

Intake Manifold

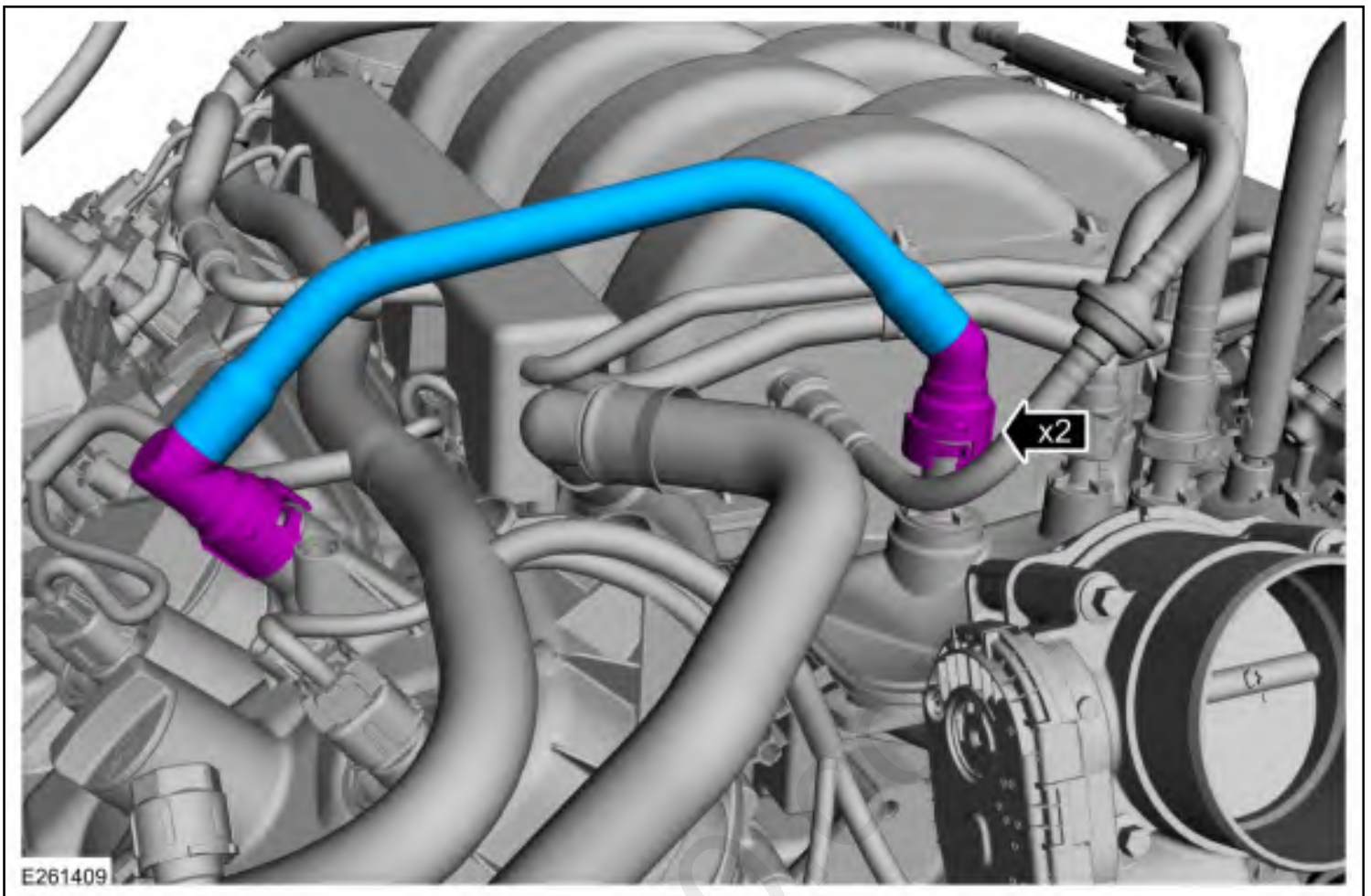
Base Part Number: Base Part Number: 9424

Removal

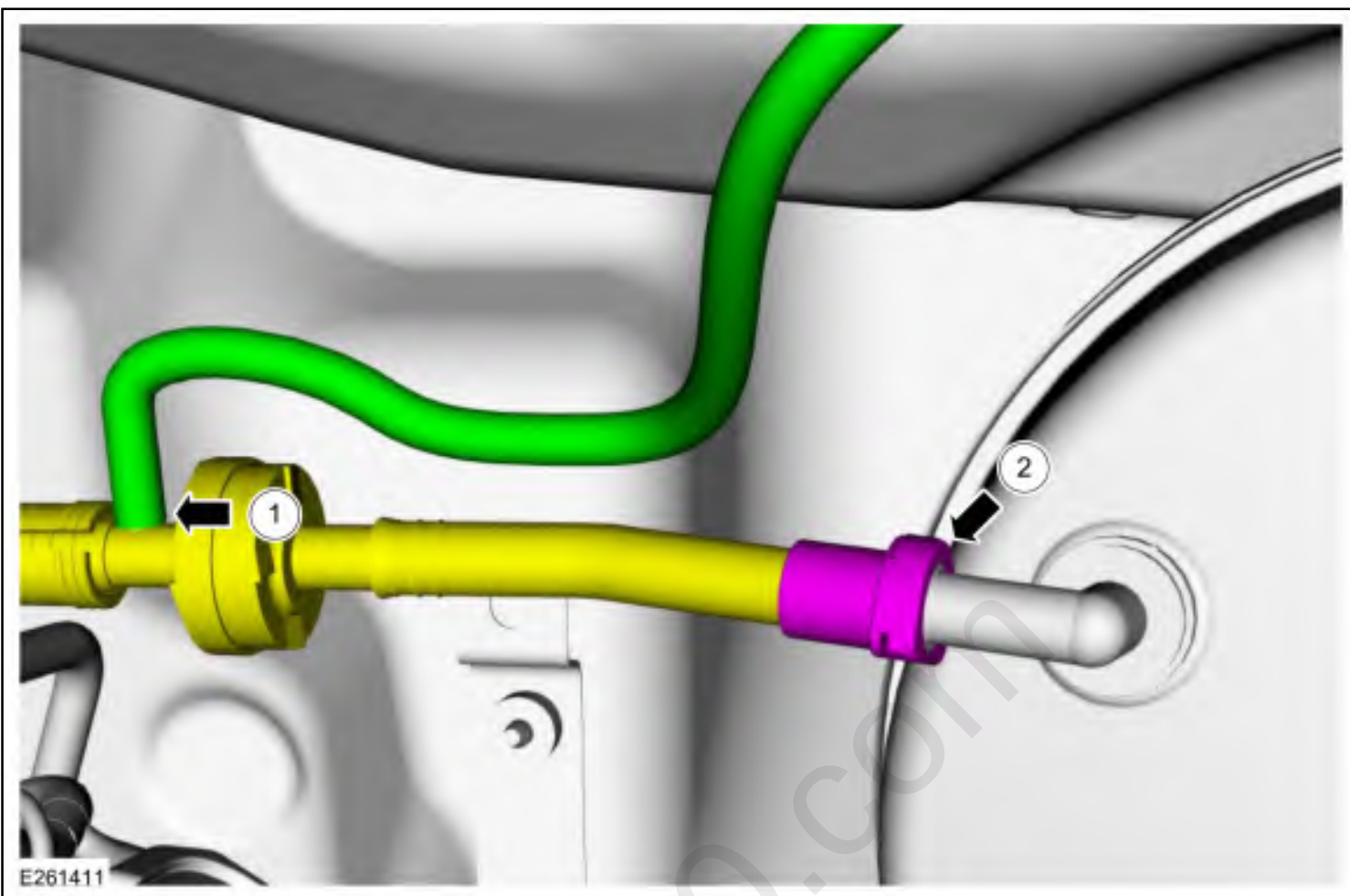
NOTICE: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces, that enters the oil passages, coolant passages or the oil pan, can cause engine failure.

