

ENGINE COOLING - V8 N/A 5.0L PETROL/V8 S/C 5.0L PETROL

REAR COOLANT MANIFOLD - V8 S/C 5.0L PETROL (G2368814)

REMOVAL AND INSTALLATION

26.32.32	REAR COOLANT MANIFOLD - RENEW	5000 CC, AJ V8, NATURALLY ASPIRATED	2.30	USED WITHINS	
26.32.32	REAR COOLANT MANIFOLD - RENEW	5000 CC, AJ V8, SUPERCHARGED	2.30	USED WITHINS	

PART(S)

STEP	PART NAME	QUANTITY
Installation Step 1	Cylinder block coolant outlet O-ring seals	2

REMOVAL

WARNING:

Be prepared to collect escaping coolant.

NOTE:

- 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.

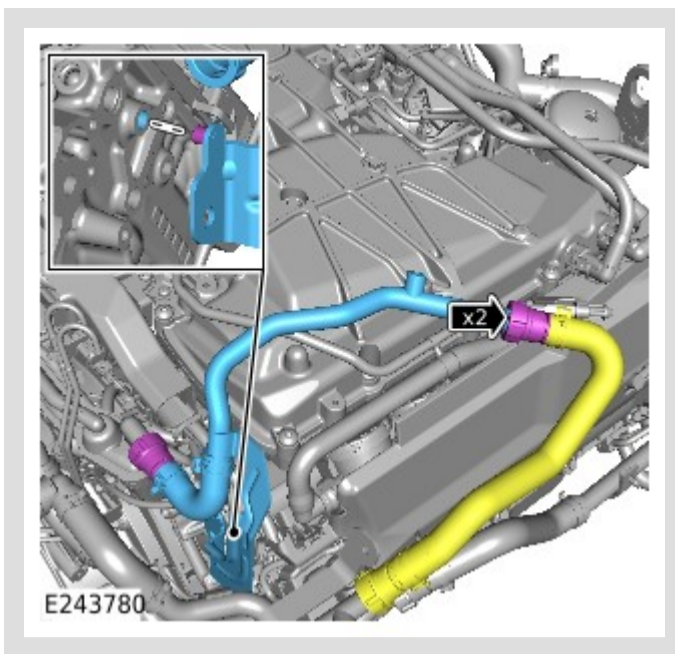
1. Raise and support the vehicle on a suitable 2 post lift.
Refer to:Lifting (100-02, Description and Operation).

2. Partially drain the cooling system.
Refer to:Cooling System Partial Draining and Vacuum Filling (303-03, General Procedures).

3. Remove the secondary bulkhead left panel.
Refer to:Secondary Bulkhead Left Panel (501-02, Removal and Installation).

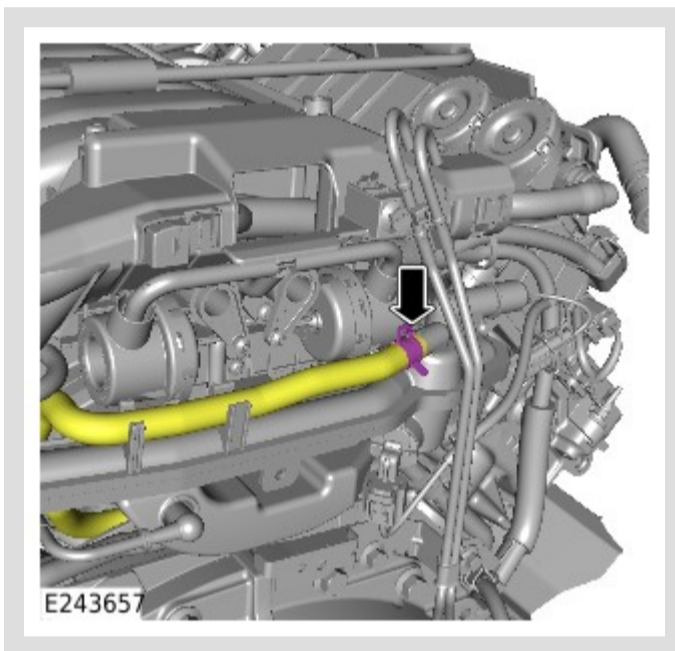
4. Remove the secondary bulkhead right panel.
Refer to:Secondary Bulkhead Right Panel (501-02, Removal and Installation).

5.



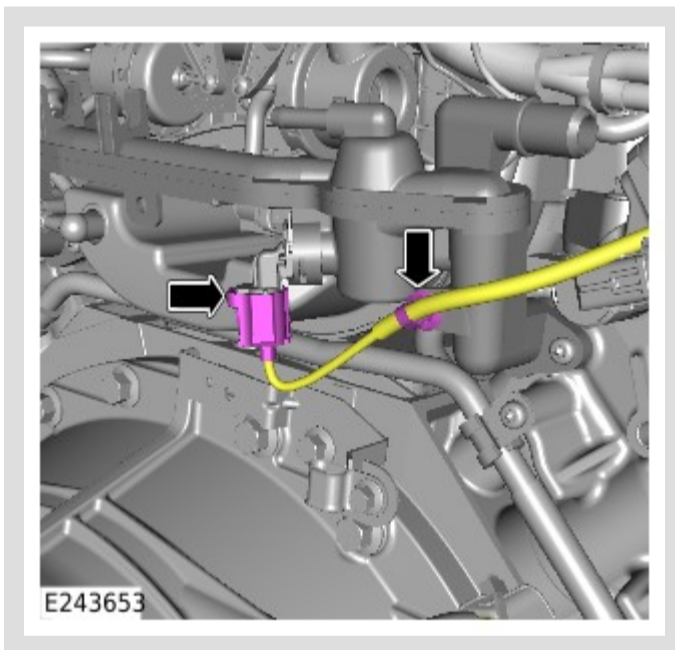
- Disconnect the 2 coolant hose connectors.
- Remove the rear coolant manifold right hose.

6.



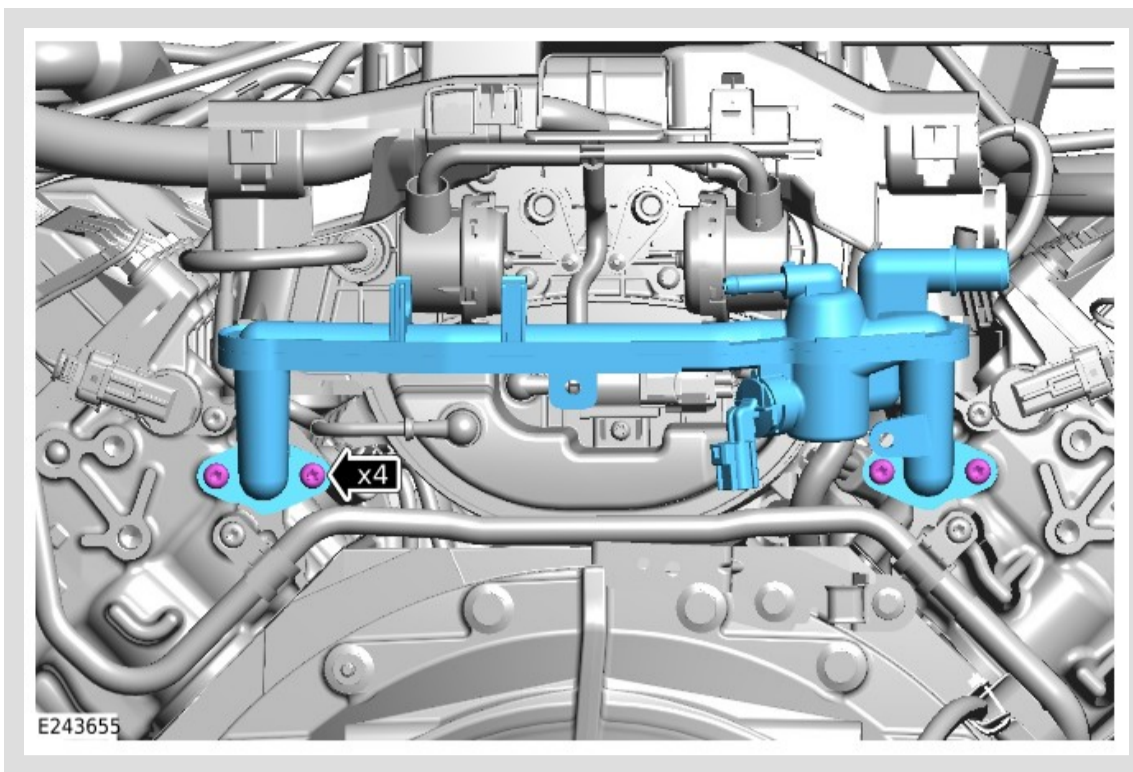
- Release the coolant hose clip.
- Disconnect the rear coolant manifold left hose.

7.



- Disconnect the electrical connector.
- Release the wiring harness clip.

8.



- Remove the 4 bolts.
- Remove the rear coolant manifold.

9.

 NOTE:

This step is only required if new components are not installed.



Remove and discard the 2 O-ring seals.

1.

NOTE:

This step is only required if new components are not installed.

Install 2 new O-ring seals to the rear coolant manifold.

