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2013 Ford F-350 Super Duty Service and Repair Manual

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5.
 - Clean and inspect the exhaust manifold.

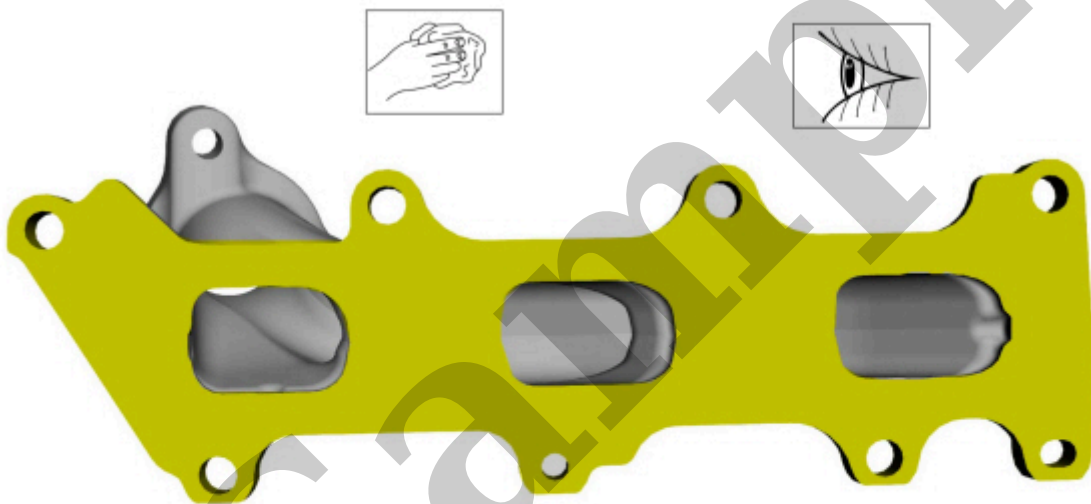
Refer to: [Exhaust Manifold Cleaning and Inspection](#)(303-00 Engine System - General Information, General Procedures).

- **NOTICE**

Do not use metal scrapers, wire brushes, power abrasive discs or other abrasive means to clean the sealing surfaces. These may cause scratches and gouges resulting in leak paths. Use a plastic scraper to clean the sealing surfaces.

Clean the exhaust manifold mating surface of the cylinder head with metal surface prep wipes. Follow the directions on the packaging.

Material : Motorcraft® Metal Surface Prep Wipes / ZC-31-B



E339481

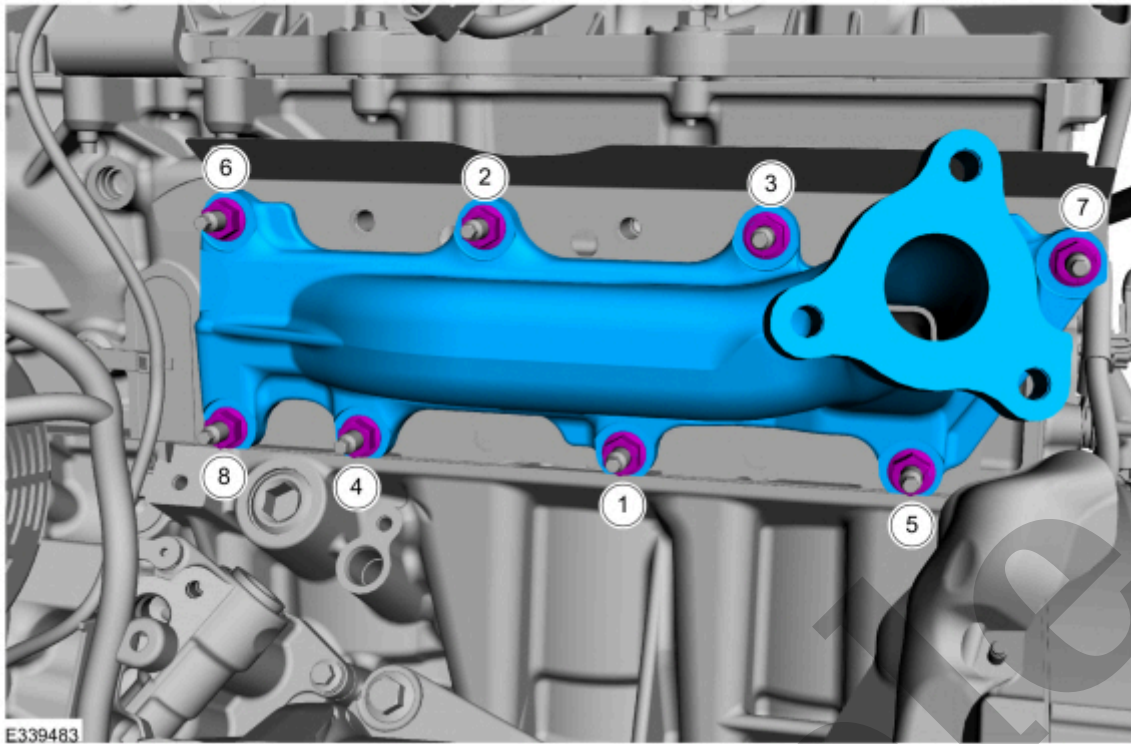
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Installation

