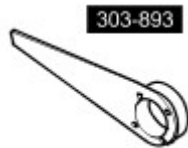


Published : Jul 14, 2005

Crankshaft Pulley (12.21.01)

Special Service Tools



E46728

Holding Tool Crankshaft Pulley (LRT-12-080)



E46730

Adapter
303-191-03



E59251

Bolts and spacers
303-191-04



E46729

Remover, crankshaft pulley
303-588



E64849


Remover, crankshaft seal 303-D121



Installer, crankshaft seal
303-1100

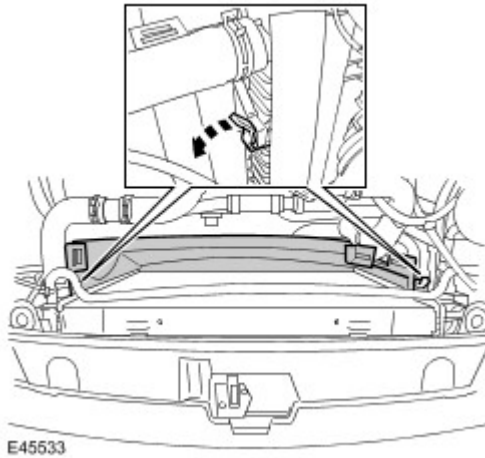
Removal

1. Disconnect the battery ground cable. For additional information, refer to [Specifications](#) (Section 414-00)

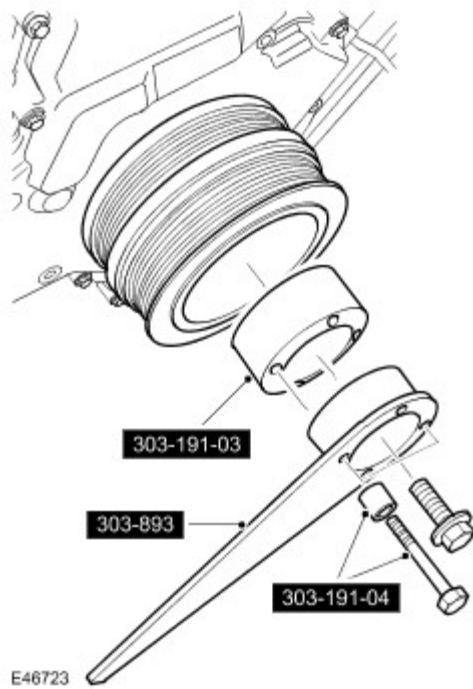
2.  **WARNING: Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.**

Raise and support the vehicle.

3. Remove the accessory drive belt. For additional information, refer to [Accessory Drive Belt \(86.10.03\)](#) (Section 303-05)



4. Remove the cooling fan shroud.
 - Release 2 clips from the cooling fan lower shroud.
 - Release and remove the cooling fan lower shroud from the cooling pack.
5. Using the special tools, retain the crankshaft pulley.



6 .



CAUTION: Under no circumstances should the crankshaft setting peg, 303-645, be used in the following operations, to restrain the crankshaft.

NOTE :

The crankshaft pulley retaining bolt will be very tight.

Remove the crankshaft pulley retaining bolt.

➤ Discard the bolt.

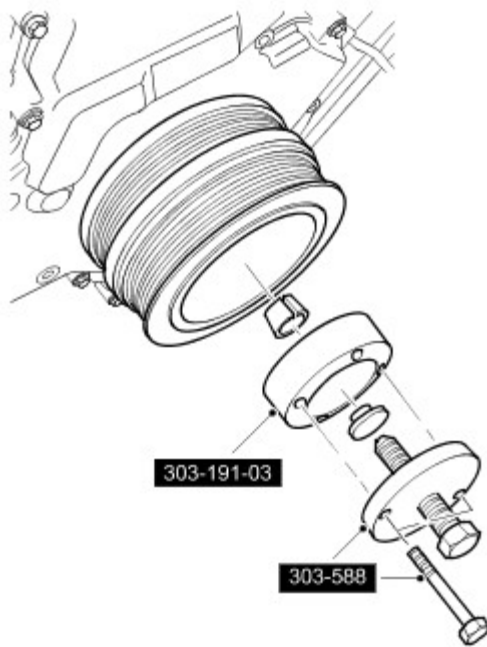
7 .

