

Volvo Car Corporation Gothenburg, Sweden

 Instruction No
 Version
 Part. No.

 31470177
 1.2
 31470821

Parking assistance, pilot



Volvo Car Corporation Gothenburg, Sweden

Special toolo			
Special tools			
	999 7234 Hole stamp Tool number:999 7234		
	Tool description:Hole stamp Tool boards:80		
	951 2950 Glue gun (kit) Tool number:951 2950		
	Tool description:Glue gun (kit)		
	Tool boards:08		
	981 4203 Expander pliers		
	To all sources are 2014 (2020		
	Tool number:981 4203		
	Tool description:Expander pliers		
	Tool boards:30		
	999 7614 Hole punch Tool number:999 7614		
	Tool description:Hole punch		
	Tool boards:30		
	981 4204 Expander pliers		
	Tool number:981 4204		
	Tool description:Expander pliers		
	Tool boards:87		
	951 2632 Terminal removal tool (Color code: RED) Tool number:951 2632 Tool description:Terminal removal tool (Color code: RED)		
	Tool boards:39		

Materials	
Designation	Part number
Isopropanol	
Masking tape	
Bonding primer, plastic	31335448

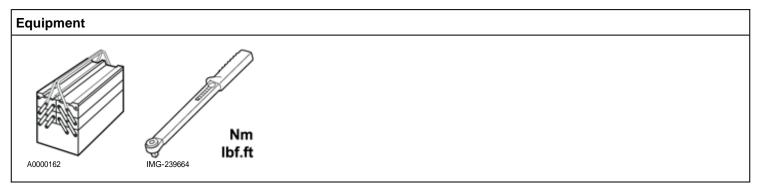
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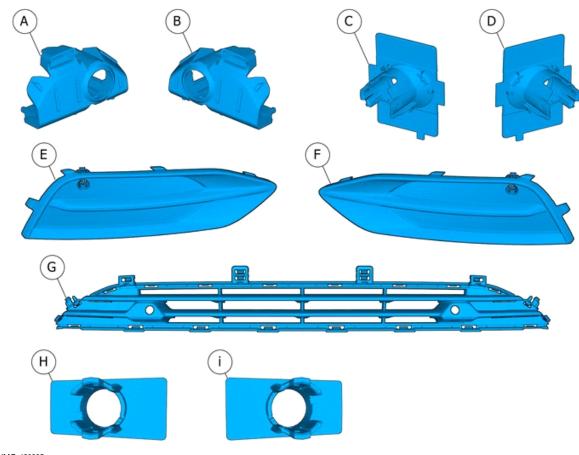
Parking assistance, pilot- 31470177 - V1.2



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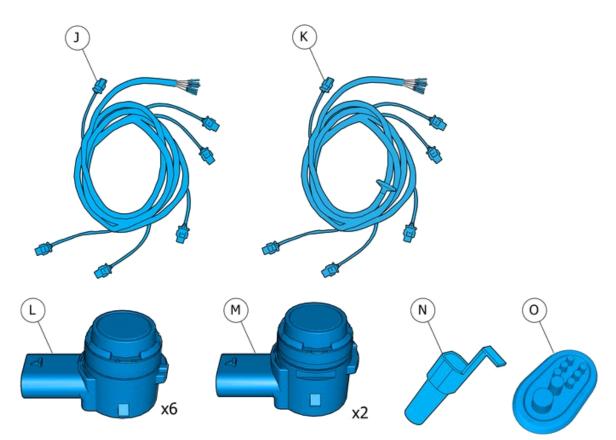
Sand paper P1000	
Volvo Original Touch-up paint	
Varnish 2-component	31335447
Mixing pipe	1161730
Glue	9511027
Таре	9511083
Electrical tape	
Primer	1161765
Lubricant	1161150



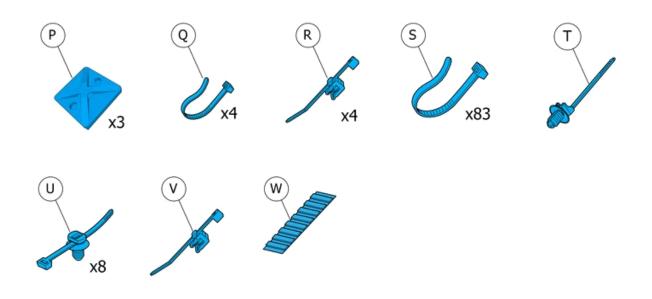




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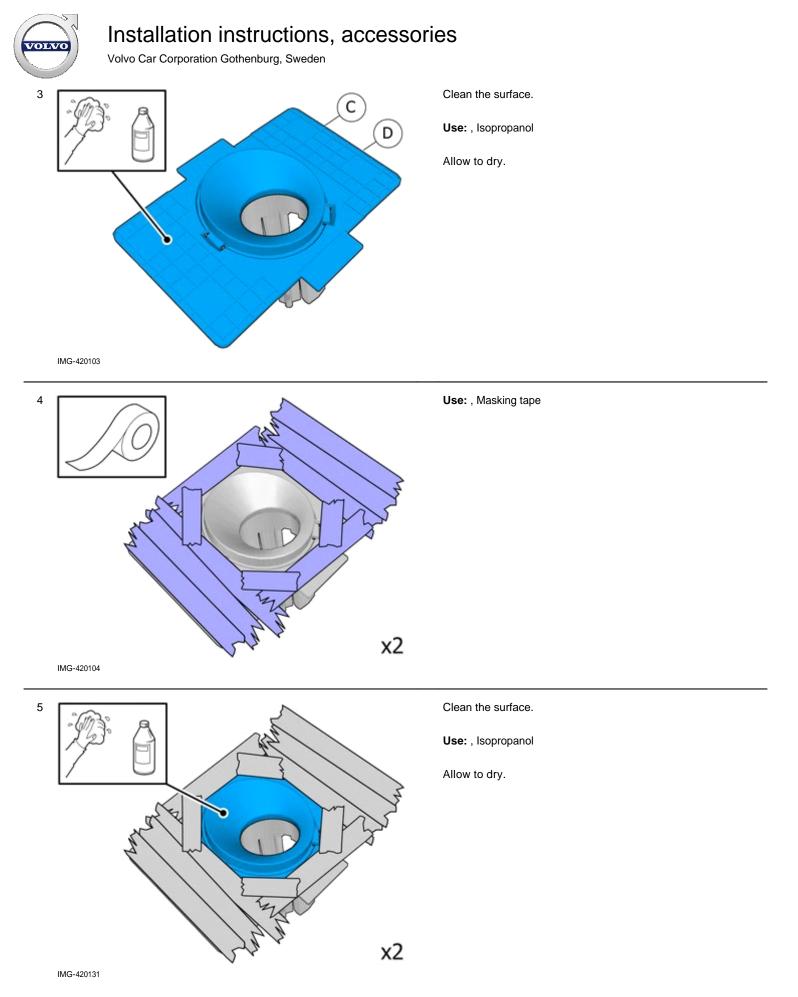
IMG-420485

OLVO



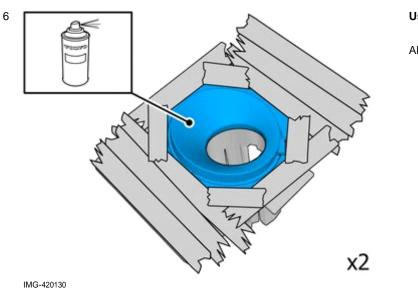
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		Information
1		Read through all of the instructions before starting installation.
		Notifications and warning texts are for your safety and to minimise the risk of something breaking during installation.
		Ensure that all tools stated in the instructions are available before starting installation.
		Certain steps in the instructions are only presented in the form of images. Explanatory text is also given for more complicated steps.
		In the event of any problems with the instructions or the accessory, contact your local Volvo dealer.
		Color symbols
2		
	(5)	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.
	6	Used for focused component, the component with which you will do something.
		Used as extra colors when you need to show or differentiate additional parts.
		Used for attachments that are to be removed/installed. May be screws, clips, connectors, etc.
IMG-363036		Used when the component is not fully removed from the vehicle but only hung to the side.
		Used for standard tools and special tools.
		Used as background color for vehicle components.
		Paintwork





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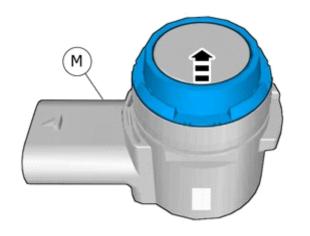
Use: 31335448, Bonding primer, plastic

Also see the instructions on the container.

8

IMG-384372

7



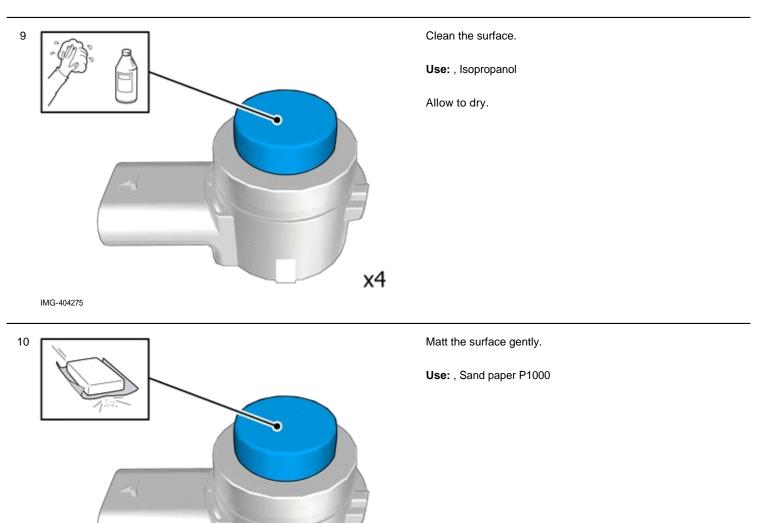
x2

x2

IMG-384853 © Volvo Car Corporation



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x4

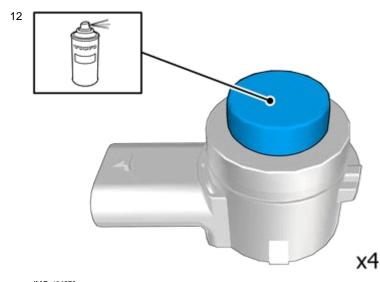


Clean the surface.

Use: , Isopropanol

Allow to dry.

IMG-404275



Caution! Protect connector surfaces against paint spray.

Note!

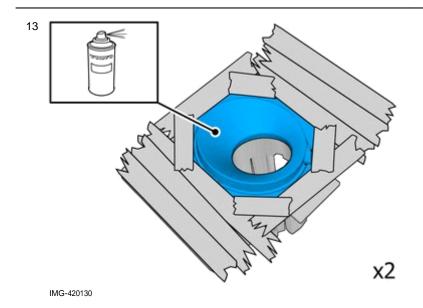
Paint the sensors the same colour code as the vehicle.

Also see the instructions on the container.

Use: , Volvo Original Touch-up paint

Use: 31335447, Varnish 2-component

IMG-404278



Note!

Use correct color following the vehicle's paint code.

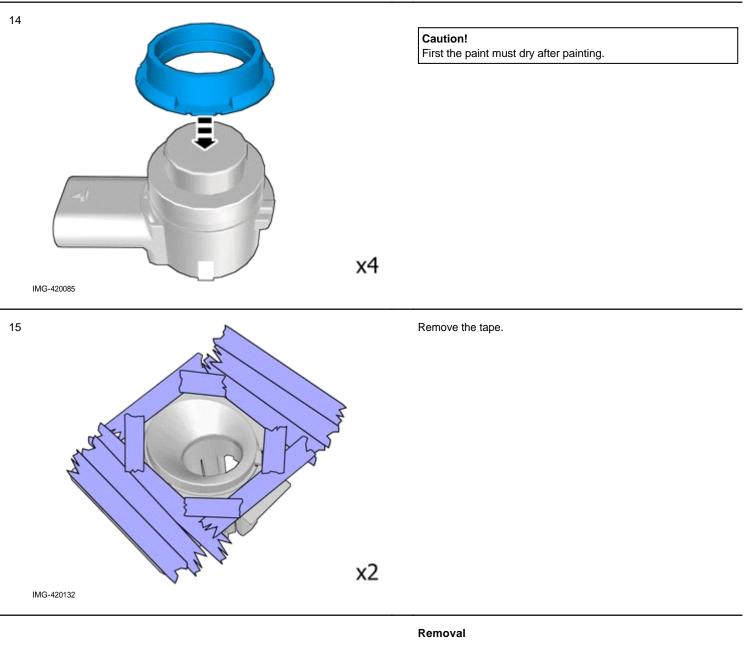
Use: , Volvo Original Touch-up paint

Use: 31335447, Varnish 2-component

Also see the instructions on the container.



