65 12 051 Remove and install / replace the central bass speaker on the driver's side

PRELIMINARY WORK

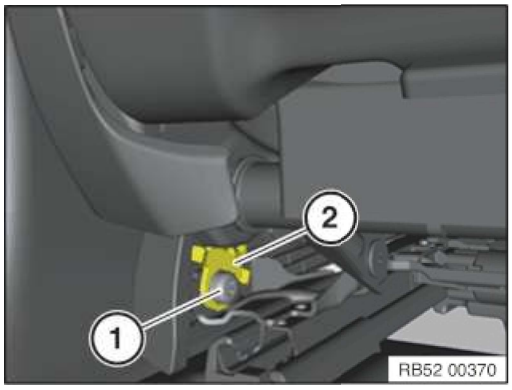
1 – Remove front seat

WARNING

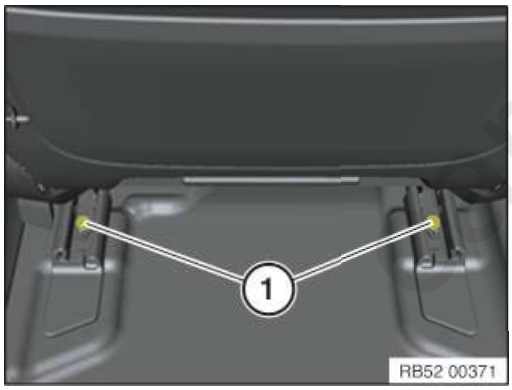
Pyrotechnic components.

Danger! Life-threatening injuries!

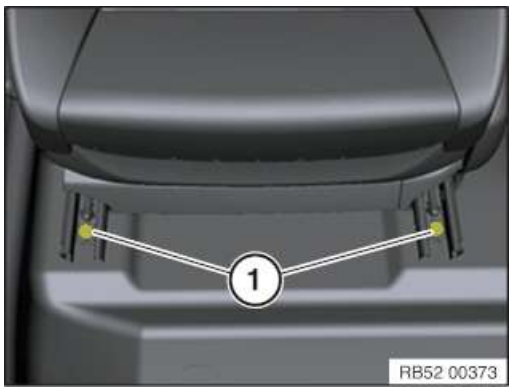
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



- Fully adjust the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).



- Loosen screws (1).



- Loosen screws (1).
- Adjust the front seat to the centre position.
- **When removing the driver's seat:**

  Completely retract the steering column

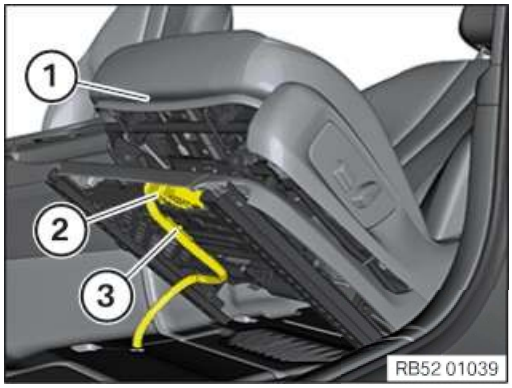
  Adjust the steering column completely upwards.

▸ **Disconnecting all battery earth leads**

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- See additional information.



RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

- Cover the door sill using protective covers.
- Place front seat (1) to the rear.
- Unlock plug connection (2) and disconnect.
- Loosen the cable clip (3).

RISK OF DAMAGE

Heavy component.

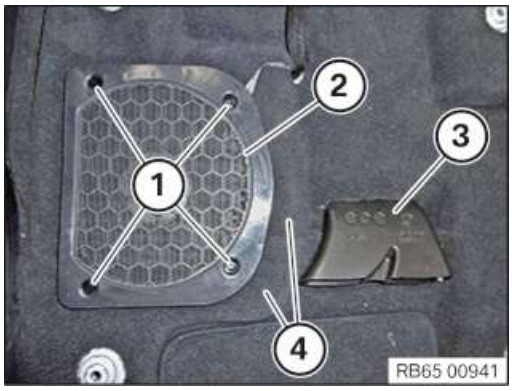
Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.

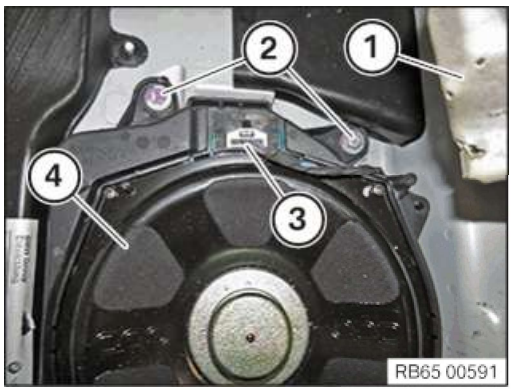
- Lift out front seat (1) with the assistance of a second person.

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2 – Remove central bass

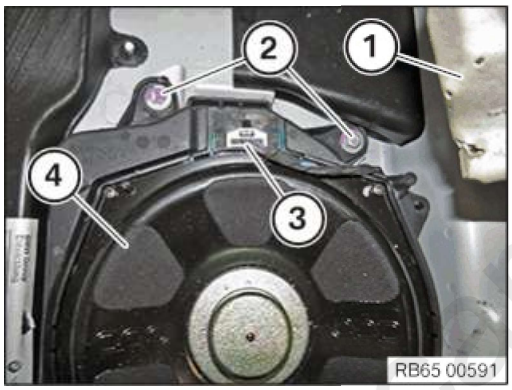


- Loosen screws (1).
- Remove speaker trim (2).
- Pull off air duct (3) towards the rear and remove it.
- Raise carpet (4) slightly.



- Fold up the carpet (1) as shown.
- Loosen screws (2).
- Unlock and disconnect connector (3).
- Remove the central bass (4).

3 – Installing the central bass

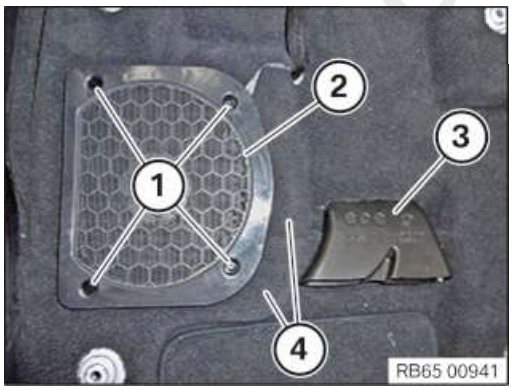


- Insert the central bass (4).
- Tighten the screws (2).

Central bass speaker to floor assembly

M6x16 screw		Tightening torque	8 Nm
NutM6		Tightening torque	8 Nm

- Connect connectors (3) and lock.
- Fold the carpet (1) down.



- Correctly lay the carpet (4).
- Correctly position the air duct (3) and engage upward.
- Feed in the speaker trim (2) and install.
- Tighten the screws (1).

Central bass speaker trim

Screw		Tightening torque	2 Nm

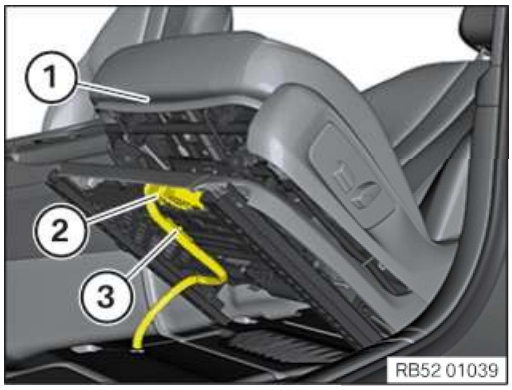
4 – Install front seat

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

- Cover the door sill using protective covers.

RISK OF DAMAGE

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.

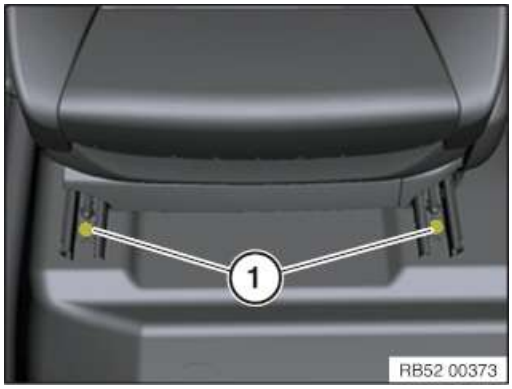
- Lift front seat (1) into the vehicle with the assistance of a second person.
- Place front seat (1) to the rear.
- Connect connector (2).
- Attach the cable clip (3).

▸ **Disconnecting all battery earth leads**

- See additional information.



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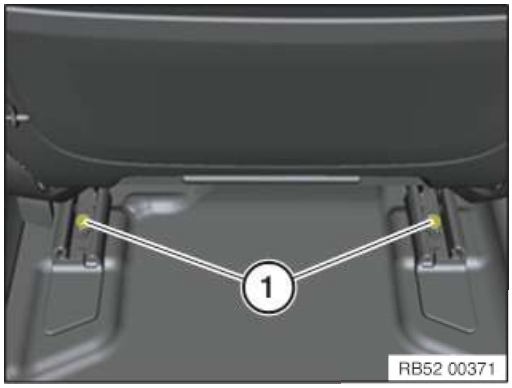


- Adjust the front seat to the rear.
- Renew screws (1).

  Parts: Bolts
- Tighten the screws (1).

Seat to body

M10	Renew screw.	Tightening torque	42 Nm

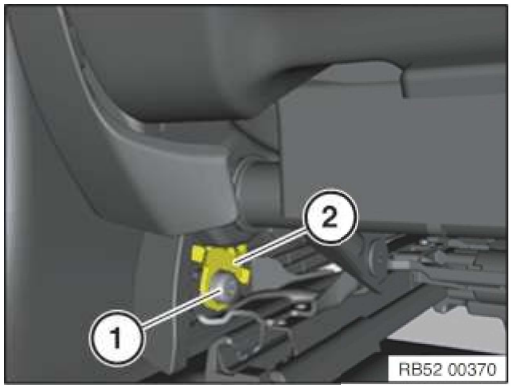


- Move front seat forwards.
- Renew screws (1).

  Parts: Bolts
- Tighten the screws (1).

Seat to body

M10	Renew screw.	Tightening torque	42 Nm



- Fully adjust the front seat to the front and top.
- Insert the end fitting (2).
- Renew the screw (1).

  Parts: Screw
- Tighten down screw (1).

End fitting to seat mechanism

M10	Renew screw.	Tightening torque	42 Nm

Additional Information

Overview of Tightening Torques

Central bass speaker to floor assembly Used in step 3

M6x16 screw		Tightening torque	8 Nm
NutM6		Tightening torque	8 Nm

Central bass speaker trim Used in step 3

Screw		Tightening torque	2 Nm

Seat to body Used in step 4

M10	Renew screw.	Tightening torque	42 Nm

End fitting to seat mechanism Used in step 4

M10	Renew screw.	Tightening torque	42 Nm

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	14

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Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
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61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14

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65 12 053 Remove and install / replace the central bass speaker on the passenger's side

NOTICE

Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

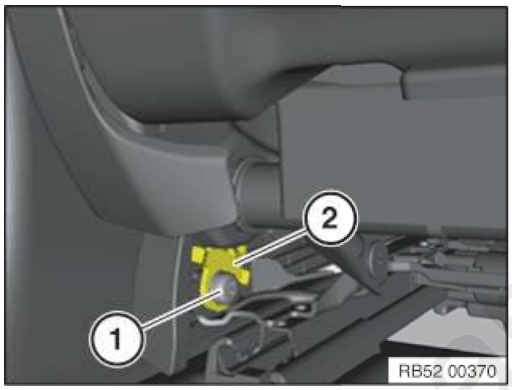
1 – Remove front seat

WARNING

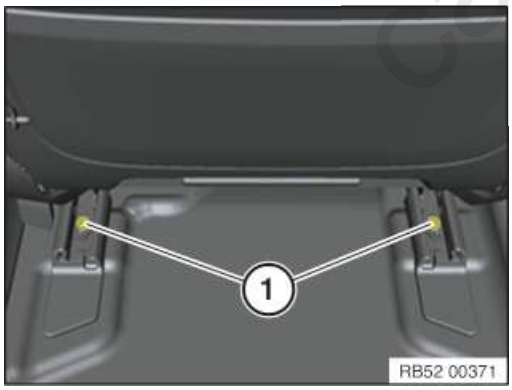
Pyrotechnic components.

Danger! Life-threatening injuries!

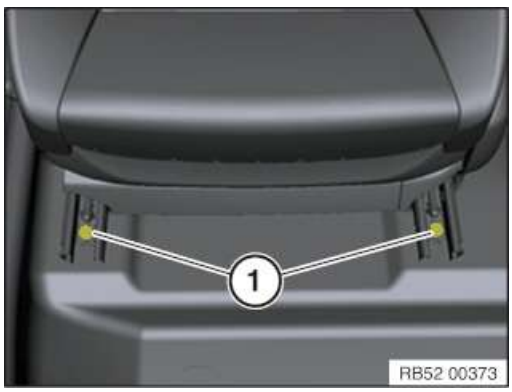
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



- Fully adjust the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).



- Loosen screws (1).



- Loosen screws (1).
- Adjust the front seat to the centre position.
- **When removing the driver's seat:**

  Completely retract the steering column

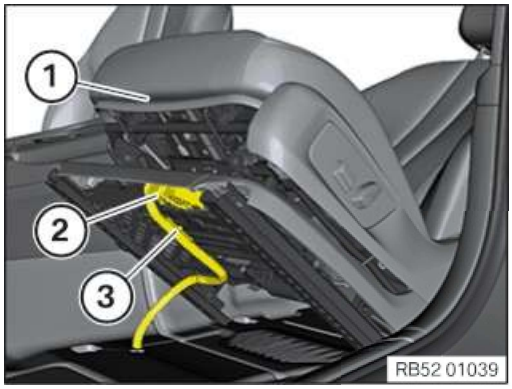
  Adjust the steering column completely upwards.

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▶ **Disconnecting all battery earth leads**



- See additional information.



RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

- Cover the door sill using protective covers.
- Place front seat (1) to the rear.
- Unlock plug connection (2) and disconnect.
- Loosen the cable clip (3).

RISK OF DAMAGE

Heavy component.

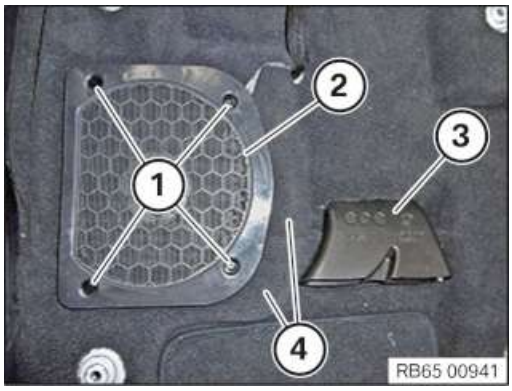
Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.

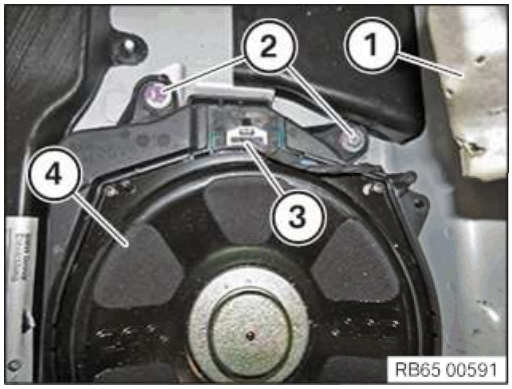
- Lift out front seat (1) with the assistance of a second person.

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2 – Remove central bass

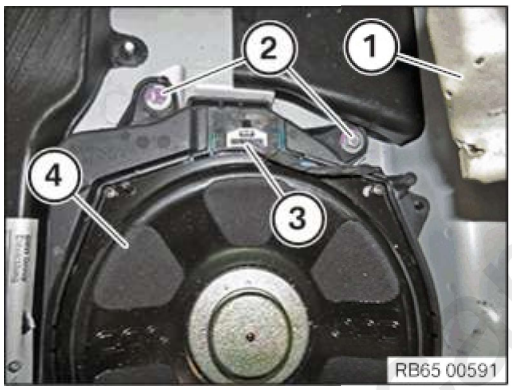


- Loosen screws (1).
- Remove speaker trim (2).
- Pull off air duct (3) towards the rear and remove it.
- Raise carpet (4) slightly.



- Fold up the carpet (1) as shown.
- Loosen screws (2).
- Unlock and disconnect connector (3).
- Remove the central bass (4).

3 – Installing the central bass

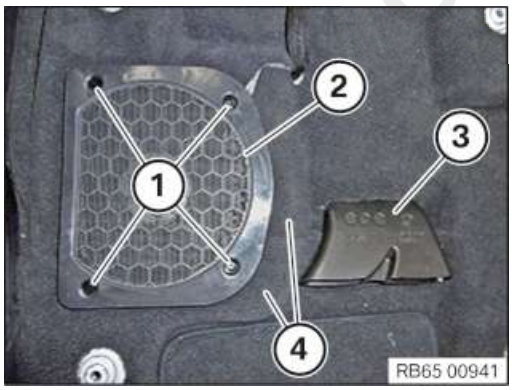


- Insert the central bass (4).
- Tighten the screws (2).

Central bass speaker to floor assembly

M6x16 screw		Tightening torque	8 Nm
NutM6		Tightening torque	8 Nm

- Connect connectors (3) and lock.
- Fold the carpet (1) down.



- Correctly lay the carpet (4).
- Correctly position the air duct (3) and engage upward.
- Feed in the speaker trim (2) and install.
- Tighten the screws (1).

Central bass speaker trim

Screw		Tightening torque	2 Nm

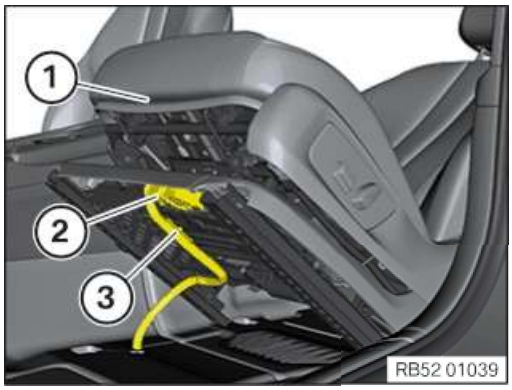
4 – Install front seat

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

- Cover the door sill using protective covers.

RISK OF DAMAGE

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.

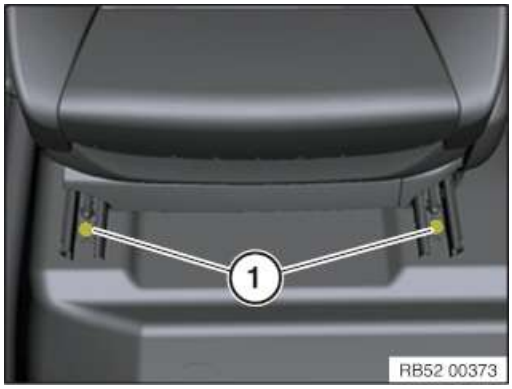
- Lift front seat (1) into the vehicle with the assistance of a second person.
- Place front seat (1) to the rear.
- Connect connector (2).
- Attach the cable clip (3).

▶ **Disconnecting all battery earth leads**

- See additional information.



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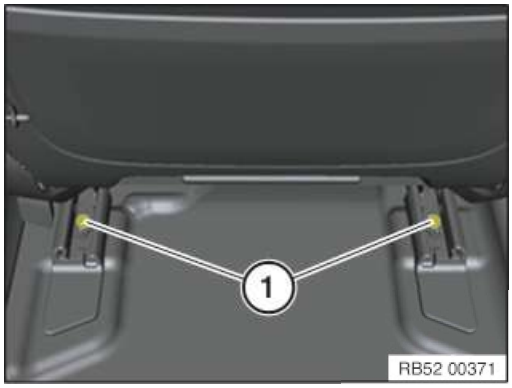


- Adjust the front seat to the rear.
- Renew screws (1).

  Parts: Bolts
- Tighten the screws (1).

Seat to body

M10	Renew screw.	Tightening torque	42 Nm

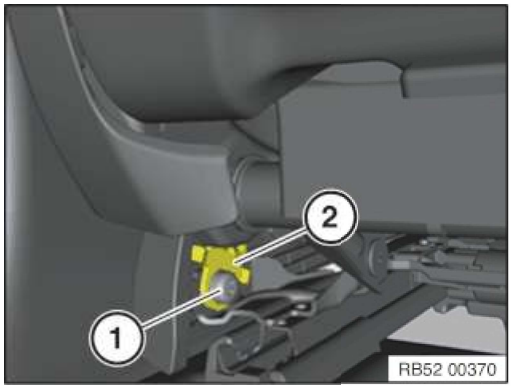


- Move front seat forwards.
- Renew screws (1).

  Parts: Bolts
- Tighten the screws (1).

Seat to body

M10	Renew screw.	Tightening torque	42 Nm



- Fully adjust the front seat to the front and top.
- Insert the end fitting (2).
- Renew the screw (1).

  Parts: Screw
- Tighten down screw (1).

End fitting to seat mechanism

M10	Renew screw.	Tightening torque	42 Nm

Additional Information

Overview of Tightening Torques

Central bass speaker to floor assembly Used in step 3

M6x16 screw		Tightening torque	8 Nm
NutM6		Tightening torque	8 Nm

Central bass speaker trim Used in step 3

Screw		Tightening torque	2 Nm

Seat to body Used in step 4

M10	Renew screw.	Tightening torque	42 Nm

End fitting to seat mechanism Used in step 4

M10	Renew screw.	Tightening torque	42 Nm

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	14

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Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
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61 20 900 Disconnecting and connecting battery earth lead	14
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	14
61 20 900 Disconnecting and connecting battery earth lead	14
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61 20 900 Disconnecting and connecting battery earth lead	14
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61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14

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65 12 315 Remove and install HU-H

PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Remove cupholder

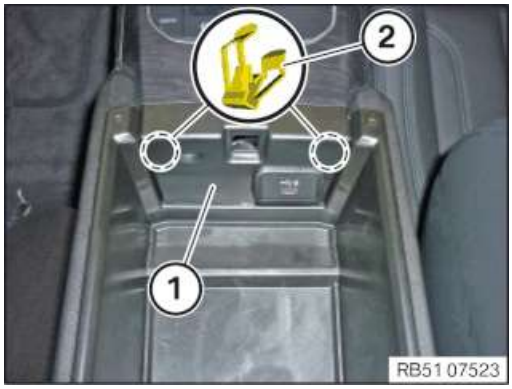


- Remove the insert (1).

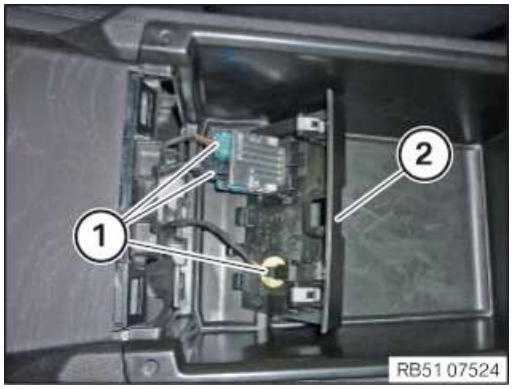


- Loosen screws (1).
- Feed the cup holder (2) out to the top.
- Unlock associated plug connections and disconnect.

3 – Removing the trim in the storage compartment on the centre armrest



- Lever out the trim (1) with the special tool (2) toward the rear from the clamps 2 298 505.



- Unlock and disconnect the plug connections (1) and remove the trim (2) .

4 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



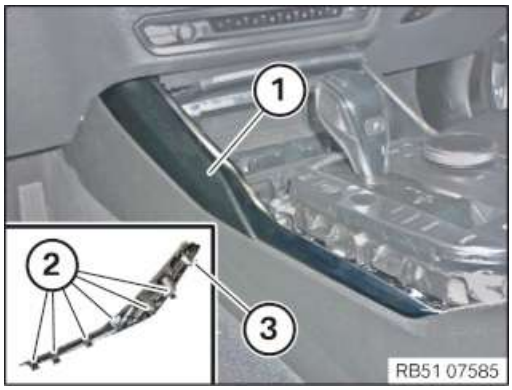
- Release and remove the centre console trim upwards (1) as shown using the special tool 2 298 505 from the latch mechanisms.

5 – Removing the decorative trim on the centre console trim on the left and right

▸ **Remove decorative trim on centre console**

NOTICE

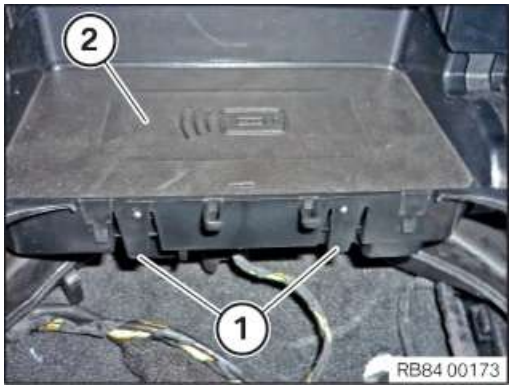
Description is for left component only. Procedure on the right side is identical.



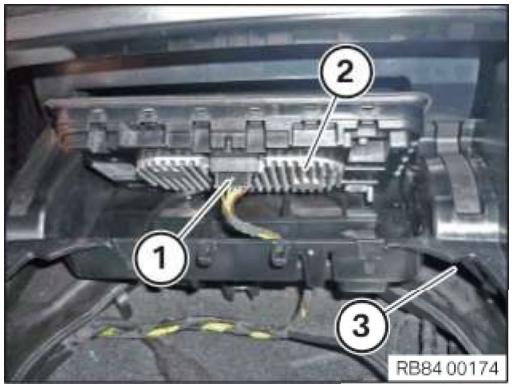
- Lever out the rear decorative trim (1) from the latch mechanisms (2) starting from the top.
- Feed out the decorative trim (1) backwards out of the guide (3) and remove.

6 – Removing the wireless charging station

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- Loosen the latch mechanisms (1) and push out the wireless charging station (2) upwards.



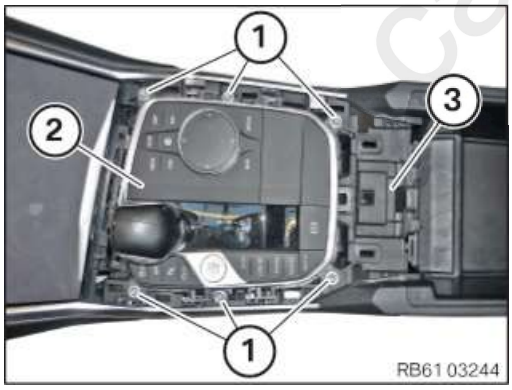
- Disconnect the connector (1) and remove the wireless charging station (2) from the centre console (3).

7 – Remove the operating facility in the centre console

▶ **Disconnecting all battery earth leads**



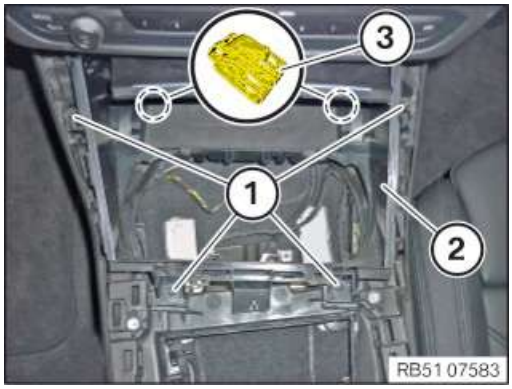
- See additional information.



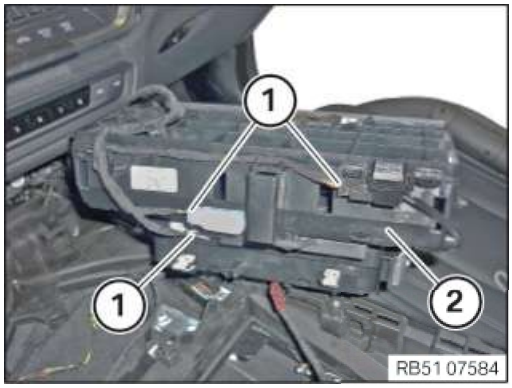
- Loosen screws (1).
- Remove the operating facility in the centre console (2) from the centre console (3).

8 – Removing the storage compartment of the front centre console

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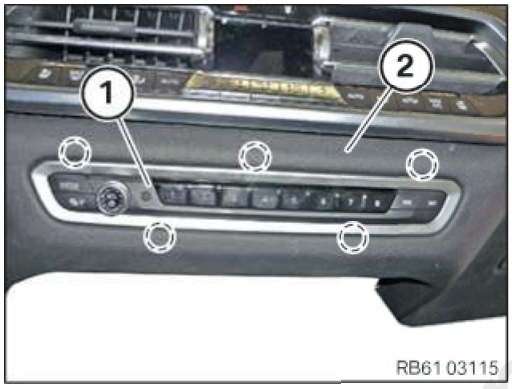


- Loosen screws (1).
- Remove storage compartment trim (2) backwards out of clamps (3).

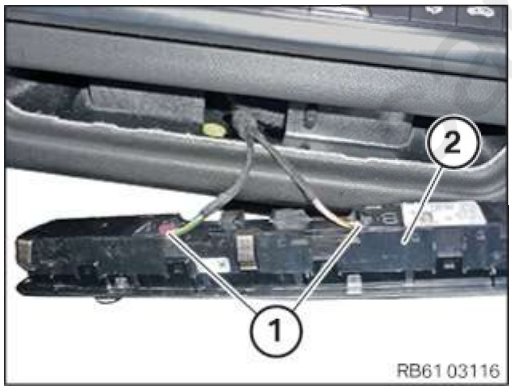


- Unlock and disconnect all the plug connections (1) and remove the storage compartment (2).

9 – Remove the audio operating unit



- Unclip the audio operating unit (1) from the instrument panel (2) at the points marked using special tool 0 496 571 (00 9 327).



- Disconnect plug connections (1) and remove the audio operating unit (2).

MAIN WORK

10 – Remove Head Unit High (HU-H)

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

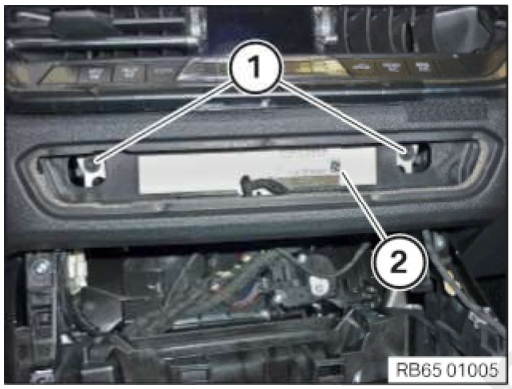
- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

RISK OF DAMAGE

Damage to the head unit.

The hard disk of the head unit can be damaged by vibration.

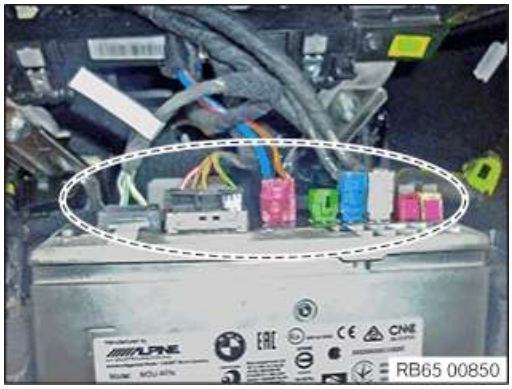
- Carry out mechanical work on the head unit and adjacent components with care.



- Release screws (1) on the head unit (2).
- Slightly pull head unit (2) to the rear and tilt downwards.



- Feed out the head unit (1) through the marks as illustrated, until the connectors behind are accessible.



- Unlock and disconnect all connectors in the marked area.

  Remove headunit.

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RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

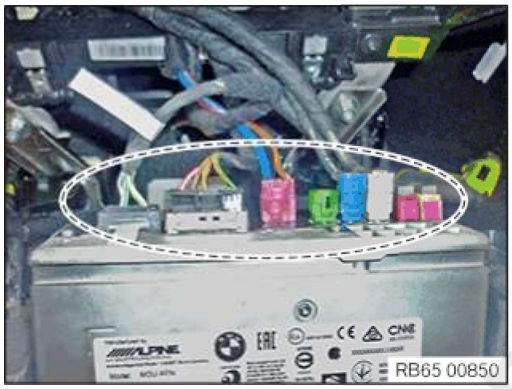
- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

RISK OF DAMAGE

Damage to the head unit.

The hard disk of the head unit can be damaged by vibration.

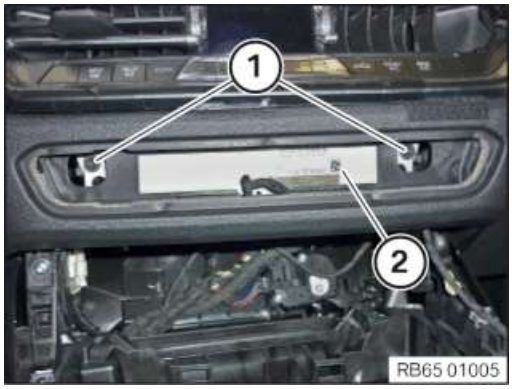
- Carry out mechanical work on the head unit and adjacent components with care.



- Position head unit.
- Connect and lock all connectors in the marked area.



- Feed in the headunit (1) through the marked areas upwards.



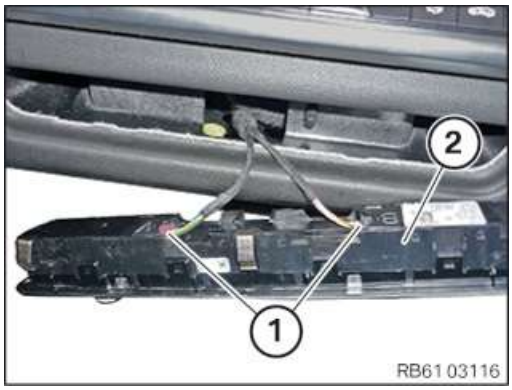
- Slide head unit (2) slightly forward and position it correctly.
- Tighten screws (1) on the head unit (2).

Head unit to holder / holder to support

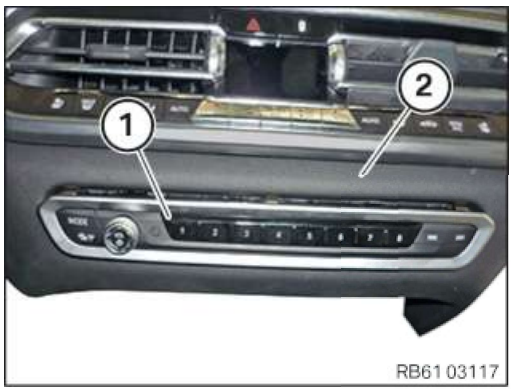
Screw		Tightening torque	1,8 Nm

diagn.com

12 – Install the audio operating unit

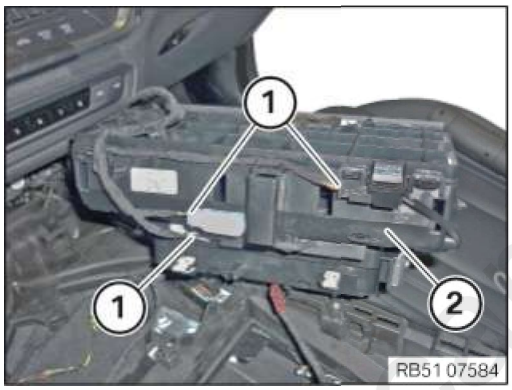


- Connect the connector (1) to the audio operating unit (2).

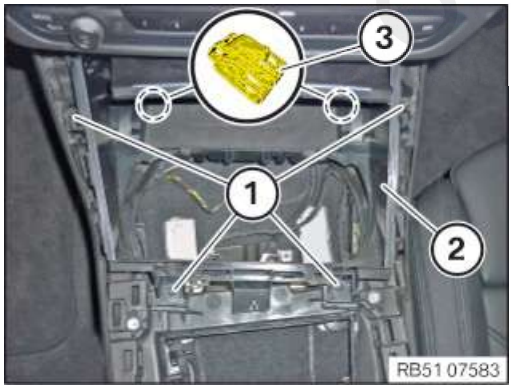


- Correctly position the audio operating unit (1) and install in the instrument panel(2).

13 – Installing the storage compartment of the front centre console



- Mount the storage compartment (2) and connect connectors (1).



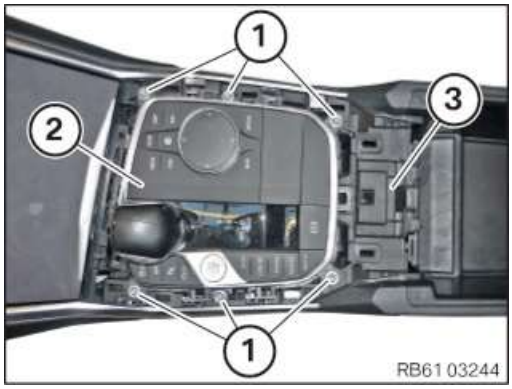
- Engage rear storage compartment trim (2) into clamps (3).
- Tighten the screws (1).

Storage compartment to centre console

Oval-head screw		Tightening torque	1,8 Nm

14 – Install the operating facility in the centre console

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- Position operating facility (2) in the centre console (3).
- Tighten the screws (1).

Gear selector switch to centre console trim

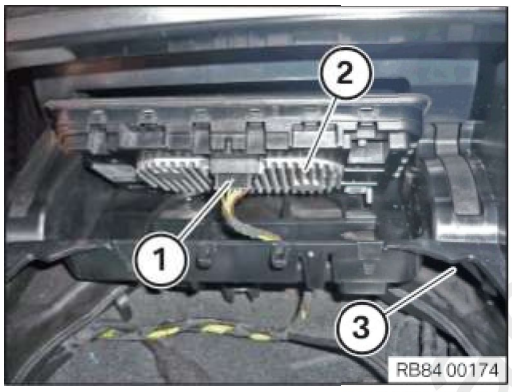
Screw		Tightening torque	1,8 Nm

▸ **Disconnecting all battery earth leads**

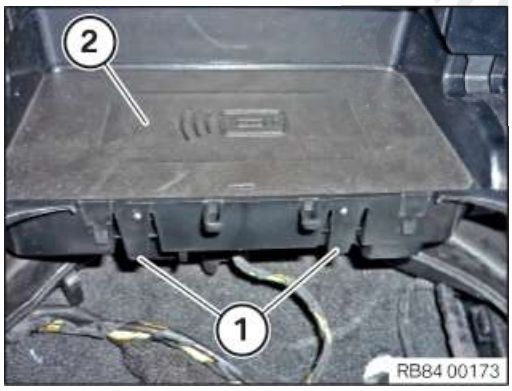


- See additional information.

15 – Installing the wireless charging station



- Connect connector (1).
- Position the wireless charging station (2) in the centre console (3).



- Press the wireless charging station (2) down till the locking units (1) are engaged correctly.

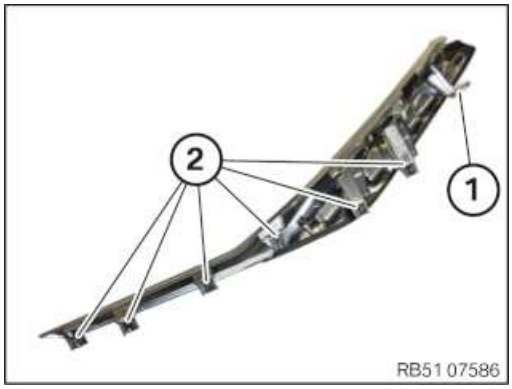
16 – Install decorative trim on centre console on left and right

▸ **Installing the decorative trim to centre console**

NOTICE

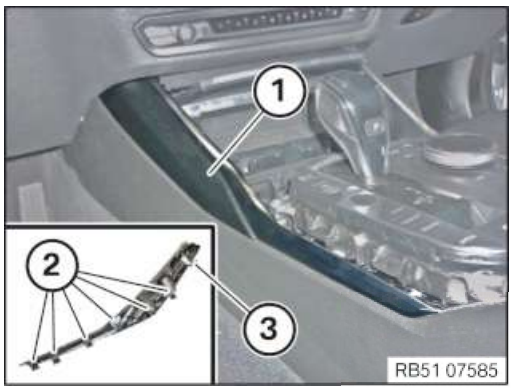
Description is for left component only. Procedure on the right side is identical.

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- Check guide (1) and the latch mechanisms (2).

  Renew defective decorative trim.



- Feed in the decorative trim (1) forward in the guide (3).
- Engage decorative trim (1) in latch mechanisms (2).

17 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



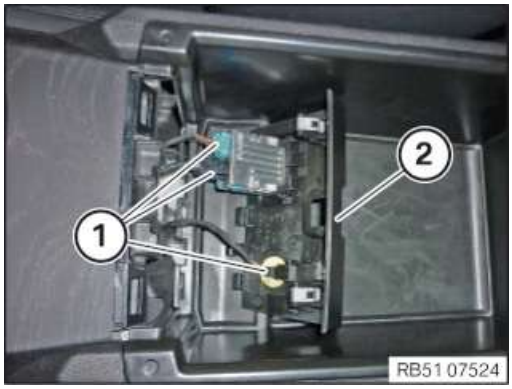
- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .



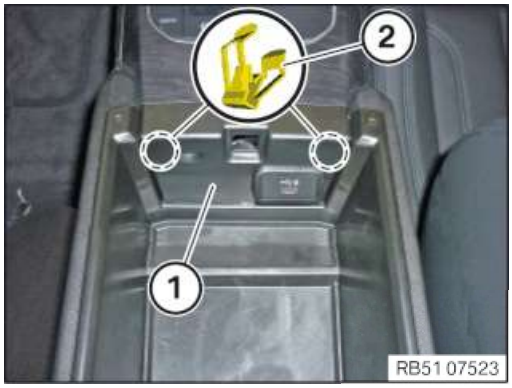
- Correctly position the centre console trim (1) and engage at the latch mechanisms.

18 – Installing the trim in the storage compartment of the centre armrest

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- Mount the trim (2) and connect connector (1) and lock.



- Correctly position trim (1) and snap into the clamps (2).

19 – Install the cup holder



- Fix the cup holder (1) and the belonging connectors.
- Correctly position cup holder (1).
- Tighten the screws (2).

Cup holder to centre console

Oval-head screw	Tightening torque	1,8 Nm



- Insert the insert (1).

20 – Disconnecting all battery earth leads



- See additional information.

21 – Initialising component protection

TECHNICAL INFORMATION

Reinitialise the component protection in the head unit after having renewed the BDC **or** having installed a **used** head unit.

- Request an enabling code from Technical Support.
- Re-initialise the component protection with the diagnosis system via the following immediate measure:
  - Vehicle handling
  - Software update
  - Additional software
  - Initialisation of component protection in the head unit (HU)
- Be sure to observe the instructions!

Additional Information

Overview of Tightening Torques

Head unit to holder / holder to support — Used in step 11

Screw		Tightening torque	1,8 Nm

Storage compartment to centre console — Used in step 13

Oval-head screw		Tightening torque	1,8 Nm

Gear selector switch to centre console trim — Used in step 14

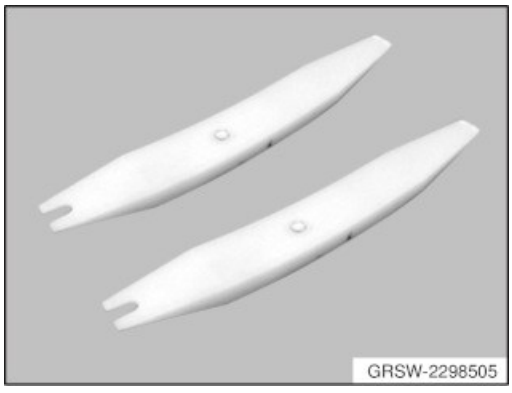
Screw		Tightening torque	1,8 Nm

Cup holder to centre console — Used in step 19

Oval-head screw		Tightening torque	1,8 Nm

Overview of Special Tools

2 298 505 Wedge

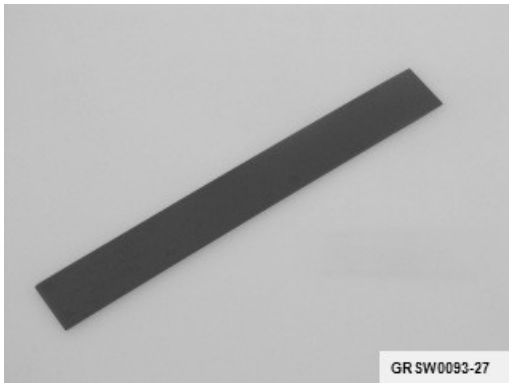


Common — Used in step 34

Usage	Set (delivery of 2 pieces)
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

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0 496 571 (00 9 327) Wedge



Common	Used in step 9
Usage	(Cleaning wedge) From 11/2008 this special tool replaces panel wedge 00 9 323 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171420
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171420
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
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61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171420
61 20 900 Disconnecting and connecting battery earth lead	171420

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61 20 900 Disconnecting and connecting battery earth lead	171420
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61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 35 ... Notes on ESD protection (Electro Static Discharge)	1011

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65 12 120 Removing and installing booster

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Removing the luggage compartment floor trim panel

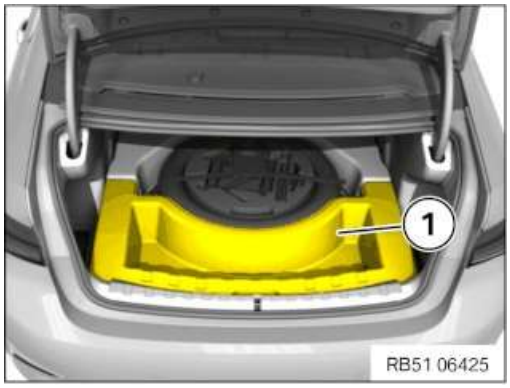


- Remove luggage compartment floor trim panel (1).

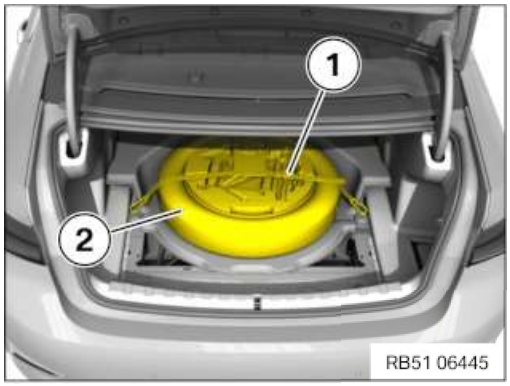
3 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

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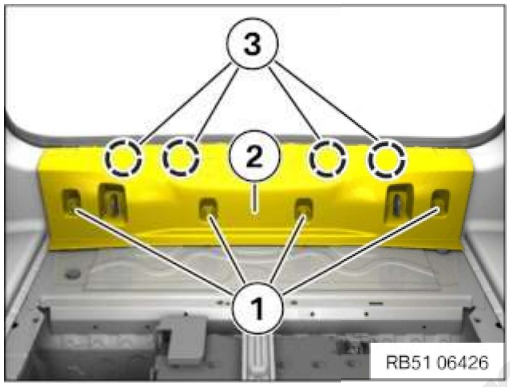


- Remove rear luggage compartment well (1).



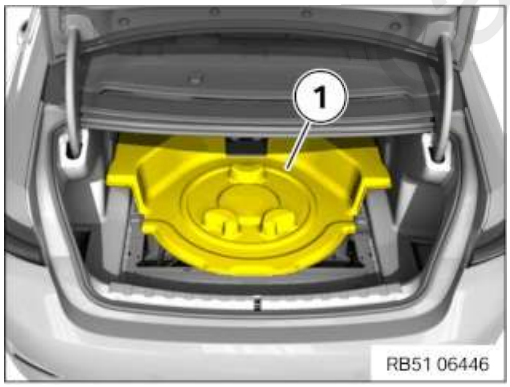
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

4 – Removing the loading edge trim



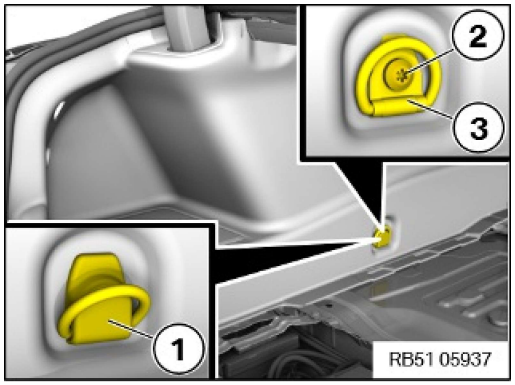
- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

5 – Removing front luggage compartment well

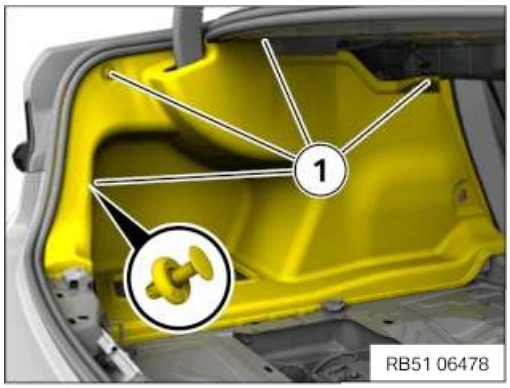


- Guide out and remove front luggage compartment well (1) on the seat belt strap.

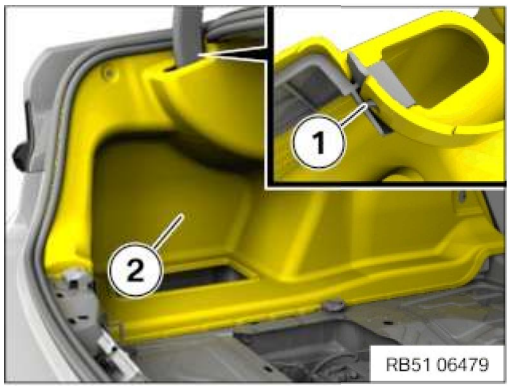
6 – Remove luggage compartment wheel arch trim panel on left.



- Remove the cover (1).
- Loosen screw (2).
- Remove lashing eye (3).



- Reposition left rear seat backrest.
- Loosen the expanding rivet (1).



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip for the tailgate and the side trim panel in the rear passenger compartment.
- Remove luggage compartment wheel arch trim panel (2).

7 – Removing storage compartment in luggage compartment

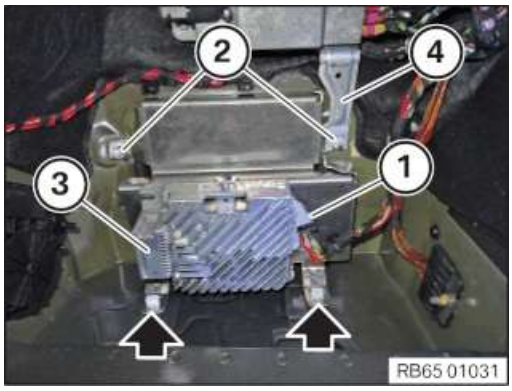


- Unclip cover (1) upwards out of the storage compartment (2) in the lugagge compartment and remove it.



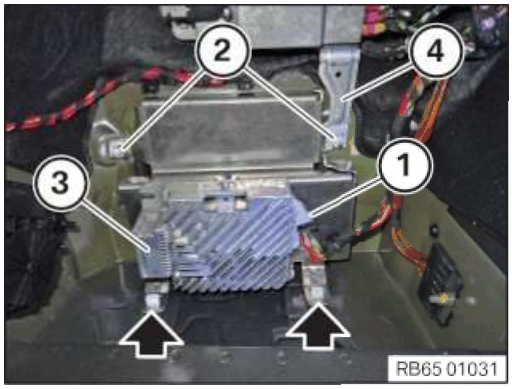
- Loosen nuts (1).
- Guide out the storage compartment (2) in the luggage compartment toward the top and remove it.

8 – Remove post amplifier



- Unlock and disconnect connector (1).
- Loosen nuts (2).
- Disengage the post amplifier in an upward direction (3) on the locking units (arrow).
- Pull the holder out (4).
- Guide the post amplifier (3) out with the holder and remove it.

9 – Installing the post amplifier



- Pull holder (4) slightly to the back.
- Feed in the post amplifier (3) with the holder and position it.
- Engage post amplifier (4) into the latch mechanisms (arrows) from the top.
- Correctly position the holder (4).
- Tighten nuts (2).

Bracket to body

Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

- Connect connectors (1) and lock.

POSTPROCESSES

10 – Installing storage compartment trim in the luggage compartment



- Insert and install the storage compartment frame (2) in the luggage compartment.
- Tighten nuts (1).

Storage compartment to body

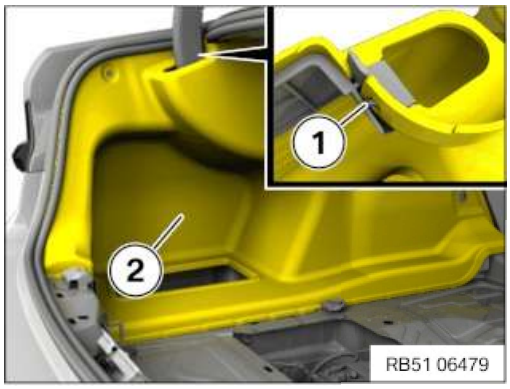
Nut		Tightening torque	2.5 Nm

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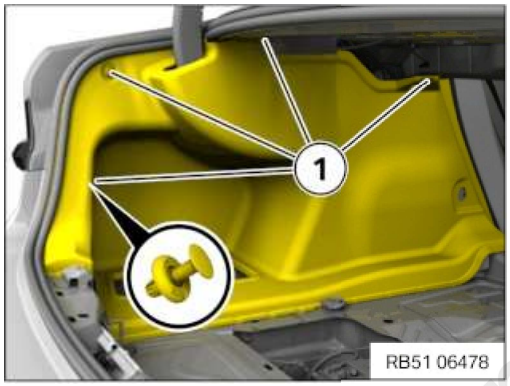


- Install cover (1) from the top in the storage compartment (2) in the luggage compartment and clip it in.

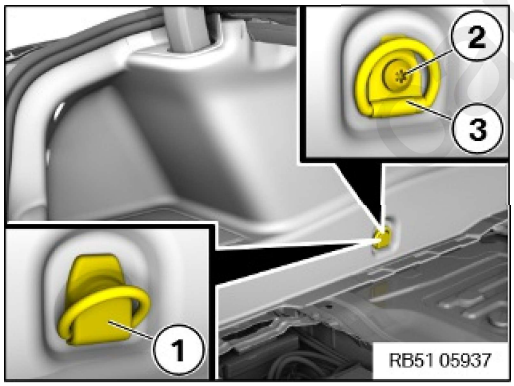
11 – Install luggage compartment wheel arch trim panel at left



- Feed luggage compartment wheel arch trim panel (2) under the side trim panel in the rear passenger compartment and the sealing lip for the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



- Secure expanding rivet (1).
- Raise the link rear seat backrest.



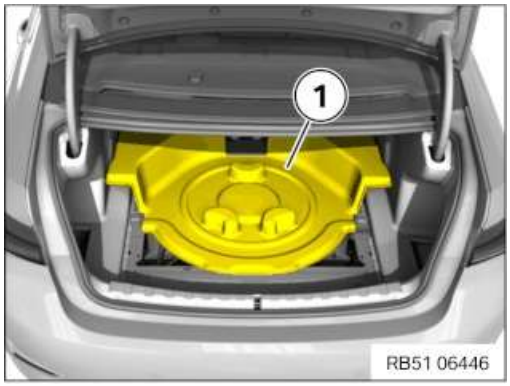
- Position the lashing eye (3).
- Tighten down screw (2).

Lashing eye to body

	Tightening torque	19 Nm

- Install the cover (1).

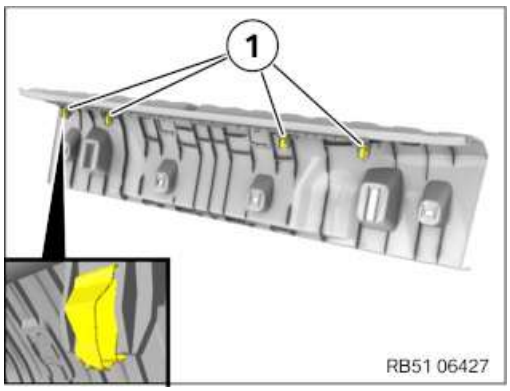
12 – Install the luggage compartment well in front



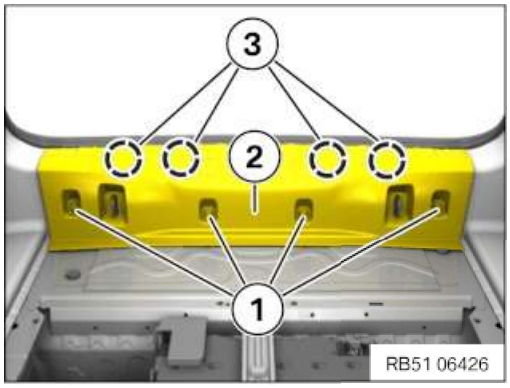
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

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13 – Installing loading edge trim

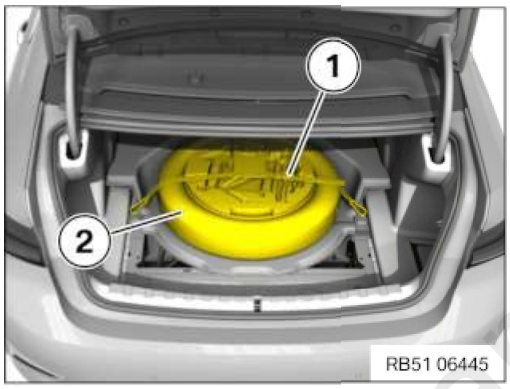


- Check the clamps (1) for damage and renew if necessary.



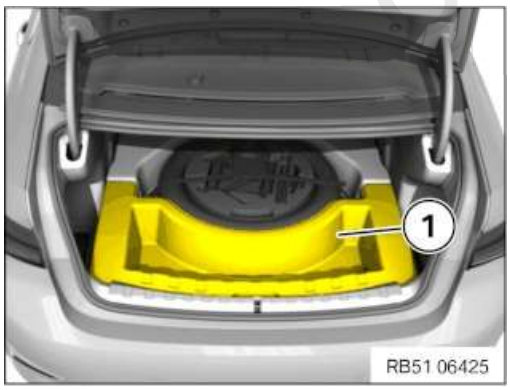
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

14 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

15 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

16 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

Bracket to body			Used in step 9
Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

Storage compartment to body			Used in step 10
Nut		Tightening torque	2.5 Nm

Lashing eye to body			Used in step 11
		Tightening torque	19 Nm

Links

Repair instructions	**Used in step**
61 20 900 Disconnecting and connecting battery earth lead	116
61 20 900 Disconnecting and connecting battery earth lead	116
61 20 900 Disconnecting and connecting battery earth lead	116
61 20 900 Disconnecting and connecting battery earth lead	116
61 20 900 Disconnecting and connecting battery earth lead	116
61 20 900 Disconnecting and connecting battery earth lead	116
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	116
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	116
61 20 900 Disconnecting and connecting battery earth lead	116
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	116

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61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle) 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
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61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 20 900 Disconnecting and connecting battery earth lead 116
61 35 ... Notes on ESD protection (Electro Static Discharge)

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65 12 400 Removing and installing receiver audio module

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Removing the luggage compartment floor trim panel

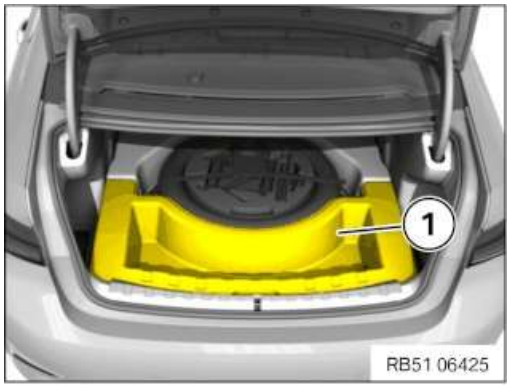


- Remove luggage compartment floor trim panel (1).

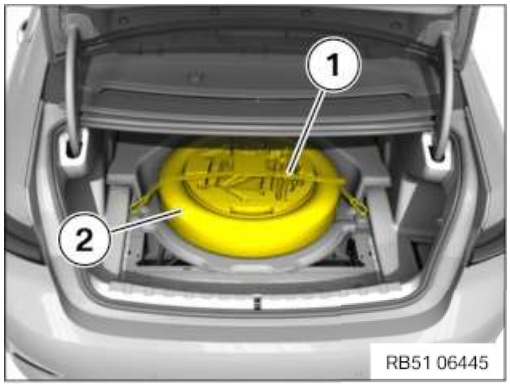
3 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

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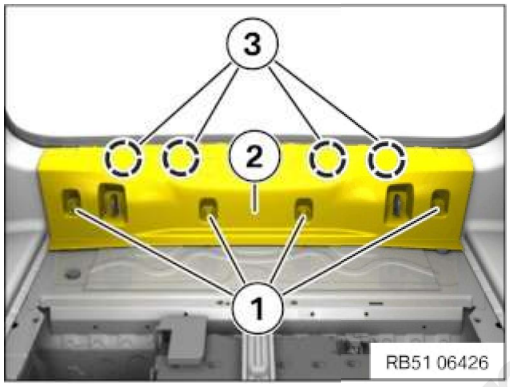


- Remove rear luggage compartment well (1).



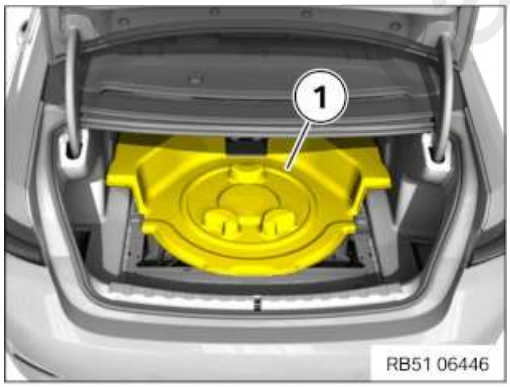
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

4 – Removing the loading edge trim



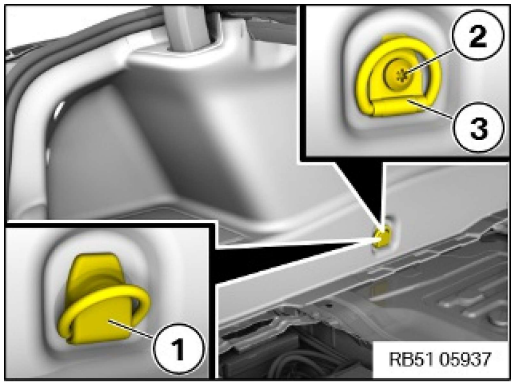
- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

5 – Removing front luggage compartment well

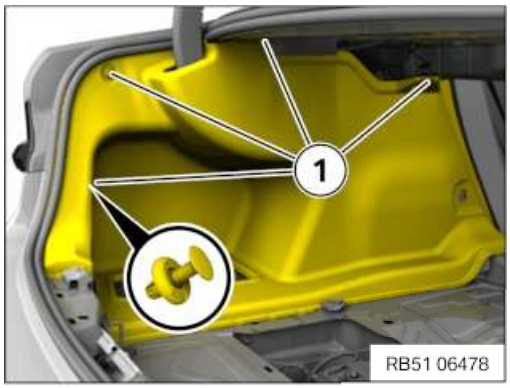


- Guide out and remove front luggage compartment well (1) on the seat belt strap.

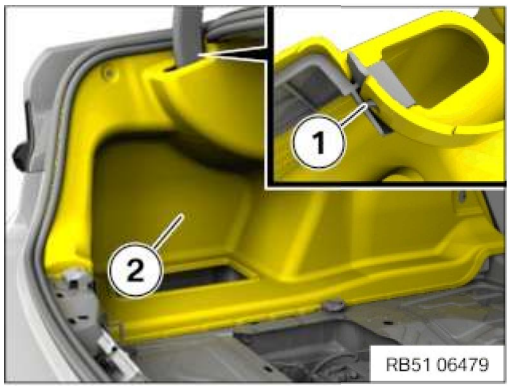
6 – Remove luggage compartment wheel arch trim panel on left.



- Remove the cover (1).
- Loosen screw (2).
- Remove lashing eye (3).



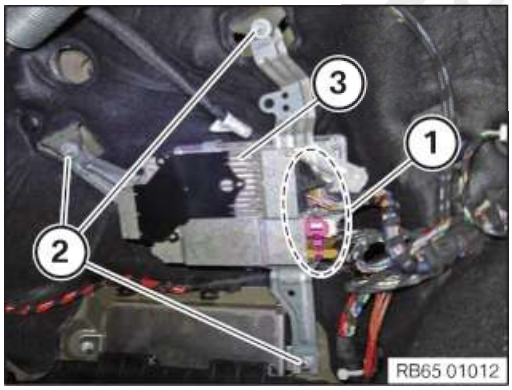
- Reposition left rear seat backrest.
- Loosen the expanding rivet (1).



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip for the tailgate and the side trim panel in the rear passenger compartment.
- Remove luggage compartment wheel arch trim panel (2).

MAIN WORK

7 – Remove receiver audio module (RAM)

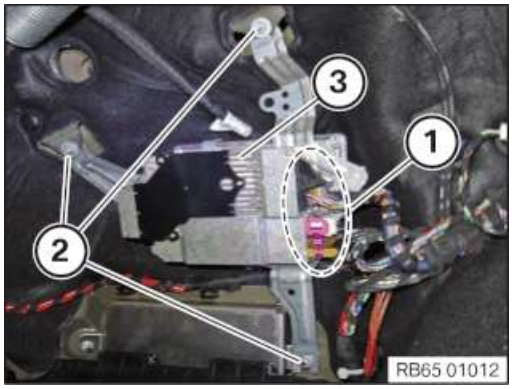


- Unlock and disconnect all connectors in area (1).
- Loosen nuts (2).
- Guide out the receiver audio module (RAM) (3) with the holder and remove it.

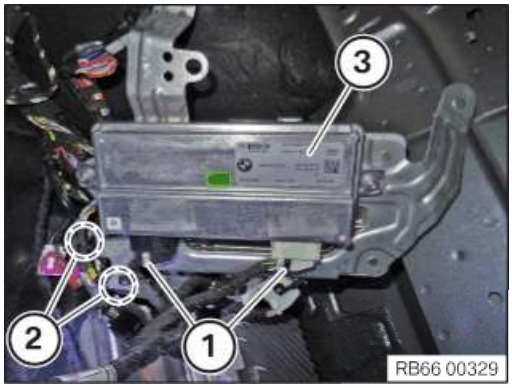
▸ **Only for equipment specification 5DN (Parking Assistant Plus)**

▹ **Remove the TRSVC control unit**

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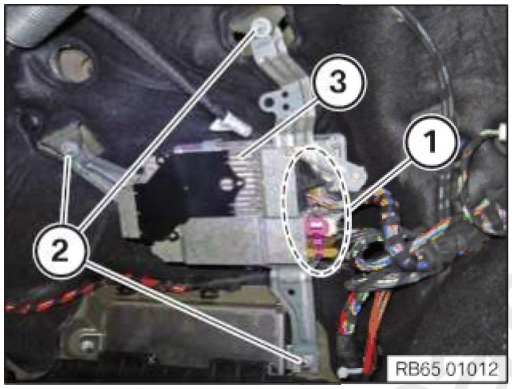
- Unlock and disconnect all connectors in area (1).
- Loosen nuts (2).
- Feed out Receiver audio module (RAM) (3) with the holder and turn.



- Unlock and disconnect connector (1).
- Release cable latch mechanisms (2).
- Feed out the TRSVC control unit (3) with the holder and remove it.

◁

8 – Install Receiver audio module (RAM)



- Feed in Receiver audio module (RAM) (3) with the holder and install.
- Tighten nuts (2).

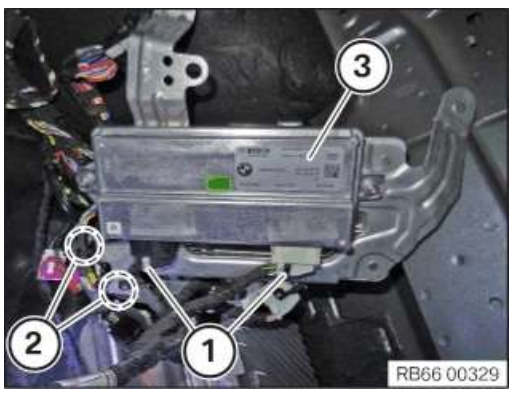
Bracket to body

Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

- Connect and lock all connectors in area (1).

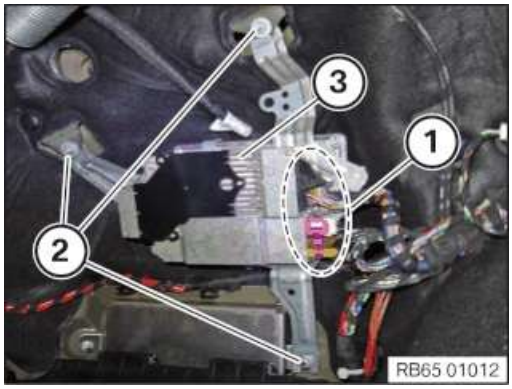
▸ Only in the case of the 5DN optional equipment (Parking Assistant Plus)

▹ Install the TRSVC control unit



- Feed in the TRSVC control unit (3) with the holder and position it.
- Engage the cable latch mechanisms (2).
- Connect connectors (1) and lock.
- Turn the TRSVC-control unit (3) with the holder.

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- Feed in the Receiver audio module (RAM) (3) with the holder and position it correctly.
- Tighten nuts (2).

Bracket to body

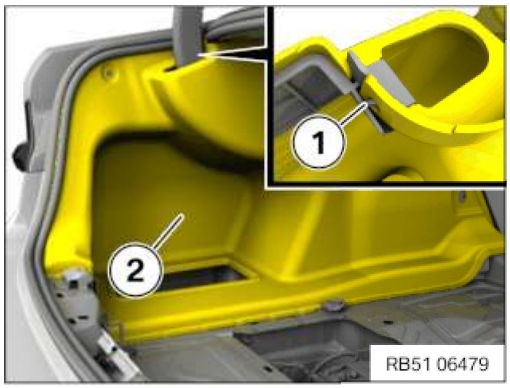
Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

- Connect and lock all connectors in the area (1).

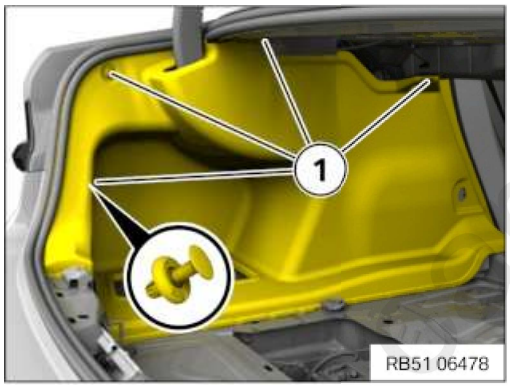
◁

POSTPROCESSES

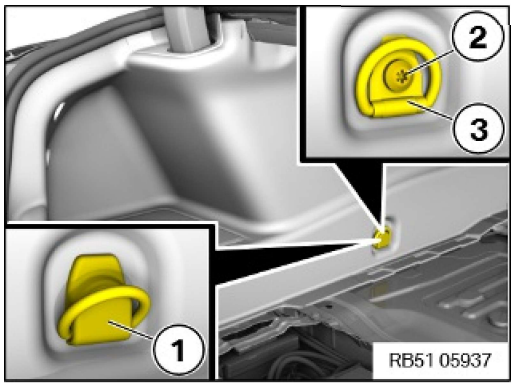
9 – Install luggage compartment wheel arch trim panel at left



- Feed luggage compartment wheel arch trim panel (2) under the side trim panel in the rear passenger compartment and the sealing lip for the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



- Secure expanding rivet (1).
- Raise the link rear seat backrest.



- Position the lashing eye (3).
- Tighten down screw (2).

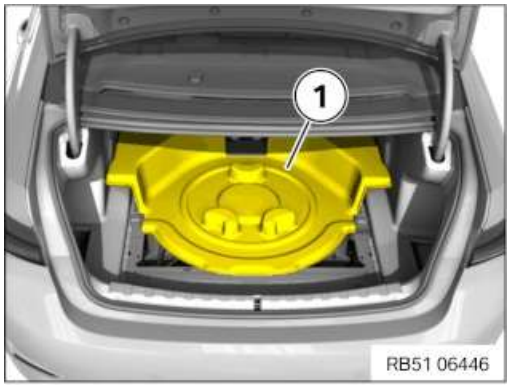
Lashing eye to body

		Tightening torque	19 Nm

- Install the cover (1).

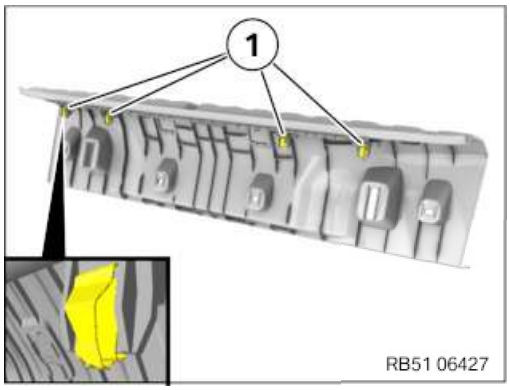
10 – Install the luggage compartment well in front

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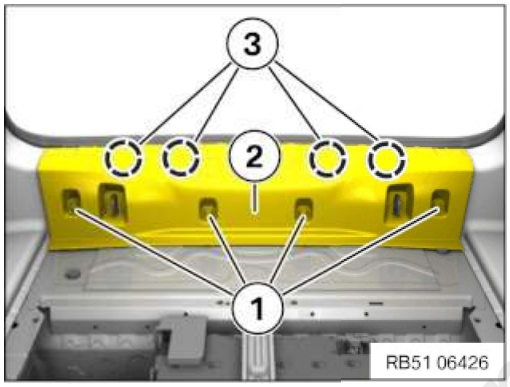


- Feed in and insert front luggage compartment well (1) on the seat belt strap.

11 – Installing loading edge trim

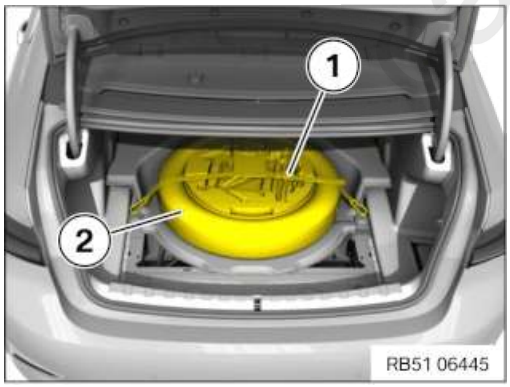


- Check the clamps (1) for damage and renew if necessary.



- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

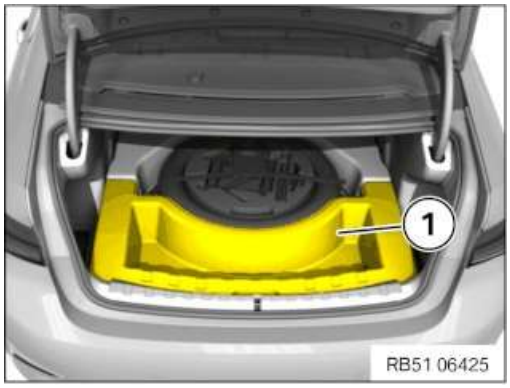
12 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

► **Installing rear luggage compartment well**

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- Install rear luggage compartment well (1).

13 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

14 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

Bracket to body			Used in step 8
Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

Lashing eye to body			Used in step 9
		Tightening torque	19 Nm

Links

Repair instructions	**Used in step**
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114

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61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 114
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle) 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
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61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 20 900 Disconnecting and connecting battery earth lead 114
61 35 ... Notes on ESD protection (Electro Static Discharge)

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65 12 621 Replacing booster

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Removing the luggage compartment floor trim panel

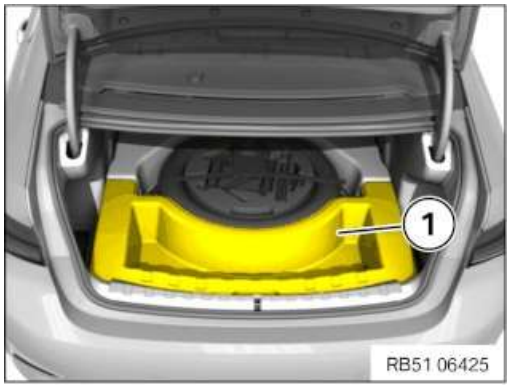


- Remove luggage compartment floor trim panel (1).

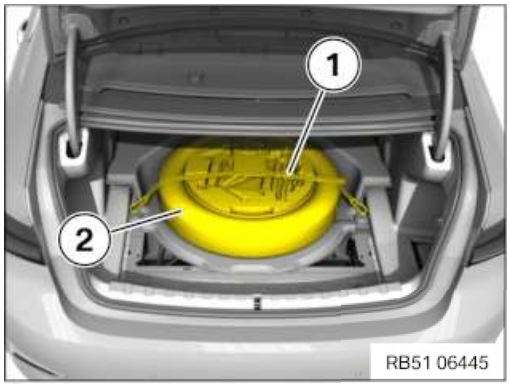
3 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

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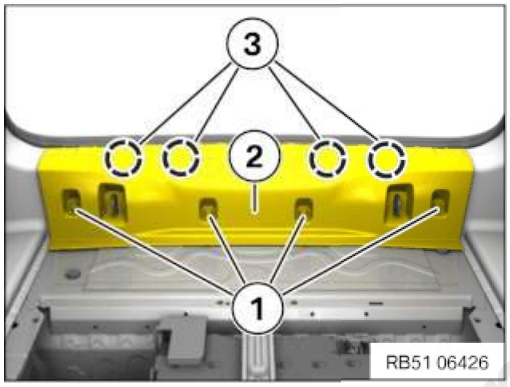


- Remove rear luggage compartment well (1).



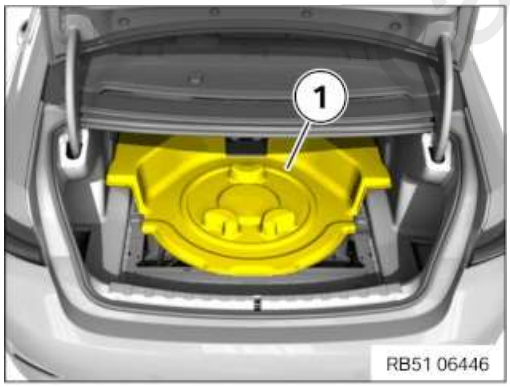
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

4 – Removing the loading edge trim



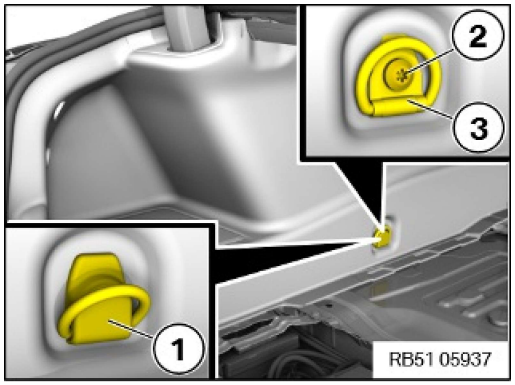
- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

5 – Removing front luggage compartment well

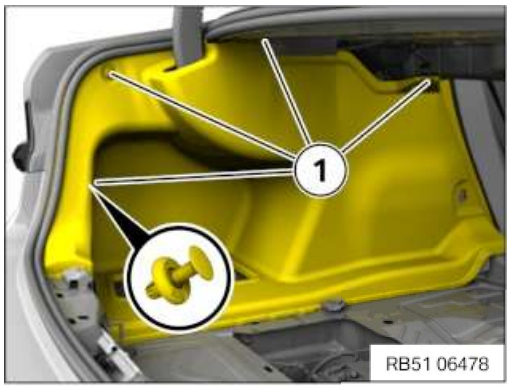


- Guide out and remove front luggage compartment well (1) on the seat belt strap.

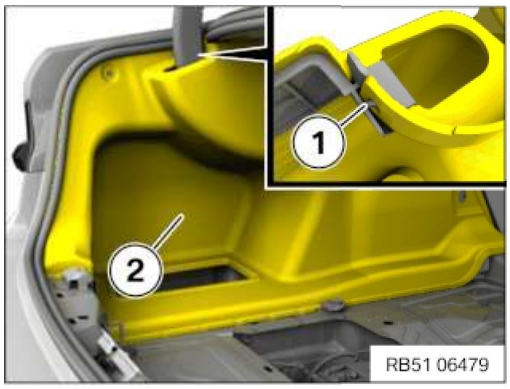
6 – Remove luggage compartment wheel arch trim panel on left.



- Remove the cover (1).
- Loosen screw (2).
- Remove lashing eye (3).



- Reposition left rear seat backrest.
- Loosen the expanding rivet (1).



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip for the tailgate and the side trim panel in the rear passenger compartment.
- Remove luggage compartment wheel arch trim panel (2).

