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2000 FORD Cougar OEM Service and Repair Workshop Manual

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Front Bumper - Raptor

501-19 Bumpers	2022 F-150
Removal and Installation	Procedure revision date: 06/18/2021

Front Bumper - Raptor

Removal

NOTE

Removal steps in this procedure may contain installation details.

1. Remove the upper active grille shutter.

Refer to: [Active Grille Shutter](#) (501-02 Front End Body Panels, Removal and Installation).

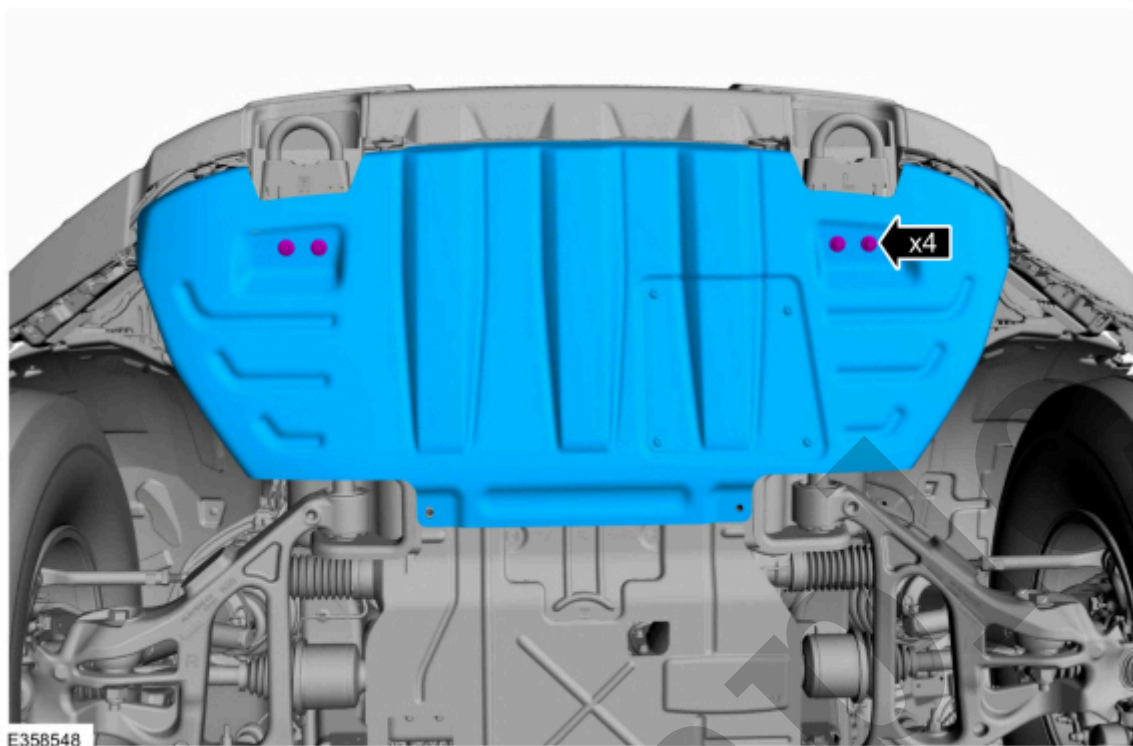
2. **NOTE**

The number and location of electrical connectors and retainers will vary depending on option content.

1. Disconnect the turbocharger bypass valve electrical connector.
2. Detach the wiring harness retainers.
3. Disconnect the front bumper harness electrical connector.
4. Disconnect the lower active grille shutter actuator electrical connector and position the front bumper wiring harness aside.