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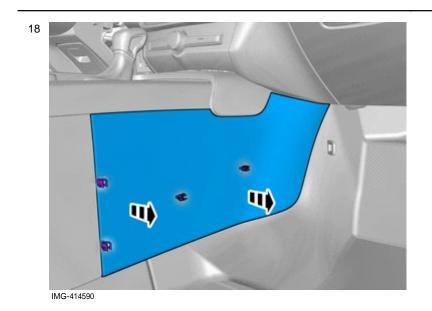


IMG-394535

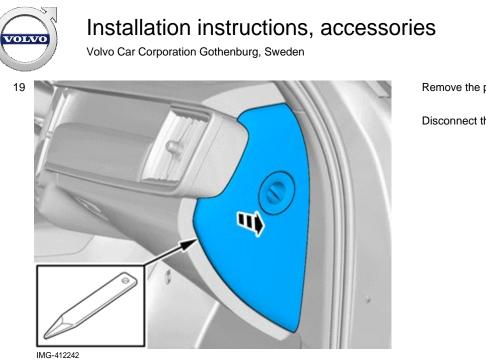
17

Note!

The removal steps may contain installation details.



Remove the panel.



20 2 /// 1 IMG-414575

21 2 x3 1

IMG-414580

Remove the panel.

Disconnect the connector, if applicable.

Remove the panel.

Remove the panel.

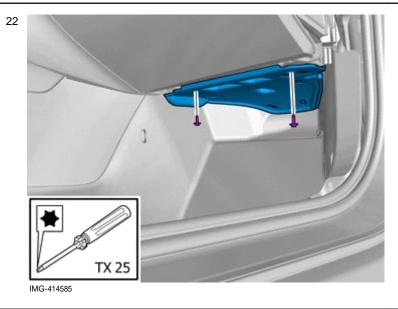
Disconnect the connector, if applicable.



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Installation instructions, accessories

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Remove the screws.

Remove the panel.

Repeat the steps when removing on opposite side.

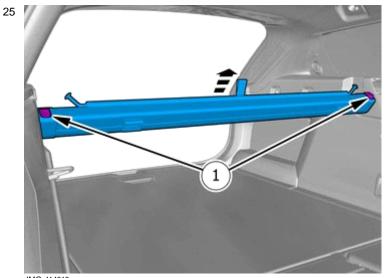
IMG-400000



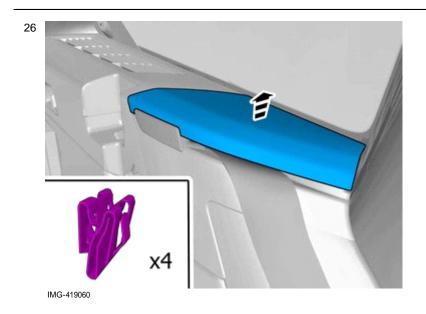
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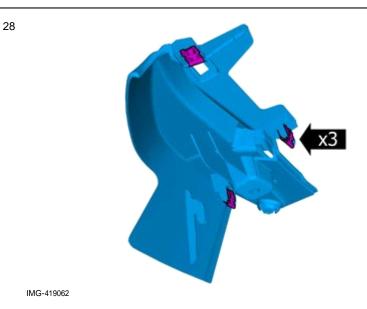
IMG-414613

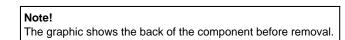


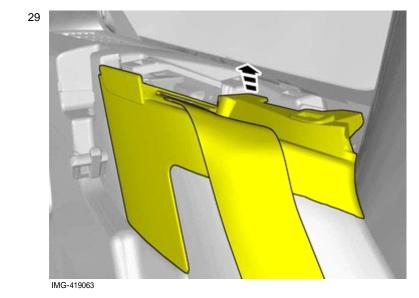
Remove the panel.



IMG-419061





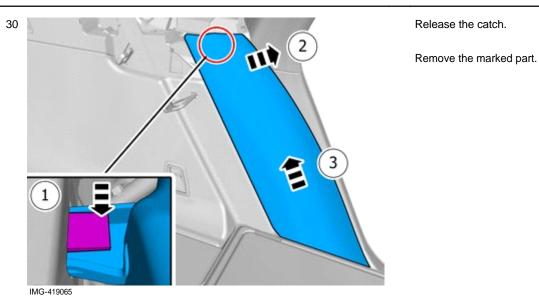


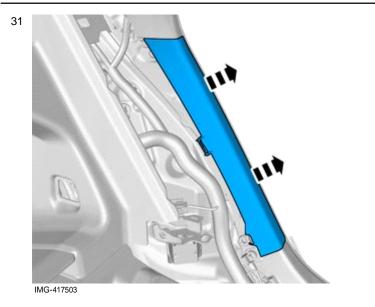
Remove the panel.

Use hands only.



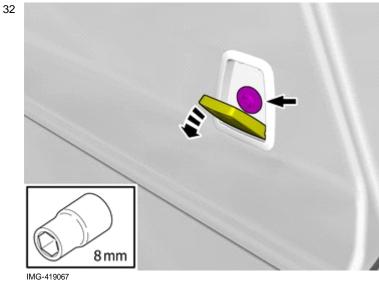
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Remove the panel.

Use hands only.



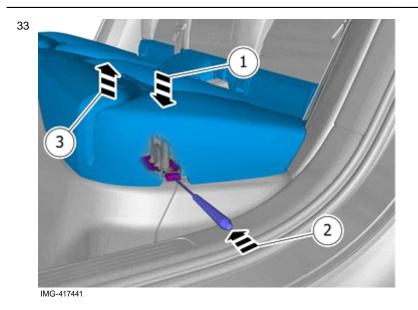
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Remove the screw.

Tightening torque: M6 , 10 Nm



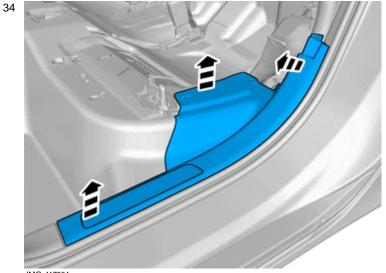
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Release the lock.

Repeat on the other side.

Remove the marked part.

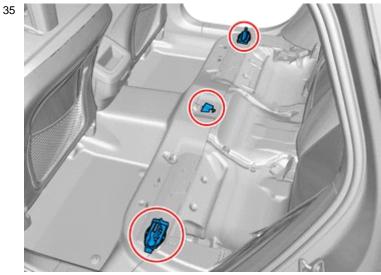


Remove the panel.

Disconnect the connector, if applicable.



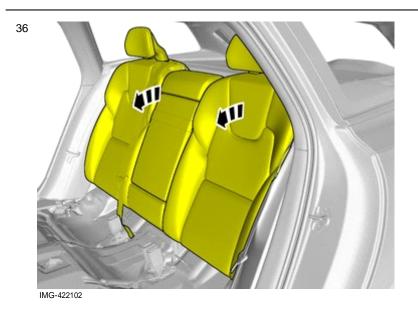
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Caution!

Make sure that the seat backrest upholstery (fold down position) is not damaged by contact with the floor!

IMG-422035

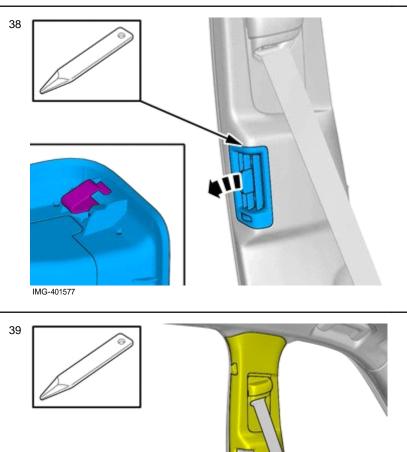


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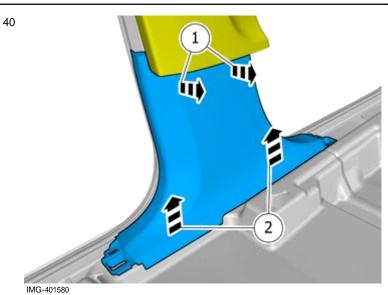
Remove the marked part.

Detach the panel.

Remove the panel.

IMG-401579

¢.



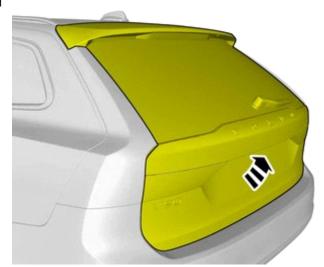
Π

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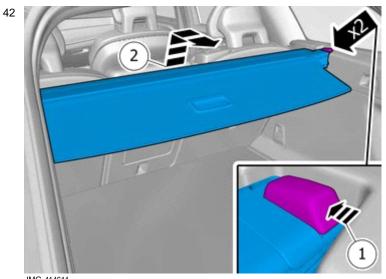


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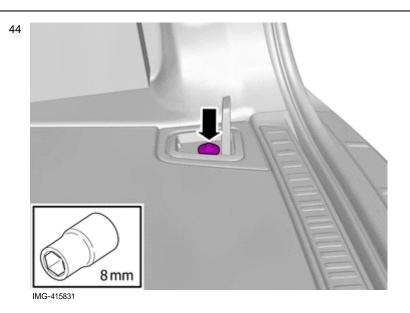
IMG-407110



Remove the marked part.



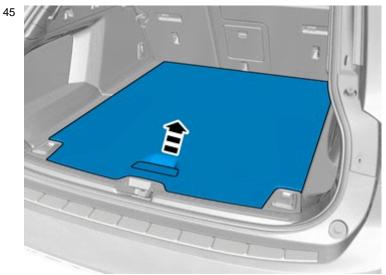
IMG-415830



Remove the screw.

Tightening torque: M6 , 10 Nm

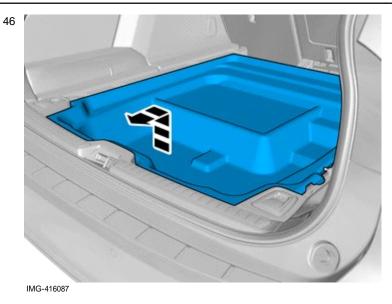
Repeat on the other side.



IMG-416086

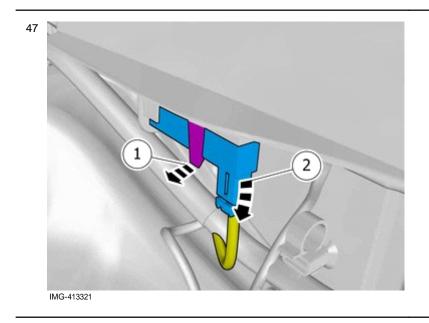


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Remove the marked part.

Vehicles with keyless entry



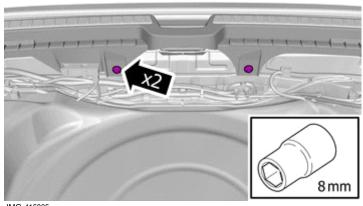
Disconnect any connector(s).

All vehicles

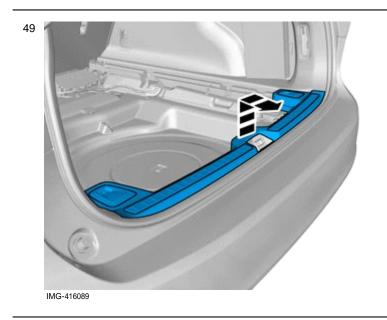


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Remove the screws.



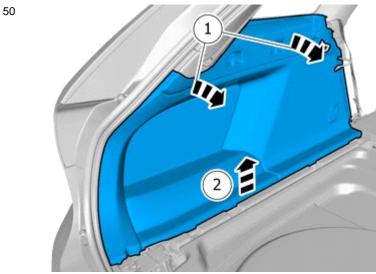
IMG-415835



Remove the marked part.

