
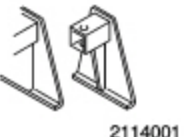

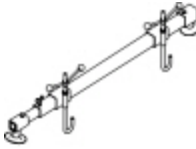



Exhaust Manifold LH

Special Tool(s) / General Equipment

	303-050 (T70P-6000) Lifting Bracket, Engine
	303-290-01 Adapter for 303-290A TKIT-1999A-F/LT TKIT-1999A-FM/FLM TKIT-1999A-LM
	303-290A-03A Adapter For 303-290A (Support Leg) TKIT-1999A-F/LT TKIT-1999A-FM/FLM TKIT-1999A-LM
	303-290B Support Bar, Engine
	303-F072 Support Bar, Engine

Removal

NOTE: The LH exhaust manifold and catalytic converter are serviced as an assembly.

NOTE: If the LH exhaust manifold is not being replaced, the HO2S and the catalyst monitor sensor do not need to be removed. Disconnecting the electrical connectors is still necessary.

NOTE: Removal steps in this procedure may contain installation details.

All vehicles

1. With the vehicle in NEUTRAL, position it on a hoist.
Refer to: [Jacking and Lifting - Overview](#) (100-02 Jacking and Lifting, Description and Operation).
2. Disconnect the battery negative and positive cable.
Refer to: [Battery Disconnect and Connect](#) (414-01 Battery, Mounting and Cables, General Procedures).

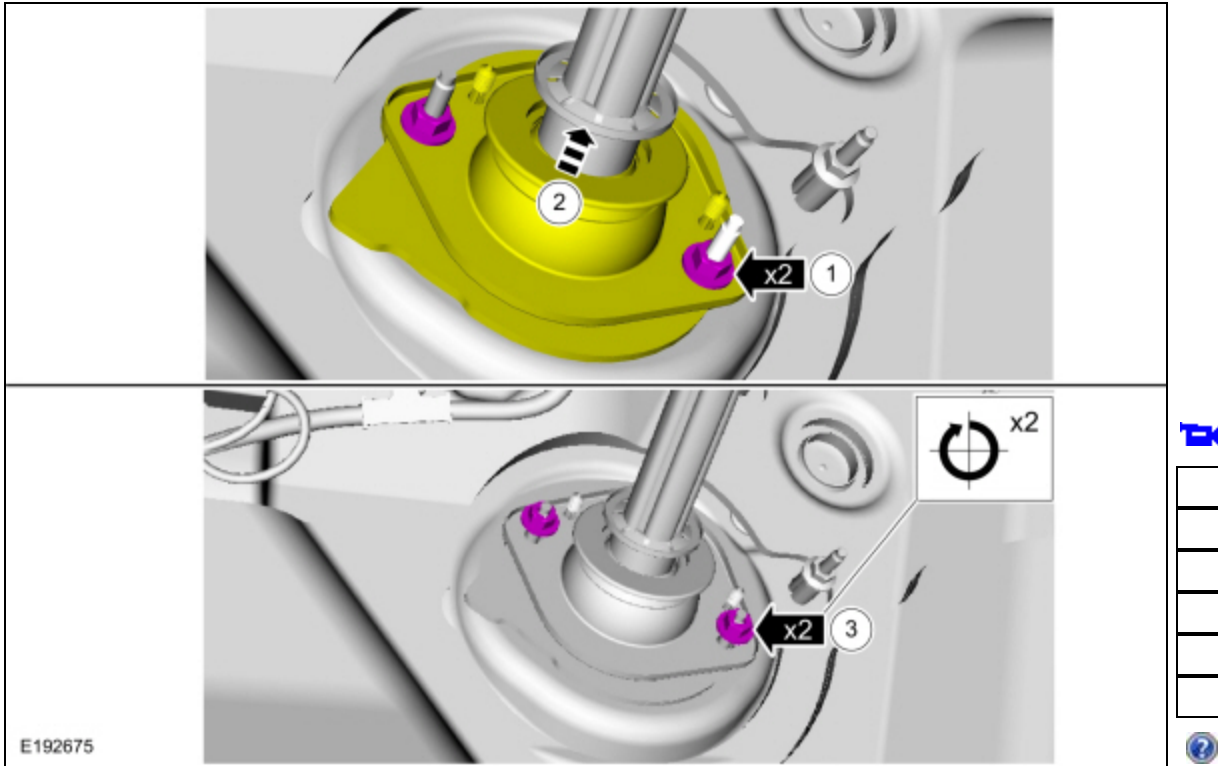
LHD RWD

3. **NOTICE:** Make sure to minimize damage to the sealer foam and avoid pulling apart dash seal brackets from retainer pins. Excessive damage may allow engine noise, fumes, air or water to enter the passenger compartment.

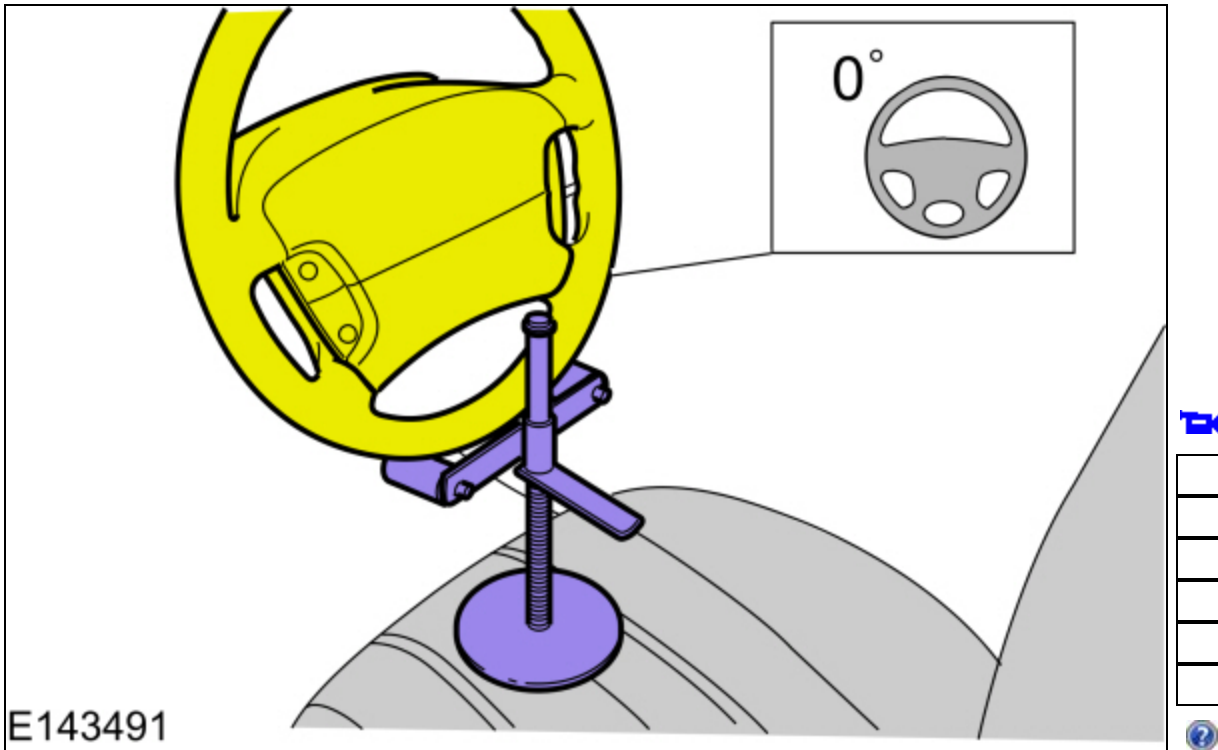
Loosen the dash seal.