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

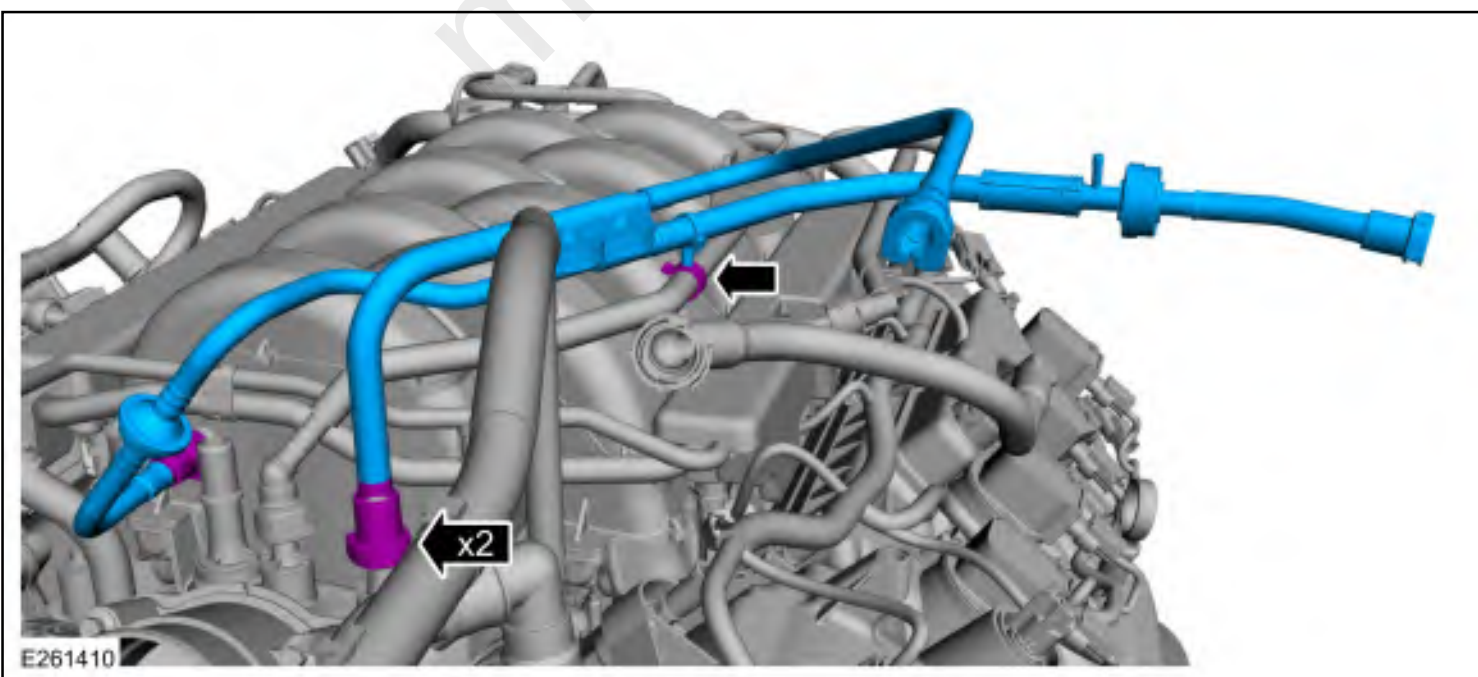
1. Release the fuel system pressure.
Refer to: [Fuel System Pressure Release](#) (310-00D Fuel System - General Information - 5.0L 32V Ti-VCT, General Procedures).
2. Disconnect the battery ground cable.
Refer to: Battery Disconnect and Connect (414-01 Battery, Mounting and Cables) .
3. Remove the air cleaner outlet pipe.
Refer to: [Air Cleaner Outlet Pipe](#) (303-12D Intake Air Distribution and Filtering - 5.0L 32V Ti-VCT, Removal and Installation).
4. Disconnect the quick release couplings and remove the PCV tube.
Refer to: [Quick Release Coupling](#) (310-00D Fuel System - General Information - 5.0L 32V Ti-VCT, General Procedures).



