

Product: BACKHOE LOADER

Model: 436C BACKHOE LOADER 9JN

Configuration: 436C Backhoe Loader Center Pivot, Single Tilt 9JN01050-UP (MACHINE) POWERED BY 3054 Engine

Disassembly and Assembly 3054 Engine for Caterpillar Built Machines

Media Number -SEN6241-13

Publication Date -01/08/2008

Date Updated -04/08/2008

i01083652

Fuel Injection Pump - Remove - Type 1 Engines and 9RM Engines

SMCS - 1251-011

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	173-9774	Bolt Remover ⁽¹⁾	1
B	9U-6198	Crankshaft Turning Tool	1
C	8S-2264	Puller Group	1
	8S-4712	Bolt	2

⁽¹⁾ The bolt remover is required in order to remove the tamper proof bolts on the access cover for the fuel injection pump.

Start By:

- A. Remove the water pump. Refer to Disassembly and Assembly, "Water Pump - Remove".
- B. Remove the fuel injection lines. Refer to Disassembly and Assembly, "Fuel Injection Lines - Remove and Install".

Note: For a complete description of Type 1 and Type 2 engines, refer to the Disassembly and Assembly, "Engine Design" topic.

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 Tools and Shop Products Guide" for tools and supplies suitable to collect and contain fluids on Caterpillar products.

Dispose of all fluids according to local regulations and mandates.

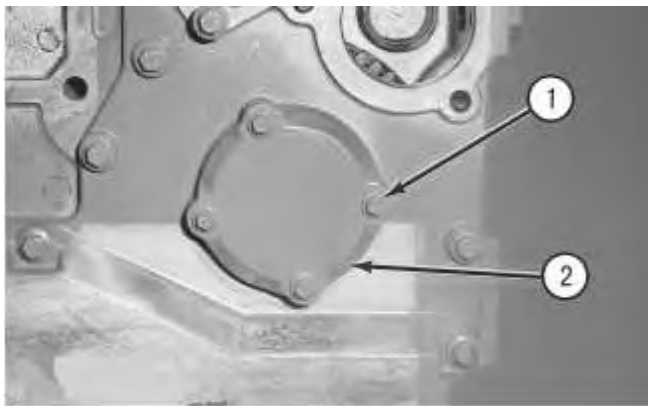


Illustration 1

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1. Remove four bolts (1) .

Note: Some engines may have four tamper proof bolts (1). Use Tool (A) in order to remove the tamper proof bolts.

2. Remove cover (2) .
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Illustration 2

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3. Remove nut (3) and the lockwasher.

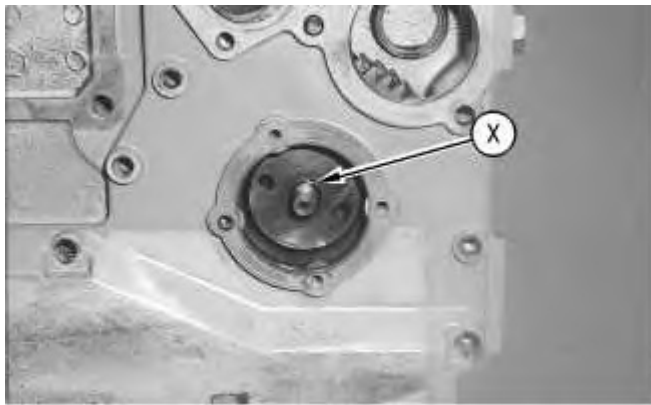


Illustration 3

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4. Use Tool (B) to rotate the crankshaft until keyway (X) is at 30 degrees from the vertical centerline.



Illustration 4

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5. Install Tool (C) .
6. Disengage the gear from the fuel injection pump.

