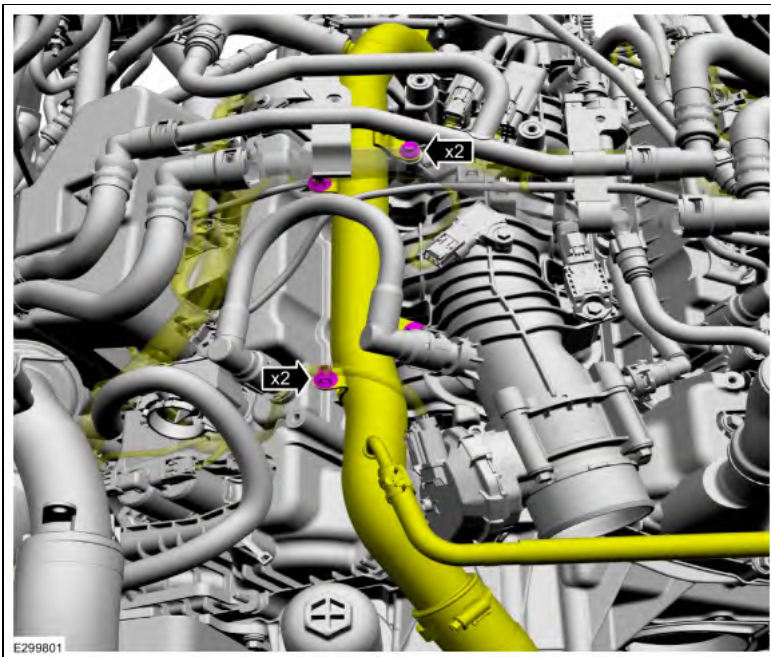
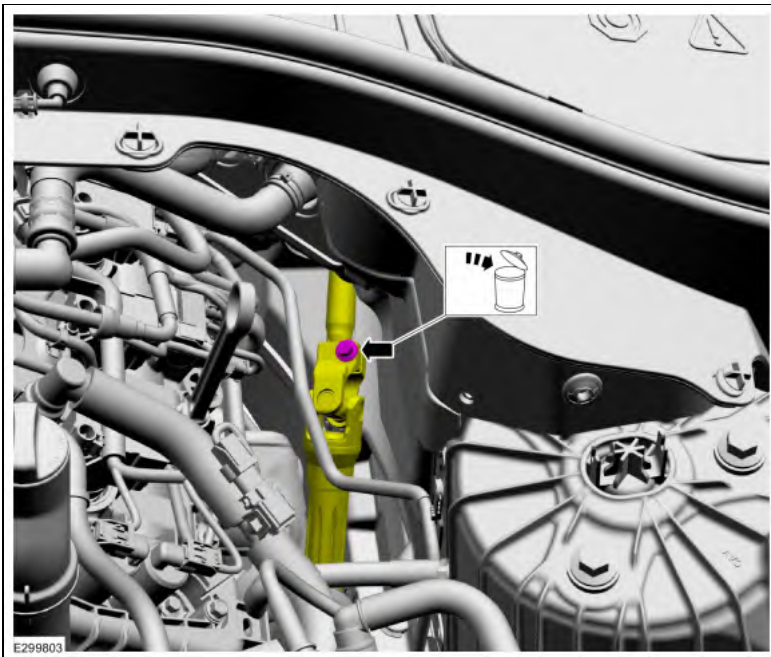
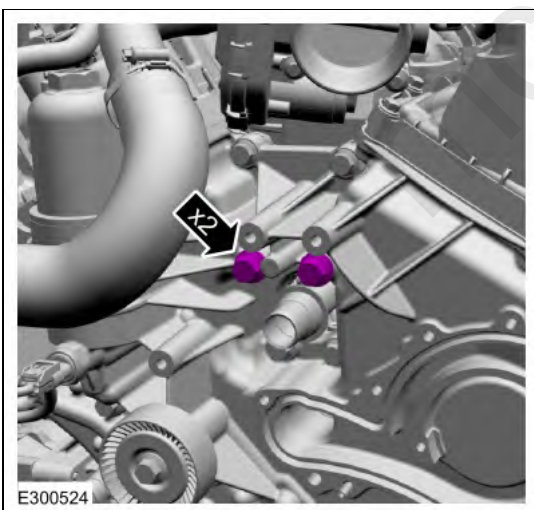




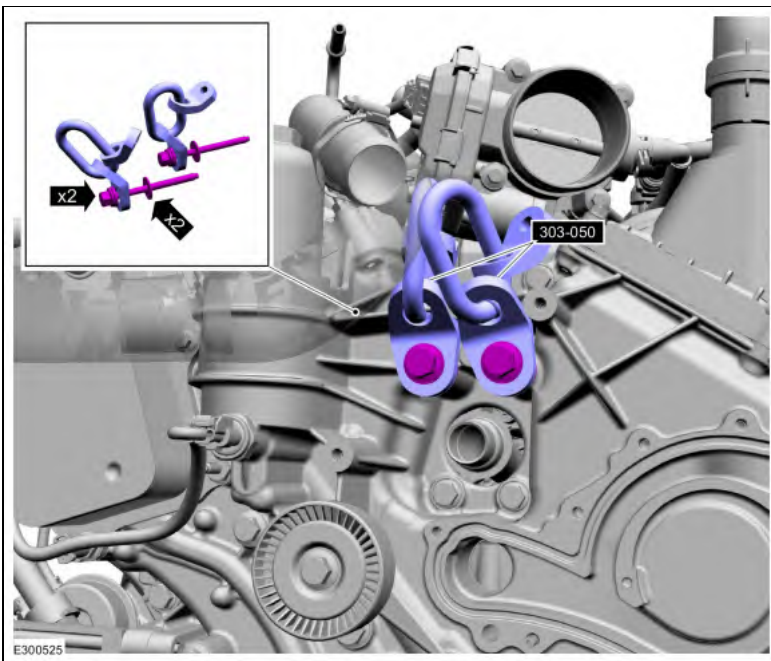
- 8.
- Remove the bolt and disconnect the steering shaft.
 - Discard the bolt.



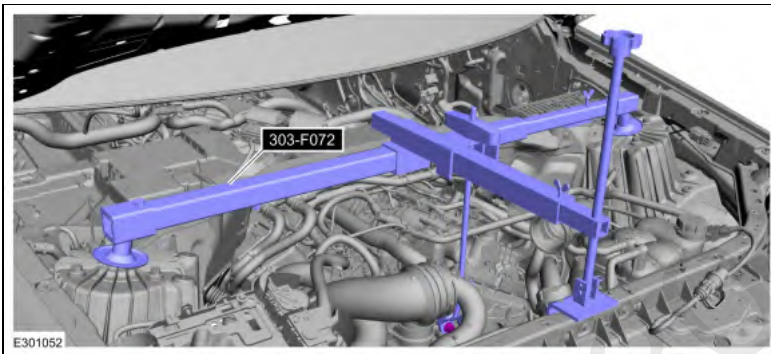
9. Remove the engine front cover bolts.



10. Using two M8 x 1.25 x 105 mm bolts and two washers, install the special tools to the engine.
Install Special Service Tool: 303-050 (T70P-6000) Lifting Bracket, Engine.



11. Install Special Service Tool: 303-F072 Support Bar, Engine.

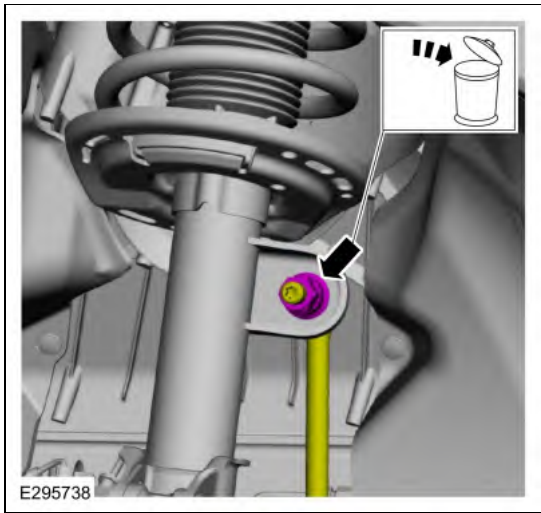


12. Remove the following items:

1. Front wheels and tires.
Refer to: Wheel and Tire (204-04A Wheels and Tires, Removal and Installation).
2. LH and RH exhaust flexible pipes.
Refer to: Exhaust Flexible Pipe (309-00B Exhaust System - 3.0L EcoBoost, Removal and Installation).

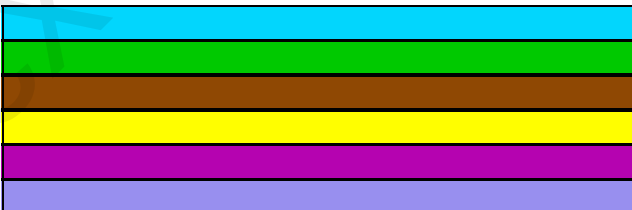
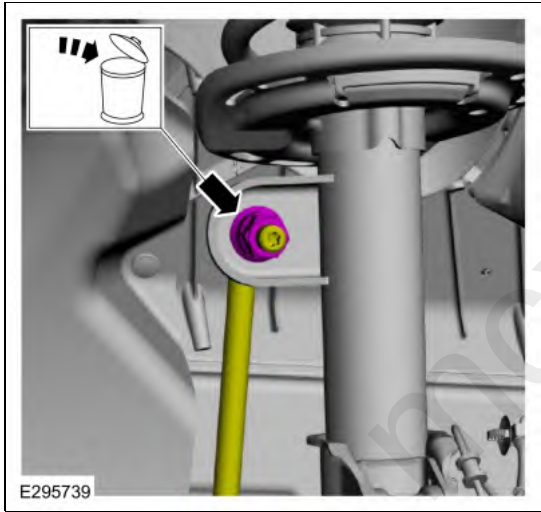
13. **NOTICE:** Use the internal or external hex-holding feature to prevent the ball and stud from turning while removing or installing the stabilizer bar link nuts. The link boot seal must not be allowed to twist while tightening the link nuts or damage to the boot seal will occur.

Remove the nut and position the LH sway bar link aside.

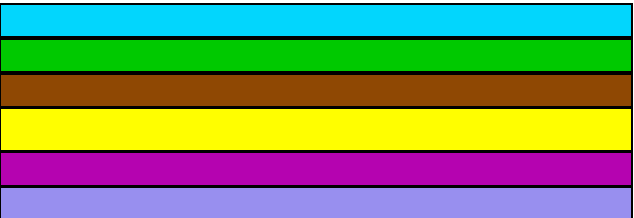
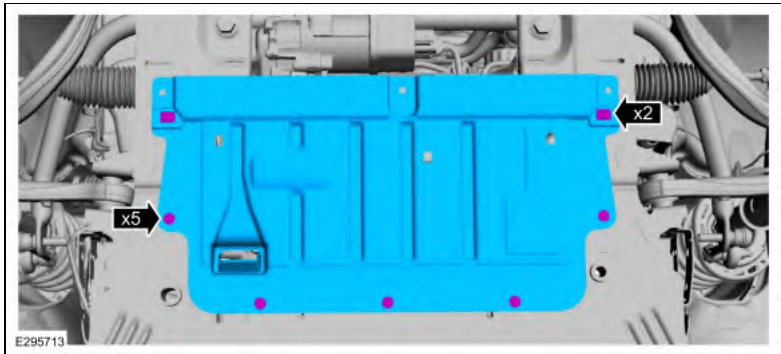


14. **NOTICE:** Use the internal or external hex-holding feature to prevent the ball and stud from turning while removing or installing the stabilizer bar link nuts. The link boot seal must not be allowed to twist while tightening the link nuts or damage to the boot seal will occur.

