

Product: MINI HYD EXCAVATOR

Model: 304.5E2 MINI HYD EXCAVATOR FXT

Configuration: 304.5E Mini Hydraulic Excavator FXT00001-UP (MACHINE) POWERED BY C2.4

## Disassembly and Assembly

### C2.4 Tier 4 Final Engines for Caterpillar Built Machines

Media Number -UENR7319-02

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i06547479

## Piston and Connecting Rods - Remove and Install

SMCS - 1225-010

### Removal Procedure

Table 1

Required Tooling			
Tool	Part Number	Part Description	Qty
A	456-7967	Piston ring compressor	1

#### Start By:

- a. Remove cylinder head.
- b. Remove oil pan.

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#### NOTICE

**Keep all parts clean from contaminants.**

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

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#### NOTICE

**Discard all used Connecting Rod fasteners.**

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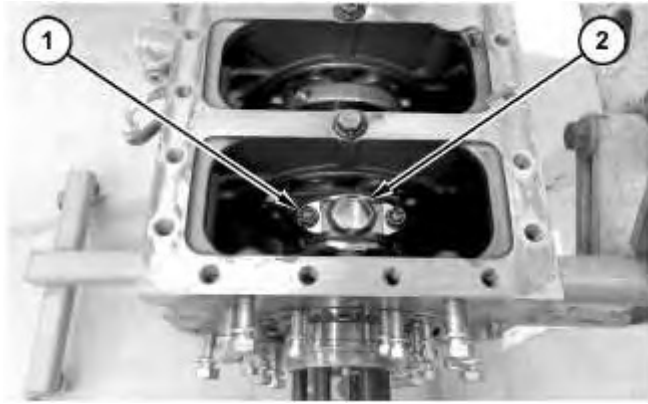


Illustration 1

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1. Remove bolts (1) and connecting rod cap (2).

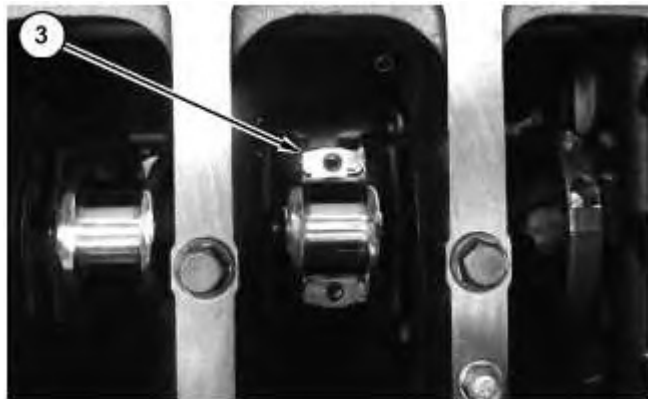


Illustration 2

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2. Carefully push connecting rod (3) and the piston into the cylinder bore until they are clear of the crankshaft and out of the cylinder block.

**Note:** The connecting rod and the connecting rod cap should have an etched Number (X) on the side. The number on the connecting rod and the connecting rod cap must match. Make a temporary mark on the connecting rod and the connecting rod cap to identify the cylinder number.



3. Remove connecting rod bearings (4).
4. Repeat Step 1 through Step 3 for remaining pistons and connecting rods.

## Installation Procedure

1. Install the connecting rods and the pistons in the reverse order of removal.

**Note:** Ensure that the piston and the connecting rod assembly are installed in the correct cylinder.

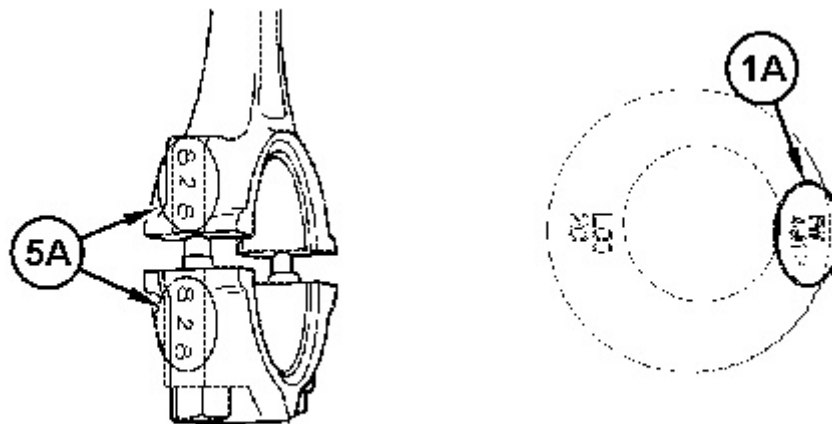


Illustration 4

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- a. The mark (5A) on the connecting rod must align with the fuel pump. Mark (1A) on the piston must align with the flywheel.
- b. Lubricate connecting rod bearings with clean engine oil.

**Note:** Install the bearing shells for the connecting rods dry when clearance checks are performed. Refer to Disassembly and Assembly, "Bearing Clearance - Check" for the correct procedure. Apply clean engine oil to the bearing shells for the connecting rods during final assembly.

- c. Install connecting rod bearings (4) with locating tabs correctly seated into slots.
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