

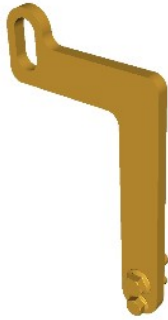
PUBLISHED: 11-AUG-2020
2020.0 DEFENDER (LE), 502-00

UNI-BODY, SUBFRAME AND MOUNTING SYSTEM

FRONT SUBFRAME (G2413867)

mcx30.com

SPECIAL TOOL(S)



E238238

JLR-303-1676

Engine lifting eyes



E243070

JLR-303-1692

Engine Support



E243071

JLR-303-1692-01

Engine Support Adapter



E263279

JLR-303-1713

Engine Brace Mountings

GENERAL EQUIPMENT

EQUIPMENT NAME
Ratchet straps
Transmission jack

PART(S)

STEP	PART NAME	QUANTITY
Installation Step 3	Steering gear bolts	2

STEP	PART NAME	QUANTITY
Installation Step 7	Bolt locator	4
Installation Step 7	Front lower control arm nut and bolt	4
Installation Step 8	Front subframe to body bolts	6
Installation Step 9	Steering column intermediate shaft lower bolt	1

REMOVAL



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.

1. Raise and support the vehicle on a suitable 2-post lift.
Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).
2. Disconnect the startup battery ground cable.
Refer to: [Specifications](#) (414-01A Battery, Mounting and Cables - Vehicles With: Non-Electric Vehicles, Specifications).
3. Remove the engine cover.
Refer to: [Engine Cover - INGENIUM I4 2.0L Petrol](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
4. Remove the engine undershield.
Refer to: [Engine Undershield](#) (501-02 Front End Body Panels, Removal and Installation).
5. Remove the front bumper.
Refer to: [Front Bumper](#) (501-19 Bumpers, Removal and Installation).
6. Remove both front wheel knuckles.
Refer to: [Wheel Knuckle](#) (204-01 Front Suspension, Removal and Installation).
7. Remove the front left halfshaft.
Refer to: [Front Left Halfshaft](#) (205-04 Front Drive Halfshafts, Removal and Installation).
8. Remove the front right halfshaft.
Refer to: [Front Right Halfshaft](#) (205-04 Front Drive Halfshafts, Removal and Installation).

9. Remove the front driveshaft.

Refer to: [Front Driveshaft](#) (205-01 Driveshaft, Removal and Installation).

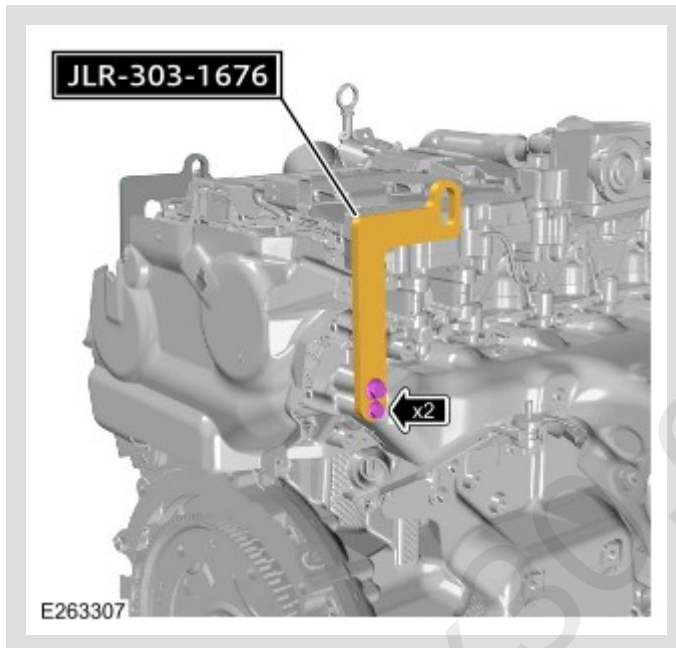
10. Remove the secondary bulkhead center panel.

Refer to: [Secondary Bulkhead Center Panel](#) (501-02 Front End Body Panels, Removal and Installation).

11.

⚠ CAUTION:

Failure to follow this instruction may result in damage to the vehicle.



- Install the right engine lifting eye.

Special Tool(s): [JLR-303-1676](#)

- Install and tighten the 2 bolts.

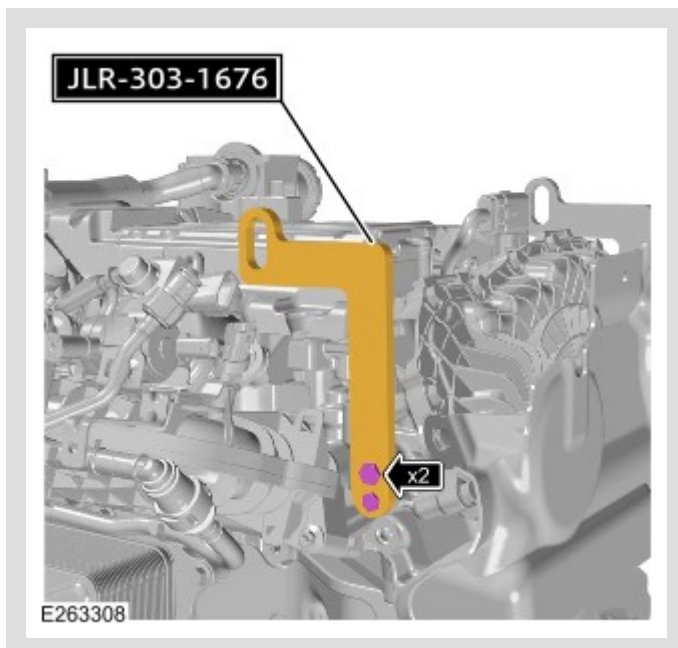
Torque

M8: **25Nm**

M10: **50Nm**

ⓘ CAUTION:

Failure to follow this instruction may result in damage to the vehicle.



- Install the left engine lifting eye.

Special Tool(s): [JLR-303-1676](#)

- Install and tighten the 2 bolts.