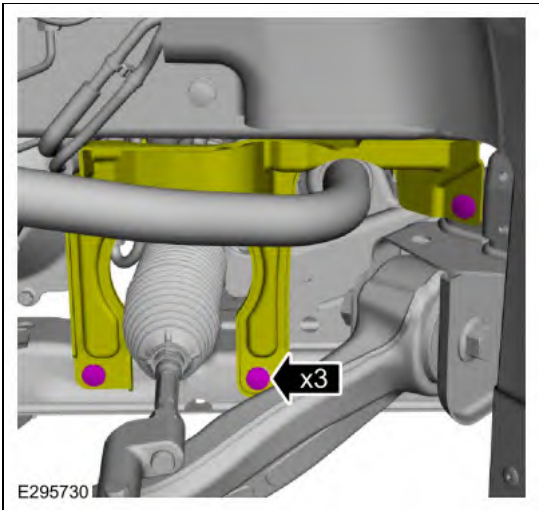
Remove the nut and position the RH sway bar link aside.



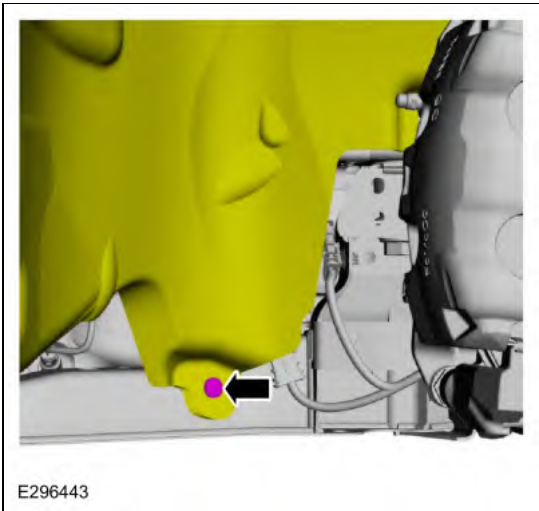
15. Remove the pin-type retainer, bolts and the rear underbody shield.



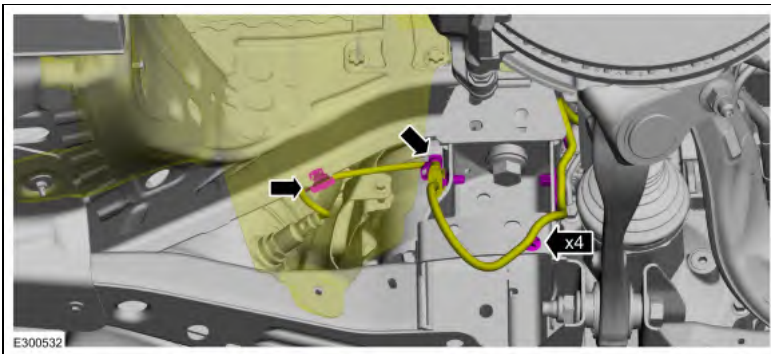
16. Remove the steering shield pin-type retainers from the RH subframe.



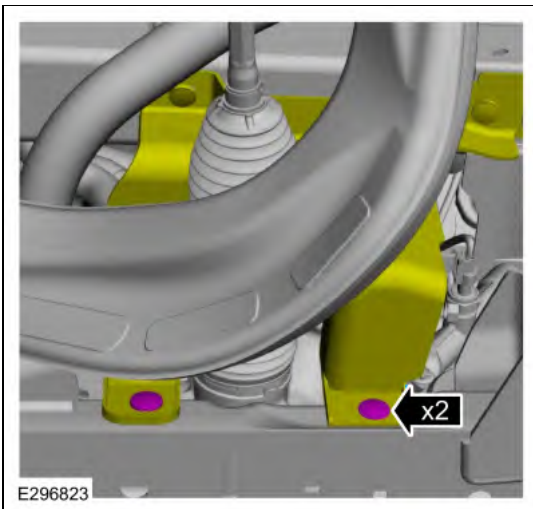
17. Remove the splash shield pin-type retainer from the RH subframe.



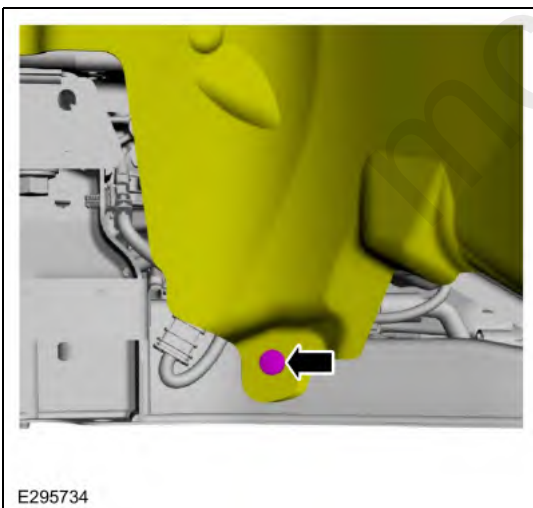
- 18.
- Disconnect the catalyst monitor sensor electrical connector.
 - Detach the wiring harness retainers.



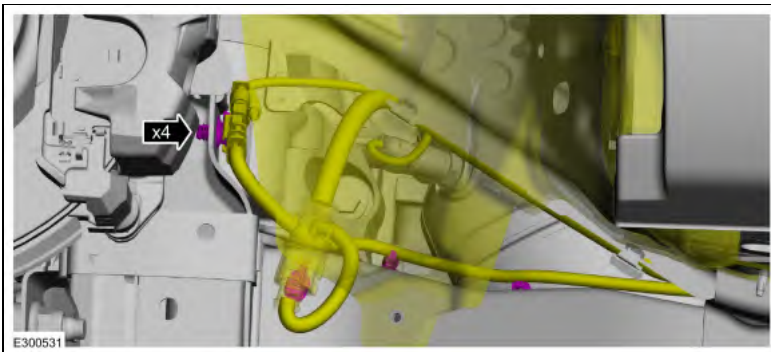
19. Remove the steering shield pin-type retainers from the LH subframe.



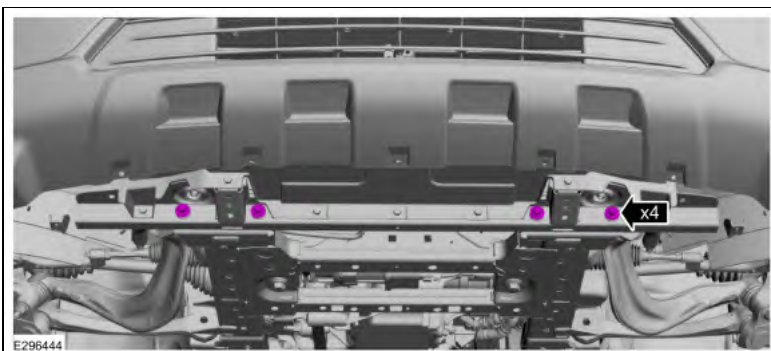
20. Remove the splash shield pin-type retainer from the LH subframe and position aside.



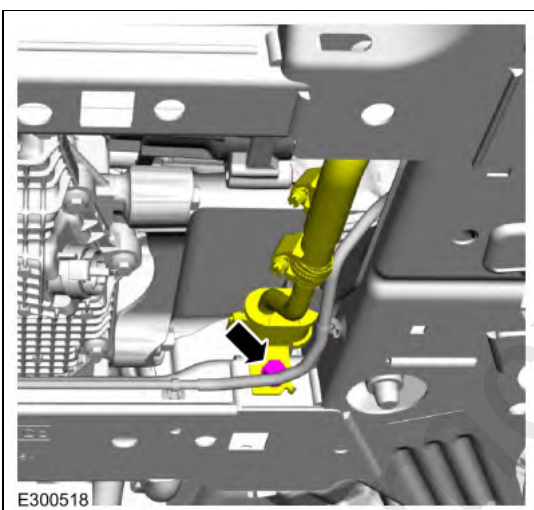
21. Detach the wiring harness retainers from the LH subframe.



22. Remove the front radiator support bar and panel bolts.

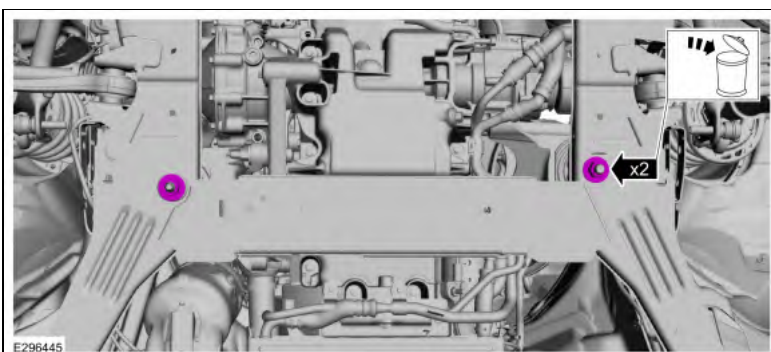


23. Remove the bolt and position the coolant tubes aside.



24. **NOTICE:** Only use hand tools when removing the engine mount nuts or damage to the engine mount can occur.

- Remove the LH and RH engine mount nuts.
- Discard the engine mount nuts.



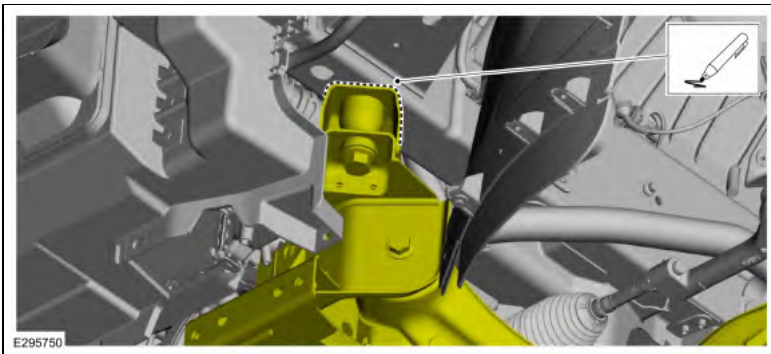
25. Remove the bolt and position the RH underbody shield aside.



26. Remove the bolt and position the LH underbody shield aside.



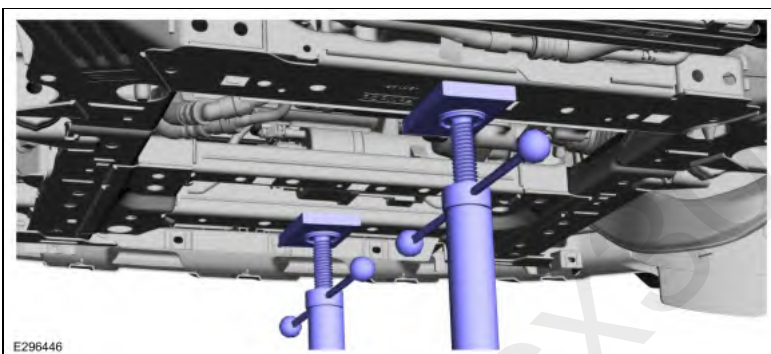
27. Mark the front subframe location.



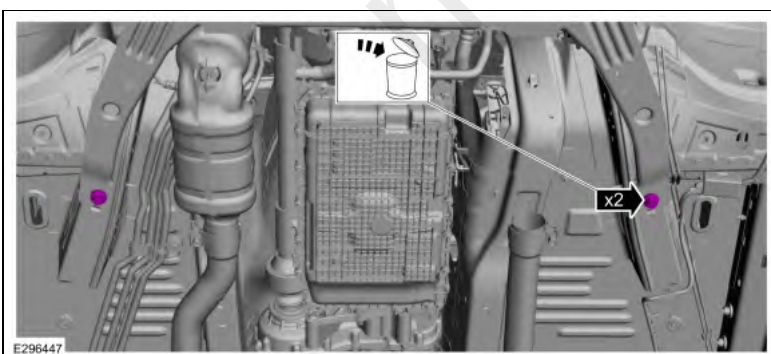
28. Mark the rear subframe location.



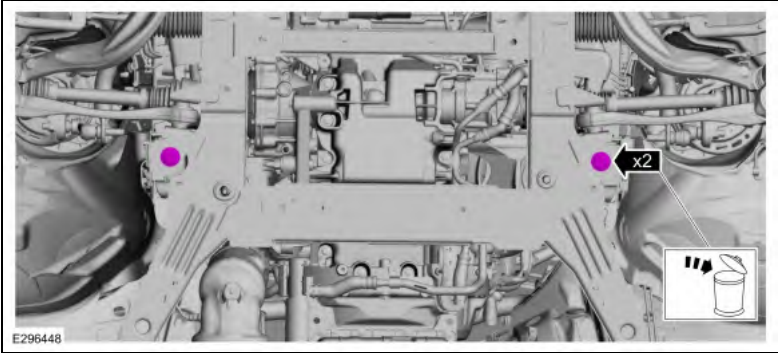
29. Support the front and rear of the subframe with adjustable jack stands.



