

PUBLISHED: 10-OCT-2017

2013.0 DISCOVERY 4 / LR4 (LA), 303-01A

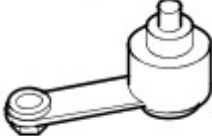
ENGINE - TDV6 3.0L DIESEL

TIMING BELT (G1240495)

REMOVAL AND INSTALLATION

	TIMING BELT				
12.65.18	-	3000 CC,	3.20	USED WITHINS	+
	CAMSHAFT	TDV6			
	- RENEW				

SPECIAL TOOL(S)




303-1117

303-1117

Timing Peg, Automatic Transmission

E54540



303-1126

303-1126

Timing Peg, Camshaft Pulley

E54551

PART(S)

STEP	PART NAME	QUANTITY
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STEP	PART NAME	QUANTITY
Installation Step 2	Timing belt and tensioner kit	1

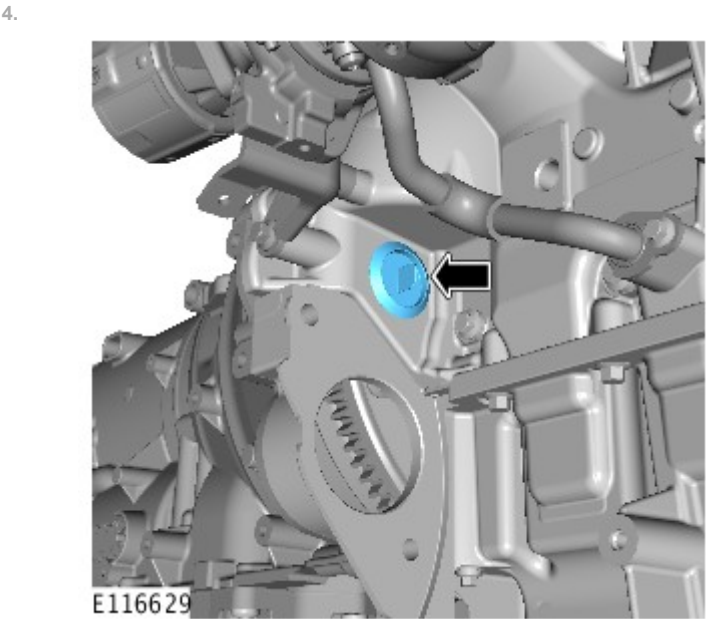
REMOVAL

1.
- WARNING:**

Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

2. Refer to: [Timing Cover](#) (303-01A Engine - TDV6 3.0L Diesel, Removal and Installation).
3. Refer to: [Starter Motor](#) (303-06B Starting System - V8 N/A 5.0L Petrol, Removal and Installation).



5. Rotate the crankshaft clockwise to align the crankshaft alignment hole in the flywheel or flexplate with the block aperture.

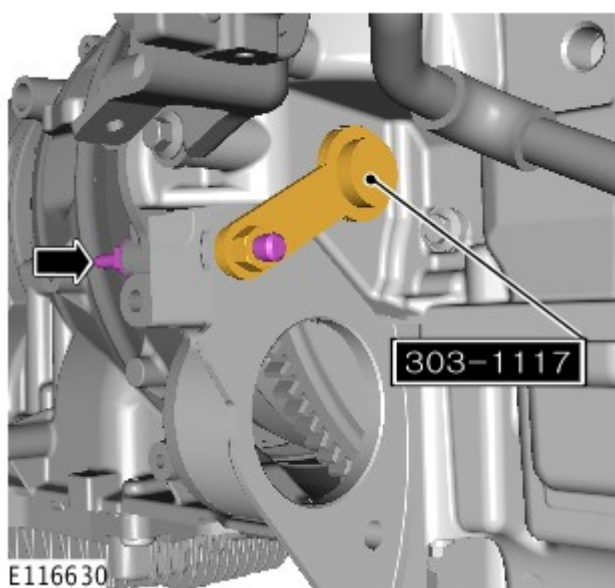
6.



E116840

Check the camshaft pulley alignment holes are correctly aligned. If the alignment holes are not aligned, rotate the crankshaft one full turn clockwise.

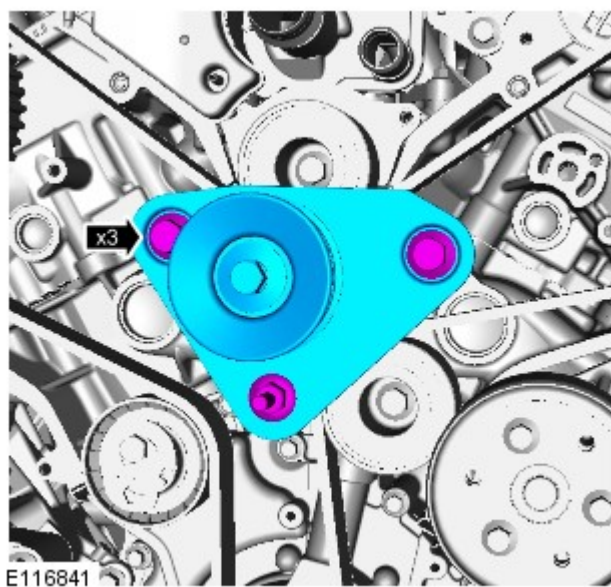
7.