Renew Part: [Cylinder block coolant outlet O-ring seals](#) Quantity: 2 .

2.

- Install the rear coolant manifold.
- Install and tighten the 4 bolts.
Torque: **9 Nm**

3.

- Connect the electrical connector.
- Install the wiring harness clip.

4.

- Connect the rear coolant manifold left hose.
- Install the coolant hose clip.

5.

- Install the rear coolant manifold right hose.
- Connect the 2 coolant hose connectors.

6.

Install the secondary bulkhead left panel.
Refer to:Secondary Bulkhead Left Panel (501-02, Removal and Installation).

7.

Install the secondary bulkhead right panel.
Refer to:Secondary Bulkhead Right Panel (501-02, Removal and Installation).

8.

Vacuum fill the coolant system.
Refer to:Cooling System Partial Draining and Vacuum Filling (303-03, General Procedures).

PUBLISHED: 06-JUN-2013
2011.75 XJ RANGE (X351), 501-02

FRONT END BODY PANELS

SECONDARY BULKHEAD RIGHT PANEL (G1267457)

REMOVAL AND INSTALLATION


76.11.30	ENGINE COMPARTMENT RIGHT HAND COVER - RENEW	ALL DERIVATIVES	1.20	USED WITHINS
76.11.30	ENGINE COMPARTMENT RIGHT HAND COVER - RENEW	ALL DERIVATIVES	1.20	USED WITHINS

REMOVAL

WARNINGS:

- To avoid accidental deployment, the restraints control module backup power supply must be depleted. Wait at least one minute after disconnecting the battery ground cable(s) before commencing any repair or adjustment to the supplemental restraint system (SRS), or any component(s) adjacent to the SRS sensors. Failure to follow these instructions may result in personal injury.

- Always wear safety glasses when working on an air bag equipped vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.
- To minimize the possibility of premature deployment, do not use radio key code savers when working on the supplemental restraint system. Failure to follow this instruction may result in personal injury.
- To minimize the possibility of injury in the event of premature deployment, always carry a live air bag module with the bag and trim cover pointed away from the body. Failure to follow this instruction may result in personal injury.
- To minimize the possibility of premature deployment, live air bag modules must only be placed on work benches which have been ground bonded and with the trim cover facing up. Failure to follow these instructions may result in personal injury.
- Never probe the electrical connectors of air bag modules or any other supplemental restraint system component. Failure to follow this instruction may result in personal injury.
- Painting over the driver air bag module trim cover or instrument panel could lead to deterioration of the trim cover and air bags. Do not for any reason attempt to paint discolored or damaged air bag module trim covers or instrument panel. Install a new component. Failure to follow this instruction may result in personal injury.

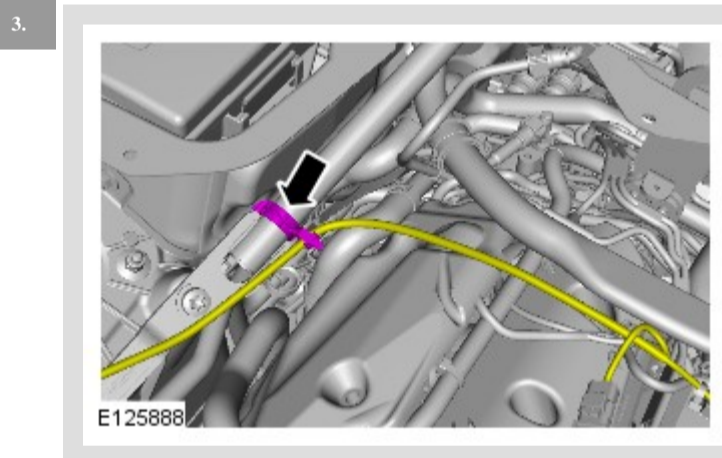
 NOTE:

Removal steps in this procedure may contain installation details.

The following step(s) applies to:
All vehicles

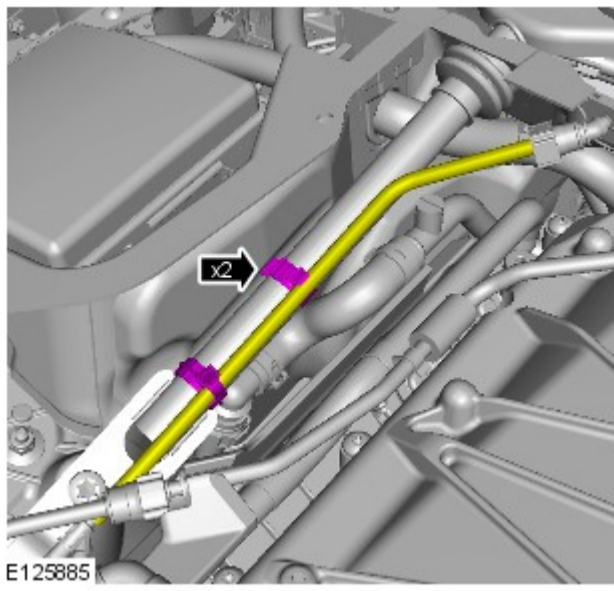
1. Disconnect the battery ground cable.
Refer to: Startup Battery Disconnect and Connect (414-01 Battery, Mounting and Cables, General Procedures).
2. Refer to: Secondary Bulkhead Left Panel (501-02 Front End Body Panels, Removal and Installation).

The following step(s) applies to:
Vehicles with 3.0L diesel engine

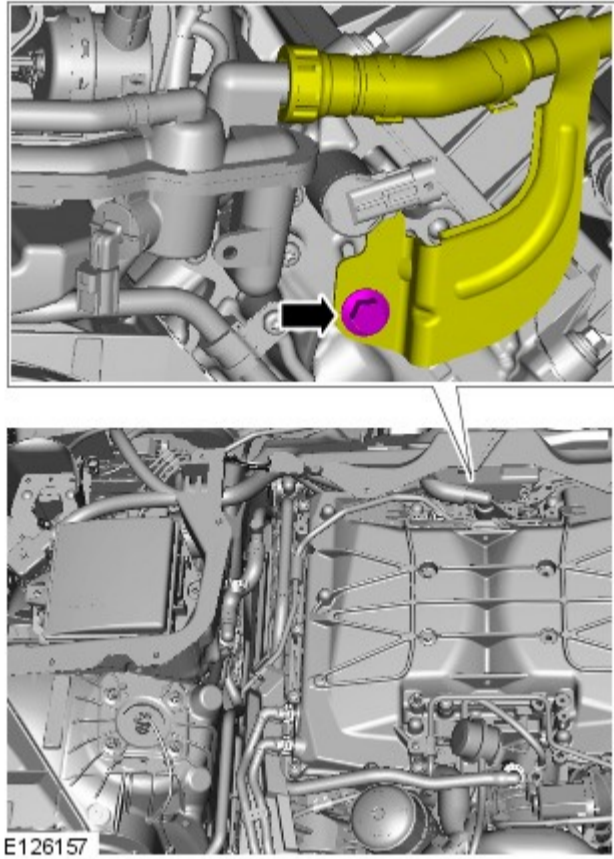


The following step(s) applies to:
Vehicles with 5.0L engine

4.



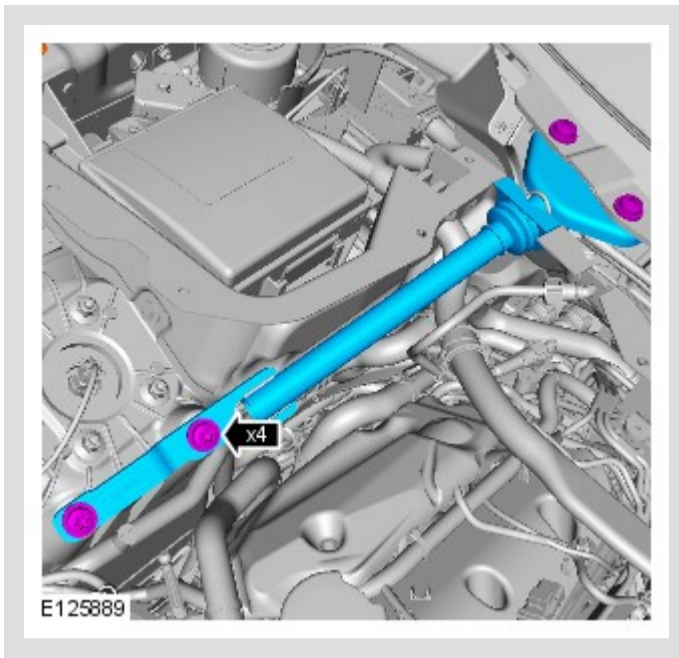
5.