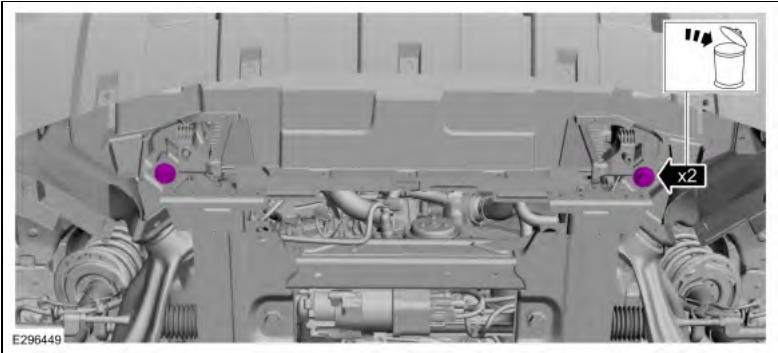
- 30.
- Remove the rear subframe bolts.
 - Discard the bolts.



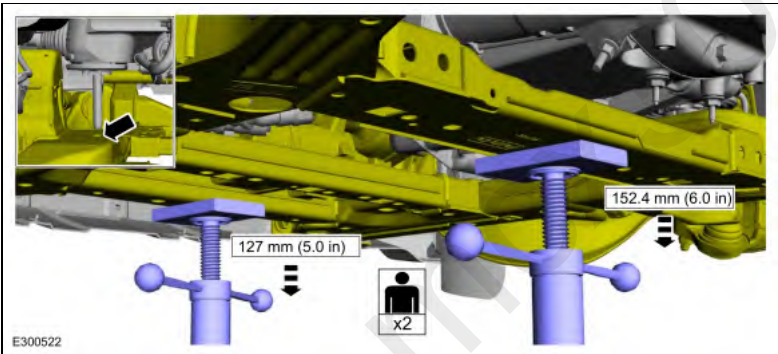
- 31.
- Remove the middle subframe bolts.
 - Discard the bolts.



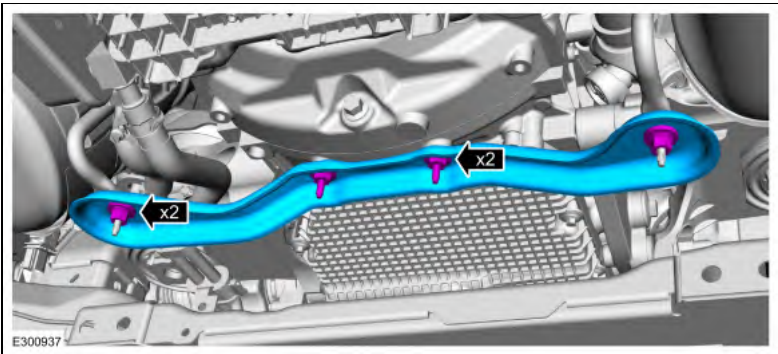
- 32.
- Remove the front subframe bolts.
 - Discard the bolts.



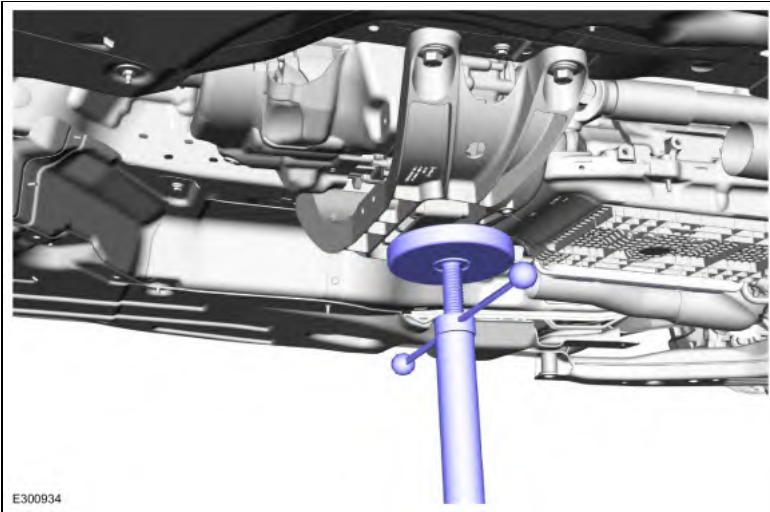
33. With the aid of an assistant, lower the front jack stand 127 mm (5.0 in) and the rear jack stand 152.4 mm (6.0 in) evenly or until engine mount stud clears the subframe.



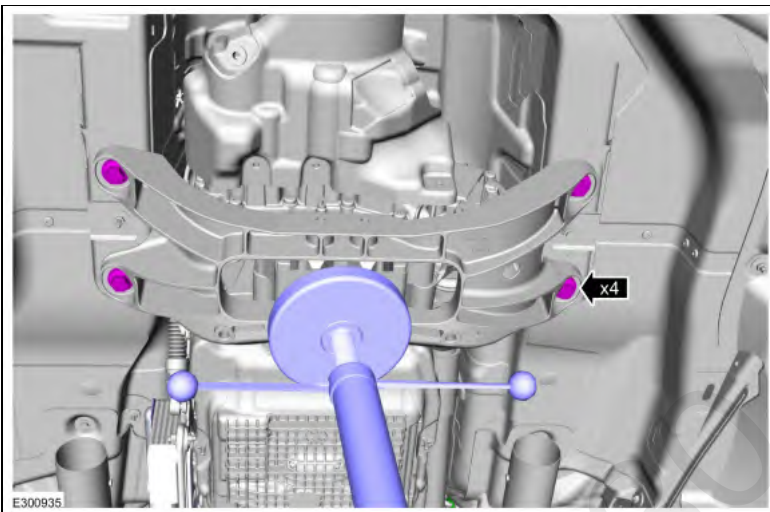
34. Remove the fasteners and the exhaust crossmember.



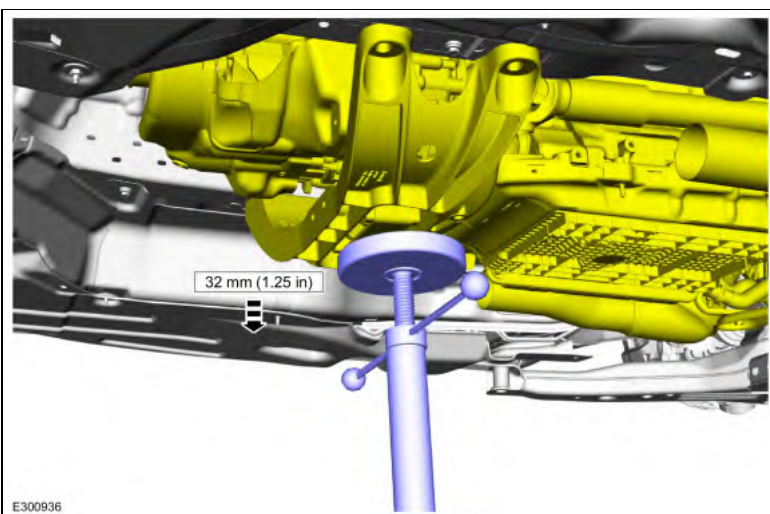
35. Position an adjustable jack stand under the transmission crossmember.



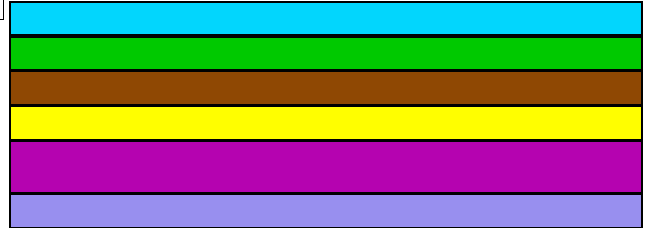
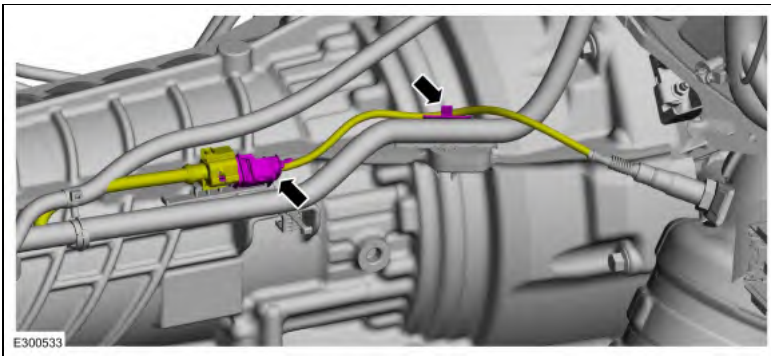
36. Remove the transmission crossmember bolts.



37. Lower the jack stand 32 mm (1.25 in).

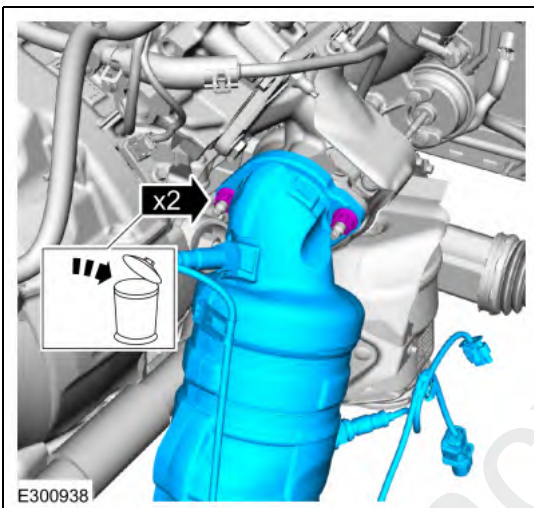


- 38.
- Disconnect the HO2S electrical connector.
 - Detach the wiring harness retainers.



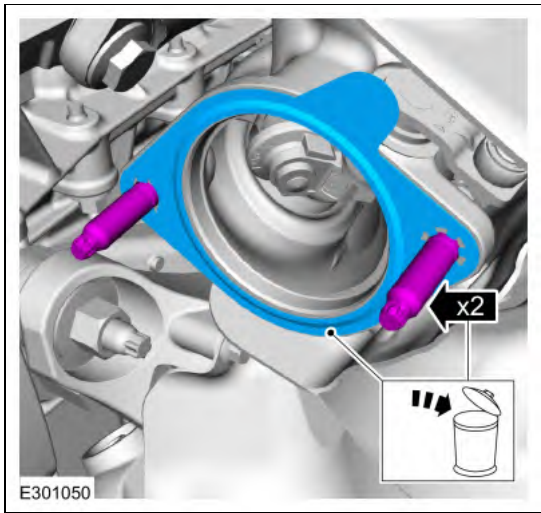
39. **NOTE:** *Body of vehicle removed from graphic for clarity.*

- Remove the nuts and the RH catalytic converter.
- Discard the nuts.

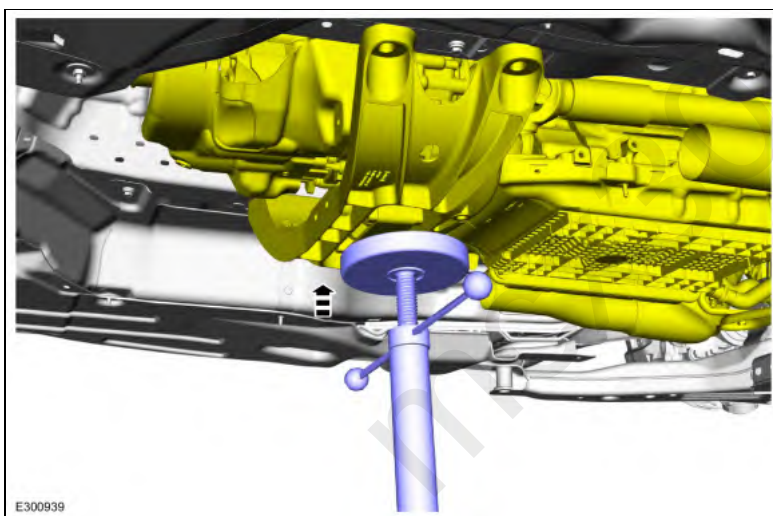


40.

