Product: BACKHOE LOADER
Model: 436C BACKHOE LOADER 1RR

Configuration: 436C Backhoe Loader Center Pivot, Parallel Lift 1RR01100-01100 (MACHINE) POWERED BY 3054 Engine

Disassembly and Assembly

3054 Engine for Caterpillar Built Machines

Media Number -SENR6241-13

Publication Date -01/08/2008

Date Updated -04/08/2008

i01605362

Crankshaft Rear Seal - Install

SMCS - 1161-012

Installation Procedure

Table 1

Required Tools					
Tool	Part Number	Part Description	Qty		
A	9U-6205	Rear Seal Installer	1		
	1P-0510	Driver Group	1		
В	FT-2806	Alignment Tool	1		

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

Engines with 14 Bolt Housing Assembly

- 1. Inspect the condition of the gasket. Replace the gasket, if necessary.
- 2. Clean the areas of the parts that will contact each other.

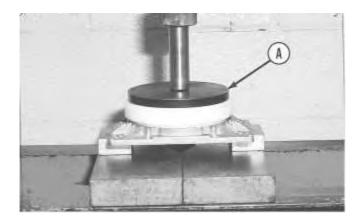


Illustration 1

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- 3. Use Tool (A) and a suitable press to install the crankshaft rear seal into the housing. Make sure that you install the seal to the correct depth in the housing. Refer to Specifications, "Crankshaft Seals" for additional information.
- 4. Lubricate the crankshaft flange and the lip of the crankshaft rear seal with clean engine oil.
- 5. Install Tool (A) onto the crankshaft flange.
- 6. Put the new gasket for the housing in position on the dowels in the cylinder block.

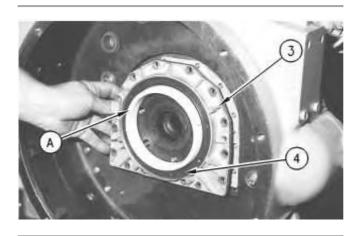


Illustration 2

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- 7. Carefully place housing (3) and crankshaft rear seal (4) over Tool (A).
- 8. Position housing (3) on the dowels in the cylinder block.
- 9. Remove Tool (A).

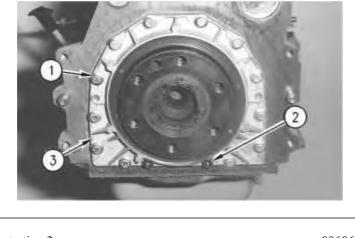


Illustration 3

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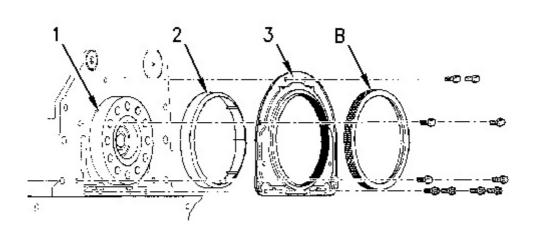
The flywheel housing has been removed for photographic purposes only.

- 10. Install bolts (1) and socket head bolts (2) that fasten housing (3) to the cylinder block.
- 11. Tighten all of the bolts to a torque of 22 N \cdot m (16 lb ft).

Engines with 10 Bolt Housing Assembly

Note: The 10 bolt housing assembly is manufactured as a one-piece assembly. The 10 bolt housing assembly is NOT adaptable to engines that have the 14 bolt housing assembly.

1. Ensure that all parts and surfaces of the engine block are clean and free from oil, grease, and dirt.



Note: The crankshaft rear seal is lubricated. There is no need to lubricate the seal or the crankshaft flange before installation.

- 2. Place housing assembly (3) on crankshaft flange (1) until the housing assembly contacts the cylinder block face. Plastic sleeve (2) will push out of the housing assembly. Discard the plastic sleeve after the housing assembly is installed.
- 3. Place Tool (B) over housing assembly (3). This will center the housing assembly onto the crankshaft flange.

