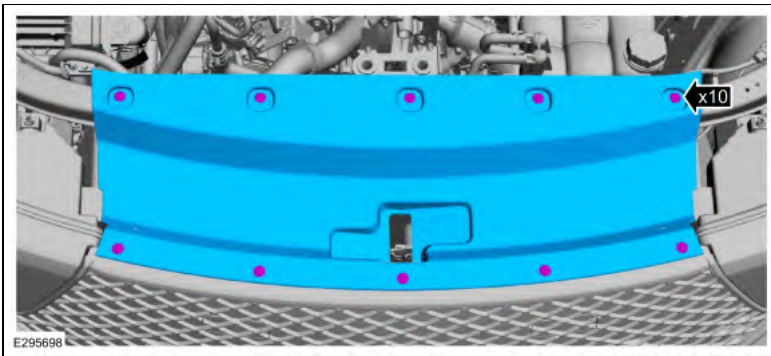
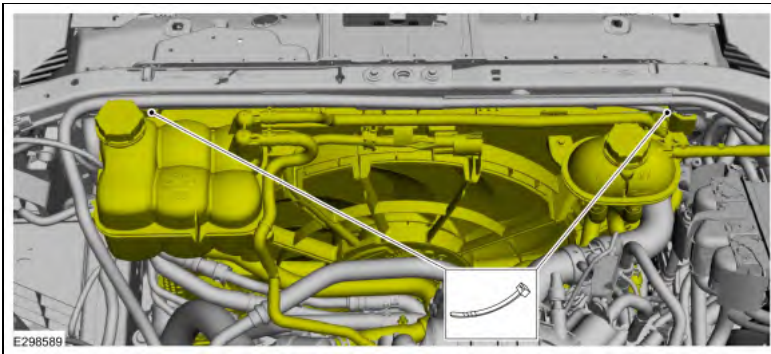
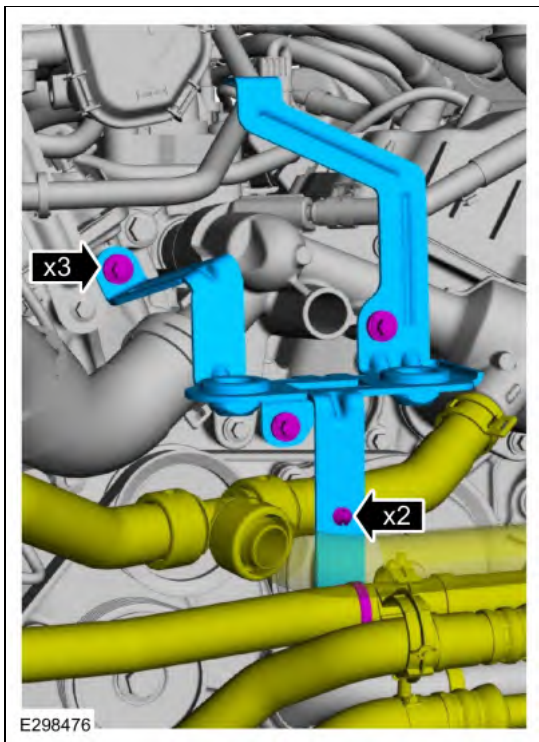


10. Using cable ties or mechanics wire through the upper location holes, to support the cooling module.
Use the General Equipment: Cable Ties



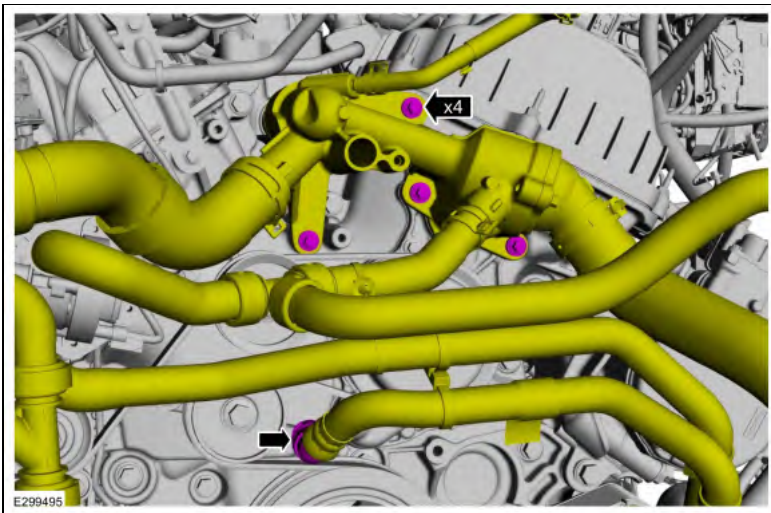
- 11.
- Detach the coolant hose retainers.
 - Remove the bolts and the air cleaner bracket.

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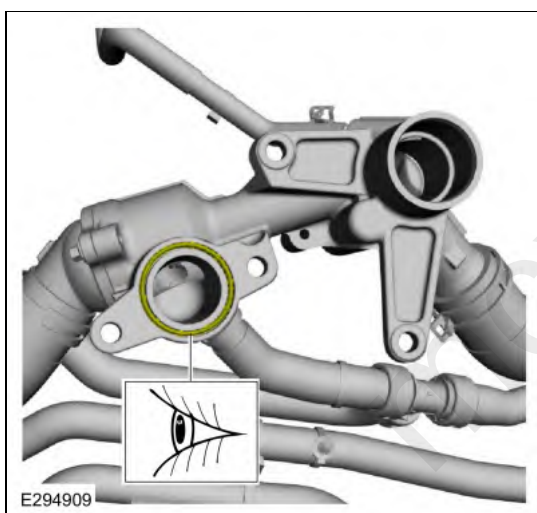


12.

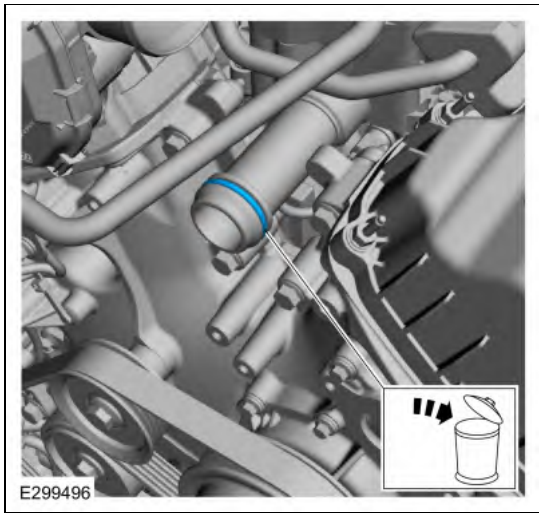
- Disconnect the coolant hose from the coolant pump.
- Remove the bolts and position the thermostat housing and coolant hoses aside.



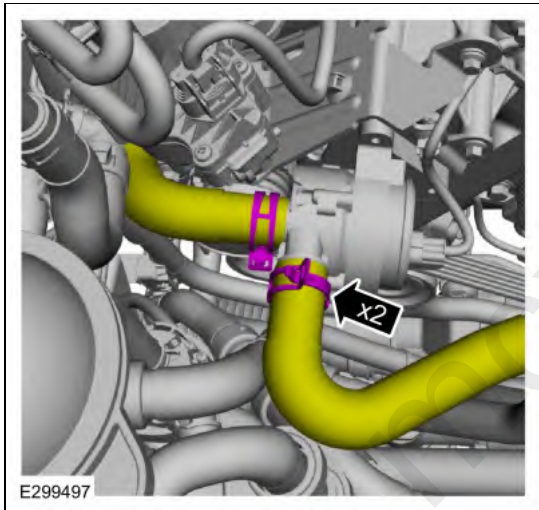
13. Inspect the O-ring seal and replace if necessary.



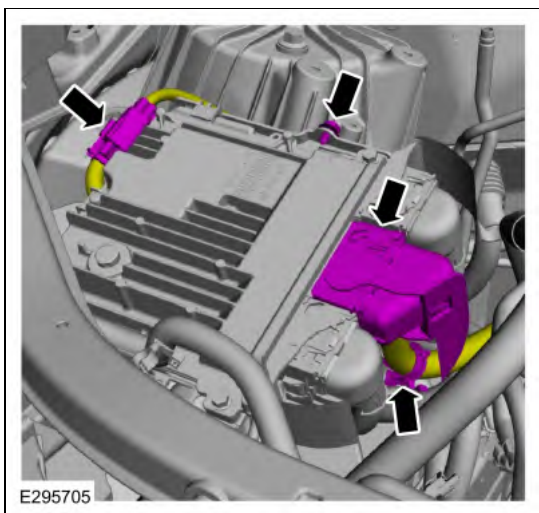
14. Remove and discard the thermostat housing O-ring seal.