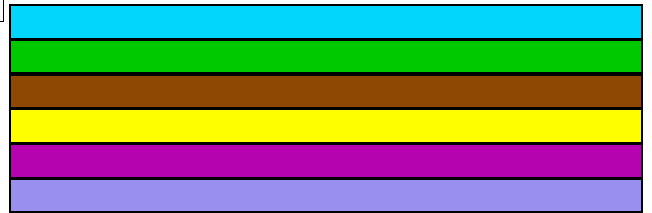
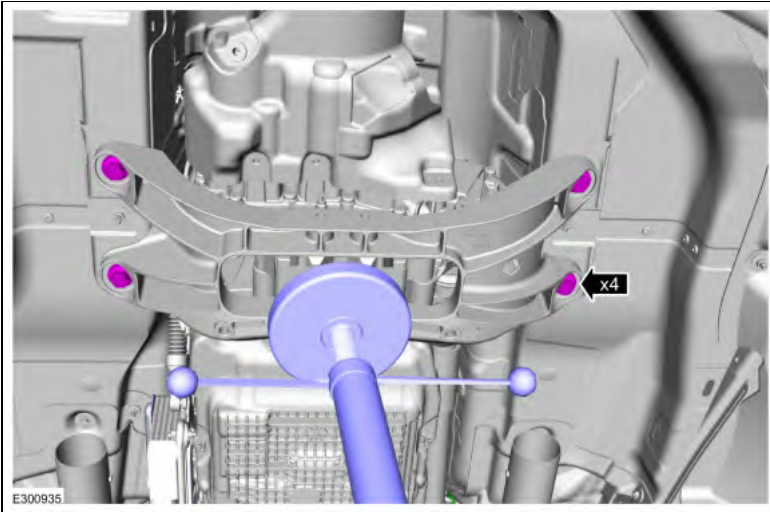
- Remove and discard the gasket.
- If damaged, remove and discard the studs.



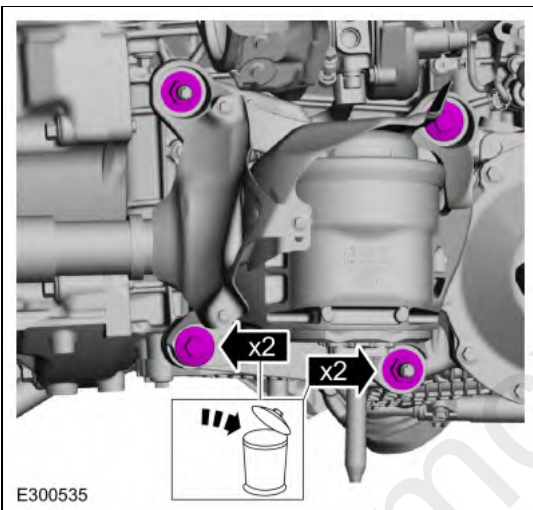
41. Raise the jack stand.



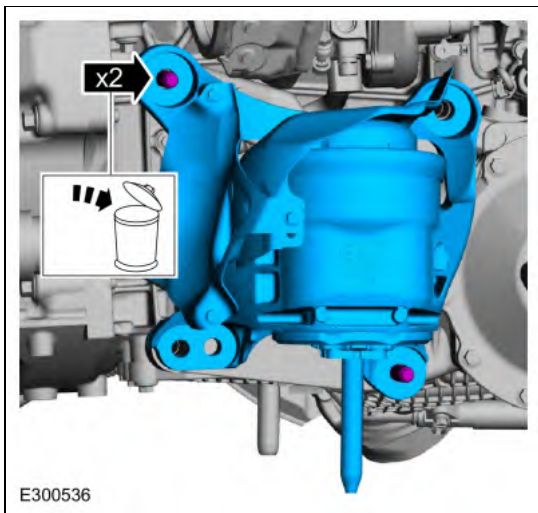
42. Install the transmission crossmember bolts.



43. Remove and discard the nuts and bolts.

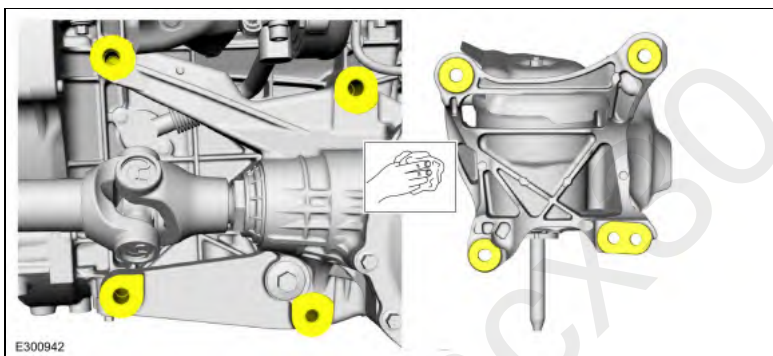


- 44.
- Remove the studs and the RH engine mount.
 - Discard the studs.

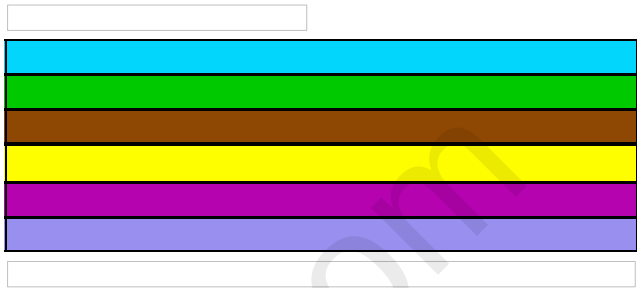
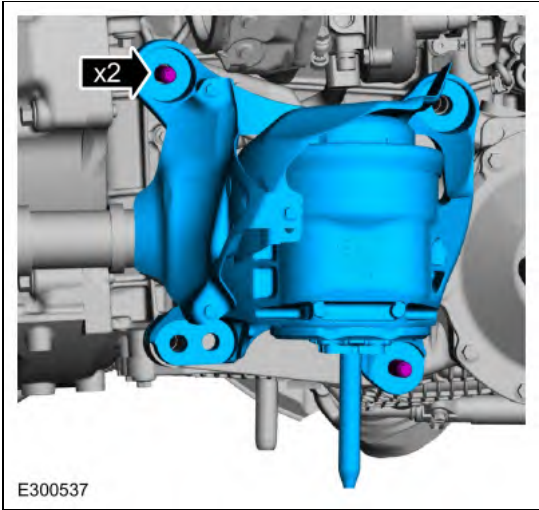


Installation

1. Clean the engine mount-to-cylinder block mating surfaces of any dirt or foreign material prior to installation.



2. Position the RH engine mount and install the new studs.
Torque: 35 lb.ft (48 Nm)

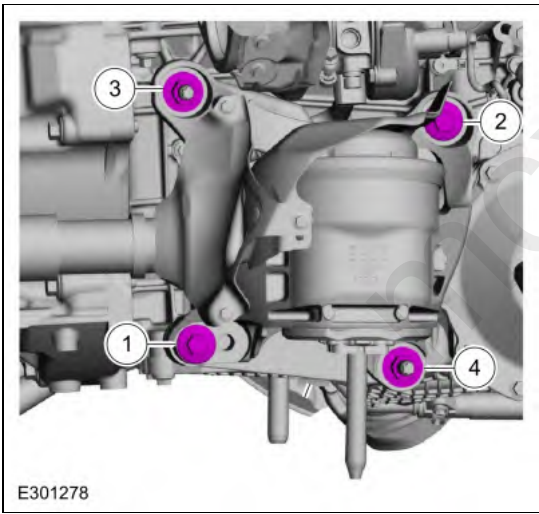


3. Install the new bolts and nuts finger-tight and then tighten in sequence.

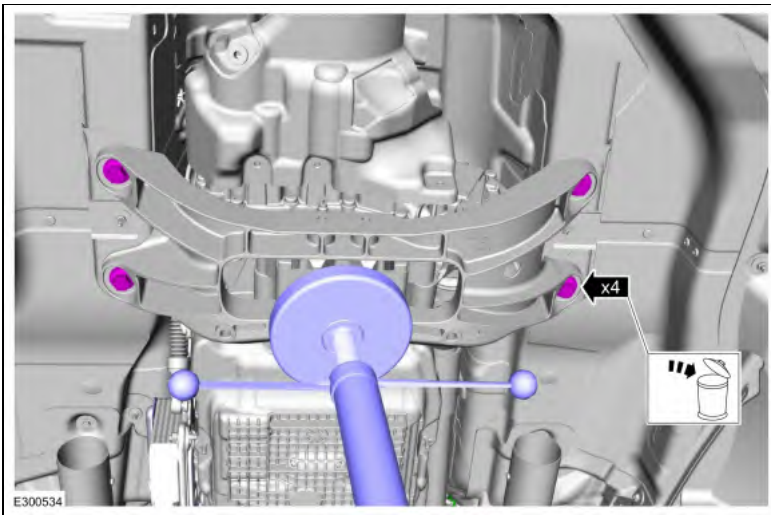
Torque:

Stage 1: 66 lb.ft (90 Nm)

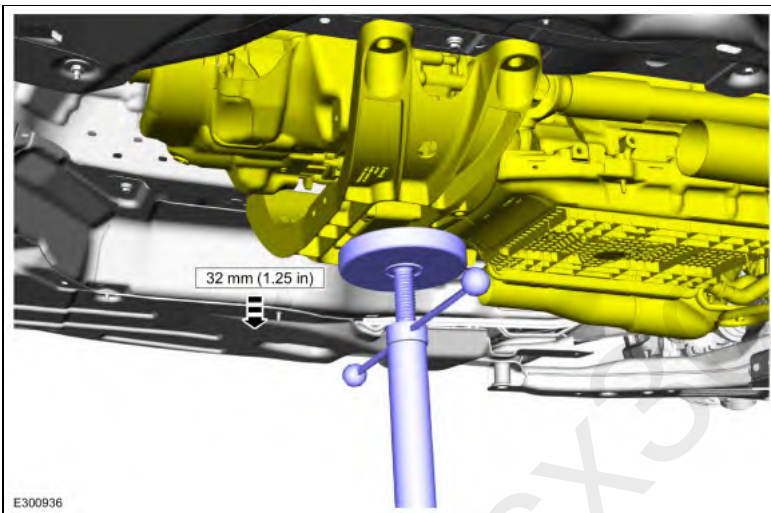
Stage 2: 90°



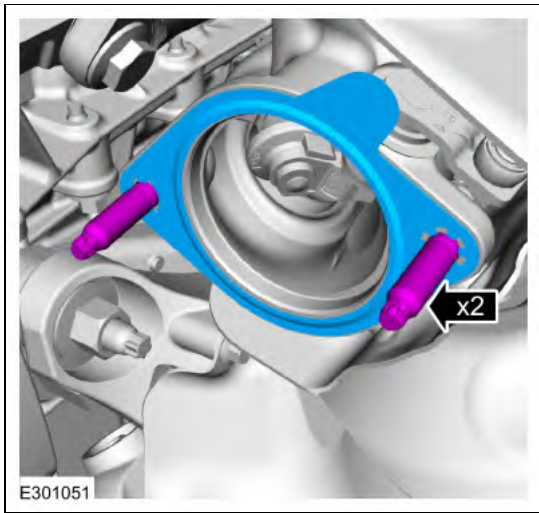
4. Remove and discard the transmission crossmember bolts.