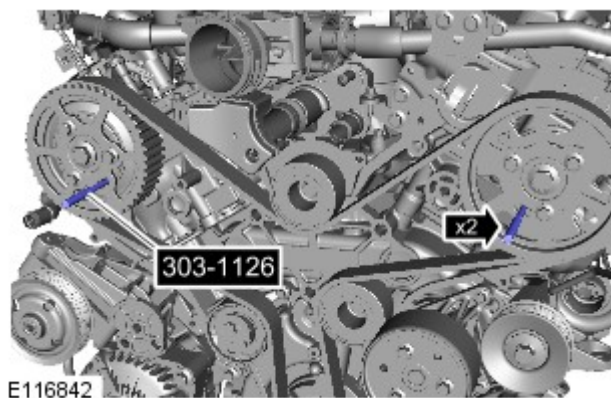
E116630

Special Tool(s): [303-1117](#)

8.



9.



Special Tool(s): [303-1126](#)

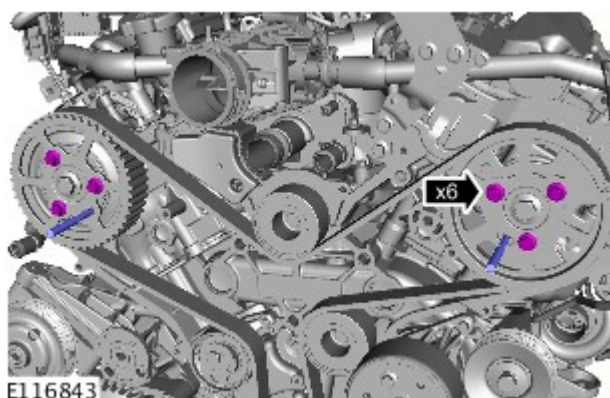
10.

CAUTION:

Do not use the special tools to lock the camshafts. Failure to follow this instruction may result in damage to the engine or the special tools.

NOTE:

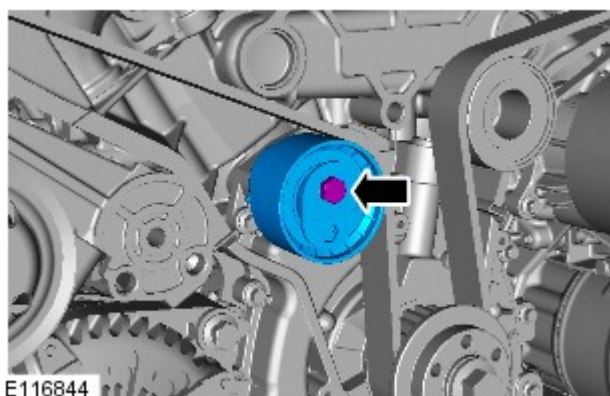
Do not loosen the bolts more than 2 turns.



11.

CAUTIONS:

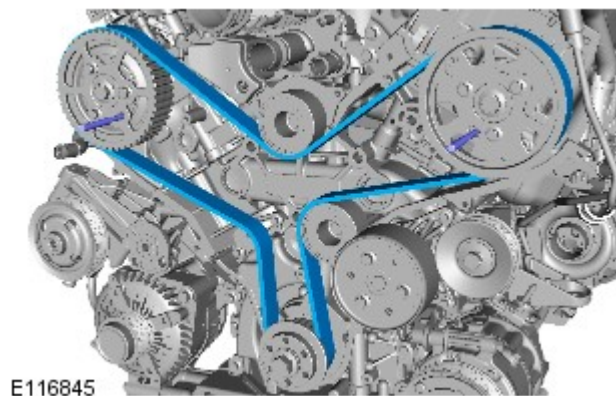
- Discard the component.
- Discard the bolt.



12.

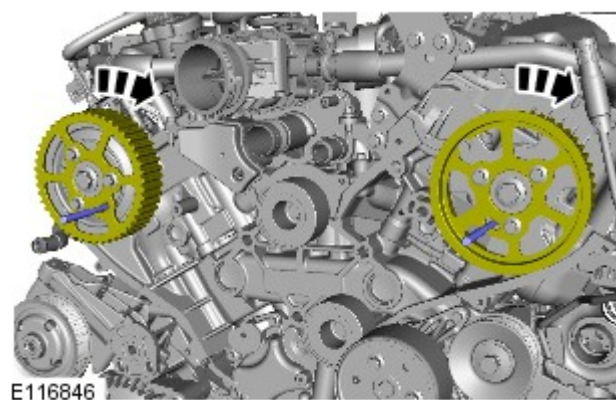
CAUTION:

Discard the component.



INSTALLATION

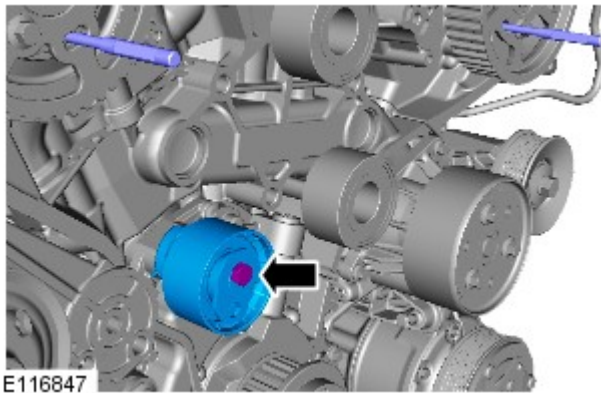
1.



2.

CAUTIONS:

- Make sure that a new bolt is installed.
- Only tighten the bolts finger-tight at this stage.

