

303-01C Engine - 3.5L EcoBoost (272kW/370PS)
Removal and Installation

2018 F-150

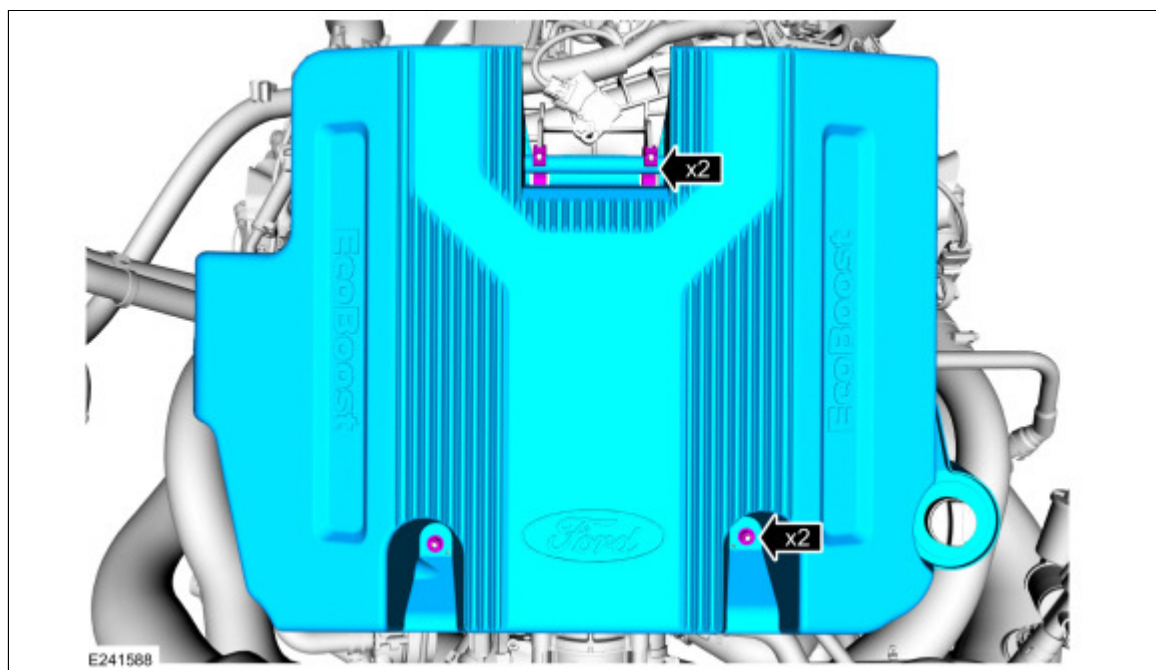
Procedure revision date: 08/30/2016

Intake Manifold



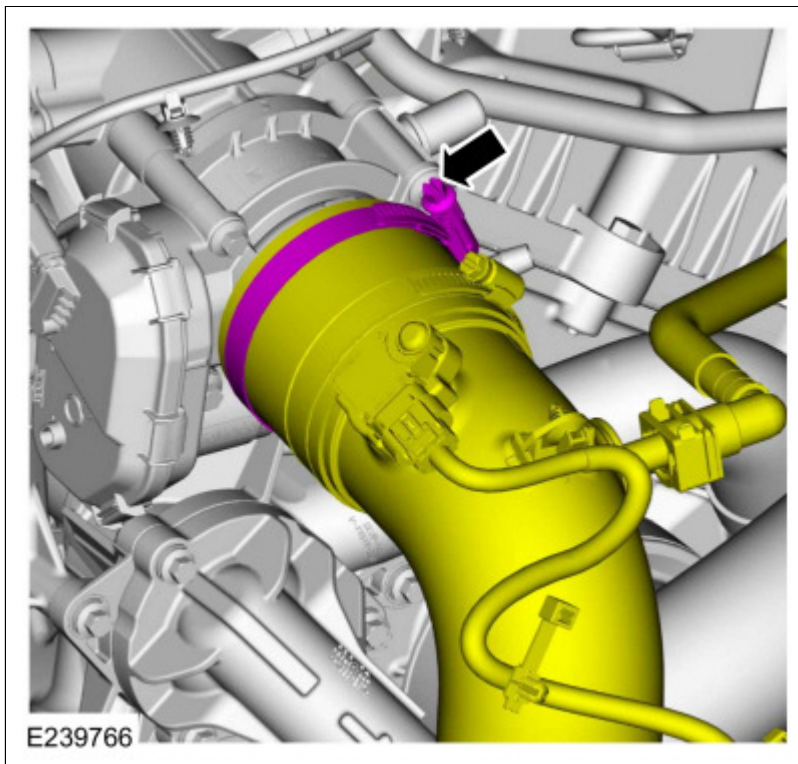
Removal

1. Disconnect the battery ground cable.
Refer to: [Battery Disconnect and Connect](#) (414-01 Battery, Mounting and Cables, General Procedures).
2. Remove the engine appearance cover retainers, release the engine appearance cover from the rear retainers and then remove the engine appearance cover.

