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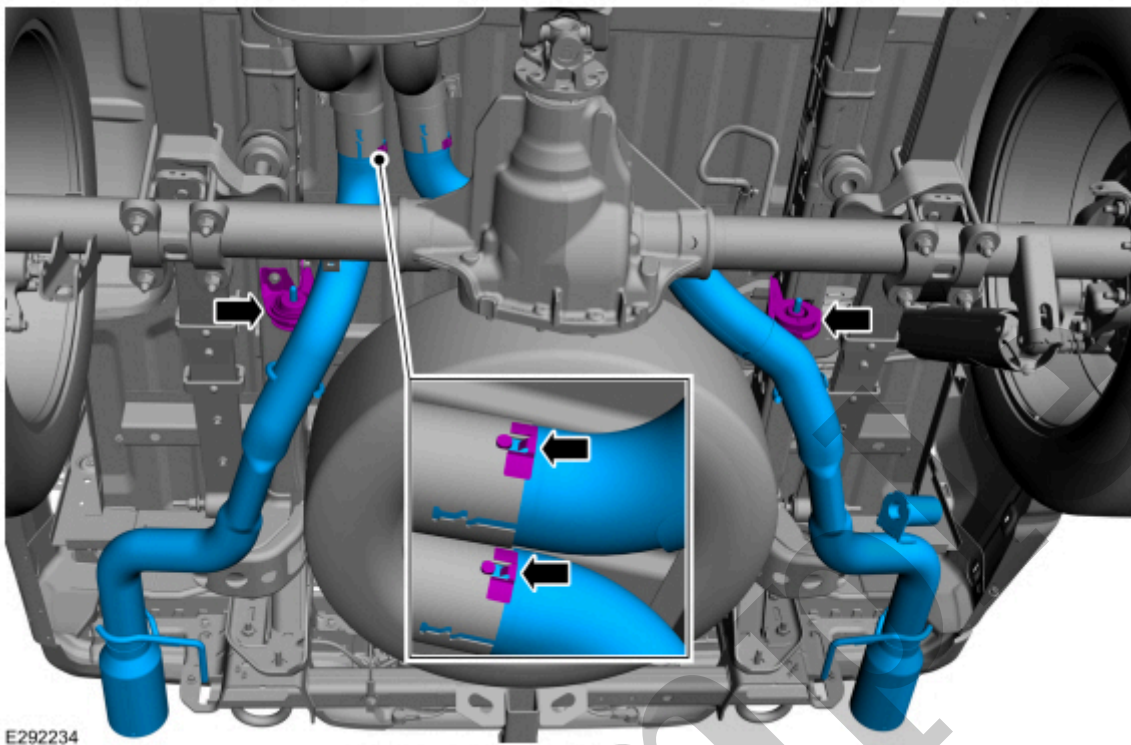
FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2017 Ford E-450 Super Duty Service and Repair Manual

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4. During removal, release the RH (right hand) and LH (left hand) tailpipe clips and separate the tailpipes.

Release the tailpipe from the exhaust isolator hangers then carefully remove the tailpipes from the vehicle.



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

5. **NOTE**

This step is only required if you are replacing with new components.

On both sides.

Loosen the clamp and remove the outlet pipe.

Torque : 22 lb.ft (30 Nm)



Tailpipe LH - Raptor

309-00C Exhaust System - 3.5L EcoBoost (BM)	2022 F-150
Removal and Installation	Procedure revision date: 06/24/2021

Tailpipe LH - Raptor

Removal

NOTE

Removal steps in this procedure may contain installation details.