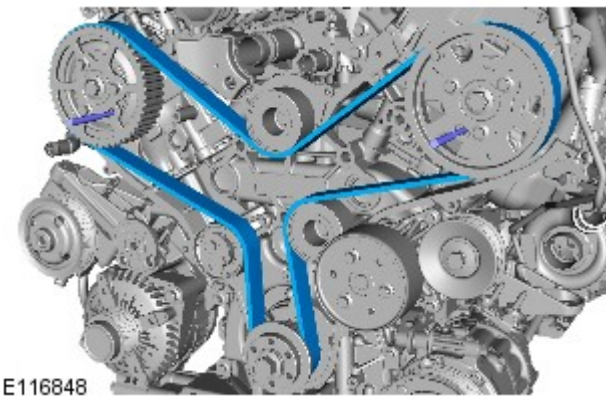


Renew Part: *Timing belt and tensioner kit* Quantity: 1.

3.

CAUTION:

Make sure the camshaft pulleys remain in the clockwise position.

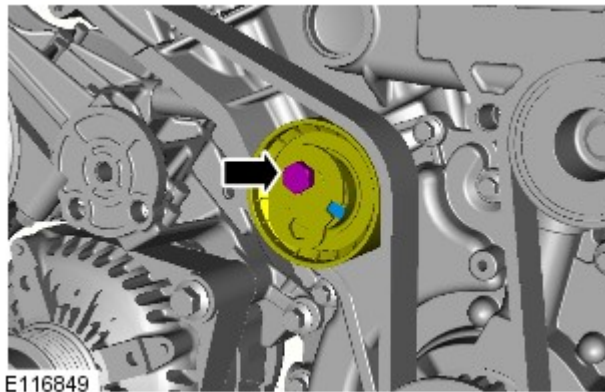


- Install the new timing belt.
- Starting at the crankshaft pulley, install the timing belt in a counter-clockwise direction, in the sequence shown.
- Stage one: Attach the timing belt to the crankshaft pulley.
- Stage two: Attach the timing belt to the idler pulley.
- Stage three: Attach the timing belt to the left-hand camshaft pulley.
- Stage four: Attach the timing belt to the idler pulley.
- Stage five: Attach the timing belt to the RH camshaft pulley.
- Stage six: Attach the timing belt to the timing belt tensioner.

4.

CAUTION:

Make sure the timing belt tensioner window is aligned with the groove as illustrated.

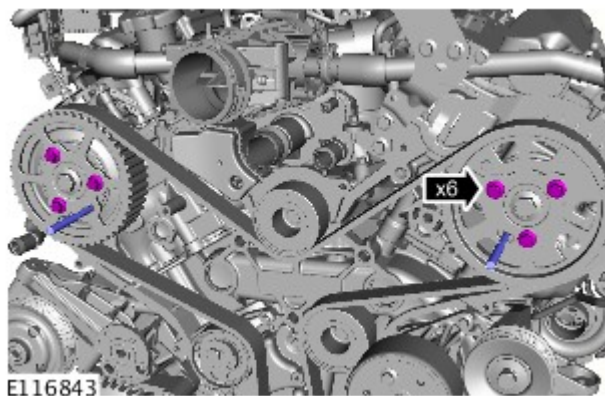


- Tension the timing belt.
- Rotate the tensioner assembly counter-clockwise.
- *Torque: 26Nm*

5.

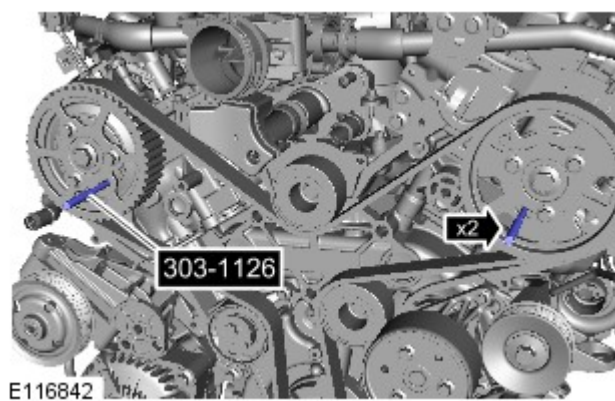
CAUTION:

Do not use the special tools to lock the camshafts. Failure to follow this instruction may result in damage to the engine or the special tools.



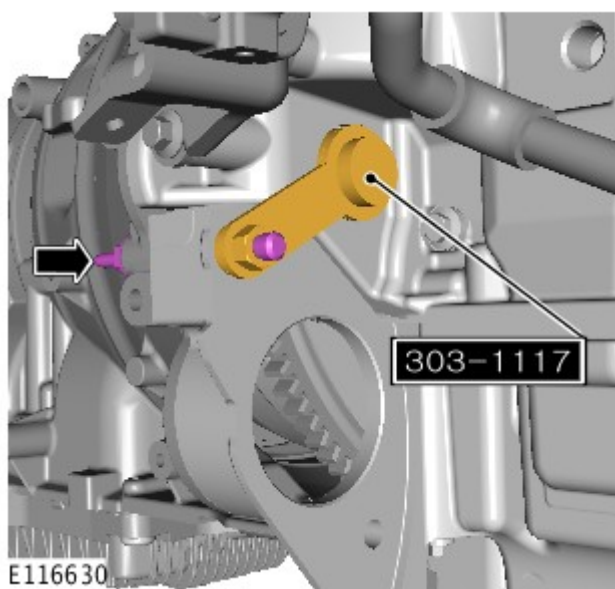
- Using a suitable tool, counterhold the camshaft pulley center retaining bolts.
- *Torque: 23Nm*

6.



Special Tool(s): [303-1126](#)

7.