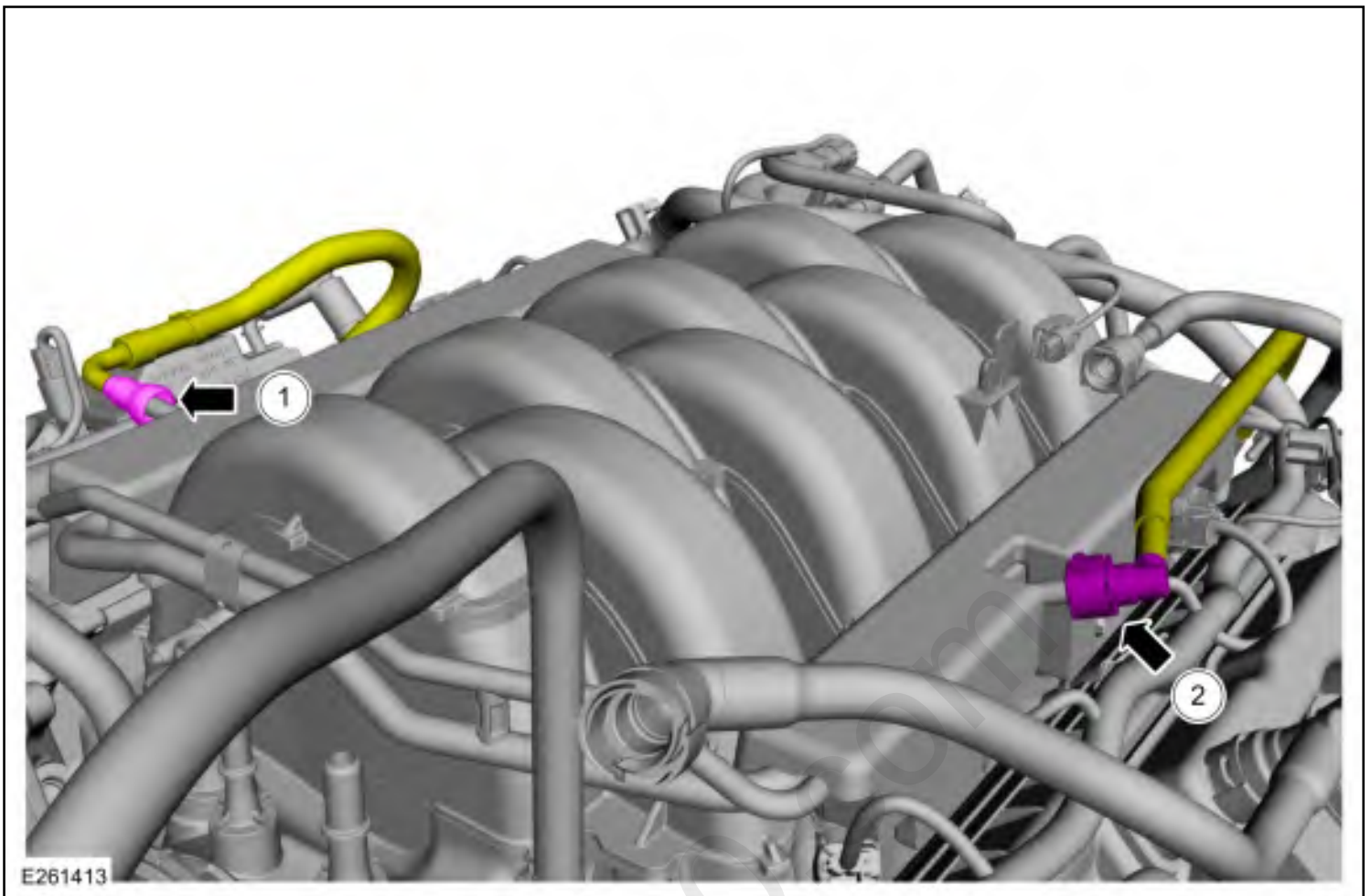
1. If equipped, disconnect the vacuum hose.
2. Disconnect the brake booster vacuum supply tube quick release coupling.
Refer to: [Quick Release Coupling](#) (310-00D Fuel System - General Information - 5.0L 32V Ti-VCT, General Procedures).



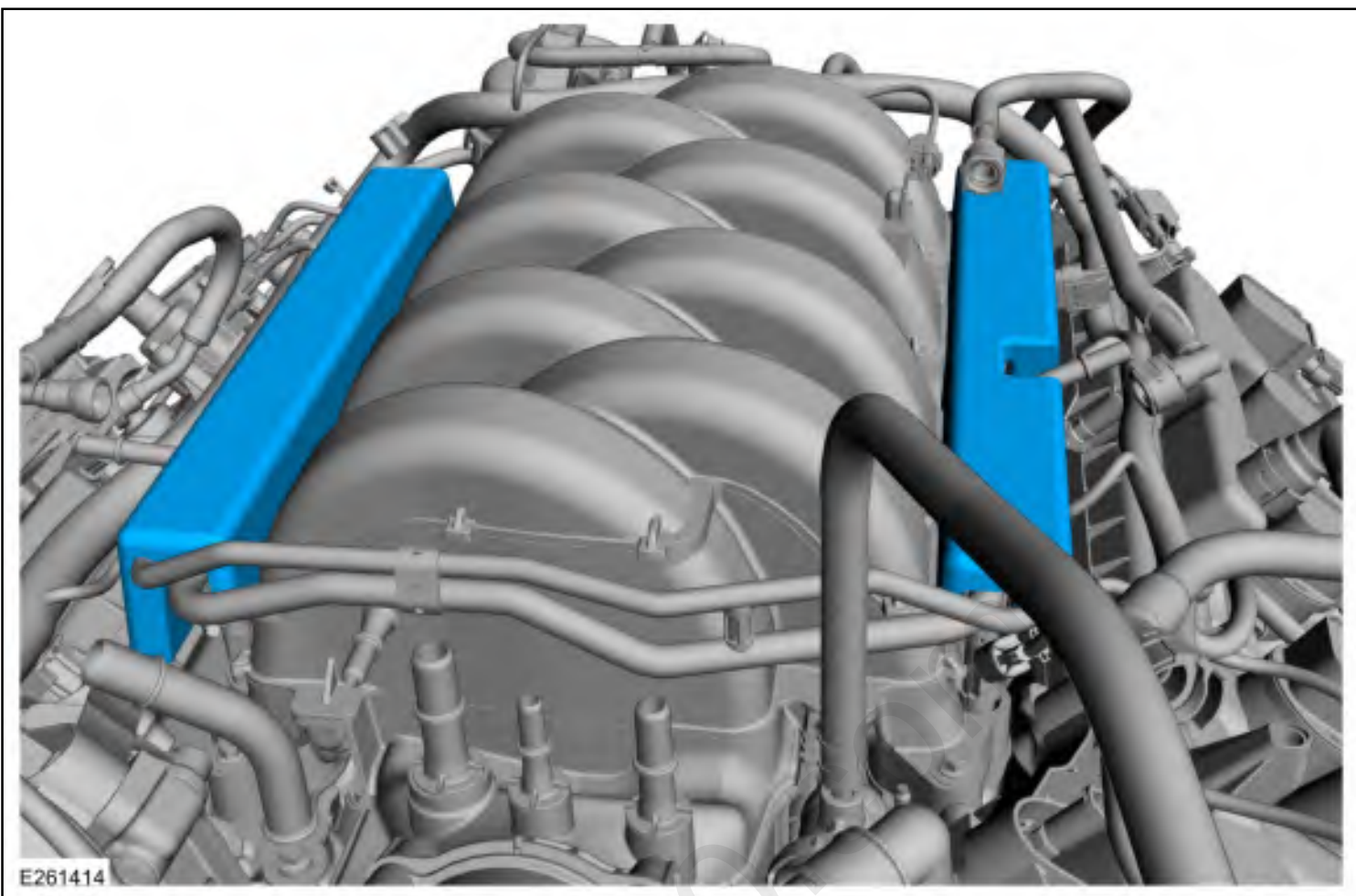
1. Disconnect the vacuum tube quick release couplings.
Refer to: [Quick Release Coupling](#) (310-00D Fuel System - General Information - 5.0L 32V Ti-VCT, General Procedures).
2. Detach the vacuum tube retainer and remove the vacuum tube assembly.