1.
 - Hand start the new exhaust manifold studs.

Torque : 115 lb.in (13 Nm)

- Tighten the new exhaust manifold studs.

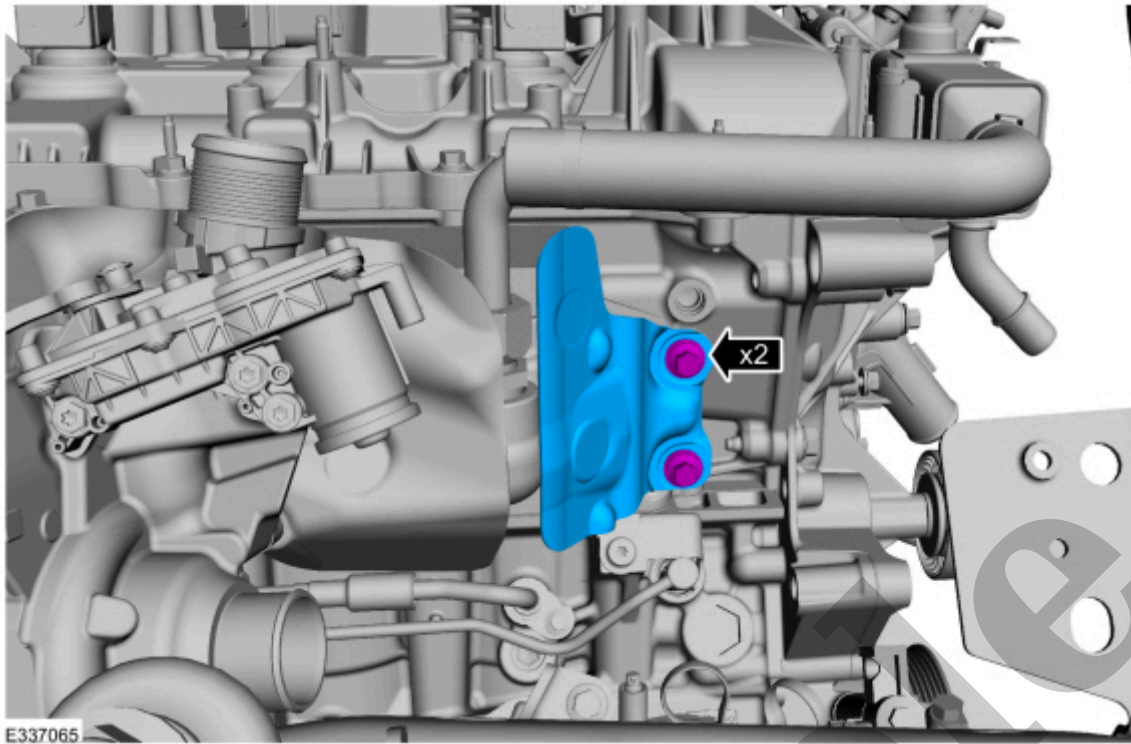


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3. Install the LH (left-hand) turbocharger.

