CATERPILLAR®

Service Repair Manual

Models

E300B EXCAVATOR

Model: E300B EXCAVATOR 1WJ

Configuration: E300B, EL300B TRACK-TYPE EXCAVATORS 1WJ00001-UP (MACHINE) POWERED BY 3306T ENGINE

Disassembly and Assembly

3304B and 3306B Engines for Caterpillar Built Machines

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i00930839

Automatic Timing Advance - Remove

SMCS - 1272-011

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	5P-7307	Engine Turning Tool	1
В	0T-0065	Bolt	1
С	9S-9155	Spacer	1
	8S-2264	Pump Impeller Puller	2
	0T-0513	Bolt	2
	5P-1075	Hard Washer	2

Start By:

A. Remove the front housing. Refer to Disassembly and Assembly, "Front Housing - Remove".

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

1. Follow the procedure in Steps 3 and 4 in order to time the fuel injection pump when the front cover is removed. Follow the procedure in Steps 6 and 7 in order to time the fuel injection pump when the front cover is installed.

Note: The No. 1 piston should be at the top center position on the compression stroke at the start of all timing procedures.

Note: The engine is seen from the flywheel end when the direction of the crankshaft rotation is given.



Illustration 1

2. Remove the electric starting motor and install Tool (A).

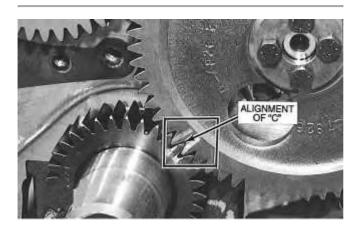


Illustration 2

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g00474593

3. Turn the crankshaft counterclockwise until the "C" on the crankshaft gear and the "C" on the camshaft gear are in alignment.

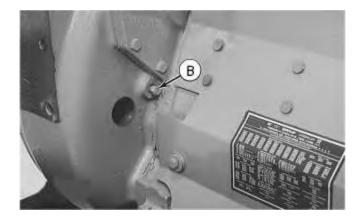


Illustration 3 g00474594

- 4. Remove two plugs and install Tool (B) in the flywheel housing. The large plug hole is for viewing.
- 5. To find the top center compression stroke for the No. 1 piston, use Tool (A) in order to turn the flywheel clockwise for approximately 30 degrees. This procedure should be used to remove all of the end play from the timing gears.
- 6. Use Tool (A) in order to turn the flywheel counterclockwise in the direction of the engine rotation until Tool (B) can be installed in the flywheel. The piston is at the top center position.

Note: If you go past the bolt hole, you must start the procedure again.

Note: Remove the breather assembly from the valve mechanism cover. The piston is at the top center position on the compression stroke when the inlet valve is closed and the exhaust valve is closed for the No. 1 cylinder. You must be able to move the rocker arms up and down with your hand.

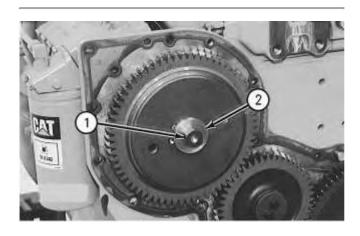


Illustration 4 g00474595

7. Remove bolt (1) and washer (2) that secures the automatic timing advance.

The automatic timing advance must have support during removal in order to help prevent damage to components.



Illustration 5 g00474596

- 8. Install bolt (1) and leave a 6.35 mm (.250 inch) gap. Install Tool (C), as shown. Tighten the stud in order to loosen the fuel pump drive gear from the taper on the fuel injection pump camshaft.
- 9. Remove Tool (C) and bolt (1). Remove the automatic timing advance.

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