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Camshaft Front Seal (12.13.44)

Special Service Tools



Holder - Camshaft Pulleys Front
303-1124



Installer - Camshaft Oil Seal
303-1119



Remover - Camshaft Oil Seal
303-1118

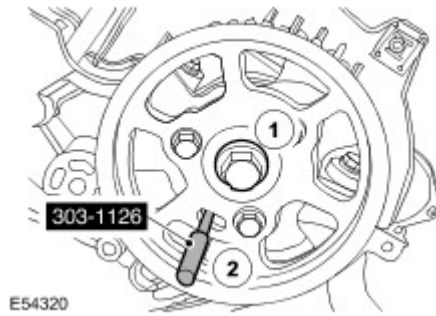


Timing Pin - Camshaft Pulleys
303-1126

Removal

- 1 . Disconnect the battery ground cable. For additional information, refer to [Specifications](#) (Section 414-00)
- 2 . Remove and discard the timing belt. For additional information, refer to [Timing Belt \(12.65.18\)](#) (Section 303-01)
- 3 . Remove the special tool.

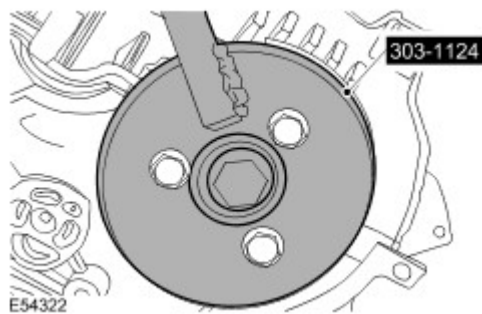
- ▶ Stage one: Retain the camshaft pulley.
- ▶ Stage two: Remove the special tool.



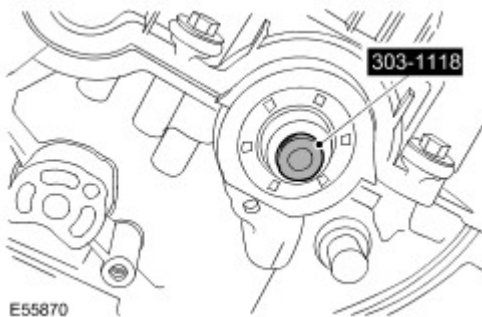
4. Remove the camshaft pulley.
- ▶ Remove the three retaining bolts.



5. Using the special tool, remove the camshaft pulley hub.
- ▶ Remove and discard the retaining bolt.



6. Install the special tool to the camshaft.

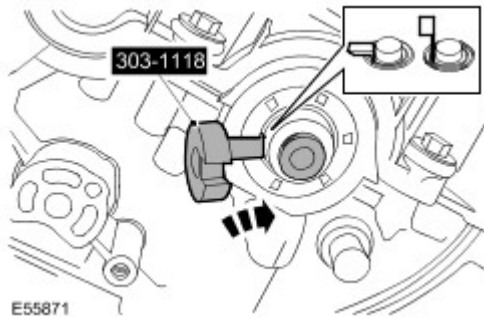


7.



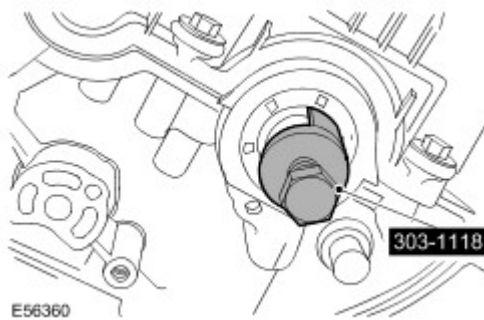
CAUTION: Make sure the special tool is correctly seated behind the camshaft seal. Failure to follow this instruction may result in damage to the special tool.

Install the special tool into the camshaft front seal.