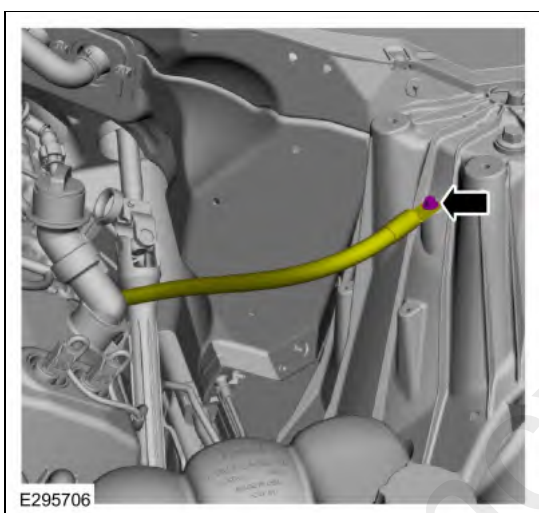
15. Remove the accessory drive belt.
Refer to: Accessory Drive Belt (303-05D Accessory Drive - 3.3L Duratec-V6 Hybrid (BP), Removal and Installation).
16. Disconnect the coolant hoses from the cabin heater coolant pump.
Use the General Equipment: Hose Clamp Remover/Installer



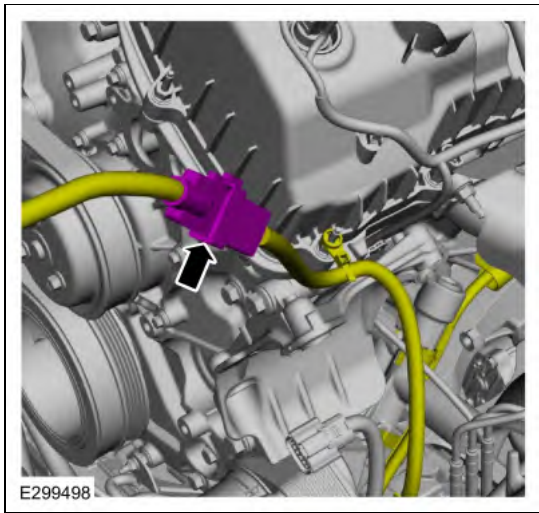
17.
 - Disconnect the center PCM electrical connector and wiring harness retainer.
 - Disconnect the engine harness electrical connector, retainer and position the engine wiring harness on the engine.



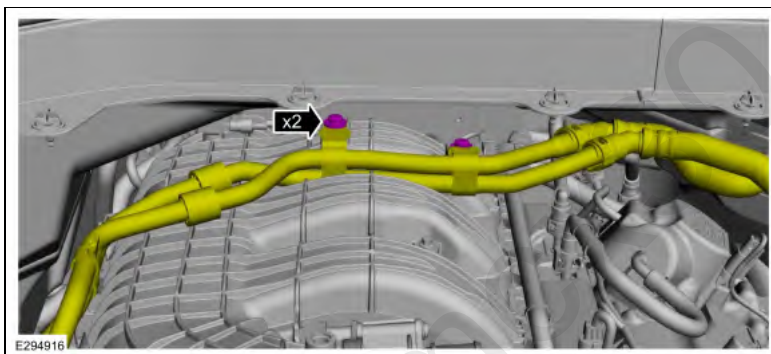
18. Remove the bolt from the LH shock tower and position the ground aside.



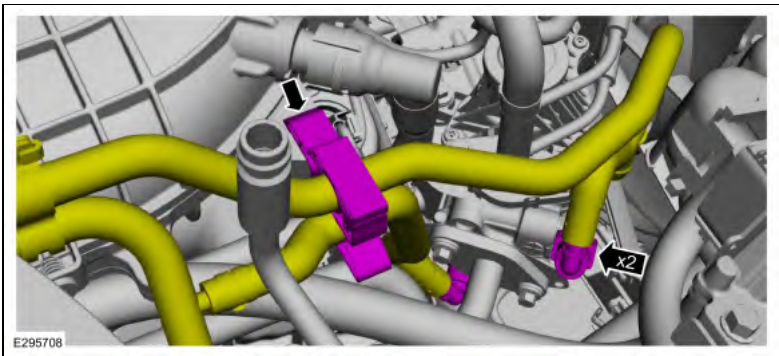
19. If equipped, disconnect the block heater.



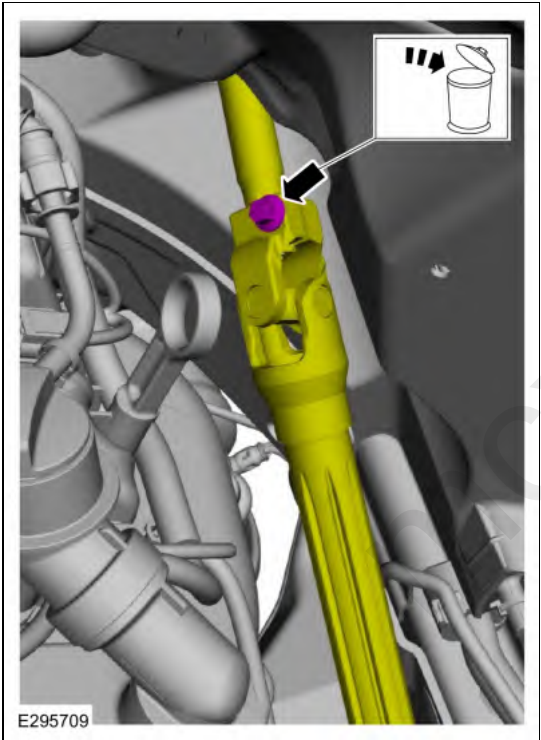
20. Remove the coolant tube bolts from the top of intake manifold.



- 21.
- Detach coolant tubes retainer from the upper intake manifold.
 - Disconnect the coolant hoses from the EGR valve.

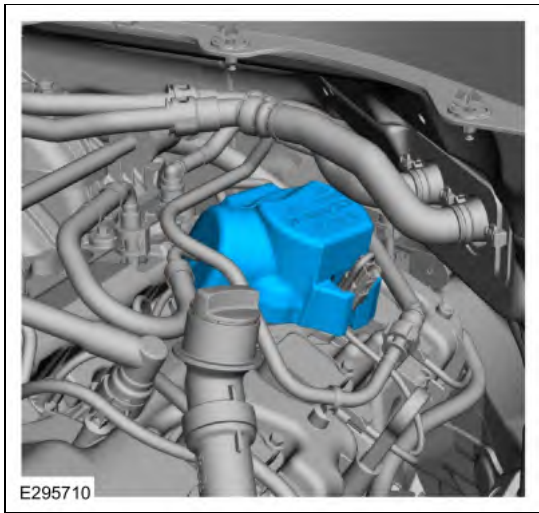


- 22.
- Remove the bolt and disconnect the steering shaft.
 - Discard the bolt.



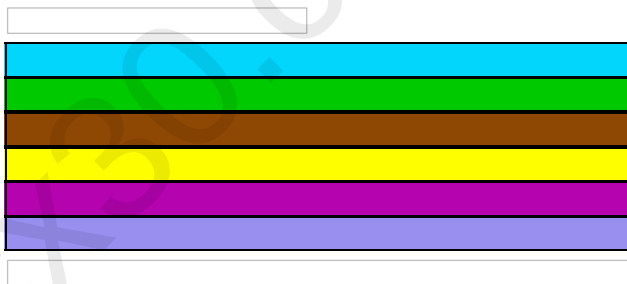
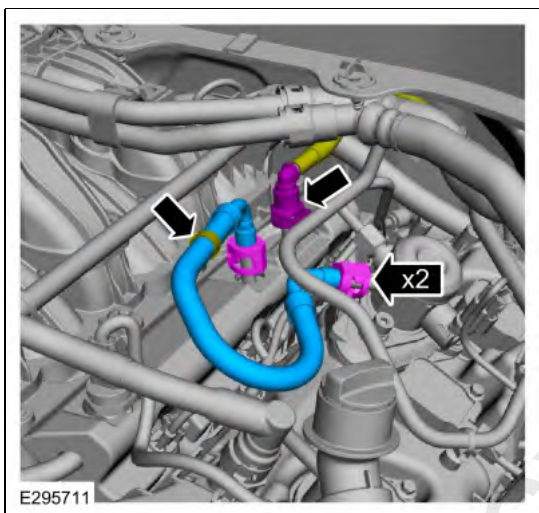
23. **NOTE:** When removing or installing the high-pressure fuel pump noise insulator, spreading the openings will reduce the risk of damage.

Remove the high-pressure fuel pump noise insulator.

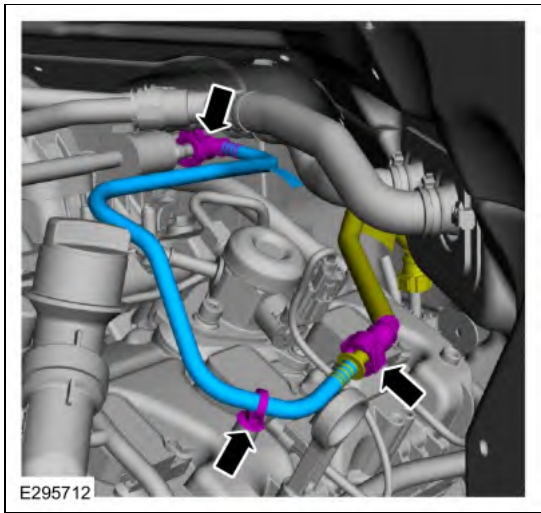


24. **NOTE:** Make note of the high-pressure fuel pump supply Oetiker® clamp end location for correct installation.

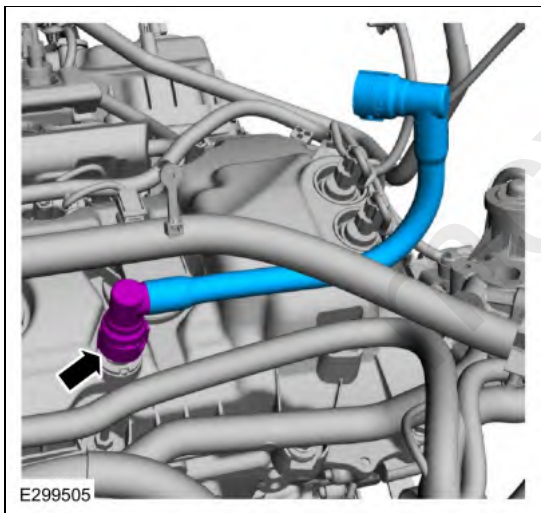
- Disconnect the quick release coupling and position the fuel supply tube aside.
- Disconnect the quick release couplings and remove the high-pressure fuel pump to port injection fuel rail tube.