1. With the vehicle in NEUTRAL, position it on a hoist.

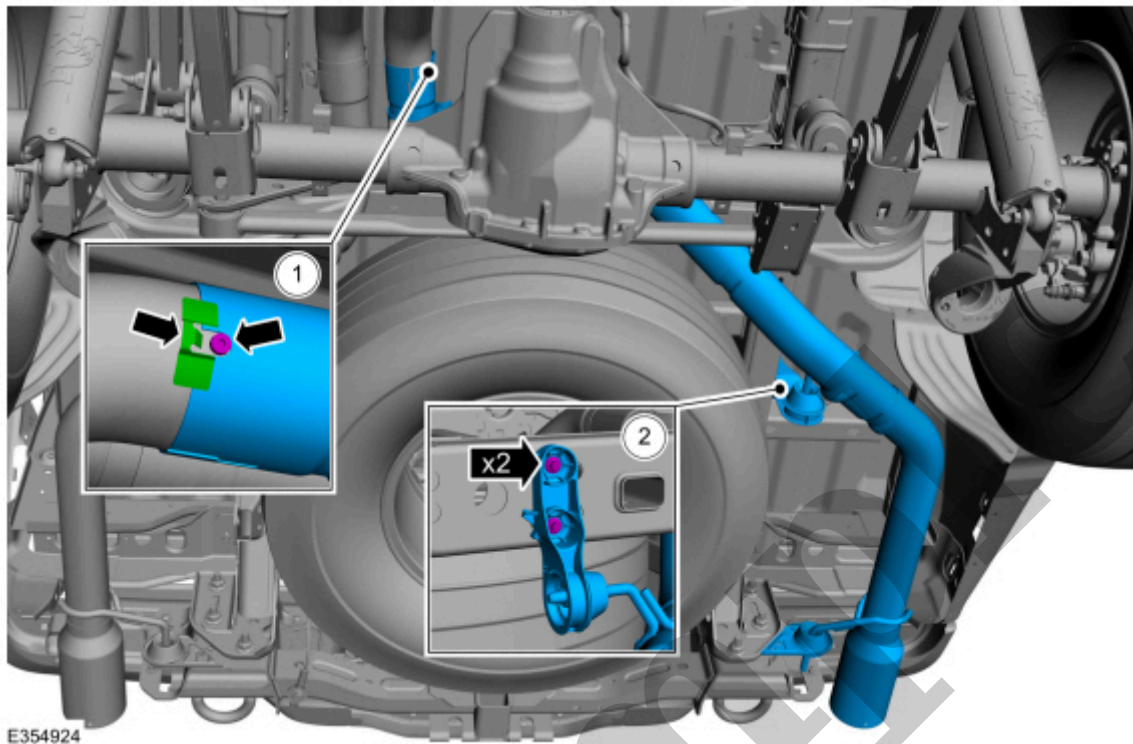
Refer to: [Jacking and Lifting - Overview](#)(100-02 Jacking and Lifting, Description and Operation).

2. Remove the tailpipe hanger bracket.

Torque : 106 lb.in (12 Nm)

4. 1. Release the tailpipe clip.
2. Remove the hanger bracket bolts and carefully remove the tailpipe from the vehicle.

Torque : 22 lb.ft (30 Nm)



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

Isolator hanger bracket

NOTE

The below following steps are only necessary, if you are replacing the isolator hanger bracket.

