ENGINE - V8 S/C 5.0L PETROL

CRANKSHAFT PULLEY (G1785711)

REMOVAL AND INSTALLATION

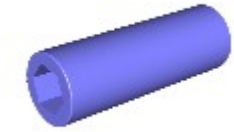
12.21.09	CRANKSHAFT DAMPER - RENEW	5000 CC, AJ V8, SUPERCHARGED	3	USED WITHINS

SPECIAL TOOL(S)

E115256

303-1437

Crankshaft Damper Remover/Installer



E115257

303-1438

Crankshaft Damper Bolt Remover/Installer

E115258

303-1439

Crankshaft Damper Removal Plate

E115259

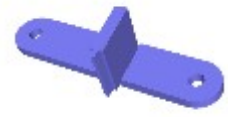
303-1440

Crankshaft Damper Removal/Installation Stud

E115260

303-1441

Crankshaft Damper Remover/Installer Body



E115266

303-1448

Locking Tool

 E152576	**JLR-303-1304** Locking Tool

REMOVAL

NOTE:

Removal steps in this procedure may contain installation details.

1. Refer to: Battery Disconnect and Connect (414-01 Battery, Mounting and Cables, General Procedures).

2. **WARNING:**

   Make sure to support the vehicle with axle stands.

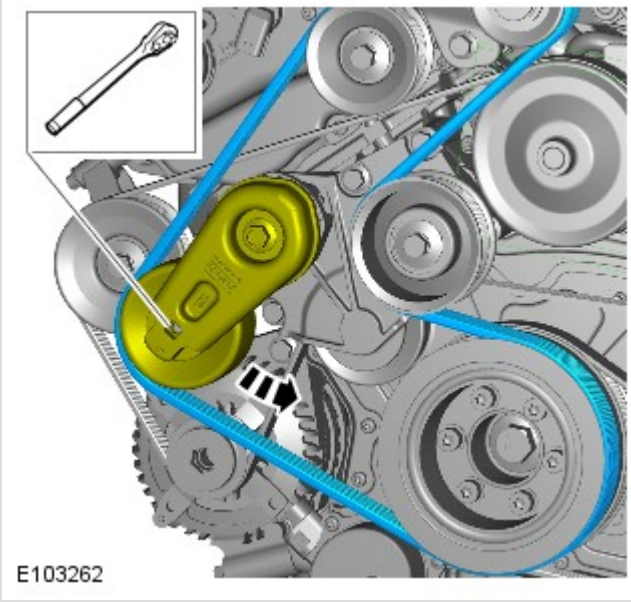
   Raise and support the vehicle.

3. Remove the cooling fan.
   Refer to: Cooling Fan Motor and Shroud - V8 S/C 5.0L Petrol (303-03C Engine Cooling - V8 5.0L Petrol/V8 S/C 5.0L Petrol, Removal and Installation).

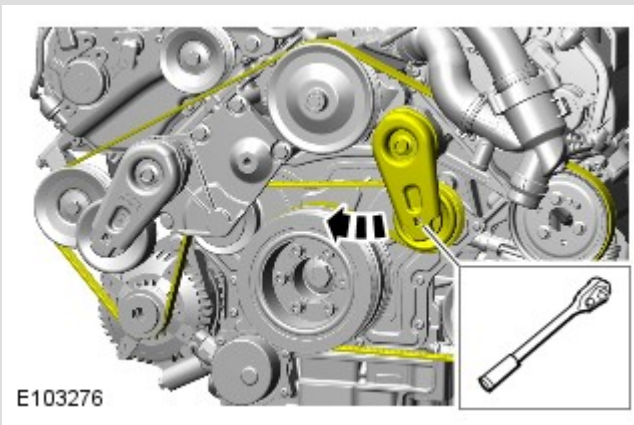
4. Remove the starter motor.

Refer to: Starter Motor (303-06B Starting System - V8 5.0L Petrol/V8 S/C 5.0L Petrol, Removal and Installation).

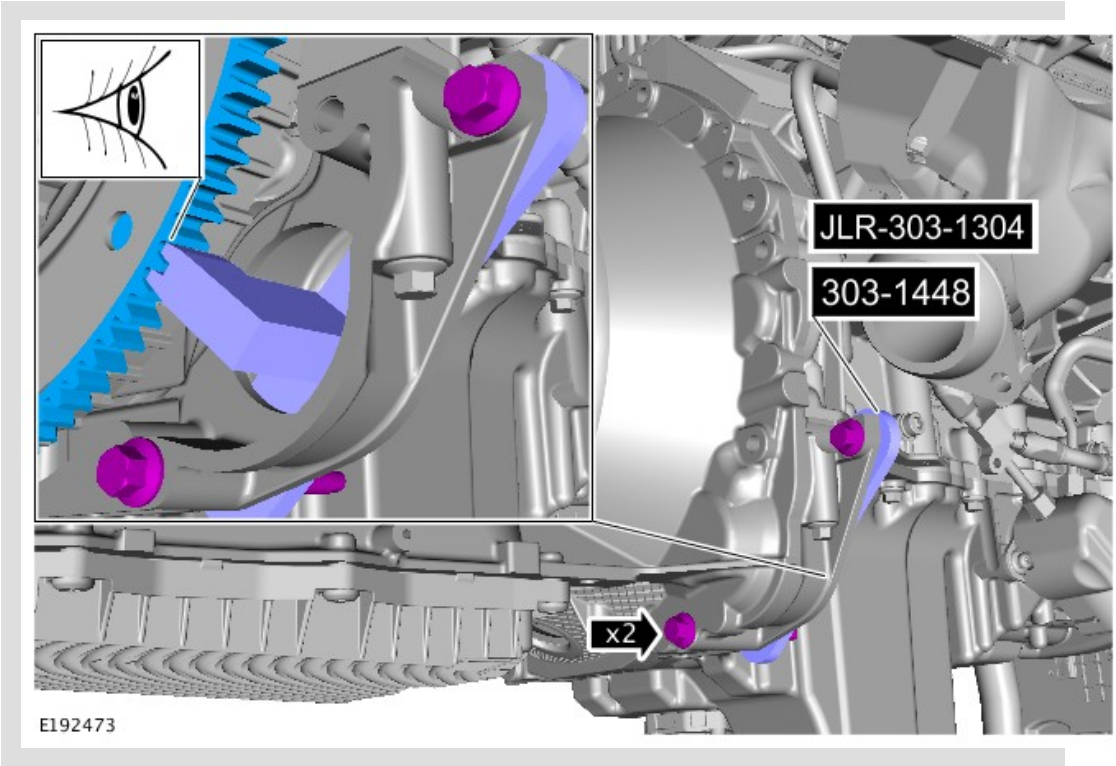
5.



6.



7.

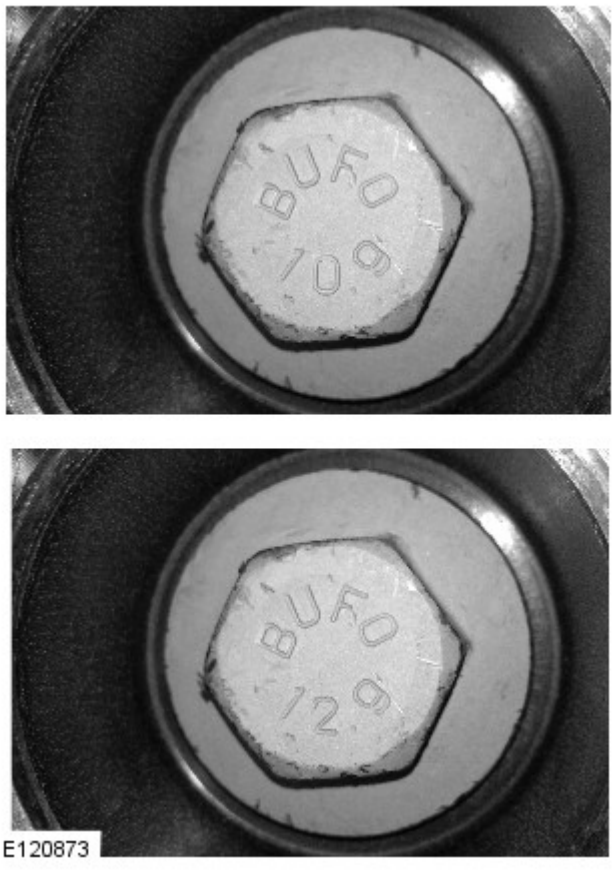


- Install the special tool.
- Vehicles without Auto stop/start system.
  Special Tool(s): 303-1448
- Vehicles with Auto stop/start system.
  Special Tool(s): JLR-303-1304

8.

