

TECHNICAL BULLETIN
LTB00420v3
20 MAY 2014



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This reissue replaces all previous versions. Please destroy all previous versions. Only refer to the electronic version of this Technical Bulletin in TOPIx.

This bulletin supersedes TSB LTB00420v2/2012 dated 03 OCT 2012, which should either be destroyed or clearly marked to show it is no longer valid (e.g. with a line across the page). Only refer to the electronic version of this Technical Bulletin in TOPIx.

Changes are highlighted in gray

SECTION: 204-05

Suspension Compressor Replacement

AFFECTED VEHICLE RANGE:

Discovery 4 / LR4 (LA)

Model Year: 2010-2012

VIN: AA513326-
CA638964

Range Rover Sport (LS)

Model Year: 2005-2013

VIN: 5A900302-
DA768550

Discovery 3 / LR3 (LA)

Model Year: 2005-2009

VIN: 5A000360-
9A513325

MARKETS:

All

CONDITION SUMMARY:

Situation:

A customer may report a concern that the air suspension warning lamp is illuminated and the suspension will not rise.

This version has been issued for a change to the Service Instruction and to Parts Required.

Manufacturing have previously used two different types of air suspension compressors. See Below for applicable VIN Ranges. If the Hitachi or old-design AMK air suspension compressor requires replacement, then a new-design AMK air suspension compressor can be installed.

Hitachi air suspension compressor installed from VIN:

Discovery 3/LR3 - 5A000360 to 9A513325

Range Rover Sport - 5A900302 to 9A215622

Hitachi or old-design AMK air suspension compressor installed from VIN:



NOTE: Some vehicles may have been previously repaired using the old-design AMK air

suspension compressor.

Discovery 4/LR4 - AA513326 to CA638964

Range Rover Sport - AA215623 to DA768550

Cause: The air suspension compressor. **Suggested Customer Concern Code C50.**



NOTE: The Fault Code C1A20-64 may also be displayed.

Action: Should a customer express concern, follow the Service Instruction outlined below.

PARTS:

LR045251	AMK Compressor Replacement Kit	Quantity: 1
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WARRANTY:



NOTE: Repair procedures are under constant review, and therefore times are subject to change; those quoted here must be taken as guidance only. Always refer to TOPIx to obtain the latest repair time.



NOTE: DDW requires the use of causal part numbers. Labor only claims must show the causal part number with a quantity of zero.

DESCRIPTION	SRO	TIME	CONDITION CODE	CAUSAL PART
Replace the Hitachi compressor with the AMK compressor	60.50.89/58	0.6 hours	42	LR023964 Hitachi LR032902 AMK



NOTE: Normal Warranty policies and procedures apply.

SERVICE INSTRUCTION:



NOTE: Some variation in the illustrations may occur, but the essential information is always correct.



1. **NOTE:** Hitachi compressor (number 1).



NOTE: Old-design AMK air suspension compressor (number 2).



NOTE: New-design AMK air suspension compressor (number 3).

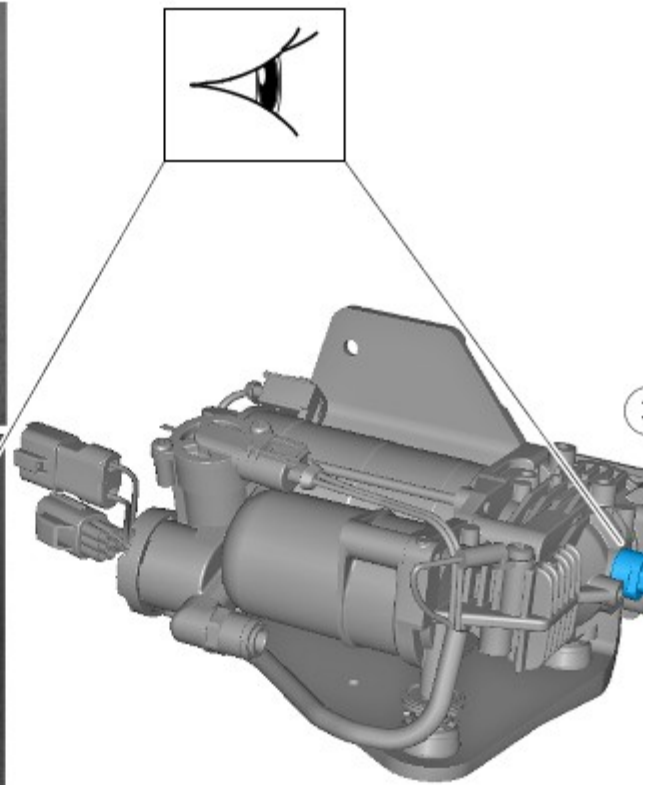
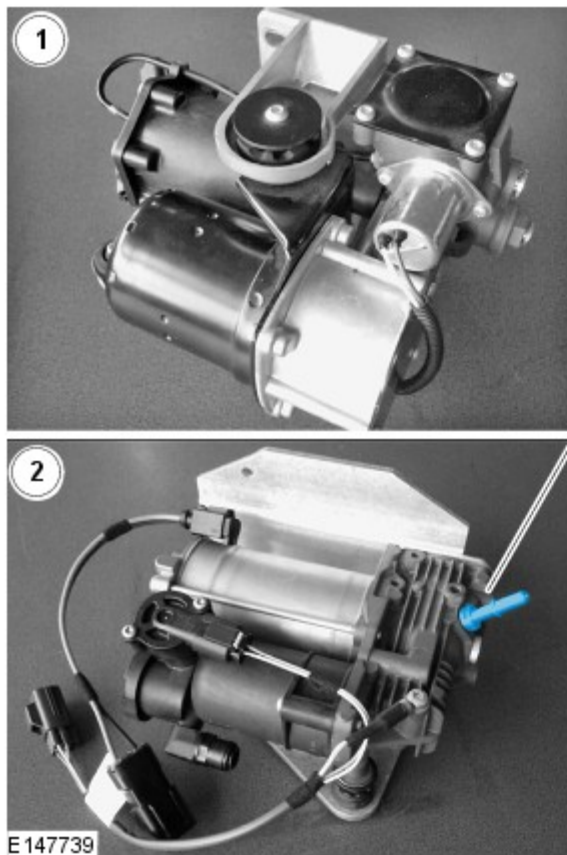


NOTE: Note that there is a subtle difference between the 2 AMK air suspension compressors.