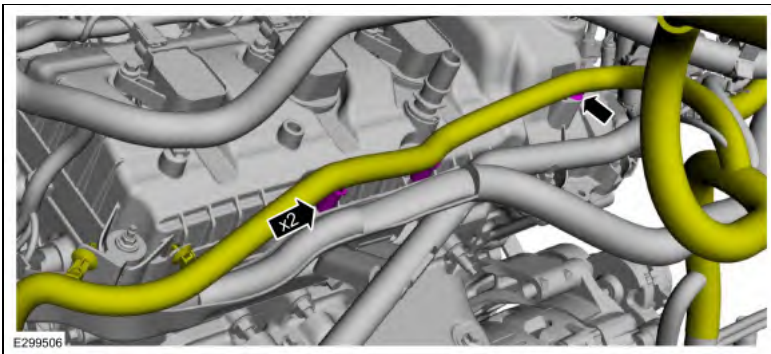
- 25.
- Detach the EVAP tube retainer.
 - Disconnect the quick release couplings and remove the EVAP tube.



26. Remove the upper intake manifold.
Refer to: Upper Intake Manifold (303-01C Engine - 3.3L Duratec-V6, Removal and Installation).
27. Remove the PCV tube.

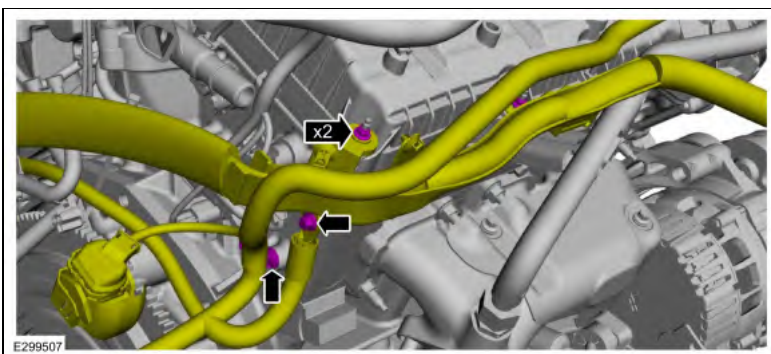


28. Detach the wiring harness retainers and position the transmission wiring harness aside.



29.

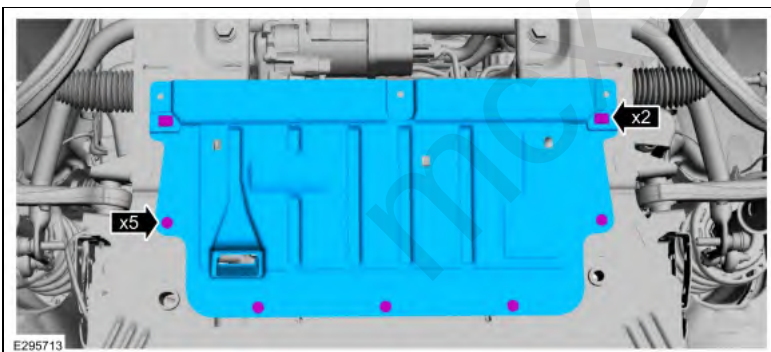
- Remove the nuts and position the high-voltage cable aside.
- Remove the bolt and position the cable aside.
- Detach the wiring harness retainer.



30. Remove the EGR valve.

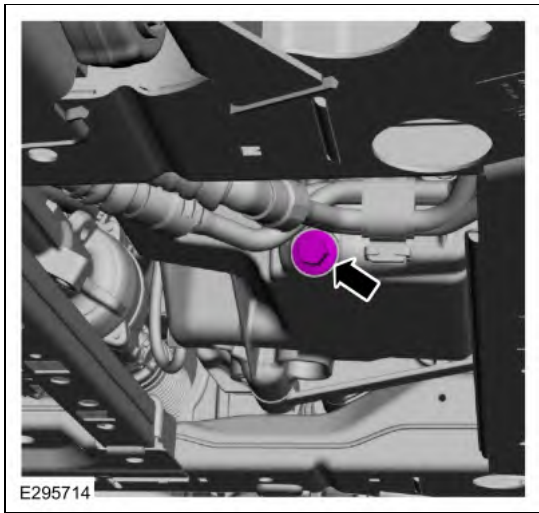
Refer to: Exhaust Gas Recirculation (EGR) Valve (303-08D Engine Emission Control - 3.3L Duratec-V6 Hybrid (BP), Removal and Installation).

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

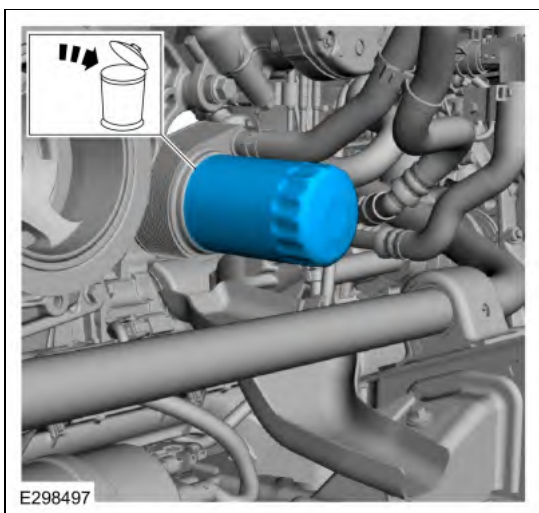


32.

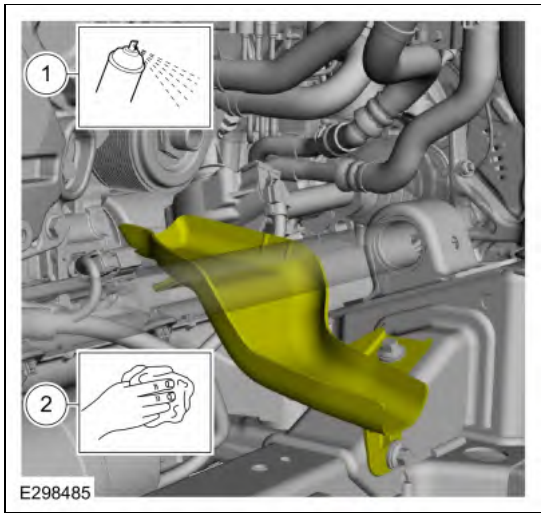
- Remove the oil pan drain plug and drain the engine oil.
Use the General Equipment: Oil Drain Equipment
- Install the oil drain plug.
Torque: 19 lb.ft (26 Nm)



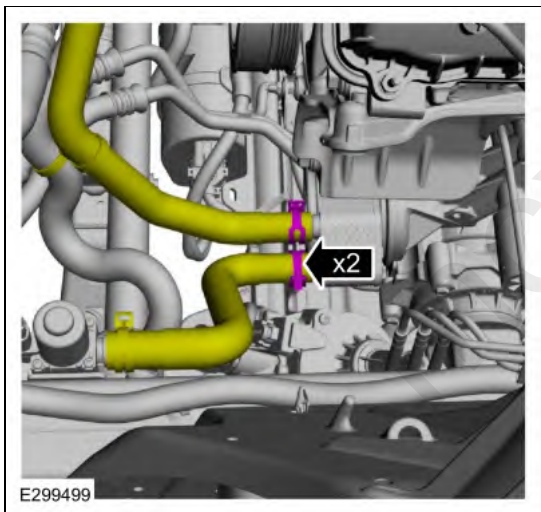
33. Remove and discard the engine oil filter.
Use the General Equipment: Oil Drain Equipment



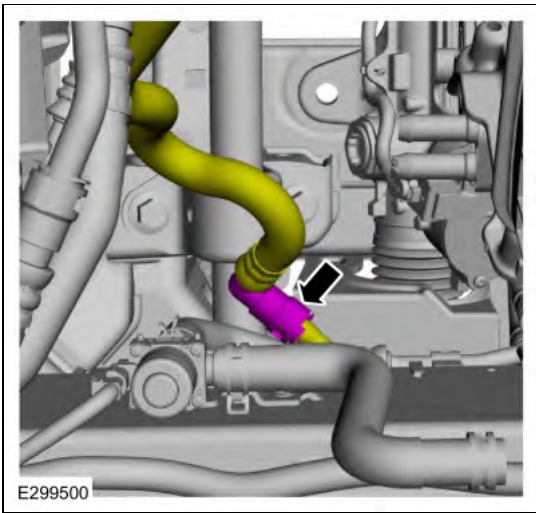
- 34.
- Using brake cleaner, clean the drain trough.
Use the General Equipment: Oil Drain Equipment
Material: Motorcraft® Metal Brake Parts Cleaner / PM-4-A, PM-4-B
 - Wipe the drain trough clean.



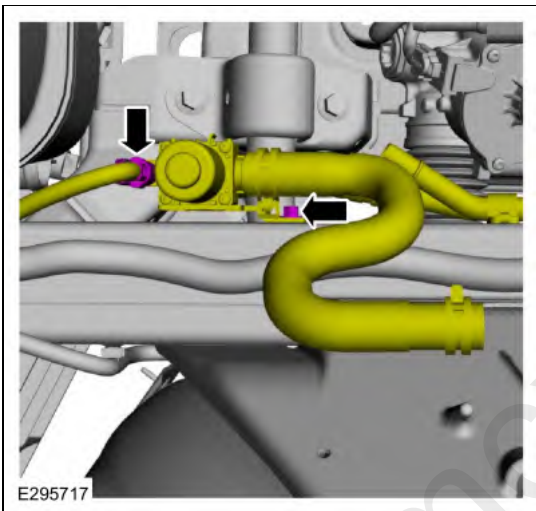
35. Disconnect the coolant hoses from the oil cooler.
Use the General Equipment: Hose Clamp Remover/Installer



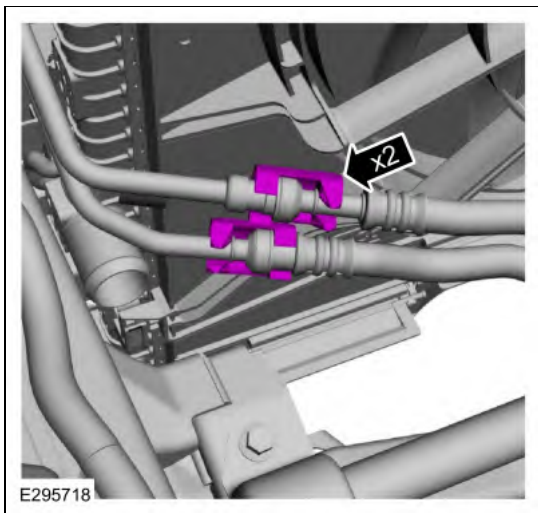
36. Disconnect the coolant hose from transmission cooler hose.