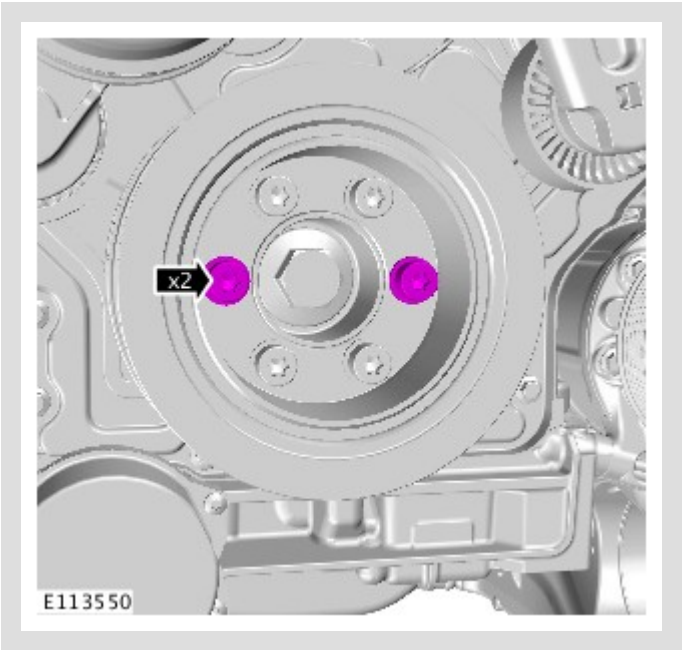
CAUTION:

Before removing the crankshaft pulley bolt, note the numbers on the bolt head. If the bolt head shows 10.9, the bolt must be removed counter clockwise. If the bolt head shows 12.9, the bolt must be removed clockwise. Failure to follow this instruction may result in damage to the crankshaft.

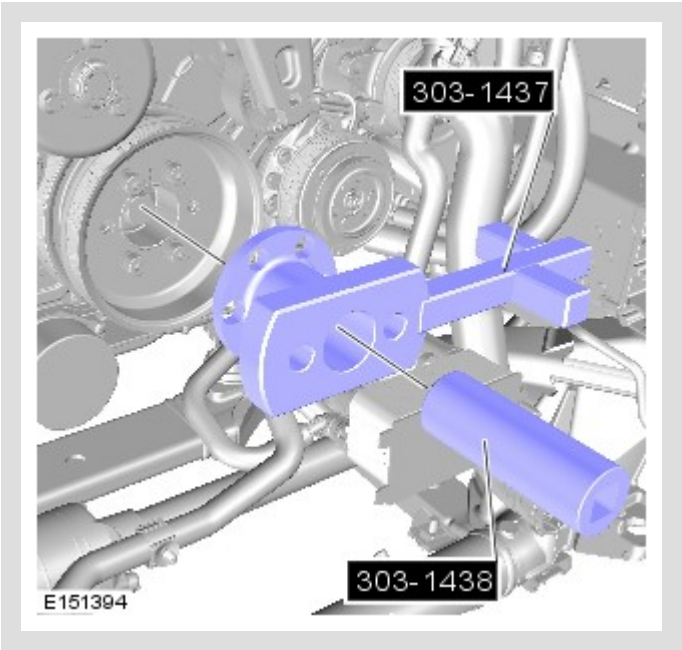


Note the markings on the crankshaft pulley bolt.

9.



10.



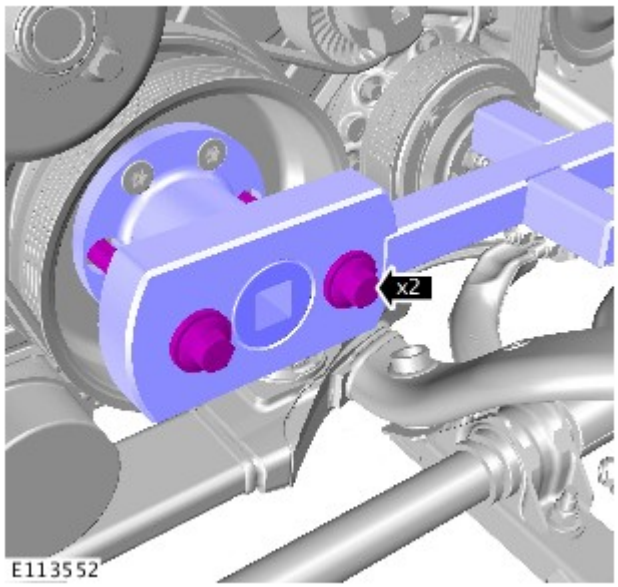
- Install the special tools.
- *Special Tool(s):* 303-1437

- *Special Tool(s):* 303-1438

11.

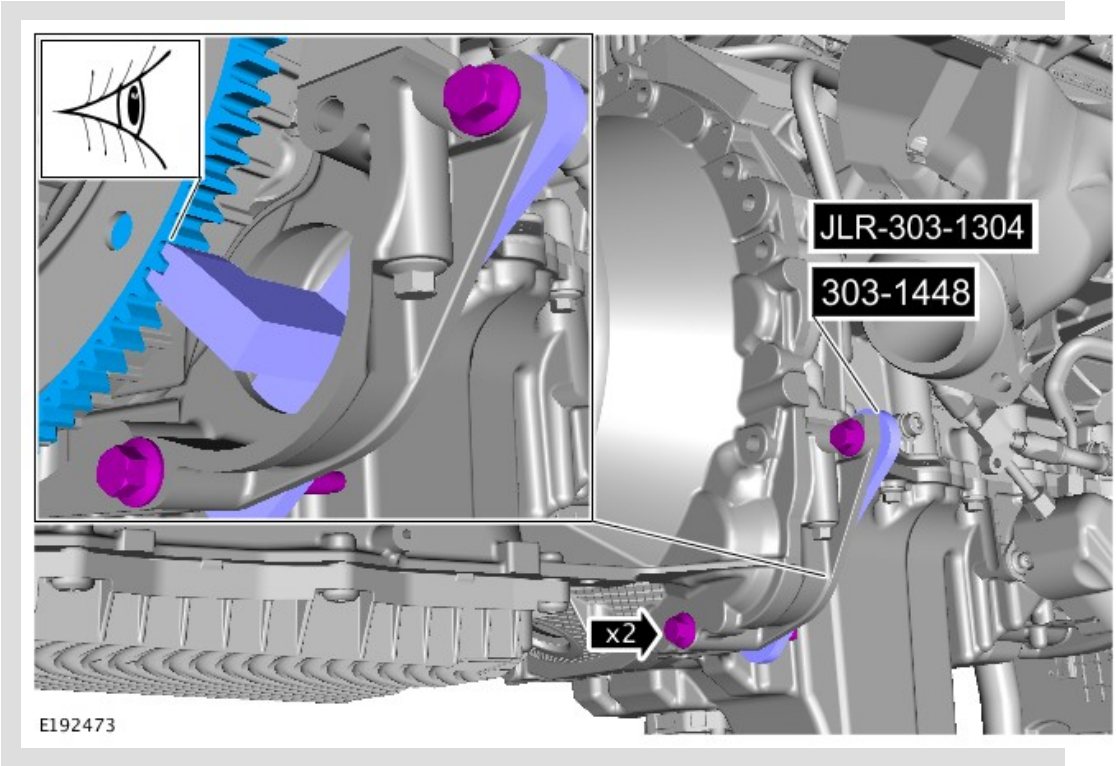
NOTE:

The illustration shows the tool positioning for LH threaded crankshaft damper bolts, RH threaded crankshaft bolts will require the tool position to be the opposite direction.



Torque: **25 Nm**

12.

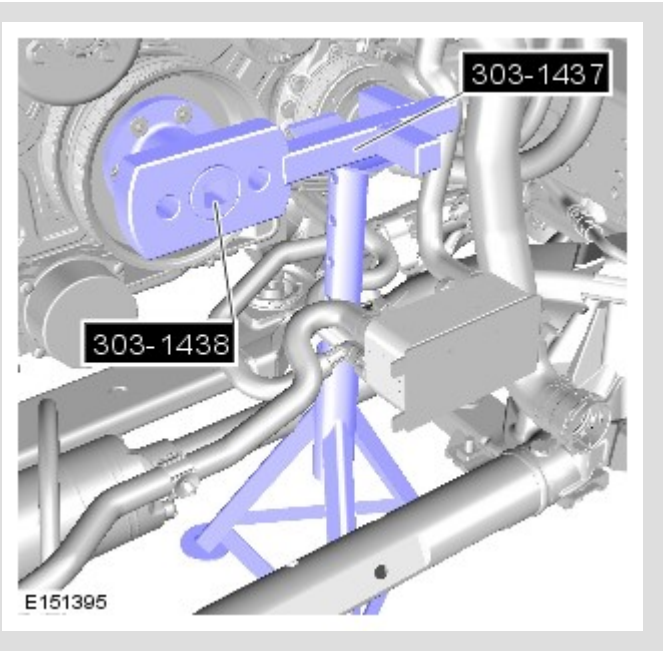


- Remove the special tool.
- Vehicles without Auto stop/start system.
  Special Tool(s): 303-1448
- Vehicles with Auto stop/start system.
  Special Tool(s): JLR-303-1304

13.