1. Remove the nuts.
Torque: 80 lb.in (9 Nm)

2. Loosen the dash seal.
3. Hand start the nuts.



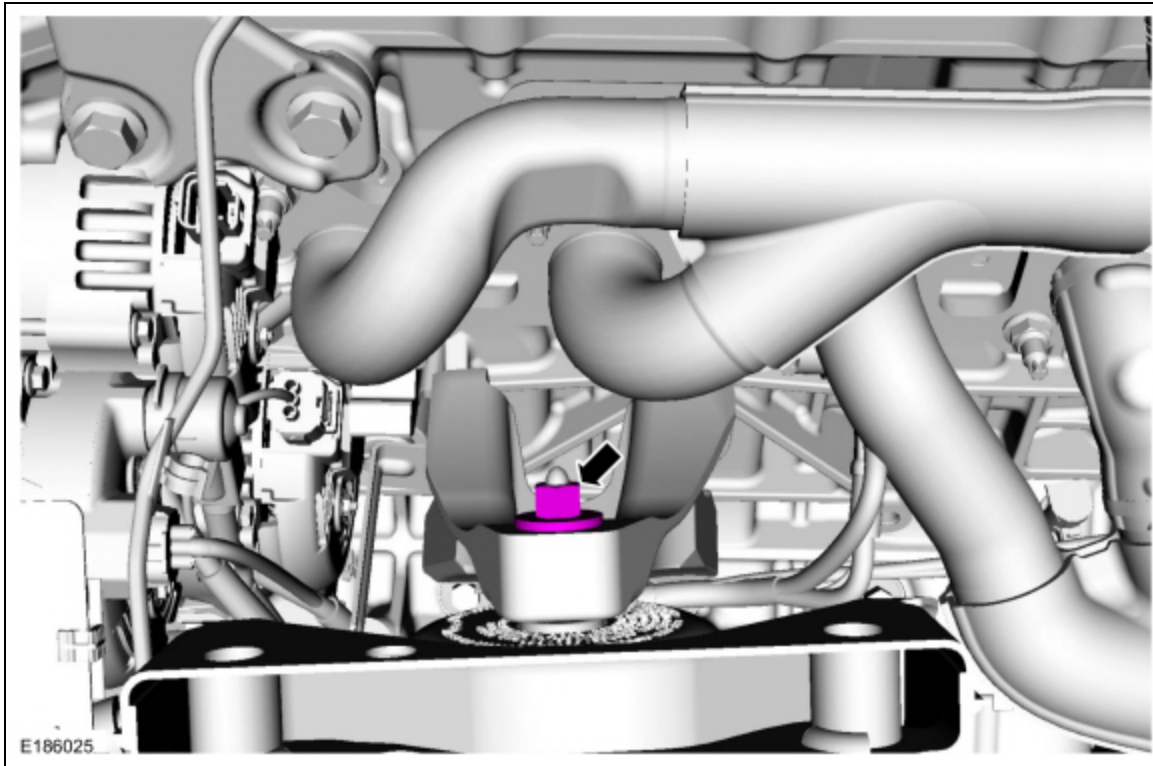
4. Steering wheel in straight ahead position.



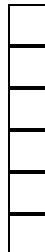
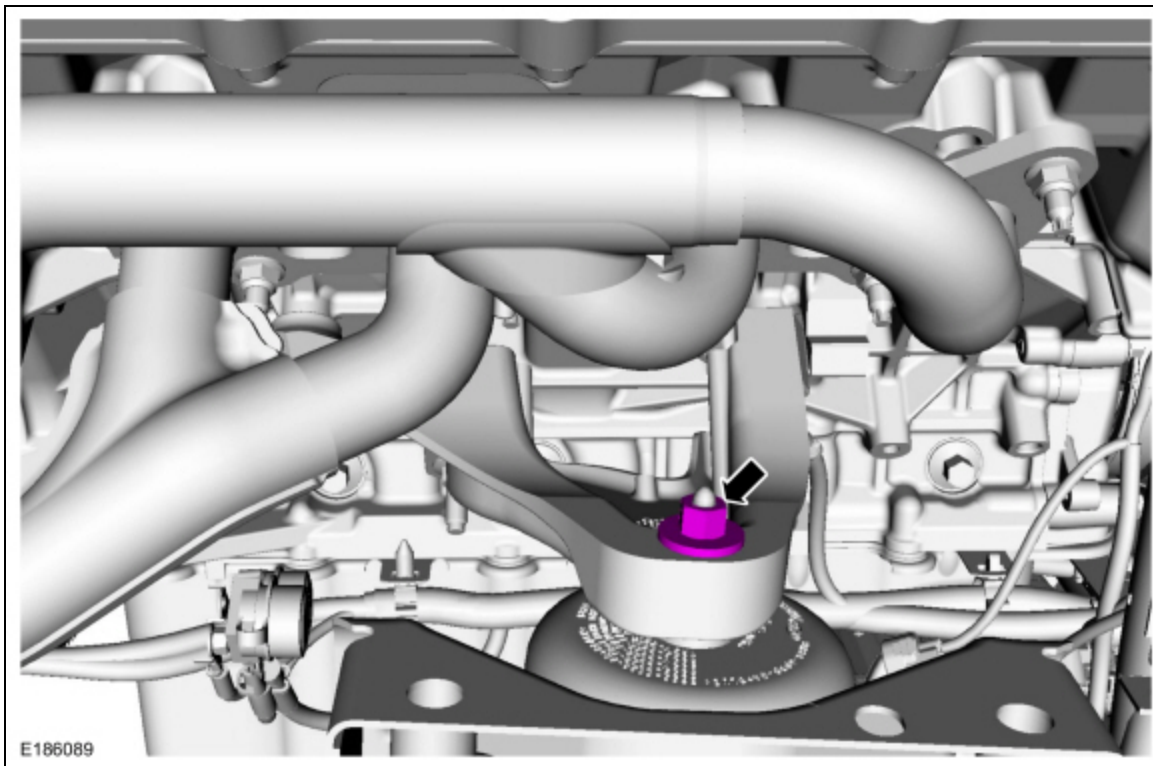
All vehicles

5. Remove the following items:
 1. Air cleaner outlet pipe.
Refer to: Air Cleaner Outlet Pipe (303-12) .
 2. Air cleaner.
Refer to: Air Cleaner (303-12) .

