



# Technical Journal

TITLE:

**Recall R89707: Air conditioner drain hose**

<b>REF NO:</b> TJ 31955.1.7	<b>ISSUING DEPARTMENT:</b> Technical Service	<b>CAR MARKET:</b> United States and Canada	
<b>PARTNER:</b> 3 US 7510 Volvo Car USA		<b>ISSUE DATE:</b> 2016-11-10	<b>STATUS DATE:</b> 2016-11-15
<b>FUNC GROUP:</b> 8700	<b>FUNC DESC:</b> Air conditioning unit	Page 1 of 30	

“Right first time in Time”

## Attachment

File Name	File Size
TJ 31955 Inspection.pdf	4.9656 MB
TJ 31955 New replacement.pdf	4.4208 MB
TJ 31955 Wiring_Repair_if_needed.pdf	1.8667 MB

## Vehicle Type

Type	Eng	Eng Desc	Sales	Body	Gear	Steer	Model Year	Plant	Chassis range	Struc Week Range
234							2017-2017	21	0000001-0005452	0-0
256							2016-2017	21	0000064-0129750	0-0

## CSC Customer Symptom Codes

Code	Description
XW	Service action/Recall/Service action/Recall

## VST Operation Number

## DTC Diagnostic Trouble Codes

Rows beginning with \* are modified

Note! If using a printed copy of this Technical Journal, first check for the latest online version.

## Text



## DESCRIPTION:

Volvo Car USA LLC and Volvo Car Canada LTD (Volvo) on behalf of Volvo Car Group has decided to launch Recall R89707 on model year 2016 & 2017 XC90 & S90 vehicles.

Condensation water, transferred through the air conditioning drain hose, may leak into the passenger compartment due to incorrect installation during vehicle assembly. If this condition should occur, it may result in moisture inside the passenger compartment, which could lead to air conditioning functionality issues.

If the leakage has not been detected over a period of time, this condition could affect SRS systems (airbag), engine management systems, etc. In such a case, the driver may experience various warning messages displayed in the Driver Information Module (DIM) identifying that a fault may be present and also providing guidance on how to proceed.

Volvo therefore considers this a potential safety risk over time.

## SERVICE:

\*Updated replacement video added 11/10/2016

The corrective action is to inspect the air conditioning drain hose to ensure correct installation per the attached Tech Journal 31955, and if necessary replace the drain hose.

See <https://www.youtube.com/watch?v=lz4U7HtU2uA>

If after inspection the drain needs to be replaced, please follow the updated replacement instructions that includes new grommets (elbow) and plug.

See [https://www.youtube.com/watch?v=bo\\_GaHkOD\\_U](https://www.youtube.com/watch?v=bo_GaHkOD_U)

Should there be water present beneath the carpet, the wire harness should be inspected.

If the wiring is wet or corroded repair per the attached instruction.

See <https://youtu.be/AYVltPYBBcA>

\*Added 10/13/2016

Also inspect the LIN splice located in the floor wiring harness (white wire with green tracer).

See <https://youtu.be/sOeE7f0yBkE>. Repair the splice if necessary.

Problems with this splice may lead to difficulties loading SW to the DDM and/or PDM or issues with rear door functions.

LIN = Local Interconnect Network

DDM = Driver Door Module

PDM = Passenger Door Module

## VEHICLE REPORT:

N/A

**To view TJ attachments continue to next page. This TJ has three attachments and four imbedded videos.**



## Volvo Car Customer Service

TJ 31955

<b>Title</b>	Climate unit drain hose	<b>Page</b>	1 ( 11 )
<b>Action</b>	Inspection	<b>Operation number:</b>	98635-2

<b>Issue</b>	<b>Date</b>	<b>Reason</b>
1	2016-09	First issue

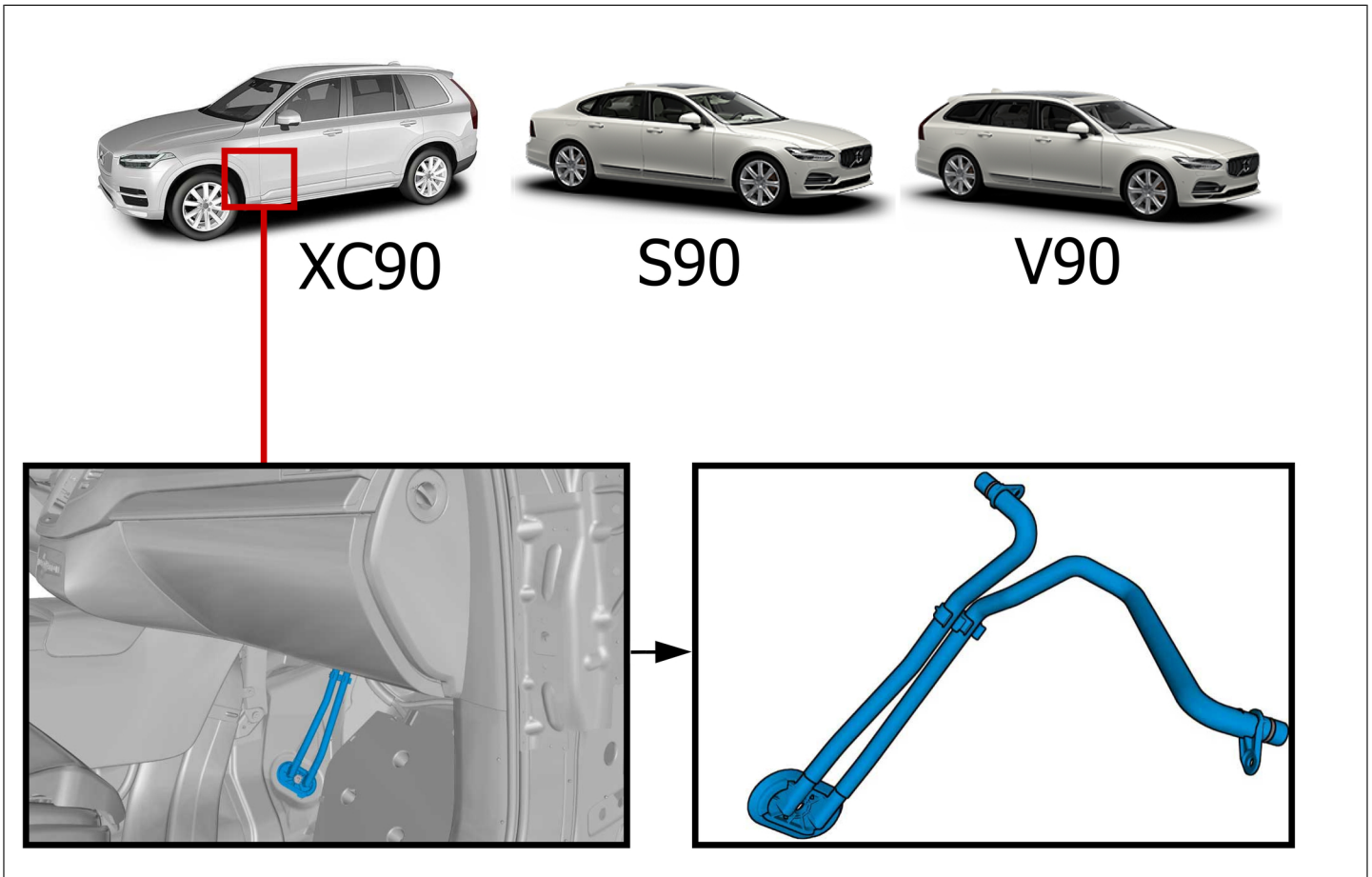
### Affected vehicles

<b>Model year</b>	<b>Model</b>
2017	S90 (17-)
2016, 2017	XC90 (16-)

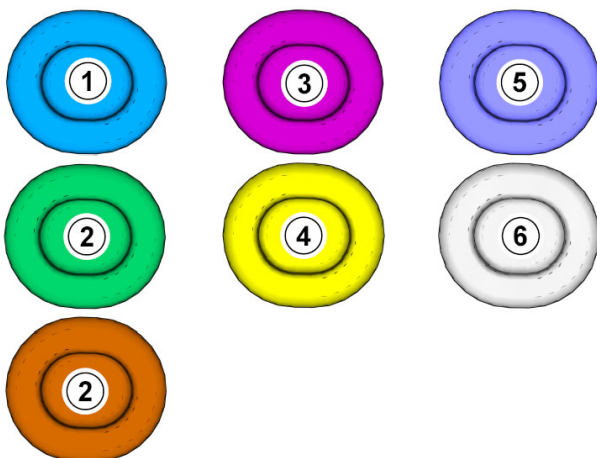
### Equipment

<b>Designation</b>	<b>Part No.</b>
Interior trim remover	

## Orientation view



## Color symbols



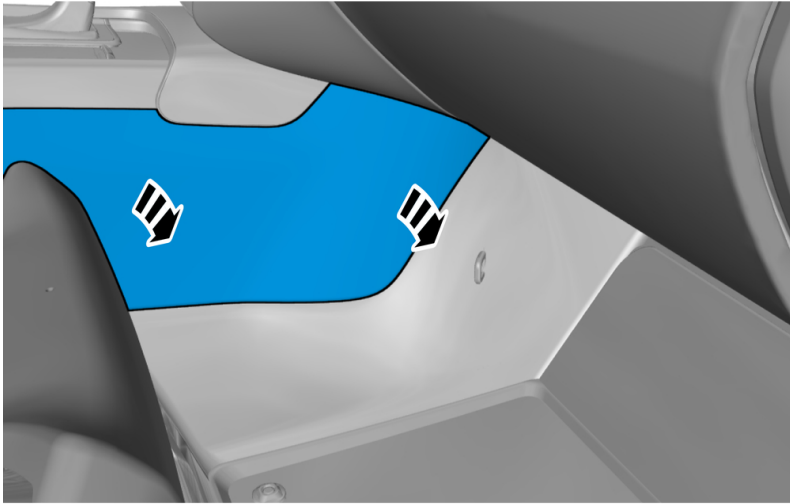
**Note!** This colour chart displays (in colour print and electronic version) the importance of the different colours used in the images of the method steps.

- 1 . Used for focused component, the component with which you will do something.
- 2 . Used as extra colors when you need to show or differentiate additional parts.
- 3 . Used for attachments that are to be removed/installed. May be screws, clips, connectors, etc.
- 4 . Used when the component is not fully removed from the vehicle but only hung to the side.
- 5 . Used for standard tools and special tools.
- 6 . Used as background color for vehicle components.