Torque: 12 Nm

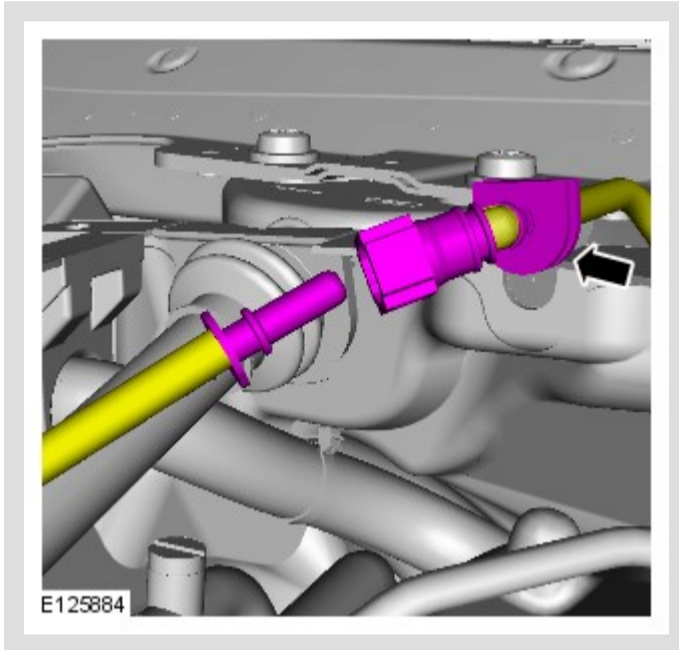
The following step(s) applies to:
All vehicles

6.



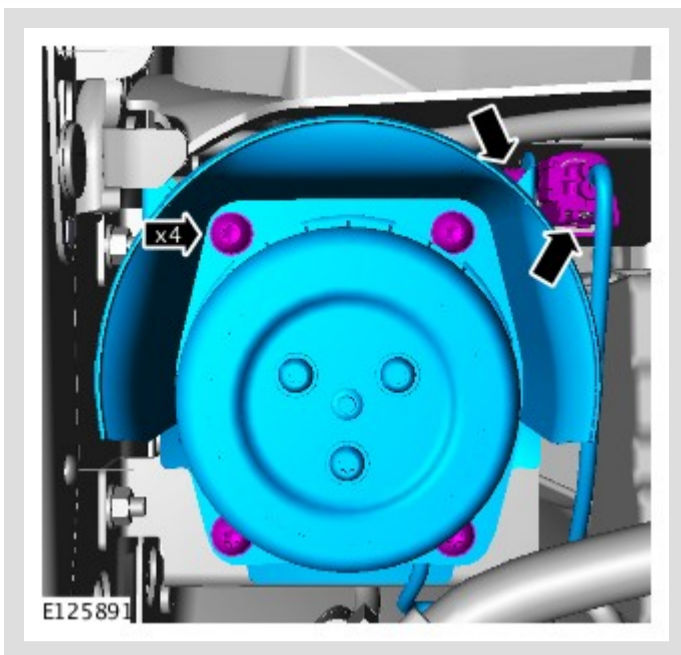
Torque: 55 Nm

7.



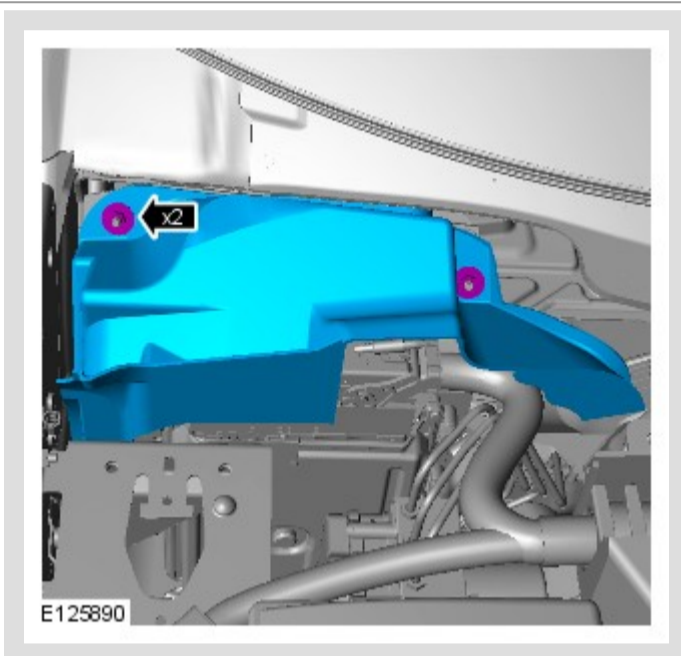
The following step(s) applies to:
Left-hand drive vehicles

8.



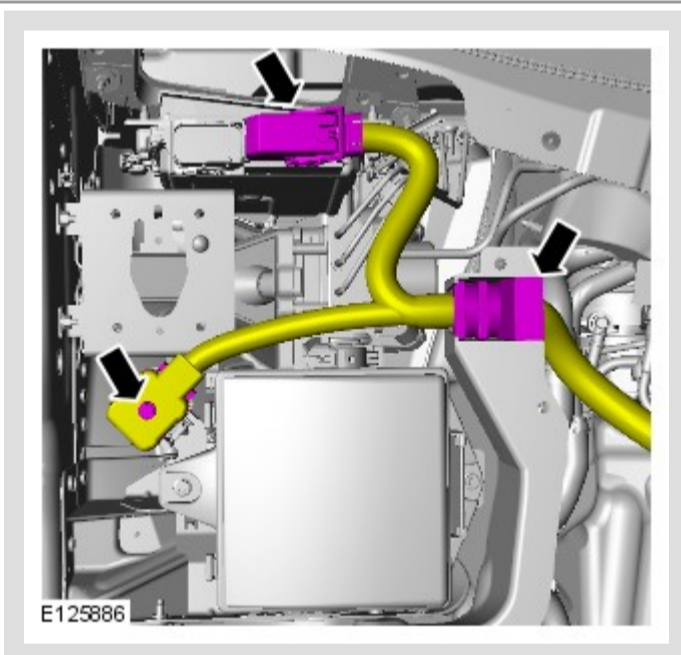
Torque: 8 Nm

9.



Torque: 7 Nm

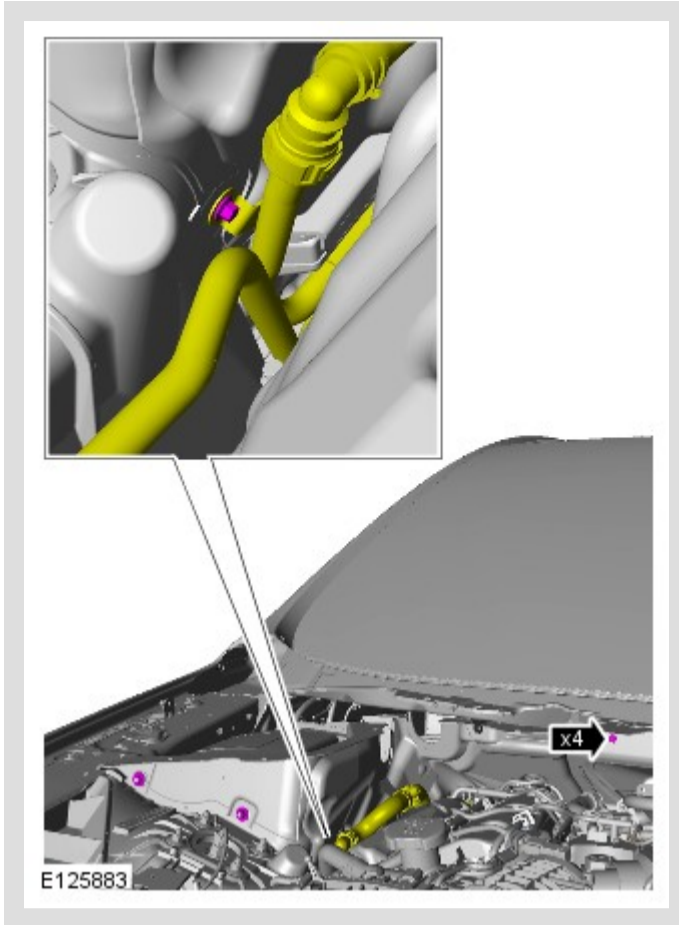
10.



Torque: 8 Nm

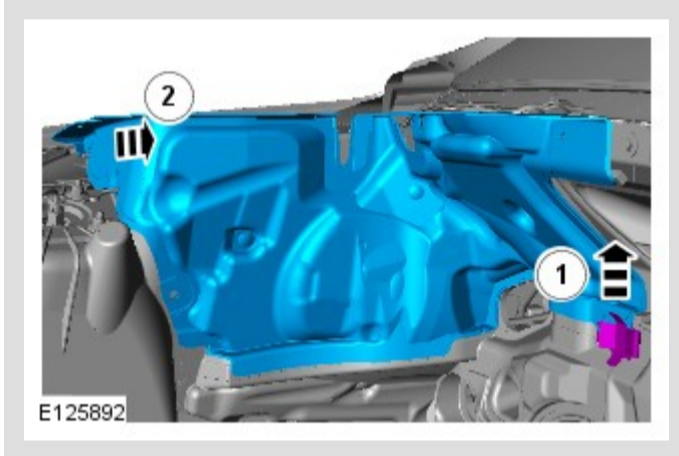
The following step(s) applies to:
All vehicles

11.