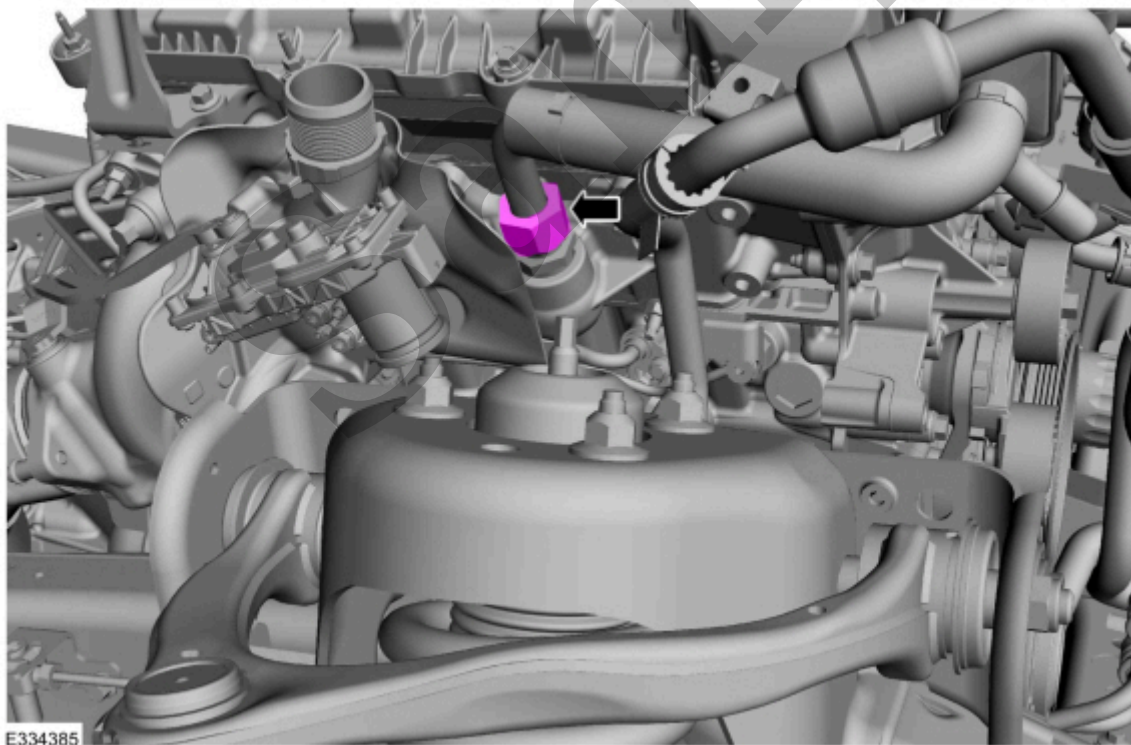
Refer to: [Turbocharger LH](#)(303-04G Fuel Charging and Controls - Turbocharger - 3.5L EcoBoost (BM), Removal and Installation).

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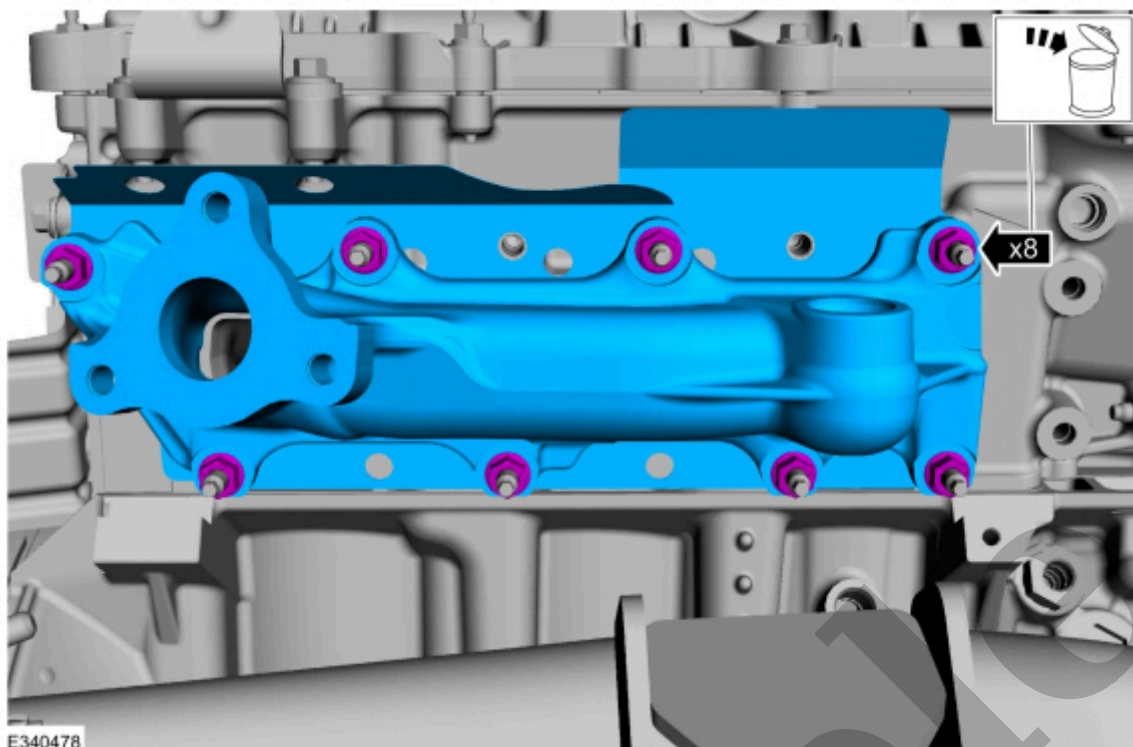
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3. Remove the EGR (exhaust gas recirculation) cooler exhaust tube from the exhaust.