NOTE:

The illustration shows the tool positioning for LH threaded crankshaft damper bolts, RH threaded crankshaft bolts will require the tool position to be the opposite direction.



Using a suitable stand, support the special tool.

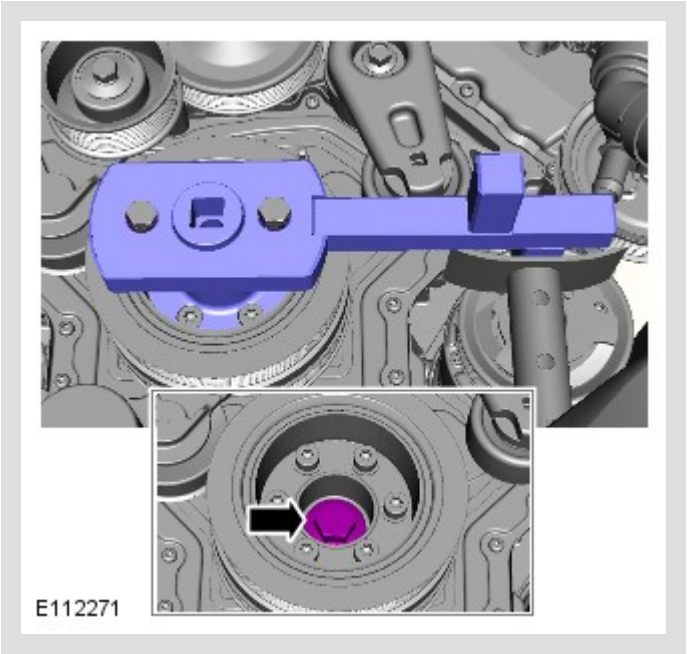
14.

CAUTION:

Discard the bolt.

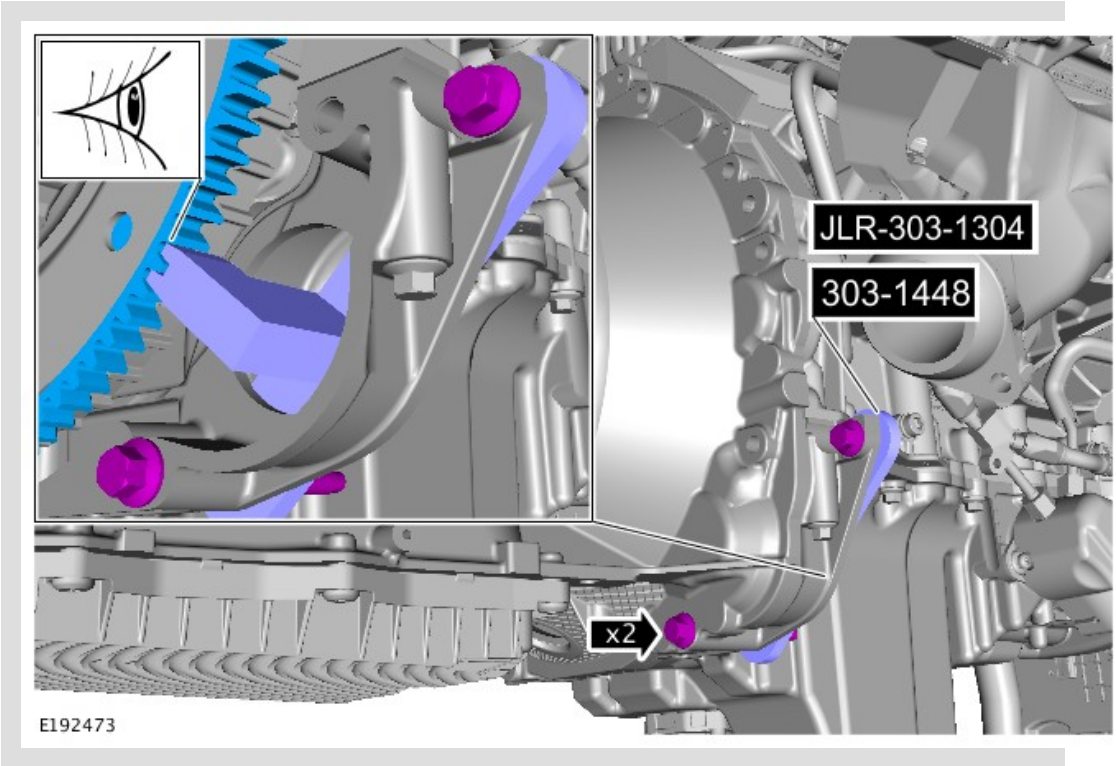
NOTES:

- The illustration shows the tool positioning for LH threaded crankshaft damper bolts, RH threaded crankshaft bolts will require the tool position to be the opposite direction.
- The crankshaft pulley bolt will be very tight.



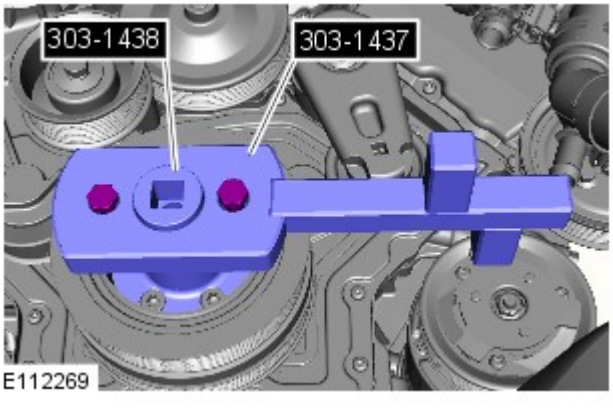
Remove the crankshaft damper bolt, make sure the bolt thread direction has been noted as described in step 8.

15.



- Install the special tool.
- Vehicles without Auto stop/start system.
  Special Tool(s): 303-1448
- Vehicles with Auto stop/start system.
  Special Tool(s): JLR-303-1304

16.

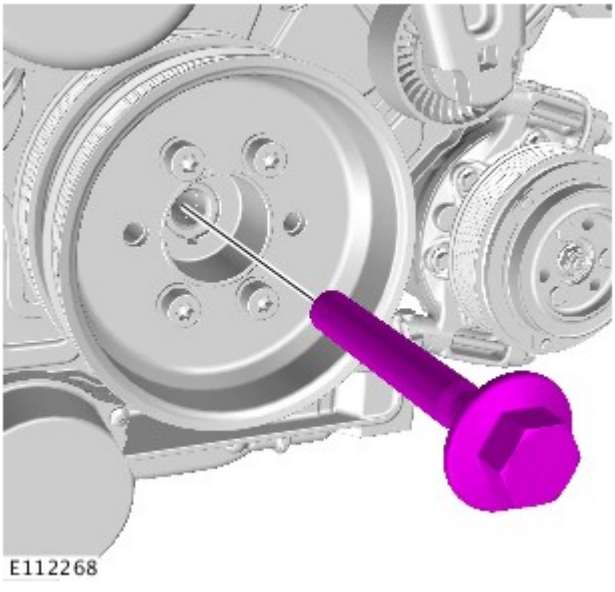


Remove the special tool.

17.

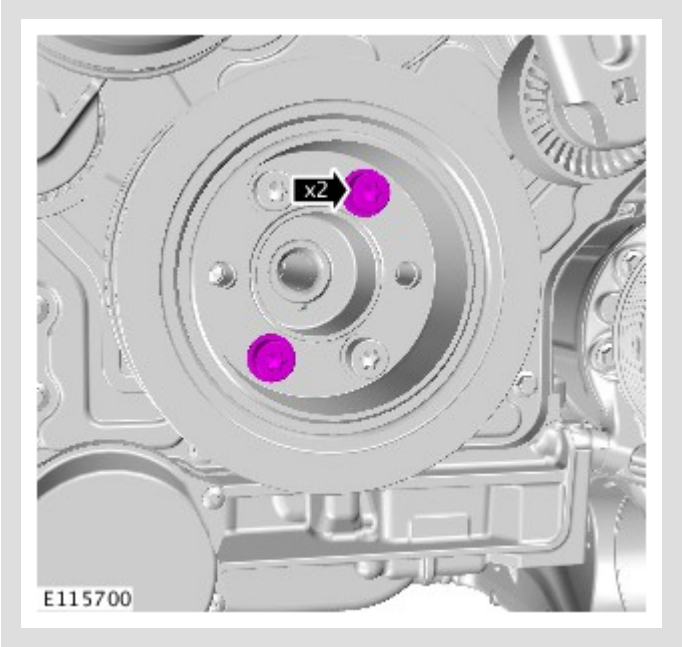
NOTE:

Discard the bolt after removal.



Remove the crankshaft damper bolt.

18.