5. Lower the jack stand 32 mm (1.25 in).

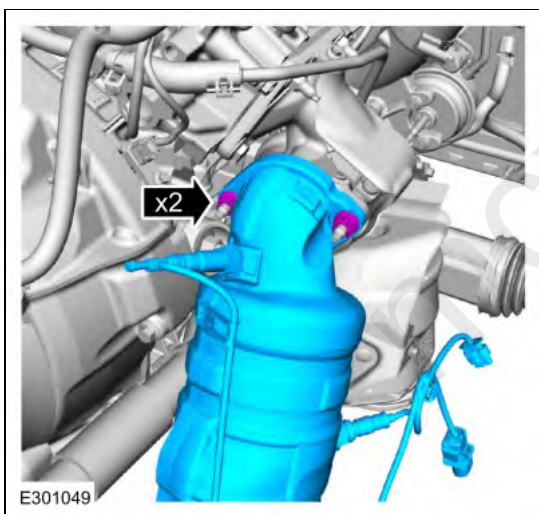


- 6.
- If removed, install new studs.
Torque: 18 lb.ft (25 Nm)
 - Install the new gasket.

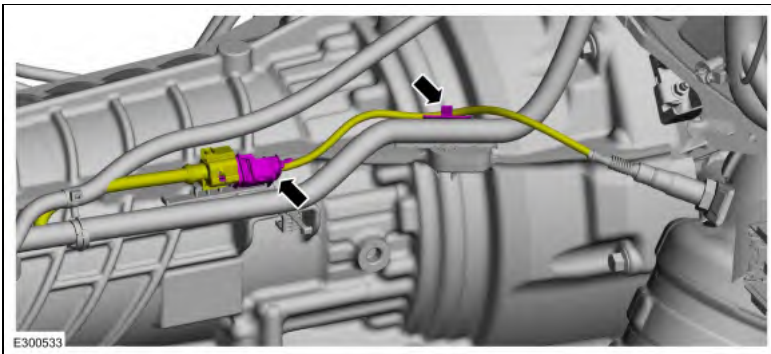


7. **NOTE:** Body of vehicle removed from graphic for clarity.

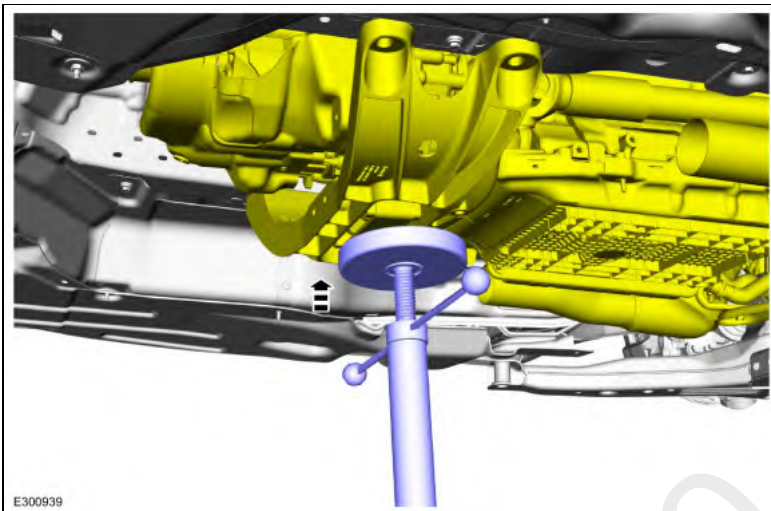
Install the RH catalytic converter and the new nuts.
Torque: 35 lb.ft (48 Nm)



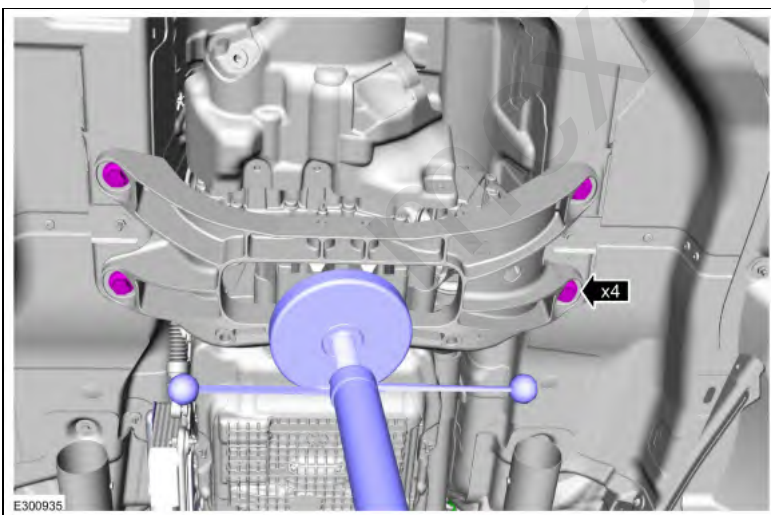
- 8.
- Connect the HO2S electrical connector.
 - Attach the wiring harness retainers.



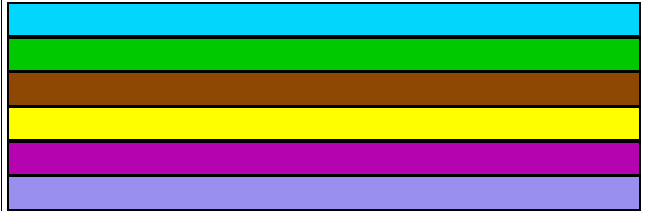
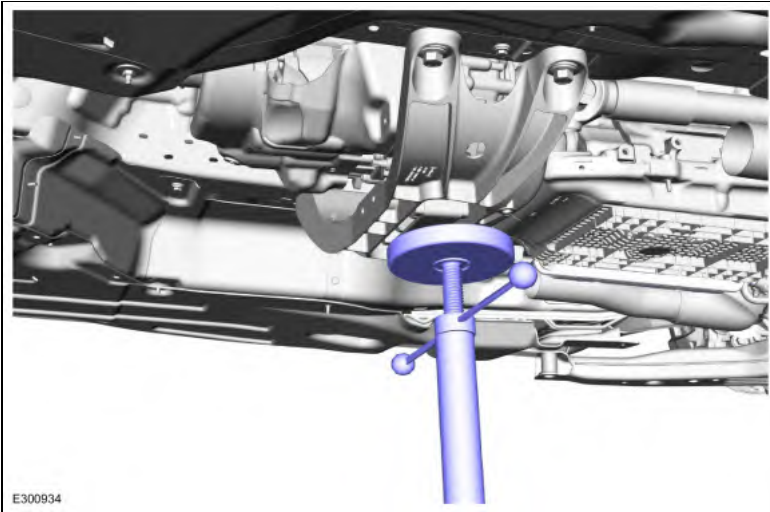
9. Raise the jack stand.



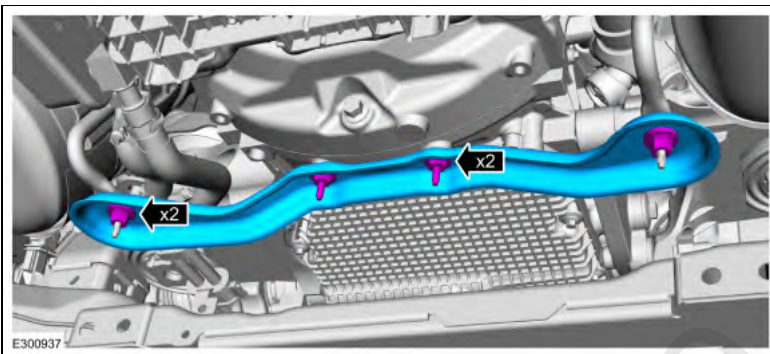
10. Install the new transmission crossmember bolts.
Torque: 76 lb.ft (103 Nm)



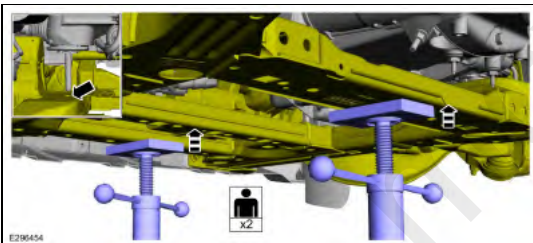
11. Remove the adjustable jack stand.



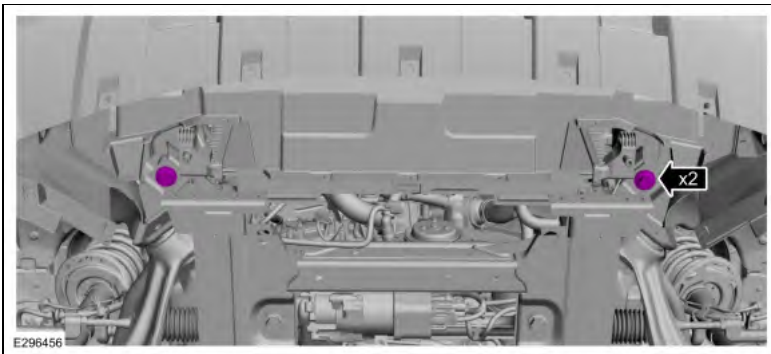
12. Install the exhaust crossmember and the fasteners.
Torque: 18 lb.ft (25 Nm)



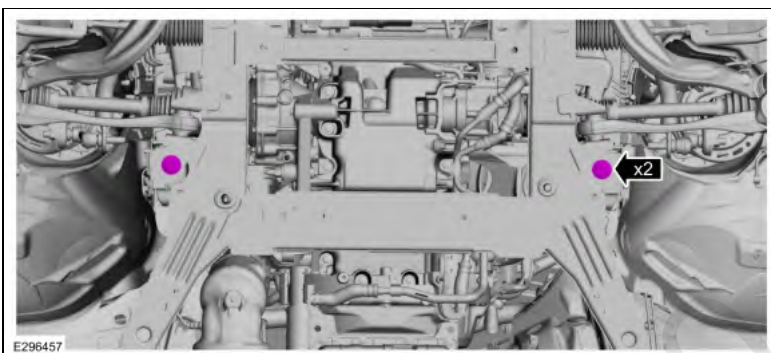
13. **NOTE:** Make sure that the LH and RH engine mount studs are in the subframe when raised.
With the aid of an assistant, raise the front and rear jack stand evenly.



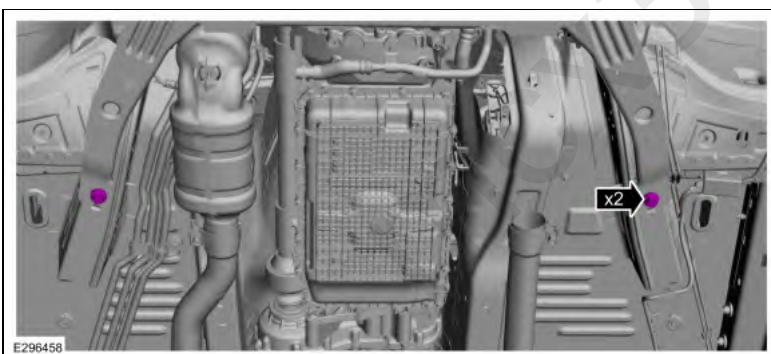
14. Install the new front subframe bolts finger tight.



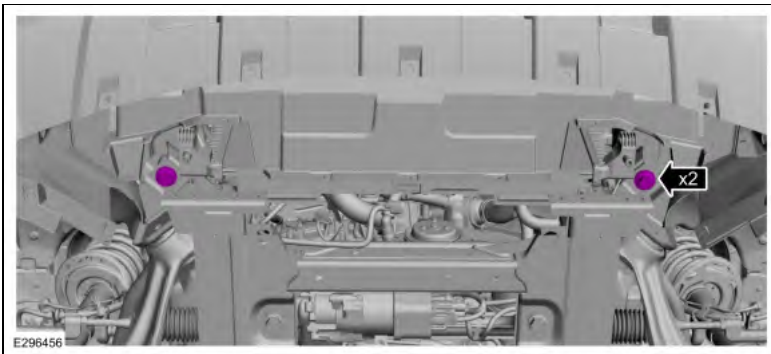
15. Install the new middle subframe bolts finger tight.



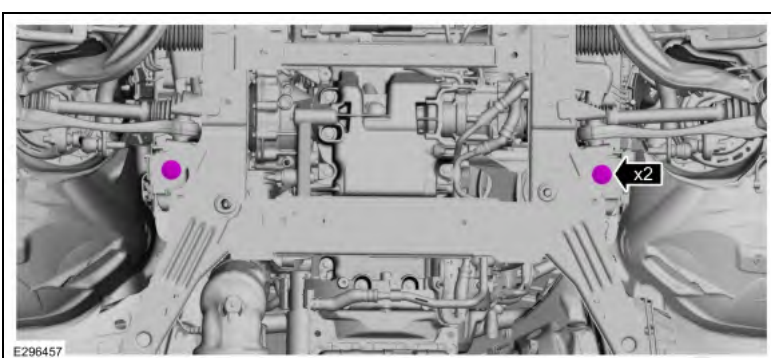
16. Install the new rear subframe bolts finger tight.