Identify the air suspension compressor installed on the vehicle.

1. If a Hitachi air suspension compressor is installed, carry out steps 2 to 19 and 38 to 44.

2. If an old-design AMK air suspension compressor is installed, carry out steps 20 to 44.



NOTE: Vehicles equipped with Hitachi air suspension compressor.

2.  **WARNING:** Steps 2 and 3 must be carried out within 10 minutes of each other, failure to follow this instruction may result in personal injury.



CAUTION: Make sure the ignition switch is turned off, the park brake is on and the selector lever is in park position.

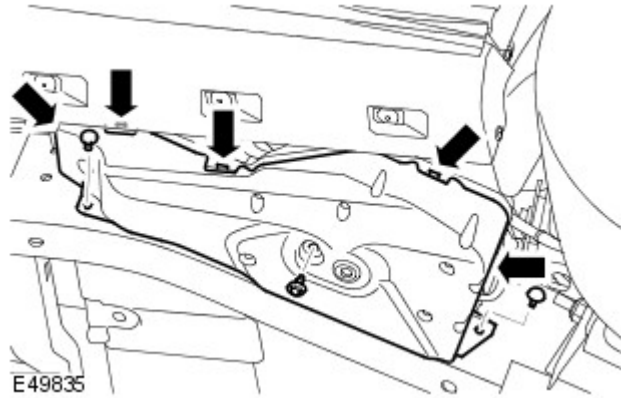
Open the front door.


3.  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise and support the vehicle, make sure at least one of the wheels is off the ground.


4. Remove the air suspension compressor lower cover.

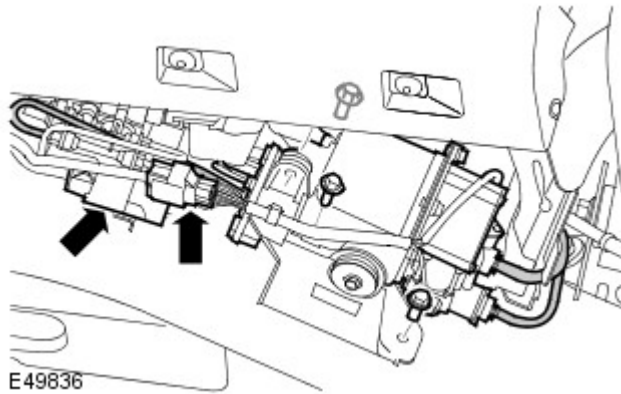
- Remove the 3 retaining bolts.
- Release the 5 retaining clips.



5.  **CAUTION:** Make sure that the 3 suspension compressor mounting nuts in the chassis rail are not damaged or corroded. If required, install the nuts.

 **CAUTION:** Always plug any open connections to prevent contamination.


 **NOTE:** Access to the top compressor retaining bolt is very restricted. It is advisable to use a 3/8 inch drive socket with a flexible coupling.



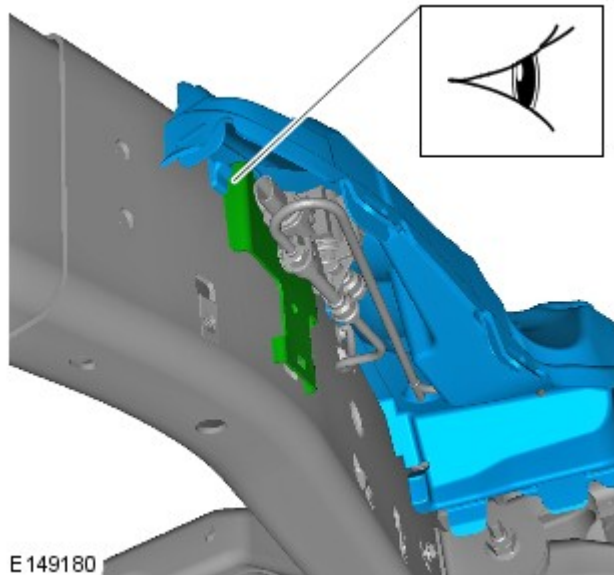
Remove the air suspension compressor.


- Disconnect the 3 air lines.
- Disconnect the 2 electrical connectors.
- Remove the 3 retaining bolts.

6. Remove and discard the old suspension compressor upper cover.

7.  **CAUTION:** Make sure that the cover is correctly located behind the bracket as shown. Failure to follow this instruction may cause noise/vibration issues.

Install the new suspension compressor upper cover.

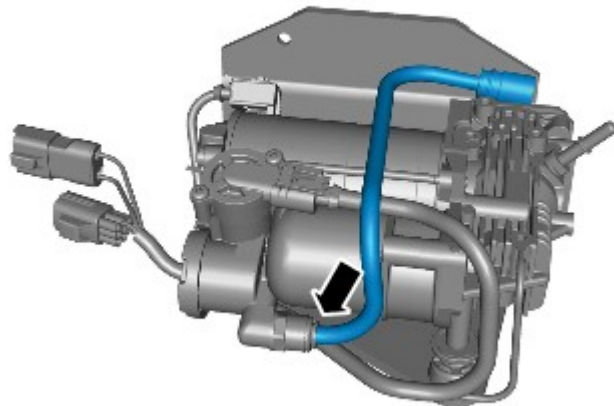



8.  **CAUTION:** Make sure the new pipe is installed securely into the new air suspension compressor connector, failure to follow this instruction may cause damage to the component.