Special Tool(s): [303-1117](#)

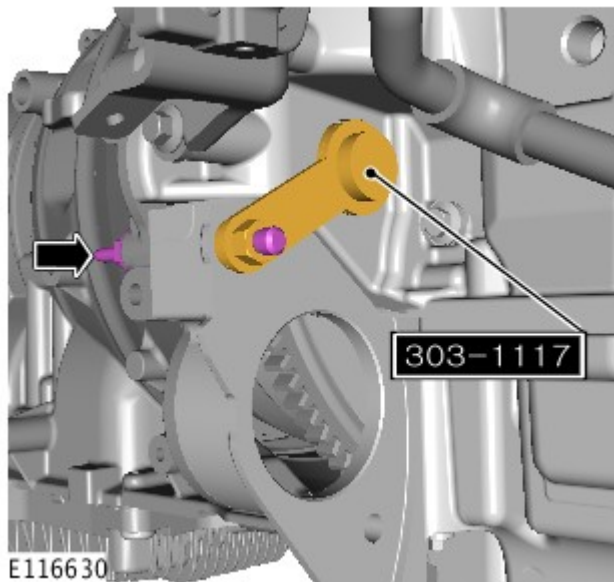
8.

CAUTION:

Only rotate the crankshaft clockwise.

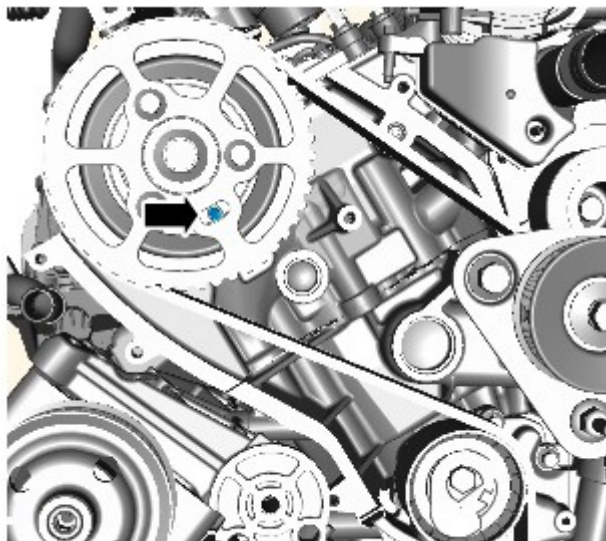
Rotate the engine two complete turns clockwise.

9.



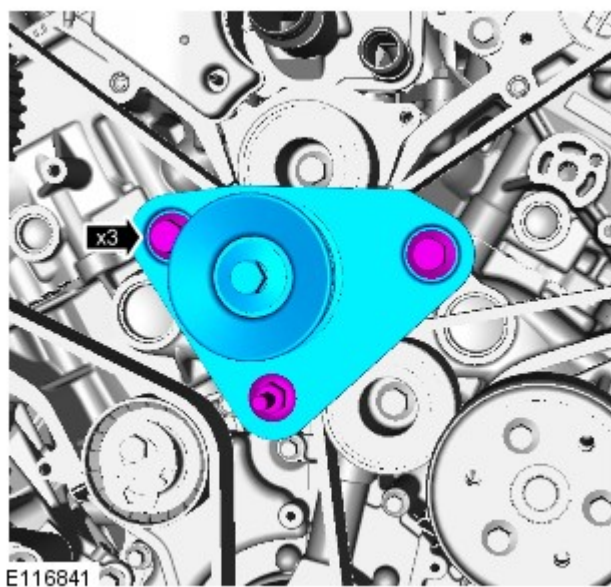
Special Tool(s): [303-1117](#)

10.



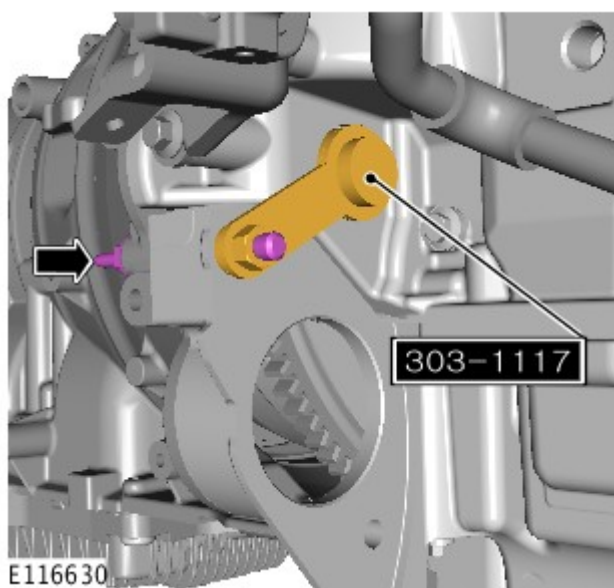
- Install the special tools to the exhaust camshaft pulleys.
- If the special tool does not fit correctly, repeat the timing belt installation procedure.
- Remove the special tools from the camshaft pulleys.

11.



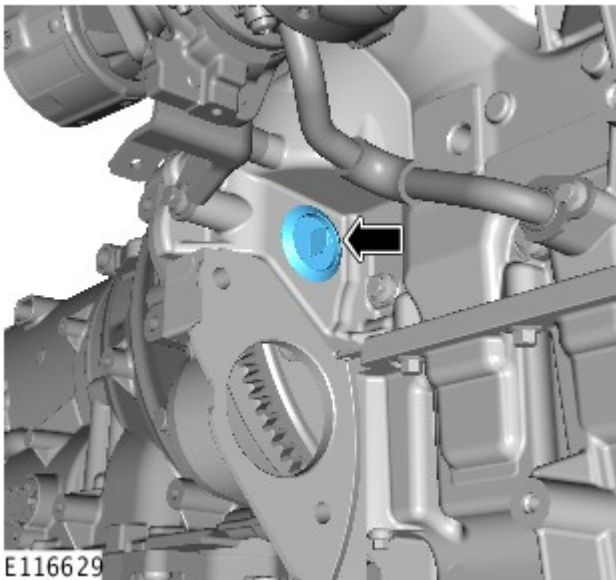
Torque: 80Nm

12.