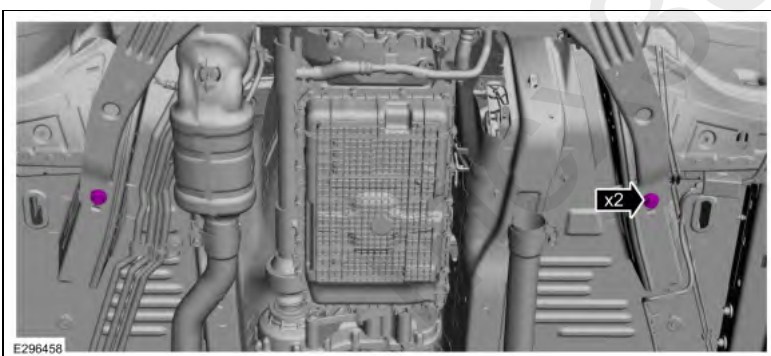
17. Tighten the front subframe bolts.
Torque: 195 lb.ft (265 Nm)



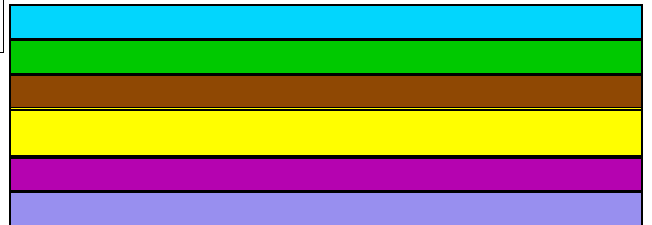
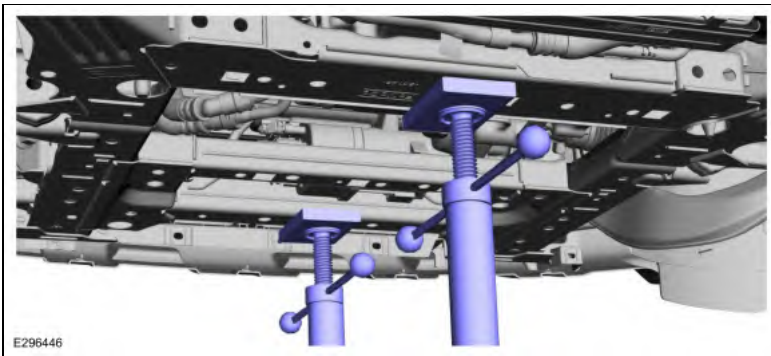
18. Tighten the middle subframe bolts.
Torque: 195 lb.ft (265 Nm)



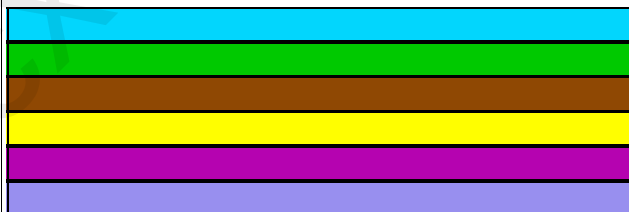
19. Tighten the rear subframe bolts.
Torque: 52 lb.ft (70 Nm)



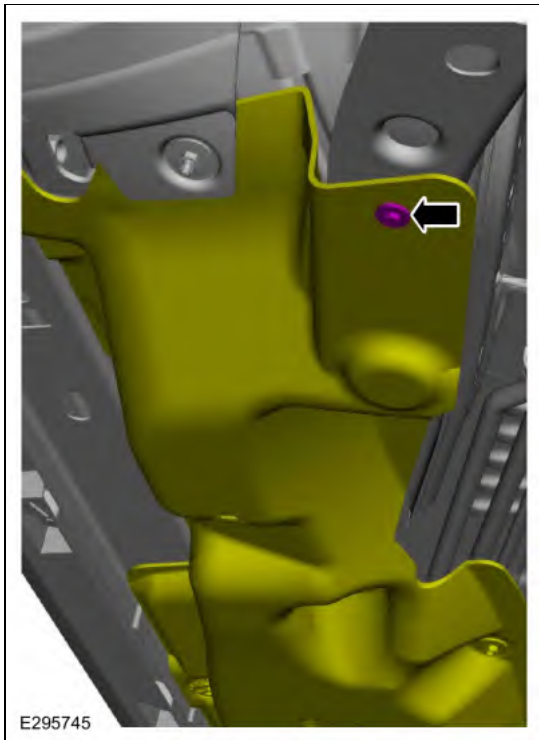
20. Remove adjustable jack stands.



21. Position the LH underbody shield and install the bolt.
Torque: 22 lb.in (2.5 Nm)

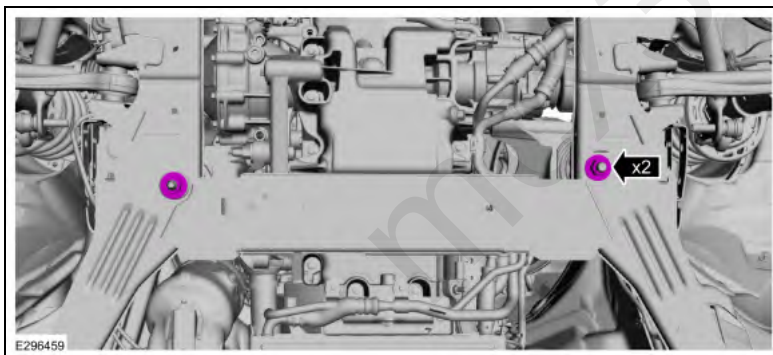


22. Position the RH underbody shield and install the bolt.
Torque: 22 lb.in (2.5 Nm)

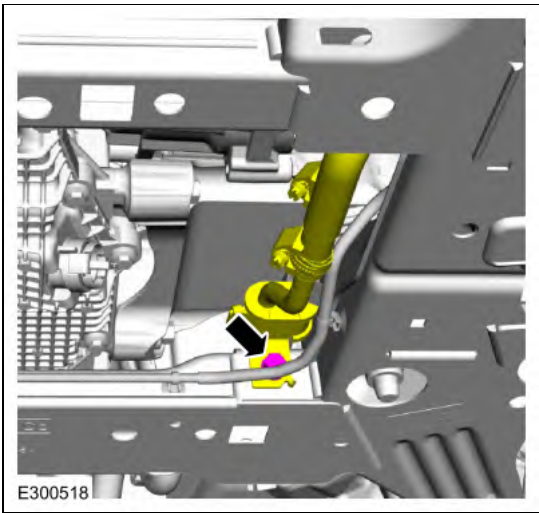


23. **NOTICE:** Only use hand tools when removing the engine mount nuts or damage to the engine mount can occur.

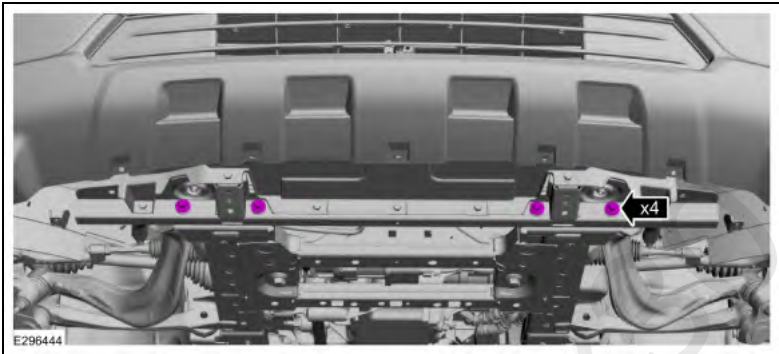
Install the new LH and RH engine mount nuts.
Torque: 184 lb.ft (250 Nm)



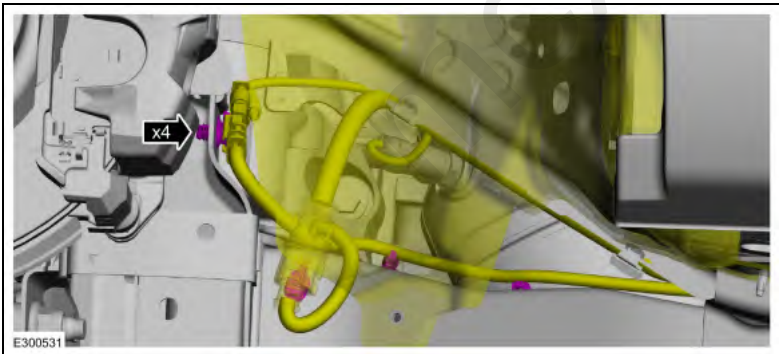
24. Position the coolant tubes and install the bolt.
Torque: 71 lb.in (8 Nm)



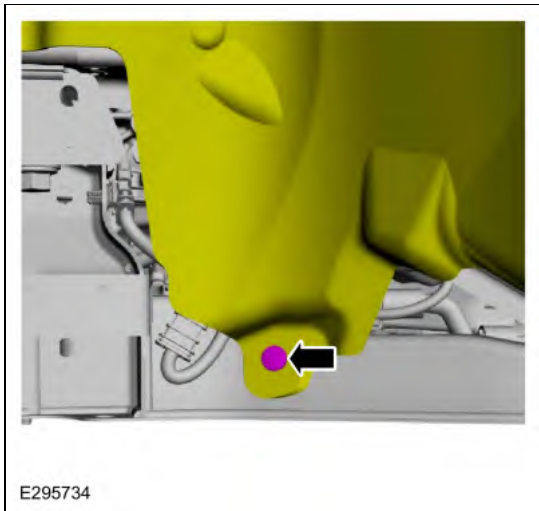
25. Install the front radiator support bar bolts.
Torque: 46 lb.ft (63 Nm)



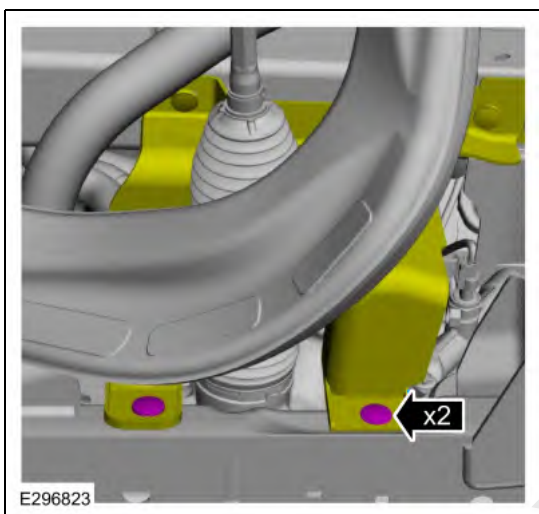
26. Attach the wiring harness retainers to LH subframe.



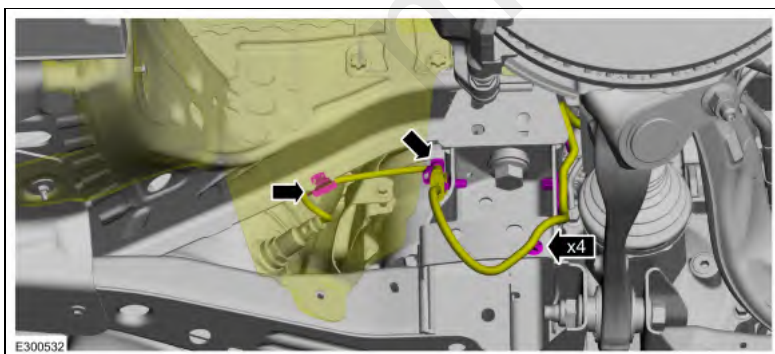
27. Position the splash shield and install the pin-type retainer to the LH subframe.