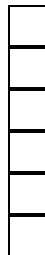
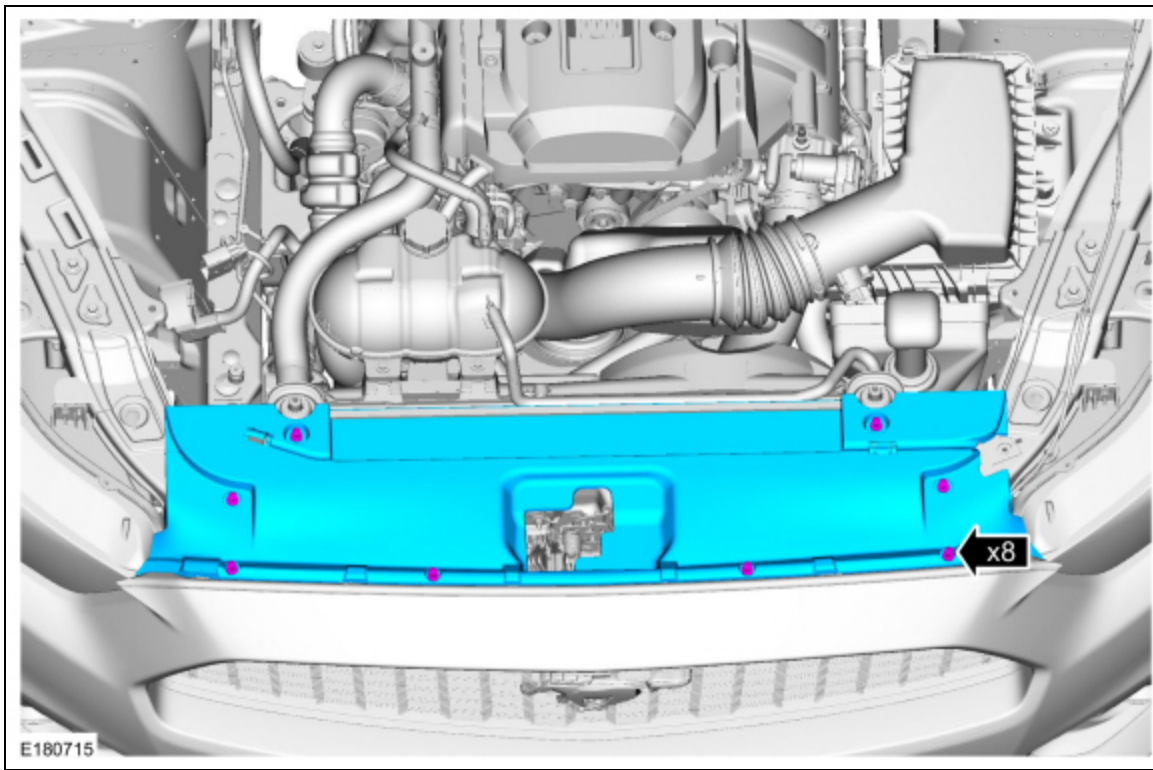
6. Remove the LH motor mount nut.
Torque: 46 lb.ft (63 Nm)



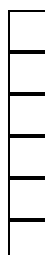
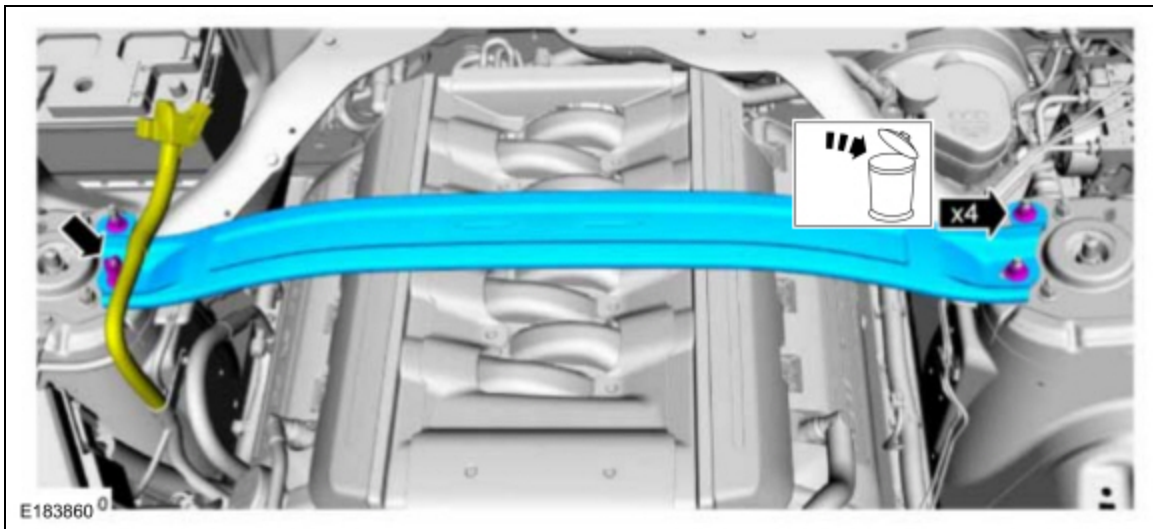
7. Remove the RH motor mount nut.
Torque: 46 lb.ft (63 Nm)



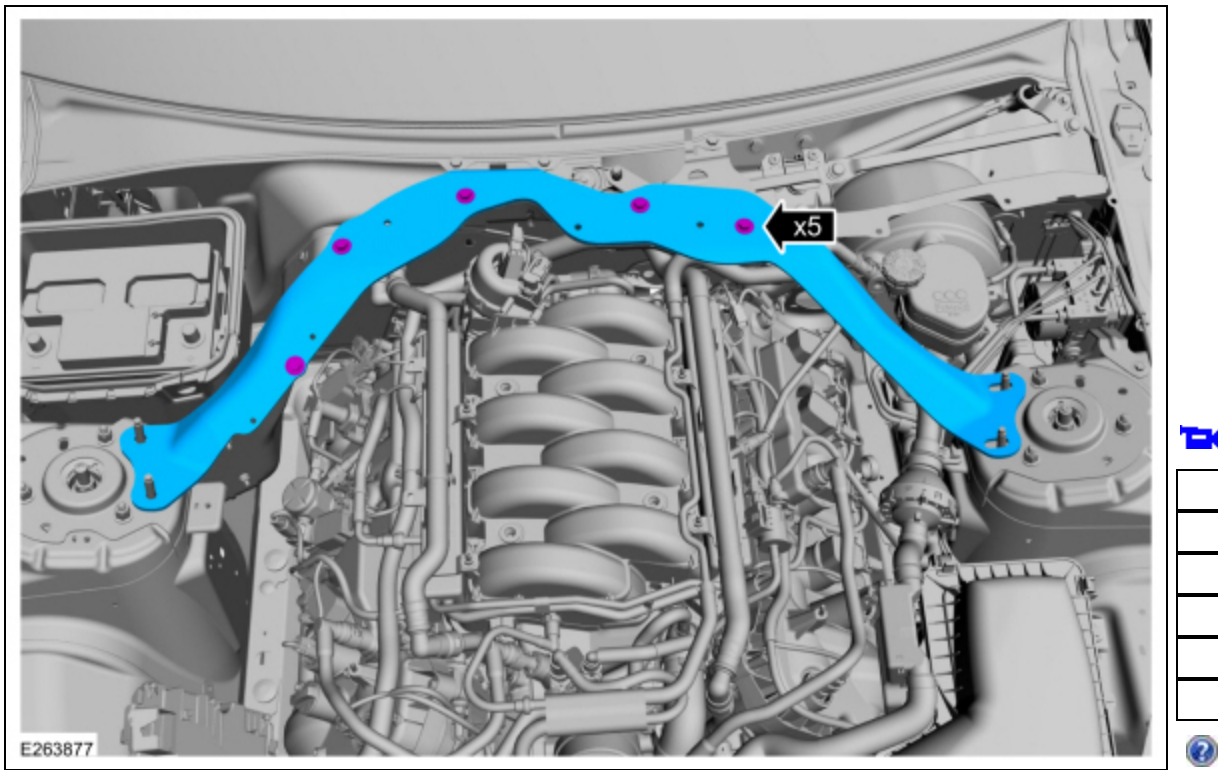
8. Remove the retainers and the radiator sight shield.