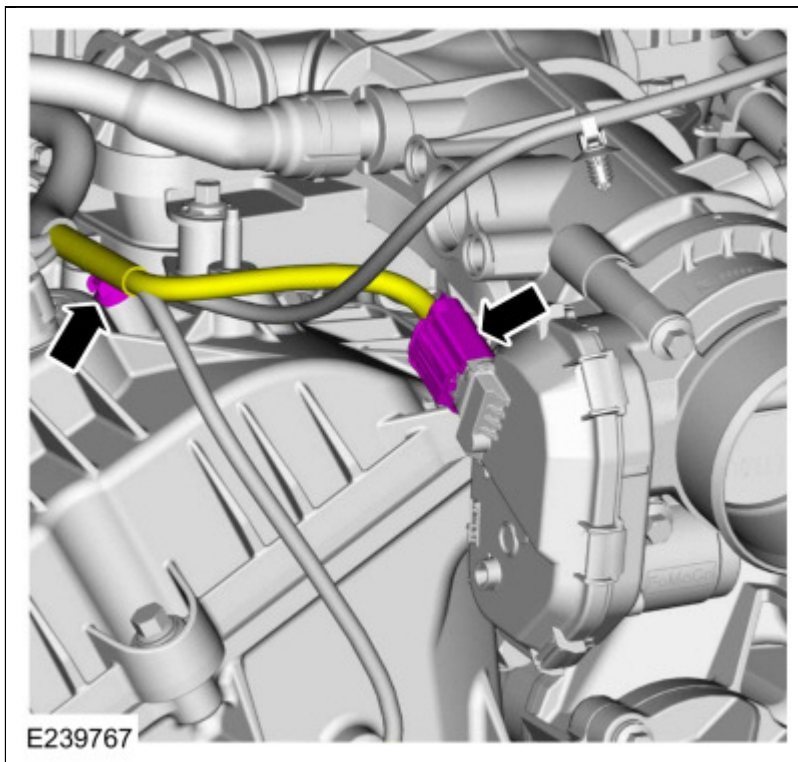


3. Remove the air cleaner outlet pipe.
Refer to: [Air Cleaner Outlet Pipe](#) (303-12C Intake Air Distribution and Filtering - 3.5L EcoBoost (272kW/370PS), Removal and Installation).
4. Loosen the clamp and position the throttle body intake pipe aside.

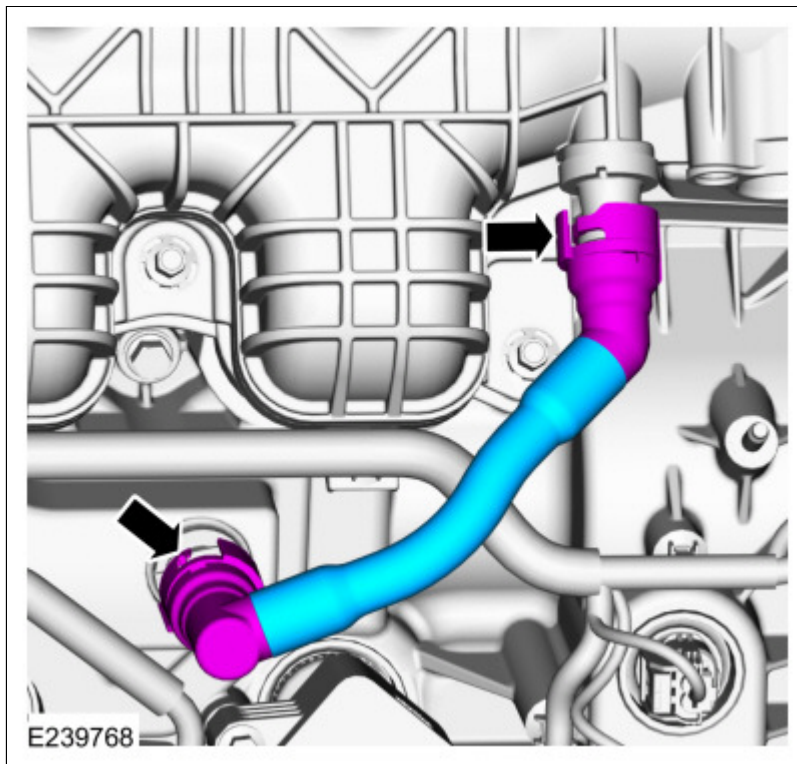




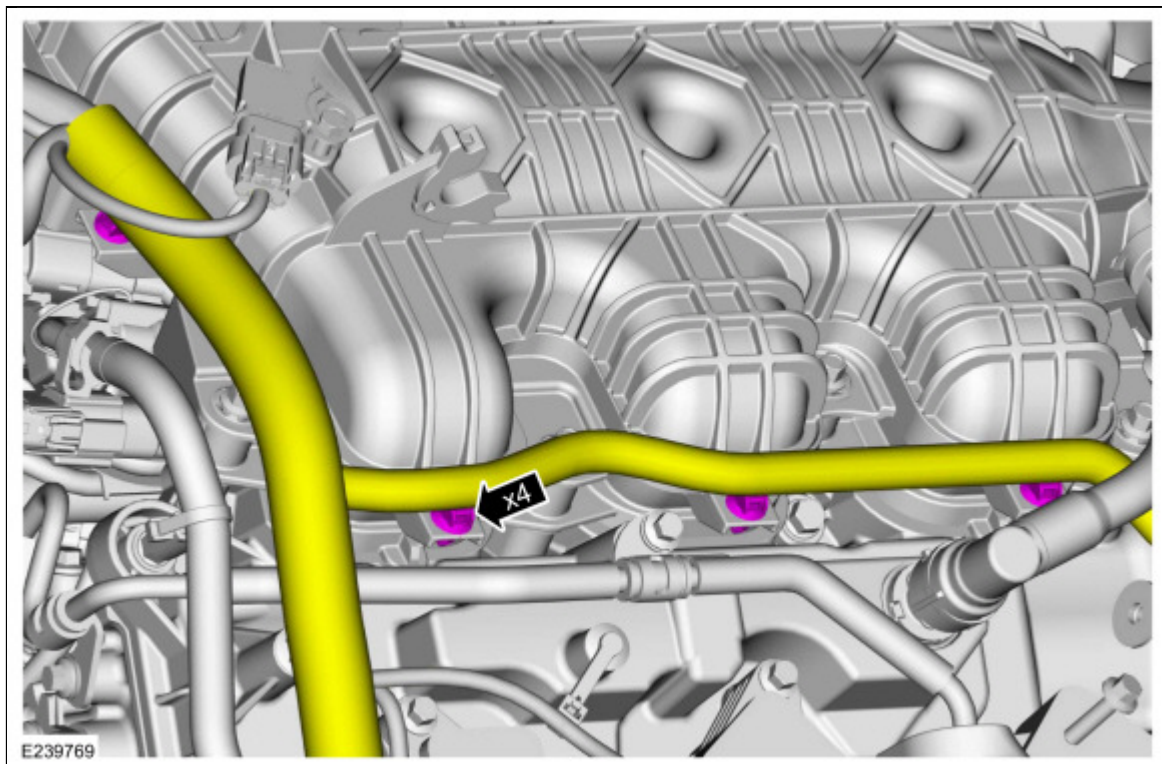
5. Disconnect the throttle body electrical connector and wiring harness retainer.