Remove the special tools.

8 .

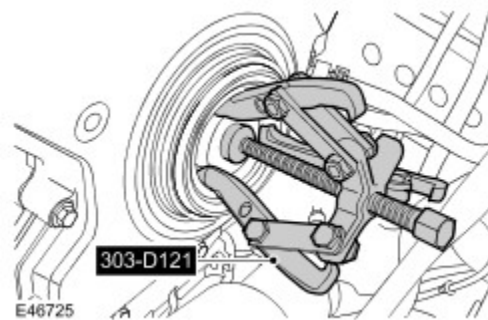
Using the special tools, remove the crankshaft pulley.

➤ Collect the locking ring.



E46724

- 9 . Remove the special tools from the crankshaft pulley.
- 10 . Using the special tool, remove the crankshaft front seal.
 - Remove the outer section of the seal.
 - Repeat the process to remove the inner section of seal.

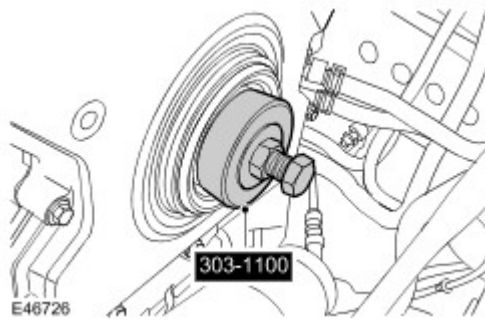


E46725

- 11 . Check the crankshaft damper pulley and locking ring for damage.

Installation

- 1 . Clean all the crankshaft pulley mating faces.
- 2 . Using the special tool, install the crankshaft front seal.
 - Lubricate the seal with clean engine oil.
 - Use the discarded crankshaft bolt with the service tool.




3. Install the crankshaft pulley.
 - ▶ Lubricate the seal with clean engine oil.

4. Install the crankshaft pulley locking ring.

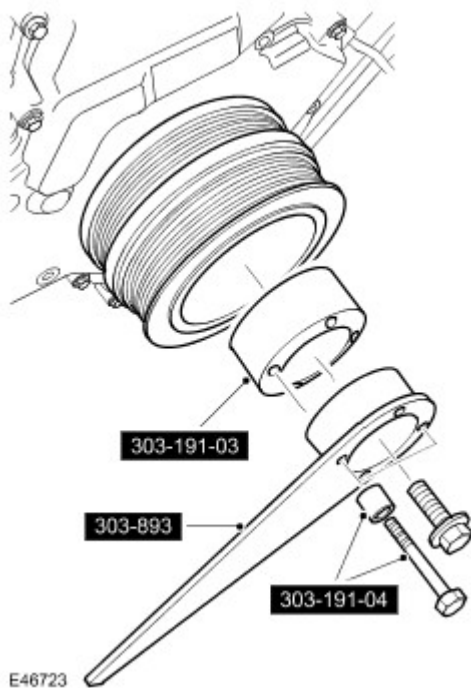
5.  **CAUTION: The screw thread in the crankshaft pulley must be cleaned out before installing a new crankshaft pulley bolt.**

Install, but do not tighten, the new crankshaft pulley bolt.

6.  **CAUTION: Under no circumstances should the crankshaft setting peg, 303-645, be used in the following operations, to restrain the crankshaft.**

Using the special tools, retain the crankshaft pulley.

- ▶ Tighten the crankshaft pulley bolt to 380 Nm (280 lb.ft).



7. Remove the special tools.

- 8 . Install the cooling fan lower shroud.
- 9 . Install the accessory drive belt. For additional information, refer to [Accessory Drive Belt \(86.10.03\)](#) (Section 303-05)
- 10 . Connect the battery ground cable. For additional information, refer to [Specifications](#) (Section 414-00)