7 – Removing storage compartment in luggage compartment

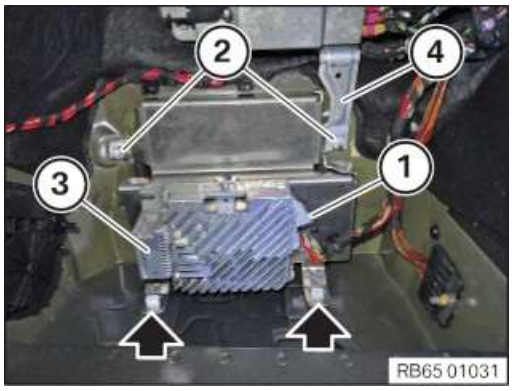


- Unclip cover (1) upwards out of the storage compartment (2) in the lugagge compartment and remove it.



- Loosen nuts (1).
- Guide out the storage compartment (2) in the luggage compartment toward the top and remove it.

8 – Remove post amplifier

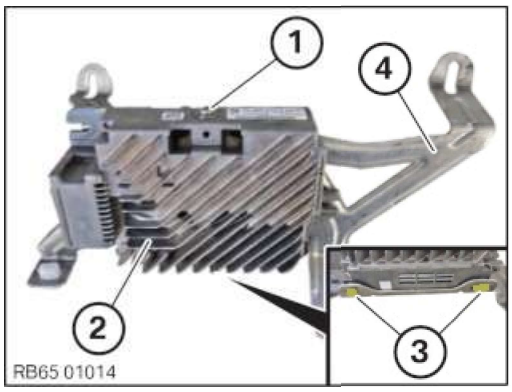


- Unlock and disconnect connector (1).
- Loosen nuts (2).
- Disengage the post amplifier in an upward direction (3) on the locking units (arrow).
- Pull the holder out (4).
- Guide the post amplifier (3) out with the holder and remove it.

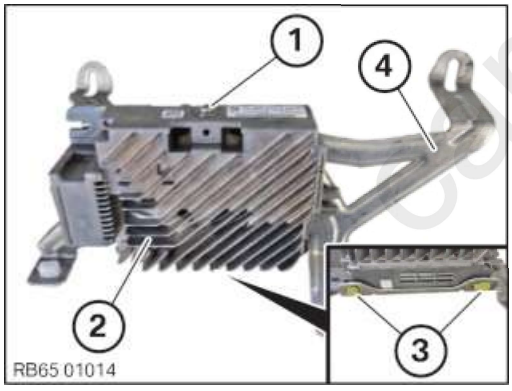
9 – Replacing post amplifier

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



- Loosen screw (1).
- Guide out post amplifier (2) with the guides (3) below on the holder (4).
- Remove post amplifier (2).



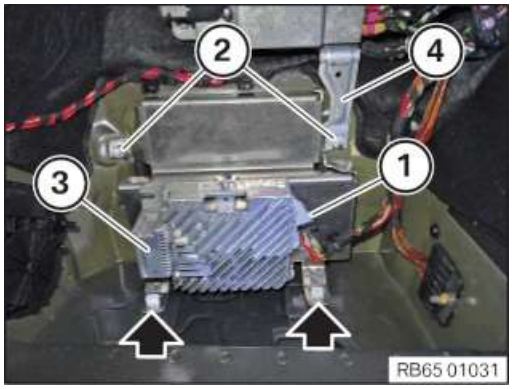
- Feed in the post amplifier (2) with the guides (3) below on the holder (4) and position it correctly.
- Tighten down screw (1).

Post-amplifier to holder

Screw		Tightening torque	3,3 Nm

10 – Installing the post amplifier

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- Pull holder (4) slightly to the back.
- Feed in the post amplifier (3) with the holder and position it.
- Engage post amplifier (4) into the latch mechanisms (arrows) from the top.
- Correctly position the holder (4).
- Tighten nuts (2).

Bracket to body

Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

- Connect connectors (1) and lock.

POSTPROCESSES

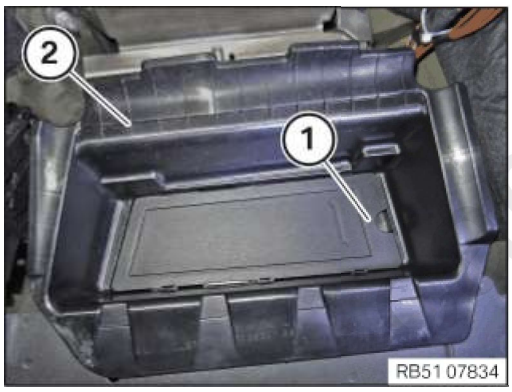
11 – Installing storage compartment trim in the luggage compartment



- Insert and install the storage compartment frame (2) in the luggage compartment.
- Tighten nuts (1).

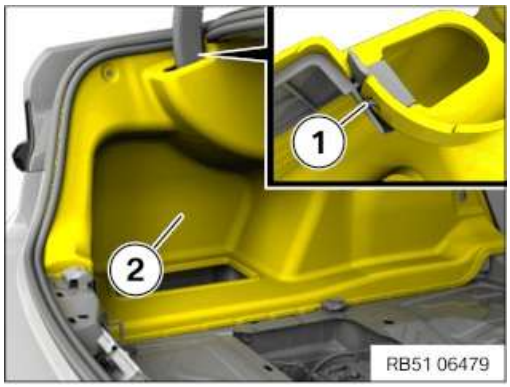
Storage compartment to body

Nut		Tightening torque	2.5 Nm



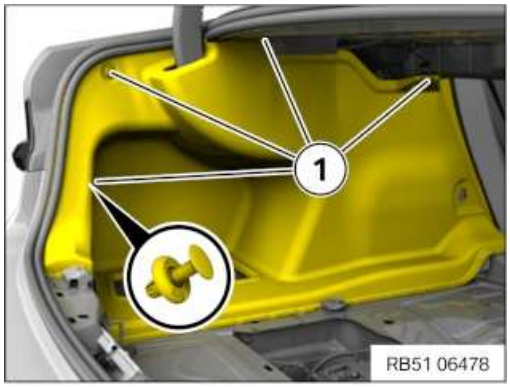
- Install cover (1) from the top in the storage compartment (2) in the luggage compartment and clip it in.

12 – Install luggage compartment wheel arch trim panel at left

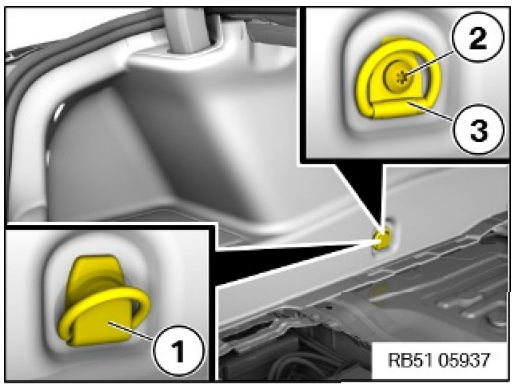


- Feed luggage compartment wheel arch trim panel (2) under the side trim panel in the rear passenger compartment and the sealing lip for the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).
- Raise the link rear seat backrest.



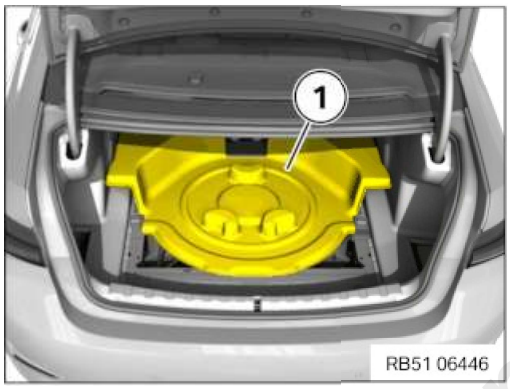
- Position the lashing eye (3).
- Tighten down screw (2).

Lashing eye to body

	Tightening torque	19 Nm

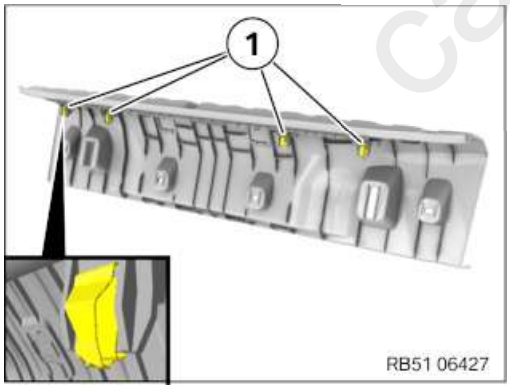
- Install the cover (1).

13 – Install the luggage compartment well in front

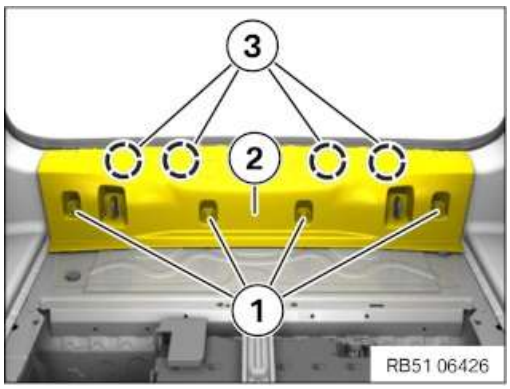


- Feed in and insert front luggage compartment well (1) on the seat belt strap.

14 – Installing loading edge trim



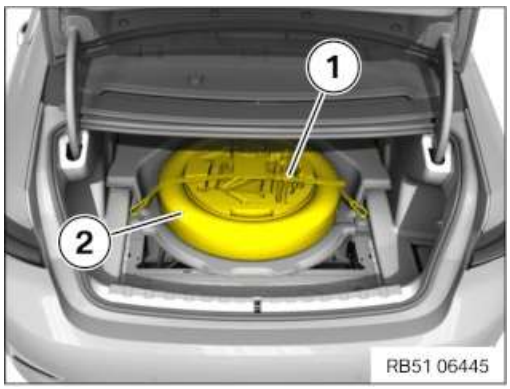
- Check the clamps (1) for damage and renew if necessary.



- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

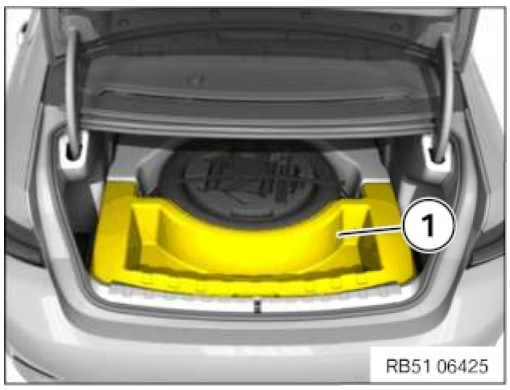
cardiagn.com

15 – If installed: Install the emergency wheel



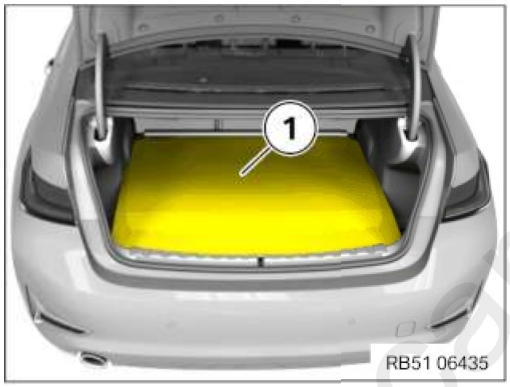
- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

16 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

17 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

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Post-amplifier to holder			Used in step 9
Screw		Tightening torque	3,3 Nm

Bracket to body			Used in step 10
Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

Storage compartment to body			Used in step 11
Nut		Tightening torque	2.5 Nm

Lashing eye to body			Used in step 12
		Tightening torque	19 Nm

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	117
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	117
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting battery earth lead	117
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	117
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61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 20 900 Disconnecting and connecting battery earth lead	117
61 35 ... Notes on ESD protection (Electro Static Discharge)	

65 12 816 Replacing head unit high

PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Remove cupholder

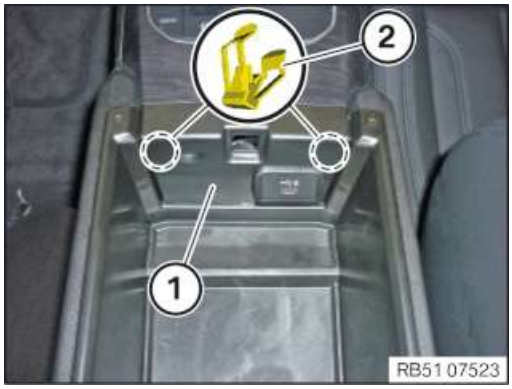


- Remove the insert (1).

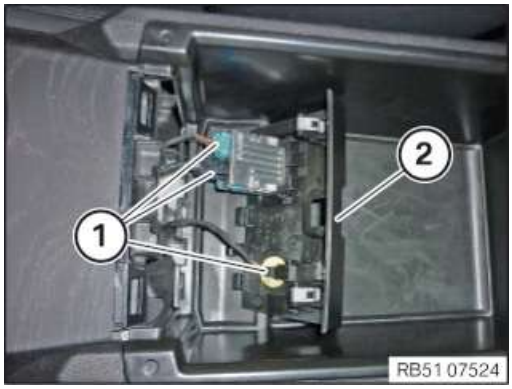


- Loosen screws (1).
- Feed the cup holder (2) out to the top.
- Unlock associated plug connections and disconnect.

3 – Removing the trim in the storage compartment on the centre armrest



- Lever out the trim (1) with the special tool (2) toward the rear from the clamps 2 298 505.



- Unlock and disconnect the plug connections (1) and remove the trim (2) .

4 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



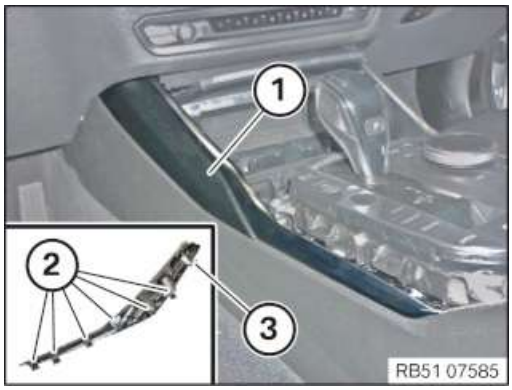
- Release and remove the centre console trim upwards (1) as shown using the special tool 2 298 505 from the latch mechanisms.

5 – Removing the decorative trim on the centre console trim on the left and right

▸ **Remove decorative trim on centre console**

NOTICE

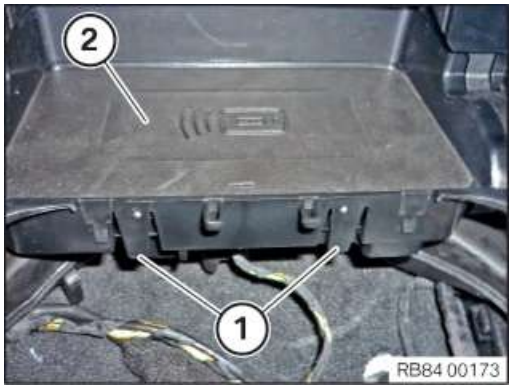
Description is for left component only. Procedure on the right side is identical.



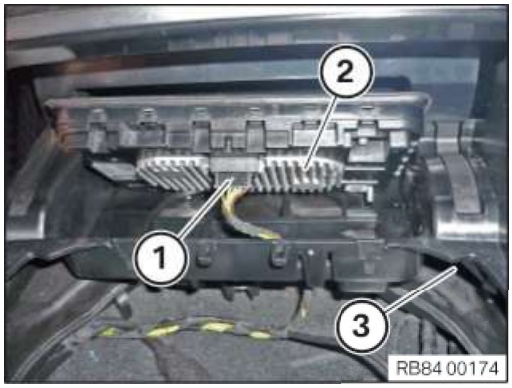
- Lever out the rear decorative trim (1) from the latch mechanisms (2) starting from the top.
- Feed out the decorative trim (1) backwards out of the guide (3) and remove.

6 – Removing the wireless charging station

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- Loosen the latch mechanisms (1) and push out the wireless charging station (2) upwards.



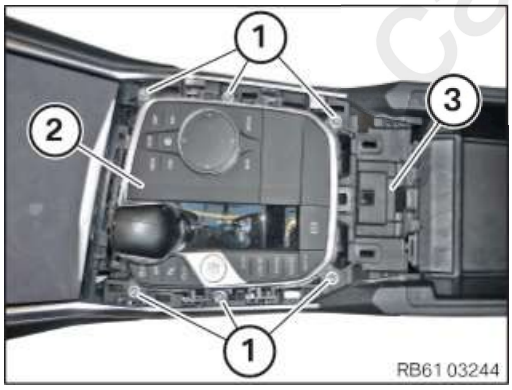
- Disconnect the connector (1) and remove the wireless charging station (2) from the centre console (3).

7 – Remove the operating facility in the centre console

▶ **Disconnecting all battery earth leads**



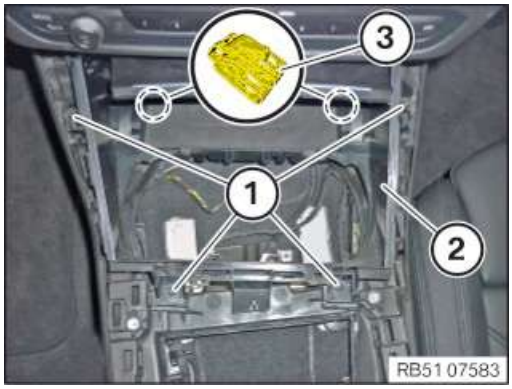
- See additional information.



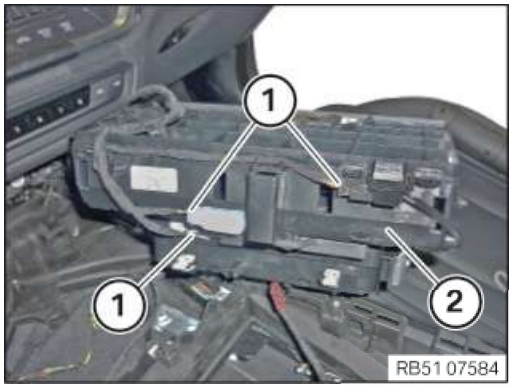
- Loosen screws (1).
- Remove the operating facility in the centre console (2) from the centre console (3).

8 – Removing the storage compartment of the front centre console

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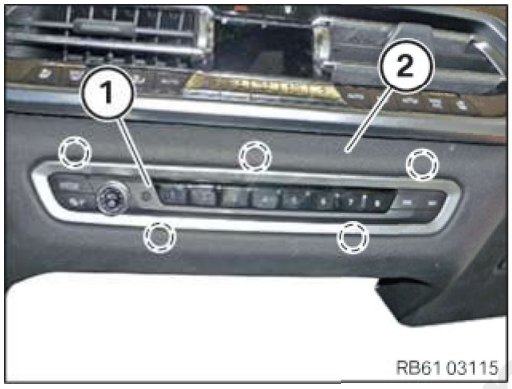


- Loosen screws (1).
- Remove storage compartment trim (2) backwards out of clamps (3).

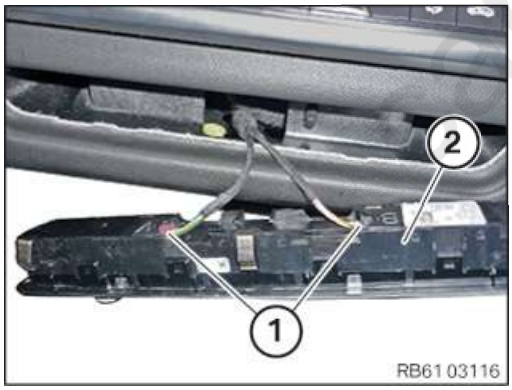


- Unlock and disconnect all the plug connections (1) and remove the storage compartment (2).

9 – Remove the audio operating unit



- Unclip the audio operating unit (1) from the instrument panel (2) at the points marked using special tool 0 496 571 (00 9 327).



- Disconnect plug connections (1) and remove the audio operating unit (2).

MAIN WORK

10 – Remove Head Unit High (HU-H)

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

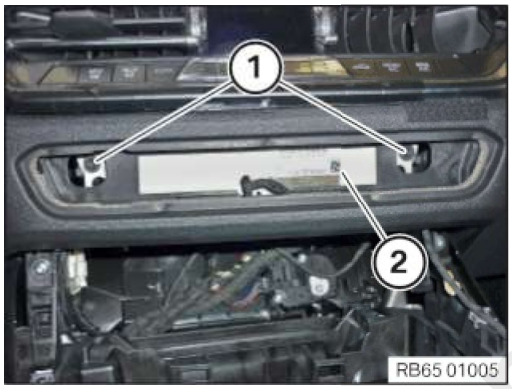
- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

RISK OF DAMAGE

Damage to the head unit.

The hard disk of the head unit can be damaged by vibration.

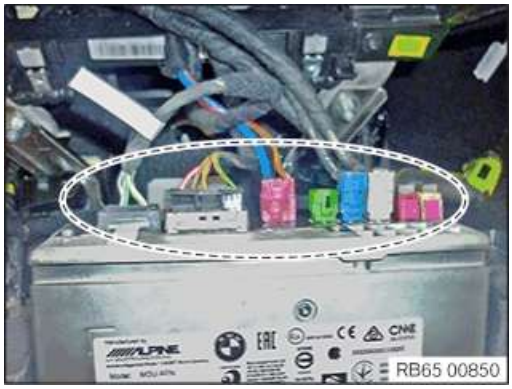
- Carry out mechanical work on the head unit and adjacent components with care.



- Release screws (1) on the head unit (2).
- Slightly pull head unit (2) to the rear and tilt downwards.



- Feed out the head unit (1) through the marks as illustrated, until the connectors behind are accessible.



- Unlock and disconnect all connectors in the marked area.

  Remove headunit.

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RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

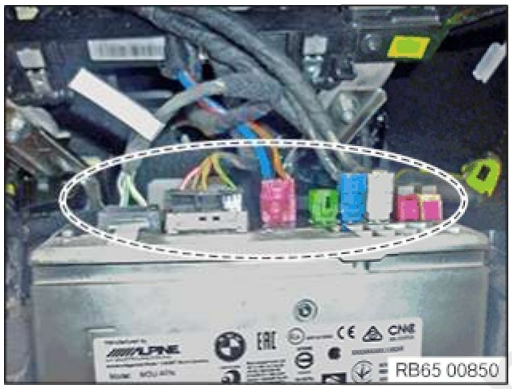
- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

RISK OF DAMAGE

Damage to the head unit.

The hard disk of the head unit can be damaged by vibration.

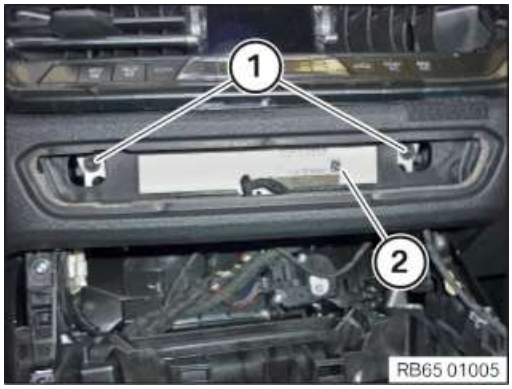
- Carry out mechanical work on the head unit and adjacent components with care.



- Position head unit.
- Connect and lock all connectors in the marked area.



- Feed in the headunit (1) through the marked areas upwards.



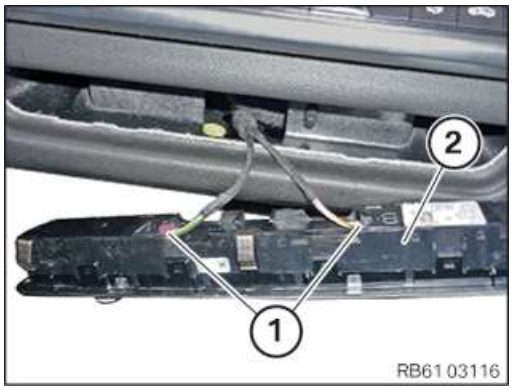
- Slide head unit (2) slightly forward and position it correctly.
- Tighten screws (1) on the head unit (2).

Head unit to holder / holder to support

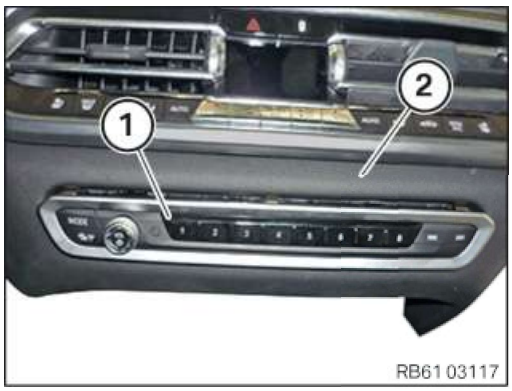
Screw		Tightening torque	1,8 Nm

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12 – Install the audio operating unit

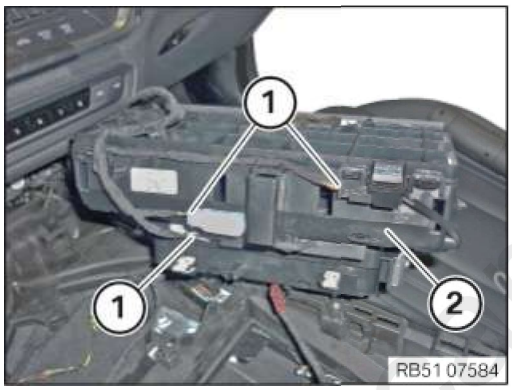


- Connect the connector (1) to the audio operating unit (2).

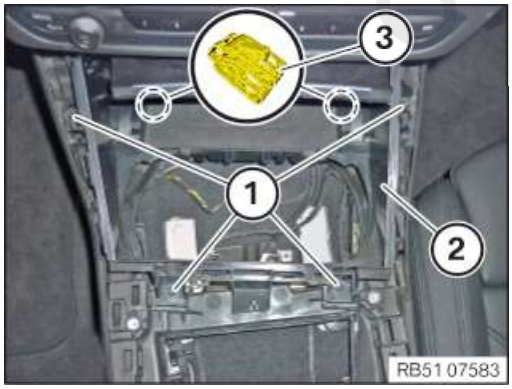


- Correctly position the audio operating unit (1) and install in the instrument panel(2).

13 – Installing the storage compartment of the front centre console



- Mount the storage compartment (2) and connect connectors (1).



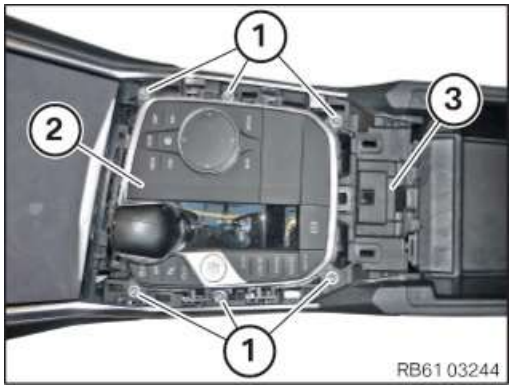
- Engage rear storage compartment trim (2) into clamps (3).
- Tighten the screws (1).

Storage compartment to centre console

Oval-head screw		Tightening torque	1,8 Nm

14 – Install the operating facility in the centre console

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- Position operating facility (2) in the centre console (3).
- Tighten the screws (1).

Gear selector switch to centre console trim

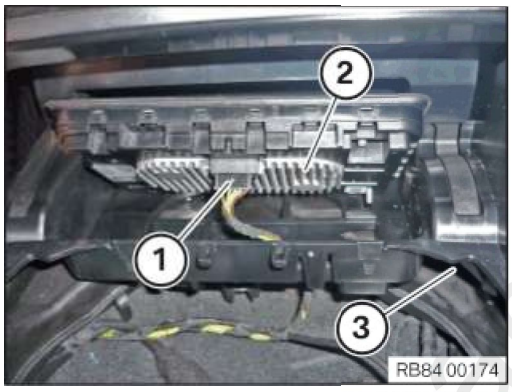
Screw		Tightening torque	1,8 Nm

▸ **Disconnecting all battery earth leads**

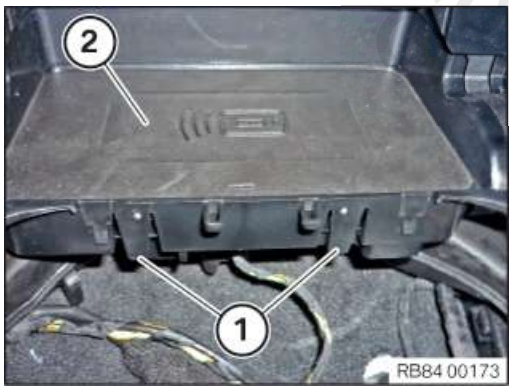


- See additional information.

15 – Installing the wireless charging station



- Connect connector (1).
- Position the wireless charging station (2) in the centre console (3).



- Press the wireless charging station (2) down till the locking units (1) are engaged correctly.

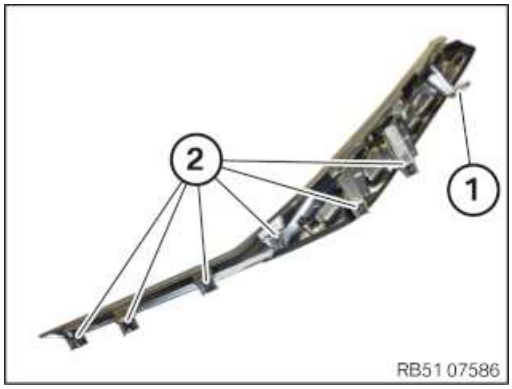
16 – Install decorative trim on centre console on left and right

▸ **Installing the decorative trim to centre console**

NOTICE

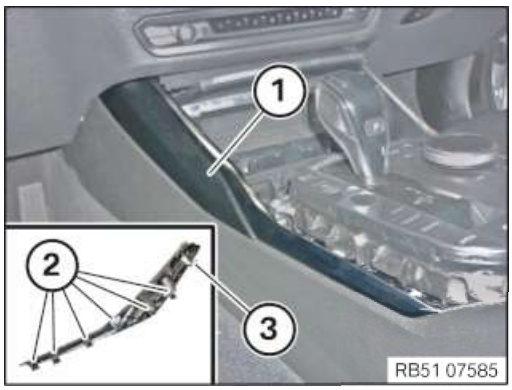
Description is for left component only. Procedure on the right side is identical.

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- Check guide (1) and the latch mechanisms (2).

  Renew defective decorative trim.



- Feed in the decorative trim (1) forward in the guide (3).
- Engage decorative trim (1) in latch mechanisms (2).

17 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



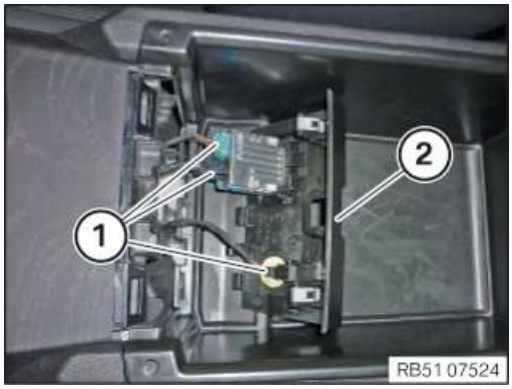
- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .



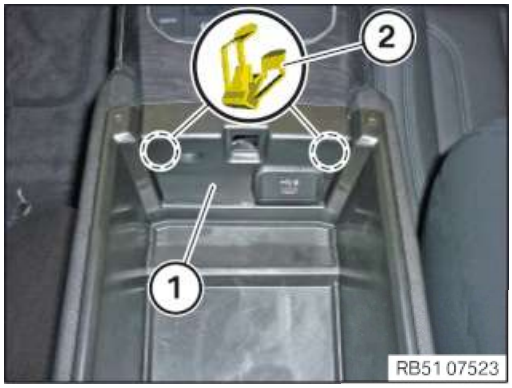
- Correctly position the centre console trim (1) and engage at the latch mechanisms.

18 – Installing the trim in the storage compartment of the centre armrest

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- Mount the trim (2) and connect connector (1) and lock.



- Correctly position trim (1) and snap into the clamps (2).

19 – Install the cup holder



- Fix the cup holder (1) and the belonging connectors.
- Correctly position cup holder (1).
- Tighten the screws (2).

Cup holder to centre console

Oval-head screw	Tightening torque	1,8 Nm



- Insert the insert (1).

20 – Disconnecting all battery earth leads



- See additional information.

21 – Encode/program control unit(s)

- **Replacement**.
- **This task is not included in this flat rate unit item.**

▶ **Encode/program control unit(s)**

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

22 – Installing the correct navigation map

TECHNICAL INFORMATION

Install the correct navigation map depending on the validity of the customer subscription after having replaced the head unit.

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- *Different cases:*

  Customer subscription is **still valid**:

  - Install the most recent navigation map.

  Customer subscription has **expired**:

  - Check when the customer subscription expired*.
  - Install the navigation map applicable on the expiry date.

  Customer subscription **has expired**. **After the expiry** of his/her subscription, the customer **purchased a newer version of the navigation map** ("One Time Update"):

  - Check which navigation map was installed most recently*.
  - Install this navigation map.

  The information required to determine the term of the customer subscription can be found in document "6512 Determining the term of the customer subscription".

23 – Importing the Service history

- 05 Maintenance and Pre-Delivery Check
- Service history

Additional Information

Overview of Tightening Torques

Head unit to holder / holder to support			Used in step 11
Screw		Tightening torque	1,8 Nm

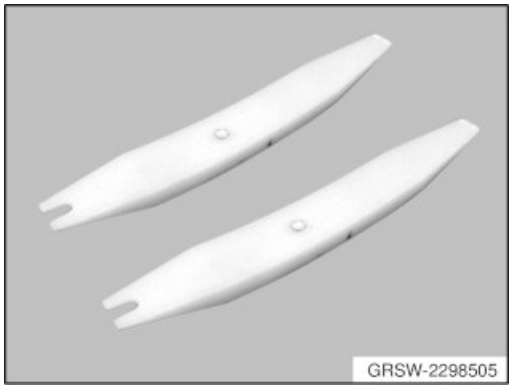
Storage compartment to centre console			Used in step 13
Oval-head screw		Tightening torque	1,8 Nm

Gear selector switch to centre console trim			Used in step 14
Screw		Tightening torque	1,8 Nm

Cup holder to centre console			Used in step 19
Oval-head screw		Tightening torque	1,8 Nm

Overview of Special Tools

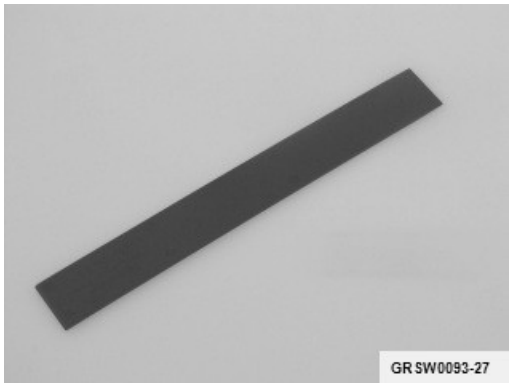
2 298 505 Wedge



Common	Used in step 34
Usage	Set (delivery of 2 pieces)
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

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0 496 571 (00 9 327) Wedge



Common	Used in step 9
Usage	(Cleaning wedge) From 11/2008 this special tool replaces panel wedge 00 9 323 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171420
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171420
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
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61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420
61 20 900 Disconnecting and connecting battery earth lead	171420

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61 20 900 Disconnecting and connecting battery earth lead 171420
61 35 ... Notes on ESD protection (Electro Static Discharge) 1011

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65 12 902 Replacing receiver audio module

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Removing the luggage compartment floor trim panel

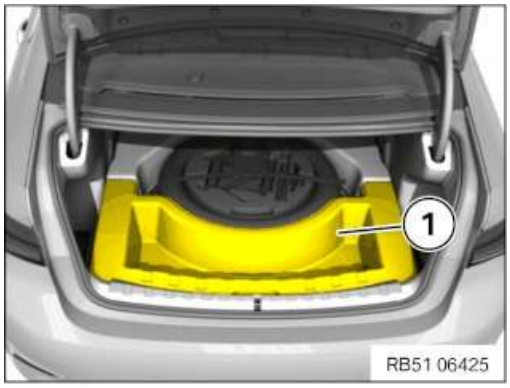


- Remove luggage compartment floor trim panel (1).

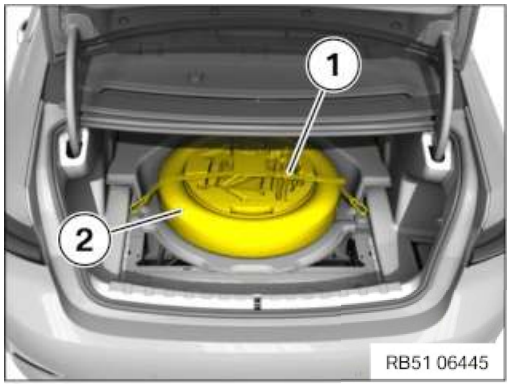
3 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

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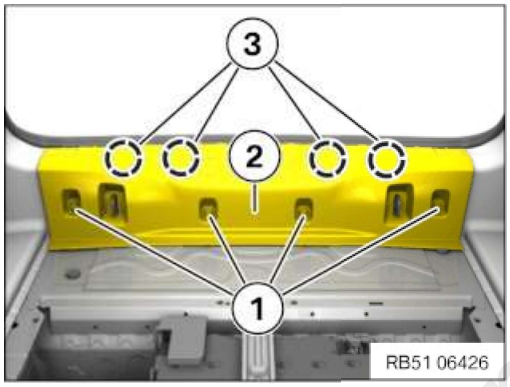


- Remove rear luggage compartment well (1).



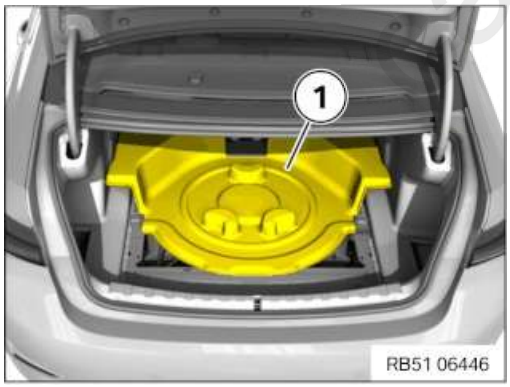
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

4 – Removing the loading edge trim



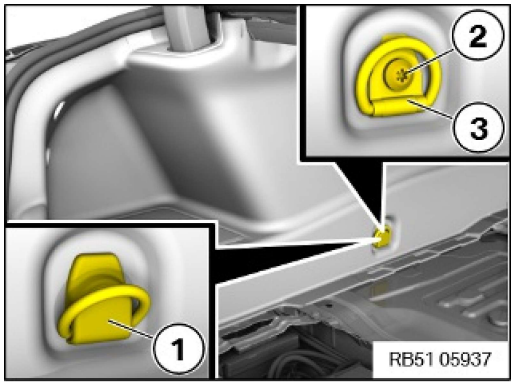
- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

5 – Removing front luggage compartment well

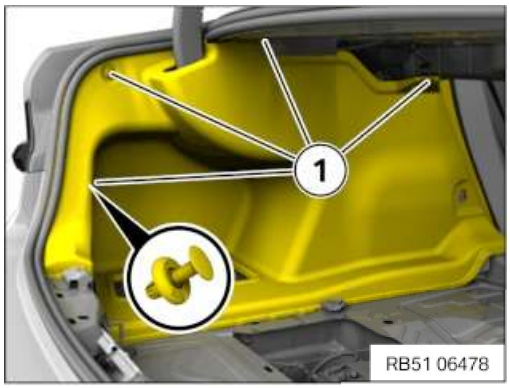


- Guide out and remove front luggage compartment well (1) on the seat belt strap.

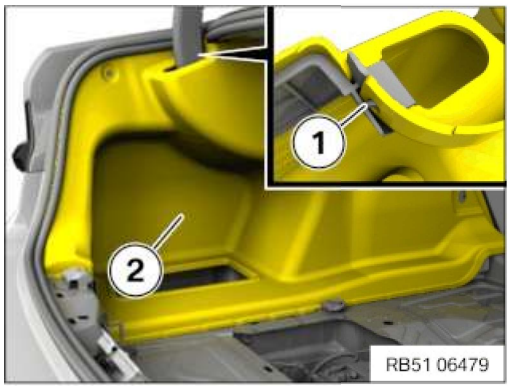
6 – Remove luggage compartment wheel arch trim panel on left.



- Remove the cover (1).
- Loosen screw (2).
- Remove lashing eye (3).



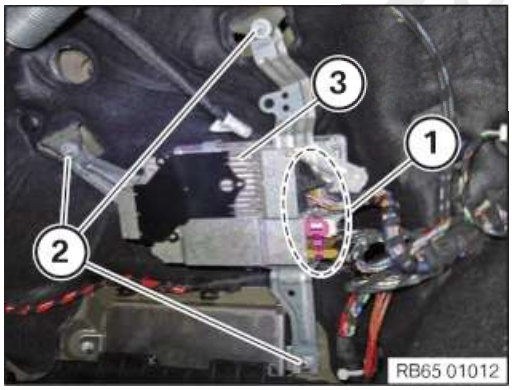
- Reposition left rear seat backrest.
- Loosen the expanding rivet (1).



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip for the tailgate and the side trim panel in the rear passenger compartment.
- Remove luggage compartment wheel arch trim panel (2).

MAIN WORK

7 – Remove receiver audio module (RAM)

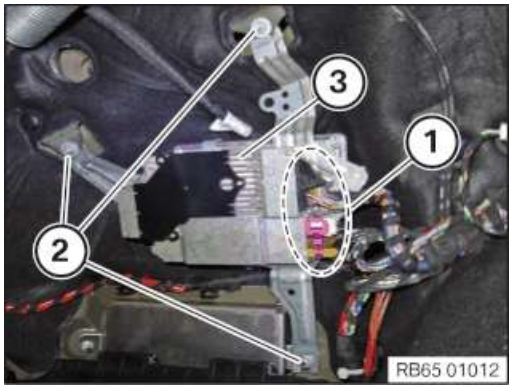


- Unlock and disconnect all connectors in area (1).
- Loosen nuts (2).
- Guide out the receiver audio module (RAM) (3) with the holder and remove it.

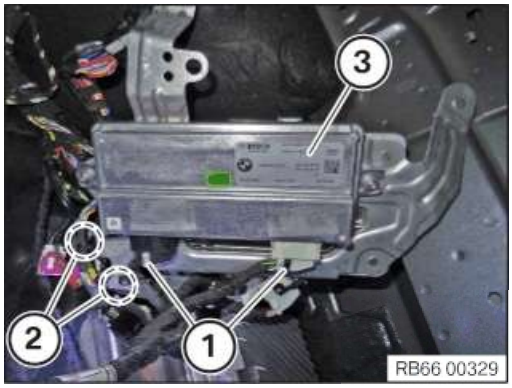
▸ **Only for equipment specification 5DN (Parking Assistant Plus)**

▹ **Remove the TRSVC control unit**

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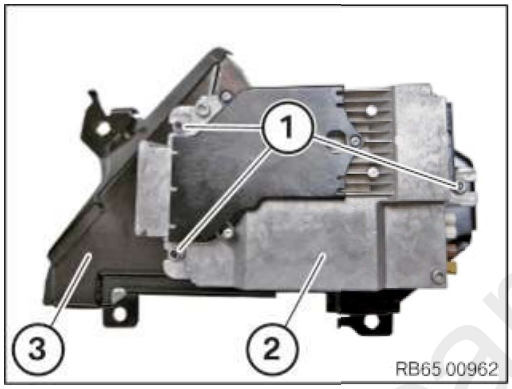
- Unlock and disconnect all connectors in area (1).
- Loosen nuts (2).
- Feed out Receiver audio module (RAM) (3) with the holder and turn.



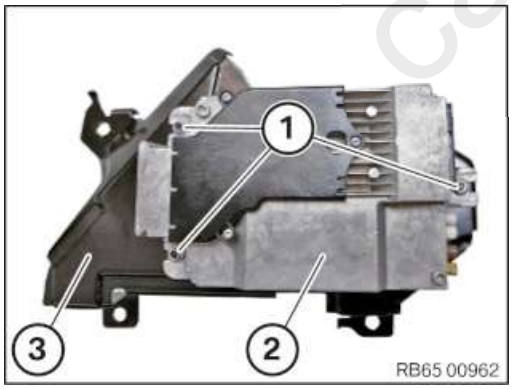
- Unlock and disconnect connector (1).
- Release cable latch mechanisms (2).
- Feed out the TRSVC control unit (3) with the holder and remove it.

◁

8 – Replace the Receiver audio module (RAM)



- Loosen nuts (1).
- Remove the Receiver audio module (RAM) (2) from holder (3).



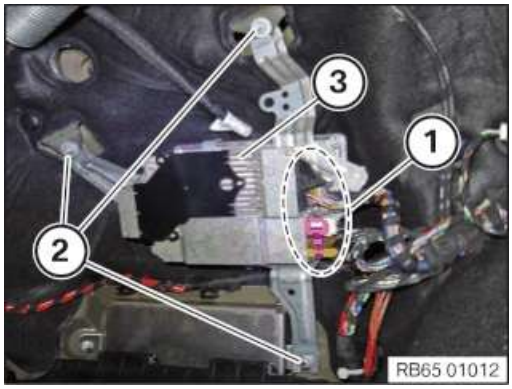
- Attach the Receiver audio module (RAM) (2) to holder (3).
- Tighten nuts (1).

Amplifier / RAM on holder

M5 screw		Tightening torque	3 Nm
Nut		Tightening torque	3 Nm

9 – Install Receiver audio module (RAM)

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- Feed in Receiver audio module (RAM) (3) with the holder and install.
- Tighten nuts (2).

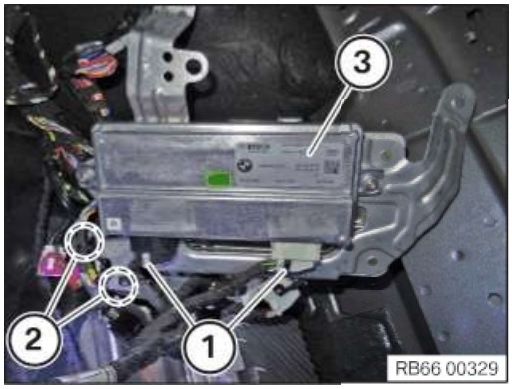
Bracket to body

Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

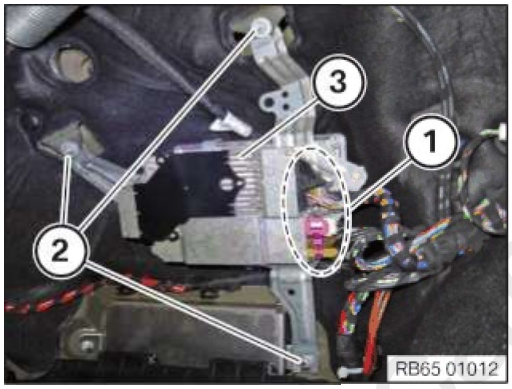
- Connect and lock all connectors in area (1).

▸ Only in the case of the 5DN optional equipment (Parking Assistant Plus)

▹ Install the TRSVC control unit



- Feed in the TRSVC control unit (3) with the holder and position it.
- Engage the cable latch mechanisms (2).
- Connect connectors (1) and lock.
- Turn the TRSVC-control unit (3) with the holder.



- Feed in the Receiver audio module (RAM) (3) with the holder and position it correctly.
- Tighten nuts (2).

Bracket to body

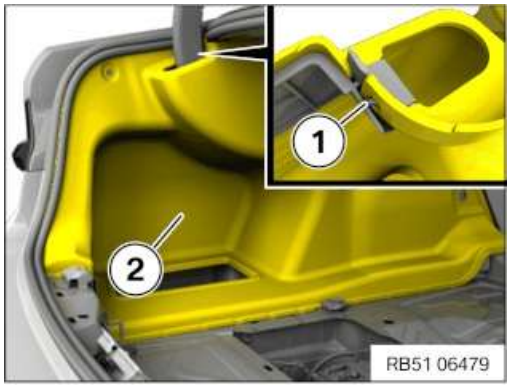
Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

- Connect and lock all connectors in the area (1).

◃

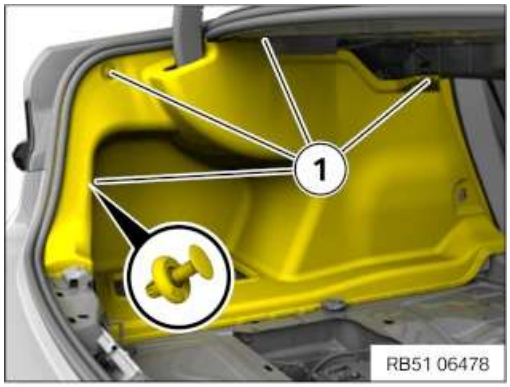
POSTPROCESSES

10 – Install luggage compartment wheel arch trim panel at left

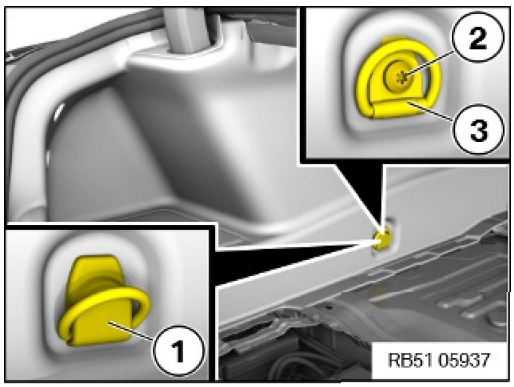


- Feed luggage compartment wheel arch trim panel (2) under the side trim panel in the rear passenger compartment and the sealing lip for the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

offdiag.com



- Secure expanding rivet (1).
- Raise the link rear seat backrest.



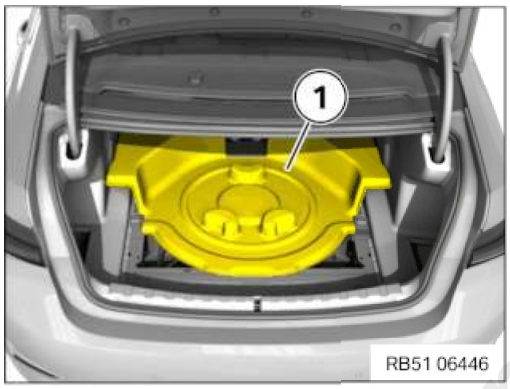
- Position the lashing eye (3).
- Tighten down screw (2).

Lashing eye to body

	Tightening torque	19 Nm

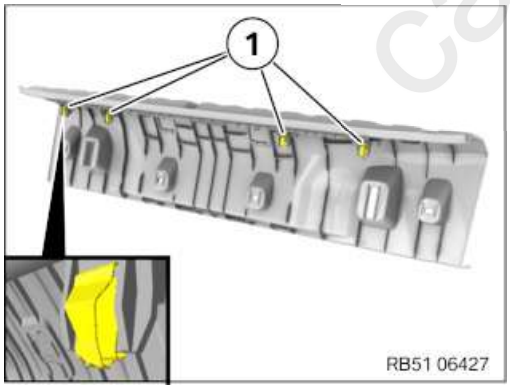
- Install the cover (1).

11 – Install the luggage compartment well in front

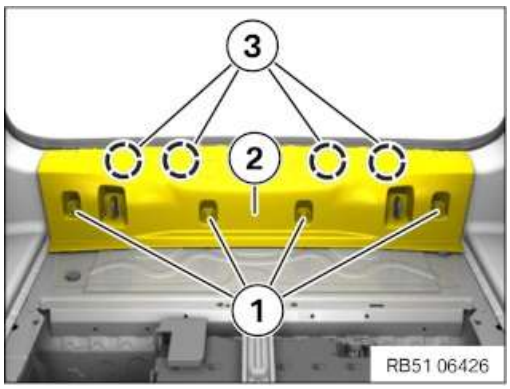


- Feed in and insert front luggage compartment well (1) on the seat belt strap.

12 – Installing loading edge trim



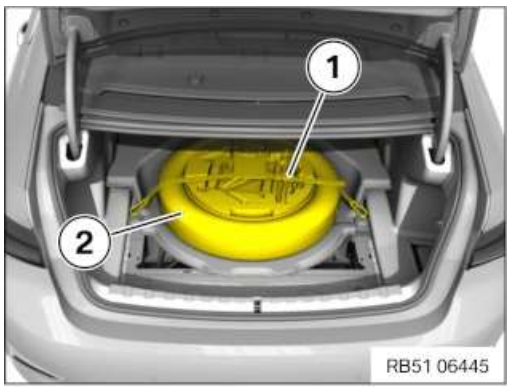
- Check the clamps (1) for damage and renew if necessary.



- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

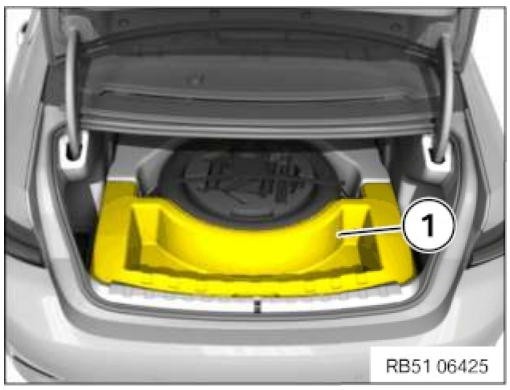
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13 – If installed: Install the emergency wheel



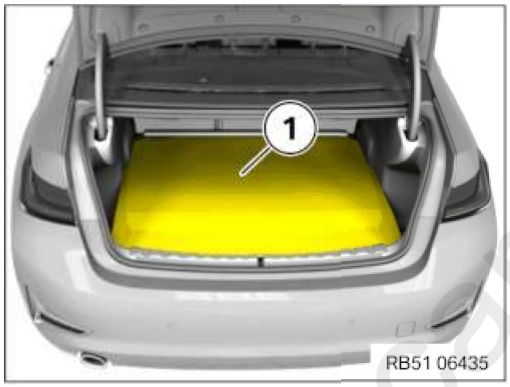
- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

14 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

15 – Disconnecting all battery earth leads



- See additional information.

16 – Encode/program control unit(s)

- **Replacement**.
- **This task is not included in this flat rate unit item.**

▶ **Encode/program control unit(s)**

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Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

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Additional Information

Overview of Tightening Torques

Amplifier / RAM on holder — Used in step 8

M5 screw		Tightening torque	3 Nm
Nut		Tightening torque	3 Nm

Bracket to body — Used in step 9

Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

Lashing eye to body — Used in step 10

		Tightening torque	19 Nm

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	115
61 20 900 Disconnecting and connecting battery earth lead	115

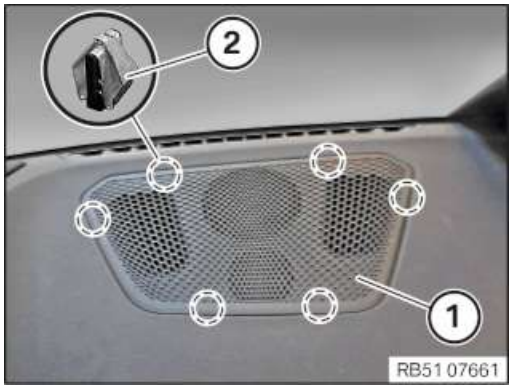
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 115
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 115
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle) 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
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61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
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61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 20 900 Disconnecting and connecting battery earth lead 115
61 35 ... Notes on ESD protection (Electro Static Discharge)

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65 13 065 Removing and installing front speaker holder

PRELIMINARY WORK

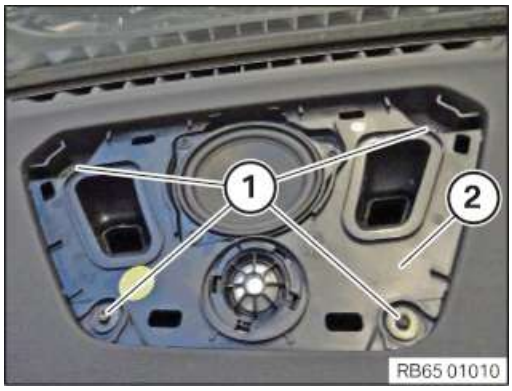
1 – Remove the speaker trim at the instrument panel



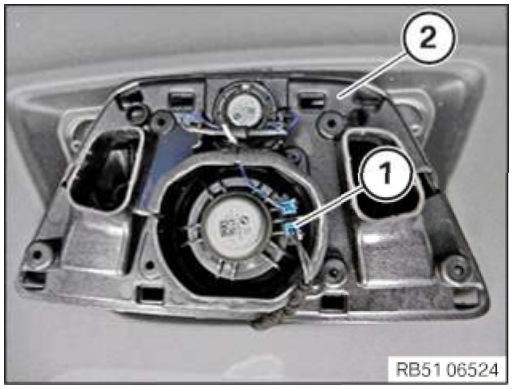
- Lever out the speaker trim (1) with the special tool 0 496 569 (00 9 325) from the clamps (2) toward the top and remove.

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2 – Remove the speaker holder at the instrument panel

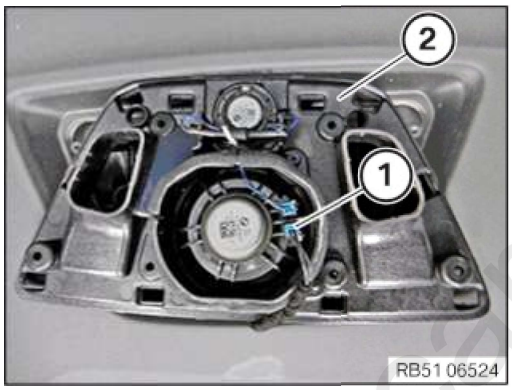


- Loosen screws (1).
- Pull out speaker holder (2) slightly with the loudspeakers and tilt it to the side.

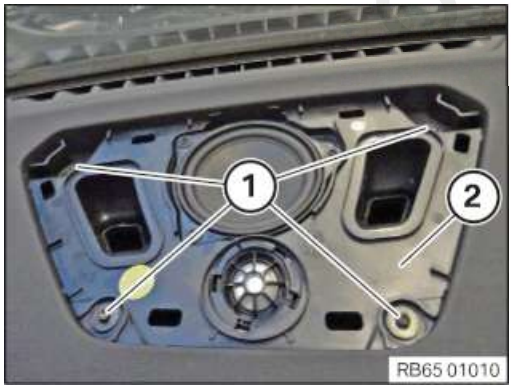


- Unlock plug connection (1) and disconnect.
- Remove the speaker holder (2).

3 – Install the speaker holder at the instrument panel



- Position the speaker holder (2).
- Connect connector (1).



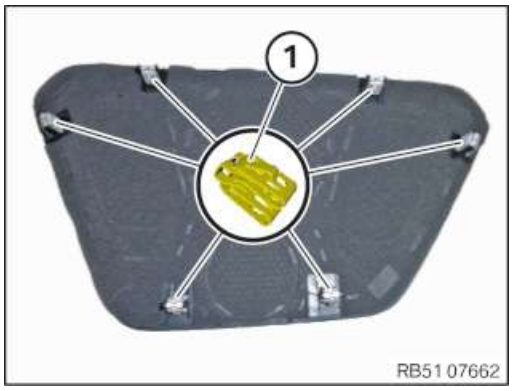
- Install the speaker holder (2).
- Tighten the screws (1).

Speaker to support / support to instrument panel / support to body

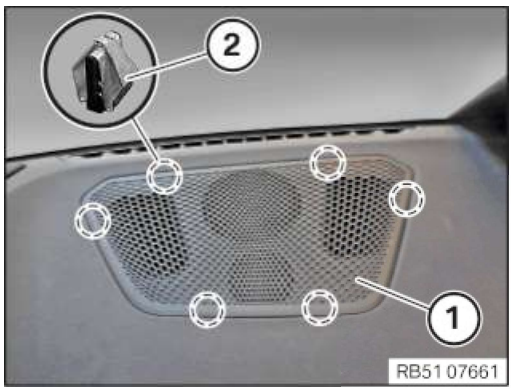
Screw		Tightening torque	1,8 Nm

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4 – Install the speaker trim at the instrument panel



- Check clamps (1) for damage.
- Replace broken or missing clamps (1).



- Position the speaker trim (1) correctly and engage it at the clamps (2).

Additional Information

Overview of Tightening Torques

Speaker to support / support to instrument panel / support to body Used in step 3

Screw		Tightening torque	1,8 Nm

Overview of Special Tools

0 496 569 (00 9 325) Wedge



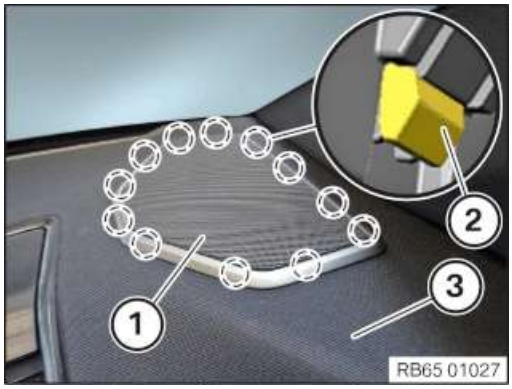
Common Used in step 1

Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

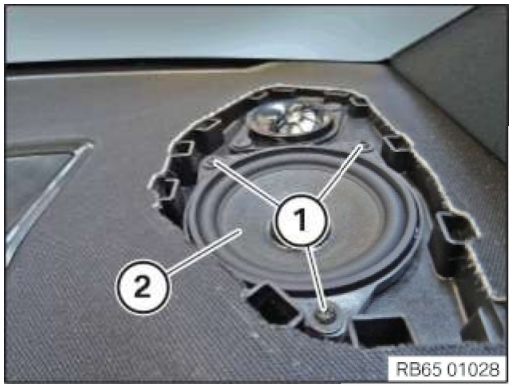
cardiagn.com

65 13 188 Removing and installing/replacing mid-range speaker

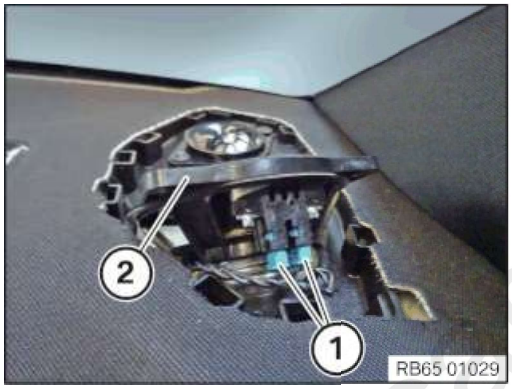
1 – Remove rear mid-range speaker



- Unclip the cover (1) with the special tool 0 496 571 (00 9 327) from the latch mechanisms (2) towards the top.
- Remove cover (1) from storage shelf (3).

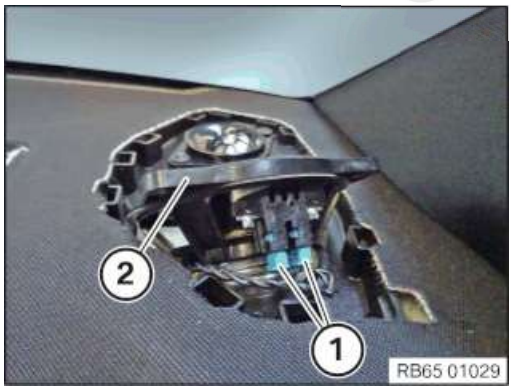


- Loosen screws (1).
- Raise mid-range speaker (2) slightly.



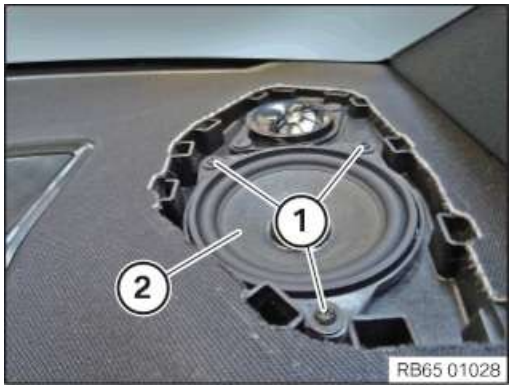
- Unlock and disconnect connector (1).
- Remove the mid-range speaker (2).

2 – Installing the rear mid-range speaker



- Position the mid-range speaker (2).
- Connect connectors (1) and lock.

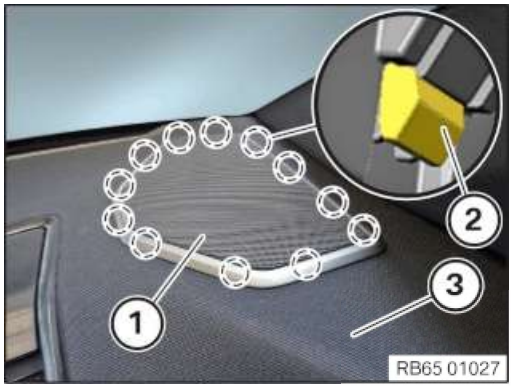
Cardiagn.com



- Correctly position the mid-range speaker (2).
- Tighten the screws (1).

Speaker to storage shelf/support

Screw		Tightening torque	1,8 Nm



- Correctly position the cover (1) on the storage shelf (3).
- Clip in the cover (1) with the latch mechanisms (2) in storage shelf (3).

Additional Information

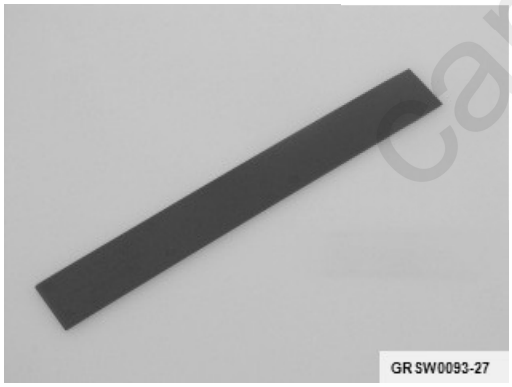
Overview of Tightening Torques

Speaker to storage shelf/support — Used in step 2

Screw		Tightening torque	1,8 Nm

Overview of Special Tools

0 496 571 (00 9 327) Wedge



Common — Used in step 1

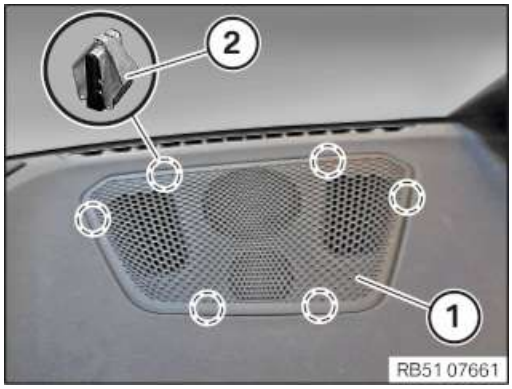
Usage	(Cleaning wedge) From 11/2008 this special tool replaces panel wedge 00 9 323 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

cardiagn.com

65 13 060 Removing and installing/replacing the speaker

PRELIMINARY WORK

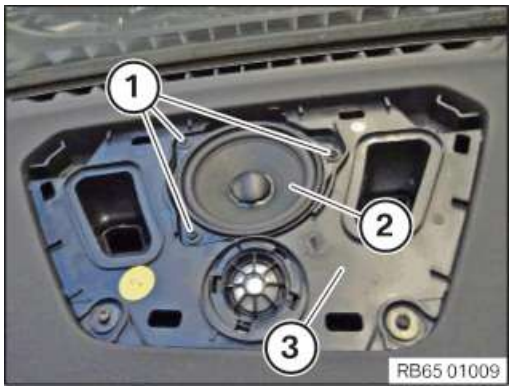
1 – Remove the speaker trim at the instrument panel



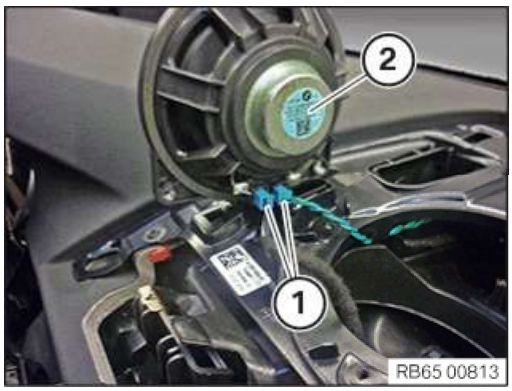
- Lever out the speaker trim (1) with the special tool 0 496 569 (00 9 325) from the clamps (2) toward the top and remove.

cardiagn.com

2 – Remove the mid-range speaker from the instrument panel

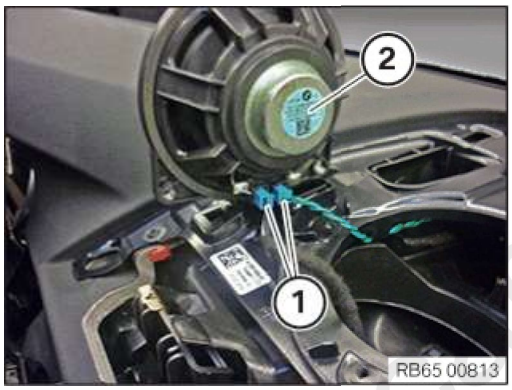


- Loosen screws (1).
- Lift the mid-range speaker (2) off the speaker holder (3).

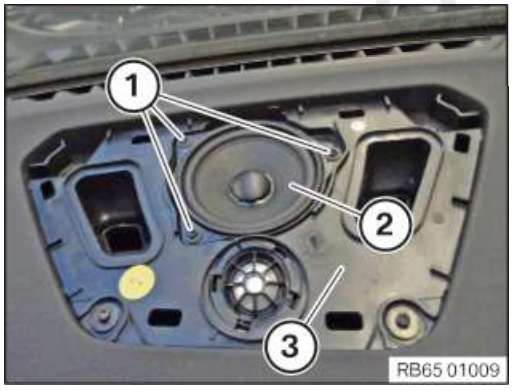


- Disconnect the plug connections (1) and remove the mid-range speaker (2).

3 – Install the mid-range speakers in the instrument panel



- Install the mid-range speaker (2) and connect the connectors (1).



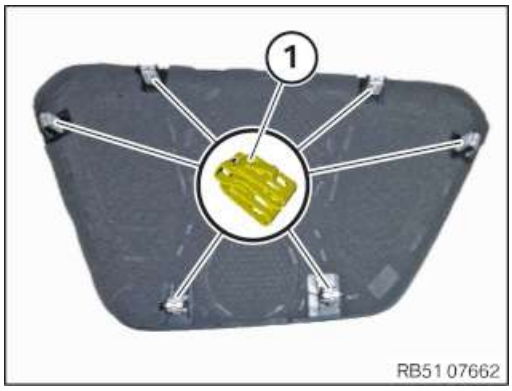
- Install the mid-range speaker (2) in the speaker holder (3).
- Tighten the screws (1).

Speaker on instrument panel / speaker on door

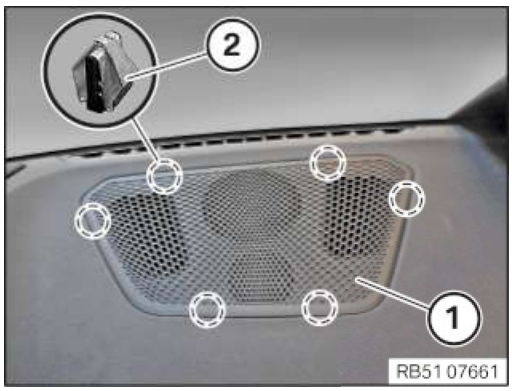
Screw		Tightening torque	1,8 Nm

rdiag.com

4 – Install the speaker trim at the instrument panel



- Check clamps (1) for damage.
- Replace broken or missing clamps (1).



- Position the speaker trim (1) correctly and engage it at the clamps (2).

Additional Information

Overview of Tightening Torques

Speaker on instrument panel / speaker on door Used in step 3

Screw		Tightening torque	1,8 Nm

Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common	Used in step 1
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

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65 13 090 Removing and installing/replacing the speaker

RISK OF DAMAGE

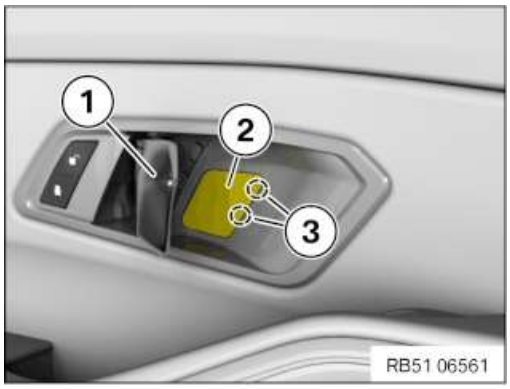
Scratches.

Tools and sharp-edged components can cause scratches.

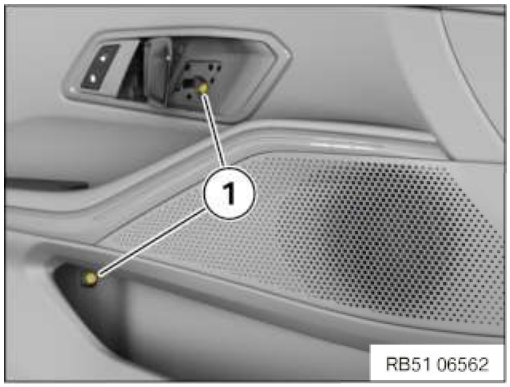
- Protect working area.
- Handle tools and components carefully.

cardiagn.com

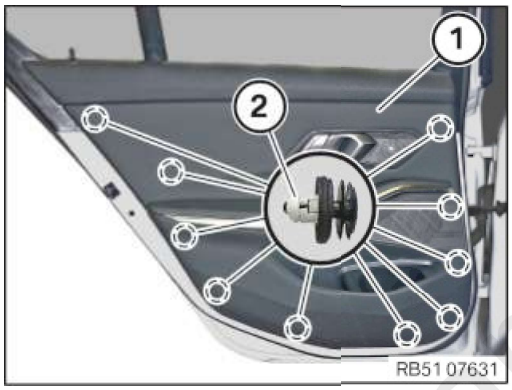
1 – Remove rear door trim



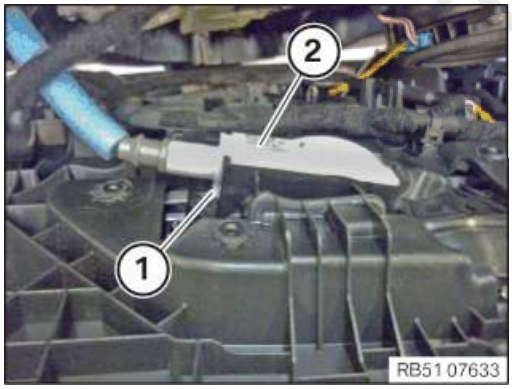
- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable tool.
- Remove trim (2).



- Loosen screws (1).



- Unclip the door trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Guide the door trim panel (1) upwards out of the weather strip.

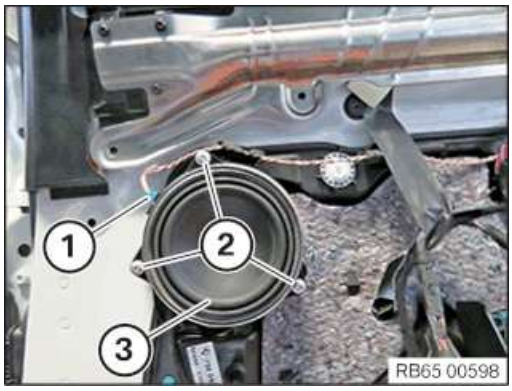


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock available plug connections and disconnect.
- Remove door trim panel.

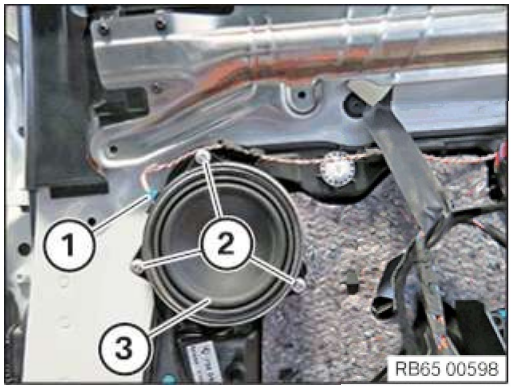
MAIN WORK

2 – Removing mid-range speaker in rear door



- Disconnect plug connection (1).
- Loosen screws (2).
- Remove the mid-range speaker (3).

3 – Installing mid-range speaker in rear door



- Correctly position the mid-range speaker (3).
- Tighten down screws (2).

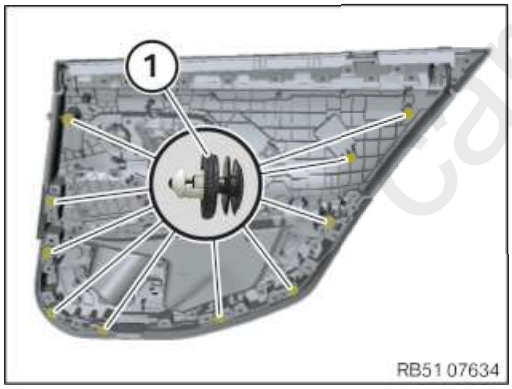
Speaker on instrument panel / speaker on door

Screw		Tightening torque	1,8 Nm

- Connect connector (1).

POSTPROCESSES

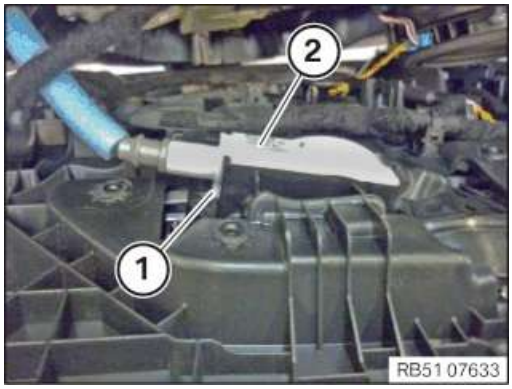
4 – Installing rear door trim panel



- Renew the clips (1).

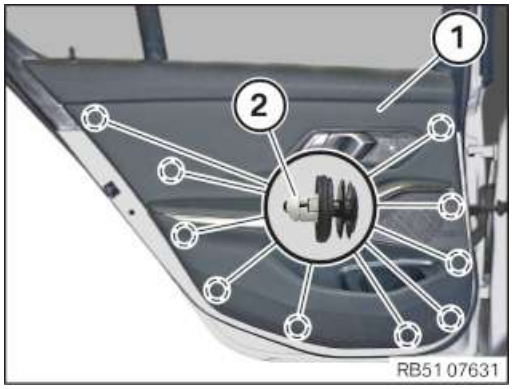
  Parts: Clips

  The clips (1) **must not be engaged. The disengaged state is shown.**

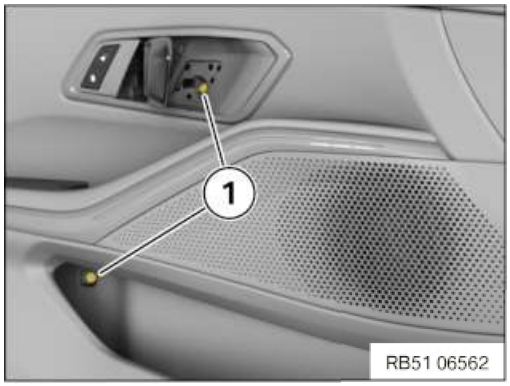


- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door handle (2) and clip in to the latch mechanism (1).
- Connect existing connectors and lock.

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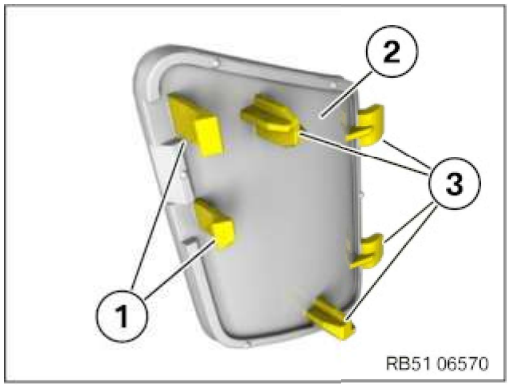
- Feed door trim panel from the top into the inner window recess finisher strip.
- Carefully clip in the door trim panel onto the clips (1).