 **CAUTION:** Make sure the in-line connector is located inside the compressor box.

 **NOTE:** Old-design AMK air suspension compressor shown, new-design is similar.

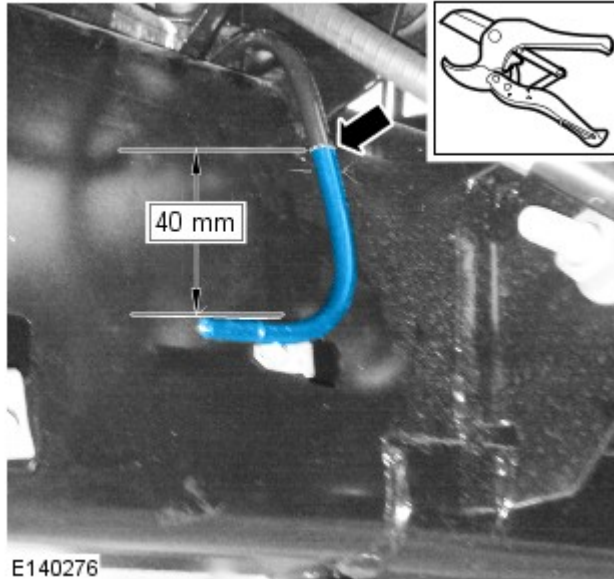
Install the new exhaust pipe to the new air suspension compressor as shown.




9.  **CAUTION:** 40mm must be removed from the pipe. Failure to do this could cause a short between the compressor and box covers resulting in a noisy compressor.

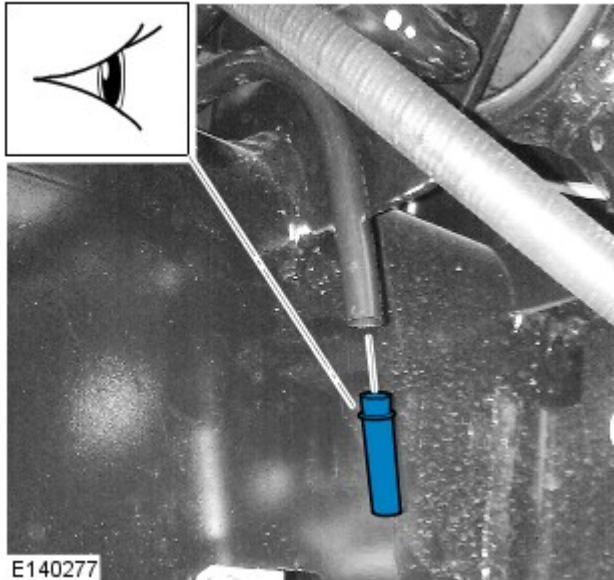
 **NOTE:** The pipe to be cut is the smaller diameter intake pipe.

Using a suitable pipe cutter tool, cut the air suspension feed pipe in the position indicated.

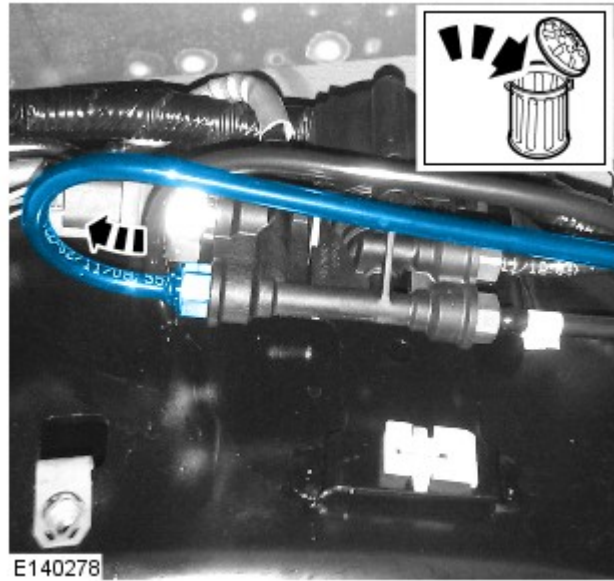


10.  **CAUTION:** Make sure the air line insert is in the correct orientation, failure to follow this instruction may cause damage to the component.

Install the air line insert until there is no part of the airline insert showing, and it is flush with the end of the air line.



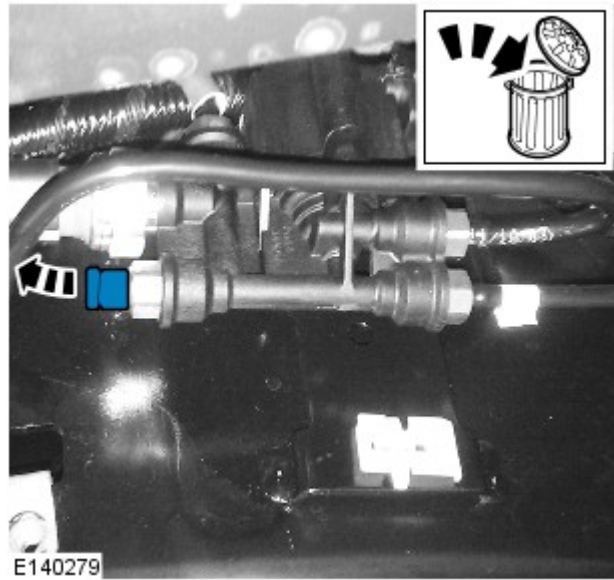
11. Remove and discard the air line and connector from the valve block.