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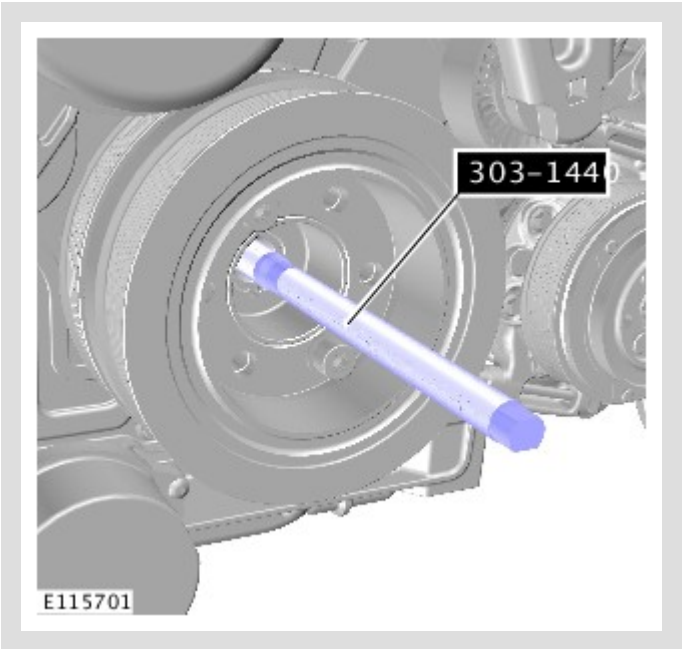
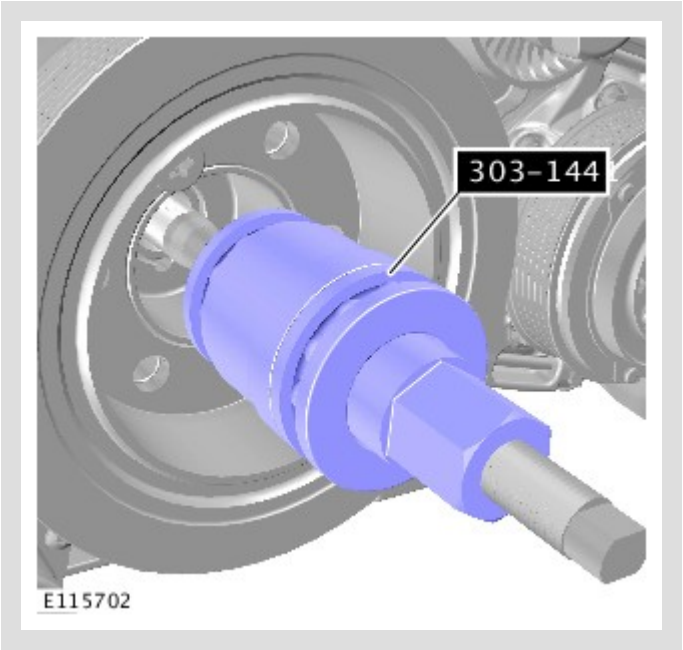


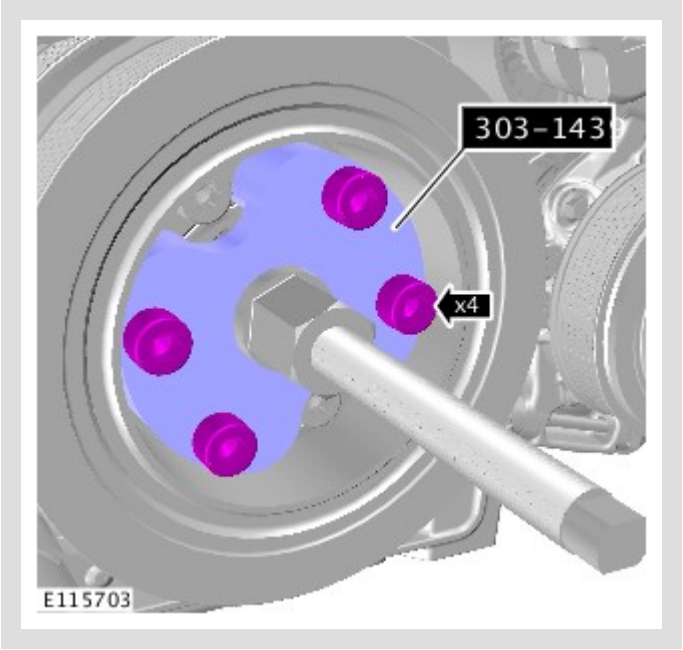
- Install the special tool.
- *Special Tool(s):* 303-1440

20.



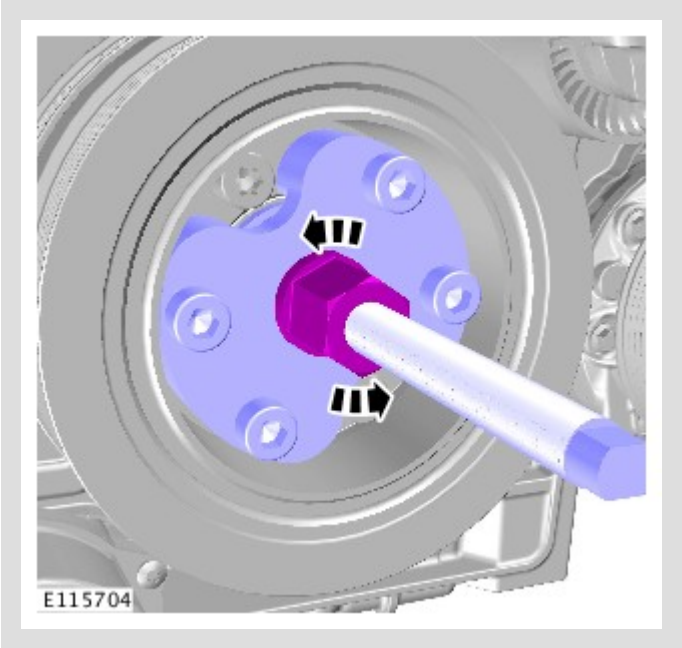
- Install the special tool.
- *Special Tool(s):* 303-1441

21.



- Install the special tool.
- *Special Tool(s):* 303-1439

22.



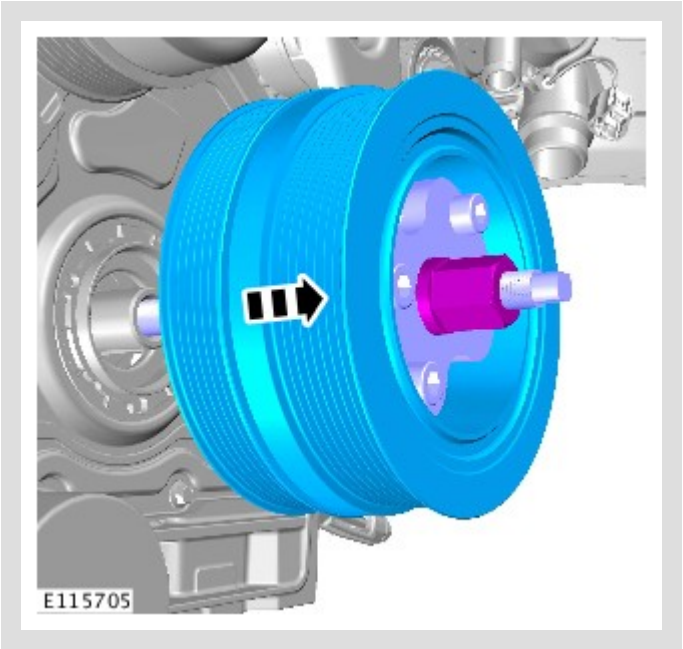
23.

CAUTION:

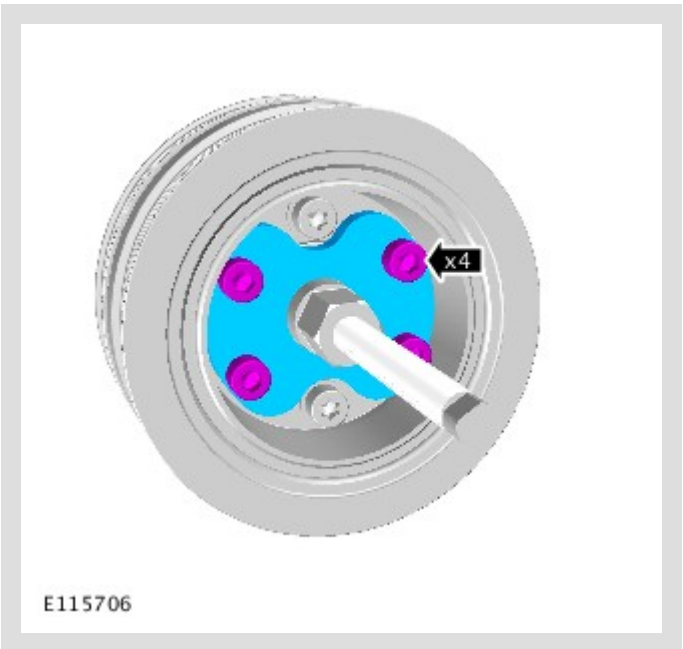
Discard the friction washer after removing the crankshaft pulley.

