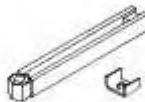
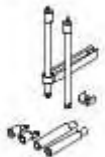
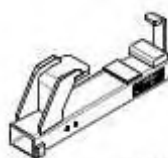
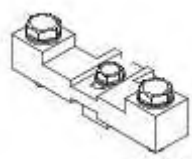
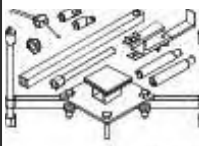


Removal and Installation

Special Tool(s) / General Equipment

 E128768	303-1554 Engine Support Bar
 E188155	303-1554-07 Adapter for 303-1554, Engine Support Bar
 E188156	303-1554-08 Adapter for 303-1554, Engine Support Bar
 E224684	303-1554-09 Adapter for 303-1554, Engine Support Bar
 E221556	303-1643 Locking Tool, Flywheel
 E42950	303-290A-15 Adapter for 303-290A
 21127	303-428 Separator, Oil Pan
Oil Suction Equipment	
Plastic Scraper	

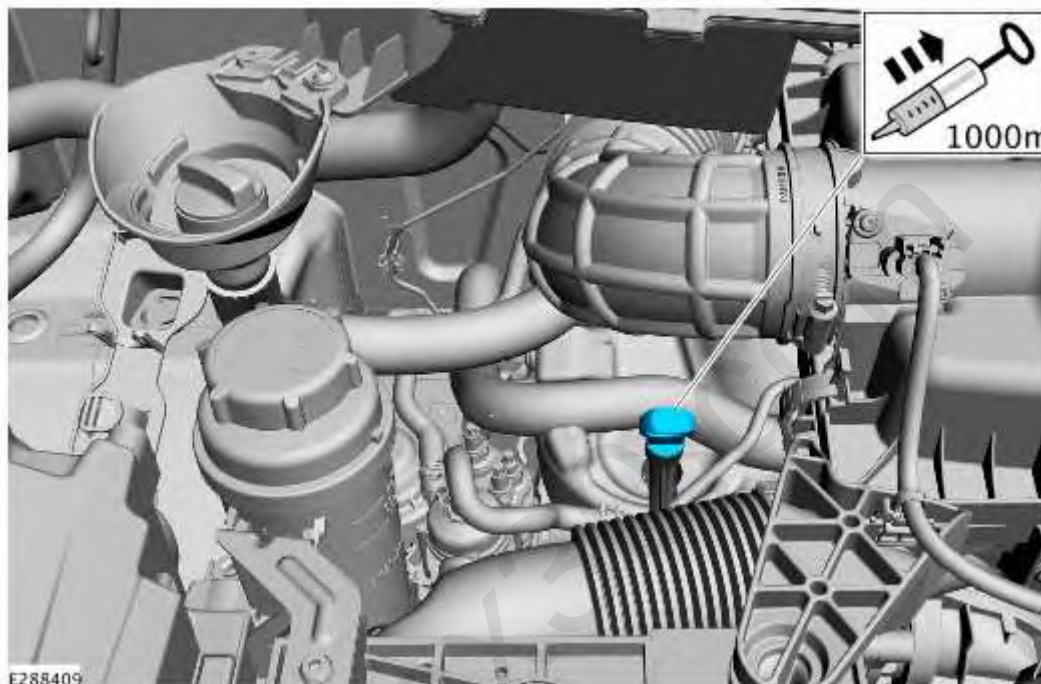
Two Leg Puller

Materials

Name	Specification
Primer	-
Silicone Sealant	WSE-M4G323-A4

Removal

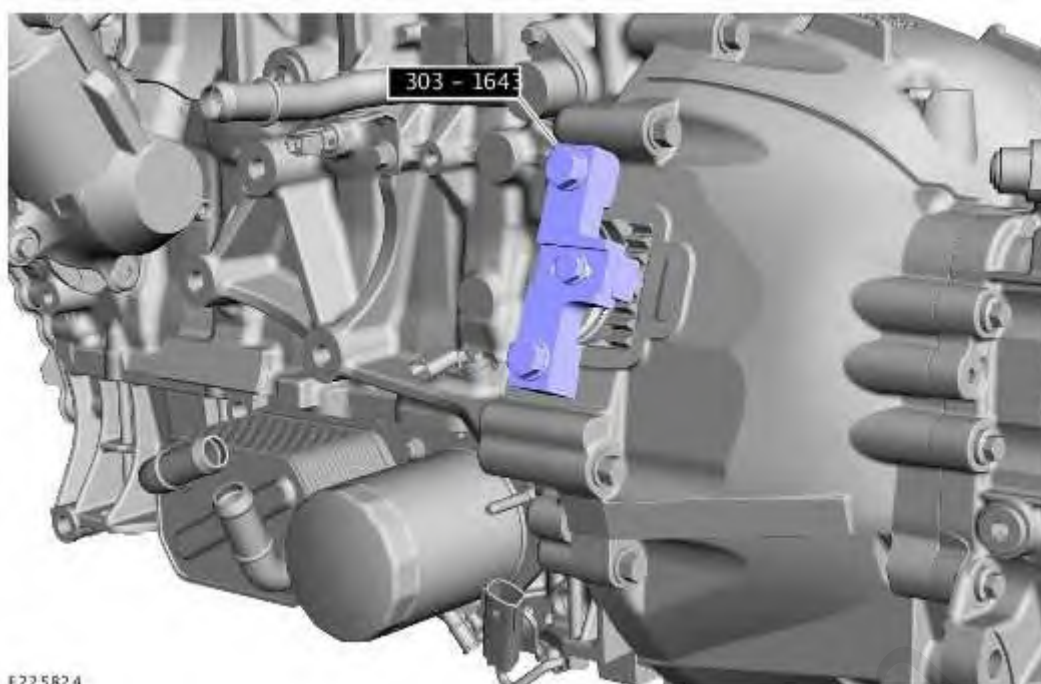
1. Refer to: [Battery Disconnect and Connect](#) (414-01 Battery, Mounting and Cables, General Procedures).
2. Use the General Equipment: [Oil Suction Equipment](#)



3. Right Side Only.

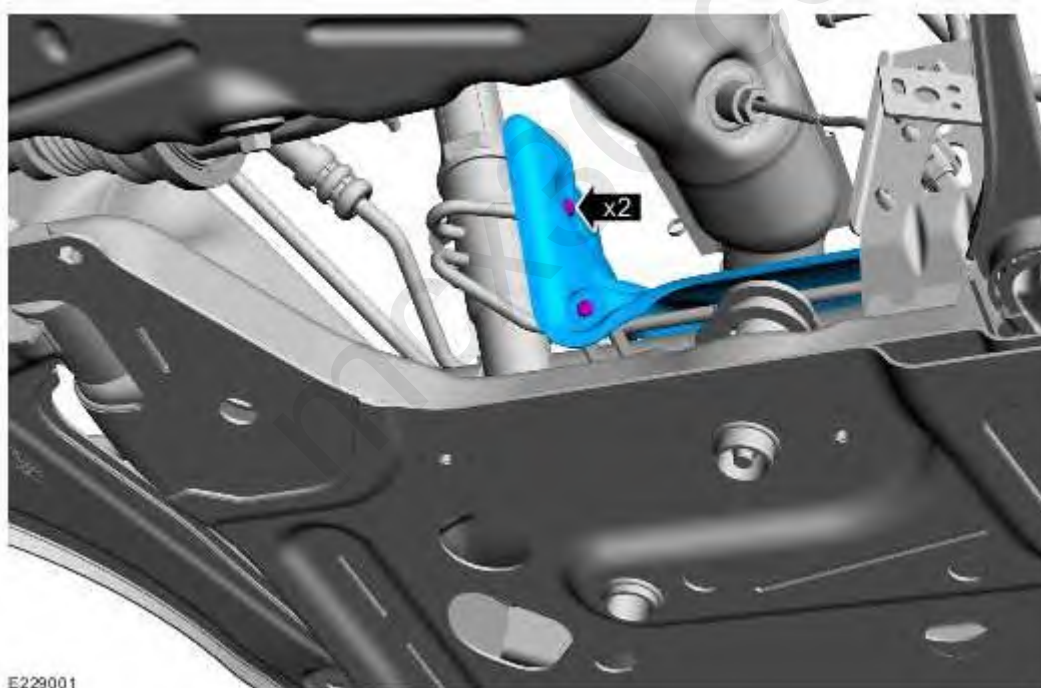
Refer to: [Headlamp Assembly](#) (417-01 Exterior Lighting, Removal and Installation).

4. Refer to: [Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03A Engine Cooling, General Procedures).
5. Refer to: [Accessory Drive Belt](#) (303-05A Accessory Drive, Removal and Installation).
6. Refer to: [Starter Motor](#) (303-06A Starting System, Removal and Installation).
7. Install Special Service Tool: [303-1643](#).



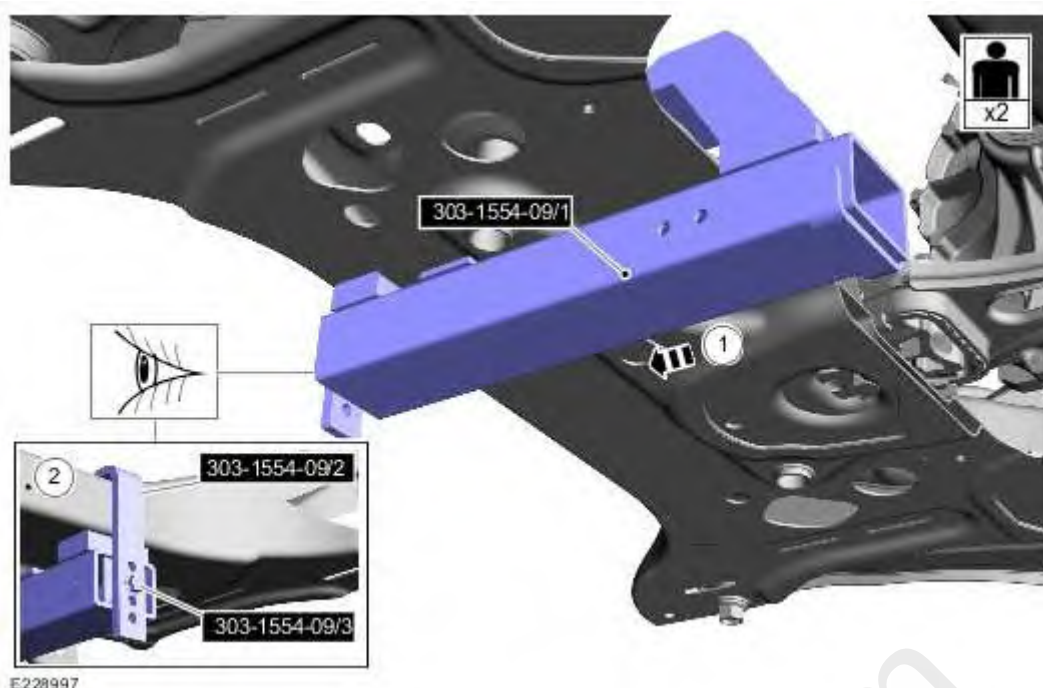
RHD FWD

8.