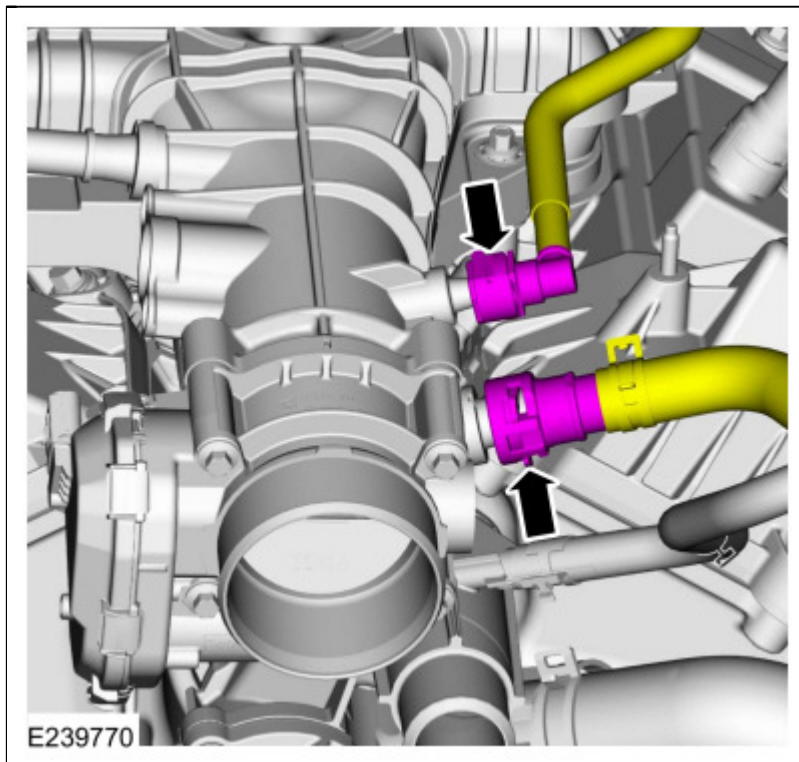
6. Remove the PCV tube.
 Refer to: Quick Release Coupling (310-00 Fuel System - General Information - 3.5L EcoBoost (272kW/370PS)) .



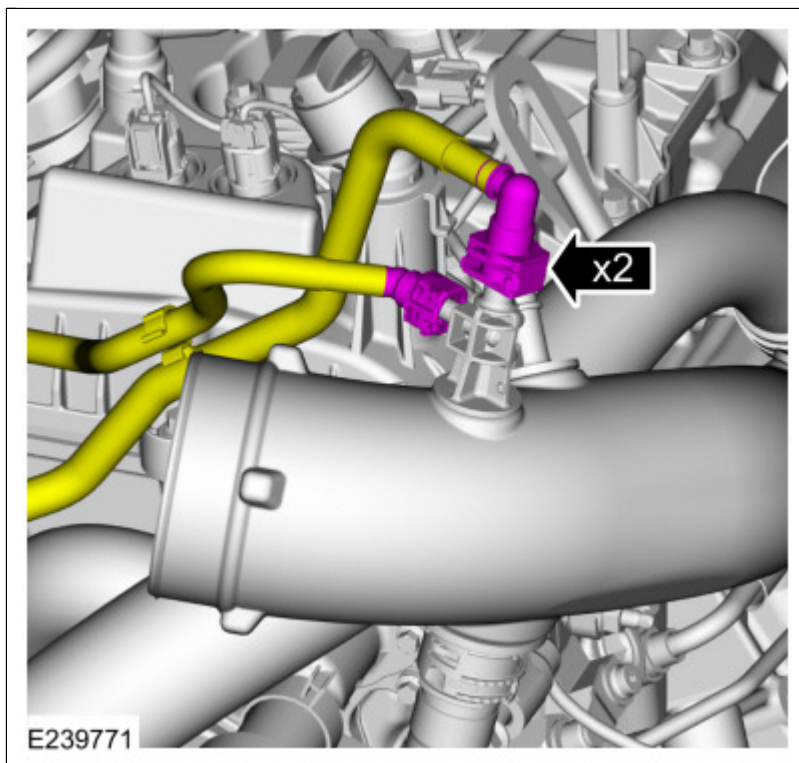
7. Disconnect the wire harness retainers from the intake manifold.



- 8.
- Disconnect the fuel vapor tube to the intake manifold.
Refer to: Quick Release Coupling (310-00 Fuel System - General Information - 3.5L EcoBoost (272kW/370PS)) .
 - Disconnect the vacuum hose.

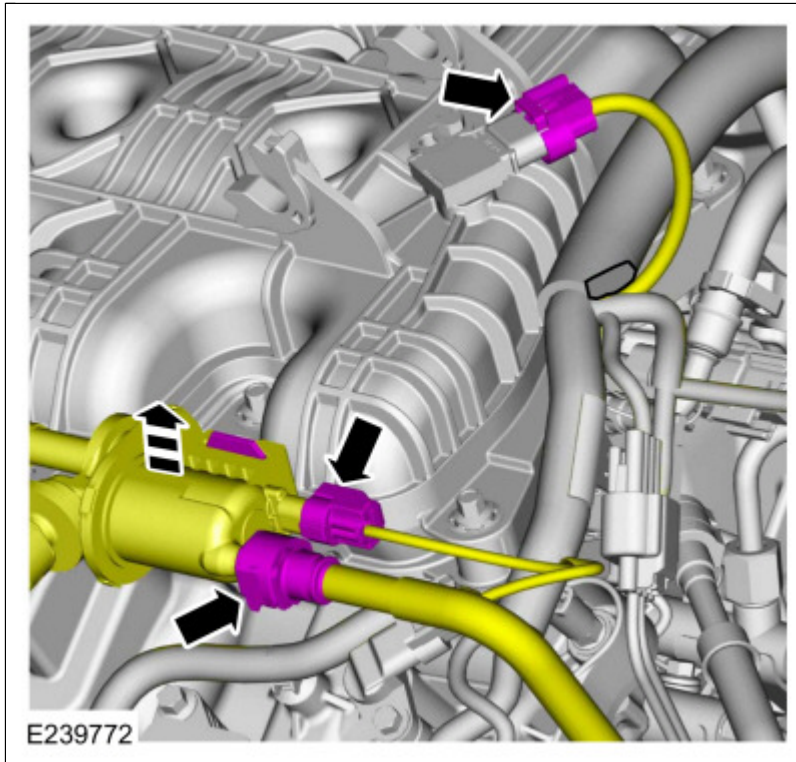


9. Disconnect the hose couplings at turbocharger inlet tube.
 Refer to: Quick Release Coupling (310-00 Fuel System - General Information - 3.5L EcoBoost (272kW/370PS)) .