5. Remove the nuts and the hanger brackets.

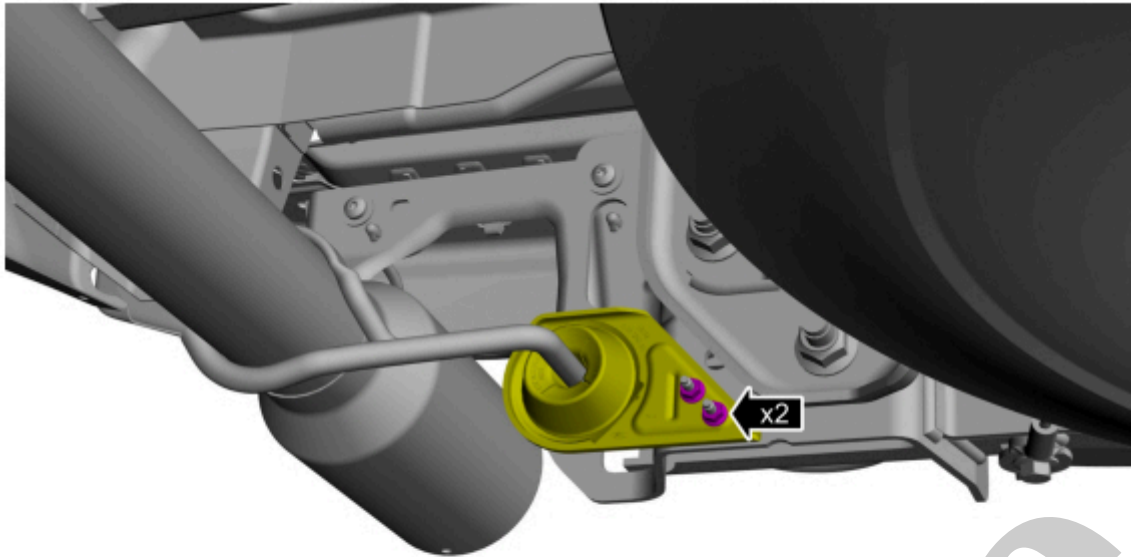
Torque : 106 lb.in (12 Nm)

Installation

1. To install, reverse the removal procedure.
2. Clean all exhaust connections before reassembly.
3. Check the exhaust system for leaks.

