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2020.0 DEFENDER (LE), 502-00

UNI-BODY, SUBFRAME AND MOUNTING SYSTEM

REAR SUBFRAME (G2426742)

mcx30.com

REMOVAL AND INSTALLATION

GENERAL EQUIPMENT

EQUIPMENT NAME
Suspension Spring Compressor
Transmission jack

PART(S)

STEP	PART NAME	QUALIFICATION	QUANTITY
Step 3	Upper control arm to subframe nuts and bolts	All vehicles	2
Step 4	Rear lower arm to subframe nut and bolt	All vehicles	2
Step 5	Rear lower control arm nut and bolt	All vehicles	4
Step 9	Rear stabilizer bar to subframe bolts	All vehicles	2
Step 9	Rear stabilizer bar to subframe nuts	All vehicles	2
Step 15	Rear subframe to body bolts	All vehicles	4
Step 17	Shock absorber nut and bolt	All vehicles	2
Step 21	Air line connector(s)	Vehicles with air suspension	2
Step 22	Driveshaft to rear differential bolts	All vehicles	6

REMOVAL

⚠ CAUTION:

Only tighten the nuts and bolts when the suspension is at the normal ride height. Failure to follow this instruction may result in damage to the vehicle.

△ NOTES:

- This procedure contains some variation in the illustrations depending on the vehicle specification, but the essential information is always correct.
- This procedure contains illustrations showing certain components removed to provide extra clarity.
- Before disconnecting any components, make sure the area is clean and free from foreign material. When disconnected all openings must be sealed

The following step(s) applies to:

Vehicles with air suspension

1. Use the Jaguar Land Rover (JLR) approved diagnostic system, to depressurise the air suspension.
Refer to: [Air Suspension System Depressurize and Pressurize](#) (204-05 Vehicle Dynamic Suspension, General Procedures).

The following step(s) applies to:

All vehicles

2. Disconnect the startup battery ground cable.
Refer to: [Startup Battery Disconnect and Connect](#) (414-00 Battery and Charging System - General Information, General Procedures).

3. Raise and support the vehicle on a suitable 2-post lift.
Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).

4. Remove the rear brake pads.
Refer to: [Brake Pads - Vehicles With: 325mm Brake Disc](#) (206-04 Rear Disc Brake, Removal and Installation).
Refer to: [Brake Pads - Vehicles With: 350mm Brake Disc](#) (206-04 Rear Disc Brake, Removal and Installation).
Refer to: [Brake Pads - Vehicles With: 365mm Brake Disc](#) (206-04 Rear Disc Brake, Removal and Installation).

5. Remove the exhaust system.
Refer to: [Exhaust System](#) (309-00C Exhaust System - INGENIUM I6 3.0L Petrol, Removal and Installation).

6. Disconnect the rear driveshaft from the rear differential.
Refer to: [Driveshaft to Rear Differential Disconnection](#) (205-00 Driveline System - General Information, General Procedures).

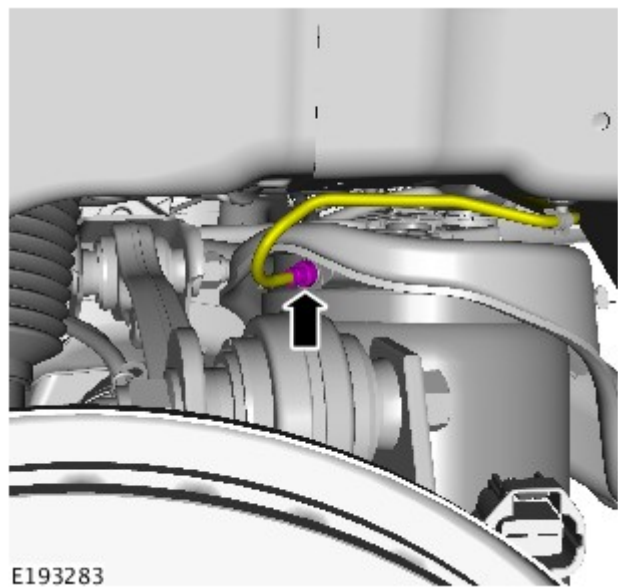
The following step(s) applies to:

Vehicles with air suspension

7.

NOTE:

Repeat the step for the other side.

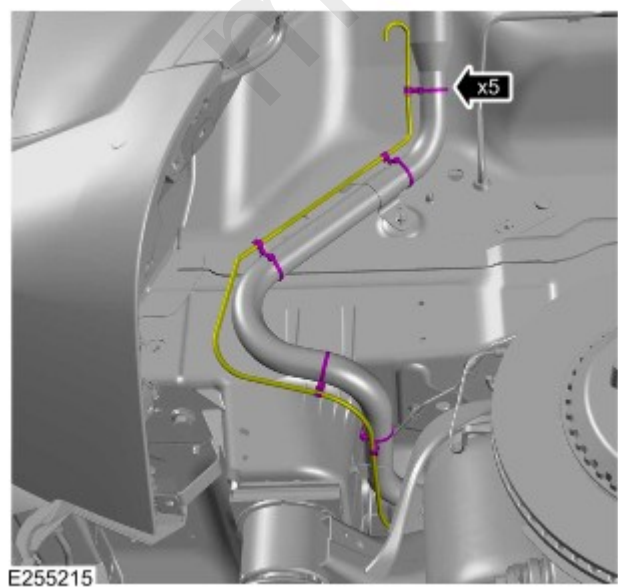


Disconnect and discard the air line connector.

The following step(s) applies to:

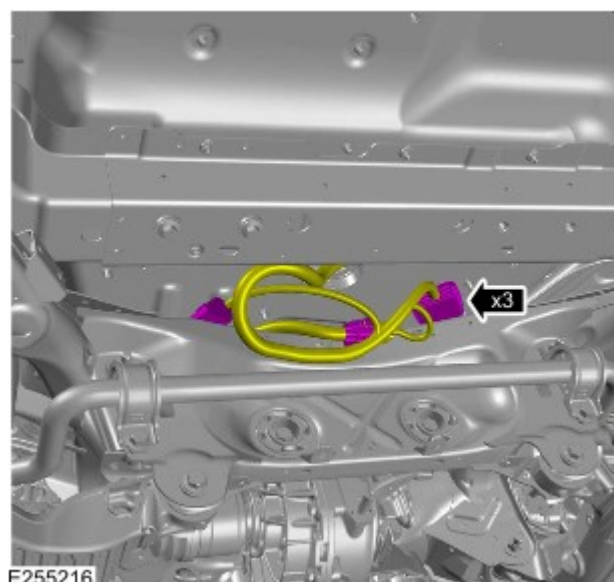
All vehicles

8.



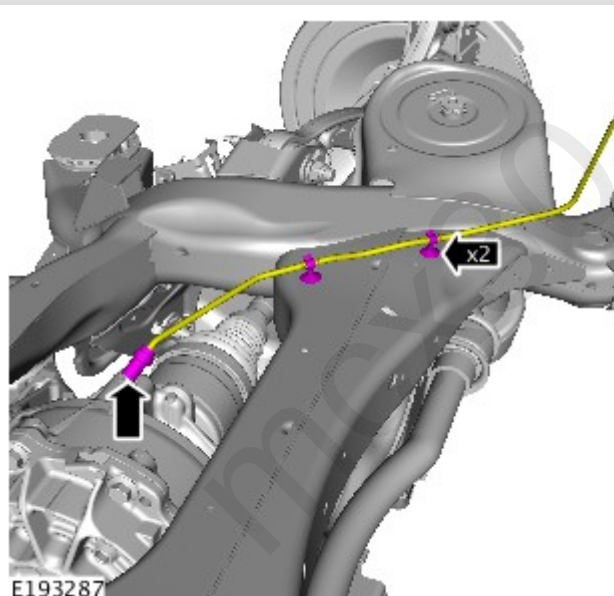
Release the breather hose from the 5 clips.

9.



Disconnect the 3 electrical connectors.

10.

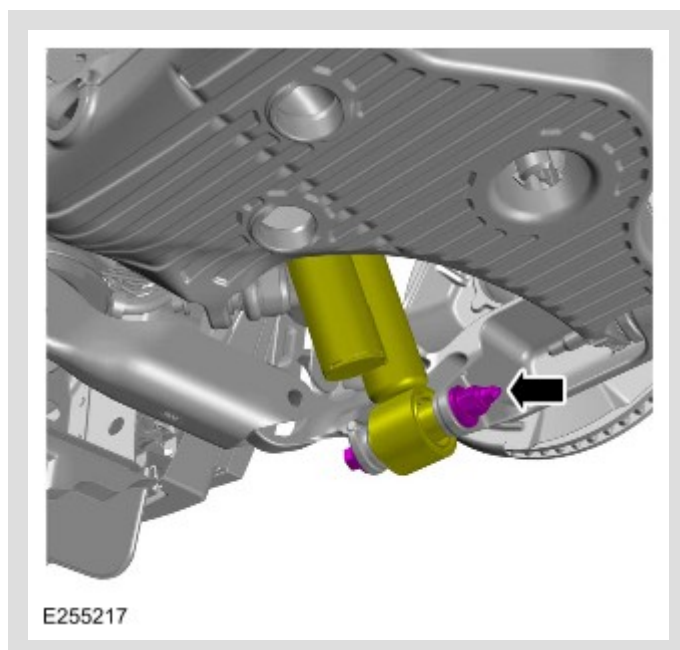


- Disconnect the breather hose.
- Release the breather hose from the 2 clips.

11.

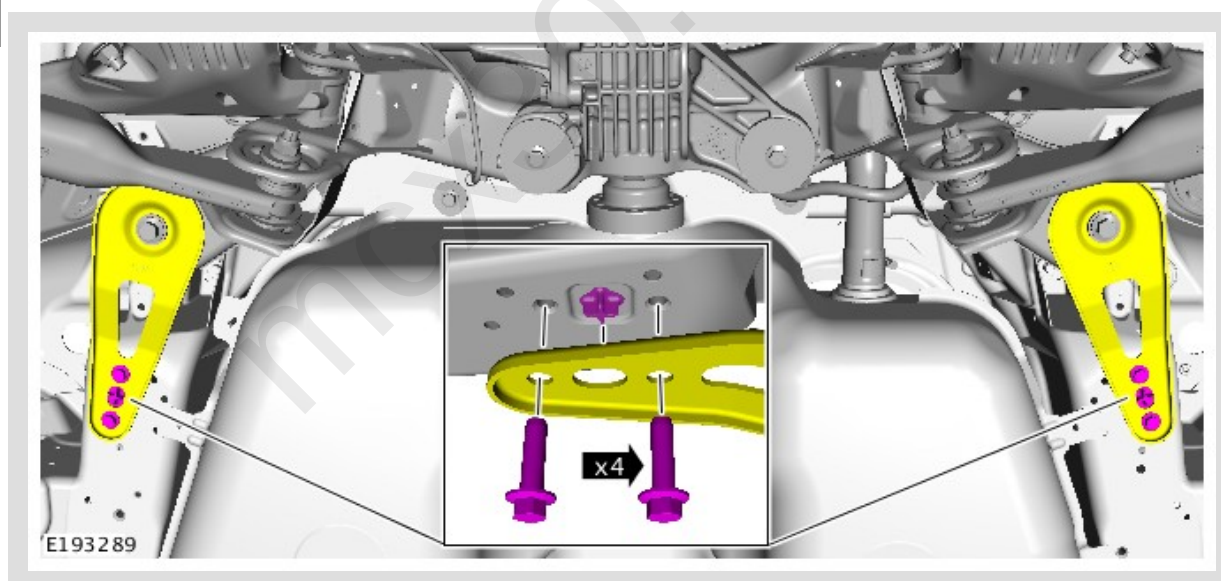
 NOTE:

Repeat the step for the other side.