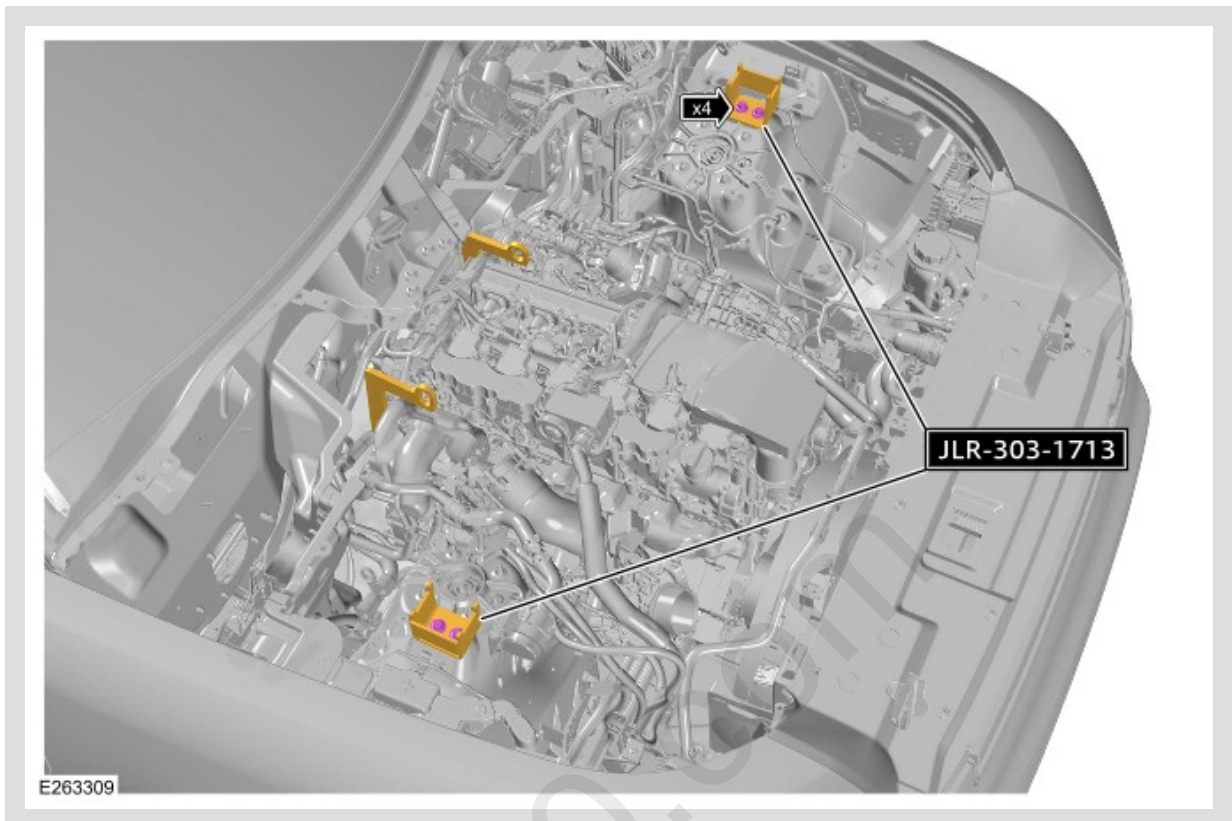
Torque

M8: **25Nm**

M10: **50Nm**

ⓘ CAUTION:

Failure to follow this instruction may result in damage to the vehicle.



- Install the 2 engine compartment brace mountings as illustrated.

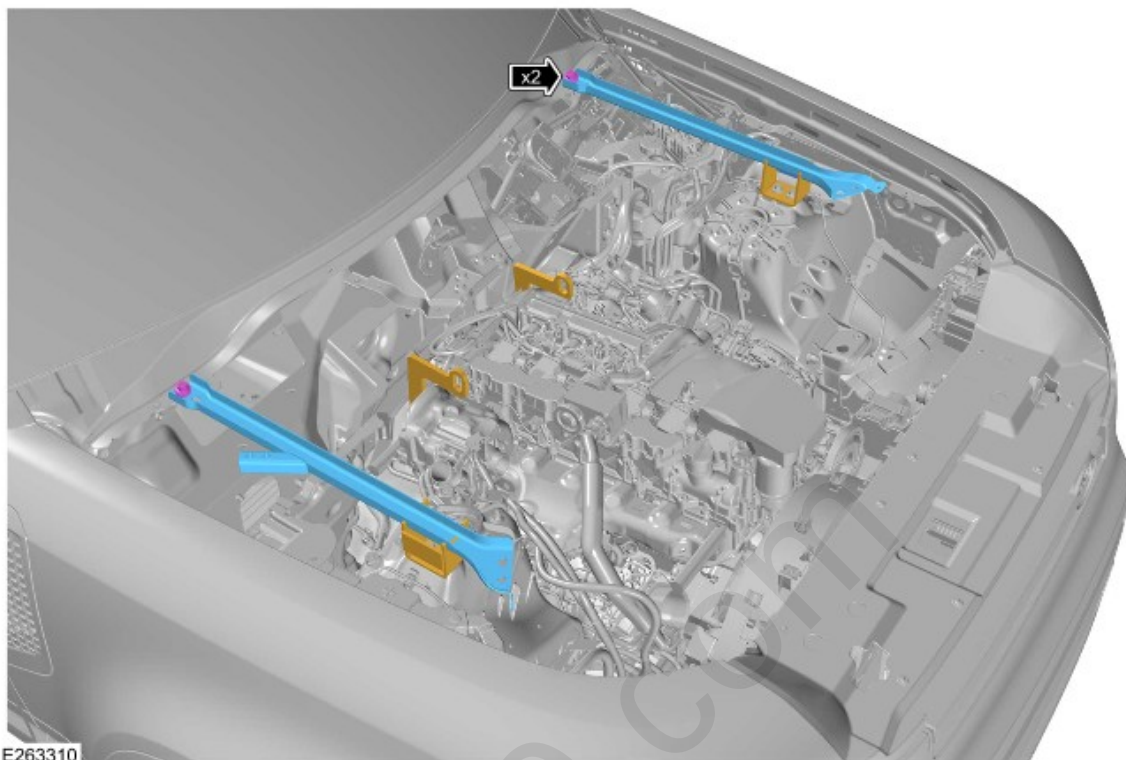
Special Tool(s): [JLR-303-1713](#)

- Install and tighten the 4 bolts.

Torque: **50Nm**

ⓘ CAUTION:

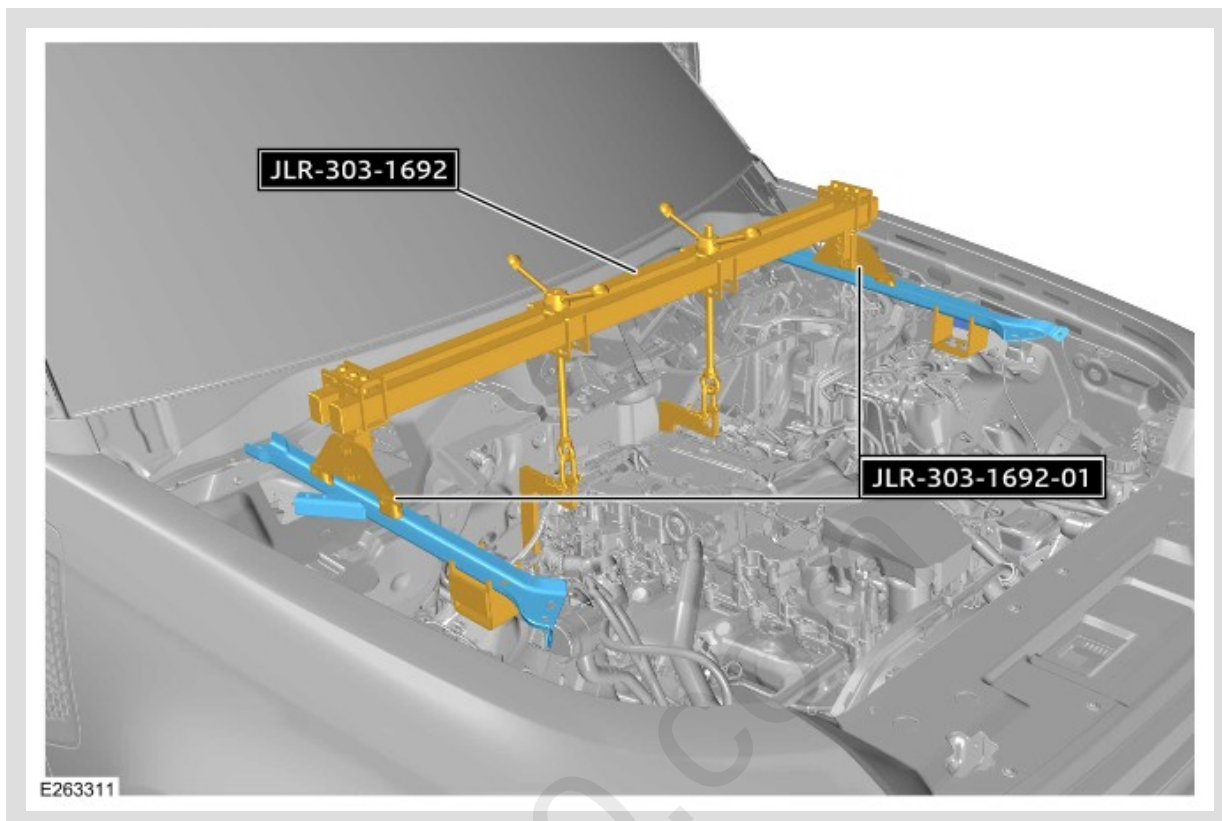
Failure to follow this instruction may result in damage to the vehicle.



