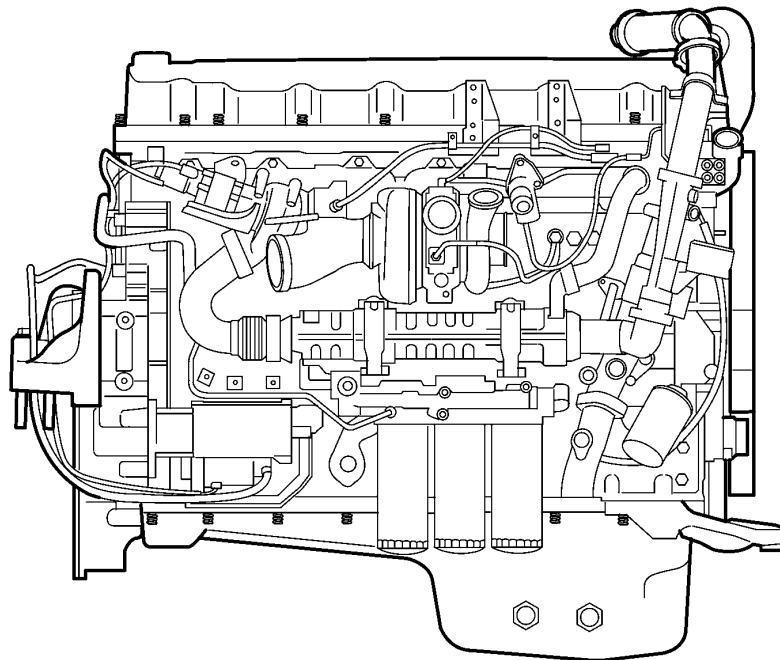


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Crankshaft Seal  
Replacement (Front)  
D13F

## Crankshaft Seal, Replacement (Front)



W2005779

This information covers service procedures for replacing the front crankshaft seal on the Volvo D13F engine.

### Contents

- "Special Tools" page 2
- "Crankshaft Seal, Replacement (Front)" page 3

**Note:** Information is subject to change without notice.  
Illustrations are used for reference only and can differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.

# Tools

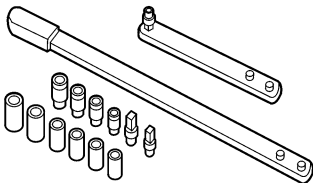
## Special Tools

For special tools ordering information, refer to Tool Information, group 08.



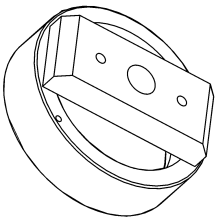
W0001793

**9992000**  
Handle



W0001817

**J-44392**  
Drive Belt Tensioner Tool



T0012654

**88800021**  
Seal Remover/Installer

## Service Procedures

**2167-03-03-02**

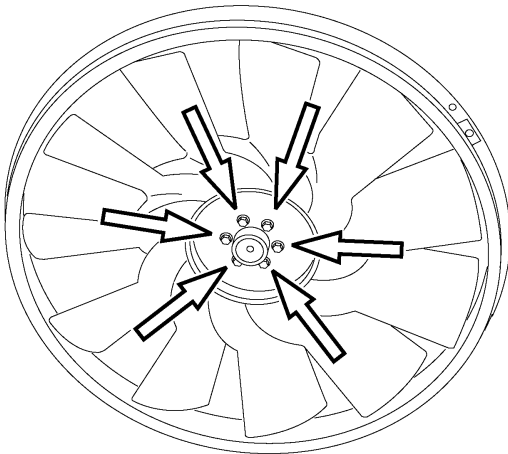
### Crankshaft Seal, Replacement (Front)

Radiator Removed

*Special tools: 9992000, 88800021, J44392*

**1**

Remove fan blade from the fan clutch.

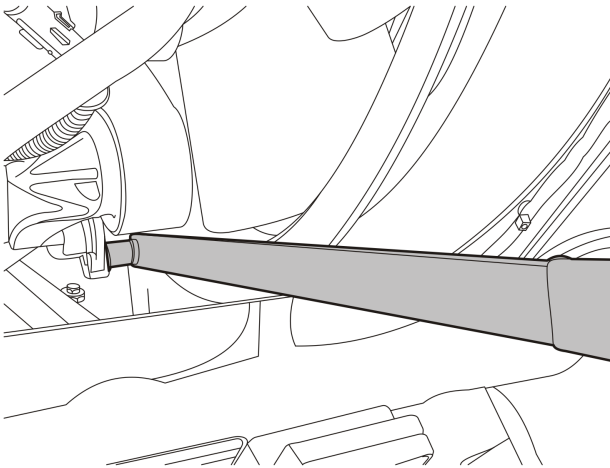


W2006089

**2**

Compress the belt tensioner to release pressure on the fan and coolant pump drive belt and remove the belt.