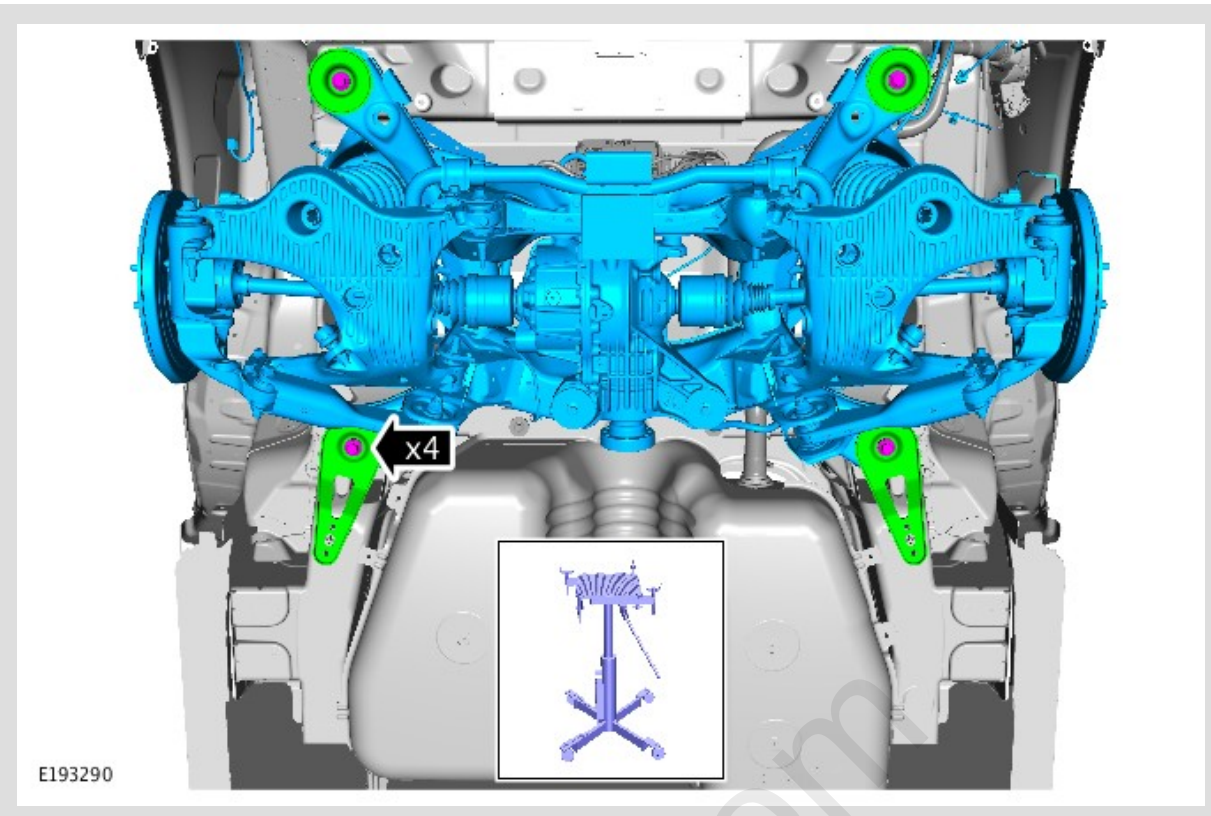


Remove and discard the nut and bolt.

12.



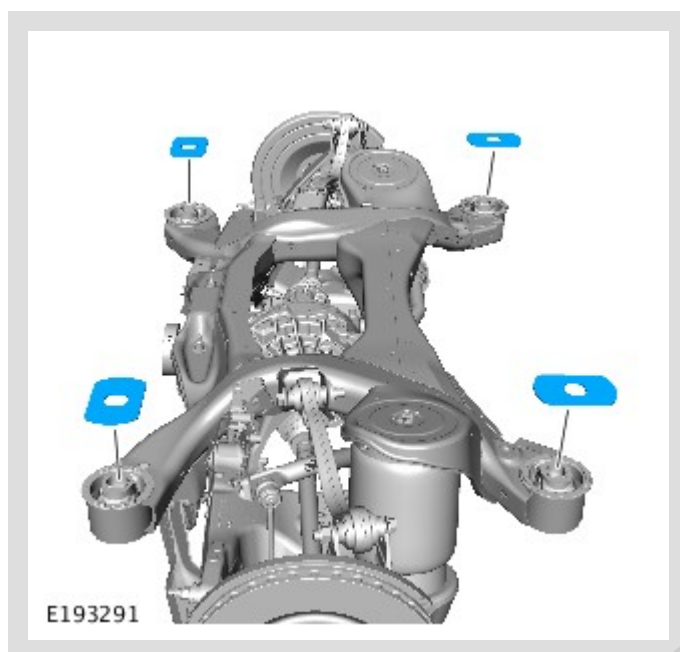
Remove the rear subframe 4 support bracket bolts.



- Use a suitable tool to support the rear subframe.
General Equipment: [Transmission jack](#)
- Remove and discard the 4 rear subframe bolts.
- With assistance remove the rear subframe.

 NOTES:

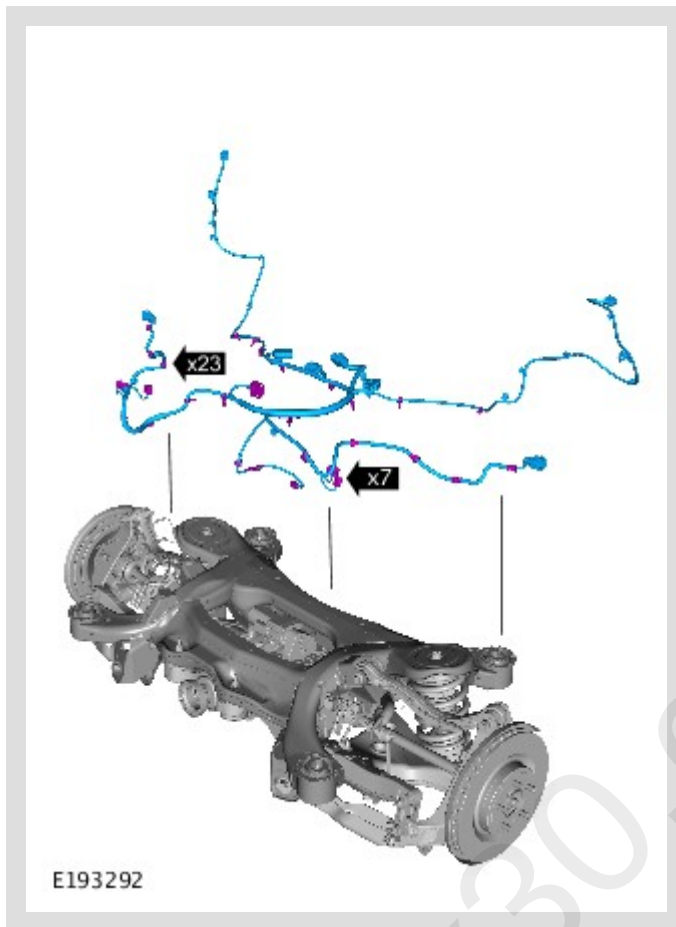
- Do not disassemble further if the component is removed for access only.
- Note the orientation of the components.



Remove the 4 spacers.

 NOTE:

Note the orientation of the components.



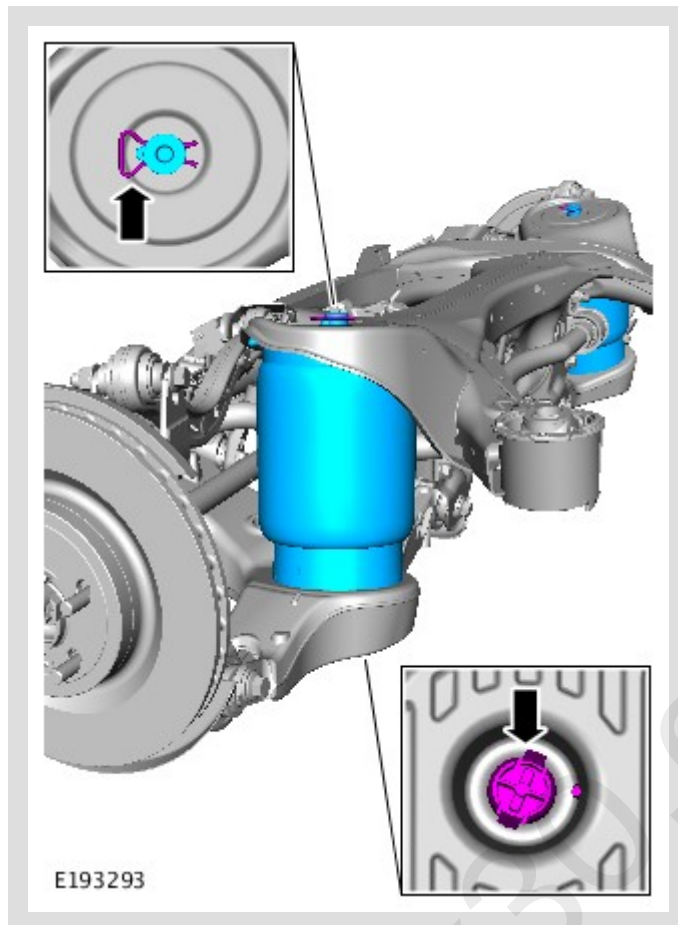
- Release the clips.
- Disconnect the 7 electrical connectors.
- Remove the wiring harness from the rear subframe.

The following step(s) applies to:

Vehicles with air suspension

 NOTE:

Repeat the step for the other side.



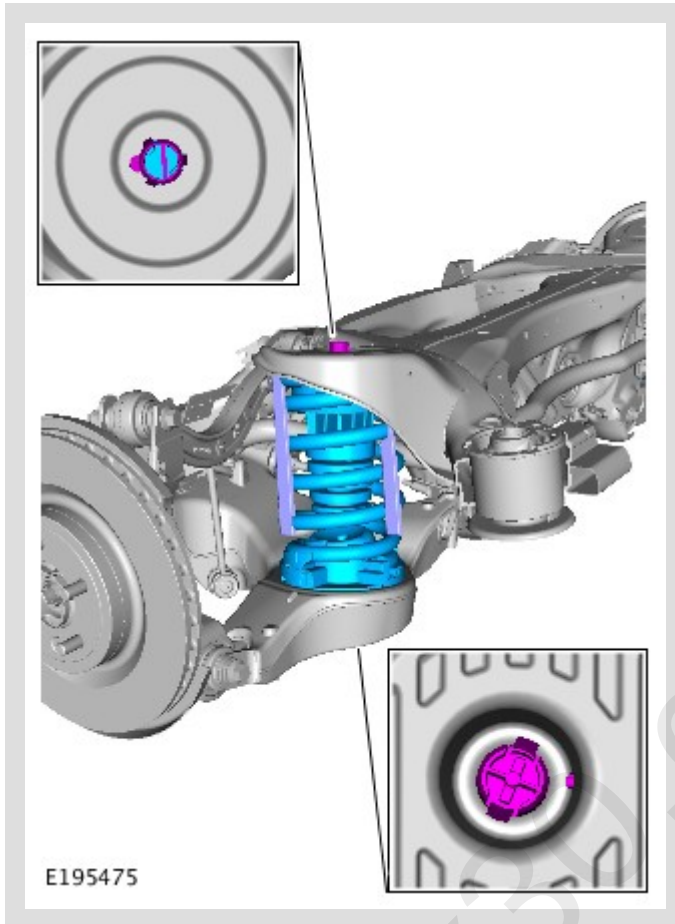
- Remove the clip on the top.
- Release the clip on the bottom.
- Remove the rear air spring.