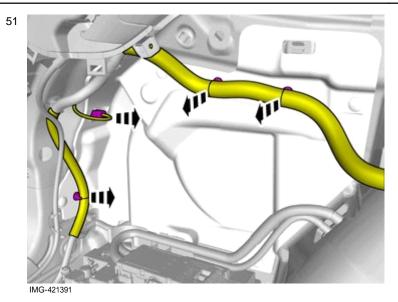
Remove the panel.

Disconnect any connector(s).





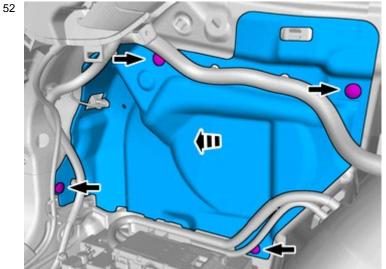
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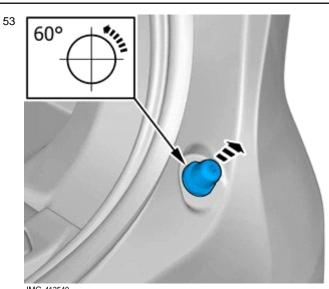
Disconnect the connector.

Remove the cable harness clips.





IMG-421395



IMG-413540 © Volvo Car Corporation

Remove the clips.

Remove the marked part.

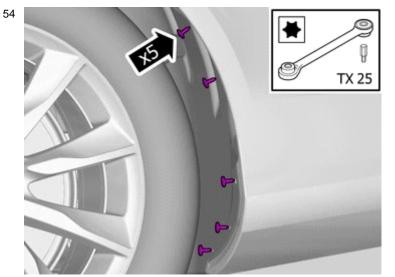
Remove the marked part.

Repeat on the other side.

Make sure that the components are not mixed up at the installation.

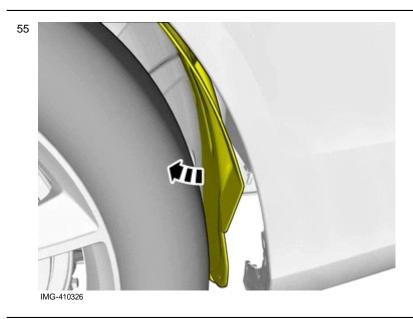


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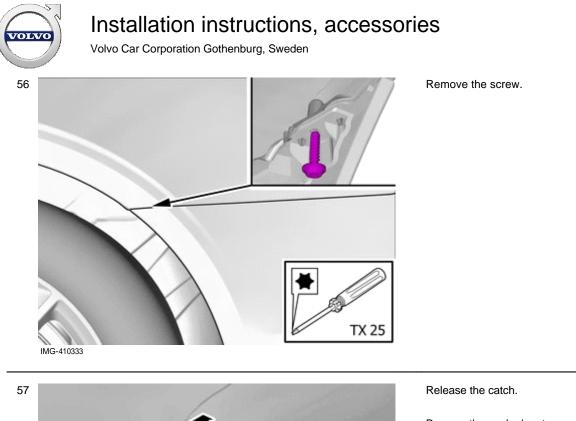


Remove the screws.

IMG-410325

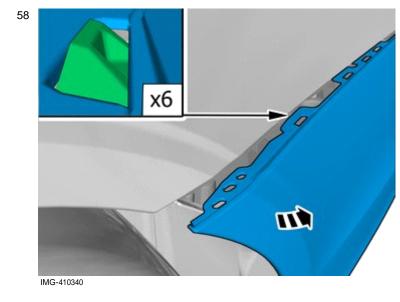


Fold the wing liner to one side.



<image><image>

Remove the marked part.



Remove the part carefully

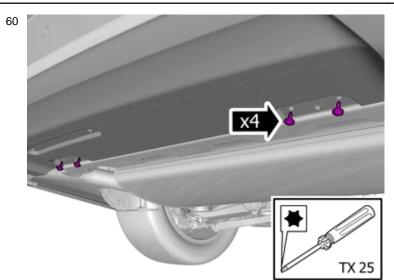


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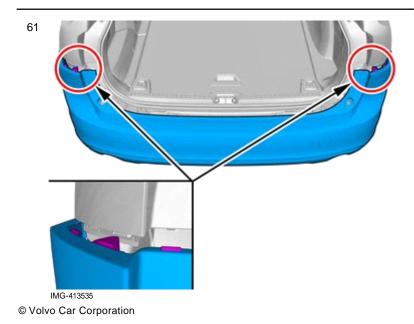
59

Repeat the steps when removing on opposite side.

IMG-400000



IMG-410355



Raise the car.

Remove the screws.

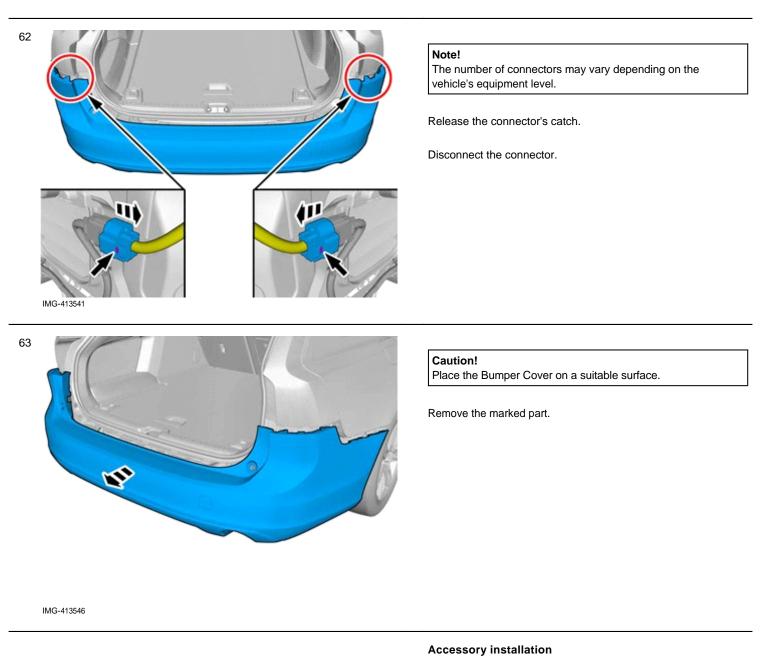
Note!

This step requires the aid of another technician.

Loosen the component indicated. Do not remove it.



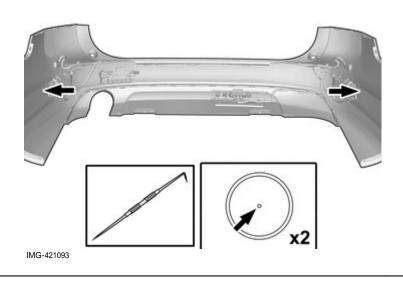
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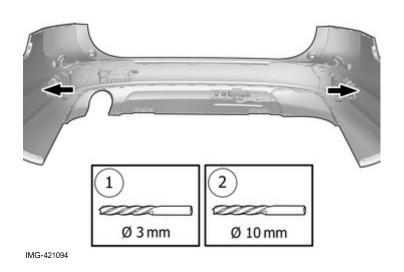


Locate the markings for the positions.

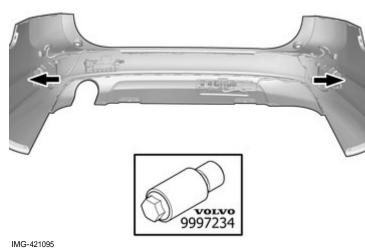
Measure and mark out the centre.

Use: Scribe

65



66



Caution!

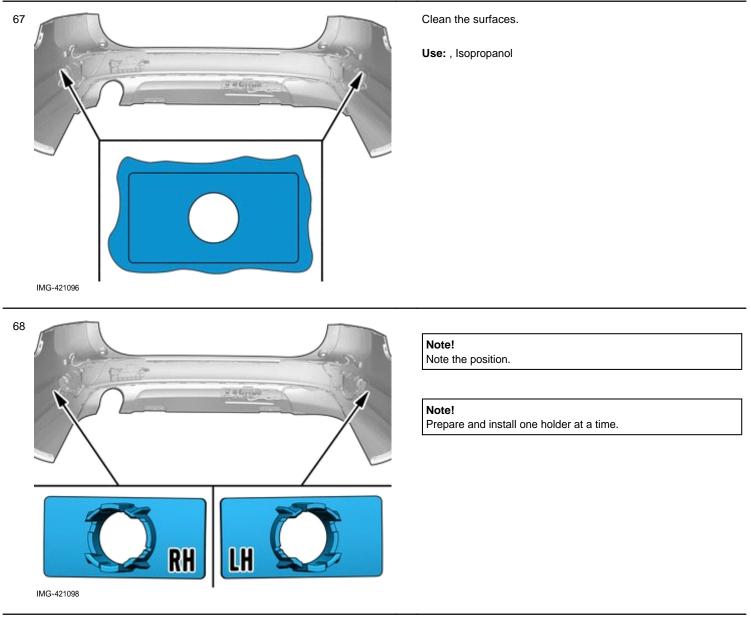
Sharp end of tool must be on outside of cover.

Use special tool: T9997234, Hole stamp

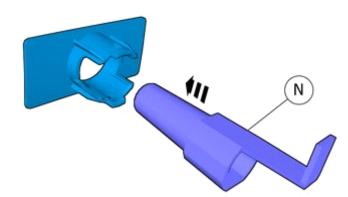
1110 421000



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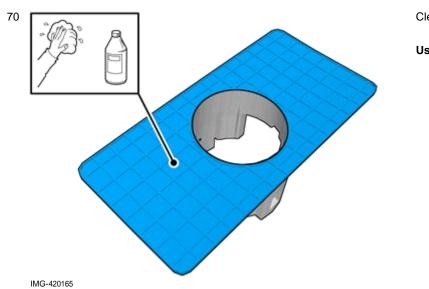


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Clean the surface.

Use: , Isopropanol

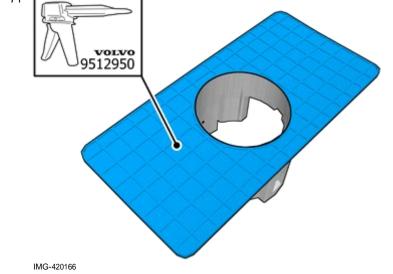
Warning! Wear protective gloves.

Warning! Make sure to provide adequate ventilation.

Apply a thin and even layer.

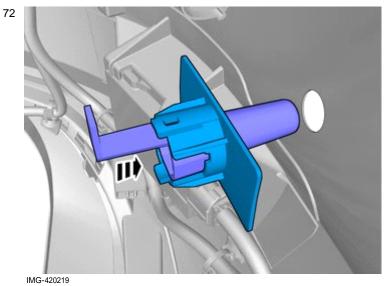
Use special tool: T9512950, Glue gun (kit)

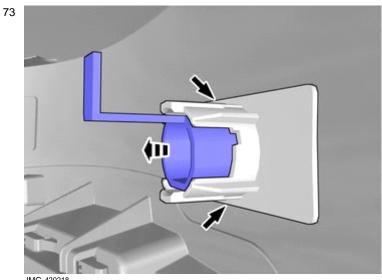
Use: 1161730, Mixing pipe **Use:** 9511027, Glue



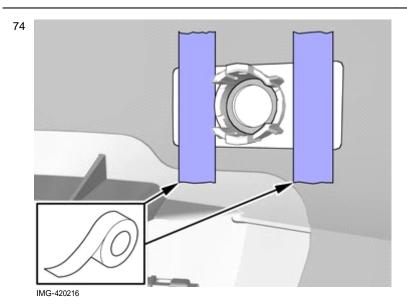


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IMG-420218



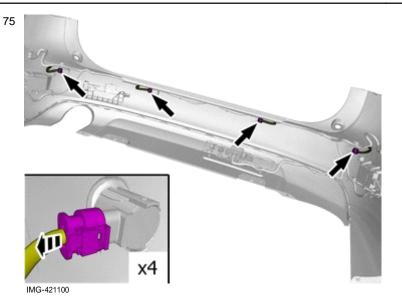
Note!

Hold the part securely at the marker arrows when removing the tool.

Use: 9511083, Tape



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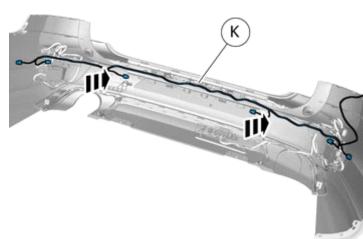
Disconnect the connectors.