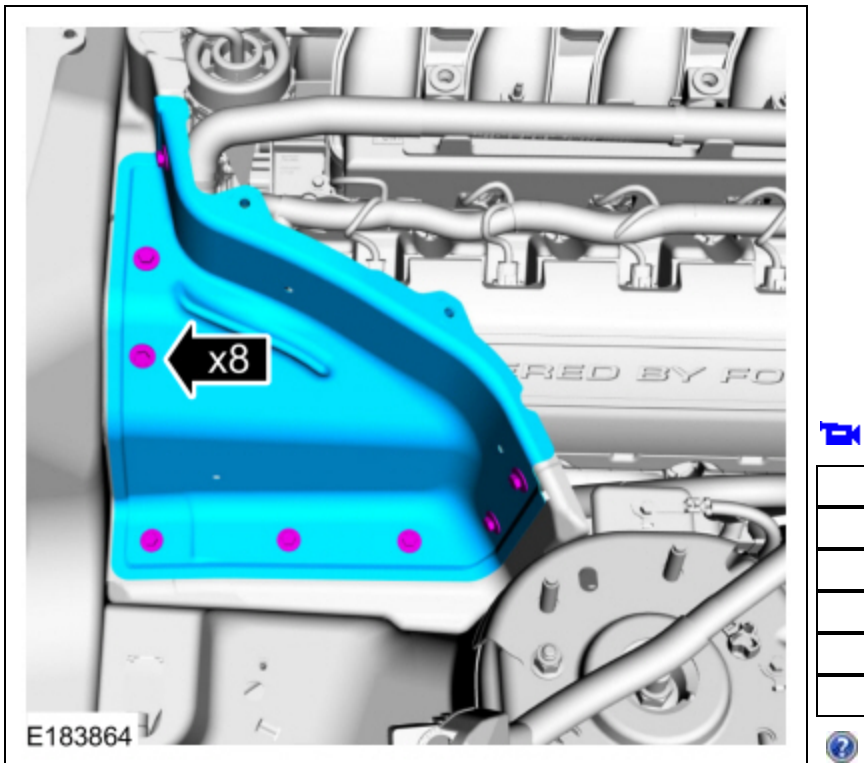
9. Position aside the battery positive cable. Remove the 4 cross brace nuts and remove the cross brace.
Torque: 41 lb.ft (55 Nm)



10. Remove the battery tray.
 Refer to: [Battery Tray](#) (414-01 Battery, Mounting and Cables, Removal and Installation).
11. Remove the cowl panel grille.
 Refer to: [Cowl Panel Grille](#) (501-02 Front End Body Panels, Removal and Installation).
12. Remove the fasteners and the cowl extension.
Torque: 26 lb.ft (35 Nm)



13. Remove the 8 screws and the battery heat shield.
Torque: 80 lb.in (9 Nm)

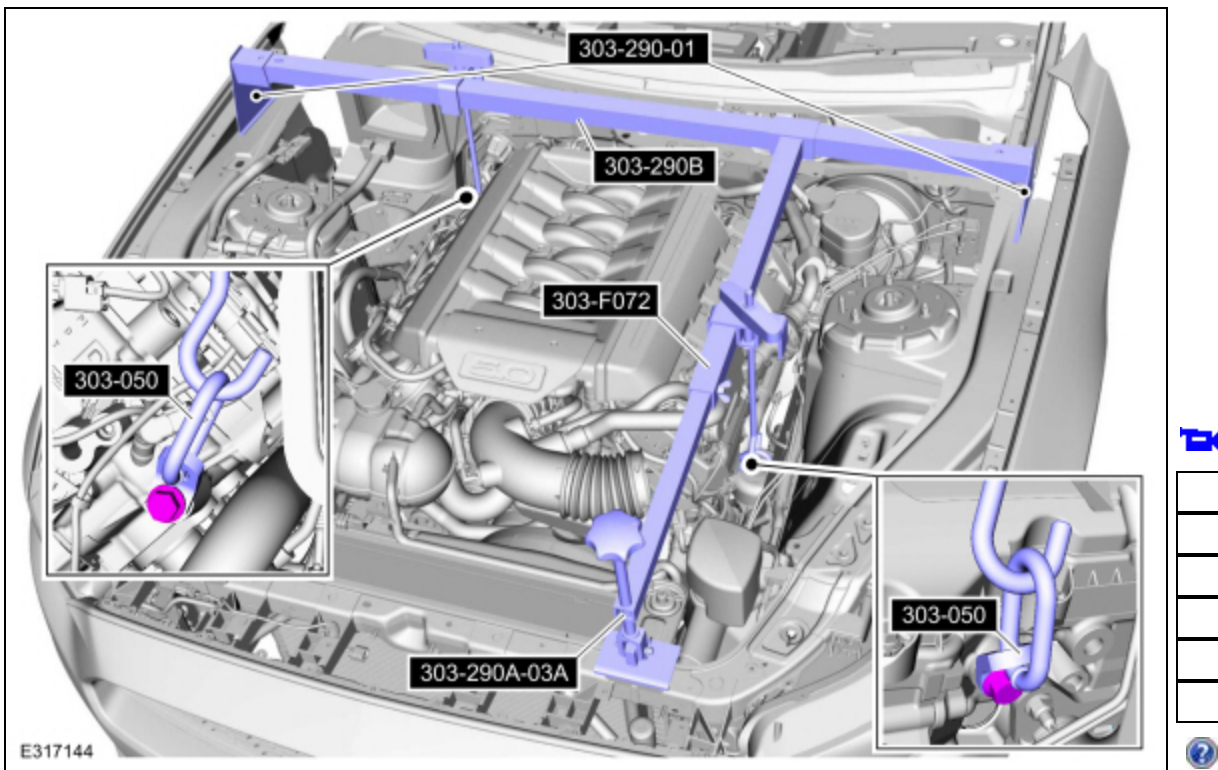


14. **NOTICE:** Do not position the legs of the Engine Support Bar on the fenders. Instead, position the legs on the body structure near the suspension strut tower. Failure to follow these instructions may result in body damage.