J44392



W2006031

**3**

Compress the accessory belt tensioner and remove the drive belt from the vibration damper, A/C compressor and alternator pulleys.

J44392

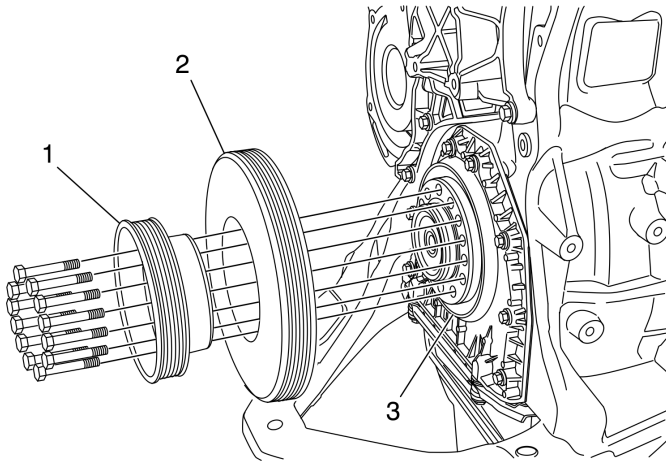
**4**  
Remove the mounting fasteners and remove the front engine PTO, if so equipped.

**5**  
Remove the mounting fasteners securing the pulley and vibration damper to the crankshaft hub, now the pulley and damper can be removed.



**CAUTION**

When handling a vibration damper, be careful not to damage the housing. Dents in the outer housing can render the damper ineffective. The vibration damper cannot be repaired.



W2005536

- 1 Fan and Coolant Pump Drive Pulley
- 2 Vibration Damper
- 3 Crankshaft Hub

**6**  
Remove the front crankshaft seal as follows:

- 1 Drill two 3.5 mm (0.138 inch) holes in the metal rim of the front crankshaft seal using the holes in the rim of the seal remover/installer.

**Note:** Apply grease to the drill bit to prevent dirt getting into the engine.

- 2 Using two self-tapping M5 fasteners of suitable length, attach the front crankshaft seal remover/installer to the seal.
- 3 Using two M10 fasteners threaded into the remover/installer, remove the front crankshaft seal.

88800021

**7**  
Clean the seal seating surface in the crankshaft front cover and the sealing surface on the crankshaft hub.

**8**  
Assemble the handle and front crankshaft seal remover/installer.

9992000, 88800021

**9**

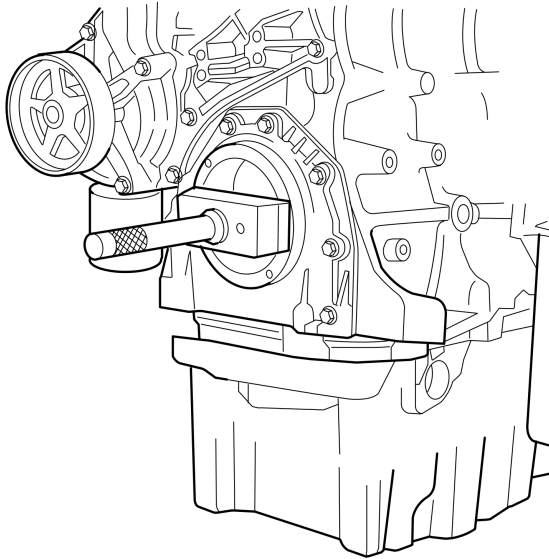
Place the seal in position on the remover/installer.

**Note:** The seal should be installed dry. No sealant or lubricant is necessary.

**10**

Position the remover/installer with new seal in place over the crankshaft hub and seal cover. Carefully drive the seal into the cover until the tool bottoms against the crankshaft hub.