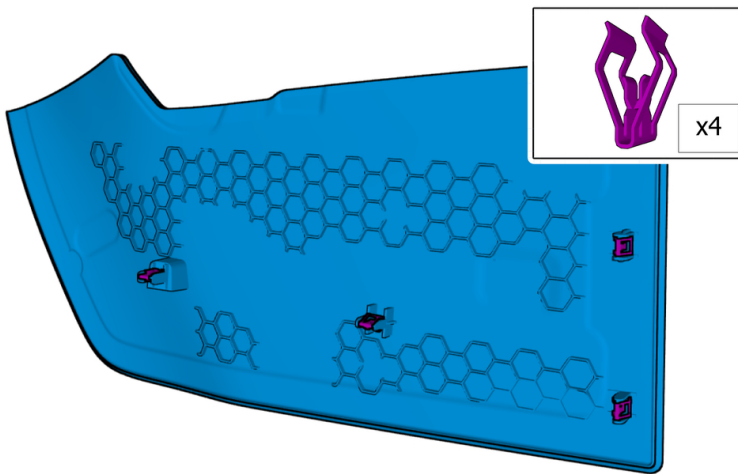


Applies to the passenger side

### Removal



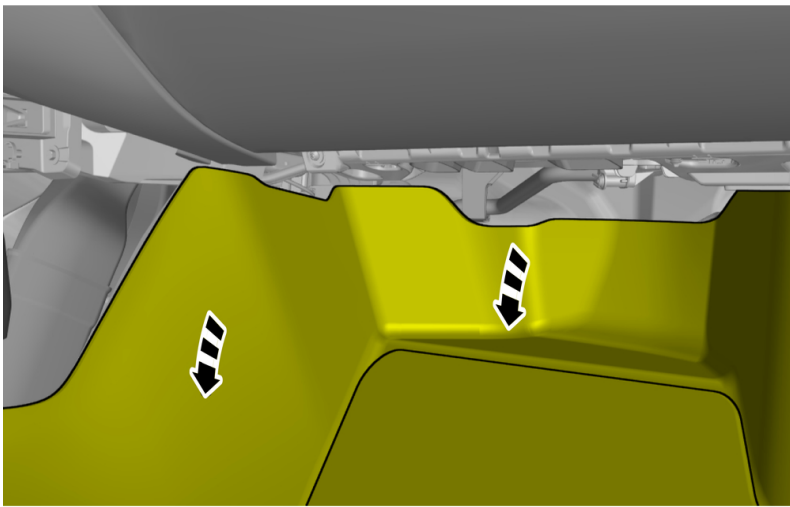
Remove the part carefully  
Remove the panel.



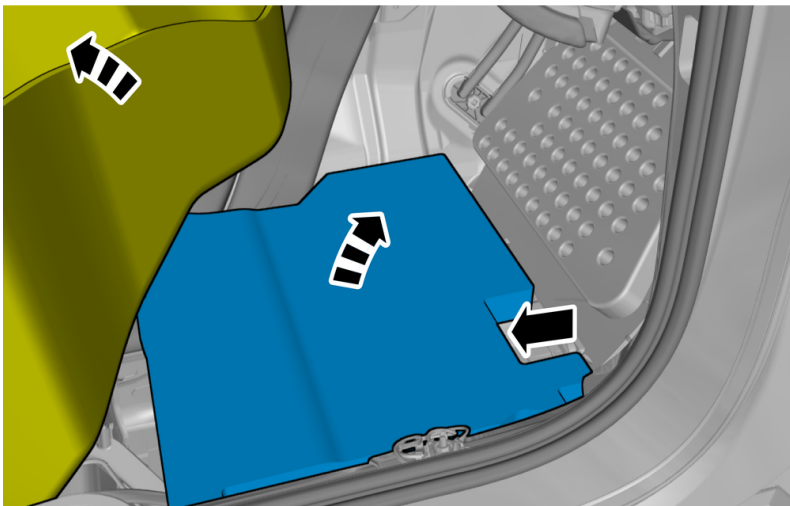
The graphic shows the back of the component.

Remove passenger side sill moulding front ,  
refer to:

- Removal, replacement and installation
- 8 - Body and interior
- 84 - Exterior trim, glass, weatherstrips
- 845 - sealing and protect. molding for door, lid, and side window



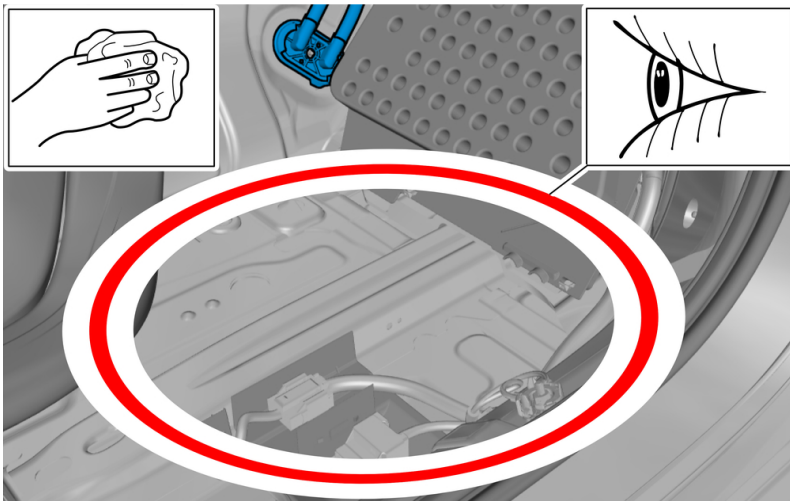
Remove the part carefully  
Fold the carpet to the side.



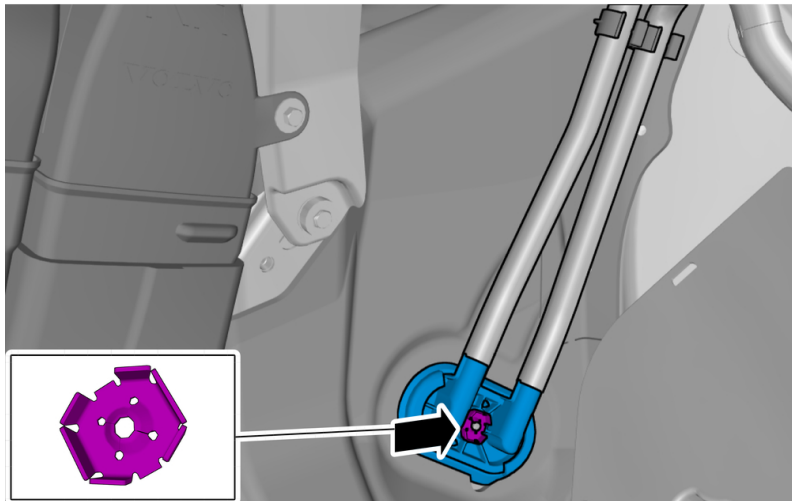
**Caution! Make sure that the component is positioned correctly.**

Fold the carpet to the side.  
Remove the part carefully  
Remove the marked part.

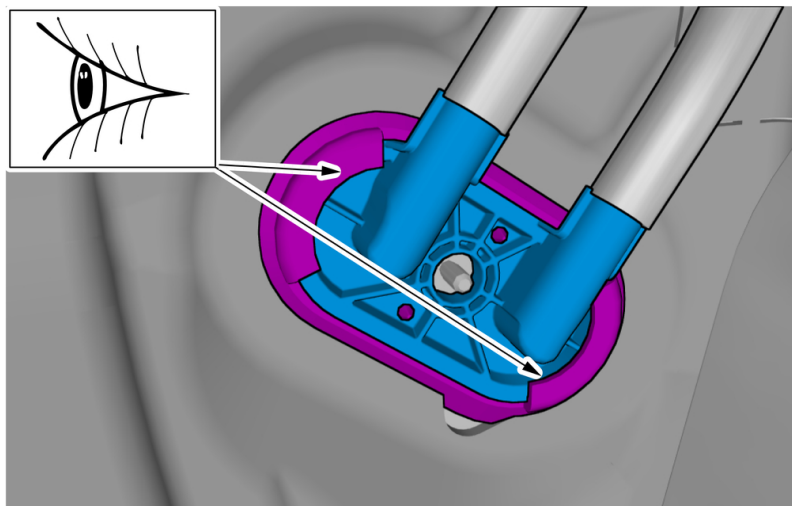
**Check**



**Note! Check for moisture in the area indicated.**

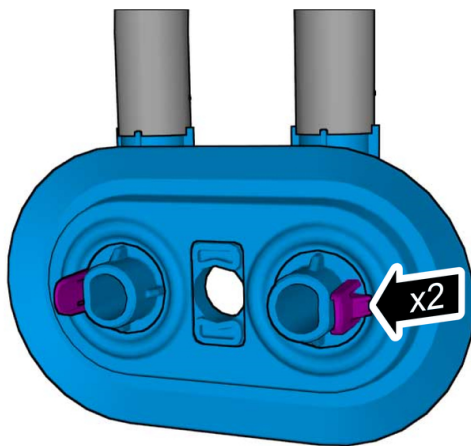


Remove the nut.

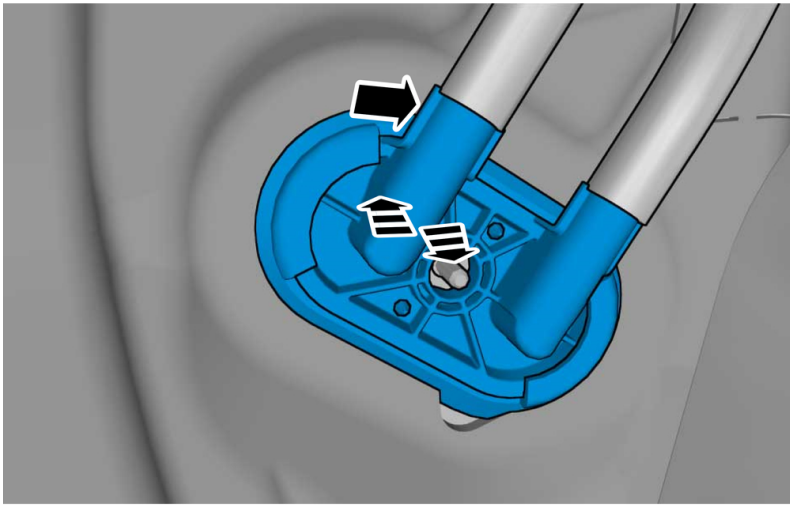


**Caution!** The grommet seal must rest on the metal surface, not on the carpet.

**Note!** Make sure that the seal is correctly located.

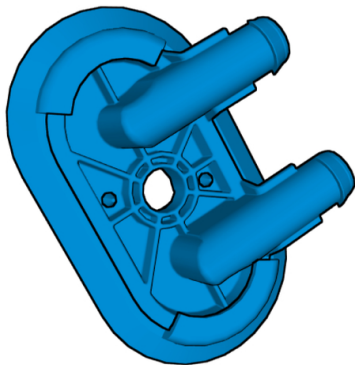


The graphic is just to show the back of the component and the location of the tabs. The component does not need to be removed if it is already correctly installed.



