

303-04B Fuel Charging and Controls - Turbocharger - 2.3L EcoBoost
(201kW/273PS)

2019 Ranger

Removal and Installation

Procedure revision date:
12/5/2018

Turbocharger Coolant Return Tube

Materials

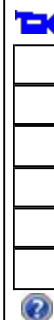
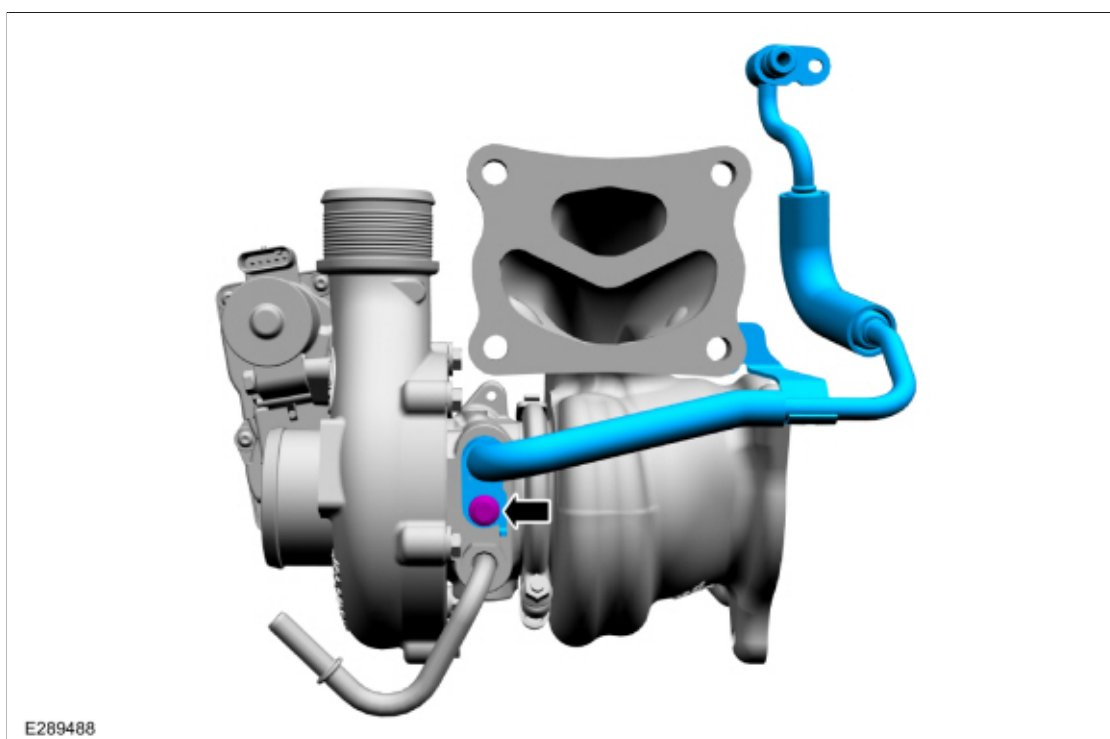
Name	Specification
Motorcraft® Metal Brake Parts Cleaner PM-4-A, PM-4-B	-

Removal

NOTICE: The turbocharger compressor vanes can be damaged by even the smallest particles. When removing any turbocharger or engine air intake system component, ensure that no debris enters the system. Failure to do so may result in damage to the turbocharger.

NOTICE: Special attention needs to be given to the sealing ports for the oil feed, the oil drain, and the coolant tubes, on turbocharged engines. The sealing ports must be totally clean and free from O-ring residue, have no damage to the sealing surface and the tubes to ensure that there are no leaks or repeat repairs.

1. Remove the turbocharger.
Refer to: [Turbocharger](#) (303-04B Fuel Charging and Controls - Turbocharger - 2.3L EcoBoost (201kW/273PS), Removal and Installation).
2. Remove the turbocharger coolant return tube bolt, then remove the turbocharger coolant return tube.