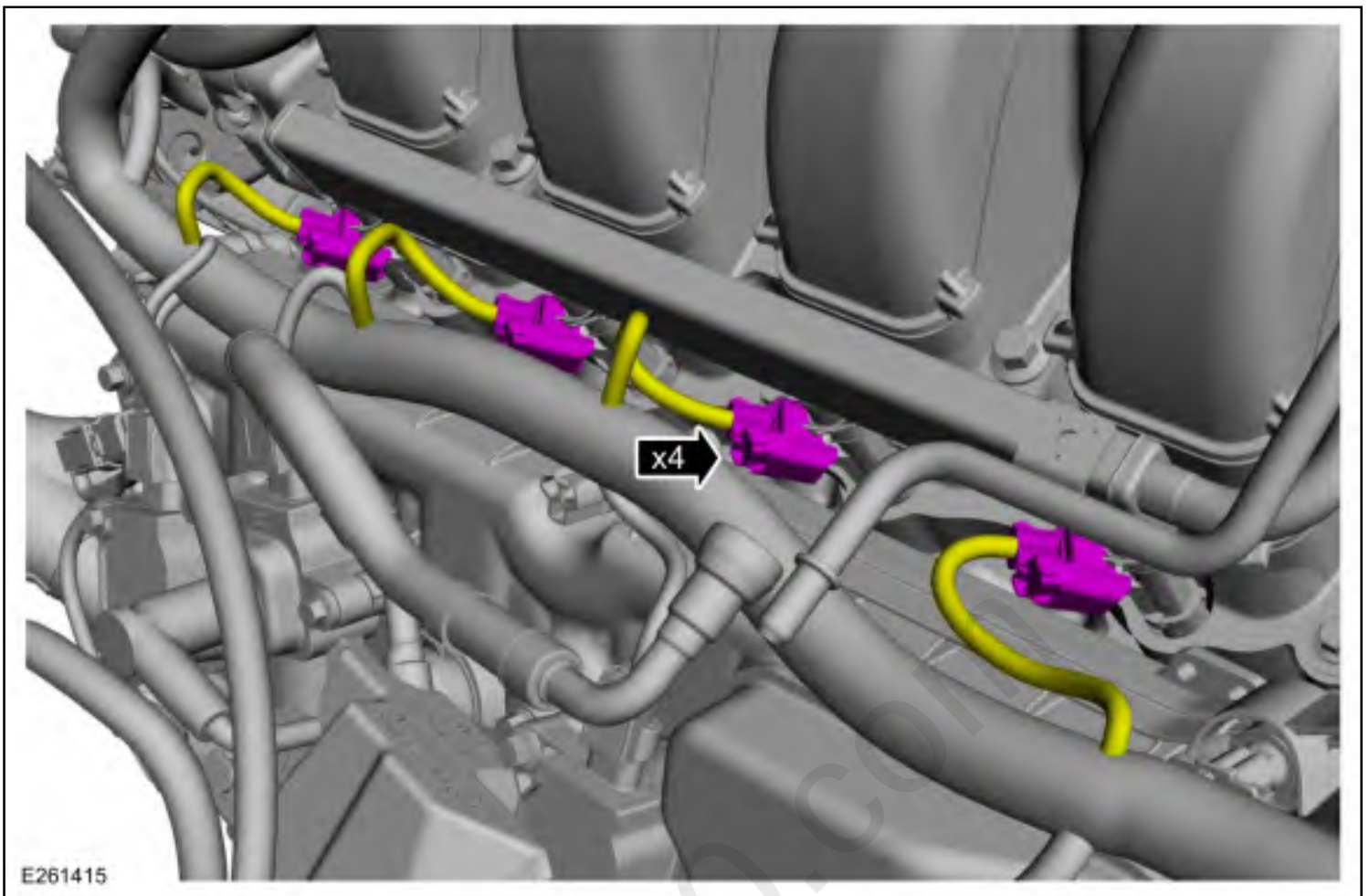
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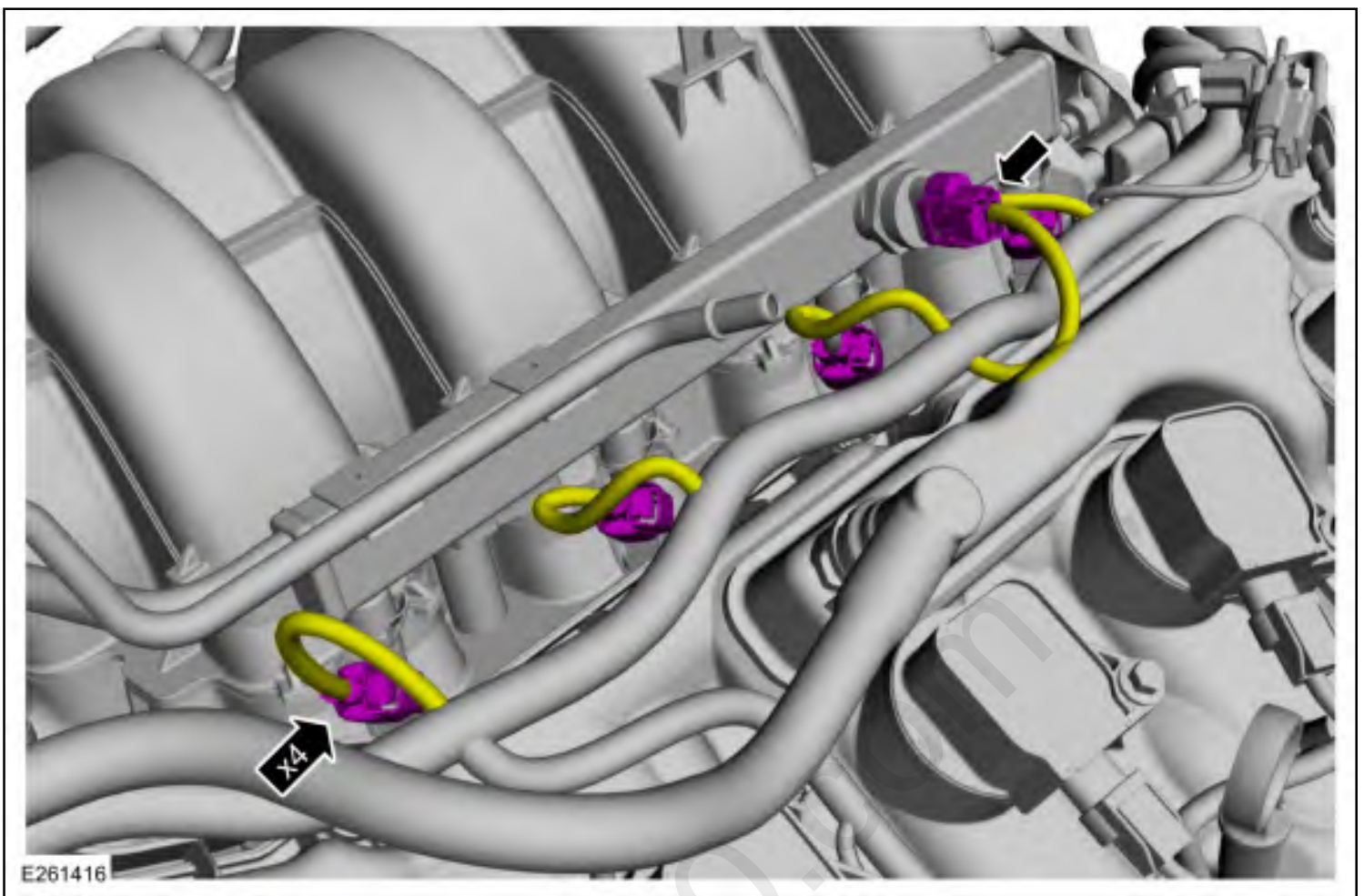
9. Remove the fuel rail insulators.