Torque: 7 Nm

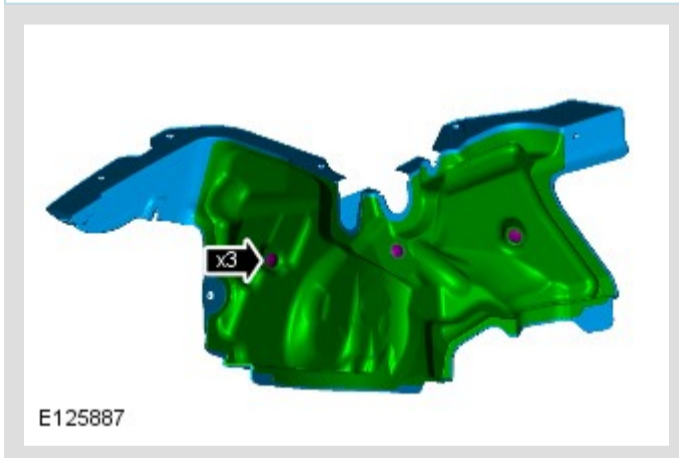
12.



13.

NOTE:

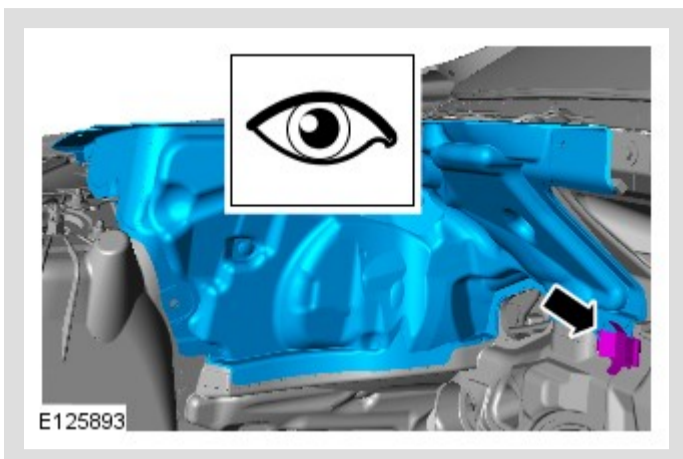
Do not disassemble further if the component is removed for access only.



1.

CAUTION:

Make sure that the clip is correctly located.



To install, reverse the removal procedure.

PUBLISHED: 06-JUN-2013
2011.75 XJ RANGE (X351), 501-02

FRONT END BODY PANELS

SECONDARY BULKHEAD LEFT PANEL (G1267456)

REMOVAL AND INSTALLATION

76.11.28

ENGINE
COMPARTMENT
LEFT HAND COVER
- RENEW

ALL DERIVATIVES

0.70

USED WITHINS

REMOVAL

WARNINGS:

- To avoid accidental deployment, the restraints control module backup power supply must be depleted. Wait at least one minute after disconnecting the battery ground cable(s) before commencing any repair or adjustment to the supplemental restraint system (SRS), or any component(s) adjacent to the SRS sensors. Failure to follow these instructions may result in personal injury.
- Always wear safety glasses when working on an air bag equipped vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.
- To minimize the possibility of premature deployment, do not use radio key code savers when working on the supplemental restraint system. Failure to follow this instruction may result in personal injury.
- To minimize the possibility of injury in the event of premature deployment, always carry a live air bag module with the bag and trim cover pointed away from the body. Failure to follow this instruction may result in personal injury.
- To minimize the possibility of premature deployment, live air bag modules must only be placed on work benches which have been ground bonded and with the trim cover facing up. Failure to follow these instructions may result in personal injury.
- Never probe the electrical connectors of air bag modules or any other supplemental restraint system component. Failure to follow this instruction may result in personal injury.
- Painting over the driver air bag module trim cover or instrument panel could lead to deterioration of the trim cover and air bags. Do not for any reason attempt to paint discolored or damaged air bag module trim covers or instrument panel. Install a new component. Failure to follow this instruction may result in personal injury.

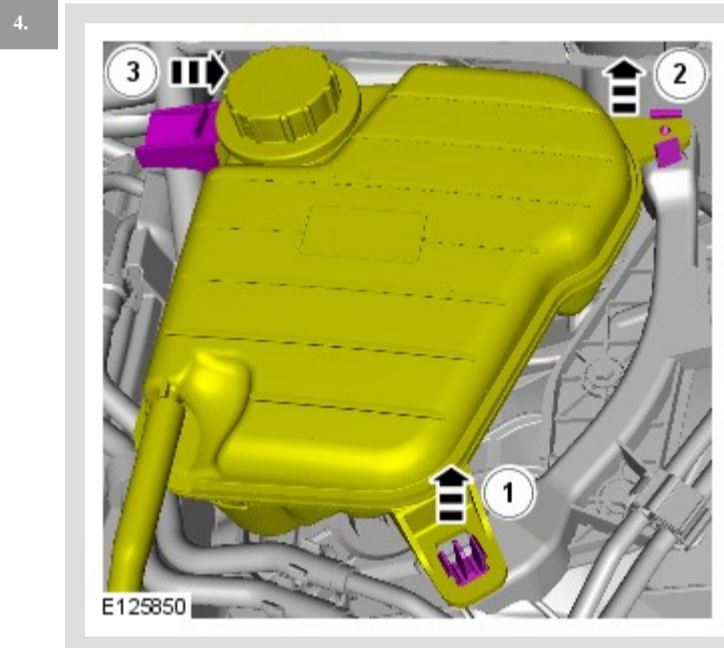
NOTE:

Removal steps in this procedure may contain installation details.

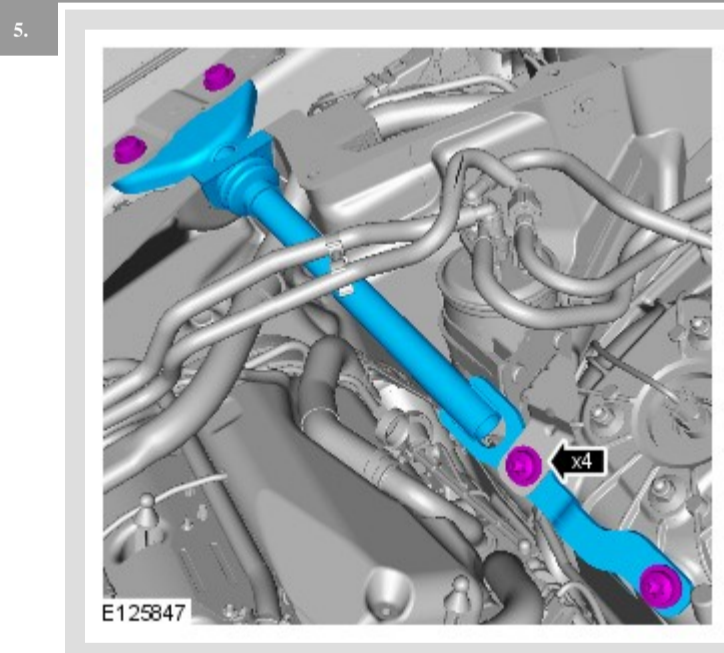
The following step(s) applies to:
All vehicles

1. Disconnect the battery ground cable.
Refer to: Startup Battery Disconnect and Connect (414-01 Battery, Mounting and Cables, General Procedures).
2. Refer to: Engine Cover - TDV6 3.0L Diesel (501-05, Removal and Installation).
Refer to: Engine Cover - V8 N/A 5.0L Petrol/V8 S/C 5.0L Petrol (501-05, Removal and Installation).
Refer to: Engine Cover - V8 N/A 5.0L Petrol/V8 S/C 5.0L Petrol (501-05, Removal and Installation).
Refer to: Engine Cover - GTDi 2.0L Petrol (501-05, Removal and Installation).
3. Refer to: Cowl Vent Screen (501-02 Front End Body Panels, Removal and Installation).

The following step(s) applies to:
Vehicles with petrol engine



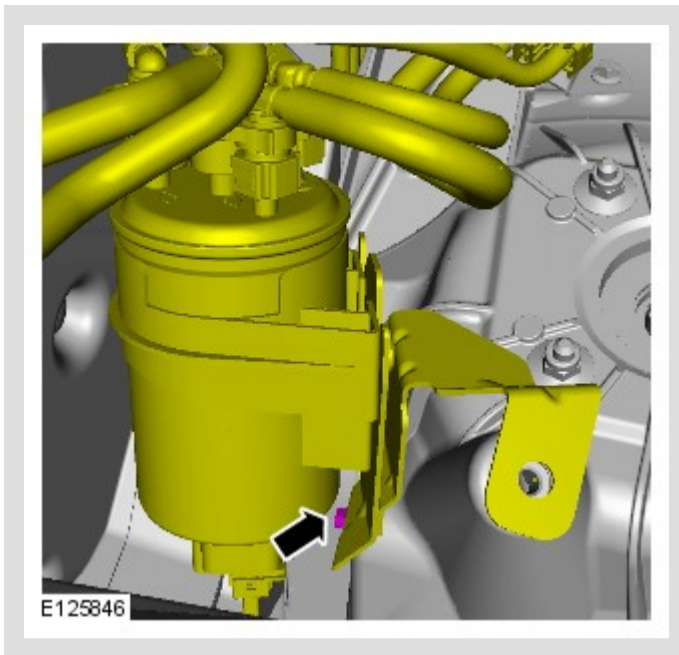
The following step(s) applies to:
All vehicles



Torque: 55 Nm

The following step(s) applies to:
Vehicles with 3.0L diesel
engine

6.