- Install the 2 engine compartment braces as illustrated.
- Install and tighten the 2 bolts.
Torque: 20Nm

ⓘ CAUTION:

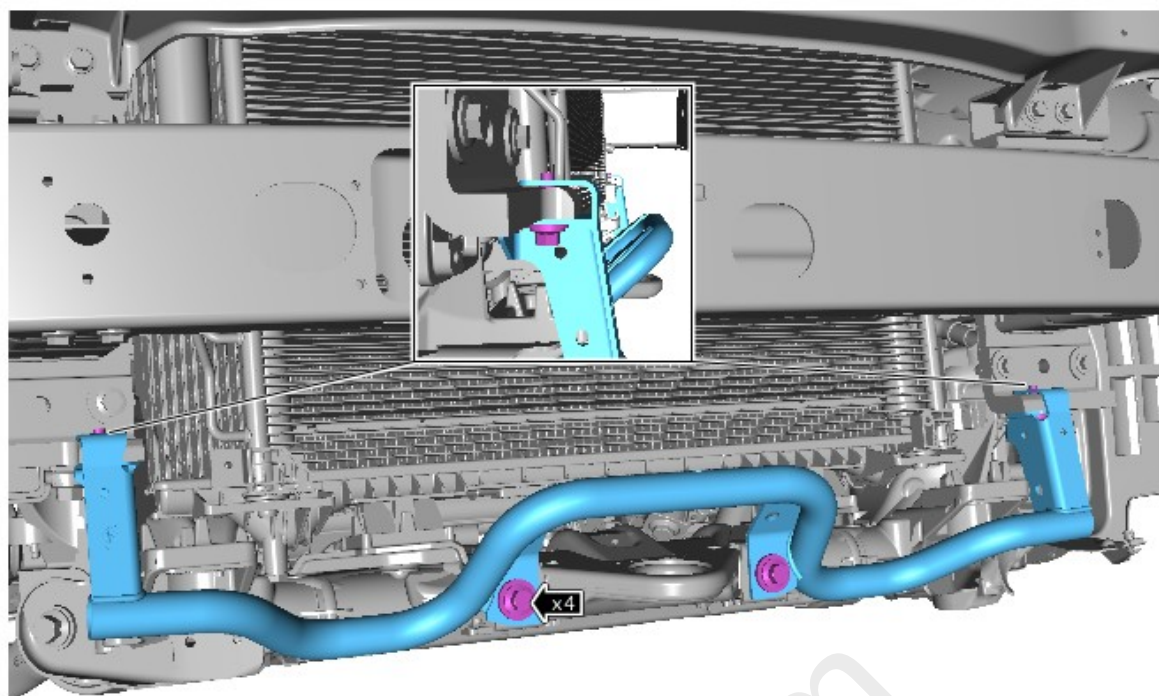
Failure to follow this instruction may result in damage to the vehicle.



Install the engine support beam and the engine support adapter as illustrated.

Special Tool(s): JLR-303-1692, JLR-303-1692-01

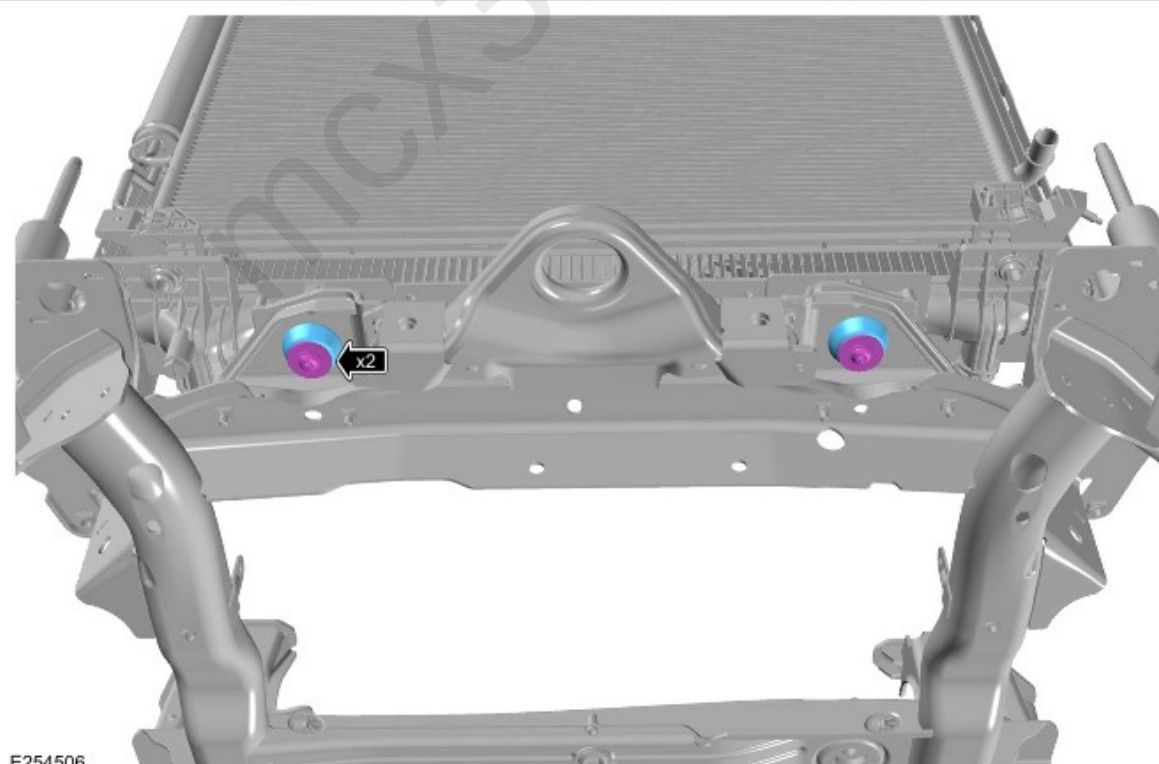
16.



E216118

- Remove the 4 bolts.
- Remove the cooling protector.

17.



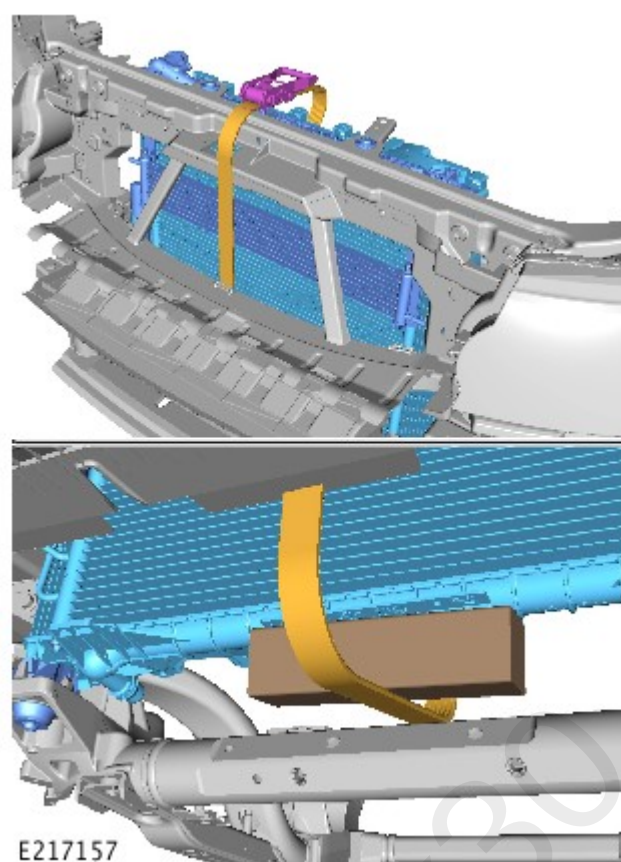
E254506

- Remove the 2 bolts.
- Remove the 2 rubber mounts.

18.