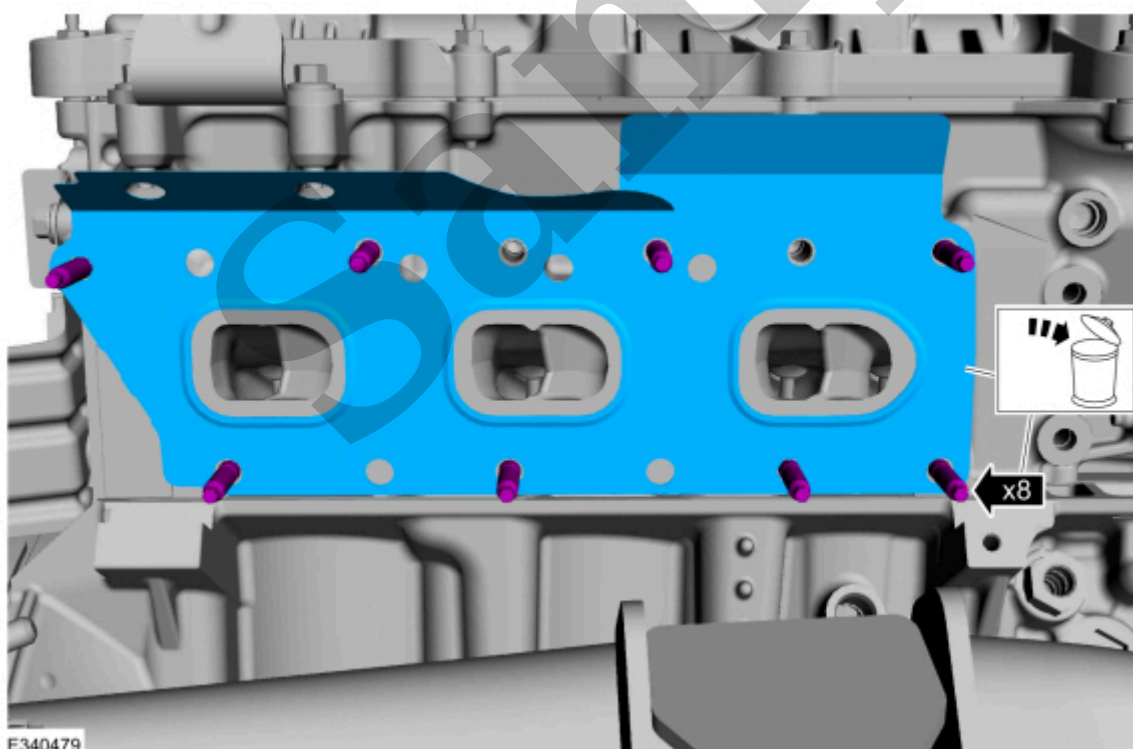
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4. Remove the RH (right-hand) turbocharger.