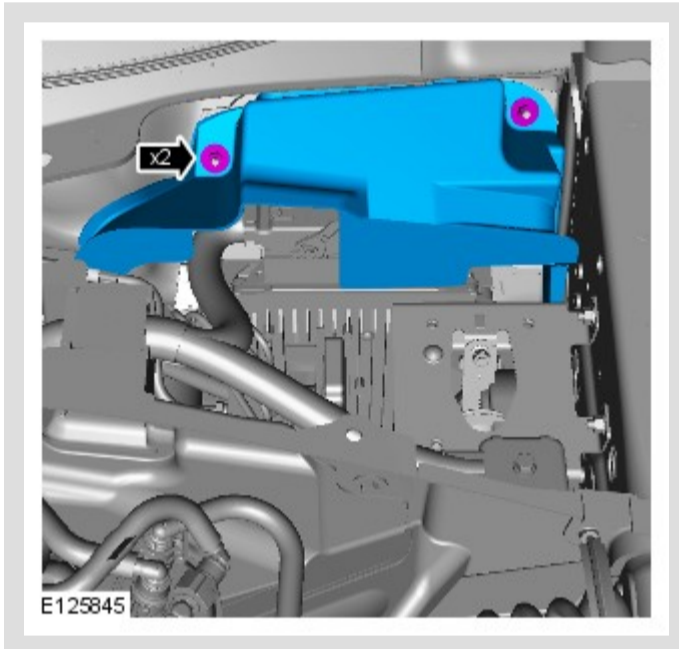


Torque: 10 Nm

The following step(s) applies to:
Right-hand drive vehicles

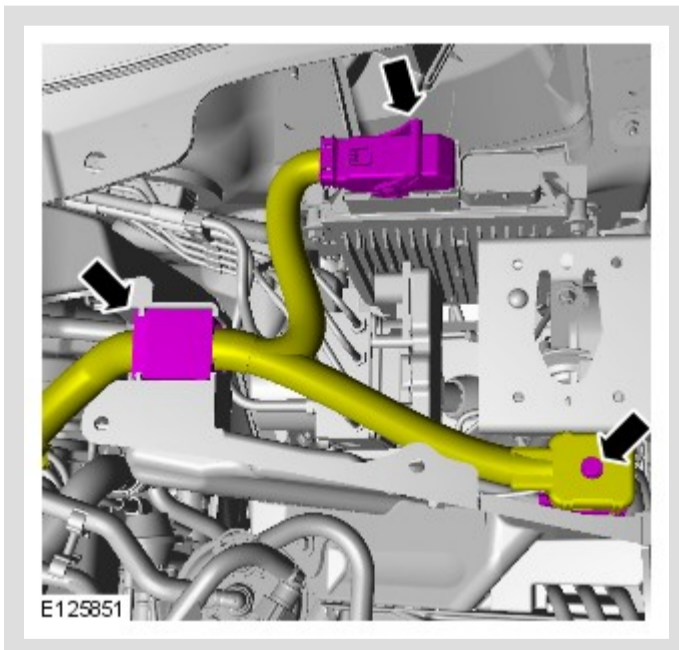
7. Refer to: Left Pedestrian Protection Hood Actuator (501-20 Pedestrian Protection System, Removal and Installation).

8.



Torque: 7 Nm

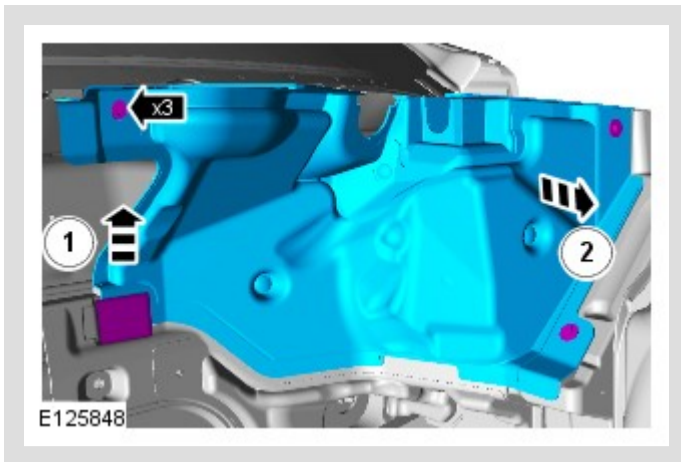
9.



Torque: 8 Nm


The following step(s) applies to:
All vehicles

10.

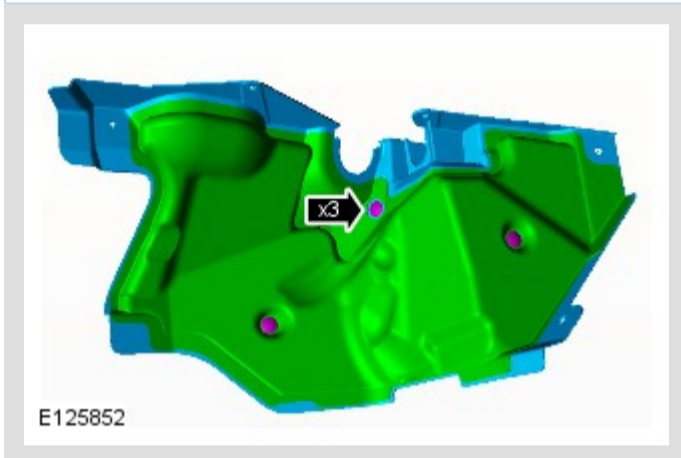


Torque: 7 Nm

11.

 NOTE:

Do not disassemble further if the component is removed for access only.

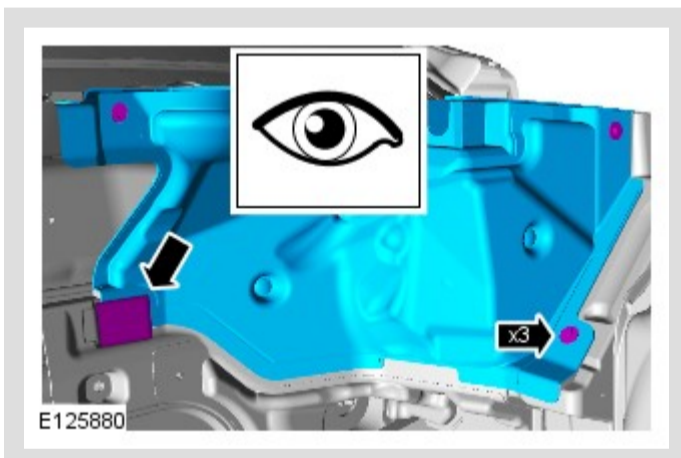


INSTALLATION

1.

 CAUTION:

Make sure that the clip is correctly located.



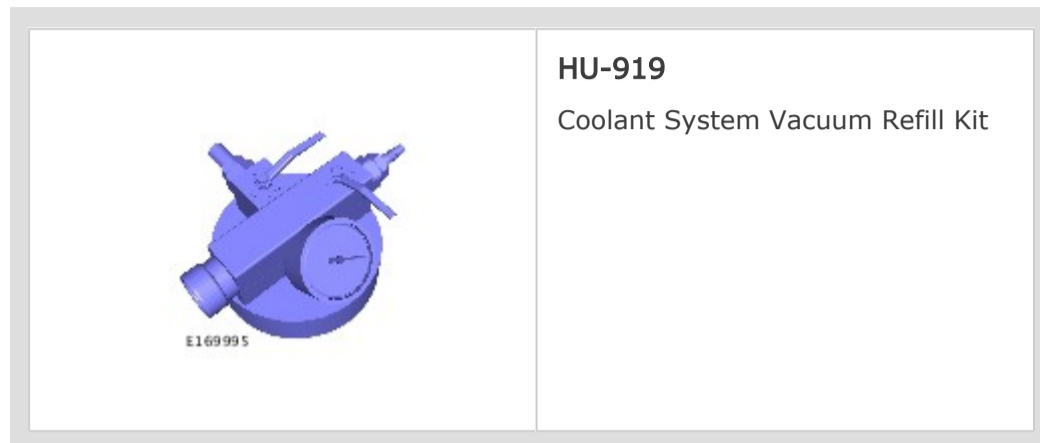
To install, reverse the removal procedure.

PUBLISHED: 09-FEB-2016
2011.75 XJ RANGE (X351), 303-03B

ENGINE COOLING - V8 N/A 5.0L PETROL/V8 S/C 5.0L PETROL

COOLING SYSTEM PARTIAL DRAINING AND VACUUM FILLING (G1816935)

SPECIAL TOOL(S)



DRAINING

⚠ WARNING:

Since injury such as scalding could be caused by escaping steam or coolant, do not remove the filler cap from the coolant expansion tank while the system is hot.

ⓘ CAUTIONS:

- The engine cooling system must be maintained with the correct concentration and type of anti-freeze solution to prevent corrosion and frost damage. Failure to follow this instruction may result in damage to the engine.
- Engine coolant will damage the paint finished surfaces. If spilt, immediately remove the coolant and clean the area with water.