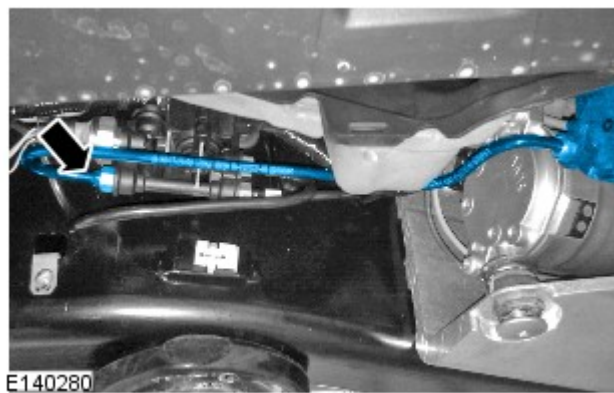
12.  **CAUTION: Do not remove the blanking plug until after the connector is tightened.**

Install the new connector and tighten to 2Nm.

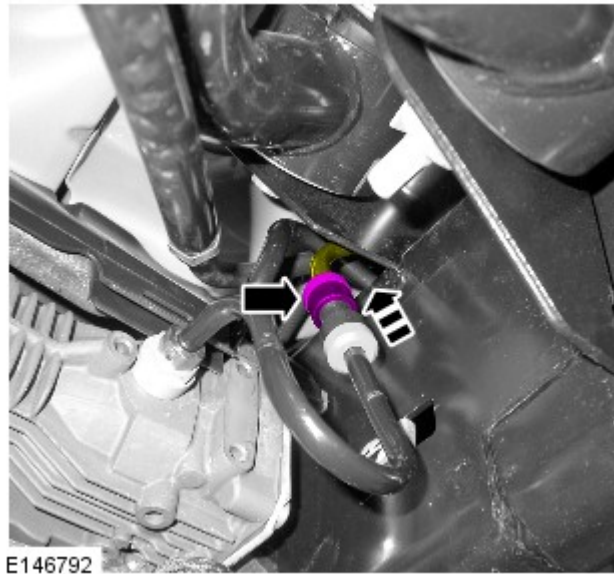
- Remove blanking plug.





13. Install the new air line link pipe.




14. Connect the new air line link pipe.



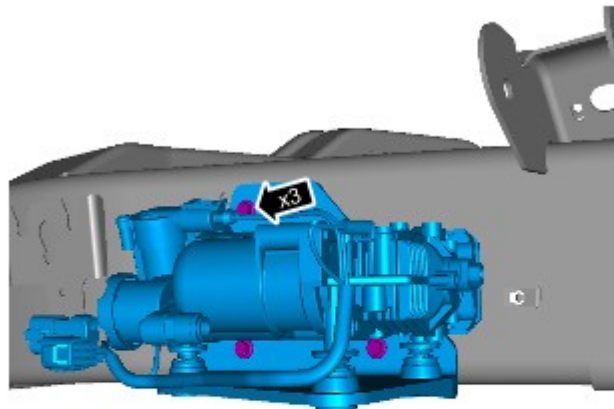
15.  **CAUTION:** Make sure the air lines and wiring harness are not trapped between the suspension compressor mounting bracket and the chassis, failure to follow this instruction may cause damage to the vehicle.


 **CAUTION:** Make sure the air line link pipe is correctly fitted. It must be inserted to a depth of 20mm.


 **NOTE:** Make sure that the suspension compressor upper cover is installed correctly.

Secure the suspension compressor and bracket assembly.

- Tighten the 3 retaining bolts to 23 Nm.




16.  **CAUTION:** Make sure the air line link pipe is correctly installed. It must be inserted to a depth of 20mm.

 **CAUTION:** Make sure the air lines and wiring are not trapped between the suspension compressor mounting bracket and the chassis, failure to follow this instruction may cause damage to the vehicle.

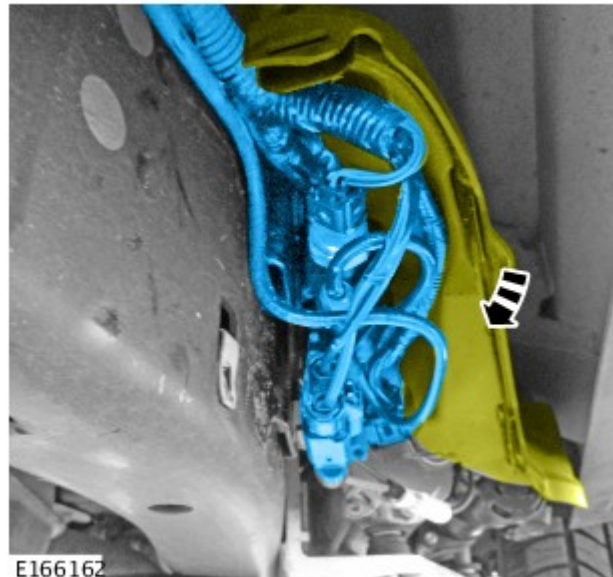
Position the new air suspension compressor using the new mounting bolts (do not tighten the bolts fully) and install the new air line link pipe.



E146791


17.  **CAUTION:** Make sure the air lines and wiring harness are not trapped between the suspension compressor mounting bracket and the chassis, failure to follow this instruction may cause damage to the vehicle.

Check route of wiring harness before fully tightening the new mounting bolts.



E166162

18.  **CAUTION:** Do not pre-load the compressor mounts.

 **NOTE:** After connection, make sure the inline connector is located inside the cover in the positions shown.


 **NOTE:** Suspension compressor upper cover shown removed for clarity.

Connect the air line.