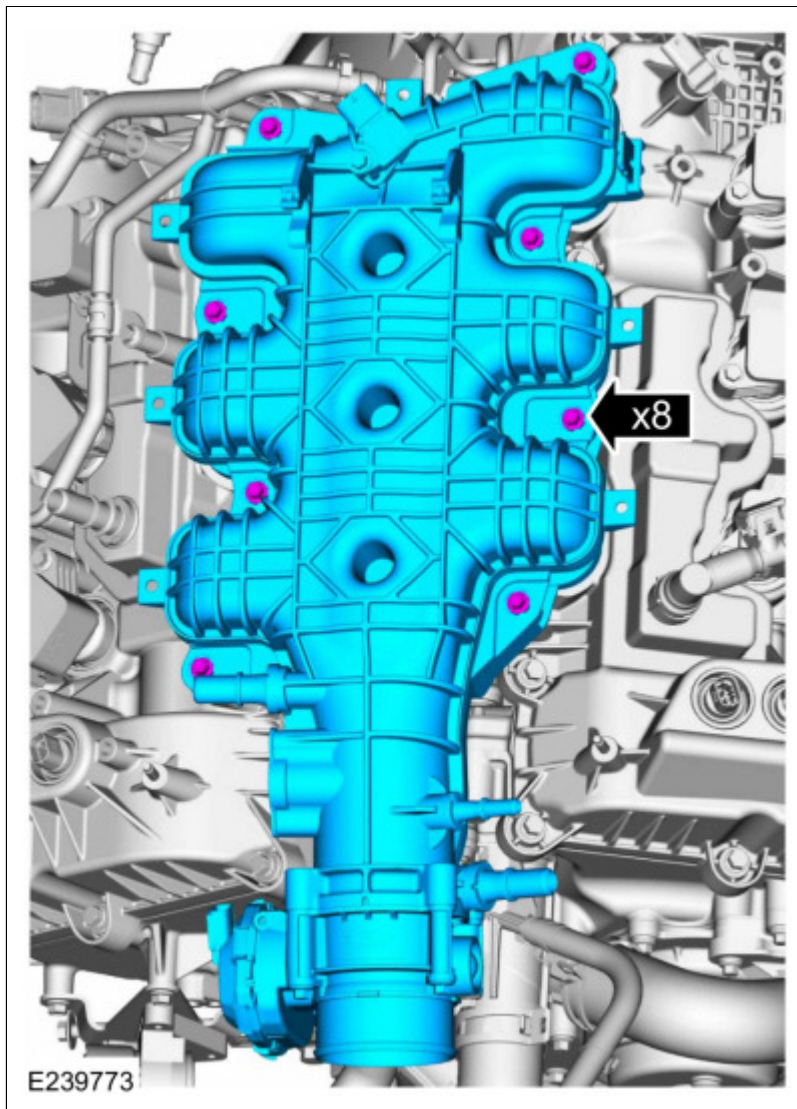


10. • Disconnect the MAPT electrical connector.

- Disconnect the EVAP purge solenoid electrical connector and quick connect coupling.
Refer to: Quick Release Coupling (310-00 Fuel System - General Information - 3.5L EcoBoost (272kW/370PS)) .
- Lift the EVAP purge valve off of the intake manifold mounting tab.



11. Remove the bolts and the intake manifold.

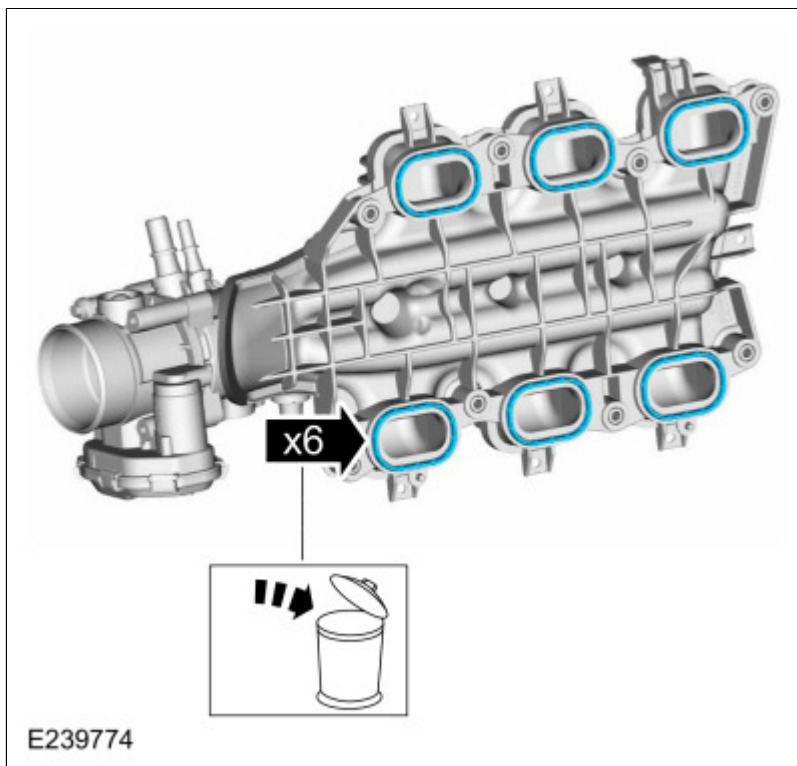


12.

- Remove and discard the intake manifold gaskets.
- Clean and inspect all of the sealing surfaces of the cylinder heads and the intake manifold.