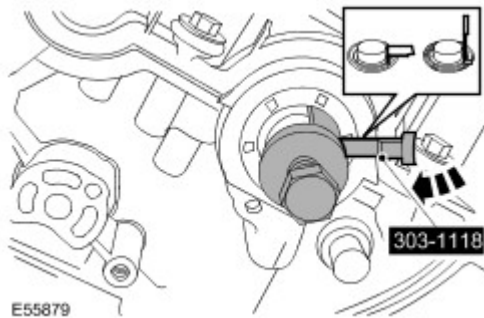
8.

Install the special tool extracting bolt.



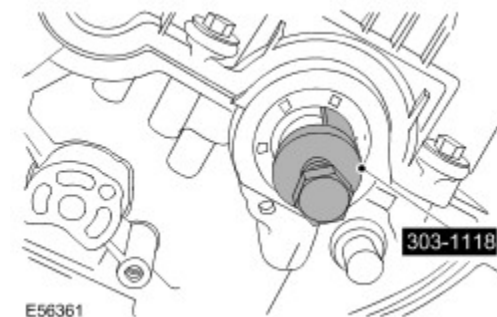
9.

Install the special tool into the camshaft front seal.



10.

Using the special tool, remove the camshaft front seal.



Installation

1.



CAUTION: A new camshaft front seal is supplied with a transit sleeve that must not be removed until the camshaft front seal is fully installed. Failure to follow this instruction may result in damage to the vehicle.



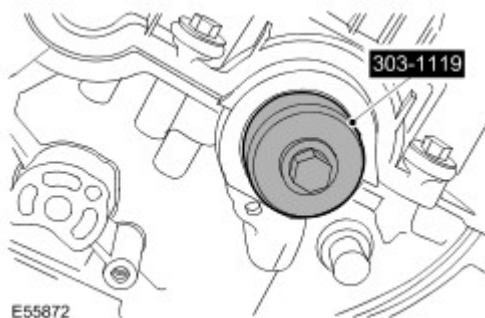
CAUTION: Do not use any lubricant on the camshaft front seal, transit sleeve or the camshaft. Failure to follow this instruction may result in damage to the vehicle.



CAUTION: Make sure the seal is installed correctly.

Using the special tool, install the camshaft front seal.

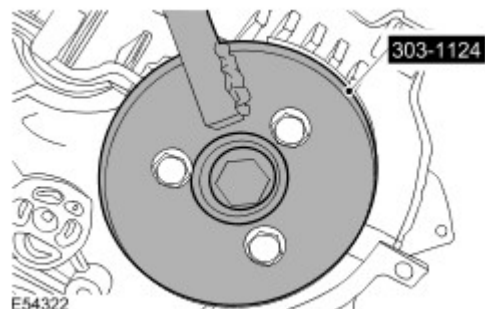
- Clean the component mating faces.
- Use the discarded camshaft pulley hub retaining bolt with the special tool.
- Remove and discard the transit sleeve.



2.

Using the special tool, install the camshaft pulley hub.

- Install a new retaining bolt.
- Tighten the retaining bolt in two stages:
 - Stage one: Tighten to 80 Nm (59 lb.ft).
 - Stage two: Tighten a further 90 degrees.

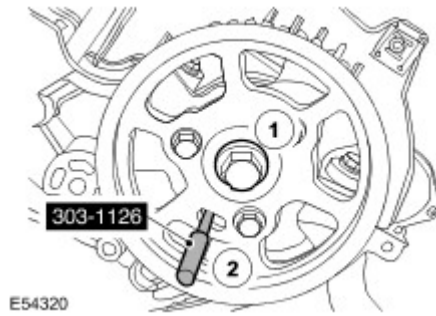


3.

Install the camshaft pulley.

- Install the bolts, but do not tighten fully at this stage.

- 4 . Install the special tool.
- ▶ Stage one: Retain the camshaft pulley.
 - ▶ Stage two: Install the special tool.



- 5 . Install the new timing belt. For additional information, refer to [Timing Belt \(12.65.18\)](#) (Section 303-01)
- 6 . Connect the battery ground cable. For additional information, refer to [Specifications](#) (Section 414-00)