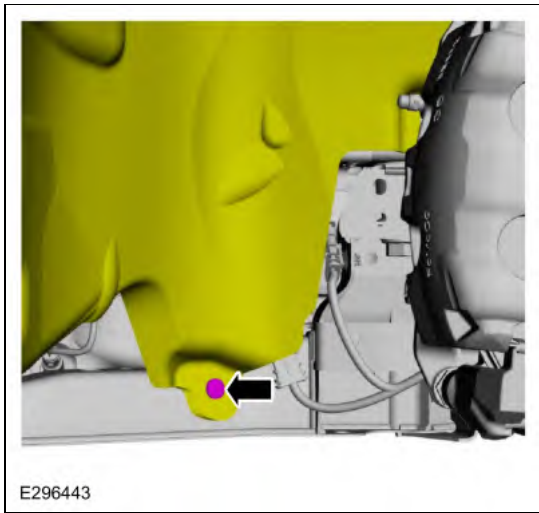
28. Install the steering shield pin-type retainers to the LH subframe.



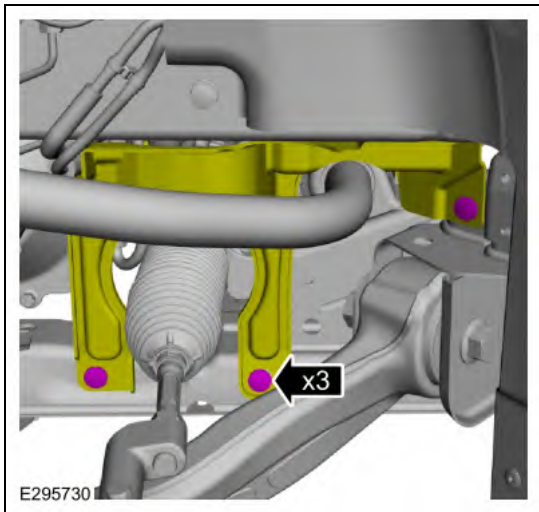
- 29.
- Connect the catalyst monitor sensor electrical connector.
 - Attach the wiring harness retainers.



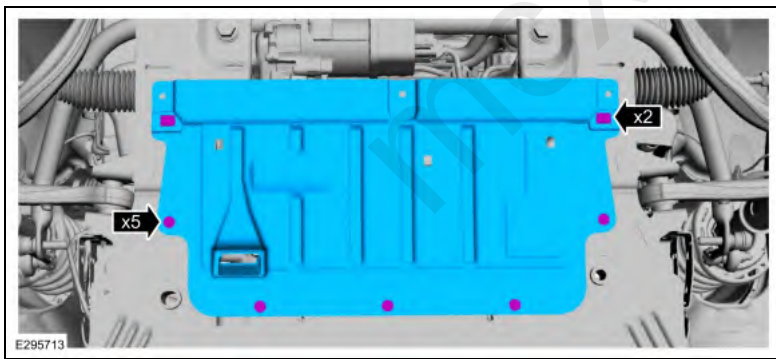
30. Install the splash shield pin-type retainer to the RH subframe.



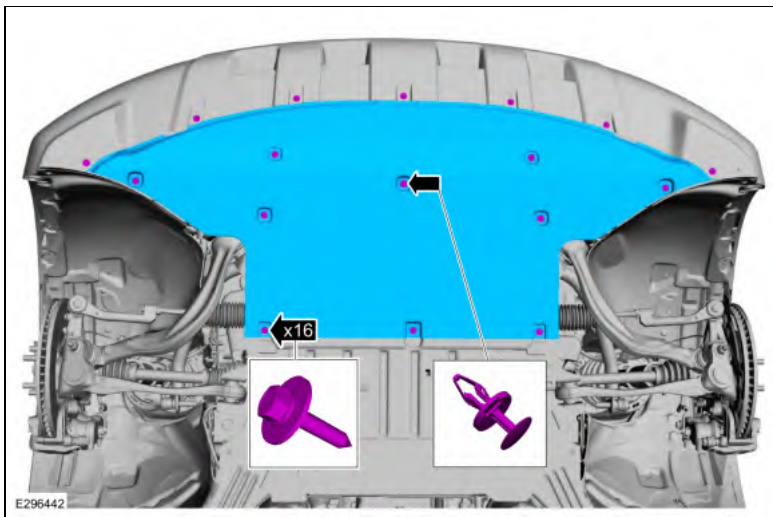
31. Install the steering shield pin-type retainers to the RH subframe.



32. Install the rear underbody shield, bolts and the pin-type retainers.
Torque: 22 lb.in (2.5 Nm)

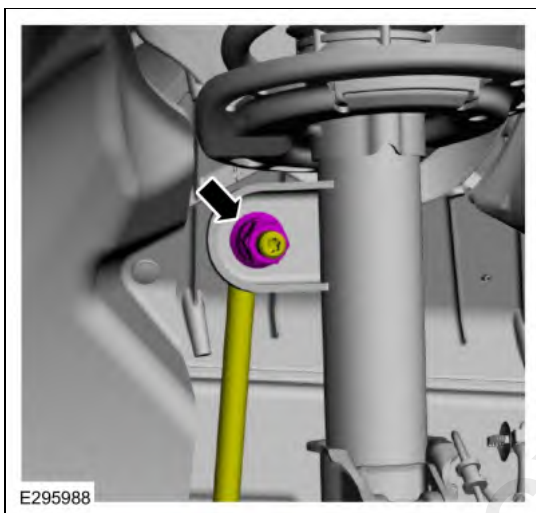


- 33.
- Install the underbody shield and the bolts.
Torque: 22 lb.in (2.5 Nm)
 - Install pin-type retainer.



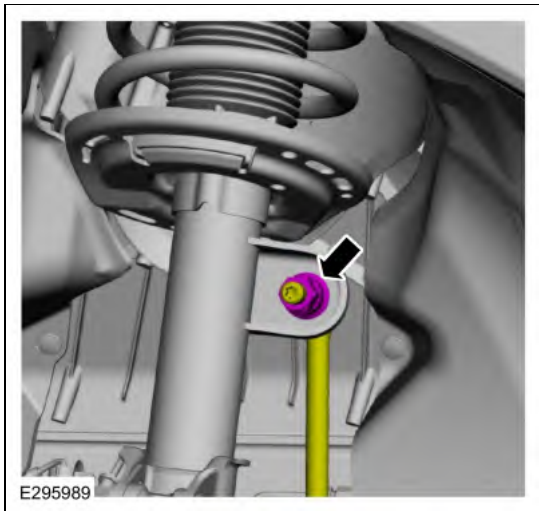
34. **NOTICE:** Use the internal or external hex-holding feature to prevent the ball and stud from turning while removing or installing the stabilizer bar link nuts. The link boot seal must not be allowed to twist while tightening the link nuts or damage to the boot seal will occur.

Position the RH sway bar link and install the new nut.
Torque: 129 lb.ft (175 Nm)



35. **NOTICE:** Use the internal or external hex-holding feature to prevent the ball and stud from turning while removing or installing the stabilizer bar link nuts. The link boot seal must not be allowed to twist while tightening the link nuts or damage to the boot seal will occur.

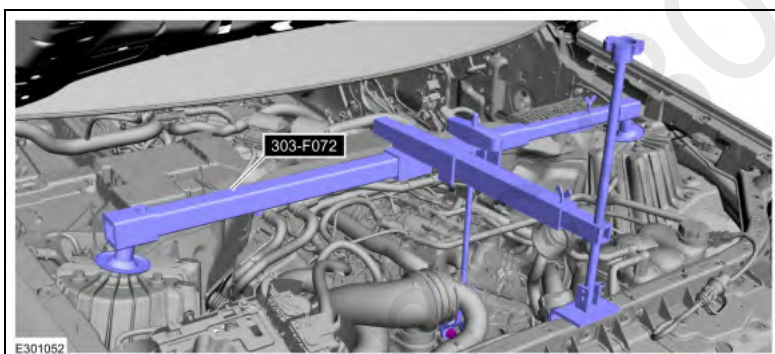
Position the LH sway bar link and install the new nut.
Torque: 129 lb.ft (175 Nm)



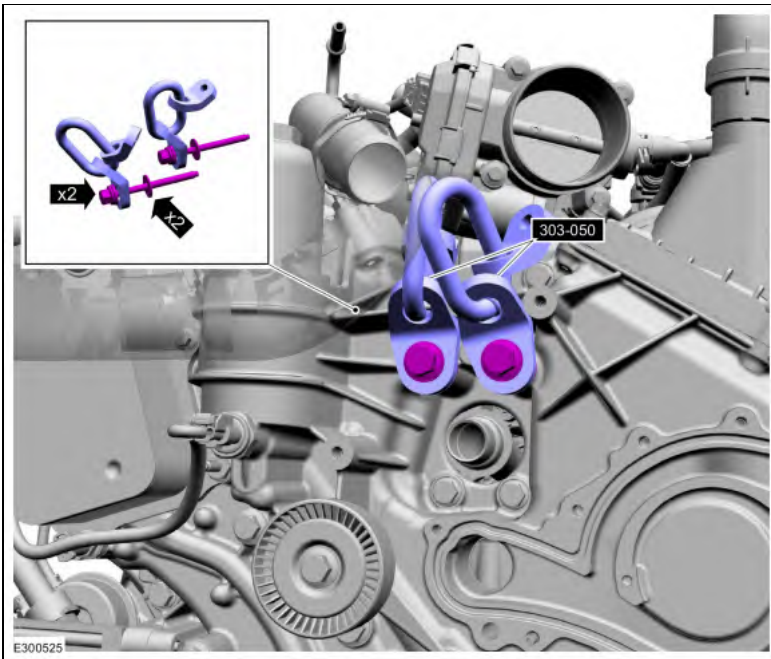
36. Install the following items:

1. LH and RH exhaust flexible pipes.
Refer to: Exhaust Flexible Pipe (309-00B Exhaust System - 3.0L EcoBoost, Removal and Installation).
2. Front wheels and tires.
Refer to: Wheel and Tire (204-04A Wheels and Tires, Removal and Installation).

37. Remove Special Service Tool: 303-F072 Support Bar, Engine.



38. Remove the two M8 x 1.25 x 105 mm bolts, two washers, and the special tools.
Remove Special Service Tool: 303-050 (T70P-6000) Lifting Bracket, Engine.

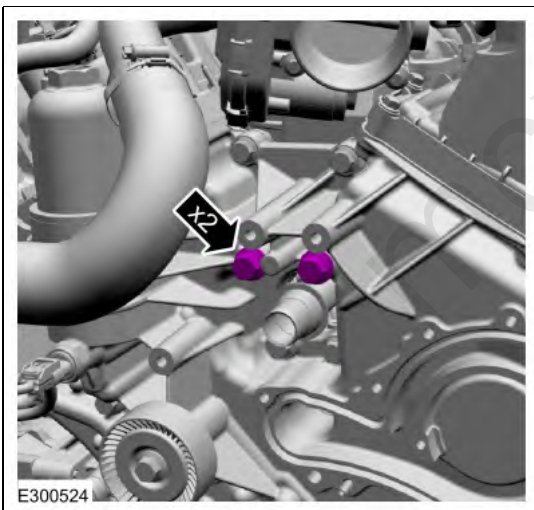


39. Install the engine front cover bolts.

Torque:

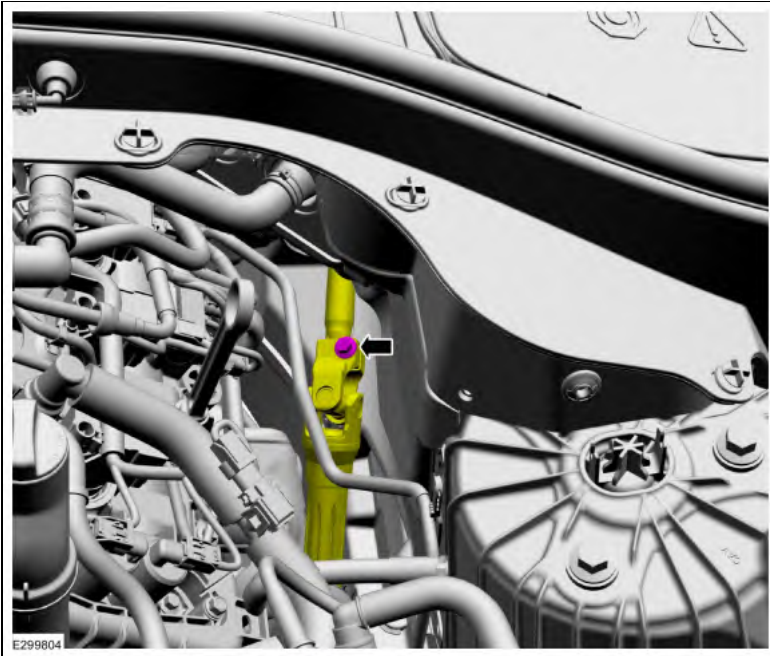
Stage 1: 177 lb.in (20 Nm)