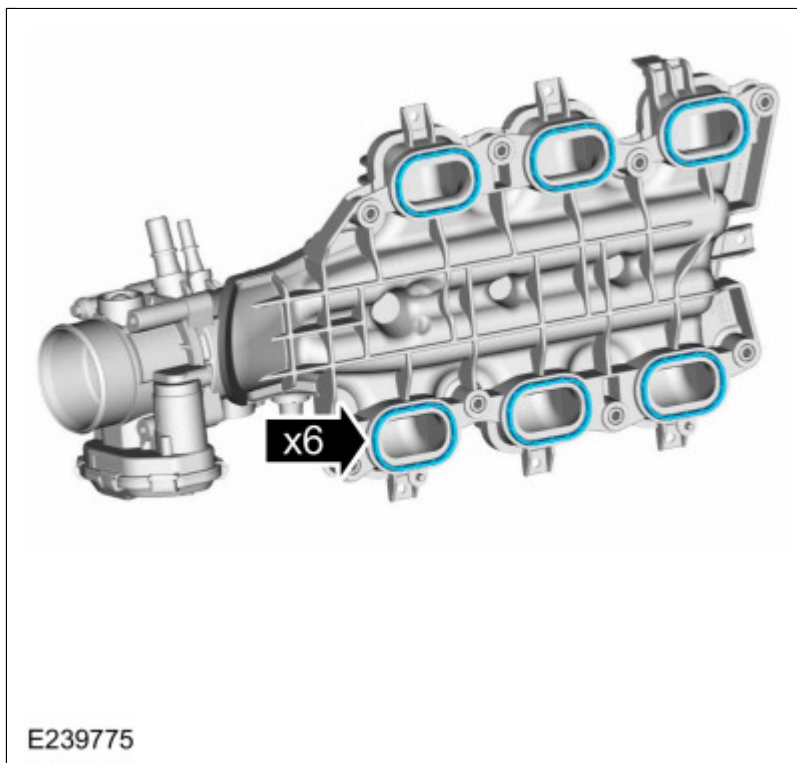






Installation

1. Install the new intake manifold gaskets.



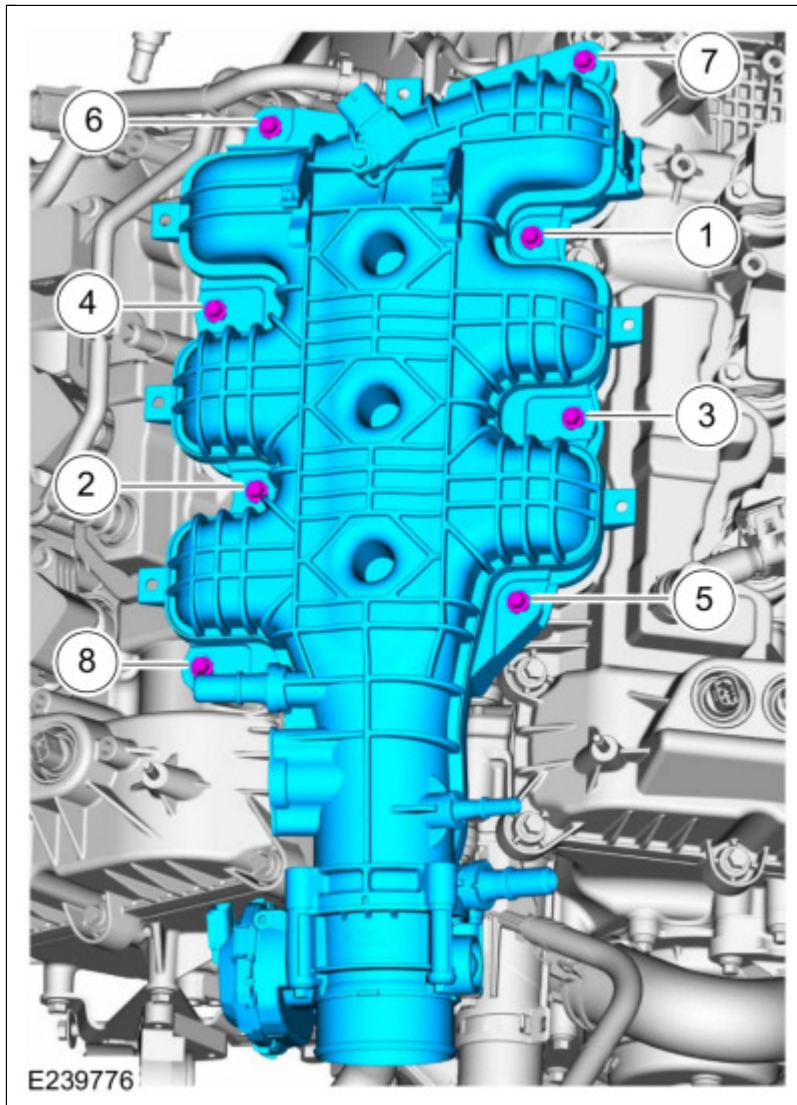
2. **NOTICE:** If the engine is repaired or replaced because of upper engine failure, typically including valve or piston damage, check the intake manifold for metal debris. If metal debris is found, install a new intake manifold. Failure to follow these instructions can result in engine damage.

Install the intake manifold and the bolts.

Torque:

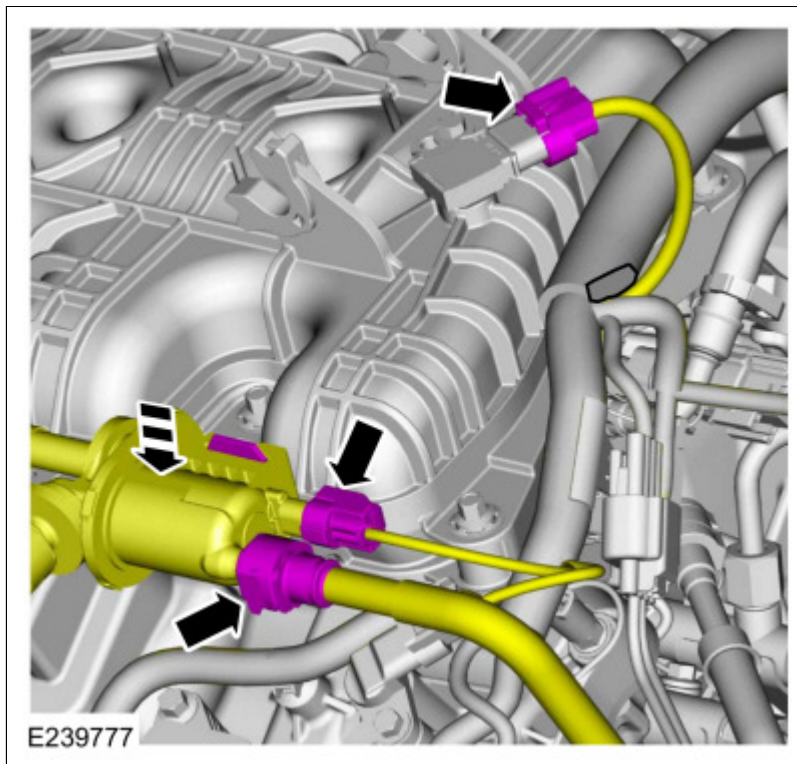
Stage 1: 89 lb.in (10 Nm)