10. Disconnect the RH fuel injector electrical connectors.

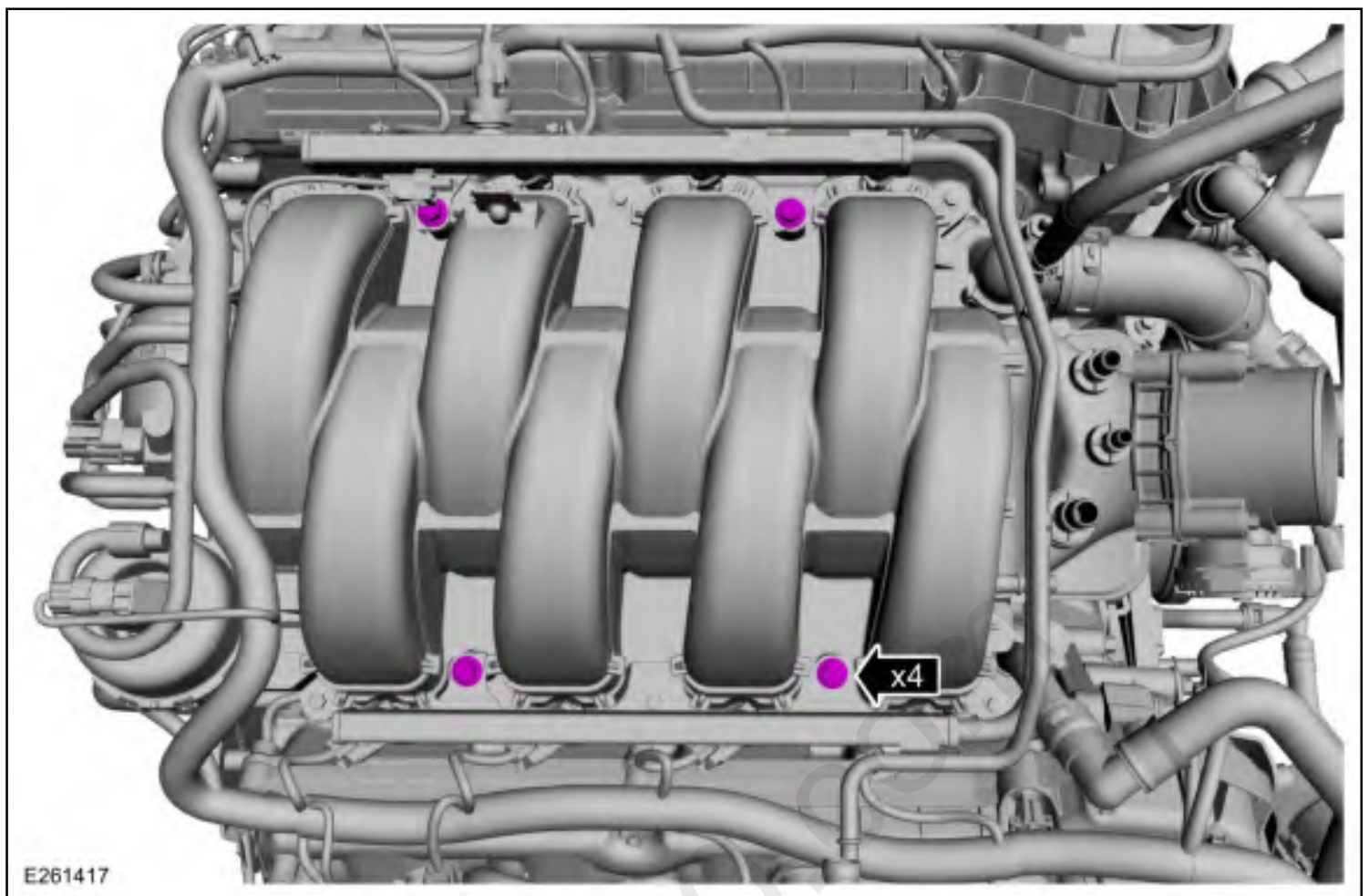


11. Disconnect the LH fuel injector electrical connectors and the fuel sensor electrical connector.