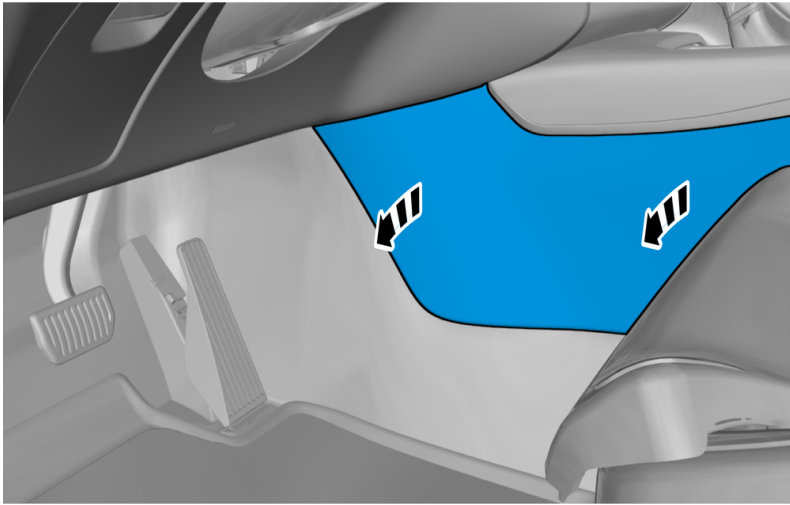
Check that the rubber grommet is not loose:  
1 -First grab the hose connection and press inwards. 2 -Then pull outwards. 3 -Again push inwards.

If no faults are detected, to install, reverse the removal procedure.

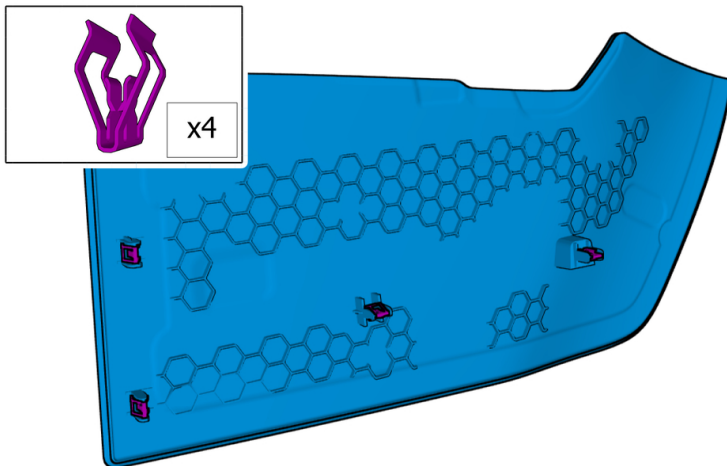


If the result of the checking procedure is not OK, the component must be replaced with a new component.

Applies to the driver's side



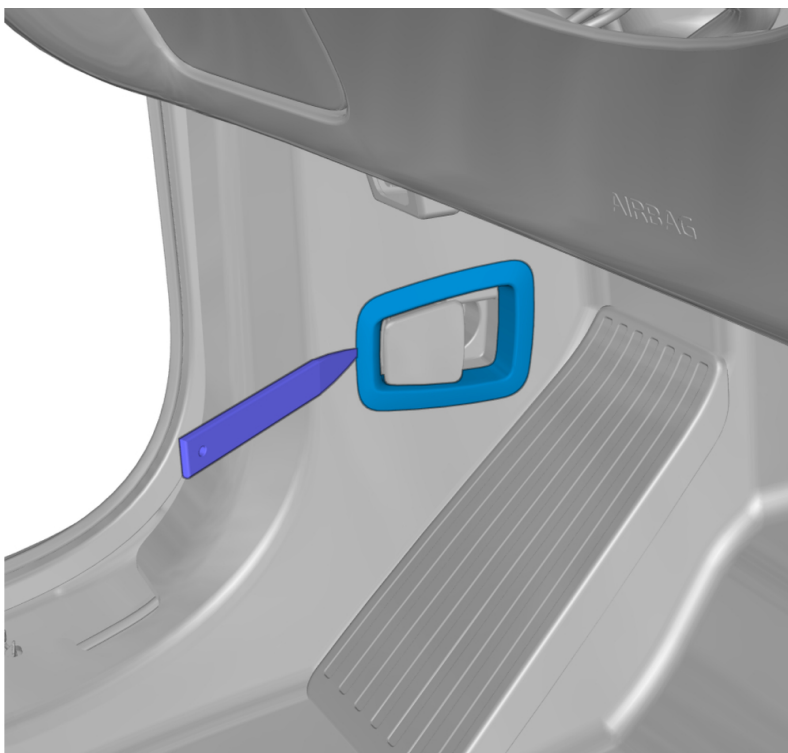
Remove the part carefully  
Remove the panel.



The graphic shows the back of the component.

Remove driver side front sill trim panel , refer to:

- Removal, replacement and installation
- 8 - Body and interior
- 84 - Exterior trim, glass, weatherstrips
- 845 - sealing and protect. molding for door, lid, and side window



Remove the part carefully

**Use:** Interior trim remover

Remove the marked part.

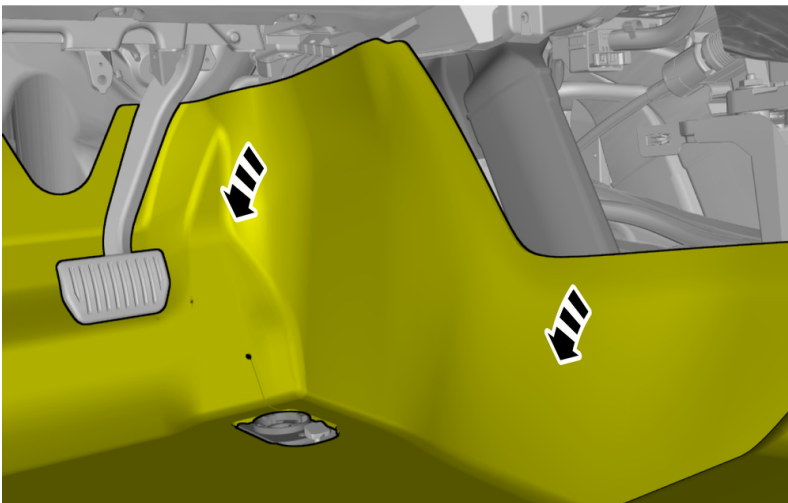
Remove accelerator pedal , refer to:

Removal, replacement and installation

2 - Engine with mountings and equipment

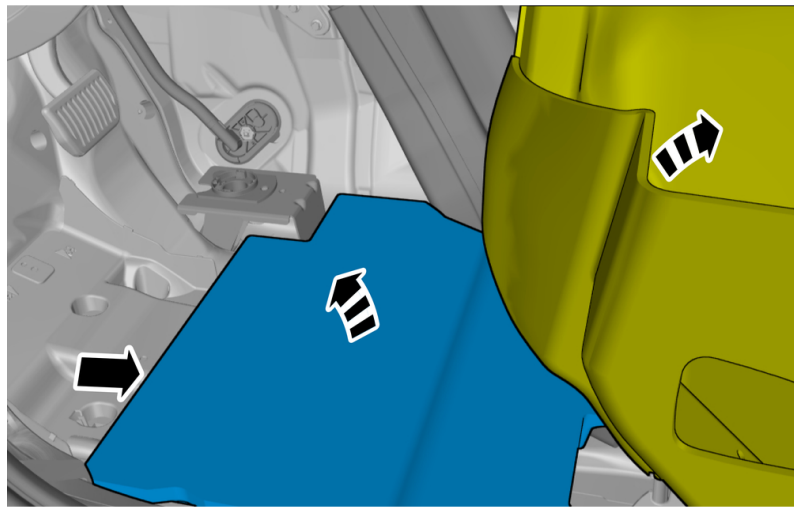
27 - Engine control

271 - gas pedal control



Remove the part carefully

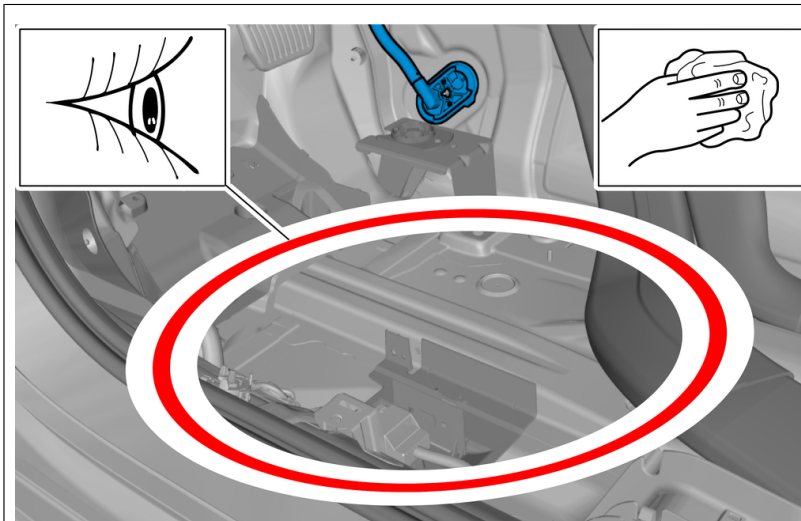
Fold the carpet to the side.