Stage 2: 45Å°



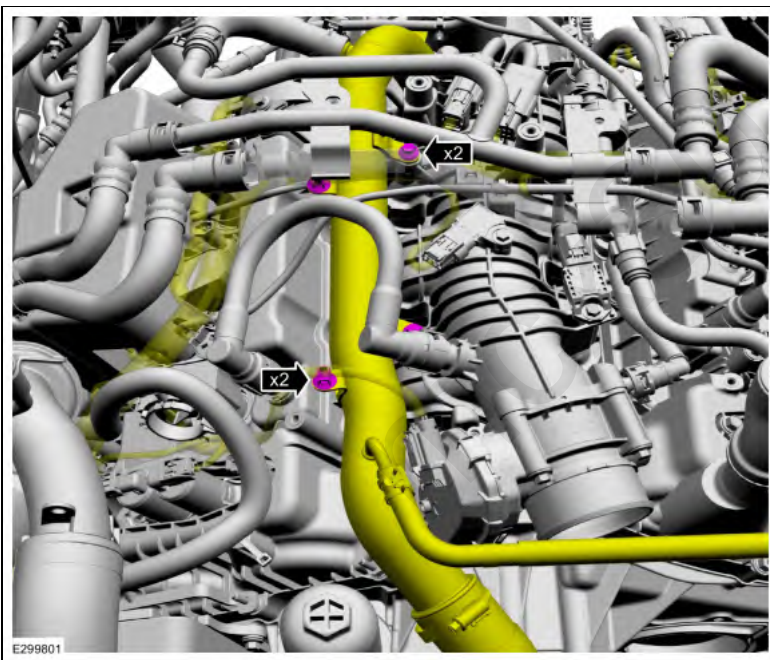
40. Install the new steering shaft bolt.

Torque: 22 lb.ft (30 Nm)



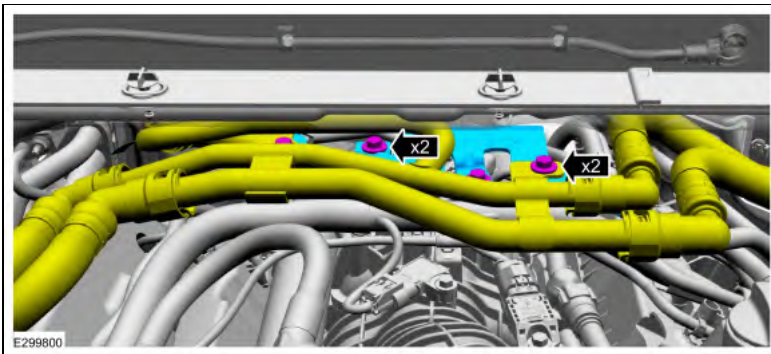
41.

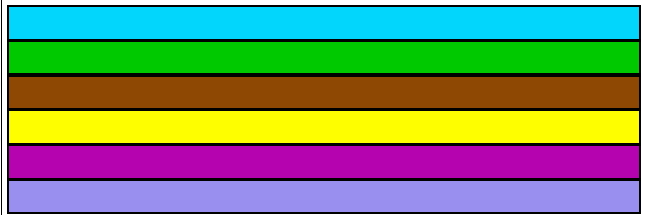
- Position the coolant pipe.
- Install the coolant pipe bolts.
Torque: 97 lb.in (11 Nm)
- Attach the wiring harness retainers.



42.

- Install the intake manifold bracket and bolts.
Torque: 97 lb.in (11 Nm)
- Install the coolant pipe bracket retaining bolts.
Torque: 97 lb.in (11 Nm)



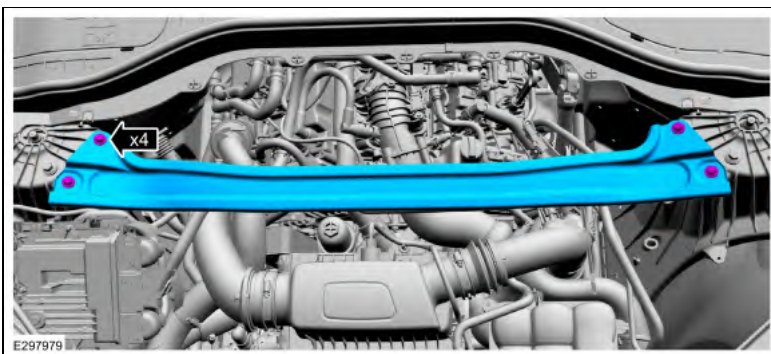


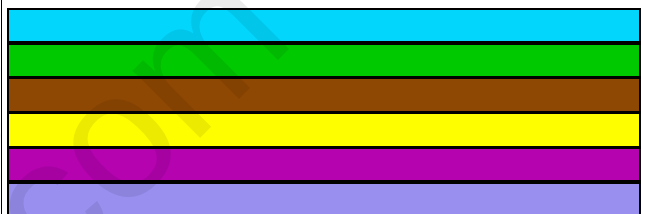
43. Install the following items:

1. Coolant pump.
Refer to: Coolant Pump (303-03B Engine Cooling - 3.0L EcoBoost, Removal and Installation).
2. Charge air cooler outlet pipe.
Refer to: Charge Air Cooler (CAC) Outlet Pipe (303-12B Intake Air Distribution and Filtering - 3.0L EcoBoost, Removal and Installation).

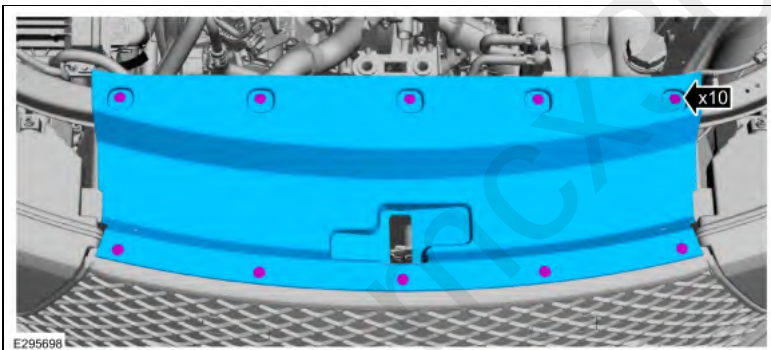
44. Install the suspension support bar and the bolts.

Torque: 22 lb.ft (30 Nm)



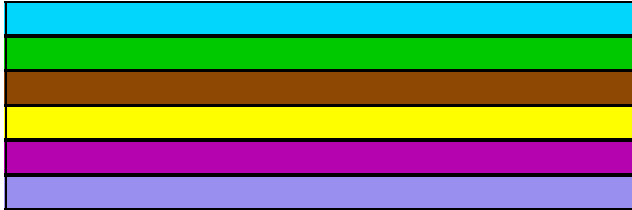
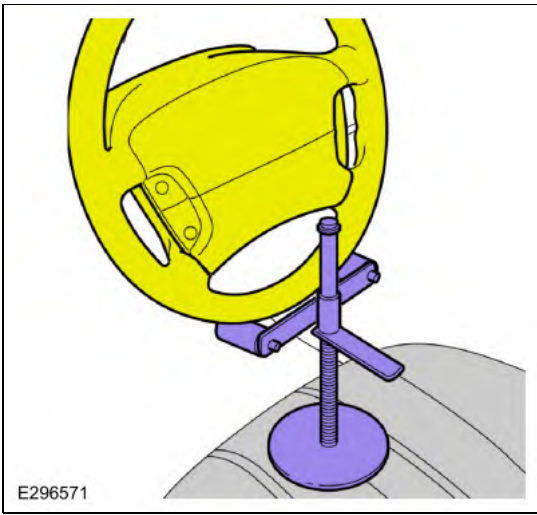


45. Install the upper radiator panel and the retainers.





46. Remove the holding device.



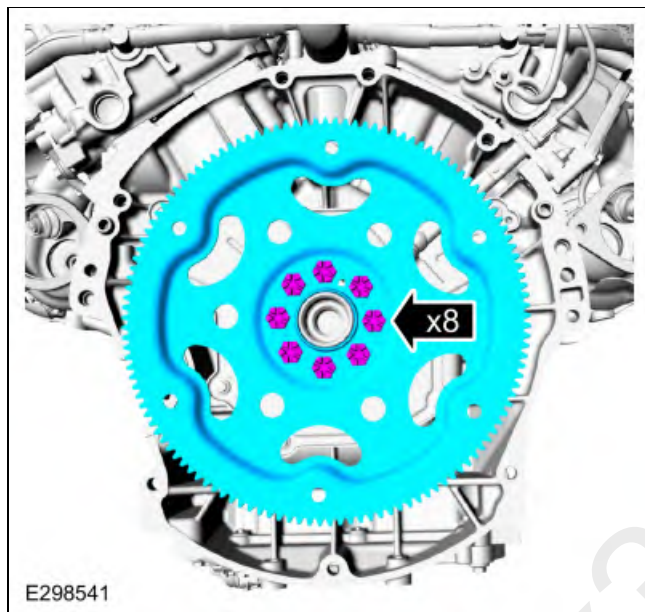
47. Start and check the exhaust system for leaks.

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Flexplate

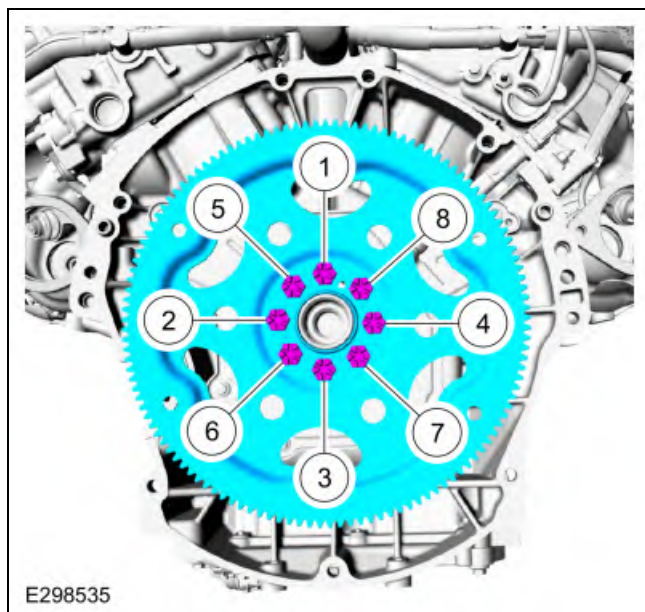
Removal

1. Remove the transmission.
Refer to: Transmission - 3.0L EcoBoost (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 10-Speed Automatic Transmission â€“ 10R60, Removal and Installation).
Refer to: Transmission - 3.0L EcoBoost (307-01B Automatic Transmission, Transfer Case and Power Transfer Unit - 10-Speed Automatic Transmission â€“ 10R80, Removal and Installation).
2. Remove the bolts and the flexplate.



Installation

1.
 1. Position the flexplate on the crankshaft.
 2. Install the bolts then rundown the bolts one turn at a time in sequence shown until the flexplate is snug against the rear face of the crankshaft.
 3. Final tighten the bolts in sequence shown.
Torque: 59 lb.ft (80 Nm)



2. Install the transmission.

Refer to: Transmission - 3.0L EcoBoost (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 10-Speed Automatic Transmission – 10R60, Removal and Installation).

Refer to: Transmission - 3.0L EcoBoost (307-01B Automatic Transmission, Transfer Case and Power Transfer Unit - 10-Speed Automatic Transmission – 10R80, Removal and Installation).

3. Use the Powertrain Control Module (PCM) Misfire Monitor Profile Correction routine in the diagnostic scan tool.

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