4. Remove the bolts and the front underbody skid plate.

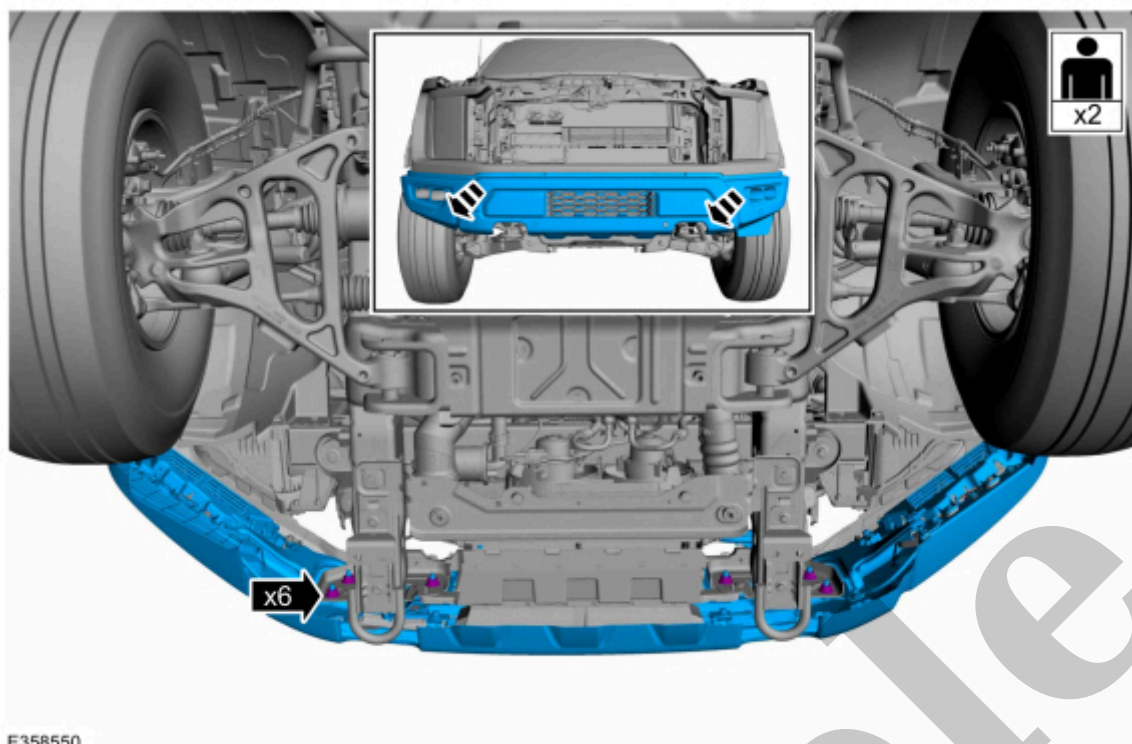
Torque : 35 lb.ft (48 Nm)



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

5. On both sides.

Remove the bolts and the front bumper arm outer bracket.



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

Installation

1. To install, reverse the removal procedure.
2. On both sides.

Install the front bumper arm outer bracket and tighten the bolts in the sequence shown.

Torque : 97 lb.in (11 Nm)



Front Bumper

501-19 Bumpers	2022 F-150
Removal and Installation	Procedure revision date: 10/2/2020

Front Bumper

Removal

NOTE

Removal steps in this procedure may contain installation details.

1. Remove the radiator grille.

Refer to: [Radiator Grille](#)(501-08 Exterior Trim and Ornamentation, Removal and Installation).