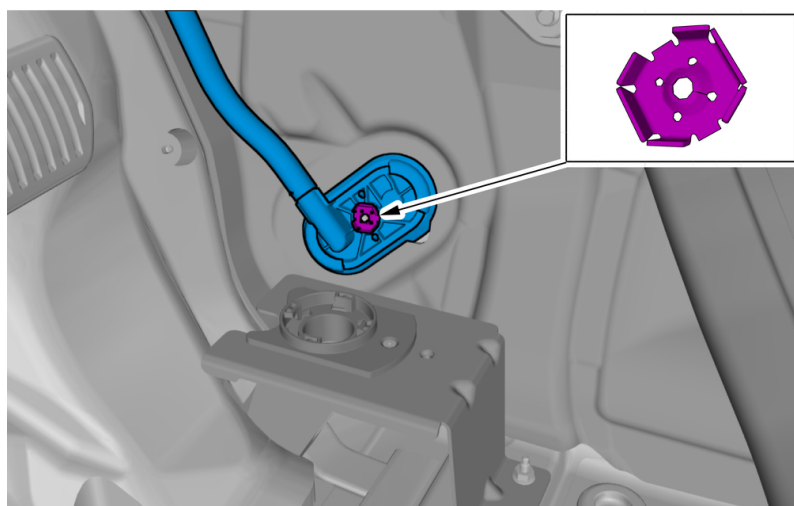
**Caution! Make sure that the component is positioned correctly.**

Fold the carpet to the side.  
Remove the part carefully  
Remove the marked part.

**Check**

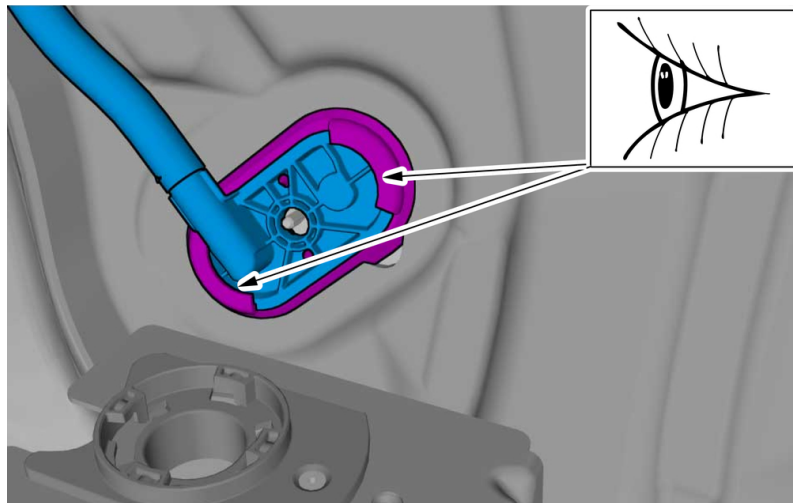


**Note! Check for moisture in the area indicated.**



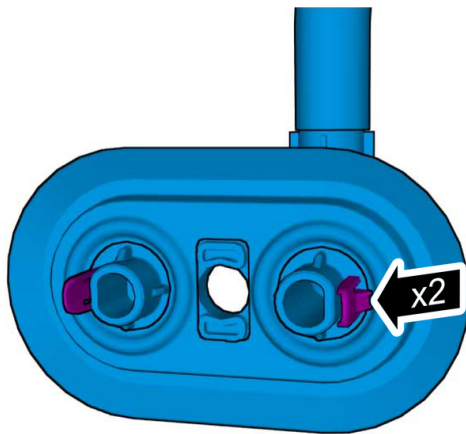
**Remove the nut.**





**Caution!** The grommet seal must rest on the metal surface, not on the carpet.

**Note!** Make sure that the seal is correctly located.



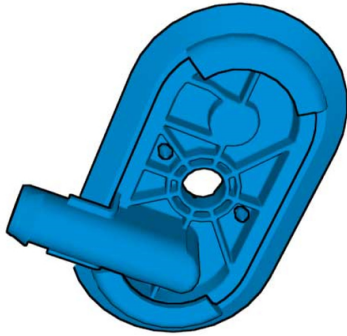
The graphic is just to show the back of the component and the location of the tabs. The component does not need to be removed if it is already correctly installed.



Check that the rubber grommet is not loose:  
 1 -First grab the hose connection and press inwards. 2 -Then pull outwards. 3 -Again push inwards.

If no faults are detected, to install, reverse the removal procedure.





If the result of the checking procedure is not OK, the component must be replaced with a new component.



## Volvo Car Customer Service

TJ 31955

<b>Title</b>	Climate unit drain hose	<b>Page</b>	1 ( 10 )
<b>Action</b>	Replacement	<b>Operation number:</b>	98636-3

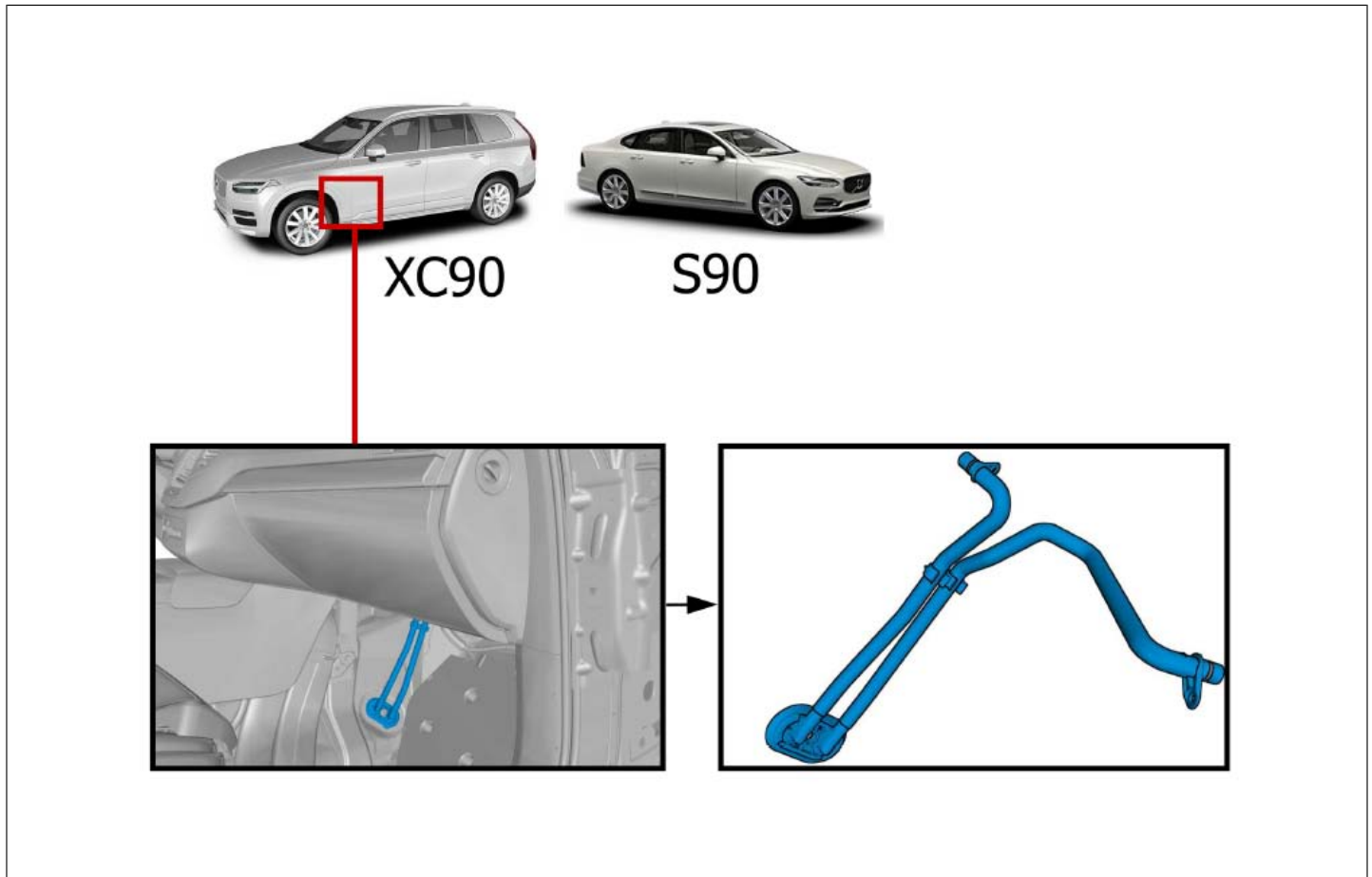
### Affected vehicles

Model year	Model
2017	S90 (17-)
2016, 2017	XC90 (16-)

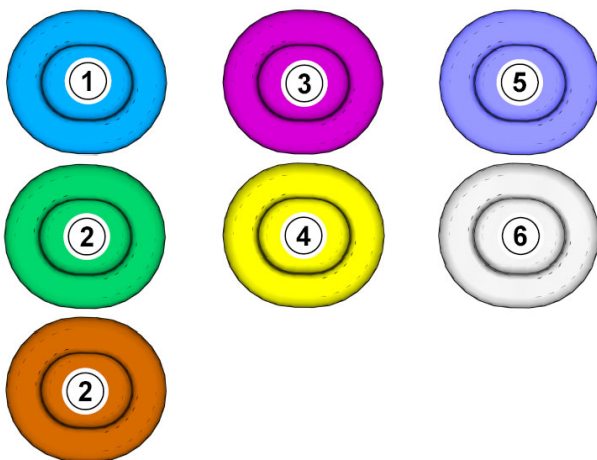
### Materials

Materials	Qty.	Part No.	Notes
Grommet	2.0	31497446	XC90 / S90 - PASSENGER SIDE
Grommet	1.0	31497446	XC90 / S90 - DRIVER SIDE
Plug	1.0	974685	XC90 / S90 - DRIVER SIDE