1.

⚠ WARNING:

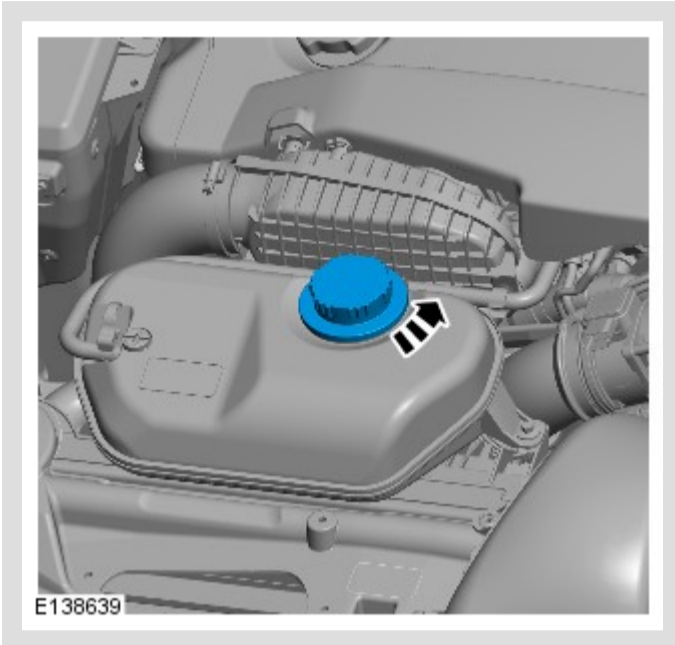
Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

2.

⚠ WARNINGS:

- Release the cooling system pressure by slowly turning the coolant expansion tank cap a quarter of a turn. Cover the expansion tank cap with a thick cloth to prevent the possibility of scalding. Failure to follow this instruction may result in personal injury.
- Be prepared to collect escaping fluids.
- Since injury such as scalding could be caused by escaping steam or coolant, make sure the vehicle cooling system is cool prior to carrying out this procedure.



3. Refer to: Radiator Splash Shield (501-02 Front End Body Panels, Removal and Installation).

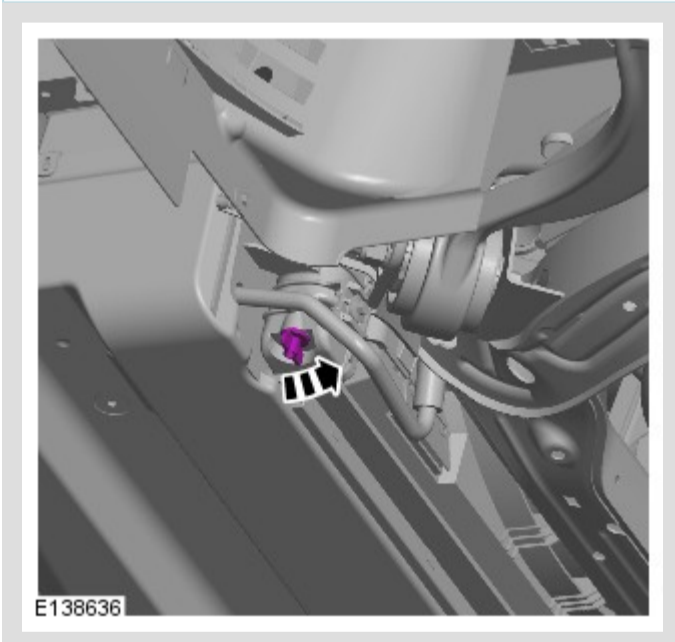
4.

⚠ CAUTION:

Be prepared to collect escaping fluids.

△ NOTES:

- Collect the coolant in a clean container and reuse.
- If equipped.

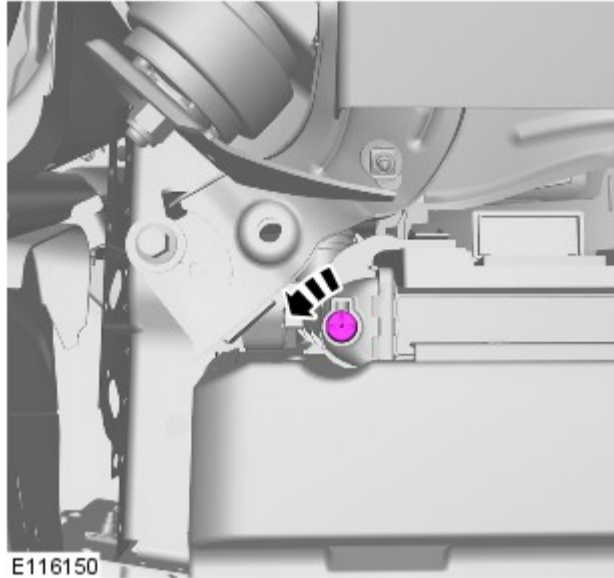


⚠ CAUTION:

Be prepared to collect escaping fluids.

△ NOTES:

- Collect the coolant in a clean container and reuse.
- If equipped.

**FILLING****⚠ WARNING:**

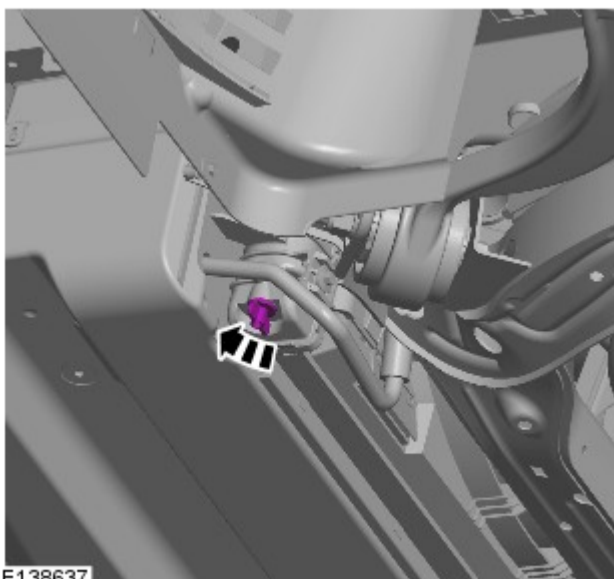
Since injury such as scalding could be caused by escaping steam or coolant, do not remove the filler cap from the coolant expansion tank while the system is hot.

⚠ CAUTIONS:


- The engine cooling system must be maintained with the correct concentration and type of anti-freeze solution to prevent corrosion and frost damage. Failure to follow this instruction may result in damage to the engine.
- Engine coolant will damage the paint finished surfaces. If spilt, immediately remove the coolant and clean the area with water.

△ NOTE:

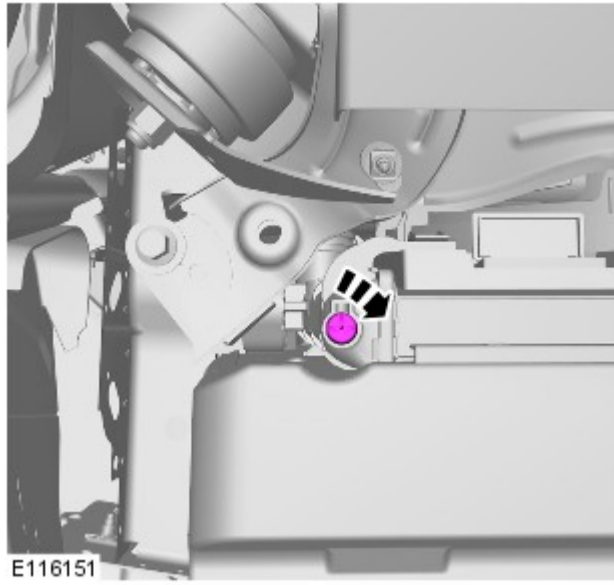
If equipped.



2.

 NOTE:

If equipped.

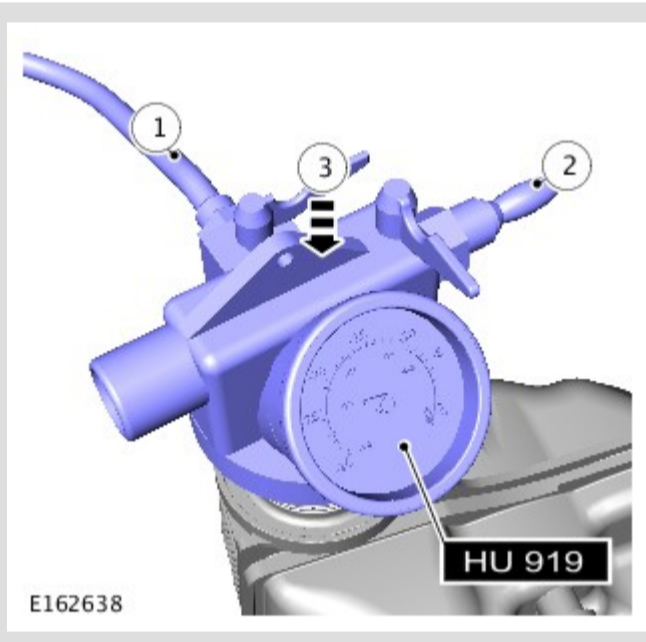


Torque: 2 Nm

3. Refer to: Radiator Splash Shield (501-02 Front End Body Panels, Removal and Installation).

4. Prepare a sufficient amount of coolant to the specified concentration.

5.