The following step(s) applies to:

Vehicles with coil suspension

NOTE:

Repeat the step for the other side.



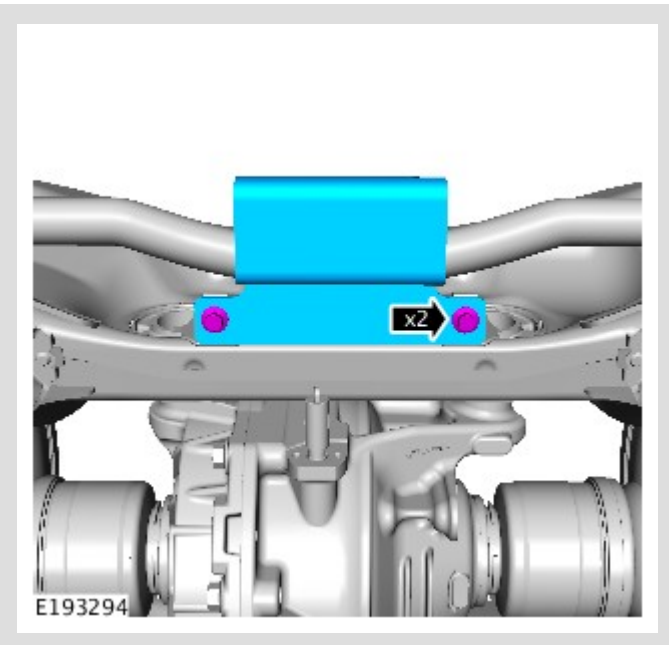
Remove the coil springs using two suspension spring compressors located on opposite sides of the spring. Make sure the suspension spring compressors are correctly installed. Refer to manufactures instructions.

General Equipment: [Suspension Spring Compressor](#)

The following step(s) applies to:

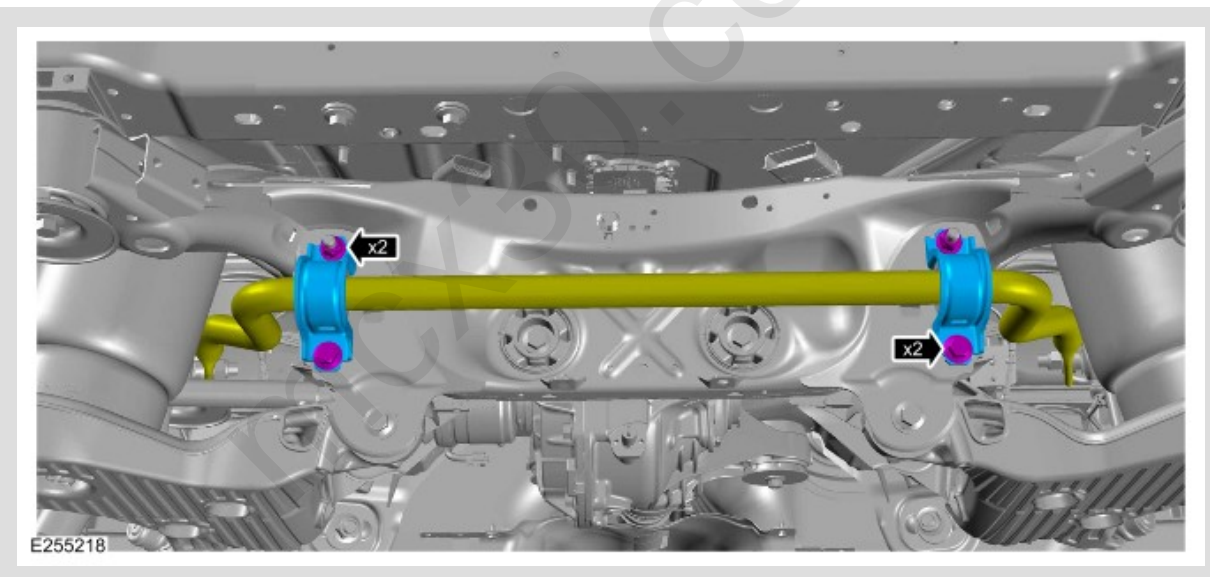
All vehicles

18.



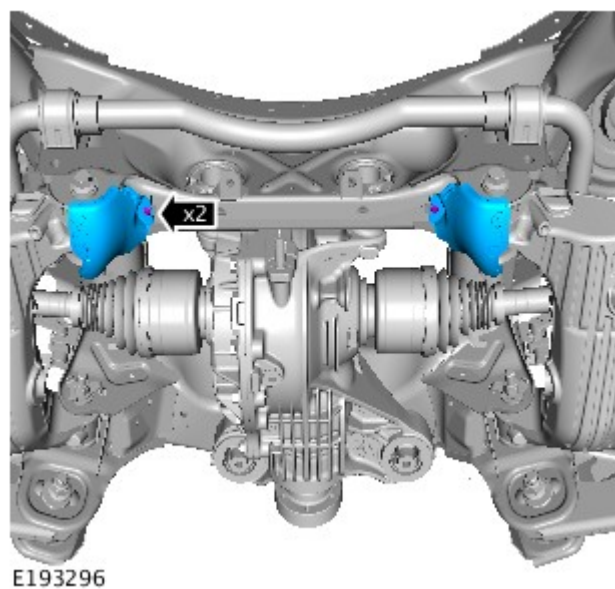
- Remove the 2 bolts.
- Remove the shield.

19.



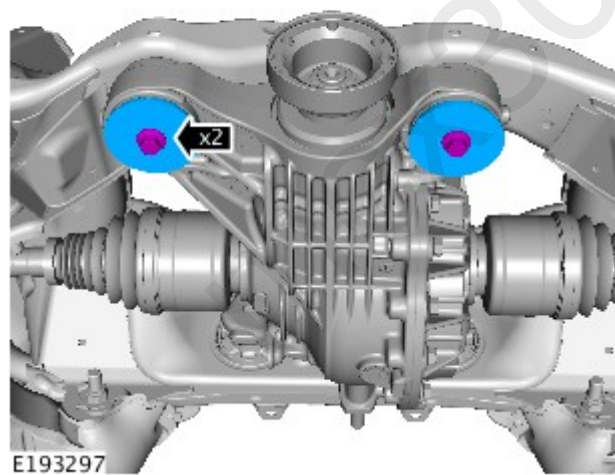
- Remove and discard the 2 bolts.
- Remove and discard the 2 nuts.

20.



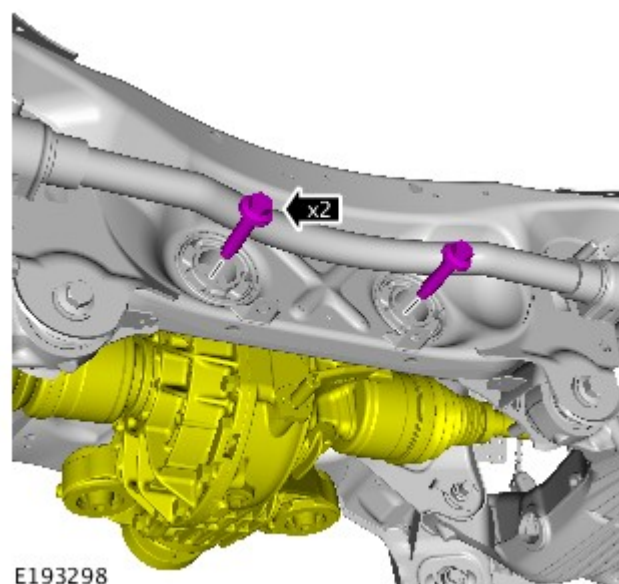
- Remove the 2 pop rivets.
- Remove the 2 shields.

21.



Remove the 2 bolts.

22.

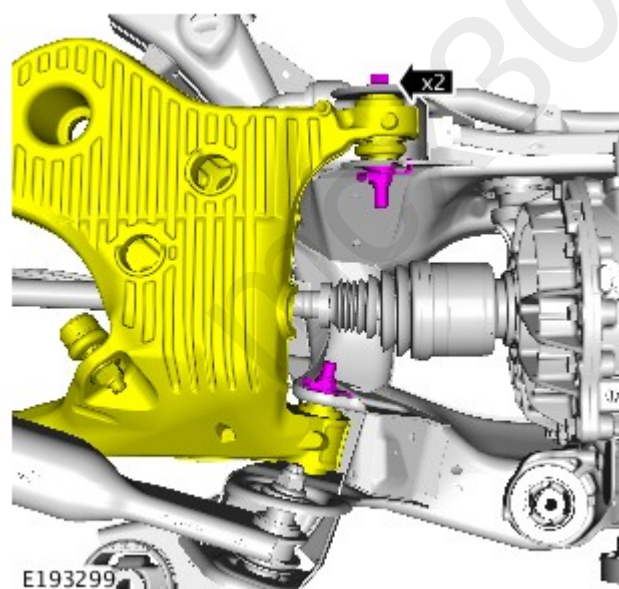


Remove the 2 bolts.

23.

△ NOTE:

Repeat the step for the other side.

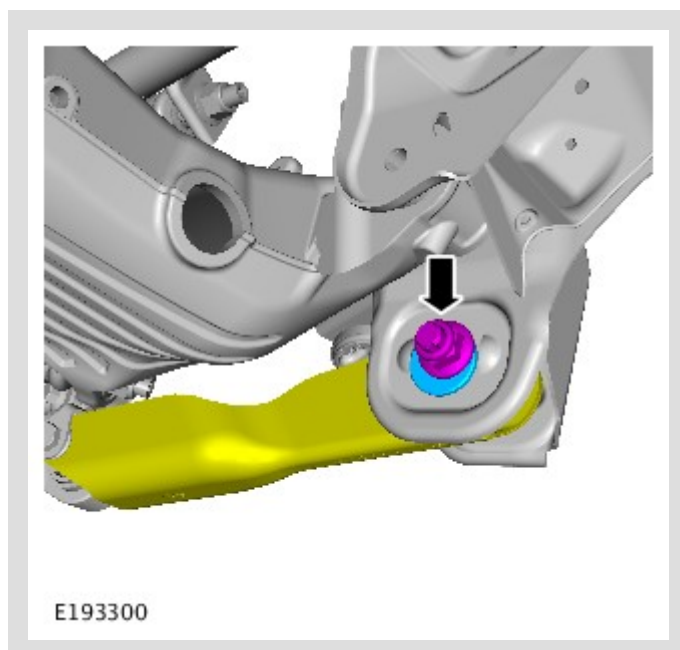


Remove and discard the 2 nuts and 2 bolts.

24.

 **NOTE:**

Repeat the step for the other side.