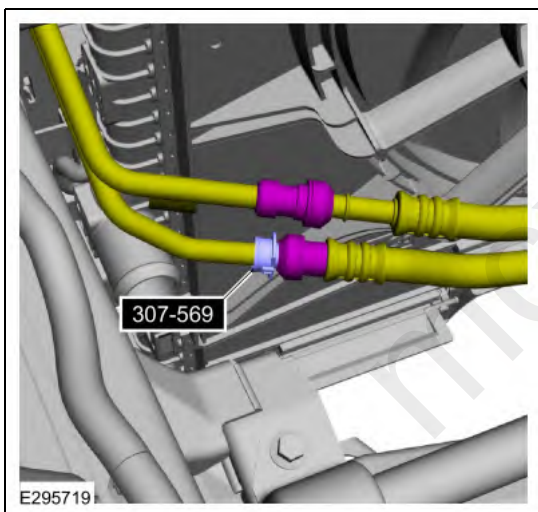
- 37.
- Disconnect the coolant solenoid wiring harness electrical connector.
 - Remove the coolant solenoid bracket bolt and position aside.



38. If equipped, remove the transmission fluid cooler tube secondary latches.



39. If equipped, using the special tool, disconnect the transmission fluid cooler tubes.
Use Special Service Tool: 307-569 Disconnect Tool TOC Line (1/2).



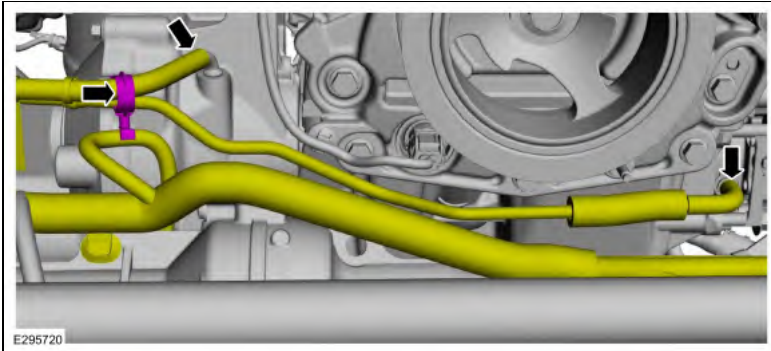
40. **NOTICE: Do not allow the brake caliper and anchor plate assembly to hang from the brake hose or damage to the hose can occur.**

Remove both front brake disc.

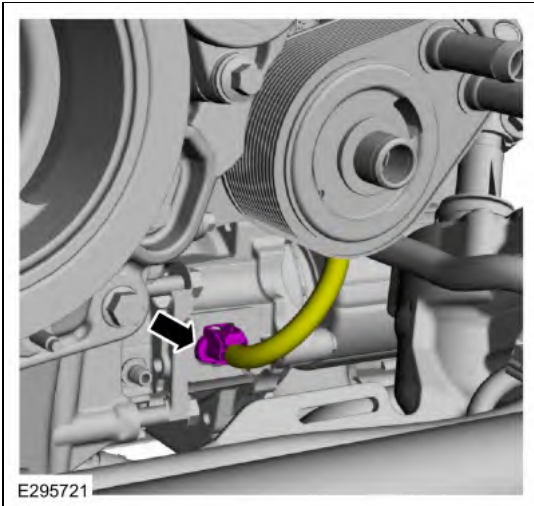
Refer to: Brake Disc (206-03 Front Disc Brake, Removal and Installation).

LHD AWD

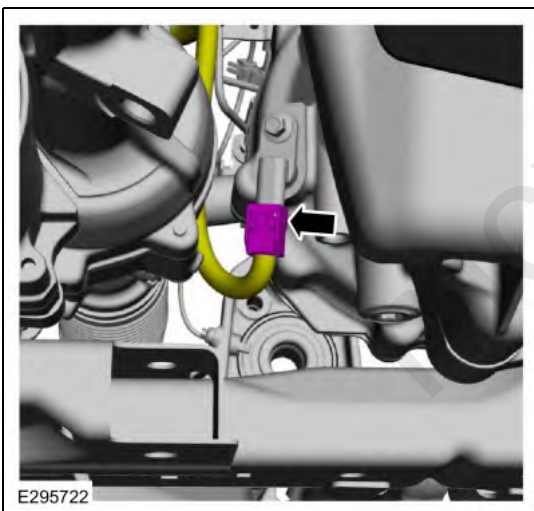
41. Remove the RH and LH halfshafts.
Refer to: Halfshaft (205-04 Front Drive Halfshafts, Removal and Installation).
- 42.
- Disconnect the vent hose from the LH axle connector.
 - Detach the wiring harness retainer from the vent tubes.
 - Disconnect the vent hose from the front axle assembly and position the vent tubes aside.



43. Disconnect the wiring harness electrical connector from the LH axle connector.

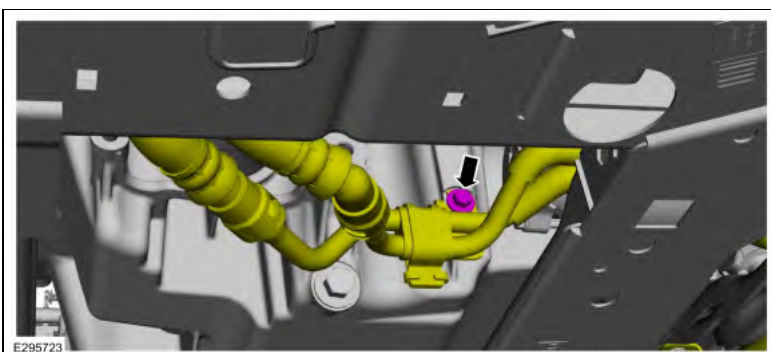


44. Disconnect the wiring harness electrical connector from the front axle assembly.

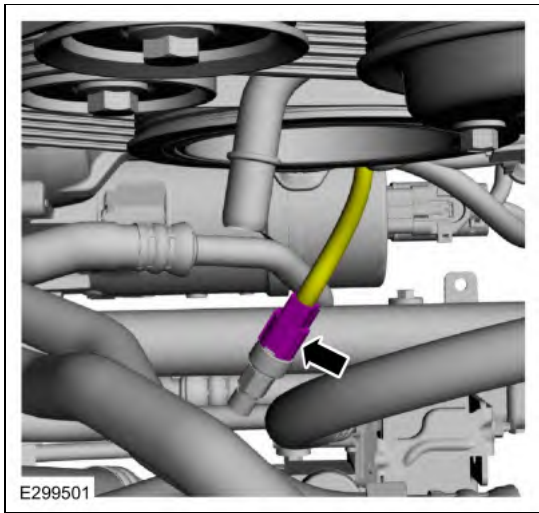


LHD AWD/LHD RWD

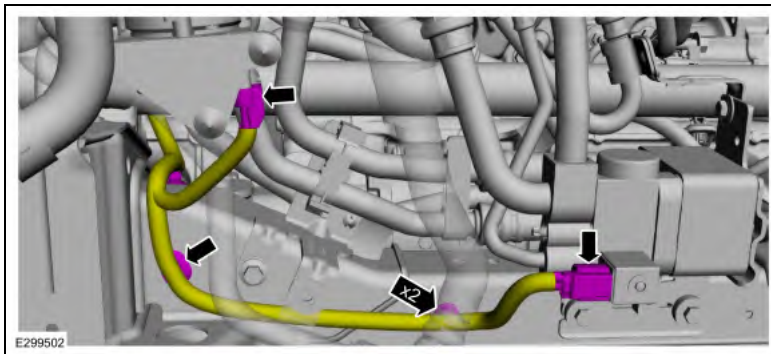
45. Remove the bolt from oil pan and position the coolant tubes aside.



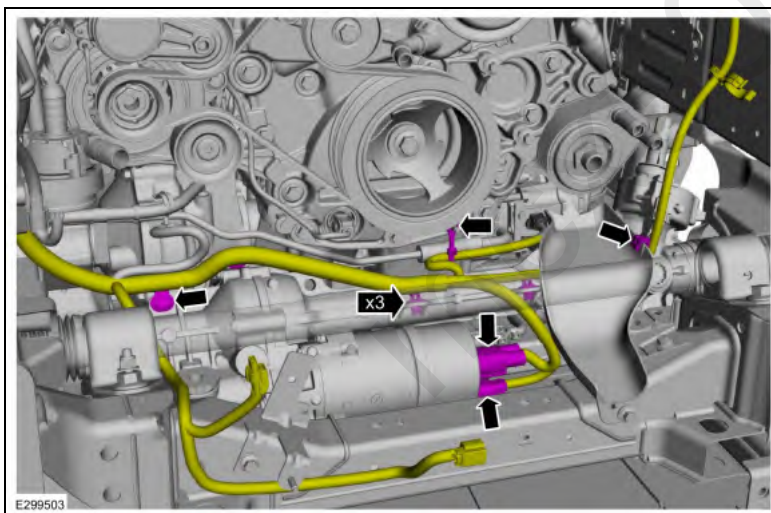
46. Disconnect the A/C pressure switch.