NOTE: If the LH exhaust manifold and the RH exhaust manifold are removed at the same, follow the Special tool setup in the RH exhaust manifold procedure.

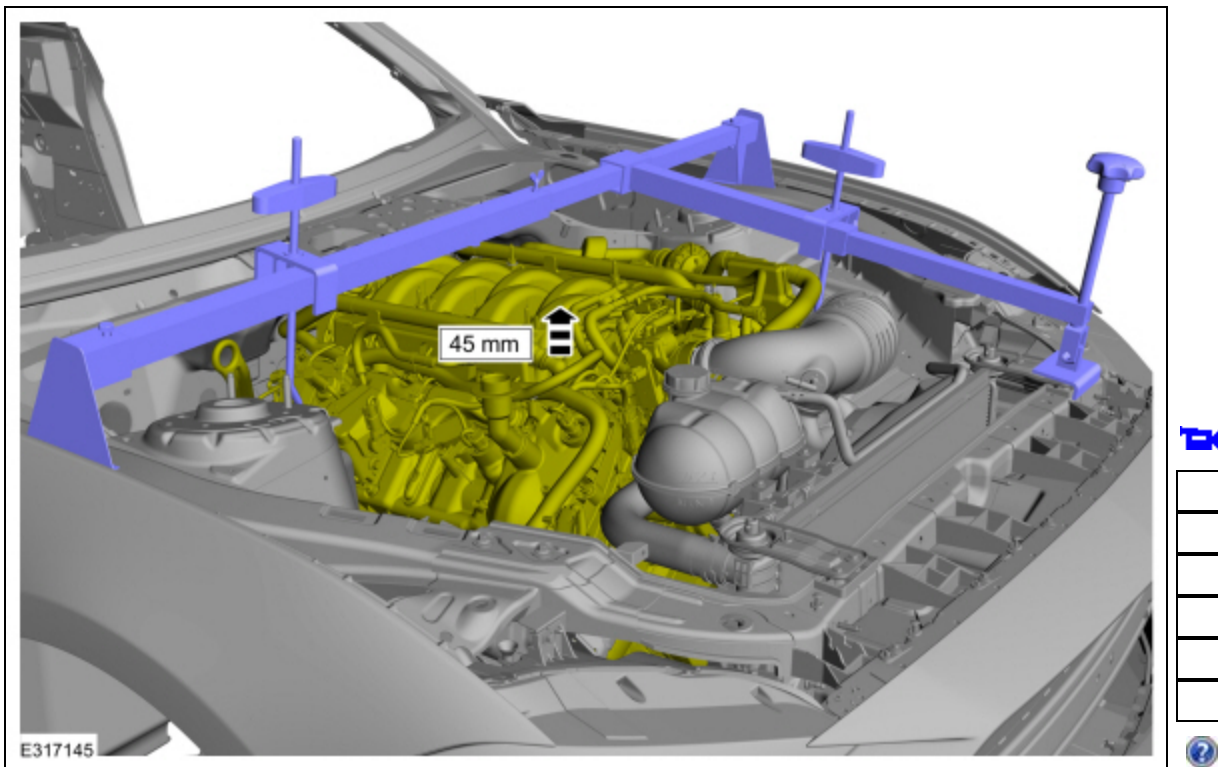
Using the special tools, support the engine.

Install Special Service Tool: [303-050 \(T70P-6000\) Lifting Bracket, Engine.](#) , [303-F072 Support Bar, Engine.](#) , [303-290A-03A Adapter For 303-290A \(Support Leg\).](#) , [303-290-01 Adapter for 303-290A.](#) , [303-290B Support Bar, Engine.](#)



15. **NOTE:** Carefully lift the engine from the normal position.

Lift the engine upward to 45mm.



LHD RWD

16. Detach the steering column lower shaft from the coupling.

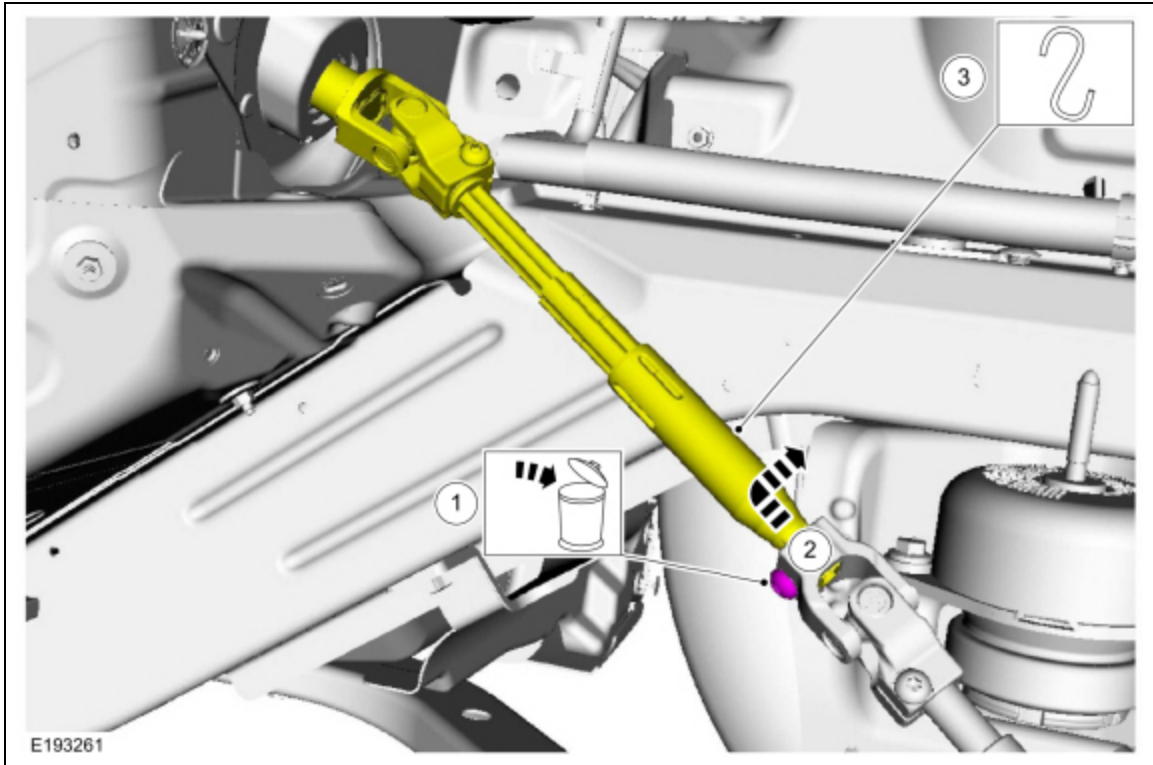
1. **⚠ WARNING: DO NOT hammer, pry or force steering column and column shafts during installation or removal. Failure to follow this instruction may cause damage to steering components that could lead to loss of steering control during vehicle operation and could result in serious personal injury or death.**

⚠ WARNING: Do not reuse steering column shaft bolts. This may result in fastener failure and steering column shaft detachment or loss of steering control. Failure to follow this instruction may result in serious injury to vehicle occupant(s).