NOTE:

Make sure to clean the threads in the end of the crankshaft and that the crank nose is free of any foreign materials.



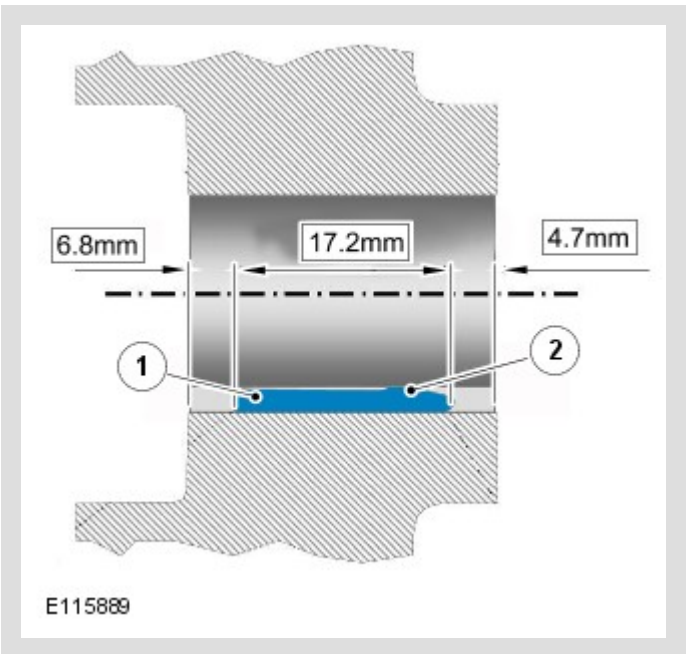
24.



25.

INSTALLATION

1.



1. Apply RTV sealant to the crankshaft pulley keyway.

1. Make sure that the RTV sealant is applied in a 2mm diameter bead.
1. Make sure that when the RTV sealant is applied that the RTV sealant is level with the top of the keyway.

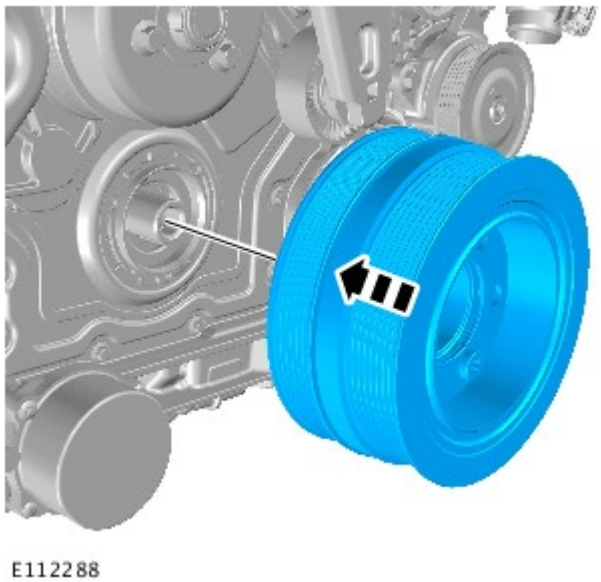
2.

CAUTION:

Install a new friction washer before installing the crankshaft pulley.

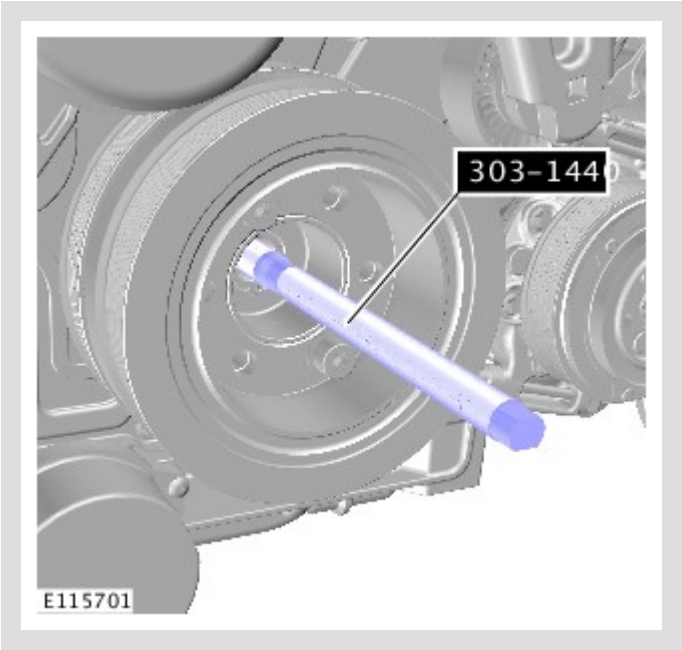
NOTES:

- Make sure to clean the threads in the end of the crankshaft and that the crank nose is free of any foreign materials.
- Some variation in the illustrations may occur, but the essential information is always correct.



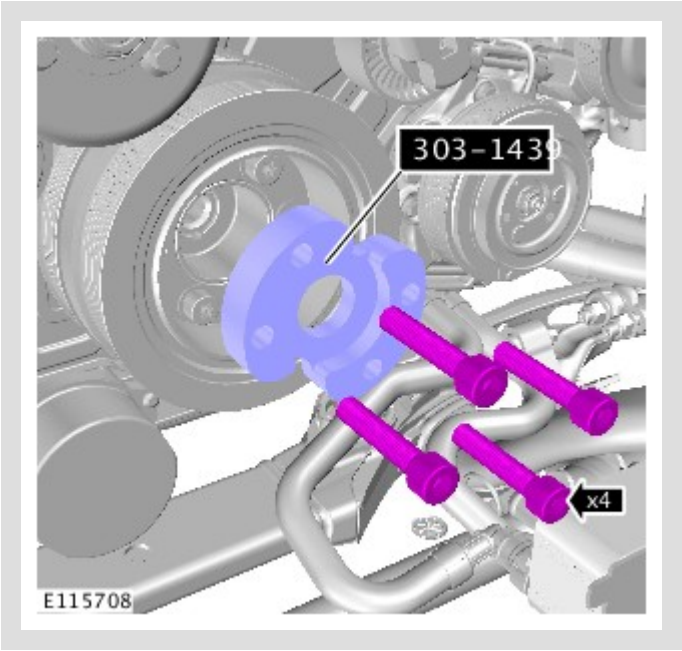
E112288

3.



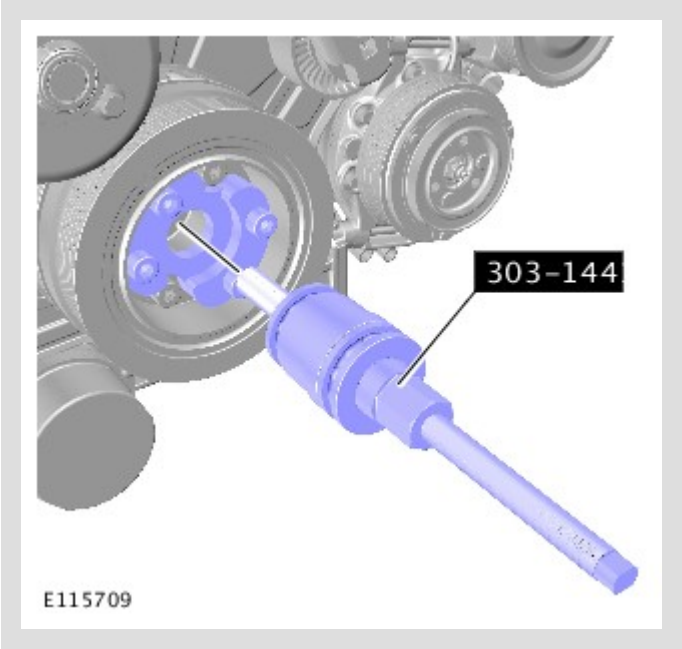
Install the special tool.

4.



- Install the special tool.
- *Special Tool(s):* 303-1439
- *Torque:* **25 Nm**

5.