Stage 2: 45°

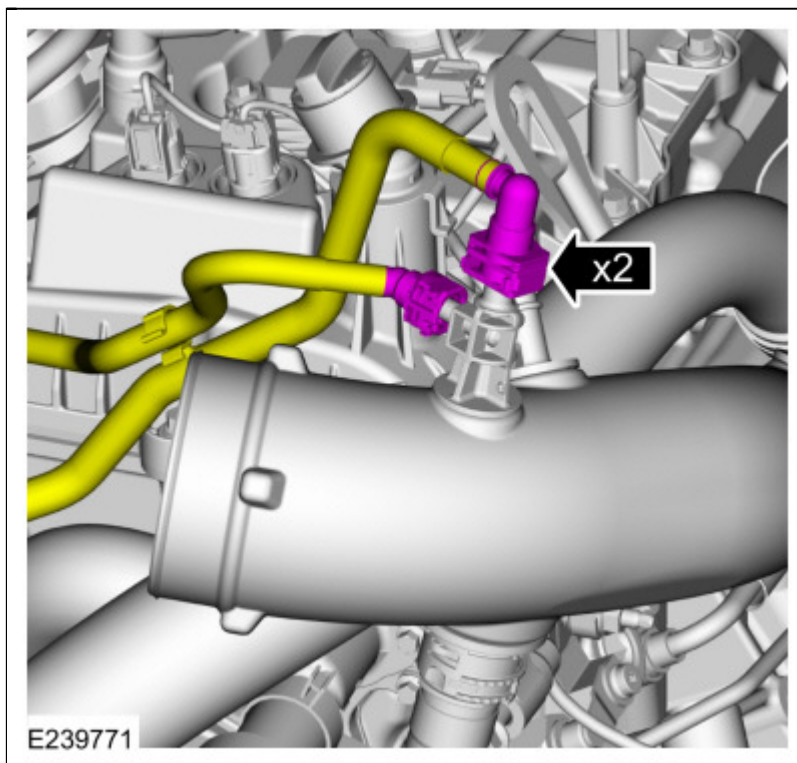


3.

- Slide the EVAP purge valve onto the intake manifold mounting tab.
- Connect the EVAP purge solenoid electrical connector and quick connect coupling.
Refer to: Quick Release Coupling (310-00 Fuel System - General Information - 3.5L EcoBoost (272kW/370PS)).
- Connect the MAPT electrical connector.

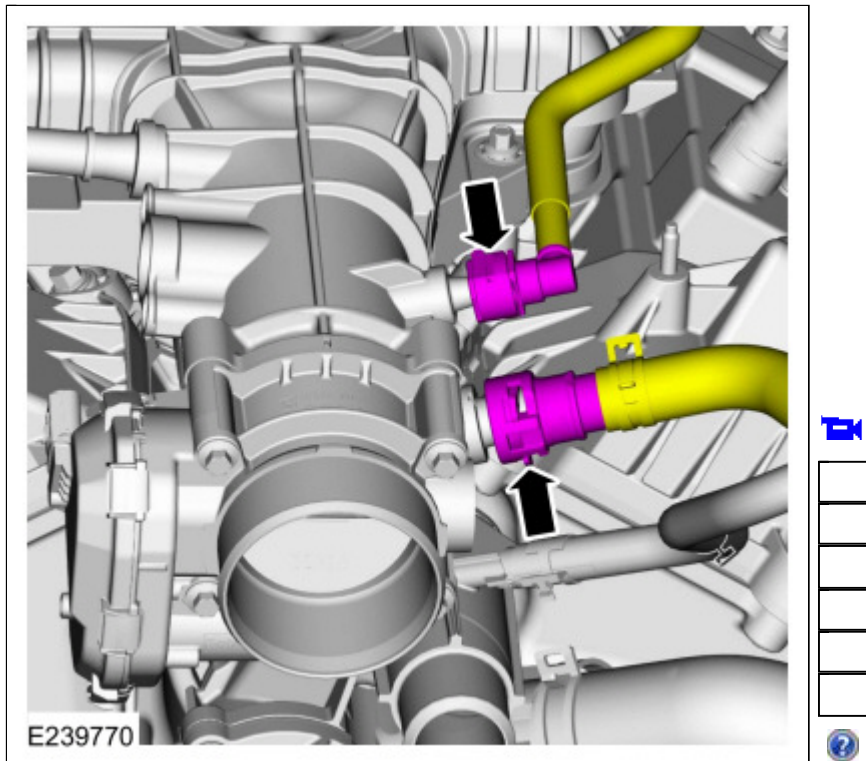


4. Connect the quick connect couplings at turbocharger inlet tube.
Refer to: Quick Release Coupling (310-00 Fuel System - General Information - 3.5L EcoBoost (272kW/370PS)) .