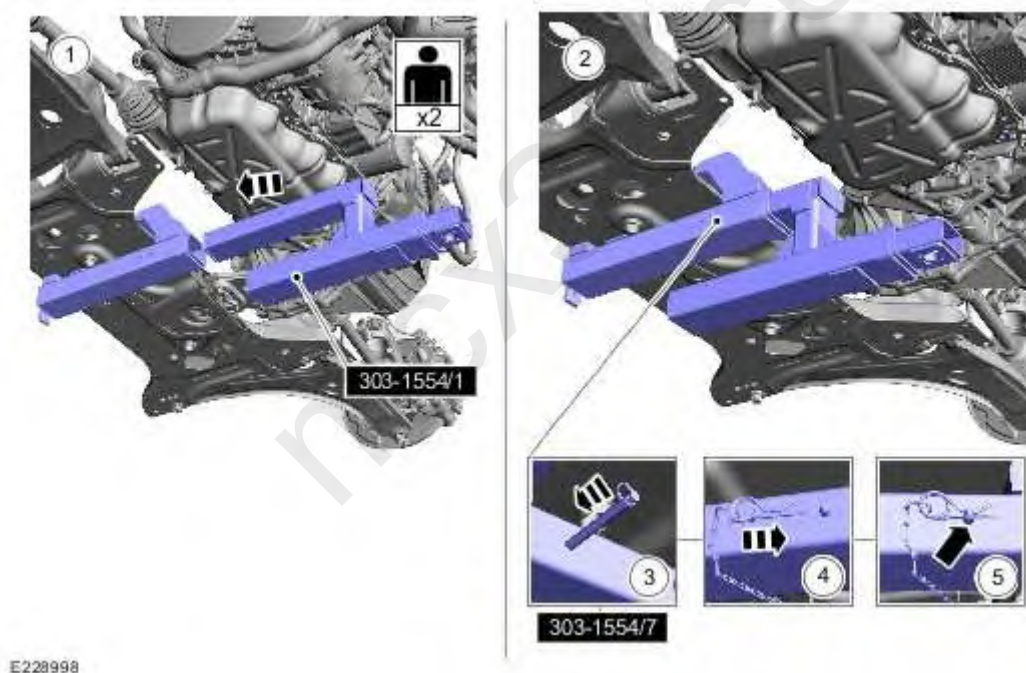


All vehicles

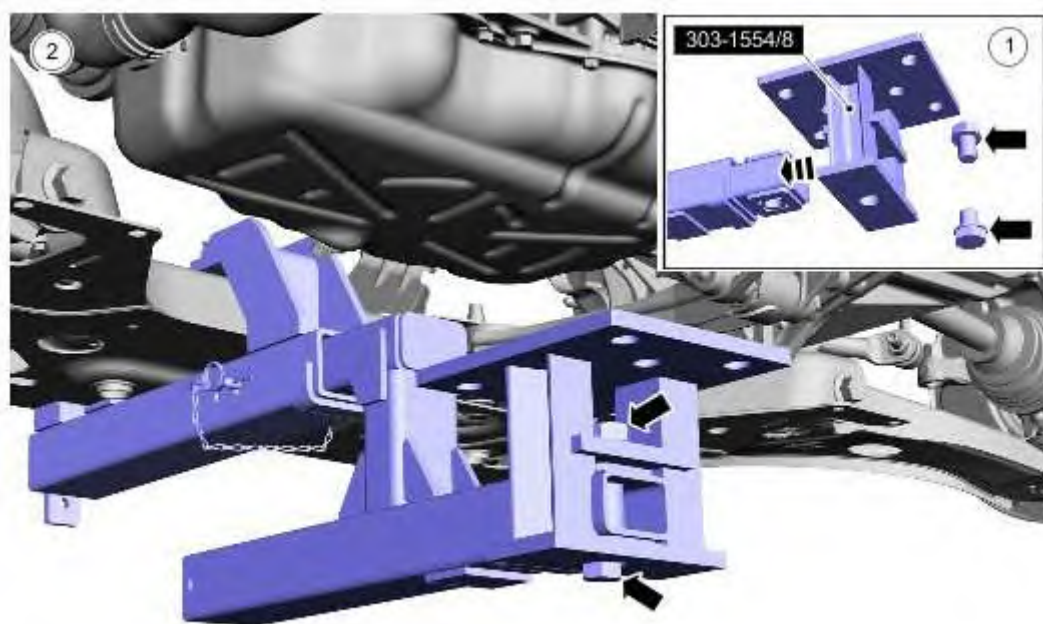
9. **NOTE:** The component must be installed by hand before final tightening.
 Use Special Service Tool: [303-1554-09](#).
 Torque: 36 Nm



10. Use Special Service Tool: [303-1554](#).

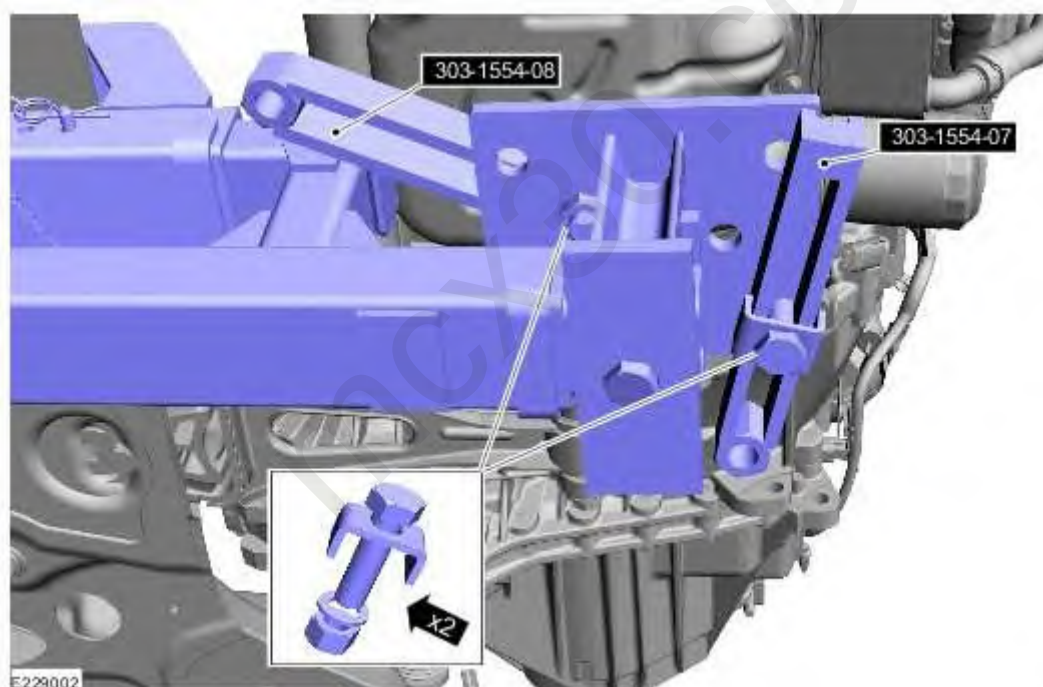


11. **NOTE:** The component must be installed by hand before final tightening.
Use Special Service Tool: [303-1554](#).



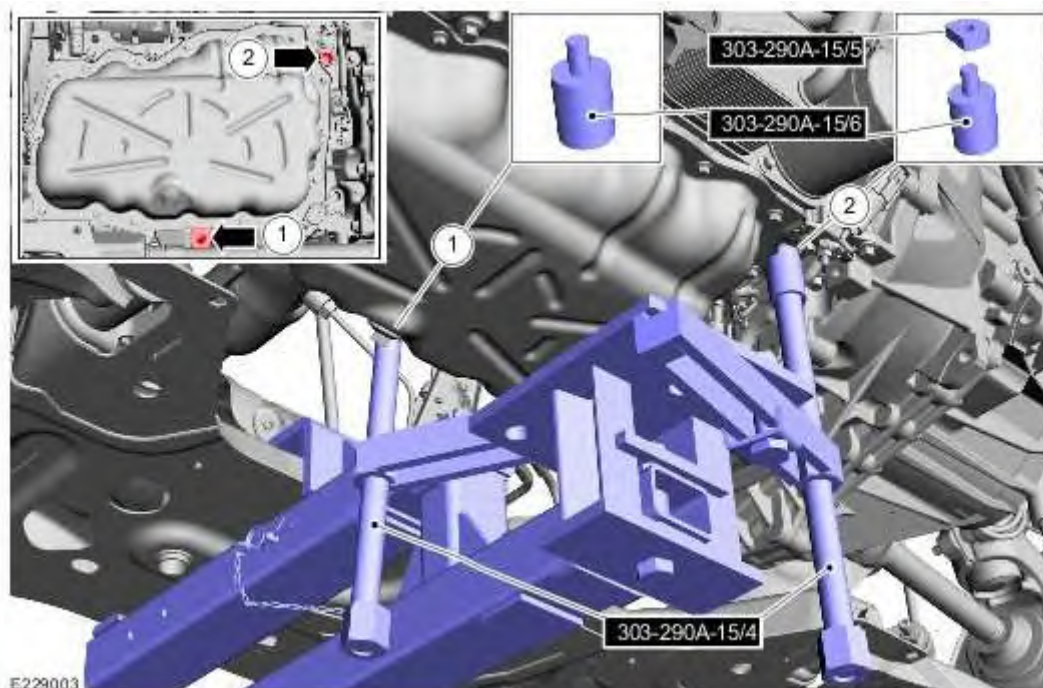
E228999

12. Use Special Service Tools: [303-1554-08](#), [303-1554-07](#).

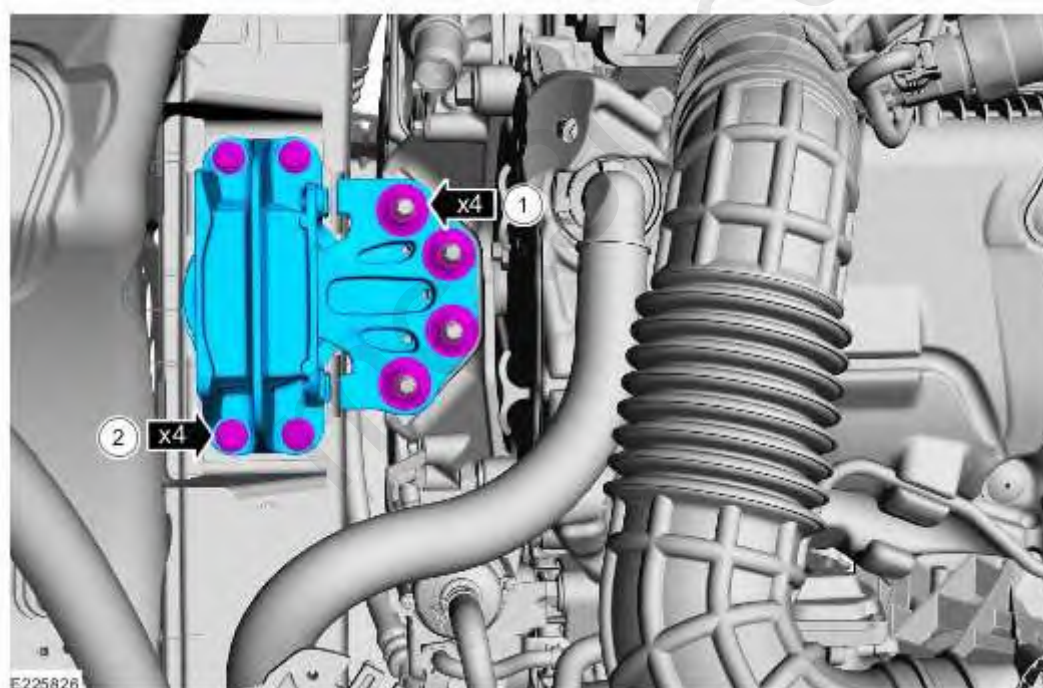


E229002

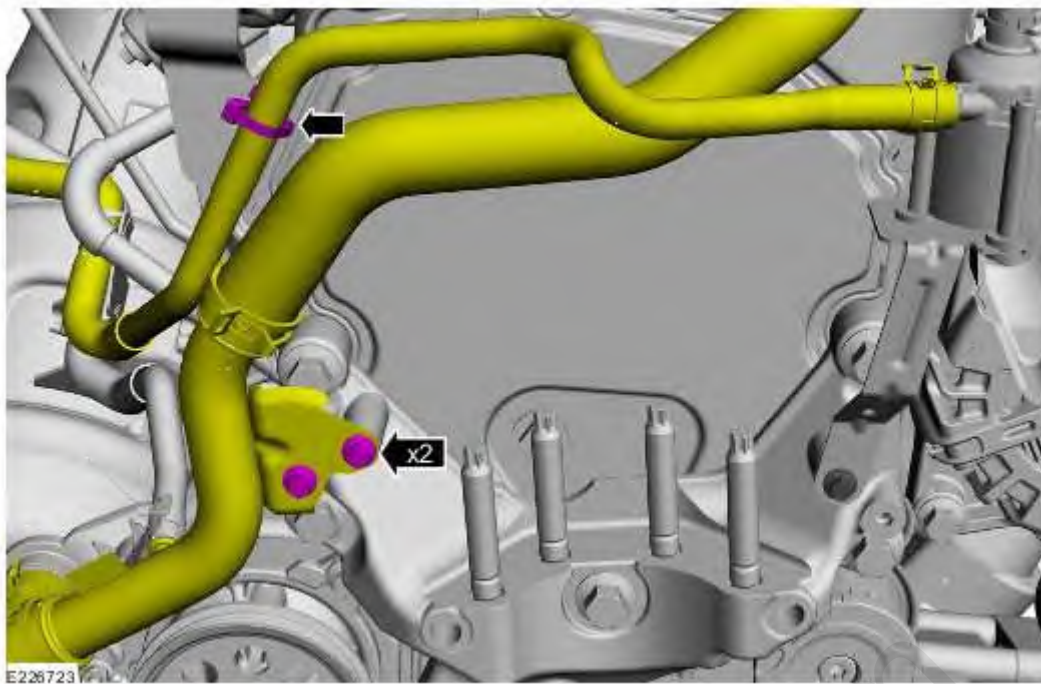
13. Install Special Service Tool: [303-290A-15](#).



