. Ensure that the locating tab for the upper main bearing shell is correctly seated in the slot in the cylinder block.

Note: The upper main bearing shell has a groove and two oil holes.

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