Attach the connector to the wiring harness.

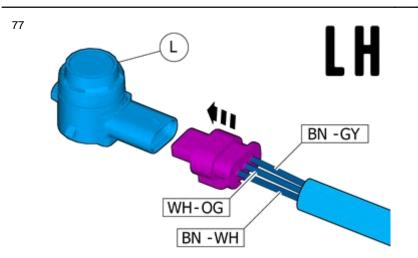
Install component that comes with the accessory kit.

Put the wiring in the Bumper cover without installing the wiring.





IMG-421101



Connect the two painted sensors to the external connections.

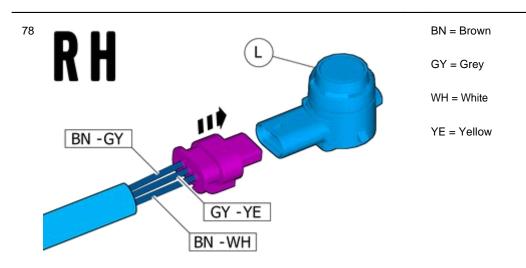
BN = Brown

OG = Orange

WH = White

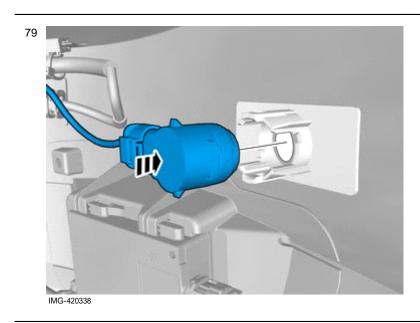


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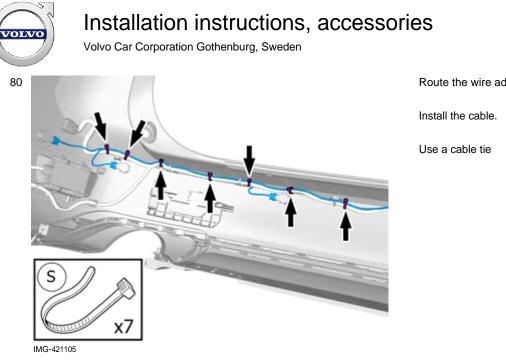


IMG-420337

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Repeated on the right-hand side.

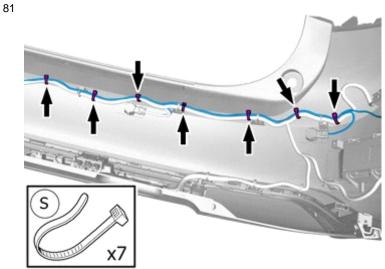


Route the wire adjacent to existing wirings.

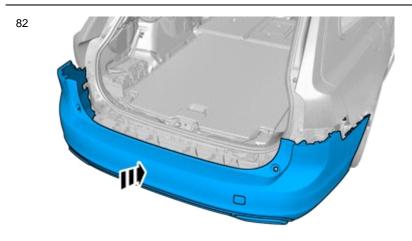
Route the wire adjacent to existing wirings.

Install the cable.

Use a cable tie



IMG-421106



Note!

This step is easier with two people.

Place the Bumper Cover in position for installation.



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Vehicles without aftermarket-installed Parking assistance

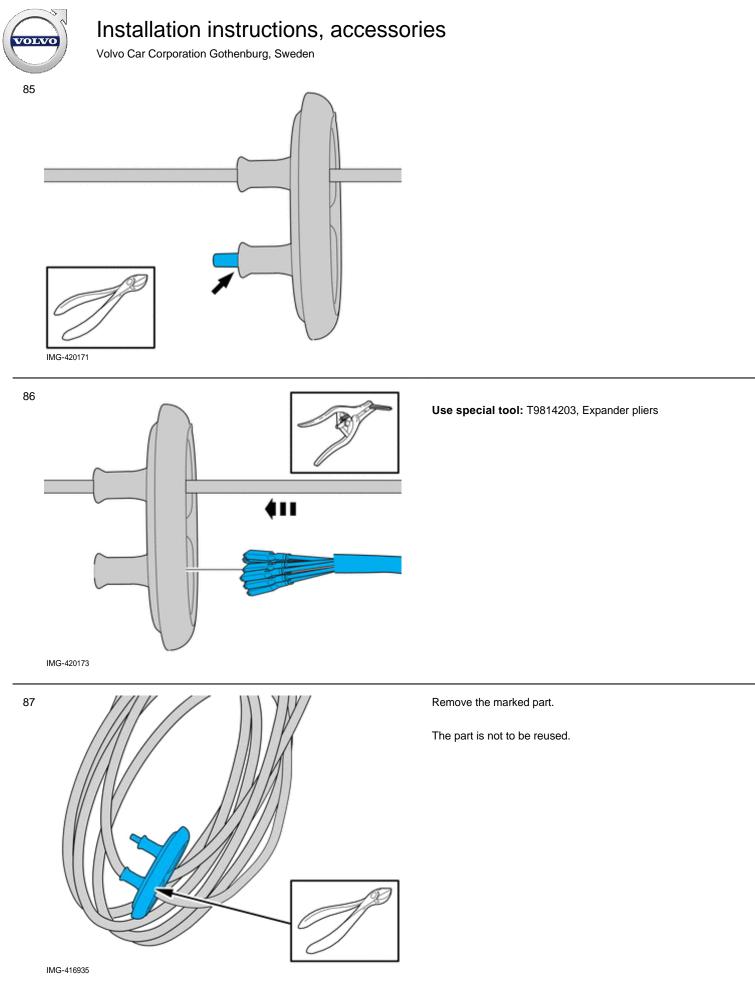
Remove the marked part.

IMG-415410

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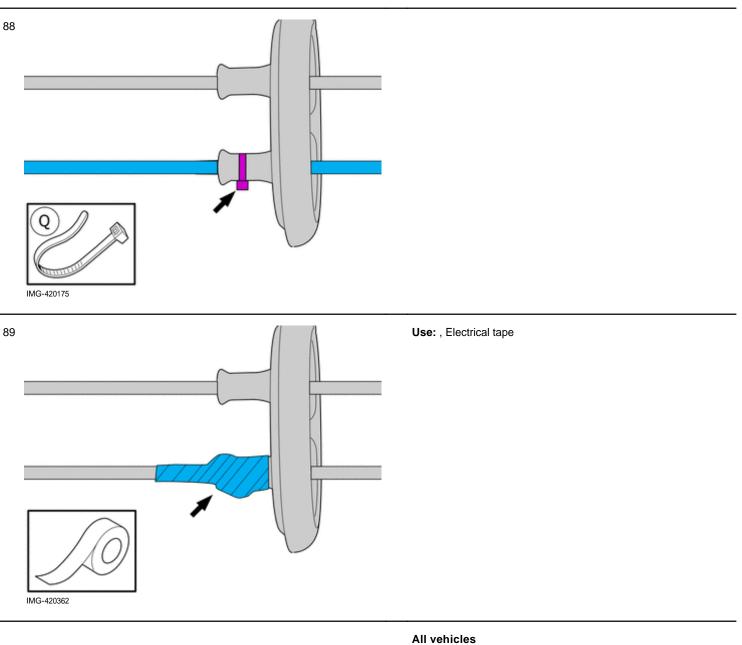
Vehicles with aftermarket-installed Parking assistance

Loosen the component indicated. Do not remove it.



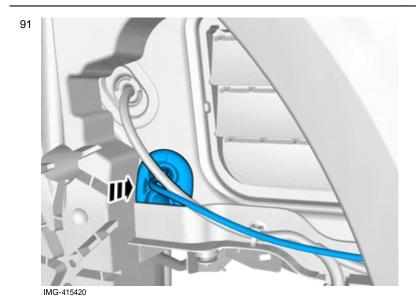


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Caution! Make sure that the rubber grommet seals properly to the body.

Route the wiring harness into the passenger compartment.

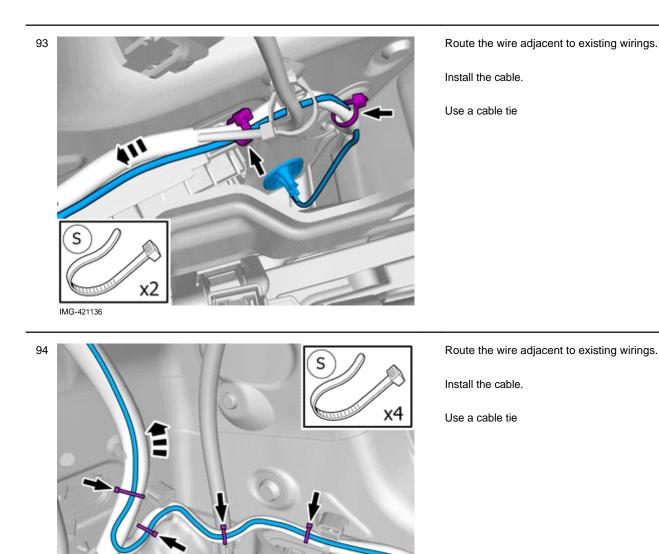


Reinstall the bumper.



All vehicles

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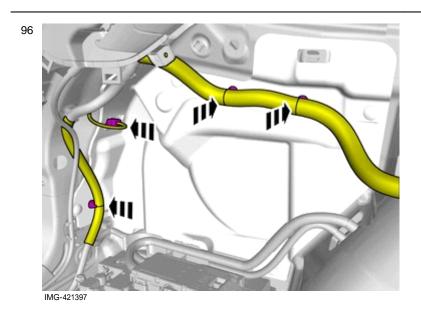
ÍII



Reinstall the insulation mat.

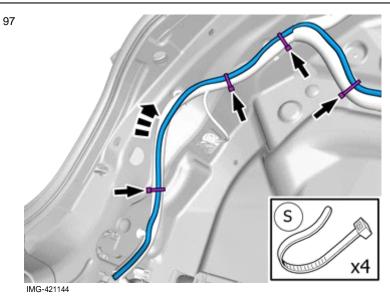
Reinstall the clips.

IMG-421396



Connect the connector.

Install the wiring harness.



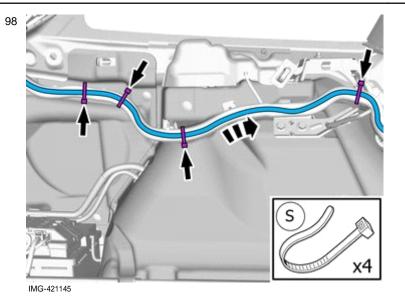
Route the wire adjacent to existing wirings.

Install the cable.

Use a cable tie



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Route the wire adjacent to existing wirings.

Install the cable.

Use a cable tie

Route the wire adjacent to existing wirings.

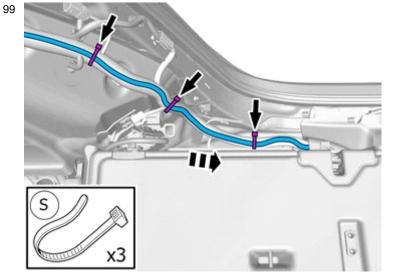
Position/route the cable as illustrated.

Install the cable.

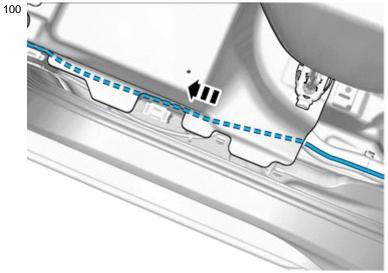
Use a cable tie

Install the cable.

Use a cable tie



IMG-421146

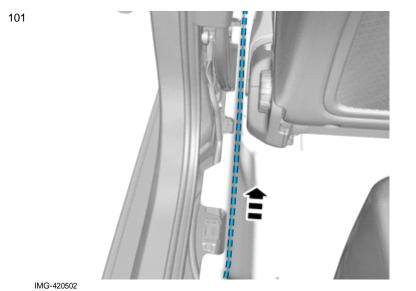


IMG-420500 © Volvo Car Corporation

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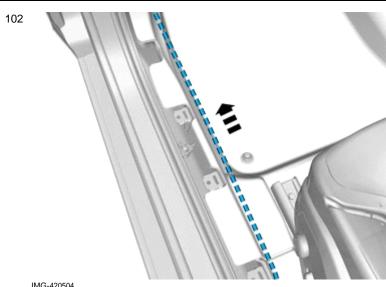
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Note!