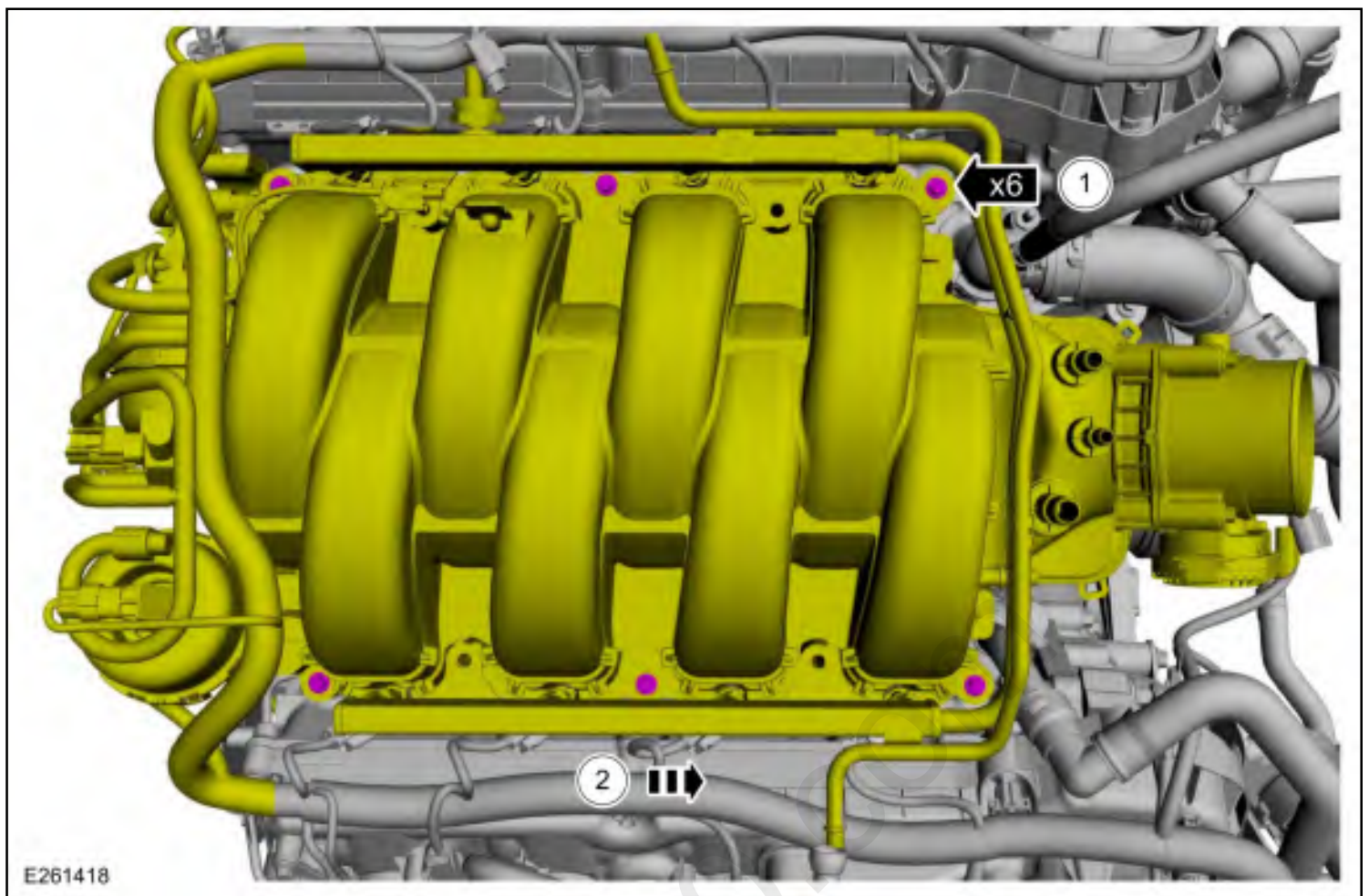


12. **NOTE:** *It is not necessary to remove the fuel rail from the intake manifold assembly.*

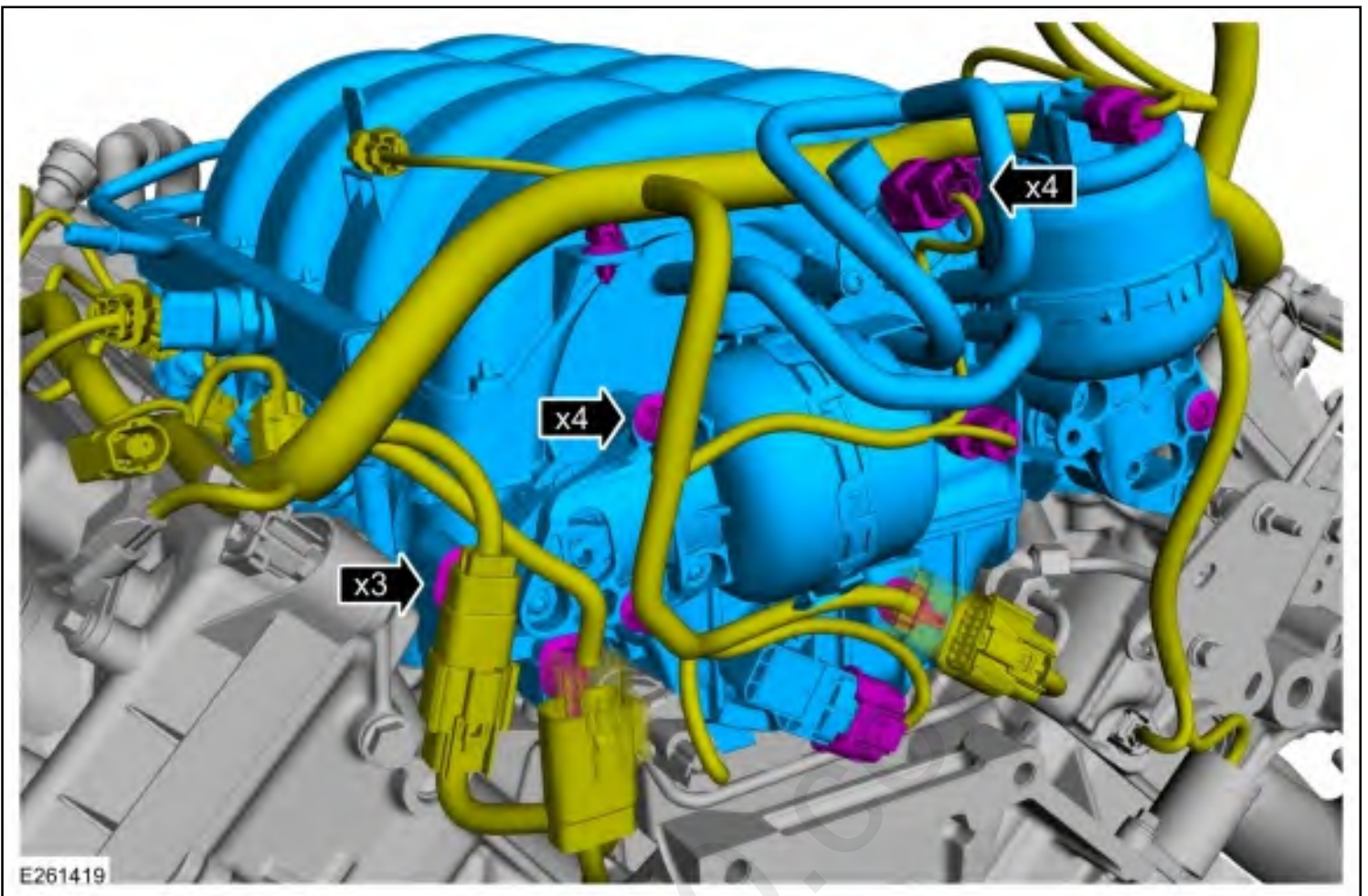
Remove the fuel rail bolts.