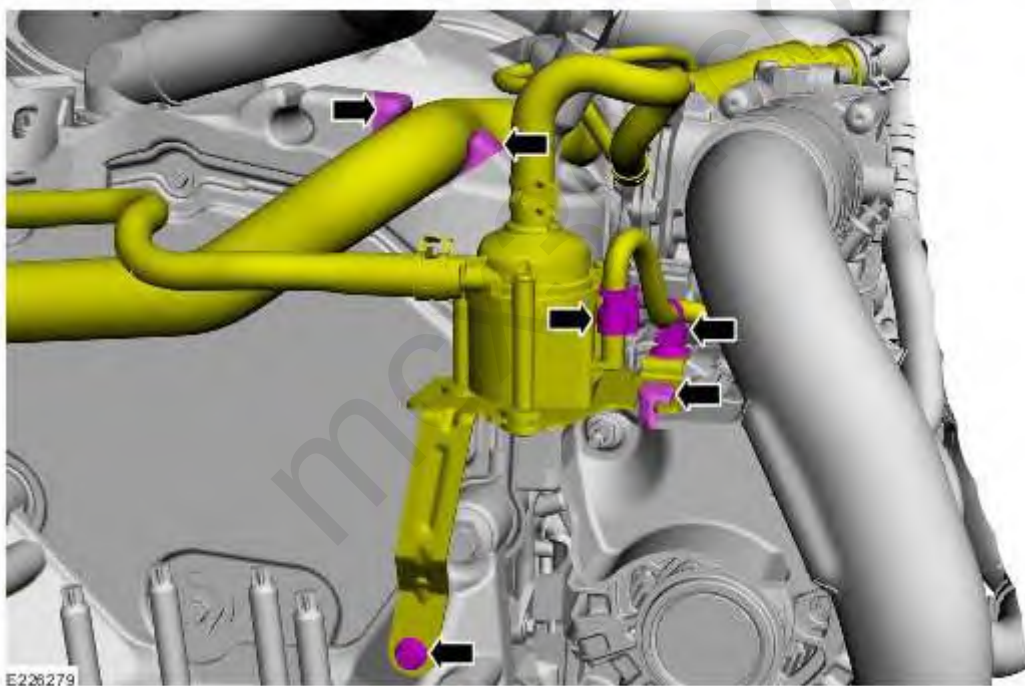
14. Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).
- 15.



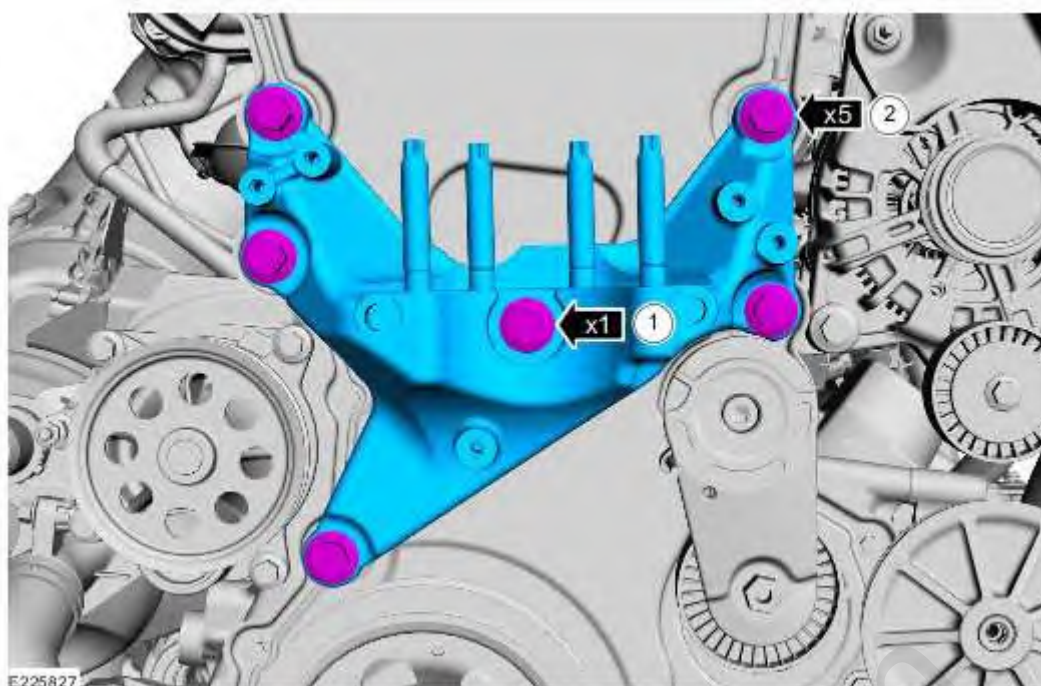
- 16.



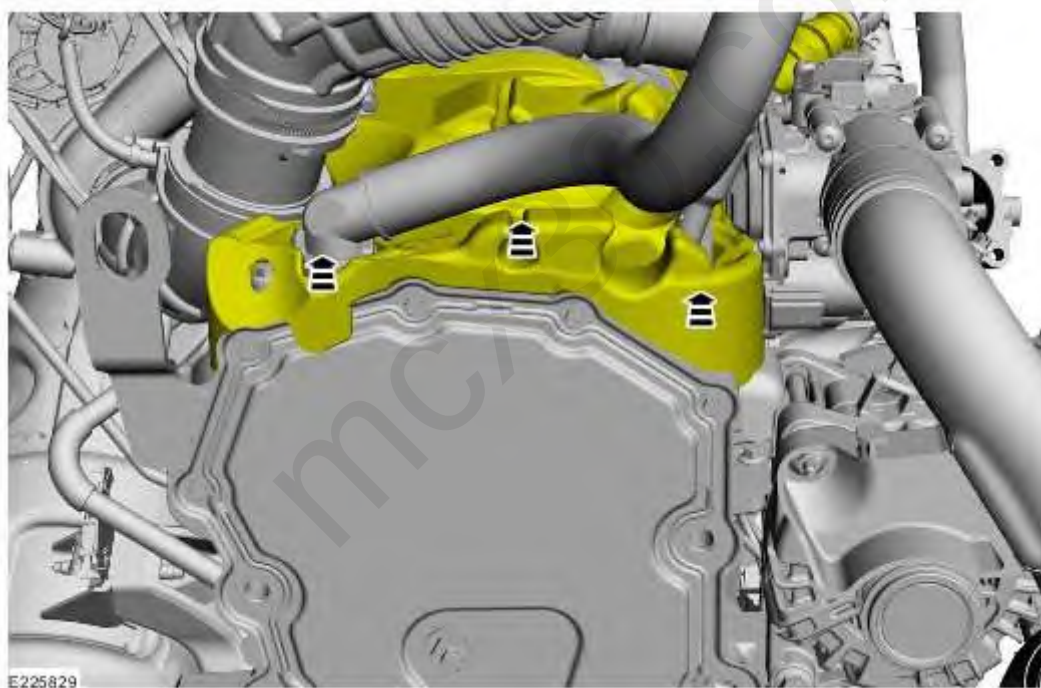
17.



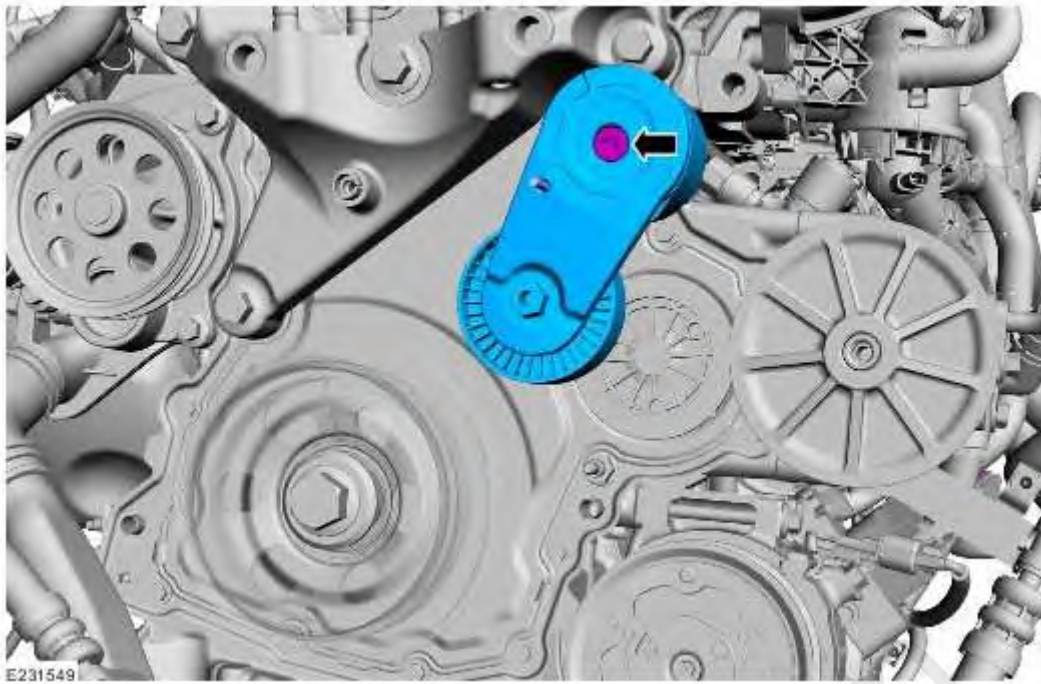
18.



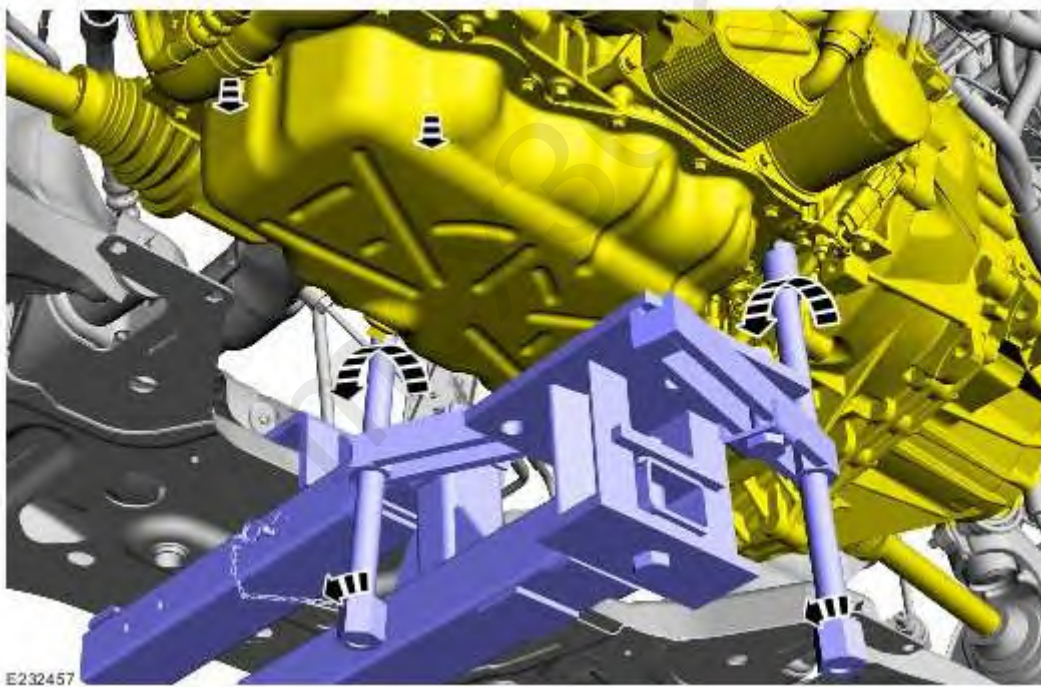
19.