Remove and discard the bolt.

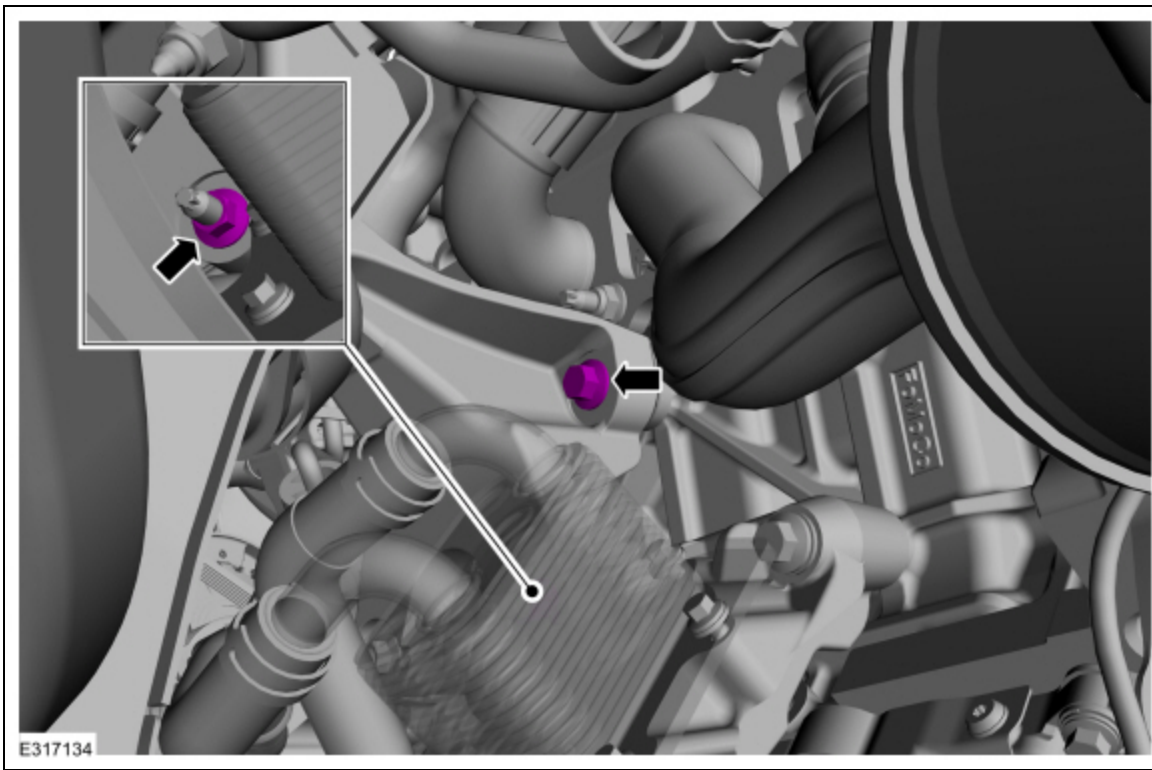
Torque: 22 lb.ft (30 Nm)

2. Pull apart the steering column lower shaft from the coupling.
3. Secure the lower shaft to the frame rail.
 - After reassembly, inspect the steering column lower shaft.
Refer to: [Steering Column Collapsed Check](#) (211-04 Steering Column, General Procedures).

