

Product: MOTOR GRADER

Model: 140H ES MOTOR GRADER 3AS

Configuration: 140H Motor Grader 3AS00001-UP (MACHINE) POWERED BY 3306 Engine

Disassembly and Assembly 3304B and 3306B Engines for Caterpillar Built Machines

Media Number -SEN5598-09

Publication Date -01/01/2013

Date Updated -25/01/2013

i01112752

Crankshaft - Remove

SMCS - 1202-011

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7575	Link Bracket	2
B	8B-7551	Bearing Puller	1
	8B-7549	Puller Leg	2
	3H-0465	Push-Puller Plate	4
	1B-4207	Full Nut	2
	8B-7560	Step Plate	1
	1P-0820	Hydraulic Puller	1
	9U-6600	Hand Hydraulic Pump	1

Start By:

- Remove the front housing. Refer to Disassembly and Assembly, "Front Housing - Remove".
 - Remove the flywheel housing. Refer to Disassembly and Assembly, "Flywheel Housing - Remove and Install".
 - Remove the engine oil pump. Refer to Disassembly and Assembly, "Engine Oil Pump - Remove".
 - Remove the oil pan plate. Refer to Disassembly and Assembly, "Engine Oil Pan Plate - Remove and Install".
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NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

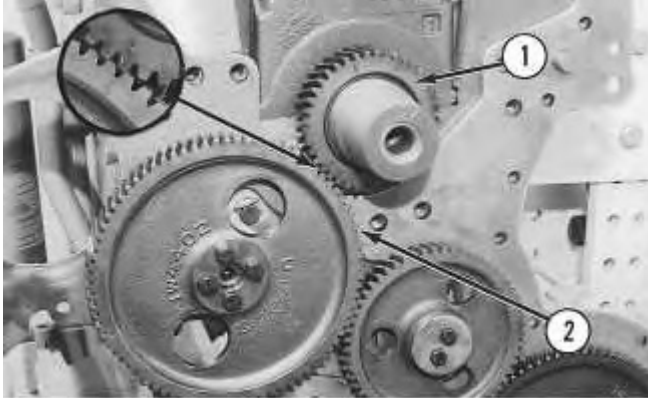


Illustration 1

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1. Turn the crankshaft until timing mark "C" on crankshaft gear (1) is aligned with timing mark "C" on camshaft gear (2) .

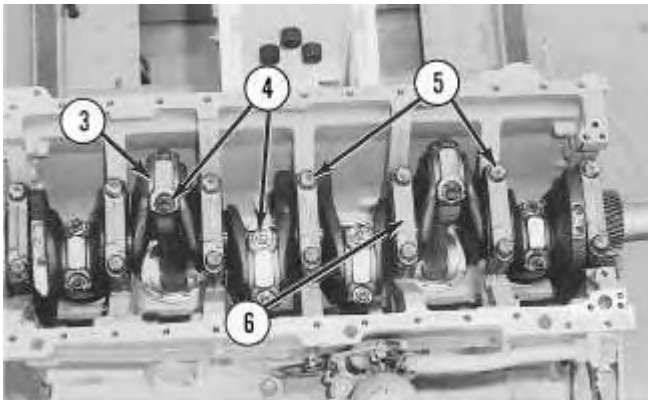


Illustration 2

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2. Remove connecting rod nuts (4) and connecting rod caps (3) from the connecting rods.
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NOTICE

Damage may occur to the fuel injection nozzle or the piston if the piston and connecting rod are pushed too far down in the cylinder liners.

Note: The piston will be difficult to push down into the cylinder when the inlet valves and exhaust valves are closed.

3. Push down on the pistons that are not at the top center position in order to clear the crankshaft.
4. Remove main bearing cap bolts (5) and main bearing caps (6) from the cylinder block.

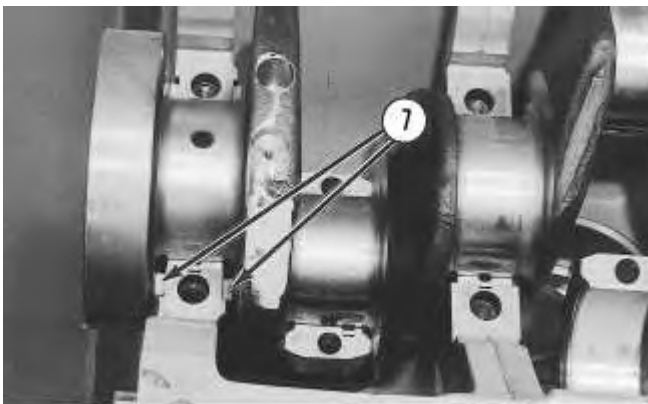


Illustration 3

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5. Remove thrust plates (7) from the rear main bearing.

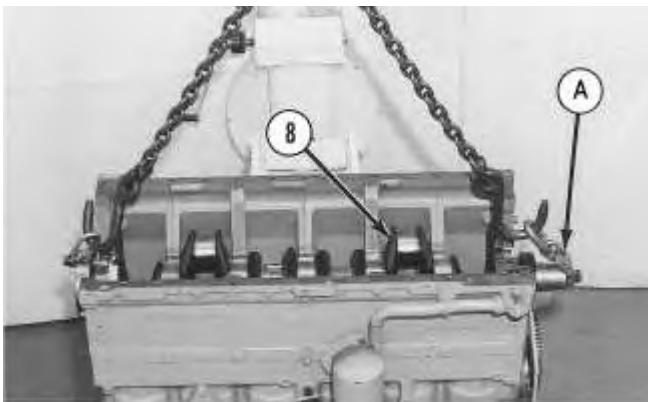


Illustration 4

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6. Install Tool (A) and a suitable lifting device on crankshaft (8), as shown. Lift the crankshaft straight up from the cylinder block. The weight of the 3304B crankshaft is 65 kg (143 lb). The weight of the 3306B crankshaft is 95 Kg (210 lb).

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