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2018 Ford Flex Service and Repair Manual

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8. Raise the opposite end of the CAC (charge air cooler) and agitate it by hand for at least 5 minutes.
9. Drain the CAC (charge air cooler) .
10. Repeat Steps 4 through 9 until no contaminants are found in the flush water.
11. Flush the CAC (charge air cooler) thoroughly with clean water.
12. Allow the CAC (charge air cooler) to air dry.
13. Install electrical components and sensors on the CAC (charge air cooler) .

14. **NOTE**

The following leak test steps must be performed prior to installing the CAC (charge air cooler) .

NOTE

Use a commercially available kit, such as the Johnson Manufacturing Company Charge Air Cooler Test Set Part No. 351-CAS, or equivalent.

Install the commercially available cooler tester on the CAC (charge air cooler) following the manufacturer's installation instructions.

15. Tighten the clamps.

Torque : 44 lb.in (5 Nm)

16. **WARNING**

Never exceed the specified pressure. Excessive pressure may cause the test adapter to blow off or may damage the charge air cooler (CAC). Failure to follow this instruction may result in serious personal injury.

Slowly apply air pressure.

Pressure : 21.8 psi (150 kPa)

17. Let the CAC (charge air cooler) stand for a few minutes and note any loss in pressure.
18. Release the air pressure.
19. Repeat Steps 16 through 18 as many times as necessary to verify the readings. The reading is considered verified when 3 consecutive tests show approximately the same pressure drop.

Air Cleaner Outlet Pipe LH

303-12D Intake Air Distribution and Filtering - 3.5L V6 PowerBoost (CN)	2022 F-150
Removal and Installation	Procedure revision date: 06/24/2022

Air Cleaner Outlet Pipe LH

Removal

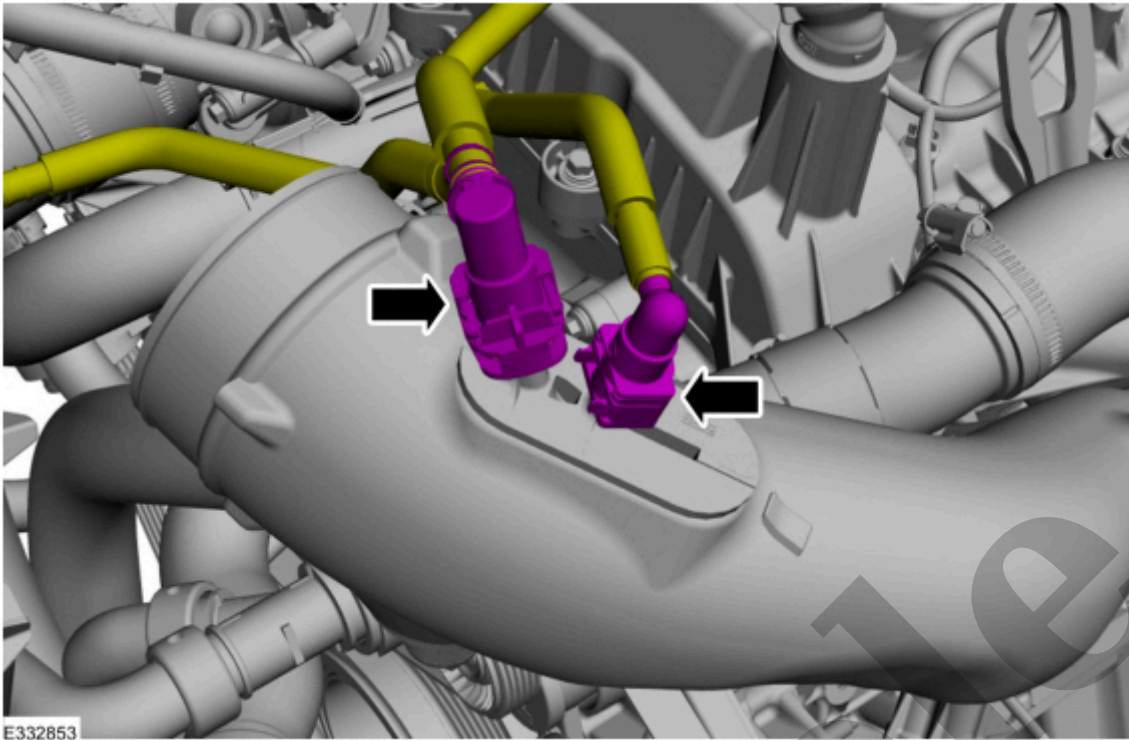
NOTICE

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.

NOTE

Removal steps in this procedure may contain installation details.