 NOTES:

- Make sure the coolant supply valve is in the closed position on the special tool.
- The special tool needs an air pressure of 6 to 8 bar (87 to 116 psi) to operate correctly.
- Small diameter or long airlines may restrict airflow to the coolant vacuum fill tool.

2. Position the hose from the special tool into a container of clean coolant.

3. Connect a regulated compressed air supply to the special tool.

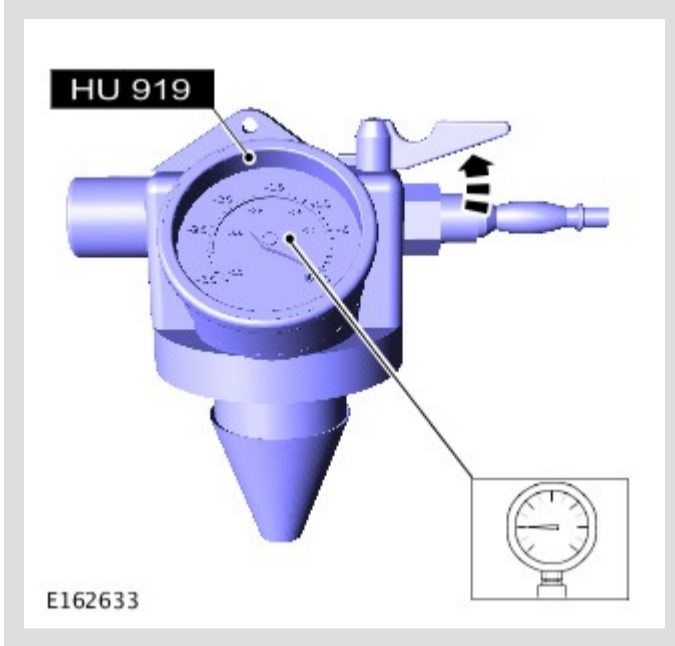
4. Move the special tool to the expansion tank.

Special Tool(s): [HU-919](#)

6.

NOTES:

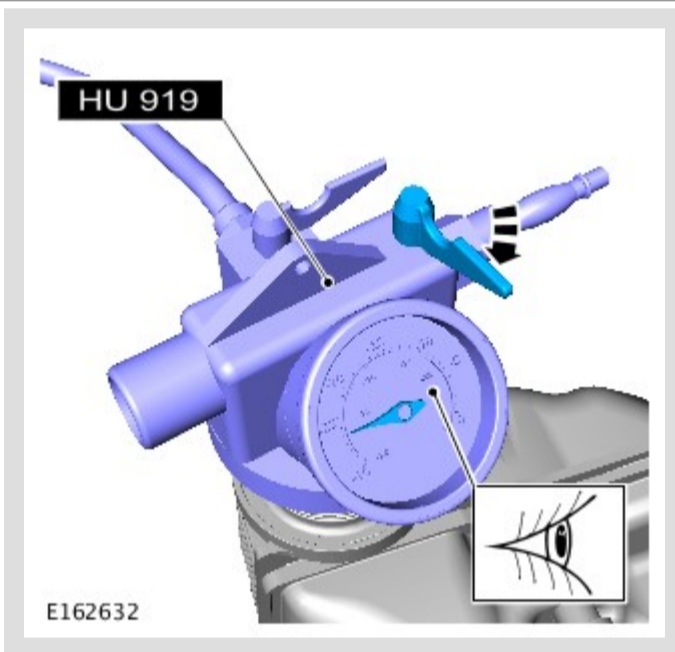
- Make sure the coolant supply valve is in the closed position on the special tool.
- The special tool needs an air pressure of 6 to 8 bar (87 to 116 psi) to operate correctly.
- Small diameter or long airlines may restrict airflow to the coolant vacuum fill tool.



Open the air supply valve until -0.8 (-12 psi) Bar is shown on the gauge.

Special Tool(s): [HU-919](#)

7.



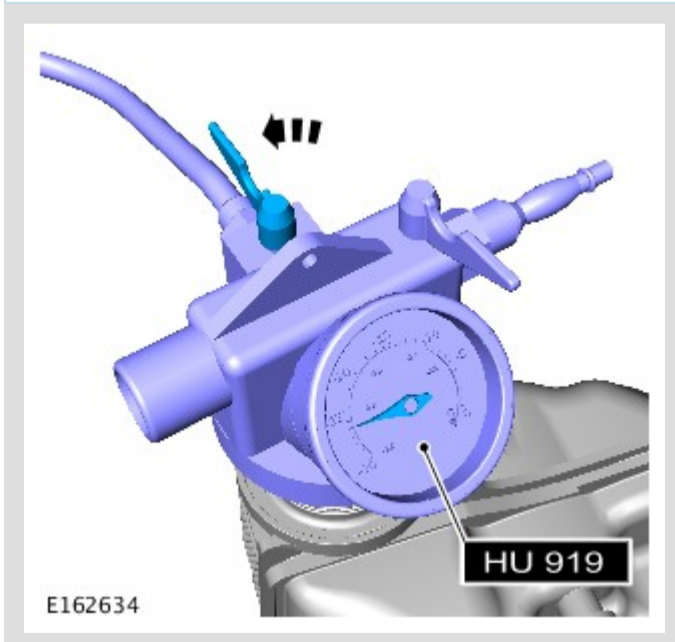
- Close the air supply valve.
- Allow 1 minute to check the vacuum is held.

Special Tool(s): [HU-919](#)

8.

NOTES:

- The coolant is to be reused.
- Close the coolant supply valve when the coolant expansion tank MAX mark is reached or coolant movement has stopped.



Open the coolant supply valve and allow the coolant to be drawn into the system.

Special Tool(s): [HU-919](#)

9. Remove the special tool.

10. Connect exhaust extraction hoses to the tail pipes.

11. Start and run the engine.

12.  **CAUTION:**

Correct installation of the coolant expansion tank cap can be obtained by tightening the cap until 3 audible clicks are heard.

Install the coolant expansion tank cap.

13. Hold the engine speed at 2000 revolutions per minute (RPM) until warm air is expelled from the heater.

14. Switch the engine off and allow to cool.

15. Clean any spill or excess coolant from the vehicle.

16.  **WARNING:**

Since injury such as scalding could be caused by escaping steam or coolant, allow the vehicle cooling system to cool prior to carrying out this procedure.

Check and top-up the coolant if required.

PUBLISHED: 11-MAY-2011
2011.75 XJ RANGE (X351), 100-02

JACKING AND LIFTING

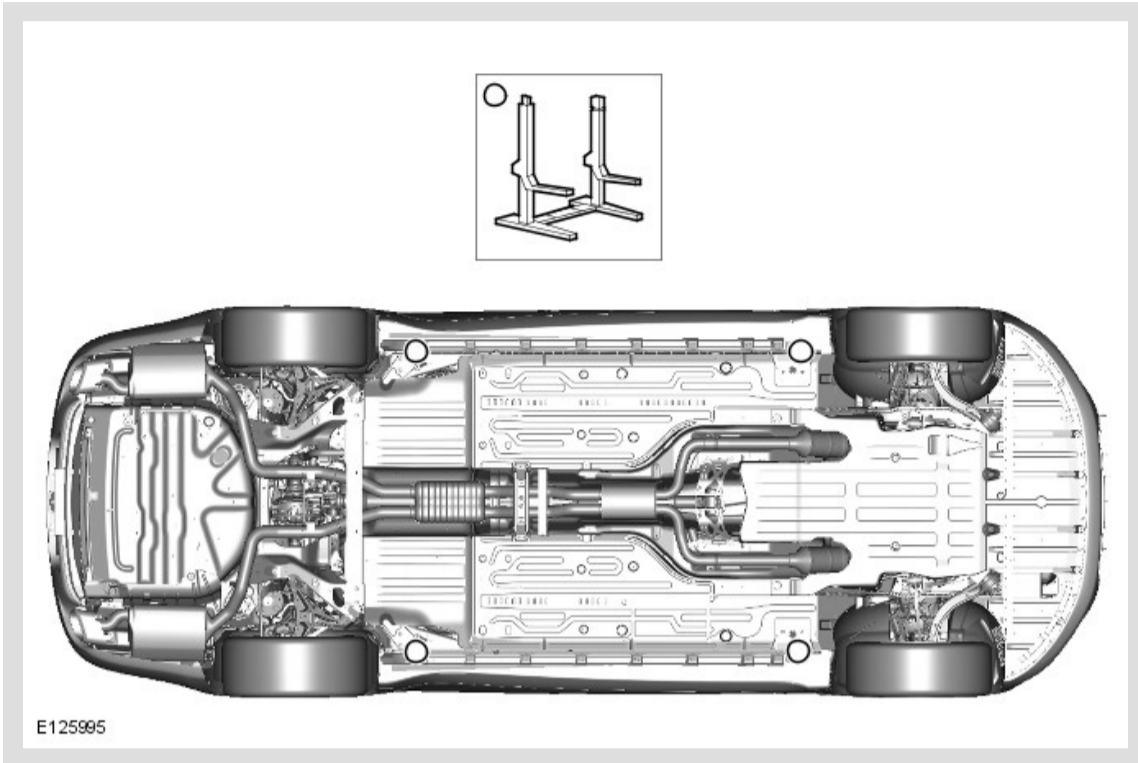
LIFTING (G1272794)

