



Service Repair Manual

Models

318E L Excavator

Product: EXCAVATOR

Model: 318E L EXCAVATOR DZF

Configuration: 318E L Excavator DZF00001-UP (MACHINE) POWERED BY C4.4 Engine

Disassembly and Assembly

C4.4 Engines for Caterpillar Built Machines

Media Number -UENR0602-11

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i04047744

Crankshaft - Remove

SMCS - 1202-011

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	1U-8221	Lifting Sling	2
B	-	5mm Allen Socket	1

Start By:

- If the engine is equipped with a balancer, remove the balancer. Refer to Disassembly and Assembly, "Balancer - Remove" for the correct procedure.
- If the engine is not equipped with a balancer, remove the engine oil pump. Refer to Disassembly and Assembly, "Engine Oil Pump - Remove" for the correct procedure.
- Remove the front housing. Refer to Disassembly and Assembly, "Housing (Front) - Remove" for the correct procedure.
- Remove the crankshaft rear seal. Refer to Disassembly and Assembly, "Crankshaft Rear Seal - Remove" for the correct procedure.
- Remove the rocker shaft and pushrods. Refer to Disassembly and Assembly, "Rocker Shaft and Pushrod - Remove" for the correct procedure.
- If necessary, remove the cylinder head. Refer to Disassembly and Assembly, "Cylinder Head - Remove" for the correct procedure.
- If necessary, remove the pistons and connecting rods. Refer to Disassembly and Assembly, "Pistons and Connecting Rods - Remove" for the correct procedure.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

1. The engine should be mounted on a suitable stand and placed in the inverted position.
 2. If the cylinder head, the pistons and the connecting rods have not been removed already, remove the connecting rod bearings. Refer to Disassembly and Assembly, "Connecting Rod Bearings - Remove" for the correct procedure.
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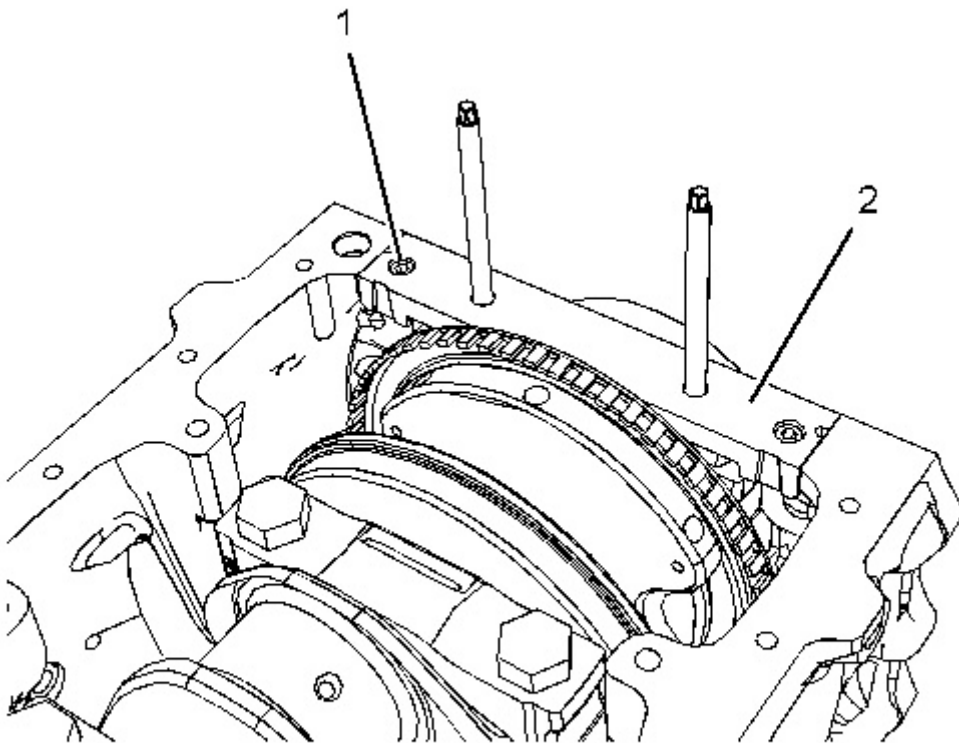