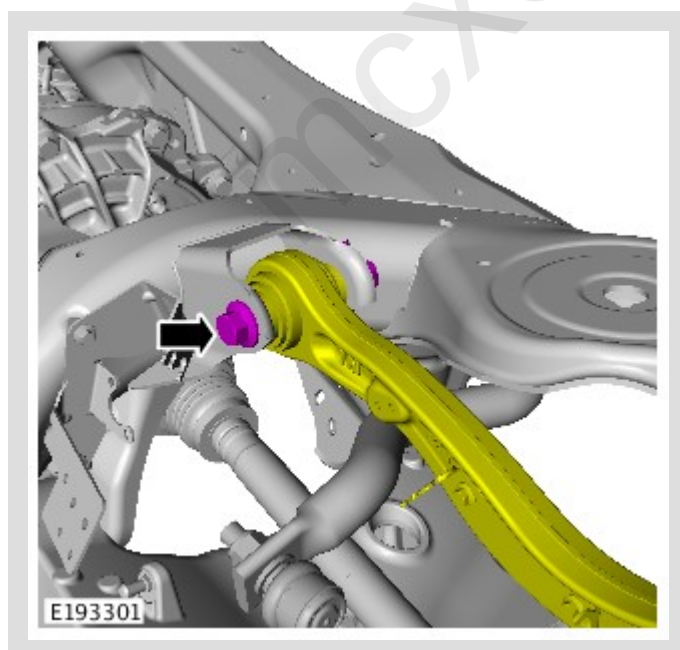


Remove and discard the nut and bolt.

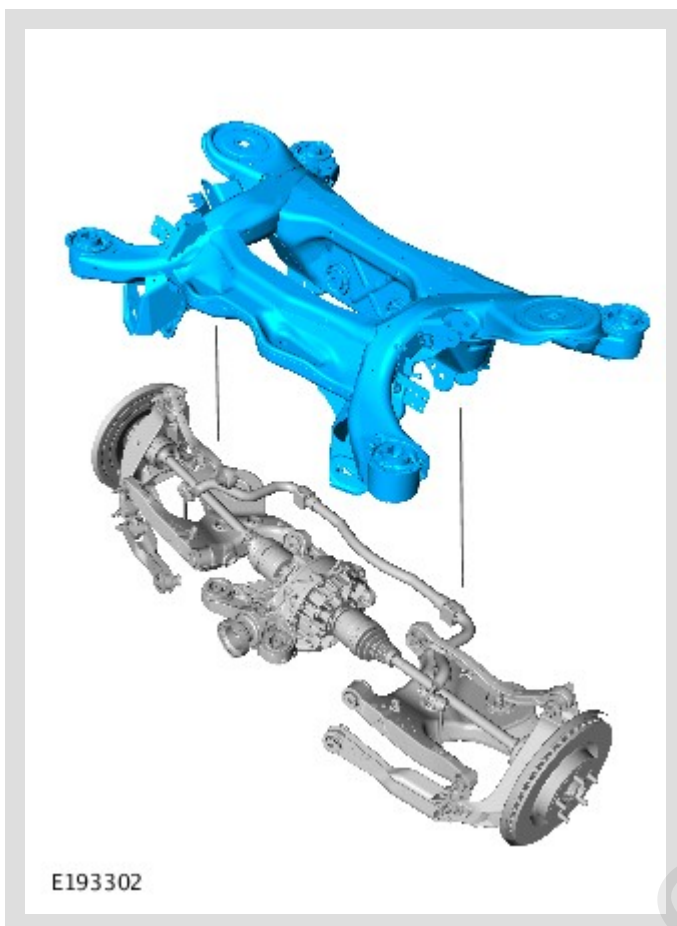
25.

 **NOTE:**

Repeat the step for the other side.



Remove and discard the nut and bolt.

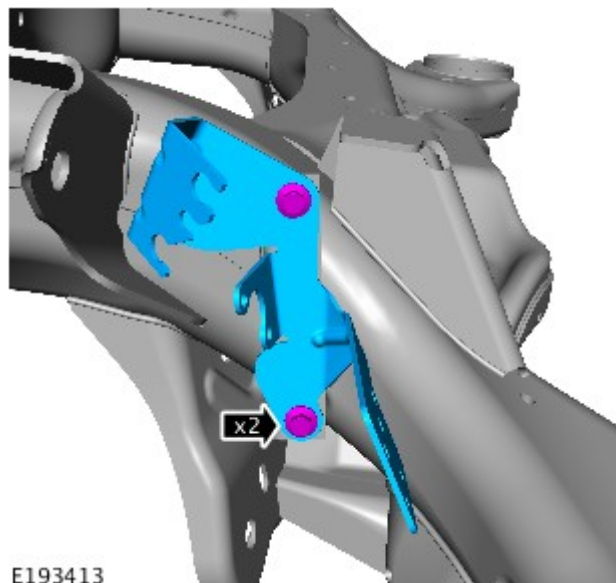


With assistance, remove the rear subframe.

27.

 NOTE:

Repeat the step for the other side.



- Remove the 2 bolts.
- Remove the bracket.

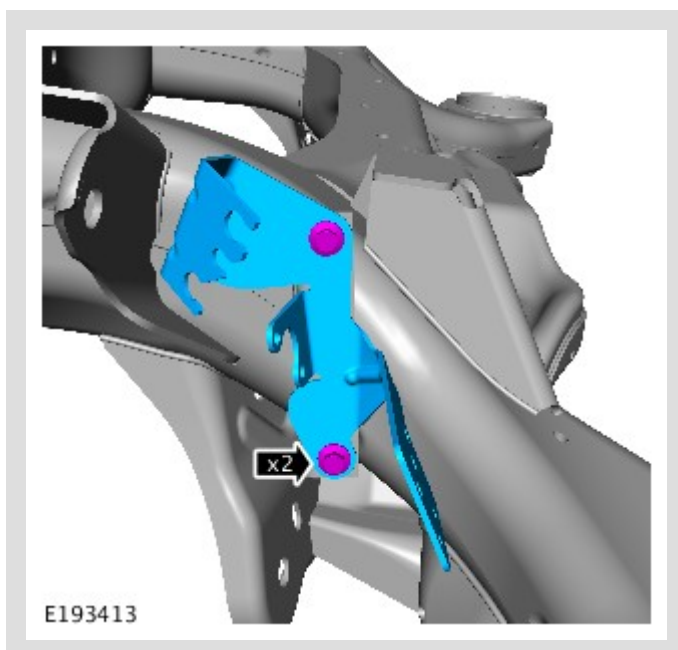
INSTALLATION

The following step(s) applies to:
All vehicles

1.

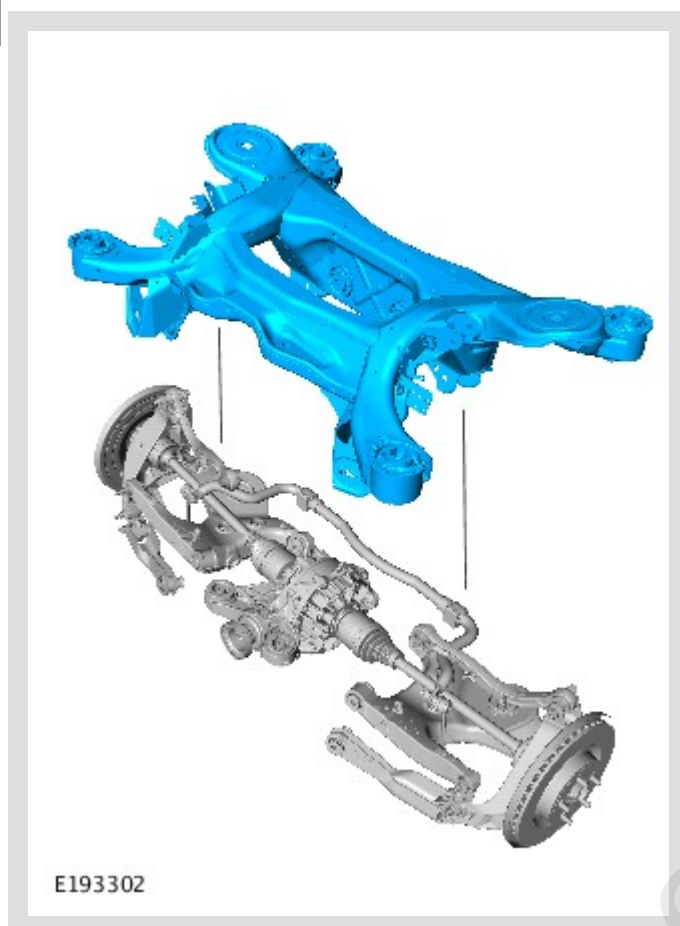
 NOTE:

Repeat the step for the other side.



- Install the bracket.
- Install and tighten the 2 bolts.

Torque: 10Nm



With assistance, install the rear subframe.

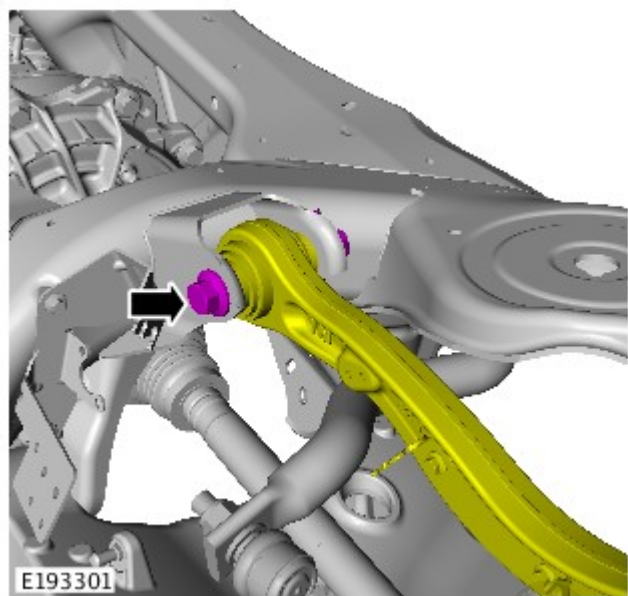
3.

⚠ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.

△ NOTE:

Repeat the step for the other side.



Install and hand tighten the new bolt and nut.

Renew Part: *Upper control arm to subframe nuts and bolts* Quantity: 2.

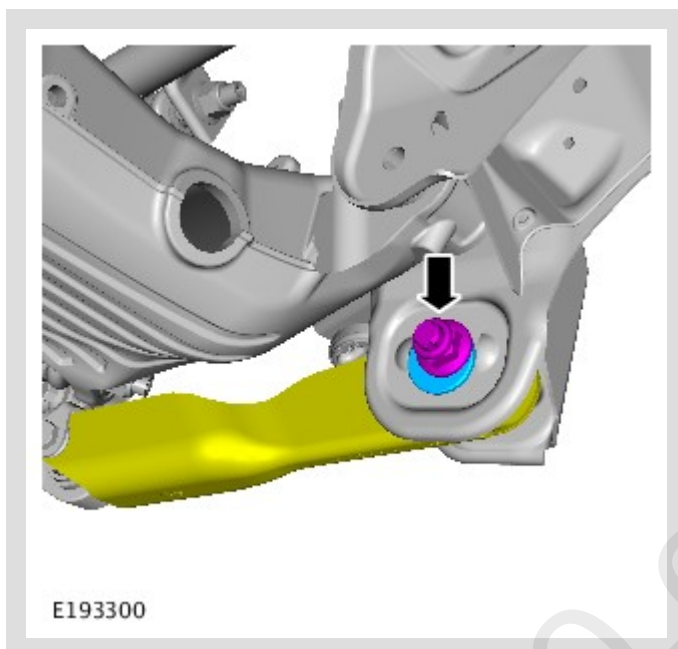
4.

⚠ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.

△ NOTE:

Repeat the step for the other side.



Install and hand tighten the new nut and bolt.

Renew Part: *Rear lower arm to subframe nut and bolt* Quantity: 2.