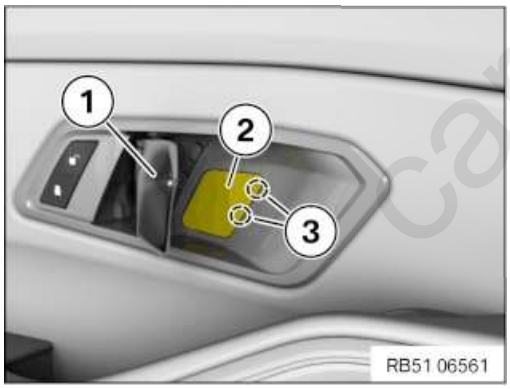
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

Additional Information

Overview of Tightening Torques

Speaker on instrument panel / speaker on door Used in step 3

Screw		Tightening torque	1,8 Nm

Door trim panel to door Used in step 4

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

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0 496 569 (00 9 325) Wedge



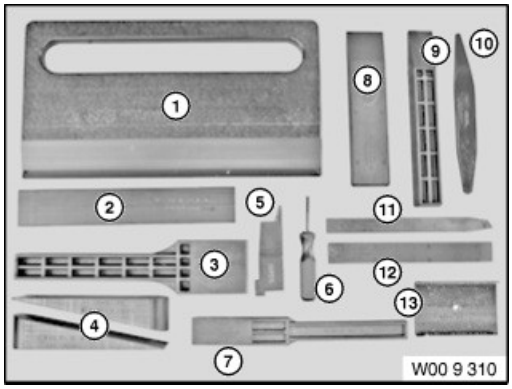
Common	Used in step 1
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

cardiagn.com

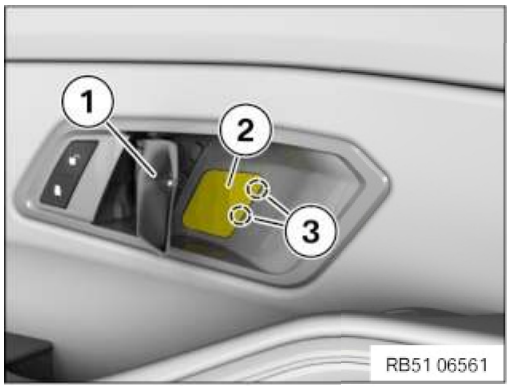
65 13 070 Removing and installing/replacing the speaker

PRELIMINARY WORK

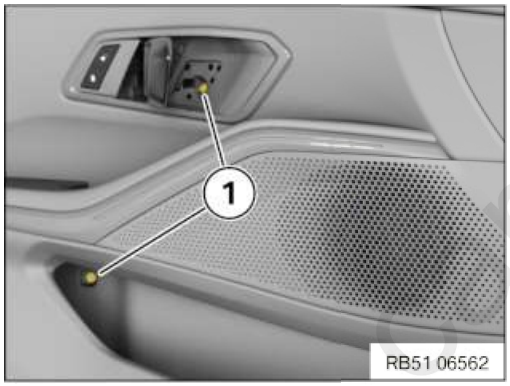
1 – Remove door trim panel



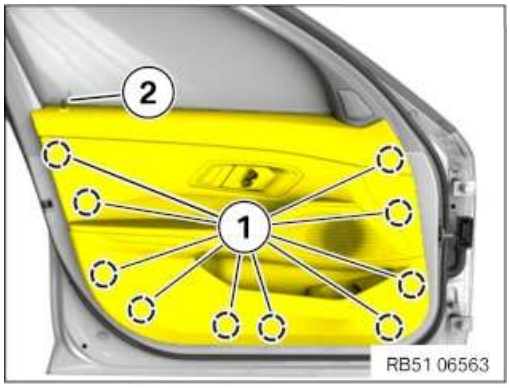
- Have the set of special tools 0 493 752 (00 9 329) ready.



- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable special tool.
- Remove trim (2).

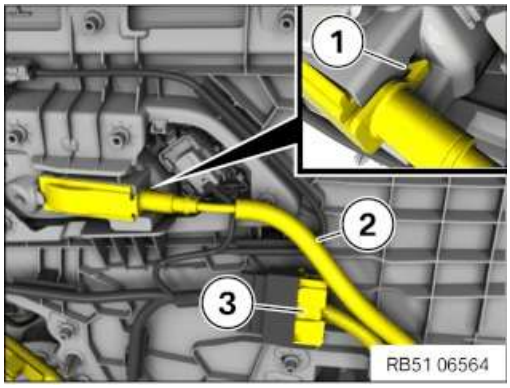


- Loosen screws (1).



- Unclip the door trim panel at the clips (1) using a suitable special tool.
- Guide the door trim panel upwards out of the front inner weather strip and the operating rod (2).

carsdiagn.com

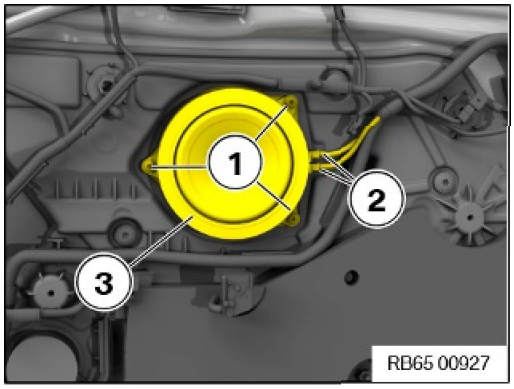


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock plug connection (3), disconnect it and remove the door trim panel.

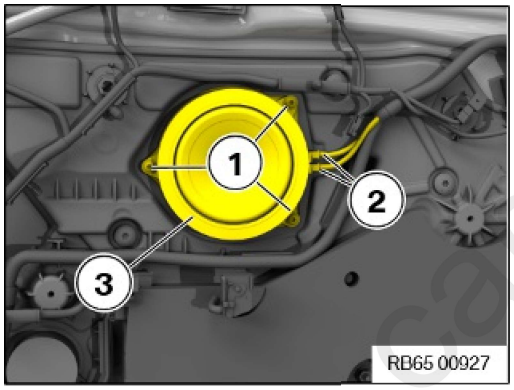
MAIN WORK

2 – Remove the speaker from the front door



- Loosen screws (1).
- Unlock and disconnect plug connections (2).
- Remove the speaker in the front door (3).

3 – Install the speaker on the front door



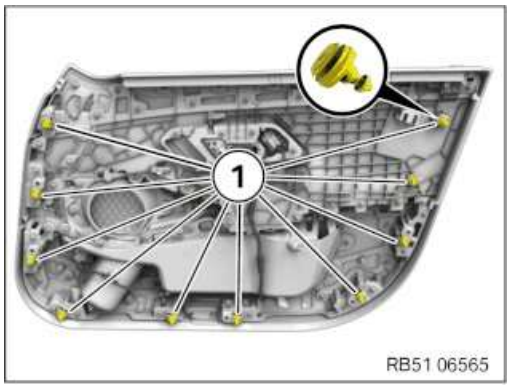
- Connect connectors (2) and lock.
- Position speaker on the front door (3) and tighten the screws (1).

Door speaker on door module carrier

Oval-head screw for thermoplastic		Tightening torque	2 Nm

POSTPROCESSES

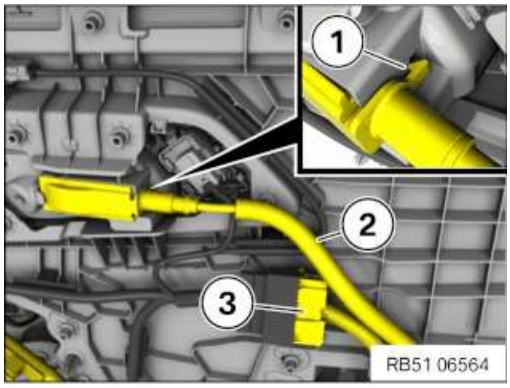
4 – Install door trim panel



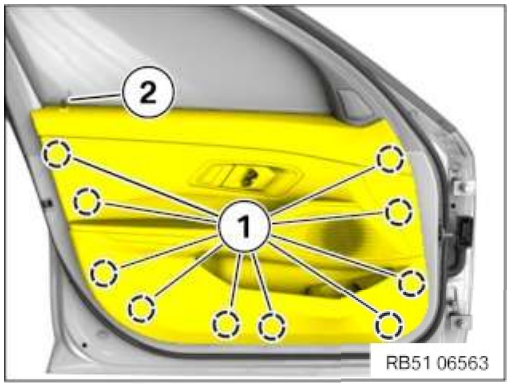
- Renew the clips (1).

  Parts: Clips

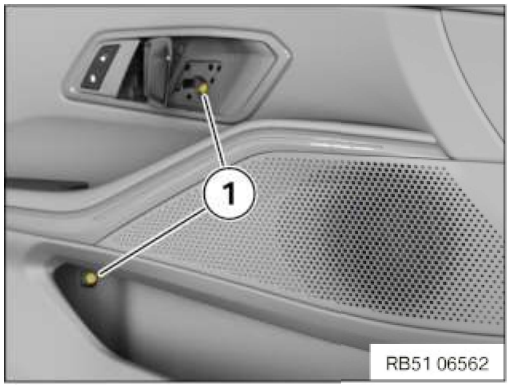
carmanuals.com



- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door opener (2) and clip in the latch mechanism (1).
- Connect connectors (3) and lock.



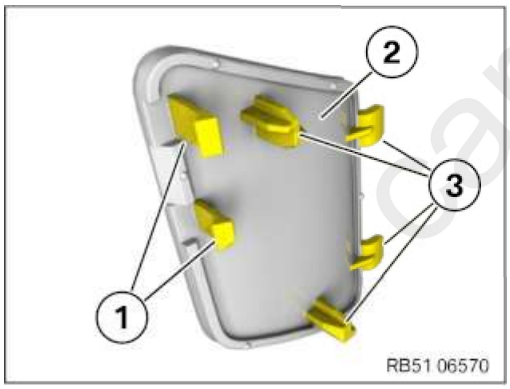
- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).



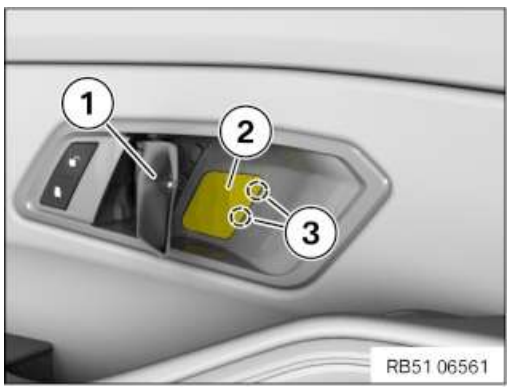
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

Additional Information

Overview of Tightening Torques

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Overview of Tightening Torques

Door speaker on door module carrier — Used in step 3

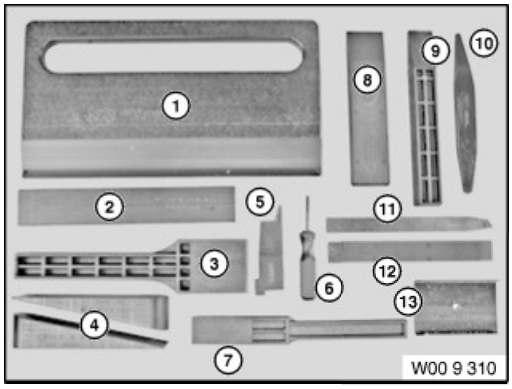
Oval-head screw for thermoplastic		Tightening torque	2 Nm

Door trim panel to door — Used in step 4

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common — Used in step 1

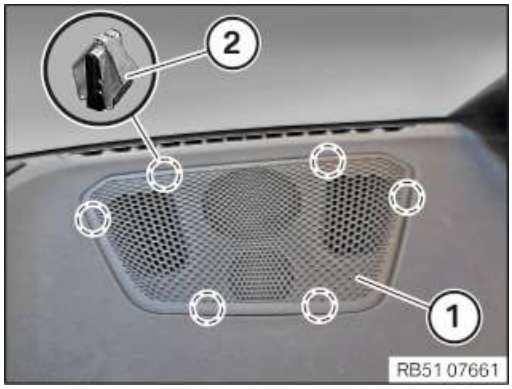
Usage	(Case) with insert not incl. panel wedges
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

cardiagn.com

65 13 062 Removing and installing/replacing the speaker

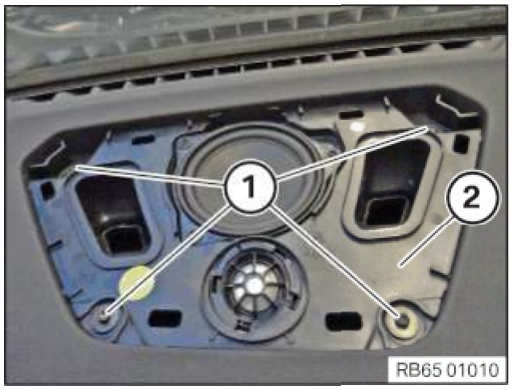
PRELIMINARY WORK

1 – Remove the speaker trim at the instrument panel

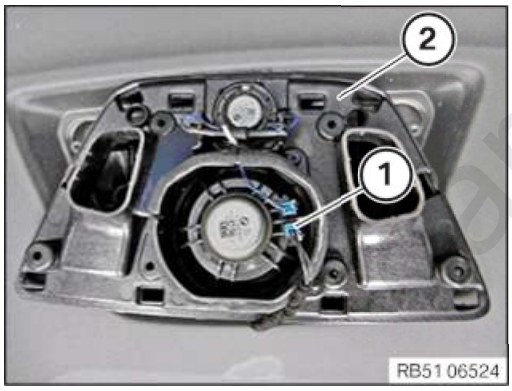


- Lever out the speaker trim (1) with the special tool 0 496 569 (00 9 325) from the clamps (2) toward the top and remove.

2 – Remove the speaker holder at the instrument panel



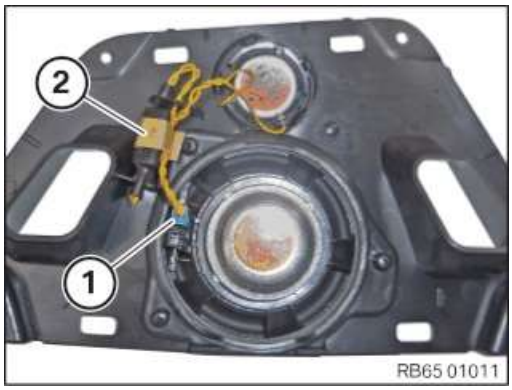
- Loosen screws (1).
- Pull out speaker holder (2) slightly with the loudspeakers and tilt it to the side.



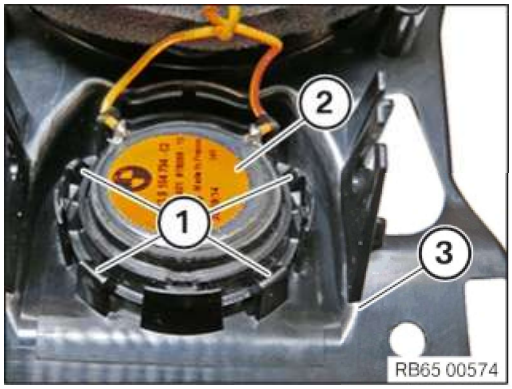
- Unlock plug connection (1) and disconnect.
- Remove the speaker holder (2).

eradiagn.com

3 – Remove the tweeter from the speaker holder

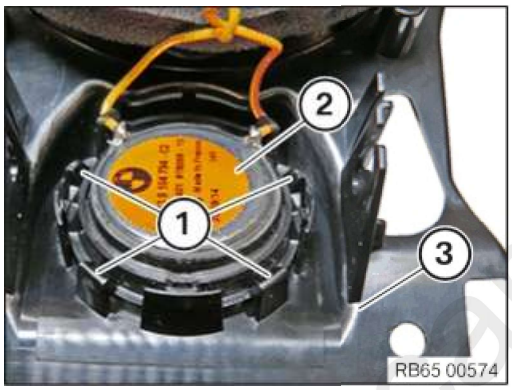


- Disconnect the connector (1) .
- Remove the resistor (2).



- Loosen the latch mechanisms (1).
- Remove the tweeter (2) from the speaker holder (3).

4 – Install the tweeter in the speaker holder



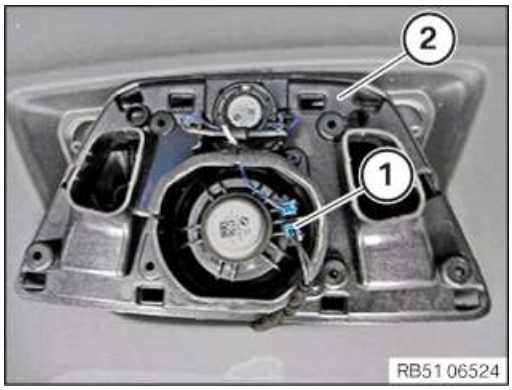
- Correctly position the tweeter (2) on the speaker holder (3).
- Correctly engage the tweeter (2) in the latch mechanisms (1).



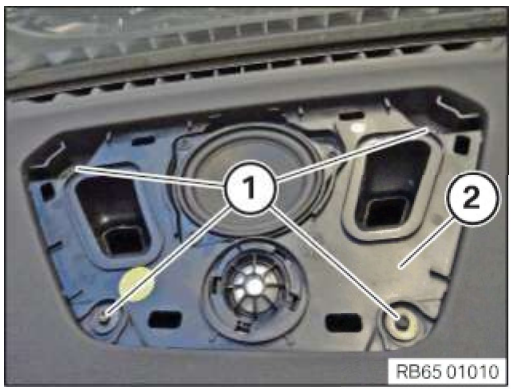
- Insert resistance (2).
- Connect connector (1).

bmwdiagn.com

5 – Install the speaker holder at the instrument panel



- Position the speaker holder (2).
- Connect connector (1).

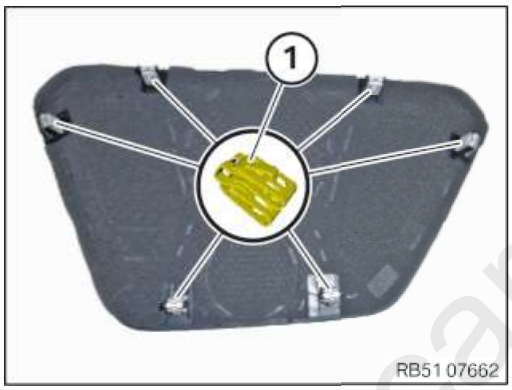


- Install the speaker holder (2).
- Tighten the screws (1).

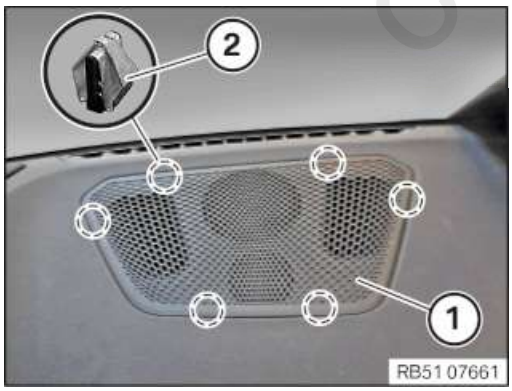
Speaker to support / support to instrument panel / support to body

Screw		Tightening torque	1,8 Nm

6 – Install the speaker trim at the instrument panel



- Check clamps (1) for damage.
- Replace broken or missing clamps (1).



- Position the speaker trim (1) correctly and engage it at the clamps (2).

Additional Information

Overview of Tightening Torques

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Speaker to support / support to instrument panel / support to body			Used in step 5
Screw		Tightening torque	1,8 Nm

Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common	Used in step 1
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

cardiagn.com

65 13 080 Removing and installing/replacing the speaker

RISK OF DAMAGE

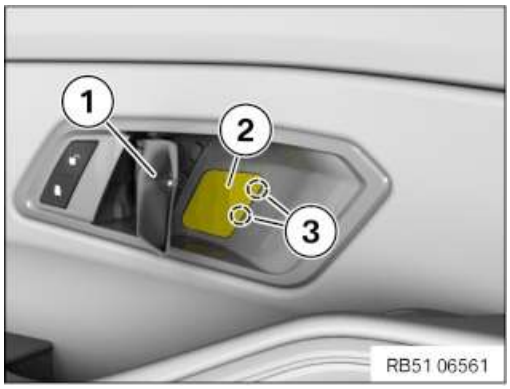
Scratches.

Tools and sharp-edged components can cause scratches.

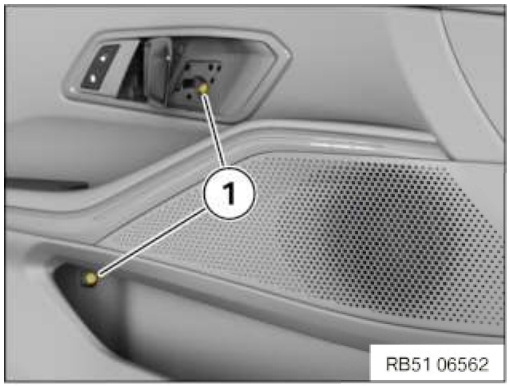
- Protect working area.
- Handle tools and components carefully.

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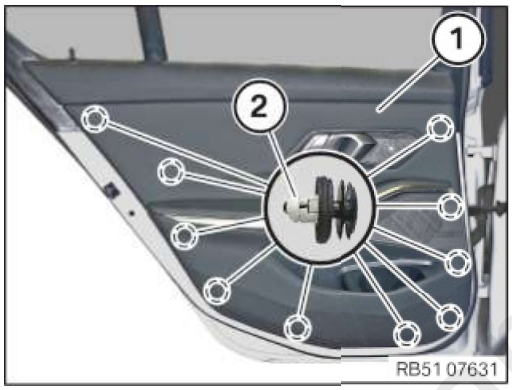
1 – Remove rear door trim



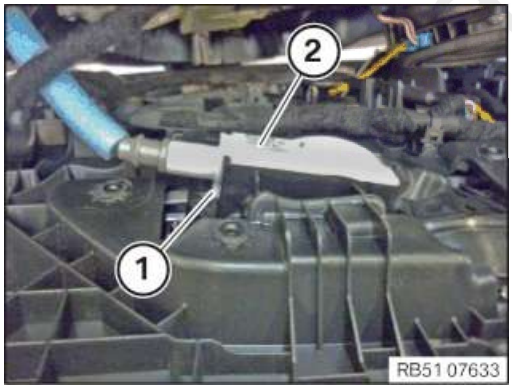
- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable tool.
- Remove trim (2).



- Loosen screws (1).



- Unclip the door trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Guide the door trim panel (1) upwards out of the weather strip.

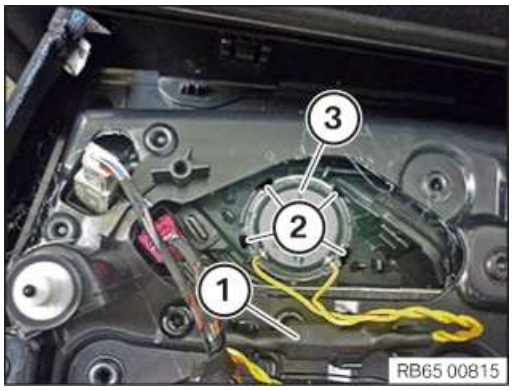


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock available plug connections and disconnect.
- Remove door trim panel.

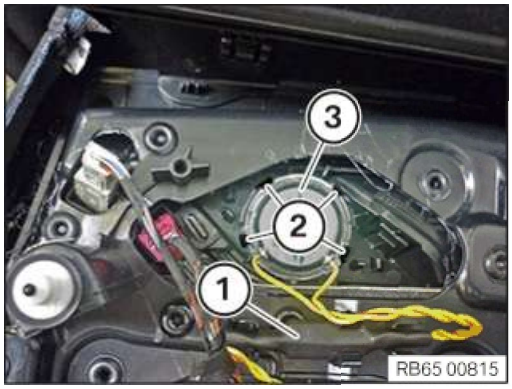
MAIN WORK

2 – Remove the tweeter from the rear door



- Unclip the resistance (1).
- Disconnect plug connection.
- Loosen the latch mechanisms (2).
- Remove the tweeter (3).

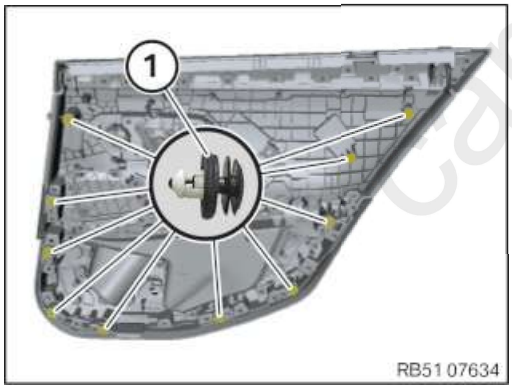
3 – Install the tweeter in the rear door



- Correctly position the tweeter (3) and clip it in at the latch mechanisms (2).
- Connect connector.
- Clip in the resistor (1).

POSTPROCESSES

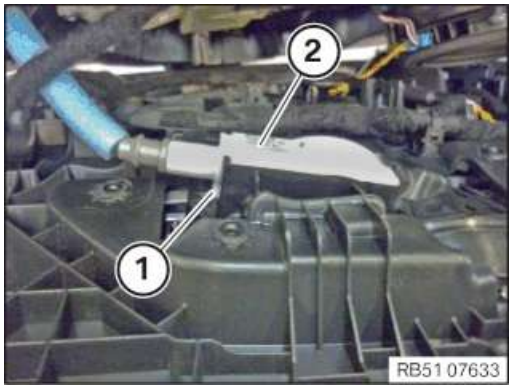
4 – Installing rear door trim panel



- Renew the clips (1).

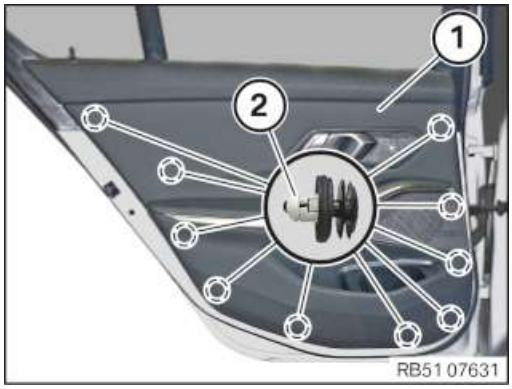
  Parts: Clips

  The clips (1) **must not be engaged. The disengaged state is shown.**

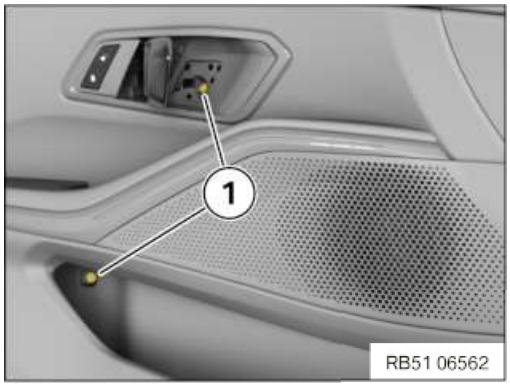


- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door handle (2) and clip in to the latch mechanism (1).
- Connect existing connectors and lock.

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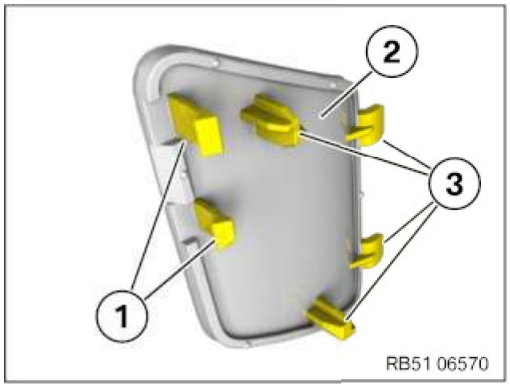
- Feed door trim panel from the top into the inner window recess finisher strip.
- Carefully clip in the door trim panel onto the clips (1).



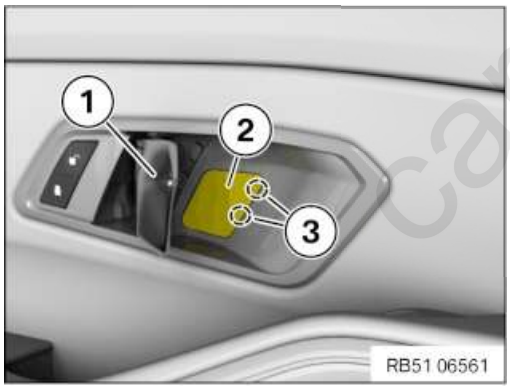
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

Additional Information

Overview of Tightening Torques

Door trim panel to door Used in step 4

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

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0 496 569 (00 9 325) Wedge



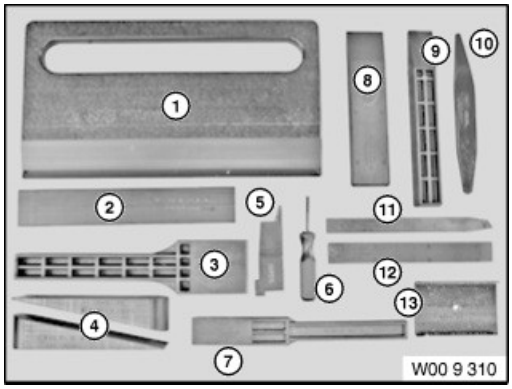
Common	Used in step 1
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

cardiagn.com

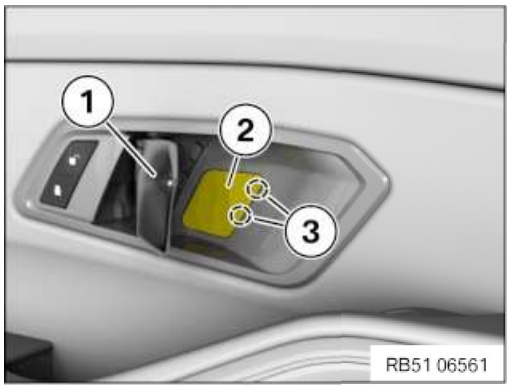
65 13 050 Removing and installing/replacing the speaker

PRELIMINARY WORK

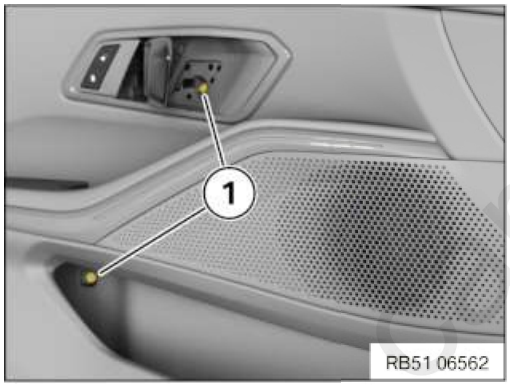
1 – Remove door trim panel



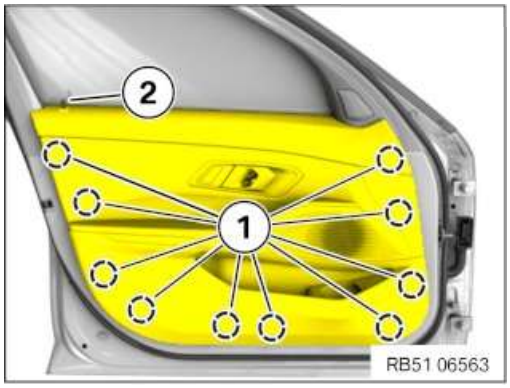
- Have the set of special tools 0 493 752 (00 9 329) ready.



- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable special tool.
- Remove trim (2).

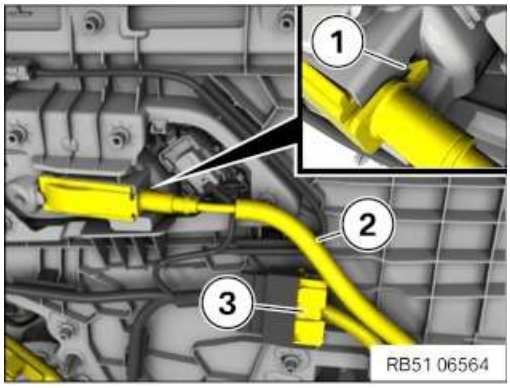


- Loosen screws (1).



- Unclip the door trim panel at the clips (1) using a suitable special tool.
- Guide the door trim panel upwards out of the front inner weather strip and the operating rod (2).

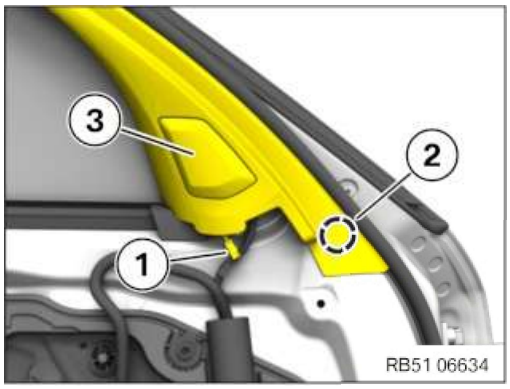
carsdiagn.com



- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock plug connection (3), disconnect it and remove the door trim panel.

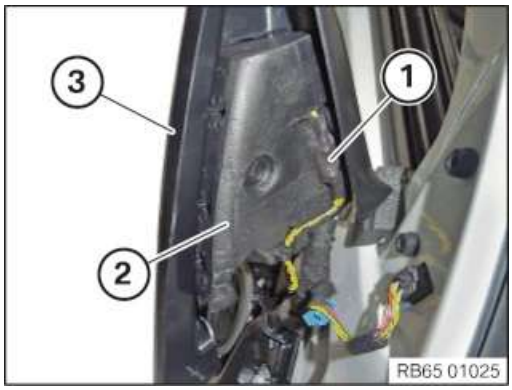
2 – Partially removing the cover on the inner window frame



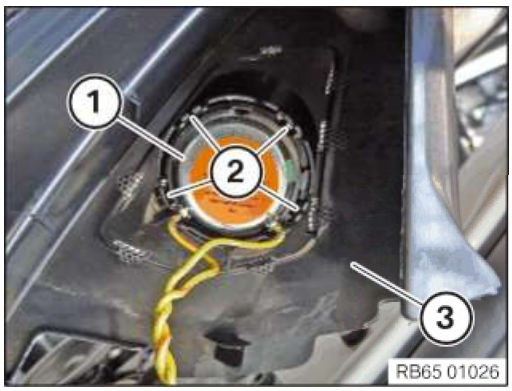
- If necessary, unlock and disconnect the plug connection (1).
- Unclip clip (2).
- Release the cover on inner window frame (3) in the area of the exterior rearview mirror.

cardiagn.com

3 – Remove the tweeter in mirror triangle

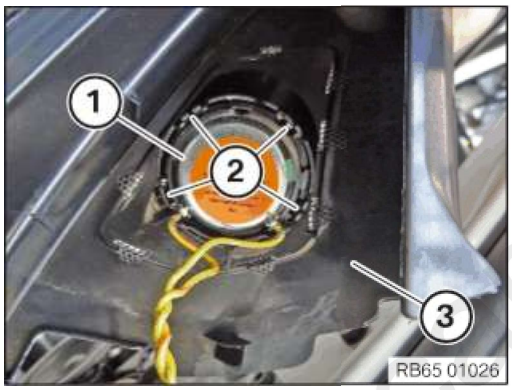


- Feed out the resistor (1) with cable from the foam material (2).
- Remove the foam material (1) from the cover (3).

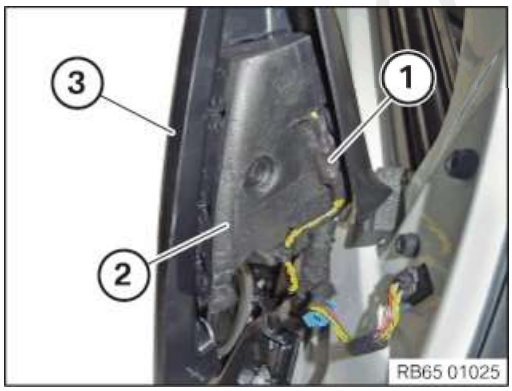


- Unclip the tweeter (1) from the latch mechanisms (2).
- Remove the tweeter (1) from the cover (3).

4 – Installing the tweeter in mirror triangle



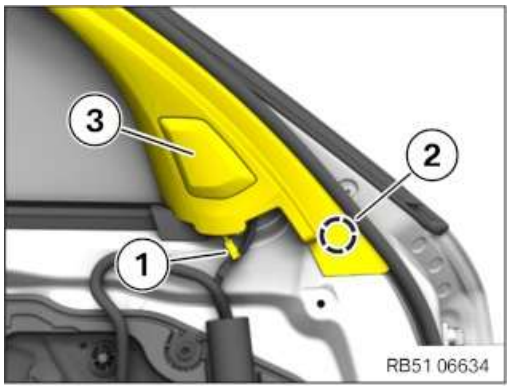
- Insert the tweeter (1) in the cover (3) correctly.
- Clip tweeter (1) into latch mechanisms (2).



- Insert the foam material (1) into the cover (3) and position it correctly.
- Feed in resistor (1) with cable to the foam material (2).

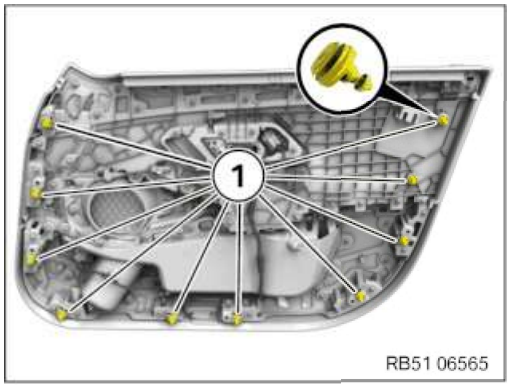
fordiag.com

5 – Installing the cover on the inside of the window frame partially



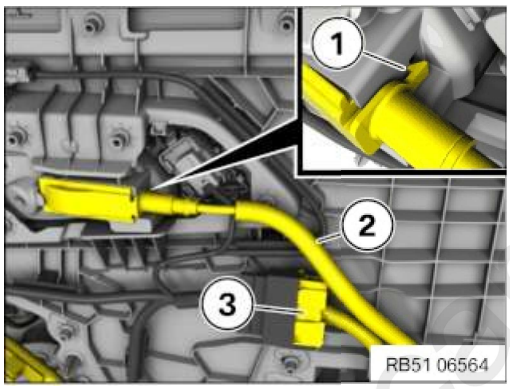
- Mount cover on the inner window frame (3) in the area of the exterior rearview mirror.
- Clip in the clip (2).
- If necessary, connect the connector (1) and lock it.

6 – Install door trim panel

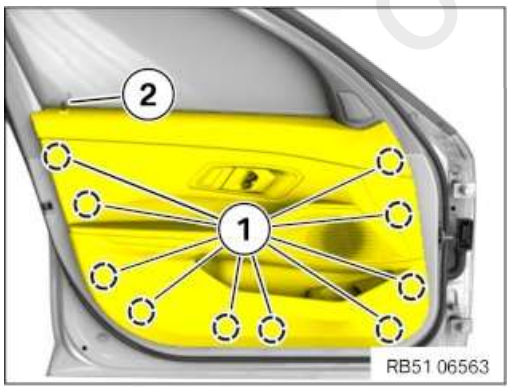


- Renew the clips (1).

  Parts: Clips

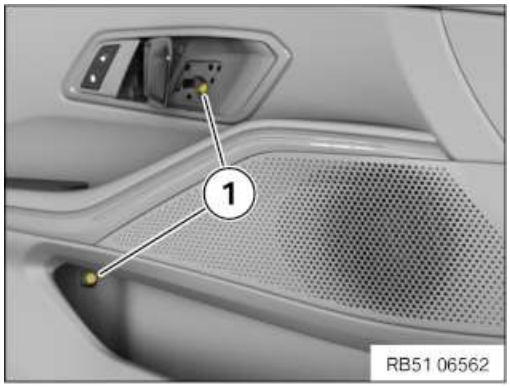


- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door opener (2) and clip in the latch mechanism (1).
- Connect connectors (3) and lock.



- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).

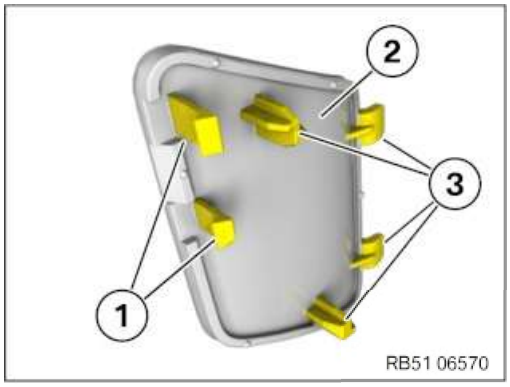
carfdiagn.com



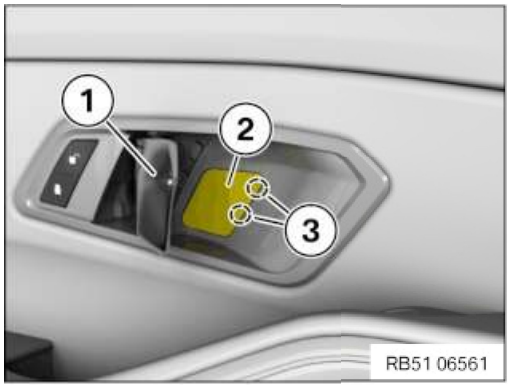
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

Additional Information

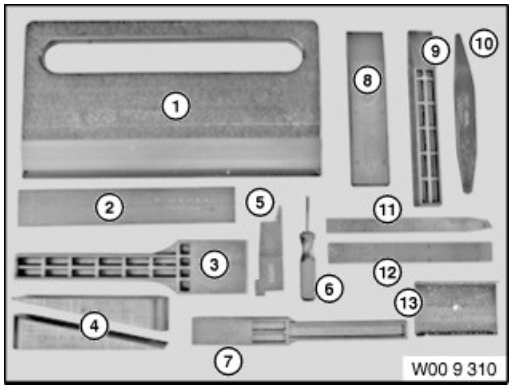
Overview of Tightening Torques

Door trim panel to door Used in step 6

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common Used in step 1

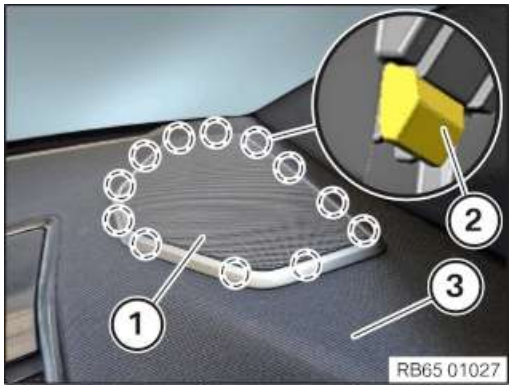
Usage	(Case) with insert not incl. panel wedges
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

cardiagn.com

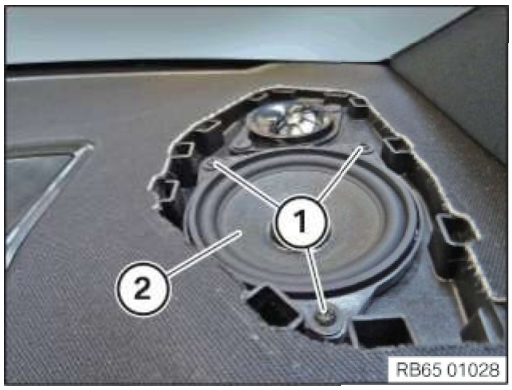
65 13 195 Removing and installing/replacing tweeter in rear

PRELIMINARY WORK

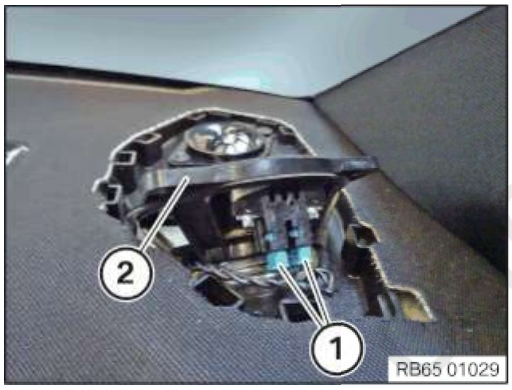
1 – Remove rear mid-range speaker



- Unclip the cover (1) with the special tool 0 496 571 (00 9 327) from the latch mechanisms (2) towards the top.
- Remove cover (1) from storage shelf (3).



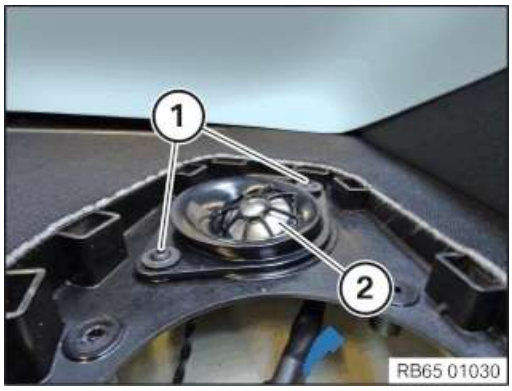
- Loosen screws (1).
- Raise mid-range speaker (2) slightly.



- Unlock and disconnect connector (1).
- Remove the mid-range speaker (2).

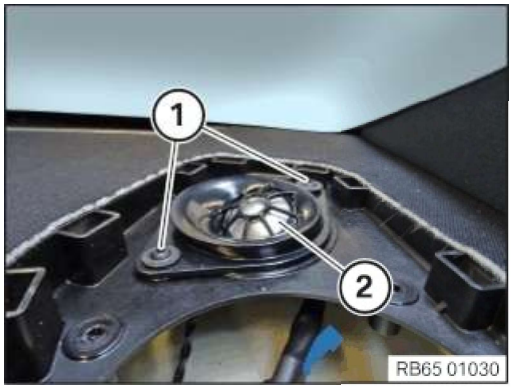
tdiagn.com

2 – Remove rear tweeter



- Loosen screws (1).
- Pull out the high-range speaker (2) with the cable and remove.

3 – Installing the rear tweeter



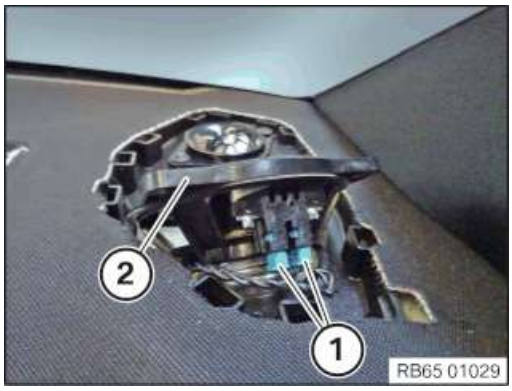
- Feed in the tweeter (2) with the cable and position correctly
- Tighten the screws (1).

Speaker to storage shelf/support

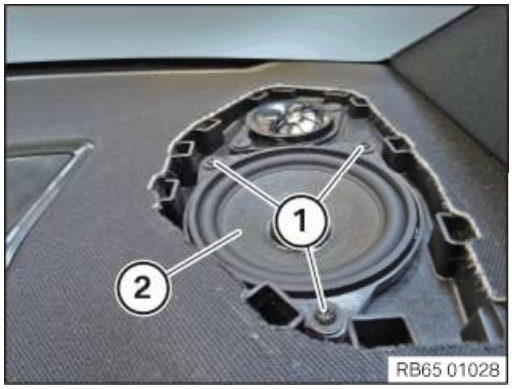
Screw		Tightening torque	1,8 Nm

cardiagn.com

4 – Installing the rear mid-range speaker



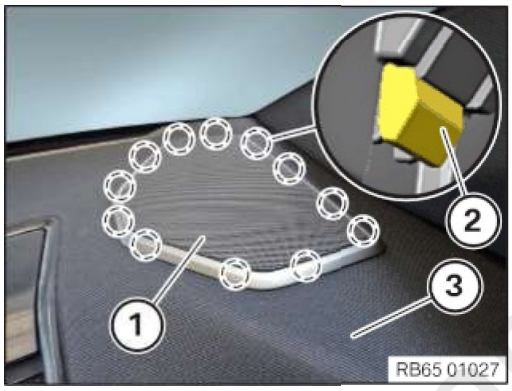
- Position the mid-range speaker (2).
- Connect connectors (1) and lock.



- Correctly position the mid-range speaker (2).
- Tighten the screws (1).

Speaker to storage shelf/support

Screw		Tightening torque	1,8 Nm



- Correctly position the cover (1) on the storage shelf (3).
- Clip in the cover (1) with the latch mechanisms (2) in storage shelf (3).

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Additional Information

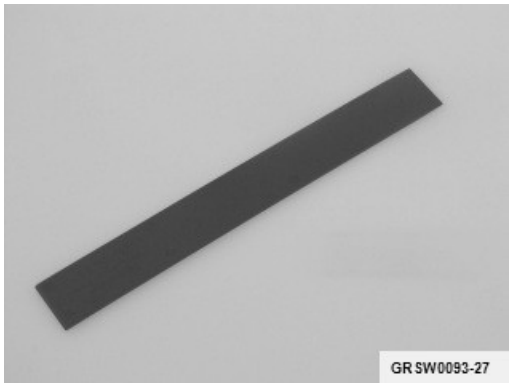
Overview of Tightening Torques

Speaker to storage shelf/support Used in step 34

Screw		Tightening torque	1,8 Nm

Overview of Special Tools

0 496 571 (00 9 327) Wedge



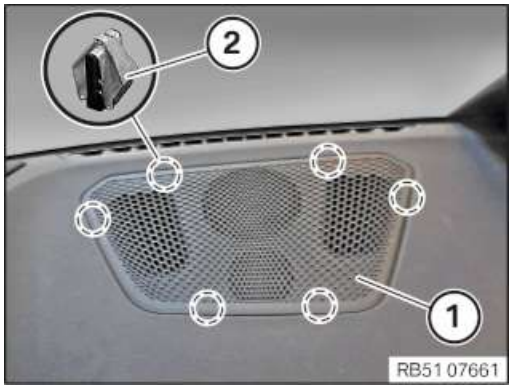
Common	Used in step 1
Usage	(Cleaning wedge) From 11/2008 this special tool replaces panel wedge 00 9 323 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

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65 13 066 Replace the front speaker holder

PRELIMINARY WORK

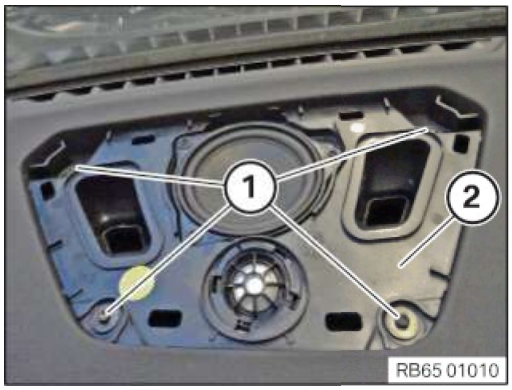
1 – Remove the speaker trim at the instrument panel



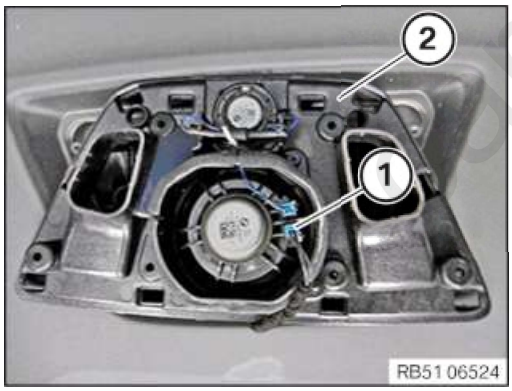
- Lever out the speaker trim (1) with the special tool 0 496 569 (00 9 325) from the clamps (2) toward the top and remove.

MAIN WORK

2 – Remove the speaker holder at the instrument panel

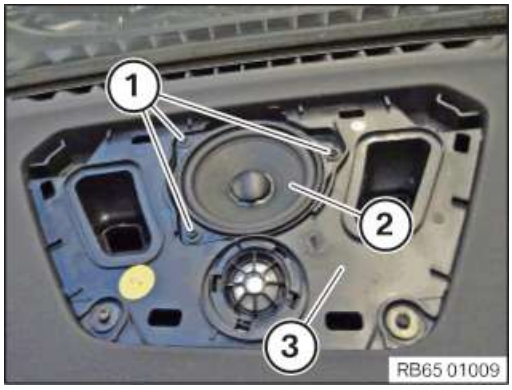


- Loosen screws (1).
- Pull out speaker holder (2) slightly with the loudspeakers and tilt it to the side.



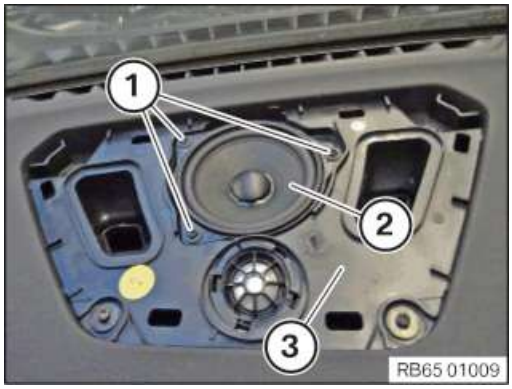
- Unlock plug connection (1) and disconnect.
- Remove the speaker holder (2).

3 – When replacing the speaker holder: Remount the mid-range speaker



- Loosen screws (1).
- Remove mid-range speaker (2) from speaker holder (3).

bmwdiagn.com

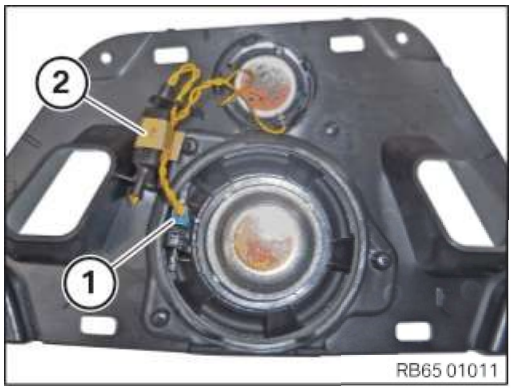


- Install the mid-range speaker (2) in the speaker holder (3).
- Tighten the screws (1).

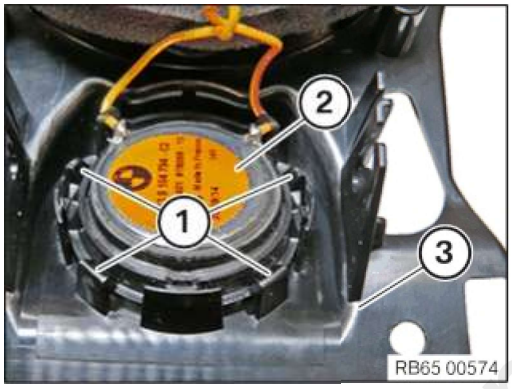
Speaker on instrument panel / speaker on door

Screw		Tightening torque	1,8 Nm

4 – Remove the tweeter from the speaker holder

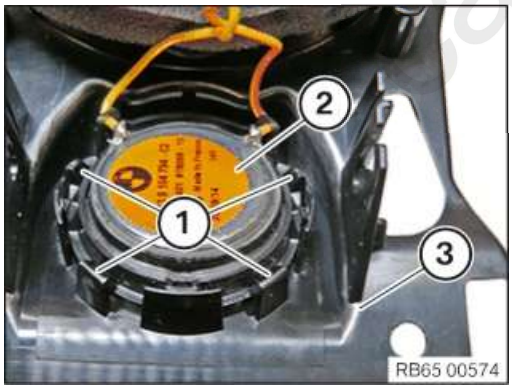


- Disconnect the connector (1) .
- Remove the resistor (2).



- Loosen the latch mechanisms (1).
- Remove the tweeter (2) from the speaker holder (3).

5 – Install the tweeter in the speaker holder



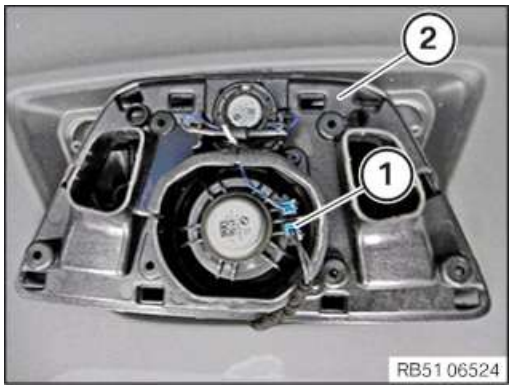
- Correctly position the tweeter (2) on the speaker holder (3).
- Correctly engage the tweeter (2) in the latch mechanisms (1).



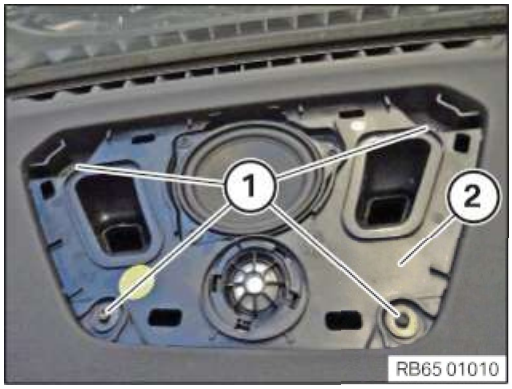
- Insert resistance (2).
- Connect connector (1).

carsdiagn.com

6 – Install the speaker holder at the instrument panel



- Position the speaker holder (2).
- Connect connector (1).



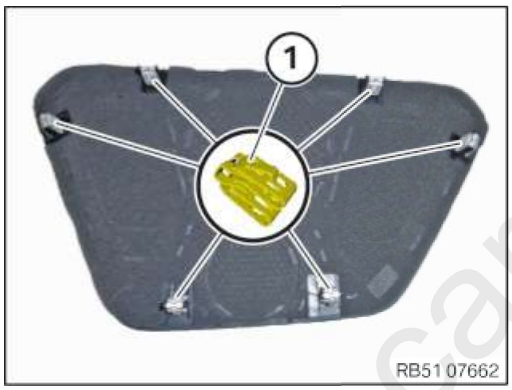
- Install the speaker holder (2).
- Tighten the screws (1).

Speaker to support / support to instrument panel / support to body

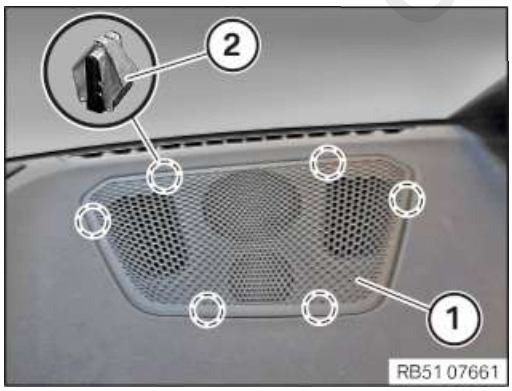
Screw		Tightening torque	1,8 Nm

POSTPROCESSES

7 – Install the speaker trim at the instrument panel



- Check clamps (1) for damage.
- Replace broken or missing clamps (1).



- Position the speaker trim (1) correctly and engage it at the clamps (2).

Additional Information

Overview of Tightening Torques

Speaker on instrument panel / speaker on door Used in step 3

Screw		Tightening torque	1,8 Nm

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Speaker to support / support to instrument panel / support to body			Used in step 6
Screw		Tightening torque	1,8 Nm

Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common	Used in step 1
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

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65 20 090 Removing and installing or replacing aerial amplifier

RISK OF DAMAGE

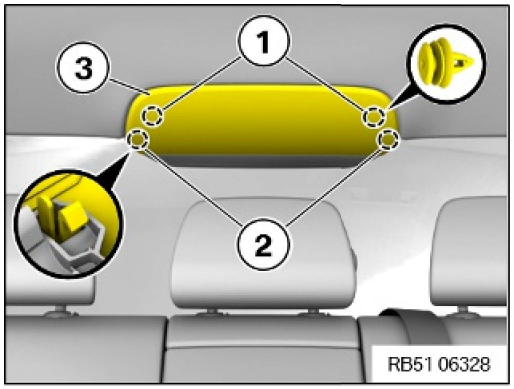
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

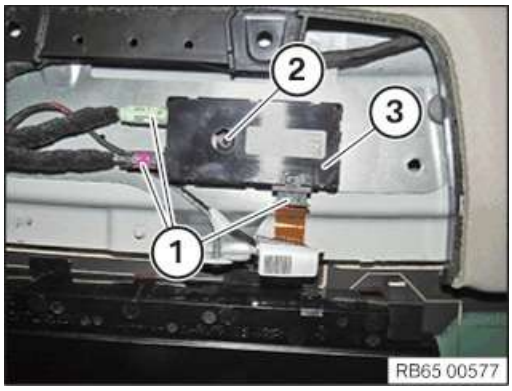
1 – Removing the trim of the additional brake light



- Loosen the clips (1).
- Release the latch mechanisms (2) and remove the trim of the additional brake light (3).

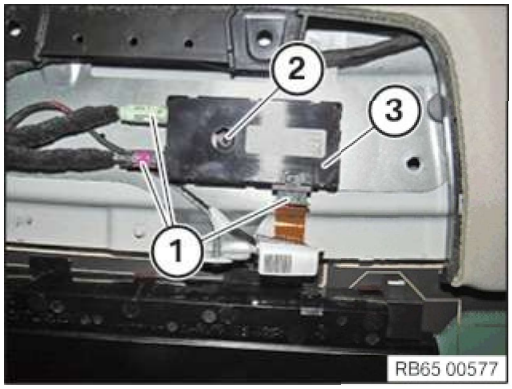
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2 – Removing aerial amplifier



- Unlock and disconnect connector (1).
- Loosen screw (2).
- Remove aerial amplifier (3).

3 – Installing the aerial amplifier



- Correctly position the aerial amplifier (3).
- Tighten down screw (2).

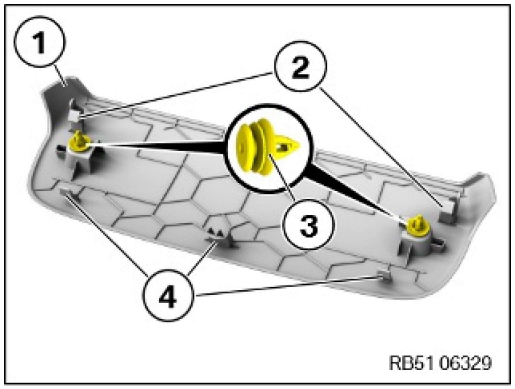
Aerial amplifier to body

Screw		Tightening torque	3 Nm

- Connect connectors (1) and lock.

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4 – Installing trim for additional brake light



Check

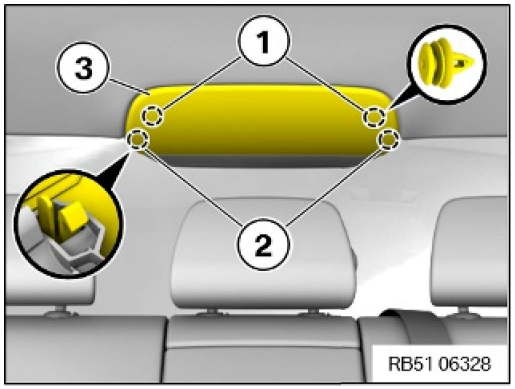
- Check the clips (3) for damage and renew if necessary.
- Check latch mechanisms (2) and guides (4) for damage.

Result

» The latch mechanism or the guide is damaged.

Measure

- Renew the trim for the additional brake light.



- Position trim for additional brake light (1) from the bottom and clip it in with latch mechanisms (2).
- Clip in clips (1).

Additional Information

Overview of Tightening Torques

Aerial amplifier to body			Used in step 3
Screw		Tightening torque	3 Nm

Links

Repair instructions	Used in step
61 35 ... Notes on ESD protection (Electro Static Discharge)	

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65 20 030 Removing and installing roof-mounted aerial housing

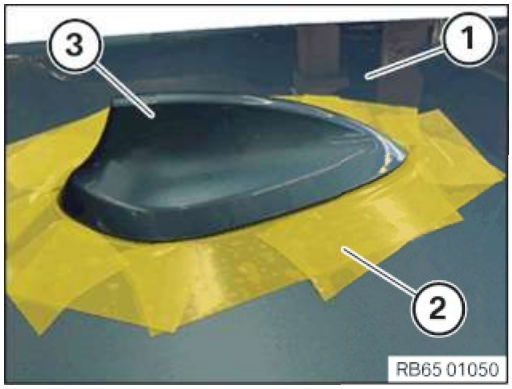
1 – Remove the empty roof-mounted aerial housing

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



- Slide the yellow plastic adhesive tape (2) under the empty housing (3) as far as possible.

Expendable materials

Yellow plastic adhesive tape		83199410979

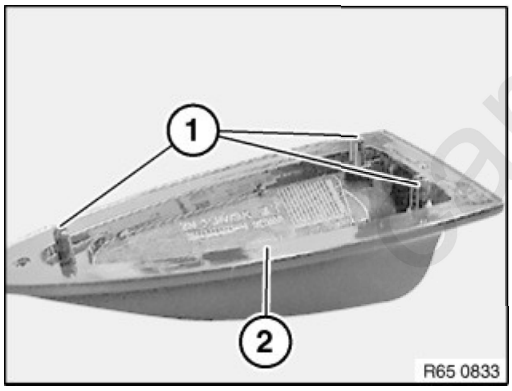
- Mask the roof outer skin (1)as shown.
- Cut through the adhesive bead using the special tool and remove the empty roof-mounted aerial housing (3).

Note: With increased effort, reposition the special tool to recut the adhesive bead, if necessary.

- If necessary, touch up the paintwork damage.

2 – Installing the roof-mounted aerial housing

Note: The preparations correspond to the instructions of bound windscreens; see additional information.



TECHNICAL INFORMATION

The following procedure forms the basis for these repair instructions and must be observed without fail.

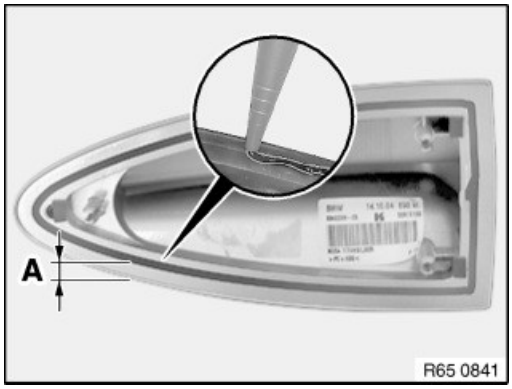
For more information see: 51 31 ... General procedure for disassembly/installation of bonded window glass

- Check centring pins (1) for damage.
- Clean the bonding surface (2) with cleaning agent R1.

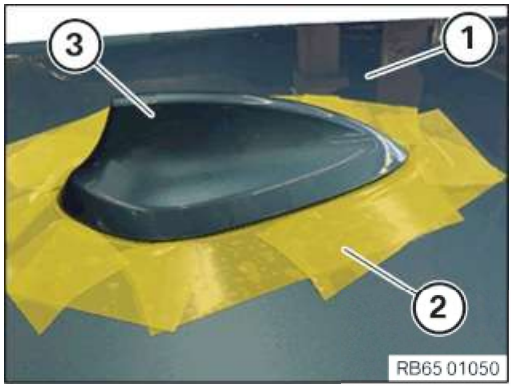
Expendable materials

Cleaning agent R1	100 ml, Bottle	83192211217

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- Apply trace of adhesive bead all round outer contour as follows.
- Distance between adhesive bead and edge of aerial housing:
  - A=6.5 mm ±1 mm
- The start and end of the bead must overlap by a maximum of 10 mm.
- To prevent the adhesive from leaking, the adhesive bead diameter must not exceed 2.5 mm to 3.5 mm.



- Join the empty housing coated with adhesive (3) to block by hand.
- To spread the adhesive better, move the empty housing horizontally (3) back and forth while lightly pressing down.
- If necessary, fix the empty housing (3) with adhesive tape and press evenly.
- After bonding, leave vehicle to stand for at least 3 hours at room temperature.
- Remove the adhesive tape (2) from the outer roof panel (1) and if necessary from the empty housing (3).

Additional Information

Overview of Special Tools

Replacement tools:

0 496 531 (65 2 014) Blade



Common	Used in step 1
Usage	(Special blade) Replaced by special tool 65 2 013 since 08/2008.
Included in the tool or work	0 494 968
Storage location	
Replaced by	
In connection with	
SI-Number	01 15 08 (475)

Links

General repair instructions	Used in step
99 00 ... Touching up paintwork damage	12
51 31 ... Notes on window bonding repair kit	2
51 00 ... Overview of consumables (Electronic Parts Catalogue)	2

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65 20 020 Removing and installing/renewing roof aerial

RISK OF DAMAGE

Fold the headlining.

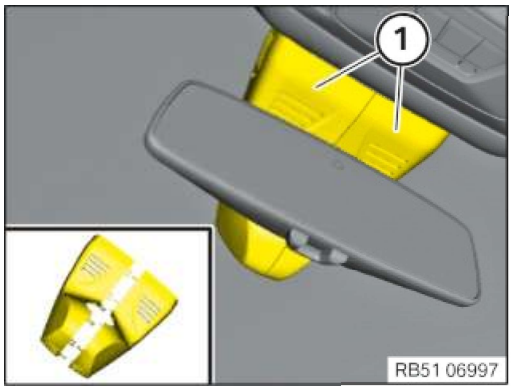
If the headlining is folded, it may have to be replaced.

- Carry out tasks with a second person to assist.
- Support the headlining at the front and back.

PRELIMINARY WORK

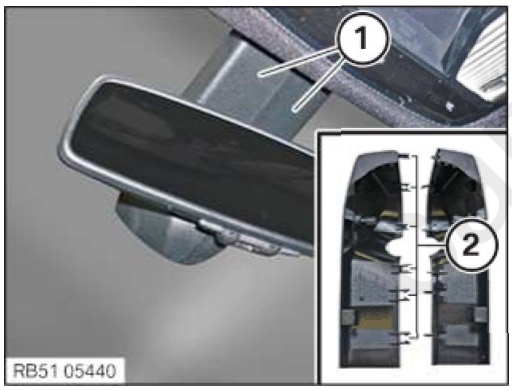
1 – Removing the covers for the interior mirror

- **Version A:**



- Release the cover (1) at the centre from the latch mechanisms (2) with a suitable plastic wedge and remove.

- **Version B:**

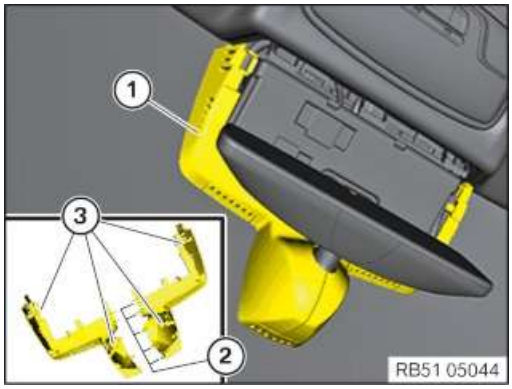


- Release the cover (1) from the latch mechanisms (2) with a suitable plastic wedge and remove sideways.

- **Version C:**



- Detach cover (1) from the clamps (2) in the marked area using a suitable plastic wedge and pull down a certain distance.
- Release cover (1) at the retaining lugs (3) and remove from the guides to the rear.



- Release cover (1) from the latch mechanisms (2) and (3) and remove sideways.
- Remove cover (1) from mirror base (2).

2 – Remove both A-pillar trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the A-pillar trim panel**

WARNING

Airbag unit.

Danger! Life-threatening injuries!

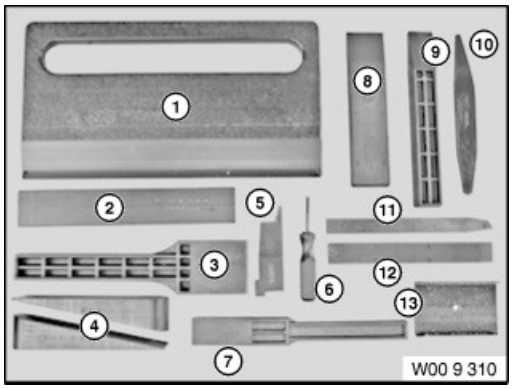
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

WARNING

Pyrotechnic components.

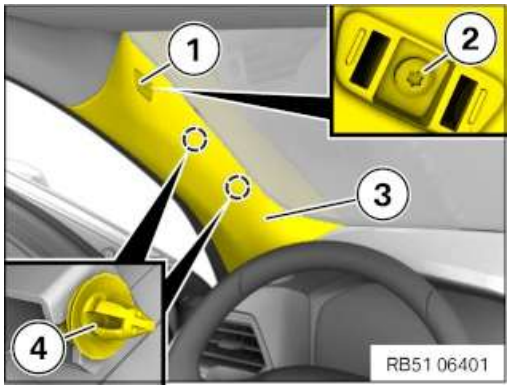
Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



- Have the set of special tools 0 493 752 (00 9 329) ready.

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- Unclip the cover (1) with suitable tools.
- Loosen screw (2).
- Unclip A-pillar trim panel (3) with clips (4) and guide it out upwards.

3 – Remove both sun visors

NOTICE

Description is for left component only. Procedure on the right side is identical.



▸ **Remove sun visor**

- Pull out the cover (1).
- Detach the sun visor (2) from the counter support .
- Disengage the sun visor (2) in front to the bottom and thread it out of the headlining at the rear.
- Unlock associated plug connection and disconnect.

4 – Remove both counter supports for the sun visors

NOTICE

Description is for left component only. Procedure on the right side is identical.



▸ **Remove the counter support for the sun visor**

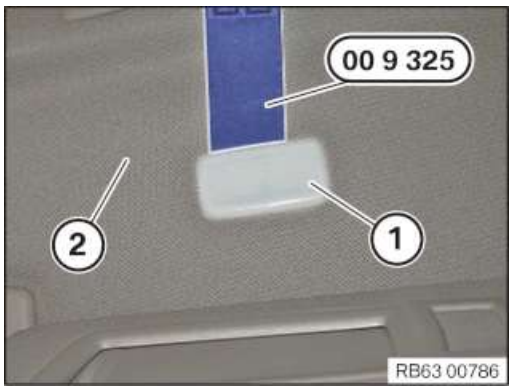
- Pull out the cover (1).
- Push the clamps (2) together and pull the counter support (3) out of the headlining.

5 – Removing front vanity mirror light

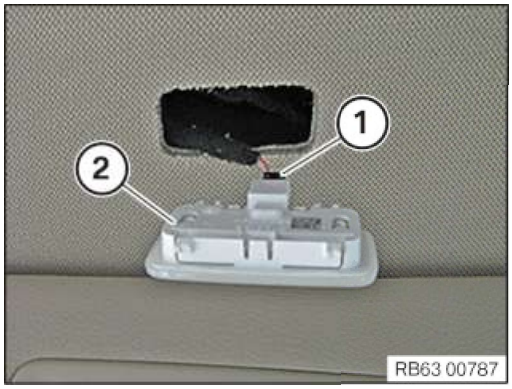
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NOTICE

Description is for left component only. Procedure on the right side is identical.



- Lever out the front vanity mirror light (1) using special tool 0 496 569 (00 9 325) from the headlining (2).



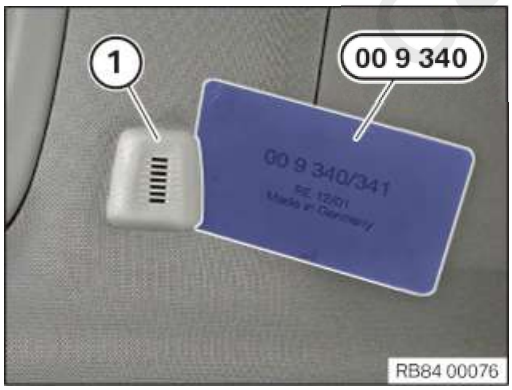
- Unlock and disconnect connector (1).
- Remove the front vanity mirror light (2).

6 – Remove both microphones

NOTICE

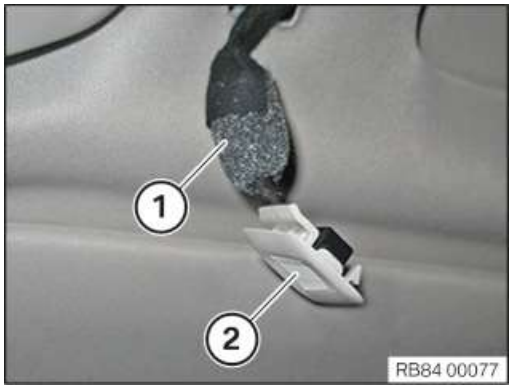
Description is for left component only. Procedure on the right side is identical.

▸ **Removing hands-free microphone**



- Lever out the hands-free microphone (1) with the special tool 0 493 687 (00 9 340).

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- Open insulation (1).
- Disconnect plug connection.
- Remove hands-free microphone (2).

7 – Removing the roof function centre (FZD)



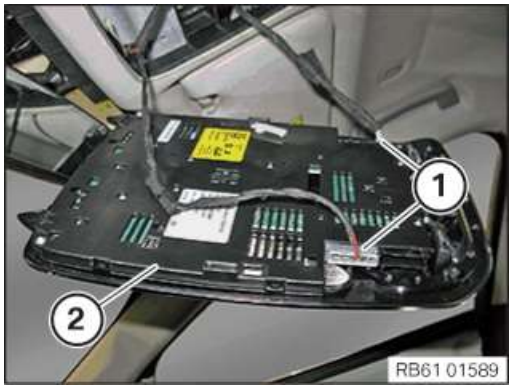
- Unclip the cover (1).



- Loosen screws (1).



- Unclip the roof function centre (FZD) (1) from the clamps (2).
- Thread the roof function centre (FZD) (1) out of the guides (3).



- Unlock and disconnect plug connections (1).
- Unclip the cable for the roof function centre (FZD) (2) from the cable clip.

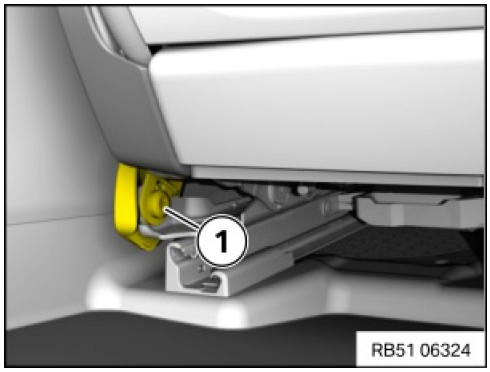
8 – Removing both B-pillar trim panels

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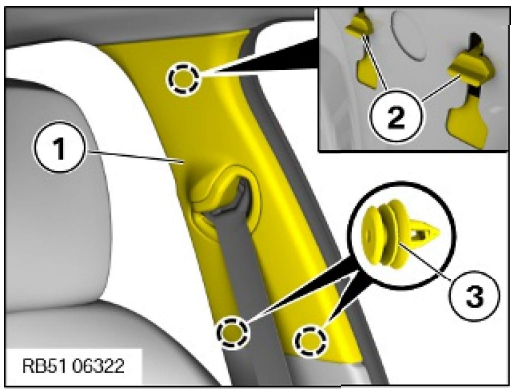
NOTICE

Description is for left component only. Procedure on the right side is identical.

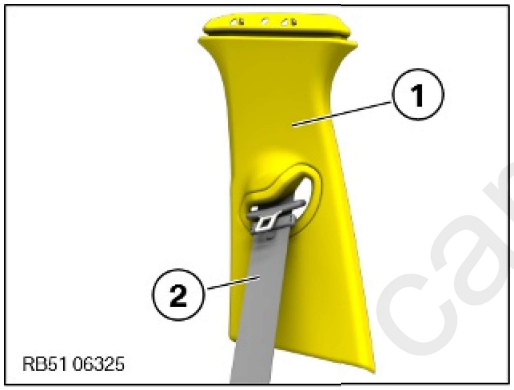
▶ **Remove the B-pillar trim panel**



- Fully position the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).

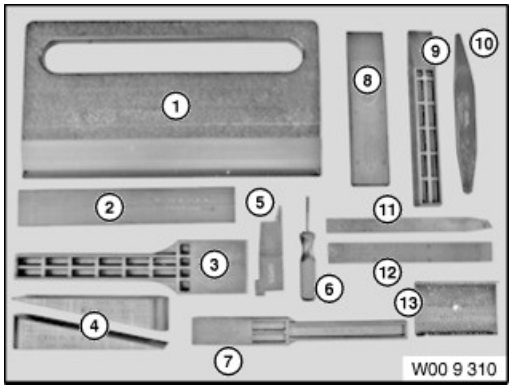


- Unclip clips (3).
- Feed B-pillar trim panel (1) out of the front and rear lip of edge protections and the guides (2).



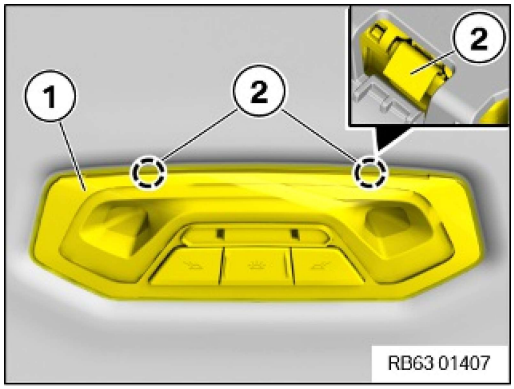
- Feed upper seat belt (2) out of B-pillar trim panel (1).

9 – Remove interior roof light



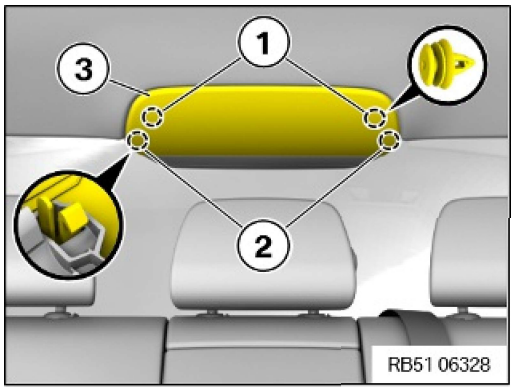
- Have the set of special tools 0 493 752 (00 9 329) ready.

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- Lever interior roof light (1) out of clamps (2) using a suitable tool.
- Unlock plug connection and disconnect.

10 – Removing the trim of the additional brake light



- Loosen the clips (1).
- Release the latch mechanisms (2) and remove the trim of the additional brake light (3).