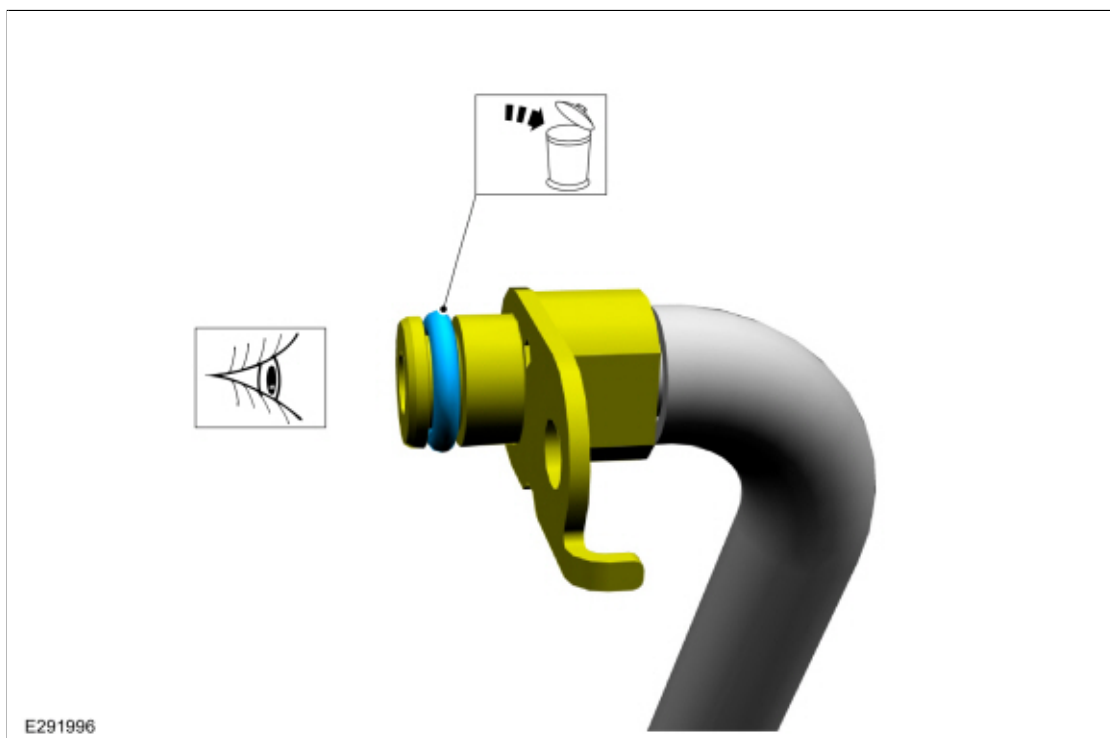


3.

1. Remove and discard the turbocharger coolant tube O-ring seal.
2. **NOTICE: Do not use a metal brush, damage to sealing area will result in leaks.**

Use brake cleaner and a nylon brush to clean. Clean the turbocharger coolant tube sealing surfaces. Inspect the sealing surfaces for debris or damage and make sure the retaining bracket is not bent, check for squareness of the O-ring area. Install new components if needed.

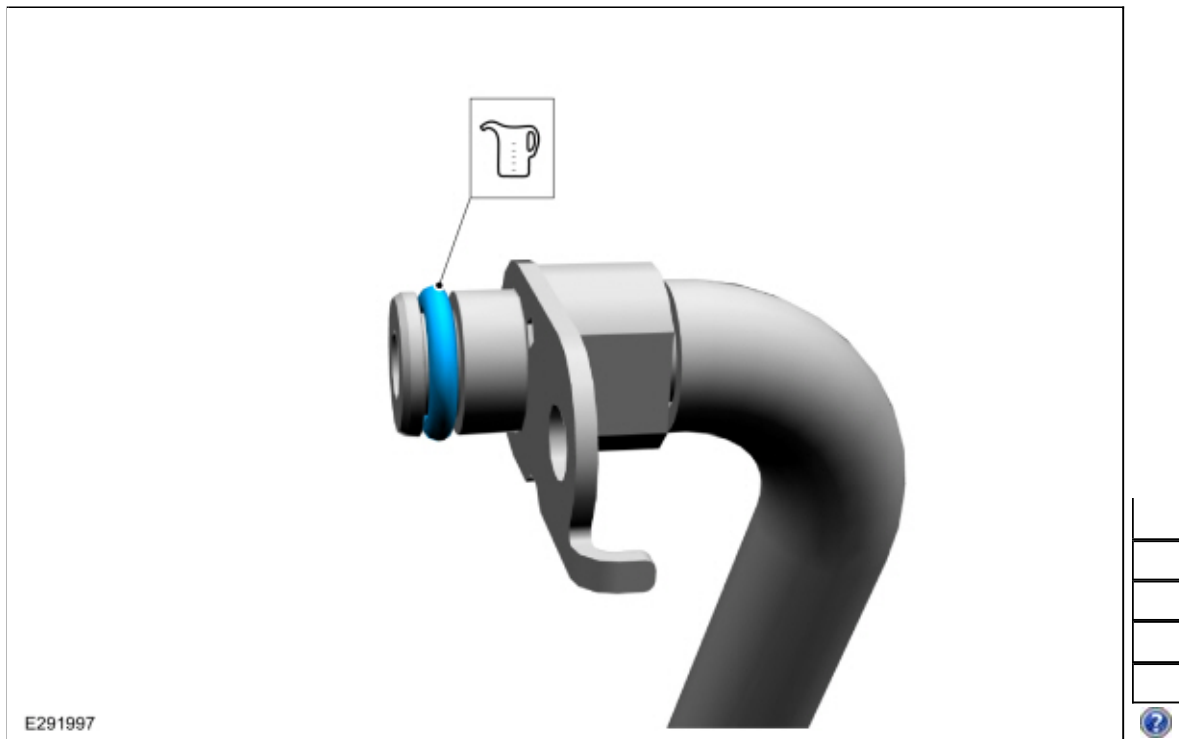
Material: Motorcraft® Metal Brake Parts Cleaner / PM-4-A, PM-4-B