47. Disconnect the wiring harness electrical connectors and the retainers.



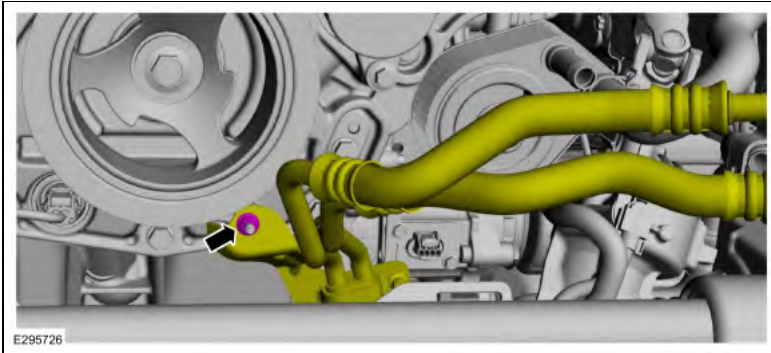
48. Disconnect the steering gear wiring harness electrical connectors, retainers and position the wiring harness to the RH side of vehicle.



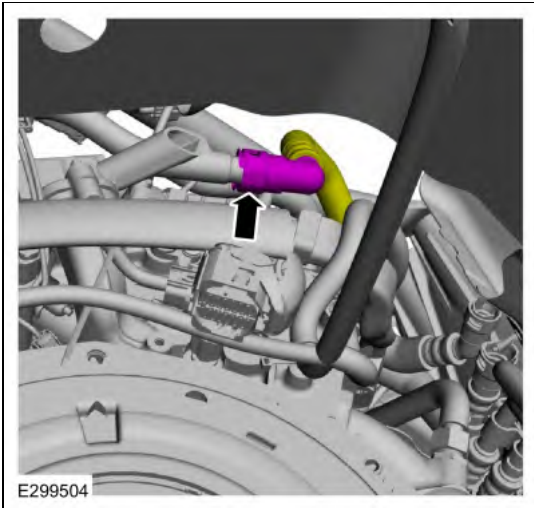
49. Remove the transmission.

Refer to: Transmission - 3.3L Duratec-V6 4-cylinder Hybrid (BP) (307-01C Automatic Transmission, Transfer Case and Power Transfer Unit - 10-Speed Automatic Transmission 10R80 MHT, Removal and Installation).

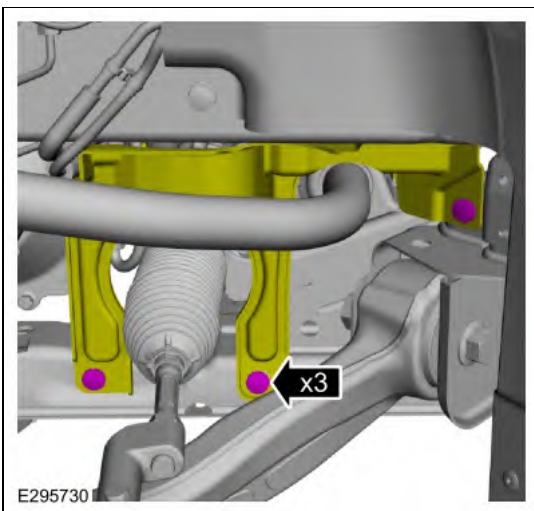
50. If equipped, remove the nut from engine front cover and position the transmission cooling tube bracket off the stud bolt.



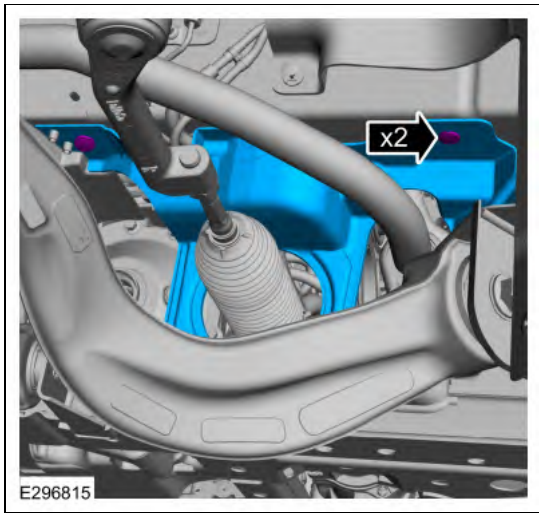
51. Disconnect the heater hose from the lower intake manifold at the rear of the engine.



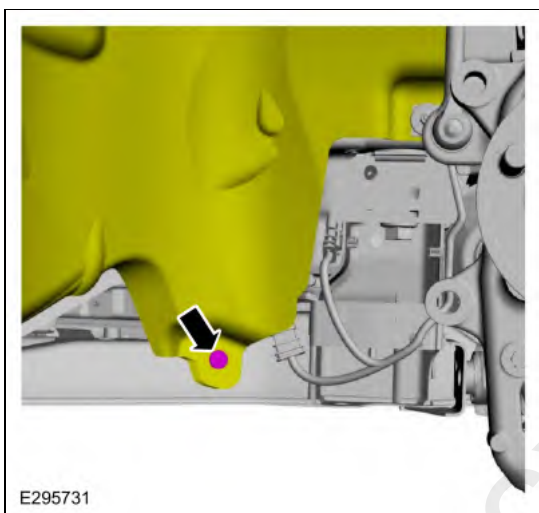
52. Remove the steering shield pin-type retainers from the RH subframe.



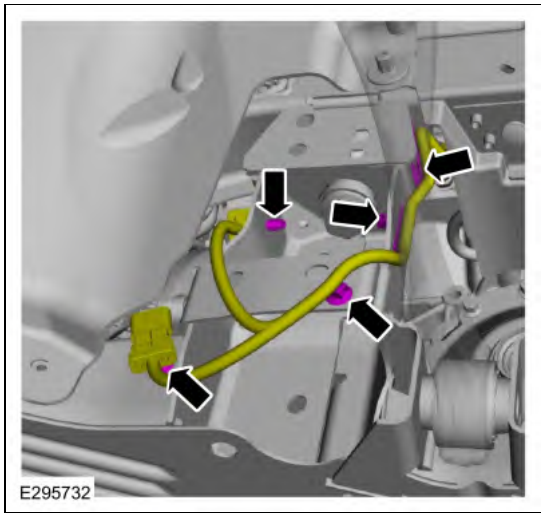
53. Remove the pin-type retainers and the steering shield from the RH subframe.



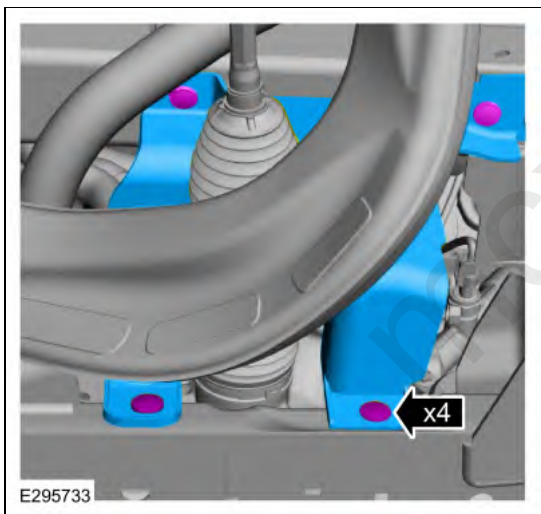
54. Remove the splash shield pin-type retainer from the RH subframe.



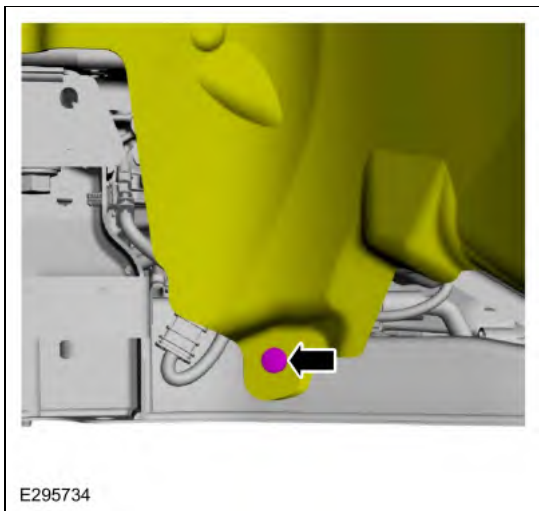
55. Detach the HO2S wiring harness retainers from the RH subframe.



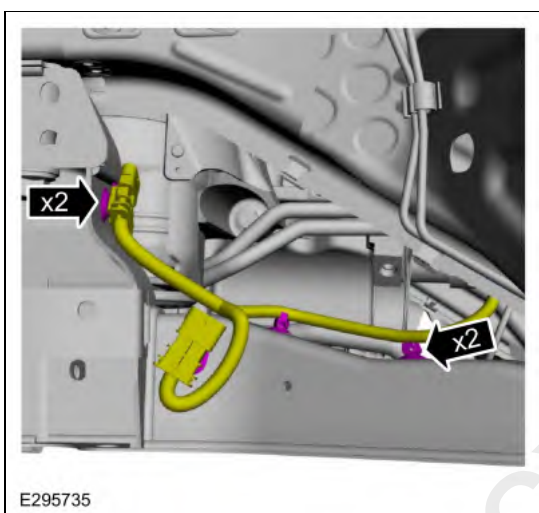
56. Remove the pin-type retainers and the steering shield from the LH subframe.