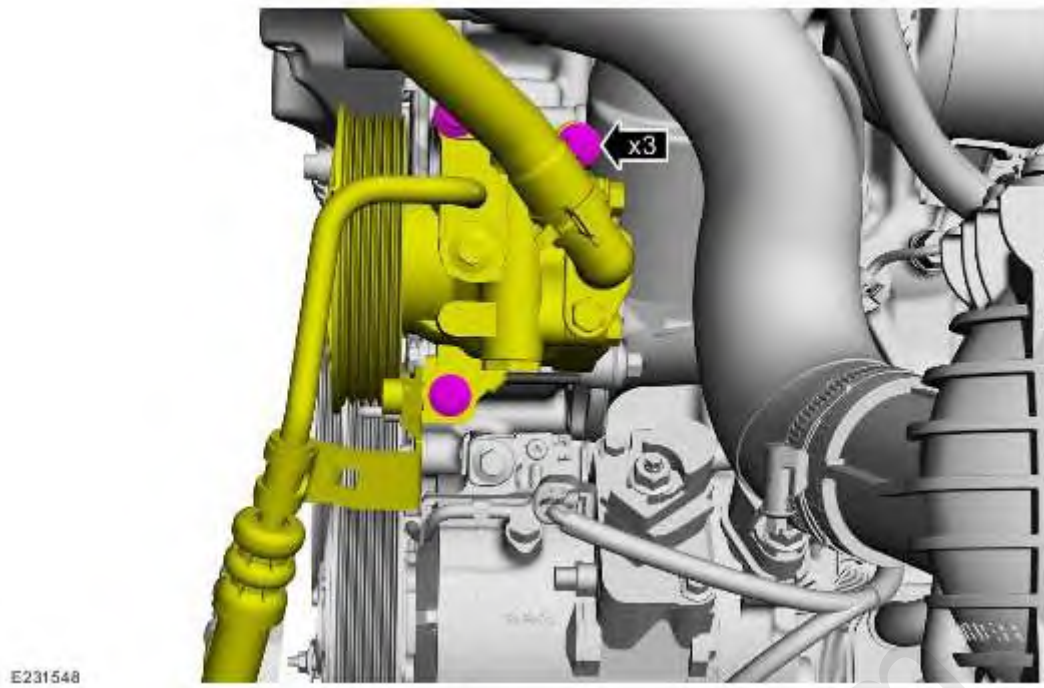
20.



21. Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).
22. **NOTE:** Make sure that no components catch.



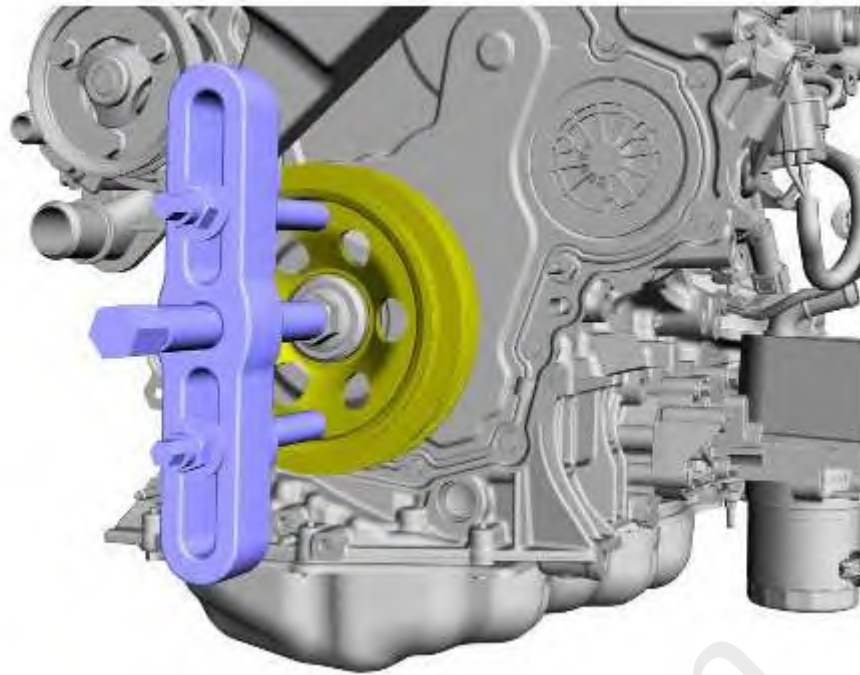
- 23.



24. Loosen: 5 turn(s)



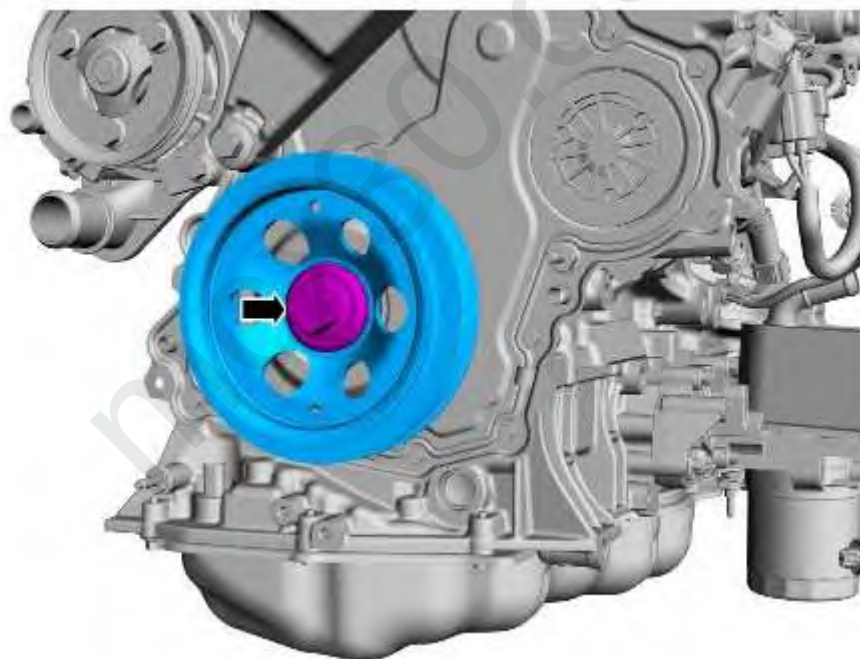
25. Use the General Equipment: [Two Leg Puller](#)



E287550

26. Remove the General Equipment: [Two Leg Puller](#)

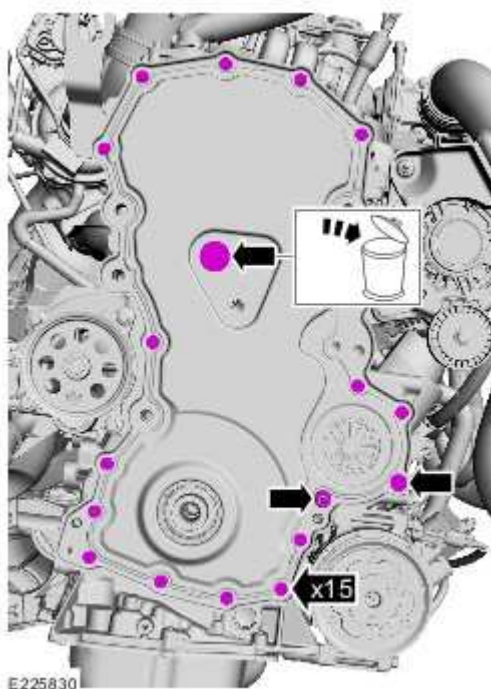
27. NOTE: Discard the bolt.



E287552

28. Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).

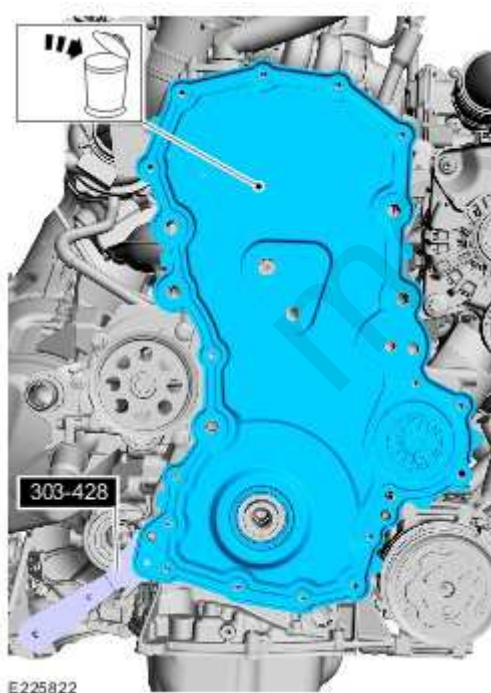
29. NOTE: Be prepared to collect escaping fluid.



30.

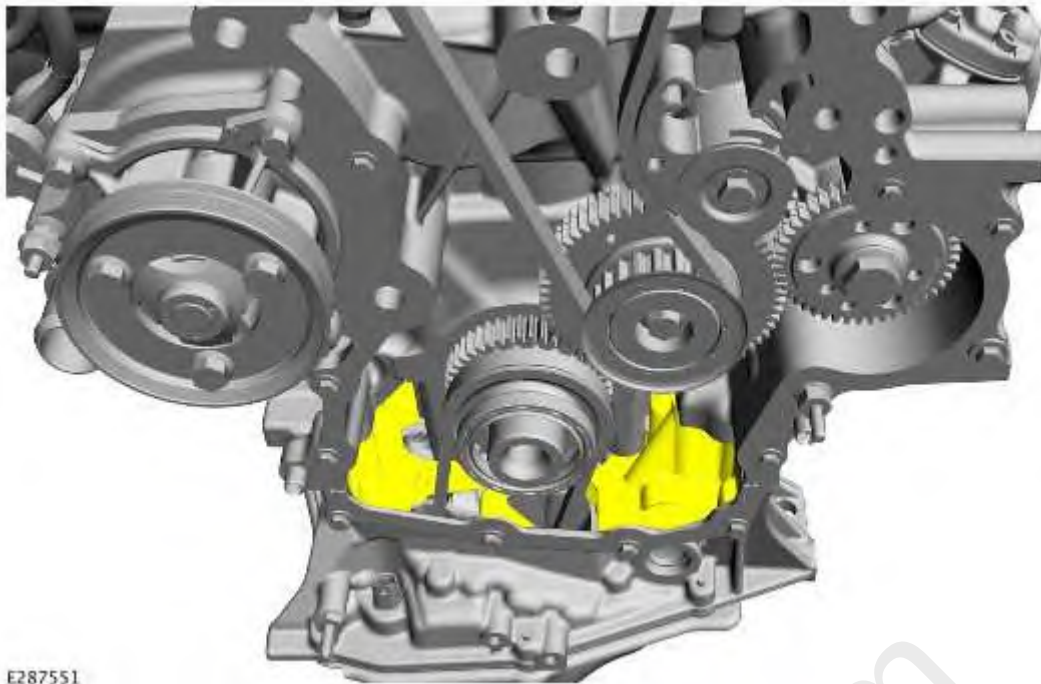
NOTE: Be prepared to collect escaping fluid.

Use Special Service Tool: [303-428](#).



Installation

1.  NOTICE: Protect the engine and the oil pan from contamination by sealer debris.

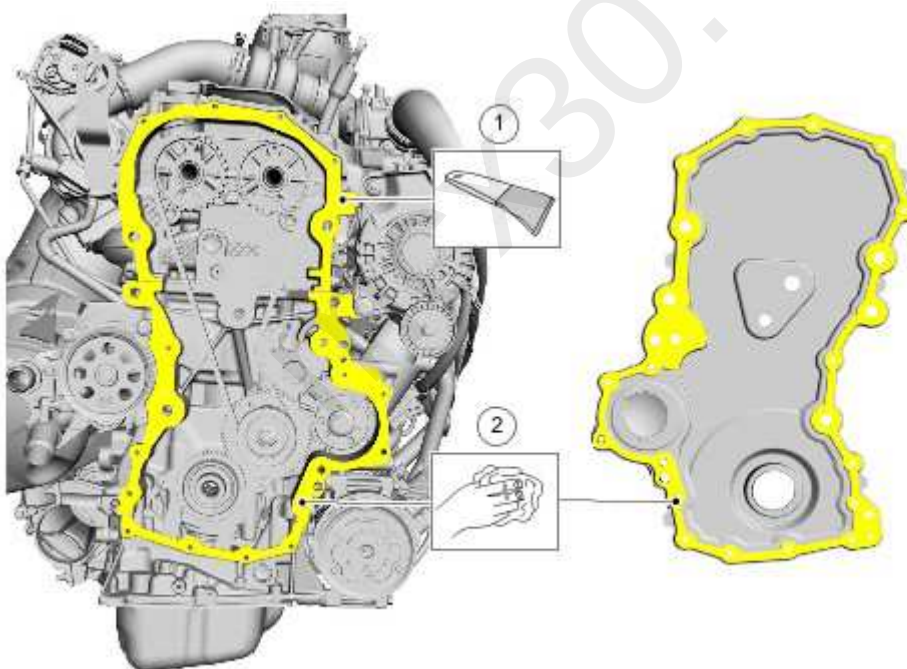


E287551

2. **NOTE:** Make sure that the mating faces are clean and free of foreign material.