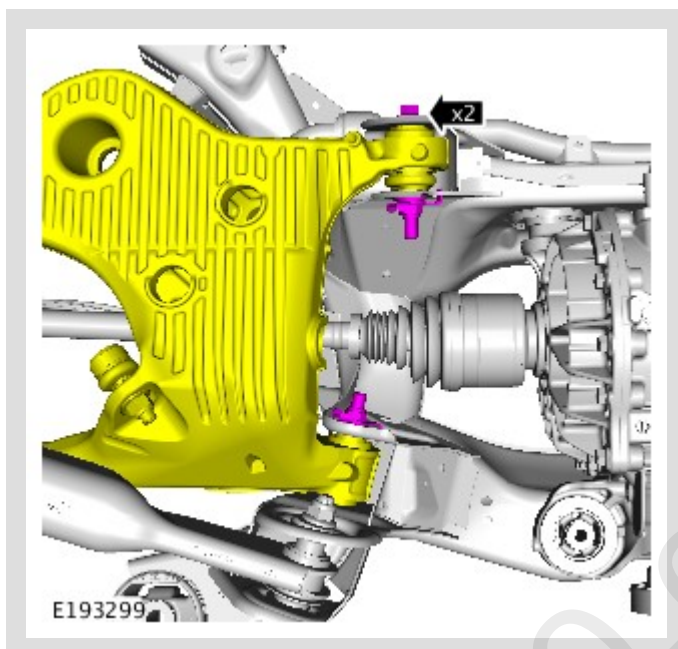
5.

⚠ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.

△ NOTE:

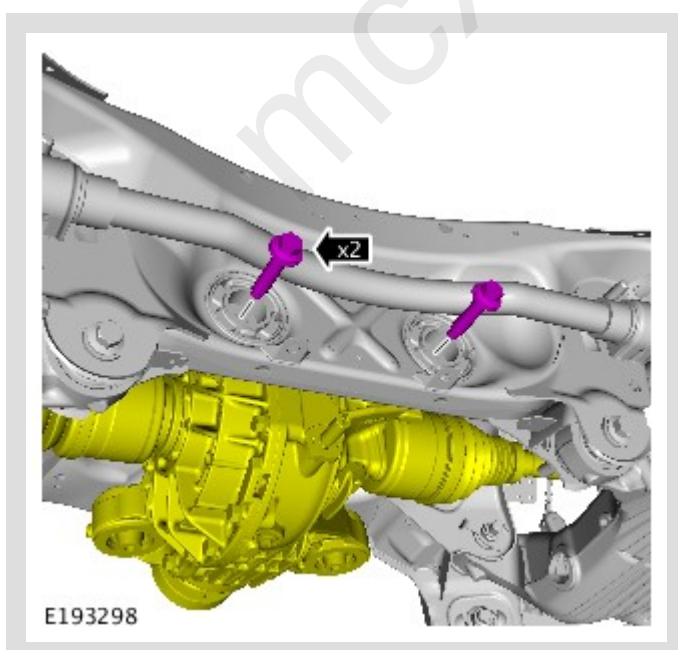
Repeat the step for the other side.



Install and hand tighten the new nuts and bolts.

Renew Part: *Rear lower control arm nut and bolt* Quantity: 4.

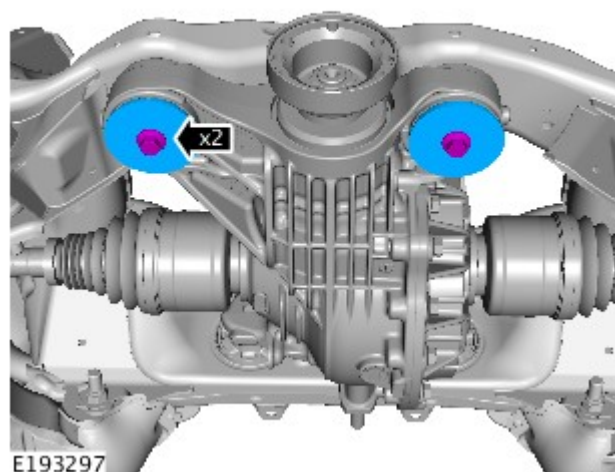
6.



Install and tighten the 2 bolts.

Torque: **170Nm**

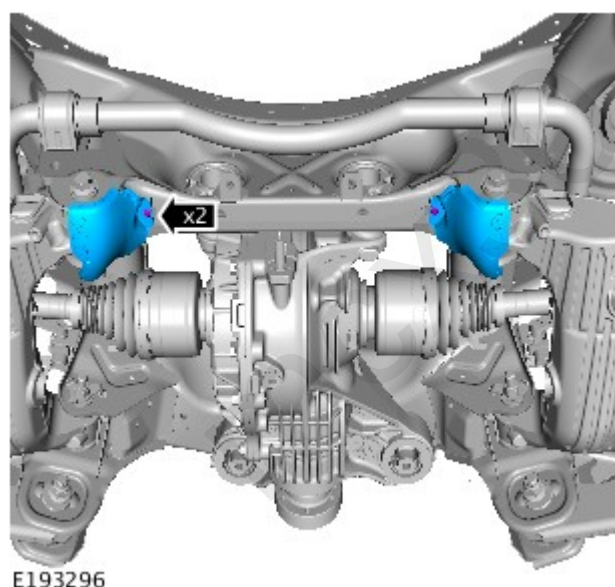
7.



Install and tighten the 2 bolts.

Torque: 110Nm

8.

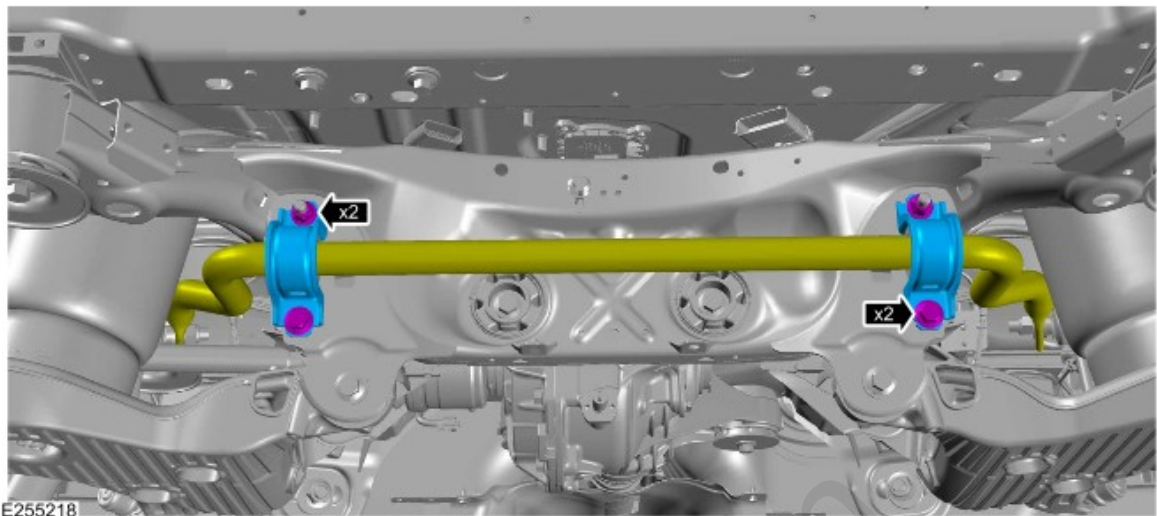


- Install the 2 shields.
- Install and tighten the 2 pop rivets.

9.

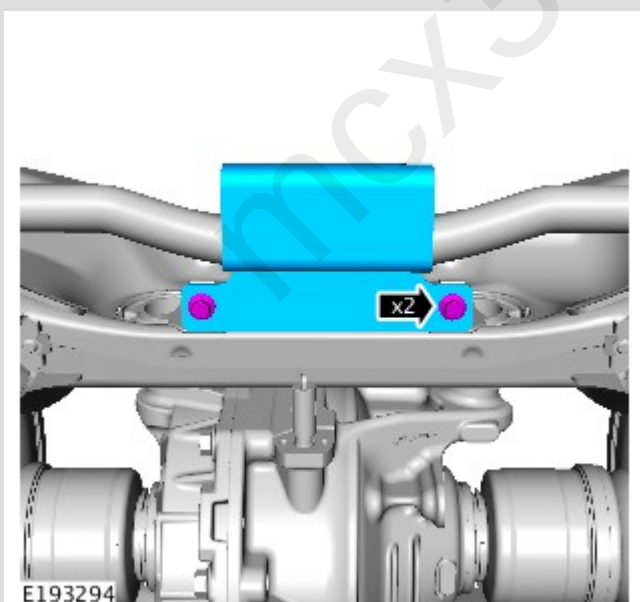
⚠ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.



- Install and hand tighten the 2 new bolts.
Renew Part: [Rear stabilizer bar to subframe bolts](#) Quantity: 2.
- Install and hand tighten the 2 new nuts.
Renew Part: [Rear stabilizer bar to subframe nuts](#) Quantity: 2.

10.



- Install the shield.
- Install and tighten the 2 bolts.
Torque: 10Nm

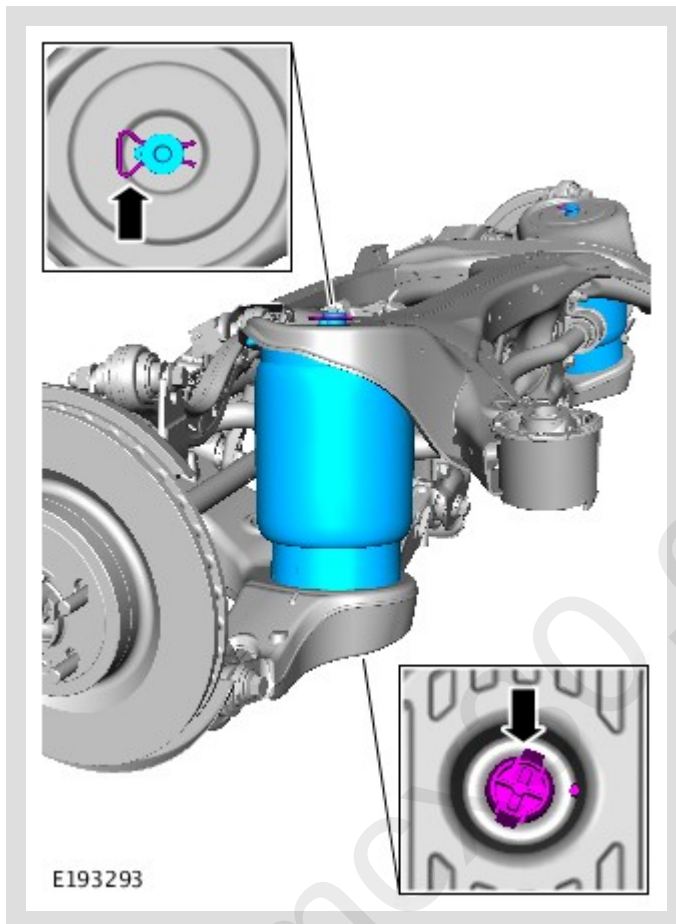
The following step(s) applies to:

Vehicles with air suspension

11.

NOTE:

Repeat the step for the other side.