11 – Remove both C-pillar trim panels

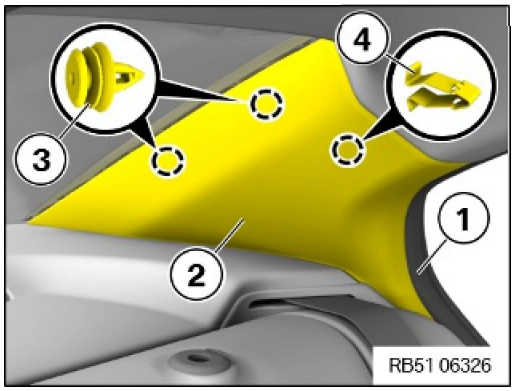
NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove C-pillar trim panel**

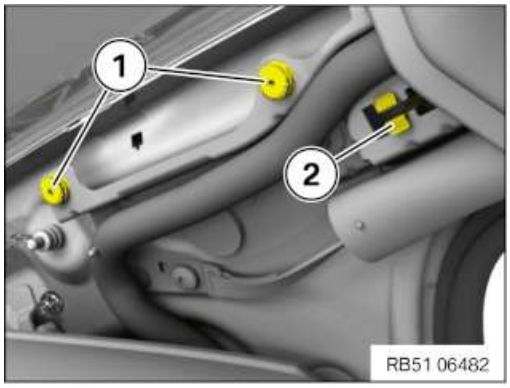
NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



- Unclip clamp (4).
- Unclip clips (3).
- Feed out C-pillar trim panel (2) from the guides to the front.
- Thread out C-pillar trim panel (2) from the lip of edge protection (1).

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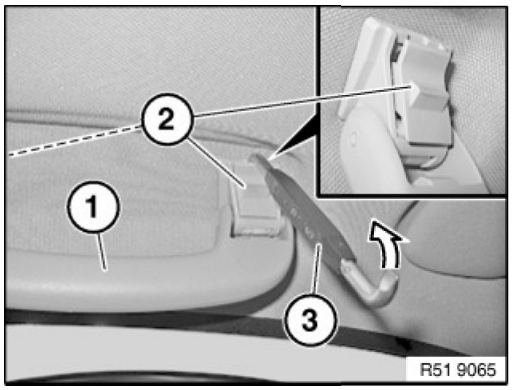
- If required, remove the clips (1) and the clamp (2) and connect it to the trim panel.

12 – Removing all grab handles

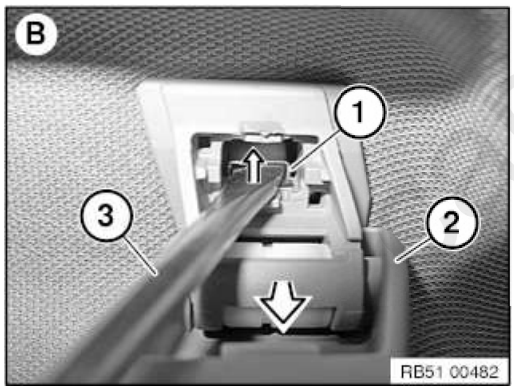
NOTICE

The description is for one component only. The procedure is identical for all further components.

▸ **Removing the grab handle**



- Expand the grab handle (1) towards the bottom.
- Disengage and remove the locking insert (2) with an angle screwdriver (3) as shown.



- Pull the grab handle (2) slightly to the inside and hold it.
- Use a suitable screwdriver (3) to detach the upper and lower release tabs (1).
- Guide the grab handle (2) out.
- Repeat the operation on the other side of the grab handle (2).

13 – Lower the headlining (with SHD)

Prerequisite

The front seats have been fully adjusted towards the bottom.

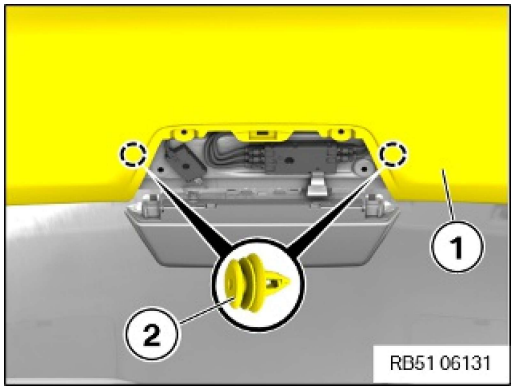
The front seat backrests have been fully adjusted towards the rear.

RISK OF DAMAGE

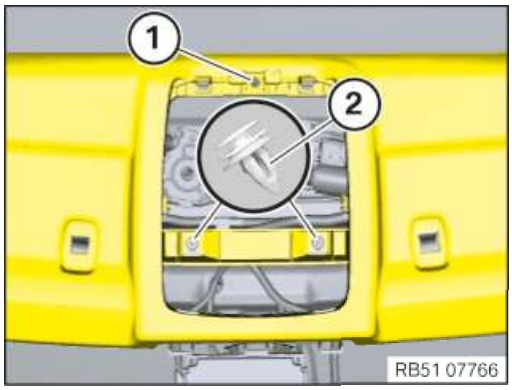
Fold the headlining.

If the headlining is folded, it may have to be replaced.

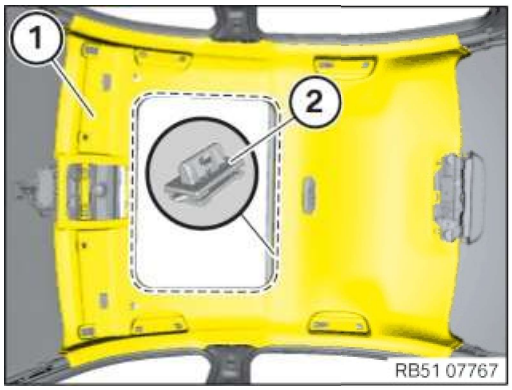
- Carry out tasks with a second person to assist.
- Support the headlining at the front and back.



- Unclip the headlining (1) on the clips (2) downwards.



- Loosen screw (1).
- Unclip the headlining on the clips (2) downwards.



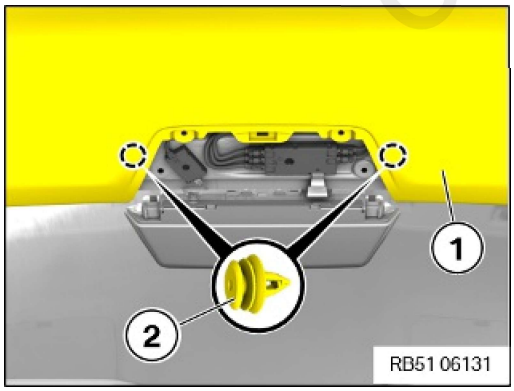
- Carefully unclip headlining (1) from the slide/tilt sunroof unit and clamps (2) in the area of the dotted line.
- Feed out headlining (1) with the help of an auxiliary person on the particular edge protection and place it on the seats.

14 – Lower roofliner

Prerequisite

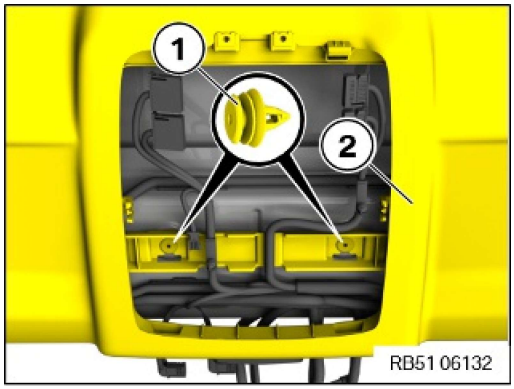
The front seats have been fully adjusted towards the bottom.

The front seat backrests have been fully adjusted towards the rear.



- Unclip the headlining (1) from the clips (2) downward.

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- Release the clips (1) at the headlining (2).
- Feed out headlining (2) with the help of an auxiliary person at the respective edge protection and place it on the seats.

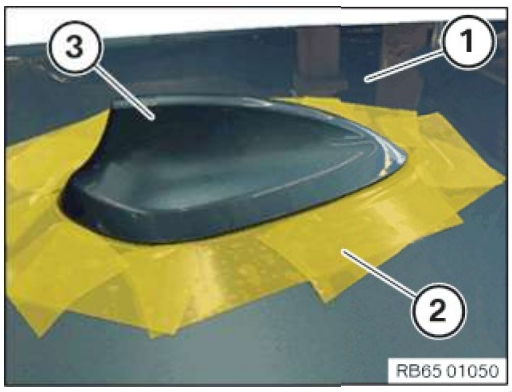
15 – Remove the empty roof-mounted aerial housing

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



- Slide the yellow plastic adhesive tape (2) under the empty housing (3) as far as possible.

Expendable materials

Yellow plastic adhesive tape		83199410979

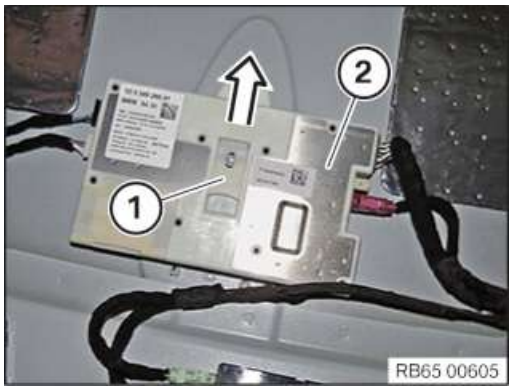
- Mask the roof outer skin (1)as shown.
- Cut through the adhesive bead using the special tool and remove the empty roof-mounted aerial housing (3).

Note: With increased effort, reposition the special tool to recut the adhesive bead, if necessary.

- If necessary, touch up the paintwork damage.

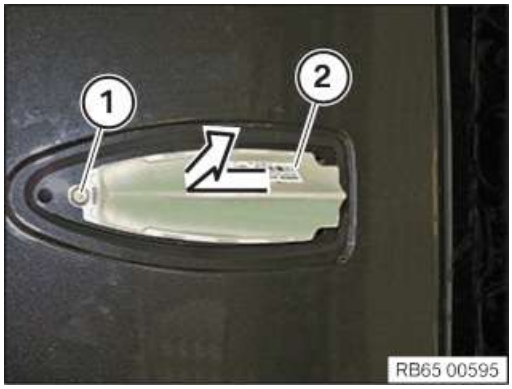
MAIN WORK

16 – Remove roof aerial



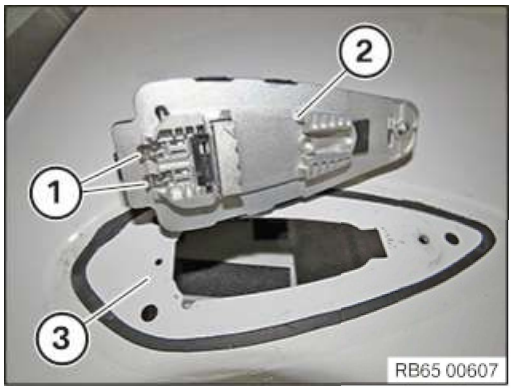
- Unlock the lock (1) downward.
- Slide the TCB (2) in the direction of arrow.

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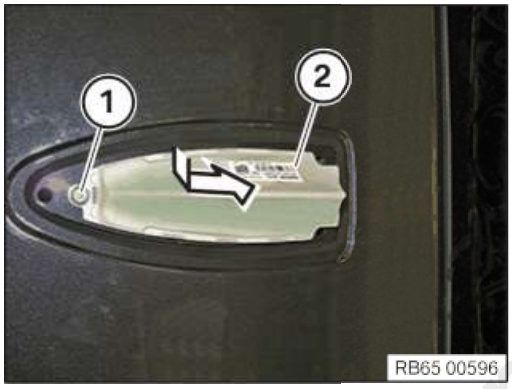


- Loosen screw (1).
- Remove the roof-mounted aerial (2) in the direction of the arrow.

17 – Installing the roof-mounted aerial



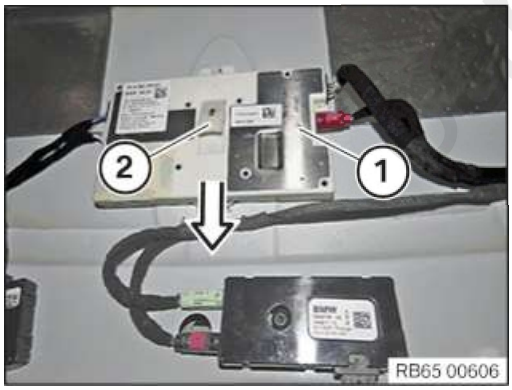
- Locks (1) on the roof-mounted aerial (2) must be correctly fitted under the roof (3).



- Install the roof-mounted aerial (2) in the direction of the arrow.
- Tighten down screw (1).

Roof-mounted aerial on the roof outer skin

Screw	Tightening torque	4 Nm

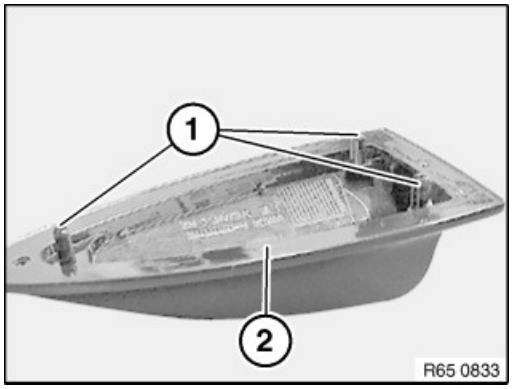


- Correctly position TCB (1) and push in direction of arrow till the lock is engaged (2).

POSTPROCESSES

18 – Installing the roof-mounted aerial housing

Note: The preparations correspond to the instructions of bound windscreens; see additional information.



TECHNICAL INFORMATION

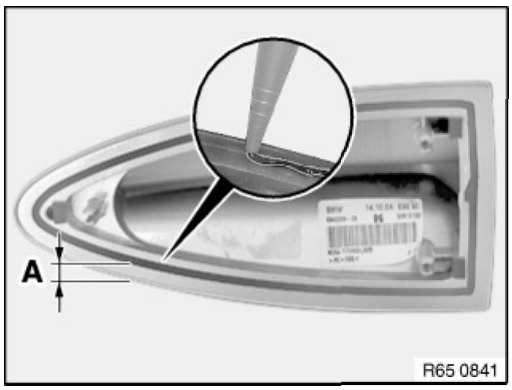
The following procedure forms the basis for these repair instructions and must be observed without fail.

For more information see: 51 31 ... General procedure for disassembly/installation of bonded window glass

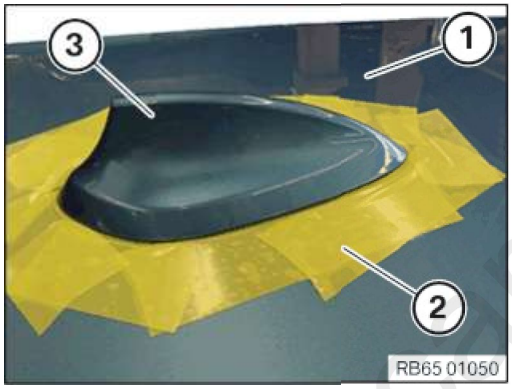
- Check centring pins (1) for damage.
- Clean the bonding surface (2) with cleaning agent R1.

Expendable materials

Cleaning agent R1	100 ml, Bottle	83192211217

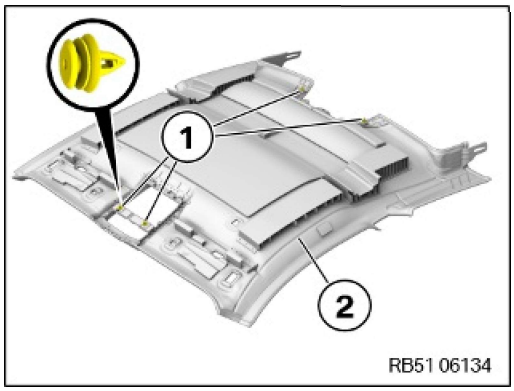


- Apply trace of adhesive bead all round outer contour as follows.
- Distance between adhesive bead and edge of aerial housing:
  - A=6.5 mm ±1 mm
- The start and end of the bead must overlap by a maximum of 10 mm.
- To prevent the adhesive from leaking, the adhesive bead diameter must not exceed 2.5 mm to 3.5 mm.



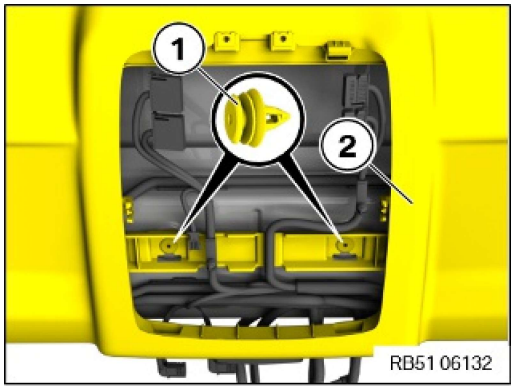
- Join the empty housing coated with adhesive (3) to block by hand.
- To spread the adhesive better, move the empty housing horizontally (3) back and forth while lightly pressing down.
- If necessary, fix the empty housing (3) with adhesive tape and press evenly.
- After bonding, leave vehicle to stand for at least 3 hours at room temperature.
- Remove the adhesive tape (2) from the outer roof panel (1) and if necessary from the empty housing (3).

19 – Install the headlining (lowered)

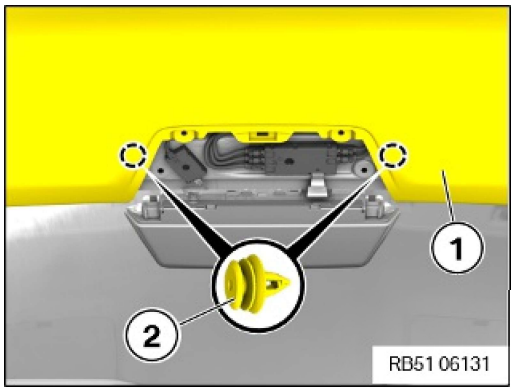


- Check the clips (1) on the headlining (2) for damage and renew if necessary.

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- Feed in the headlining (1) with the help of an auxiliary person on the respective edge protection.
- Position the headlining (2) on the clips (1) and clip it in.



- Clip in clips (2) on the headlining (1).

20 – Install the headlining (with slide/tilt sunroof) (lowered)

Prerequisite

The front seats have been fully adjusted towards the bottom.

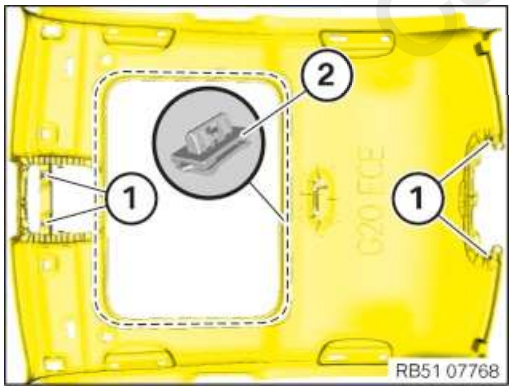
The front seat backrests have been fully adjusted towards the rear.

RISK OF DAMAGE

Fold the headlining.

If the headlining is folded, it may have to be replaced.

- Carry out tasks with a second person to assist.
- Support the headlining at the front and back.

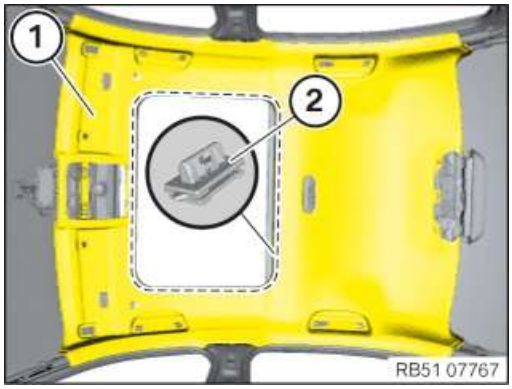


- Check the clips (1) on the headlining (2) for damage.

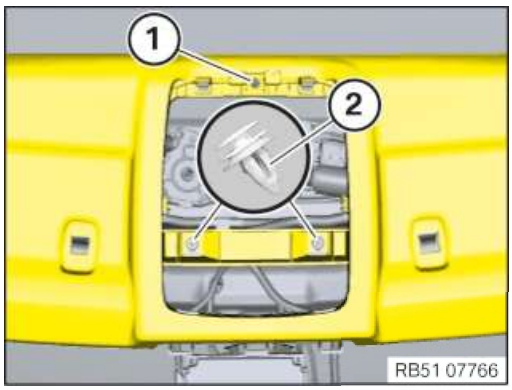
  Replace broken for missing clips (1).
- Check the clamps (2) along the dotted line.

  Replace broken or missing clamps (2).

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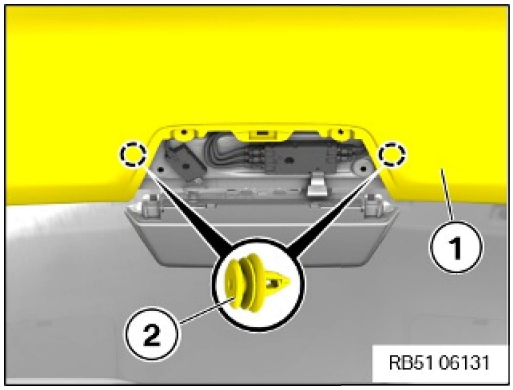
- Feed in the headlining (1) with the help of an auxiliary person on the respective edge protection.
- Clip headlining (1) into the slide/tilt sunroof unit and clamps (2) in the area of the dotted line.



- Clip headlining to the clips (2).
- Tighten down screw (1).

Headlining to frame

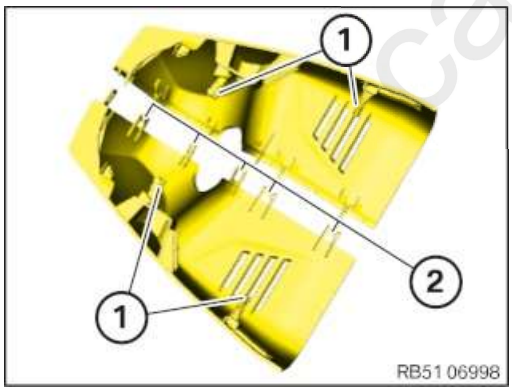
Oval-head screw		Tightening torque	1,5 Nm



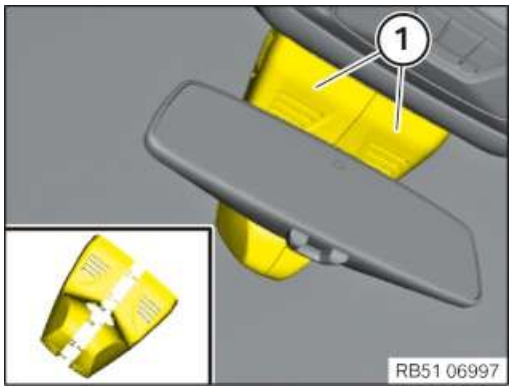
- Clip headlining (1) to the clips (2).

21 – Installing the covers for the interior mirror

- **Version A:**



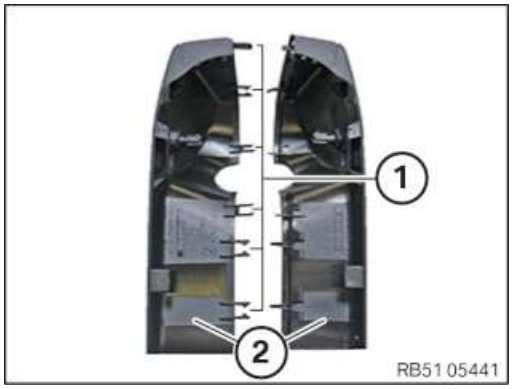
- Check latch mechanisms (1) and (2).
- If the latch mechanisms (1) or (2) are faulty, renew the covers.



- Feed cover (1) in and lock.

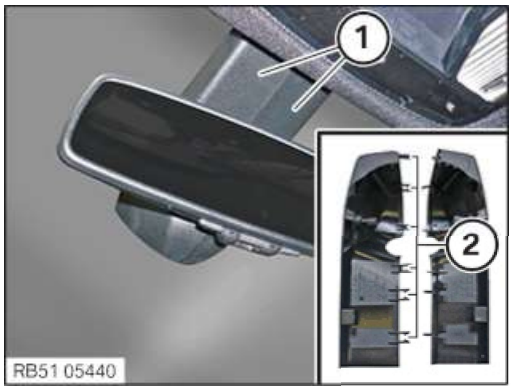
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- **Version B:**



- Check the latch mechanisms (1) on the two covers (2) for damage, renew the covers (2) if necessary.

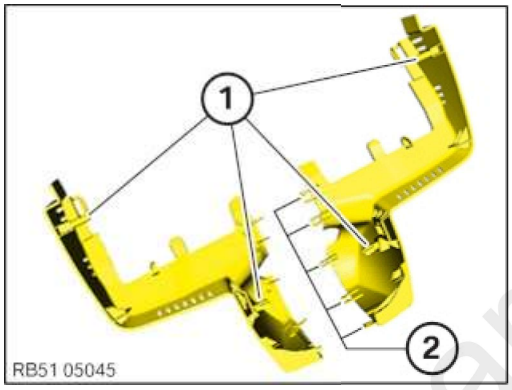
  The covers (2) must not be damaged or missing.



- Position the covers (1) correctly on the mirror and engage with the latch mechanisms (2).

- **Version C:**

Check



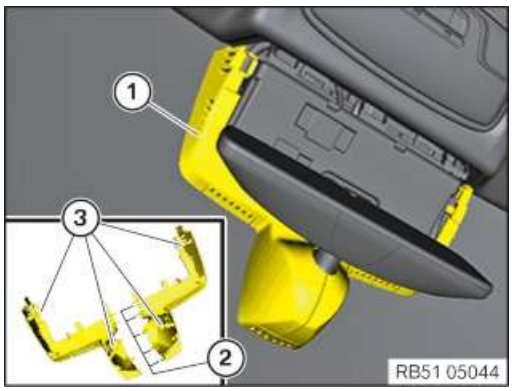
- Check the latch mechanisms (1) and (2) of the covers for damage.

Result

» The latch mechanism is damaged.

Measure

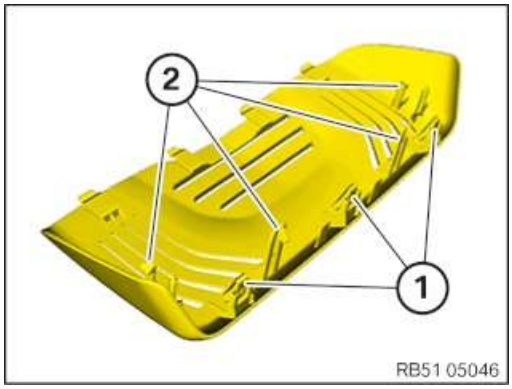
- Renew the cover.



- Guide in cover (1) on left and right and engage using latch mechanisms (2) and (3).

Check

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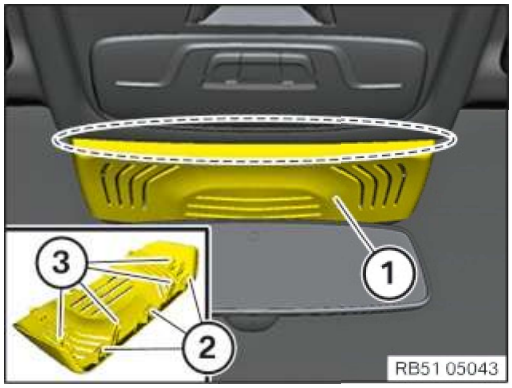
- Check clamps (1) for damage; renew if necessary.
- Check latch mechanisms (2) for damage.

Result

» The latch mechanism is damaged.

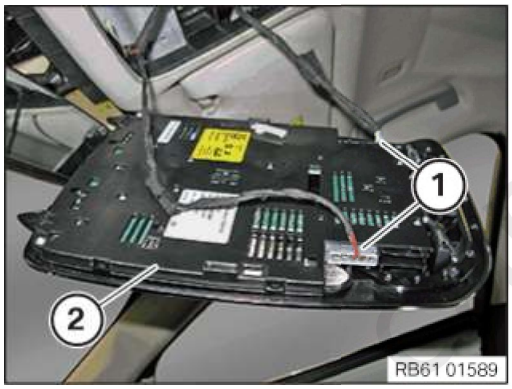
Measure

- Renew the cover.

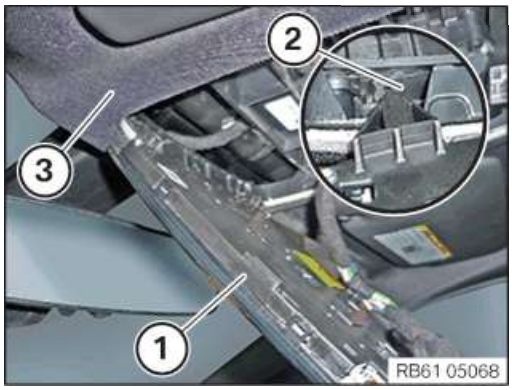


- Guide cover (1) into front guides and engage using retaining lugs (3) and clamps (2).

22 – Installing roof function centre (FZD)



- Connect connectors (1) and lock.
- Clip in the cable for the roof function centre (FZD) (2) in the cable clip.



- Thread the roof function centre (FZD) (1) as shown at a steep angle into the two guides (2) on the headlining (3).

  Make sure the headlining is not deformed during this operation.

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- Clip the roof function centre (FZD) (1) upwards into the clamps (2).



- Pass through the FZD frame and headlining with the special tool 2 298 505 and adjust the headlining correctly.



- Tighten the screws (1).

Roof function centre

	Tightening torque	1,2 Nm



- Clip in the cover (1).

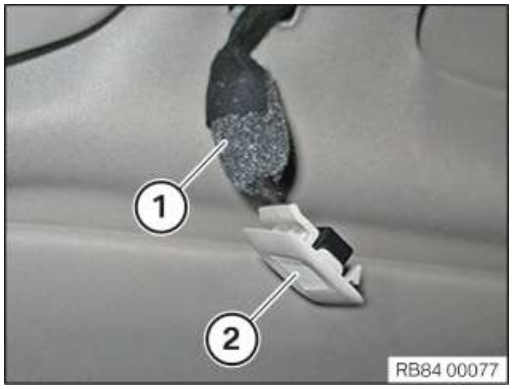
23 – Install both microphones

NOTICE

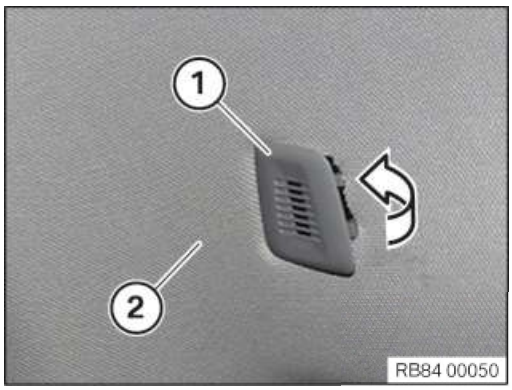
Description is for left component only. Procedure on the right side is identical.

▸ **Installing the hands-free microphone**

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- Connect the connector to the hands-free microphone (2).
- Close the insulation (1).

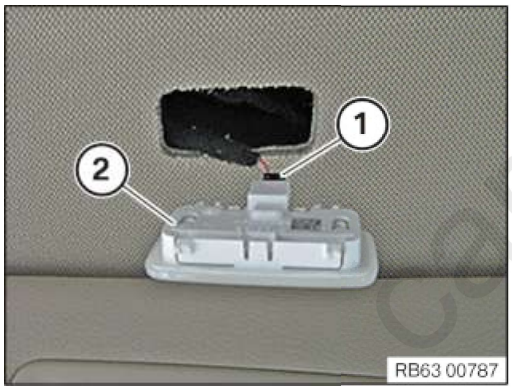


- Position hands-free microphone (1) in headlining (2) in the direction of the arrow.

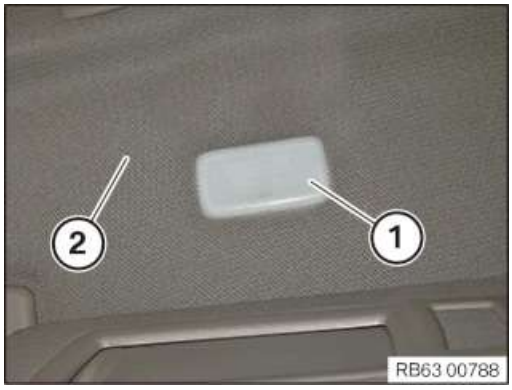
24 – Installing front vanity mirror light

NOTICE

Description is for left component only. Procedure on the right side is identical.



- Connect the connector (1) to the front vanity mirror light (2).



- Position the front vanity mirror light (1) in the headlining (2).

25 – Install both counter supports for the sun visors

NOTICE

Description is for left component only. Procedure on the right side is identical.

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▸ **Install the counter support for the sun visor**



- Insert the counter support (3) into the headlining.
- Make sure the clamps (2) are engaged correctly.
- Use cover (1).

26 – Install both sun visors

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the sun visor**



- Connect the sun visor (2) with the corresponding connector.
- Guide the sun visor (2) into the headlining.
- Use cover (1).
- Attach the sun visor (2) on the counter support.

27 – Install both A-pillar trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Installing the A-pillar trim panel**

WARNING

Airbag unit.

Danger! Life-threatening injuries!

- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

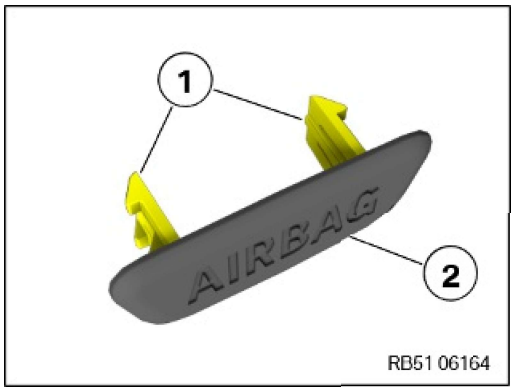
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WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



Check

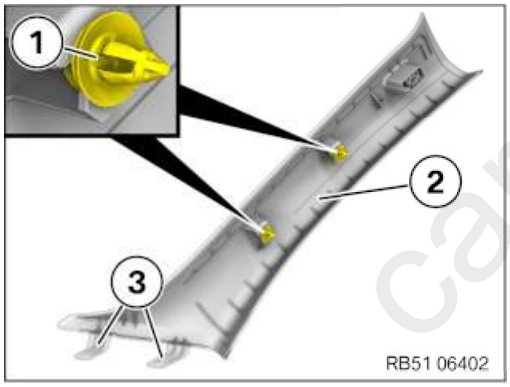
- Check retaining lugs (1) of cover (2) for damage.

Result

» Retaining lug is damaged.

Measure

- Renew the cover.



Check

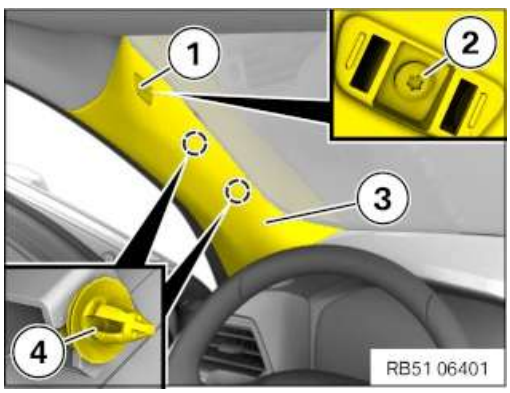
- Check the clips (1) for damage and renew if necessary.
- Check the guides (3) for damage.

Result

» Guide is damaged.

Measure

- Renew the A-pillar trim panel.



- Guide in A-pillar trim panel (3) downwards and clip it in with clips (4).
- Tighten down screw (2).

A-pillar trim panel to body

Sheet metal screw 4,8x38		Tightening torque	2,6 Nm

- Clip in the cover (1).

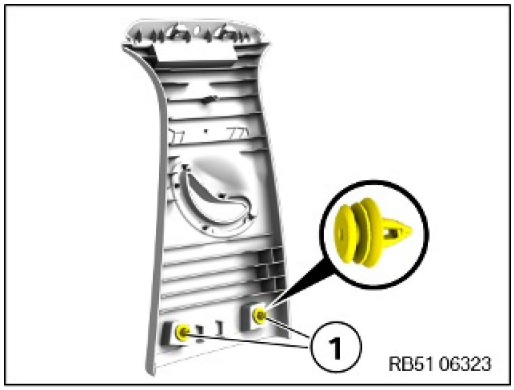
28 – Installing both B-pillar trim panels

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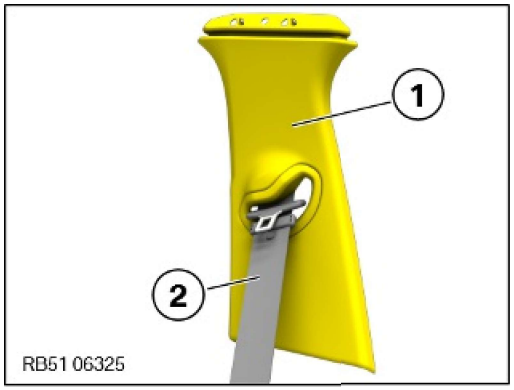
NOTICE

Description is for left component only. Procedure on the right side is identical.

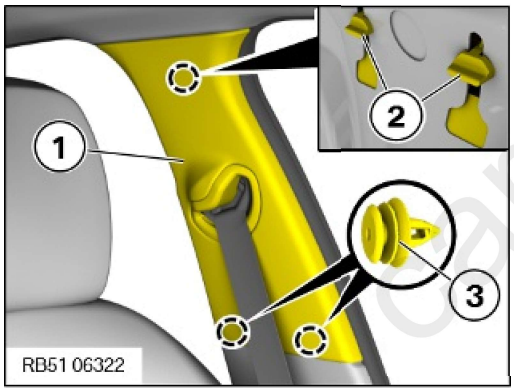
▶ **Install the B-pillar trim panel**



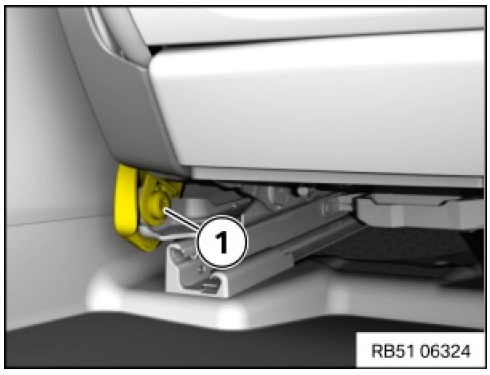
- Check the clips (1) for damage and renew if necessary.



- Guide upper seat belt (2) in B-pillar trim panel (1).



- Insert B-pillar trim panel (1) into guides (2) and under the front and rear lips of edge protection.
- Clip in the B-pillar trim panel (1) with the clips (3).



- Fully position the front seat to the front and top.
- Insert the end fitting (2).
- Renew the screw (1).

  Parts: Screw
- Tighten down screw (1).

End fitting to seat mechanism

Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

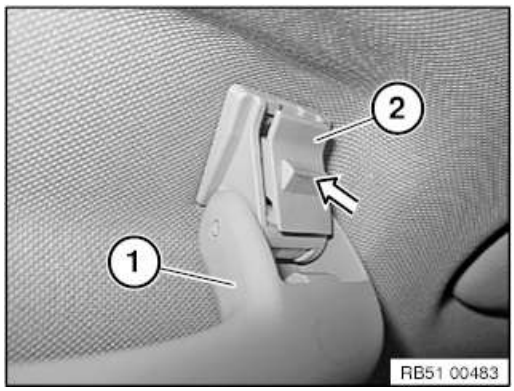
29 – Installing all grab handles

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NOTICE

The description is for one component only. The procedure is identical for all further components.

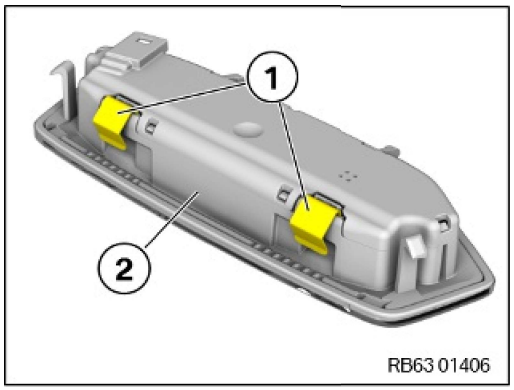
▸ **Installing the grab handle**



- Insert the grab handle (1) into body.
- Correctly clamp in the grab handle (1), as otherwise the locking inserts (2) on the grab handle (1) cannot correctly engage.
- Engage the locking inserts (2) on both sides of the grab handle (1).

30 – Install interior roof light

Check



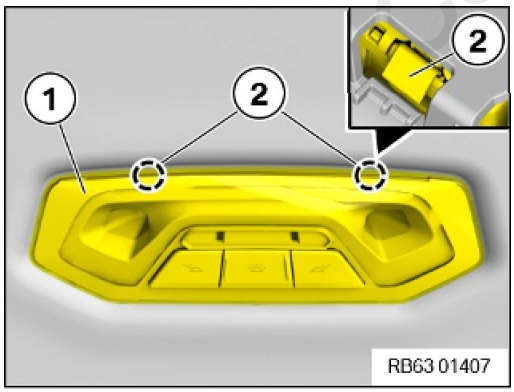
- Check the clamps (1) for damage.

Result

» Clamps (1) are damaged.

Measure

- Renew the interior roof light (2).



- Connect connectors and lock.
- Clip in the interior roof light (1) with clamps (2).

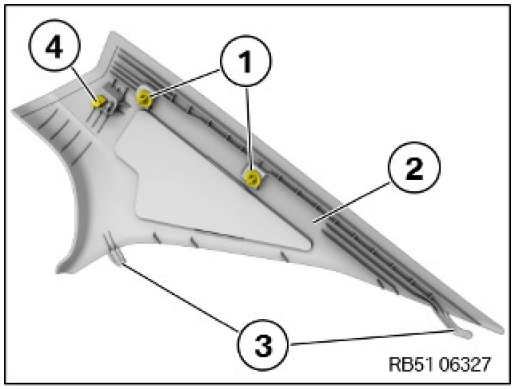
31 – Install both C-pillar trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Installing C-pillar trim panel**

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Check

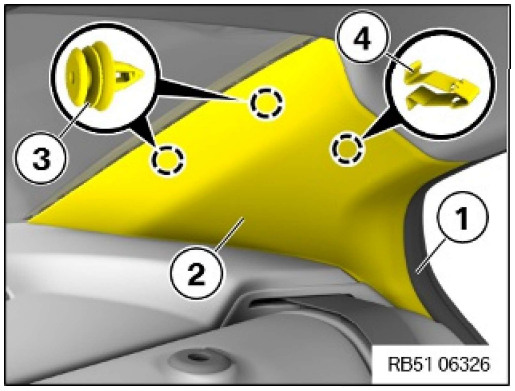
- Check clips (1) and clamp (4) for damage, renew if necessary.
- Check the guides (3) for damage.

Result

» Guide is damaged.

Measure

- Renew the C-pillar trim panel .

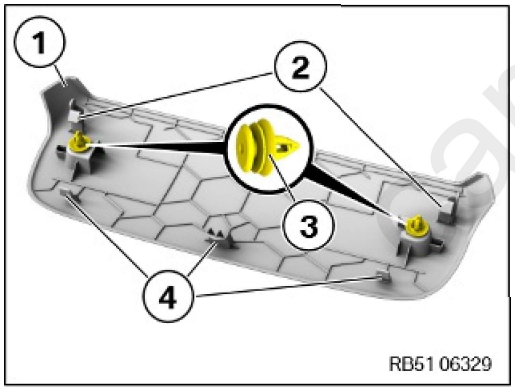


NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

- Feed C-pillar trim panel (2) into guides towards the rear.
- Clip in clips (3).
- Clip in clamp (4).
- Guide in C-pillar trim panel (2) under the lip of edge protection (1).

32 – Installing trim for additional brake light



Check

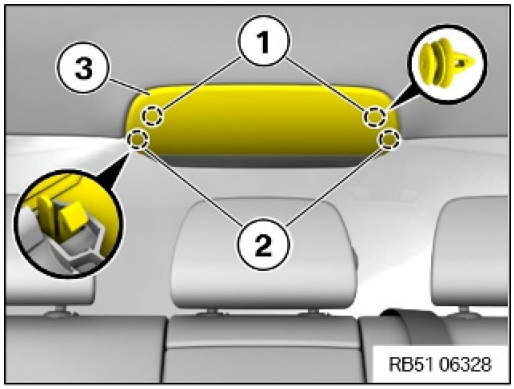
- Check the clips (3) for damage and renew if necessary.
- Check latch mechanisms (2) and guides (4) for damage.

Result

» The latch mechanism or the guide is damaged.

Measure

- Renew the trim for the additional brake light.



- Position trim for additional brake light (1) from the bottom and clip it in with latch mechanisms (2).
- Clip in clips (1).

Additional Information

Overview of Tightening Torques

Roof-mounted aerial on the roof outer skin — Used in step 17

Screw		Tightening torque	4 Nm

Headlining to frame — Used in step 20

Oval-head screw		Tightening torque	1,5 Nm

Roof function centre — Used in step 22

		Tightening torque	1,2 Nm

A-pillar trim panel to body — Used in step 27

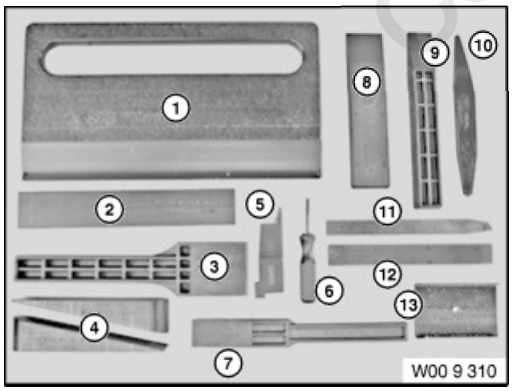
Sheet metal screw 4,8x38		Tightening torque	2,6 Nm

End fitting to seat mechanism — Used in step 28

Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common — Used in step 29

Usage	(Case) with insert not incl. panel wedges
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

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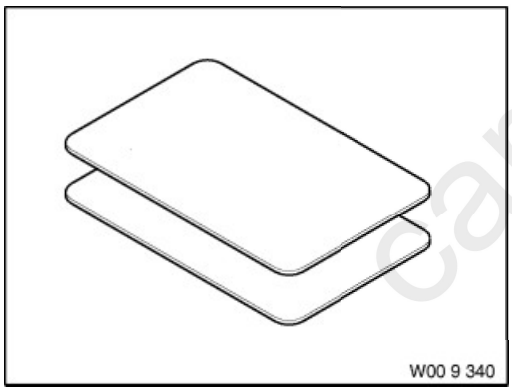
0 496 569 (00 9 325) Wedge



Common Used in step 5

Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

0 493 687 (00 9 340) Removal aid



Common Used in step 6

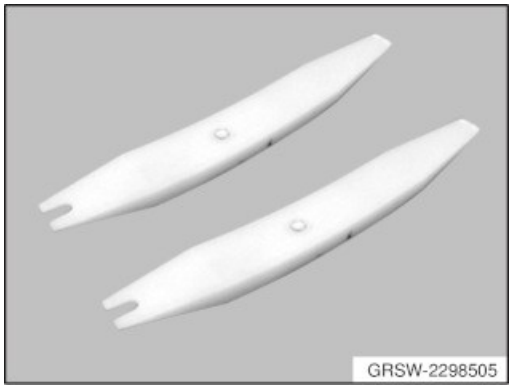
Usage	(Removal aid (2 x)) For levering out switch block on driver's door.
Included in the tool or work	
Storage location	C2
Replaced by	
In connection with	
SI-Number	01 15 99 (483)

Consisting of

Pos	BMW Order number	Replaced by	Designation	In Connection with
1	0 496 289 (00 9 341)		**Removal aid** Only available as a set (2 tools) under 00 9 340 (= 83 30 0 493 687).	

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2 298 505 Wedge



Common	Used in step 22
Usage	Set (delivery of 2 pieces)
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

Replacement tools:

0 496 531 (65 2 014) Blade



Common	Used in step 15
Usage	(Special blade) Replaced by special tool 65 2 013 since 08/2008.
Included in the tool or work	0 494 968
Storage location	
Replaced by	
In connection with	
SI-Number	01 15 08 (475)

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Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	2
72 00 ... Safety regulations for handling components with gas generators	2
99 00 ... Touching up paintwork damage	1518
51 31 ... Notes on window bonding repair kit	18
51 00 ... Overview of consumables (Electronic Parts Catalogue)	18

65 20 350 Removing and installing/replacing interference suppression filter

RISK OF DAMAGE

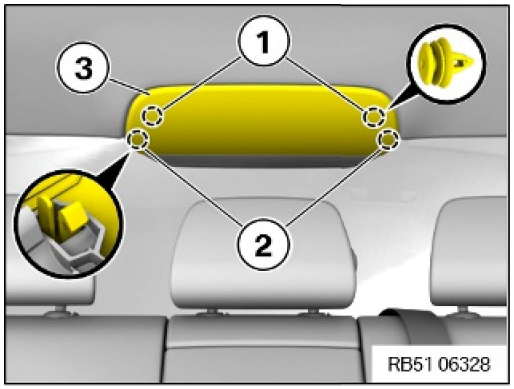
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

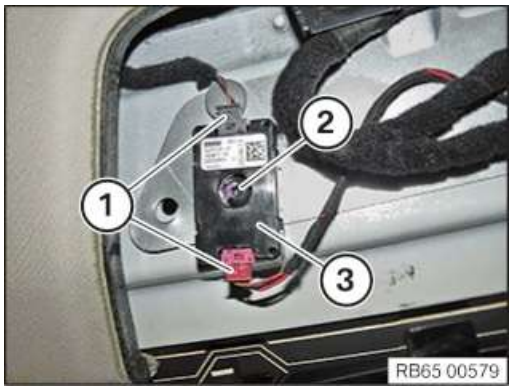
1 – Removing the trim of the additional brake light



- Loosen the clips (1).
- Release the latch mechanisms (2) and remove the trim of the additional brake light (3).

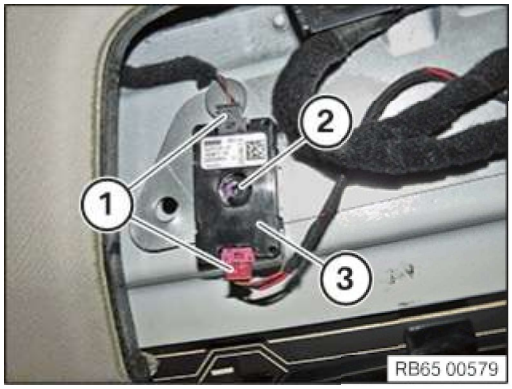
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2 – Removing the interference suppression filter



- Unfasten plug connections (1).
- Loosen screw (2).
- Remove the interference suppression filter (3).

3 – Installing the interference suppression filter



- Correctly position the interference suppression filter (3).
- Tighten down screw (2).

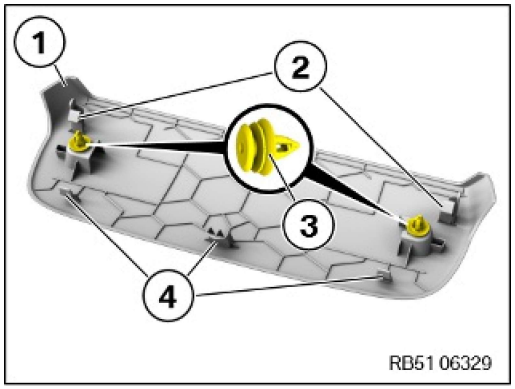
Interference suppression filter to body

Screw		Tightening torque	3 Nm

- Connect connectors (1) and lock.

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4 – Installing trim for additional brake light



Check

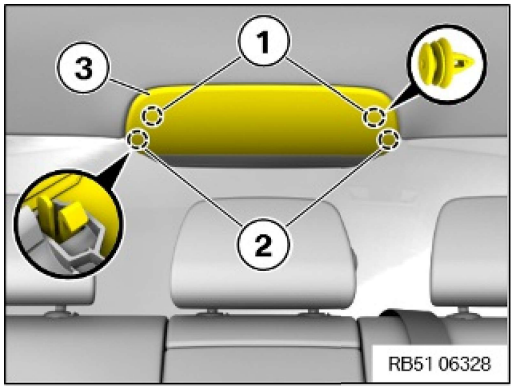
- Check the clips (3) for damage and renew if necessary.
- Check latch mechanisms (2) and guides (4) for damage.

Result

» The latch mechanism or the guide is damaged.

Measure

- Renew the trim for the additional brake light.



- Position trim for additional brake light (1) from the bottom and clip it in with latch mechanisms (2).
- Clip in clips (1).

Additional Information

Overview of Tightening Torques

Interference suppression filter to body			Used in step 3
Screw		Tightening torque	3 Nm

Links

Repair instructions	Used in step
61 35 ... Notes on ESD protection (Electro Static Discharge)	

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65 20 032 Replacing roof-mounted aerial housing

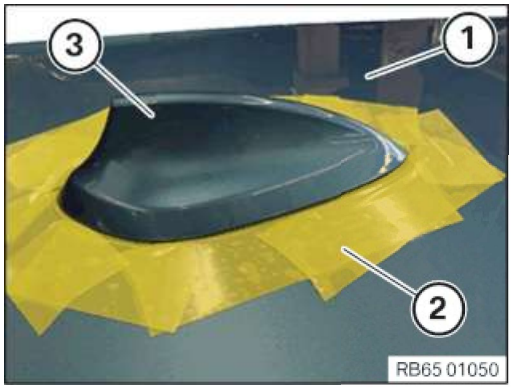
1 – Remove the empty roof-mounted aerial housing

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



- Slide the yellow plastic adhesive tape (2) under the empty housing (3) as far as possible.

Expendable materials

Yellow plastic adhesive tape		83199410979

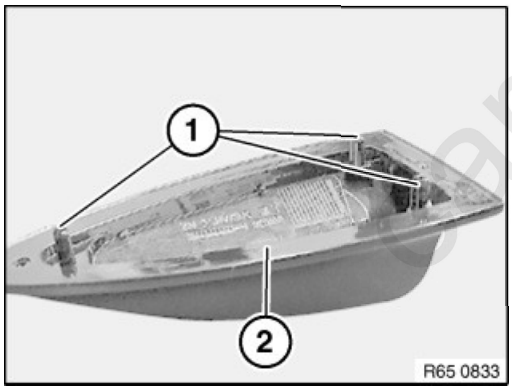
- Mask the roof outer skin (1)as shown.
- Cut through the adhesive bead using the special tool and remove the empty roof-mounted aerial housing (3).

Note: With increased effort, reposition the special tool to recut the adhesive bead, if necessary.

- If necessary, touch up the paintwork damage.

2 – Installing the roof-mounted aerial housing

Note: The preparations correspond to the instructions of bound windscreens; see additional information.



TECHNICAL INFORMATION

The following procedure forms the basis for these repair instructions and must be observed without fail.

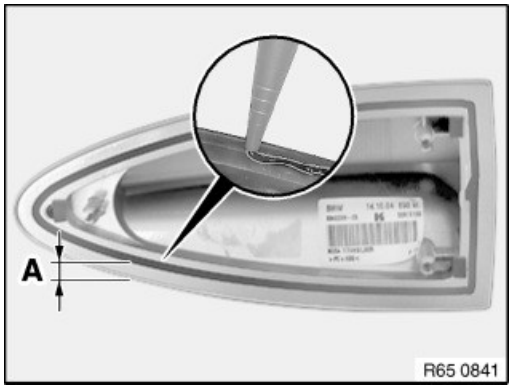
For more information see: 51 31 ... General procedure for disassembly/installation of bonded window glass

- Check centring pins (1) for damage.
- Clean the bonding surface (2) with cleaning agent R1.

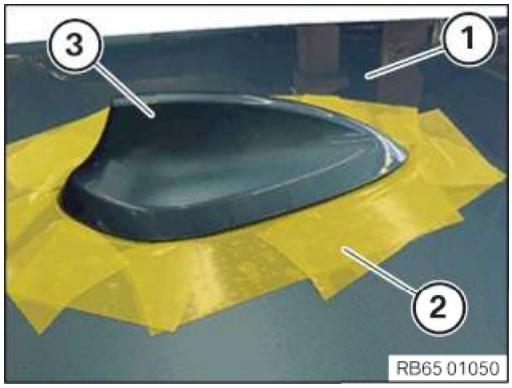
Expendable materials

Cleaning agent R1	100 ml, Bottle	83192211217

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- Apply trace of adhesive bead all round outer contour as follows.
- Distance between adhesive bead and edge of aerial housing:
  - A=6.5 mm ±1 mm
- The start and end of the bead must overlap by a maximum of 10 mm.
- To prevent the adhesive from leaking, the adhesive bead diameter must not exceed 2.5 mm to 3.5 mm.



- Join the empty housing coated with adhesive (3) to block by hand.
- To spread the adhesive better, move the empty housing horizontally (3) back and forth while lightly pressing down.
- If necessary, fix the empty housing (3) with adhesive tape and press evenly.
- After bonding, leave vehicle to stand for at least 3 hours at room temperature.
- Remove the adhesive tape (2) from the outer roof panel (1) and if necessary from the empty housing (3).

Additional Information

Overview of Special Tools

Replacement tools:

0 496 531 (65 2 014) Blade



Common	Used in step 1
Usage	(Special blade) Replaced by special tool 65 2 013 since 08/2008.
Included in the tool or work	0 494 968
Storage location	
Replaced by	
In connection with	
SI-Number	01 15 08 (475)

Links

General repair instructions	Used in step
99 00 ... Touching up paintwork damage	12
51 31 ... Notes on window bonding repair kit	2
51 00 ... Overview of consumables (Electronic Parts Catalogue)	2

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65 24 048 Removing and installing/replacing right wave trap for rear window heating

NOTICE

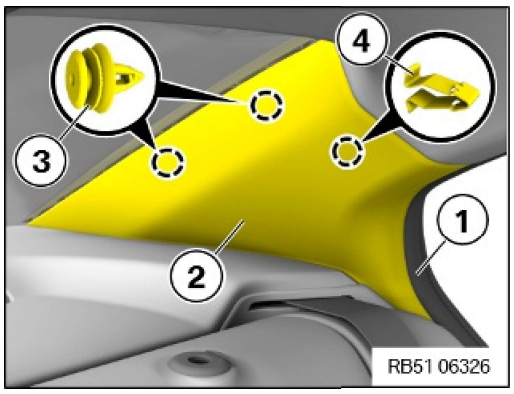
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

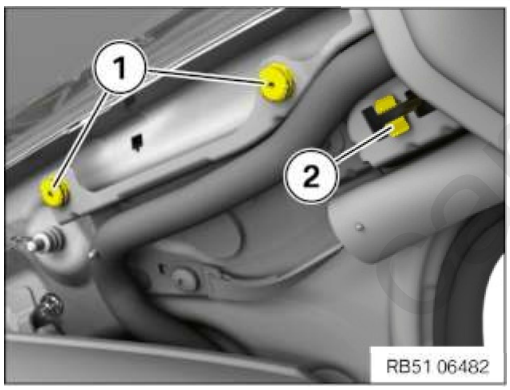
1 – Remove C-pillar trim panel

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



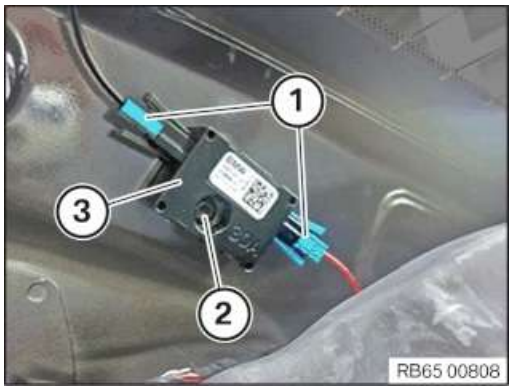
- Unclip clamp (4).
- Unclip clips (3).
- Feed out C-pillar trim panel (2) from the guides to the front.
- Thread out C-pillar trim panel (2) from the lip of edge protection (1).



- If required, remove the clips (1) and the clamp (2) and connect it to the trim panel.

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2 – Remove right wave trap



- Unlock plug connection (1) and disconnect.
- Unscrew the screw (2) and remove the wave trap (3).

3 – Install right wave trap



- Correctly position the wave trap (3) and tighten the screw (2).

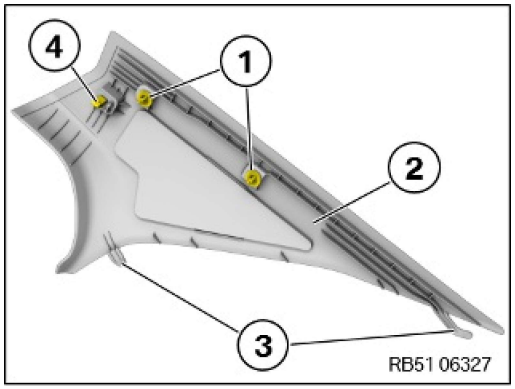
Wave trap to C-pillar

	Tightening torque	4,6 Nm

- Connect connectors (1) and lock.

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4 – Installing C-pillar trim panel



Check

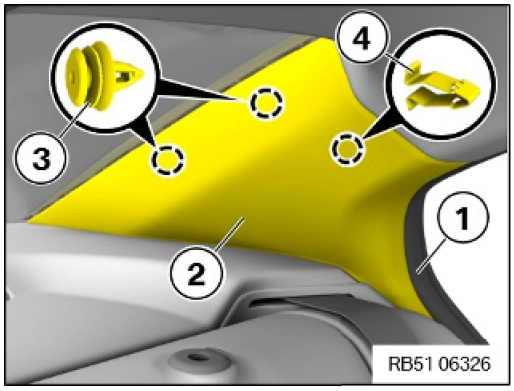
- Check clips (1) and clamp (4) for damage, renew if necessary.
- Check the guides (3) for damage.

Result

» Guide is damaged.

Measure

- Renew the C-pillar trim panel .



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

- Feed C-pillar trim panel (2) into guides towards the rear.
- Clip in clips (3).
- Clip in clamp (4).
- Guide in C-pillar trim panel (2) under the lip of edge protection (1).

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Additional Information

Overview of Tightening Torques

Wave trap to C-pillar — Used in step 3

	Tightening torque	4,6 Nm

65 50 057 Removing and installing the Central Information Display

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

RISK OF DAMAGE



Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

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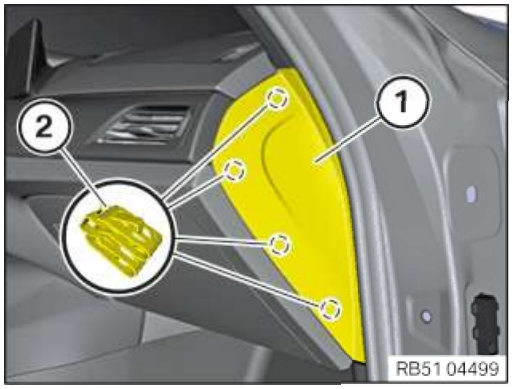
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



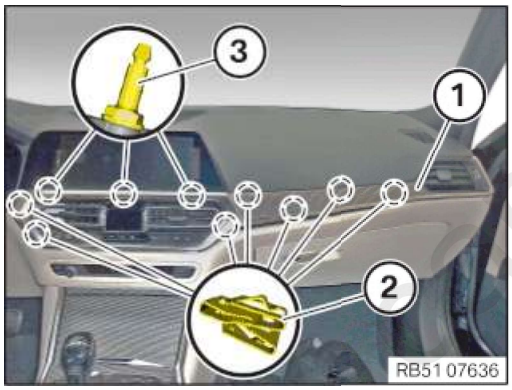
- See additional information.

2 – Remove the side panel on the right instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).
- If necessary, unlock associated plug connection and disconnect.

3 – Remove the finisher on the right instrument panel



- Unclip the decorative strip (1) towards rear at the clamps (2) and the pins (3).
- Unlock associated plug connection and disconnect.

  Remove the decorative strip (1).

MAIN WORK

4 – Remove Central Information Display (CID)

RISK OF DAMAGE

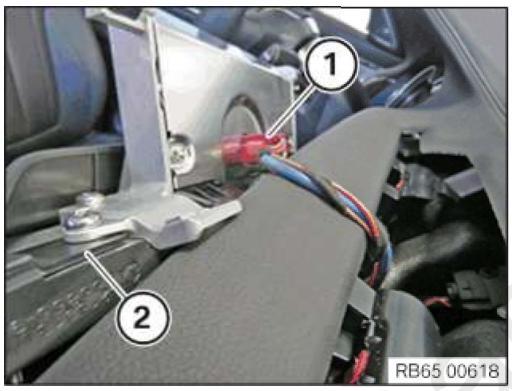
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.



- Loosen screws (1).
- Pull out central information display (CID) (2) slightly off the instrument panel.



- Unlock plug connection (1) and disconnect.
- Remove the central information display (CID) (2).

5 – Install the central information display (CID)

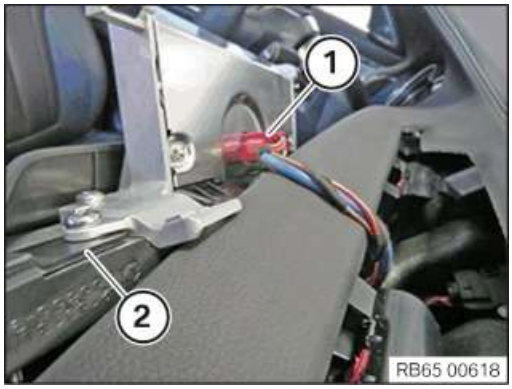
RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
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- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

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- Position Central Information Display (CID) (2).
- Connect plug connection (1) and lock.



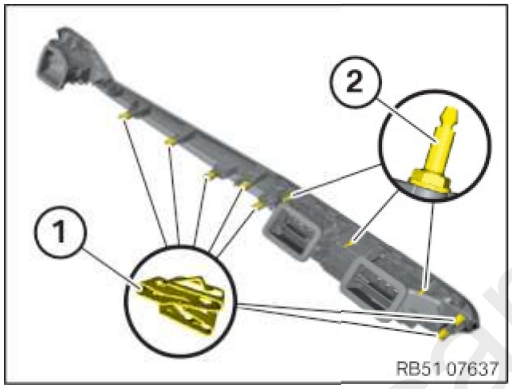
- Insert the central information display (CID) (2) in the instrument panel and position correctly.
- Tighten the screws (1).

Central information display to instrument panel

Screw		Tightening torque	1,8 Nm

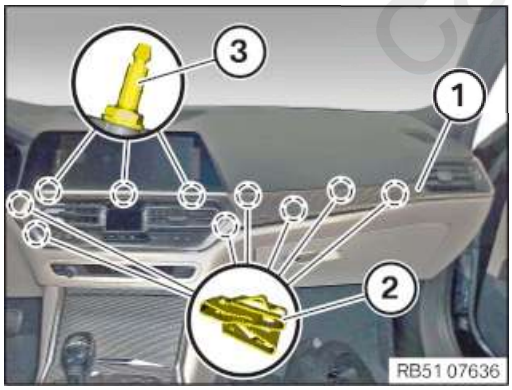
POSTPROCESSES

6 – Install the finisher on the right instrument panel



- Check the clamps (1).

  Replace broken or missing clamps (1).
- Check the pins (2) and the corresponding clamps on the instrument panel trim and renew if necessary.

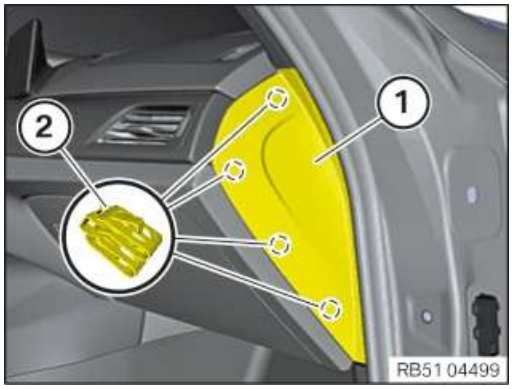


- Install the decorative strip (1).

  Connect and lock the associated connectors.
- Correctly position the decorative strip (1) and at the clamps (2) and clip in the pins (3).

7 – Install the side panel on instrument panel on the right

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- If required, connect the associated connector.
- Feed in the side panel (1) and clip it in at the clamps (2).

8 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

Central information display to instrument panel			Used in step 5
Screw		Tightening torque	1,8 Nm

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	18
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	18
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
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61 20 900 Disconnecting and connecting battery earth lead	18

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61 20 900 Disconnecting and connecting battery earth lead	18
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61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	18
61 20 900 Disconnecting and connecting battery earth lead	18
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61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 35 ... Notes on ESD protection (Electro Static Discharge)	45

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65 50 558 Replacing the central information display

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

RISK OF DAMAGE



Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

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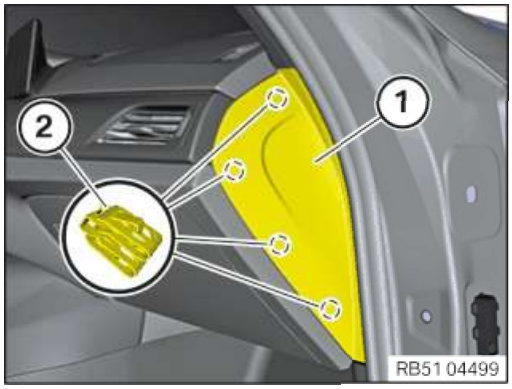
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



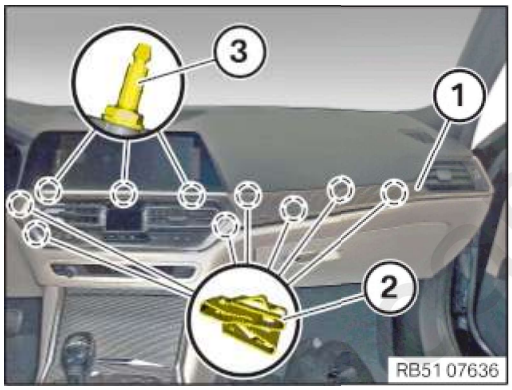
- See additional information.

2 – Remove the side panel on the right instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).
- If necessary, unlock associated plug connection and disconnect.

3 – Remove the finisher on the right instrument panel



- Unclip the decorative strip (1) towards rear at the clamps (2) and the pins (3).
- Unlock associated plug connection and disconnect.

  Remove the decorative strip (1).

MAIN WORK

4 – Remove Central Information Display (CID)

RISK OF DAMAGE

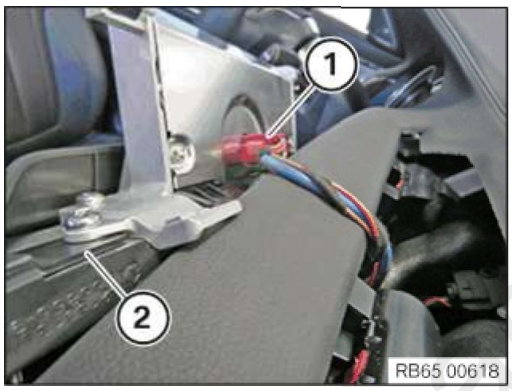
Electrostatic discharge.

Damage to or destruction of electrical components.

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- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.



- Loosen screws (1).
- Pull out central information display (CID) (2) slightly off the instrument panel.



- Unlock plug connection (1) and disconnect.
- Remove the central information display (CID) (2).

5 – Install the central information display (CID)

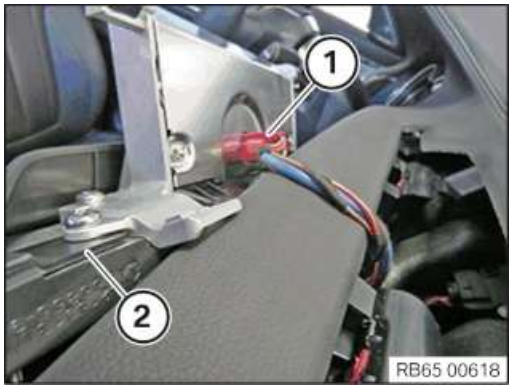
RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
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- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

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- Position Central Information Display (CID) (2).
- Connect plug connection (1) and lock.



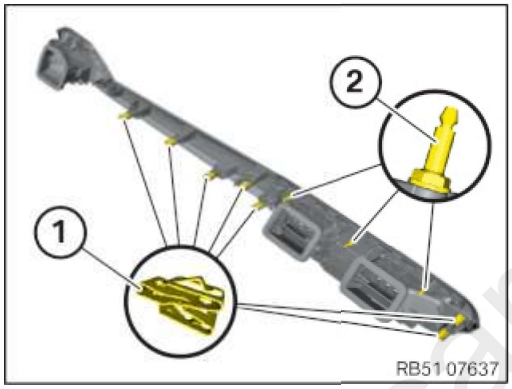
- Insert the central information display (CID) (2) in the instrument panel and position correctly.
- Tighten the screws (1).

Central information display to instrument panel

Screw		Tightening torque	1,8 Nm

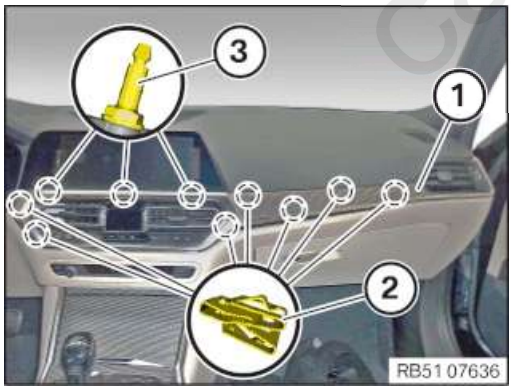
POSTPROCESSES

6 – Install the finisher on the right instrument panel



- Check the clamps (1).

  Replace broken or missing clamps (1).
- Check the pins (2) and the corresponding clamps on the instrument panel trim and renew if necessary.

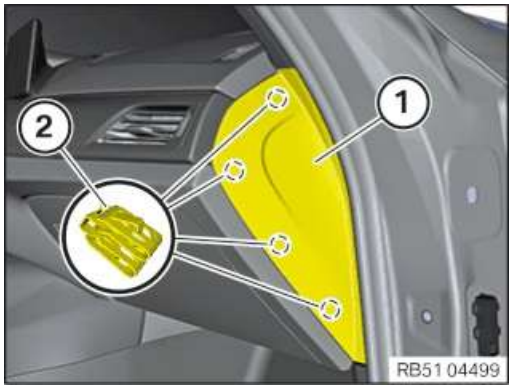


- Install the decorative strip (1).

  Connect and lock the associated connectors.
- Correctly position the decorative strip (1) and at the clamps (2) and clip in the pins (3).

7 – Install the side panel on instrument panel on the right

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- If required, connect the associated connector.
- Feed in the side panel (1) and clip it in at the clamps (2).

8 – Disconnecting all battery earth leads



- See additional information.

9 – Encode/program control unit(s)

- **Replacement**.
- **This task is not included in this flat rate unit item.**

▸ **Encode/program control unit(s)**

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

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- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

Additional Information

Overview of Tightening Torques

Central information display to instrument panel Used in step 5

Screw		Tightening torque	1,8 Nm

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
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61 20 900 Disconnecting and connecting battery earth lead	18
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61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 35 ... Notes on ESD protection (Electro Static Discharge)	45

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65 75 055 Removing and installing/replacing emergency power siren with tilt sensor

PRELIMINARY WORK

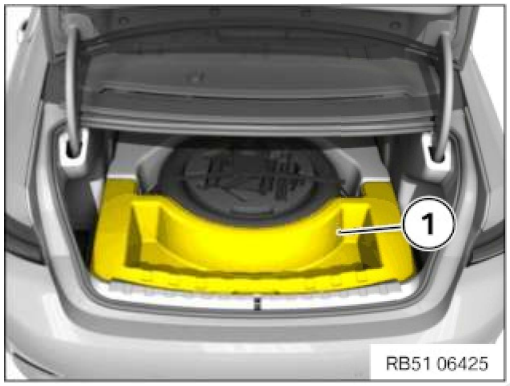
1 – Removing the luggage compartment floor trim panel



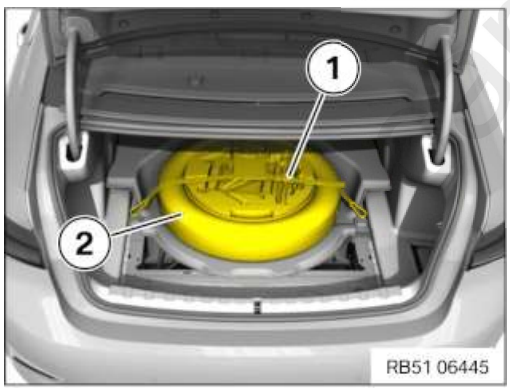
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

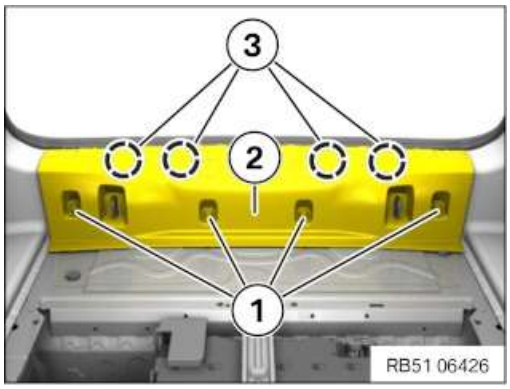


- Remove rear luggage compartment well (1).



- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

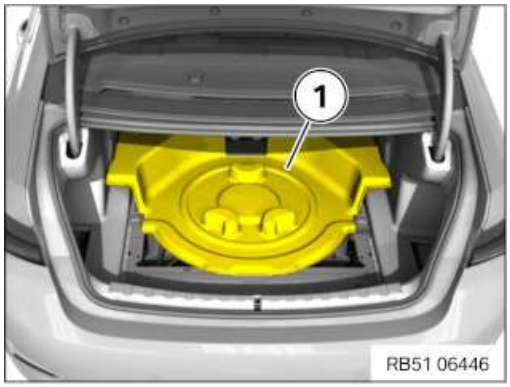
3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

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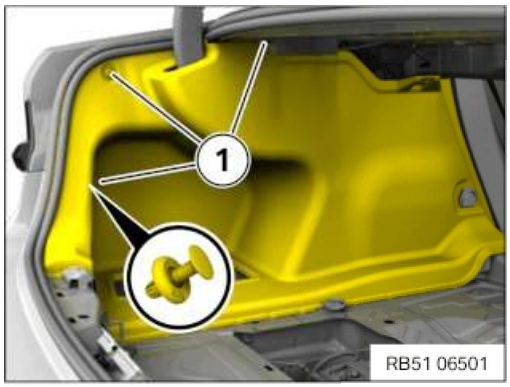
4 – Removing front luggage compartment well



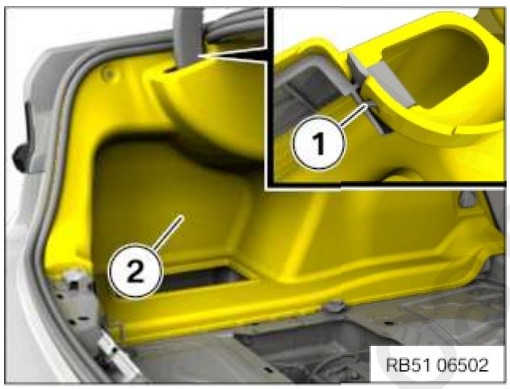
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▸ Partially remove luggage compartment wheel arch trim on left



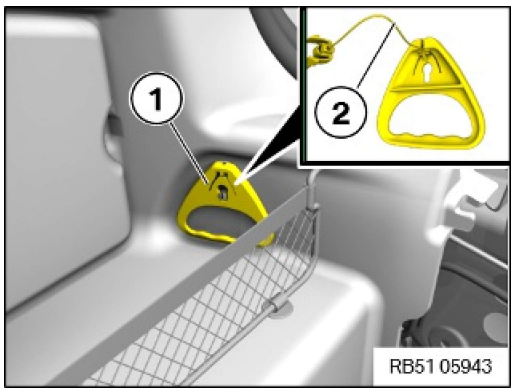
- Loosen the expanding rivet (1).



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ Partially remove luggage compartment wheel arch panel on right

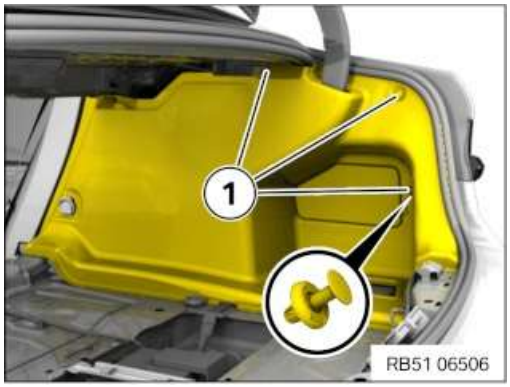
▹ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)



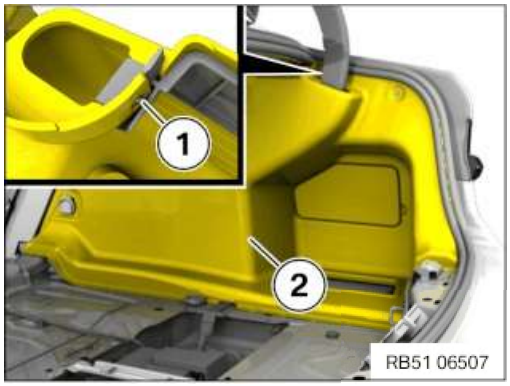
- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

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- Loosen the expanding rivet (1).