1. Use the General Equipment: [Plastic Scraper](#)

2. Material: - ([Primer](#))



E225831

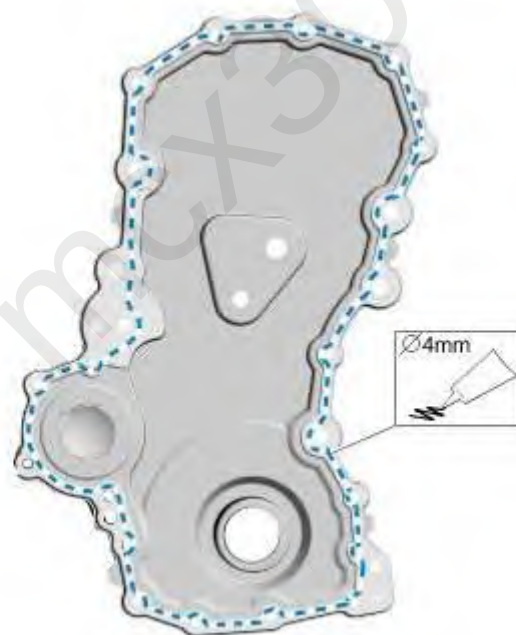
3.



4. **NOTE:** Make sure that a new component is installed.
NOTE: The component must be installed within 5 minutes of applying the sealant.

 Complete this step within: 5min

Material: [WSE-M4G323-A4 \(Silicone Sealant\)](#)

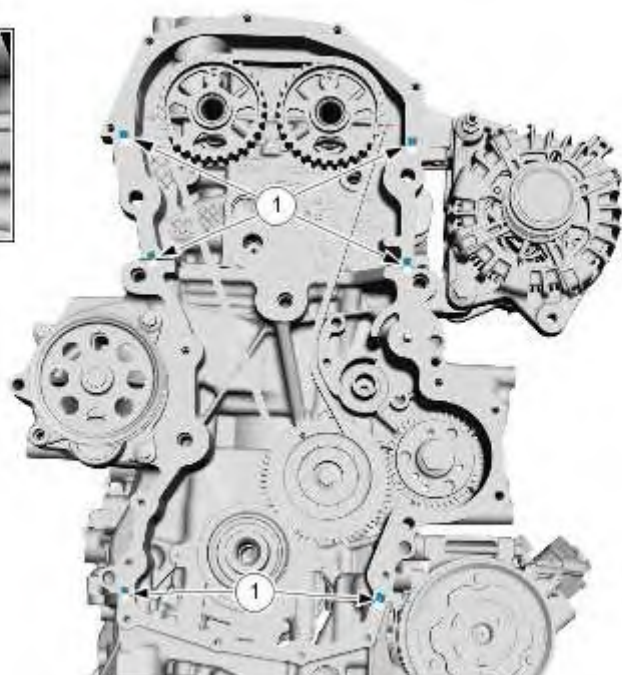
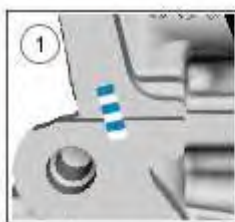


E235244

5. **NOTE:** The component must be installed within 5 minutes of applying the sealant.

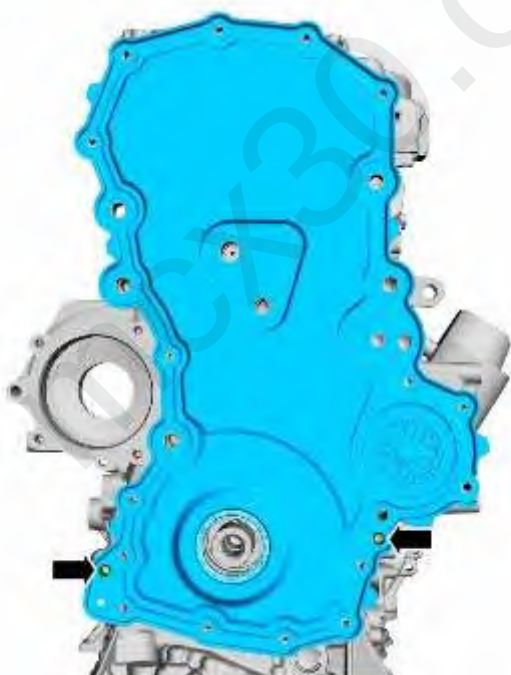
 Complete this step within: 5min

Material: [WSE-M4G323-A4 \(Silicone Sealant\)](#)



E225938

6.  **NOTICE:** Make sure that the component is correctly located on the locating dowels.



E225939

7. **NOTE:** Only tighten the bolts finger tight at this stage.



E234040

8. NOTE: Only tighten the bolts finger tight at this stage.

Torque:

Stage 1: 12 Nm

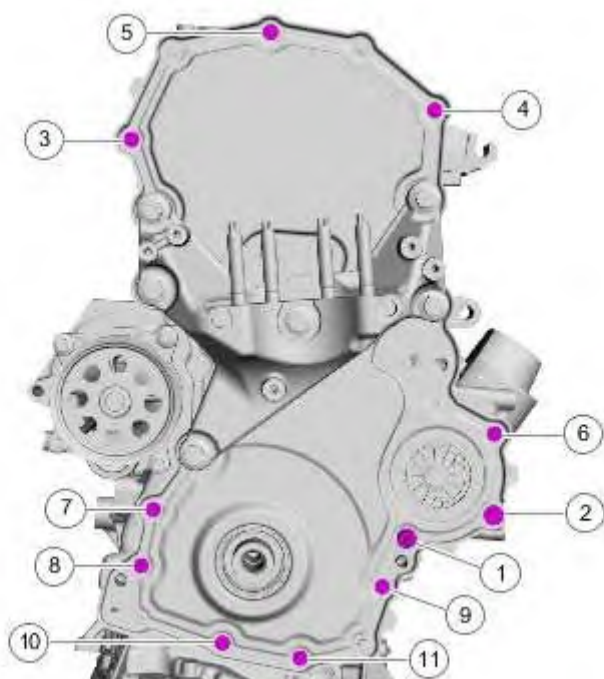
Stage 2: 80 Nm

Stage 3: 90°



E234041

9. NOTE: Only tighten the bolts finger tight at this stage.

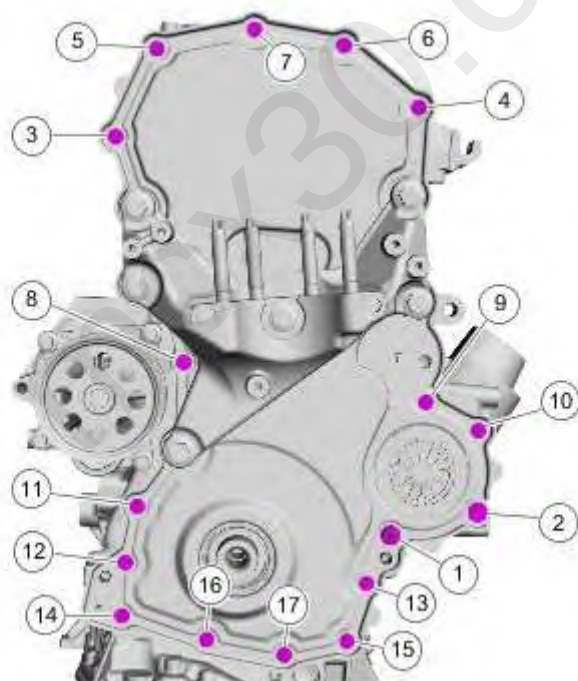


E234042

10. *Torque:*

1-2 18 Nm

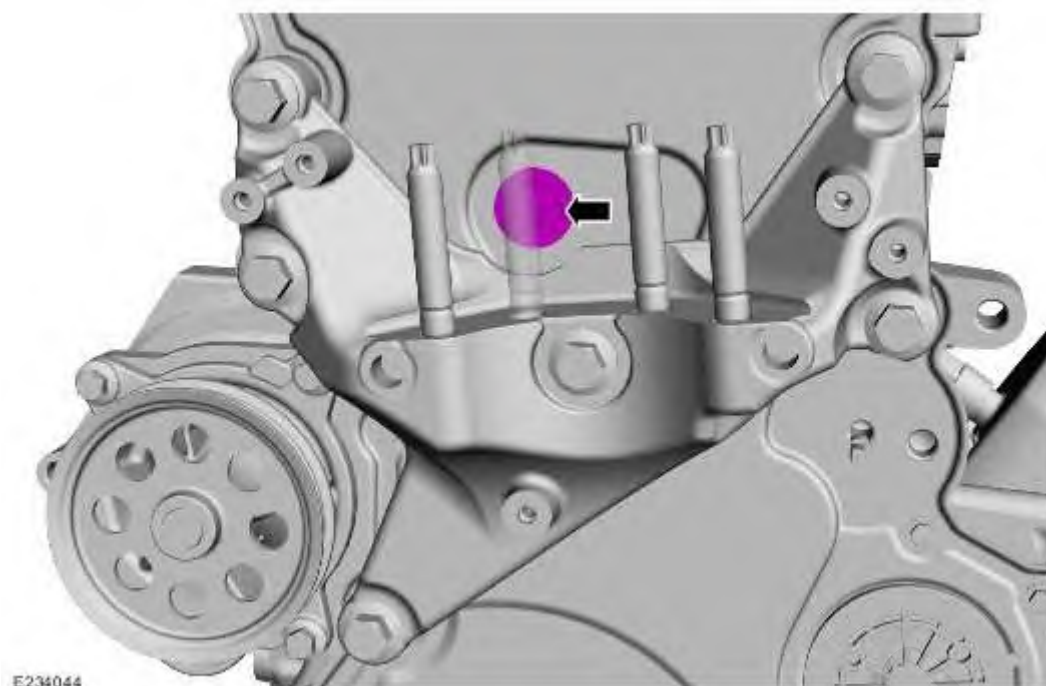
3-17 10 Nm



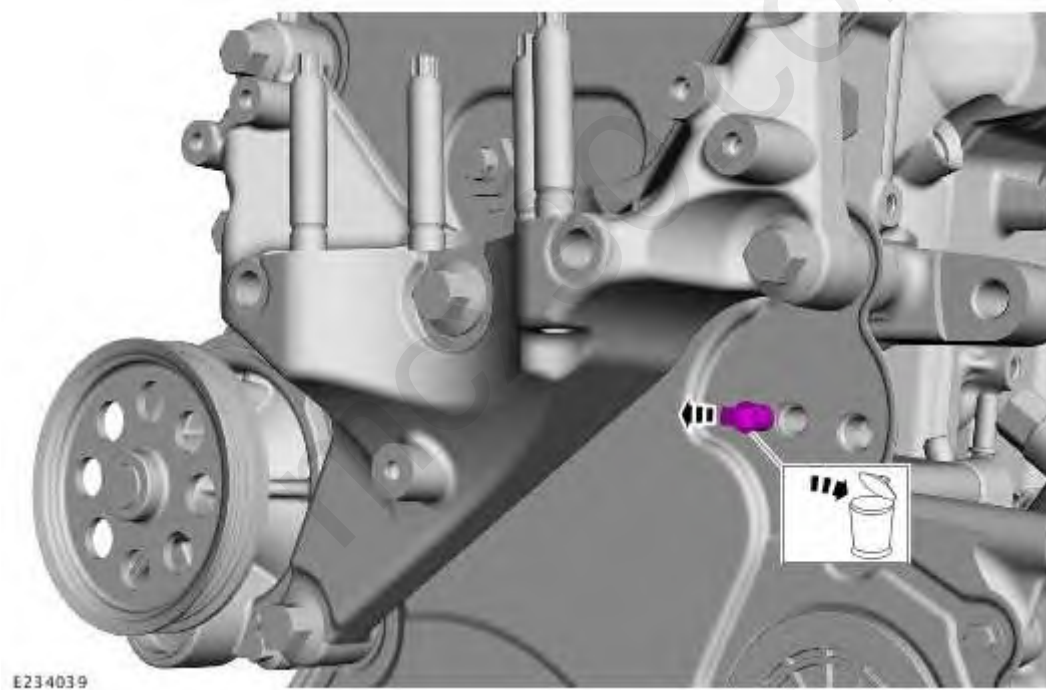
E234043

11. **NOTE:** Only tighten the bolt finger tight at this stage.
NOTE: Make sure that new bolts are installed.