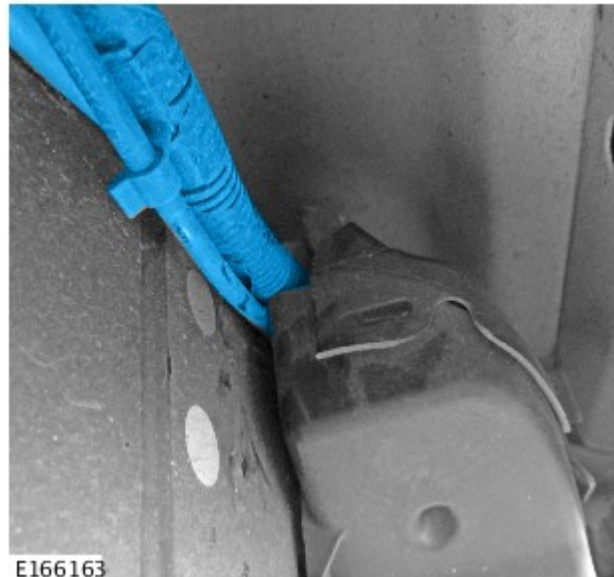
- After connecting the air line make sure the connector is located inside the cover.



E149322

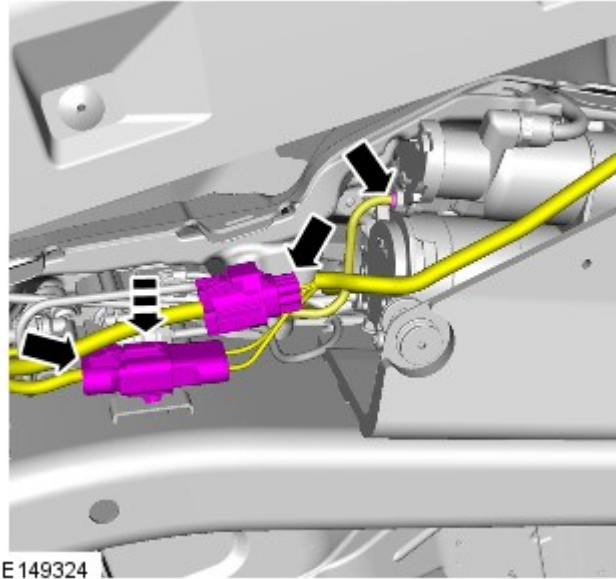
19.  **CAUTION:** Make sure the wiring harness is not trapped between the suspension compressor mounting bracket and the chassis, failure to follow this instruction may cause damage to the vehicle.

Make sure the wiring harness is correctly routed.



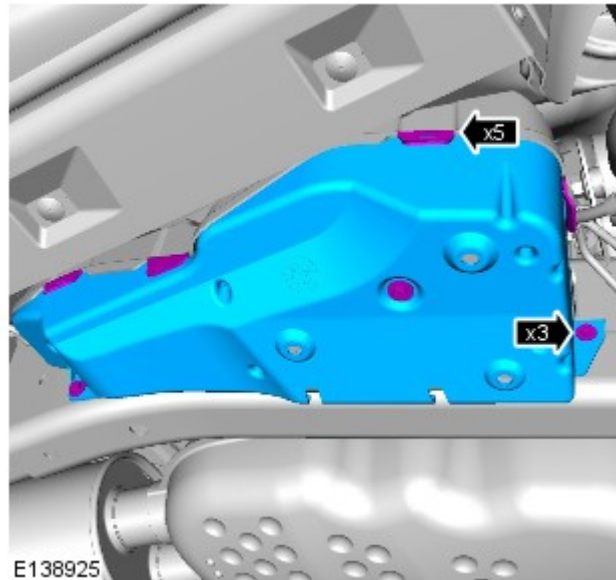
E166163

20. Connect the air line and the 2 electrical connectors.



21. Install the suspension compressor lower cover.

- Secure the 5 retaining clips.
- Tighten the 3 retaining bolts to 9 Nm.



 **NOTE: Vehicles equipped with old-design AMK air suspension compressor.**

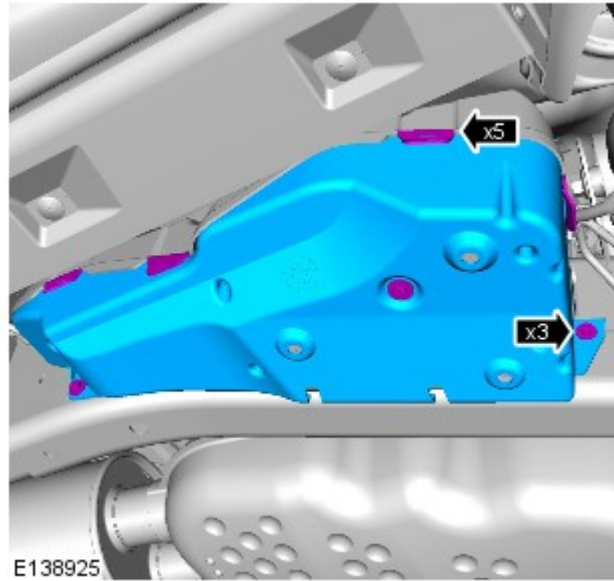
22.  **WARNING: Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.**

 **WARNING: Make sure that at least one wheel is off the ground.**

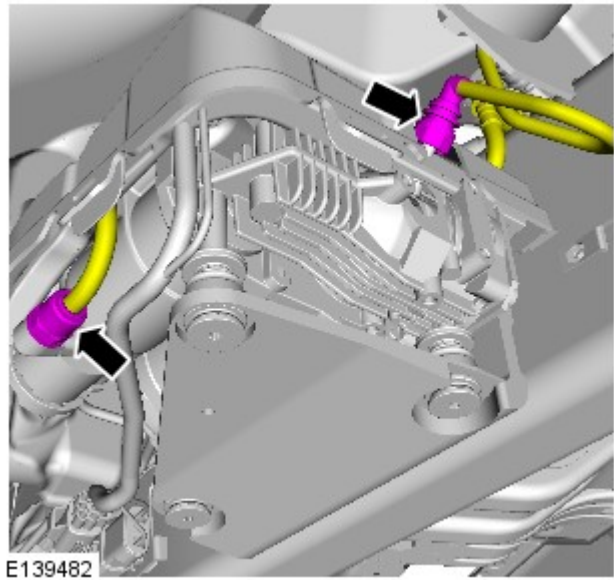
Raise and support the vehicle.