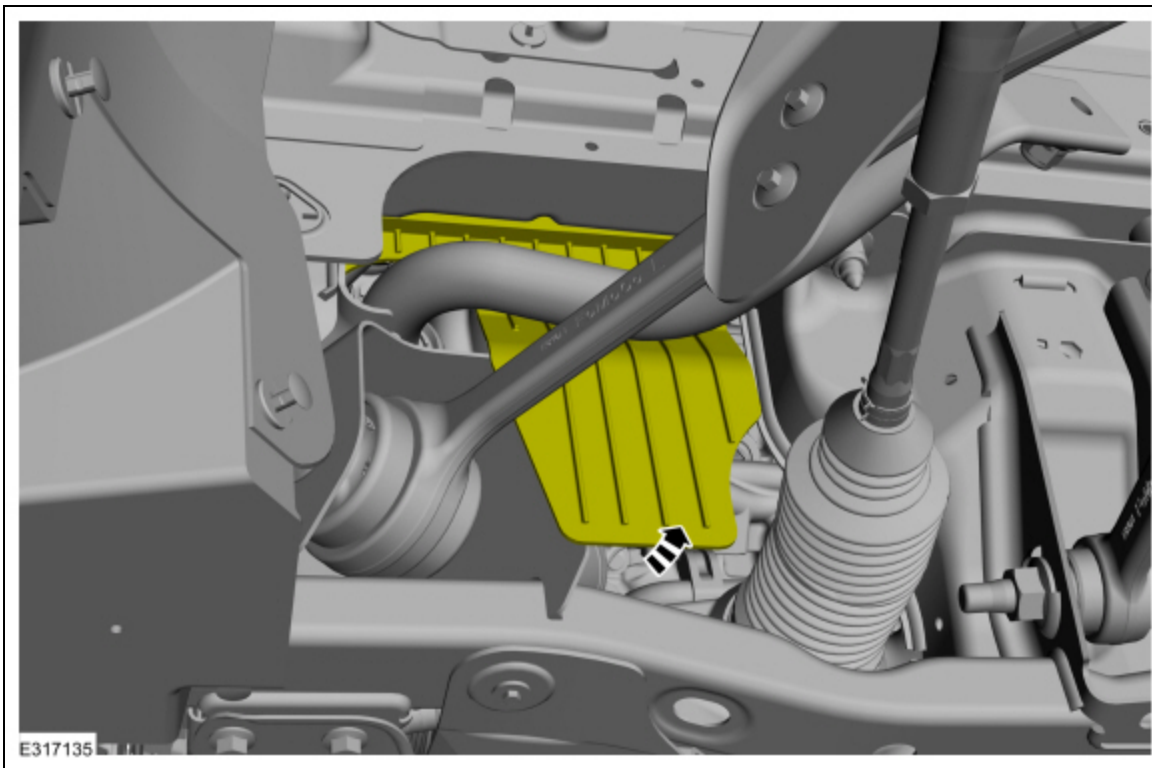


All vehicles

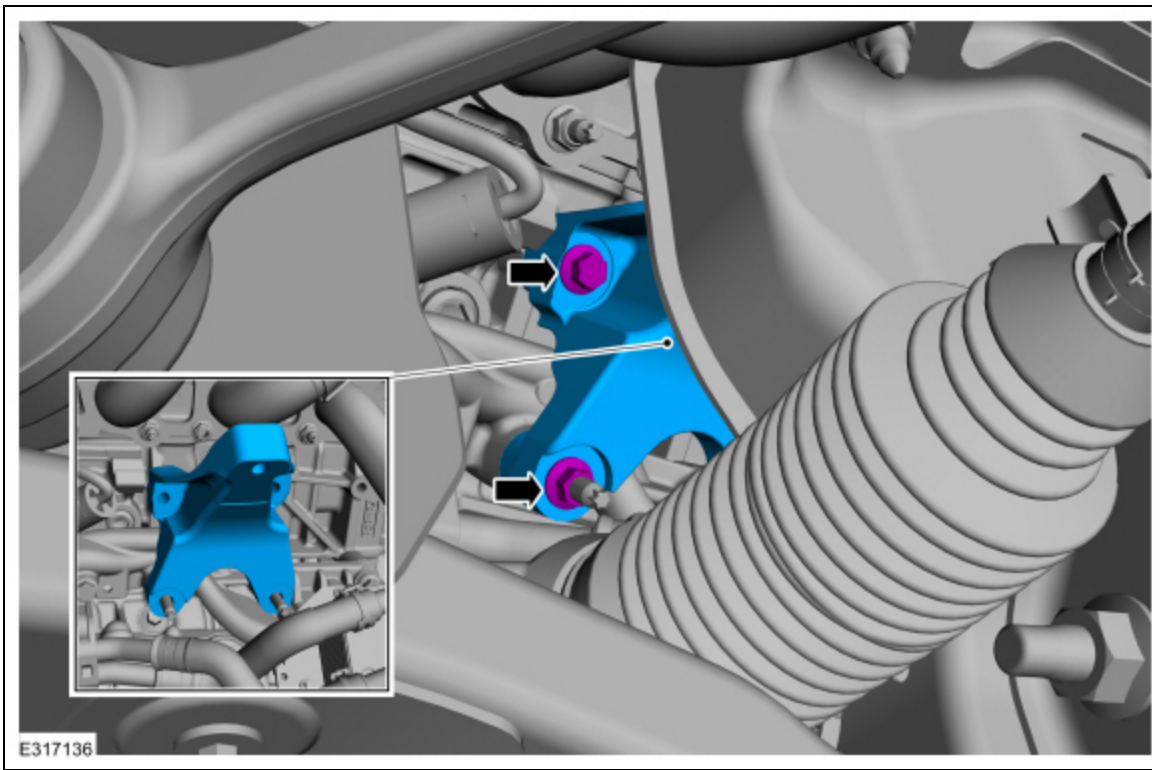
17. Remove the muffler inlet pipe.
Refer to: Muffler Inlet Pipe (309-00) .
18. Remove the bolt and the nut.
Torque: 46 lb.ft (63 Nm)



