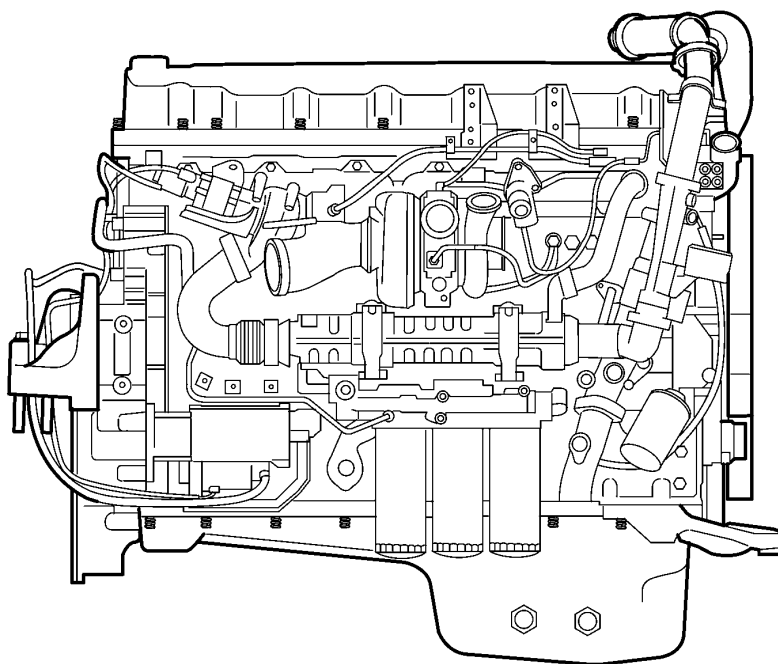


Date	Group	No.	Page
2.2007	216	84	1(6)

Crankshaft Seal Replacement (Rear) D13F

Crankshaft Seal, Replacement (Rear)



W2005779

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

Contents

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

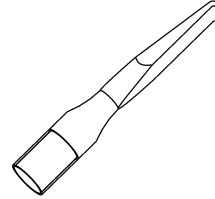
For special tools ordering information, refer to Tool Information, group 08.



W0001798

9998238

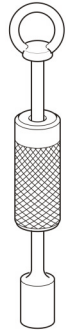
Seal Installer (Drift)
Used with Handle 9992000



T0011294

9990192

Crankshaft Seal Puller



W2005717

9996400

Slide Hammer



W0001793

9992000

Handle

Service Procedures

2167-03-02-01

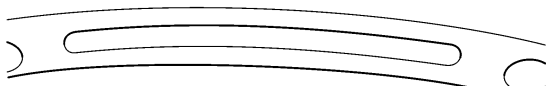
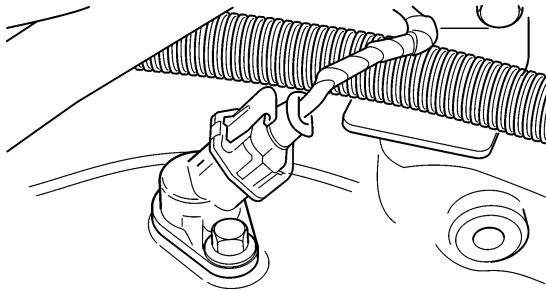
Crankshaft Seal, Replacement (Rear)

(In vehicle with transmission, clutch, and flywheel removed)

