

## Engine Oil Relief Valve - Remove and Install

SMCS - 1315-010

### Removal Procedure

**Note:** Refer to Specification UENR0995 "Engine Design" for non-specified engine Torque Values.

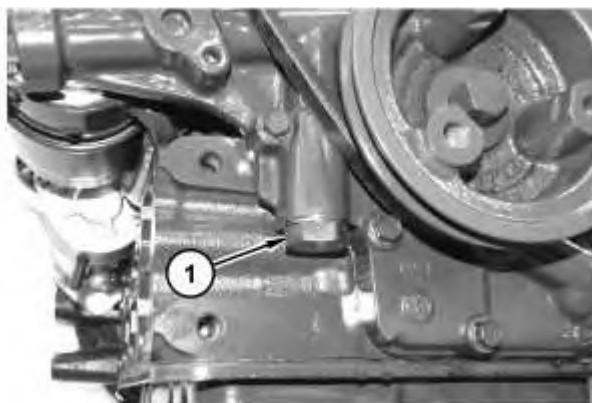


Illustration 1

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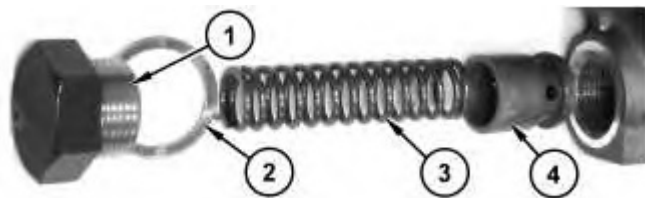


Illustration 2

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## WARNING

**Personal injury can result from being struck by parts propelled by a released spring force.**

**Make sure to wear all necessary protective equipment.**

**Follow the recommended procedure and use all recommended tooling to release the spring force.**

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1. Loosen plug (1). Carefully remove cap (1) from the front housing cover.

**Note:** The spring force will be released when the cap is removed.

2. Remove plug (1), washer (2), spring (3), and plunger (4) from the bore for the relief valve in the front housing cover.

## Installation Procedure

1. Install engine oil relief valve (1) in the reverse order of removal.

- a. Install plug (1) and tighten plug (1) to a torque of 69 to 78 N·m (51 to 57 lb ft).

**Note:** Ensure that the spring is properly located inside the plunger and the cap.

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## Engine Oil Pump - Remove and Install

SMCS - 1304-010

### Removal Procedure

**Start By:**

- a. Remove the front housing.

**Note:** Refer to Specification UENR0995 "Engine Design" for non-specified engine Torque Values.

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#### 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.**

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Illustration 1

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1. Remove screws (2) and cover (1).

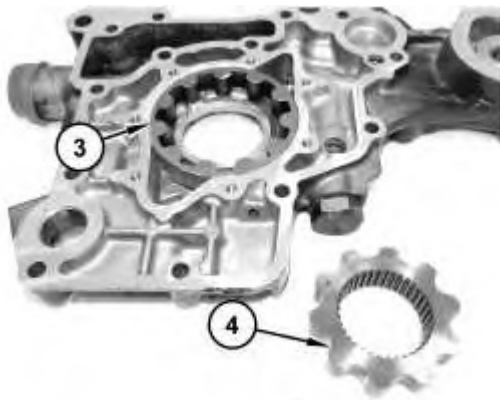


Illustration 2

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2. Remove inner rotor (4) from outer rotor (3).

## Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	129-1967	White Grease	1

### NOTICE

**Keep all parts clean from contaminants.**

**Contaminants may cause rapid wear and shortened component life.**

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## NOTICE

**If any part of the engine oil pump is worn or damaged, the complete assembly of the engine oil pump must be replaced.**

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1. Ensure that all components of the engine oil pump are clean and free from wear and damage.

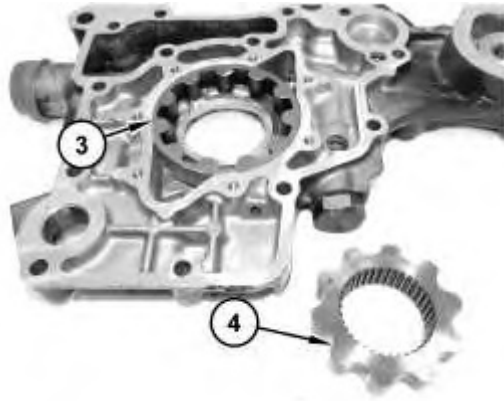


Illustration 3

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2. Position outer rotor (3) into the pump body. Check the clearance between outer rotor (3) and the pump body.
3. Install inner rotor (4) into outer rotor (3). Check the clearance between the lobes of outer rotor (3) and inner rotor (4).



Illustration 4

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4. Position a strip of Plastigage onto the outer rotor face with Tooling (A). Position cover (1) and install screws (2) and torque. Remove cover (1) and check clearance between the rotor and cover (1).
5. Position cover (1) and install screws (2). Tighten screws (2) to a torque of 8 to 9 N·m (70 to 83 lb in).

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