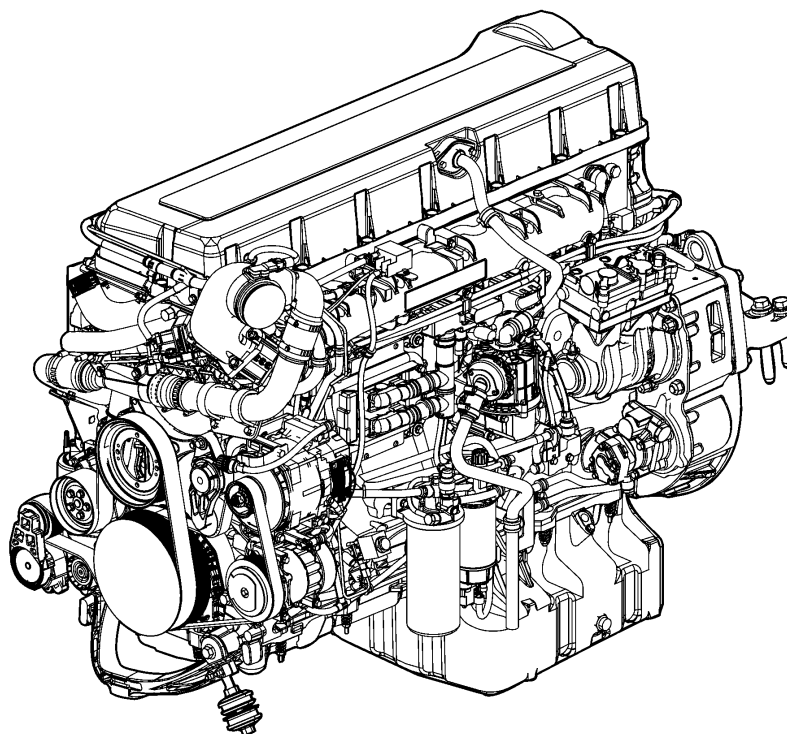


Crankshaft Seal
Replacement (Front)
D16F

Crankshaft Seal, Replacement (Front)



W2005773

This information covers service procedures for replacing the rear crankshaft seal on the Volvo D16F 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 may differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.

Tools

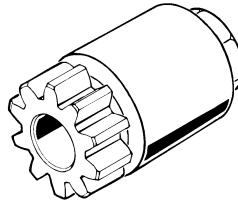
Special Tools

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



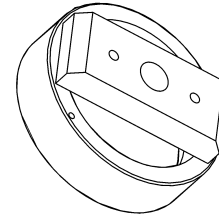
W0001793

9992000
Handle



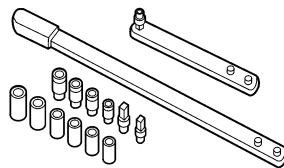
T0012612

88800014
Engine Turning Tool



T0012654

88800021
Seal Remover/Installer



W0001817

J44392
Drive Belt Tensioner Tool

Service Procedures

2167-03-03-02

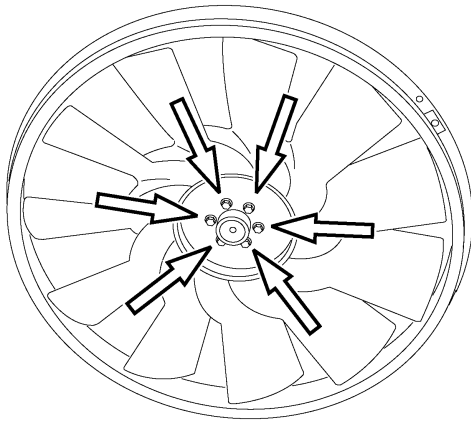
Crankshaft Seal, Replacement (Front)

Radiator Removed

Special tools: 9992000, 88800014, 88800021, J44773

1

Remove the mounting screws and remove the fan blade and clutch assembly from the drive hub.

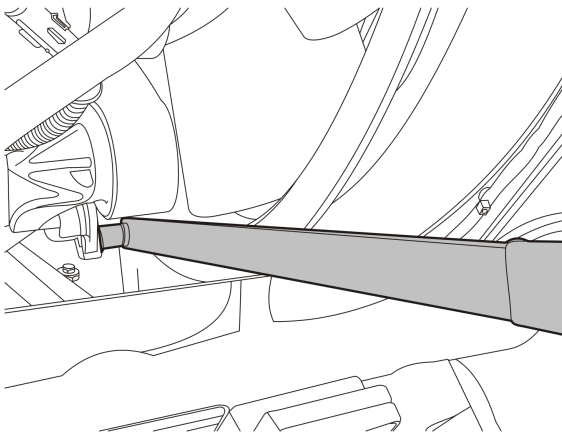


W2006089

2

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

J44392



W2006031

3

Remove the mounting screws and remove the belt tensioner assembly.