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Sample

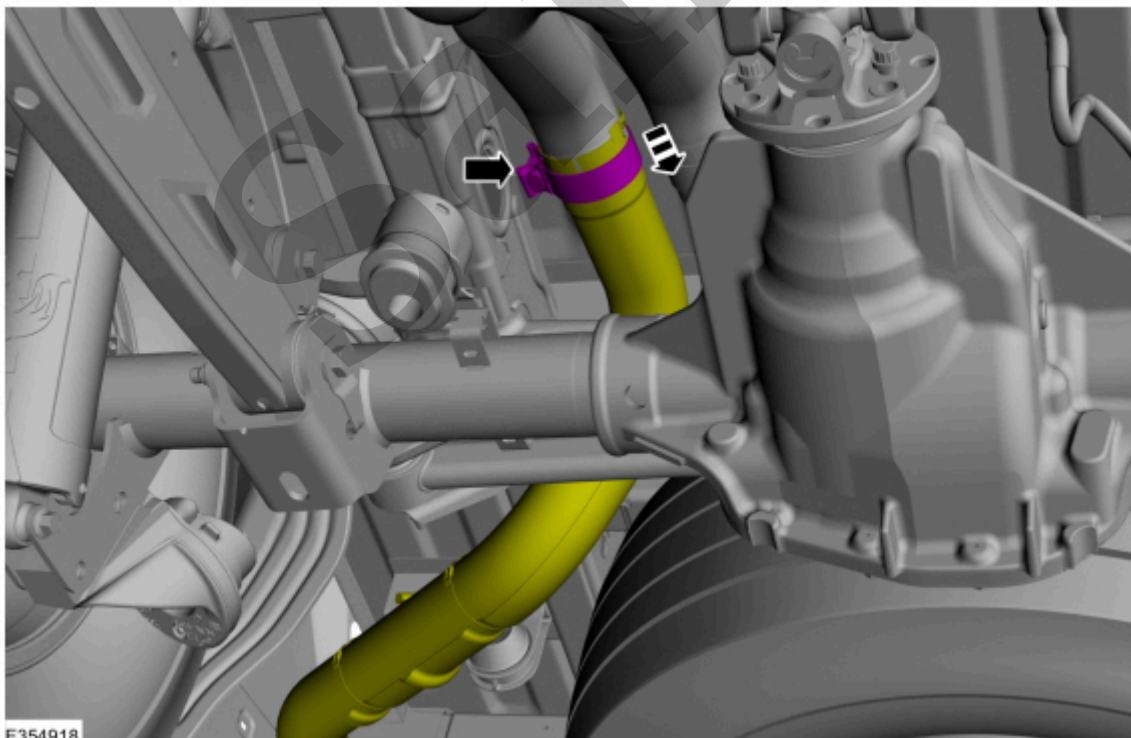


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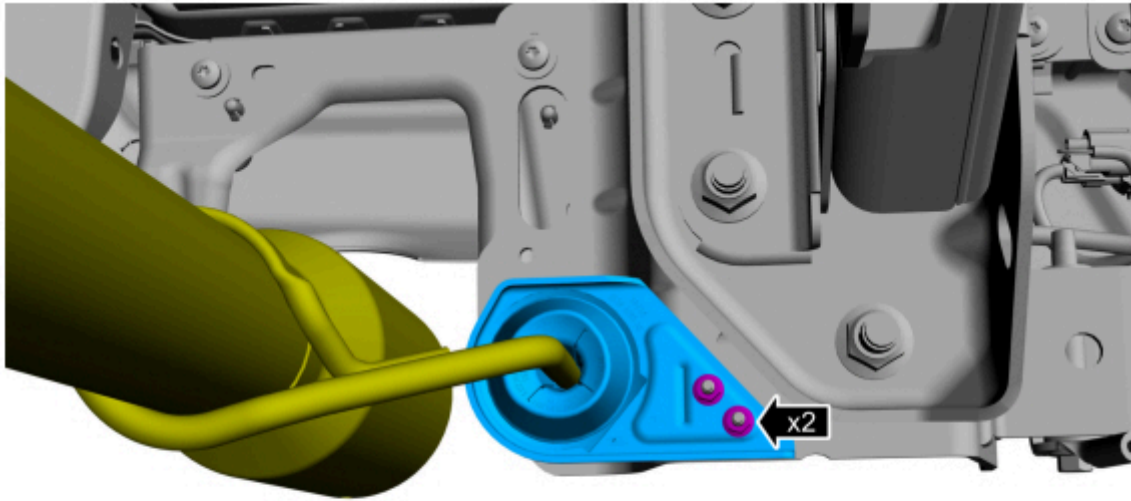
3. Loosen the tailpipe clamp.

Torque : 41 lb.ft (55 Nm)



E354918

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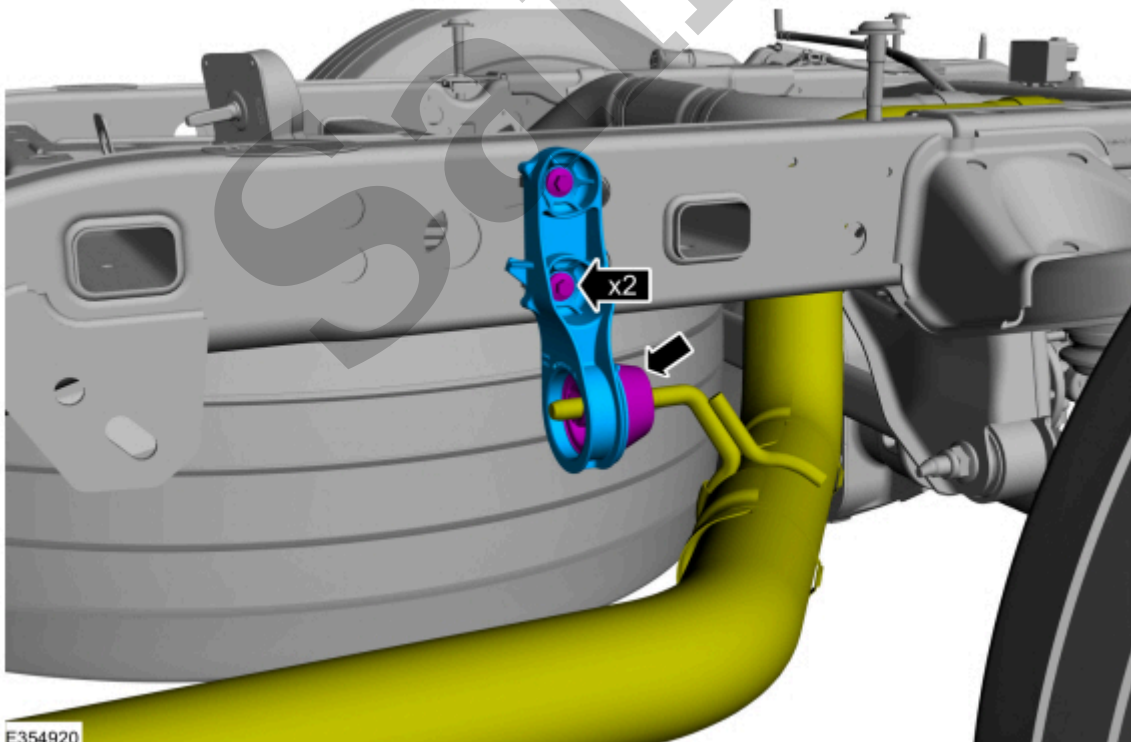