23. Remove the suspension compressor lower cover.

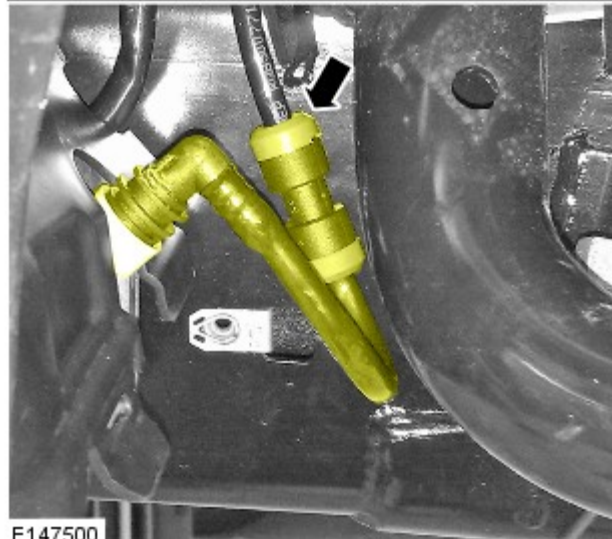
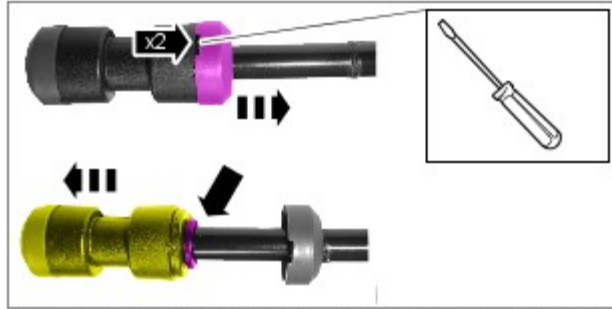
- Remove the retaining 3 bolts.
- Release the retaining 5 clips.



24. Disconnect the 2 air lines.

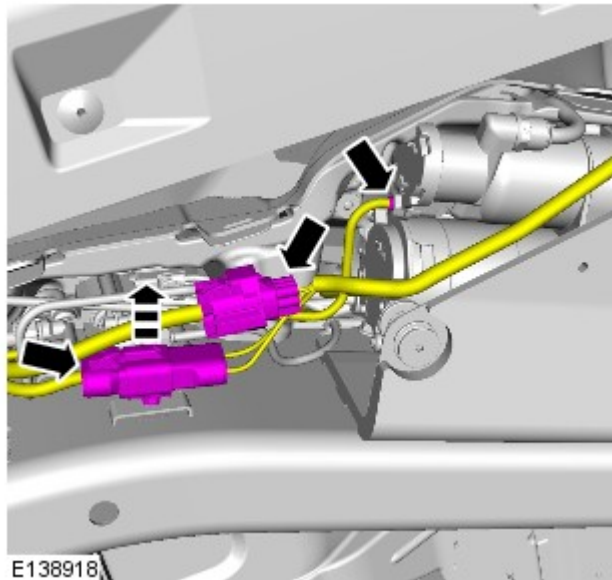


25. If installed, remove and discard the air line link pipe.




E147500

26. Disconnect the air line and 2 electrical connectors.



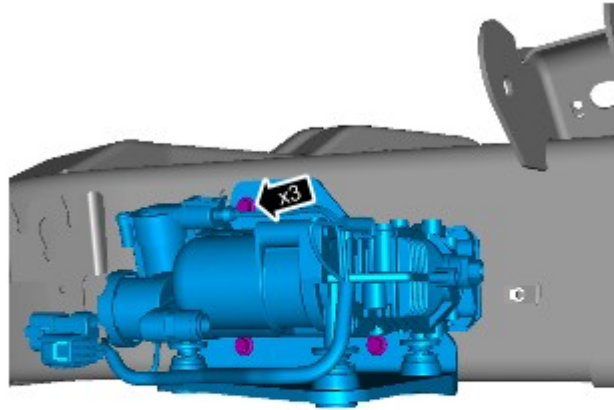
E138918

27.  **CAUTION:** Make sure that the 3 suspension compressor mounting nuts in the chassis rail are not damaged or corroded. If required, install the new nuts.

 **NOTE:** New-design AMK air suspension compressor shown, old-design is similar.


Remove the suspension compressor and bracket assembly.

- Remove the 3 retaining bolts.

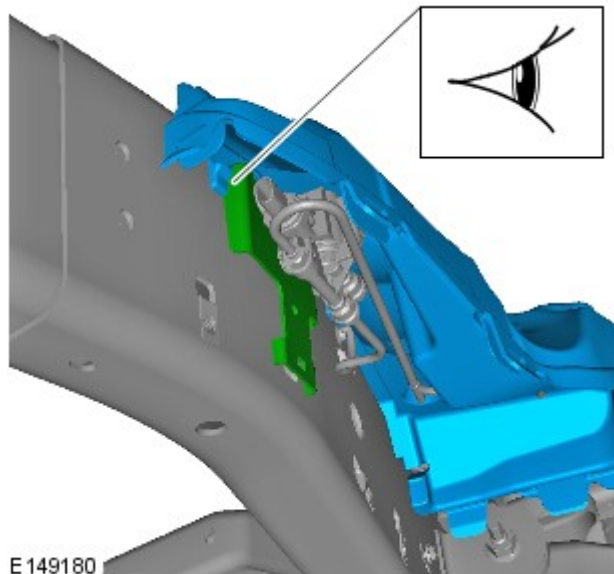


E147657


28. Remove and discard the old suspension compressor upper cover.


29.  **CAUTION:** Make sure that the cover is correctly located behind the bracket as shown. Failure to follow this instruction may cause noise/vibration issues.