Special Tool(s): 303-1117

13.



14. Refer to: [Starter Motor](#) (303-06B Starting System - V8 N/A 5.0L Petrol, Removal and Installation).
15. Refer to: [Timing Cover](#) (303-01A Engine - TDV6 3.0L Diesel, Removal and Installation).

bWhtvGxhbmQYWE7MjAyMDwNi0yNFQxMjpoOOTo1O545OTNaOzEwOS4xNjYuMTM3LjJkNz=

PUBLISHED: 21-NOV-2017
2013.0 DISCOVERY 4 / LR4 (LA), 303-01A

ENGINE - TDV6 3.0L DIESEL

TIMING COVER (G1240496)

REMOVAL AND INSTALLATION

12.65.03	COVER - CAMSHAFT DRIVE BELT - RENEW	3000 CC, TDV6	2.00	USED WITHINS	+
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PART(S)

STEP	PART NAME	QUANTITY
Removal Step 21	Timing belt cover gasket	1

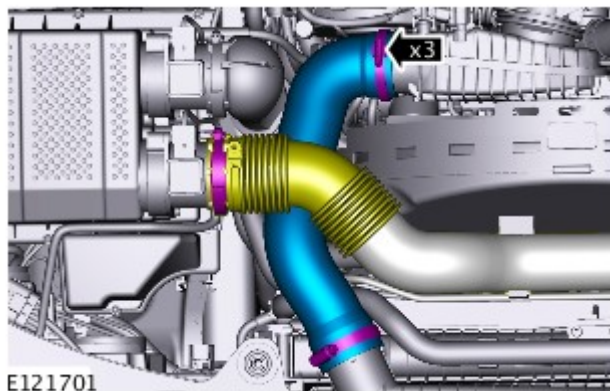
REMOVAL

NOTE:

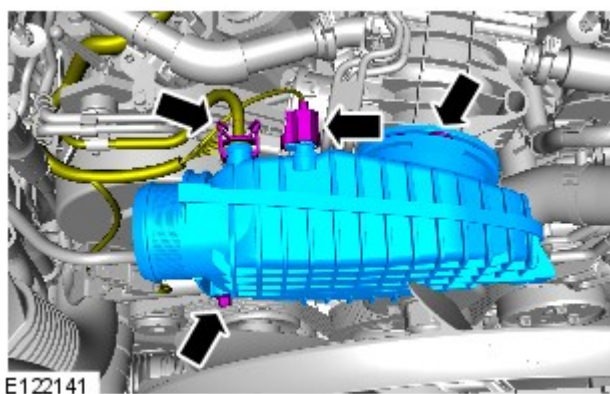
Some variation in the illustrations may occur, but the essential information is always correct.

1. Disconnect the battery ground cable.
Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).
2. Refer to: [Cooling System Partial Draining and Vacuum Filling](#) (303-03A Engine Cooling - TDV6 3.0L Diesel, General Procedures).
3. Refer to: [Engine Cover - V8 N/A 5.0L Petrol](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
4. Refer to: [Cooling Fan](#) (303-03A Engine Cooling - TDV6 3.0L Diesel, Removal and Installation).

5.

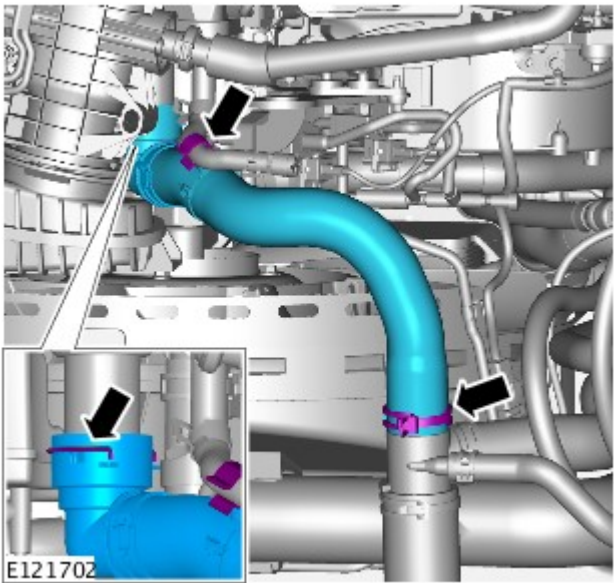


6.

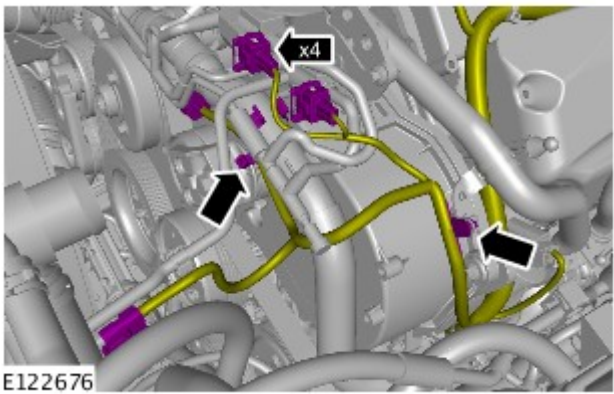


Torque: 10Nm

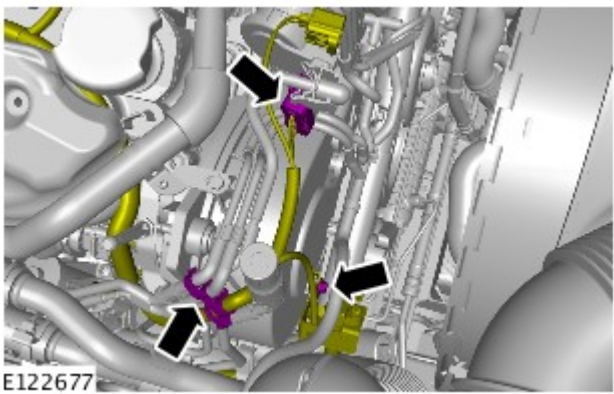
7.