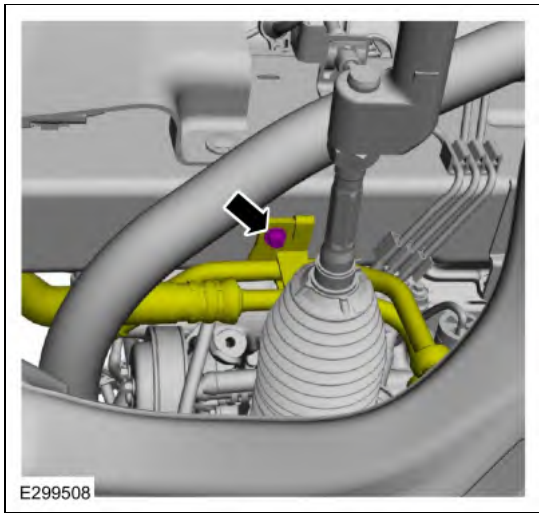
57. Remove the splash shield pin-type retainer from the LH subframe and position aside.



58. Detach the HO2S wiring harness retainers from the LH subframe.

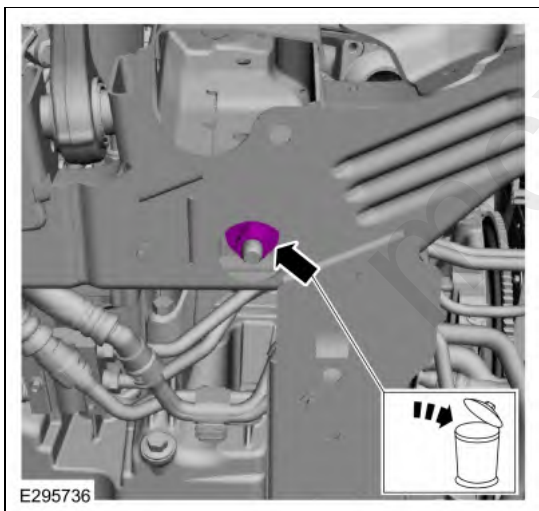


59. Remove the coolant tube bracket bolt from the LH side of frame rail.



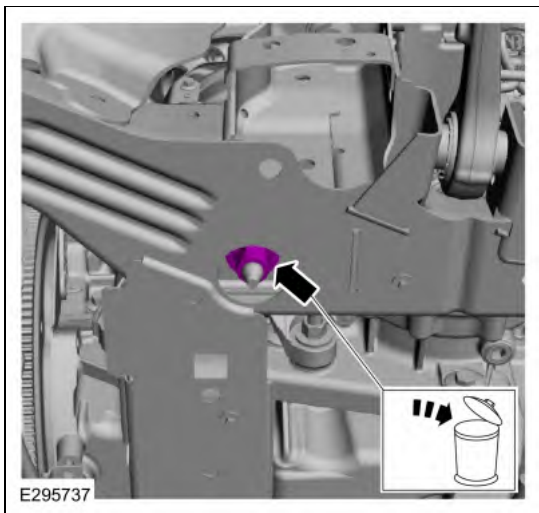
60. **NOTICE:** Only use hand tools when removing the engine mount nuts or damage to the engine mount can occur.

- Remove the LH engine mount nut.
- Discard the engine mount nut.



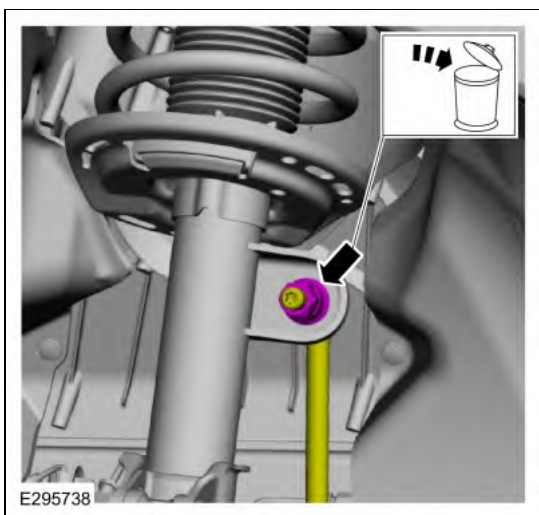
61. **NOTICE:** Only use hand tools when removing the engine mount nuts or damage to the engine mount can occur.

- Remove the RH engine mount nut.
- Discard the engine mount nut.



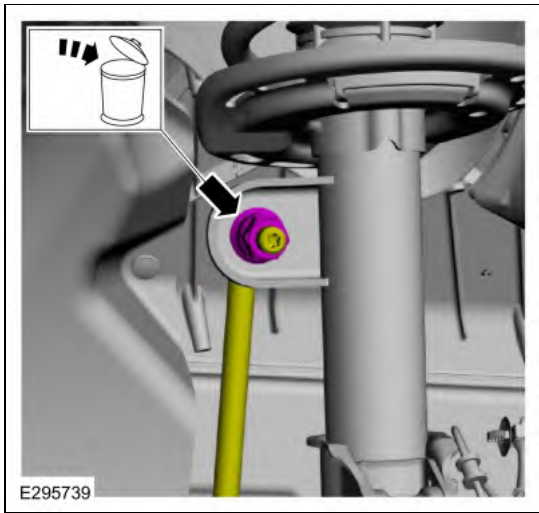
62. **NOTICE:** Use the internal or external hex-holding feature to prevent the ball and stud from turning while removing or installing the stabilizer bar link nuts. The link boot seal must not be allowed to twist while tightening the link nuts or damage to the boot seal will occur.

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



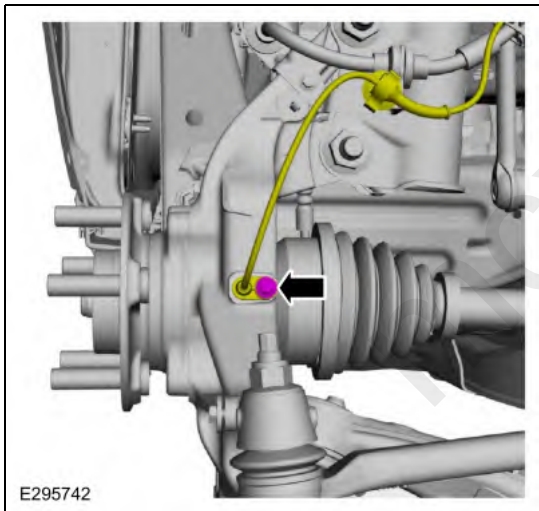
63. **NOTICE:** Use the internal or external hex-holding feature to prevent the ball and stud from turning while removing or installing the stabilizer bar link nuts. The link boot seal must not be allowed to twist while tightening the link nuts or damage to the boot seal will occur.

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

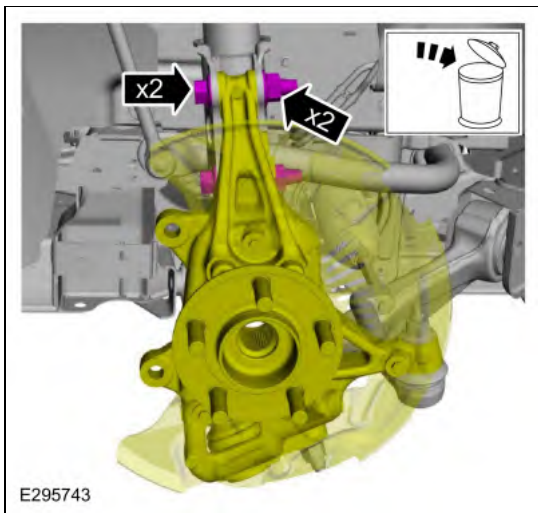


LHD RWD

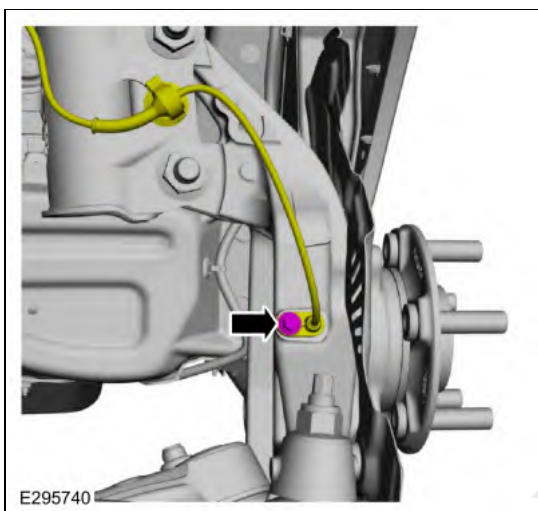
64. Remove the bolt and the RH anti-lock sensor.



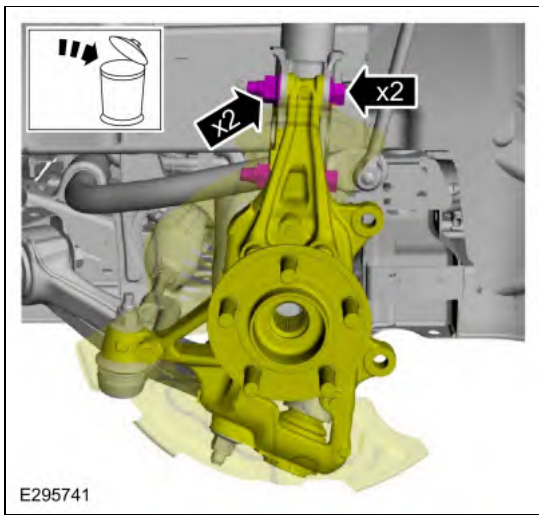
- 65.
- Remove the RH strut nuts and bolts.
 - Discard the nuts and bolts.