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6. Remove the bolts and the hanger bracket.

Torque : 22 lb.ft (30 Nm)



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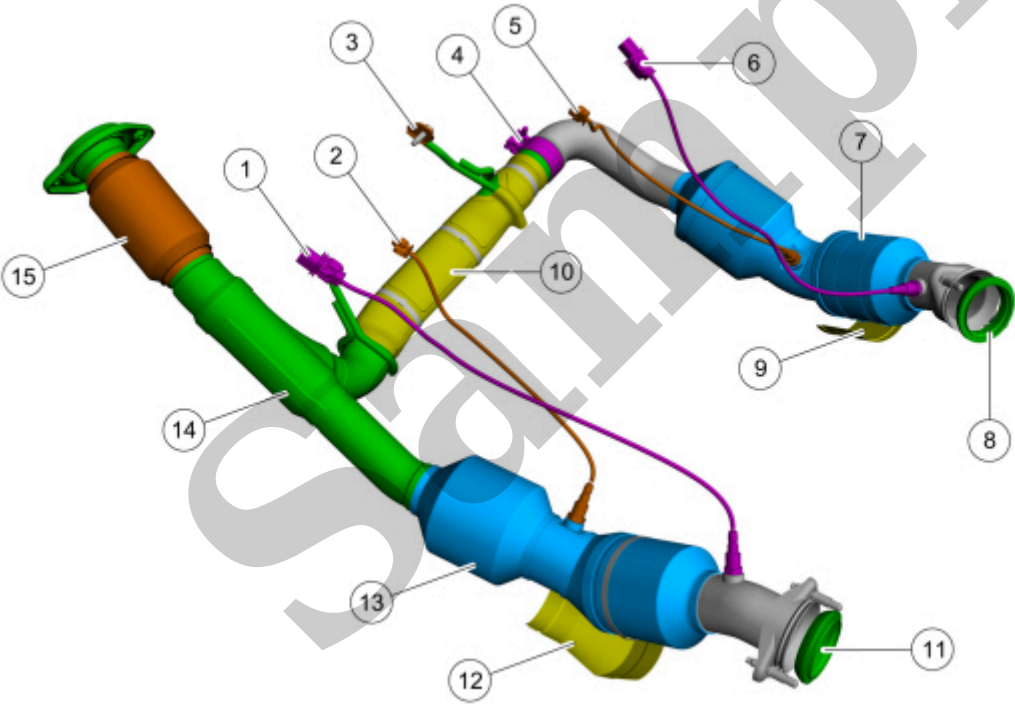
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Exhaust System - Component Location