DESCRIPTION AND OPERATION

LIFTING POINTS—TWIN-POST HOIST

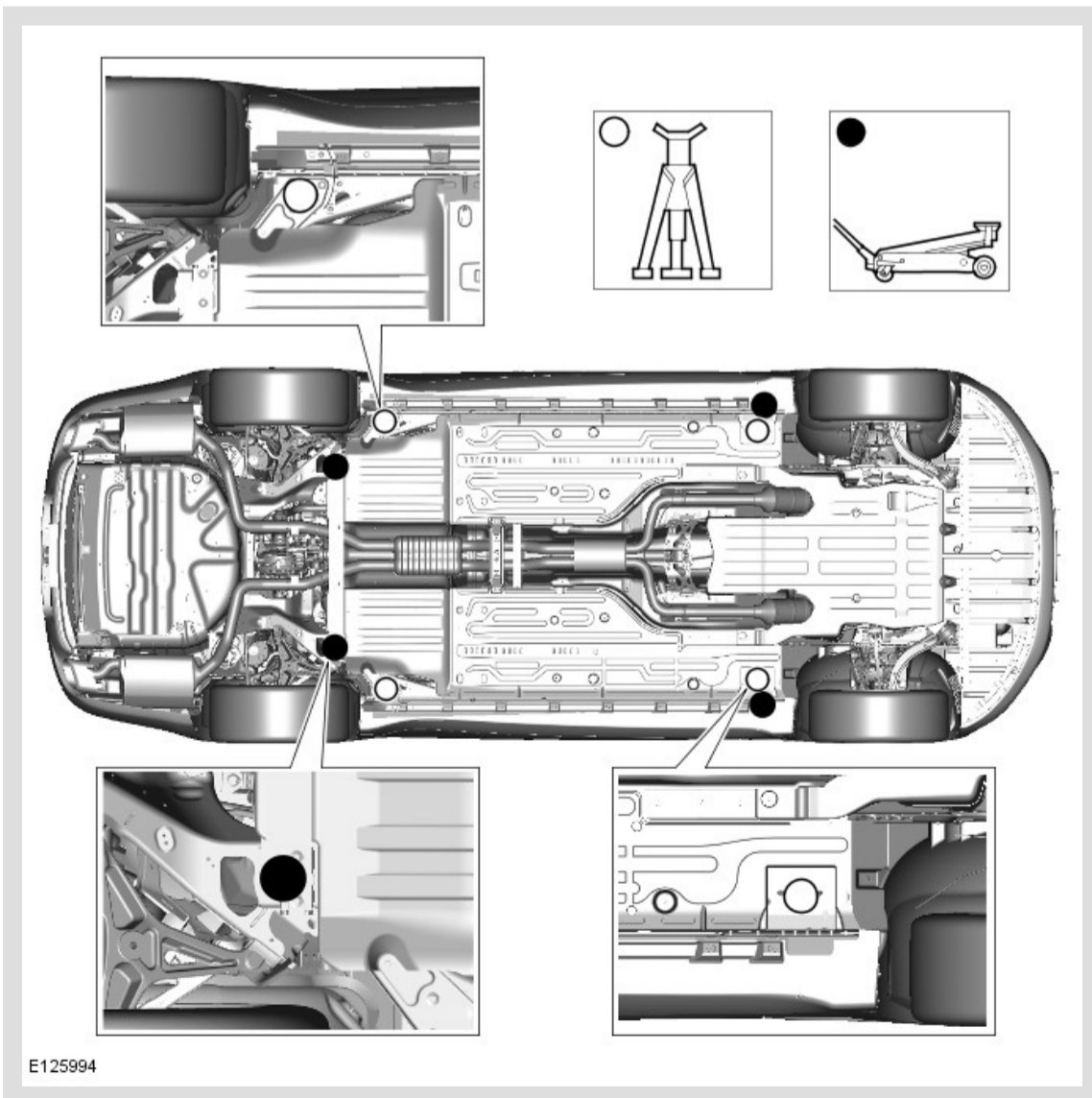
 **CAUTIONS:**

- Do not allow the hoist adapters to contact the steering linkage, suspension arms, stabilizer bar, rear subframe stabilizer brackets or to compress the lower suspension arm stabilizer bar insulator. Damage to the suspension, exhaust and steering linkage components may occur if care is not exercised when positioning the hoist adapters of two-post hoists prior to lifting the vehicle.
- Never use the rear axle as a lift point. Damage to the rear axle seals and bushes may occur.
- When using a twin post hoist, a cushioned pad must be utilized to avoid body damage.



LIFTING POINTS—FLOOR JACK AND AXLE STANDS

- ⚠ CAUTIONS:**
- If the vehicle is to be lifted using floor jacks, two jacks must be used to raise either the front or rear of the vehicle. If one jack only is used, excessive body twist may occur.
 - When using a floor jack to jack up the rear of the vehicle, the jack head must be aimed at the NVH bar securing bolts to avoid fuel tank damage or body damage.
 - When using a floor jack, a cushioned pad must be utilized to avoid body damage.
 - When using axle stands, a cushioned pad must be utilized to avoid damage to the body or rear subframe assembly.

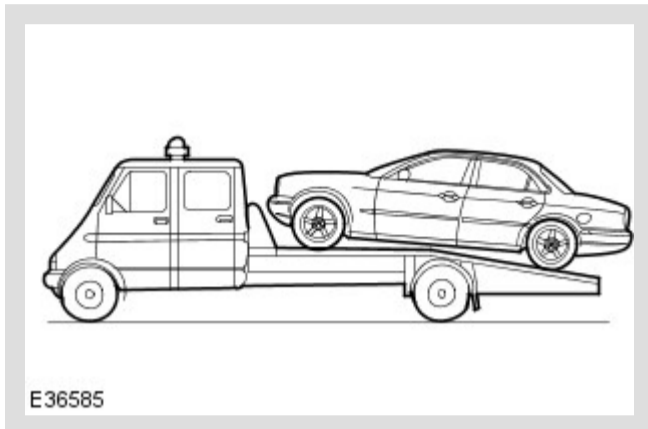


NOTES:

- Prior to vehicle recovery, make sure the vehicle keys are available and the security system is disarmed.
- Some variation in the illustrations may occur, but the essential information is always correct.

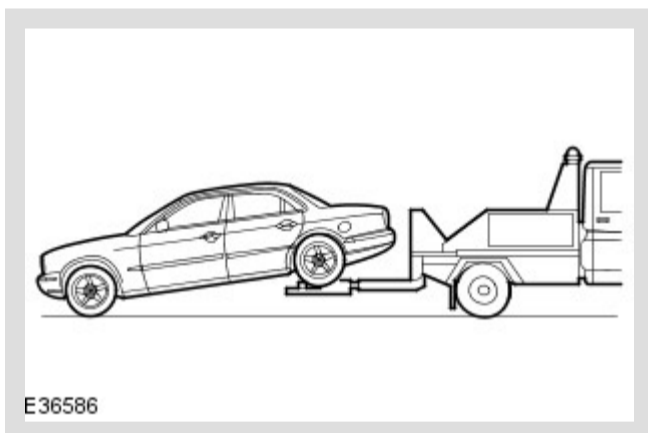
Vehicle recovery methods are:

- By flat-bed transporter.
- By rear suspended tow.

TRANSPORTER OR TRAILER RECOVERY

When the vehicle is being recovered by transporter or trailer:

- the parking brake must be applied and the wheels chocked.
- the gear selector lever must be in Neutral. Do not select Park on automatic transmission vehicles, as the parking lock mechanism may be damaged by the forward and backward rocking motion of the vehicle.
- the vehicle must be securely tied down to the transporter or trailer.

REAR SUSPENDED TOW

When the vehicle is being recovered by rear suspended tow:

- the ignition key must be removed from the vehicle to lock the steering.
- the rear wheels must be correctly positioned in the lifting cradle and securely tied down.

EMERGENCY TOWING**WARNING:**

If the engine is not running, the steering will become heavy and the force necessary to effectively apply the brakes will be greatly increased.

CAUTION:

A vehicle with a defective transmission must be towed by rear suspended tow.

When the vehicle is being towed on its own wheels:

- Local regulations for the towing of vehicles must be followed. In some countries the registration number of the towing vehicle and an 'On Tow' sign or warning triangle must be displayed at the rear of the towed vehicle.
- The gear selector lever must be in Neutral.
- The ignition must be switched on to release the steering lock and make the direction indicators, horn and stop lamps operate.
- A distance of 0,8 km (0.5 mile) must not be exceeded.

- A speed of 48 km/h (30 mph) must not be exceeded.
- The tow rope must be attached to the front towing eye.