8.

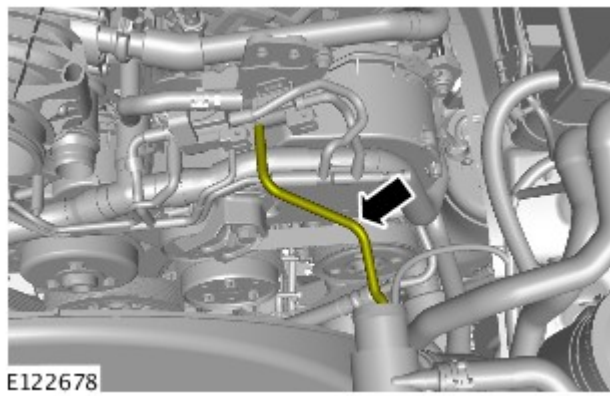


9.

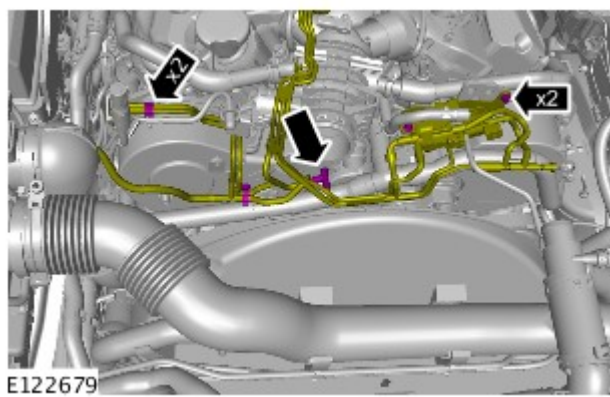


Torque: 3Nm

10.



11.

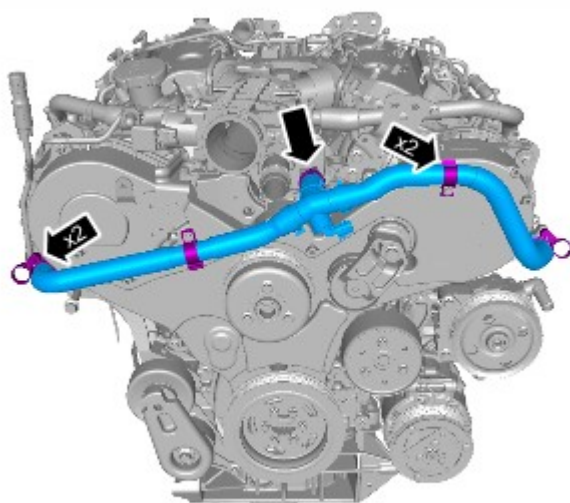


Torque: 8Nm

12.

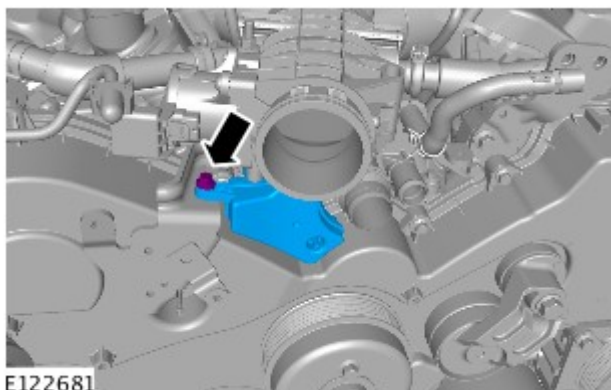
NOTE:

Engine shown removed for clarity.



E122680

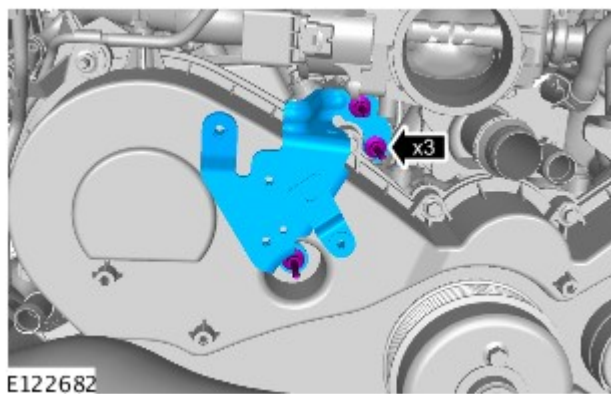
13.