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. Remove the air cleaner outlet pipe.
Refer to: [Air Cleaner Outlet Pipe](#)(303-12C Intake Air Distribution and Filtering - 3.5L EcoBoost (BM), Removal and Installation).
3. Disconnect the bypass valve tube.



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

5. Disconnect the crankcase ventilation tube.

Refer to: [Crankcase Ventilation Tube](#)(303-08C Engine Emission Control - 3.5L EcoBoost (BM), Removal and Installation).

6. NOTE

The clamp can be accessed through the fender splash shield.

- Loosen the clamp.

Torque : 48 lb.in (5.4 Nm)

- Detach the isolator and remove the air cleaner outlet pipe LH (left-hand) .



Air Cleaner Outlet Pipe RH

303-12D Intake Air Distribution and Filtering - 3.5L V6 PowerBoost (CN)	2022 F-150
Removal and Installation	Procedure revision date: 06/5/2020

Air Cleaner Outlet Pipe RH

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.

NOTE

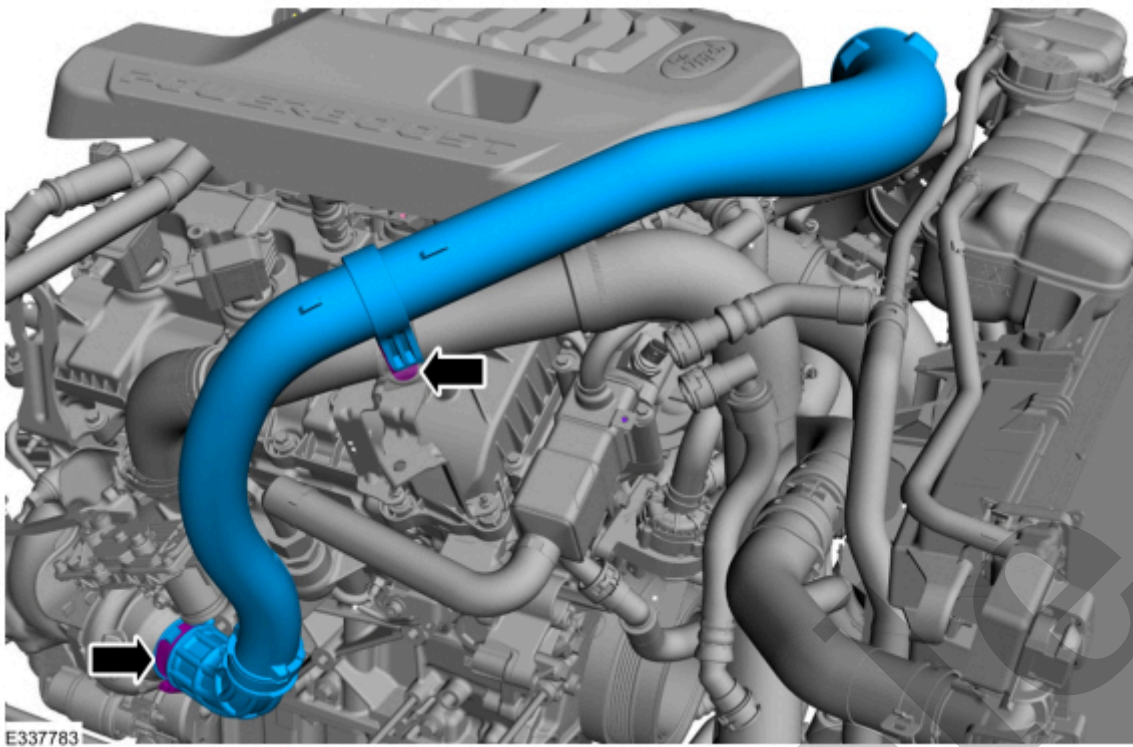
Removal steps in this procedure may contain installation details.

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. Loosen the clamp and position the air cleaner outlet pipe RH (right-hand) aside

Torque : 48 lb.in (5.4 Nm)