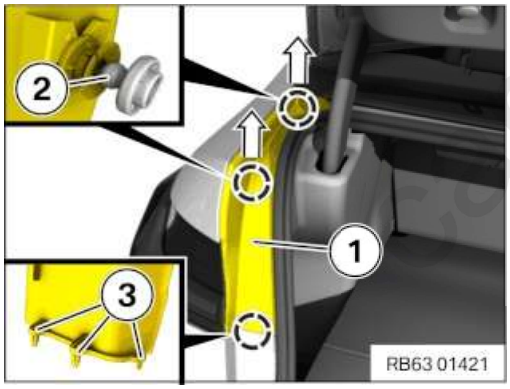
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the trim in the water channel**



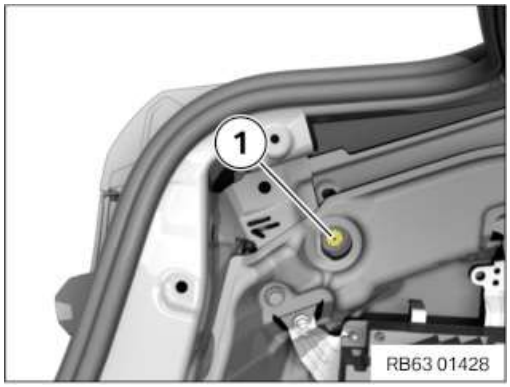
- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

7 – Remove both rear lights from the side panel

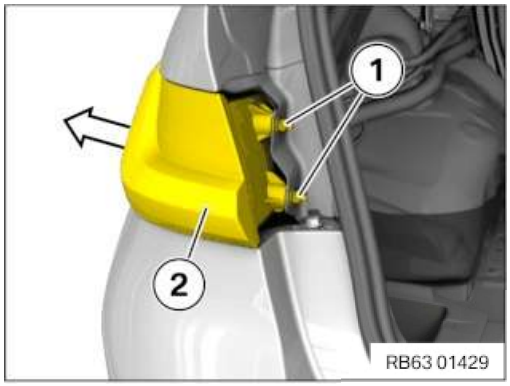
NOTICE

Description is for left component only. Procedure on the right side is identical.

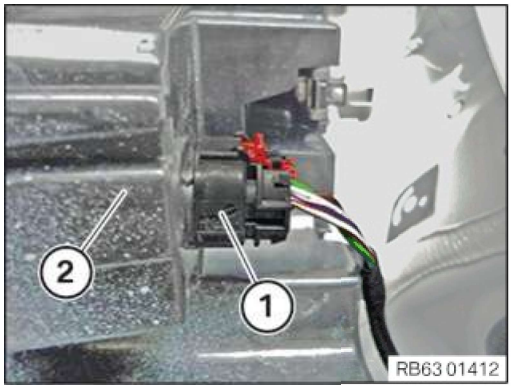
▸ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.
For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

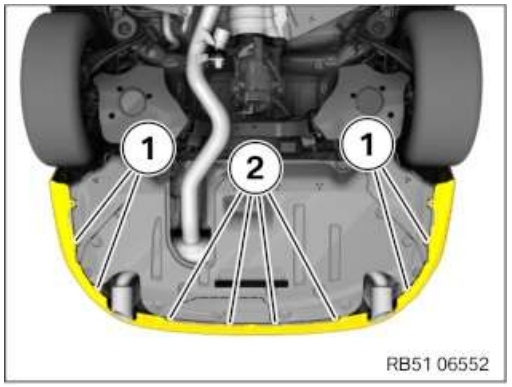
8 – Remove rear bumper panel



NOTICE

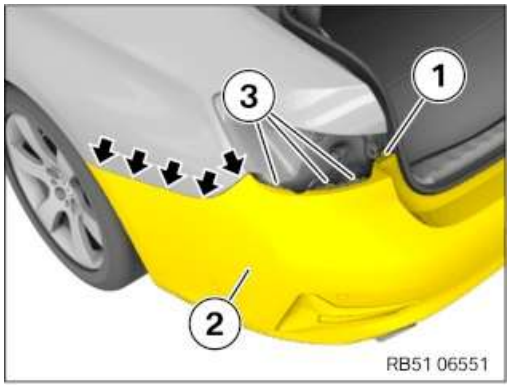
Perform the operations on the left and right side.

- Loosen screws (1).



- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.

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NOTICE

Perform the operations on the left and right side.

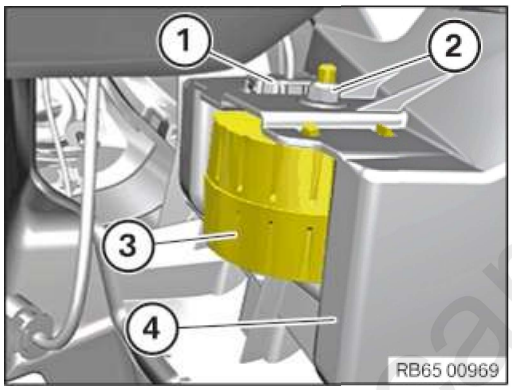
- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).



- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

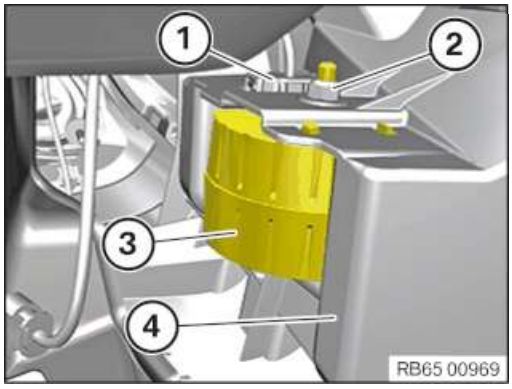
MAIN WORK

9 – Removing the emergency power siren with tilt sensor



- Unlock and disconnect connector (1).
- Loosen nut (2).
- Feed and remove emergency power siren (3) from the guide (4) of the bumper panel.

10 – Installing the emergency power siren with tilt sensor



- Insert emergency power siren (3) into the guide (4) of the bumper panel and position it correctly.
- Renew nut (2).

  Parts: Nut
- Tighten nut (2).

Emergency siren to holder

Nut		Tightening torque	6 Nm

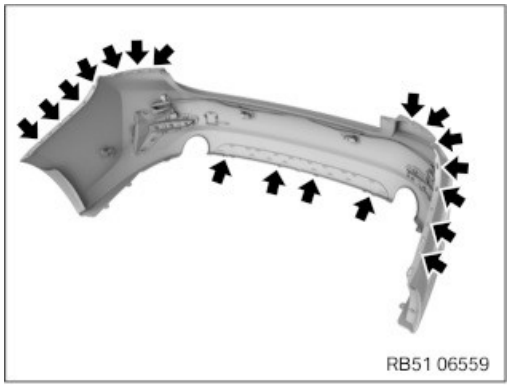
- Connect connectors (1) and lock.

POSTPROCESSES

11 – Install rear bumper panel

Check

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- Check the latch mechanisms (arrows) for damage.

Result

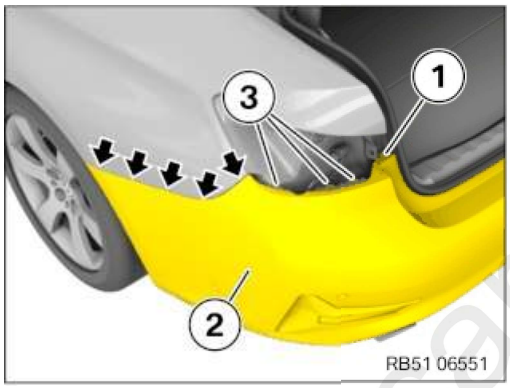
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



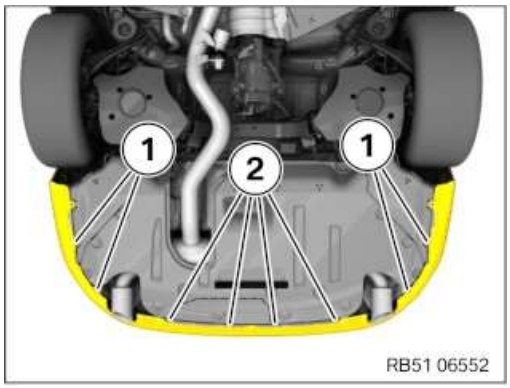
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

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NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

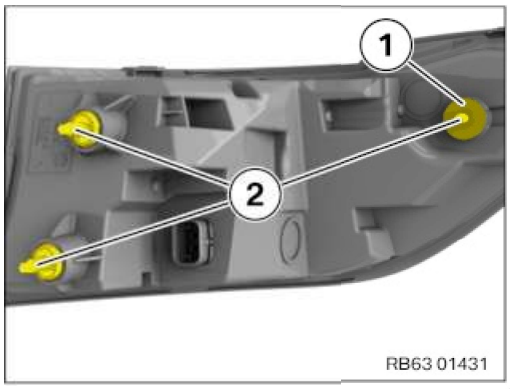
12 – Install both rear lights on the side panel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the rear light on the side panel**

Check



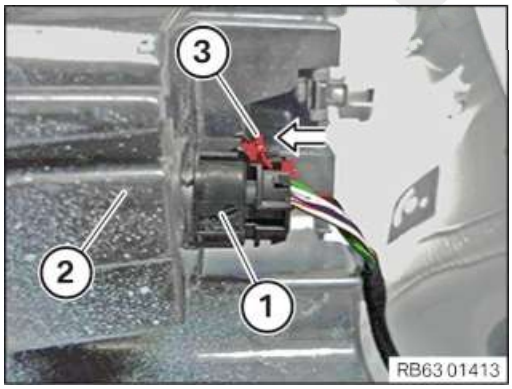
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

Measure

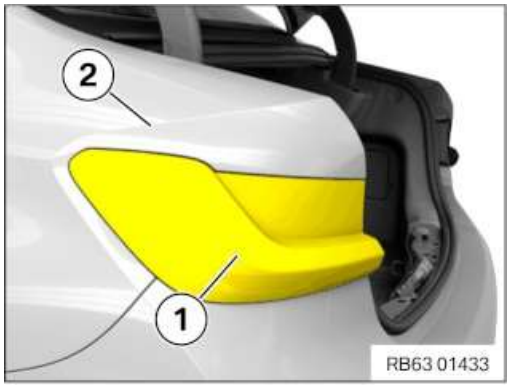
- Replace rear light.



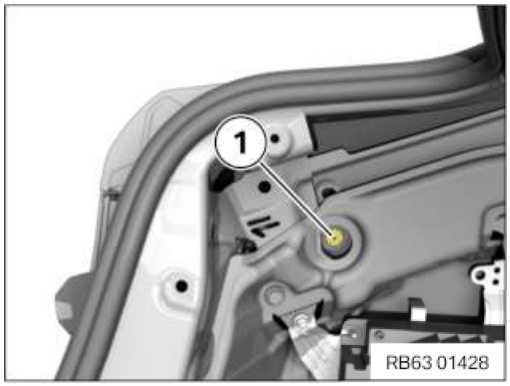
- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

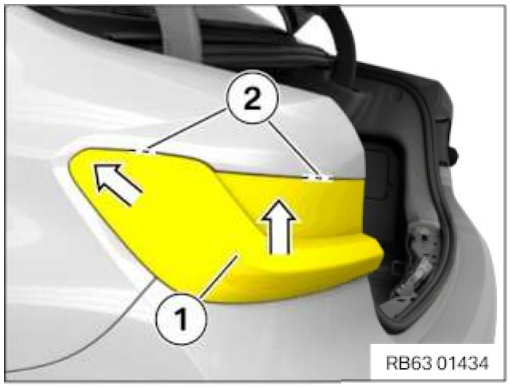
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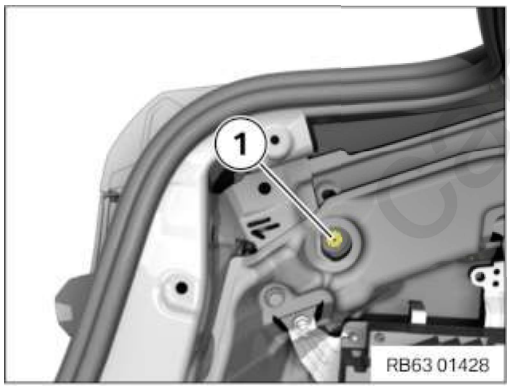
- Position the rear light on the side panel (1) on the side panel (2).



- Position the nut (1).



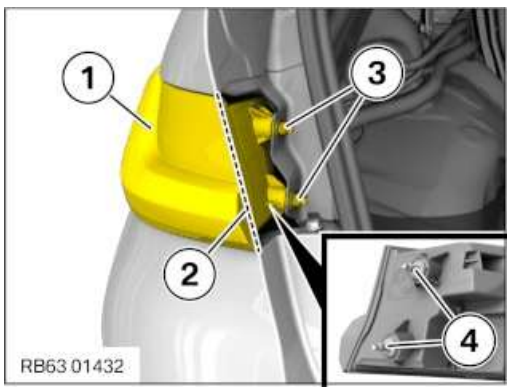
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

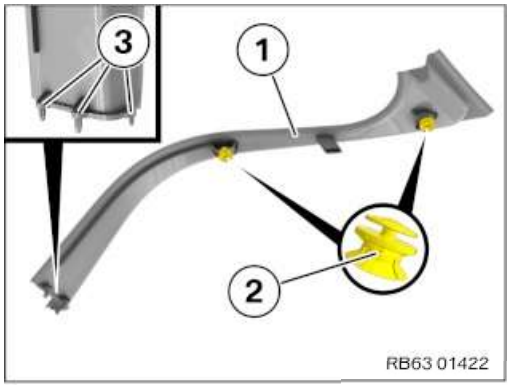
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the trim in the water channel**



Check

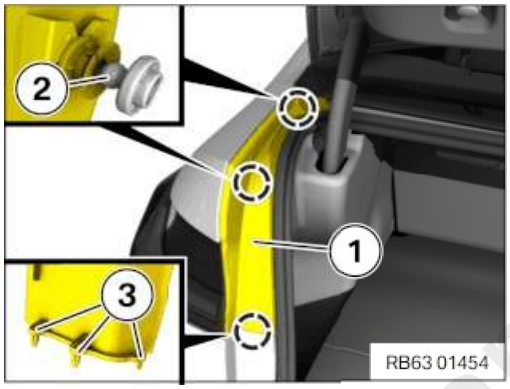
- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

Result

» The guides are damaged.

Measure

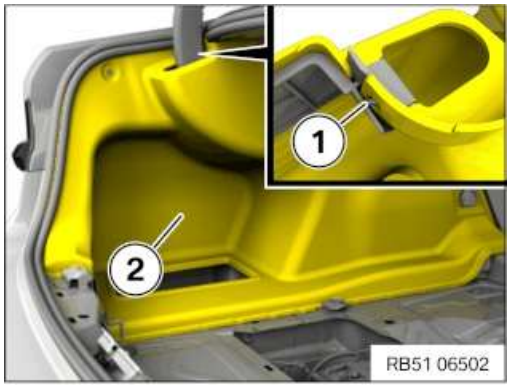
- Renew trim in the water channel .



- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

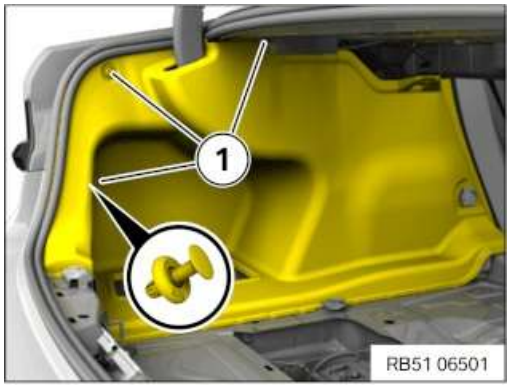
14 – Installing both luggage compartment wheel arch trim panels partially

▸ **Partially installing the left luggage compartment wheel arch trim panel**



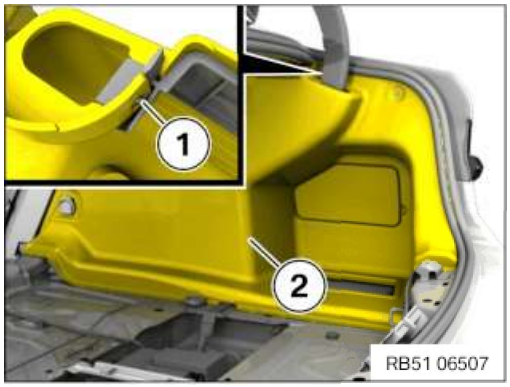
- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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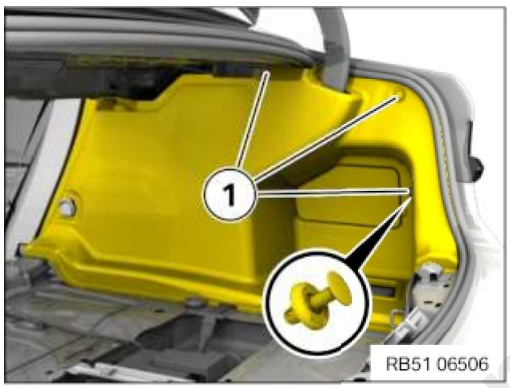


- Secure expanding rivet (1).

▶ **Partially installing right luggage compartment wheel arch trim panel**

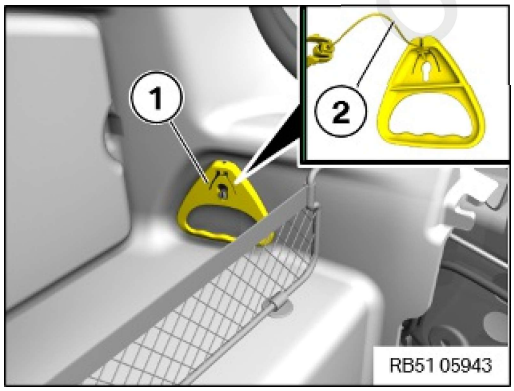


- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



- Secure expanding rivet (1).

▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**

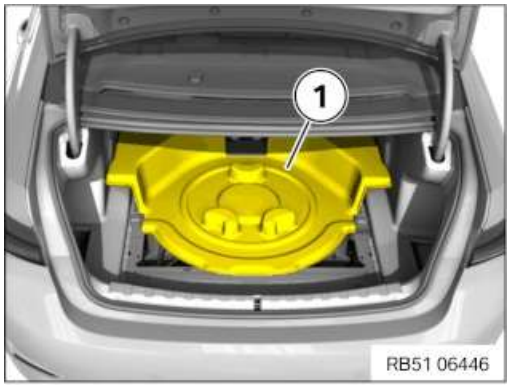


- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

◁

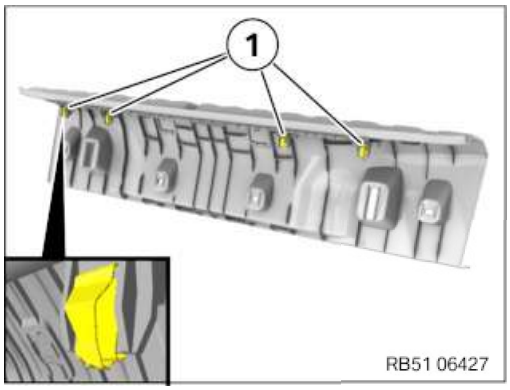
15 – Install the luggage compartment well in front

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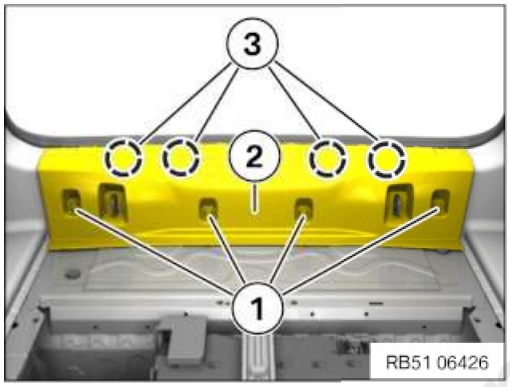


- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim

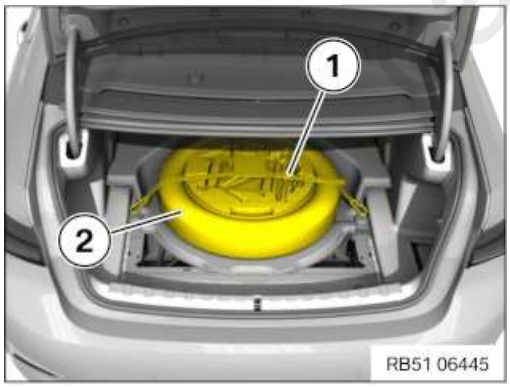


- Check the clamps (1) for damage and renew if necessary.



- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

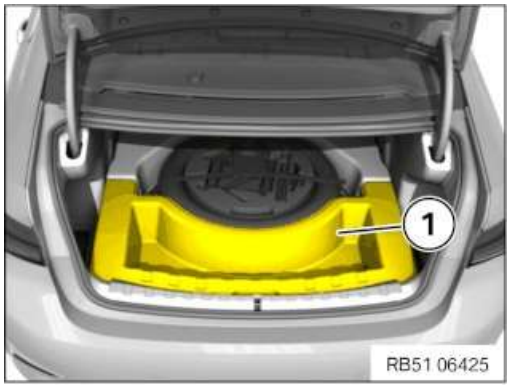
17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

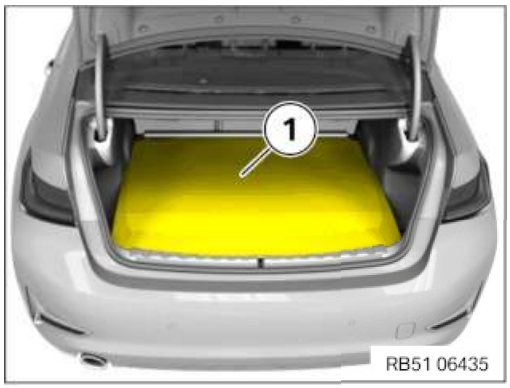
► **Installing rear luggage compartment well**

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- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

Emergency siren to holder			Used in step 10
Nut		Tightening torque	6 Nm

Rear bumper panel guide on rear centre guide			Used in step 11
Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel			Used in step 11
Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel			Used in step 11
Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel			Used in step 12
Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel			Used in step 12
Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	**Used in step**
61 13 ... Unlocking and disconnecting different plug connections	7

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65 76 630 Replacing pedestrian protection sensor (impact absorber) (after vehicle diagnosis)

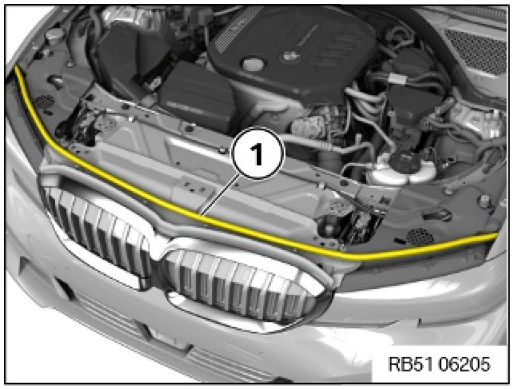
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



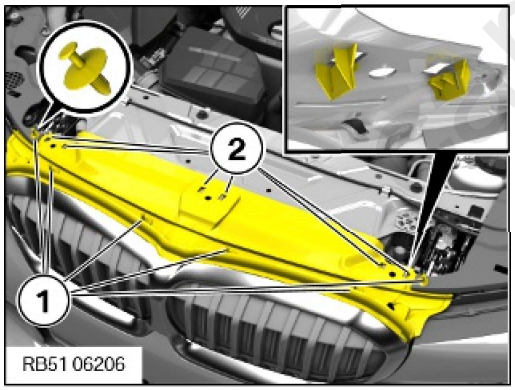
- See additional information.

2 – Remove the seal for the bonnet in front



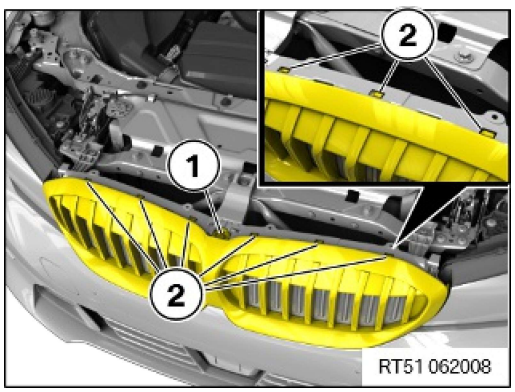
- Pull off front bonnet seal (1) upwards.

3 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

4 – Remove centre radiator ornamental grille



- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

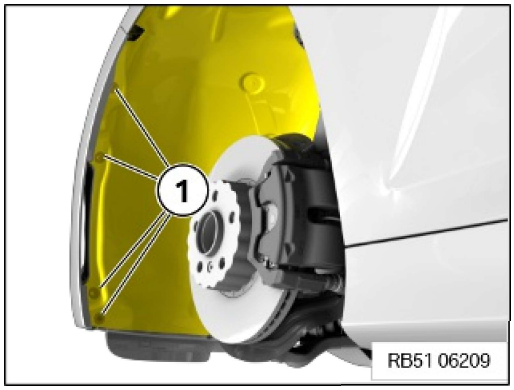
.com

5 – Partially remove both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially removing front wheel arch trim panel**

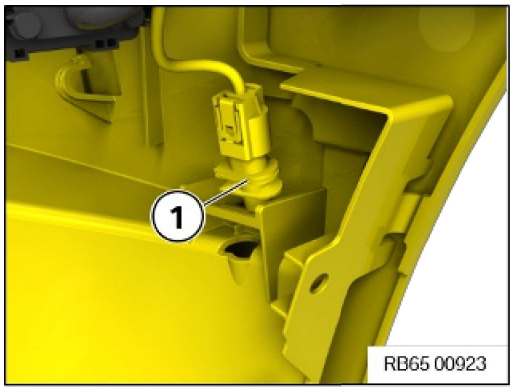


NOTICE

To provide a better overview: Schematic diagram without front wheel.

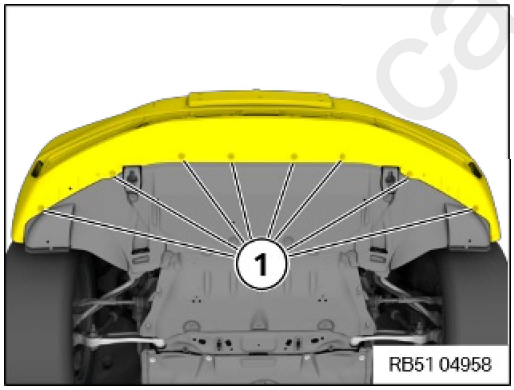
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

6 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

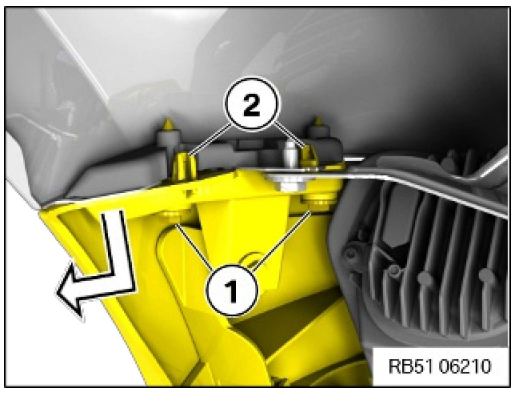
7 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

- Loosen screws (1).

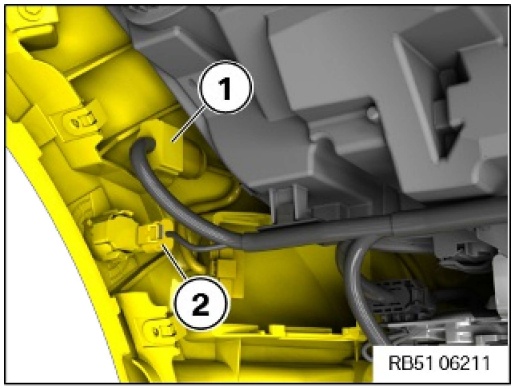


NOTICE

Perform the operations on the left and right side.

- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.

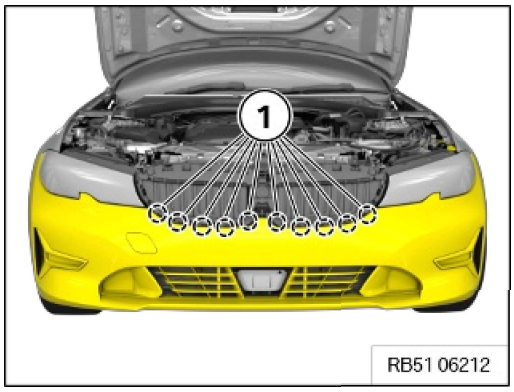
cardiagn.com



NOTICE

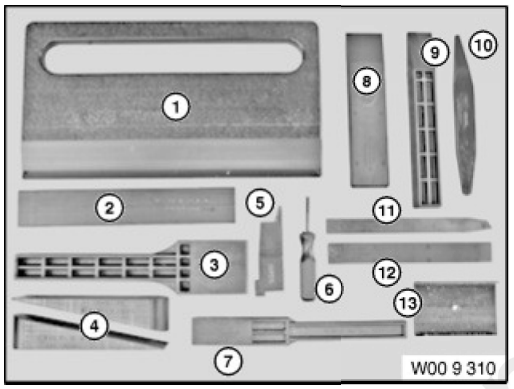
Perform the operations on the left and right side.

- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.

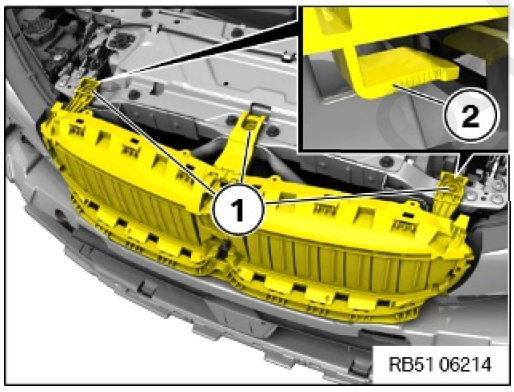


- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

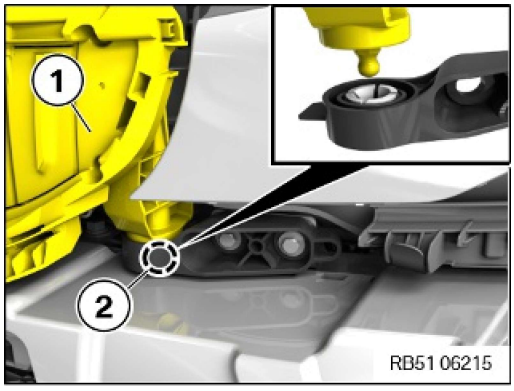
8 – Remove top automatic air flap control



- Have the set of special tools 0 493 752 (00 9 329) ready.



- Loosen screws (1).
- Carefully release the top air flap control towards the front with the latch mechanisms(2).



NOTICE

The operations shown only for one side must be carried out on both sides.

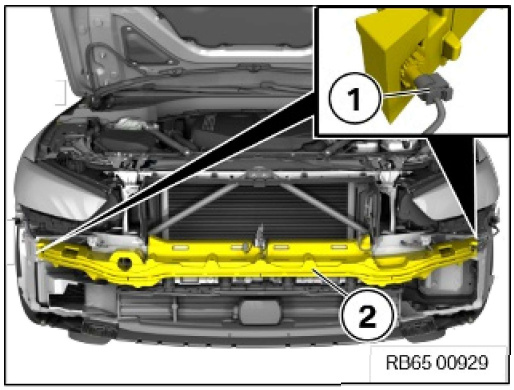
- Release the top air flap control (1)with a suitable special tool.

  Lever out the ball head (2) upwards.
- Feed out the top air flap control (1)upwards.
- Unlock associated plug connections and disconnect.

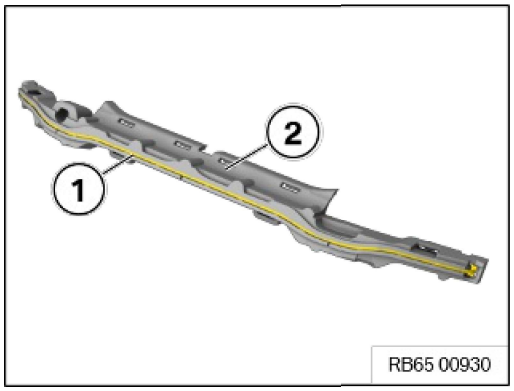
9 – Removing pedestrian protection sensor

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



- Unlock and disconnect plug connections (1).
- Remove the impact absorber (2).

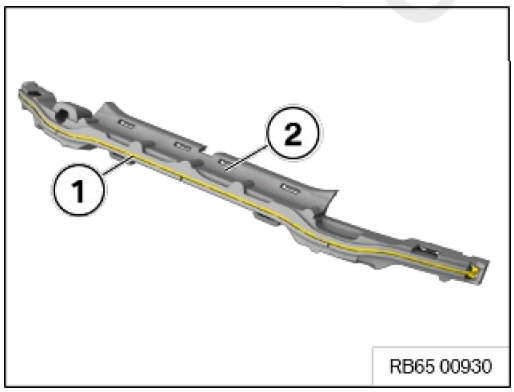


- Remove pedestrian protection sensor (1) from impact absorber (2).
  Impact absorber (2) must not be reused.
- Dispose of the impact absorber (2).

10 – Installing the pedestrian protection sensor

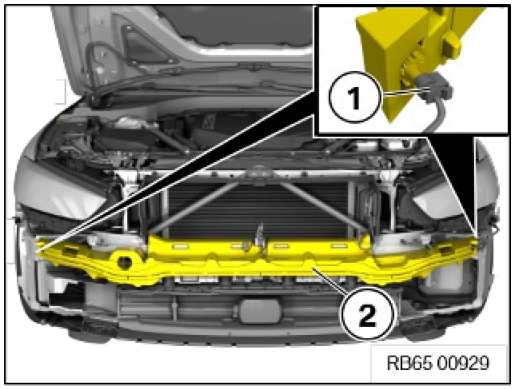
NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



- Renew the impact absorber (2).
  Parts: Impact absorber
- Carefully insert pedestrian protection (1) in the impact absorber (2).

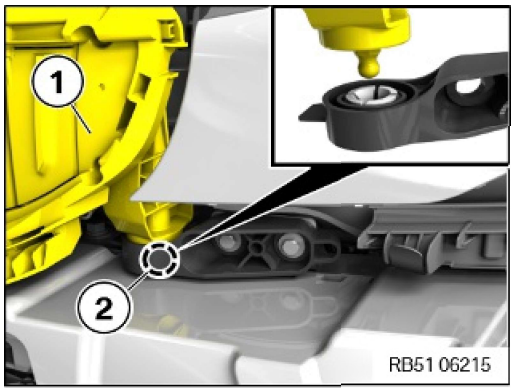
cardiagn.com



- Connect connectors (1) and lock.
- Attach impact absorber (2) at the bottom and then press it upwards.

POSTPROCESSES

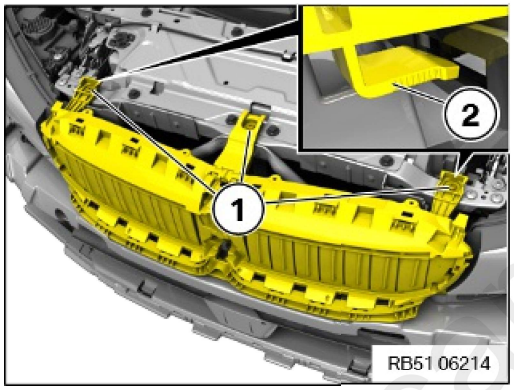
11 – Insert top automatic air flap control



NOTICE

The operations shown only for one side must be carried out on both sides.

- Position top air flap control (1).
- Connect and lock the relevant connectors.
- Feed in the top air flap control (1) and clip in with the ball head(2) .

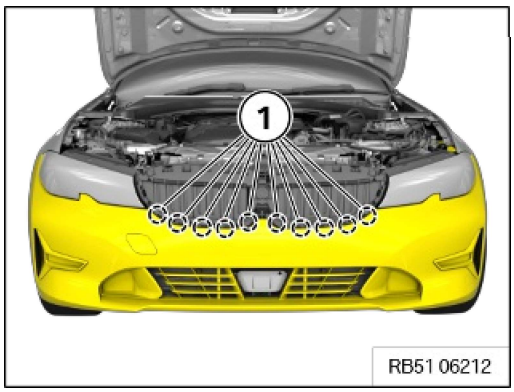


- Clip the top air flap control in the latch mechanisms(2) .
- Tighten the screws (1).

Air flap control to front end

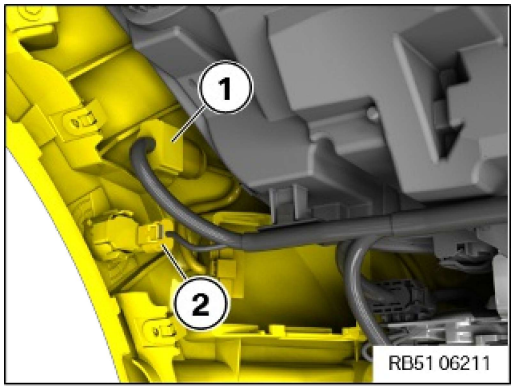
Oval-head screw with spring washer		Tightening torque	4,6 Nm

12 – Install bumper panel, front



- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).

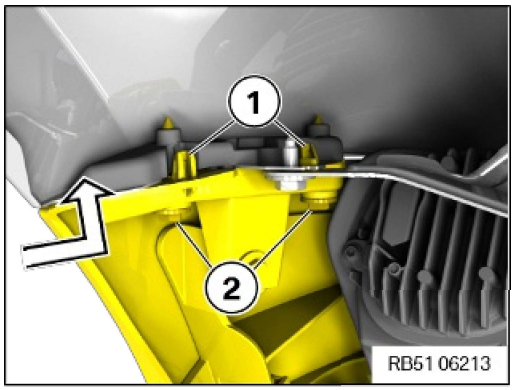
carmanuals.com



NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.



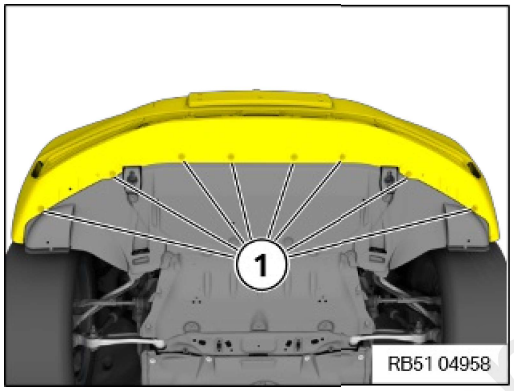
NOTICE

Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm



NOTICE

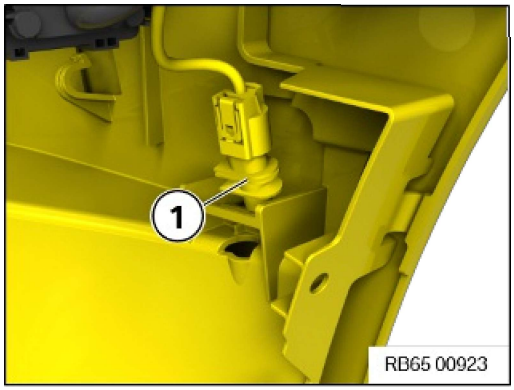
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

13 – Partially installing the temperature sensor



- Clip the temperature sensor (1) downwards into the front bumper panel.

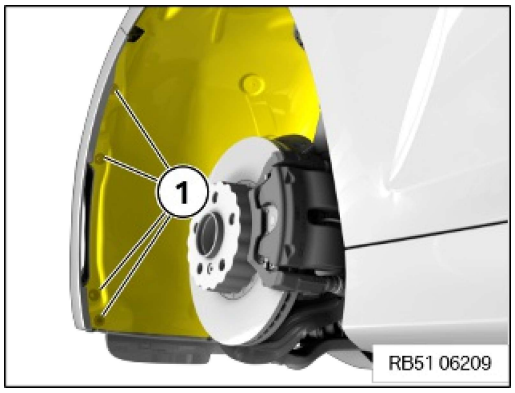
14 – Partially installing both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

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▸ **Partially installing front wheel arch trim panel**



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

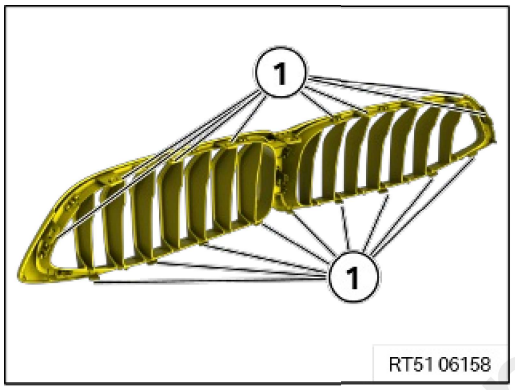
Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

15 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



Check

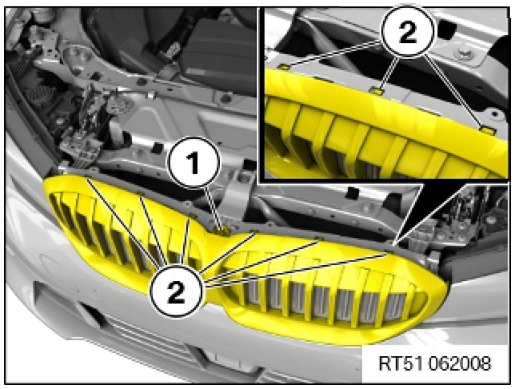
- Check latch mechanisms (1) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

- Renew the front ornamental grille, centre.



- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

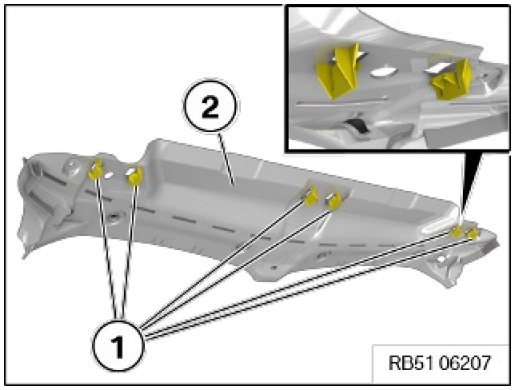
Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

16 – Installing cover for engine compartment centre

Check

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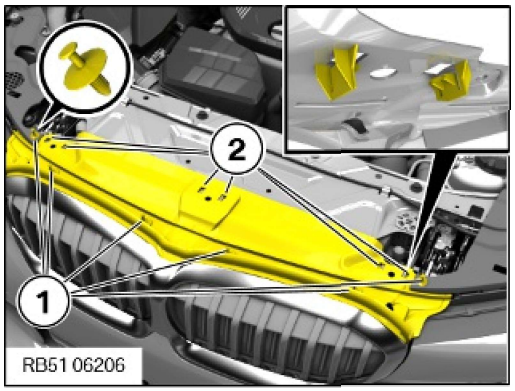
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

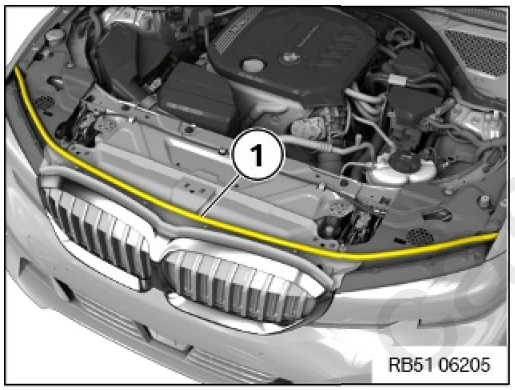
Measure

- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

17 – Install the seal for the front bonnet



- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

18 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

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Air flap control to front end — Used in step 11

Oval-head screw with spring washer		Tightening torque	4,6 Nm

Front bumper panel to front side panel — Used in step 12

Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection — Used in step 12

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Wheel arch trim panel, front — Used in step 14

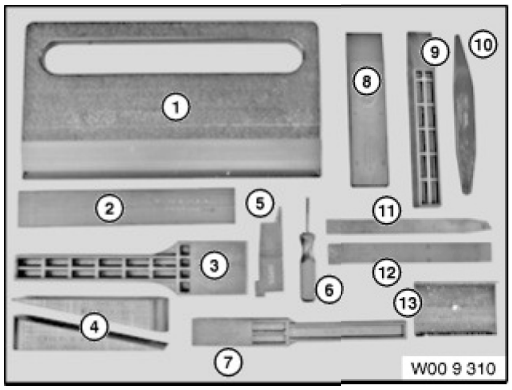
Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control — Used in step 15

Oval-head screwM6		Tightening torque	4,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common — Used in step 8

Usage	(Case) with insert not incl. panel wedges
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	118
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	118
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
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61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118
61 20 900 Disconnecting and connecting battery earth lead	118

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65 77 016 Removing and installing airbag control unit

PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Remove cupholder

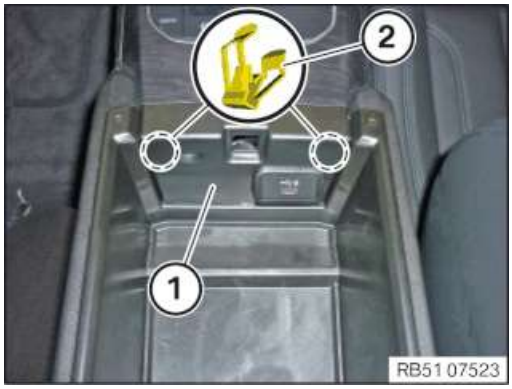


- Remove the insert (1).

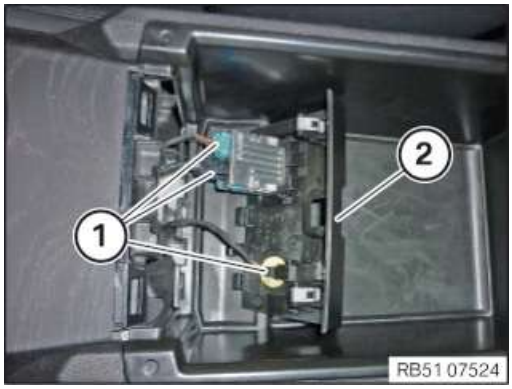


- Loosen screws (1).
- Feed the cup holder (2) out to the top.
- Unlock associated plug connections and disconnect.

3 – Removing the trim in the storage compartment on the centre armrest



- Lever out the trim (1) with the special tool (2) toward the rear from the clamps 2 298 505.



- Unlock and disconnect the plug connections (1) and remove the trim (2) .

4 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



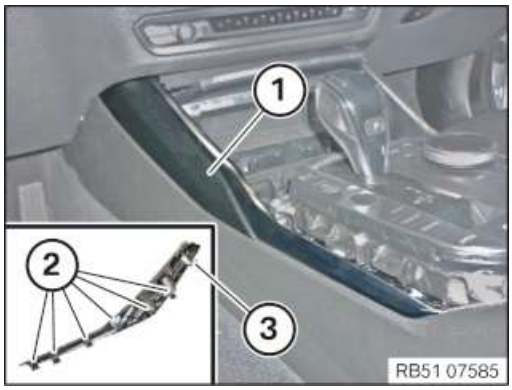
- Release and remove the centre console trim upwards (1) as shown using the special tool 2 298 505 from the latch mechanisms.

5 – Removing the decorative trim on the centre console trim on the left and right

▸ **Remove decorative trim on centre console**

NOTICE

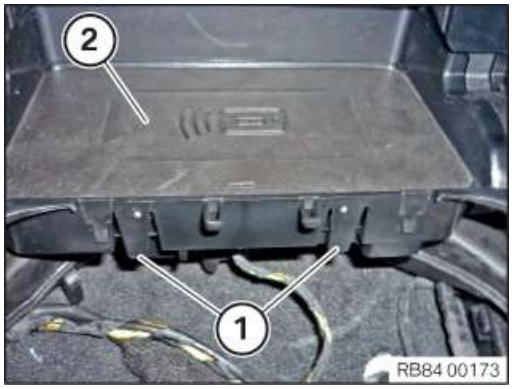
Description is for left component only. Procedure on the right side is identical.



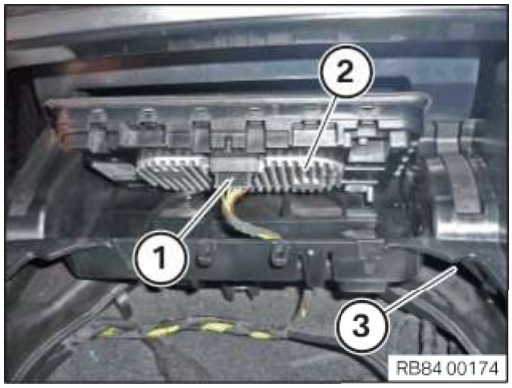
- Lever out the rear decorative trim (1) from the latch mechanisms (2) starting from the top.
- Feed out the decorative trim (1) backwards out of the guide (3) and remove.

6 – Removing the wireless charging station

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- Loosen the latch mechanisms (1) and push out the wireless charging station (2) upwards.



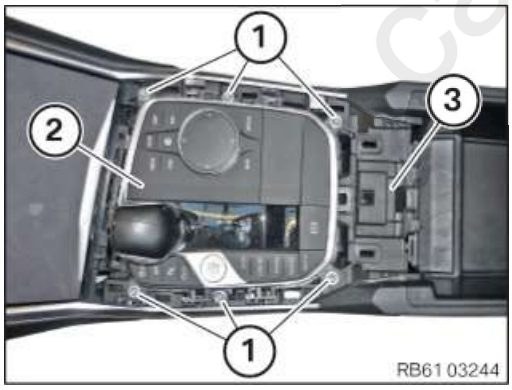
- Disconnect the connector (1) and remove the wireless charging station (2) from the centre console (3).

7 – Remove the operating facility in the centre console

▶ **Disconnecting all battery earth leads**



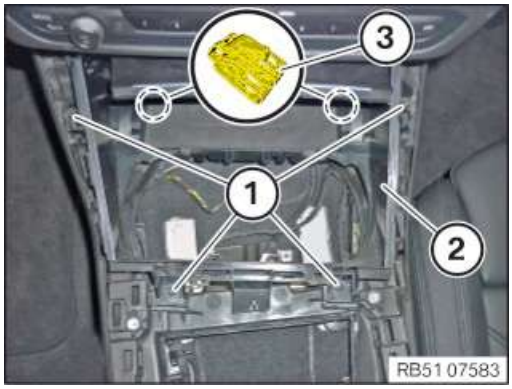
- See additional information.



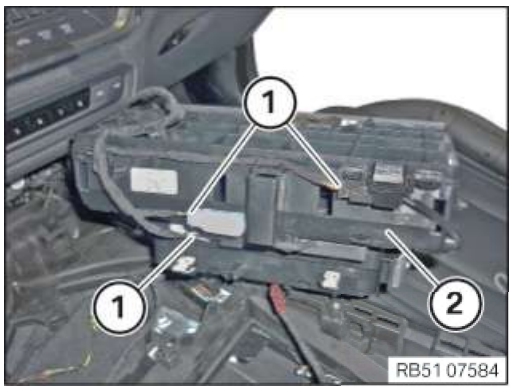
- Loosen screws (1).
- Remove the operating facility in the centre console (2) from the centre console (3).

8 – Removing the storage compartment of the front centre console

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- Loosen screws (1).
- Remove storage compartment trim (2) backwards out of clamps (3).



- Unlock and disconnect all the plug connections (1) and remove the storage compartment (2).

9 – Removing the rear centre console trim

RISK OF DAMAGE

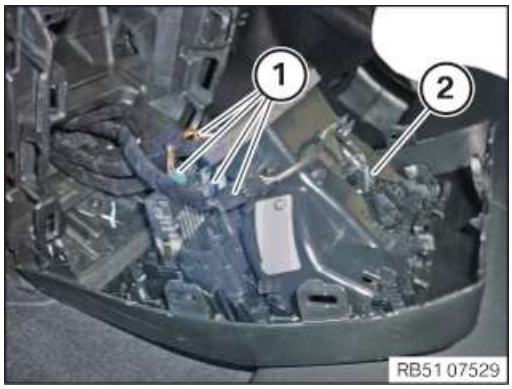
Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



- Release centre console trim (1) backwards from the latch mechanisms at the side and pull it a little way towards the rear.



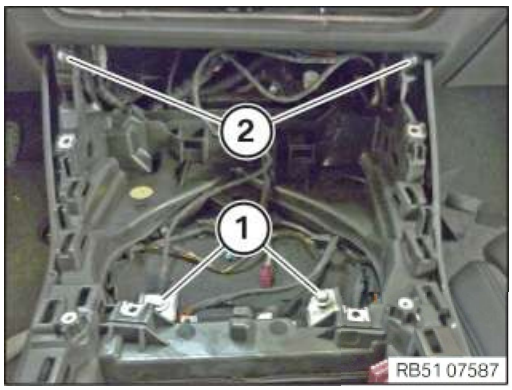
- Unlock and disconnect plug connections (1).
- Remove the centre console trim (2).

10 – Removing the centre console

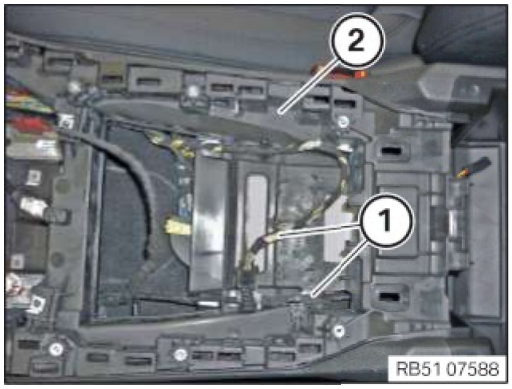
rdiagn.com



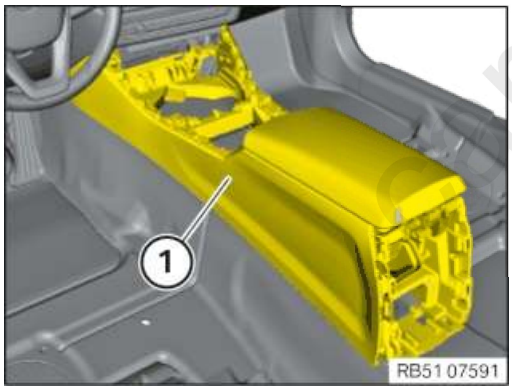
- Loosen screws (1).



- Loosen screws (1) and (2).



- Release the wiring harness (1) from the centre console (2).



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.

- Carefully raise rear centre console (1).
- Feed out wiring harness from the centre console (1) and unlock and disconnect existing plug connections, if required.
- Feed out and remove the centre console (1) on the instrument panel .

MAIN WORK

11 – Removing the airbag control unit

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WARNING

Airbag unit.

Danger! Life-threatening injuries!

- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

RISK OF DAMAGE

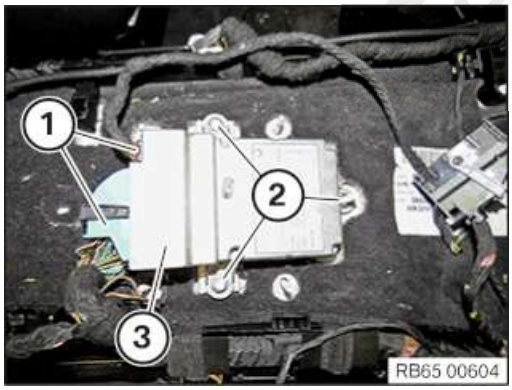
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.



- Release insulation (1) from airbag control unit (2) and fold to one side.



- Unlock plug connection (1) and disconnect.
- Loosen nuts (2).
- Remove airbag control unit (3).

12 – Installing the airbag control unit

WARNING

Airbag unit.

Danger! Life-threatening injuries!

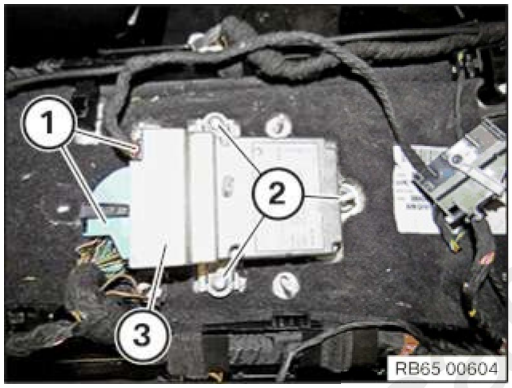
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.



- Position airbag control unit (3) correctly.
- Tighten nuts (2).

Airbag control unit to body

Screw		Tightening torque	8 Nm

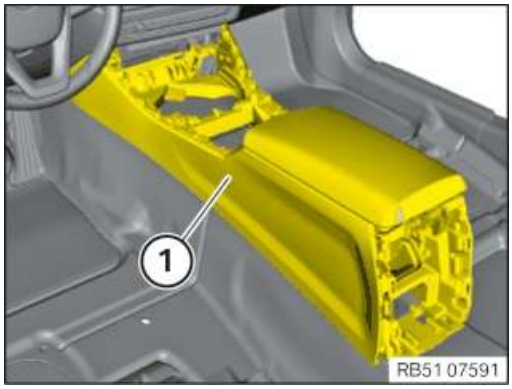
- Connect connectors (1) and lock.



- Position the insulation (1) correctly and secure on the airbag control unit (2).

POSTPROCESSES

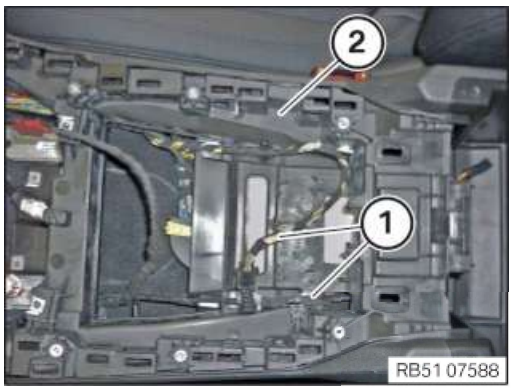
13 – Installing the centre console



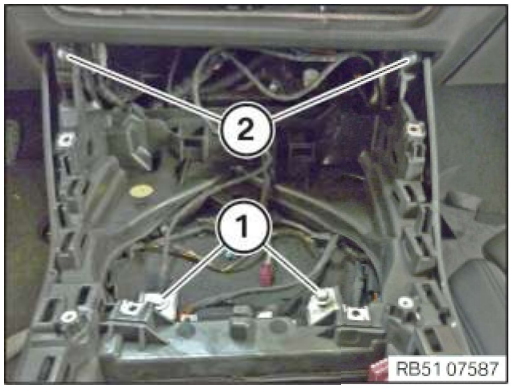
NOTICE

To provide a better overview: Schematic diagram with partially hidden components.

- Install centre console (1) and thereby feed in the wiring harness.
- Feed in the centre console (1) to the instrument panel and position correctly.



- Secure the wiring harness to the centre console (1) and connect and lock the existing plug connections.



- Tighten the screws (1).

Centre console on tunnel

M6x18 Hexagon screw		Tightening torque	4,6 Nm

- Tighten the screws (2).

Centre console to instrument panel

Oval-head screw		Tightening torque	1,8 Nm

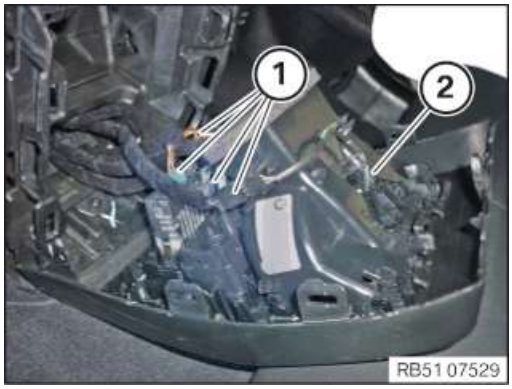


- Tighten the screws (1).

Centre console on tunnel

M6x18 Hexagon screw		Tightening torque	4,6 Nm

14 – Installing the rear centre console trim



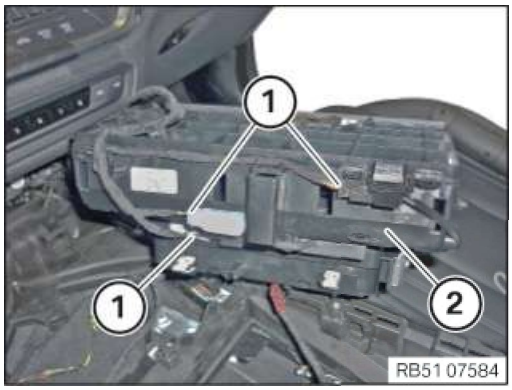
- Install the centre console trim (2).
- Connect connectors (1) and lock.

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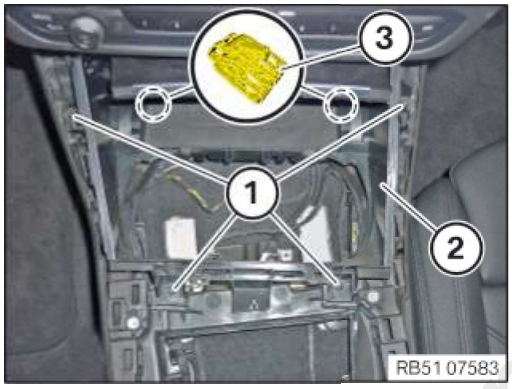


- Position centre console trim (1) and engage at the latch mechanisms at the side.

15 – Installing the storage compartment of the front centre console



- Mount the storage compartment (2) and connect connectors (1).

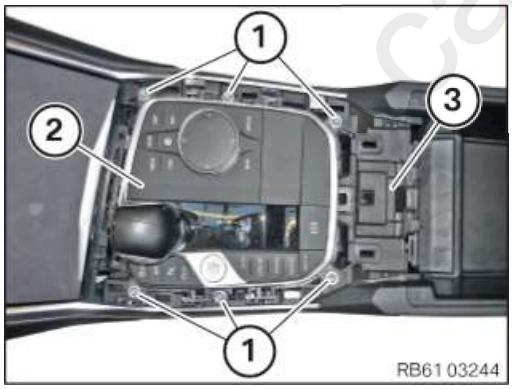


- Engage rear storage compartment trim (2) into clamps (3).
- Tighten the screws (1).

Storage compartment to centre console

Oval-head screw		Tightening torque	1,8 Nm

16 – Install the operating facility in the centre console



- Position operating facility (2) in the centre console (3).
- Tighten the screws (1).

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

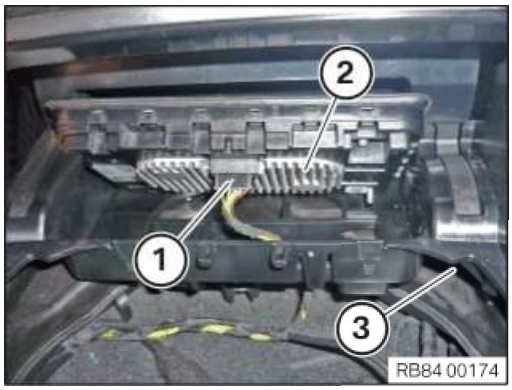
► **Disconnecting all battery earth leads**

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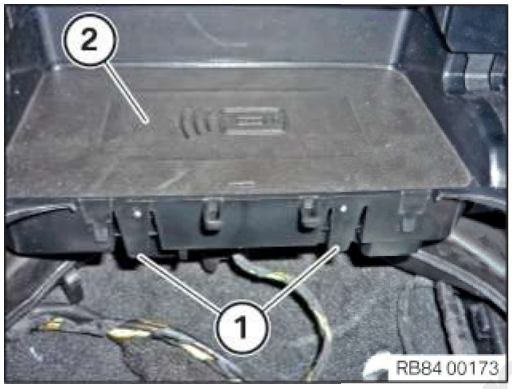


- See additional information.

17 – Installing the wireless charging station



- Connect connector (1).
- Position the wireless charging station (2) in the centre console (3).



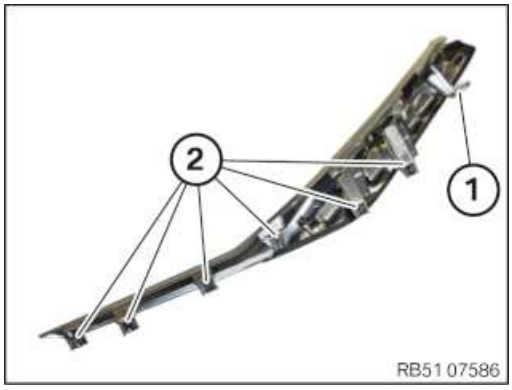
- Press the wireless charging station (2) down till the locking units (1) are engaged correctly.

18 – Install decorative trim on centre console on left and right

▸ **Installing the decorative trim to centre console**

NOTICE

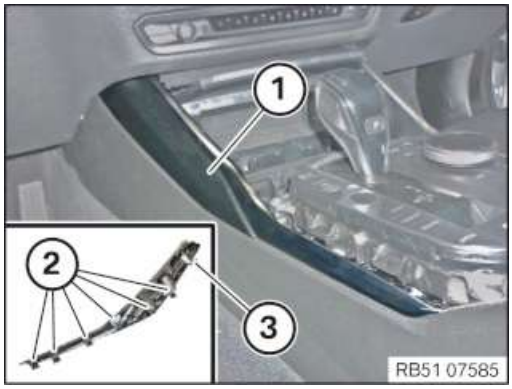
Description is for left component only. Procedure on the right side is identical.



- Check guide (1) and the latch mechanisms (2).

  Renew defective decorative trim.

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- Feed in the decorative trim (1) forward in the guide (3).
- Engage decorative trim (1) in latch mechanisms (2).

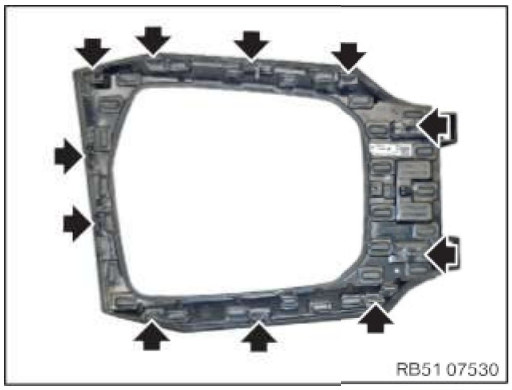
19 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

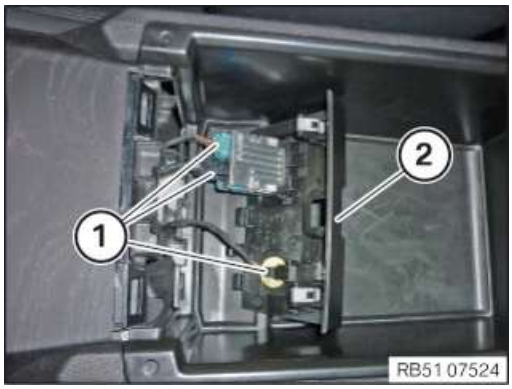


- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .



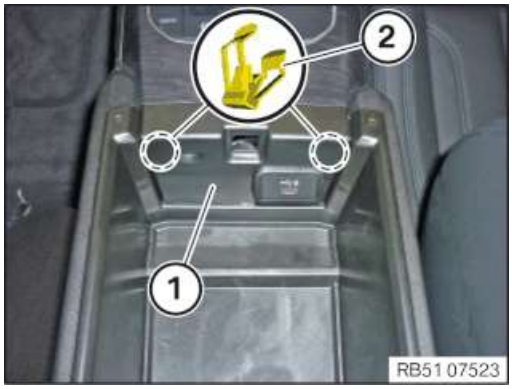
- Correctly position the centre console trim (1) and engage at the latch mechanisms.

20 – Installing the trim in the storage compartment of the centre armrest



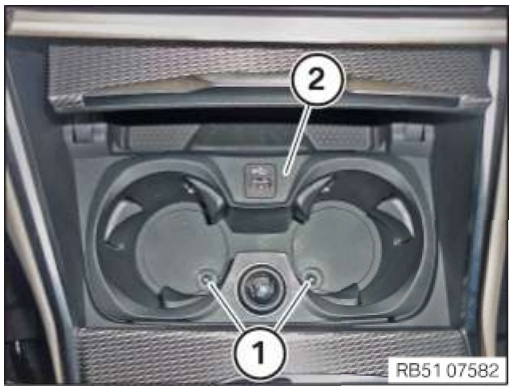
- Mount the trim (2) and connect connector (1) and lock.

mydiagn.com



- Correctly position trim (1) and snap into the clamps (2).

21 – Install the cup holder



- Fix the cup holder (1) and the belonging connectors.
- Correctly position cup holder (1).
- Tighten the screws (2).

Cup holder to centre console

Oval-head screw		Tightening torque	1,8 Nm



- Insert the insert (1).

22 – Disconnecting all battery earth leads



- See additional information.

23 – Adjusting the sensors for the driving dynamics

- Connect diagnosis system.
- Carry out the service function for adjustment of the sensors for driving dynamics.
  - Chassis and suspension
  - Traction control system
  - Adjustment of the driving dynamics sensors

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Additional Information

Overview of Tightening Torques

Airbag control unit to body			Used in step 12
Screw		Tightening torque	8 Nm

Centre console on tunnel			Used in step 13
M6x18 Hexagon screw		Tightening torque	4,6 Nm

Centre console to instrument panel			Used in step 13
Oval-head screw		Tightening torque	1,8 Nm

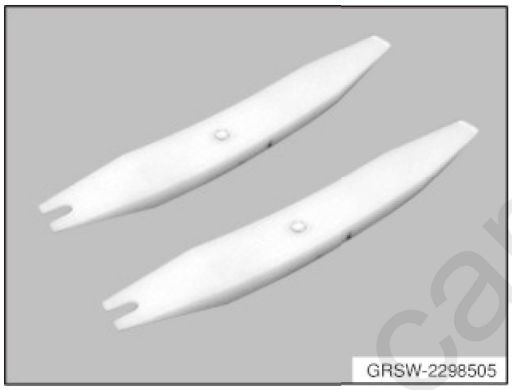
Storage compartment to centre console			Used in step 15
Oval-head screw		Tightening torque	1,8 Nm

Gear selector switch to centre console trim			Used in step 16
Screw		Tightening torque	1,8 Nm

Cup holder to centre console			Used in step 21
Oval-head screw		Tightening torque	1,8 Nm

Overview of Special Tools

2 298 505 Wedge



Common		Used in step 34
Usage	Set (delivery of 2 pieces)	
Included in the tool or work		
Storage location	C34	
Replaced by		
In connection with		
SI-Number	01 03 12 (792)	

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	1112

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171622
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171622

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61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171622
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
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61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 35 ... Notes on ESD protection (Electro Static Discharge)	1112

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65 77 725 Removing and installing airbag sensor on the B-pillar

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

NOTICE

Description is for left component only. Procedure on the right side is identical.

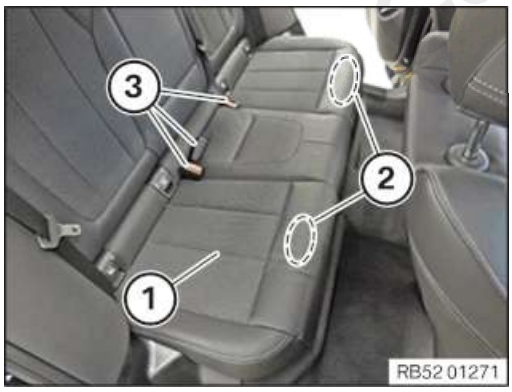
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Removing seat bench



- Disengage the seat bench (1) in area (2) in an upward direction.
- Feed out the seat belt buckle (3) from the seat bench.

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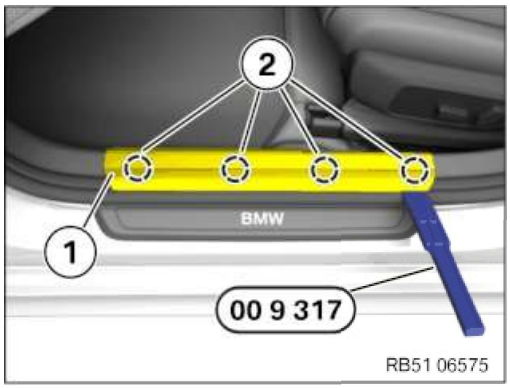


- Pull the seat bench (1) further forward.
- Release screw (2) on the end fitting and guide out belt (3).

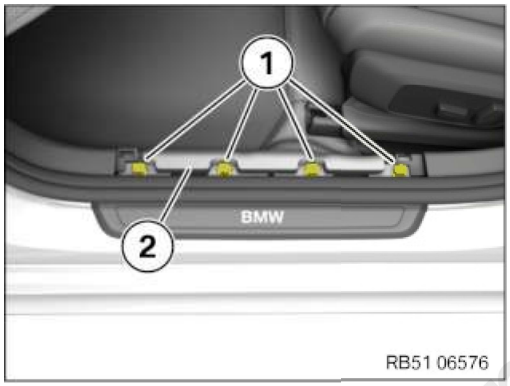
Note: If there is a belt lock on the belt, the screw on the end fitting must not be released.

- If necessary, disconnect the present plug connections.
- Lift the seat bench (1) out of the vehicle.

3 – Remove door sill cover strip

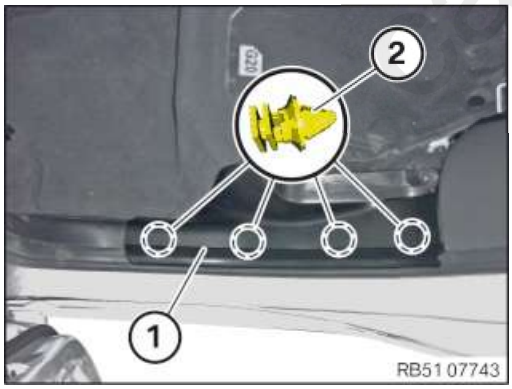


- Detach the door sill cover strip(1) using the special tool 0 490 534 (00 9 317) from the clips (2) in the floor panel.



- If necessary, remove the clips (1) from the floor panel (2) and attach to the door sill cover strip.

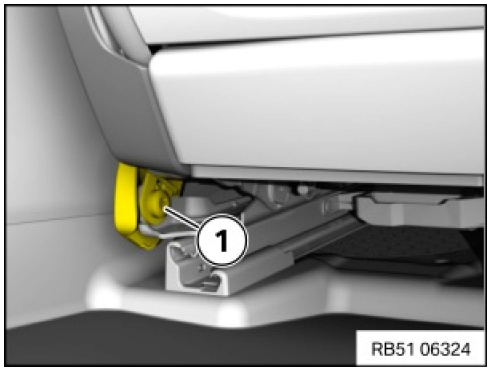
4 – Removing rear entrance cover strip



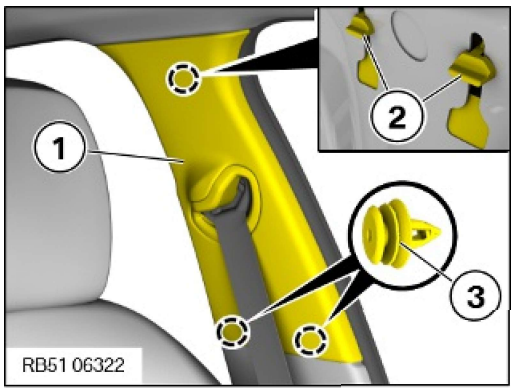
- Release the door sill cover strip (1) using the special tool 0 490 534 (00 9 317) from the clips (2) in the floor panel.
- If required, remove the clips (2) remaining in the body and mount them on the door sill cover strip.

5 – Remove the B-pillar trim panel

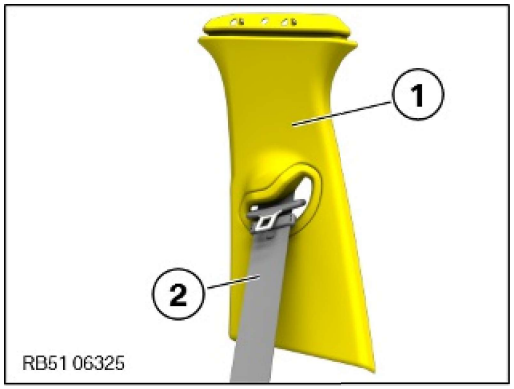
erdiagn.com



- Fully position the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).

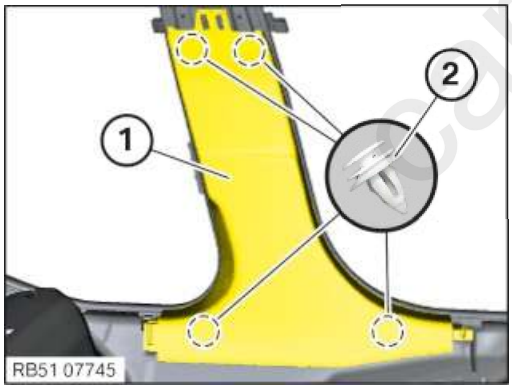


- Unclip clips (3).
- Feed B-pillar trim panel (1) out of the front and rear lip of edge protections and the guides (2).



- Feed upper seat belt (2) out of B-pillar trim panel (1).

6 – Remove the lower B-pillar trim panel



- Unclip the B-pillar trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Feed out and remove the B-pillar trim panel (1) at the front and rear edge protection.

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MAIN WORK

7 – Removing airbag sensor on the B-pillar



- Slide the seat belt (1) slightly to the side.
- Unlock and disconnect connector (2).
- Release bolt (3) and remove the airbag sensor (4) on the B-pillar.

8 – Installing airbag sensor on the B-pillar



- Slide the seat belt (1) slightly to the side.
- Position airbag sensor (4) on the B-pillar.
- Tighten down screw (3).

Airbag sensor, B-pillar

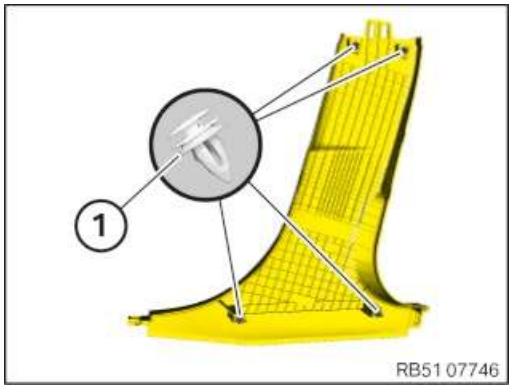
M6		Tightening torque	8.8 Nm

- Connect connectors (2) and lock.
- Position seat belt (1) correctly.

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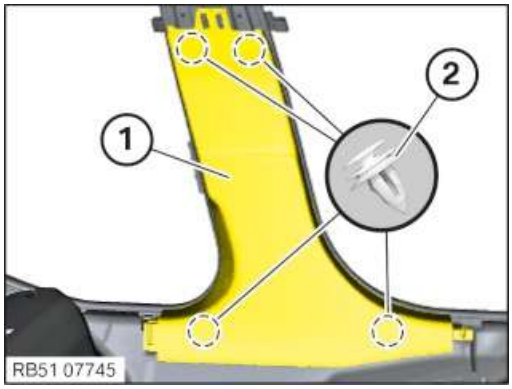
POSTPROCESSES

9 – Installing the lower B-pillar trim panel



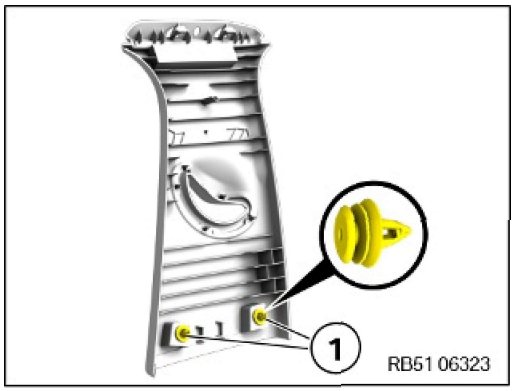
- Check the clips (1) for damage.

  Replace broken for missing clips (1).

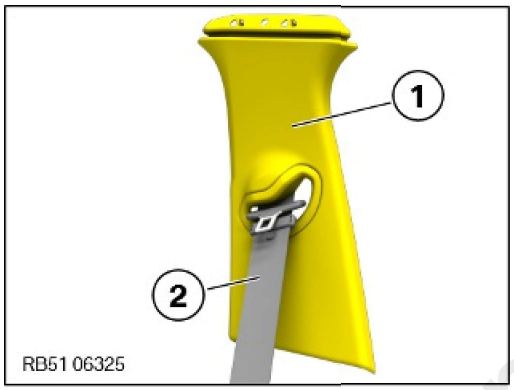


- Insert and correctly position B-pillar trim panel (1) on the front and rear edge protection.
- Clip in the B-pillar trim panel (1) at the clips (2).

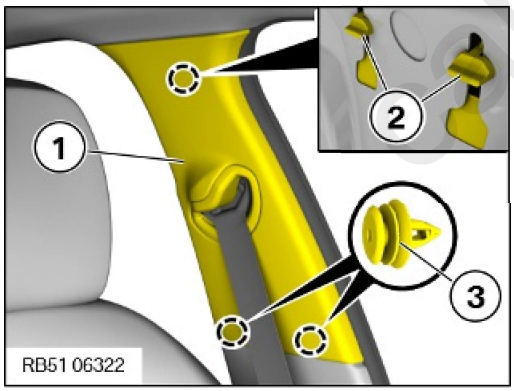
10 – Install the B-pillar trim panel



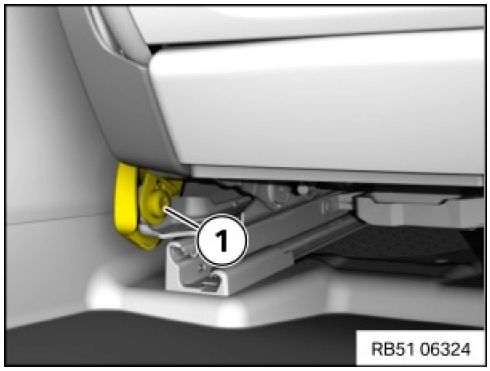
- Check the clips (1) for damage and renew if necessary.