E122681

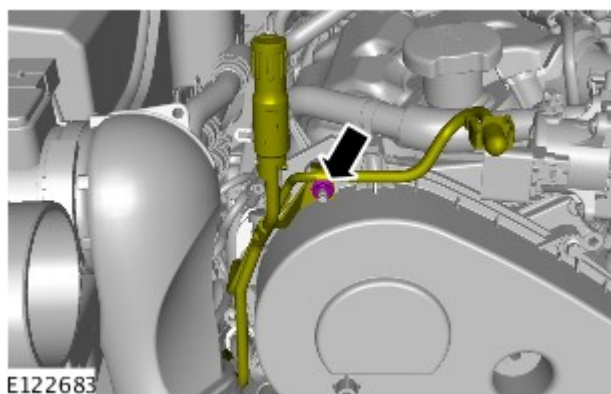
Torque: 8Nm

14.



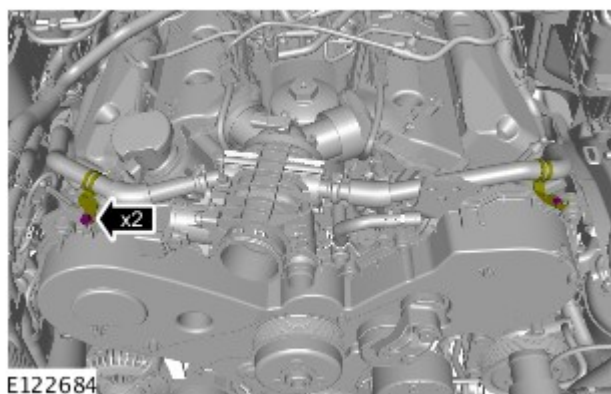
Torque: 8Nm

15.



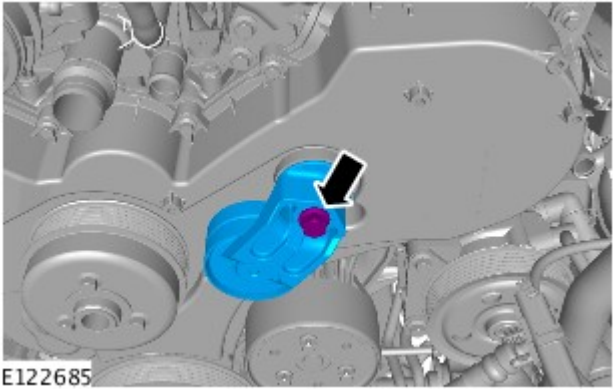
Torque: 8Nm

16.



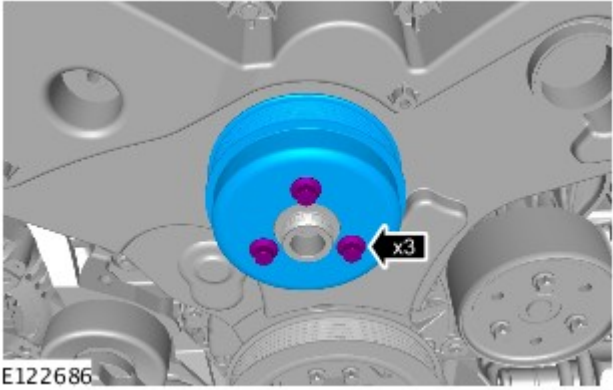
Torque: 5Nm

17.



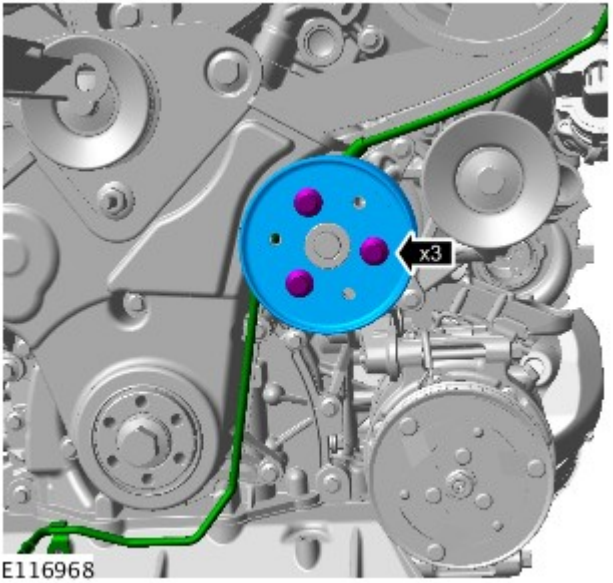
Torque: 47Nm

18.



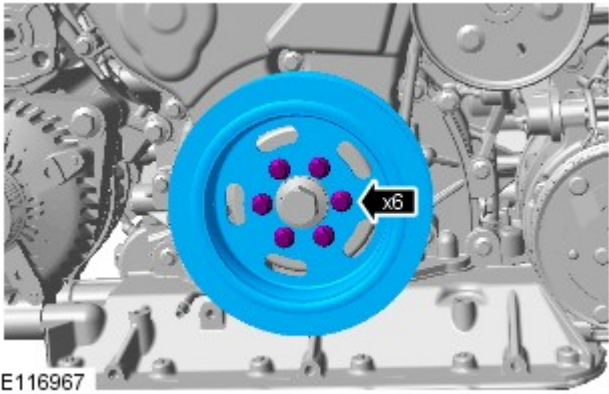
Torque: 24Nm

19.



Torque: 24Nm

20.