66. Remove the bolt and the LH anti-lock sensor.

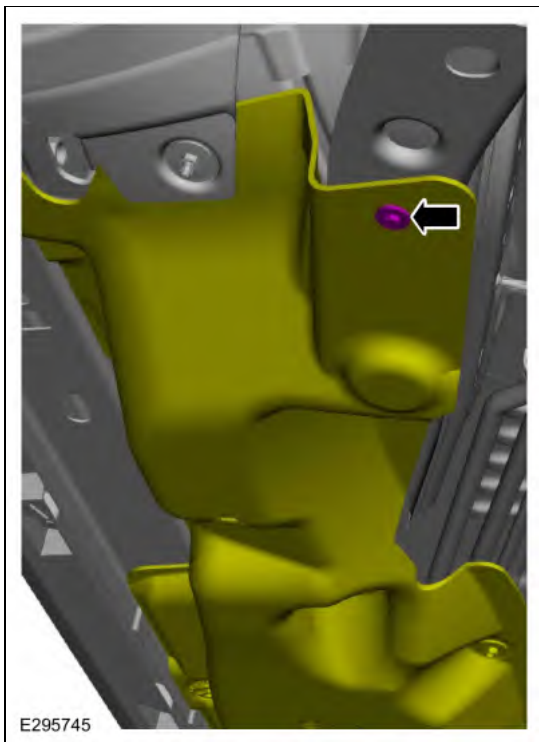


- 67.
- Remove the LH strut nuts and bolts.
 - Discard the nuts and bolts.



LHD AWD/LHD RWD

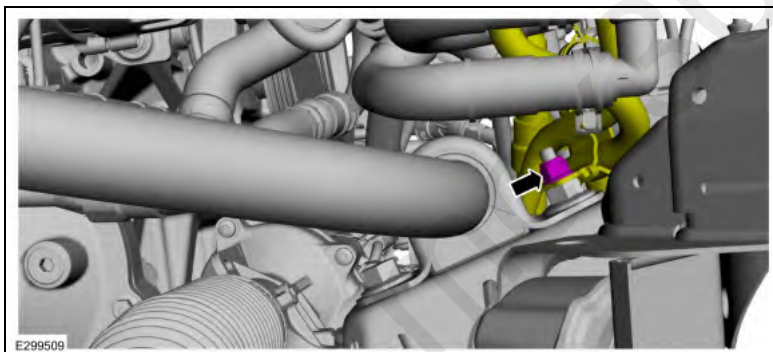
68. Remove the bolt and position the RH underbody shield aside.



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

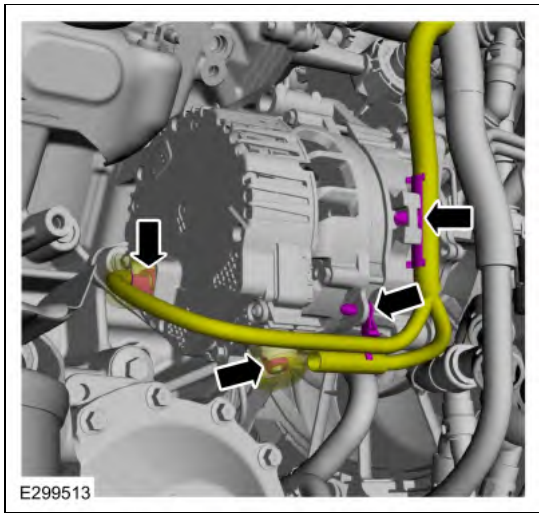


70. Remove the nut from sway bar stud bolt and position A/C line bracket aside.



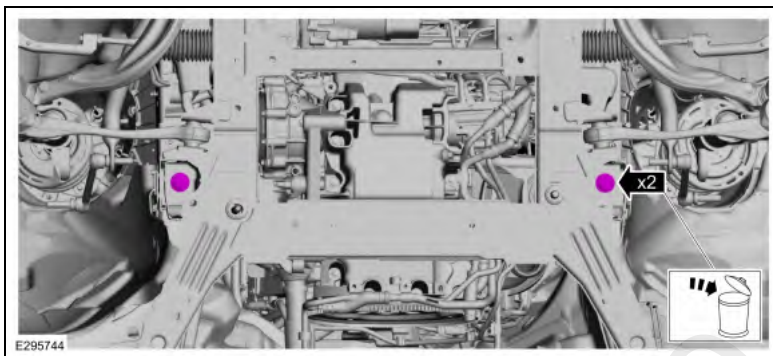
71.

- Detach the coolant tubes retainer from the bracket.
- Remove the coolant tubes bracket bolt.

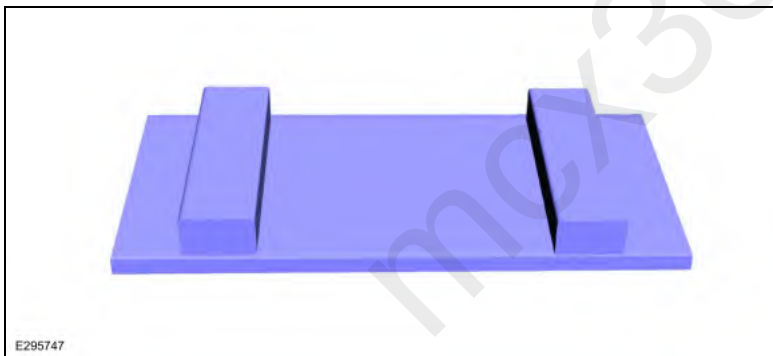


75.

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



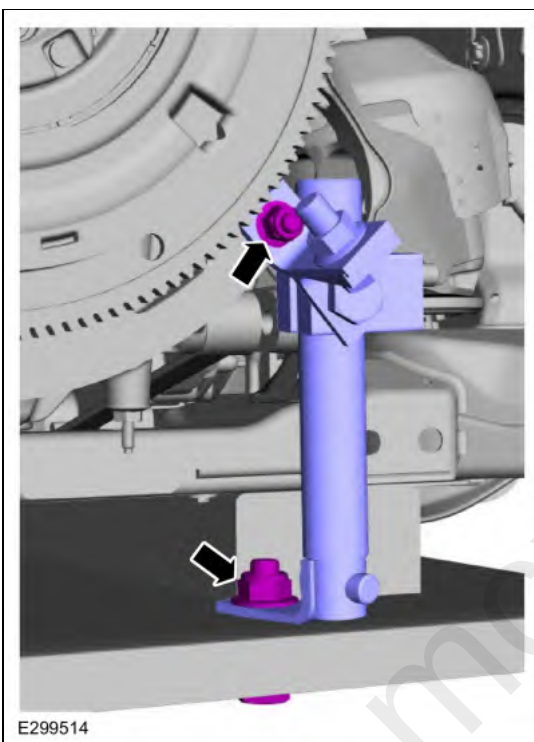
76. Position two boards onto the powertrain jack as shown.



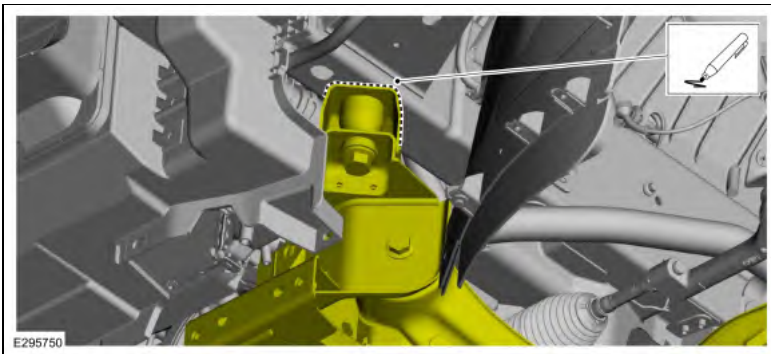
77. Position the powertrain jack and blocks of wood under the powertrain and subframe .
 Use the General Equipment: Powertrain Jack
 Use the General Equipment: Wooden Block



78. Install and adjust and tighten the adjustable mounting arm bolts.
Use the General Equipment: Adjustable Mounting Arm



79. Mark the front subframe location.



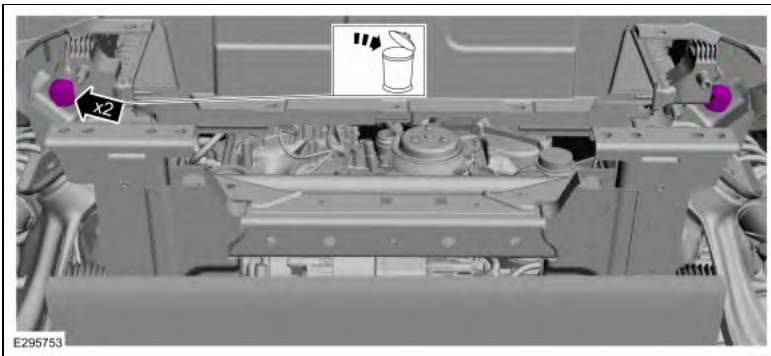
80. Mark the rear subframe location.



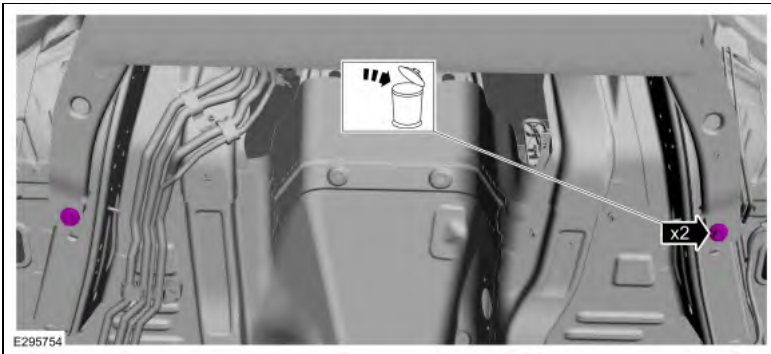
- 81.
- Remove the front radiator support bar and panel bolts.
 - Position the panel aside and remove the front radiator support bar.
 - Remove the front radiator support bar bushings.