ⓘ CAUTION:

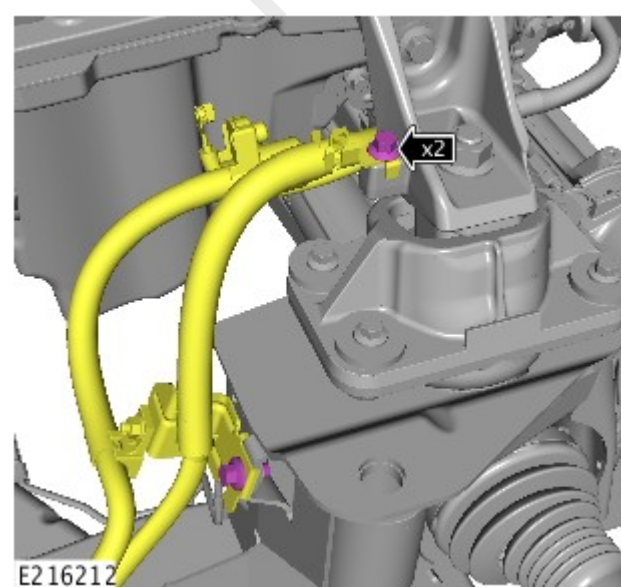
Always protect the cooling pack elements to prevent accidental damage.



Use the suitable strap and a wooden block, carefully secure the cooling module to the front grille structure.

General Equipment: [Ratchet straps](#)

19.

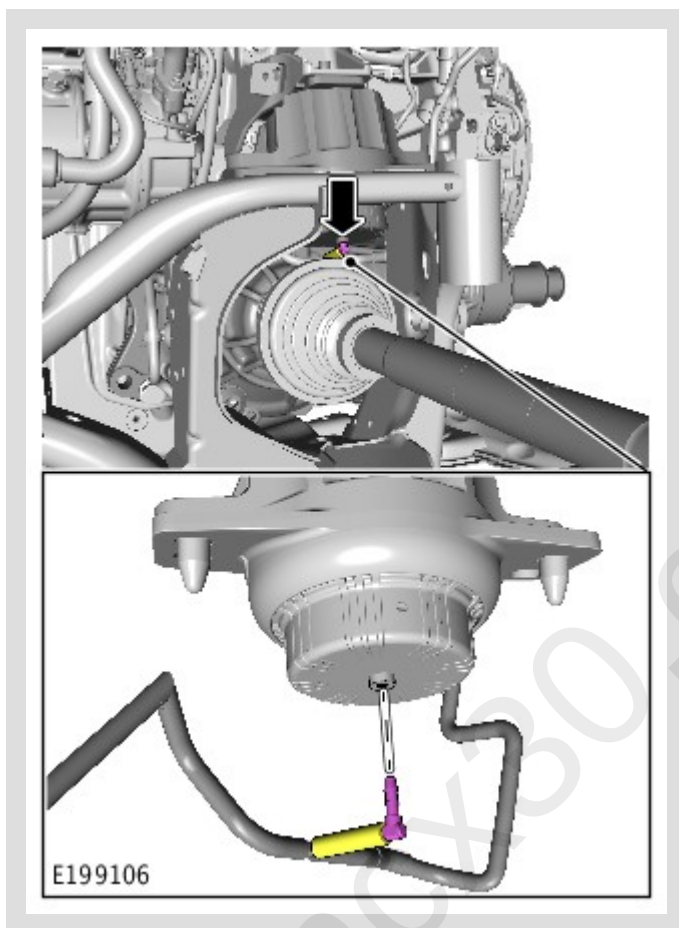


- Remove the 2 bolts.
- Position aside the wiring harness.

20.

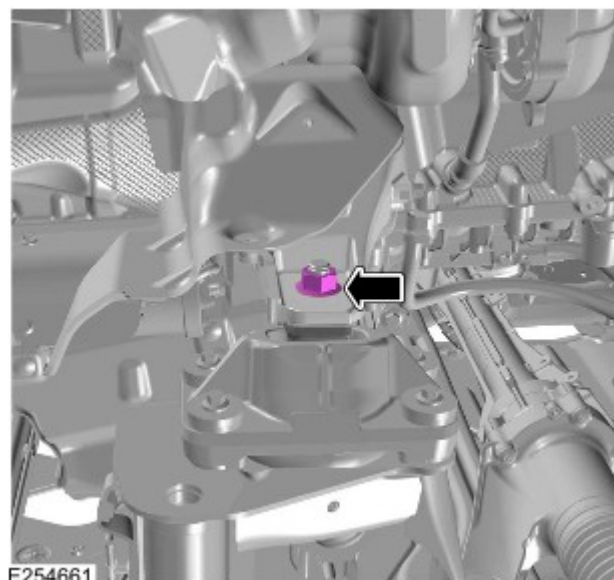
 NOTE:

Repeat this step for the other side.



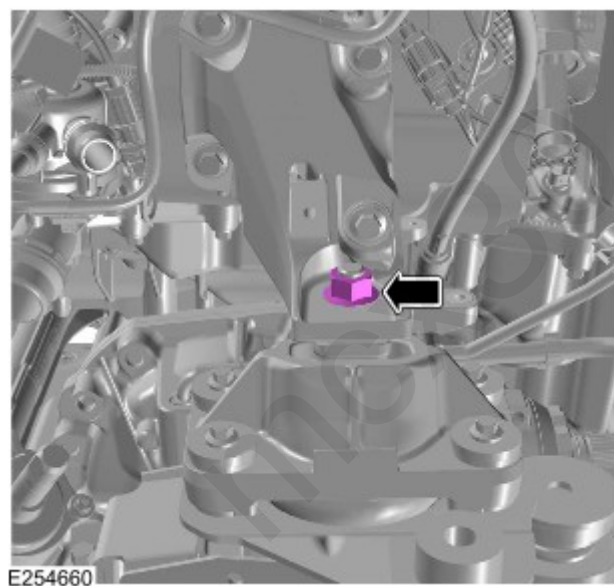
Disconnect the vacuum pipe from the engine mount.

21.



Remove the nut from the right side engine mount.

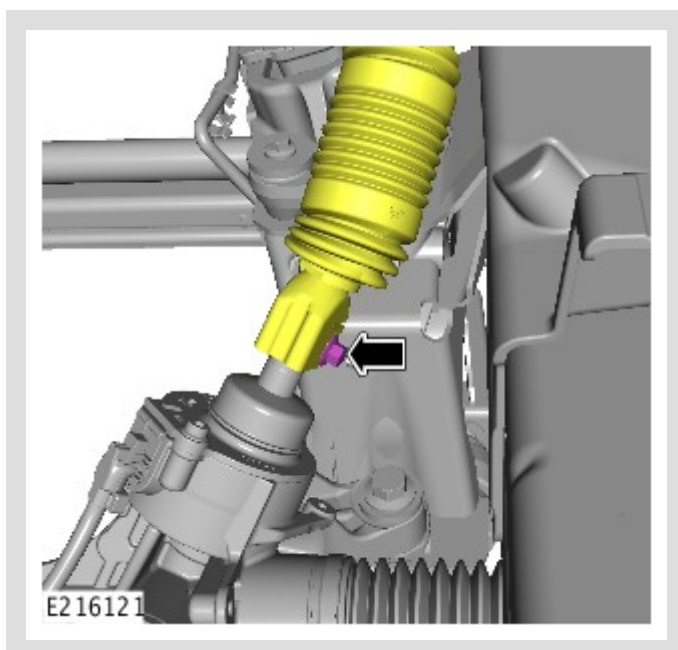
22.



Remove the nut from the left side engine mount.