2. **NOTE**

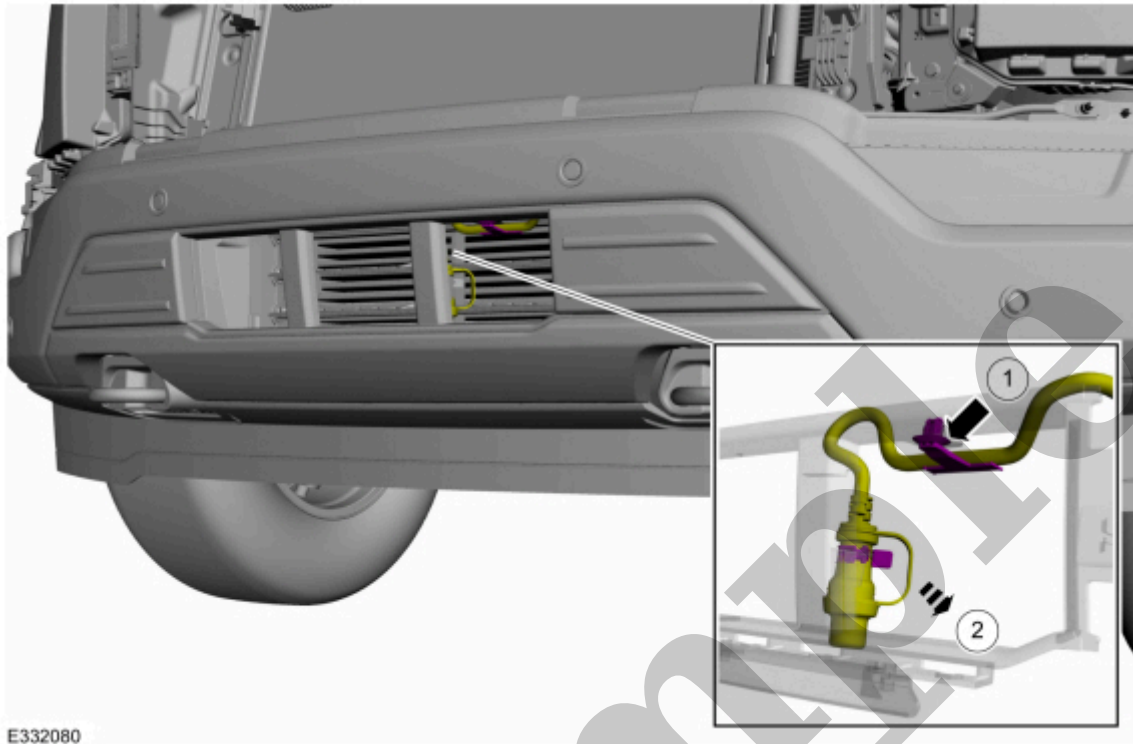
The number and location of electrical connectors and retainers will vary depending on option content.

1. Disconnect the turbocharger bypass valve electrical connector.
2. Detach the wiring harness retainers.
3. Disconnect the front bumper harness electrical connector.
4. Disconnect the lower active grille shutter actuator electrical connector and position the front bumper wiring harness aside.

4. If equipped.

1. Detach the wiring harness retainer.

2. Remove the engine block heater and position the engine block heater wiring harness aside.



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

5. Raise the vehicle on a hoist.

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

6. With the help of an assistant.

Remove the nuts and the front bumper.

Torque : 76 lb.ft (103 Nm)

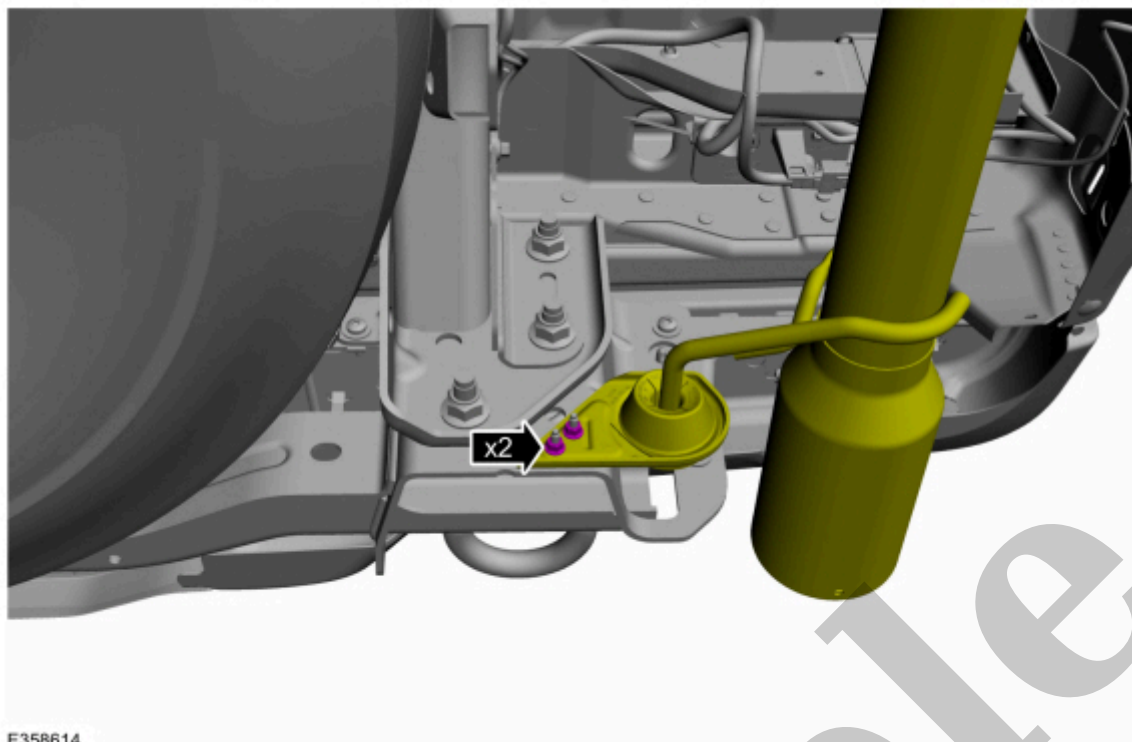
4. If any sensor fails the check, diagnose the sensor fault.