Route the wiring between floor carpet and air duct.

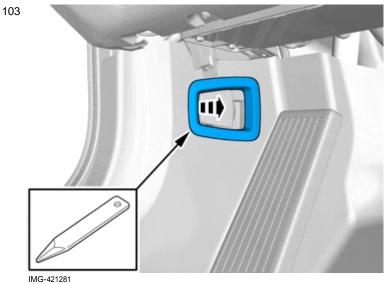
Position/route the cable as illustrated.



Position/route the cable as illustrated.



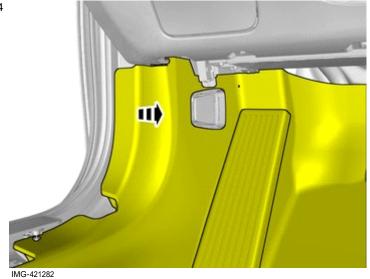
Volvo Car Corporation Gothenburg, Sweden



Remove the marked part.



104



105

Route the wire adjacent to existing wirings.

Install the cable.

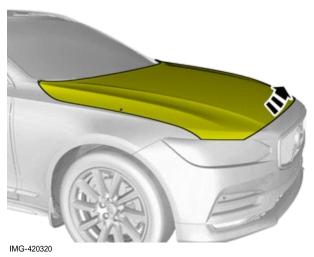
Use a cable tie



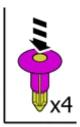
Volvo Car Corporation Gothenburg, Sweden



Open the hood.



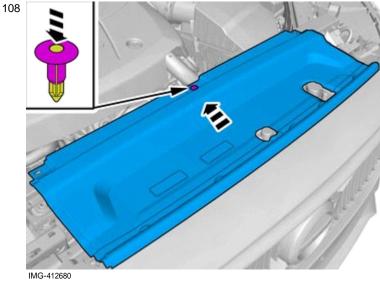
IMG-420320



Remove the clips.

Remove the marked part.

Repeat on the other side.



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IMG-412677

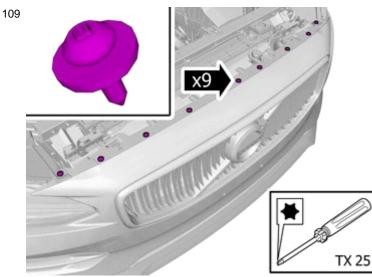
Remove the clip.

Remove the marked part.

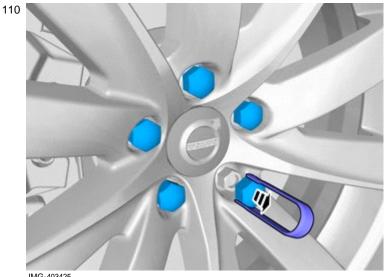
Repeat on the other side.



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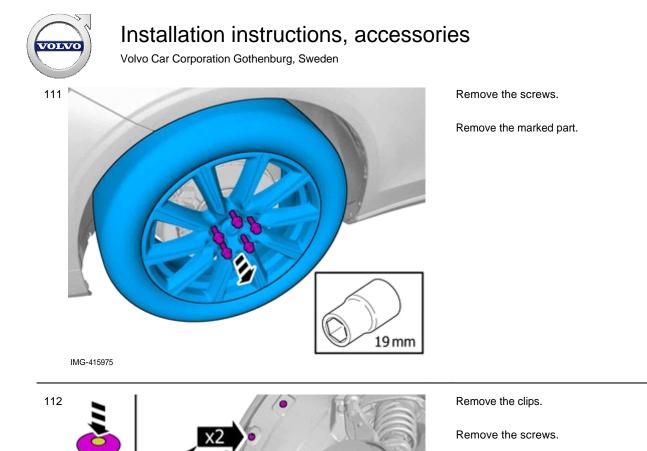
IMG-412681

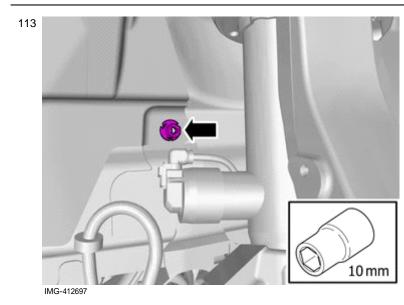


Remove the marked part.

Remove the screws.

Use: Pliers





0

Remove the nut.

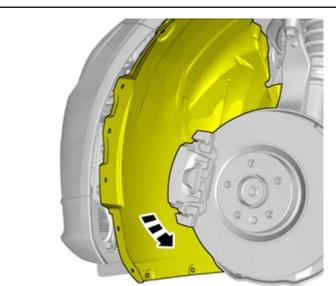
TX 25



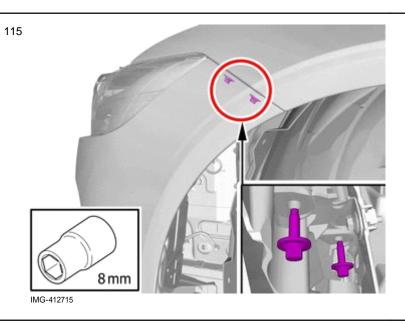
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Installation instructions, accessories

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IMG-412710



Remove the screws.

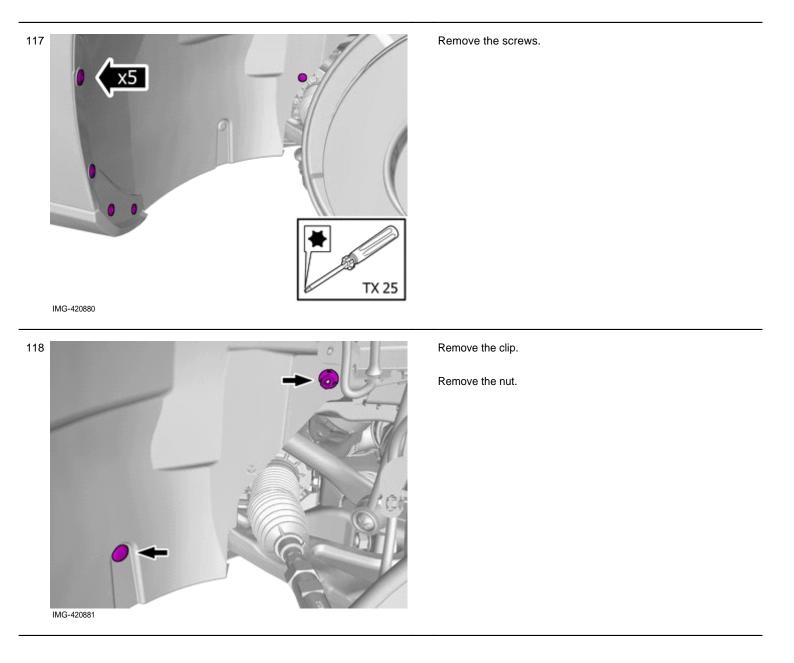
Fold the wing liner to one side.

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Repeat the steps when removing on opposite side.



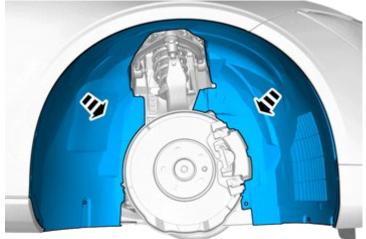
Volvo Car Corporation Gothenburg, Sweden



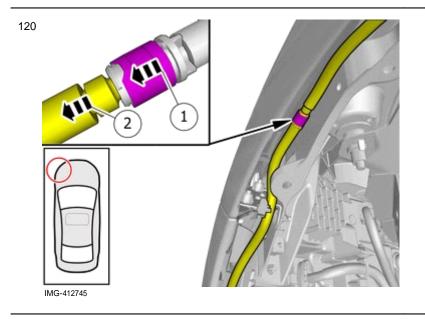
Applies to the right-hand side



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IMG-420883



Vehicles with headlamp washers

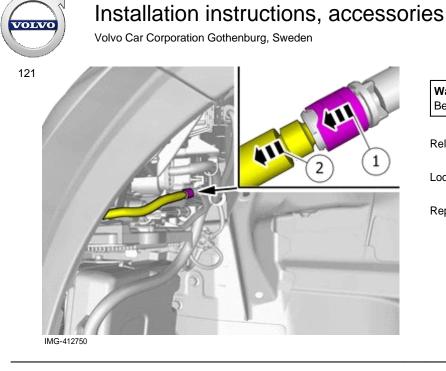
Remove the marked part.

Warning!

Be prepared to collect escaping fluid.

Release the lock.

Loosen the marked detail/details.



Warning!

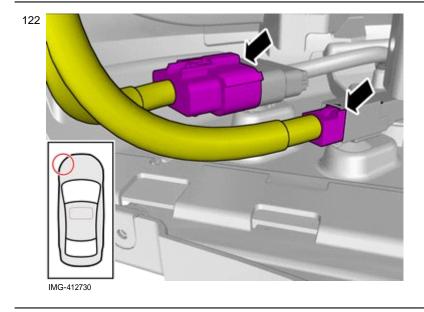
Be prepared to collect escaping fluid.

Release the lock.

Loosen the marked detail/details.

Repeat on the other side.

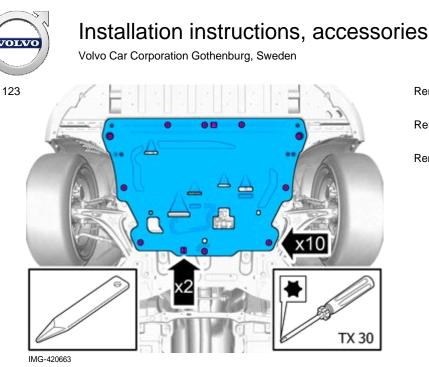
All vehicles



Note!

The number of connectors may vary depending on the vehicle's equipment level.

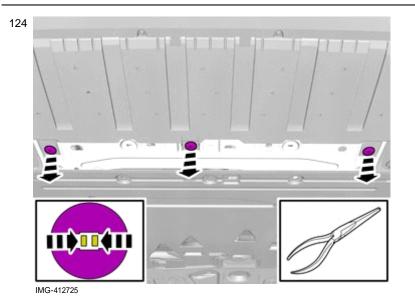
Disconnect the connectors.



Remove the clips.

Remove the screws.

Remove the marked part.



Remove the clips.

Caution!

Note!

Release the catches.

Remove the part carefully

Remove the marked part.

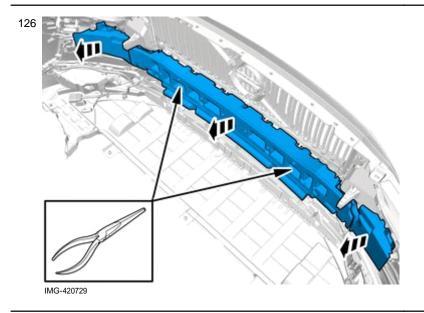
Place the Bumper Cover on a suitable surface.

This step is easier with two people.

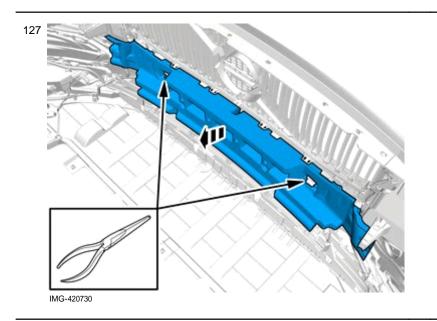


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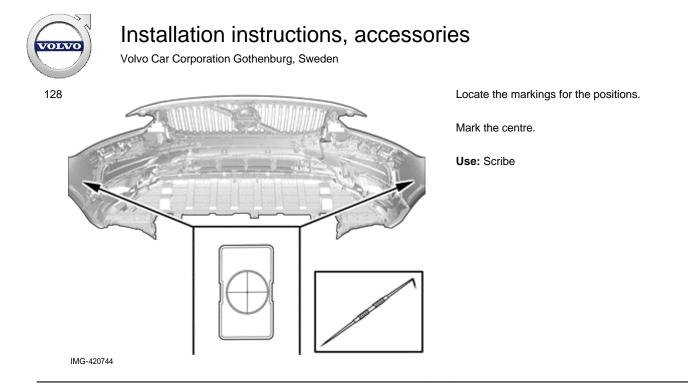
Concerns US and Canadian markets.