ⓘ CAUTION:

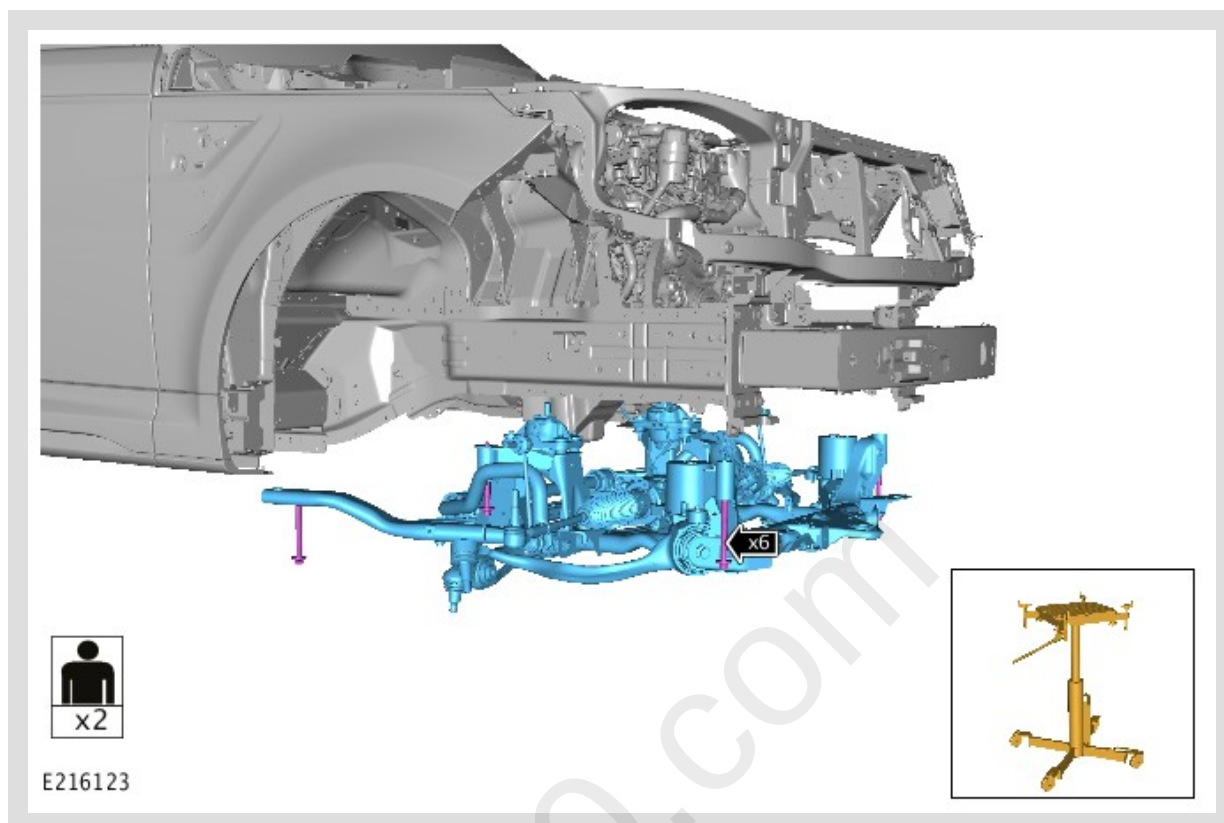
Discard the bolt.



- Remove the bolt.
- Move aside the steering column lower shaft.

⚠ CAUTION:

Discard the bolts.



- Remove the 6 subframe mounting bolts.
- With assistance remove the front subframe.

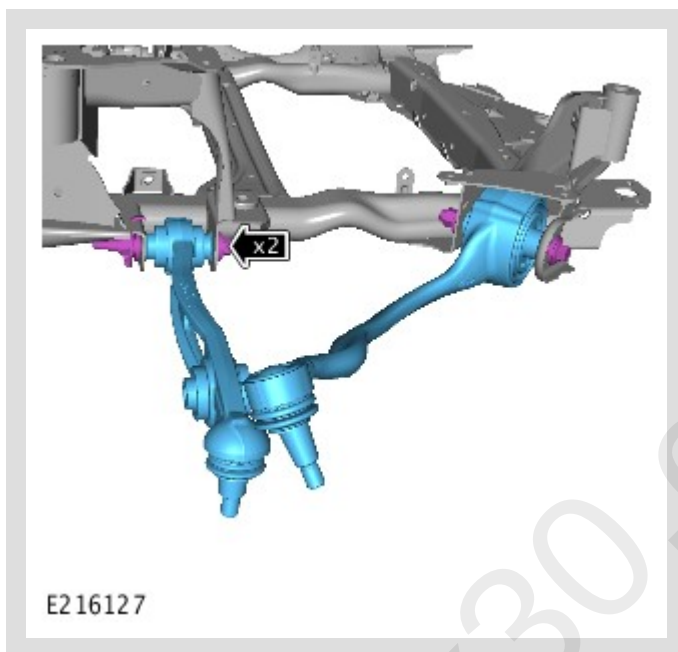
General Equipment: [Transmission jack](#)

⚠ CAUTIONS:

- Discard the nuts and bolts.
- Discard the bolt locators.

⚠ NOTES:

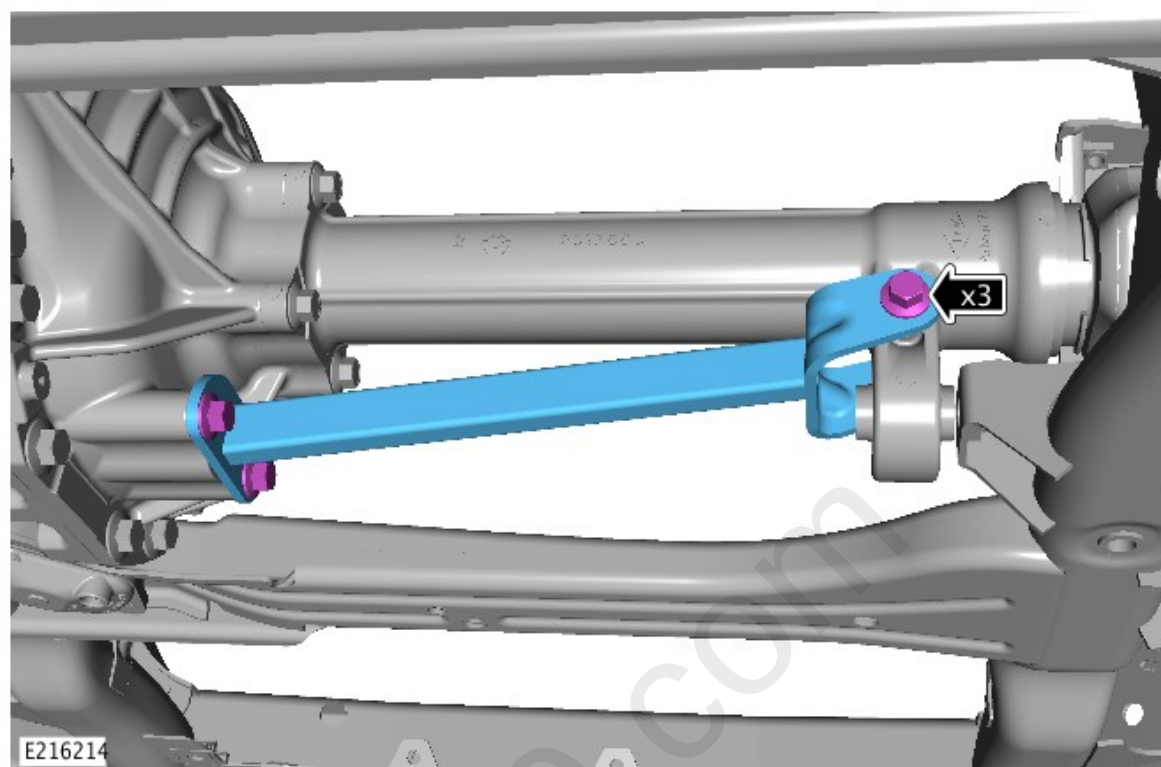
- Do not disassemble further if the component is removed for access only.
- Repeat this step for the other side.



- Remove the 2 bolts and 2 nuts.
- Remove the 2 lower control arms.