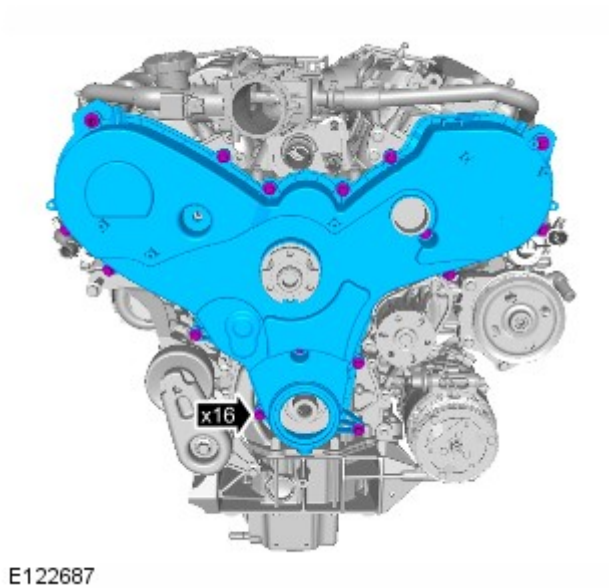


Torque: 25Nm

21.

NOTE:

Engine shown removed for clarity.



Remove and discard the timing belt cover gasket.
Renew Part: [Timing belt cover gasket](#) Quantity: 1.
Torque: 10Nm

INSTALLATION

1. To install, reverse the removal procedure.

2013.0 DISCOVERY 4 / LR4 (LA), 303-06B

STARTING SYSTEM - V8 N/A 5.0L PETROL

STARTER MOTOR (G1241050)

REMOVAL AND INSTALLATION

86.60.01	STARTER MOTOR - RENEW	3000 CC, TDV6	0.70	USED WITHINS	+
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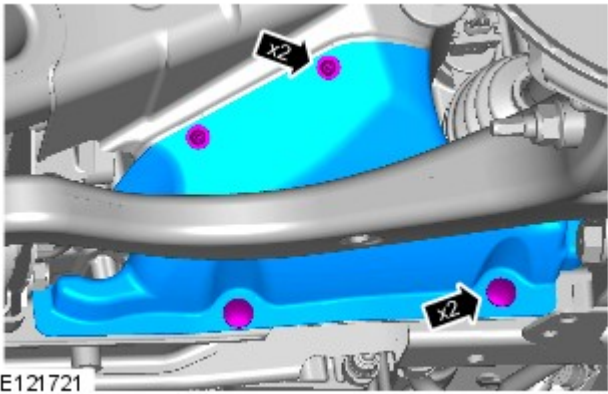
REMOVAL

1.
- Disconnect the battery ground cable.
Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2.
- WARNING:**
Make sure to support the vehicle with axle stands.

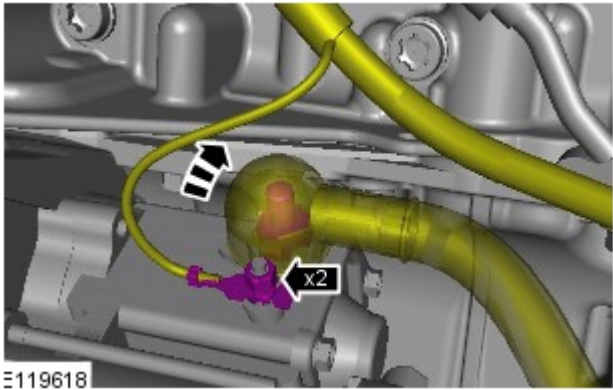
Raise and support the vehicle.

3.
- Refer to: [Engine Undershield](#) (501-02 Front End Body Panels, Removal and Installation).

4.
- 

E121721

5.

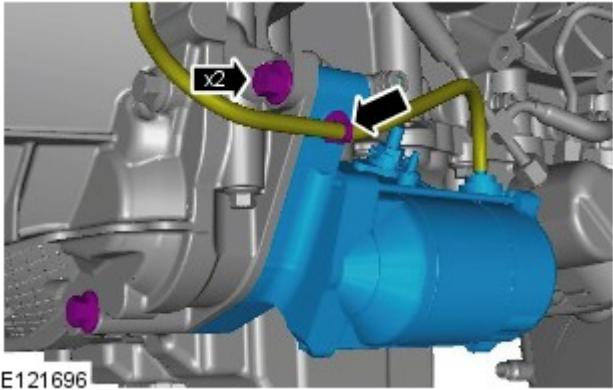


Torque

M8: 10Nm

M6: 4Nm

6.



Torque: 48Nm

INSTALLATION

1. To install, reverse the removal procedure.

76.10.50

ENGINE
UNDERSHIELD DERIVATIVES

0.20

USED WITHINS



REMOVAL

1.

WARNING:

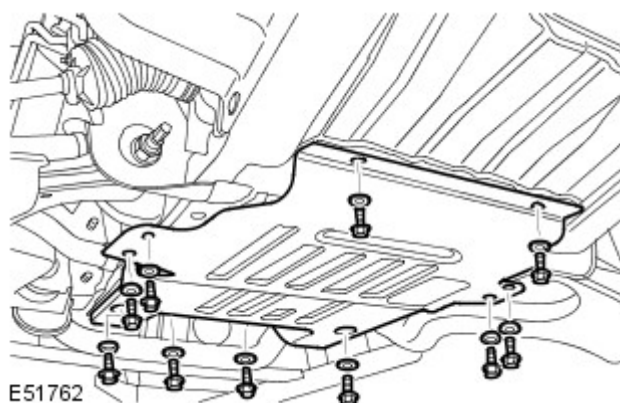
Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise and support the vehicle.

2.

CAUTION:

Note the special washer.



Remove the engine undershield.

- Remove the 10 bolts.

INSTALLATION

1. To install, reverse the removal procedure.

- Tighten the bolts to 62 Nm (46 lb.ft).

bWlvbGxhbmQYWE7MjAyMDwN0yNFOxMj01MDowMC45MDRaOzEwOS4xNjYyMTM3LjlxNz=