Refer to: [Parking Aid](#)(413-13A Parking Aid - Vehicles With: Rear Parking Aid, Diagnosis and Testing).

Refer to: [Parking Aid](#)(413-13C Parking Aid - Vehicles With: Active Park Assist, Diagnosis and Testing).

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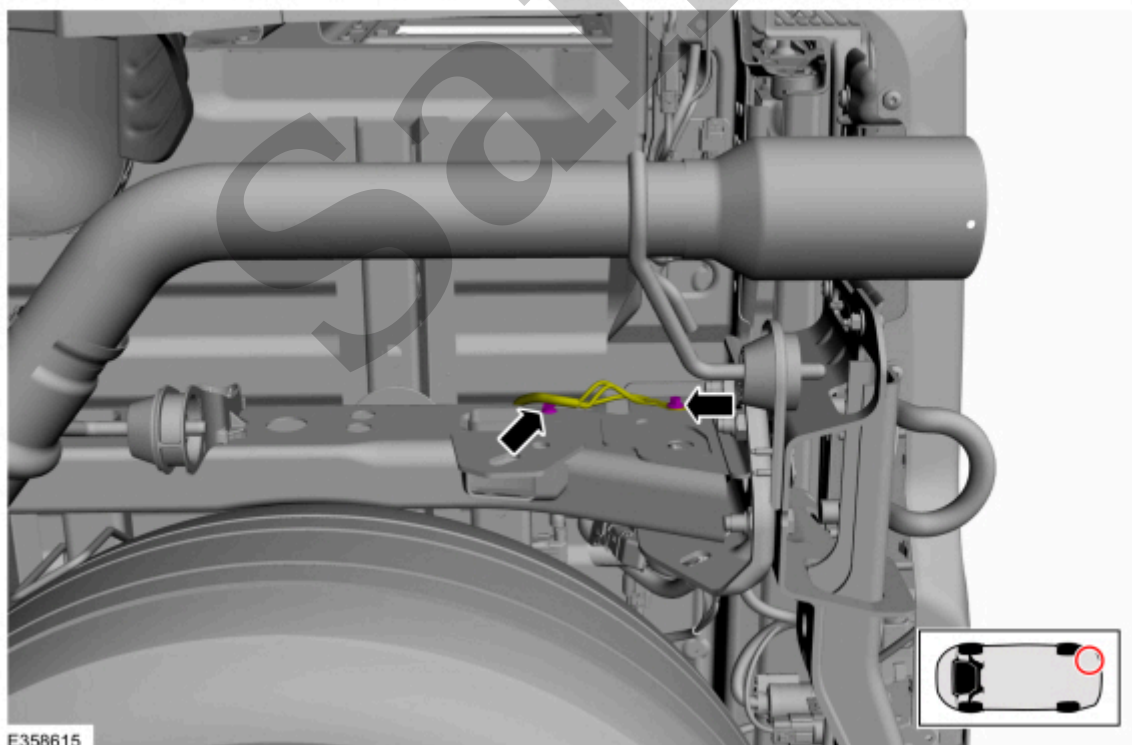
Sample