- Guide upper seat belt (2) in B-pillar trim panel (1).



- Insert B-pillar trim panel (1) into guides (2) and under the front and rear lips of edge protection.
- Clip in the B-pillar trim panel (1) with the clips (3).



- Fully position the front seat to the front and top.
- Insert the end fitting (2).
- Renew the screw (1).

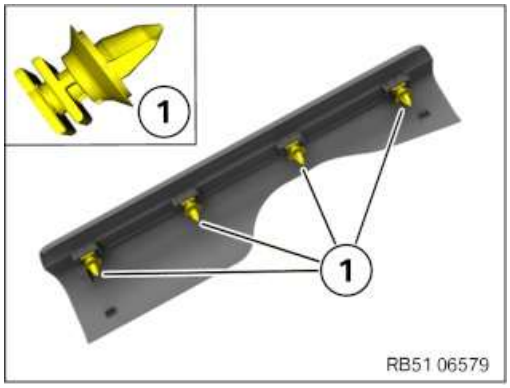
  Parts: Screw
- Tighten down screw (1).

End fitting to seat mechanism

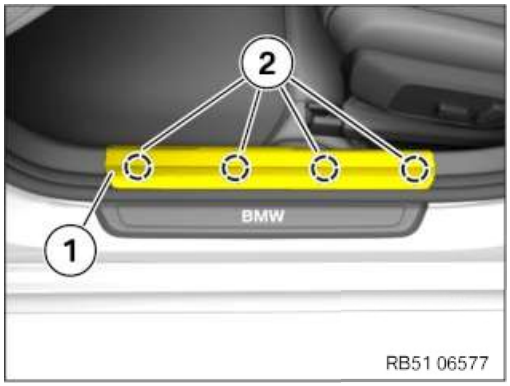
Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

11 – Install the door sill cover strip

carsdiagn.com

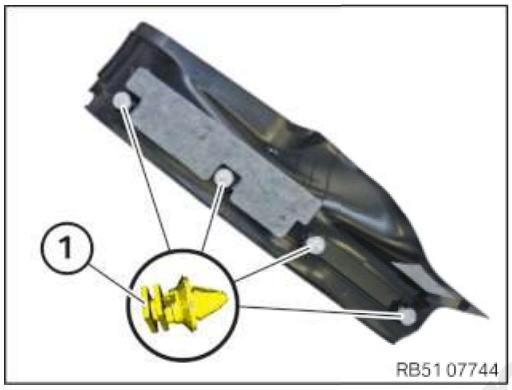


- Check the clips (1) for damage and renew if necessary.

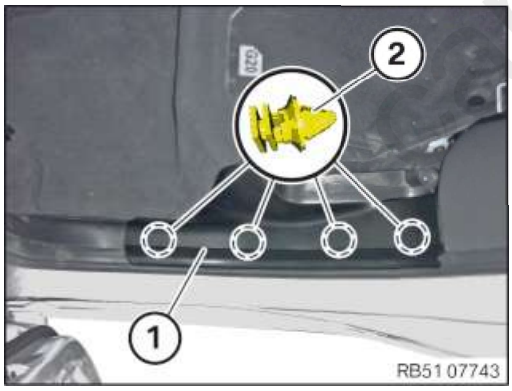


- Clip the door sill cover strip (1) into the floor panel with the clips (2).

12 – Installing the rear door sill cover strip



- Check the clips (1) for damage.
  Replace broken for missing clips (1).



- Position the door sill cover strip (1) correctly and clip in at the clips (2).

13 – Installing rear seat bench

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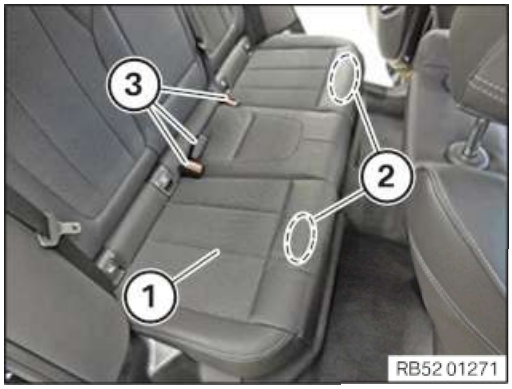
- Lift the seat bench (1) into the vehicle.
- Insert the seat belt (3).
- Renew the screw (2).

  Parts: Screw
- Tighten down screw (2).

Rear upper seat belt to bottom body

Screw	Renew screw.	Tightening torque	42 Nm

- Connect available connectors.



- Insert seat bench (1).
- Thread seat belt buckles (3) into the seat bench.
- Engage the seat bench (1) in the area (2).

14 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

Airbag sensor, B-pillar Used in step 8

M6		Tightening torque	8.8 Nm

End fitting to seat mechanism Used in step 10

Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

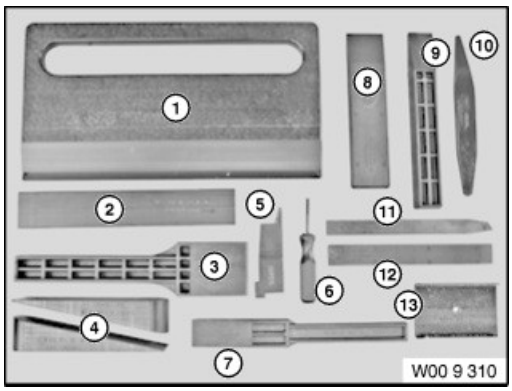
Rear upper seat belt to bottom body Used in step 13

Screw	Renew screw.	Tightening torque	42 Nm

Overview of Special Tools

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0 490 534 (00 9 317) Wedge



Common	Used in step 34
Usage	(Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)
Included in the tool or work	0 490 527
Storage location	
Replaced by	
In connection with	
SI-Number	

0 496 569 (00 9 325) Wedge



Common	Used in step 6
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	78
72 00 ... Safety regulations for handling components with gas generators	

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	114
61 20 900 Disconnecting and connecting battery earth lead	114

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61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
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61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114

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65 77 720 Removing and installing airbag sensor on the left B-pillar

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

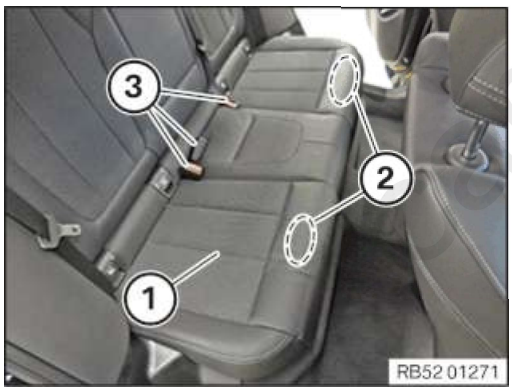
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Removing seat bench



- Disengage the seat bench (1) in area (2) in an upward direction.
- Feed out the seat belt buckle (3) from the seat bench.



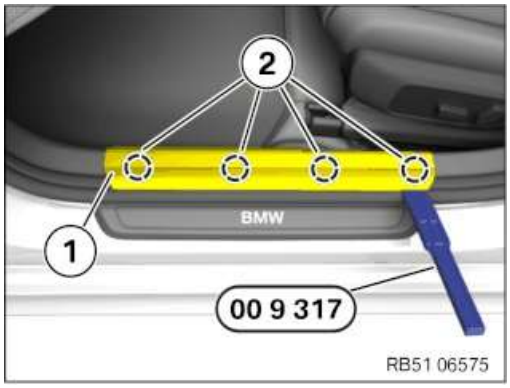
- Pull the seat bench (1) further forward.
- Release screw (2) on the end fitting and guide out belt (3).

Note: If there is a belt lock on the belt, the screw on the end fitting must not be released.

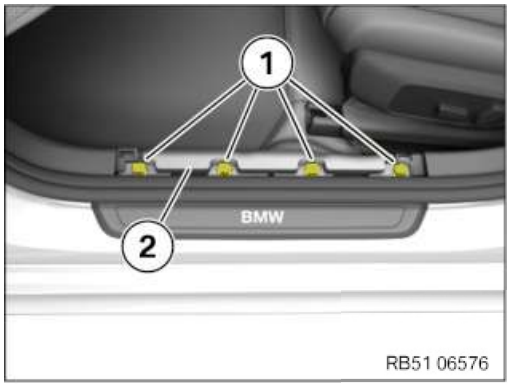
- If necessary, disconnect the present plug connections.
- Lift the seat bench (1) out of the vehicle.

3 – Remove door sill cover strip

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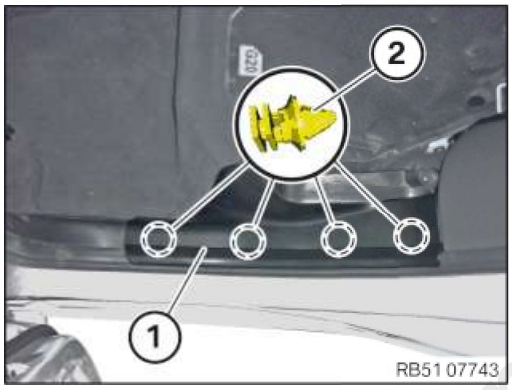


- Detach the door sill cover strip(1) using the special tool 0 490 534 (00 9 317) from the clips (2) in the floor panel.



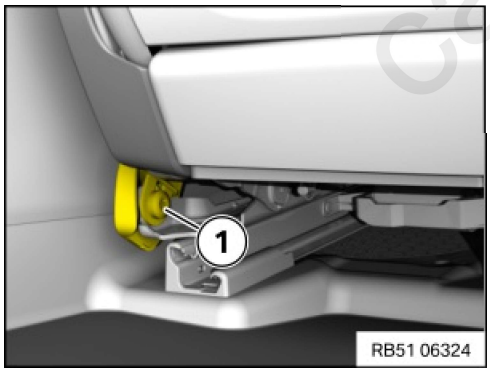
- If necessary, remove the clips (1) from the floor panel (2) and attach to the door sill cover strip.

4 – Removing rear entrance cover strip

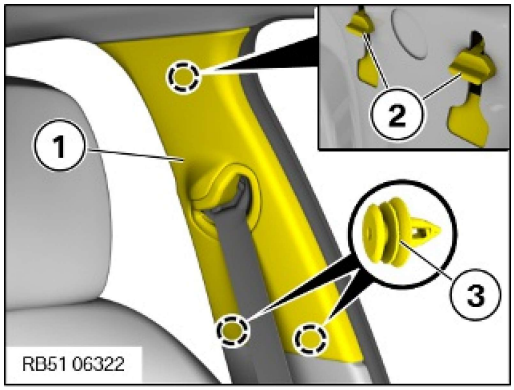


- Release the door sill cover strip (1) using the special tool 0 490 534 (00 9 317) from the clips (2) in the floor panel.
- If required, remove the clips (2) remaining in the body and mount them on the door sill cover strip.

5 – Remove the B-pillar trim panel

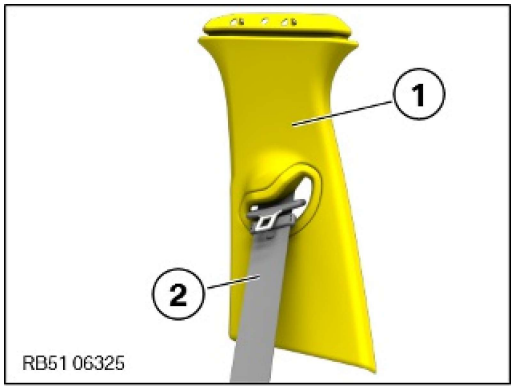


- Fully position the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).



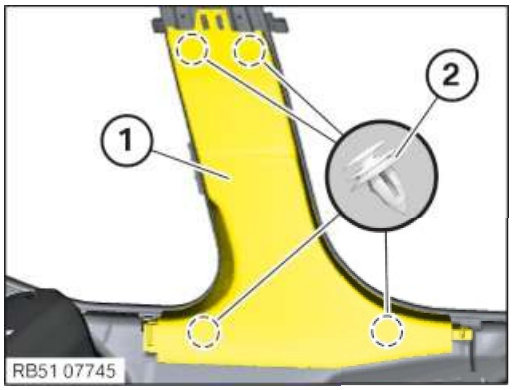
- Unclip clips (3).
- Feed B-pillar trim panel (1) out of the front and rear lip of edge protections and the guides (2).

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- Feed upper seat belt (2) out of B-pillar trim panel (1).

6 – Remove the lower B-pillar trim panel



- Unclip the B-pillar trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Feed out and remove the B-pillar trim panel (1) at the front and rear edge protection.

MAIN WORK

7 – Removing airbag sensor on the B-pillar



- Slide the seat belt (1) slightly to the side.
- Unlock and disconnect connector (2).
- Release bolt (3) and remove the airbag sensor (4) on the B-pillar.

8 – Installing airbag sensor on the B-pillar



- Slide the seat belt (1) slightly to the side.
- Position airbag sensor (4) on the B-pillar.
- Tighten down screw (3).

Airbag sensor, B-pillar

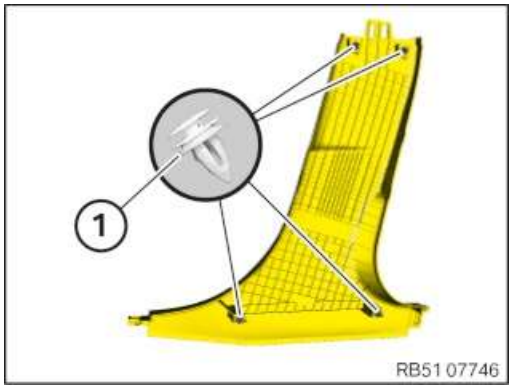
M6		Tightening torque	8.8 Nm

- Connect connectors (2) and lock.
- Position seat belt (1) correctly.

POSTPROCESSES

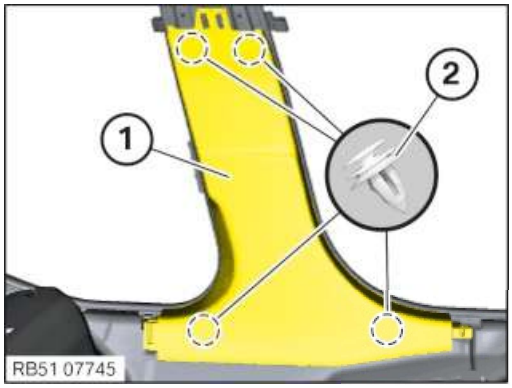
9 – Installing the lower B-pillar trim panel

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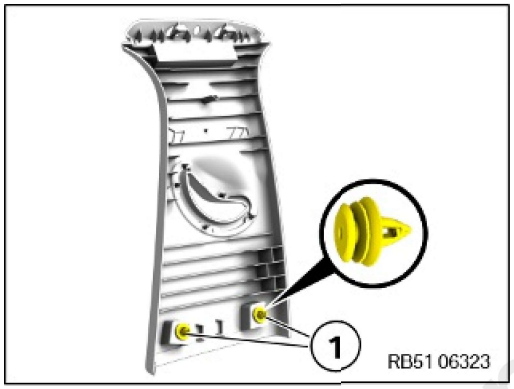
- Check the clips (1) for damage.

  Replace broken for missing clips (1).

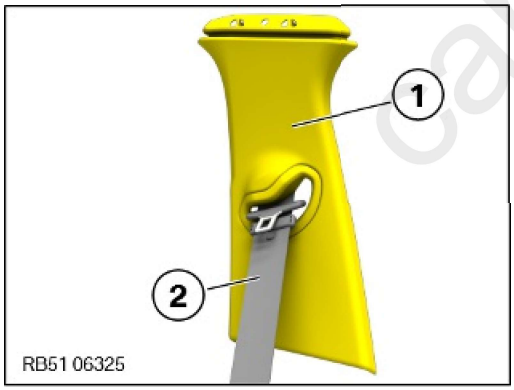


- Insert and correctly position B-pillar trim panel (1) on the front and rear edge protection.
- Clip in the B-pillar trim panel (1) at the clips (2).

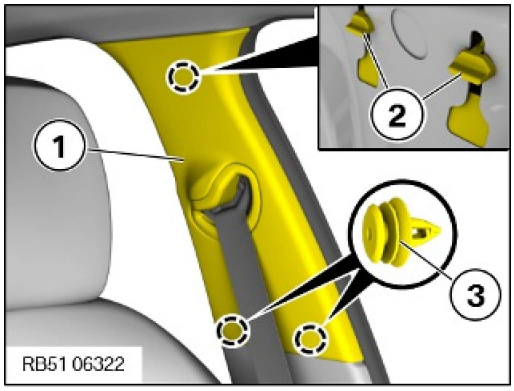
10 – Install the B-pillar trim panel



- Check the clips (1) for damage and renew if necessary.

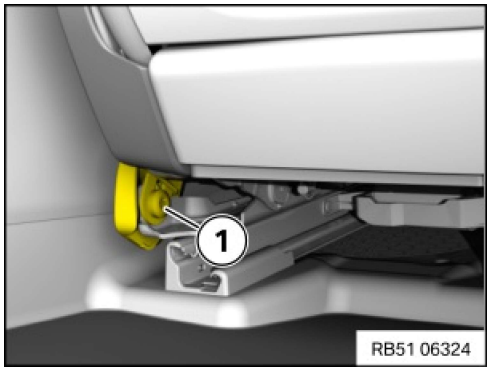


- Guide upper seat belt (2) in B-pillar trim panel (1).



- Insert B-pillar trim panel (1) into guides (2) and under the front and rear lips of edge protection.
- Clip in the B-pillar trim panel (1) with the clips (3).

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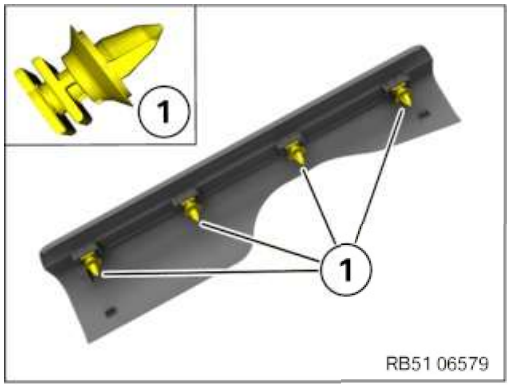
- Fully position the front seat to the front and top.
- Insert the end fitting (2).
- Renew the screw (1).

  Parts: Screw
- Tighten down screw (1).

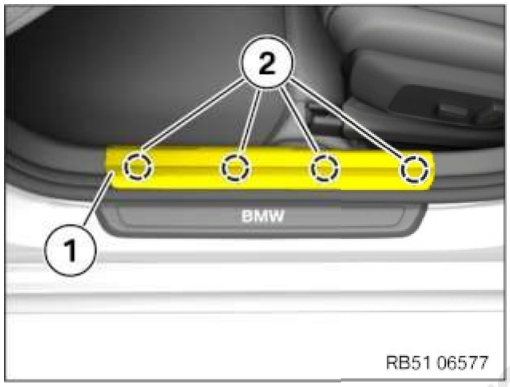
End fitting to seat mechanism

Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

11 – Install the door sill cover strip

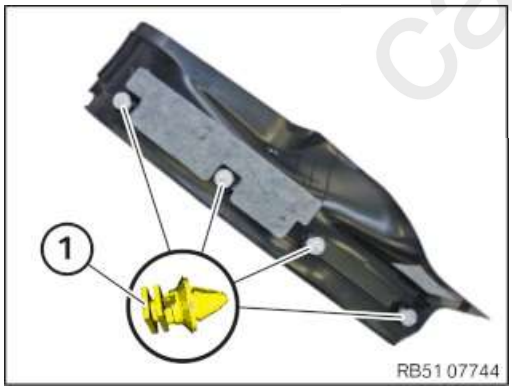


- Check the clips (1) for damage and renew if necessary.



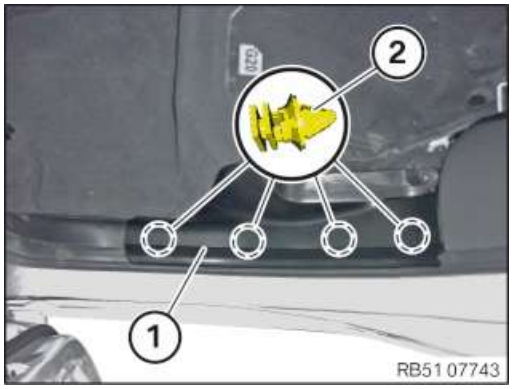
- Clip the door sill cover strip (1) into the floor panel with the clips (2).

12 – Installing the rear door sill cover strip



- Check the clips (1) for damage.

  Replace broken for missing clips (1).



- Position the door sill cover strip (1) correctly and clip in at the clips (2).

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13 – Installing rear seat bench



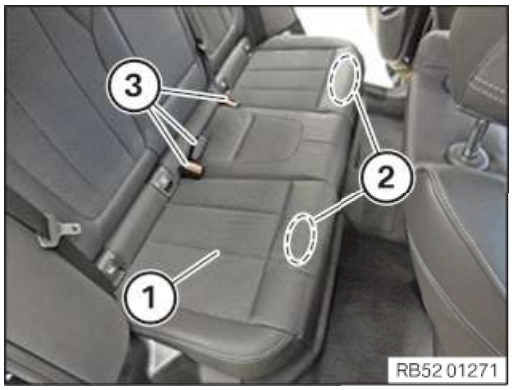
- Lift the seat bench (1) into the vehicle.
- Insert the seat belt (3).
- Renew the screw (2).

  Parts: Screw
- Tighten down screw (2).

Rear upper seat belt to bottom body

Screw	Renew screw.	Tightening torque	42 Nm

- Connect available connectors.



- Insert seat bench (1).
- Thread seat belt buckles (3) into the seat bench.
- Engage the seat bench (1) in the area (2).

14 – Disconnecting all battery earth leads



- See additional information.

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Additional Information

Overview of Tightening Torques

Airbag sensor, B-pillar Used in step 8

M6		Tightening torque	8.8 Nm

End fitting to seat mechanism Used in step 10

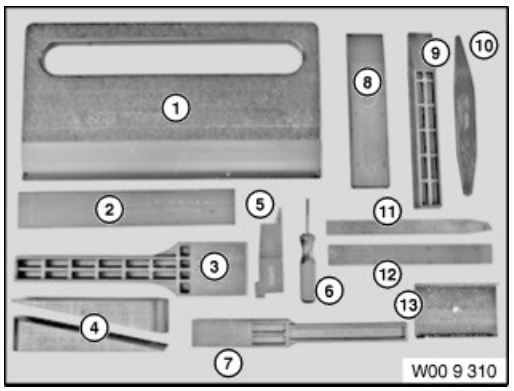
Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

Rear upper seat belt to bottom body Used in step 13

Screw	Renew screw.	Tightening torque	42 Nm

Overview of Special Tools

0 490 534 (00 9 317) Wedge



Common	Used in step 34
Usage	(Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)
Included in the tool or work	0 490 527
Storage location	
Replaced by	
In connection with	
SI-Number	

0 496 569 (00 9 325) Wedge



Common	Used in step 6
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	78
72 00 ... Safety regulations for handling components with gas generators	

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114

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61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
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61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
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61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114

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65 77 745 Removing and installing the front right door sensor

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

NOTICE

Description is for left component only. Procedure on the right side is identical.

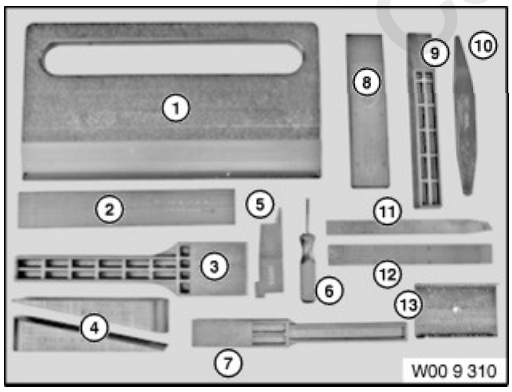
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



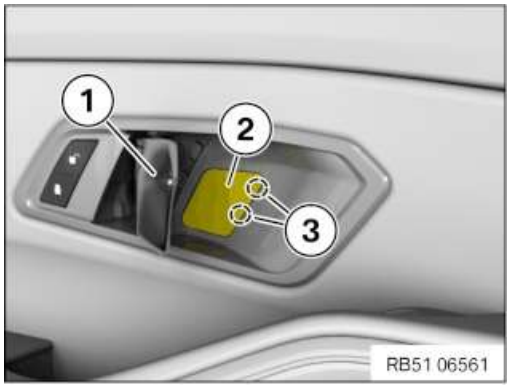
- See additional information.

2 – Remove door trim panel

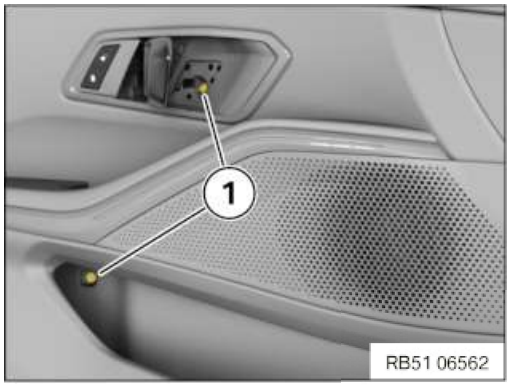


- Have the set of special tools 0 493 752 (00 9 329) ready.

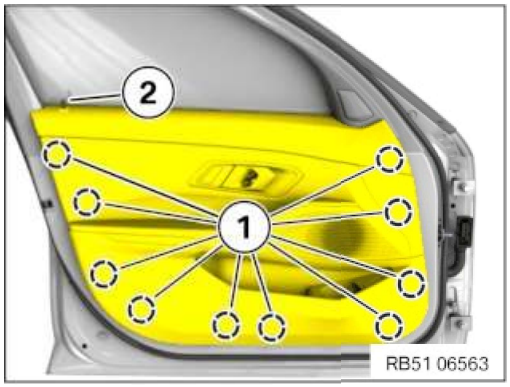
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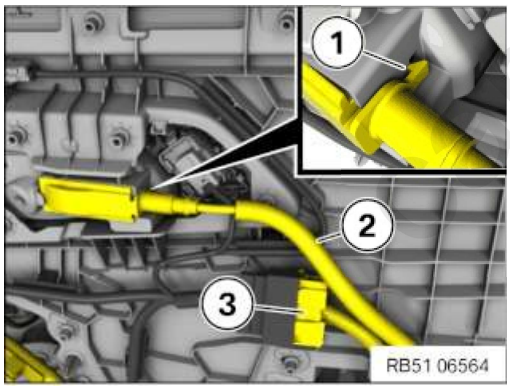
- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable special tool.
- Remove trim (2).



- Loosen screws (1).



- Unclip the door trim panel at the clips (1) using a suitable special tool.
- Guide the door trim panel upwards out of the front inner weather strip and the operating rod (2).



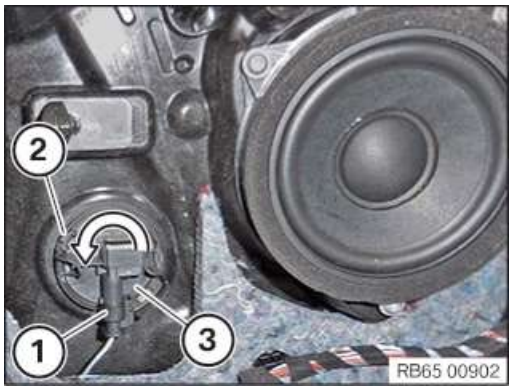
- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock plug connection (3), disconnect it and remove the door trim panel.

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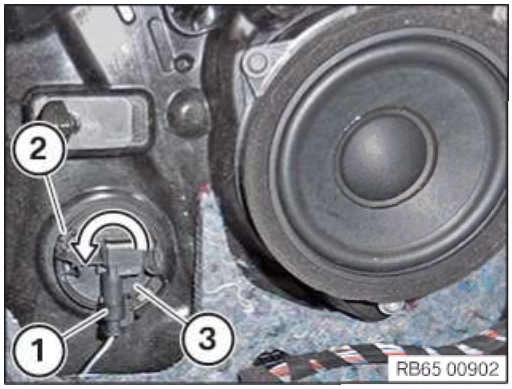
MAIN WORK

3 – Removing the airbag sensor on the front door



- Unlock and disconnect connector (1).
- Unlock the latch mechanism (2).
- Turn airbag sensor (3) in the direction of arrow and remove.

4 – Installing the airbag sensor on the front door

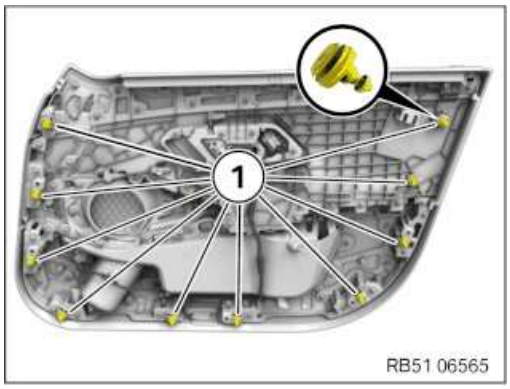


- Position airbag sensor (3) correctly and turn it in the direction of the arrow until latch mechanism (2) engages.
- Connect connectors (1) and lock.

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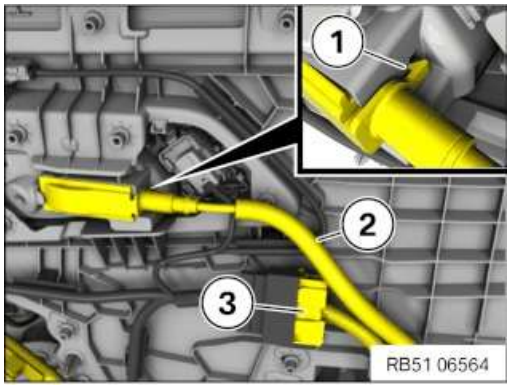
POSTPROCESSES

5 – Install door trim panel

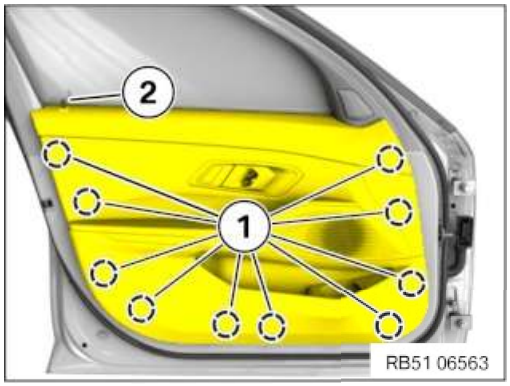


- Renew the clips (1).

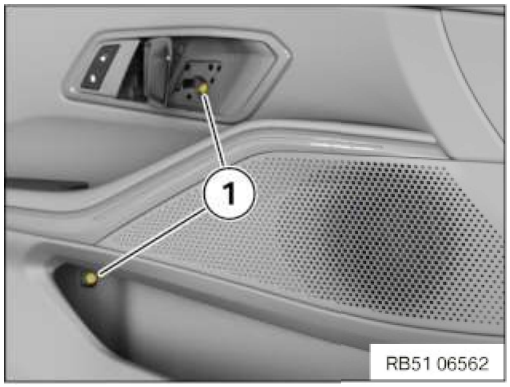
  Parts: Clips



- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door opener (2) and clip in the latch mechanism (1).
- Connect connectors (3) and lock.



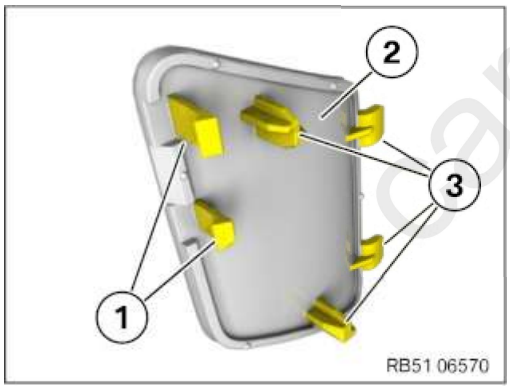
- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).



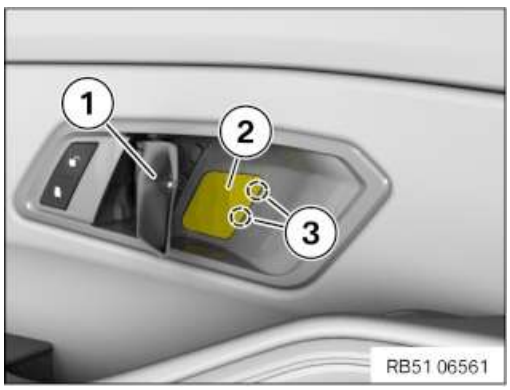
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

6 – Disconnecting all battery earth leads

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- See additional information.

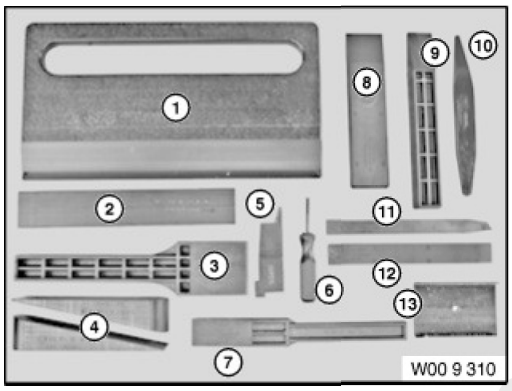
Additional Information

Overview of Tightening Torques

Door trim panel to door			Used in step 5
Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common		Used in step 2
Usage	(Case) with insert not incl. panel wedges	
Included in the tool or work	0 490 527	
Storage location	Individual	
Replaced by		
In connection with		
SI-Number	01 07 09 (530)	

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	16
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	16
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	16
61 20 900 Disconnecting and connecting battery earth lead	16

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61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
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61 20 900 Disconnecting and connecting battery earth lead	16
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61 20 900 Disconnecting and connecting battery earth lead	16
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61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16

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65 77 740 Removing and installing the left front door sensor (after vehicle diagnosis)

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

WARNING

Working on 12 V vehicle electrical system.

Risk of short circuits! Risk of fire!

- Detach battery earth lead from battery.
- For additional batteries: Detach all battery earth leads from additional batteries.

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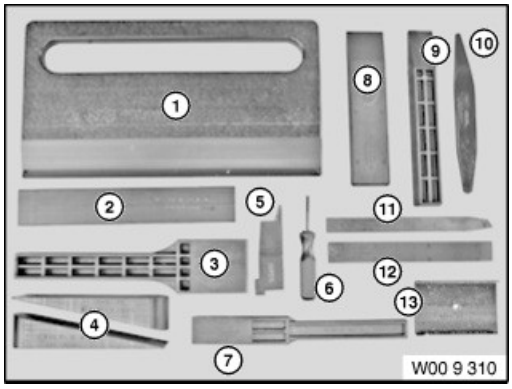
PRELIMINARY WORK

1 – Disconnecting all battery earth leads

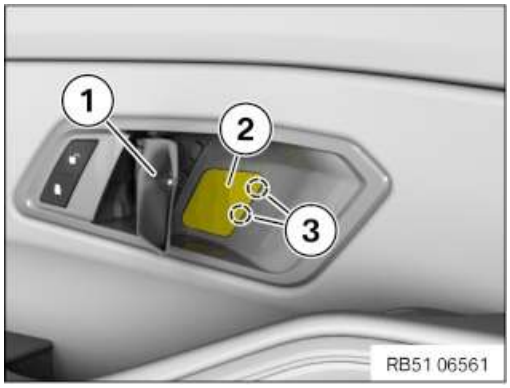


- See additional information.

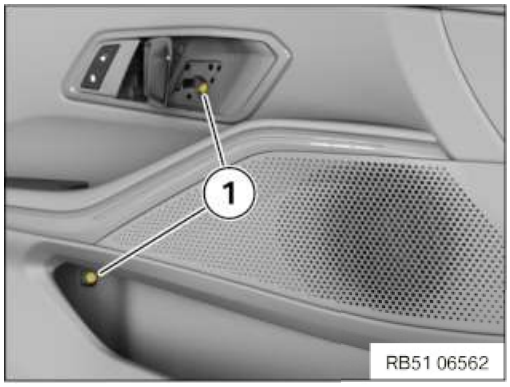
2 – Remove door trim panel



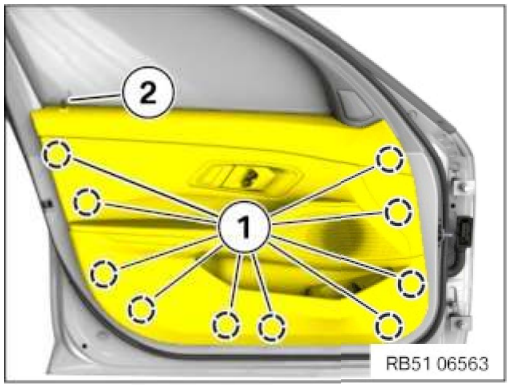
- Have the set of special tools 0 493 752 (00 9 329) ready.



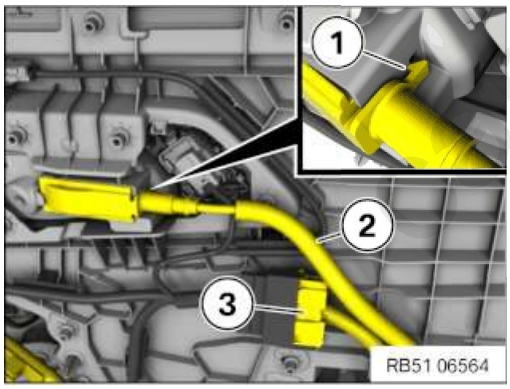
- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable special tool.
- Remove trim (2).



- Loosen screws (1).



- Unclip the door trim panel at the clips (1) using a suitable special tool.
- Guide the door trim panel upwards out of the front inner weather strip and the operating rod (2).



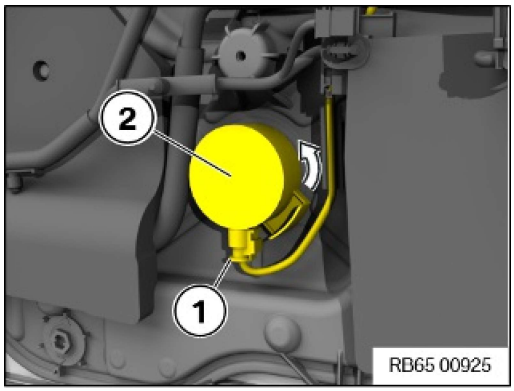
- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock plug connection (3), disconnect it and remove the door trim panel.

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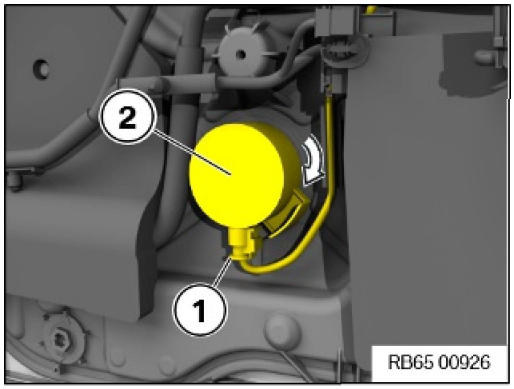
MAIN WORK

3 – Removing the airbag sensor on the front door



- Unlock plug connection (1) and disconnect.
- Turn airbag sensor (2) on the front door in the direction of the arrow and remove it.

4 – Installing the airbag sensor on the front door

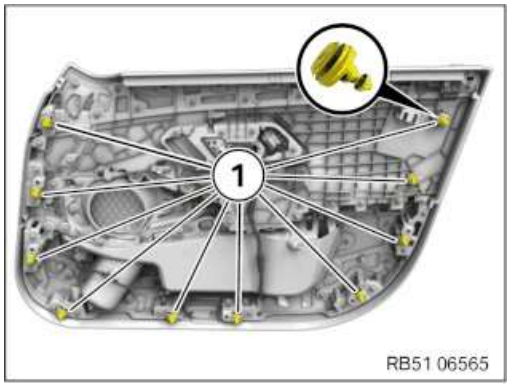


- Position airbag sensor (2) on the front door and lock it in the direction of the arrow.
- Connect connectors (1) and lock.

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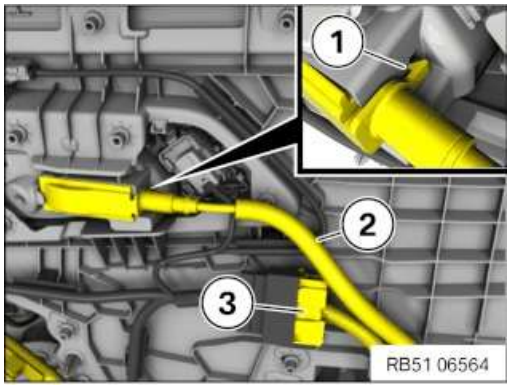
POSTPROCESSES

5 – Install door trim panel

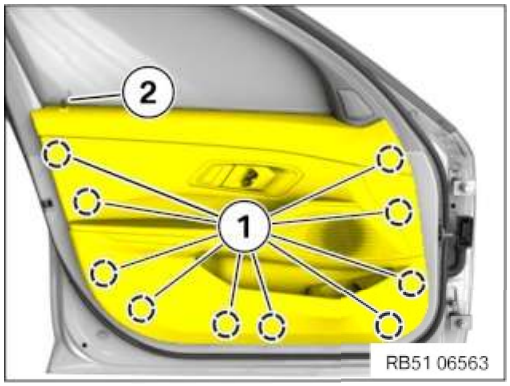


- Renew the clips (1).

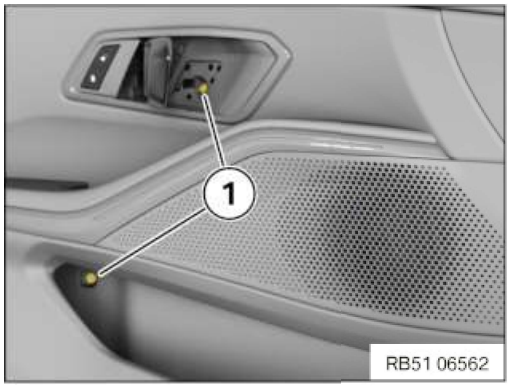
  Parts: Clips



- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door opener (2) and clip in the latch mechanism (1).
- Connect connectors (3) and lock.



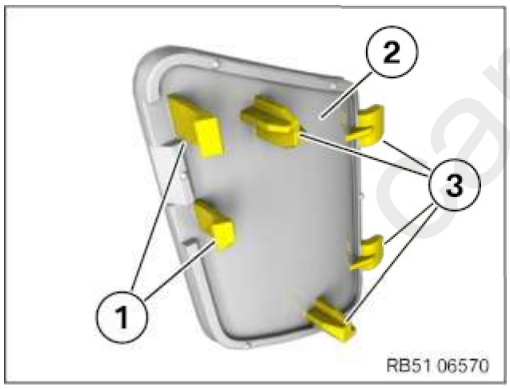
- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).



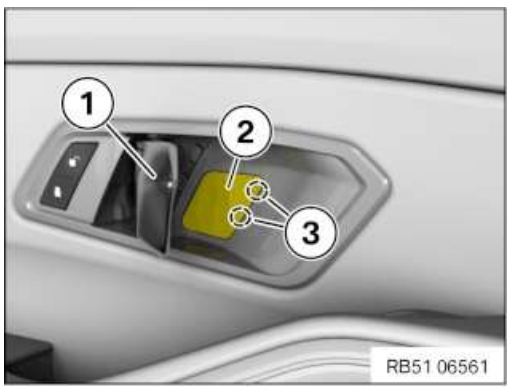
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

6 – Disconnecting all battery earth leads

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- See additional information.

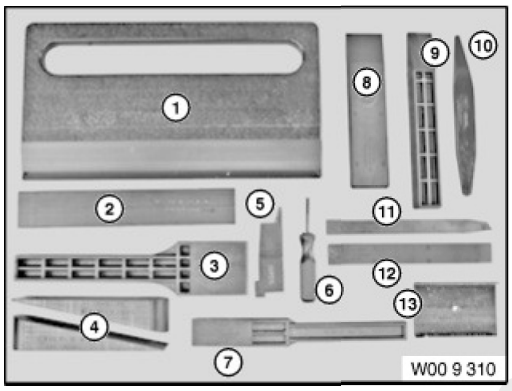
Additional Information

Overview of Tightening Torques

Door trim panel to door			Used in step 5
Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common		Used in step 2
Usage	(Case) with insert not incl. panel wedges	
Included in the tool or work	0 490 527	
Storage location	Individual	
Replaced by		
In connection with		
SI-Number	01 07 09 (530)	

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	16
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	16
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16

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61 20 900 Disconnecting and connecting battery earth lead	16
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61 20 900 Disconnecting and connecting battery earth lead	16
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61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16
61 20 900 Disconnecting and connecting battery earth lead	16

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65 77 560 Removing and installing/replacing the control electronics for the front passenger seat SBE

PRELIMINARY WORK

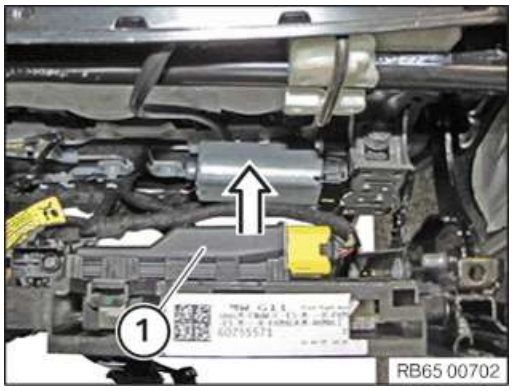
1 – Disconnecting all battery earth leads



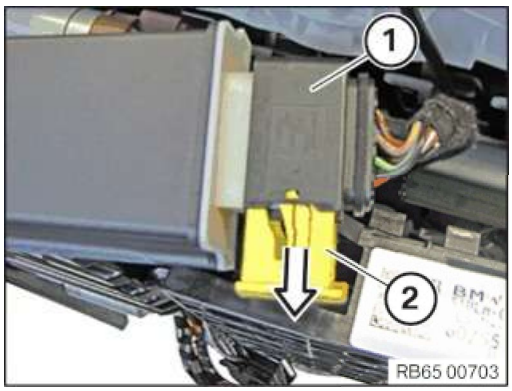
- See additional information.

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2 – Remove control unit

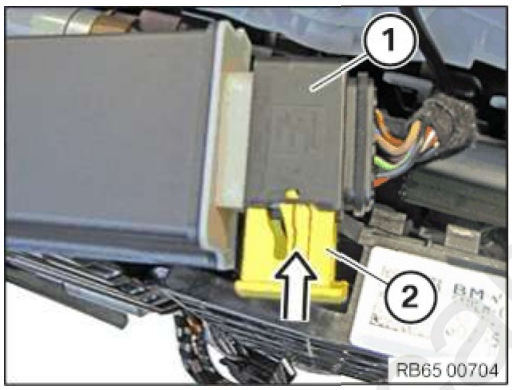


- Unclip the control unit (1) in the direction of the arrow.

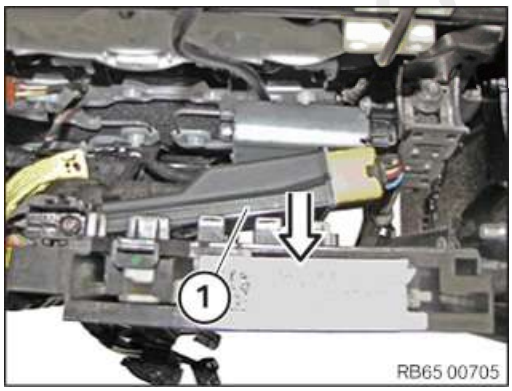


- Open the lock (2) in the direction of the arrow.
- Disconnect plug connection (1).
- Remove the control unit .

3 – Install the control unit



- Close plug connection (1).
- Close lock (2) in direction of arrow.



- Position the control unit (1) as shown and clip it in correctly in the direction of the arrow.

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4 – Disconnecting all battery earth leads



- See additional information.

5 – Encode/program control unit(s)

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

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Additional Information

Links

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
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61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14

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65 77 018 Replace airbag control unit

PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Remove cupholder

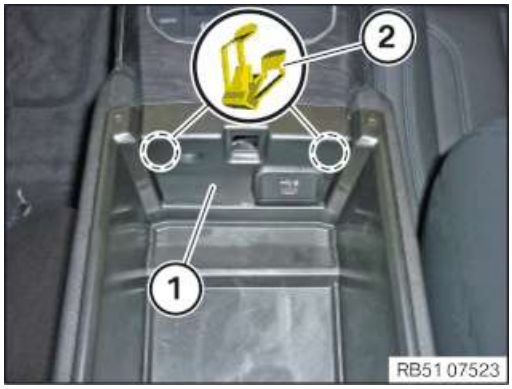


- Remove the insert (1).



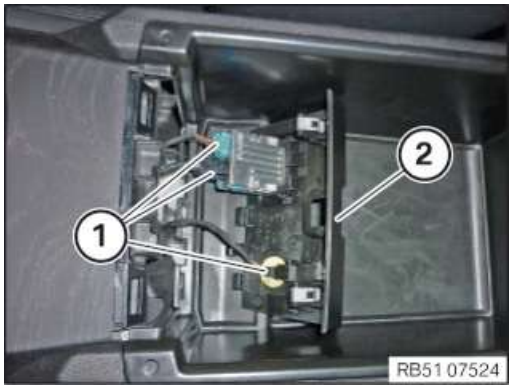
- Loosen screws (1).
- Feed the cup holder (2) out to the top.
- Unlock associated plug connections and disconnect.

3 – Removing the trim in the storage compartment on the centre armrest



- Lever out the trim (1) with the special tool (2) toward the rear from the clamps 2 298 505.

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- Unlock and disconnect the plug connections (1) and remove the trim (2) .

4 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



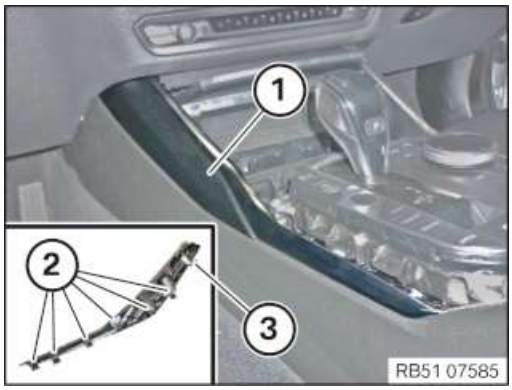
- Release and remove the centre console trim upwards (1) as shown using the special tool 2 298 505 from the latch mechanisms.

5 – Removing the decorative trim on the centre console trim on the left and right

▸ **Remove decorative trim on centre console**

NOTICE

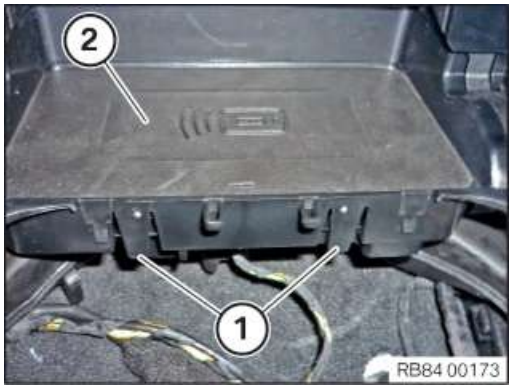
Description is for left component only. Procedure on the right side is identical.



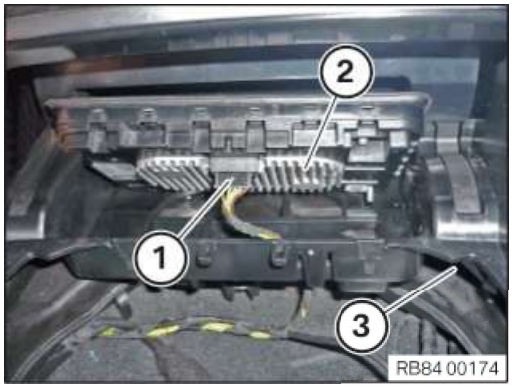
- Lever out the rear decorative trim (1) from the latch mechanisms (2) starting from the top.
- Feed out the decorative trim (1) backwards out of the guide (3) and remove.

6 – Removing the wireless charging station

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- Loosen the latch mechanisms (1) and push out the wireless charging station (2) upwards.



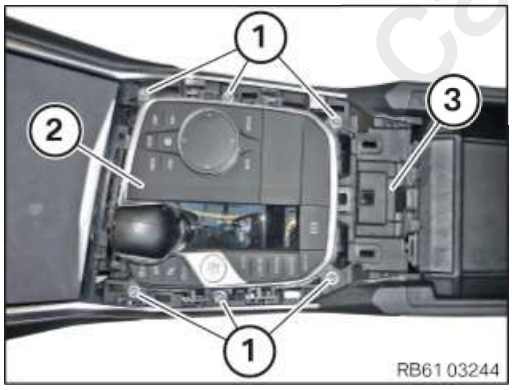
- Disconnect the connector (1) and remove the wireless charging station (2) from the centre console (3).

7 – Remove the operating facility in the centre console

▶ **Disconnecting all battery earth leads**



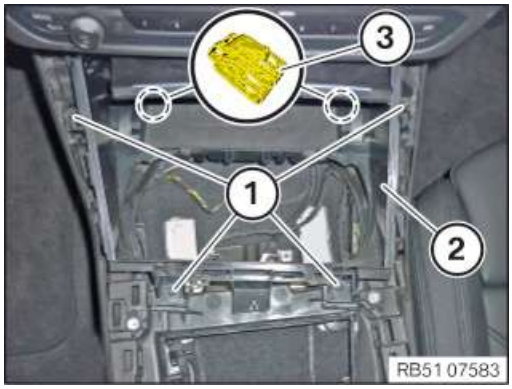
- See additional information.



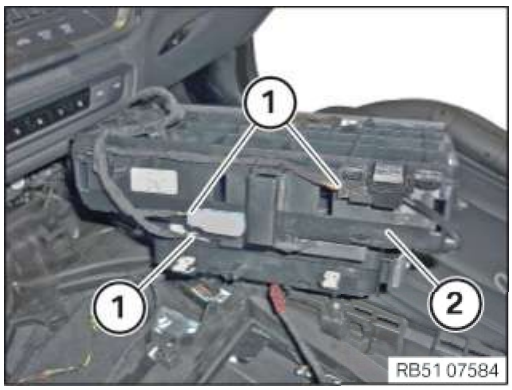
- Loosen screws (1).
- Remove the operating facility in the centre console (2) from the centre console (3).

8 – Removing the storage compartment of the front centre console

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- Loosen screws (1).
- Remove storage compartment trim (2) backwards out of clamps (3).



- Unlock and disconnect all the plug connections (1) and remove the storage compartment (2).

9 – Removing the rear centre console trim

RISK OF DAMAGE

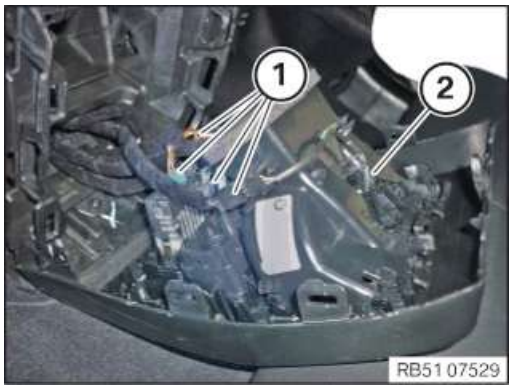
Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



- Release centre console trim (1) backwards from the latch mechanisms at the side and pull it a little way towards the rear.



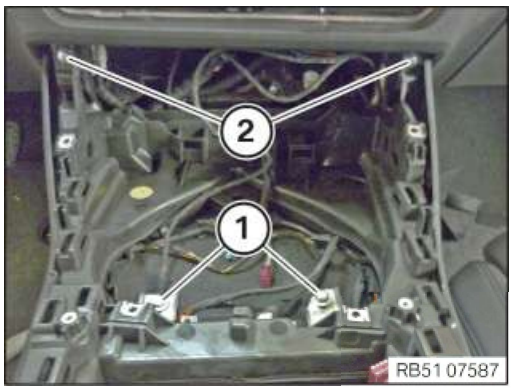
- Unlock and disconnect plug connections (1).
- Remove the centre console trim (2).

10 – Removing the centre console

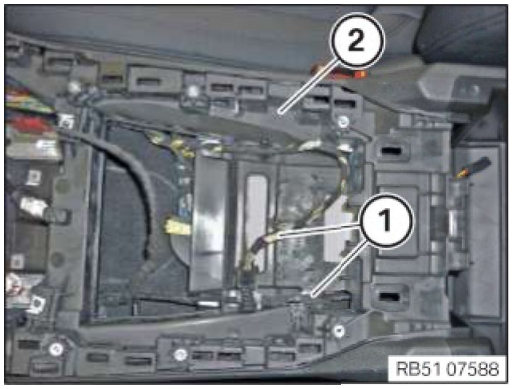
rdiagn.com



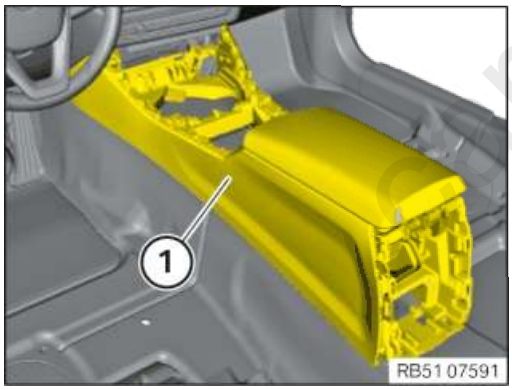
- Loosen screws (1).



- Loosen screws (1) and (2).



- Release the wiring harness (1) from the centre console (2).



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.

- Carefully raise rear centre console (1).
- Feed out wiring harness from the centre console (1) and unlock and disconnect existing plug connections, if required.
- Feed out and remove the centre console (1) on the instrument panel .

MAIN WORK

11 – Removing the airbag control unit

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WARNING

Airbag unit.

Danger! Life-threatening injuries!

- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

RISK OF DAMAGE

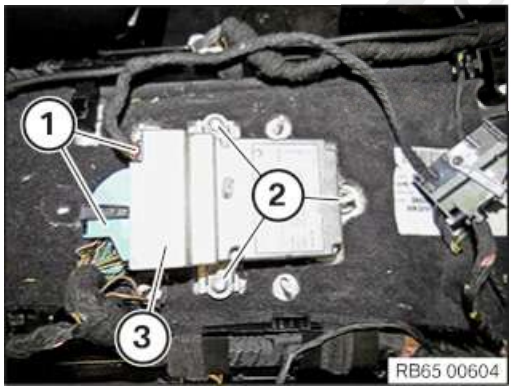
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.



- Release insulation (1) from airbag control unit (2) and fold to one side.



- Unlock plug connection (1) and disconnect.
- Loosen nuts (2).
- Remove airbag control unit (3).

12 – Installing the airbag control unit

WARNING

Airbag unit.

Danger! Life-threatening injuries!

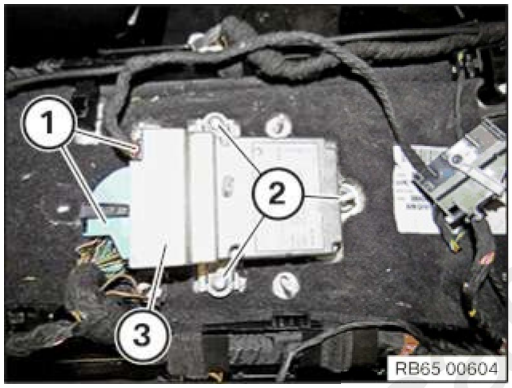
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.



- Position airbag control unit (3) correctly.
- Tighten nuts (2).

Airbag control unit to body

Screw		Tightening torque	8 Nm

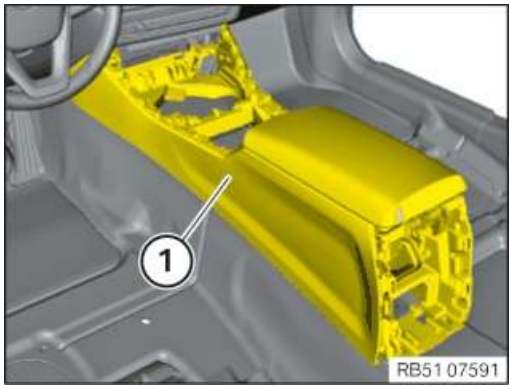
- Connect connectors (1) and lock.



- Position the insulation (1) correctly and secure on the airbag control unit (2).

POSTPROCESSES

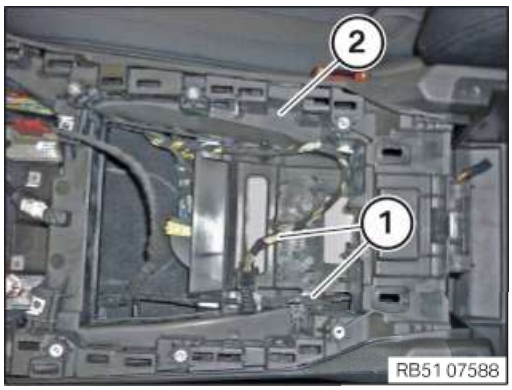
13 – Installing the centre console



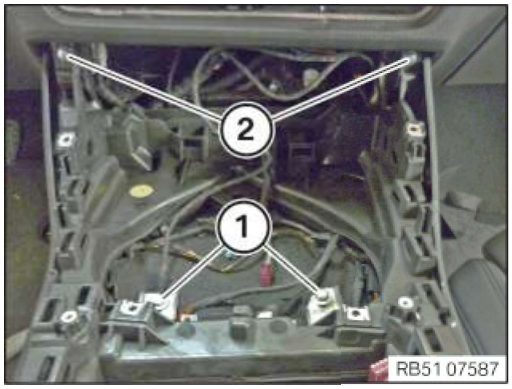
NOTICE

To provide a better overview: Schematic diagram with partially hidden components.

- Install centre console (1) and thereby feed in the wiring harness.
- Feed in the centre console (1) to the instrument panel and position correctly.



- Secure the wiring harness to the centre console (1) and connect and lock the existing plug connections.



- Tighten the screws (1).

Centre console on tunnel

M6x18 Hexagon screw		Tightening torque	4,6 Nm

- Tighten the screws (2).

Centre console to instrument panel

Oval-head screw		Tightening torque	1,8 Nm

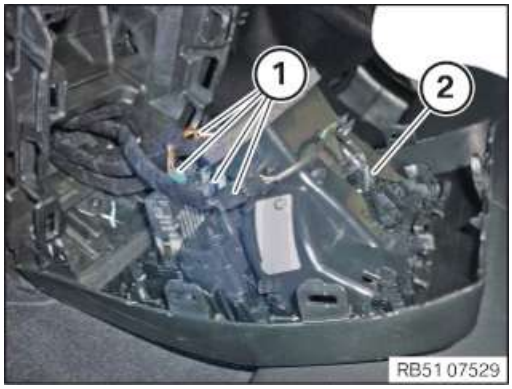


- Tighten the screws (1).

Centre console on tunnel

M6x18 Hexagon screw		Tightening torque	4,6 Nm

14 – Installing the rear centre console trim



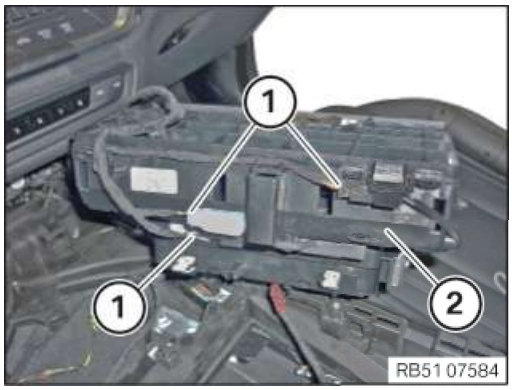
- Install the centre console trim (2).
- Connect connectors (1) and lock.

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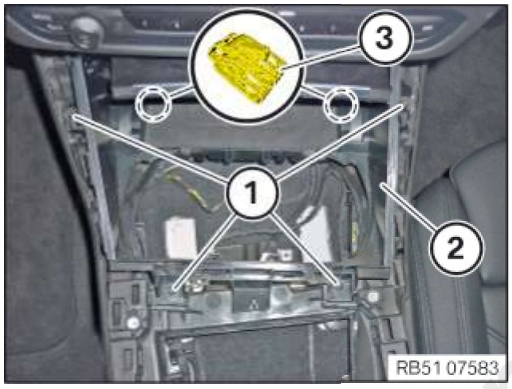


- Position centre console trim (1) and engage at the latch mechanisms at the side.

15 – Installing the storage compartment of the front centre console



- Mount the storage compartment (2) and connect connectors (1).

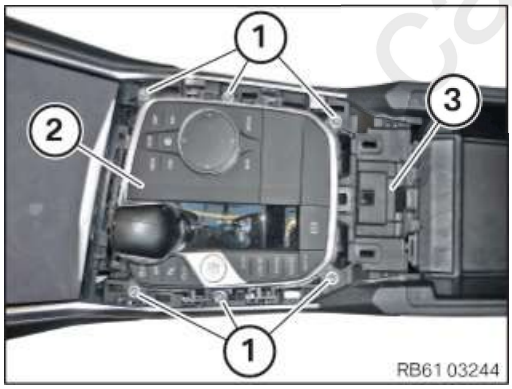


- Engage rear storage compartment trim (2) into clamps (3).
- Tighten the screws (1).

Storage compartment to centre console

Oval-head screw		Tightening torque	1,8 Nm

16 – Install the operating facility in the centre console



- Position operating facility (2) in the centre console (3).
- Tighten the screws (1).

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

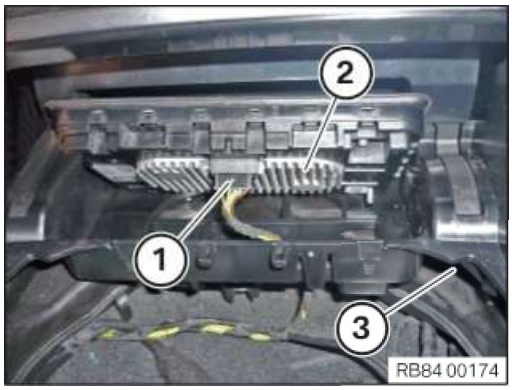
► **Disconnecting all battery earth leads**

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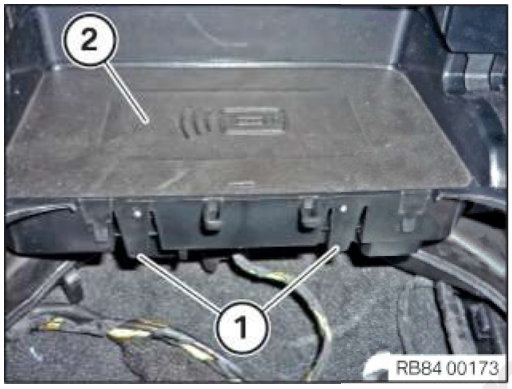


- See additional information.

17 – Installing the wireless charging station



- Connect connector (1).
- Position the wireless charging station (2) in the centre console (3).



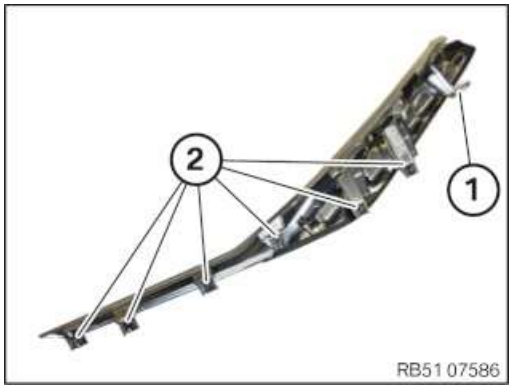
- Press the wireless charging station (2) down till the locking units (1) are engaged correctly.

18 – Install decorative trim on centre console on left and right

▸ **Installing the decorative trim to centre console**

NOTICE

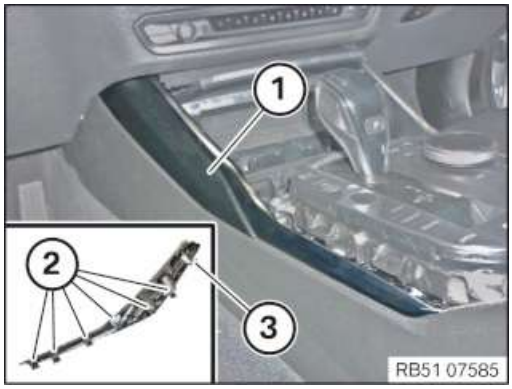
Description is for left component only. Procedure on the right side is identical.



- Check guide (1) and the latch mechanisms (2).

  Renew defective decorative trim.

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- Feed in the decorative trim (1) forward in the guide (3).
- Engage decorative trim (1) in latch mechanisms (2).

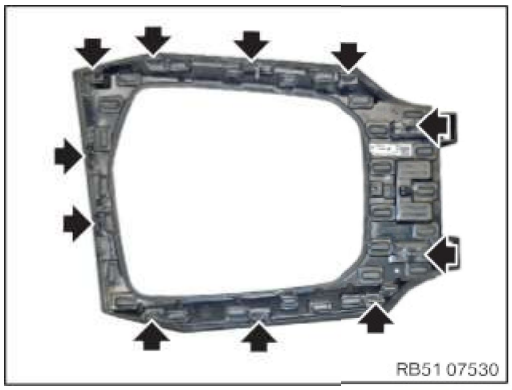
19 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

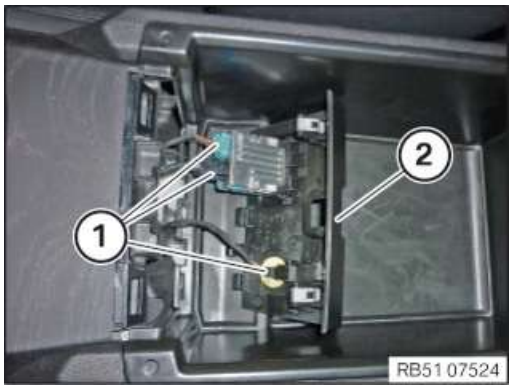


- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .



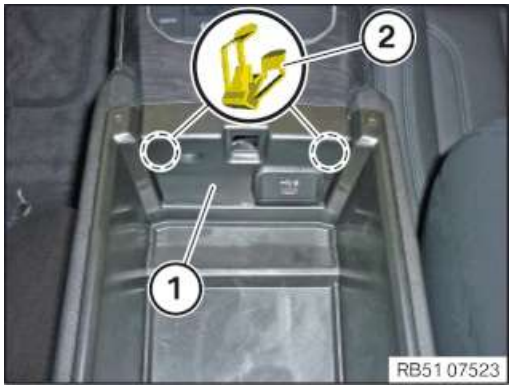
- Correctly position the centre console trim (1) and engage at the latch mechanisms.

20 – Installing the trim in the storage compartment of the centre armrest



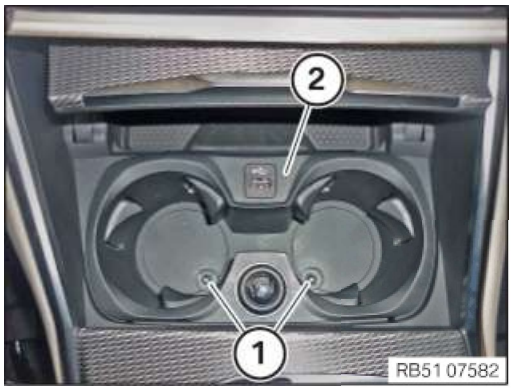
- Mount the trim (2) and connect connector (1) and lock.

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- Correctly position trim (1) and snap into the clamps (2).

21 – Install the cup holder



- Fix the cup holder (1) and the belonging connectors.
- Correctly position cup holder (1).
- Tighten the screws (2).

Cup holder to centre console

Oval-head screw		Tightening torque	1,8 Nm



- Insert the insert (1).

22 – Disconnecting all battery earth leads



- See additional information.

23 – Encode/program control unit(s)

- **Replacement**.
- **This task is not included in this flat rate unit item.**

► **Encode/program control unit(s)**

Prerequisite

Replacement of component.

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TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

24 – Adjusting the sensors for the driving dynamics

- Connect diagnosis system.
- Carry out the service function for adjustment of the sensors for driving dynamics.
  - Chassis and suspension
  - Traction control system
  - Adjustment of the driving dynamics sensors

Additional Information

Overview of Tightening Torques

Airbag control unit to body — Used in step 12

Screw		Tightening torque	8 Nm

Centre console on tunnel — Used in step 13

M6x18 Hexagon screw		Tightening torque	4,6 Nm

Centre console to instrument panel — Used in step 13

Oval-head screw		Tightening torque	1,8 Nm

Storage compartment to centre console — Used in step 15

Oval-head screw		Tightening torque	1,8 Nm

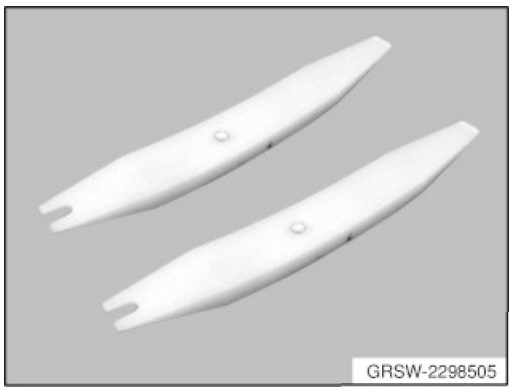
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Gear selector switch to centre console trim			Used in step 16
Screw		Tightening torque	1,8 Nm

Cup holder to centre console			Used in step 21
Oval-head screw		Tightening torque	1,8 Nm

Overview of Special Tools

2 298 505 Wedge



Common		Used in step 34
Usage	Set (delivery of 2 pieces)	
Included in the tool or work		
Storage location	C34	
Replaced by		
In connection with		
SI-Number	01 03 12 (792)	

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	1112

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171622
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171622
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
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61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	171622

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61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 20 900 Disconnecting and connecting battery earth lead	171622
61 35 ... Notes on ESD protection (Electro Static Discharge)	1112

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65 77 721 Replacing airbag sensor on the left B-pillar

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

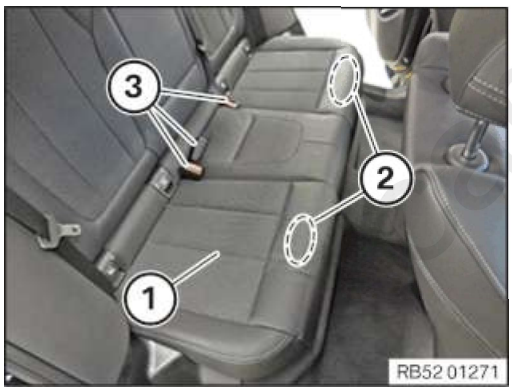
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Removing seat bench



- Disengage the seat bench (1) in area (2) in an upward direction.
- Feed out the seat belt buckle (3) from the seat bench.



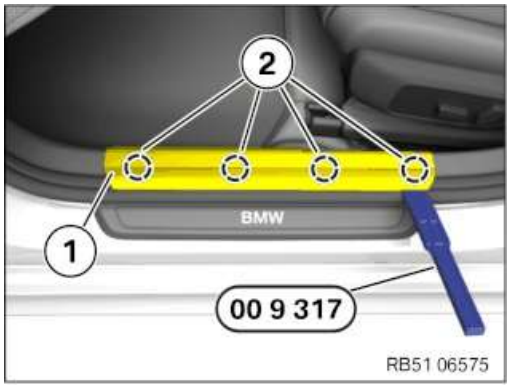
- Pull the seat bench (1) further forward.
- Release screw (2) on the end fitting and guide out belt (3).

Note: If there is a belt lock on the belt, the screw on the end fitting must not be released.

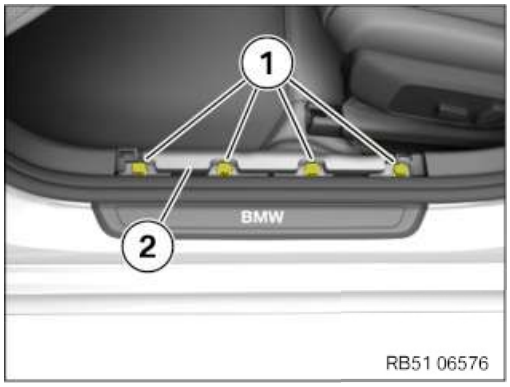
- If necessary, disconnect the present plug connections.
- Lift the seat bench (1) out of the vehicle.

3 – Remove door sill cover strip

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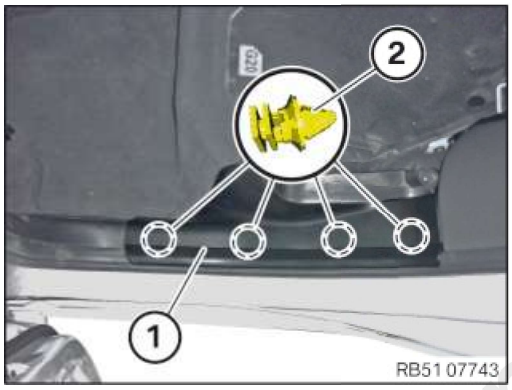


- Detach the door sill cover strip(1) using the special tool 0 490 534 (00 9 317) from the clips (2) in the floor panel.



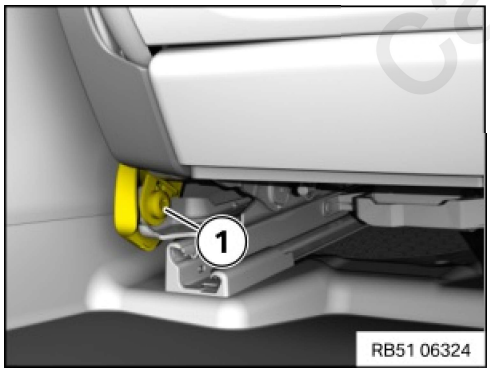
- If necessary, remove the clips (1) from the floor panel (2) and attach to the door sill cover strip.

4 – Removing rear entrance cover strip

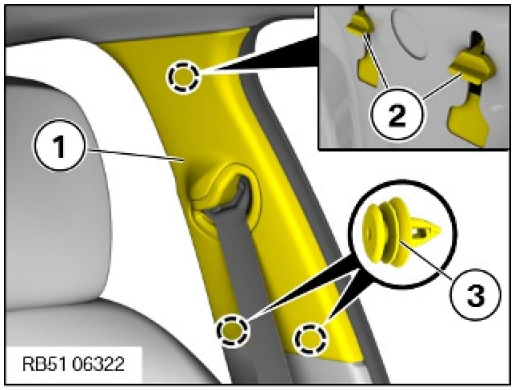


- Release the door sill cover strip (1) using the special tool 0 490 534 (00 9 317) from the clips (2) in the floor panel.
- If required, remove the clips (2) remaining in the body and mount them on the door sill cover strip.

5 – Remove the B-pillar trim panel

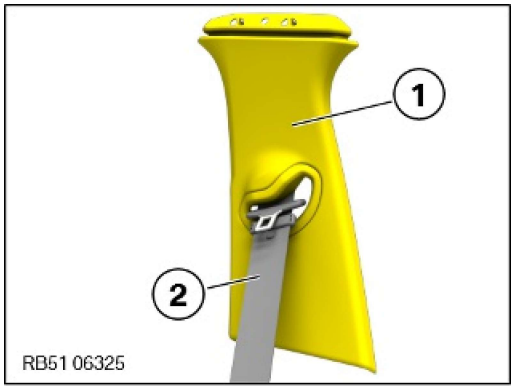


- Fully position the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).



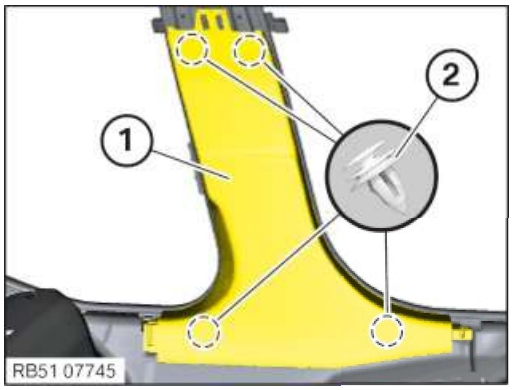
- Unclip clips (3).
- Feed B-pillar trim panel (1) out of the front and rear lip of edge protections and the guides (2).

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- Feed upper seat belt (2) out of B-pillar trim panel (1).

6 – Remove the lower B-pillar trim panel



- Unclip the B-pillar trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Feed out and remove the B-pillar trim panel (1) at the front and rear edge protection.

MAIN WORK

7 – Removing airbag sensor on the B-pillar



- Slide the seat belt (1) slightly to the side.
- Unlock and disconnect connector (2).
- Release bolt (3) and remove the airbag sensor (4) on the B-pillar.

8 – Installing airbag sensor on the B-pillar



- Slide the seat belt (1) slightly to the side.
- Position airbag sensor (4) on the B-pillar.
- Tighten down screw (3).