## Orientation view



## Color symbols

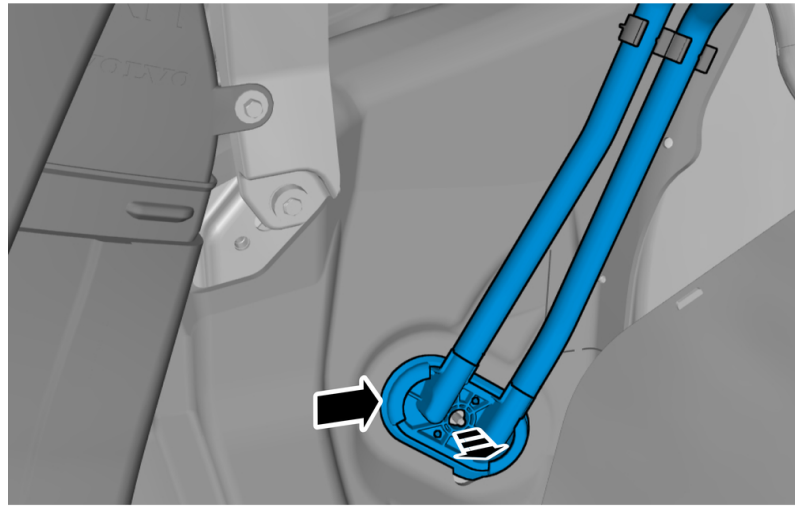


**Note! This colour chart displays (in colour print and electronic version) the importance of the different colours used in the images of the method steps.**

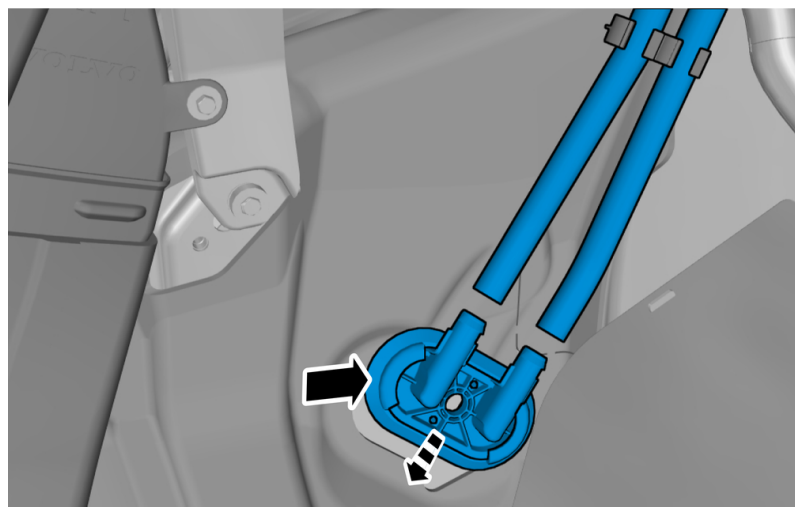
- 1 . Used for focused component, the component with which you will do something.
- 2 . Used as extra colors when you need to show or differentiate additional parts.
- 3 . Used for attachments that are to be removed/installed. May be screws, clips, connectors, etc.
- 4 . Used when the component is not fully removed from the vehicle but only hung to the side.
- 5 . Used for standard tools and special tools.
- 6 . Used as background color for vehicle components.

**Note: If the factory drain is not broken, DO NOT REPLACE IT with the updated parts.**

### Removal

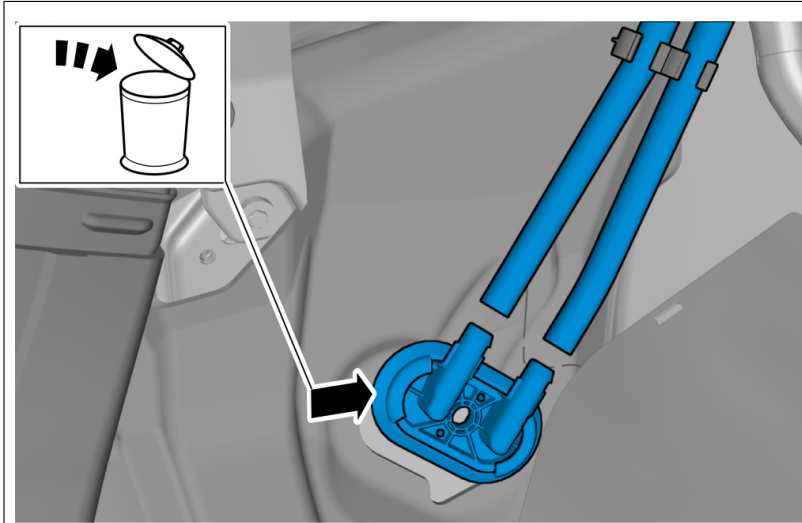


Remove the part carefully



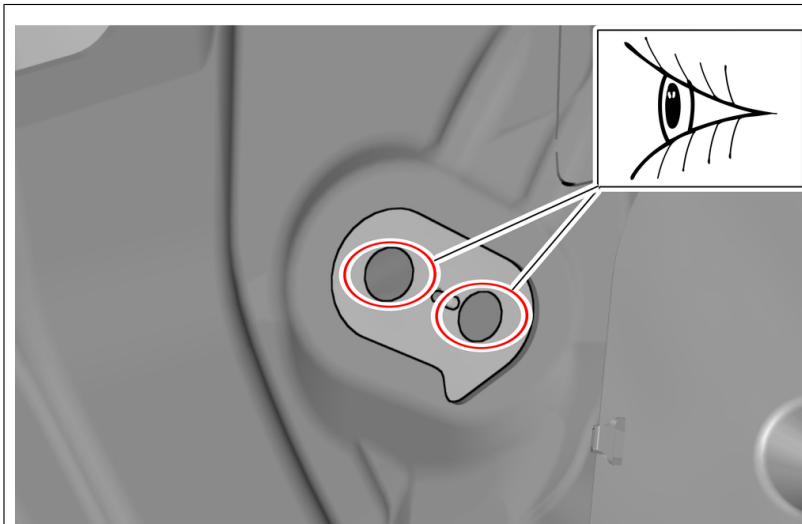
**Note! Use suitable paper to absorb any escaping fluid.**

Undo the hoses from the connections.  
Remove the marked part.



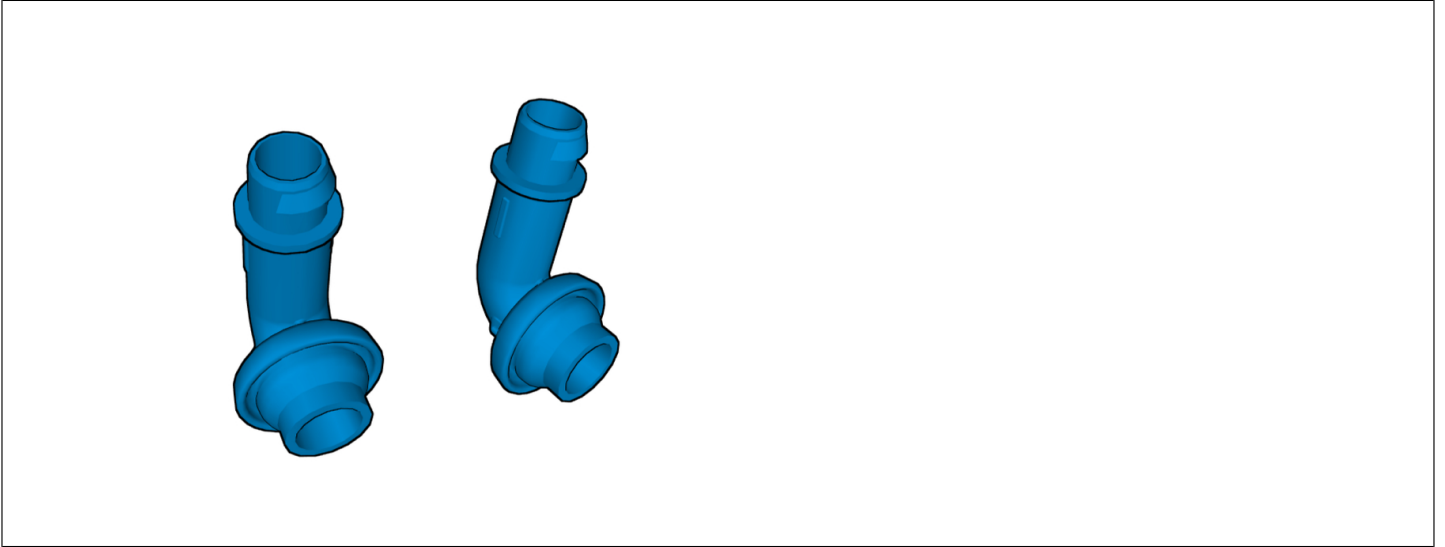
**Note: If the factory drain is not broken, DO NOT REPLACE IT with the updated parts.**