Install the new suspension compressor upper cover.



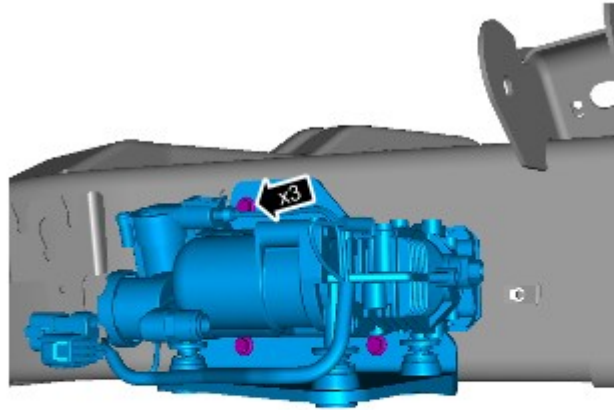
E149180

30.  **CAUTION:** Make sure the air lines and wiring harness are not trapped between the suspension compressor mounting bracket and the chassis, failure to follow this instruction may cause damage to the vehicle.

 **NOTE:** Make sure that the suspension compressor upper cover is installed correctly.

Install the suspension compressor and bracket assembly.

- Tighten the 3 retaining bolts to 23Nm.

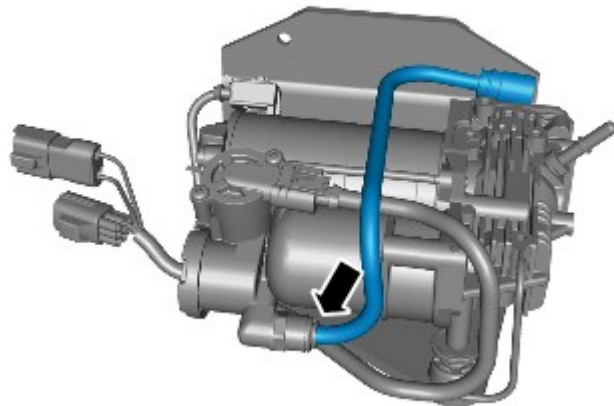


E147657

31.  **NOTE:** Old design AMK compressor shown, new design is similar.


 **NOTE:** Component shown removed from vehicle for clarity.

Connect the air line.



E140275

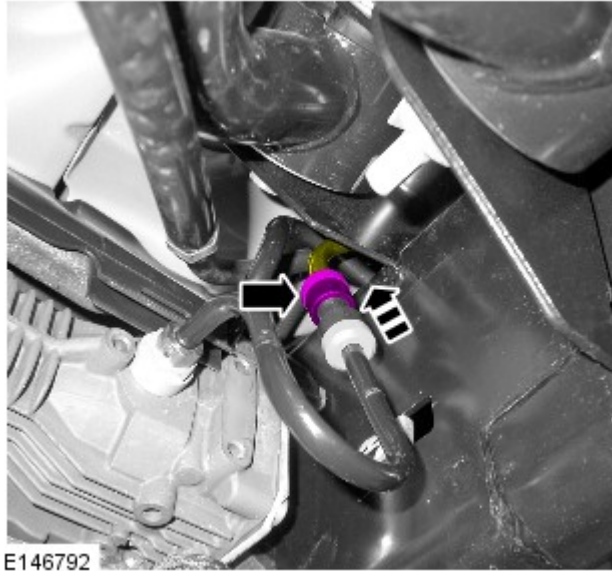
Vehicles with air link pipe.

32.  **CAUTION: Make sure the air line link pipe is correctly installed. It must be inserted to a depth of 20mm.**

Install the new air line link pipe.



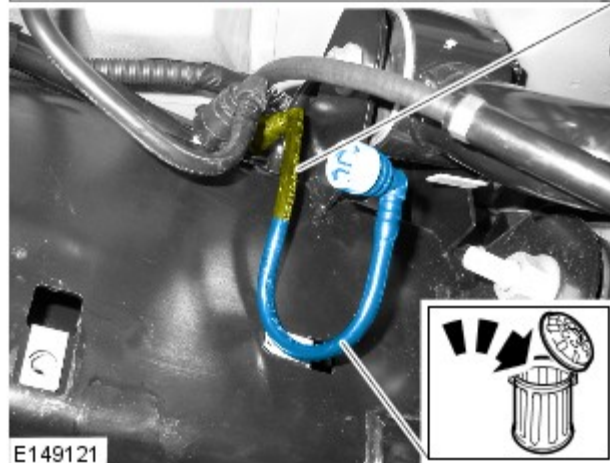
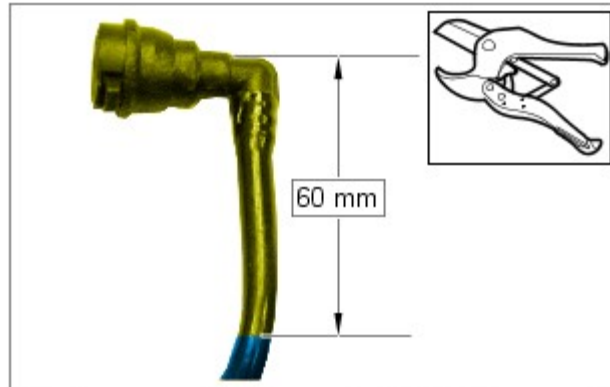
33. Connect the new air line link pipe.




Vehicles without air link pipe.