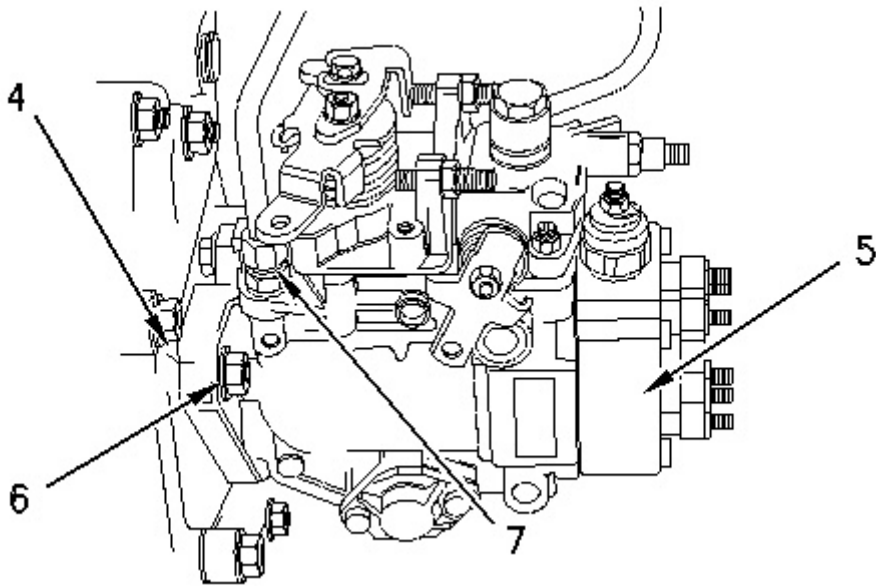


Illustration 5

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7. Disconnect hose (7) from the fuel injection pump.
8. Remove three nuts (6) that hold fuel injection pump (5) in position.
9. Remove fuel injection pump (5) and the gasket.

Note: Ensure that you do not lose the key when the fuel injection pump is removed. Also notice the position of marks (4) in order to ensure proper alignment of fuel injection pump (5) during installation.



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Disassembly and Assembly 3054 Engine for Caterpillar Built Machines

Media Number -SEN6241-13

Publication Date -01/08/2008

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Fuel Injection Pump - Install - Type 2 Engines and 7BJ Engines

SMCS - 1251-012

Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	150-3992	Timing Pin ⁽¹⁾	1
	150-3993	Timing Pin ⁽²⁾	1
B	171-1085 or 173-9774	Tamper Resistant Tool Gp	1

⁽¹⁾ Tooling (A) is required in order to install Bosch fuel injection pumps.

⁽²⁾ Tooling (A) is required in order to install Dephi (Lucas) and Stanadyne fuel injection pumps.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

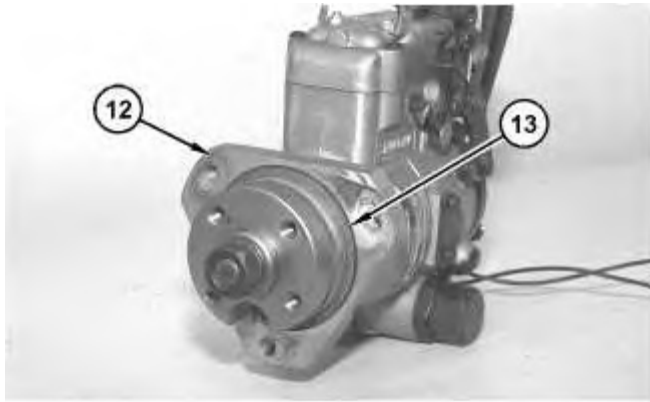


Illustration 1

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Typical example

1. Check the condition of O-ring seal (13) on fuel injection pump (12). If the seal is worn or damaged, replace the seal.
2. Lightly lubricate O-ring seal (13) with clean engine oil. Install O-ring seal (13) on fuel injection pump (12) .