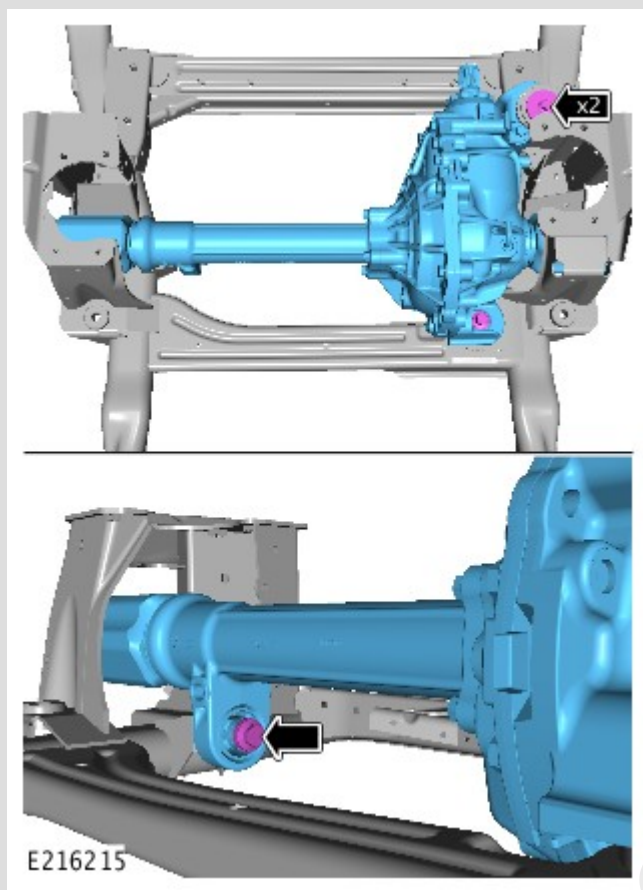
 NOTE:

If equipped.



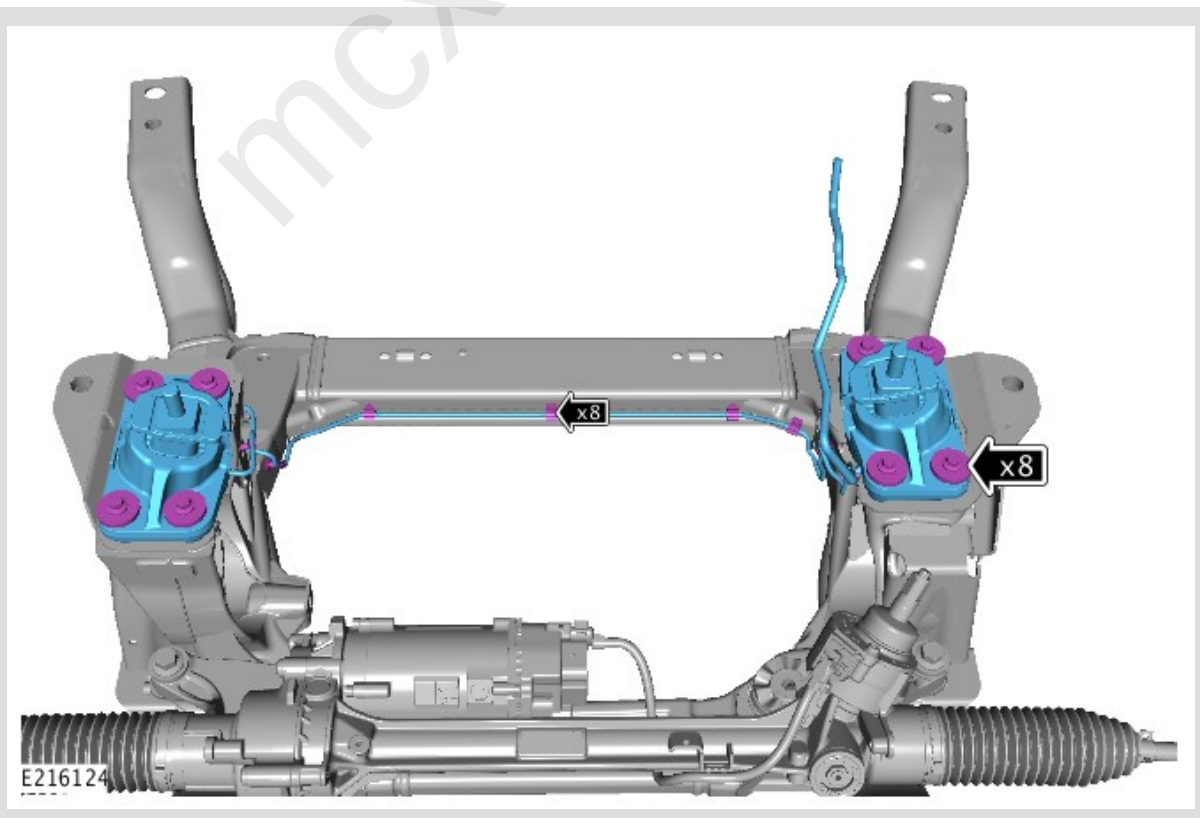
- Remove the 3 bolts.
- Remove the front differential bracket.

27.



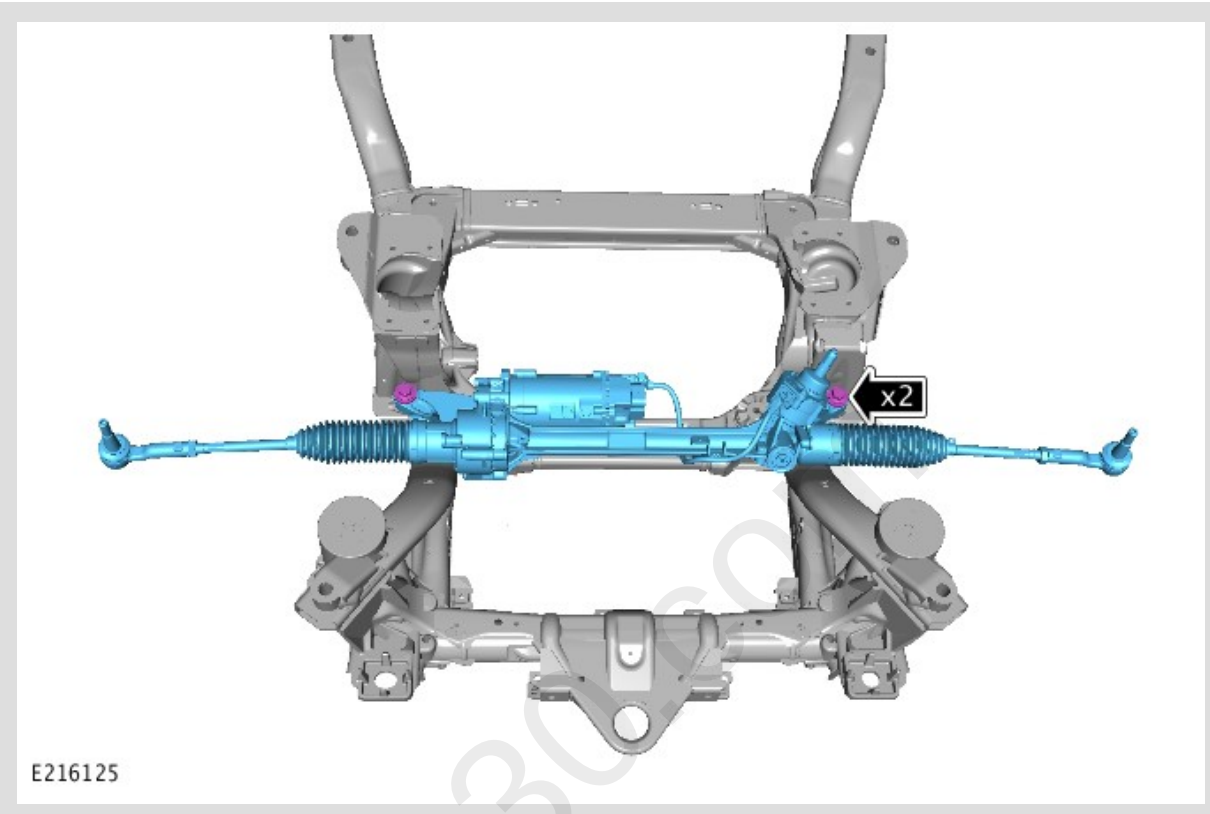
- Remove the 3 bolts.
- Remove the front differential from the subframe.