Airbag sensor, B-pillar

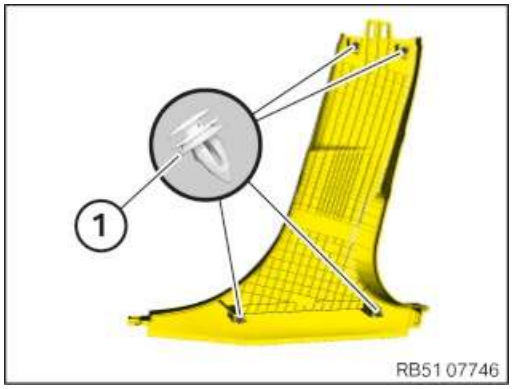
M6		Tightening torque	8.8 Nm

- Connect connectors (2) and lock.
- Position seat belt (1) correctly.

POSTPROCESSES

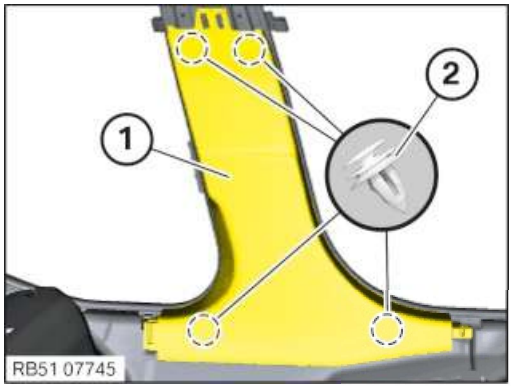
9 – Installing the lower B-pillar trim panel

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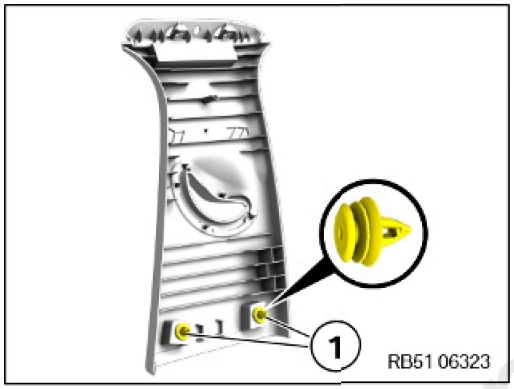
- Check the clips (1) for damage.

  Replace broken for missing clips (1).

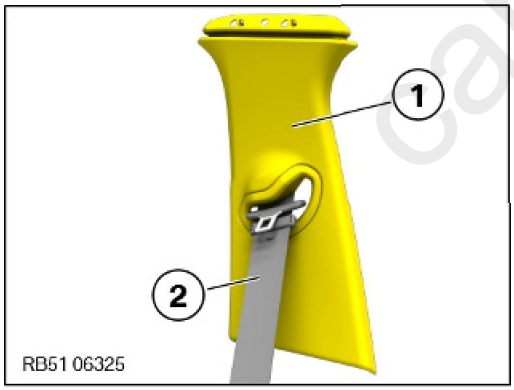


- Insert and correctly position B-pillar trim panel (1) on the front and rear edge protection.
- Clip in the B-pillar trim panel (1) at the clips (2).

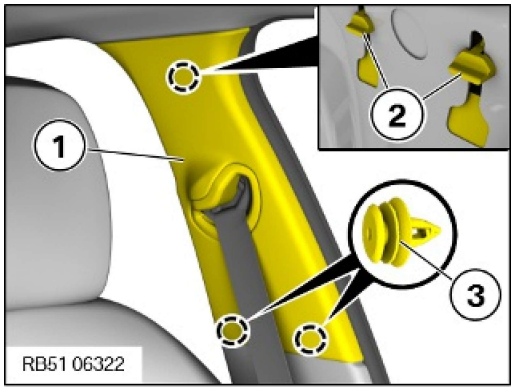
10 – Install the B-pillar trim panel



- Check the clips (1) for damage and renew if necessary.

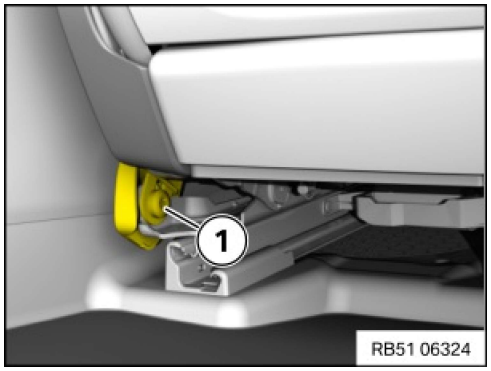


- Guide upper seat belt (2) in B-pillar trim panel (1).



- Insert B-pillar trim panel (1) into guides (2) and under the front and rear lips of edge protection.
- Clip in the B-pillar trim panel (1) with the clips (3).

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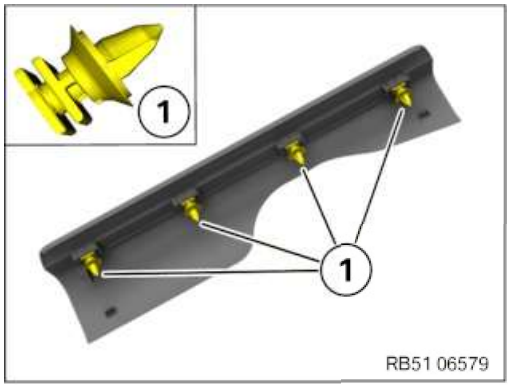
- Fully position the front seat to the front and top.
- Insert the end fitting (2).
- Renew the screw (1).

  Parts: Screw
- Tighten down screw (1).

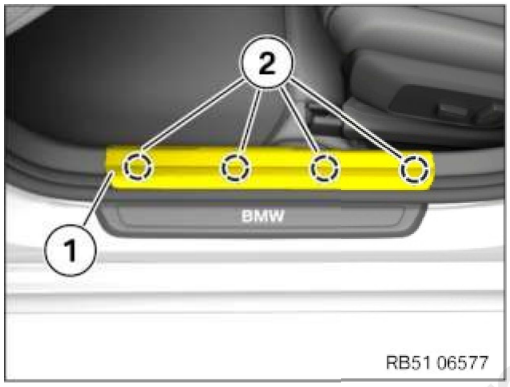
End fitting to seat mechanism

Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

11 – Install the door sill cover strip

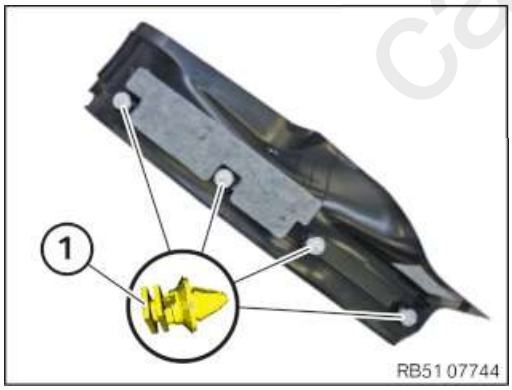


- Check the clips (1) for damage and renew if necessary.



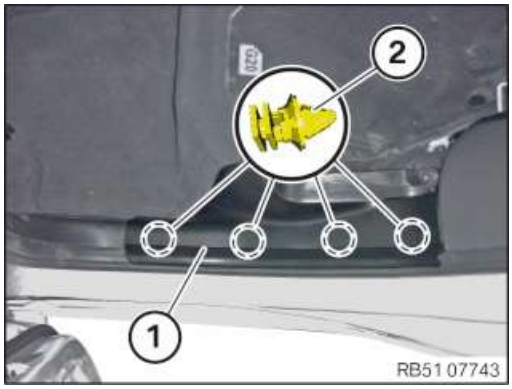
- Clip the door sill cover strip (1) into the floor panel with the clips (2).

12 – Installing the rear door sill cover strip



- Check the clips (1) for damage.

  Replace broken for missing clips (1).



- Position the door sill cover strip (1) correctly and clip in at the clips (2).

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13 – Installing rear seat bench



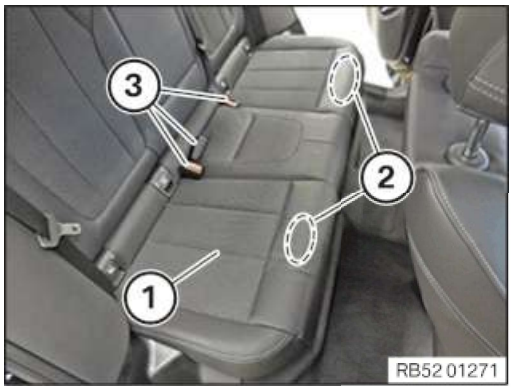
- Lift the seat bench (1) into the vehicle.
- Insert the seat belt (3).
- Renew the screw (2).

  Parts: Screw
- Tighten down screw (2).

Rear upper seat belt to bottom body

Screw	Renew screw.	Tightening torque	42 Nm

- Connect available connectors.



- Insert seat bench (1).
- Thread seat belt buckles (3) into the seat bench.
- Engage the seat bench (1) in the area (2).

14 – Disconnecting all battery earth leads



- See additional information.

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Additional Information

Overview of Tightening Torques

Airbag sensor, B-pillar Used in step 8

M6		Tightening torque	8.8 Nm

End fitting to seat mechanism Used in step 10

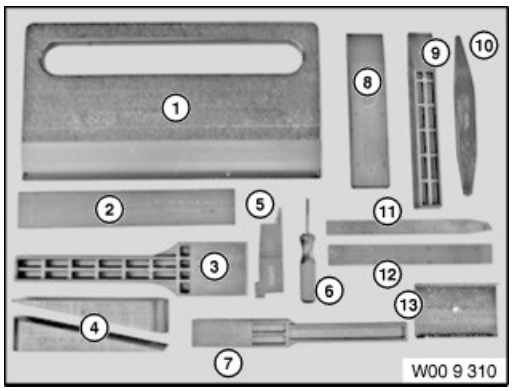
Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

Rear upper seat belt to bottom body Used in step 13

Screw	Renew screw.	Tightening torque	42 Nm

Overview of Special Tools

0 490 534 (00 9 317) Wedge



Common	Used in step 34
Usage	(Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)
Included in the tool or work	0 490 527
Storage location	
Replaced by	
In connection with	
SI-Number	

0 496 569 (00 9 325) Wedge



Common	Used in step 6
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	78
72 00 ... Safety regulations for handling components with gas generators	

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114

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61 20 900 Disconnecting and connecting battery earth lead	114
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61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114

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65 77 726 Replacing airbag sensor on the right B-pillar

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

NOTICE

Description is for left component only. Procedure on the right side is identical.

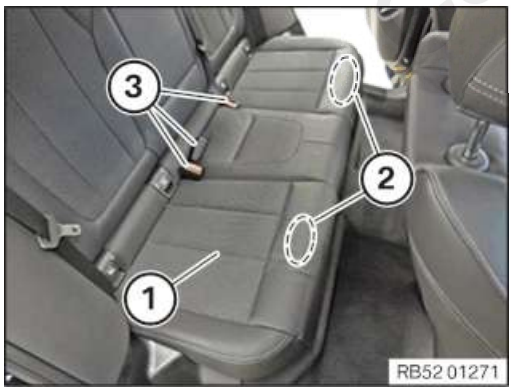
PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Removing seat bench



- Disengage the seat bench (1) in area (2) in an upward direction.
- Feed out the seat belt buckle (3) from the seat bench.

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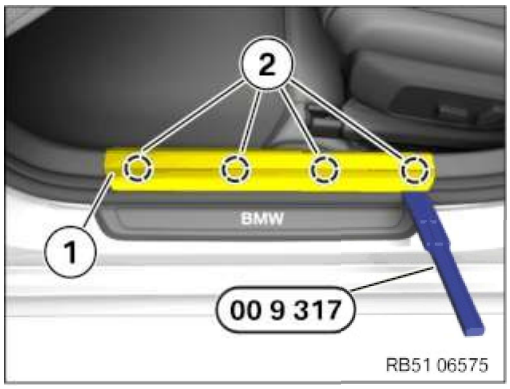


- Pull the seat bench (1) further forward.
- Release screw (2) on the end fitting and guide out belt (3).

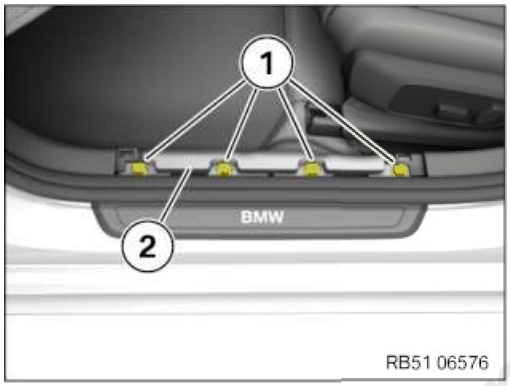
Note: If there is a belt lock on the belt, the screw on the end fitting must not be released.

- If necessary, disconnect the present plug connections.
- Lift the seat bench (1) out of the vehicle.

3 – Remove door sill cover strip

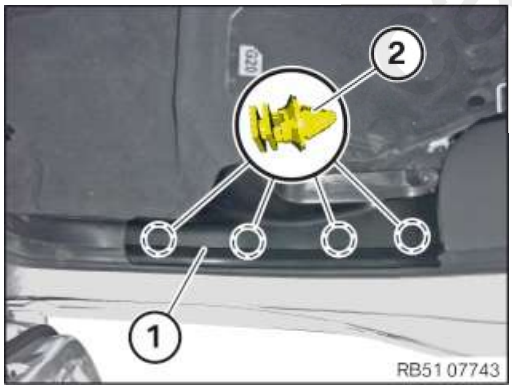


- Detach the door sill cover strip(1) using the special tool 0 490 534 (00 9 317) from the clips (2) in the floor panel.



- If necessary, remove the clips (1) from the floor panel (2) and attach to the door sill cover strip.

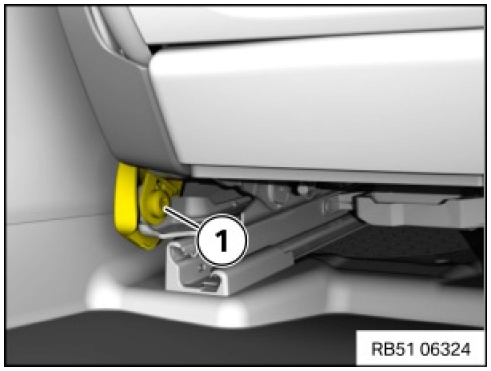
4 – Removing rear entrance cover strip



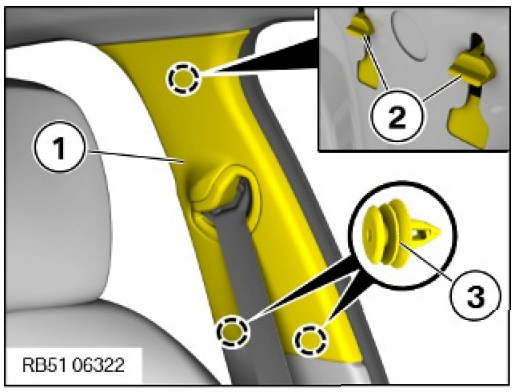
- Release the door sill cover strip (1) using the special tool 0 490 534 (00 9 317) from the clips (2) in the floor panel.
- If required, remove the clips (2) remaining in the body and mount them on the door sill cover strip.

5 – Remove the B-pillar trim panel

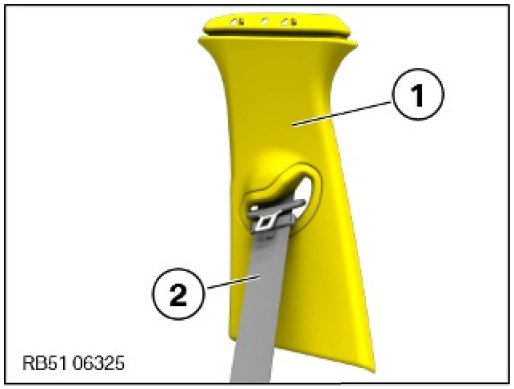
erdiagn.com



- Fully position the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).

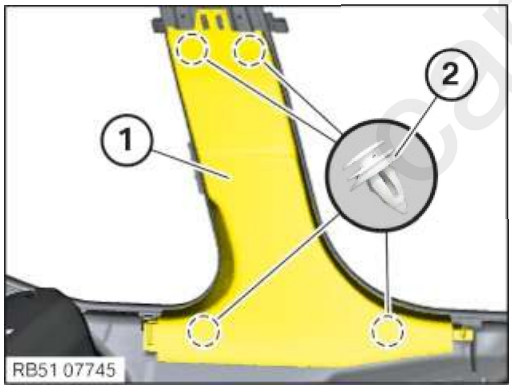


- Unclip clips (3).
- Feed B-pillar trim panel (1) out of the front and rear lip of edge protections and the guides (2).



- Feed upper seat belt (2) out of B-pillar trim panel (1).

6 – Remove the lower B-pillar trim panel



- Unclip the B-pillar trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Feed out and remove the B-pillar trim panel (1) at the front and rear edge protection.

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MAIN WORK

7 – Removing airbag sensor on the B-pillar



- Slide the seat belt (1) slightly to the side.
- Unlock and disconnect connector (2).
- Release bolt (3) and remove the airbag sensor (4) on the B-pillar.

8 – Installing airbag sensor on the B-pillar



- Slide the seat belt (1) slightly to the side.
- Position airbag sensor (4) on the B-pillar.
- Tighten down screw (3).

Airbag sensor, B-pillar

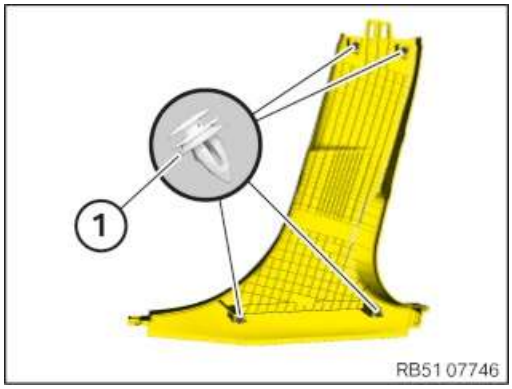
M6		Tightening torque	8.8 Nm

- Connect connectors (2) and lock.
- Position seat belt (1) correctly.

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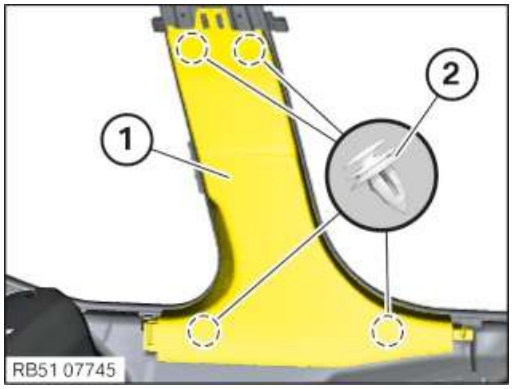
POSTPROCESSES

9 – Installing the lower B-pillar trim panel



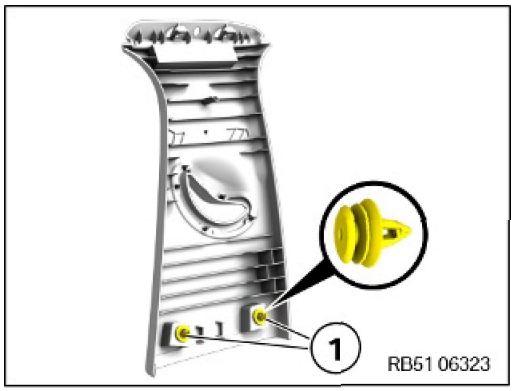
- Check the clips (1) for damage.

  Replace broken for missing clips (1).

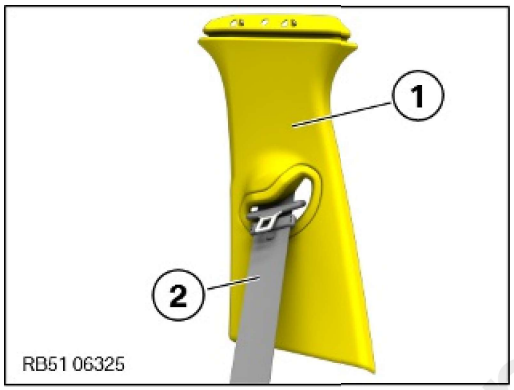


- Insert and correctly position B-pillar trim panel (1) on the front and rear edge protection.
- Clip in the B-pillar trim panel (1) at the clips (2).

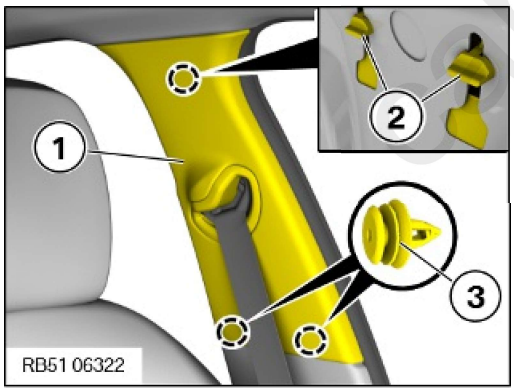
10 – Install the B-pillar trim panel



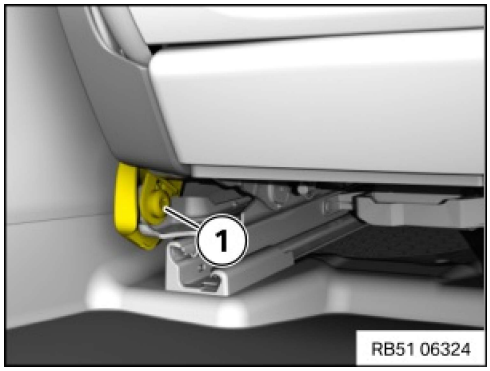
- Check the clips (1) for damage and renew if necessary.



- Guide upper seat belt (2) in B-pillar trim panel (1).



- Insert B-pillar trim panel (1) into guides (2) and under the front and rear lips of edge protection.
- Clip in the B-pillar trim panel (1) with the clips (3).



- Fully position the front seat to the front and top.
- Insert the end fitting (2).
- Renew the screw (1).

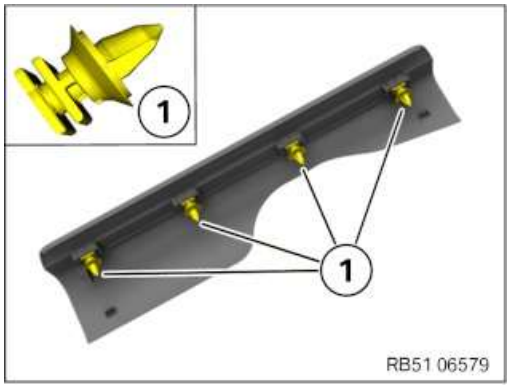
  Parts: Screw
- Tighten down screw (1).

End fitting to seat mechanism

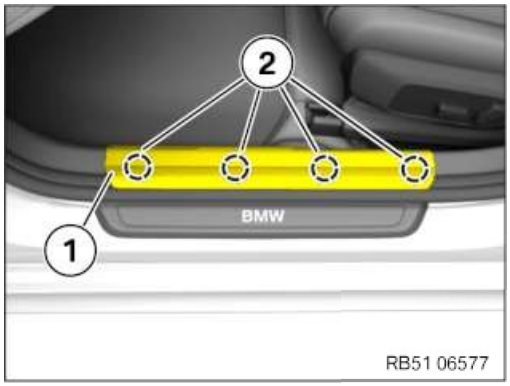
Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

11 – Install the door sill cover strip

carsdiagn.com

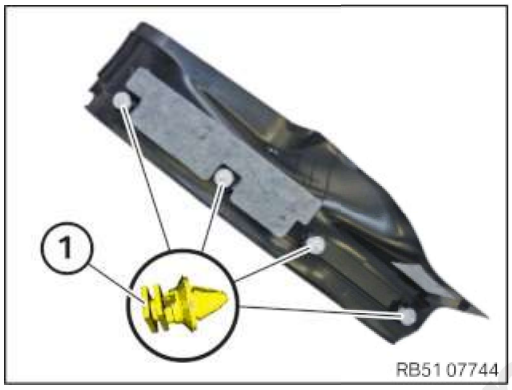


- Check the clips (1) for damage and renew if necessary.

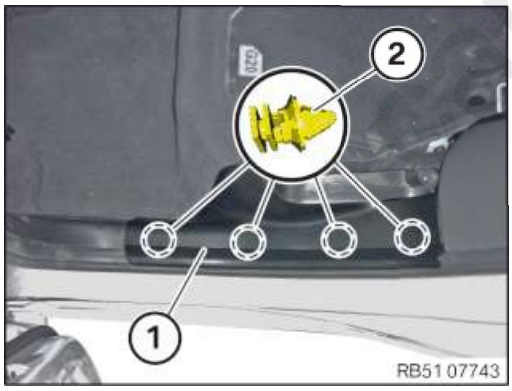


- Clip the door sill cover strip (1) into the floor panel with the clips (2).

12 – Installing the rear door sill cover strip



- Check the clips (1) for damage.
  Replace broken for missing clips (1).



- Position the door sill cover strip (1) correctly and clip in at the clips (2).

13 – Installing rear seat bench

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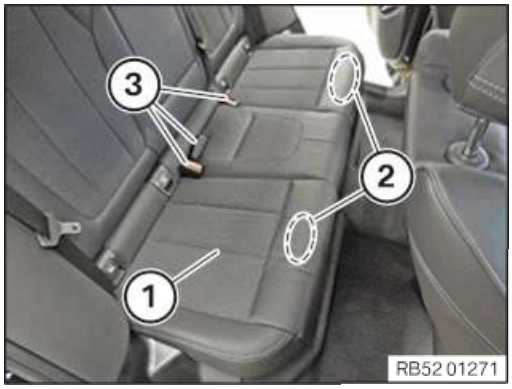
- Lift the seat bench (1) into the vehicle.
- Insert the seat belt (3).
- Renew the screw (2).

  Parts: Screw
- Tighten down screw (2).

Rear upper seat belt to bottom body

Screw	Renew screw.	Tightening torque	42 Nm

- Connect available connectors.



- Insert seat bench (1).
- Thread seat belt buckles (3) into the seat bench.
- Engage the seat bench (1) in the area (2).

14 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

Airbag sensor, B-pillar Used in step 8

M6		Tightening torque	8.8 Nm

End fitting to seat mechanism Used in step 10

Flat-head screwM10	Renew screw.	Tightening torque	42 Nm

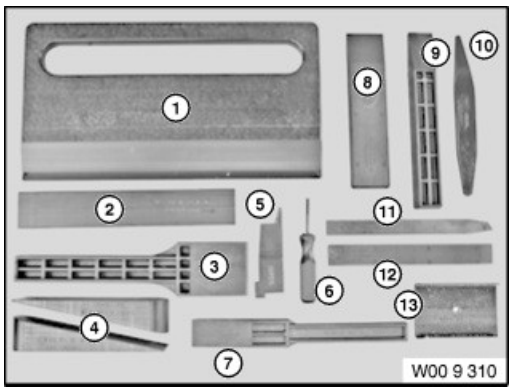
Rear upper seat belt to bottom body Used in step 13

Screw	Renew screw.	Tightening torque	42 Nm

Overview of Special Tools

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0 490 534 (00 9 317) Wedge



Common	Used in step 34
Usage	(Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)
Included in the tool or work	0 490 527
Storage location	
Replaced by	
In connection with	
SI-Number	

0 496 569 (00 9 325) Wedge



Common	Used in step 6
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	78
72 00 ... Safety regulations for handling components with gas generators	

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	114
61 20 900 Disconnecting and connecting battery earth lead	114

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61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
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61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	114
61 20 900 Disconnecting and connecting battery earth lead	114
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61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114
61 20 900 Disconnecting and connecting battery earth lead	114

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65 77 600 Replacing seat occupancy mat for front passenger seat

NOTICE

Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

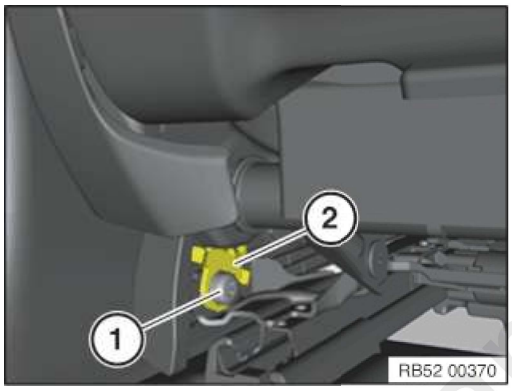
1 – Remove front seat

WARNING

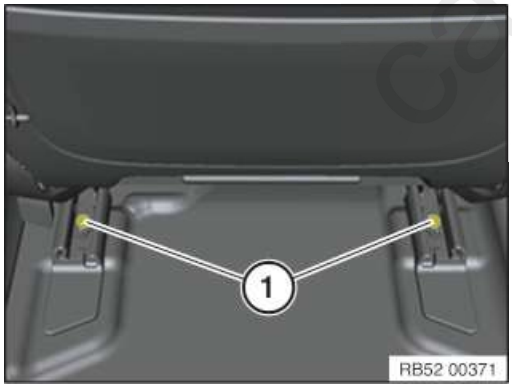
Pyrotechnic components.

Danger! Life-threatening injuries!

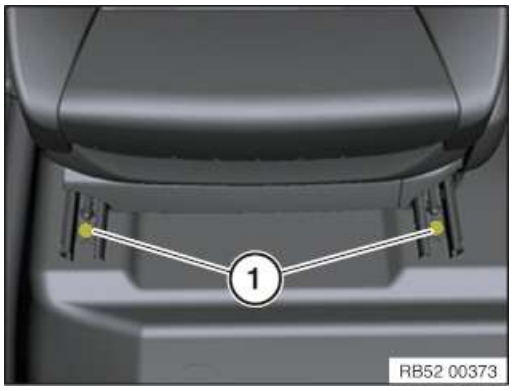
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



- Fully adjust the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).



- Loosen screws (1).



- Loosen screws (1).
- Adjust the front seat to the centre position.
- **When removing the driver's seat:**

  Completely retract the steering column

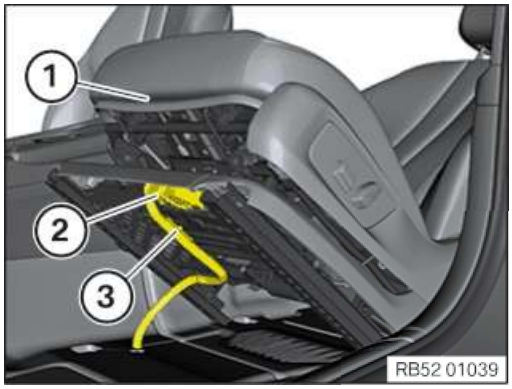
  Adjust the steering column completely upwards.

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▶ **Disconnecting all battery earth leads**



- See additional information.



RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

- Cover the door sill using protective covers.
- Place front seat (1) to the rear.
- Unlock plug connection (2) and disconnect.
- Loosen the cable clip (3).

RISK OF DAMAGE

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.

- Lift out front seat (1) with the assistance of a second person.

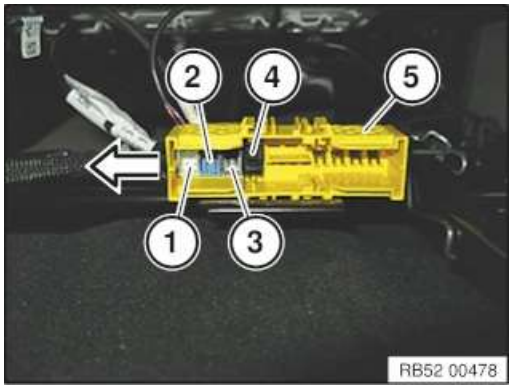
MAIN WORK

2 – Removing the sensor mat for SBE

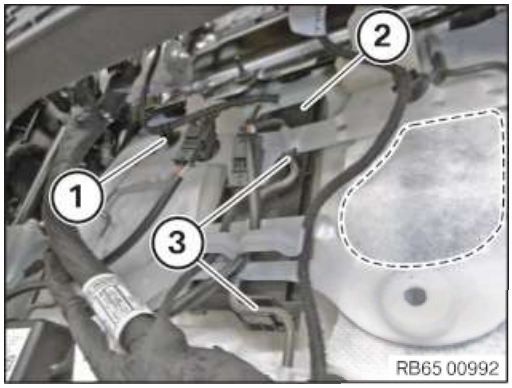


- Unfasten cable strap (1).

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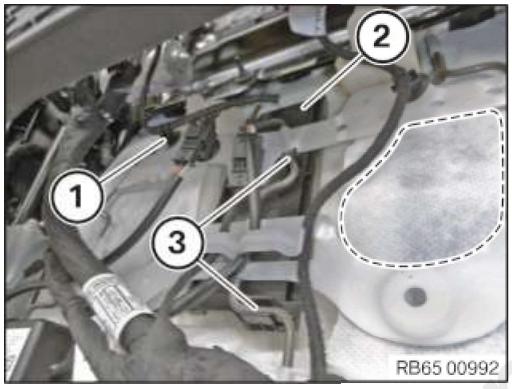


- Unlock the connector housing in the sequence (1) to (4) and pull it out of the connector housing (5) in the direction of the arrow.

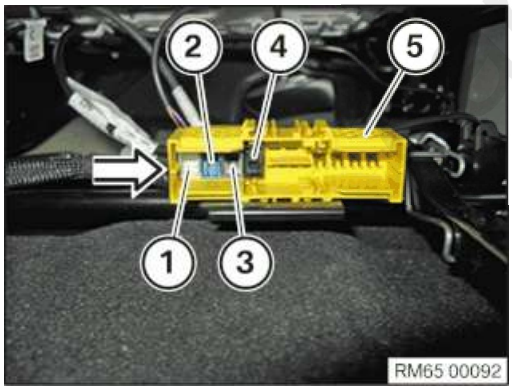


- Unclip the cable clip (1).
- Loosen the sensor (2) for the SBE at the latch mechanisms (3).
- Carefully withdraw the sensor (2) via the area marked on the seat mechanism and remove.

3 – Installing the sensor mat for SBE



- Guide in the sensor (2) through the marked area at the seat mechanism and position it correctly.
- Engage the sensor (2) for the SBE at the latch mechanisms (3).
- Clip in the cable clip (1).



- Correctly insert the connector housing in the sequence (1) to (4) in the direction of the arrow into the connector housing (5) and lock.



- Secure cable strap (1).

POSTPROCESSES

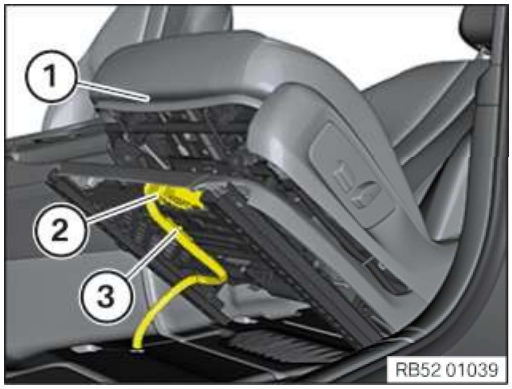
4 – Install front seat

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

- Cover the door sill using protective covers.

RISK OF DAMAGE

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.

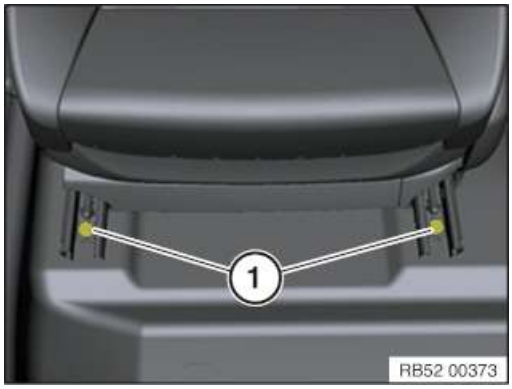
- Lift front seat (1) into the vehicle with the assistance of a second person.
- Place front seat (1) to the rear.
- Connect connector (2).
- Attach the cable clip (3).

▶ **Disconnecting all battery earth leads**

- See additional information.



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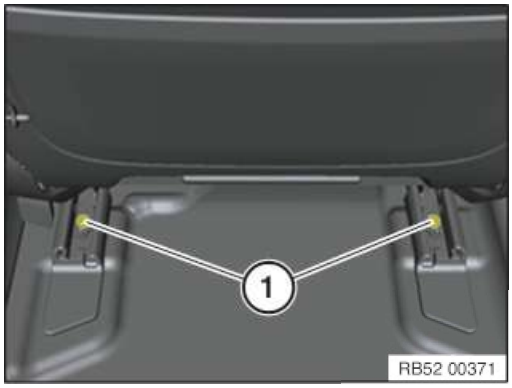


- Adjust the front seat to the rear.
- Renew screws (1).

  Parts: Bolts
- Tighten the screws (1).

Seat to body

M10	Renew screw.	Tightening torque	42 Nm

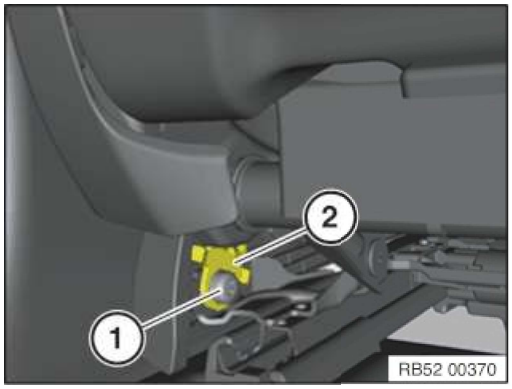


- Move front seat forwards.
- Renew screws (1).

  Parts: Bolts
- Tighten the screws (1).

Seat to body

M10	Renew screw.	Tightening torque	42 Nm



- Fully adjust the front seat to the front and top.
- Insert the end fitting (2).
- Renew the screw (1).

  Parts: Screw
- Tighten down screw (1).

End fitting to seat mechanism

M10	Renew screw.	Tightening torque	42 Nm

Additional Information

Overview of Tightening Torques

Seat to body Used in step 4

M10	Renew screw.	Tightening torque	42 Nm

End fitting to seat mechanism Used in step 4

M10	Renew screw.	Tightening torque	42 Nm

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	14

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14

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61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnecting and connecting battery earth lead	14
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	14
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	14
61 20 900 Disconnecting and connecting battery earth lead	14
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61 20 900 Disconnecting and connecting battery earth lead	14

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65 77 611 Replacing seat occupancy mat for front passenger seat

NOTICE

Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

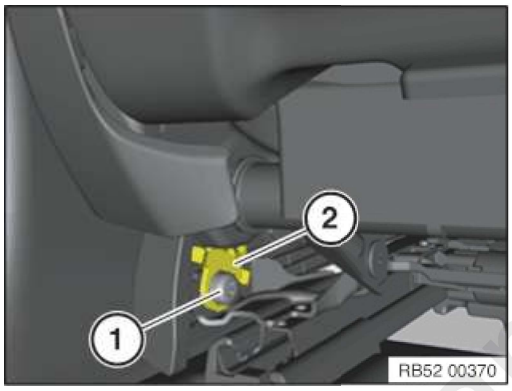
1 – Remove front seat

WARNING

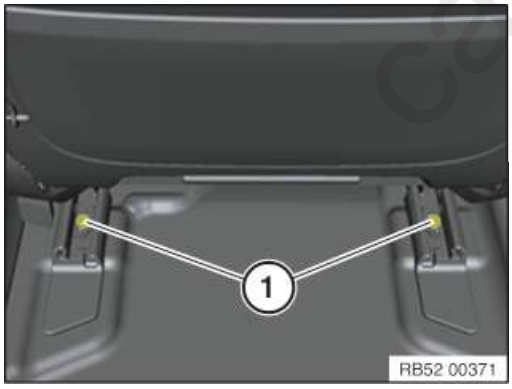
Pyrotechnic components.

Danger! Life-threatening injuries!

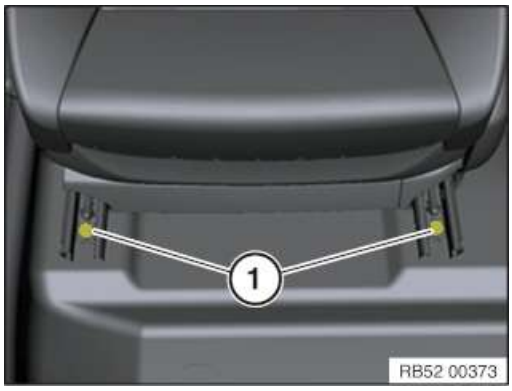
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



- Fully adjust the front seat to the front and top.
- Loosen screw (1).
- Remove end fitting (2).



- Loosen screws (1).



- Loosen screws (1).
- Adjust the front seat to the centre position.
- **When removing the driver's seat:**

  Completely retract the steering column

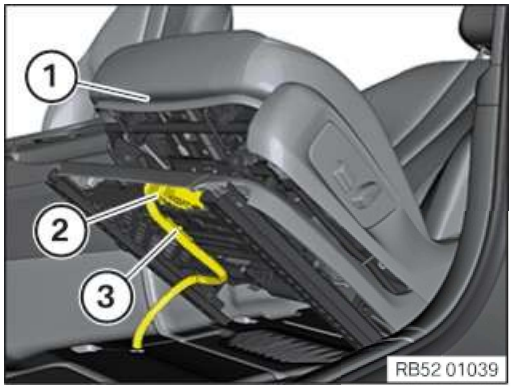
  Adjust the steering column completely upwards.

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▶ **Disconnecting all battery earth leads**



- See additional information.



RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

- Cover the door sill using protective covers.
- Place front seat (1) to the rear.
- Unlock plug connection (2) and disconnect.
- Loosen the cable clip (3).

RISK OF DAMAGE

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.

- Lift out front seat (1) with the assistance of a second person.

2 – Remove outer cover on front seat



- Unclip the cover (1).

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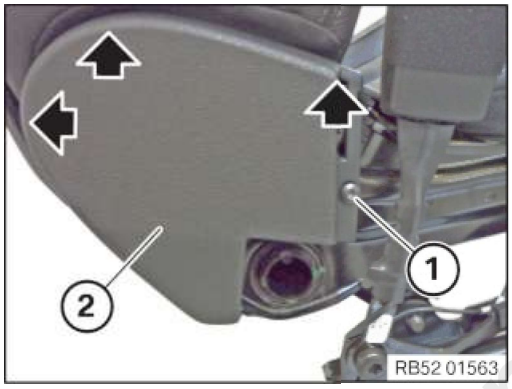


- Loosen screw (1).
- Disengage the cover (2) at the latch mechanisms (3) toward the top.
- Guide out and remove the cover (2) in the area (4).



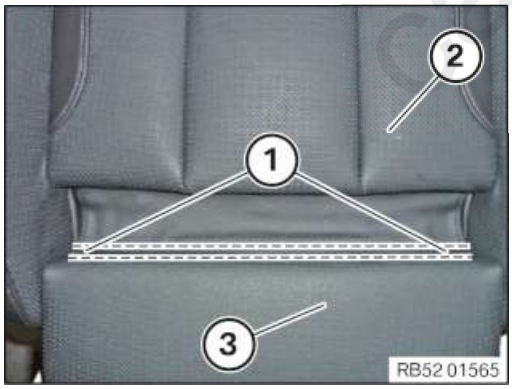
- Disconnect plug connection (1) and, if necessary, unclip the cable clip.

3 – Remove inner cover on front seat



- Loosen screw (1).
- Guide out the cover (2) at the arrows.

4 – Remove thigh support



- Move the thigh support (3) completely to the front.
- Unhook the piping (1) on the seat cover (2) from the thigh support (3).



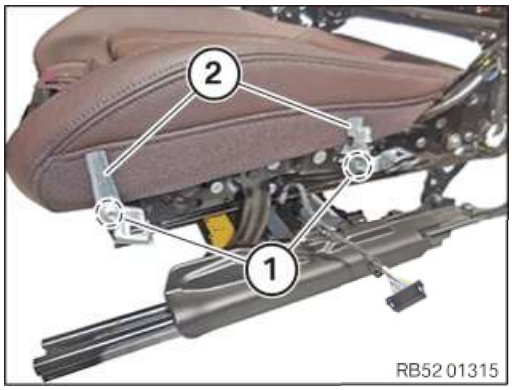
- Loosen screws (1).
- Feed the thigh support (2) out.

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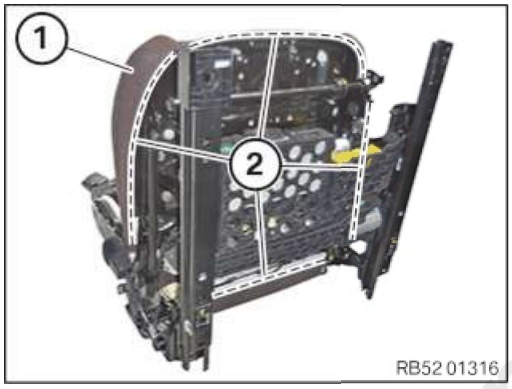


- Unlock plug connection (1) and disconnect.
- Remove thigh support (2).

5 – Removing the seat cover including cushion for the front passenger seat



- Loosen screws (1) and remove holder (2).



- Detach the seat cover (1) in the areas (2).
- Feed out the seat cover (1) with the cushion and remove.
- Disconnect the existing plug connection where required and unclip the cable clips.

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MAIN WORK

6 – Renewing the upholstery for the front passenger seat

TECHNICAL INFORMATION

Only US/Canadian version of front passenger seat with seat occupancy mat (CIS):

The seat occupancy mat is bonded to the entire surface of the upholstery and can only be replaced together with the upholstery.

If the seat occupancy mat or upholstery is defective, both parts must always be replaced together.

Full operability can only be guaranteed with the Original BMW replacement part.

After fitting the seat cover, enable the seat occupancy mat using the BMW programming system.

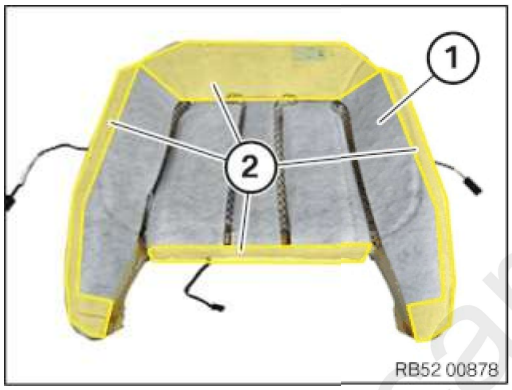
TECHNICAL INFORMATION

The heating element is bonded to the upholstery and it cannot be removed without destroying it.

When replaced, a new heating element must always be fitted with new upholstery.

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



- **Equipment specification with seat heating**

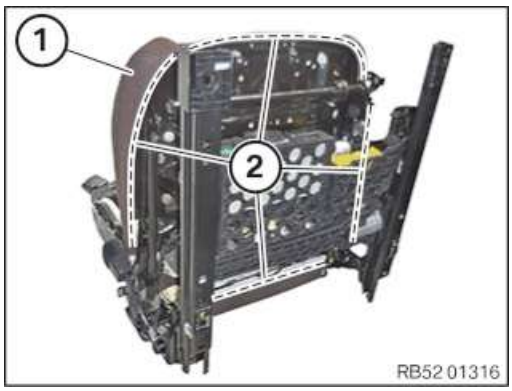
  Position the heating mat (1) on the cushion and align.

  Bond the heating mat (1) to the cushion in these areas (2).

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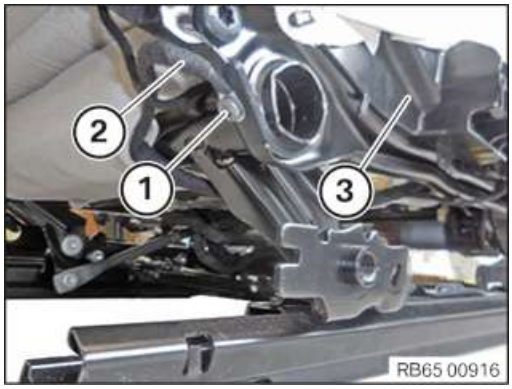
POSTPROCESSES

7 – Installing the seat cover including cushion for the front passenger seat



- Feed in the seat cover (1) with the cushion and position.
- Attach the seat cover (1) in the areas (2).
- Where applicable, connect the existing plug connections and clip in the cable clips.

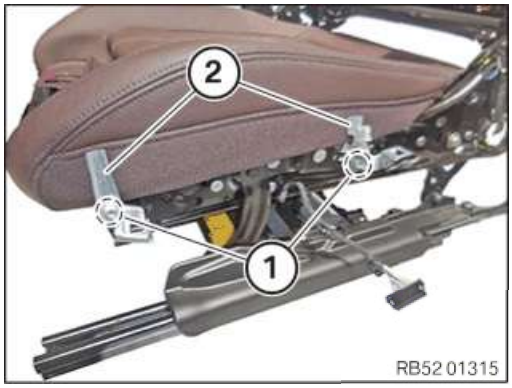
▸ **Securing ground cable of the seat occupancy mat (CIS)**



- Correctly position ground cable (2) for the seat occupancy mat on the seat mechanism (3).
- Tighten down screw (1).

Ground cable of the seat occupancy mat (CIS) on seat

Screw		Tightening torque	7,5 Nm

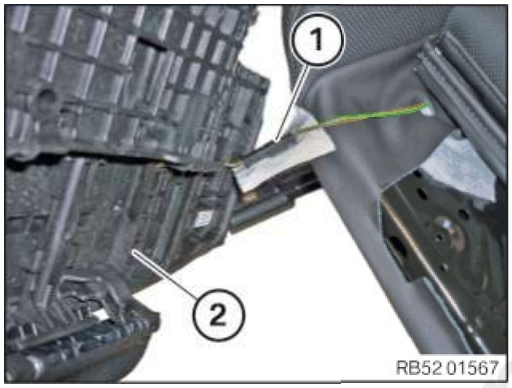


- Position holder (2) and tighten screws (1).

Seat trim to seat frame

Sheet metal screw		Tightening torque	2.5 Nm

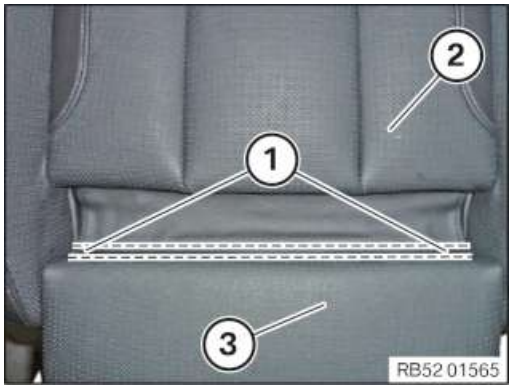
8 – Install thigh support



- Position the thigh support (2).
- Connect connectors (1) and lock.



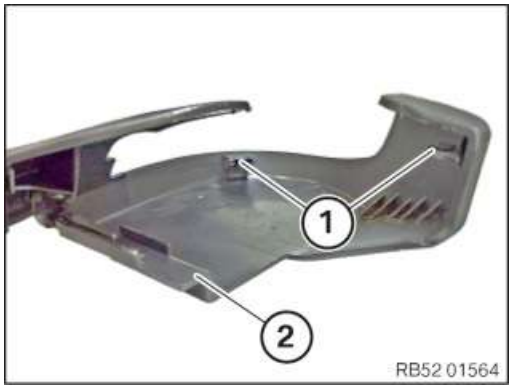
- Guide in the thigh support (2) and position correctly.
- Tighten the screws (1).



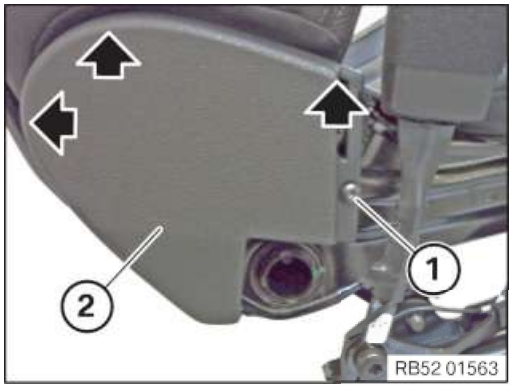
- Attach the edge stripping (1) of the seat cover (2) on the thigh support (3).

9 – Installing the inner cover on the front seat

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- Check the guides (1) of the cover (2) for damage and replace if necessary.

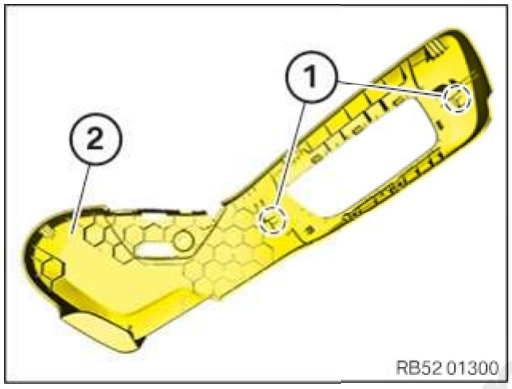


- Guide in the cover (2) on the arrows and position correctly.
- Tighten down screw (1).

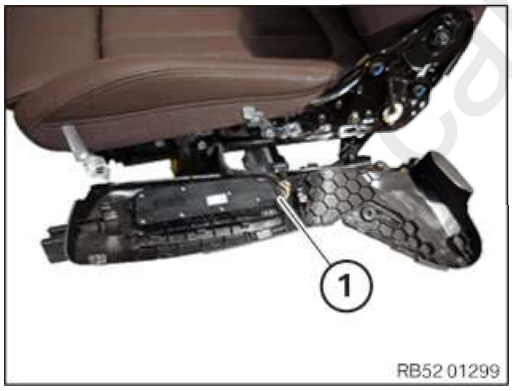
Inner cover on seat frame

Screw		Tightening torque	2.5 Nm

10 – Install outer cover on front seat



- Check the locking units (1) for damages, and replace the cover if necessary (2).



- Connect the connector (1) and if necessary clip the cable holder in.



- Insert the cover (2) in the area (4) and position it.
- Engage the cover (2) at the latch mechanisms (3).
- Tighten down screw (1).

Seat trim to seat frame

Sheet metal screw		Tightening torque	2.5 Nm

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- Clip in the cover (1).

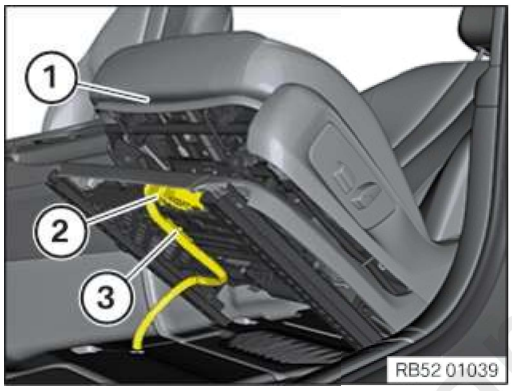
11 – Install front seat

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.



RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

- Cover the door sill using protective covers.

RISK OF DAMAGE

Heavy component.

Heavy components can lead to injury or damage.

- Remove and install heavy components with the aid of another person/other persons.

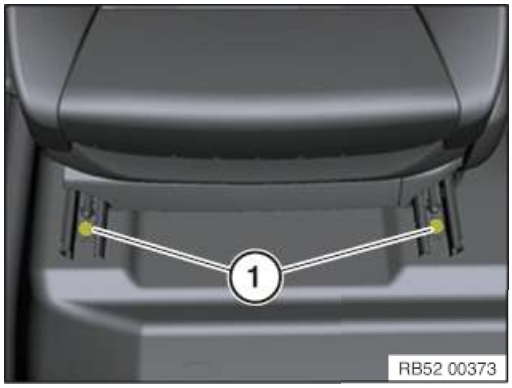
- Lift front seat (1) into the vehicle with the assistance of a second person.
- Place front seat (1) to the rear.
- Connect connector (2).
- Attach the cable clip (3).

► **Disconnecting all battery earth leads**

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- See additional information.

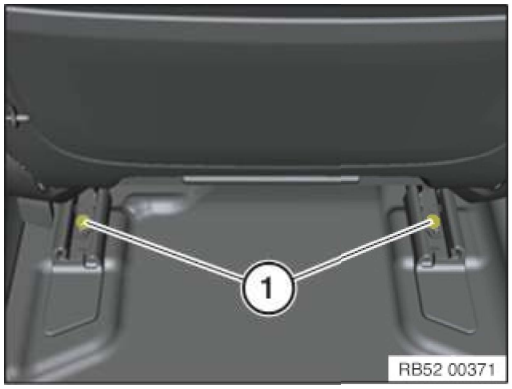


- Adjust the front seat to the rear.
- Renew screws (1).

  Parts: Bolts
- Tighten the screws (1).

Seat to body

M10	Renew screw.	Tightening torque	42 Nm

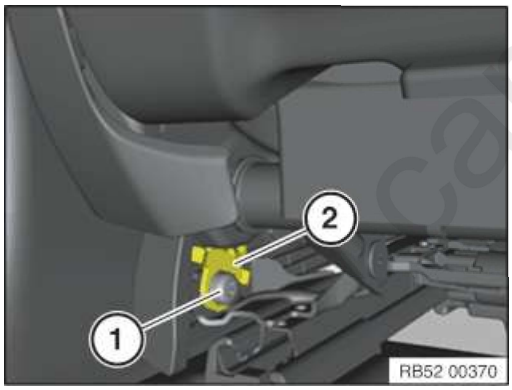


- Move front seat forwards.
- Renew screws (1).

  Parts: Bolts
- Tighten the screws (1).

Seat to body

M10	Renew screw.	Tightening torque	42 Nm



- Fully adjust the front seat to the front and top.
- Insert the end fitting (2).
- Renew the screw (1).

  Parts: Screw
- Tighten down screw (1).

End fitting to seat mechanism

M10	Renew screw.	Tightening torque	42 Nm

Additional Information

Overview of Tightening Torques

Ground cable of the seat occupancy mat (CIS) on seat Used in step 7

Screw		Tightening torque	7,5 Nm

Seat trim to seat frame Used in step 710

Sheet metal screw		Tightening torque	2.5 Nm

Inner cover on seat frame Used in step 9

Screw		Tightening torque	2.5 Nm

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Seat to body			Used in step 11
M10	Renew screw.	Tightening torque	42 Nm

End fitting to seat mechanism			Used in step 11
M10	Renew screw.	Tightening torque	42 Nm

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	111

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	111
61 20 900 Disconnecting and connecting battery earth lead	111
61 20 900 Disconnecting and connecting battery earth lead	111
61 20 900 Disconnecting and connecting battery earth lead	111
61 20 900 Disconnecting and connecting battery earth lead	111
61 20 900 Disconnecting and connecting battery earth lead	111
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	111
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	111
61 20 900 Disconnecting and connecting battery earth lead	111
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	111
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	111
61 20 900 Disconnecting and connecting battery earth lead	111
61 20 900 Disconnecting and connecting battery earth lead	111
61 20 900 Disconnecting and connecting battery earth lead	111
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	111
61 20 900 Disconnecting and connecting battery earth lead	111
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61 20 900 Disconnecting and connecting battery earth lead	111

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65 81 060 Removing and installing/replacing outside temperature sensor

NOTICE

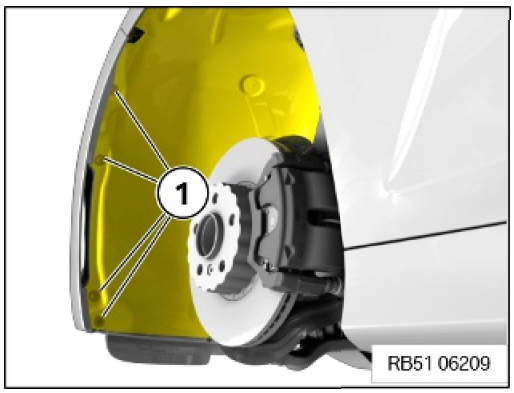
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

1 – Partially removing front right wheel arch trim panel

NOTICE

Description is for left component only. Procedure on the right side is identical.



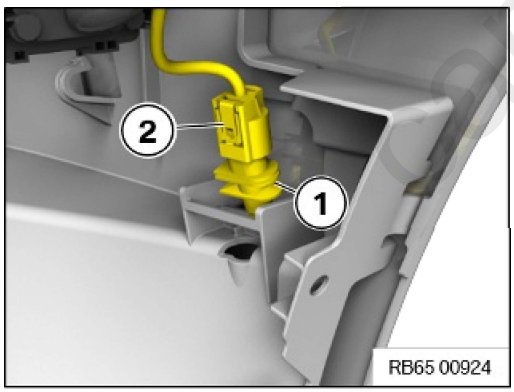
NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

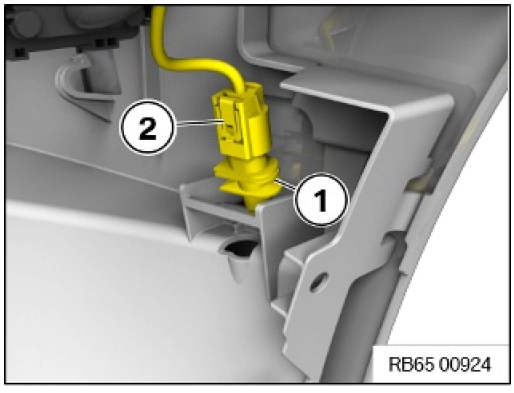
MAIN WORK

2 – Remove the outside temperature sensor



- Unclip outside temperature sensor (1) upwards out of the bumper panel.
- Unlock plug connection (2) and disconnect.
- Remove outside temperature sensor (1).

3 – Install the outside temperature sensor

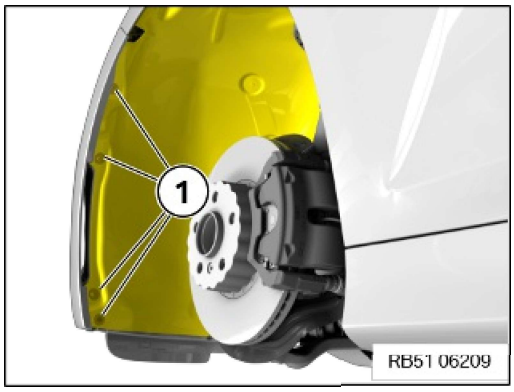


- Connect connectors (2) and lock.
- Clip the outside temperature sensor (1) into the bumper panel toward the bottom.

4 – Partly installing the right front wheel arch trim panel

NOTICE

Description is for left component only. Procedure on the right side is identical.



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Additional Information

Overview of Tightening Torques

Wheel arch trim panel, front Used in step 4

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

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61 00 ... Notes on handling wiring harnesses and cables



The following applies in general:

To avoid damage, observe the following instructions:

- Avoid compressive and tensile loads
- To ensure professional repairs, perform repair work only with BMW-approved or recommended special tools and spare parts
- Make sure cables are laid without kinks or abrasions
- Ensure non-contacting routing at sharp-edged body parts; use edge protection if necessary
- Secure additionally laid cables/leads with cable ties

The following additionally applies:

Shielded lines

Interference radiation and interference resistance can lead to neutral zones at contact points in the shielding. Consequently, distinctions have to be drawn between the following types:

Coaxial lines

- Shielded coaxial cables RTK031 may only be repaired with a special crimping tool.
- For aerial lines only the bushing contact may be repaired.
- RG174 Lines and the bushing contact may not be repaired.

CVBS lines

- CVBS cables may not be repaired.
- CVBS cables must be replaced in their entirety.

HSD lines

- HSD cables may not be repaired.
- HSD cables must be replaced in their entirety.

Optical fibre cable:

Note:
Fibre-optic cables are coloured differently as follows:

- Green = **MOST** (**M**edia **O**riented **S**ystems **T**ransport) optical fibres
- Yellow = **ISIS** (**I**ntelligent **S**afety and **I**ntegration **S**ystem) optical fibres
- Orange=repair fibre-optic cables

Attention!

- Optical fibres are permitted to show only one junction point (bridge). Replace optical fibres if necessary
- Smallest permissible bending radius is 25 mm
- Avoid effects of heat ≥ 85 °

Treating cables and fibre-optic cables

FlexRay (twisted cables):

It is possible to repair the FlexRay. In the event of damage, the cables can be joined with conventional butt connectors and heat-shrink tubing.

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Note:

- FlexRay lines may only reveal one separation point (bride); renew complete line if necessary.
- If possible, maintain twisted cable after repair.
- After repairs, twist cables as close as possible to the connector/separation point.
- Twisting must be as symmetrical as possible.

Airbag lines:

Repairing airbag cables

Ribbon cables:

Repairing ribbon cables

Replacing wiring harnesses

Repair wiring harnesses mainly cover the full equipment of the vehicle. If certain optional equipment is not installed in the vehicle, note the following:

- If necessary, secure the remaining connectors.
- If necessary, seal the remaining connectors outside the vehicle interior, for example, with butyl tape in such a way that moisture ingress can be eliminated permanently.
- If necessary, repin the connector of the repair wiring harness.

Note:
Repair wiring harnesses can be equipped with an **additional socket housing** (30-pin, for example), **which was not provided on the previous vehicle-side wiring harness**. This socket housing also cannot be found in the wiring diagram.

Procedure

The separation point between the vehicle-side wiring harness and the repair wiring harness is located **in the vehicle interior** (in the footwell, for example):

- Cut the additional socket housing and connect the lines to the vehicle-side wiring harness using a butt connector.
- Alternatively, a suitable pin housing can be fitted on the vehicle-side wiring harness and connected to the additional socket housing.

  However, this is permitted only if the following conditions are met:
  - Carpets must not protrude visibly or become deformed due to the installation of the additional plug connection.
  - It must be possible to install the adjacent components (for example, trims, trim panels, etc.) correctly after installing the additional plug connection.
  - All the attachment points of the adjacent components (for example, trims, trim panels, etc.) must engage correctly.
  - There must be no rattling noise due to the installation of the additional plug connection.
  - The additional plug connection must not damage the adjacent components/wiring harnesses, etc..

The separation point between the vehicle-side wiring harness and the repair wiring harness is located **outside the vehicle interior** (in the

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wheel arch, for example):

- Cut the additional socket housing and connect the lines to the vehicle-side wiring harness using a butt connector.
- **Using the additional socket housing is not permitted with a separation point outside the vehicle interior.**

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61 00 ... Parking-residing-driving

Vehicles of the G series feature a new type of terminal control:

Functional description of the parking-residing-driving terminal control

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66 12 610 Replace the radio remote control

1 Blocking/enabling the radio remote control

- Carry out the service function as follows:
  - Body
  - Locking and security functions
  - Remote key, key
  - Block/enable

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66 12 ... Teach in radio remote control/radio remote control with display (BMW display key)

Functional description for teach-in of radio remote control/radio remote control with display (BMW display key).

The service function mentioned in the functional description can be found via the following path:

- Body
- Locking and security functions
- Remote key, key
- Lock and enable remote control key

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66 20 510 Remove and install/replace the control unit

RISK OF DAMAGE

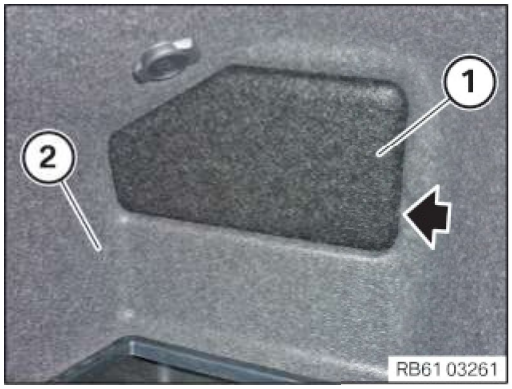
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

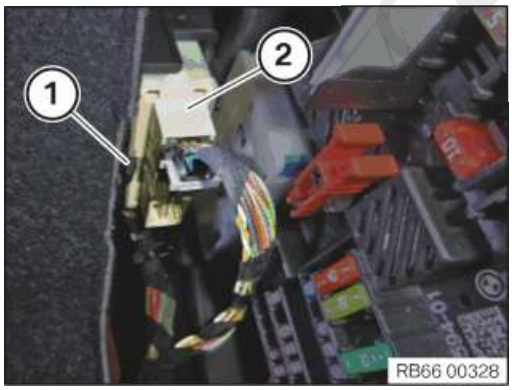
1 – Removing the flap in the luggage compartment wheel arch trim panel on the right



- Remove the flap (1) from the luggage compartment wheel arch trim panel on the right (2)

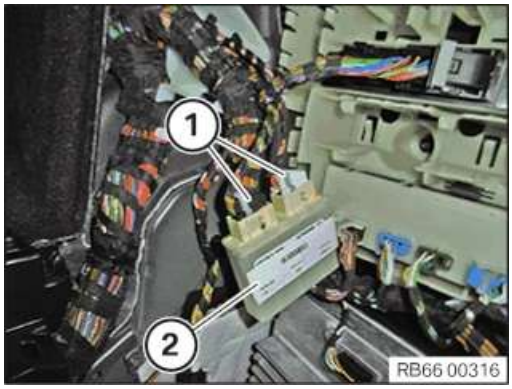
MAIN WORK

2 – Remove the PDC/PMA control unit



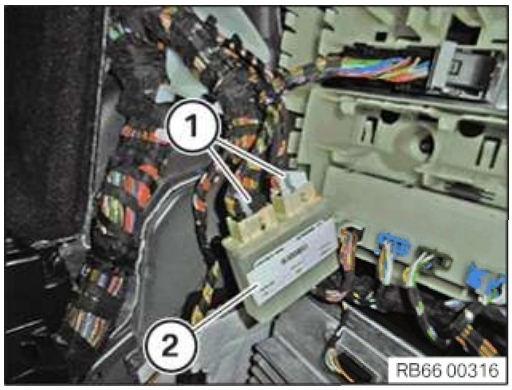
- Unlock lock (1).
- Pull out the PDC-/PMA-control unit(2) downwards form the holder.

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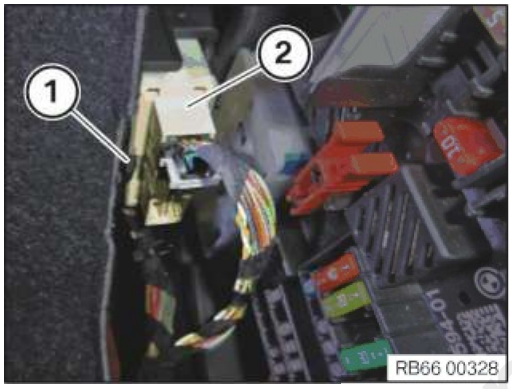


- Unlock and disconnect plug connections (1).
- Remove the PDC/PMA control unit (2).

3 – Install the PDC/PMA control unit



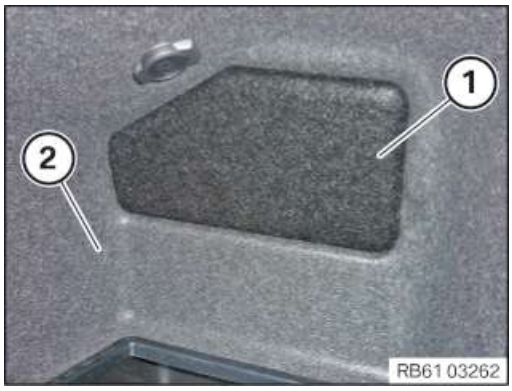
- Position PDC/PMA - control unit (2).
- Connect and lock the plug connections (1).



- Insert PDC-/PMA-control unit (2) upwards into the holder.
- Lock the lock (1).

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4 – Installing the flap in the luggage compartment wheel arch trim panel on the right



- Position the flap (1) correctly in the right luggage compartment wheel arch trim panel (2) and install.

5 – Encode/program control unit(s)

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

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Additional Information

Links

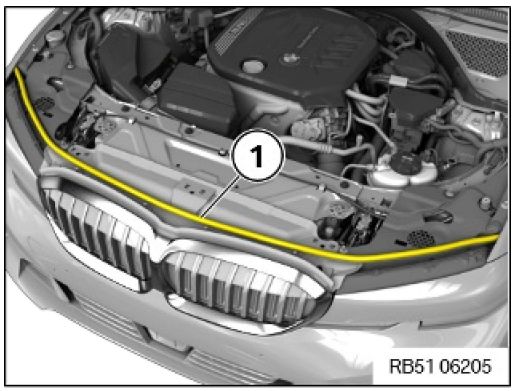
Repair instructions	Used in step
61 35 ... Notes on ESD protection (Electro Static Discharge)	

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66 20 515 Removing and installing/replacing on ultrasonic sensor at the front left

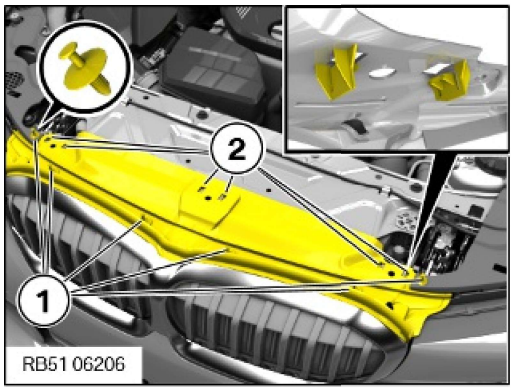
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



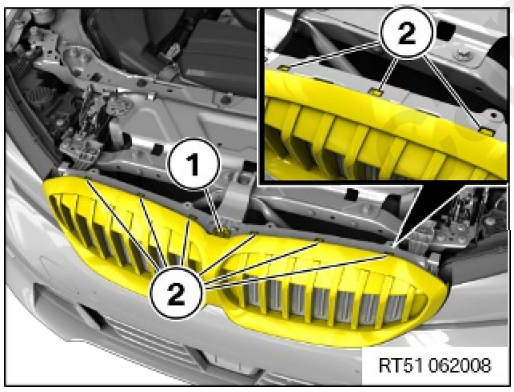
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

3 – Remove centre radiator ornamental grille



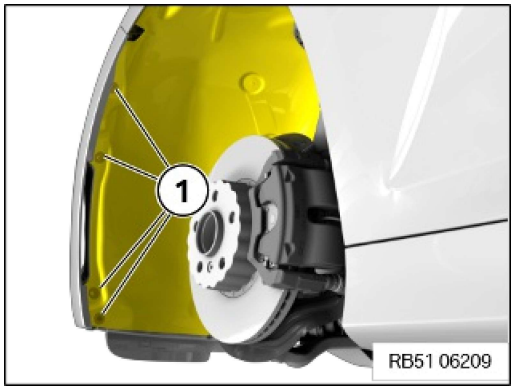
- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

4 – Partially remove both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially removing front wheel arch trim panel**

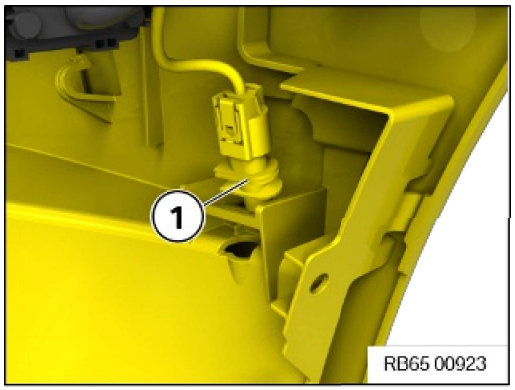


NOTICE

To provide a better overview: Schematic diagram without front wheel.

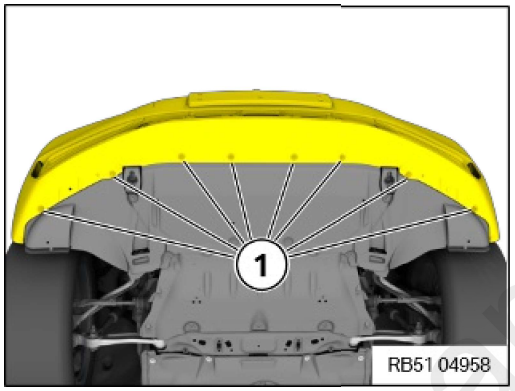
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

5 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

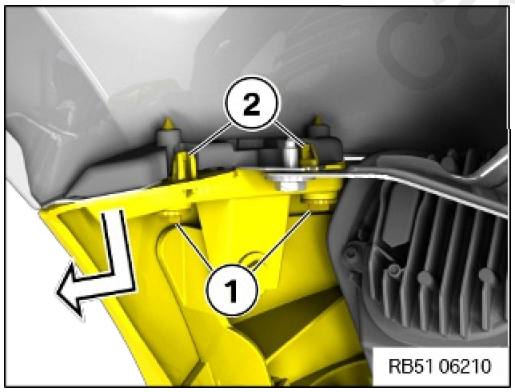
6 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

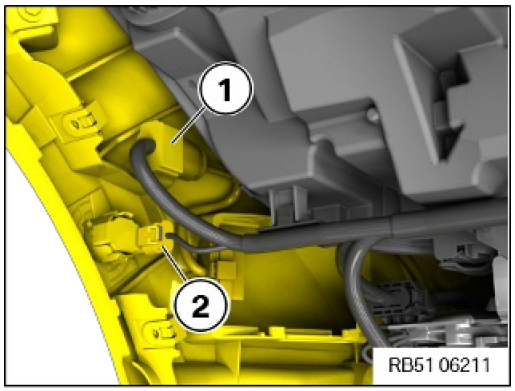
- Loosen screws (1).



NOTICE

Perform the operations on the left and right side.

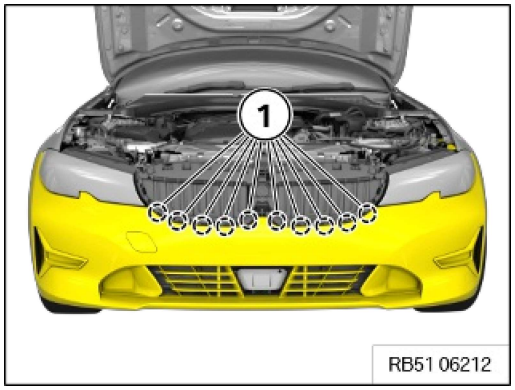
- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.



NOTICE

Perform the operations on the left and right side.

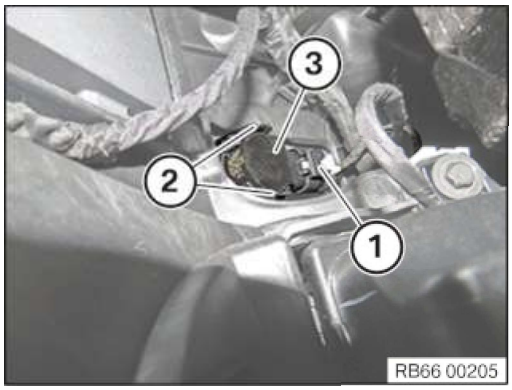
- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.



- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

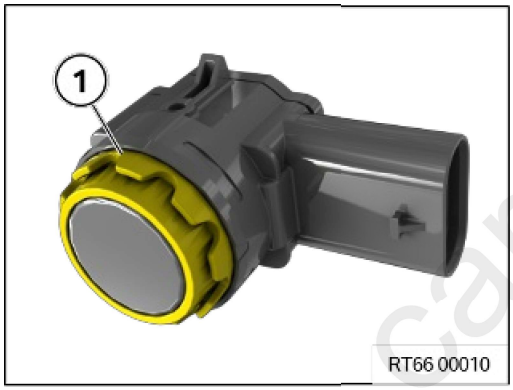
MAIN WORK

7 – Removing the ultrasonic sensor at the front left



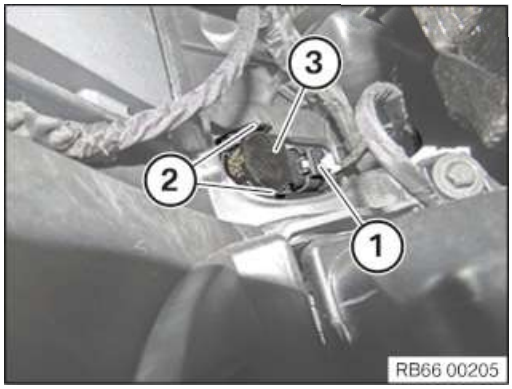
- Unlock and disconnect connector (1).
- Unlock the latch mechanisms (2).
- Remove the ultrasonic sensor (3).

8 – Installing the ultrasonic sensor at the front left



- Check the decoupling ring (1) for damage.

  Decoupling ring (1) must be installed.

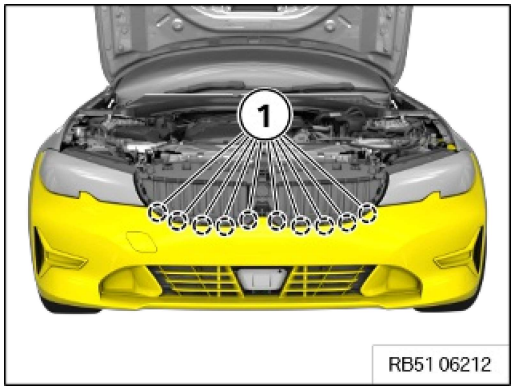


- Position the ultrasonic sensor (3) correctly and engage it in the latch mechanisms (2).
- Connect connectors (1) and lock.

