CATERPILLAR®

Service Repair Manual

Models

320D2 and 320D2 L Excavator

Model: 320D2 L EXCAVATOR ZCS

Configuration: 320D2 & 320D2 L Excavators ZCS00001-UP (MACHINE) POWERED BY C7.1 Engine

Disassembly and Assembly

C7.1 (Mech) Engines for Caterpillar Built Machines

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i04780462

Gear Group (Front) - Remove and Install

SMCS - 1206-010

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A ⁽¹⁾	9U-6198	Crankshaft Turning Tool	1
$A^{(2)}$	9U-7336	Housing	1
	5P-7305	Engine Turning Tool	1
В	230-6284	Timing Pin (Camshaft)	1
С	136-4632	Timing Pin (Crankshaft)	1
	268-1966	Adapter	1

⁽¹⁾ The Crankshaft Turning Tool is used on the front pulley.

Start By:

- a. Remove the front cover. Refer to Disassembly and Assembly, "Front Cover Remove and Install" for the correct procedure .
- b. Remove the valve mechanism cover. Refer to Disassembly and Assembly, "Valve Mechanism Cover Remove and Install" for the correct procedure .

⁽²⁾ This Tool is used in the aperture for the electric starting motor.

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

NOTICE

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

Dispose of all fluids according to local regulations and mandates.

Note: Either Tooling (A) can be used. Use the Tooling that is most suitable.

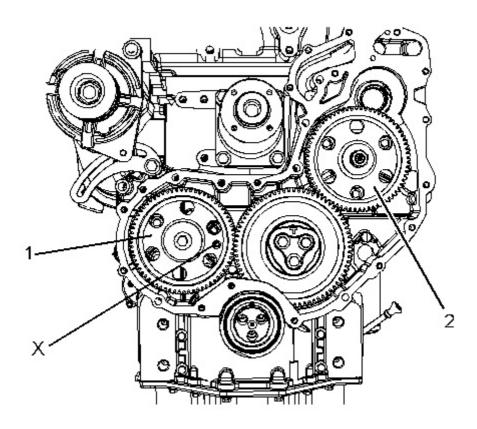


Illustration 1 g02706996

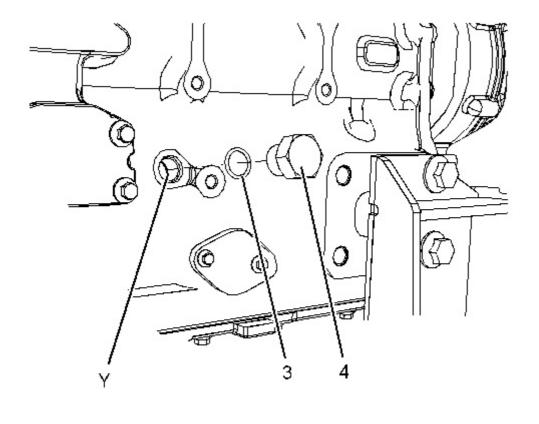


Illustration 2 g02695979

1. Care must be taken in order to ensure that the fuel injection pump timing is not lost during the removal of the front gear group. Carefully follow the procedure in order to remove the gear group.

- 2. Remove plug (4) from the cylinder block. Remove O-ring seal (3) from plug (4).
- 3. Use Tooling (A) in order to rotate the crankshaft so that number one piston is at top dead center on the compression stroke. Refer to System Operation, Testing and Adjusting, "Finding Top Center Position for No.1 Piston" for the correct procedure.
- 4. Install Tooling (B) through Hole (X) in camshaft gear (1) into the front housing. Use Tooling (B) in order to lock the camshaft in the correct position.
- 5. Install Tooling (C) into Hole (Y) in the cylinder block. Use Tooling (C) in order to lock the crankshaft in the correct position.

Note: Do not use excessive force to install Tooling (C). Do not use Tooling (C) to hold the crankshaft during repairs.

6. Apply sufficient pressure to fuel injection pump gear (2) in a counterclockwise direction in order to remove the backlash. Lock the fuel injection pump in this position. Refer to Disassembly and Assembly, "Fuel Pump Gear - Remove" for the correct procedure.

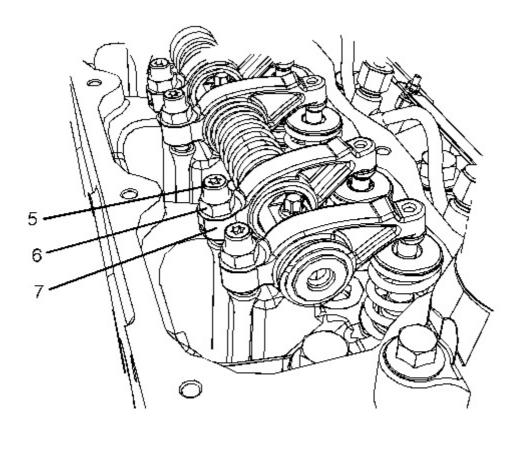


Illustration 3 g02707118

7. Loosen nuts (6) on all rocker arms (7). Unscrew adjusters (5) on all rocker arms (7) until all valves are fully closed.

Note: Failure to ensure that ALL adjusters are fully unscrewed can result in contact between the valves and pistons.

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