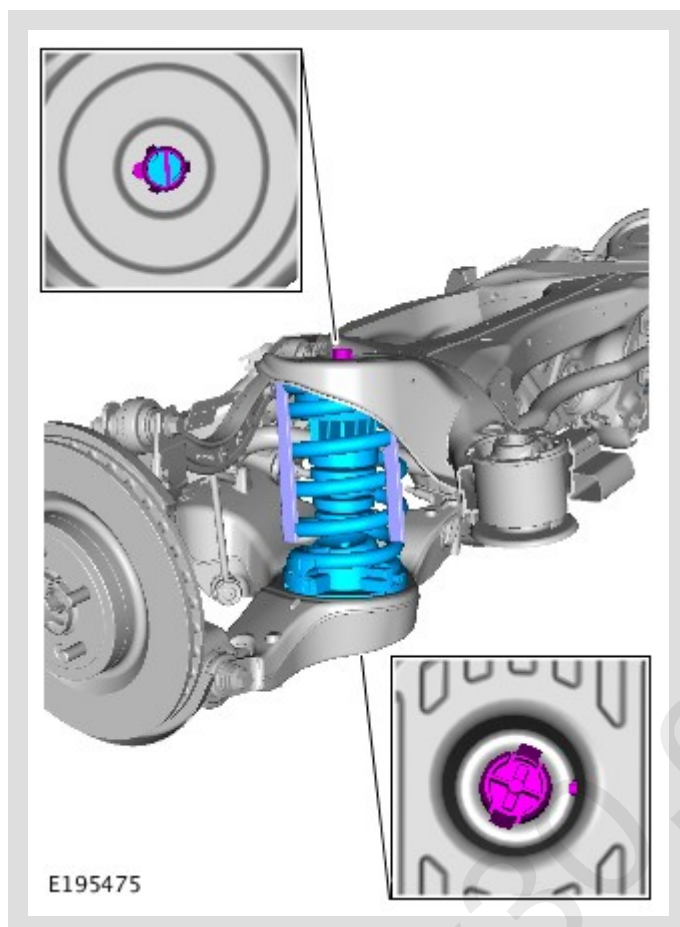
- Install the rear air spring.
- Install the clip on the top.
- Secure the clip on the bottom.

The following step(s) applies to:

Vehicles with coil suspension

 NOTE:

Repeat the step for the other side.

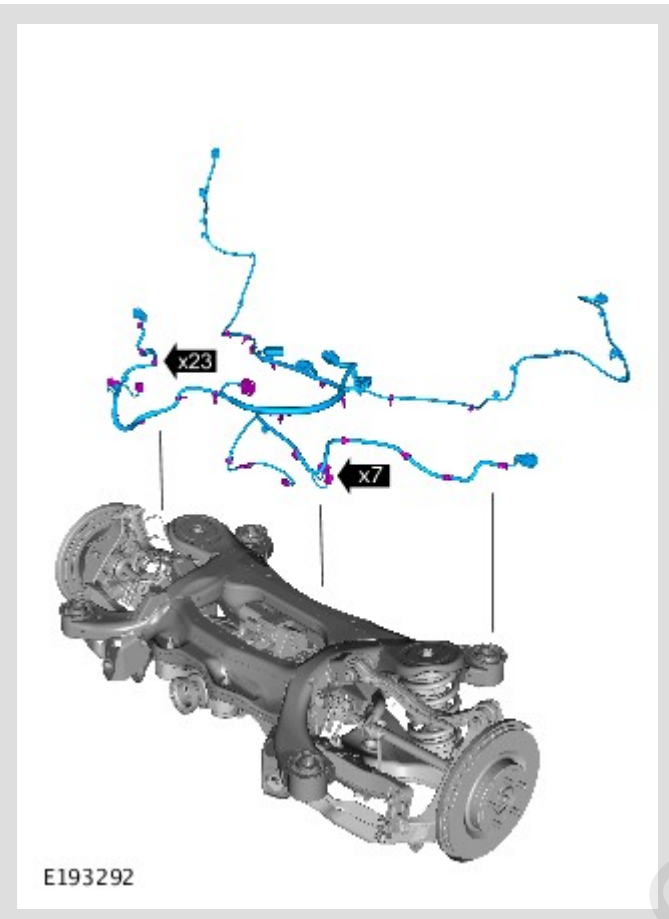


Install the coil springs using two suspension spring compressors located on opposite sides of the spring. Make sure the suspension spring compressors are correctly installed. Refer to manufactures instructions.
General Equipment: [Suspension Spring Compressor](#)

The following step(s) applies to:

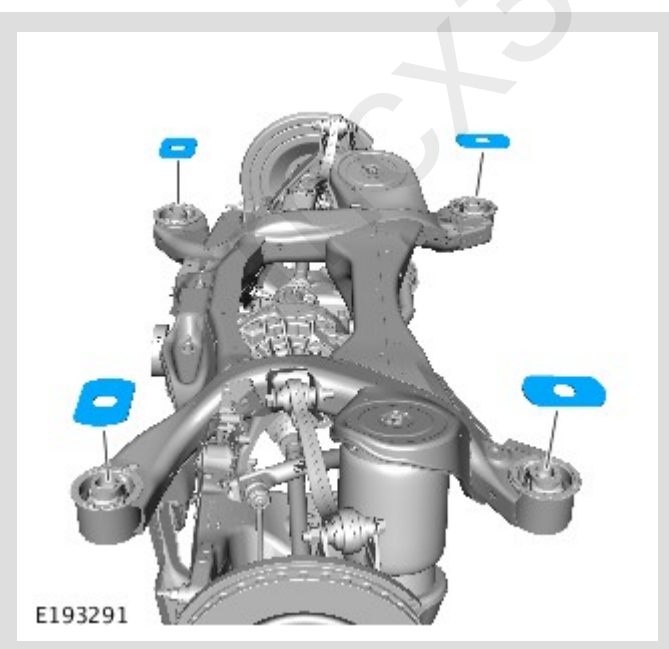
All vehicles

13.



Install the wiring harness to the rear subframe.

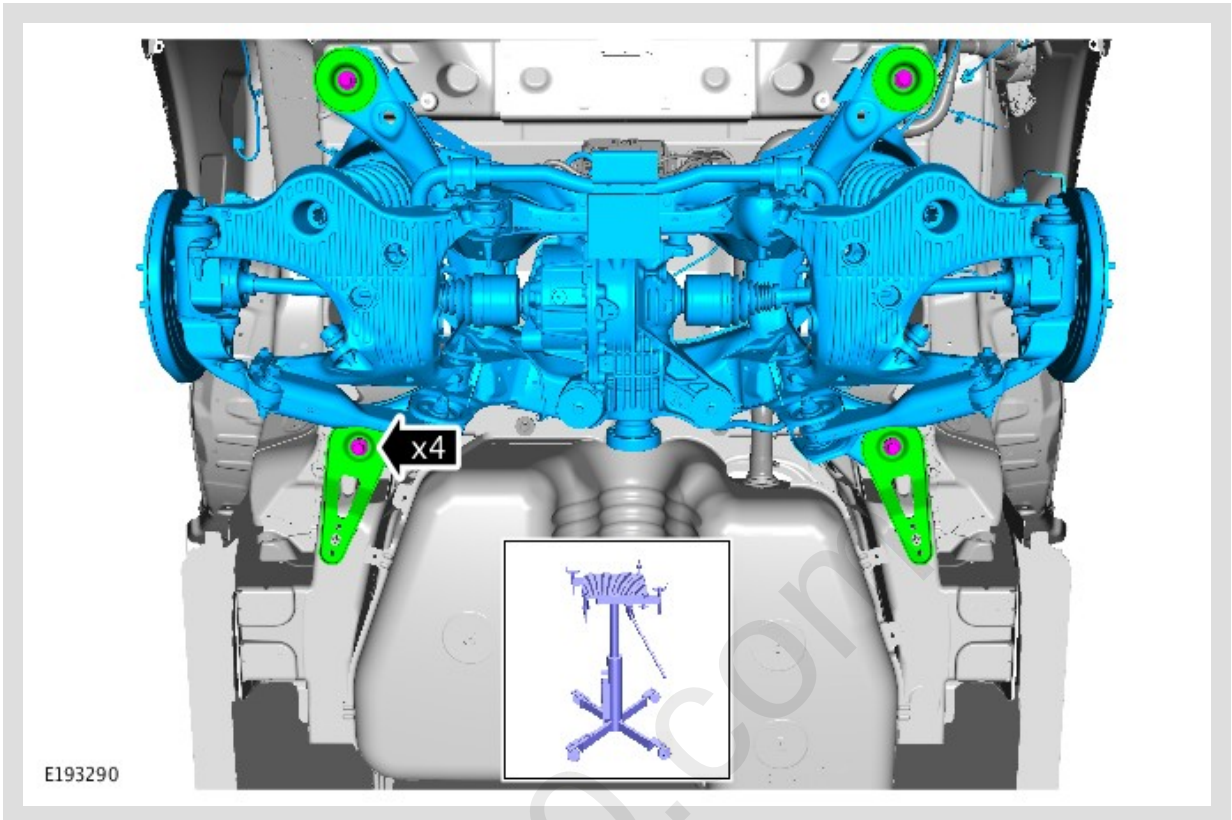
14.



Install the 4 spacers.

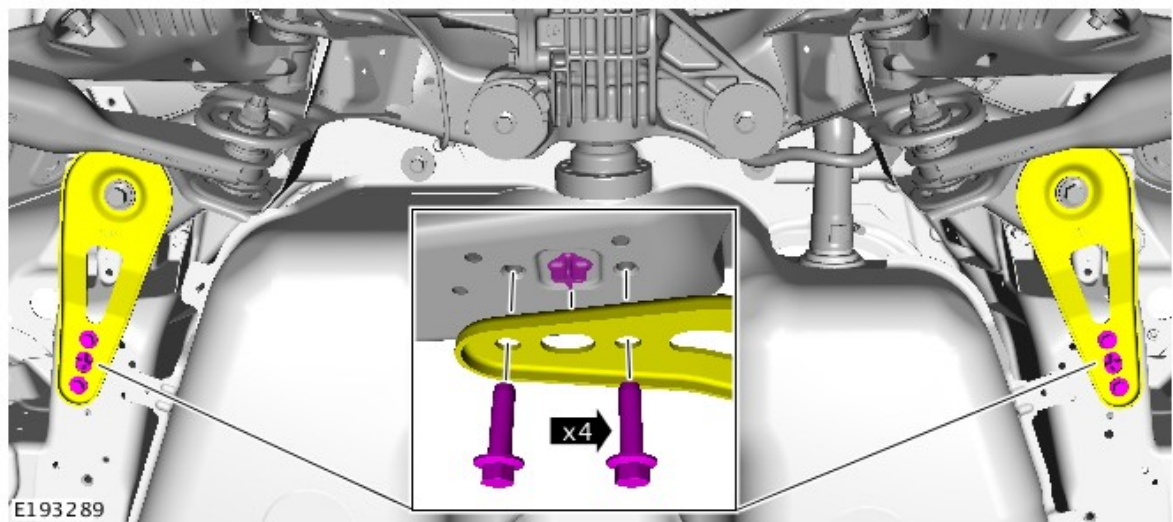
ⓘ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.



- Use a suitable tool to support the rear subframe.
General Equipment: [Transmission jack](#)
- With assistance install the rear subframe.
- Install and hand tighten the 4 new rear subframe bolts.
Renew Part: [Rear subframe to body bolts](#) Quantity: 4.

16.



Install and tighten the rear subframe 4 support bracket bolts.

Torque: 60Nm

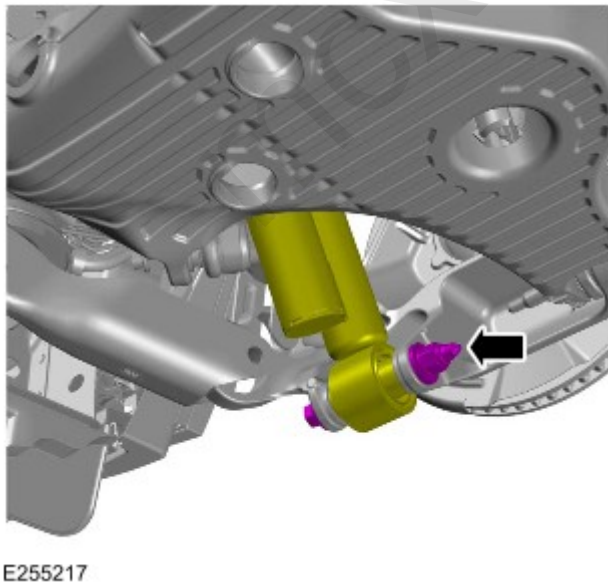
17.