19. Position aside the air deflector.

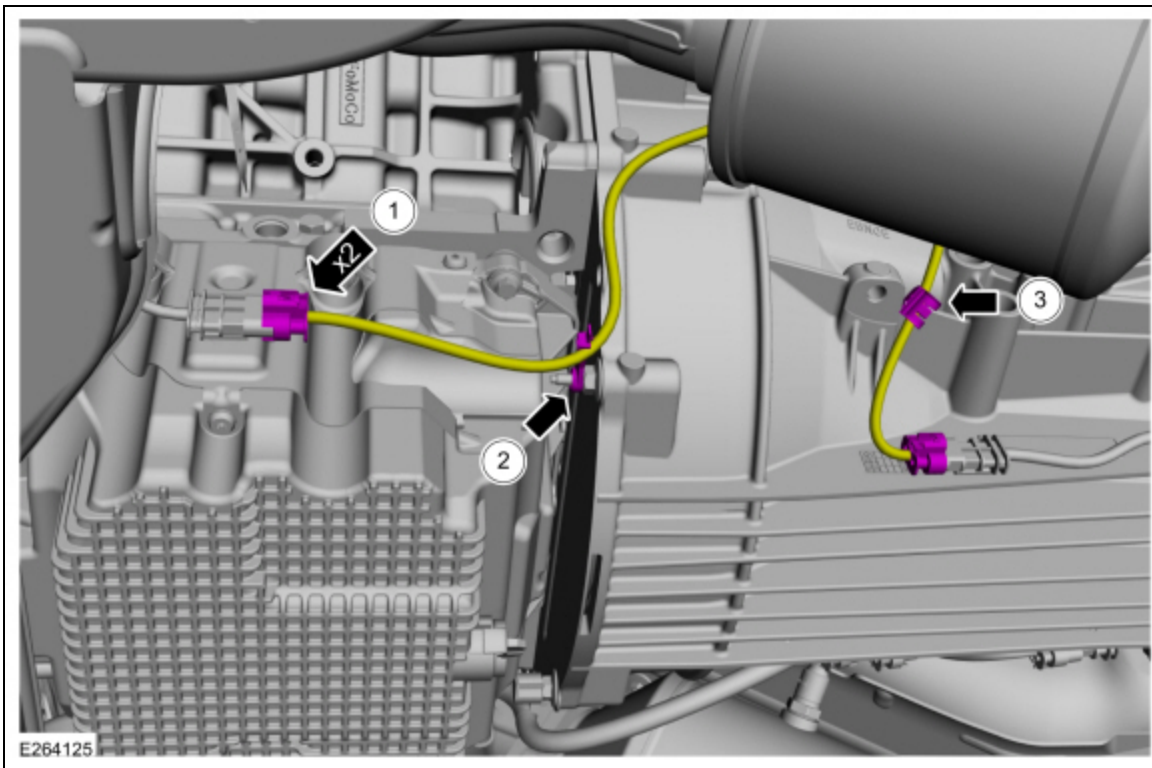


20. Remove the bolt, nut and the engine mount bracket.
Torque: 46 lb.ft (63 Nm)

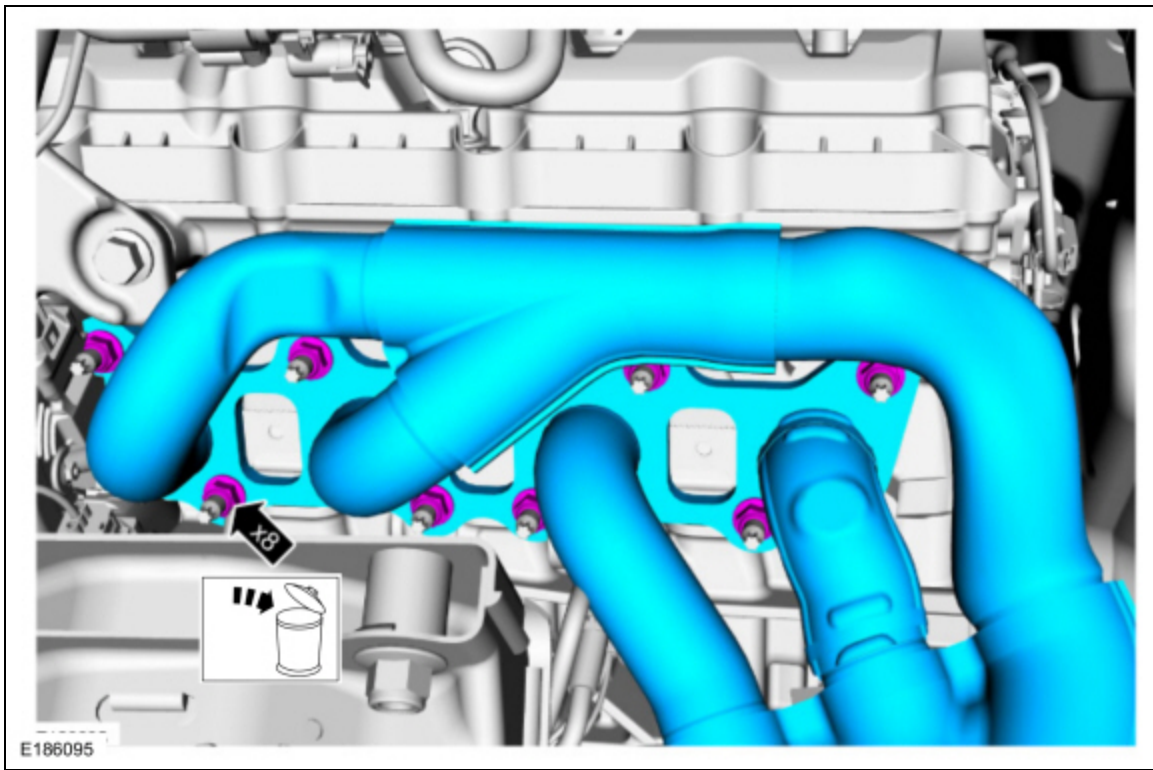


21. **NOTE:** Manual transmission shown, automatic transmission similar.

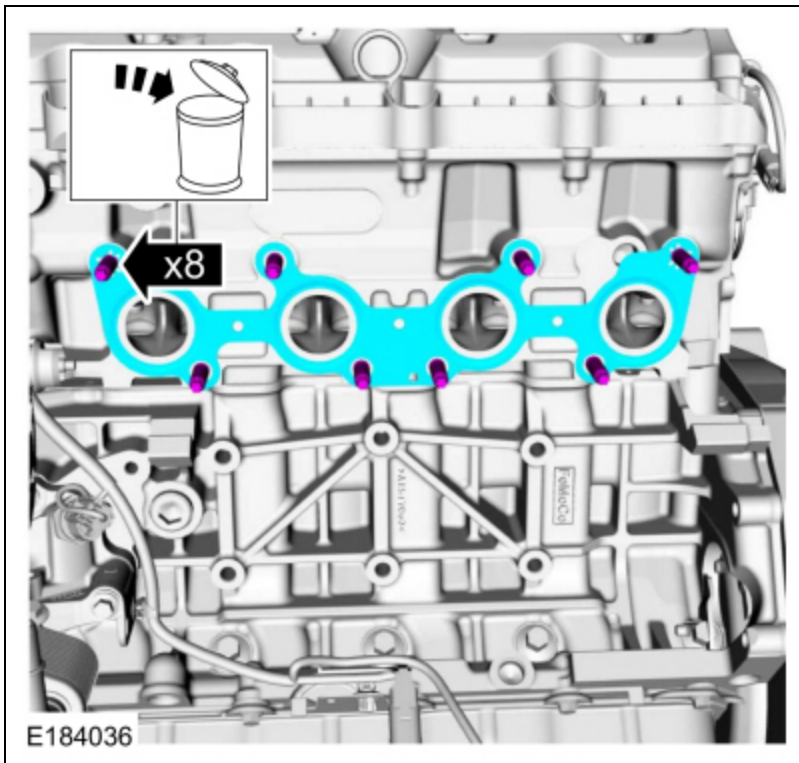
1. Disconnect the HO2S and catalyst monitor sensor electrical connectors.
2. Detach the wiring harness retainer.
3. Detach the wiring harness retainer.



22. Remove and discard the nuts, remove the LH exhaust manifold.

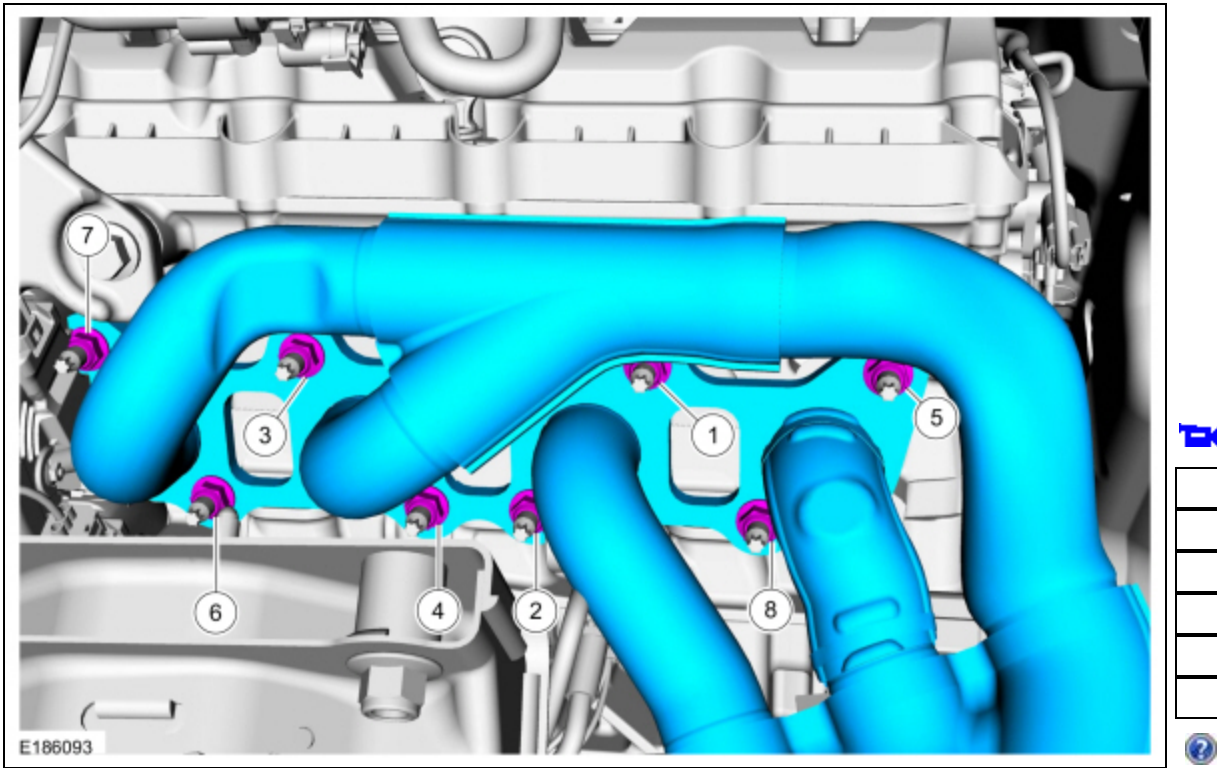


23. Remove and discard the gasket and studs.
Torque: 18 lb.ft (25 Nm)



Installation

1. To install, reverse the removal procedure.
2. Clean all exhaust connections before reassembly.
3.
 1. Position the exhaust manifold onto the engine and finger-tight the nuts.
 2. Tighten the nuts in the sequence shown.
Torque:
 Stage 1: 18 lb.ft (24 Nm)
 Stage 2: 24 lb.ft (32 Nm)



4. Check the exhaust system for leaks.

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