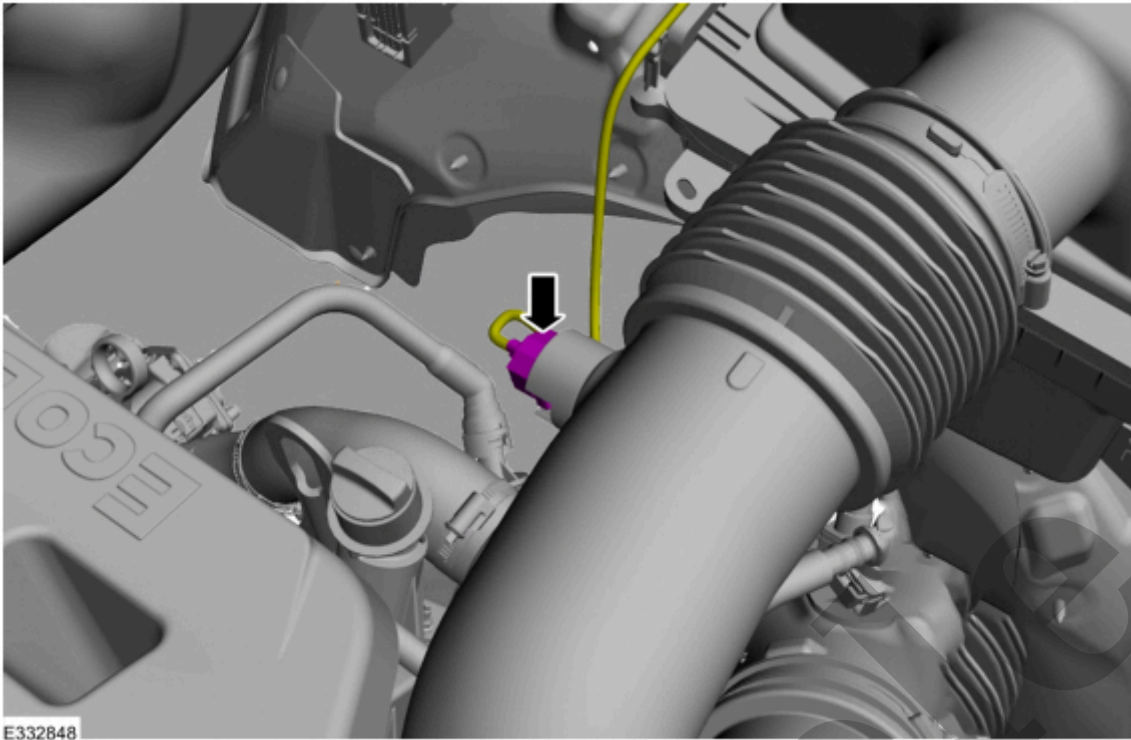


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Installation

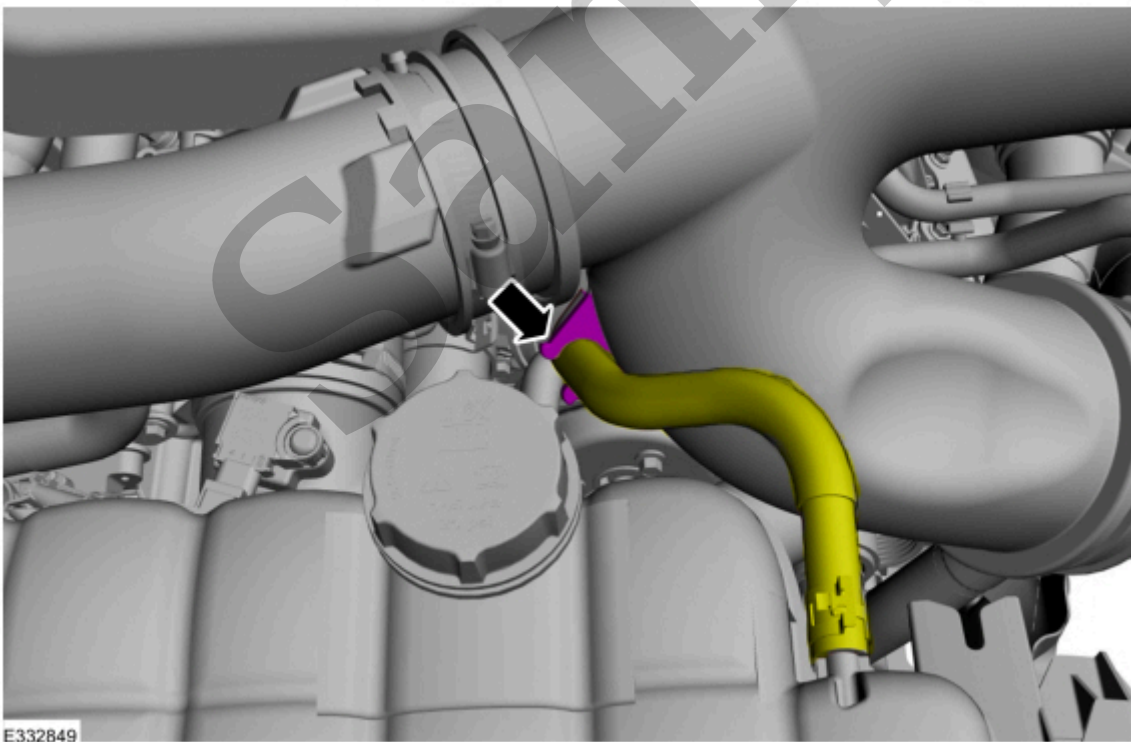
1. Inspect the turbocharger or engine air intake system components and clean, if necessary.
2. To install, reverse the removal procedure.

