



# Service Repair Manual

## **Models**

# 307 MINI HYDRAULIC EXCAVATOR

S/N DAN00001 and up

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Product: EXCAVATOR

Model: 307 EXCAVATOR 2WM

Configuration: 307 EXCAVATOR 2WM00001-00499 (MACHINE) POWERED BY 3054 ENGINE

## Disassembly and Assembly 3054 Engine for Caterpillar Built Machines

Media Number -SEN6241-13

Publication Date -01/08/2008

Date Updated -04/08/2008

i02453078

# Pistons and Connecting Rods - Remove

SMCS - 1225-011

## Removal Procedure

Table 1

| Required Tools |             |                  |     |
|----------------|-------------|------------------|-----|
| Tool           | Part Number | Part Description | Qty |
| A              | 8S-2269     | Ridge Reamer     | 1   |

### Start By:

- A. Remove the cylinder head. Refer to Disassembly and Assembly, "Cylinder Head - Remove".
- B. Remove the engine oil pump. Refer to Disassembly and Assembly, "Engine Oil Pump - Remove".
- C. Remove the piston cooling jets. Refer to Disassembly and Assembly, "Piston Cooling Jets - 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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1. Use Tooling (A) to remove the liner wear ridge from the inner surface of the cylinder liner.
2. Position the two pistons that are being removed at the bottom center position.

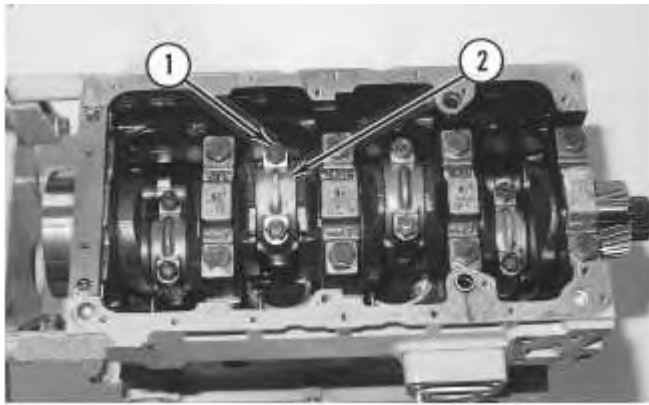


Illustration 1

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3. Remove nuts (1) and the bolts.
4. Remove connecting rod caps (2) and the connecting rod bearings. Keep connecting rod caps (2) and the connecting rod bearings together for installation.

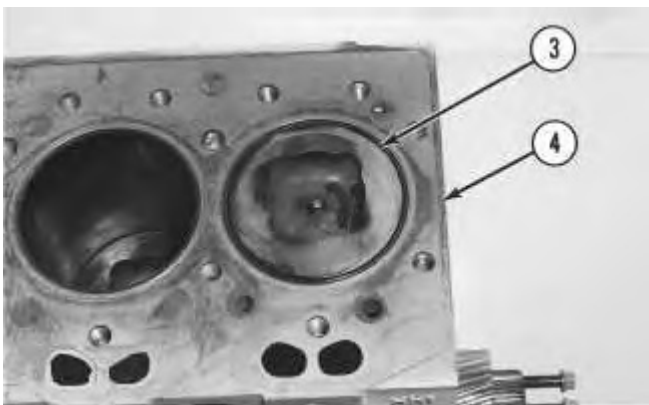


Illustration 2

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5. Push pistons (3) and the connecting rods out of the top of cylinder block (4) .

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Media Number -SEN6241-13

Publication Date -01/08/2008

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i02088687

# Pistons and Connecting Rods - Disassemble

SMCS - 1225-015

## Disassembly Procedure

Table 1

| Required Tools |             |                       |     |
|----------------|-------------|-----------------------|-----|
| Tool           | Part Number | Part Description      | Qty |
| A              | 1U-6683     | Ring Expander         | 1   |
| B              | 1P-1857     | Retaining Ring Pliers | 1   |

### Start By:

- Remove the pistons and the connecting rods. Refer to Disassembly and Assembly, "Piston and Connecting Rods - Remove".

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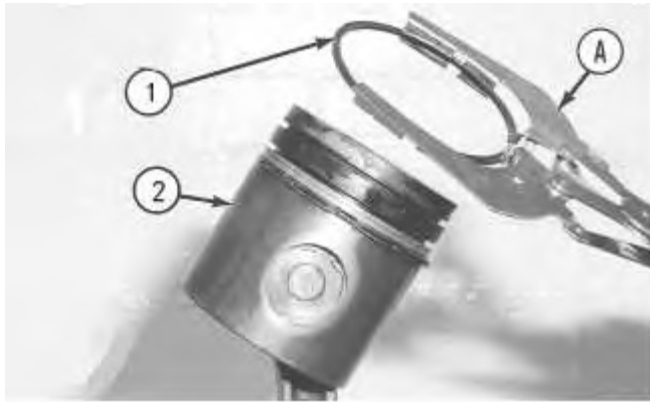


Illustration 1

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Typical example

1. Use Tooling (A) in order to remove three piston rings (1) from piston (2).

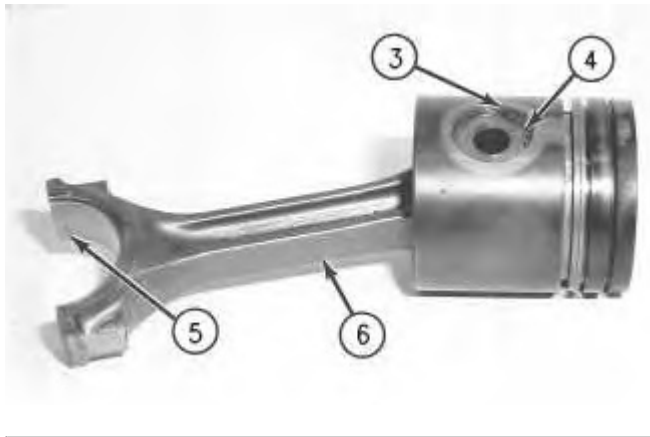


Illustration 2

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Typical example

2. Use Tooling (B) in order to remove retaining rings (3) that hold the piston pin in position.
3. Remove piston pin (4) from the piston.

**Note:** If the piston pin cannot be removed by hand, heat the piston to a temperature of  $45 \pm 5$  °C ( $113 \pm 9$  °F). Do not use a torch to heat the piston.

4. Remove bearing (5) from connecting rod (6).

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