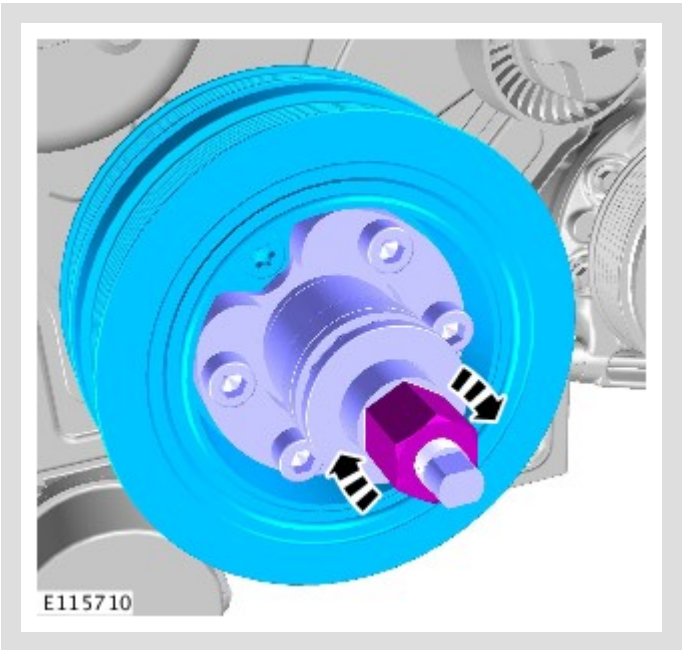


Install the special tool.

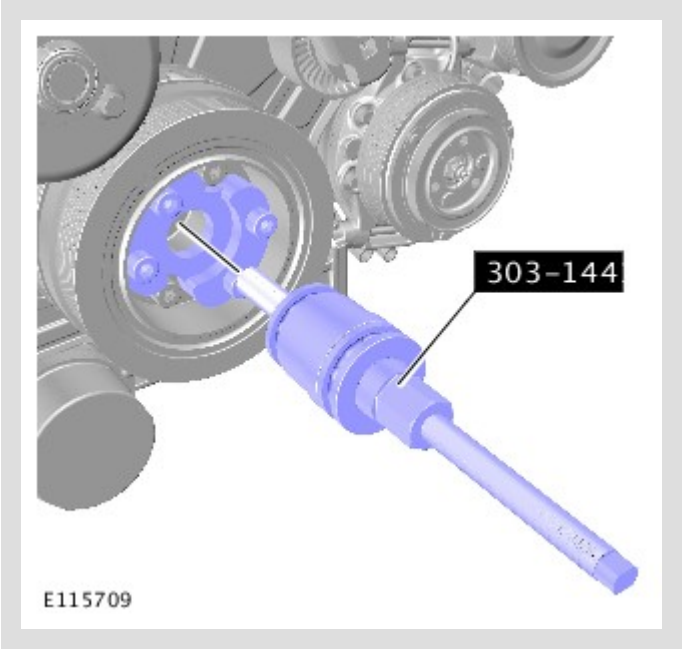
6.

CAUTION:

Rotate the crankshaft pulley installation tool until the pulley is fully located, do not over tighten. Failure to do this may result in damage to the components.

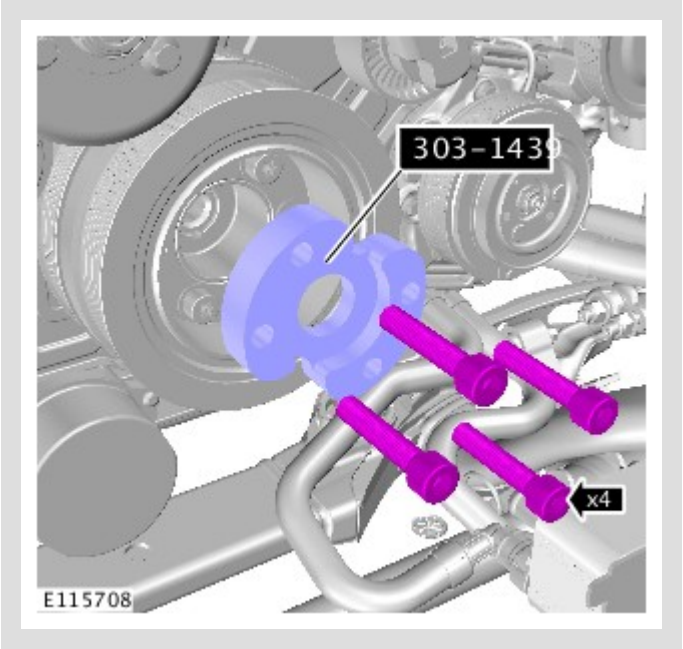


7.



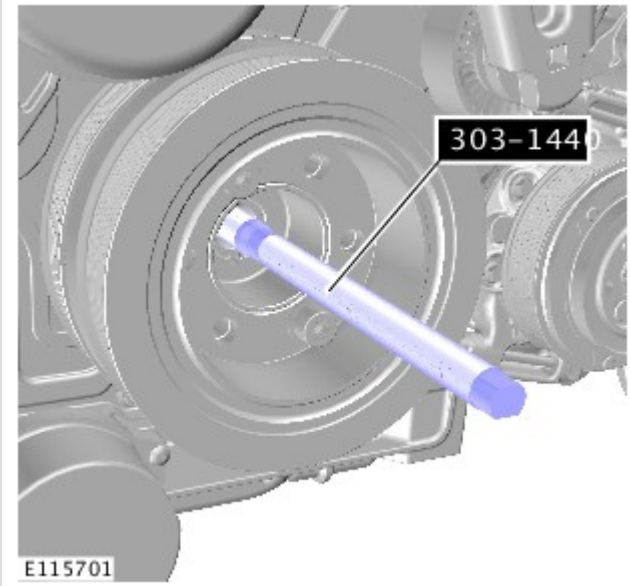
Remove the special tool.

8.



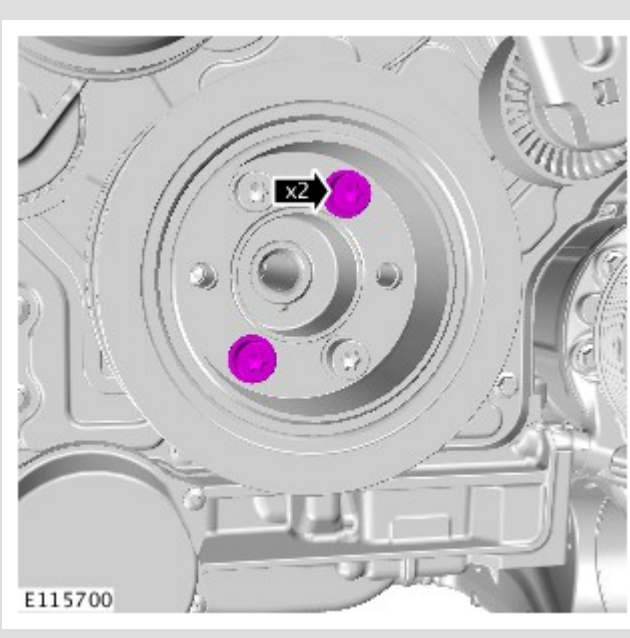
- Remove the special tool.

9.



Remove the special tool.

10.



CAUTION:

Make sure that a new bolts are installed.

Apply loctite 270 to the thread of the bolts.

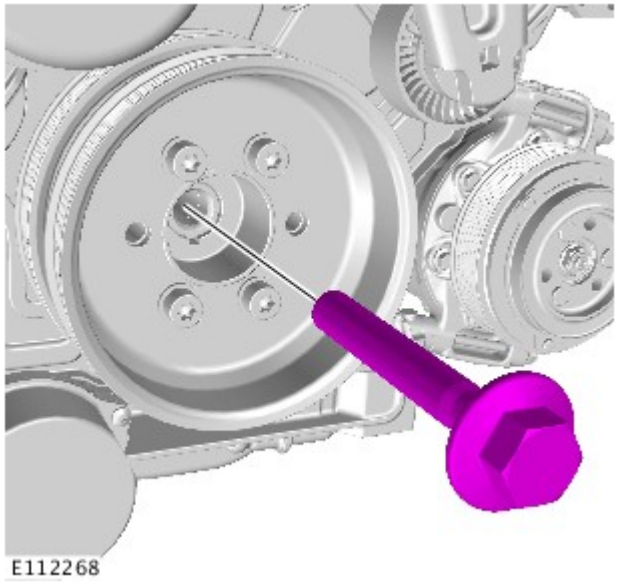
- *Torque:* **65 Nm**

11. **WARNING:**

Make sure that a new bolt is installed.

CAUTION:

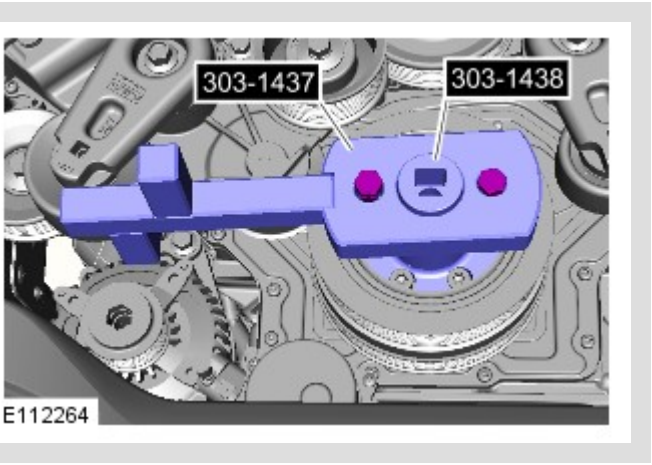
Tighten the component finger tight first.