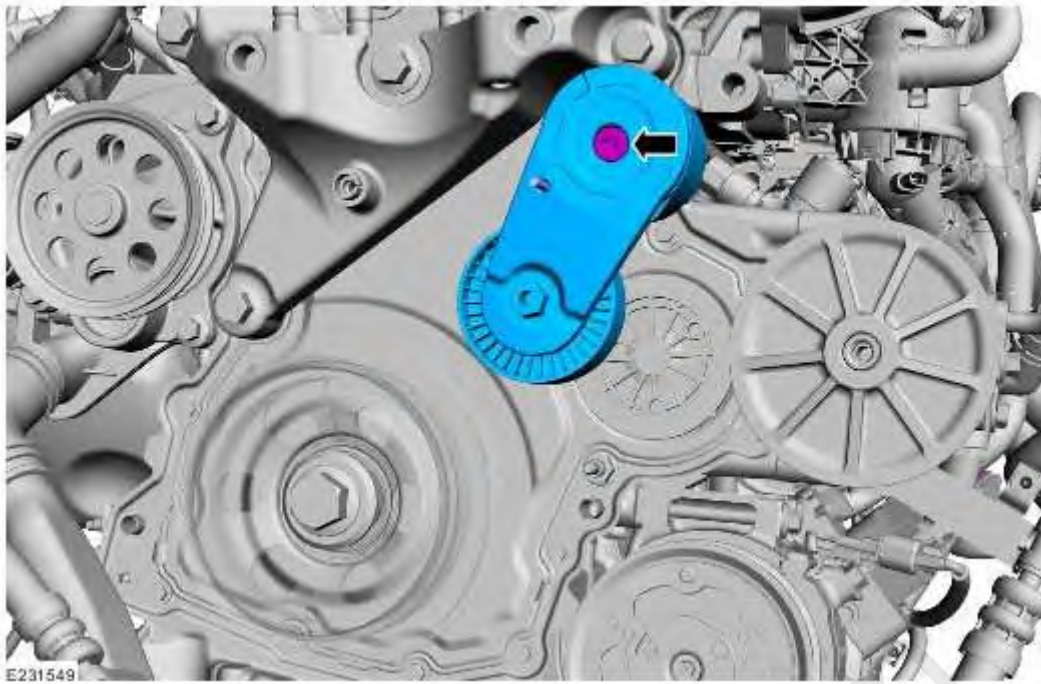
Torque: 40 Nm



12.



13. Torque: 48 Nm



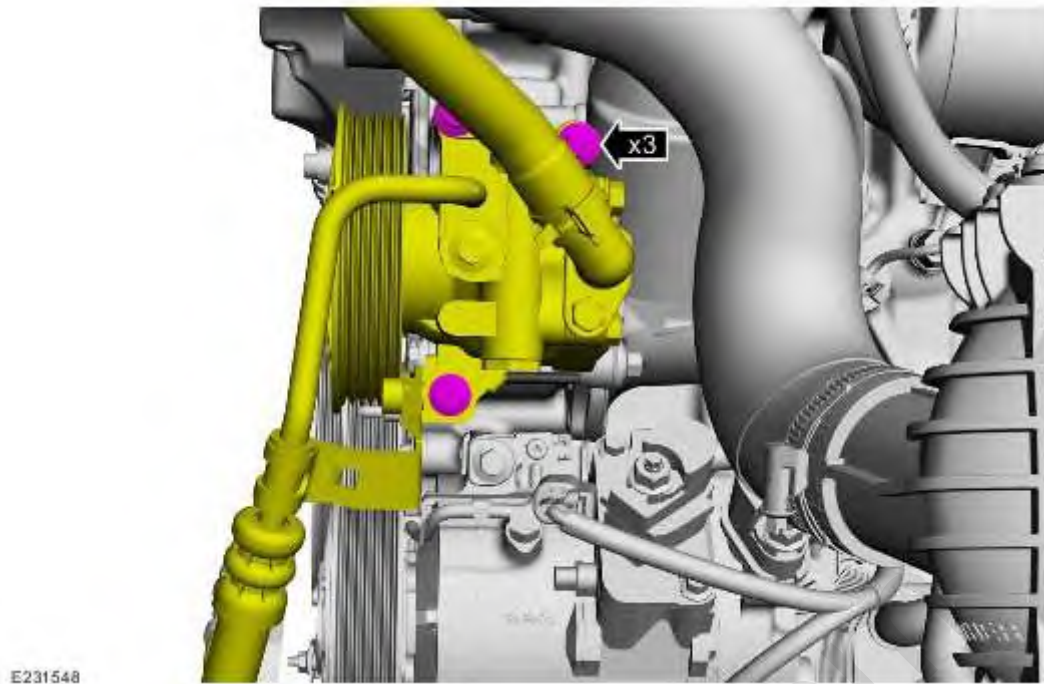
14. Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).
15. **NOTE:** Make sure a new bolt is installed.
NOTE: Only tighten the bolt finger tight at this stage.

Torque:

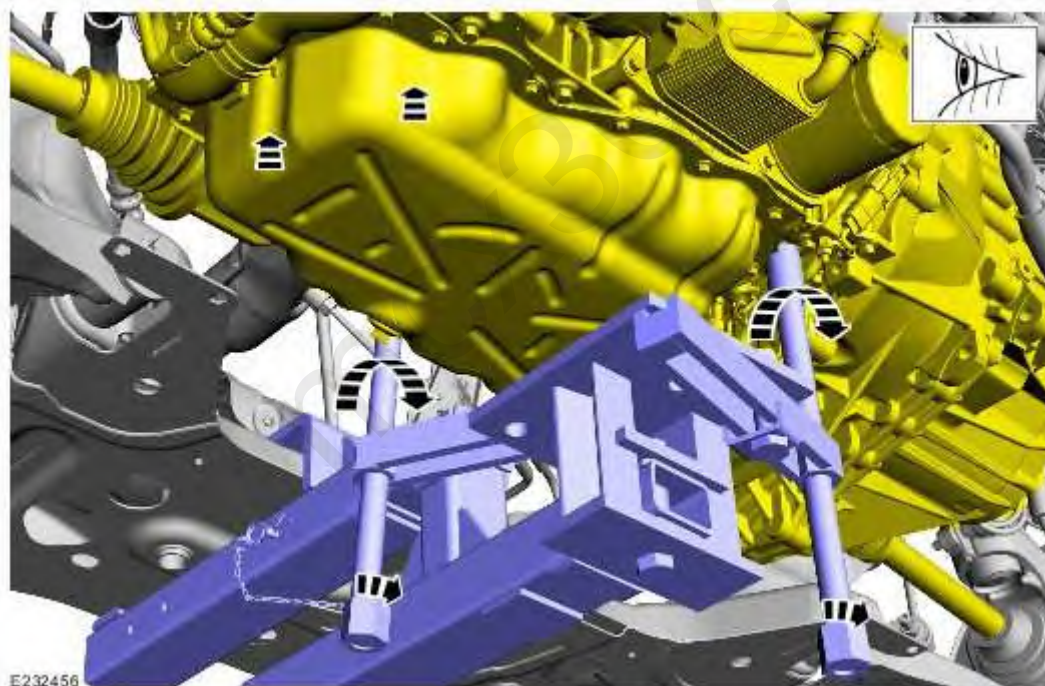
- Stage 1: 10 Nm
- Stage 2: Loosen: 60°
- Stage 3: 20 Nm
- Stage 4: 70 Nm
- Stage 5: 150 Nm
- Stage 6: Loosen: 90°
- Stage 7: 100 Nm
- Stage 8: 300 Nm
- Stage 9: 90°



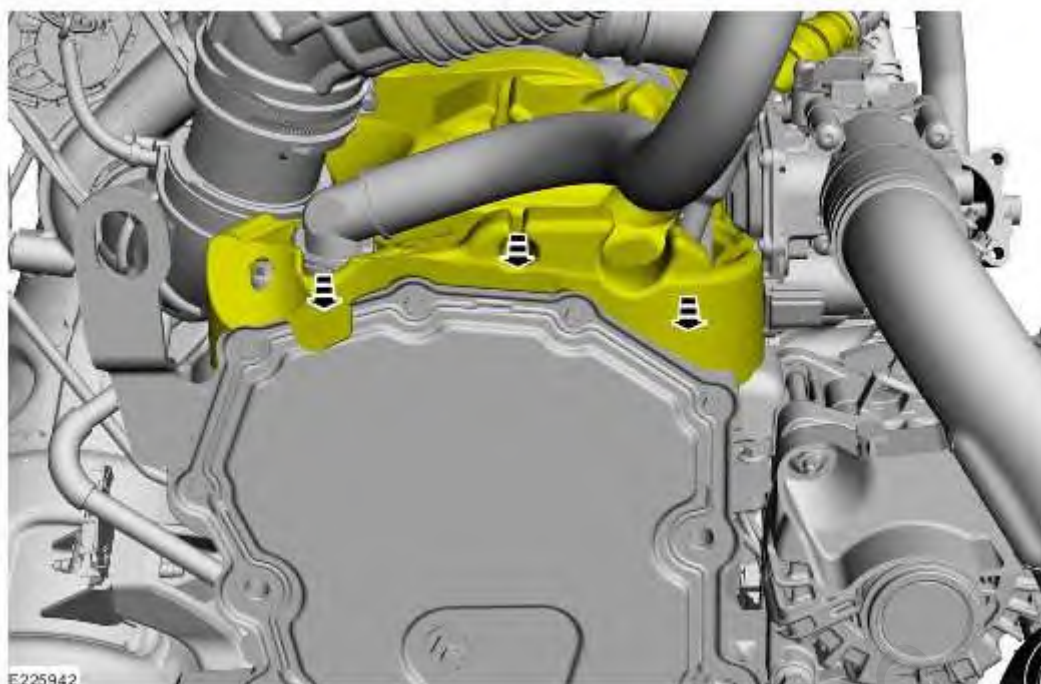
16. Torque: 23 Nm



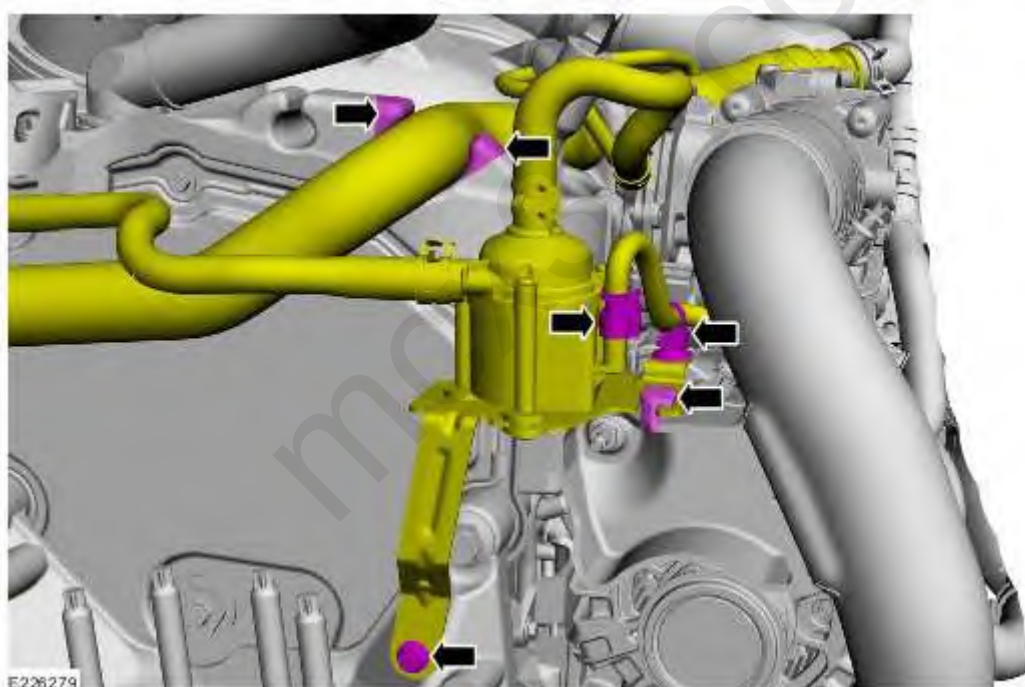
17. NOTE: Make sure that no components catch.