9992000, 88800021



W2005547

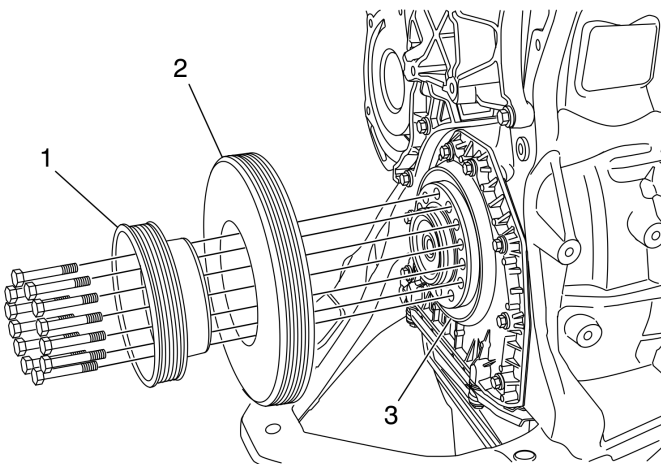
**11**

Remove the tool and check the seal to be sure that it is properly installed.

**12**

Place the vibration damper and fan pulley in position on the crankshaft hub. Tighten the mounting fasteners in two steps, first to  $35 \pm 5$  Nm ( $26 \pm 4$  ft-lb), and then, to  $90 \pm 10$  Nm ( $66 \pm 7$  ft-lb).

$35 \pm 5$  Nm  
( $26 \pm 4$  ft-lb)  
 $90 \pm 10$  Nm  
( $66 \pm 7$  ft-lb)

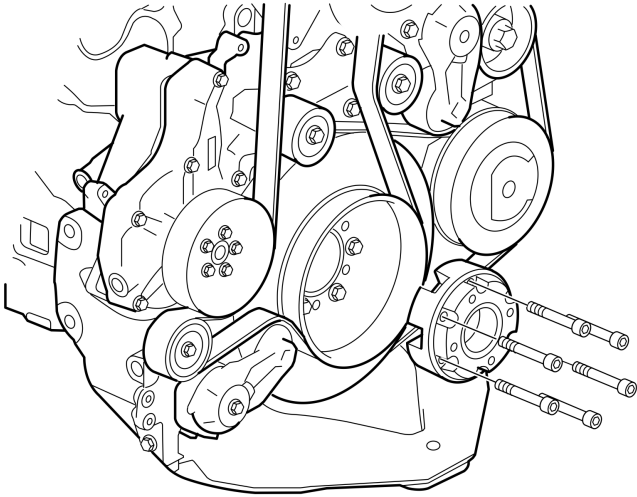


W2005536

- 1 Fan and Coolant Pump Drive Pulley
- 2 Vibration Damper
- 3 Crankshaft Hub

**13**

Install the front engine PTO, if so equipped.  
Torque-tighten the mounting fasteners to specification.



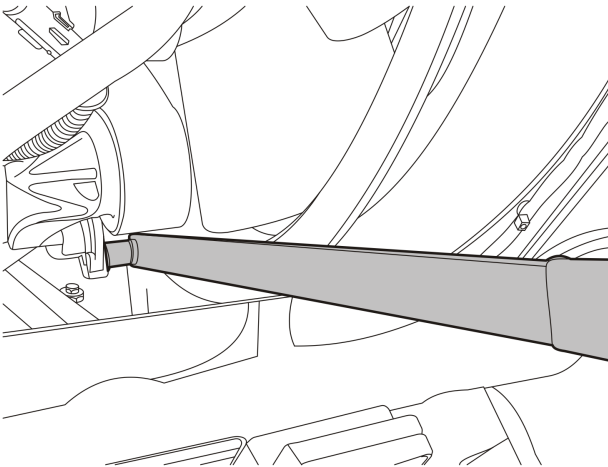
W4002845

**14**

Compress the accessory drive belt tensioner and install the drive belt over the crankshaft, A/C compressor and alternator pulleys.

**15**

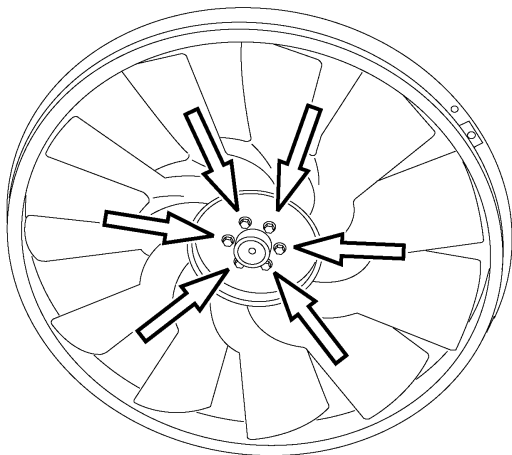
Compress the lower belt tensioner and install the drive belt over the crankshaft, fan drive and coolant pump pulleys.



W2006031

**16**

Install the fan blade and torque-tighten the mounting fasteners to specification.



W2006089