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

3. Remove the bolt, separate the wiring harness retainer and position the wiring harness aside.

Torque : 106 lb.in (12 Nm)



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

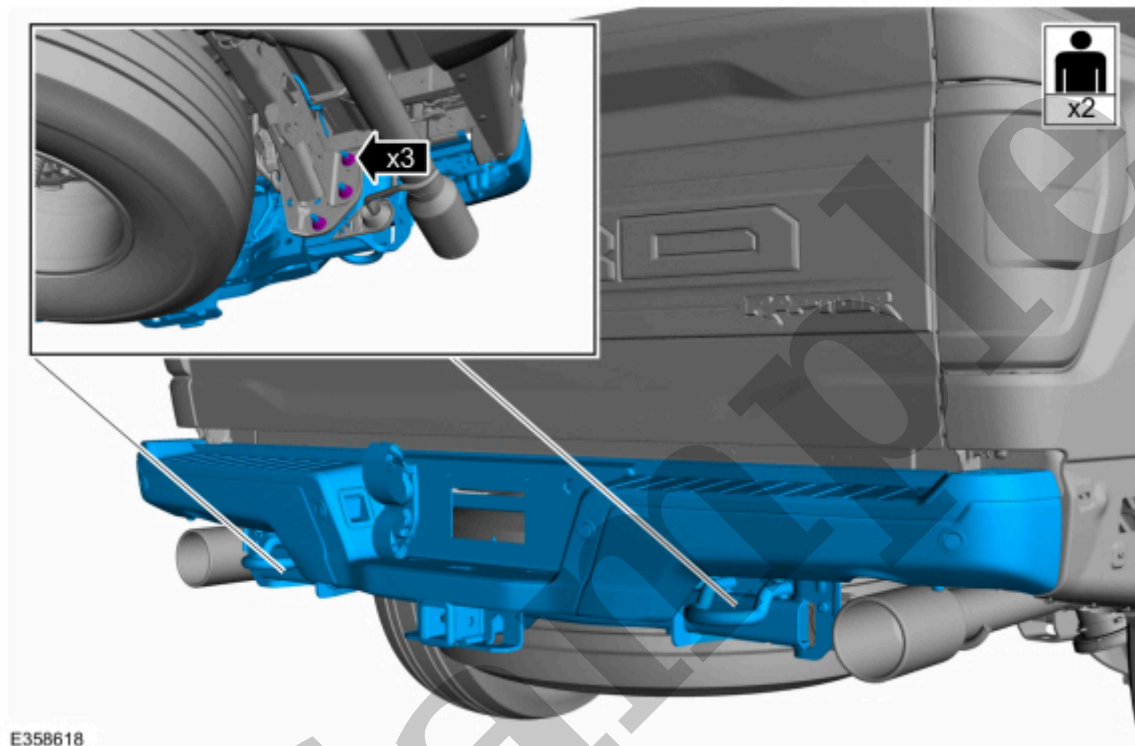
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6. **NOTE**

This step requires the aid of another technician.

Remove the nuts and the rear bumper assembly.

Torque : 129 lb.ft (175 Nm)



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

Installation

1. To install, reverse the removal procedure.

Vehicles With: Rear Parking Aid

2. If replacing the rear bumper.

Check the alignment of the rear parking aid sensors.

Refer to: [Azimuth System Check](#)(413-13A Parking Aid - Vehicles With: Rear Parking Aid, General Procedures).

Refer to: [Elevation System Check](#)(413-13A Parking Aid - Vehicles With: Rear Parking Aid, General Procedures).



Rear Bumper

501-19 Bumpers	2022 F-150
Removal and Installation	Procedure revision date: 10/2/2020

Rear Bumper

Removal

NOTE

Removal steps in this procedure may contain installation details.

All vehicles

1. Raise the vehicle on a hoist.

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

2. Remove the bolt, separate the wiring harness retainer and position the wiring harness aside.

Torque : 106 lb.in (12 Nm)