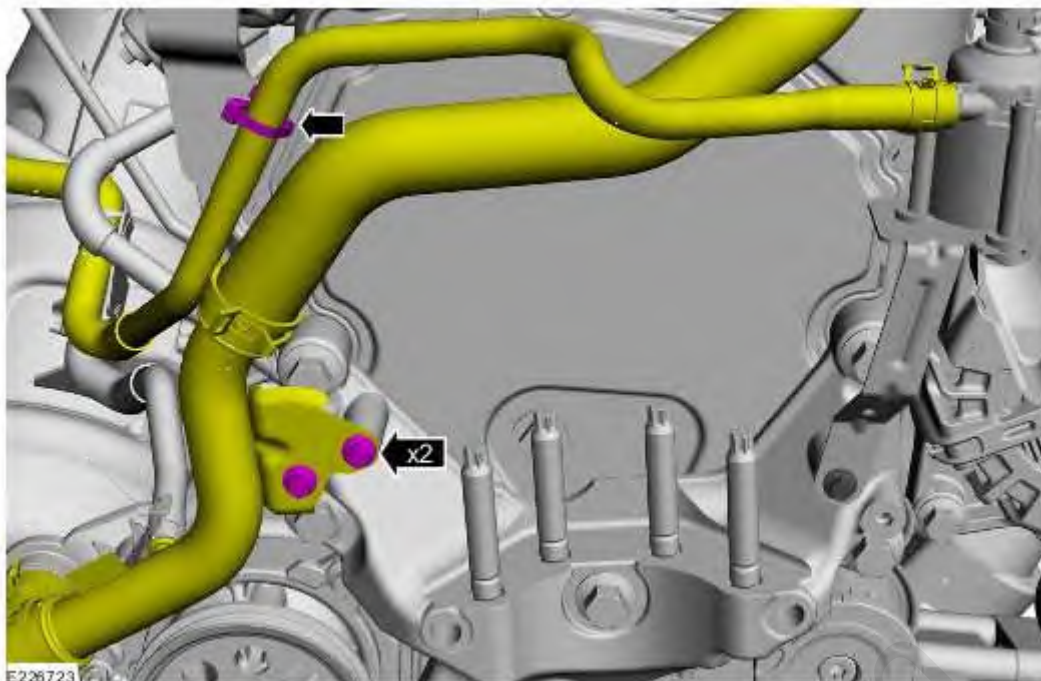
18. Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).
19.



20. Torque: 10 Nm



21.

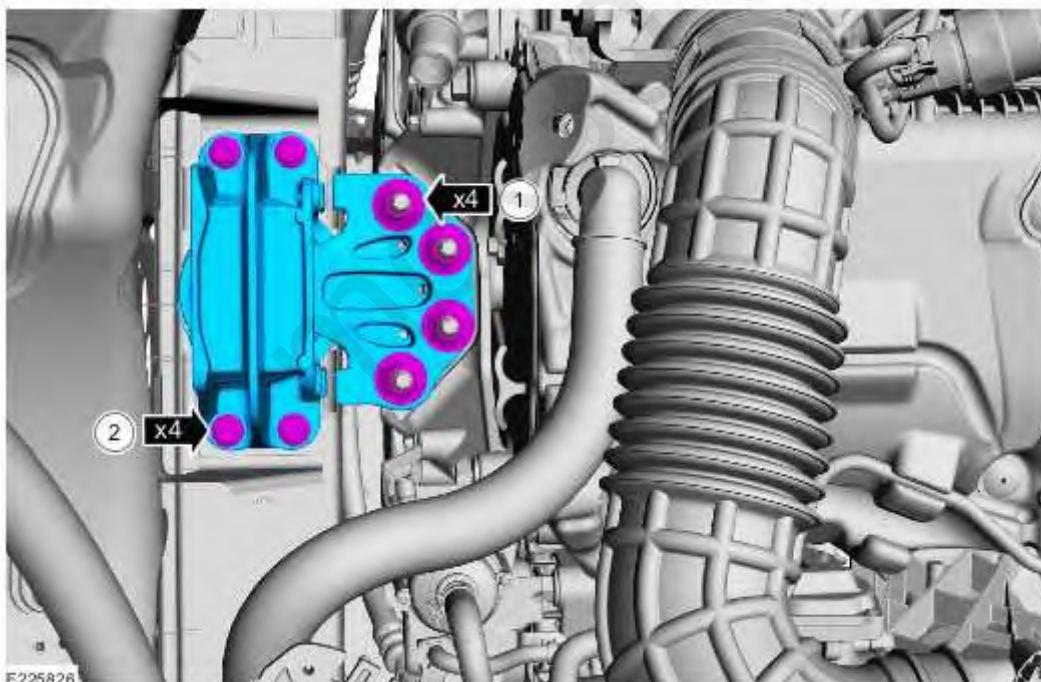


22. NOTE: Only tighten the nuts and bolts finger tight at this stage.

Torque:

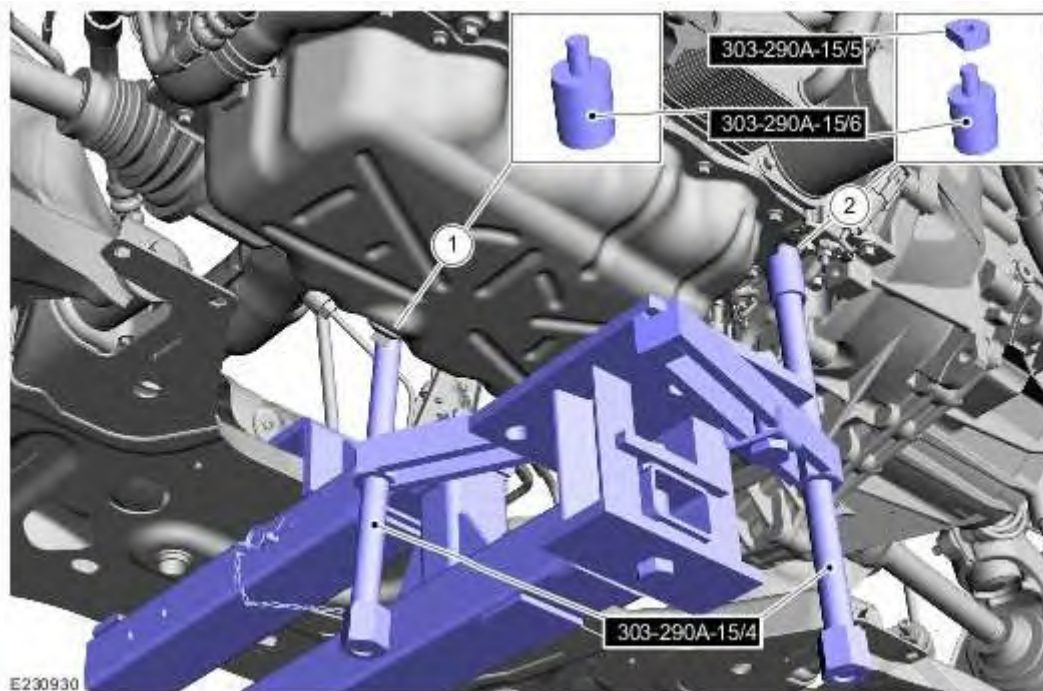
1 115 Nm

2 70 Nm

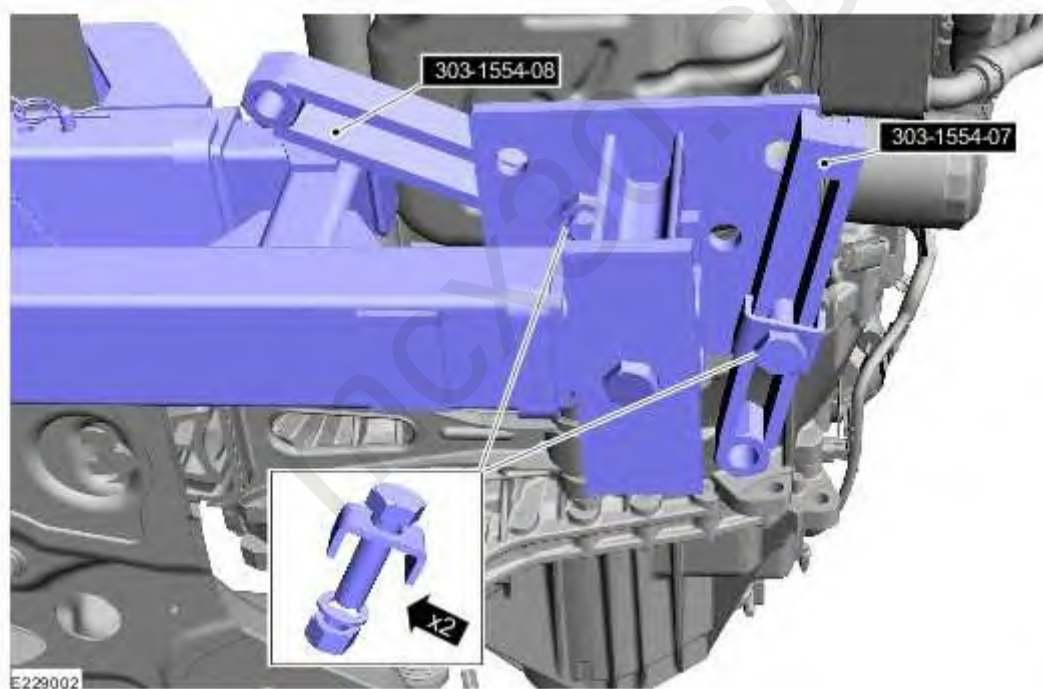


23. Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).

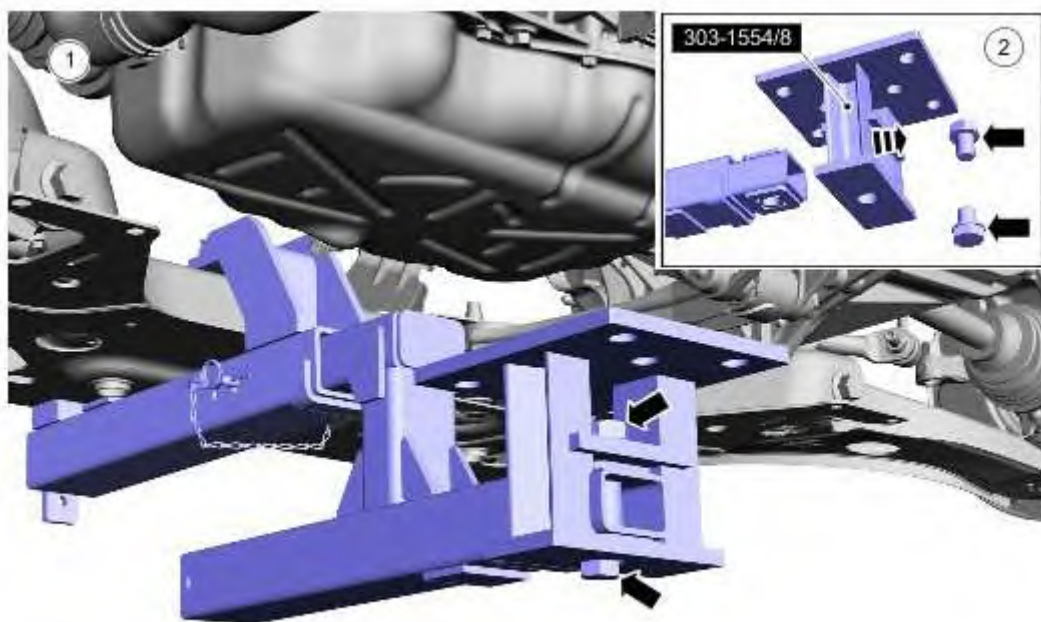
24. Remove *Special Service Tool*: [303-290A-15](#).