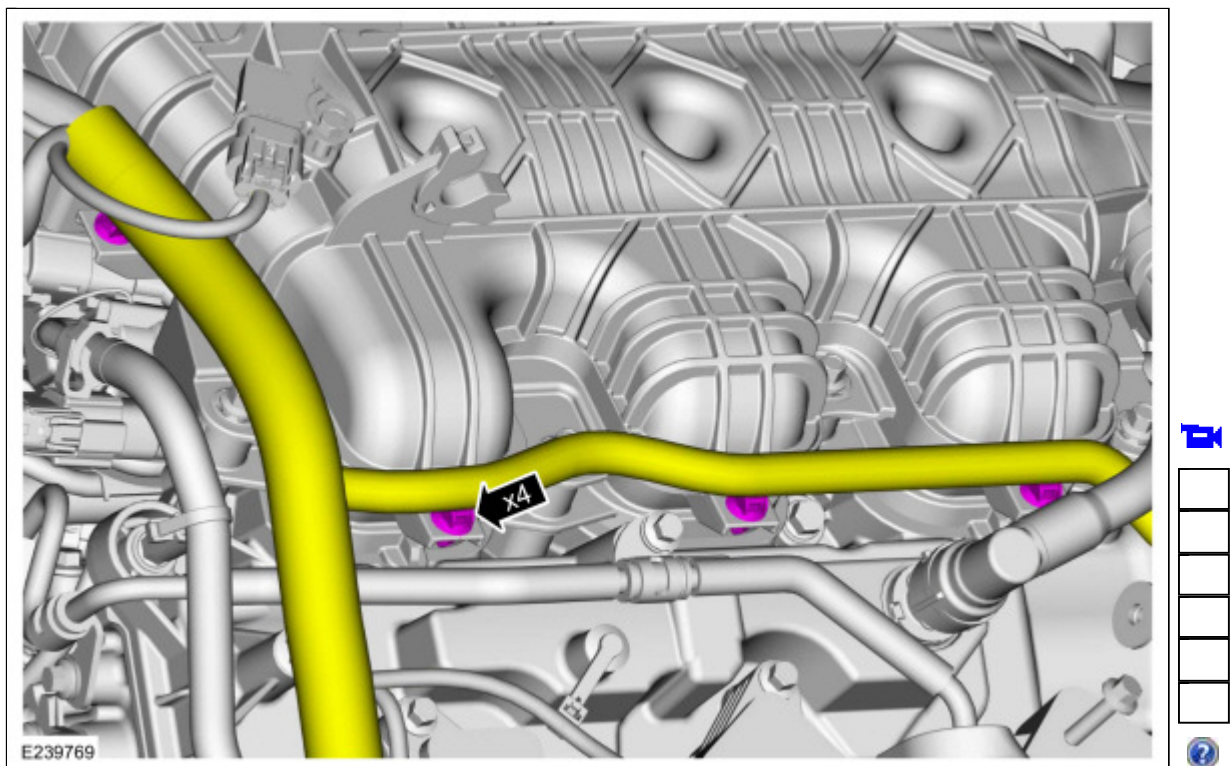


- 5.

- Connect the fuel vapor tube to the intake manifold.
Refer to: Quick Release Coupling (310-00 Fuel System - General Information - 3.5L EcoBoost (272kW/370PS)) .
- Install the vacuum hose.