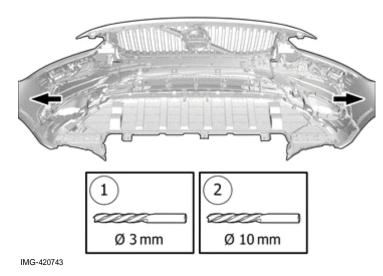
Applies to all markets, except USA and Canada



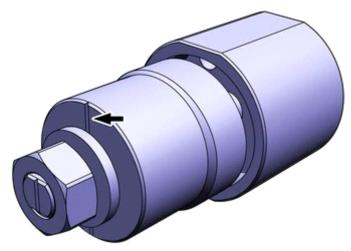
Applies to all markets.



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IMG-420735

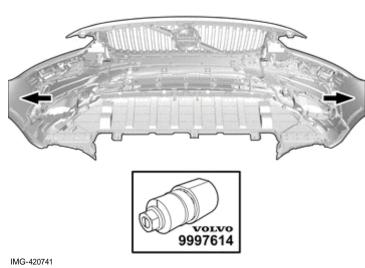
Caution! Ensure that the marking is vertical.

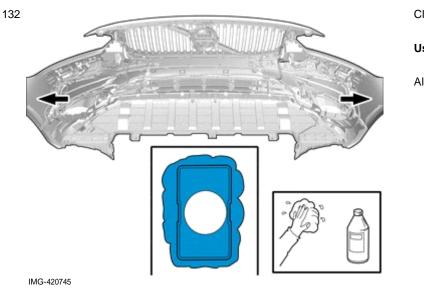
Use special tool: T9997614, Hole punch



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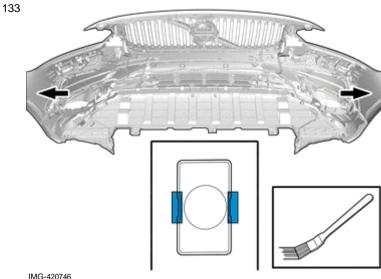
Clean the surfaces.

Caution!

Sharp end of tool must be on outside of cover.

Use: , Isopropanol

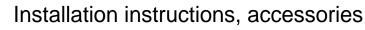
Allow to dry.



Apply a thin and even layer.

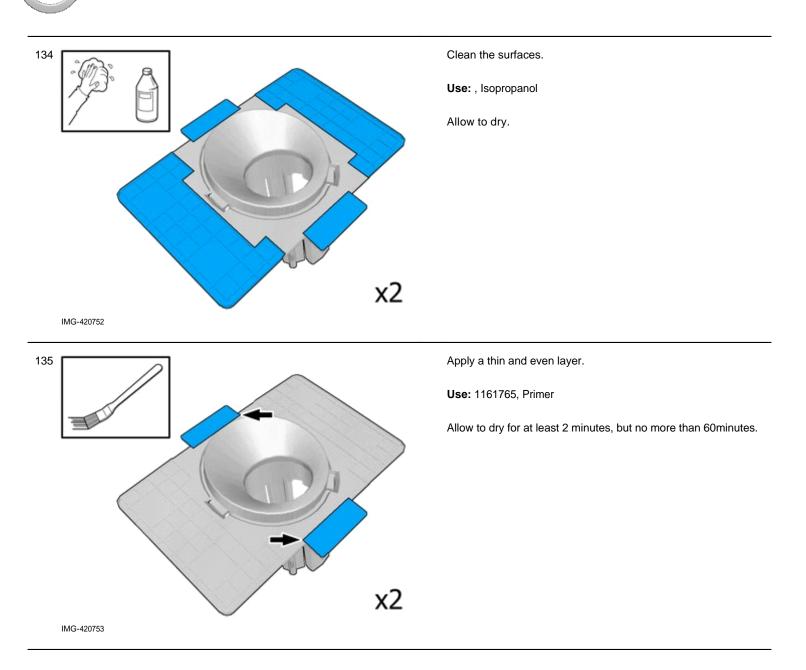
Use: 1161765, Primer

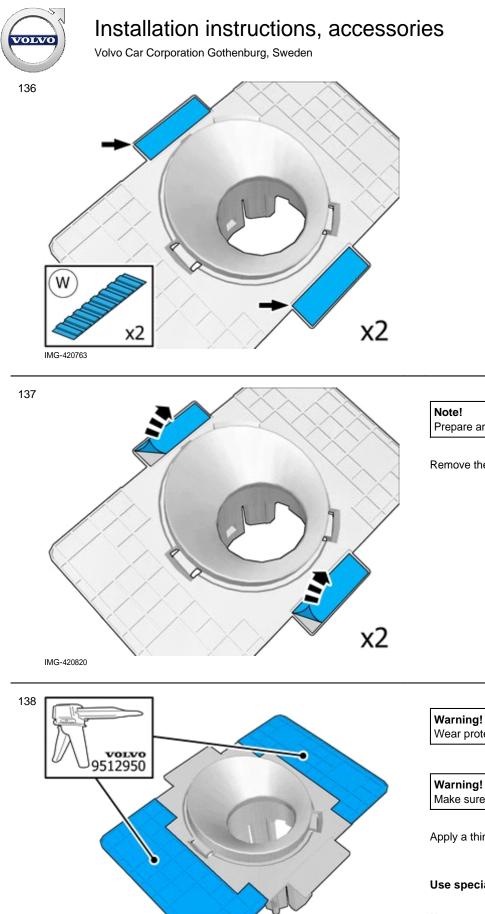
Allow to dry for at least 2 minutes, but no more than 60minutes.



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OL





Prepare and install one holder at a time.

Remove the protective film.

Wear protective gloves.

Warning!

x2

Make sure to provide adequate ventilation.

Apply a thin and even layer.

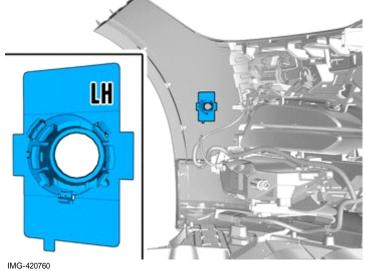
Use special tool: T9512950, Glue gun (kit)

Use: 1161730, Mixing pipe Use: 9511027, Glue



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Note!

Note the position.

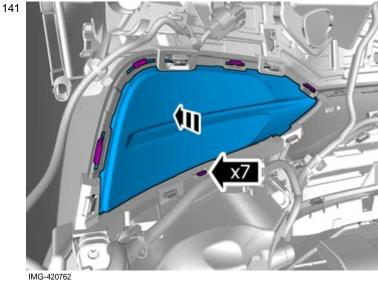
140

Note! Note the position.

Remove the marked part.

Repeat on the other side.

The part is not to be reused.

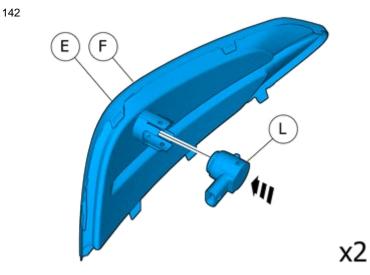


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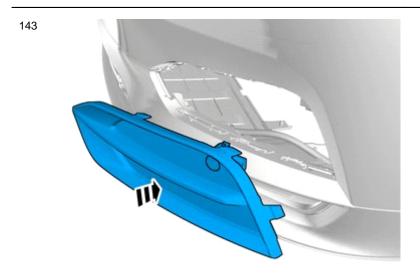
Parking assistance, pilot- 31470177 - V1.2



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IMG-420765

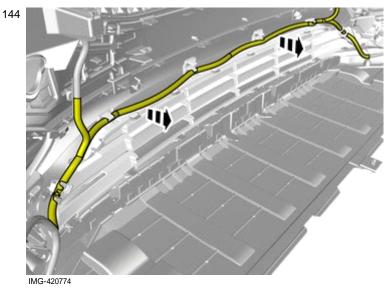


IMG-420766

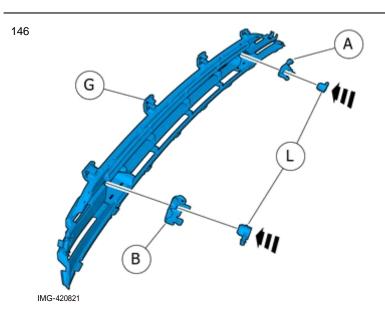
Repeat on the other side.



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IMG-420793



Loosen the wiring harness or move it to the side.

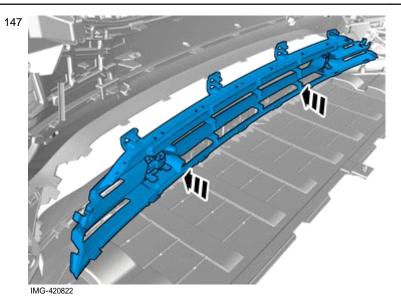
Release the catches.

Remove the marked part.

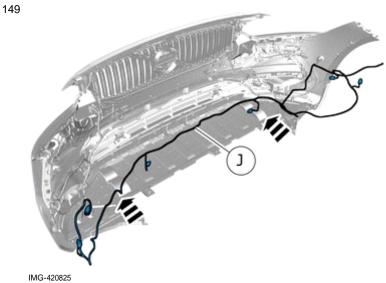
The part is not to be reused.



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IMG-420823



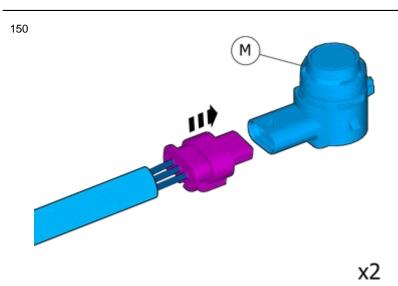
© Volvo Car Corporation

Install the wiring harness.

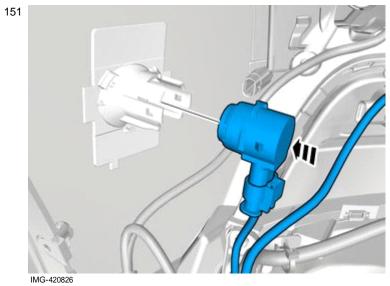
Put the wiring in the Bumper cover without installing the wiring.



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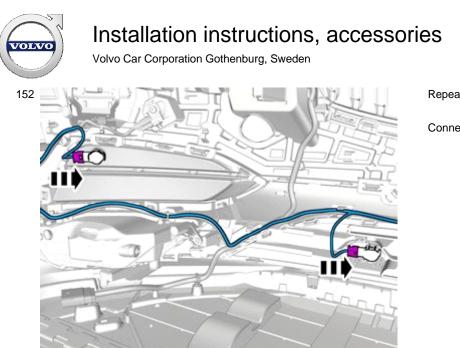


IMG-420033



Repeat on the other side.

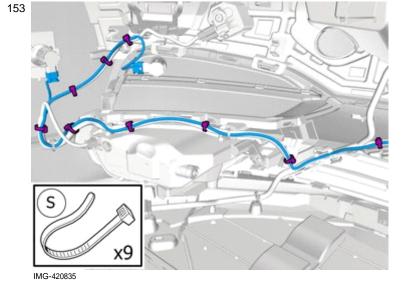
Connect the two painted sensors to the external connections.



Repeat on the other side.

Connect the connectors.

Vehicle variant with cable harness



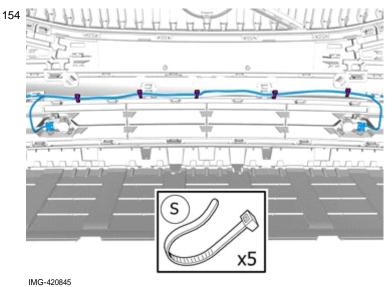
Route the cable harness to the existing cable harness.

Install the wiring harness.

Use a cable tie



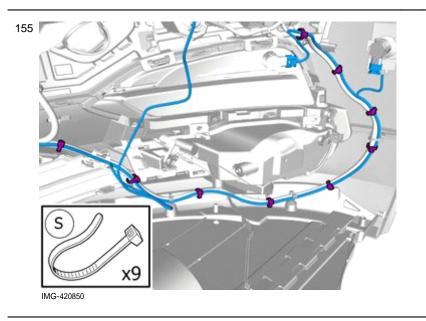
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Route the cable harness to the existing cable harness.

Install the wiring harness.

Use a cable tie

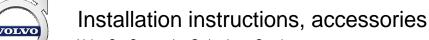


Route the cable harness to the existing cable harness.