28.



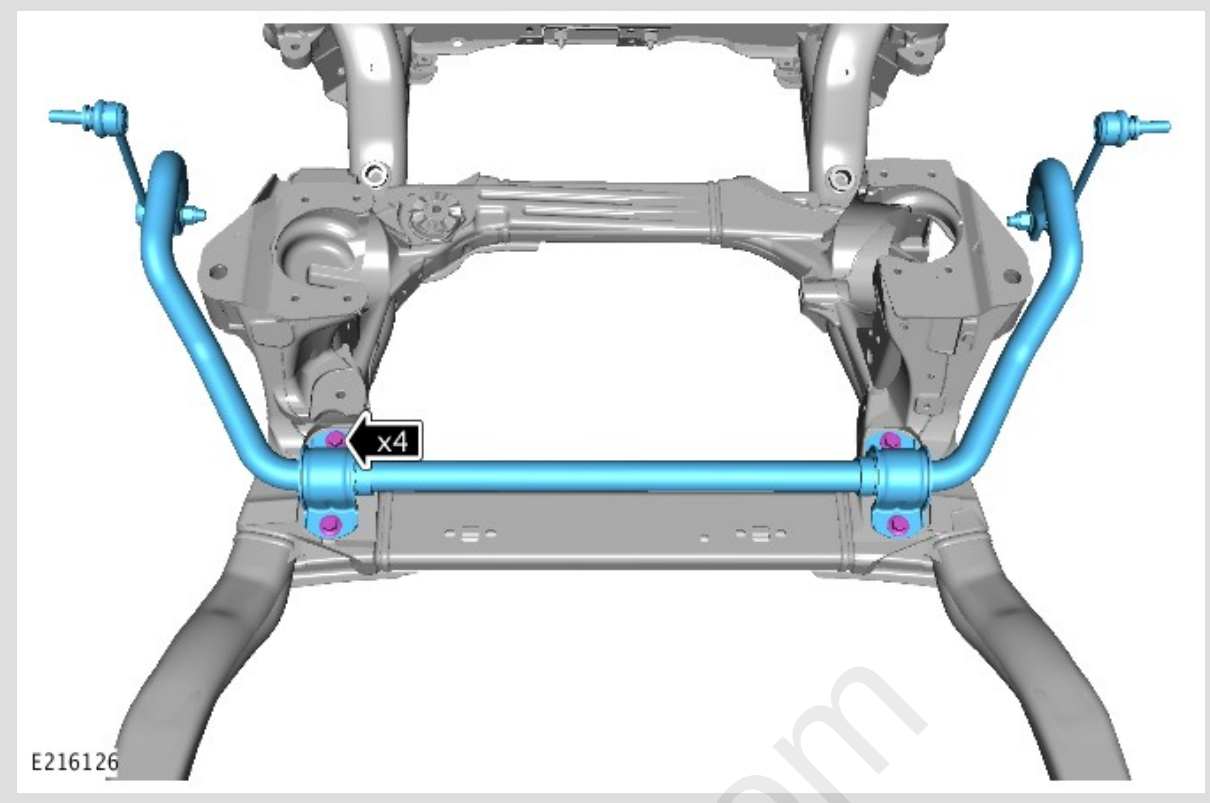
- Release the vacuum pipe from the 8 retaining clips.
- Remove the vacuum pipe.
- Remove the 8 bolts.
- Remove the 2 engine mounts.

29.



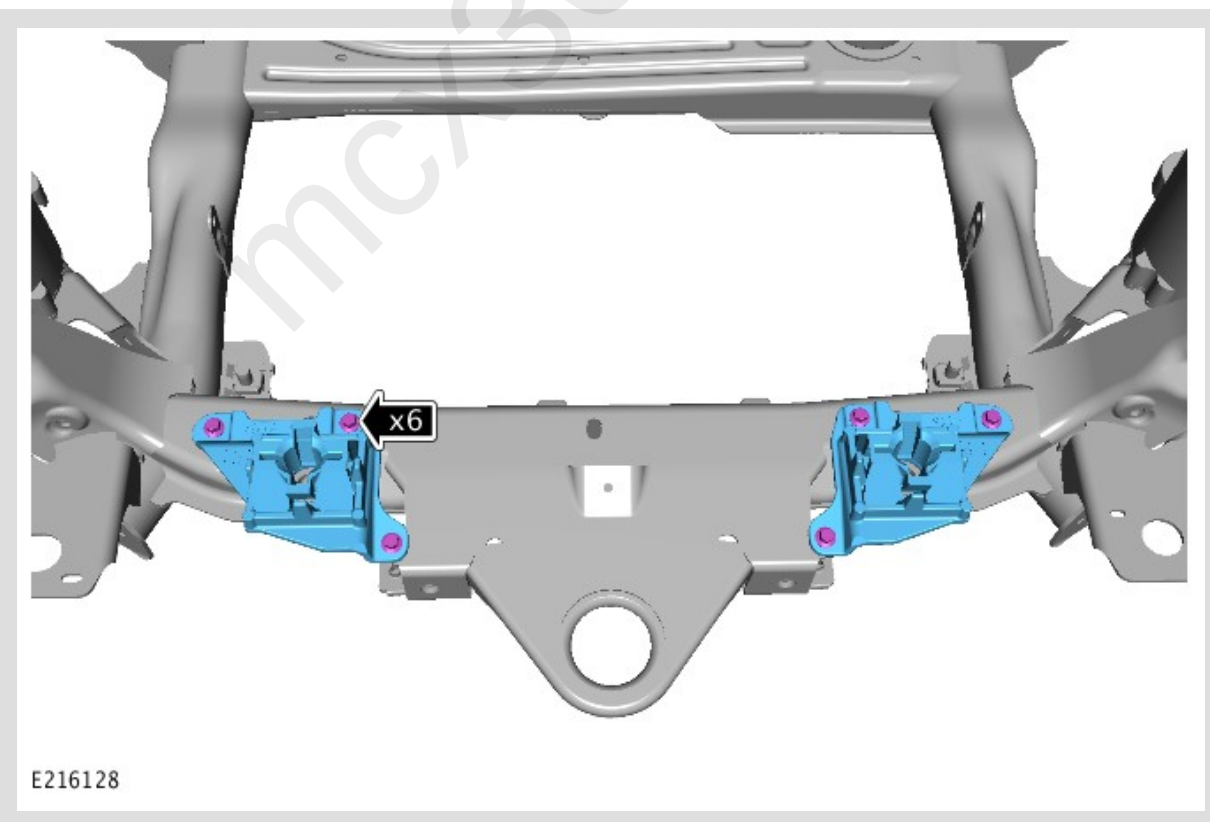
- Remove the 2 bolts.
- Remove the steering gear.

30.



- Remove the 4 bolts.
- Remove the front stabilizer bar.

31.



- Remove the 6 bolts.
- Remove the 2 radiator mounts.

INSTALLATION

1.

- Install the 2 radiator mounts to the front subframe.
- Install and tighten the 6 bolts.

Torque: 9Nm

2.

- Install the front stabilizer bar to the front subframe.
- Install and tighten 4 bolts.

Torque: 110Nm

3.

CAUTION:

Install new bolts.

- Install the steering gear to the front subframe.
- Install and tighten 2 new bolts.

Renew Part: [Steering gear bolts](#) Quantity: 2.

Torque

Stage1: **110Nm**

Stage2: **180°**

4.