⚠ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.

⚠ NOTE:

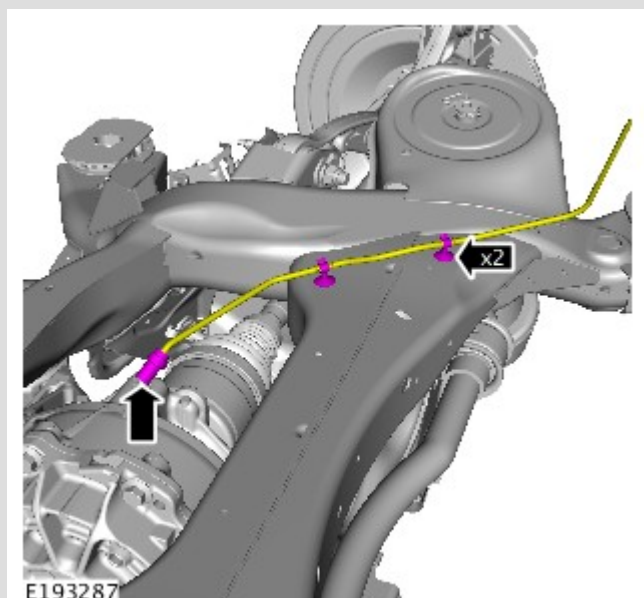
Repeat the step for the other side.



Install and hand tighten the new bolt and nut.

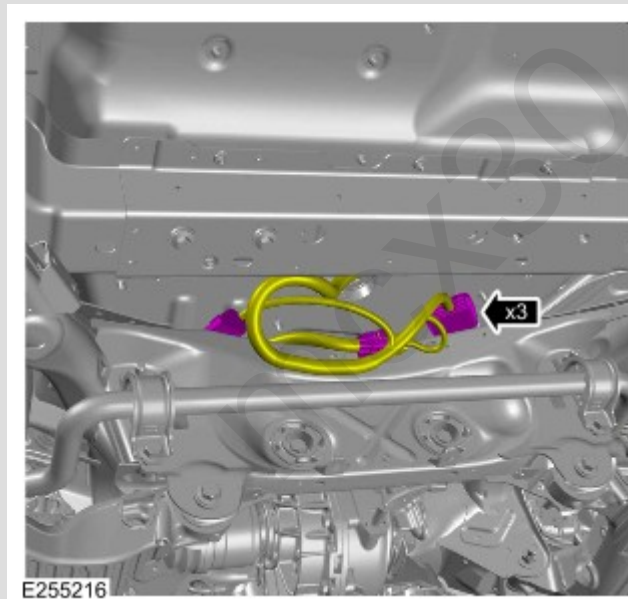
Renew Part: Shock absorber nut and bolt Quantity: 2.

18.

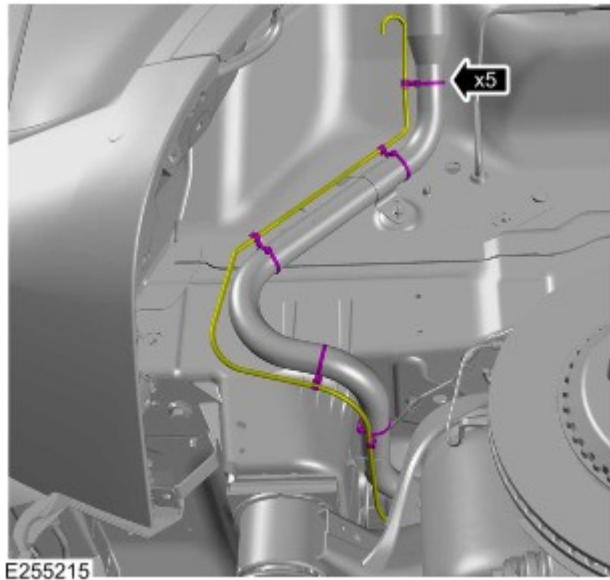


- Connect the breather hose.
- Secure the breather hose to the 2 clips.

19.



Connect the 3 electrical connectors.



Secure the breather hose to the 5 clips.

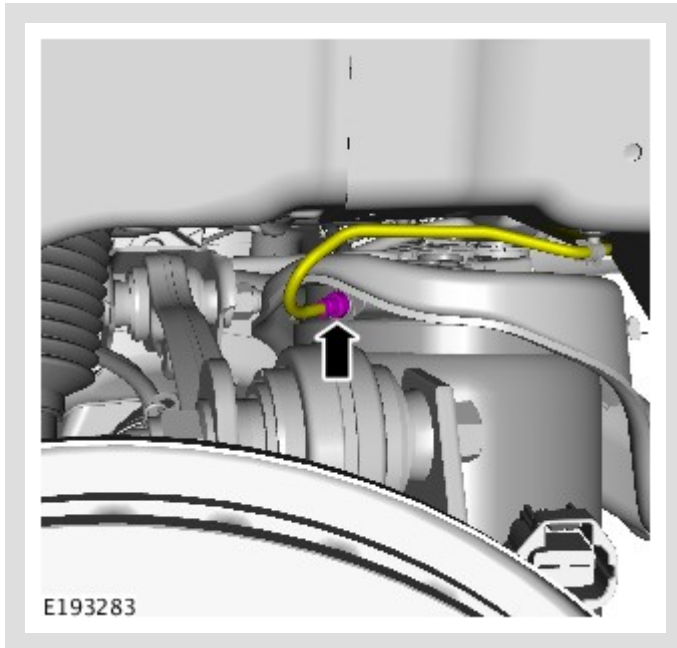
The following step(s) applies to:

Vehicles with air suspension

21.

 NOTE:

Repeat the step for the other side.



Connect the new the air line connector.

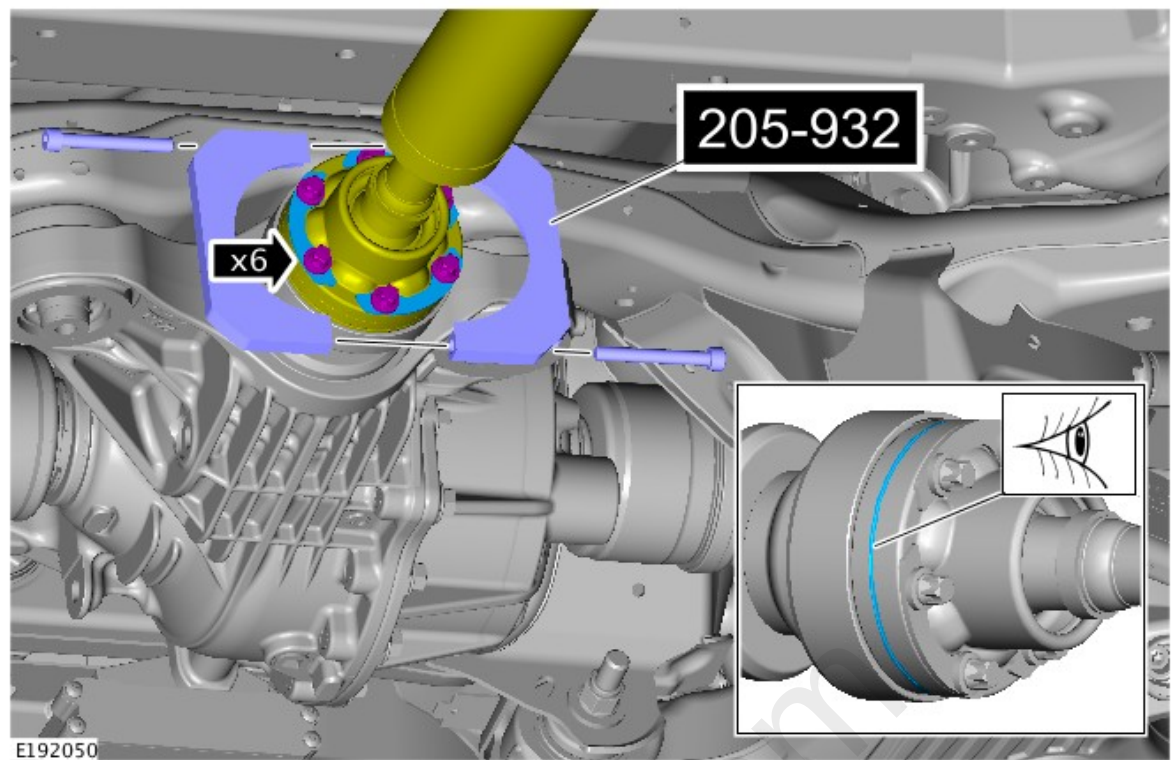
Refer to: [Air Line Connector](#) (204-05 Vehicle Dynamic Suspension, General Procedures).

Renew Part: [Air line connector\(s\)](#) Quantity: 2.

The following step(s) applies to:

All vehicles

22.



Install and tighten the new bolts.

Renew Part: [Driveshaft to rear differential bolts](#) Quantity: 6.

Torque: **73Nm**

23. Install the exhaust system.

Refer to: [Exhaust System](#) (309-00C Exhaust System - INGENIUM I6 3.0L Petrol, Removal and Installation).

24. Install the rear brake pads.

Refer to: [Brake Pads - Vehicles With: 325mm Brake Disc](#) (206-04 Rear Disc Brake, Removal and Installation).

Refer to: [Brake Pads - Vehicles With: 350mm Brake Disc](#) (206-04 Rear Disc Brake, Removal and Installation).

Refer to: [Brake Pads - Vehicles With: 365mm Brake Disc](#) (206-04 Rear Disc Brake, Removal and Installation).

25. Connect the startup battery ground cable.

Refer to: [Startup Battery Disconnect and Connect](#) (414-00 Battery and Charging System - General Information, General Procedures).

The following step(s) applies to:

Vehicles with air suspension

26.

⚠ CAUTION:

This step must be completed to prevent damage to the air spring.

Use the JLR approved diagnostic equipment to complete the air suspension manual control procedure.
Refer to: Air Suspension - Manual Control Procedure (204-05, General Procedures).

27.

⚠ CAUTIONS:

- This step must be completed in order to maintain the correct air suspension compressor/dryer performance.
- The wheels must be on the floor during this step.