**Check**

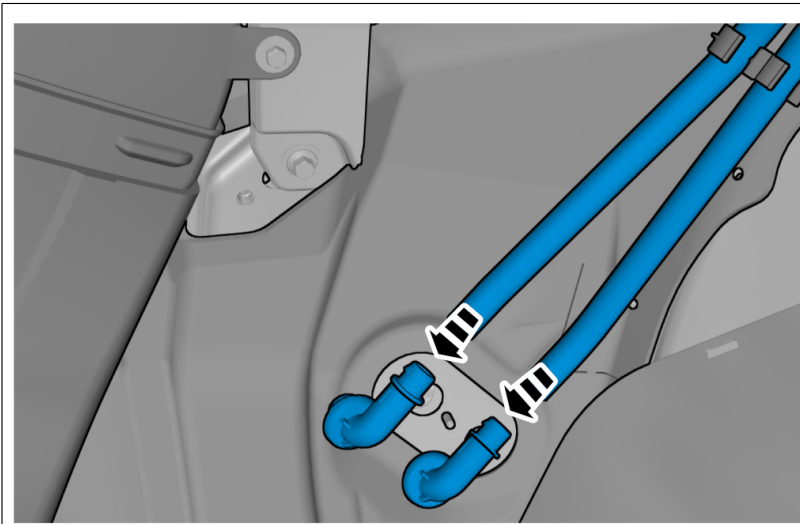


**Caution! Make sure that the area indicated is flat and free from damages.**

**Modification**

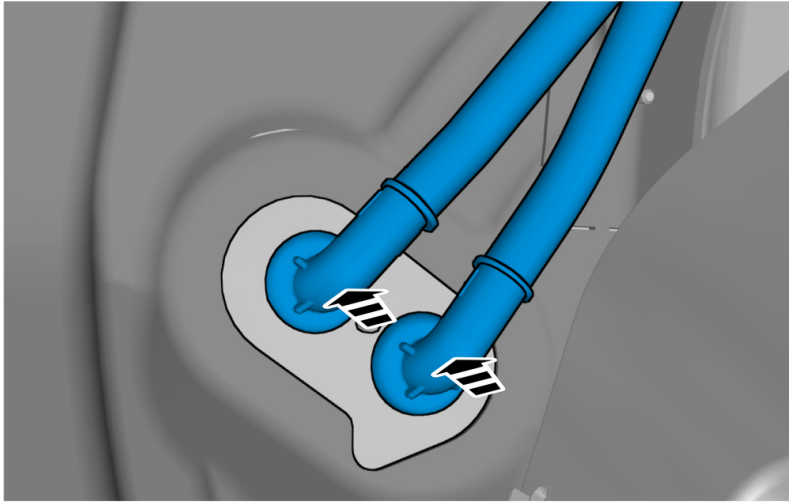


**Installation**

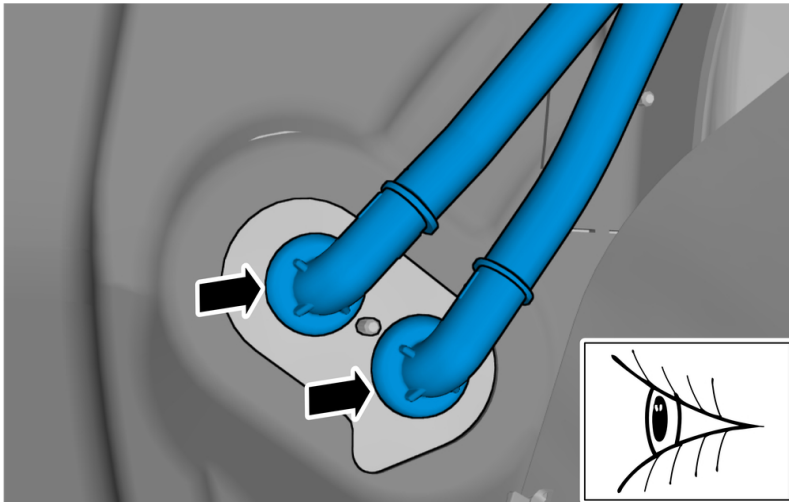


**Note! Use soap solution.**

Install the hoses.



Install the marked component.  
Press the marked component.



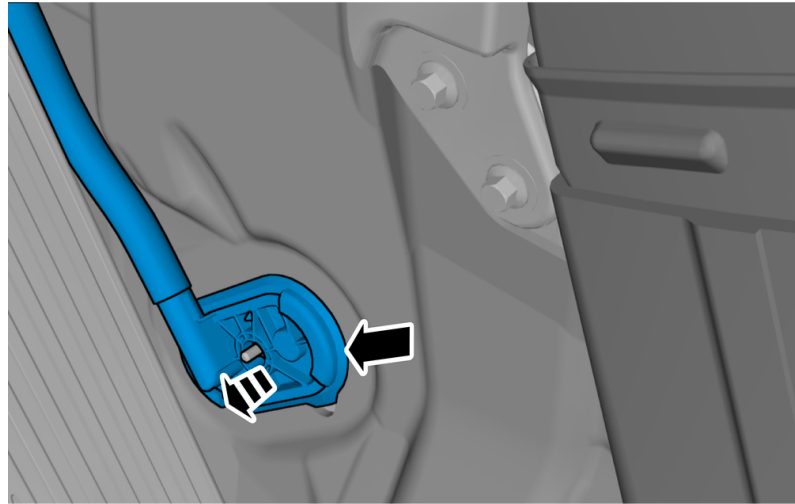
Note! Make sure that the seal is correctly located.

**Note: The retaining nut should not be reinstalled.**

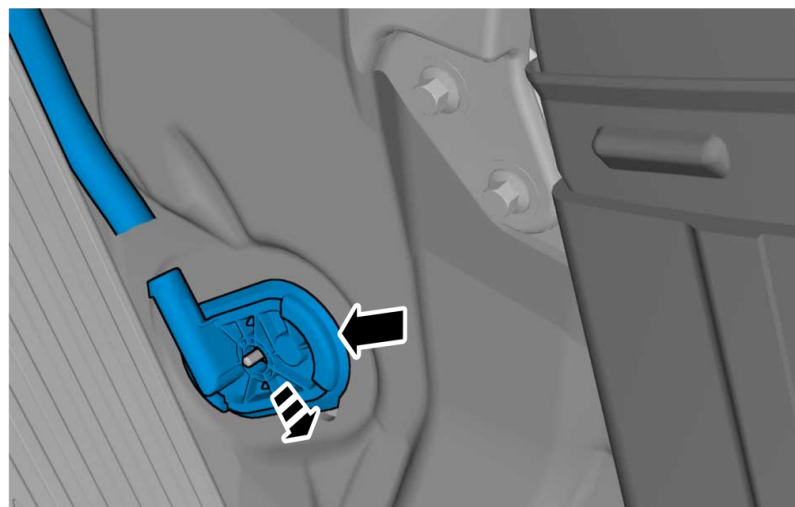
To install, reverse the removal procedure.

Applies to the driver's side **Note: If the factory drain is not broken, DO NOT REPLACE IT with the updated parts.**

### Removal



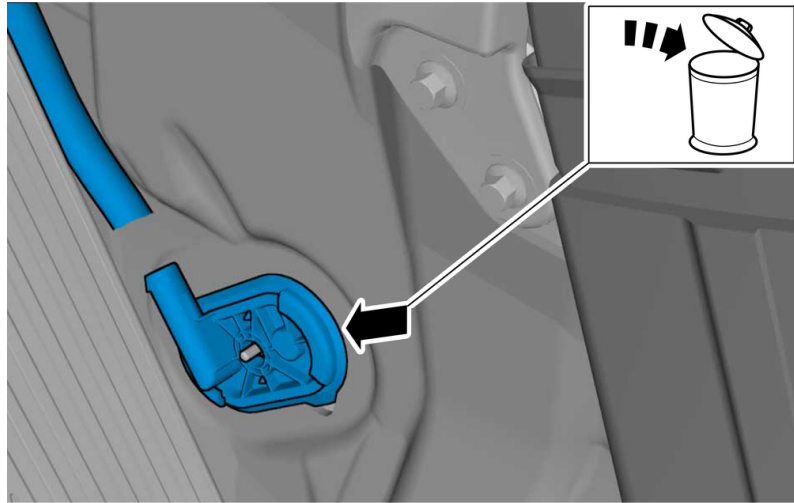
Remove the part carefully



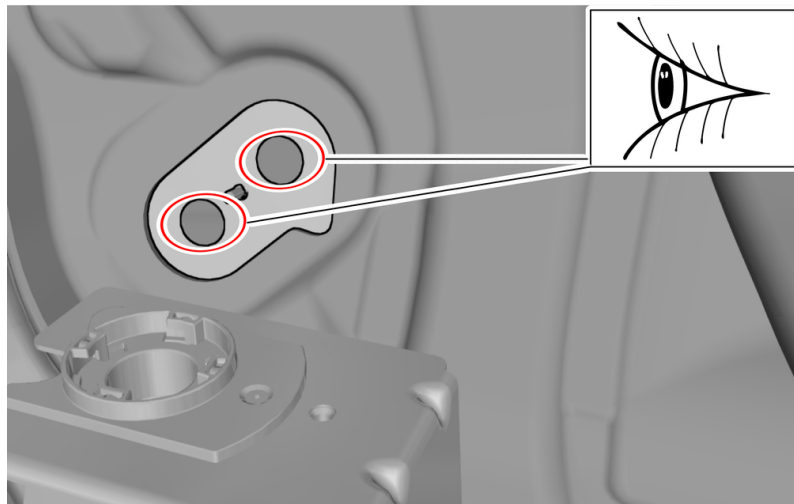
**Note! Use suitable paper to absorb any escaping fluid.**

Undo the hose from the connection.  
Remove the marked part.