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

2. Detach and position the degas bottle hose aside.



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

3. Loosen the clamps and remove the air cleaner outlet pipe.

Air Cleaner

303-12D Intake Air Distribution and Filtering - 3.5L V6 PowerBoost (CN)	2022 F-150
Removal and Installation	Procedure revision date: 06/5/2020

Air Cleaner

Removal

NOTICE

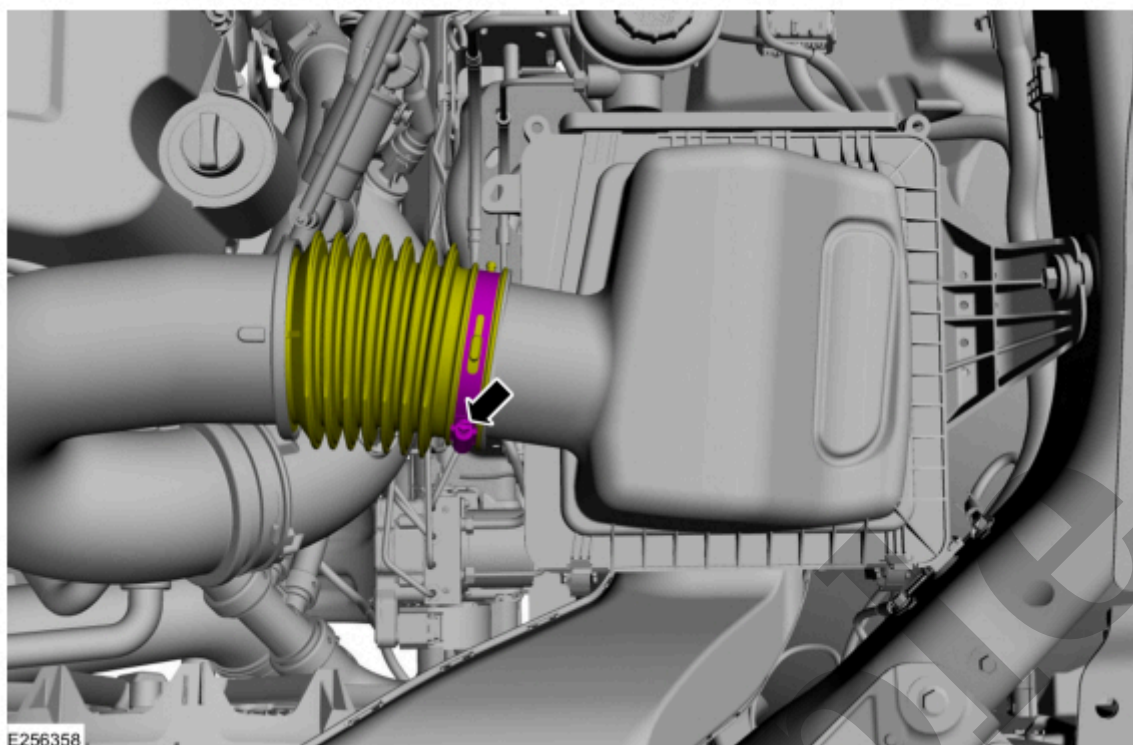
The turbocharger compressor vanes can be damaged by even the smallest particles. When removing any turbocharger or engine air intake system component, ensure that no debris enters the system. Failure to do so may result in damage to the turbocharger.

NOTE

Removal steps in this procedure may contain installation details.

1.
 - Disconnect the brake vacuum reservoir electrical connector.
 - Detach the retainers and position the wiring harness aside.

Torque : 48 lb.in (5.4 Nm)



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

4. 1. Remove the retainers.
2. Remove the bolt.
- Torque** : 177 lb.in (20 Nm)
3. Remove the isolator and air cleaner.



Charge Air Cooler (CAC) Intake Pipe

303-12D Intake Air Distribution and Filtering - 3.5L V6 PowerBoost (CN)	2022 F-150
Removal and Installation	Procedure revision date: 06/5/2020

Charge Air Cooler (CAC) Intake Pipe

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.

NOTE

Removal steps in this procedure may contain installation details.

Charge air cooler (CAC) intake pipe - Left side

1. Remove the air cleaner outlet pipe LH (left-hand) .

Refer to: [Air Cleaner Outlet Pipe LH](#)(303-12C Intake Air Distribution and Filtering - 3.5L EcoBoost (BM), Removal and Installation).

2. Remove the air cleaner.

Refer to: [Air Cleaner](#)(303-12C Intake Air Distribution and Filtering - 3.5L EcoBoost (BM), Removal and Installation).