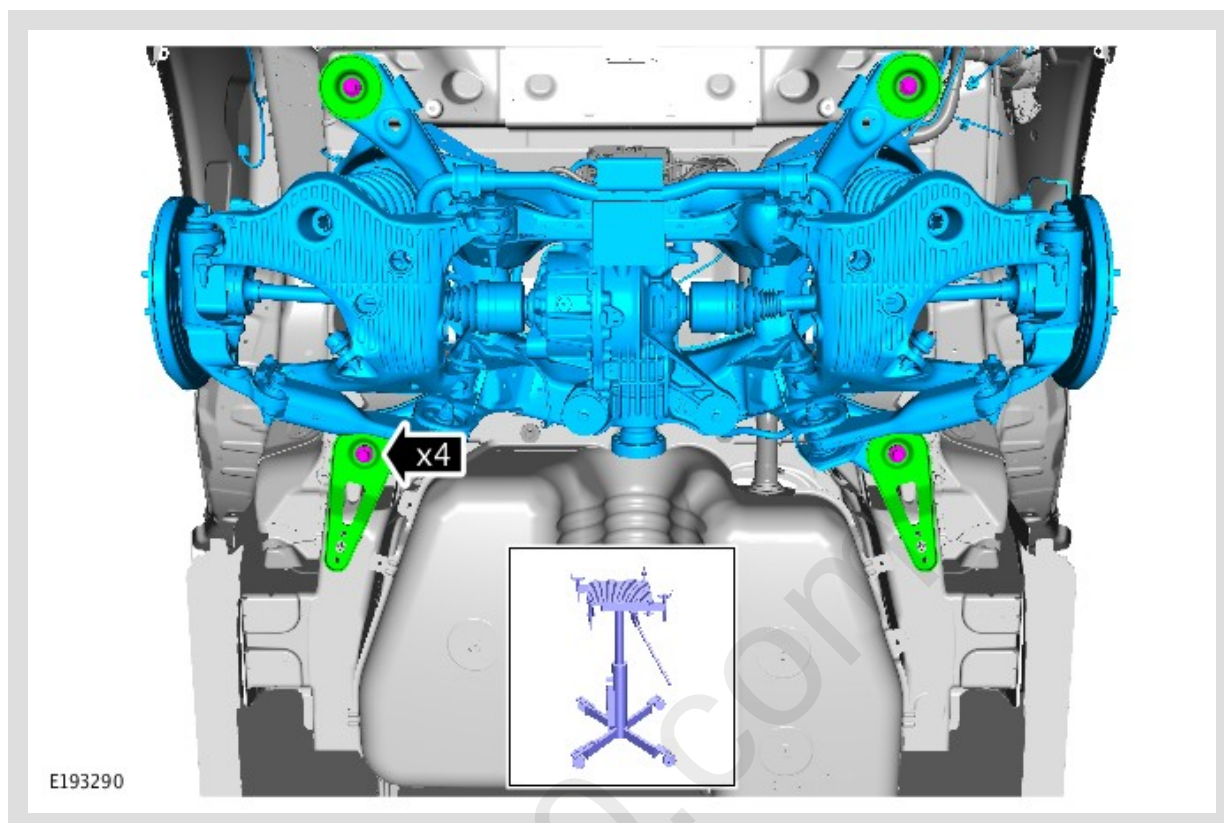
Use the JLR approved diagnostic system, to pressurise the air suspension.
Refer to: [Air Suspension System Depressurize and Pressurize](#) (204-05 Vehicle Dynamic Suspension, General Procedures).

The following step(s) applies to:

All vehicles

ⓘ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.



Final tighten the 4 rear subframe bolts.

Torque

Front bolts

Stage1: **100Nm**

Stage2: **240°**

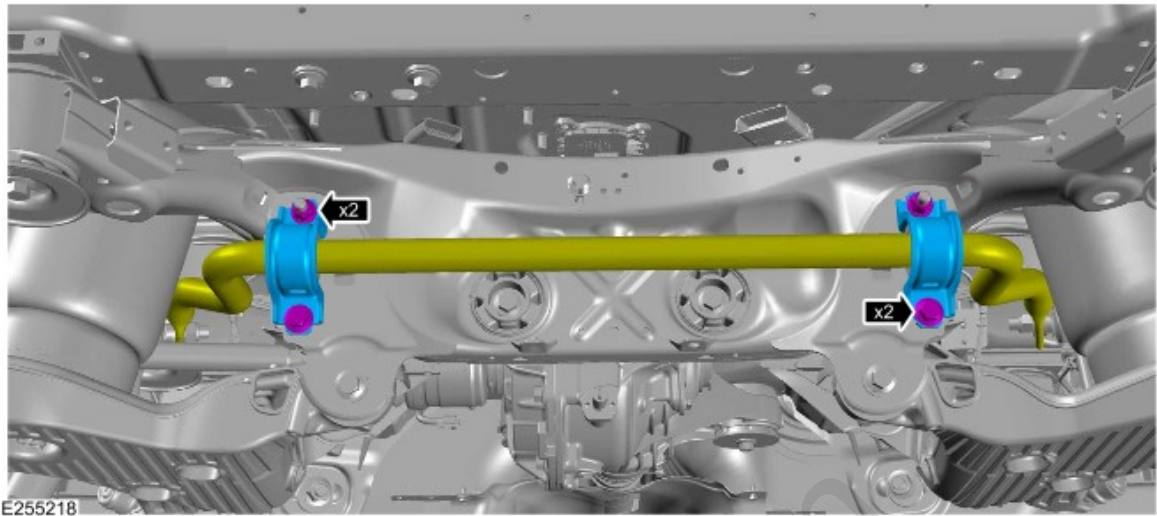
Rear bolts

Stage1: **100Nm**

Stage2: **300°**

ⓘ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.



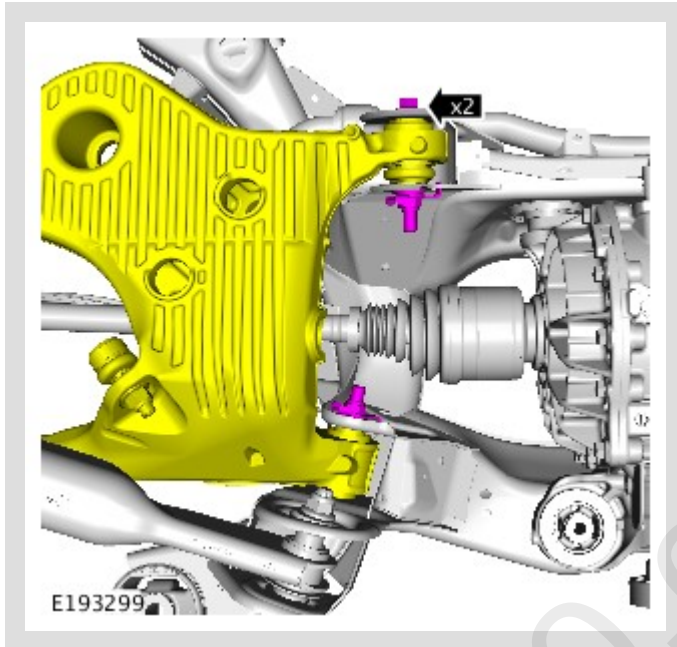
- Final tighten the 2 rear stabilizer bolts.
Torque: 100Nm
- Final tighten the 2 rear stabilizer nuts.
Torque: 100Nm

⚠ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.

△ NOTE:

Repeat the step for the other side.



Final tighten the 2 new nuts and bolts.

Torque

Stage1: **100Nm**

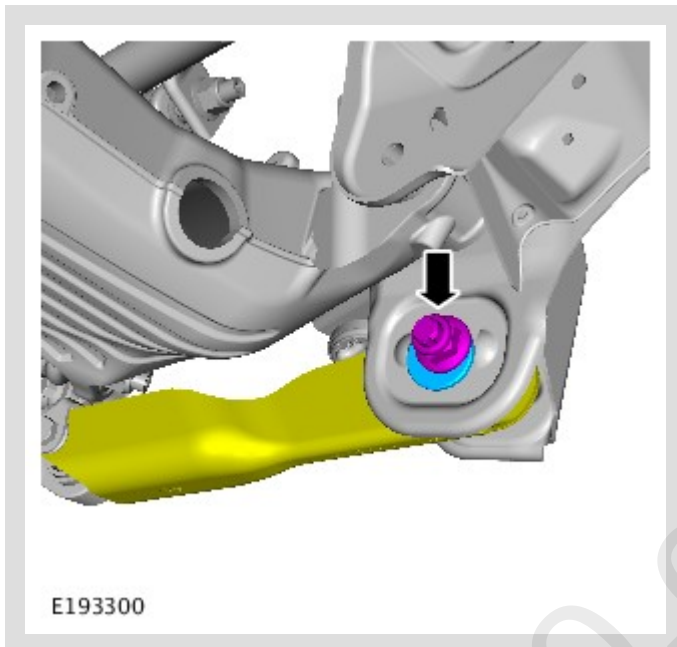
Stage2: **240°**

⚠ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.

△ NOTE:

Repeat the step for the other side.



Final tighten the new nut and bolt.

Torque

Stage1: **40Nm**

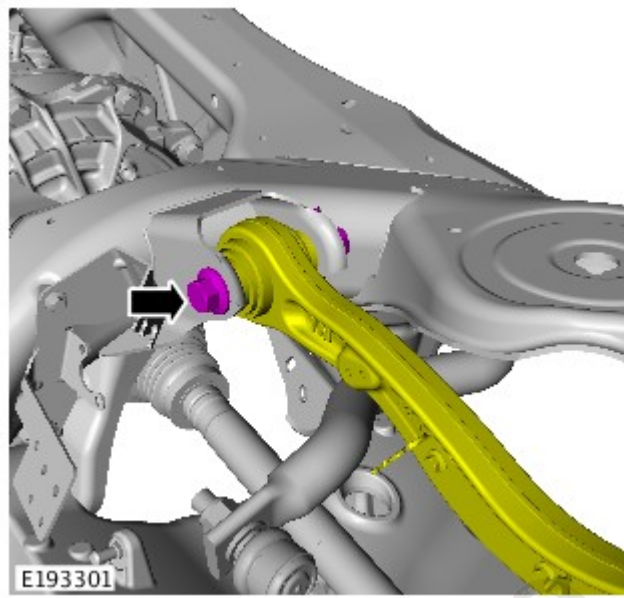
Stage2: **90°**

⚠ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.

⚠ NOTE:

Repeat the step for the other side.



Final tighten the new bolt and nut.

Torque

Stage1: **50Nm**

Stage2: **60Nm**

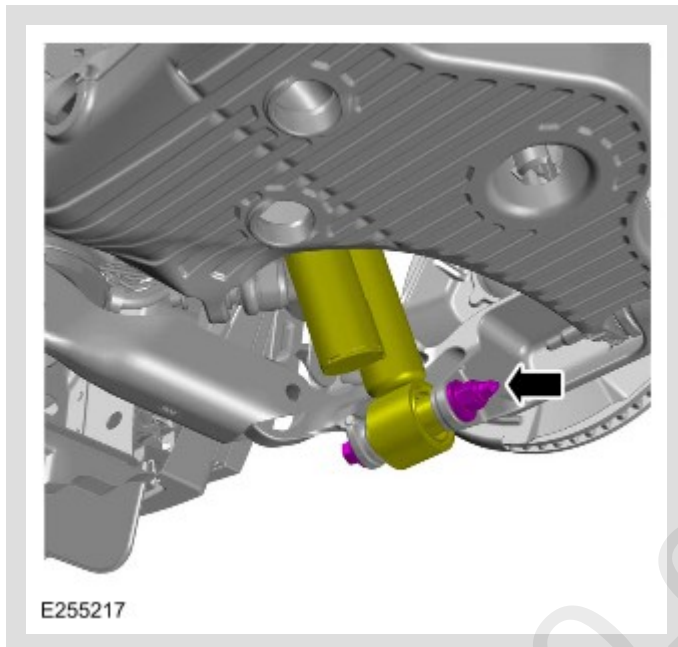
33.

⚠ CAUTION:

Nuts and bolts must be tightened with vehicle at normal ride height.

△ NOTE:

Repeat the step for the other side.



Final tighten the new bolt and nut.

Torque

Stage1: **100Nm**

Stage2: **240°**

34.

Use the JLR approved wheel alignment equipment, check and if necessary adjust the 4 wheel alignment. Refer to: [Wheel Alignment](#) (204-00 Suspension System - General Information, General Procedures).