1. Loosen the intake manifold bolts.
2. Position the manifold up and towards the front of the engine to access the rear of the manifold.



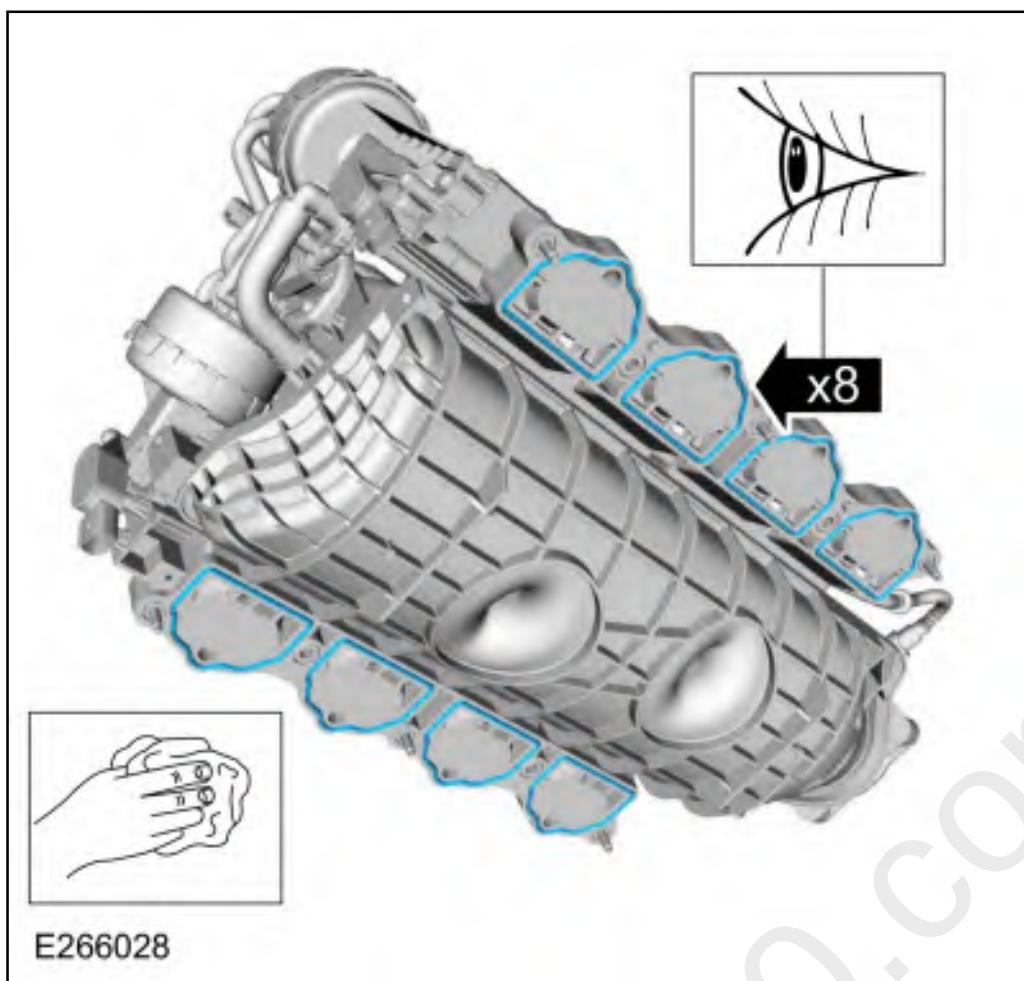
- Disconnect the wiring harness electrical connectors.
- Detach the wiring harness retainers
- Remove the intake manifold.



- **NOTE:** Visually inspect the manifold gaskets for nicks, cuts and abrasions. If these conditions are NOT present, the gaskets may be re-used.

Remove and inspect the gaskets.

- Clean and inspect all sealing surfaces.



Installation

NOTICE: If the engine is repaired or replaced because of upper engine failure, typically including valve or piston damage, check the intake manifold for metal debris. If metal debris is found, install a new intake manifold. Failure to follow these instructions can result in engine damage.