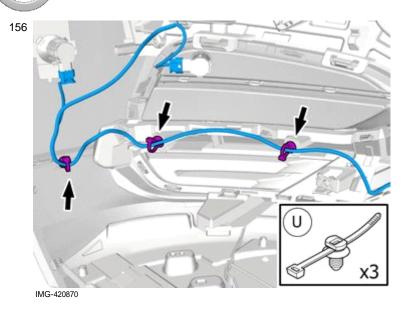
Install the wiring harness.

Use a cable tie

Vehicle variant without cable harness



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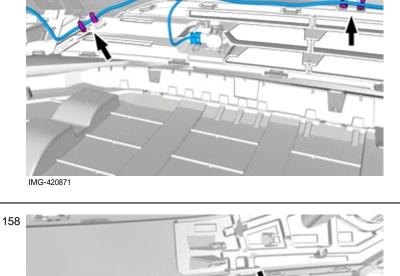
Position/route the cable harness as illustrated.

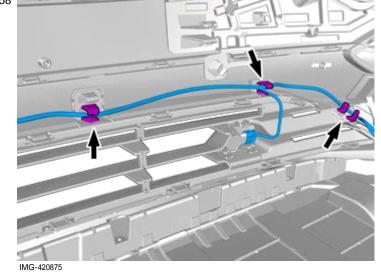
Install the wiring harness.

Use a cable tie

Position/route the cable harness as illustrated.

Install the wiring harness.





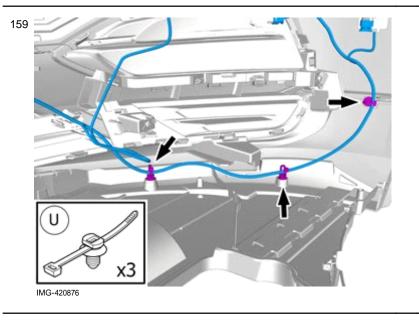
Position/route the cable harness as illustrated.

Install the wiring harness.

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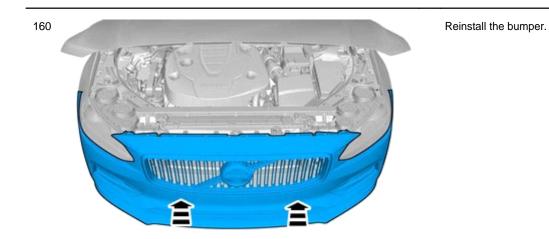


Position/route the cable harness as illustrated.

Install the wiring harness.

Use a cable tie

All vehicles





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Installation instructions, accessories

Volvo Car Corporation Gothenburg, Sweden



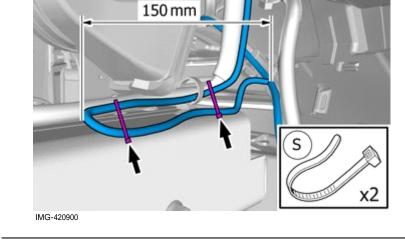
Note!

Orientation view

Position the cable harness excess as illustrated.

Install the wiring harness.

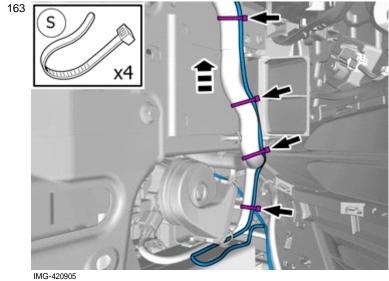
Use a cable tie



Route the cable harness to the existing cable harness.

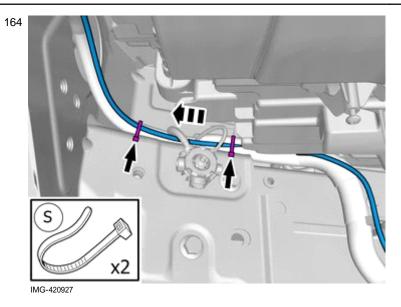
Install the wiring harness.

Use a cable tie





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Route the cable harness to the existing cable harness.

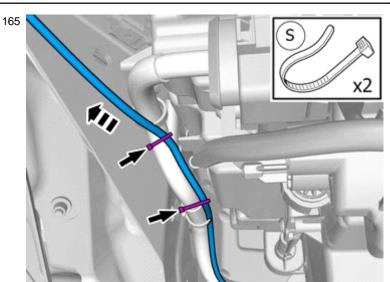
Install the wiring harness.

Use a cable tie

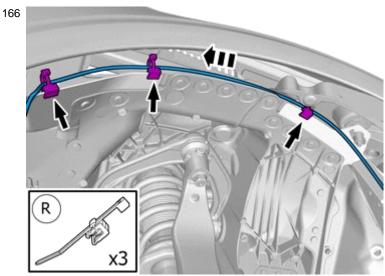
Route the cable harness to the existing cable harness.

Install the wiring harness.

Use a cable tie



IMG-420928



Position/route the cable harness as illustrated.

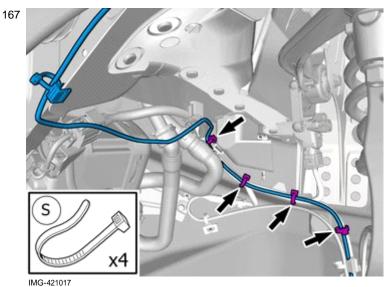
Install the wiring harness.

Use a cable tie

IMG-420929 © Volvo Car Corporation



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Position/route the cable harness as illustrated.

Install the wiring harness.

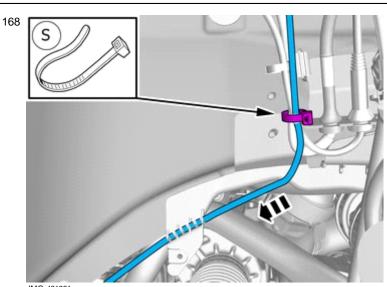
Use a cable tie

Position/route the cable harness as illustrated.

Install the wiring harness.

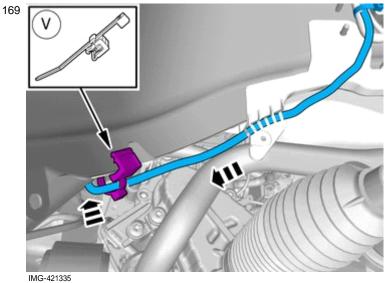
Use a cable tie







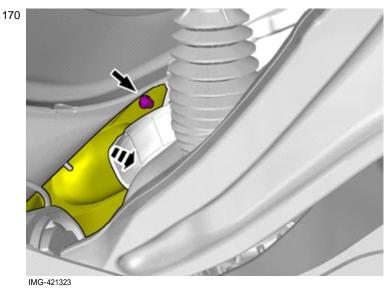
Volvo Car Corporation Gothenburg, Sweden



Position/route the cable harness as illustrated.

Install the wiring harness.

Use a cable tie

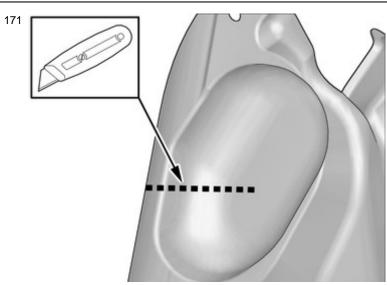


Remove the nut.

Fold the insulation to one side.

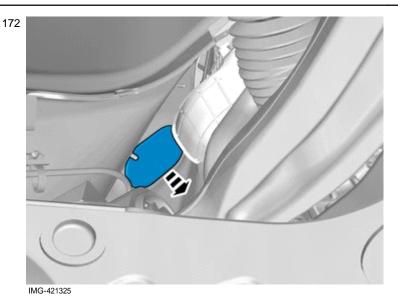
Make a cut in the insulation.





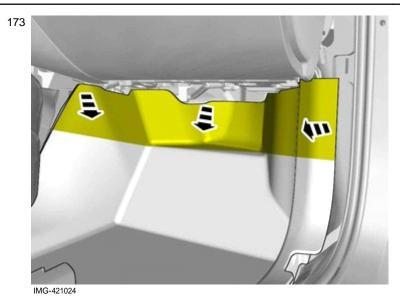


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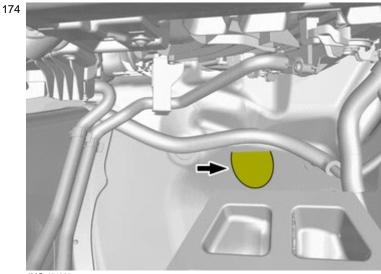
Remove the marked part.

The part is not to be reused.



Fold the carpet to the side.

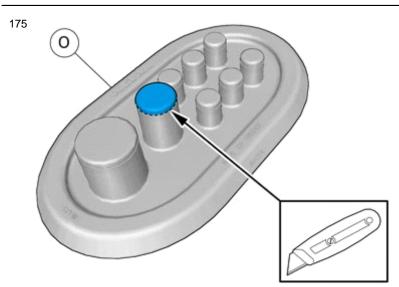
Remove the marked part.



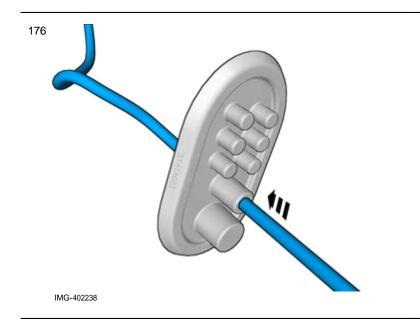
IMG-421025 © Volvo Car Corporation



Volvo Car Corporation Gothenburg, Sweden



IMG-421020



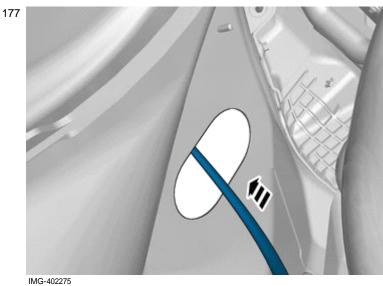
Pull the wiring through.

Use: 1161150, Lubricant

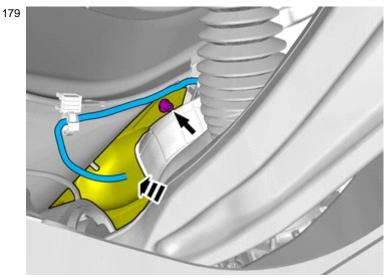
Use special tool: T9814204, Expander pliers



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IMG-402277



IMG-421375

Route the wiring harness into the passenger compartment.

Caution!

Make sure that the rubber grommet seals properly to the body.

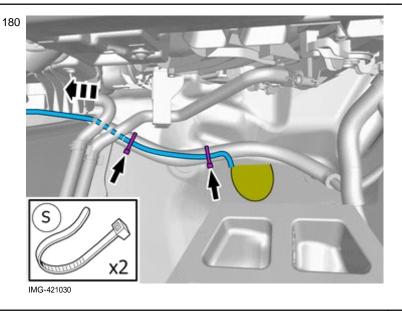
Insert the cable in to the passenger compartment, adjust the cable length out into the engine compartment and secure the rubber grommet.

Refit the insulation.

Install the nut.



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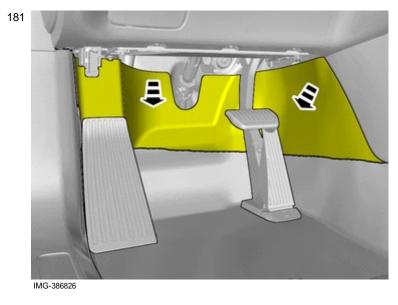


Position/route the cable harness as illustrated.

Install the wiring harness.

Use a cable tie

Pull the wiring through.

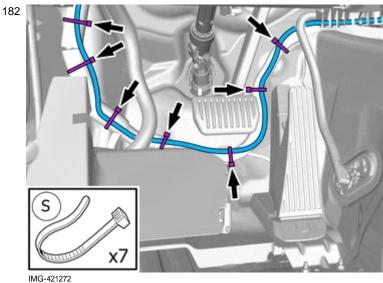


Fold the carpet to the side.

Position/route the cable harness as illustrated.

Install the wiring harness.