25. Remove Special Service Tools: [303-1554-08](#), [303-1554-07](#).

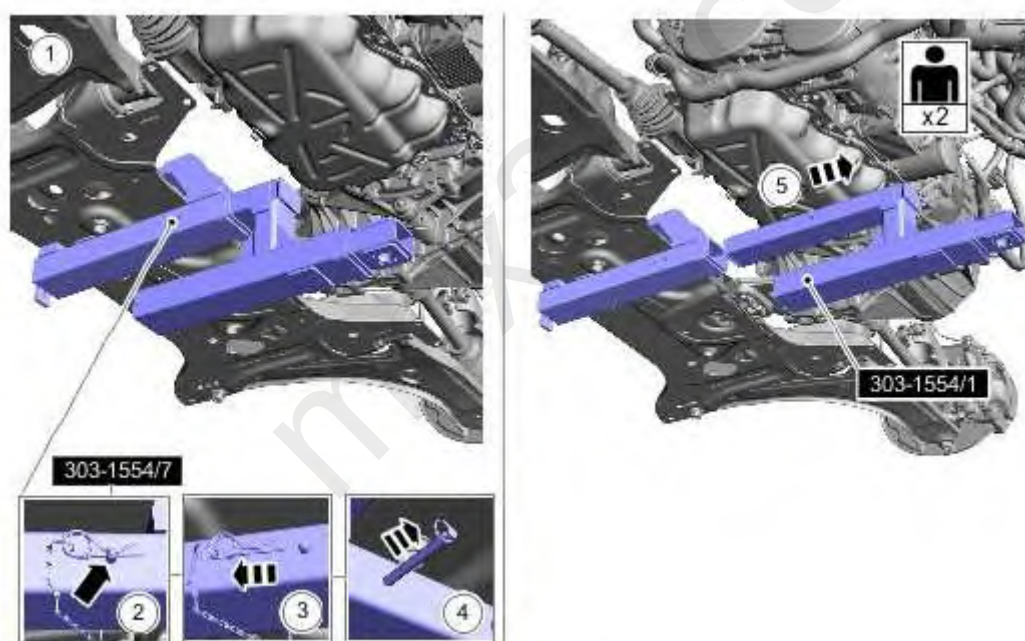


26. Remove Special Service Tool: [303-1554](#).



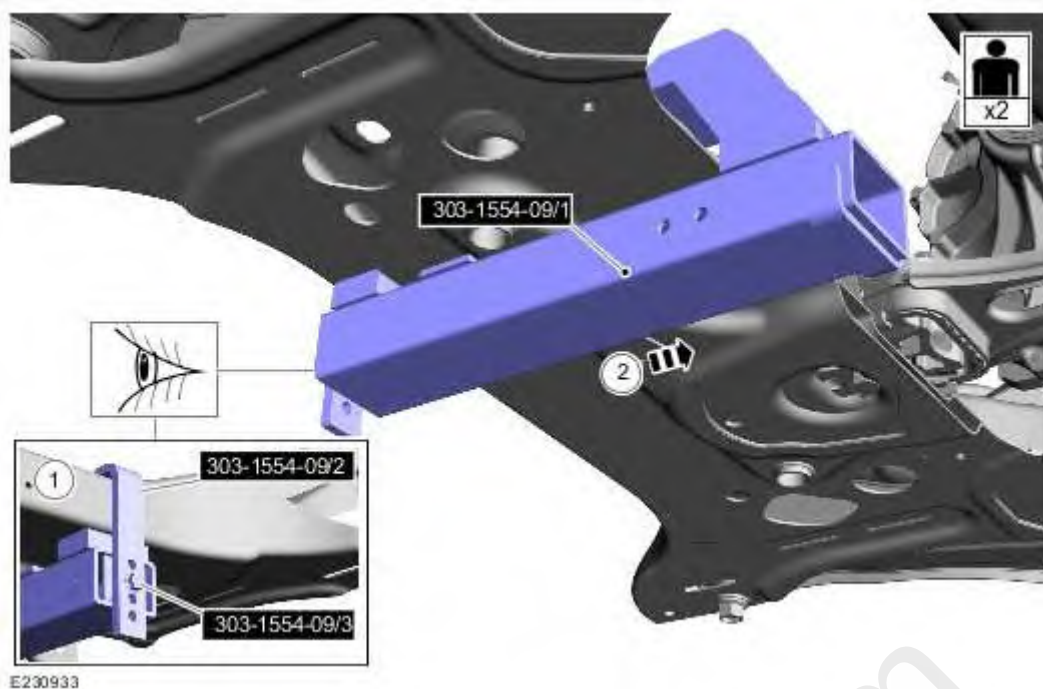
E230931

27. Remove Special Service Tool: 303-1554.



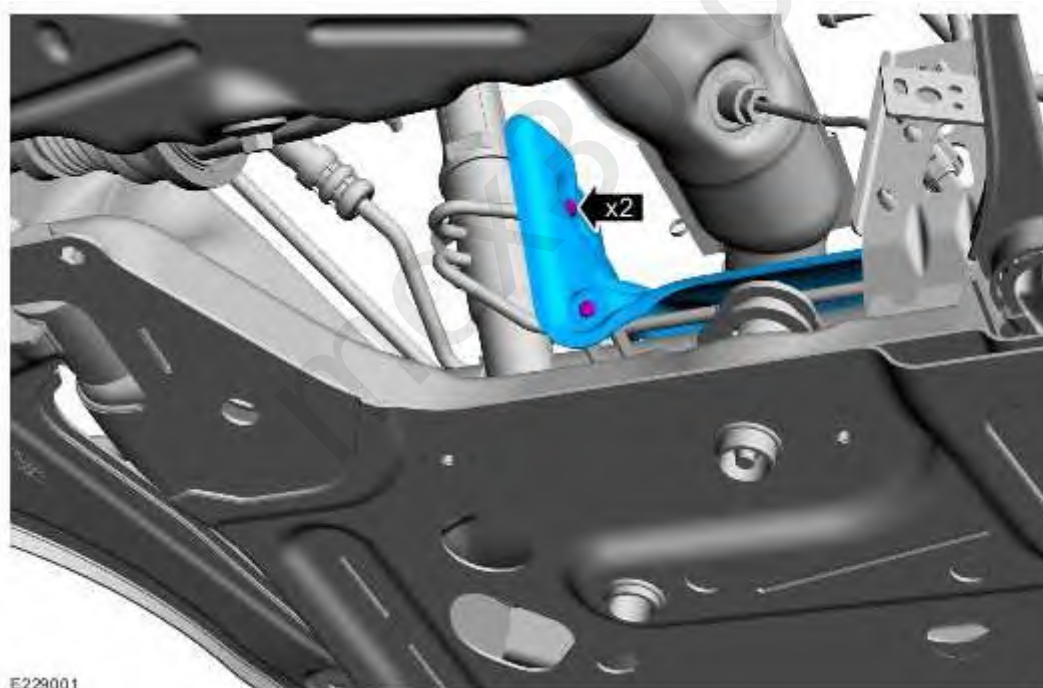
E230932

28. Remove Special Service Tool: 303-1554-09.



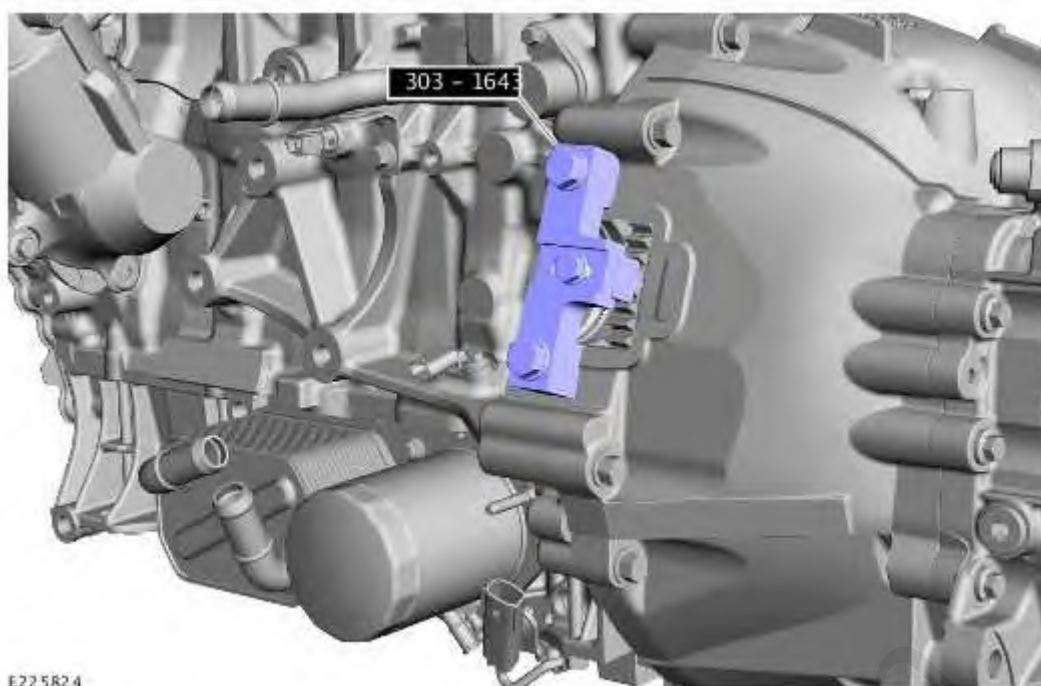
RHD FWD

29. Torque: 7 Nm



All vehicles

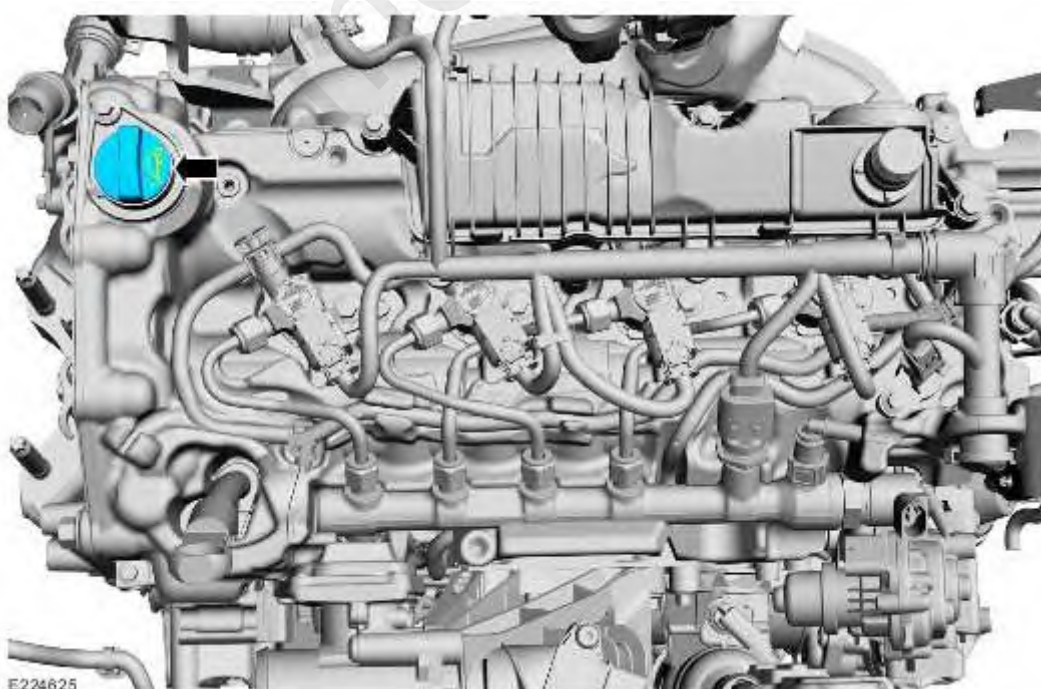
30. Remove Special Service Tool: [303-1643](#).



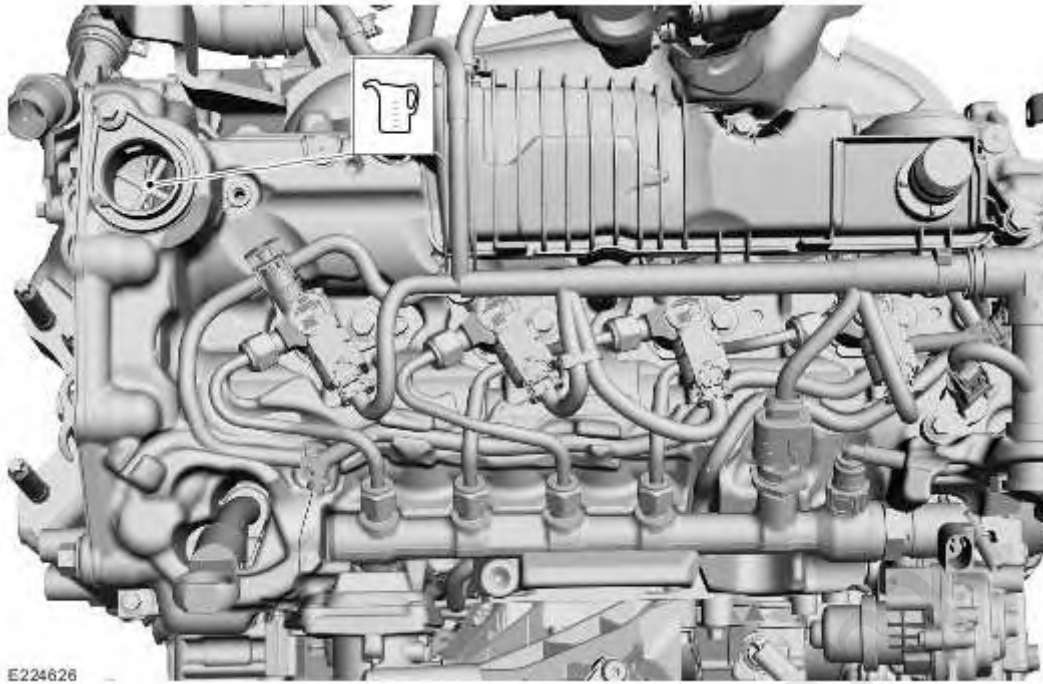
31. Refer to: [Starter Motor](#) (303-06A Starting System, Removal and Installation).
32. Refer to: [Accessory Drive Belt](#) (303-05A Accessory Drive, Removal and Installation).
33. Right side only.

Refer to: [Headlamp Assembly](#) (417-01 Exterior Lighting, Removal and Installation).

34. Refer to: [Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03A Engine Cooling, General Procedures).
35. Refer to: [Battery Disconnect and Connect](#) (414-01 Battery, Mounting and Cables, General Procedures).
- 36.



37. Refer to: [Specifications](#) (303-01A Engine, Specifications).



38.