- Install the left and the right engine mounts to the subframe.
- Install and tighten the 8 bolts.

Torque: 32Nm

- Secure the vacuum hose into the 8 clips.

5.

- Install the front differential to the front subframe.
- Install and tighten 3 bolts.

Torque

M10: **60Nm**

M12: **110Nm**

6.

NOTE:

If equipped.

- Install the front differential bracket.
- Install and tighten the 3 bolts.

Torque: 50Nm

7.

ⓘ CAUTIONS:

- Bolts must be tightened with vehicle at normal ride height.
- Do not fully tighten the new bolts and the new nuts at this stage.
- Install new bolt locators.

- Install the 4 lower control arms.

Renew Part: *Bolt locator* Quantity: 4.

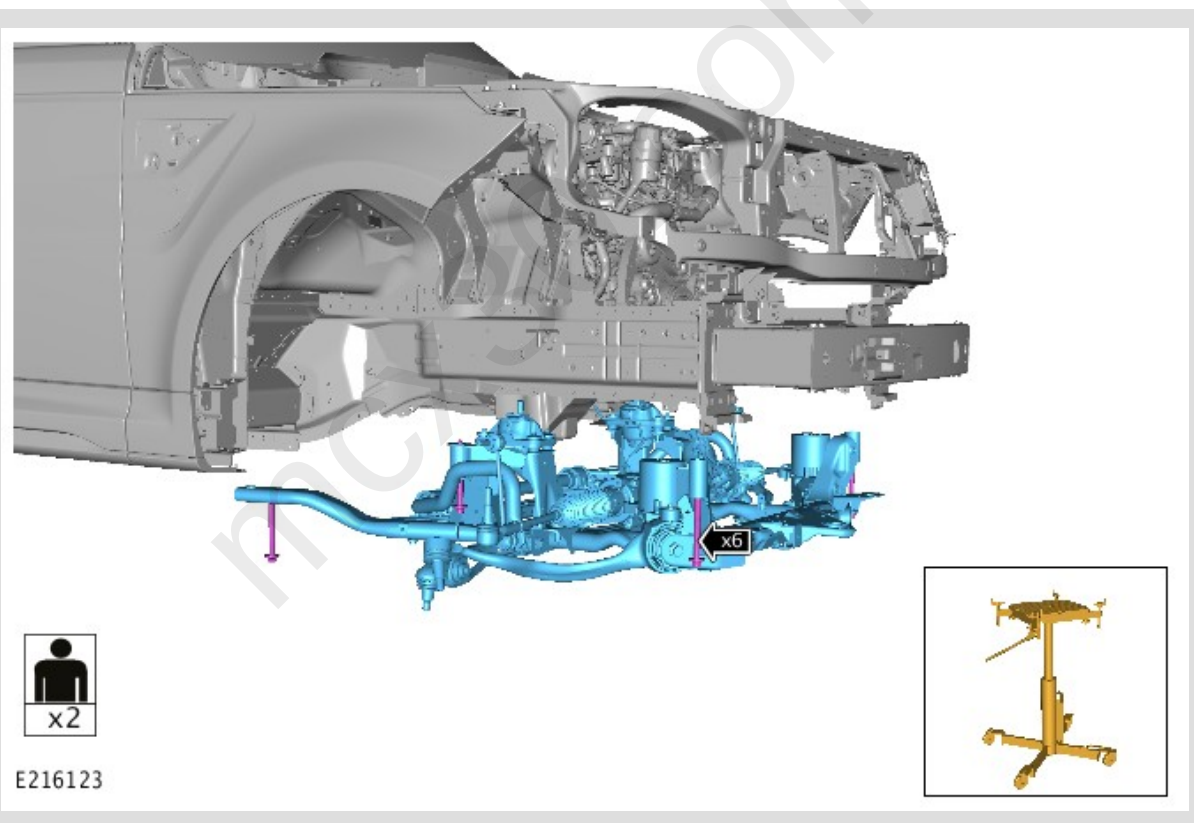
Renew Part: *Front lower control arm nut and bolt* Quantity: 4.

- Install and hand tighten the 4 new bolts and 4 new nuts.

8.

ⓘ CAUTIONS:

- Bolts must be tightened with vehicle at normal ride height.
- Do not fully tighten the new bolts and the new nuts at this stage.



- With assistance install the front subframe.

- Install and hand tighten the 6 new bolts.

Renew Part: *Front subframe to body bolts* Quantity: 6.

9.

- Install the steering column lower shaft to the steering gear.
- Install and tighten the new bolt.

Renew Part: [Steering column intermediate shaft lower bolt](#) *Quantity:* 1.

Torque: **30Nm**

10.

 NOTE:

Repeat the step for the other side.

Install and tighten the nut left engine mount.

Torque: **110Nm**

11.

 NOTE:

Repeat this step for the other side.

Connect the vacuum pipe to the engine mount.

12.

- Install the wiring harness.
- Install and tighten the 2 bolts.

Torque: **24Nm**

13.

 CAUTION:

Always protect the cooling pack elements to prevent accidental damage.

- Install the 2 rubber mount.
- Install the 2 cooling module bolts.
- Carefully remove the strap and the wooden block.

Torque: **15Nm**

General Equipment: [Ratchet straps](#)

14.

- Install the cooling module protector.
- Install and tighten the 4 bolts.

Torque

M10: **60Nm**

M12: **110Nm**

15.

Remove the engine support beam and the engine support adapter.

Special Tool(s): [JLR-303-1692](#), [JLR-303-1692-01](#)

16.

- Remove the 2 bolts.
- Remove the 2 engine compartment braces.

17.

- Remove the 4 bolts.
- Remove the 2 engine compartment brace mountings.

Special Tool(s): [JLR-303-1713](#)

18.

- Remove the 2 bolts.
- Remove the left engine lifting eye.

Special Tool(s): [JLR-303-1676](#)

19.

- Remove the 2 bolts.
- Remove the right engine lifting eye.

Special Tool(s): [JLR-303-1676](#)

20.

Install the secondary bulkhead center panel.

Refer to: [Secondary Bulkhead Center Panel](#) (501-02 Front End Body Panels, Removal and Installation).

21.

Install the front driveshaft.

Refer to: [Front Driveshaft](#) (205-01 Driveshaft, Removal and Installation).

22.

Install the front left halfshaft.

Refer to: [Front Left Halfshaft](#) (205-04 Front Drive Halfshafts, Removal and Installation).

23.

Install the front right halfshaft.

Refer to: [Front Right Halfshaft](#) (205-04 Front Drive Halfshafts, Removal and Installation).

24.

Install the left and the right front wheel knuckles.

Refer to: [Wheel Knuckle](#) (204-01 Front Suspension, Removal and Installation).

25.

Install the front bumper.

Refer to: [Front Bumper](#) (501-19 Bumpers, Removal and Installation).

26.

Install the engine undershield.

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

27.

Install the engine cover.

Refer to: [Engine Cover - INGENIUM I4 2.0L Petrol](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

28. Connect the startup battery ground cable.

Refer to: [Specifications](#) (414-01A Battery, Mounting and Cables - Vehicles With: Non-Electric Vehicles, Specifications).

29.

 CAUTION:

Bolts must be tightened with vehicle at normal ride height.

Fully tighten the 6 new front subframe mount bolts.

Torque

Front subframe mount bolts

Stage1: **140Nm**

Stage2: **300°**

Mid subframe mount bolts

Stage1: **100Nm**

Stage2: **200°**

Rear subframe mount bolts

Stage1: **80Nm**

Stage2: **120°**

30.

 CAUTION:

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

Fully tighten the 4 lower control arms 4 new bolts and 4 new nuts.

Torque

Stage1: **100Nm**

Stage2: **360°**

31.

- Complete the 4 wheel alignment.

Refer to: [Wheel Alignment](#) (204-00 Suspension System - General Information, General Procedures).

- Use Jaguar Land Rover (JLR) approved equipment, check and if necessary adjust the wheel alignment.