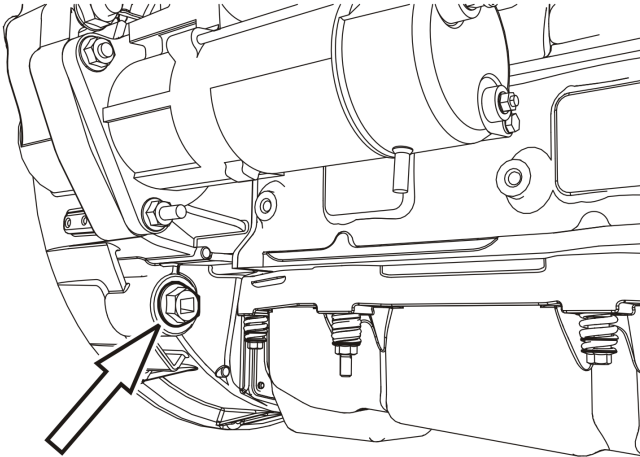
4

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

5

Install the engine turning tool in the hole of the flywheel housing.

88800014



W0002368

6

Lock the flywheel by installing a wrench on the engine turning tool and locking the wrench against the side of the engine block.

7

Remove the mounting screws and remove the front engine PTO if so equipped.

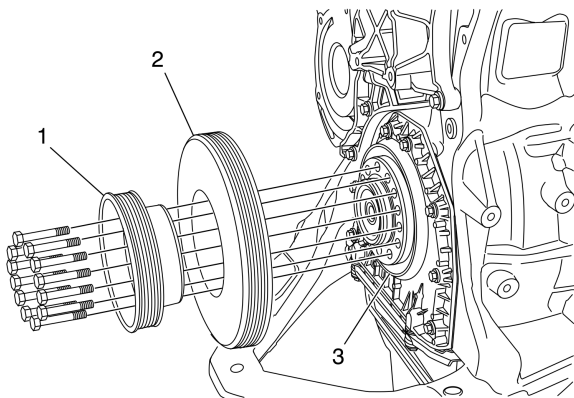
8

Remove the mounting screws securing the fan pulley and vibration damper to the crankshaft hub.



CAUTION

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



W2005536

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

9

Remove the fan pulley and vibration damper from the hub. Use care to avoid damaging the vibration damper housing.

10

Remove the old oil seal.

- 1 Drill two 3.5 mm (0.138 inch) holes in the metal rim of the oil seal using the holes in the rim of the seal remover/installer.
Apply grease on the drill bit to prevent dirt getting into the engine.
- 2 Using two self-tapping M5 screws of suitable length, attach the front main seal remover/installer to the seal.
- 3 Using two M10 screws threaded into the remover/installer, pull the oil seal off the crankshaft.

88800021

11

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

12

Assemble the handle and front main seal remover/installer.

9992000, 88800021

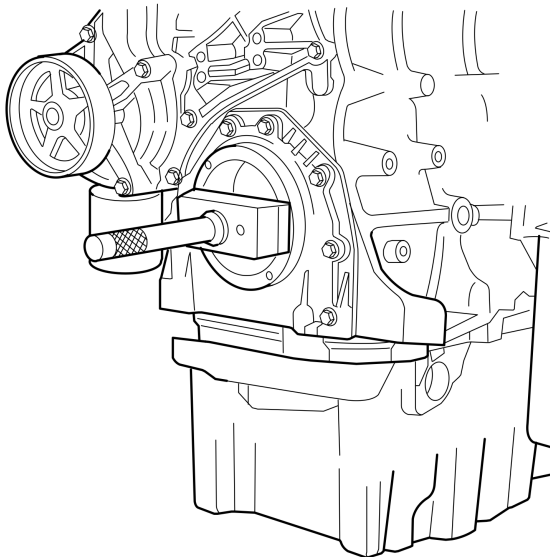
13

Place the seal in position on the remover/installer.

14

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.