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7. Remove the nuts, the RH (right-hand) exhaust manifold gasket and discard.

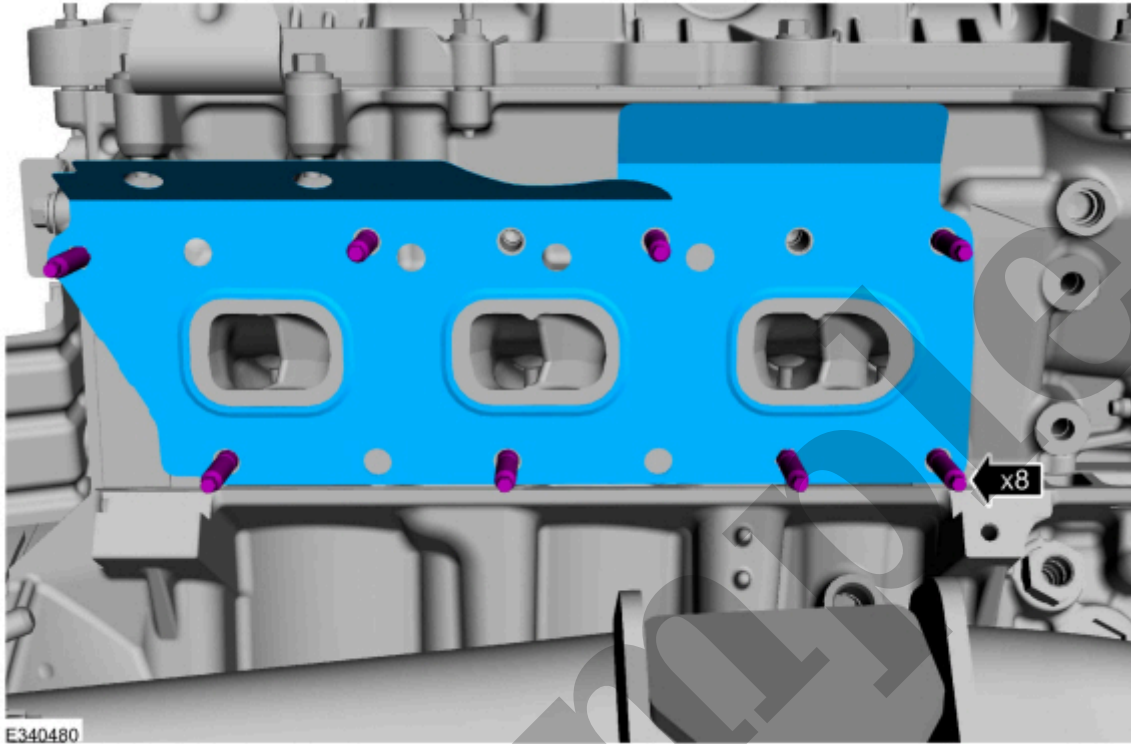


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- Loosely install the new studs into the RH (right-hand) cylinder head.
- Tighten the studs.

Torque : 115 lb.in (13 Nm)

- Install the new exhaust manifold gasket.