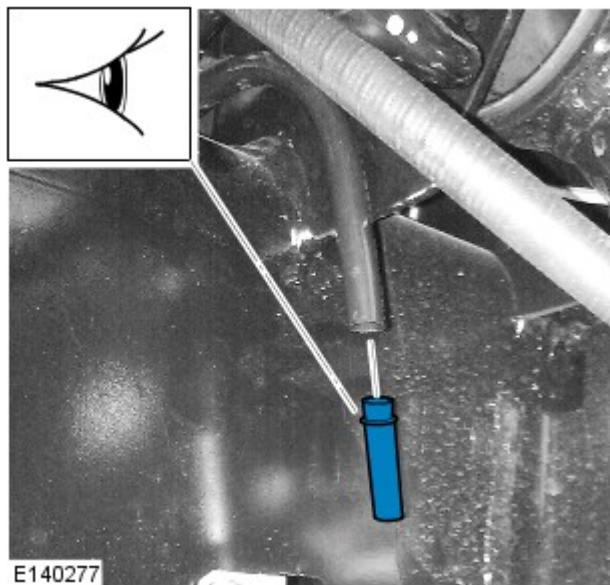
34. Using a suitable pipe cutter tool, cut the air suspension feed pipe in the position indicated.

- Discard the lower section of the pipe.

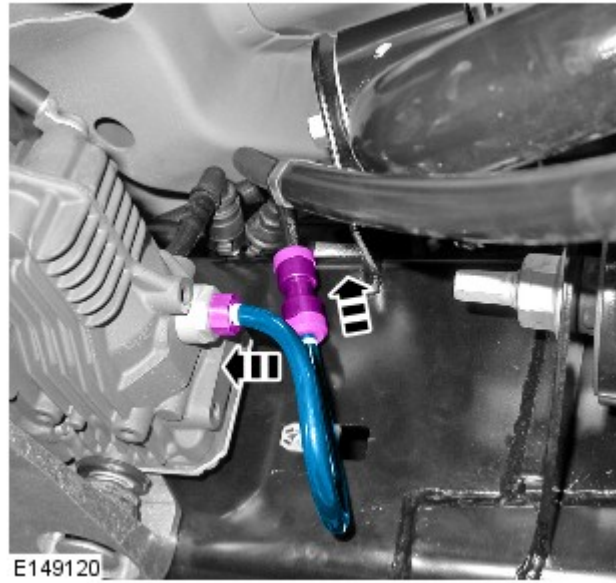


35.  **CAUTION: Make sure the air line insert is in the correct orientation, failure to follow this instruction may cause damage to the component.**

Install the air line insert until there is no part of the airline insert showing, and it is flush with the end of the air line.

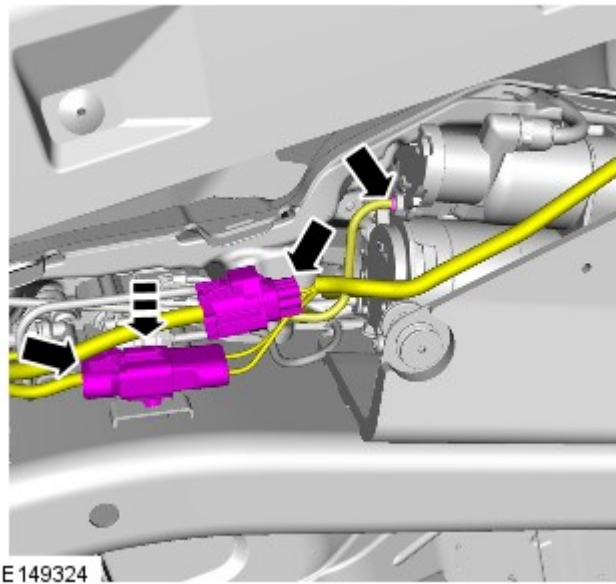


36. Install the new air line link pipe.



All Vehicles.

37. Connect the air line and 2 electrical connectors.



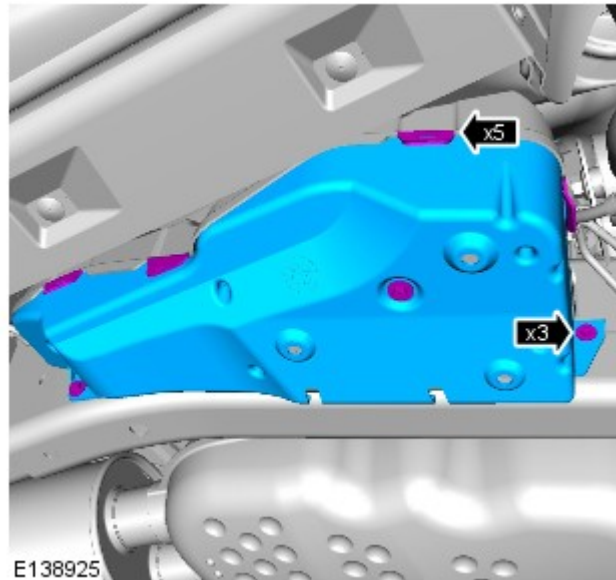
38.  **NOTE: Suspension compressor upper cover shown removed for clarity.**

Connect the air line.



39. Install the suspension compressor lower cover.

- Secure the 5 retaining clips.
- Tighten the 3 retaining bolts to 9 Nm.



 **NOTE: All Vehicles.**

40.  **NOTE: Location of air suspension relay to be installed.**

Install the compressor relay.

1. The relay is located in the fuse box in the engine bay.



41.  **CAUTION: SDD must be loaded with DVD131.07 calibration file 118 loaded or later.**

Connect a Land Rover approved battery support unit/power supply to the vehicle.

42. Connect SDD to the vehicle and begin a new diagnostic session, by reading the VIN for the current vehicle and initiating the data collect sequence.
43. Select Service Functions session type.
44. Run Air suspension - Air suspension compressor replacement.
45. When all tasks are complete, exit the current session by selecting the Session tab and then selecting the Close Session option.
46. Disconnect SDD and the Land Rover approved battery support unit/power supply .