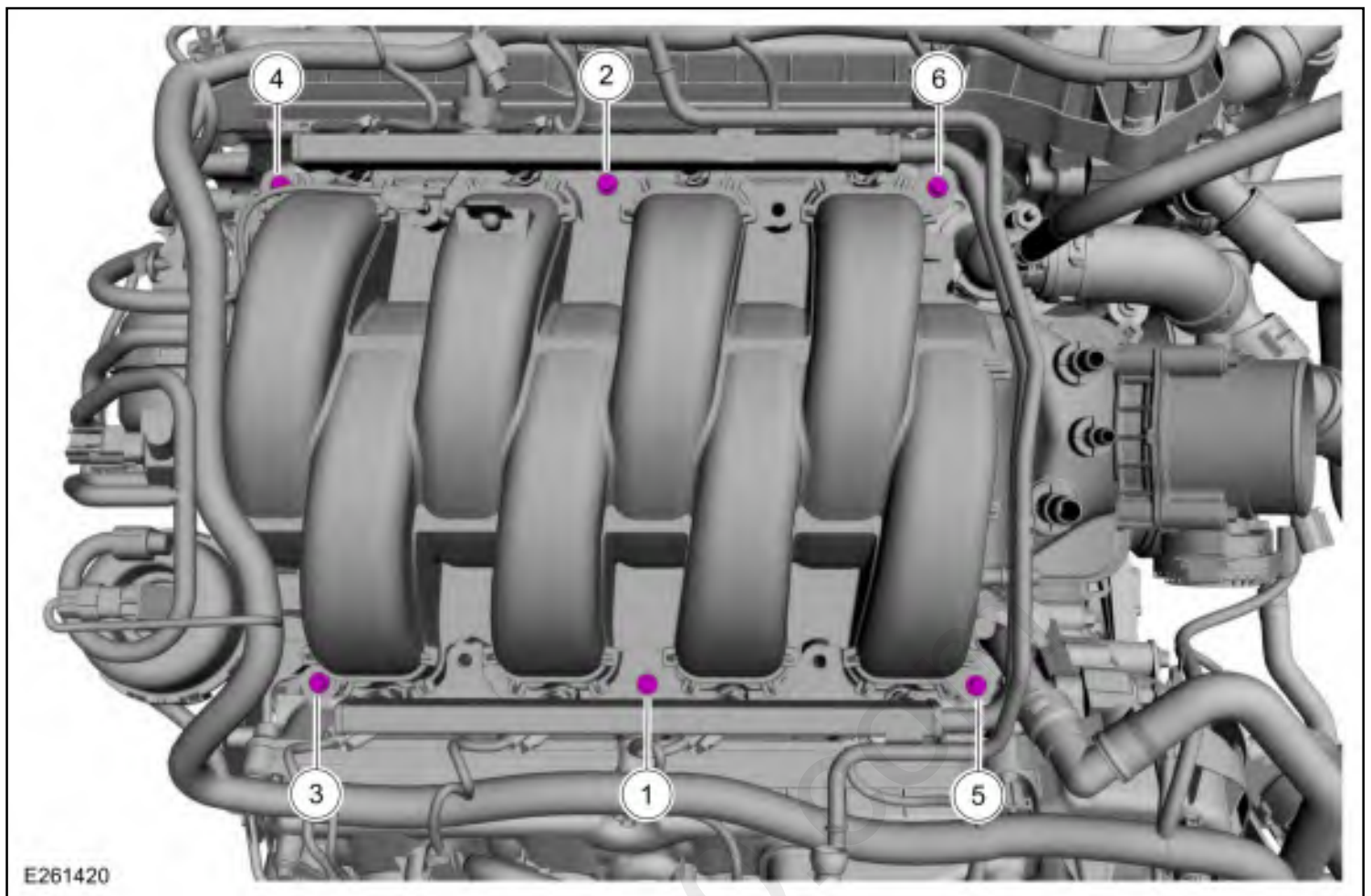
NOTE: To install, reverse the removal procedure.

1. Tighten the intake manifold bolts.

Torque:

Stage 1: 102 lb.in (11.5 Nm)

Stage 2: 35°

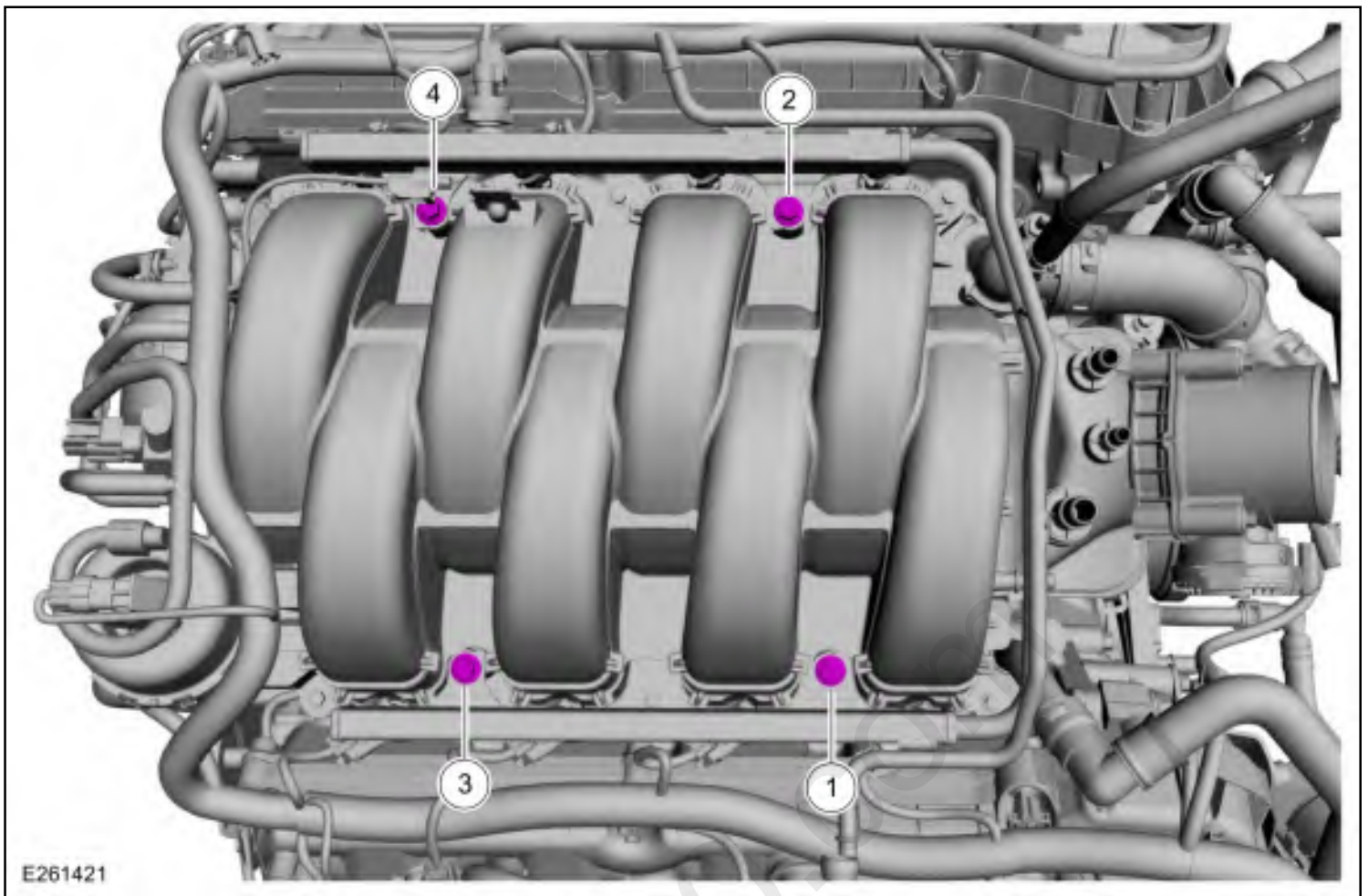


2. Install the fuel rail bolts.

Torque:

Stage 1: 89 lb.in (10 Nm)

Stage 2: 90°



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