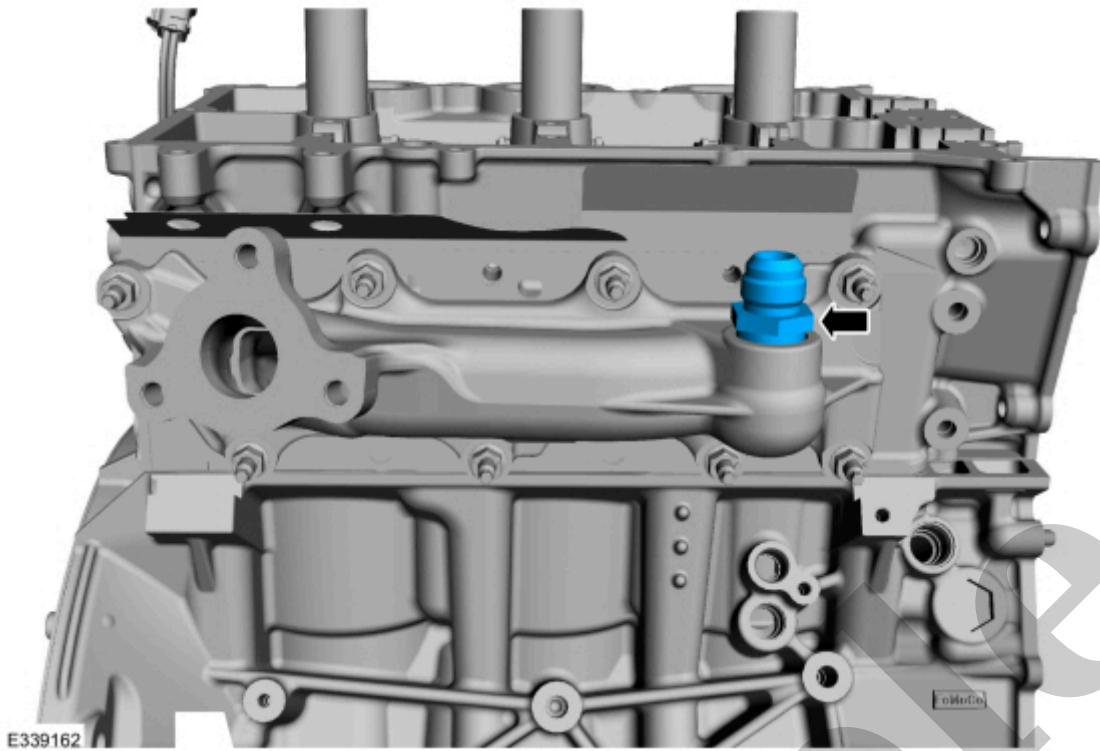
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2. Install the RH (right-hand) exhaust manifold and the new nuts. Tighten the nuts in sequence shown in 2 stages.

Torque :

Stage 1: 142 lb.in (16 Nm)

Stage 2: 16 lb.ft (22 Nm)



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4. Install the RH (right-hand) turbocharger.

Refer to: [Turbocharger RH](#)(303-04G Fuel Charging and Controls - Turbocharger - 3.5L EcoBoost (BM), Removal and Installation).

5. Engine equipped with dual generator.

Install the exhaust manifold heat shield and bolts.

Torque : 18 lb.ft (25 Nm)



Flexplate

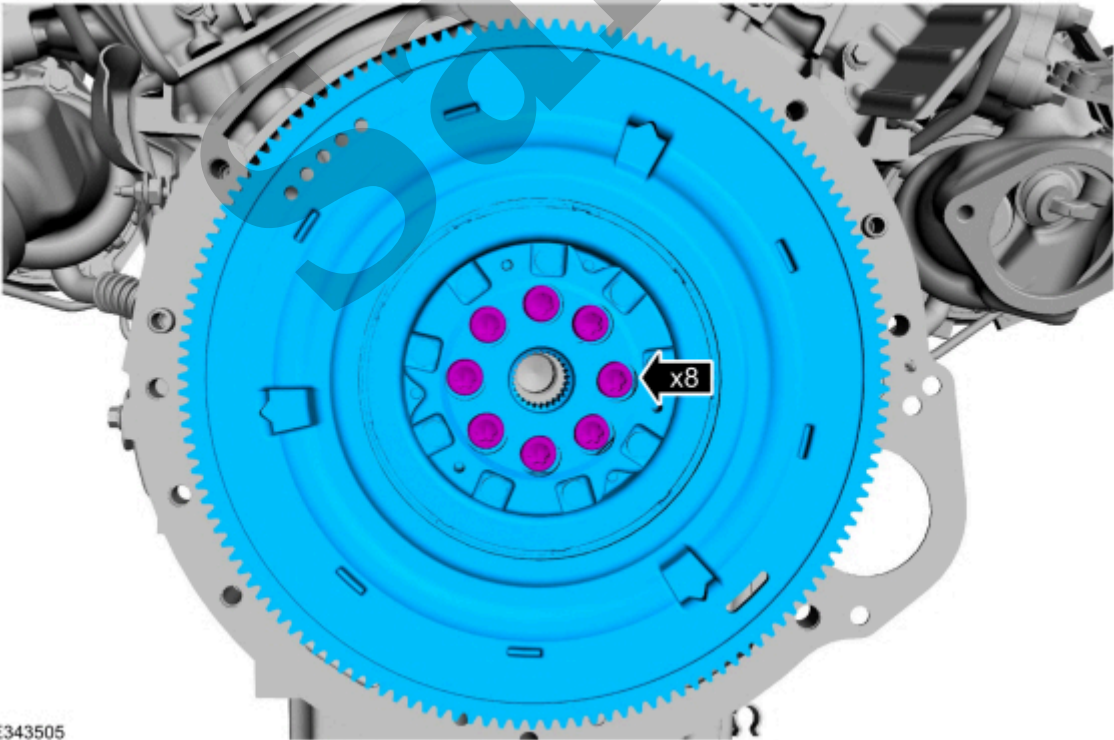
303-01D Engine - 3.5L V6 PowerBoost (CN)	2022 F-150
Removal and Installation	Procedure revision date: 09/8/2022