NOTICE

The No. 1 cylinder must be at the top center position on the compression stroke before the fuel injection pump is installed. If the crankshaft needs to be rotated, the fuel injection pump must be mounted temporarily or the loose gear could cause damage to the front housing.

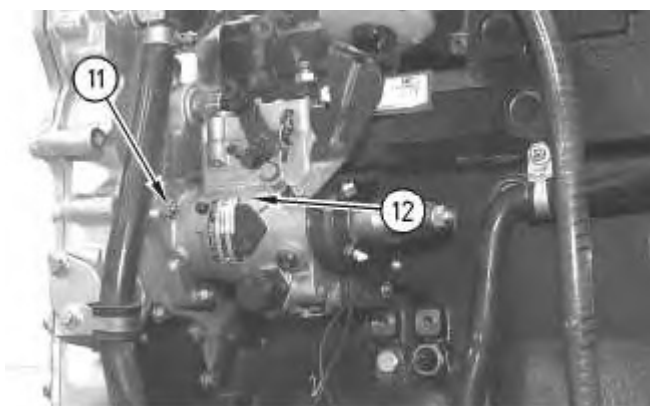


Illustration 2

g00808376

Typical example

- Put fuel injection pump (12) in position on the engine. Ensure that the timing gear is aligned with the hub of fuel injection pump (12). Install three flange nuts (11) and tighten the flange nuts to a torque of 28 N·m (21 lb ft).

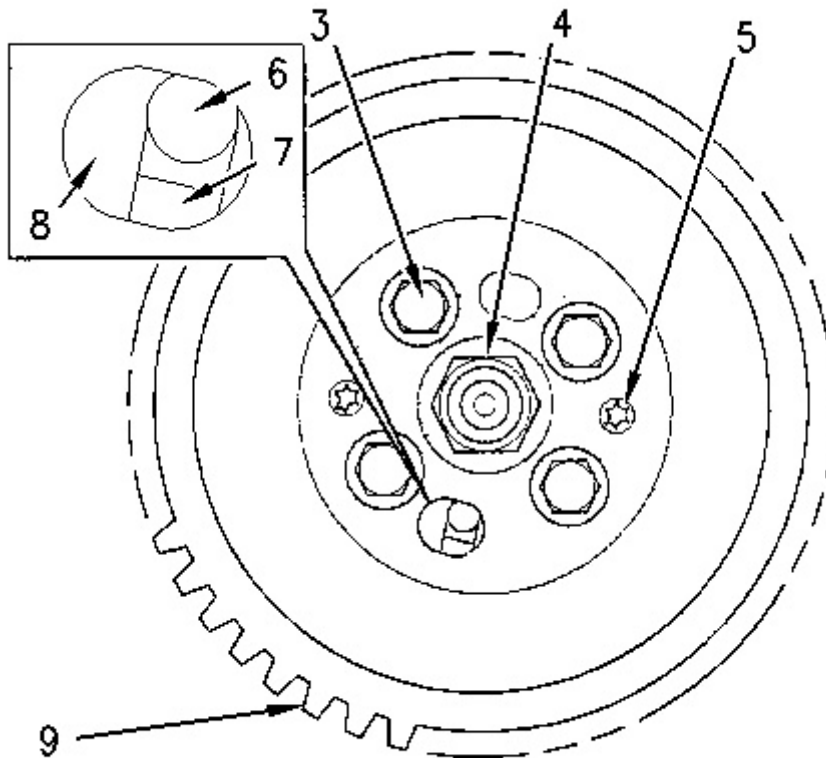


Illustration 3

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Typical example

- Position gear (9) on the shaft of the fuel injection pump.

Note: Some fuel injection pumps are installed with tamper proof bolts. Tooling (B) may be necessary in order to install the tamper proof bolts.

- Put the timing gear plate in position and install four bolts (3). Tighten the four bolts finger tight.

Note: The fuel injection pump gear will only fit in one position. Install the gear with the letters "C" and "M" facing away from the engine.

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