Install a new crankshaft damper bolt.

12. **NOTE:**

The illustration shows the tool positioning for LH threaded crankshaft damper bolts, RH threaded crankshaft bolts will require the tool position to be the opposite direction.

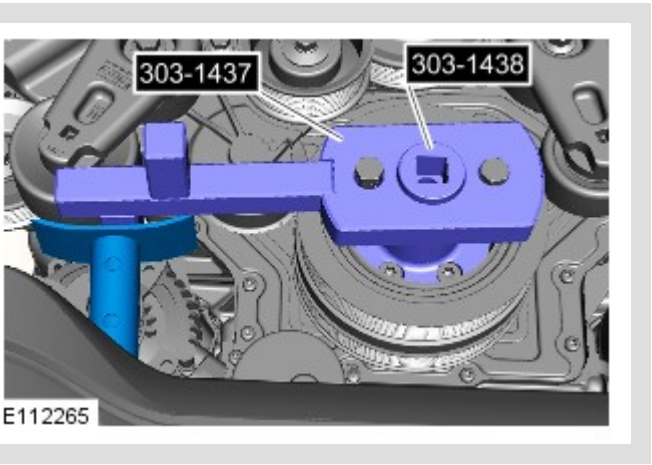


Torque: **25 Nm**

13.

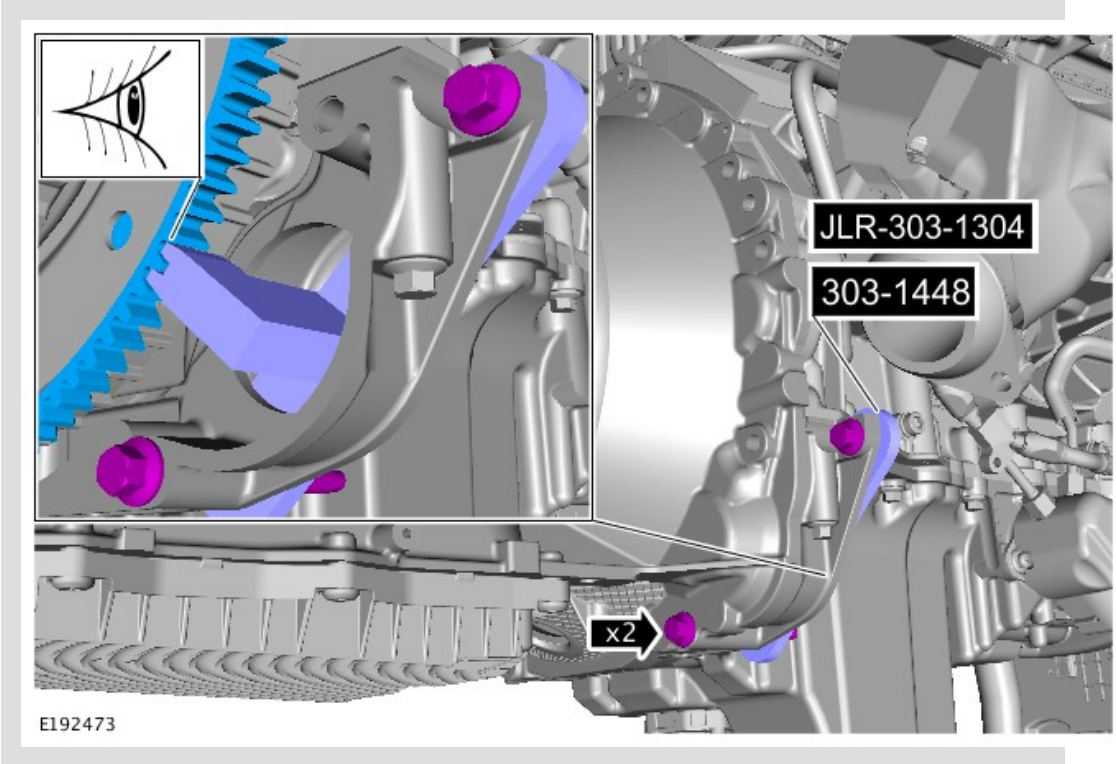
NOTE:

The illustration shows the tool positioning for LH threaded crankshaft damper bolts, RH threaded crankshaft bolts will require the tool position to be the opposite direction.



Using a suitable stand, support the special tool.

14.

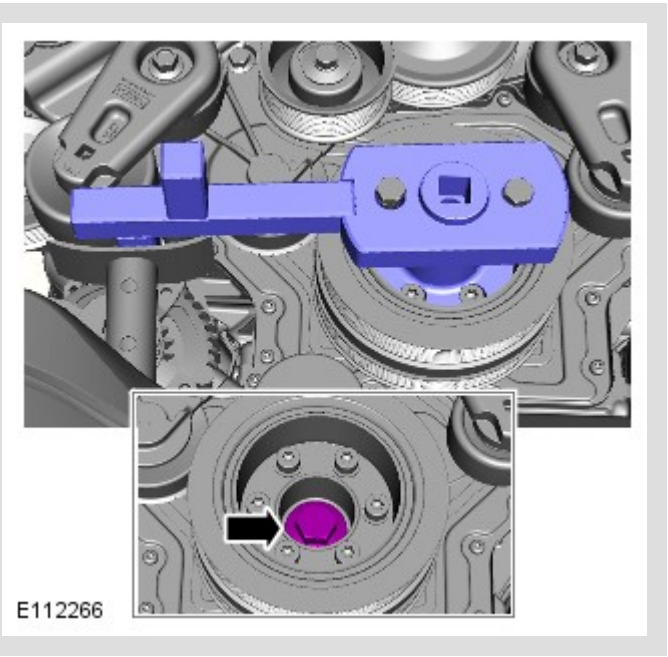


- Remove the special tool.
- Vehicles without Auto stop/start system.
  Special Tool(s): 303-1448
- Vehicles with Auto stop/start system.
  Special Tool(s): JLR-303-1304

15.

NOTES:

- The use of a torque multiplier capable of 600Nm will be required.
- The illustration shows the tool positioning for LH threaded crankshaft damper bolts, RH threaded crankshaft bolts will require the tool position to be the opposite direction.



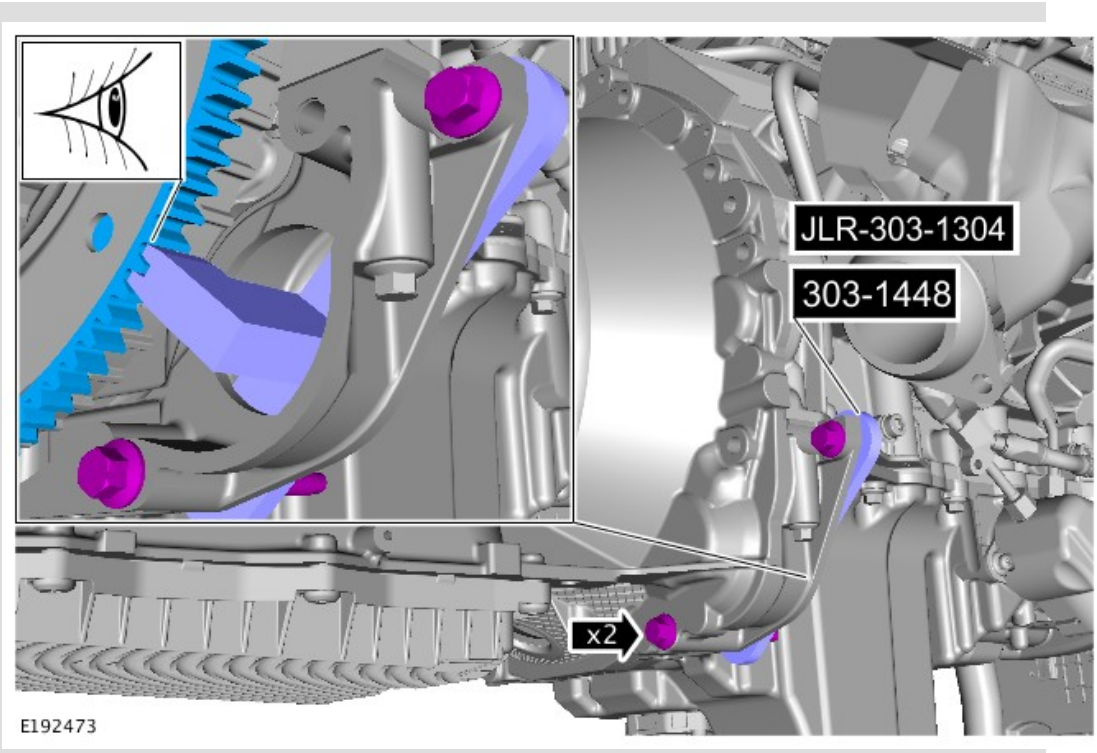
Tighten the crankshaft pulley bolt. Make sure that the socket is turned through 270 degrees not the torque wrench.