Installation

1.

1. Install the new turbocharger coolant tube O-ring seal and lubricate with clean engine coolant. Refer to: [Specifications](#) (303-03 Engine Cooling - 2.3L EcoBoost (201kW/273PS), Specifications).



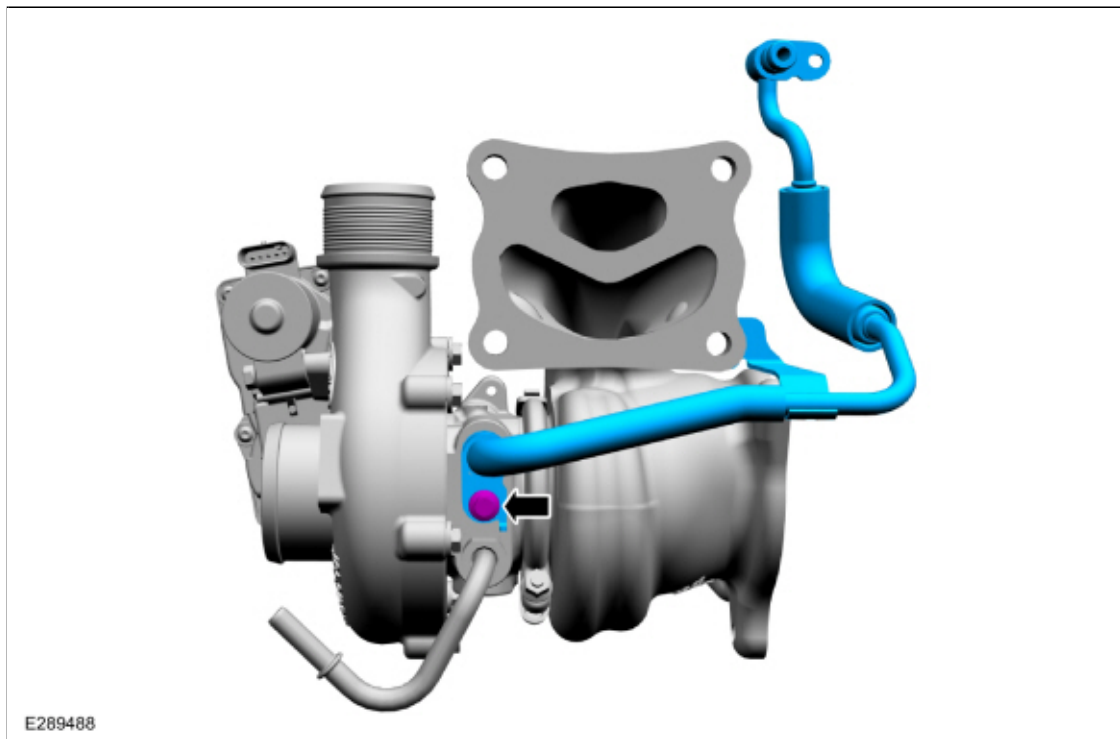
2. **NOTICE: Do not use a metal brush, damage to sealing area will result in leaks.**

- Carefully use a nylon brush to remove the old O-ring residue, use brake cleaner to rinse the O-ring residue out of the turbocharger tube O-ring bore. Inspect the area for deep scratches and gouges. Install new components if needed.

Material: Motorcraft® Metal Brake Parts Cleaner / PM-4-A, PM-4-B

1. Fit the turbocharger coolant return tube to the turbocharger. The lower coolant supply tube goes into the turbocharger first.
2. Install and tighten the turbocharger coolant tube bolt.
Torque: 97 lb.in (11 Nm)





3. Install the turbocharger.
Refer to: [Turbocharger](#) (303-04B Fuel Charging and Controls - Turbocharger - 2.3L EcoBoost (201kW/273PS), Removal and Installation).

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