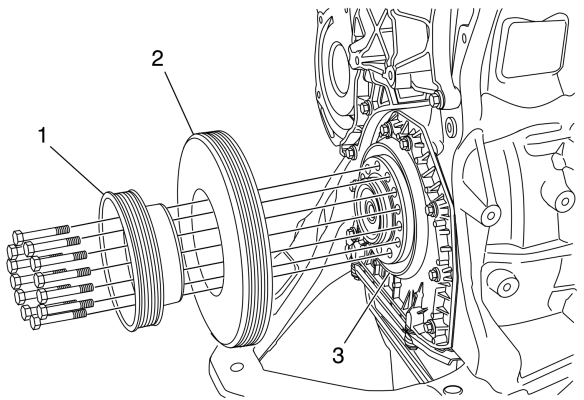
9992000, 88800021



W2005547

15

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



W2005536

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

16

Place the vibration damper and fan pulley in position on the crankshaft hub. Tighten the mounting screws to specification in two steps, first to 40 ± 4 Nm (30 ± 3 ft-lb) and then, to 90 ± 10 Nm (66 ± 7 ft-lb).

Step 1 — 40 ± 4 Nm (30 ± 3 ft-lb)

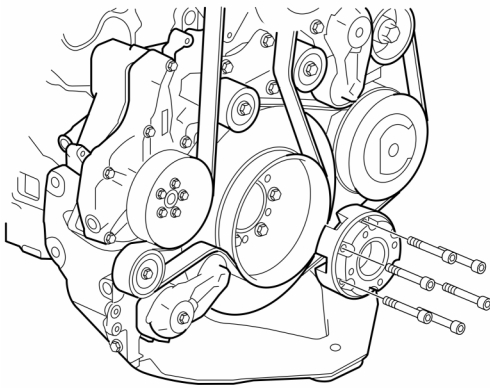
Step 2 — 90 ± 10 Nm (66 ± 7 ft-lb)

17

Install the front engine PTO, if so equipped. Tighten the mounting screws to specification in two steps, first to 40 ± 4 Nm (30 ± 3 ft-lb) and then, to 90 ± 10 Nm (66 ± 7 ft-lb).

Step 1 — 40 ± 4 Nm (30 ± 3 ft-lb)

Step 2 — 90 ± 10 Nm (66 ± 7 ft-lb)



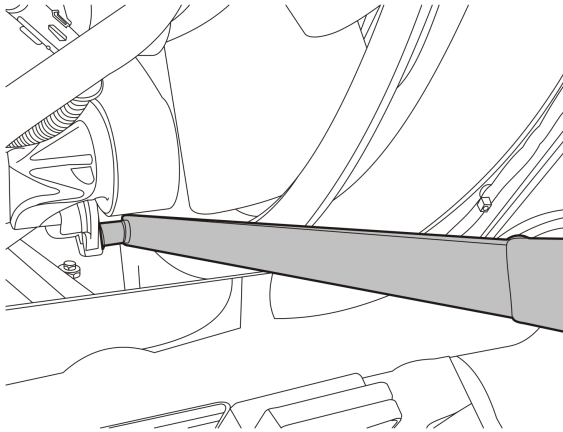
W4002845

18

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

19

Install the lower drive belt tensioner and tighten the mounting screws to 48 ± 8 Nm (35 ± 6 ft-lb).



W2006031

20

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

21

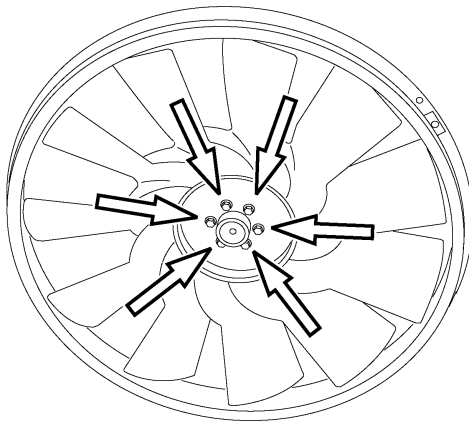
Remove the wrench from the engine turning tool, and remove the engine turning tool from the flywheel housing.

88800014

22

Install the fan blade and clutch assembly on the fan drive hub. Tighten the mounting screws to 48 ± 8 Nm (35 ± 6 ft-lb).

48 ± 8 Nm
(35 ± 6 ft-lb)



W2006089