Illustration 1

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3. Use Tooling (B) in order to remove allen head screws (1). Remove bridge piece (2).
 4. Ensure that the main bearing caps are marked for the location and orientation.
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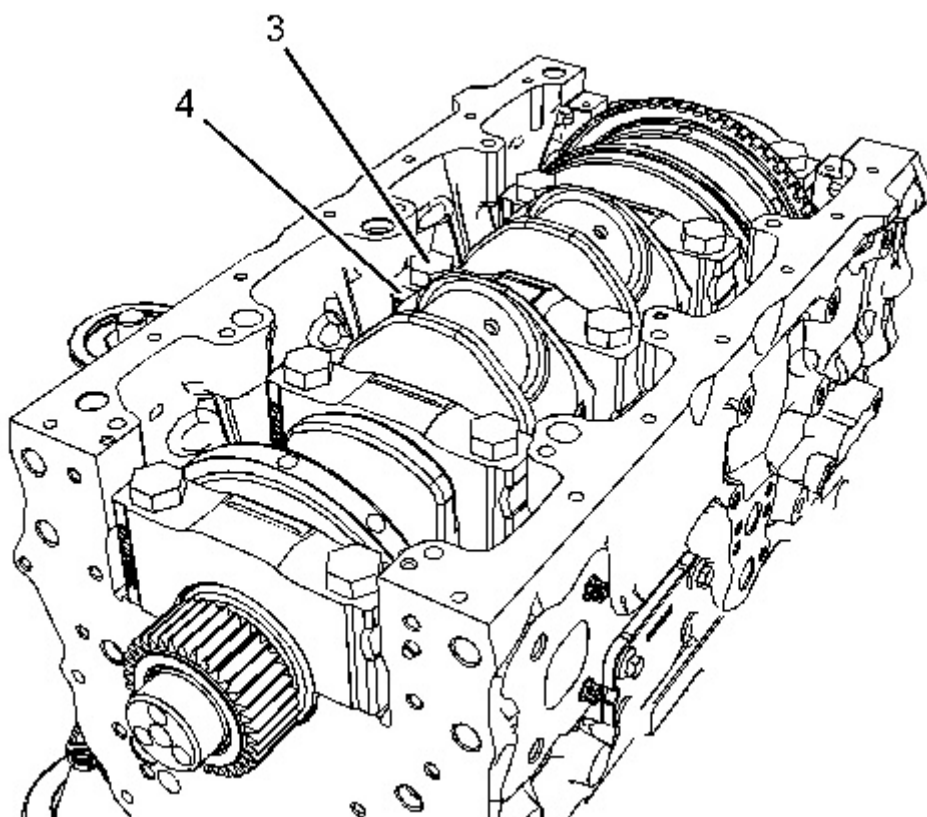


Illustration 2

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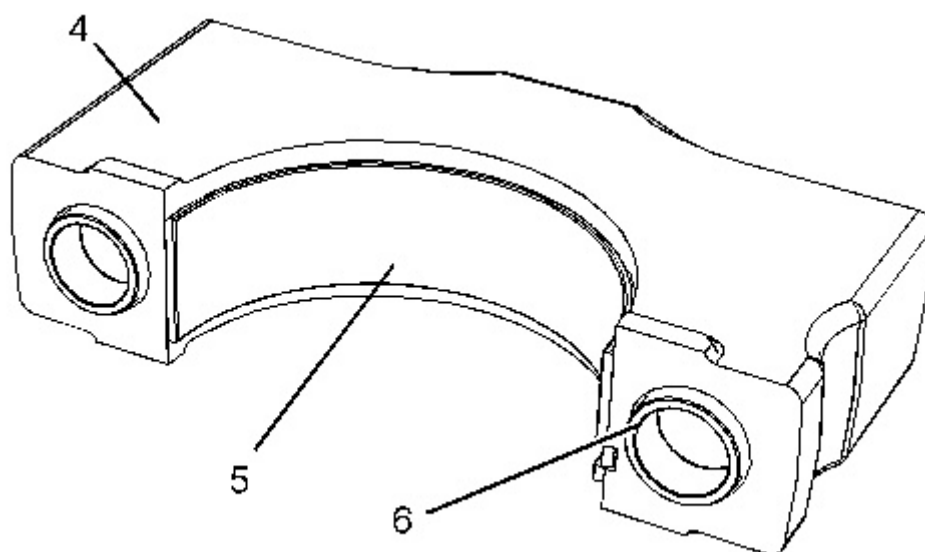