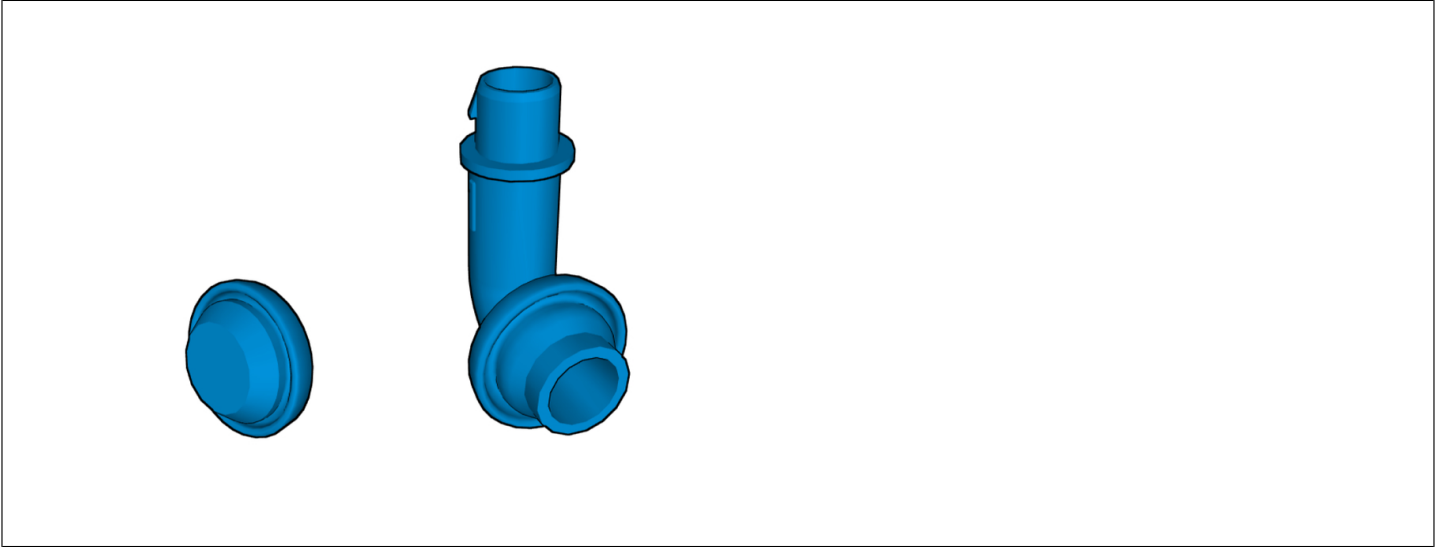


**Check**

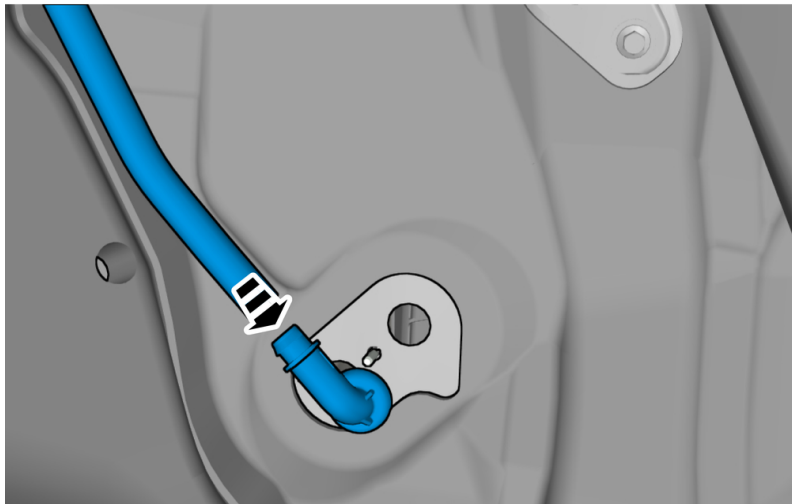


**Caution! Make sure that the area indicated is flat and free from damages.**

**Modification**

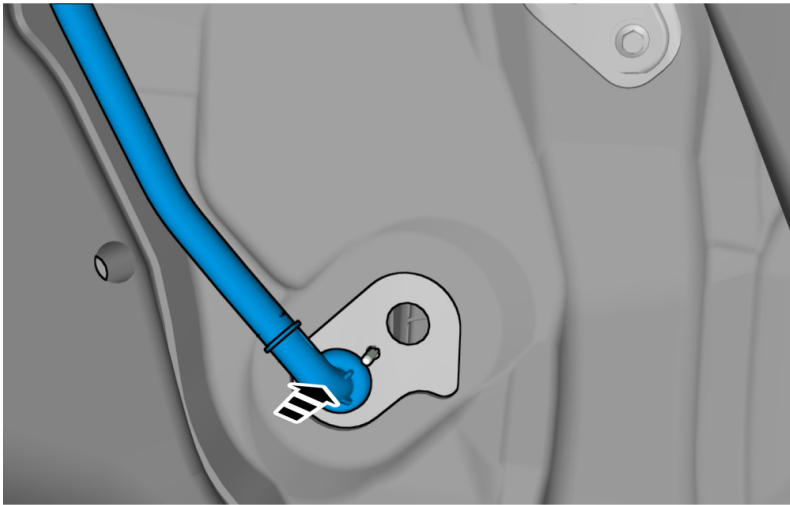


**Installation**

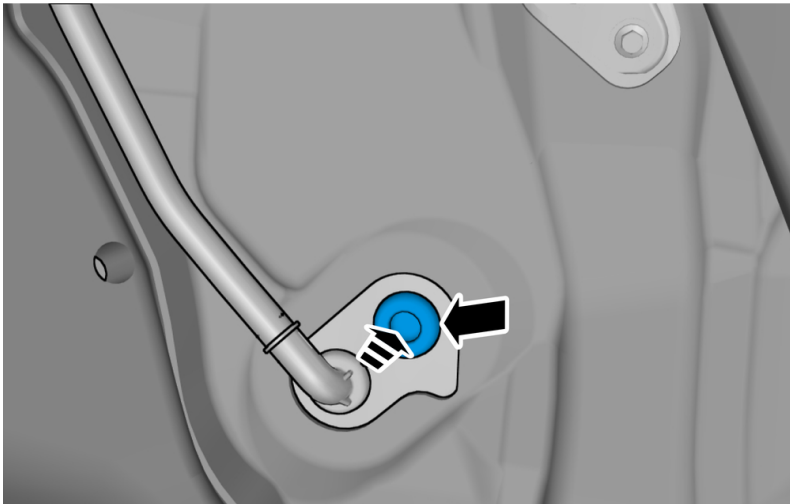


**Note! Use soap solution.**

Install the hose.

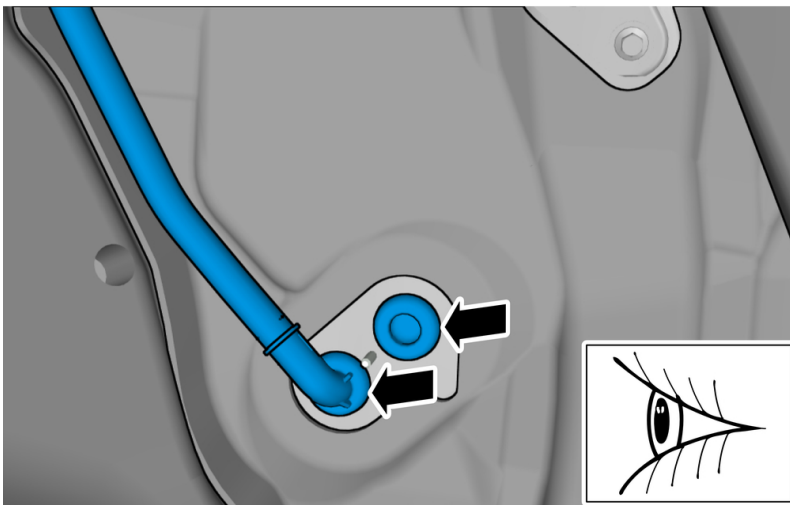


Install the marked component.  
Press the marked component.



Install the marked component.  
Press the marked component.

**Note: The retaining nut should not be reinstalled.**



**Note! Make sure that the seal is correctly located.**

To install, reverse the removal procedure.



## Volvo Car Customer Service

TJ 31955

<b>Title</b>	Floor Harness Wiring Repair, if needed	<b>Page</b>	1 ( 7 )
<b>Action</b>	Only needed if the wiring is wet or corroded.	<b>Operation number:</b>	97172-3

Issue	Date	Reason
1	2016-10	Method updated

### Affected vehicles

Model year	Model
2016, 2017	XC90 (16-)
2017	S90

### Materials

Materials	Qty.	Part No.	Notes
Electrical tape	0.4 (roll)	9511028	2m. - PASSENGER SIDE 2m. - DRIVER SIDE
Splice	2.6 (package)	9130476	PASSENGER SIDE
Splice	92	9512783	DRIVER SIDE
Splice	38	9512783	PASSENGER SIDE
Repair terminal	1.3 (package)	30656639	PASSENGER SIDE
Repair terminal	46	31288306	DRIVER SIDE
Repair terminal	19	31288306	PASSENGER SIDE

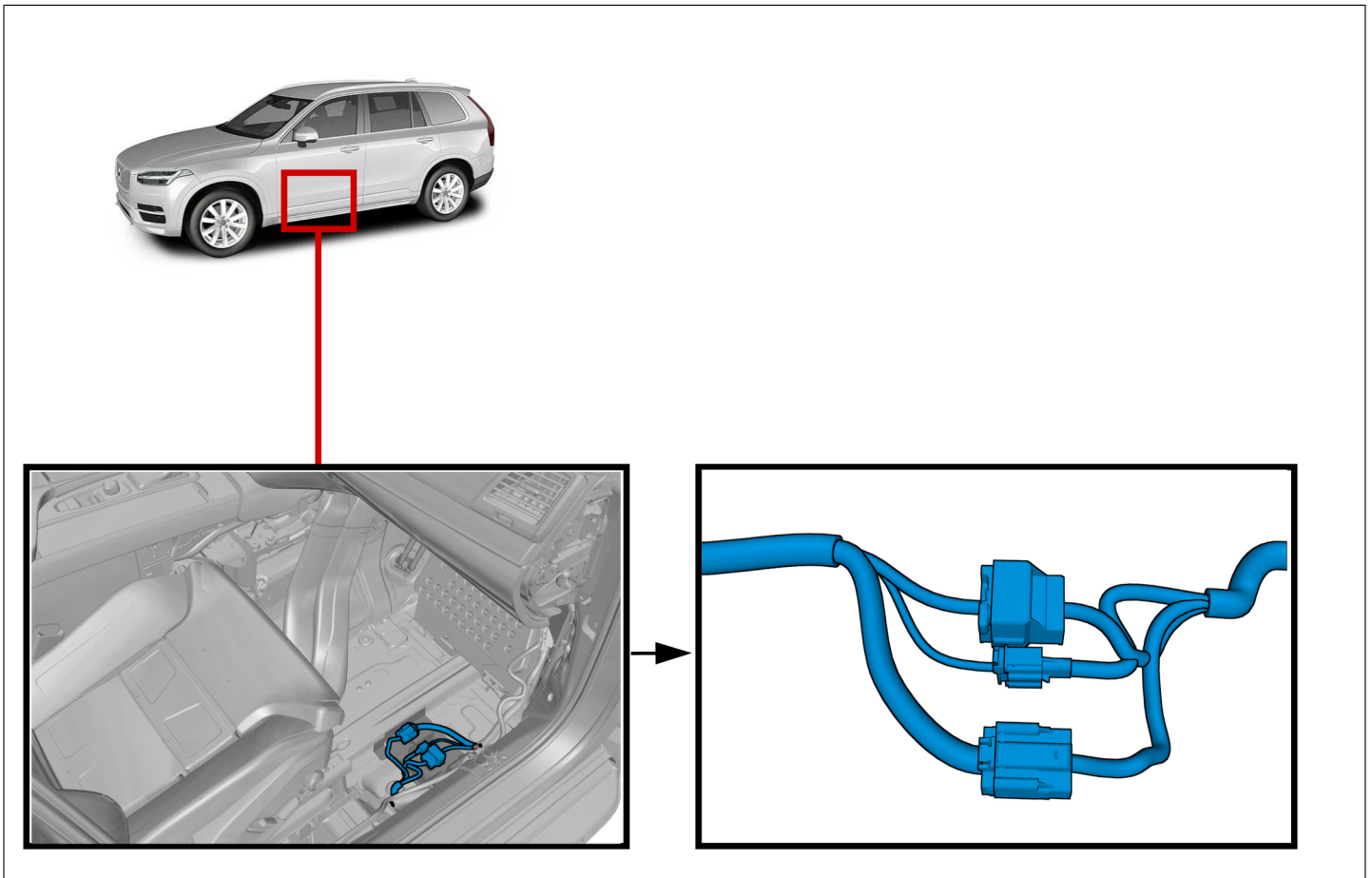
### Special tools

Description	Part No.
Crimping tool (included in 9512669)	951 2785

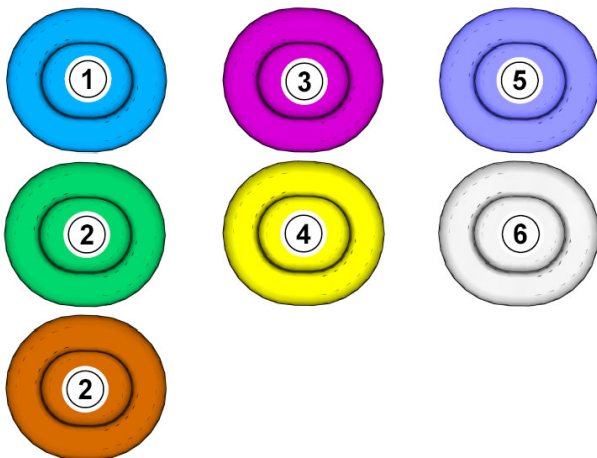
### Equipment

Designation	
Hot-air gun	

## Orientation view



## Color symbols



**Note! This colour chart displays (in colour print and electronic version) the importance of the different colours used in the images of the method steps.**

- 1 . Used for focused component, the component with which you will do something.
- 2 . Used as extra colors when you need to show or differentiate additional parts.
- 3 . Used for attachments that are to be removed/installed. May be screws, clips, connectors, etc.
- 4 . Used when the component is not fully removed from the vehicle but only hung to the side.
- 5 . Used for standard tools and special tools.
- 6 . Used as background color for vehicle components.