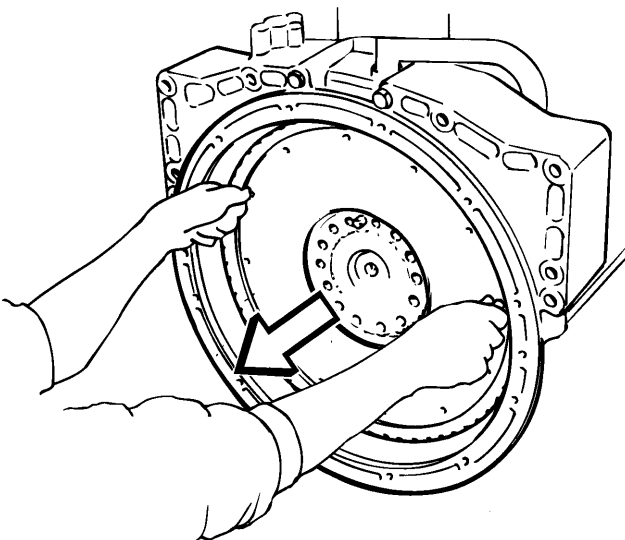
You must read and understand the precautions and guidelines in Service Information, Group 20, "General Safety Practices, Engine" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

Special tools: 9990192, 9996400, 9992000, 9998238

1
Unplug the connector, remove the bolt and carefully pull the flywheel sensor out of the flywheel housing.



T2022243

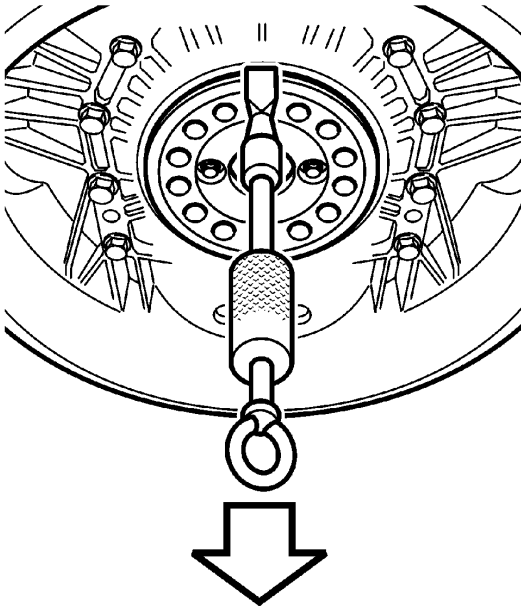


T2006667

2
Install two screws (M10x100) into the flywheel as handles to aid in removal. Remove the flywheel mounting screws and remove the flywheel from the crankshaft.

! DANGER

The flywheel is heavy. Do not attempt to remove the flywheel without the help of an assistant or the use of a suitable lifting device. Failure to heed this caution can result in severe personal injury and component damage.

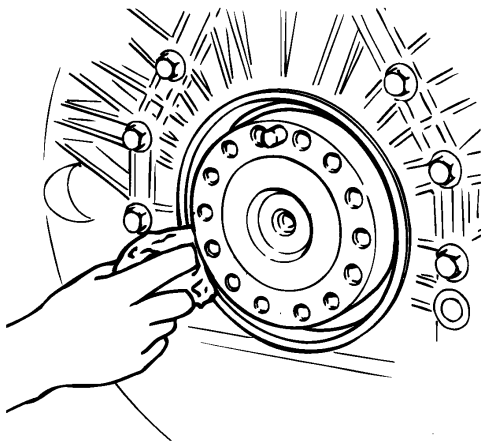


T2021760

3
Attach the puller to the slide hammer. Check that the tools are free from burrs and dirt. Insert the end of the puller between the seal and crankshaft and tap out the seal.

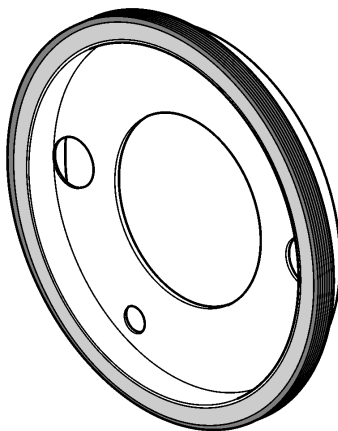
Note: Make sure not to damage the crankshaft. Slant the puller inwards to get a good grip on the seal.