Illustration 3

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5. Remove bolts (3) from main bearing caps (2). Remove main bearing caps (2) from the cylinder block.
6. Take care not to displace dowels (6).

7. Remove lower main bearing shells (5) from main bearing caps (4). Keep the lower main bearing shells with the respective main bearing caps.

Note: The lower main bearing shells are plain bearings that have no oil holes.

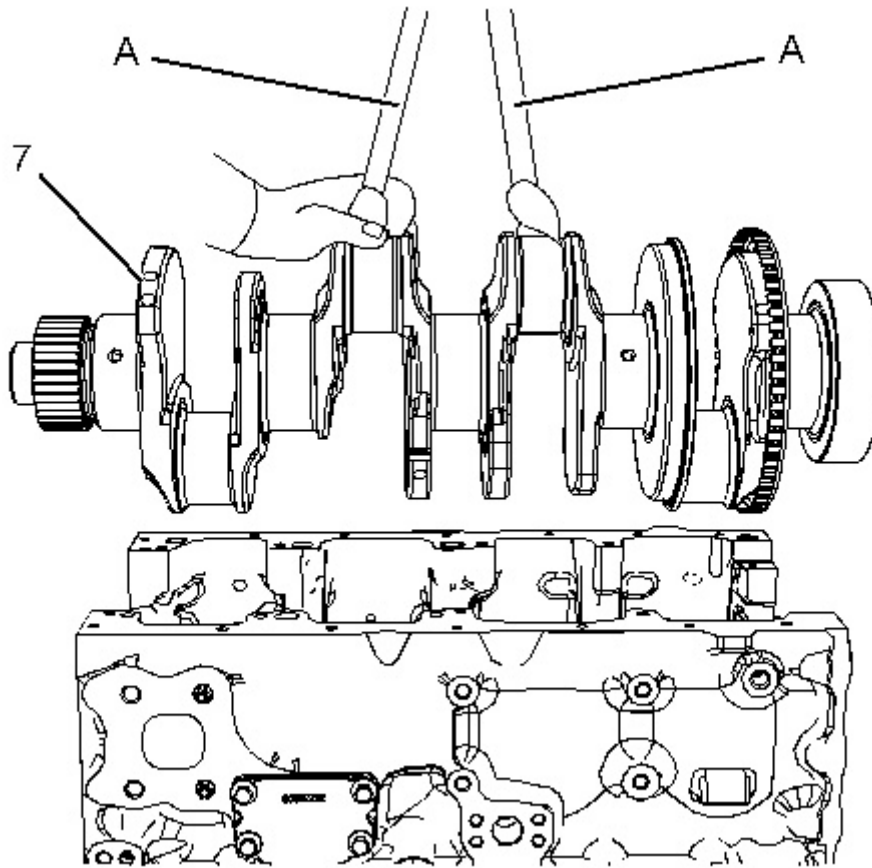


Illustration 4

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8. Attach Tooling (A) and a suitable lifting device to crankshaft (7). Lift crankshaft (7) out of the cylinder block. The weight of the crankshaft is approximately 39 kg (86 lb).

Note: Do not damage any of the finished surfaces on the crankshaft. When the crankshaft is removed from the engine, the crankshaft must be supported on a suitable stand in order to prevent damage to the crankshaft timing ring.

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