Torque:

Stage 1: **200 Nm**

Stage 2: **270°**

16.

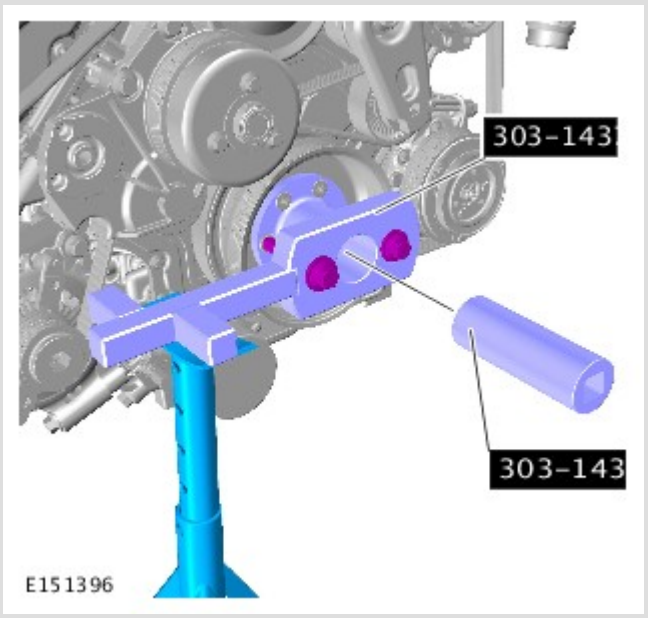


- Install the special tool.
- Vehicles without Auto stop/start system.

Special Tool(s): 303-1448

- Vehicles with Auto stop/start system.
  Special Tool(s): JLR-303-1304

17.

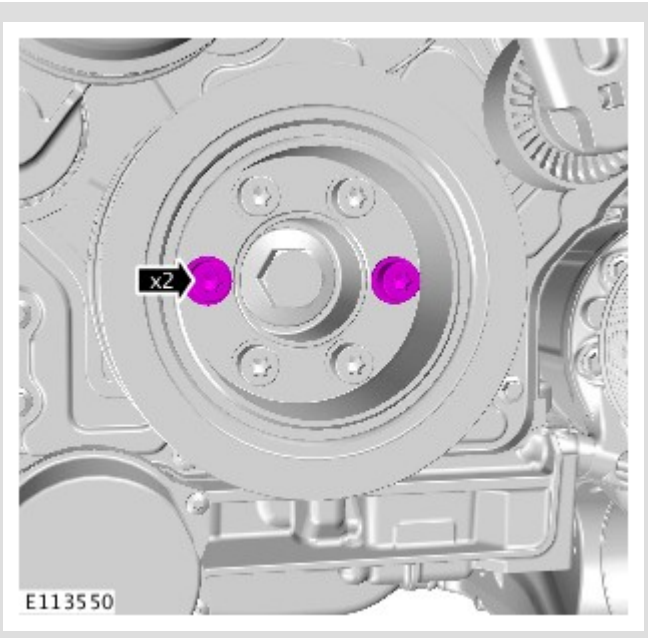


Remove the special tools.

18.

CAUTION:

Make sure that a new bolts are installed.

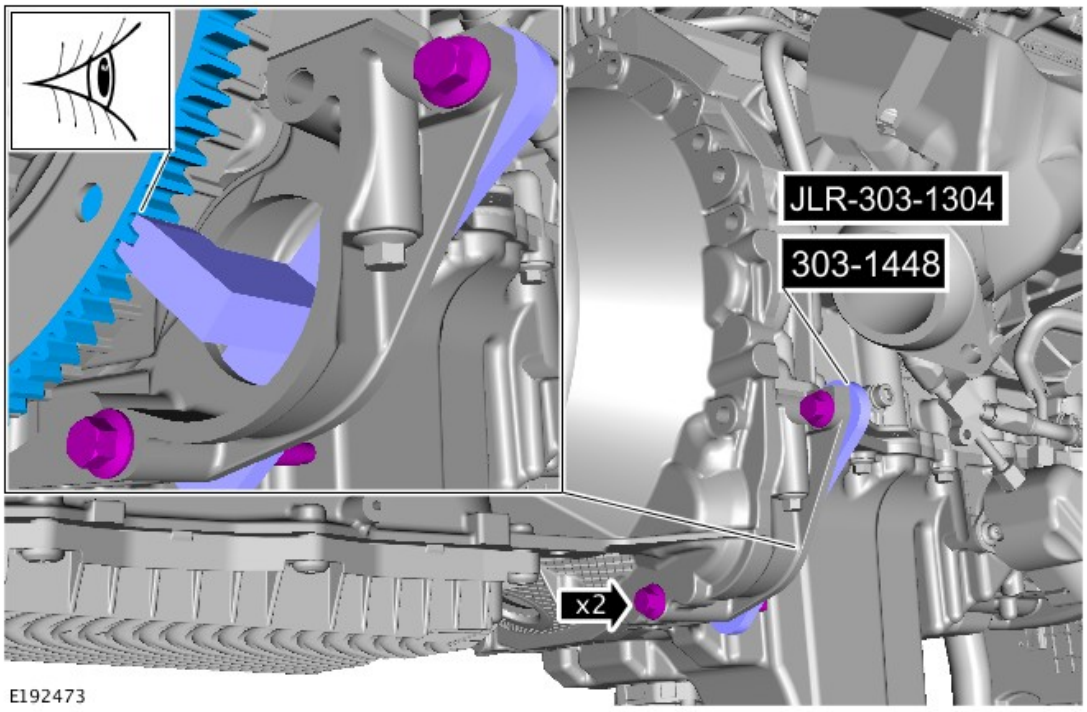


NOTE:

Apply loctite 270 to the thread of the bolts.

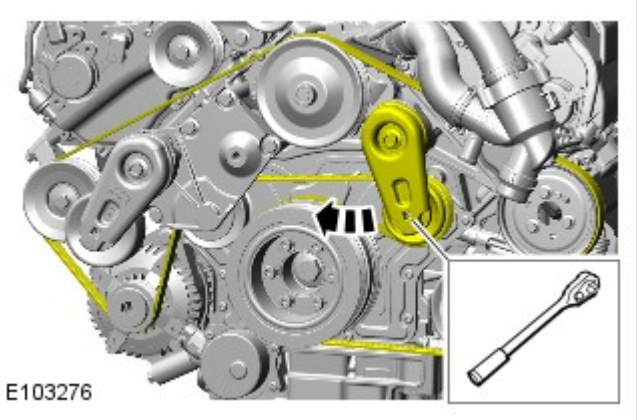
- *Torque:* **65 Nm**

19.

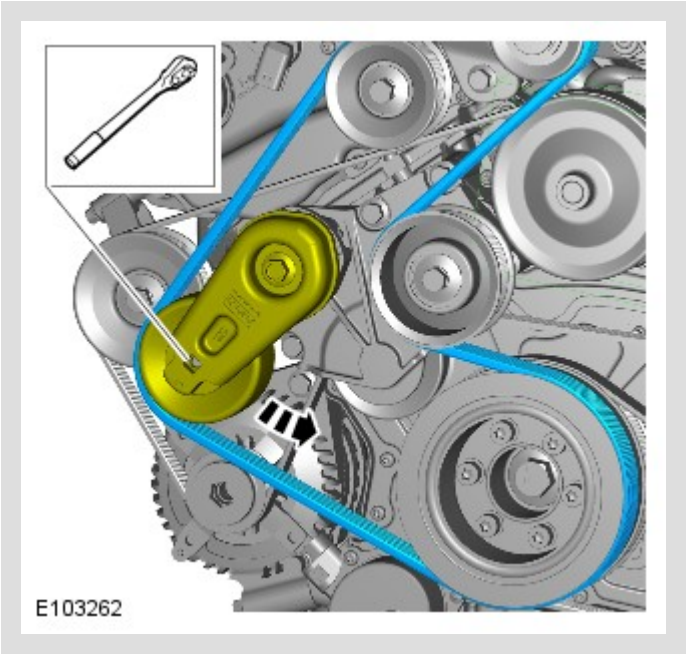


- Remove the special tool.
- Vehicles without Auto stop/start system.
  Special Tool(s): 303-1448
- Vehicles with Auto stop/start system.
  Special Tool(s): JLR-303-1304

20.



21.



22. Install the starter motor.
Refer to: Starter Motor (303-06B Starting System - V8 5.0L Petrol/V8 S/C 5.0L Petrol, Removal and Installation).

23. Install the cooling fan.
Refer to: Cooling Fan Motor and Shroud - V8 S/C 5.0L Petrol (303-03C Engine Cooling - V8 5.0L Petrol/V8 S/C 5.0L Petrol, Removal and Installation).

24. Refer to: Battery Disconnect and Connect (414-01 Battery, Mounting and Cables, General Procedures).