Flexplate

Removal

- 1. Remove the transmission.

Refer to: [Transmission](#)(307-01B Automatic Transmission - 10-Speed Automatic Transmission – 10R80 MHT, Removal and Installation).
- 2. Remove the bolts and the flexplate.





Front Cover to Coolant Pipe Seal

303-01D Engine - 3.5L V6 PowerBoost (CN)	2022 F-150
Removal and Installation	Procedure revision date: 08/24/2016

Front Cover to Coolant Pipe Seal

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, may cause engine failure.

1. Remove the coolant pump.

Refer to: [Coolant Pump](#)(303-03D Engine Cooling - 3.5L V6 PowerBoost (CN), Removal and Installation).

2.
 - Using the special tool, remove the front cover to coolant pipe seal.

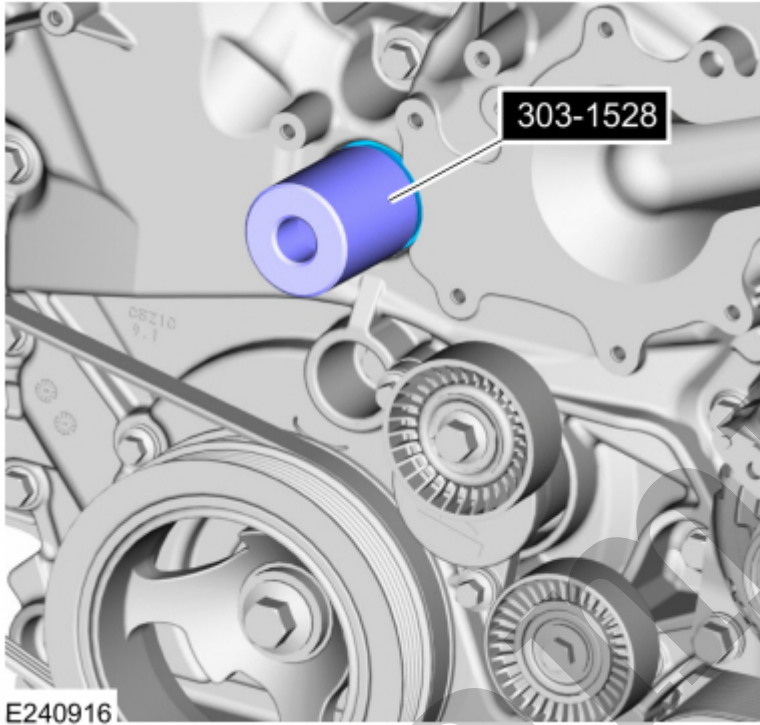
Use Special Service Tool : 303-1528 Remover/Installer, Water Tube Seal

- Reset the special tool center bolt to its retracted position.
- Screw the special tool onto the front cover to coolant pipe seal until it bottoms out.
- Using a brass hammer, give the special tool a slight tap inward to break front cover radial seal lose.
- Turn the special tool center bolt clockwise and remove the front cover to coolant pipe seal.

1.
 - Using the special tool, install the front cover to coolant pipe seal.

Use Special Service Tool : 303-1528 Remover/Installer, Water Tube Seal

- Position the front cover to coolant pipe seal on the special tool.
- Position the special tool into the engine front cover.
- Using a brass hammer, tap the special tool until the front cover to coolant pipe seal bottoms out.



[Click here to learn about symbols, color coding, and icons used in this manual.](#)

2. Inspect the front cover to coolant pipe seal for proper installation or damage.