309-00D Exhaust System - 3.5L V6 PowerBoost (CN)	2022 F-150
Description and Operation	Procedure revision date: 06/6/2020

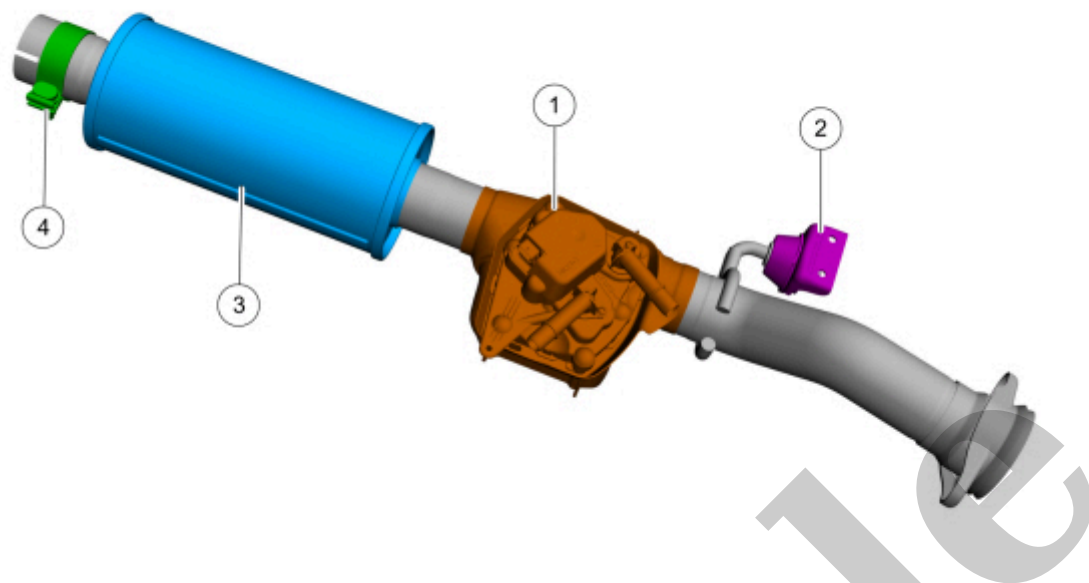
Exhaust System - Component Location



E330991

Exhaust hot end assembly

Item	Description
1	RH (right-hand) exhaust gas oxygen sensor - upstream
2	RH (right-hand) exhaust gas oxygen sensor - downstream



E330992

Exhaust intermediate pipe

Item	Description
1	Heat exchanger
2	Isolator
3	Resonator
4	Inlet pipe clamp



Exhaust System - Overview

<i>309-00D Exhaust System - 3.5L V6 PowerBoost (CN)</i>	<i>2022 F-150</i>
<i>Description and Operation</i>	<i>Procedure revision date: 07/23/2020</i>

Exhaust System - Overview

Overview

The exhaust system provides an exit for exhaust gases and reduces engine noise by passing exhaust gases through the catalytic converters and a muffler assembly.

The exhaust system consists of:

- Two catalytic converters (one integrated into the exhaust Y-pipe)
- An integrated muffler inlet pipe and heat exchanger
- A muffler assembly
- A tailpipe
- Exhaust isolators/hangers mounted on the vehicle frame

The catalytic converter plays a major role in the emission control system by operating as a gas reactor. Its function is to speed the heat-producing chemical reaction of components in the exhaust gases to reduce air pollutants.

The catalyst material inside the catalytic converter consists of a ceramic substrate.

The catalytic converter is designed to provide a long life. No maintenance is necessary.

The heat exchanger installed into the muffler inlet intermediate pipe assembly is used to heat engine coolant during engine warm up.

Sound insulators and shields, attached to the underbody, protect the vehicle from exhaust system heat and should be inspected at regular intervals to make sure they are not dented or out of position. If a sound