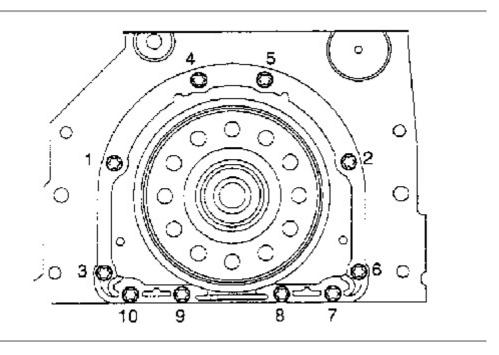


Illustration 5

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- 4. Install the bolts with Tool (B) in position in order to fasten housing assembly (3) to the cylinder block. Tighten bolts 1 and 2 to a torque of 22 N·m (16 lb ft).
- 5. Remove Tool (B). Tighten the remaining bolts in sequence to a torque of 22 N·m (16 lb ft).

End By: Install the flywheel. Refer to Disassembly and Assembly, "Flywheel - Install".

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Disassembly and Assembly 3054 Engine for Caterpillar Built Machines

Media Number -SENR6241-13

Publication Date -01/08/2008

Date Updated -04/08/2008

i01741450

Flywheel Housing - Remove and Install

SMCS - 1157-010

Removal Procedure

Table 1

Required Tools				
Tool	Part Number	Part Description	Qty	
Α	138-7574	Link Bracket	2	

Start By:

- a. Remove the electric starting motor. Refer to Disassembly and Assembly, "Electric Starting Motor Remove and Install".
- b. Remove the flywheel. Refer to Disassembly and Assembly, "Flywheel Remove".

NOTICE

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.

Refer to Special Publication, NENG2500, "Caterpillar Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Caterpillar products.

Dispose of all fluids according to local regulations and mandates.

1. Support the engine with blocks or with a suitable lifting device on a flat level surface.

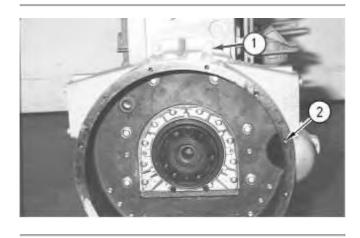


Illustration 1		
Typical example		

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2. Remove mounting bolts (1) from the top of flywheel housing (2).

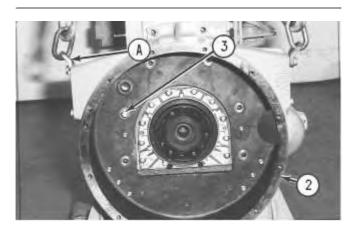


Illustration 2 Typical example

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- 3. Attach Tooling (A) and a suitable lifting device to flywheel housing (2).
- 4. Remove mounting bolts (3) that attach the flywheel housing to the cylinder block.

5. Remove flywheel housing (2). If necessary, hit flywheel housing (2) with a soft faced hammer in order to separate flywheel housing (2) from the cylinder block. The weight of flywheel housing (2) is approximately 32 kg (70 lb).

Installation Procedure

Table 2						
Required Tools						
Tool	Part Number	Part Description	Qty			
Α	138-7574	Link Bracket	2			

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

1. Clean the rear face of the cylinder block and the mating surface of the flywheel housing. Inspect the felt seal on the rear flange of the engine oil pan. Replace the felt seal, if necessary. Inspect the dowels in the cylinder block that align the flywheel housing. Replace the dowels, if necessary.

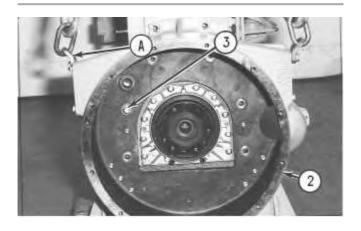


Illustration 3

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- 2. Use Tooling (A) and a suitable lifting device to position flywheel housing (2) on the dowels that are on the cylinder block. The weight of flywheel housing (2) is approximately 32 kg (70 lb).
- 3. Install mounting bolts (3).

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