Use a cable tie



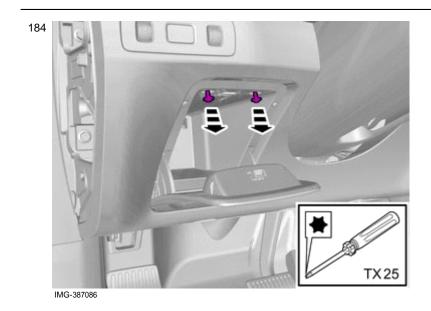
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IMG-387085



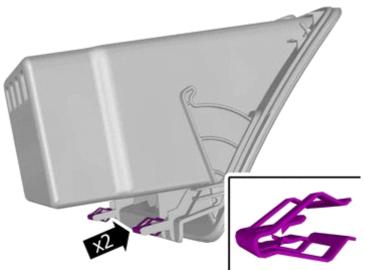
Remove the screws.



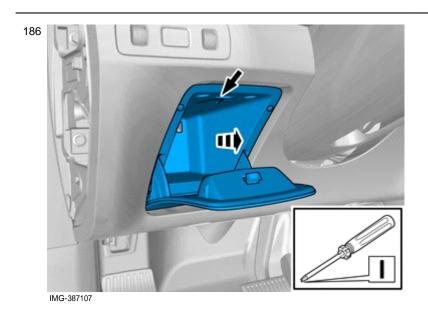
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Installation instructions, accessories

Volvo Car Corporation Gothenburg, Sweden



IMG-403400

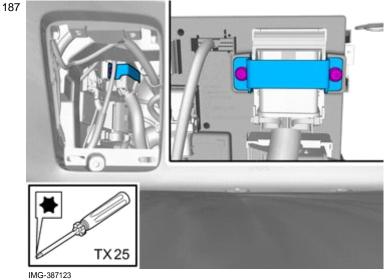


Release the catch.

Note!

The graphic shows the back of the component before removal.

Remove the marked part.

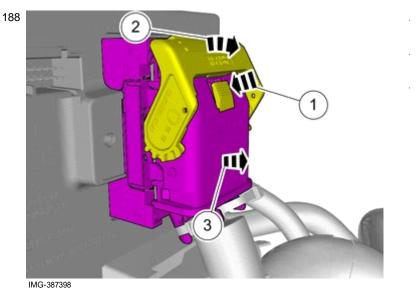


Remove the screws.

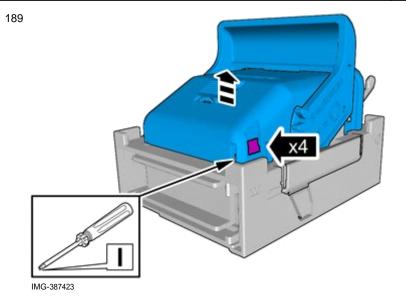
Remove the marked part.



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- Depress the locking device.
- Release the connector's catch.
- Disconnect the connector.



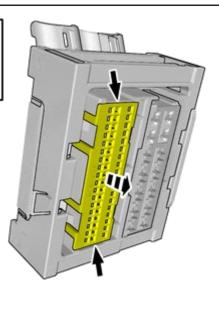
Release the catches.

Remove the marked part.

Release the connector's secondary lock.

Lift approximately 2 mm.





IMG-400415 © Volvo Car Corporation

Parking assistance, pilot- 31470177 - V1.2



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Pos.

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40

41

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45

BU

YE-WH

WH-OG

VT-WH

WH-GN

GY-OG

BN-YE

BN-WH

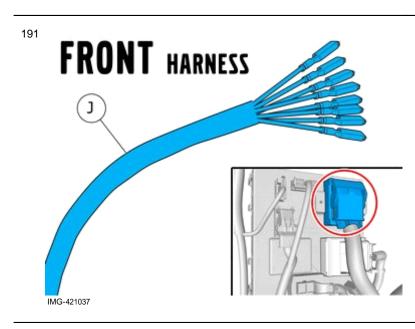
Installation instructions, accessories

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Note! Orientation view

BN = Brown

Connect the prerouted wiring harness.

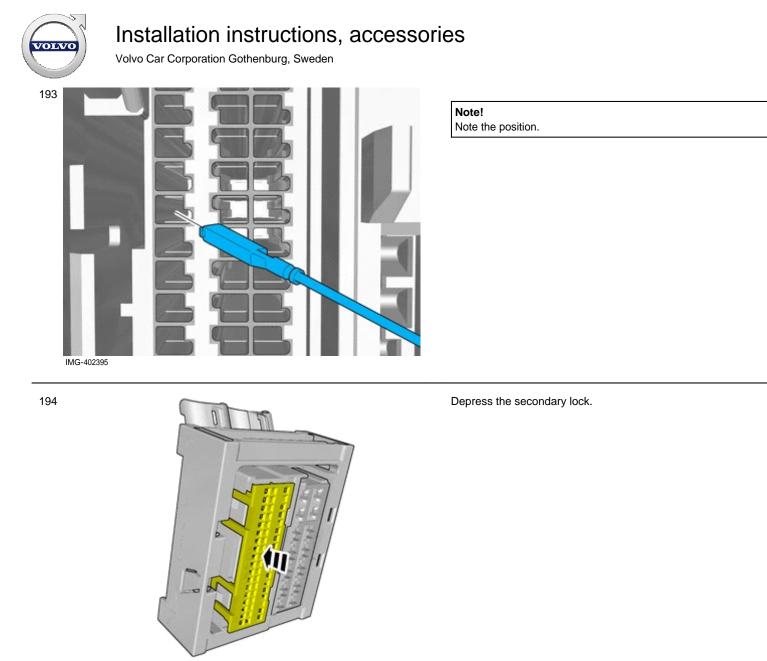
GN = Green

GY = Grey

OG = Orange

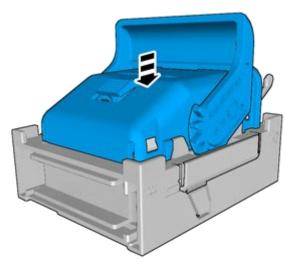
WH = White

YE = Yellow



IMG-400383

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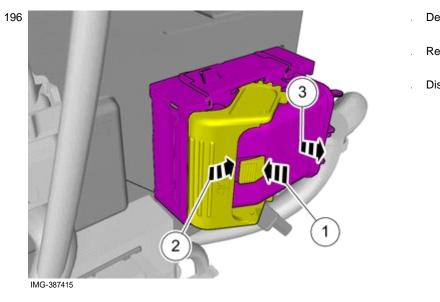


IMG-387424

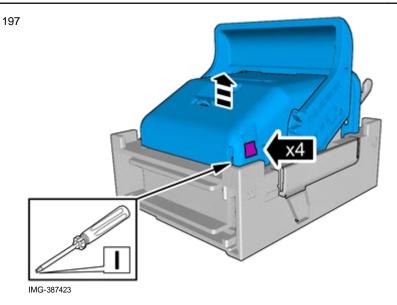
Reinstall the removed part.



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- Depress the locking device.
- Release the connector's catch.
- Disconnect the connector.



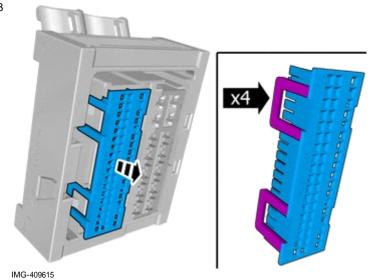
Release the catches.

Release the catches.

Remove the marked part.

Remove the marked part.

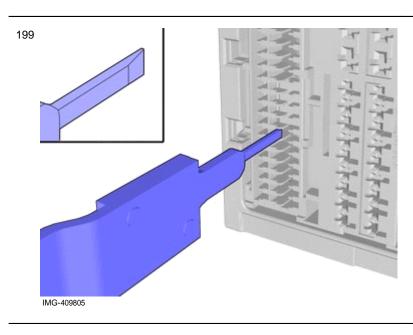




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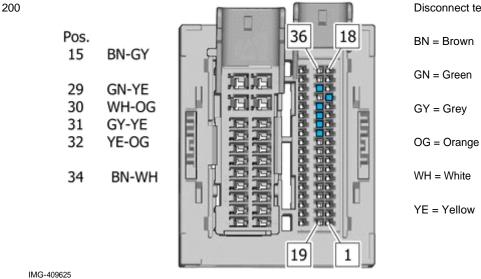


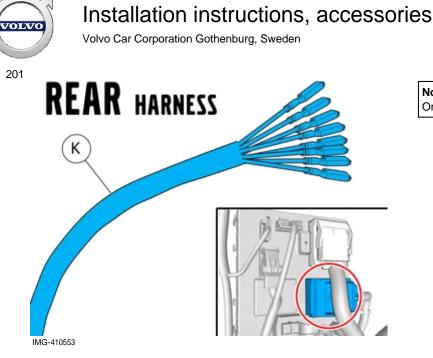
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Use special tool: T9512632, Terminal removal tool (Color code: RED)

Disconnect terminals from the connector, following the graphic.



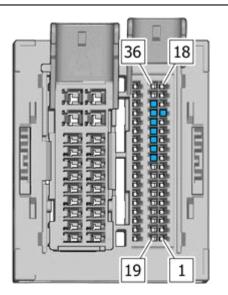


Note!

Orientation view

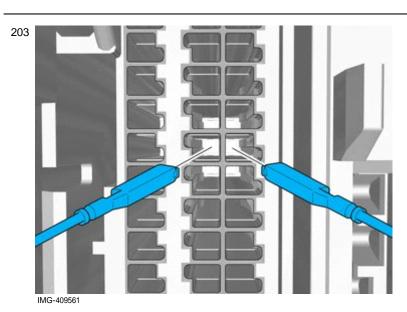
202

Pos. 15 BN-GY 28 GY-YE YE-OG 29 30 **BN-YE** 31 GY-OG 32 GN-YE 33 WH-OG 34 BN-WH



- Connect the prerouted wiring harness.
- BN = Brown GN = Green GY = Grey OG = Orange WH = White

YE = Yellow

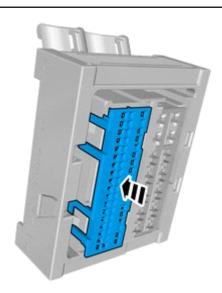


Note!
Note the position.



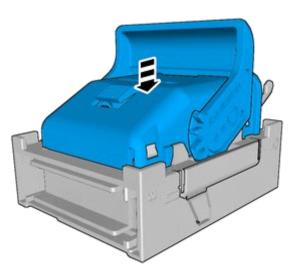
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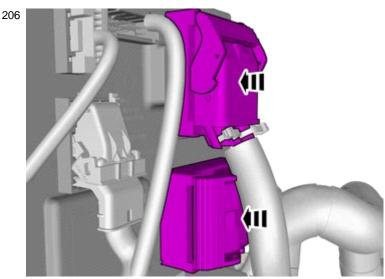


IMG-409626

205



IMG-387424



IMG-387144 © Volvo Car Corporation Depress the secondary lock.

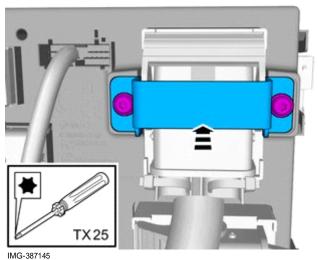
Reinstall the removed part.

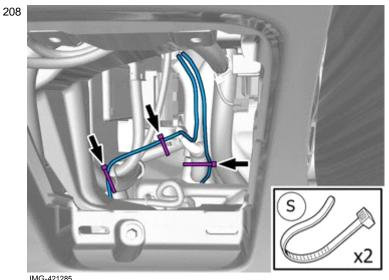
Connect the connectors.



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Reinstall the removed part.

Reinstall the screws.

Install the cables.

Use a cable tie



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VIDA

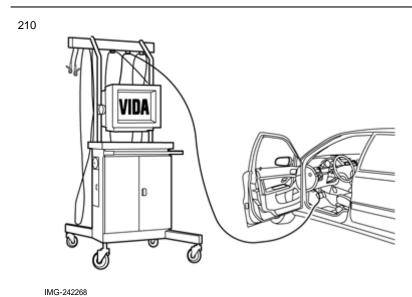
Caution!

A change to another tire size will cause changes in tire circumference. This will affect the Parking assistance pilot function.

Check that the tire dimension stated in the vehicle configuration, corresponds to the actual tire dimension of the vehicle.

If this does not correspond, download correct software.

IMG-400005



Download software (application) for the accessory's function according to the service information in VIDA. See VIDA or the accessories catalogue for software part number.

Installation



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Reinstall the removed parts in reverse order.