9990192, 9996400



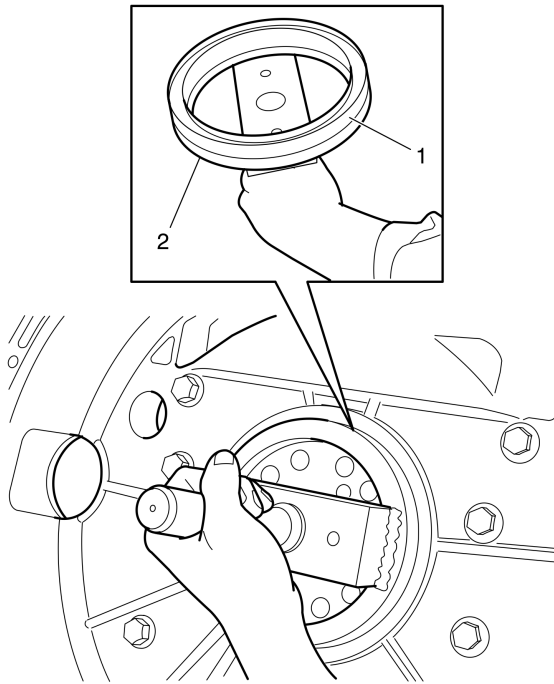
T2006662

4
Thoroughly clean the sealing surfaces of the flywheel housing and of the crankshaft.



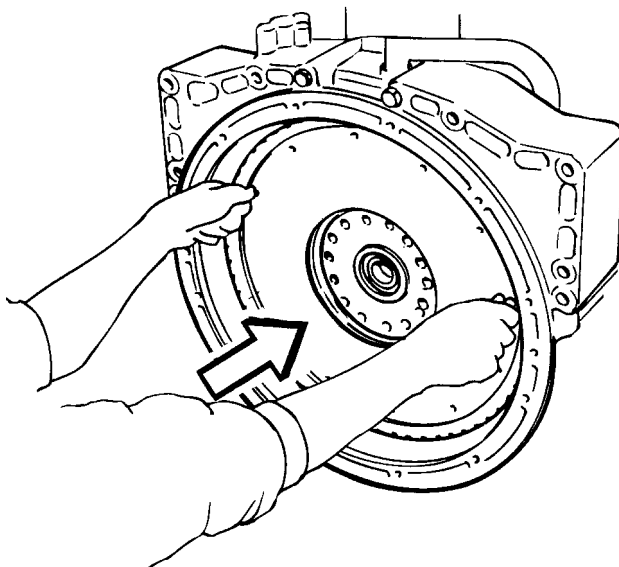
5
Note: Standard size Teflon seals are shipped on a plastic installation sleeve. Do not remove the seal from the sleeve before installation. The installation sleeve provides a smooth surface for the seal as it moves from the tool to the crankshaft flange. Thoroughly clean the surface of the crankshaft flange.

T2022255



W2005548

- 1 Rear Crankshaft Seal
- 2 Rear Crankshaft Seal Installer



T2009043

6

Install the new seal on the drift, making sure that the seal is turned in the proper direction. Carefully tap the seal into the flywheel housing using the handle and drift until the drift evenly contacts the crankshaft.

Note: Position the drift so that it does not interfere with the alignment dowel during installation. The rear crankshaft seal depth of 8.0 ± 0.5 mm (0.315 ± 0.002 inch) is set by the drift tool when fully seated.

9992000, 9998238

7

Note: When installing the flywheel, insert two alignment studs in the crankshaft flange to aid in the installation. Position the flywheel over the dowel pin and alignment studs on the flywheel mounting surface at the rear of the crankshaft.

8

Install the flywheel mounting screws and tighten the screws finger-tight.

9

Remove the two alignment studs and insert the remaining mounting screws.

10



CAUTION

Do not tighten adjacent screws sequentially. Doing so can result in uneven flywheel alignment. Failure to heed this caution can result in severe engine damage.

Tighten the screws in a crisscross pattern to 60 ± 5 Nm (44 ± 4 ft-lb) plus 135 ± 10 degrees rotation.

11

Carefully install the flywheel sensor along with any shims, install the bolt and tighten to specification. Plug the harness connector onto the flywheel sensor.