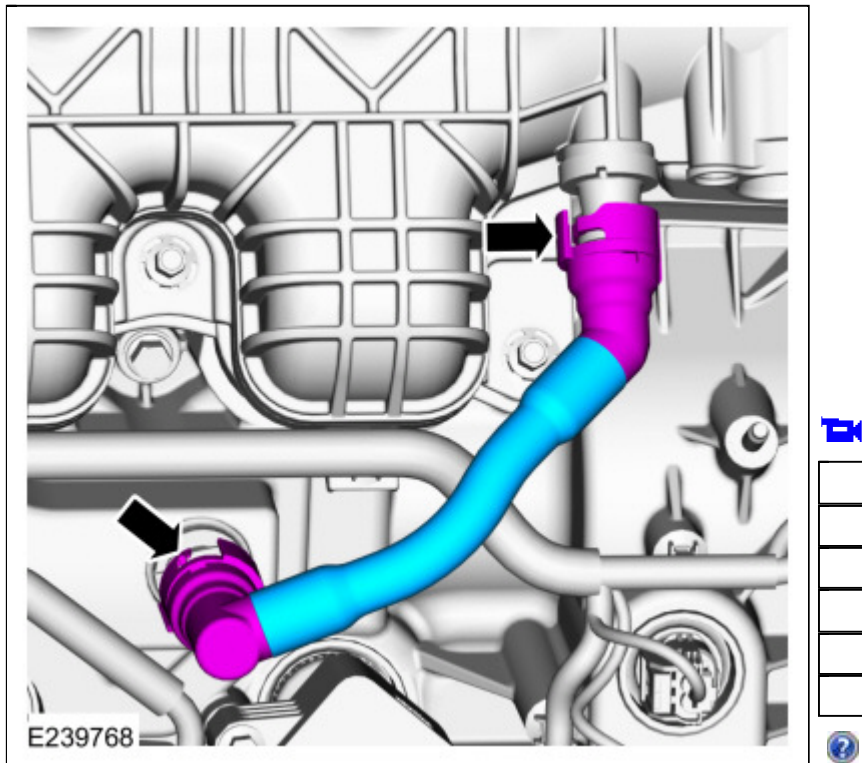


6. Connect the wire harness retainers to the intake manifold.

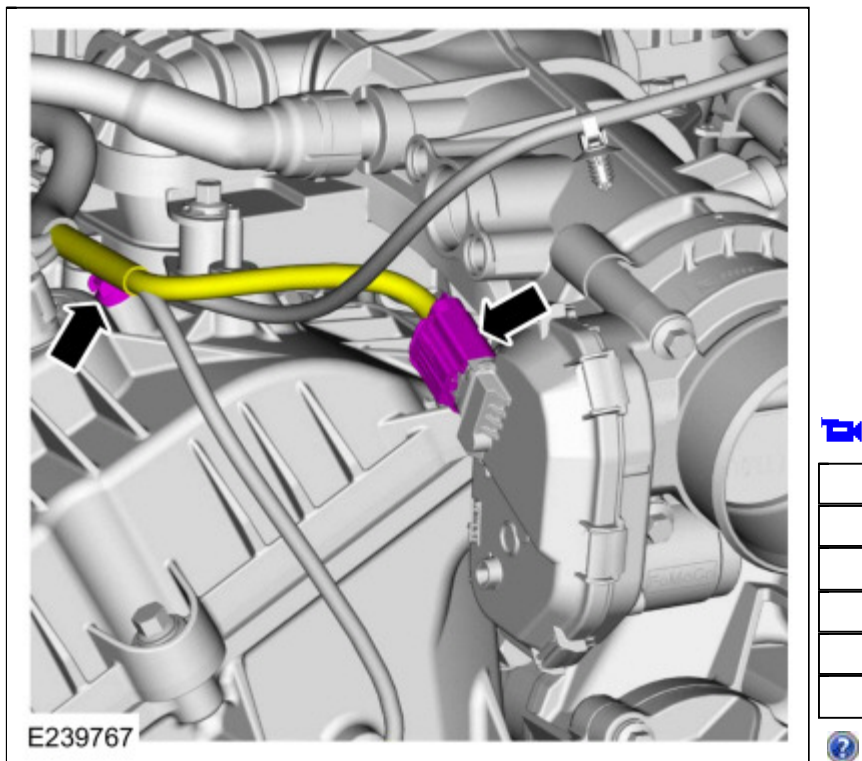


7. Install the PCV tube

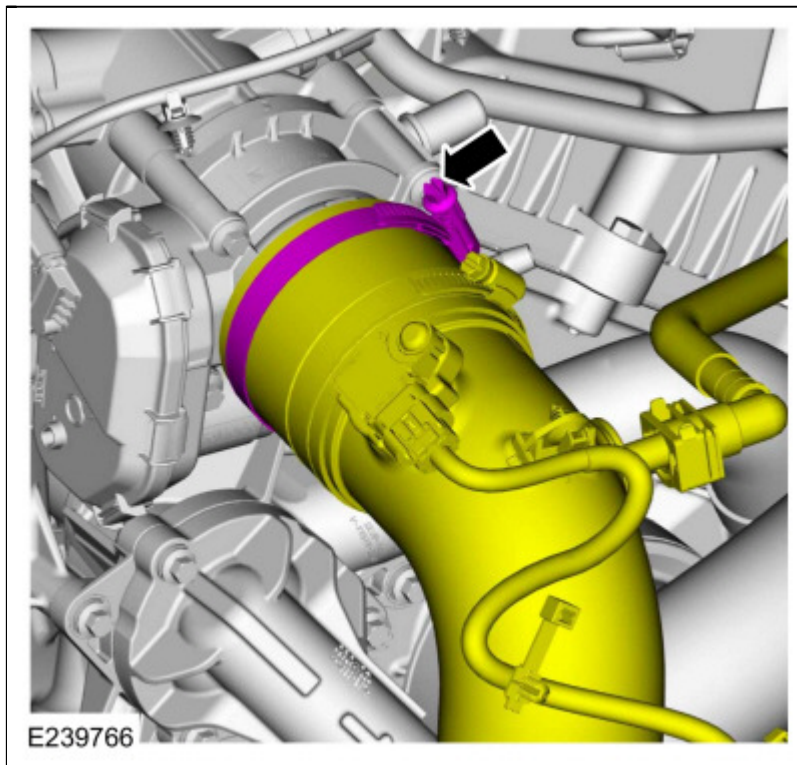
Refer to: Quick Release Coupling (310-00 Fuel System - General Information - 3.5L EcoBoost (272kW/370PS)) .



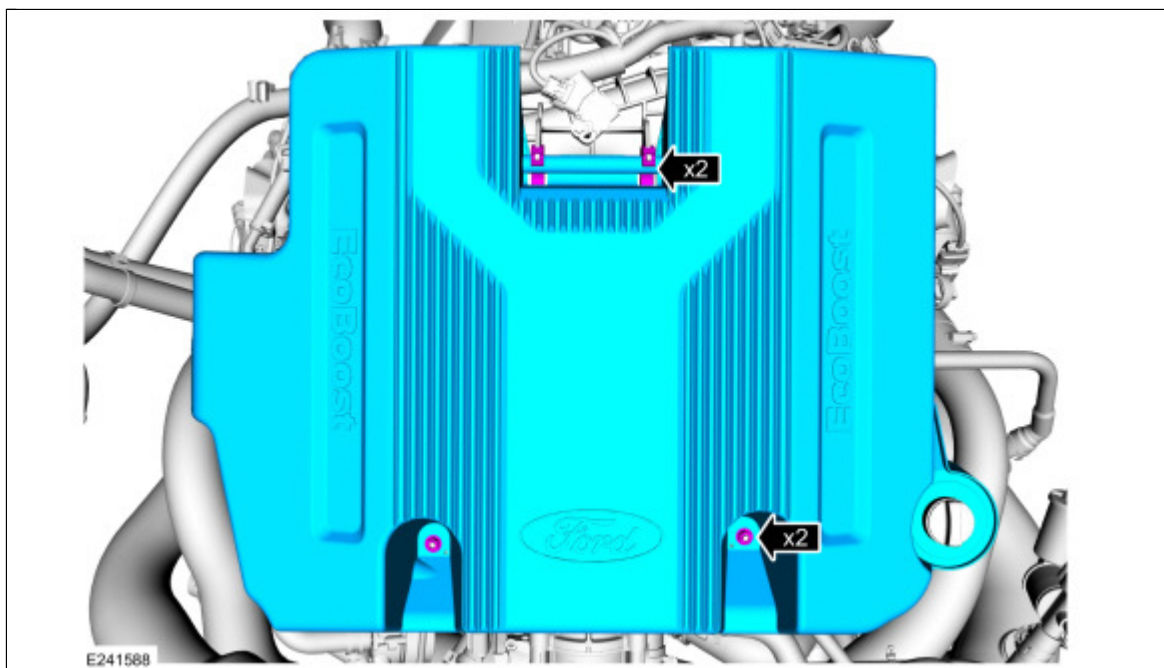
8. Connect the throttle body electrical connector and wiring harness retainer.



9. Position back the throttle body intake pipe and tighten the clamp.
Torque: 44 lb.in (5 Nm)



10. Install the air cleaner outlet pipe.
Refer to: [Air Cleaner Outlet Pipe](#) (303-12C Intake Air Distribution and Filtering - 3.5L EcoBoost (272kW/370PS), Removal and Installation).
11. Slide the engine appearance cover into the retaining bracket and install the retainers.
Torque: 97 lb.in (11 Nm)



12. Connect the battery ground cable.

Refer to: [Battery Disconnect and Connect](#) (414-01 Battery, Mounting and Cables, General Procedures).

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