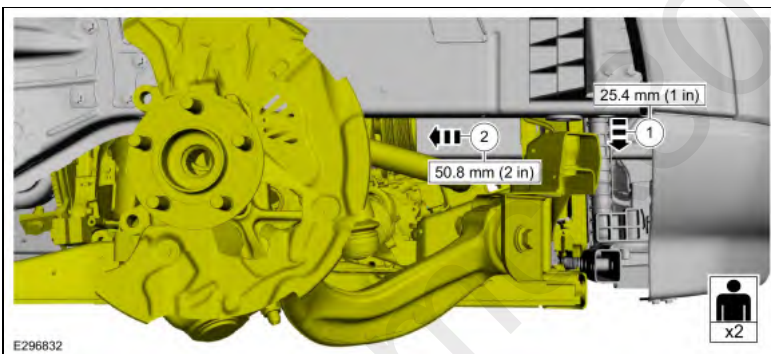
- 82.
- Remove the front subframe bolts.
 - Discard the bolts.



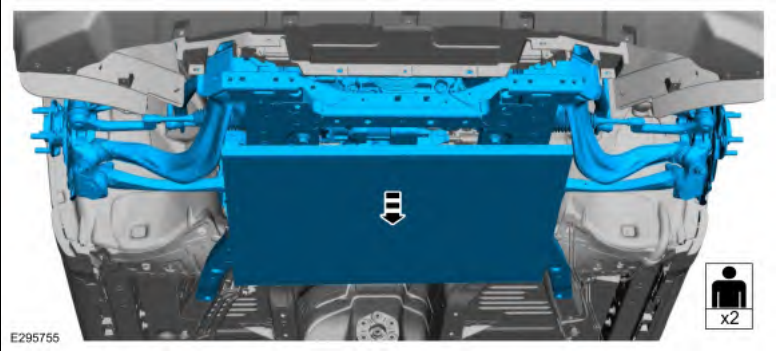
- 83.
- Remove the rear subframe bolts.
 - Discard the bolts.



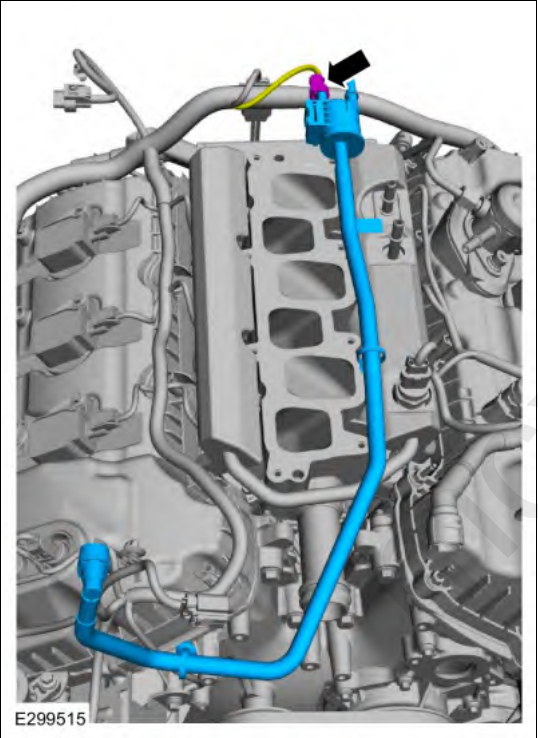
- 84.
1. With the aid of an assistant and using the powertrain jack, lower the powertrain and subframe 25.4 mm (1 in).
 2. With the aid of an assistant and using the powertrain jack, position the powertrain and subframe rearwards 50.8 mm (2 in).



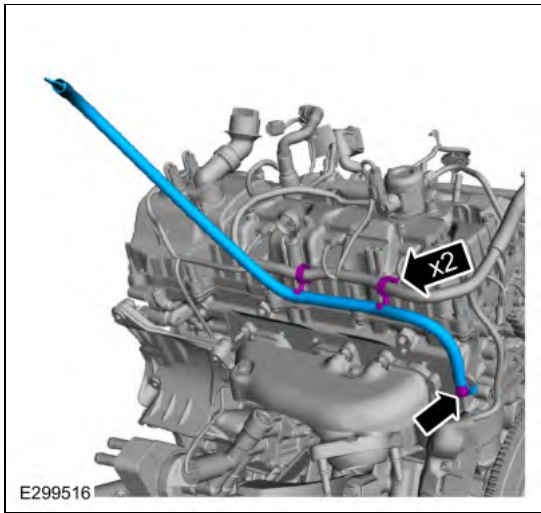
85. With the aid of an assistant and using the powertrain jack, lower the powertrain and subframe as an assembly.



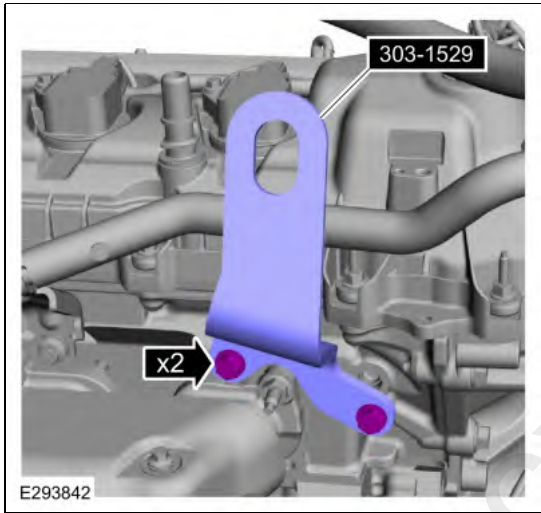
- 86.
- Disconnect the wiring harness electrical connector and remove the EVAP canister purge valve.



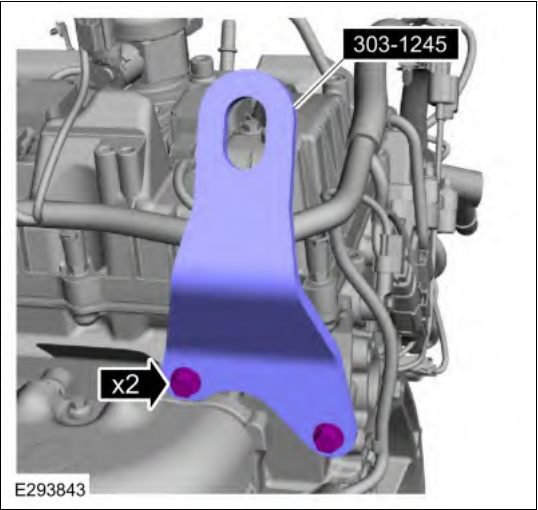
87. Remove the bolt, detach the retainers and remove the ground wire.



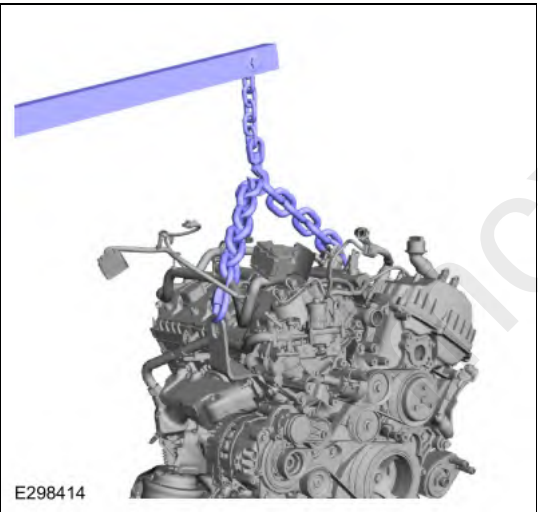
88. Install Special Service Tool: 303-1529 Lift Eye, Engine.



89. Install Special Service Tool: 303-1245 Engine Lift Eye.



90. Install the floor crane and chain,.



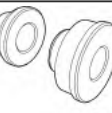
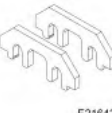
91. Remove.
Use the General Equipment: Adjustable Mounting Arm

Disassembly

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Engine

Special Tool(s) / General Equipment

 E234304	205-142 (T80T-4000-J) Installer, Differential Bearing Cone
	205-150 (T80T-4000-S) Installer, Spindle Bearing
 E133913	205-153 (T80T-4000-W) Handle
	303-1245 Engine Lift Eye TKIT-2006UF-FLM TKIT-2006UF-ROW
 E175042	303-1247 VCT Spark Plug Tube Seal Remover and Installer TKIT-2006UF-FLM TKIT-2006UF-ROW
 E216421	303-1248 Camshaft holding tools TKIT-2006UF-FLM TKIT-2006UF-ROW
	303-1529 Lift Eye, Engine TKIT-2010A-F TKIT-2010A-LM TKIT-2010A-ROW
	303-1530 Tool, Chain Tensioner Hold Down TKIT-2010A-F TKIT-2010A-LM TKIT-2010A-ROW
 E134603	303-409 (T92C-6700-CH) Remover, Crankshaft Seal TKIT-1992-FH/FMH/FLMH TKIT-1993-LMH/MH
Floor Crane	
Mounting Stand	
Plastic Scraper	

Materials

Name	Specification
Motorcraft® Silicone Gasket Remover ZC-30-A	-
Motorcraft® Metal Surface Prep Wipes ZC-31-B	-
Motorcraft® Metal Brake Parts Cleaner PM-4-A, PM-4-B	-

LHD AWD/LHD RWD

NOTICE: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces that enters the oil passages, coolant passages or the oil pan, can cause engine failure.