### Removal

Remove front floor carpet, refer to:

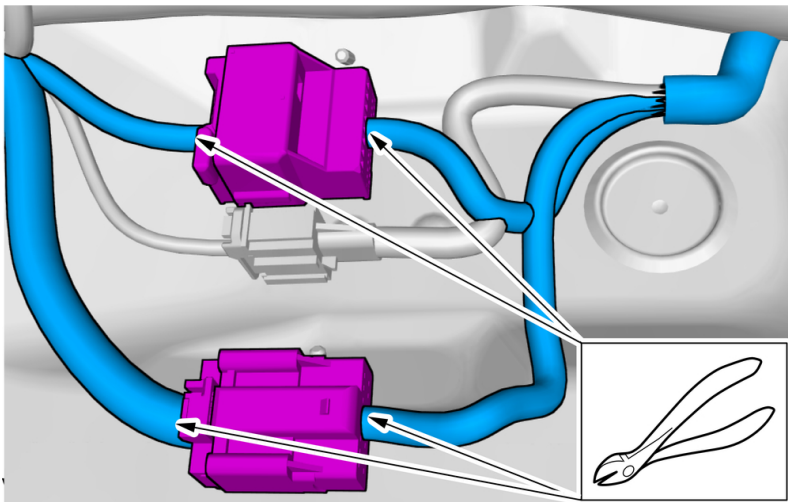
Removal, replacement and installation  
8 - Body and interior  
85 - Interior  
855 - other upholstery

### Repair

Applies to both sides.

Follow VIDA instructions regarding cable splicing, refer to:

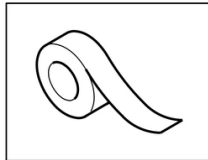
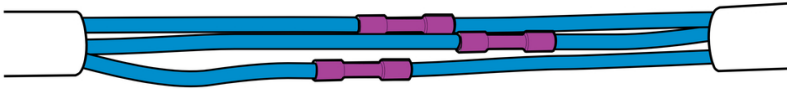
Cleaning, Inspection and Adjustment  
3 - Electrical system  
37 - Cables and fuses  
371 - cables



Cut off and discard of connector/connectors.  
Only work on one harness at a time.

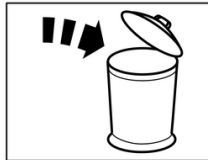
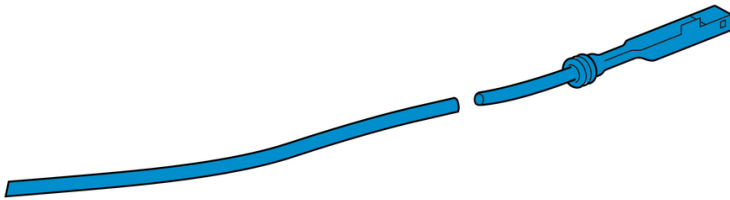
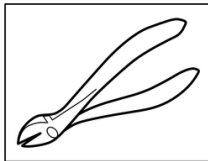
Wire splicing without extension wire.

Special Tool: T9512785, Crimping tool  
(included in 9512669)  
Remove any length of wire that is corroded.  
Use hot air gun, use tape.  
If extension of a wire is needed, see below:

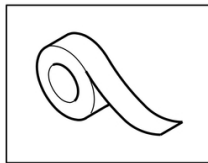
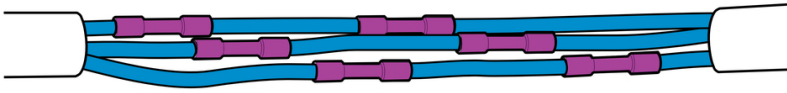


Wire splicing with extension wire.

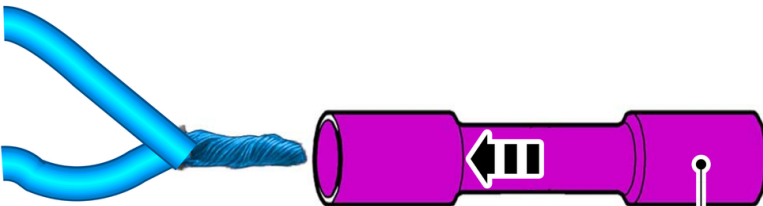
Remove and discard the terminal. Use the wire only.  
Use the appropriate gauge repair terminal for the  
specific wire being repaired.



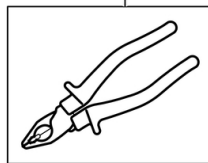
Special Tool: T9512785, Crimping tool  
(included in 9512669)  
Remove any length of wire that is corroded.  
Use hot air gun, use tape.  
If extension of a wire is needed, see below:



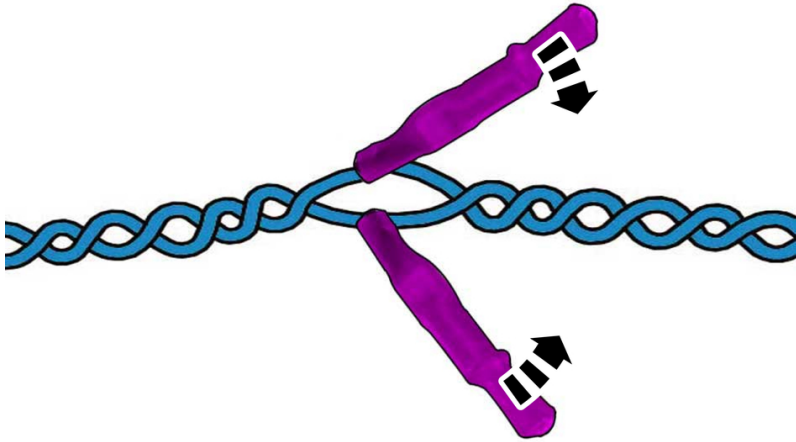
Splicing twisted pairs (CAN and FlexRay networks)



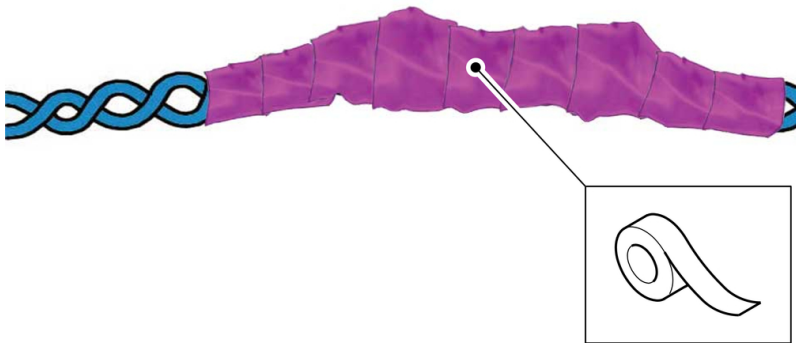
When splicing wires that are part of a twisted pair, both ends of the mating wires can be inserted into the same end of the splice. This reduces the untwisted length.



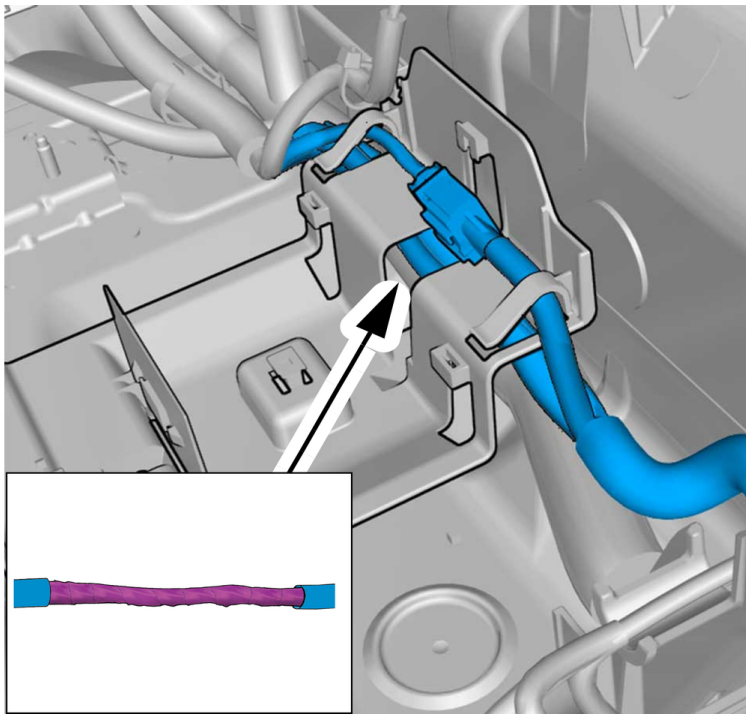




Minimize the untwisted length.  
Point both splices in the same direction.  
Use hot air gun, use tape.  
Seal the unused end of the splice.



Tape up the twisted pair.

**Installation**

Route the repaired harness back in the same position.

To install, reverse the removal procedure.