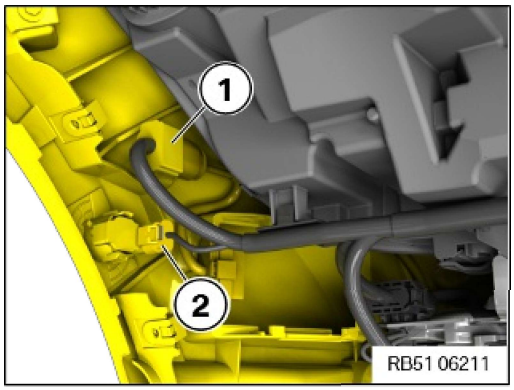
POSTPROCESSES

9 – Install bumper panel, front

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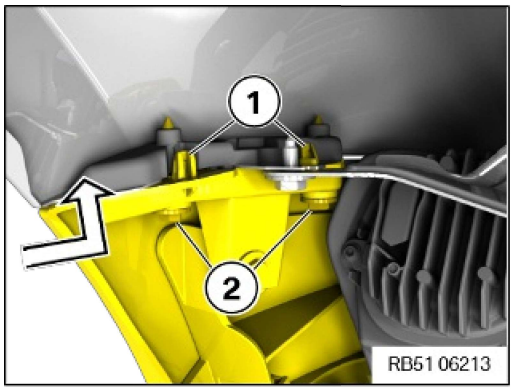
- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).



NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.



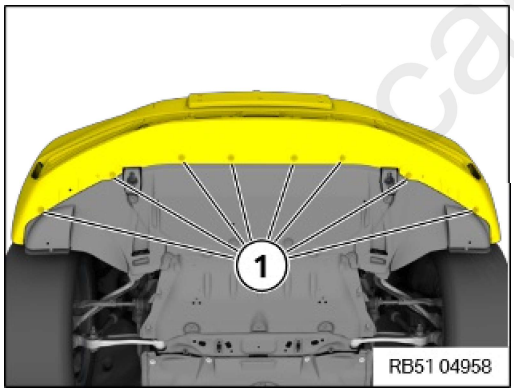
NOTICE

Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm



NOTICE

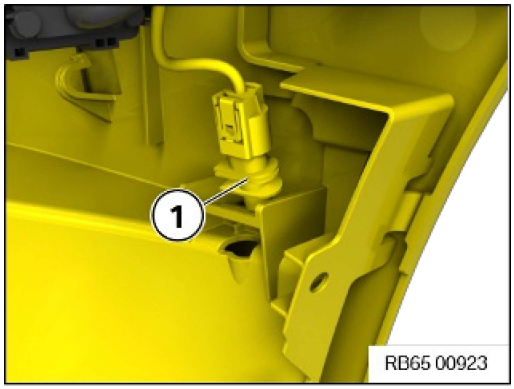
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

10 – Partially installing the temperature sensor



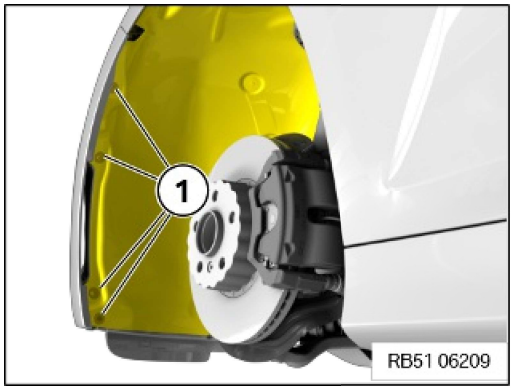
- Clip the temperature sensor (1) downwards into the front bumper panel.

11 – Partially installing both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially installing front wheel arch trim panel**



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

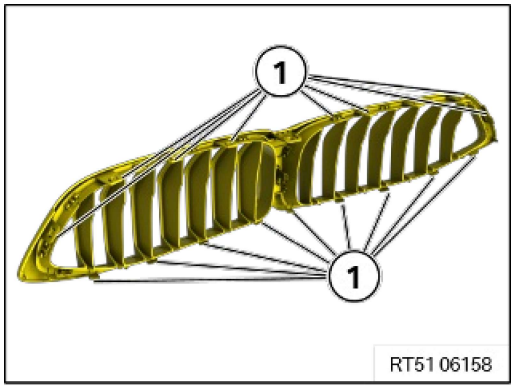
Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

12 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



Check

- Check latch mechanisms (1) for damage.

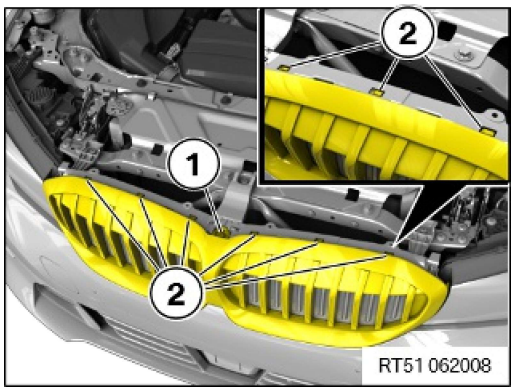
Result

» The latch mechanism (1) is damaged.

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Measure

- Renew the front ornamental grille, centre.

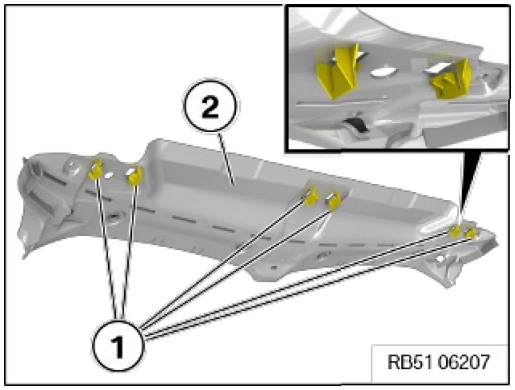


- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

13 – Installing cover for engine compartment centre



Check

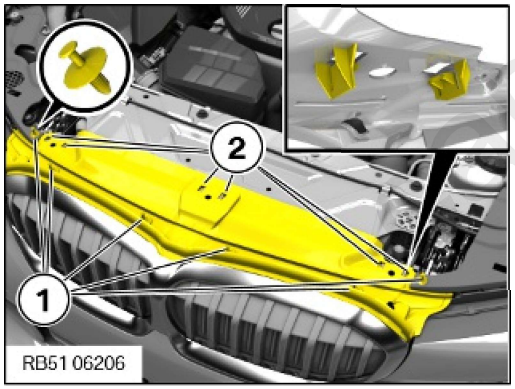
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

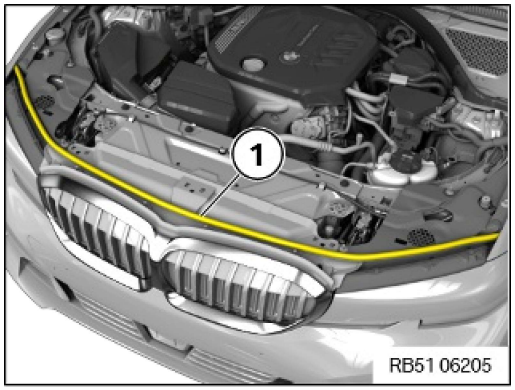
Measure

- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

14 – Install the seal for the front bonnet



- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

Additional Information

Overview of Tightening Torques

Front bumper panel to front side panel — Used in step 9

Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection — Used in step 9

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Wheel arch trim panel, front — Used in step 11

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control — Used in step 12

Oval-head screwM6		Tightening torque	4,6 Nm

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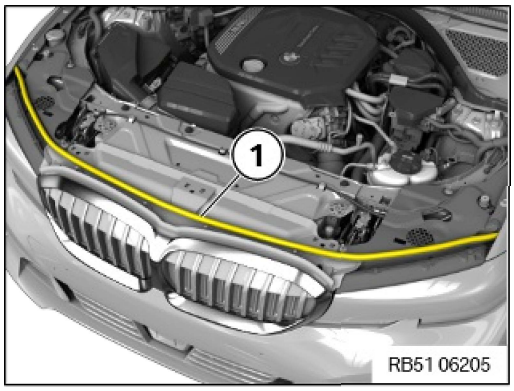
66 20 516 Removing and installing/replacing one ultrasonic sensor at the front right

NOTICE

Description is for left component only. Procedure on the right side is identical.

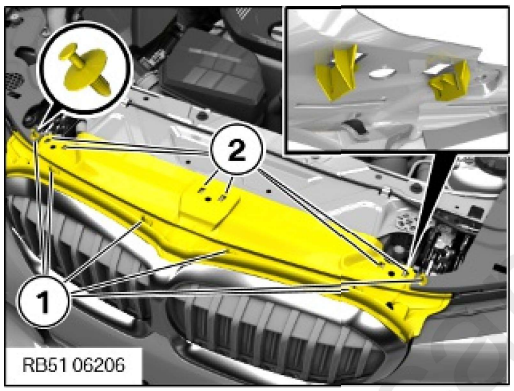
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



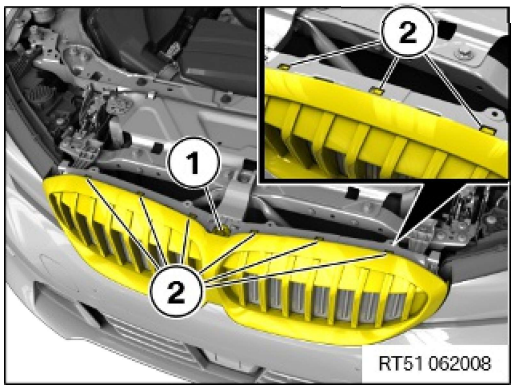
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

3 – Remove centre radiator ornamental grille



- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

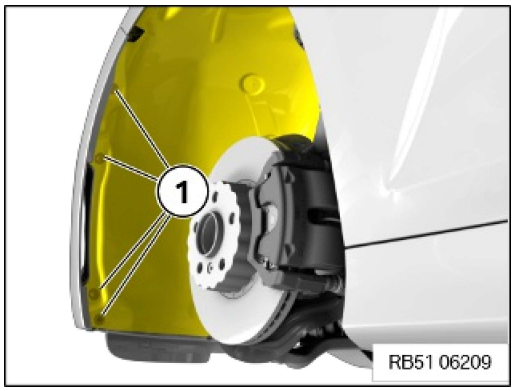
4 – Partially remove both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

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▸ **Partially removing front wheel arch trim panel**

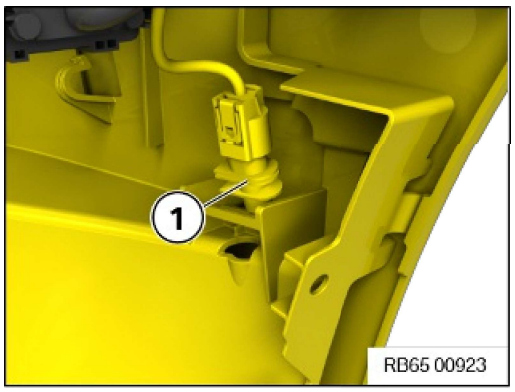


NOTICE

To provide a better overview: Schematic diagram without front wheel.

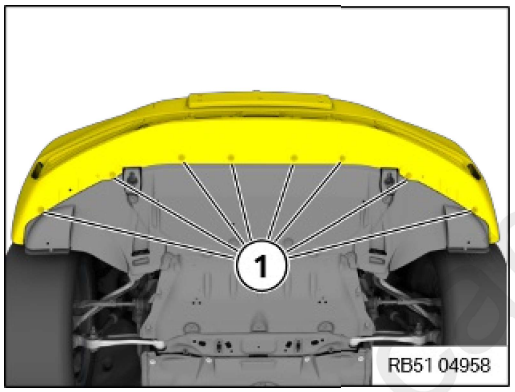
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

5 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

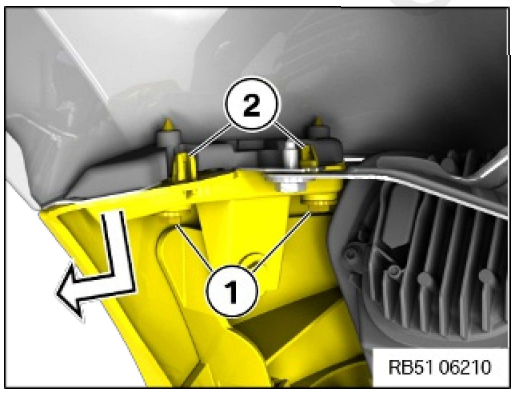
6 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

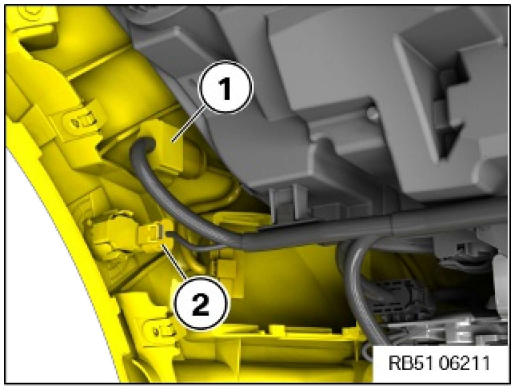
- Loosen screws (1).



NOTICE

Perform the operations on the left and right side.

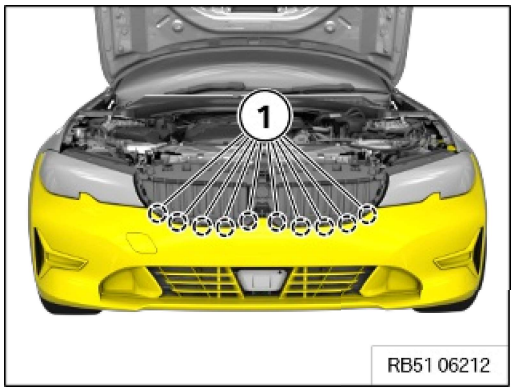
- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.



NOTICE

Perform the operations on the left and right side.

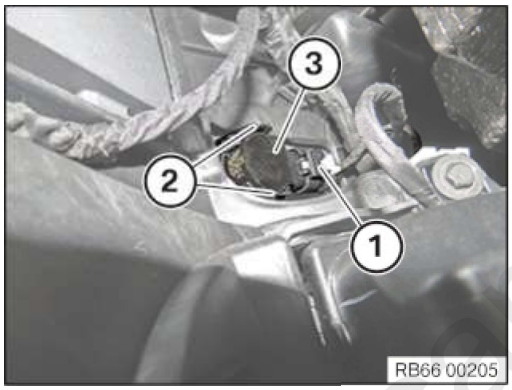
- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.



- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

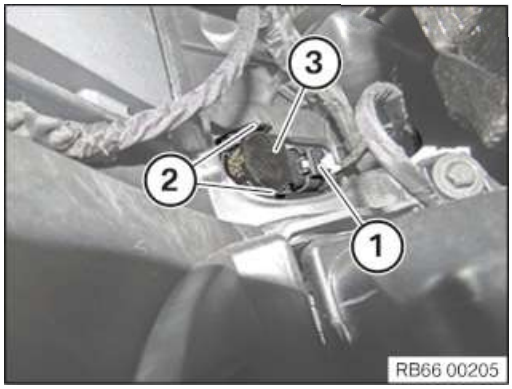
MAIN WORK

7 – Removing the ultrasonic sensor at the front right



- Unlock and disconnect connector (1).
- Unlock the latch mechanisms (2).
- Remove the ultrasonic sensor (3).

8 – Installing the ultrasonic sensor at the front right

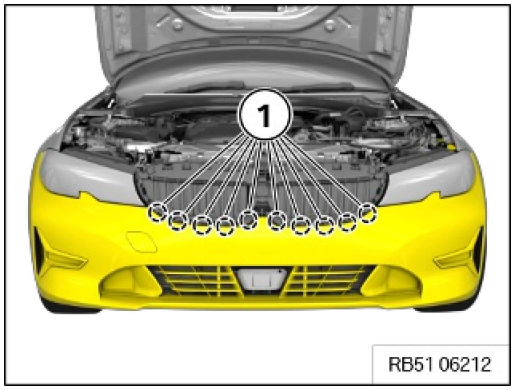


- Position the ultrasonic sensor (3) correctly and engage it in the latch mechanisms (2).
- Connect connectors (1) and lock.

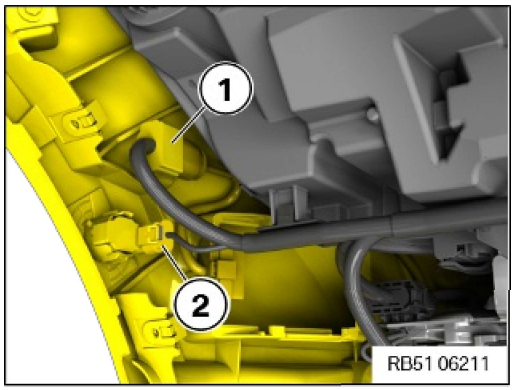
POSTPROCESSES

9 – Install bumper panel, front

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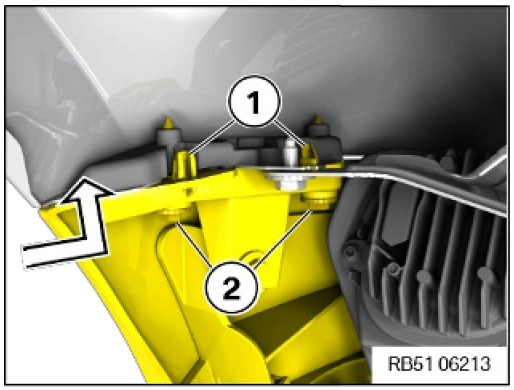
- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).



NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.



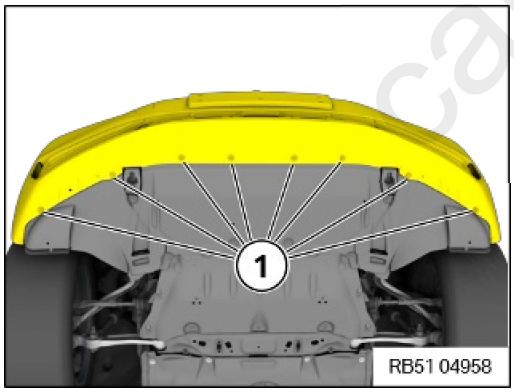
NOTICE

Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm



NOTICE

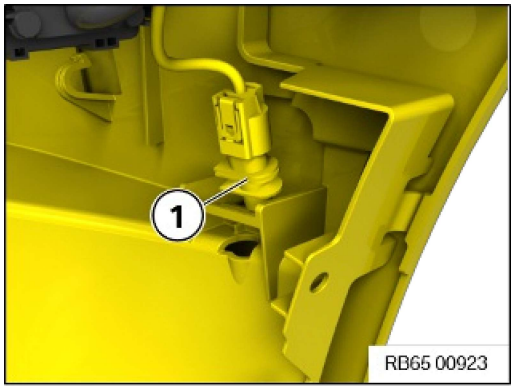
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

10 – Partially installing the temperature sensor



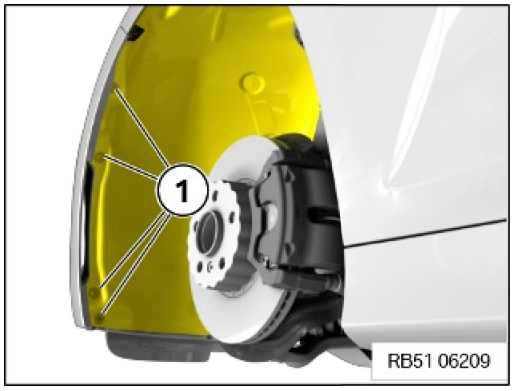
- Clip the temperature sensor (1) downwards into the front bumper panel.

11 – Partially installing both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially installing front wheel arch trim panel**



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

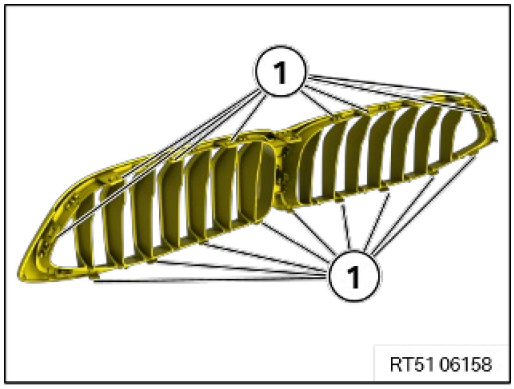
Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

12 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



Check

- Check latch mechanisms (1) for damage.

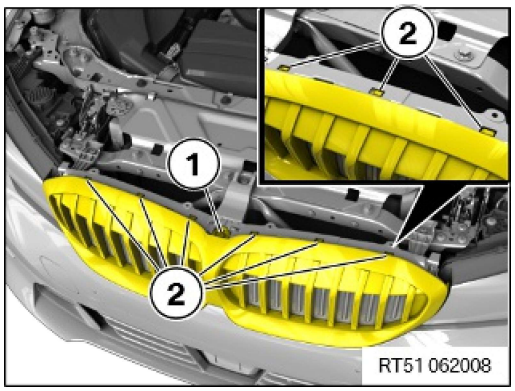
Result

» The latch mechanism (1) is damaged.

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Measure

- Renew the front ornamental grille, centre.

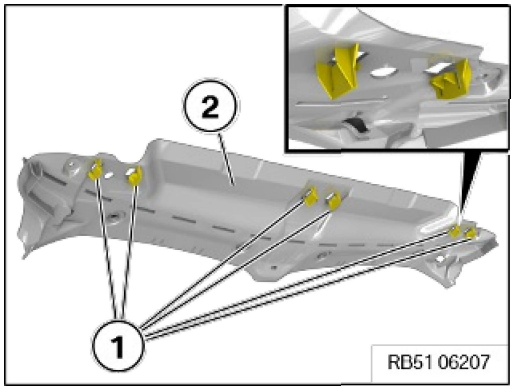


- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

13 – Installing cover for engine compartment centre



Check

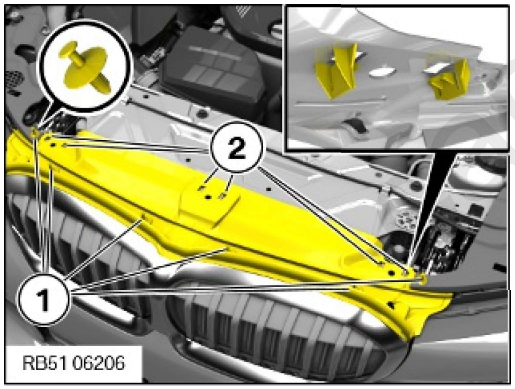
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

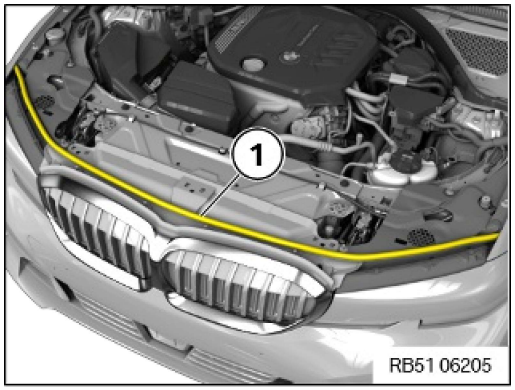
Measure

- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

14 – Install the seal for the front bonnet



- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

Additional Information

Overview of Tightening Torques

Front bumper panel to front side panel — Used in step 9

Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection — Used in step 9

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Wheel arch trim panel, front — Used in step 11

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control — Used in step 12

Oval-head screwM6		Tightening torque	4,6 Nm

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66 20 517 Removing and installing/replacing one ultrasonic sensor at the front, centre, left

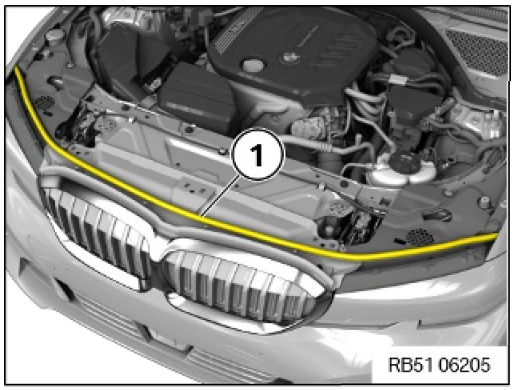
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

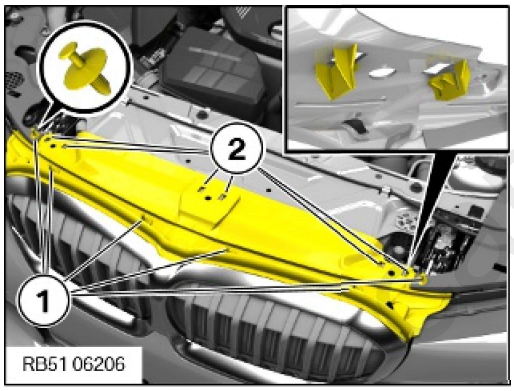
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



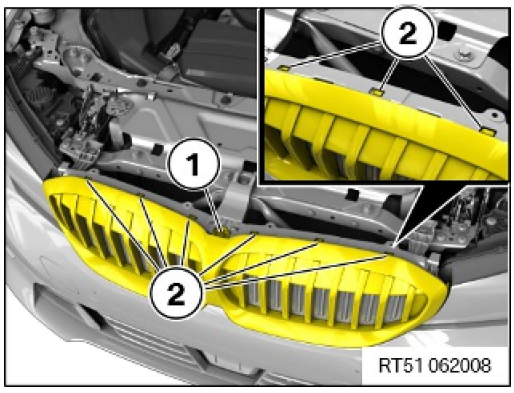
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

3 – Remove centre radiator ornamental grille



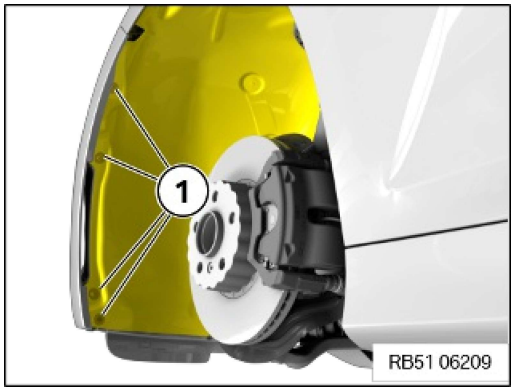
- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

4 – Partially remove both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially removing front wheel arch trim panel**

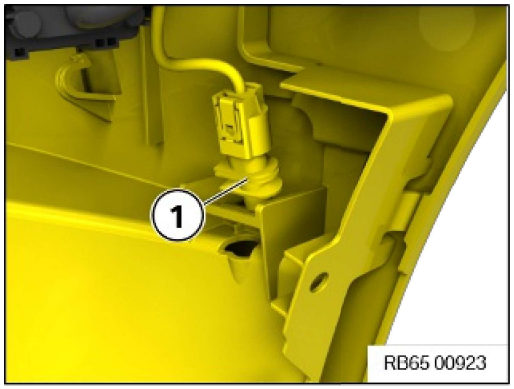


NOTICE

To provide a better overview: Schematic diagram without front wheel.

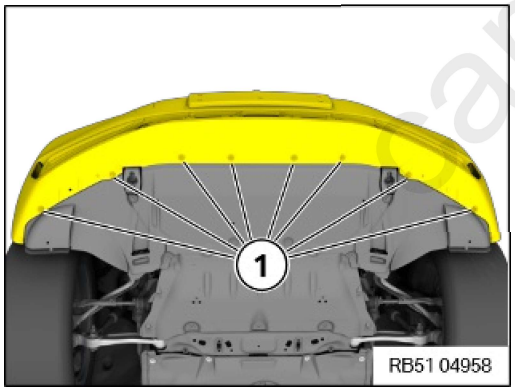
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

5 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

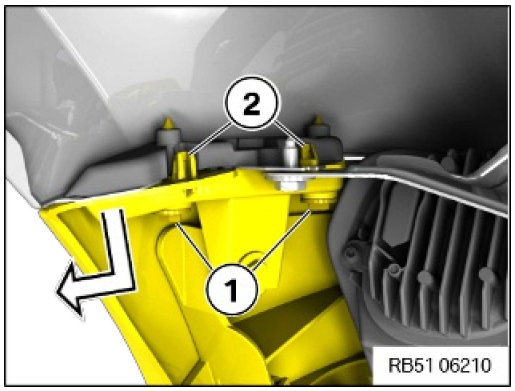
6 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

- Loosen screws (1).

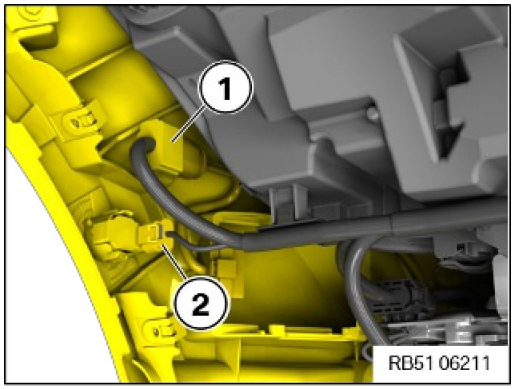


NOTICE

Perform the operations on the left and right side.

- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.

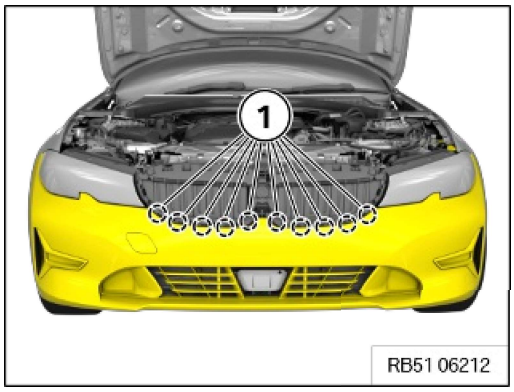
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NOTICE

Perform the operations on the left and right side.

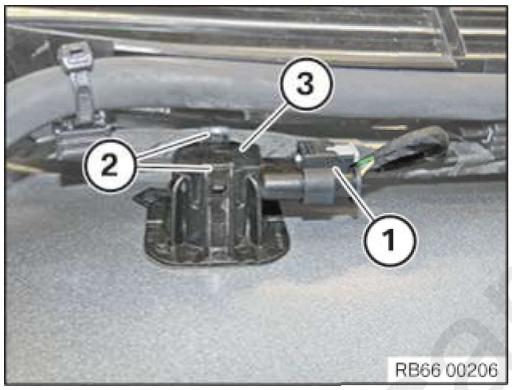
- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.



- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

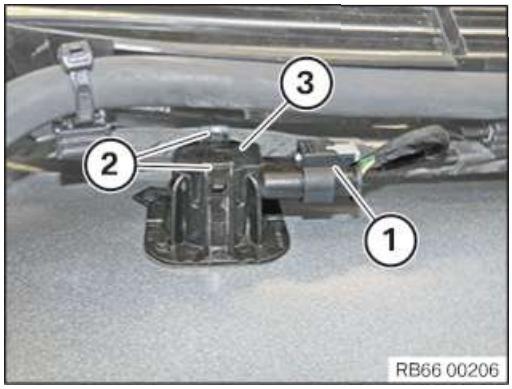
MAIN WORK

7 – Removing the ultrasonic sensor at the front left in the centre



- Unlock and disconnect connector (1).
- Unlock the latch mechanisms (2).
- Remove the ultrasonic sensor (3).

8 – Installing the ultrasonic sensor at the front, in the centre on the left

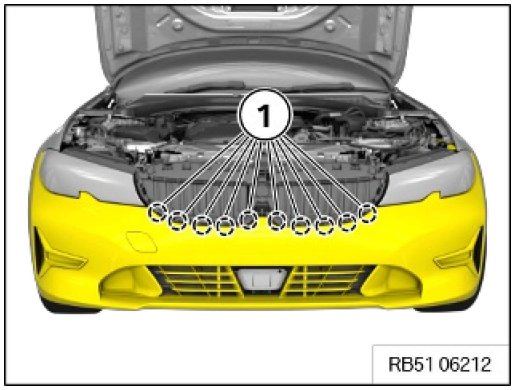


- Connect connectors (1) and lock.
- Position the ultrasonic sensor (3) correctly and engage it in the latch mechanisms (2).

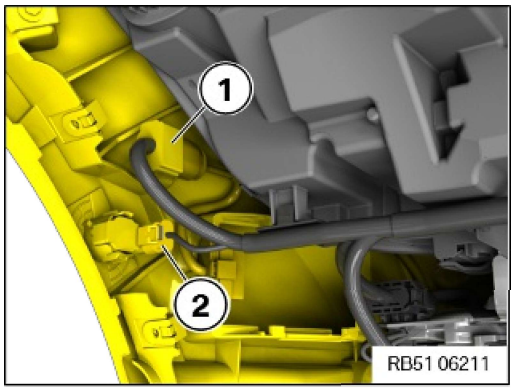
POSTPROCESSES

9 – Install bumper panel, front

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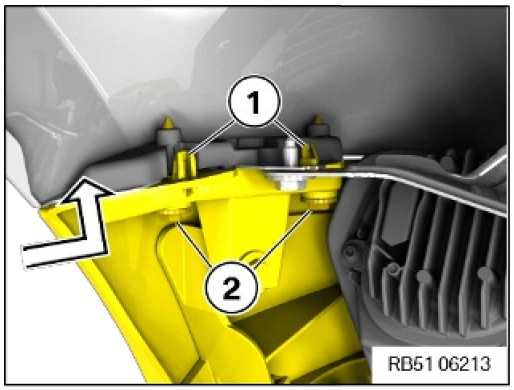
- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).



NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.



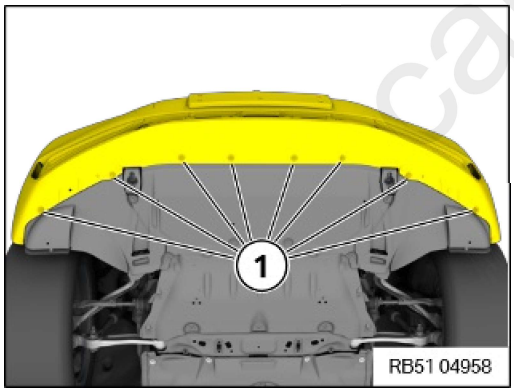
NOTICE

Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm



NOTICE

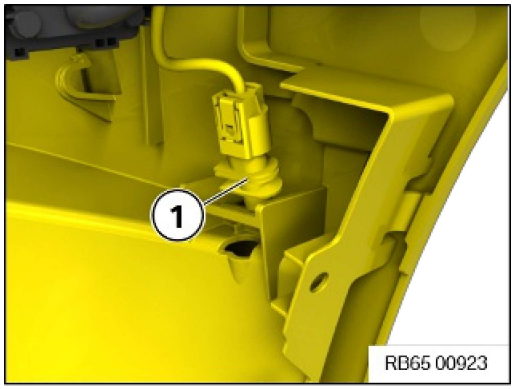
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

10 – Partially installing the temperature sensor



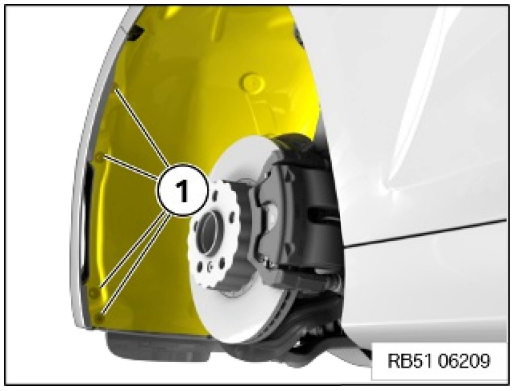
- Clip the temperature sensor (1) downwards into the front bumper panel.

11 – Partially installing both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially installing front wheel arch trim panel**



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

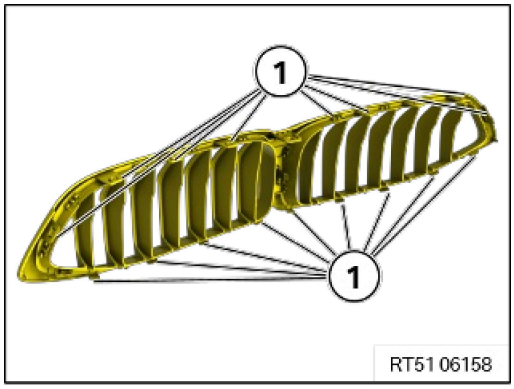
Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

12 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



Check

- Check latch mechanisms (1) for damage.

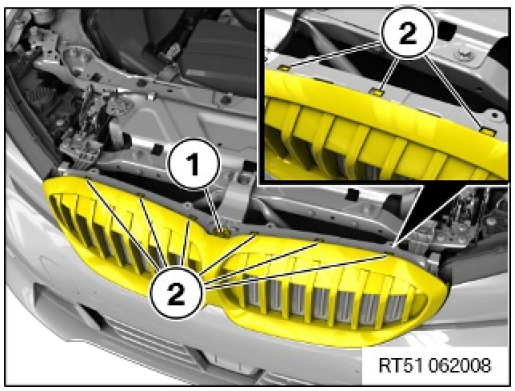
Result

» The latch mechanism (1) is damaged.

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Measure

- Renew the front ornamental grille, centre.

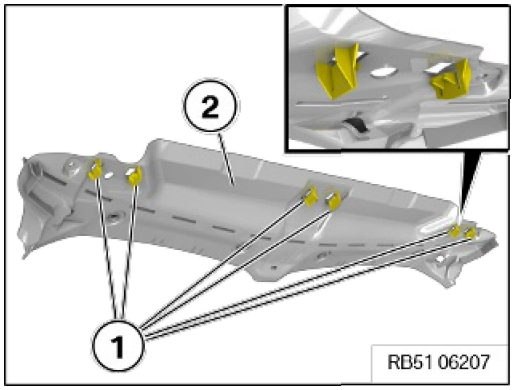


- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

13 – Installing cover for engine compartment centre



Check

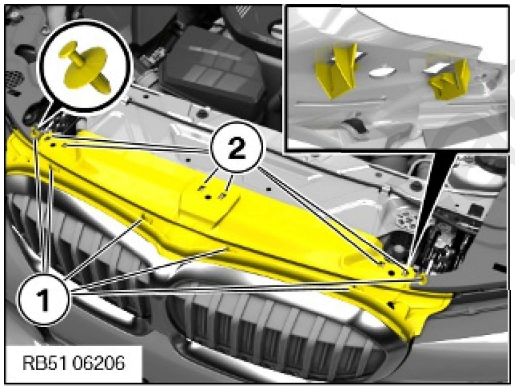
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

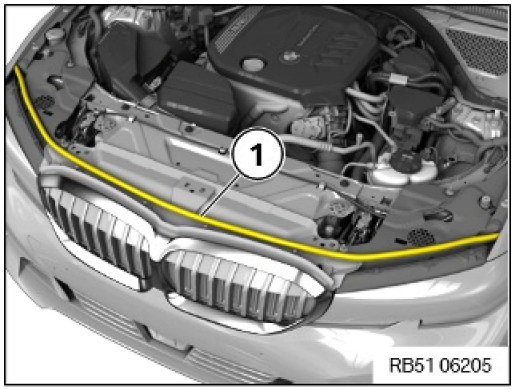
Measure

- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

14 – Install the seal for the front bonnet



- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

Additional Information

Overview of Tightening Torques

Front bumper panel to front side panel — Used in step 9

Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection — Used in step 9

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Wheel arch trim panel, front — Used in step 11

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control — Used in step 12

Oval-head screwM6		Tightening torque	4,6 Nm

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66 20 519 Removing and installing/replacing one ultrasonic sensor at the front, centre, right

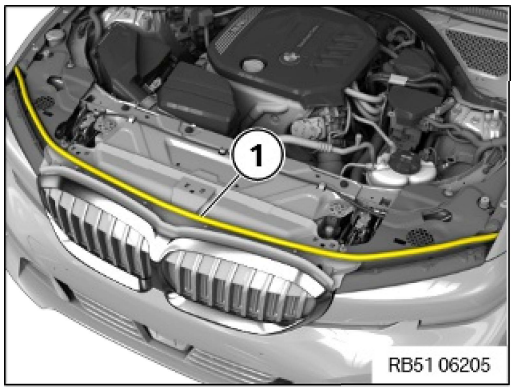
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

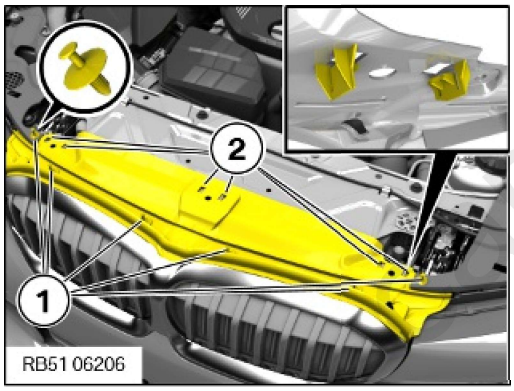
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



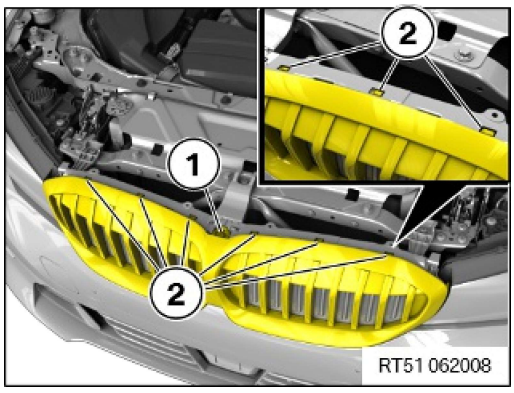
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

3 – Remove centre radiator ornamental grille



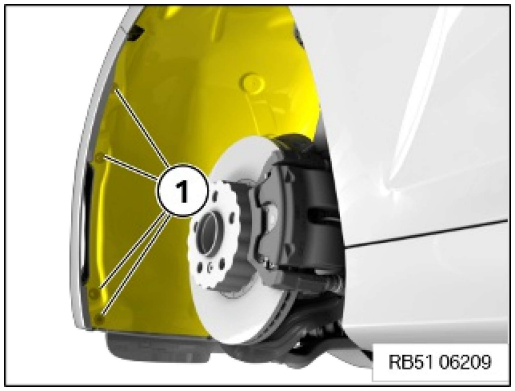
- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

4 – Partially remove both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially removing front wheel arch trim panel**

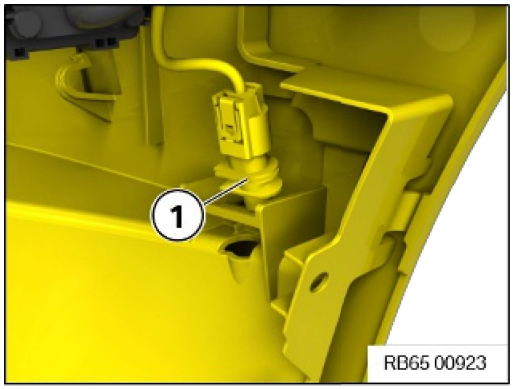


NOTICE

To provide a better overview: Schematic diagram without front wheel.

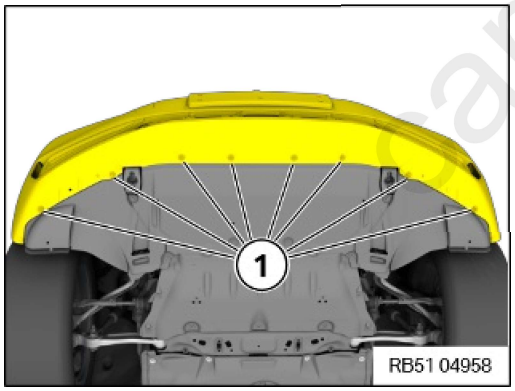
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

5 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

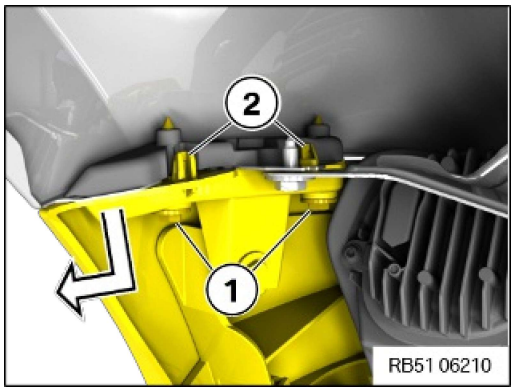
6 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

- Loosen screws (1).

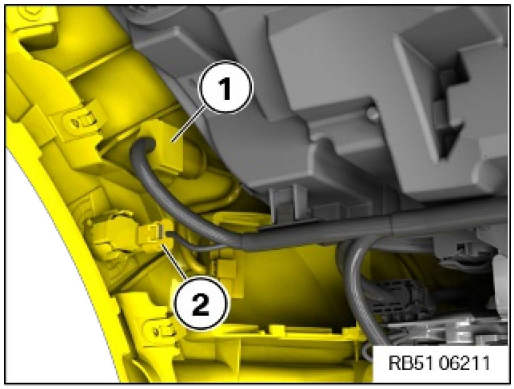


NOTICE

Perform the operations on the left and right side.

- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.

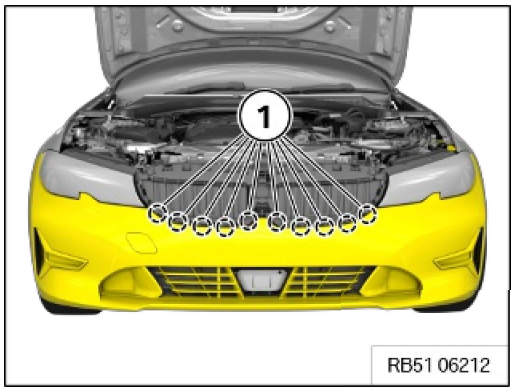
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NOTICE

Perform the operations on the left and right side.

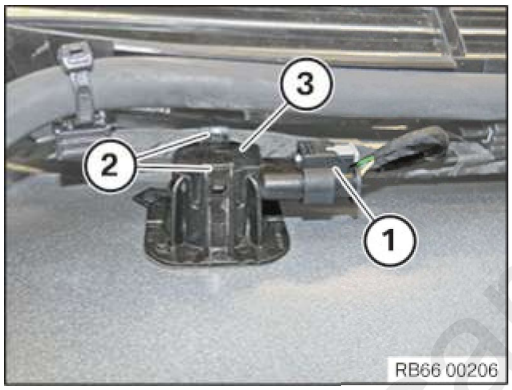
- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.



- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

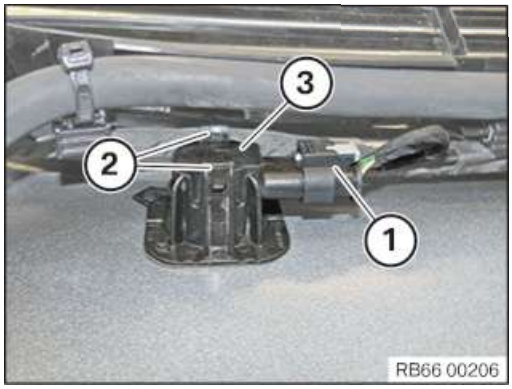
MAIN WORK

7 – Removing the ultrasonic sensor at the front right in the centre



- Unlock and disconnect connector (1).
- Unlock the latch mechanisms (2).
- Remove the ultrasonic sensor (3).

8 – Installing the ultrasonic sensor at the front right in the centre

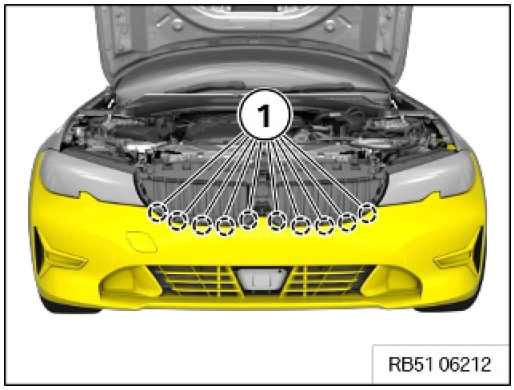


- Connect connectors (1) and lock.
- Position the ultrasonic sensor (3) correctly and engage it in the latch mechanisms (2).

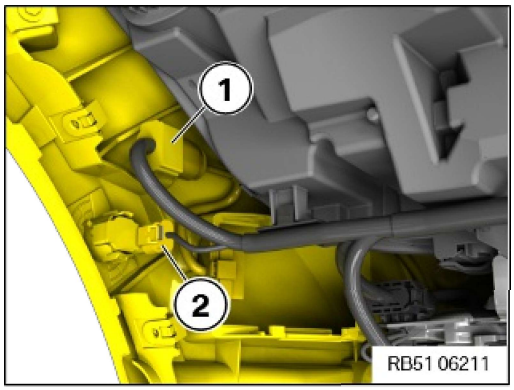
POSTPROCESSES

9 – Install bumper panel, front

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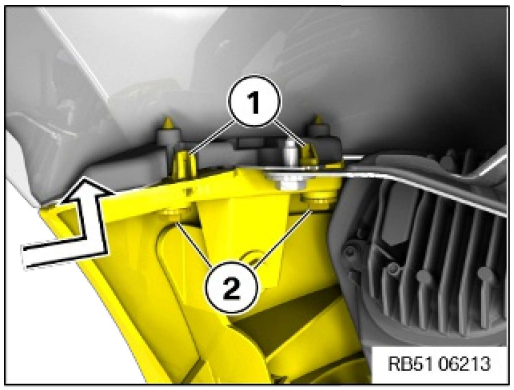
- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).



NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.



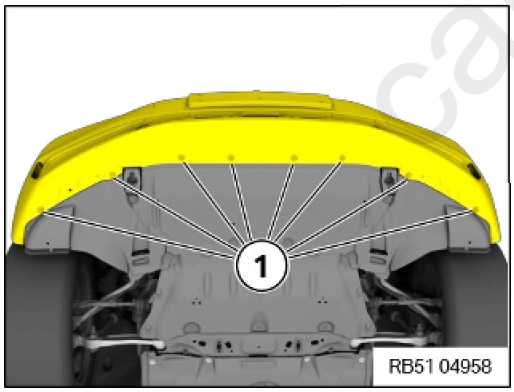
NOTICE

Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm



NOTICE

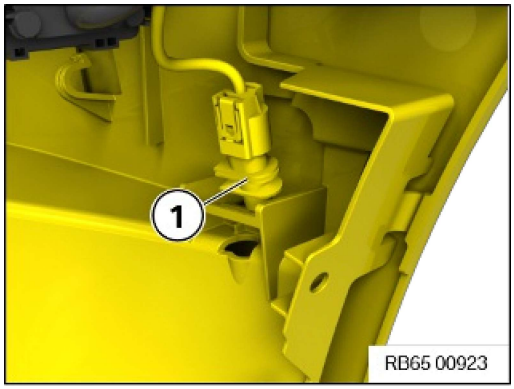
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

10 – Partially installing the temperature sensor



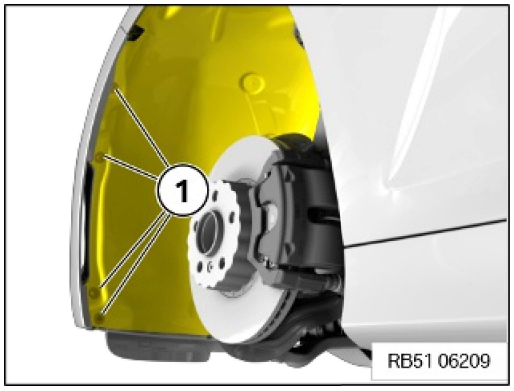
- Clip the temperature sensor (1) downwards into the front bumper panel.

11 – Partially installing both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially installing front wheel arch trim panel**



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

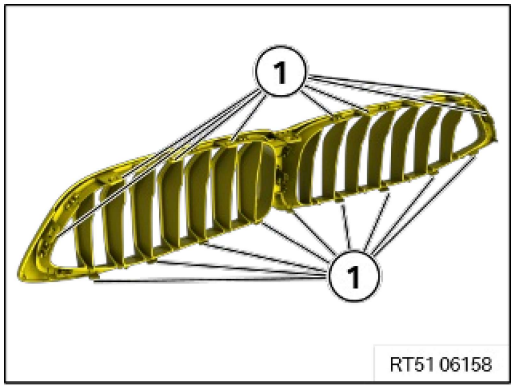
Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

12 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



Check

- Check latch mechanisms (1) for damage.

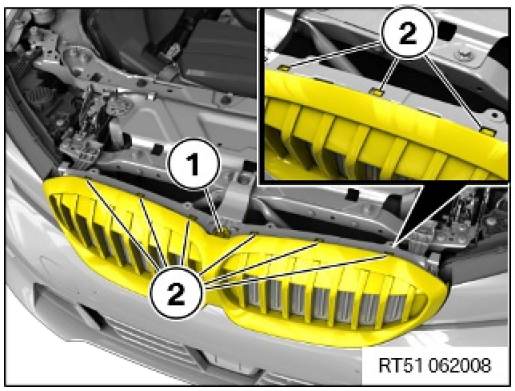
Result

» The latch mechanism (1) is damaged.

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Measure

- Renew the front ornamental grille, centre.

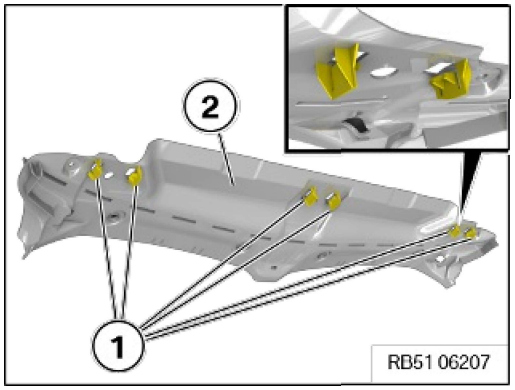


- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

13 – Installing cover for engine compartment centre



Check

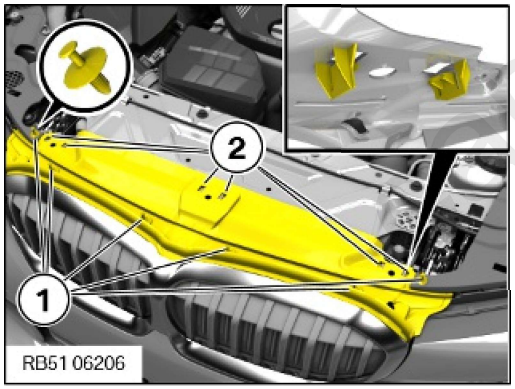
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

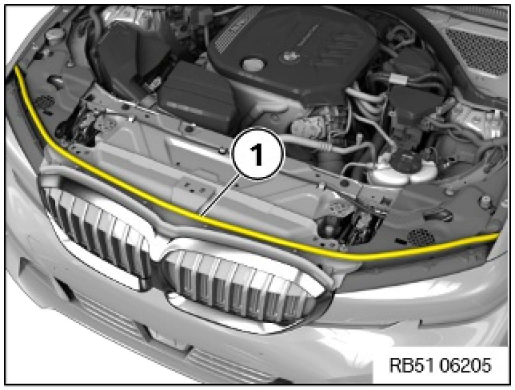
Measure

- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

14 – Install the seal for the front bonnet



- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

Additional Information

Overview of Tightening Torques

Front bumper panel to front side panel — Used in step 9

Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection — Used in step 9

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Wheel arch trim panel, front — Used in step 11

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control — Used in step 12

Oval-head screwM6		Tightening torque	4,6 Nm

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66 20 534 Removing and installing/replacing rear left ultrasonic sensor

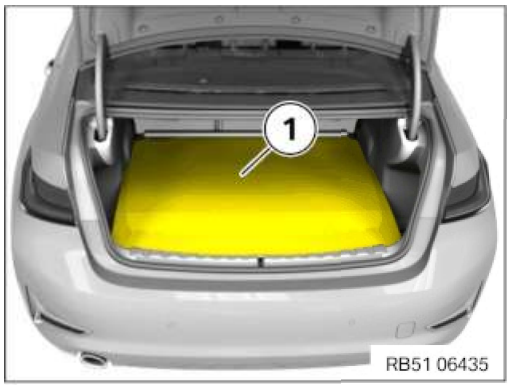
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

PRELIMINARY WORK

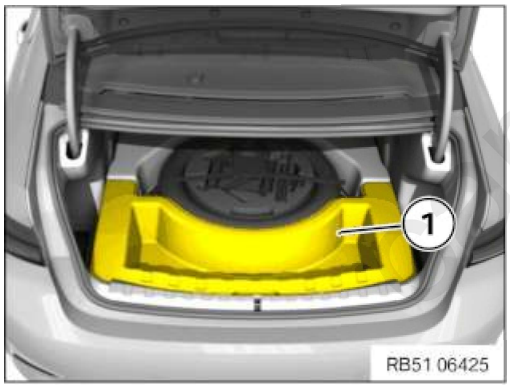
1 – Removing the luggage compartment floor trim panel



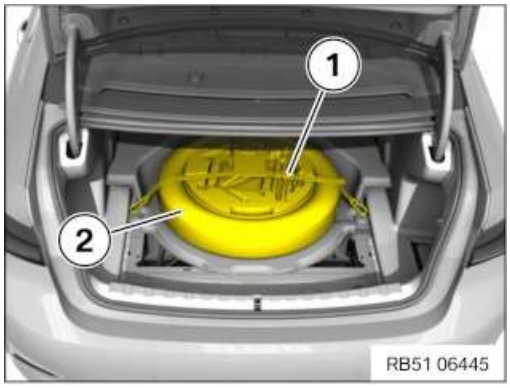
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

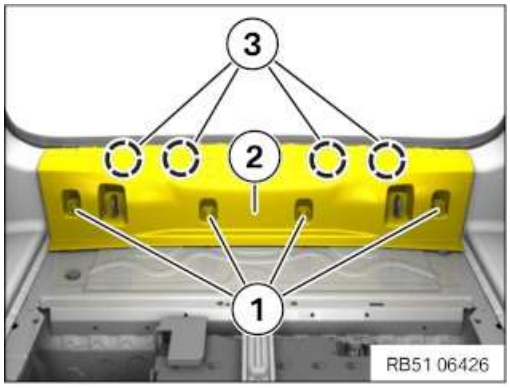


- Remove rear luggage compartment well (1).



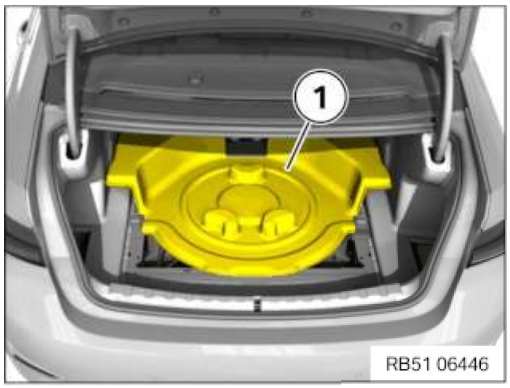
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

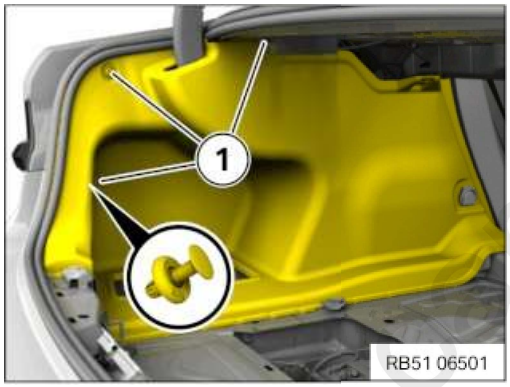
4 – Removing front luggage compartment well



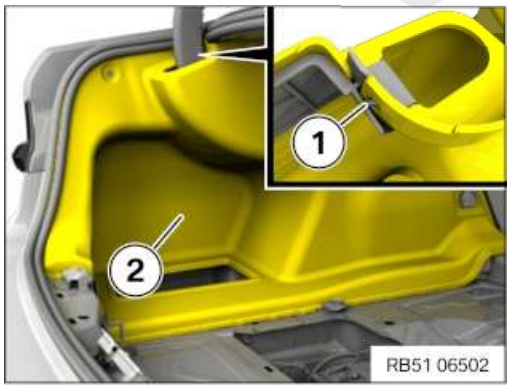
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▸ Partially remove luggage compartment wheel arch trim on left



- Loosen the expanding rivet (1).

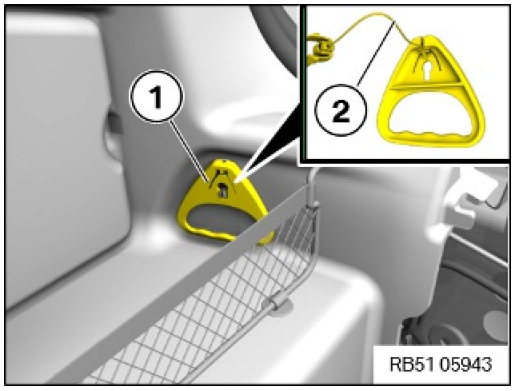


- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ Partially remove luggage compartment wheel arch panel on right

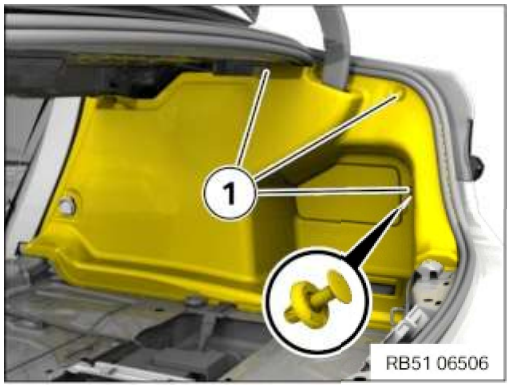
▹ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)

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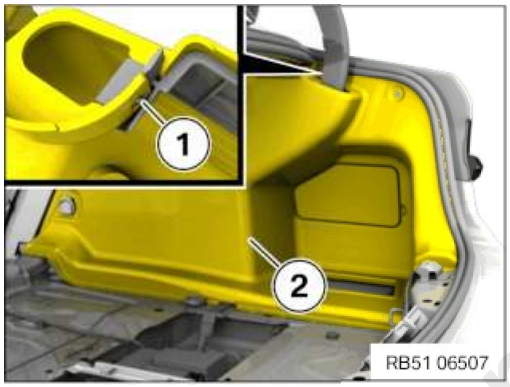


- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

◁



- Loosen the expanding rivet (1).



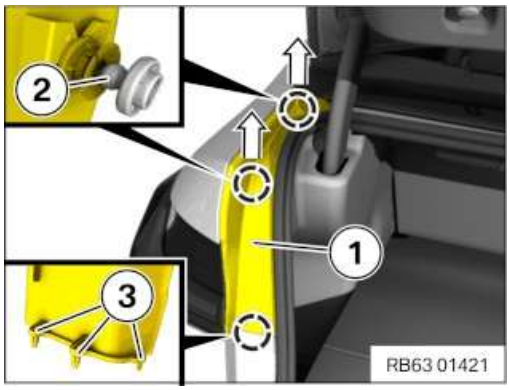
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the trim in the water channel**



- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

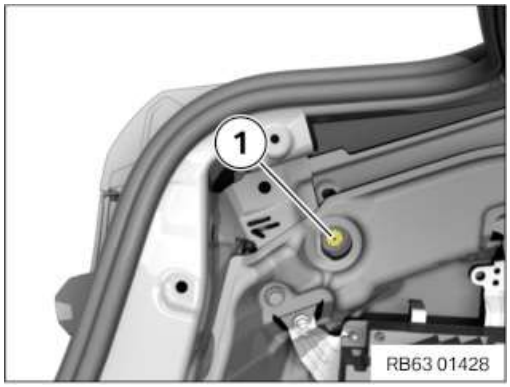
7 – Remove both rear lights from the side panel

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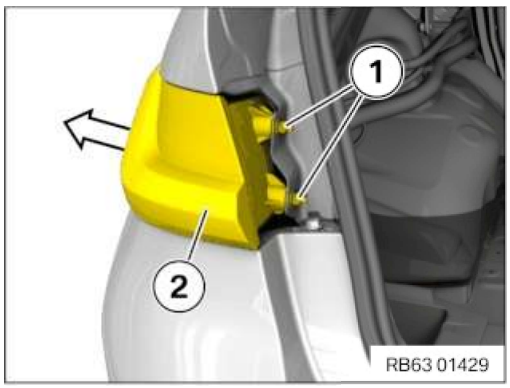
NOTICE

Description is for left component only. Procedure on the right side is identical.

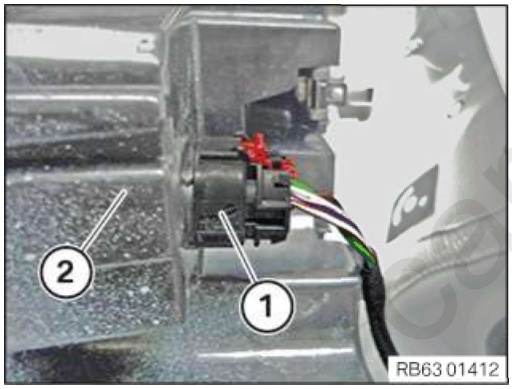
▶ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Remove rear bumper panel

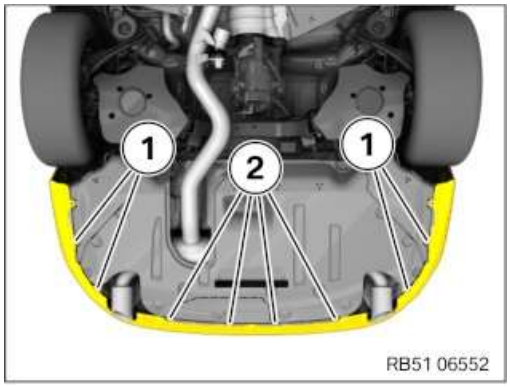


NOTICE

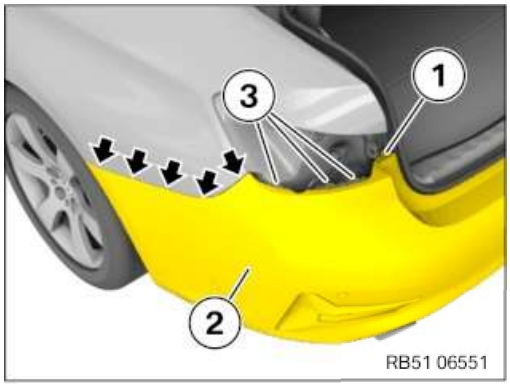
Perform the operations on the left and right side.

- Loosen screws (1).

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- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.



NOTICE

Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).

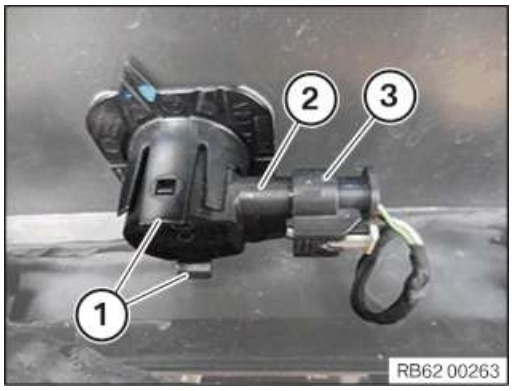


- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

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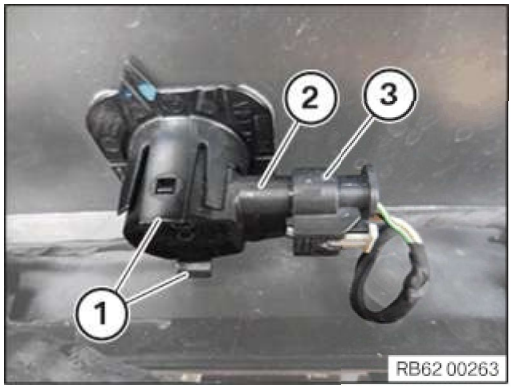
MAIN WORK

9 – Removing the ultrasonic sensor at the rear left



- Unlock plug connection (3) and disconnect.
- Unlock the latch mechanisms (1).
- Remove the ultrasonic sensor (2).

10 – Installing the ultrasonic sensor at the rear left

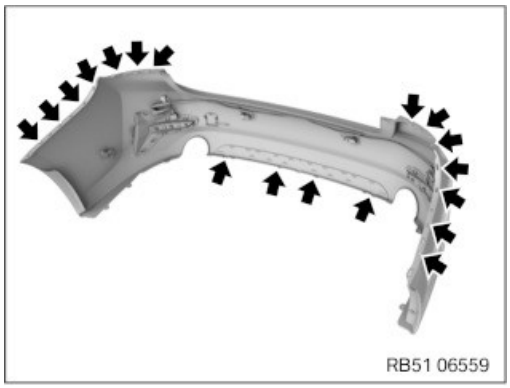


- Position the ultrasonic sensor (2) correctly and engage it in the latch mechanisms (1).
- Connect connectors (3) and lock.

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POSTPROCESSES

11 – Install rear bumper panel



Check

- Check the latch mechanisms (arrows) for damage.

Result

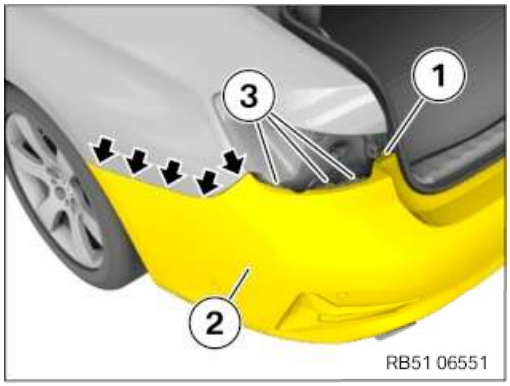
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



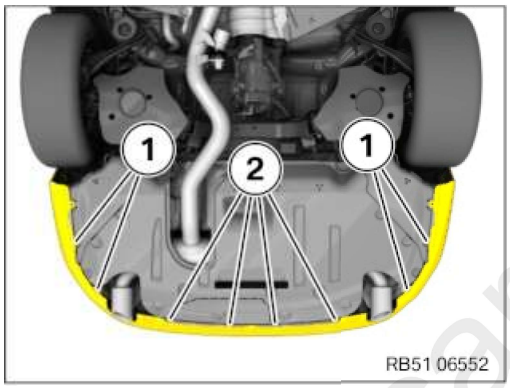
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm



NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

12 – Install both rear lights on the side panel

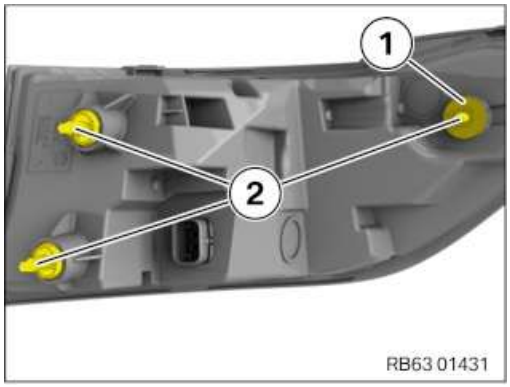
NOTICE

Description is for left component only. Procedure on the right side is identical.

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▸ **Install the rear light on the side panel**

Check



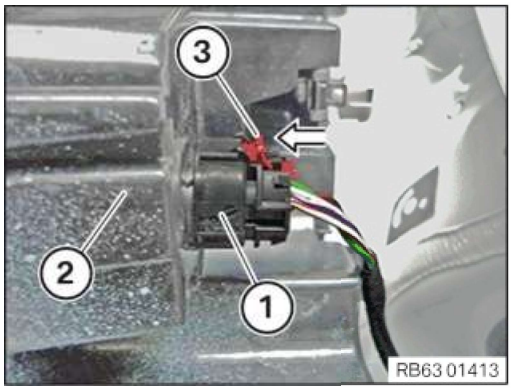
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

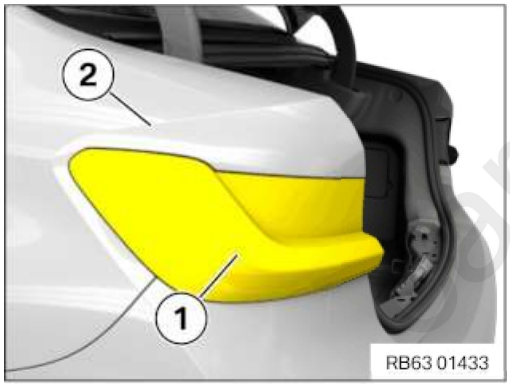
Measure

- Replace rear light.

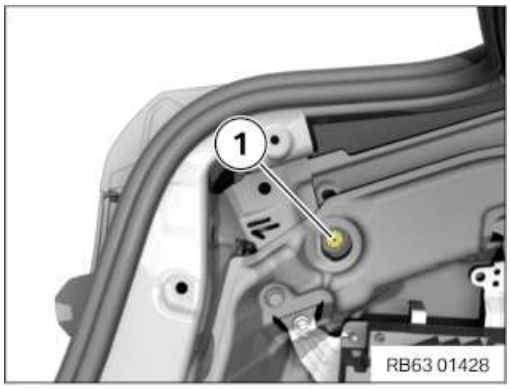


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

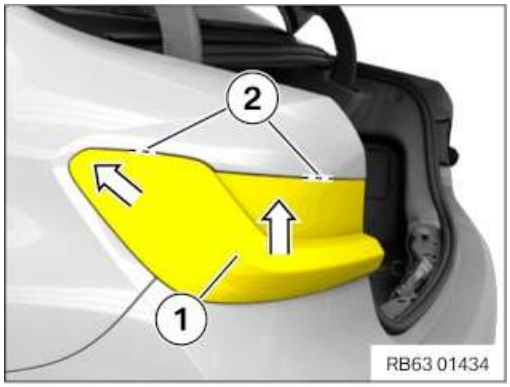


- Position the rear light on the side panel (1) on the side panel (2).

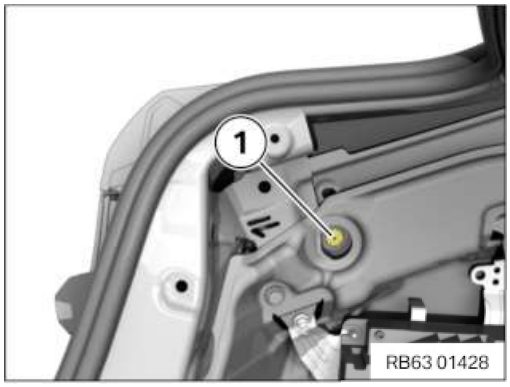


- Position the nut (1).

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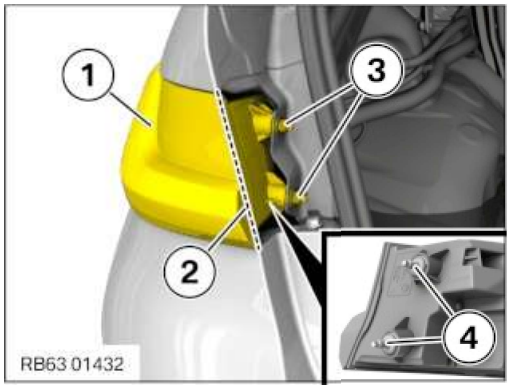
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

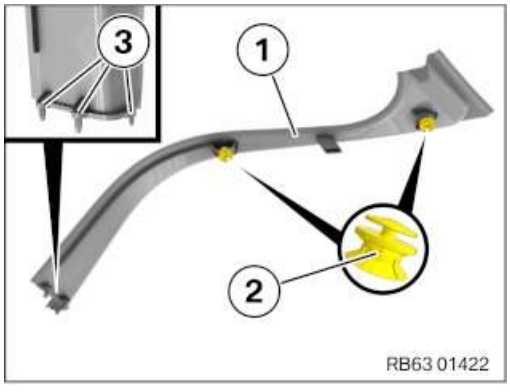
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the trim in the water channel**



Check

- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

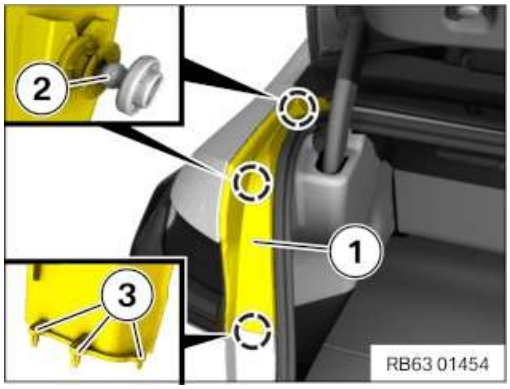
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Result

» The guides are damaged.

Measure

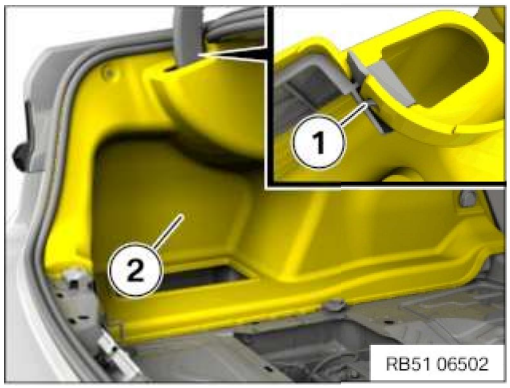
- Renew trim in the water channel .



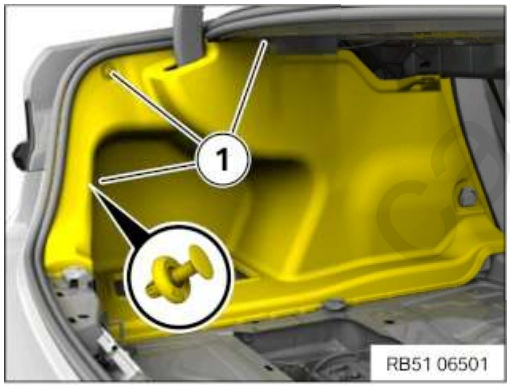
- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

14 – Installing both luggage compartment wheel arch trim panels partially

▸ Partially installing the left luggage compartment wheel arch trim panel

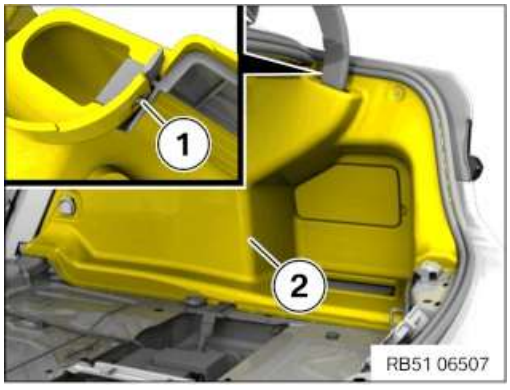


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



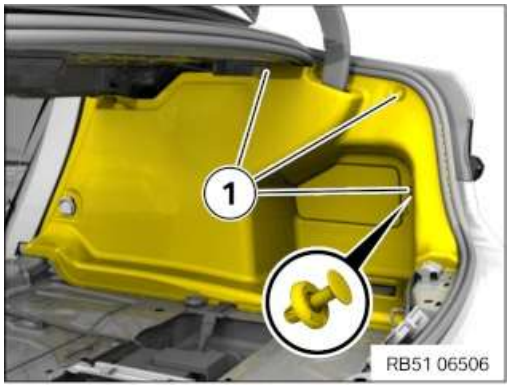
- Secure expanding rivet (1).

▸ Partially installing right luggage compartment wheel arch trim panel



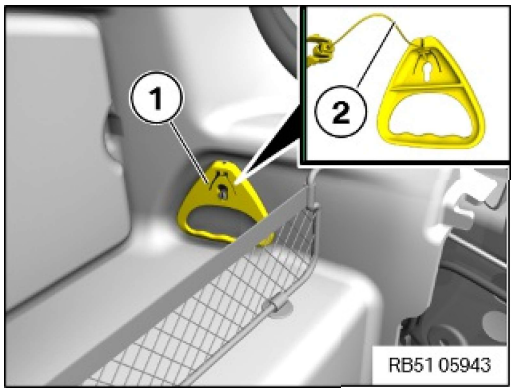
- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).

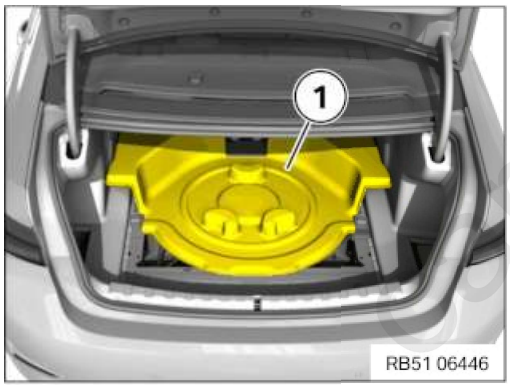
▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

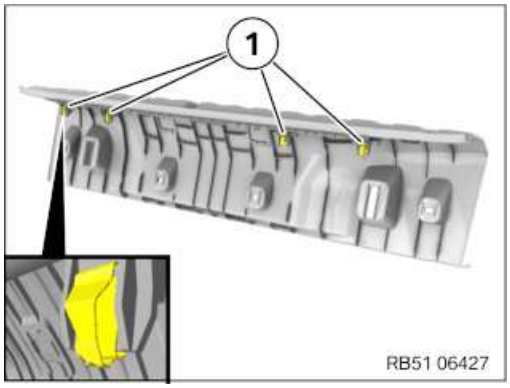
◁

15 – Install the luggage compartment well in front



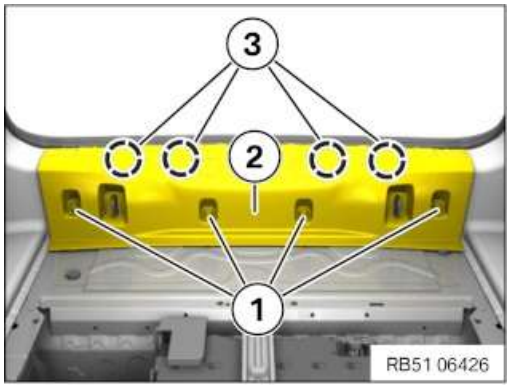
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim



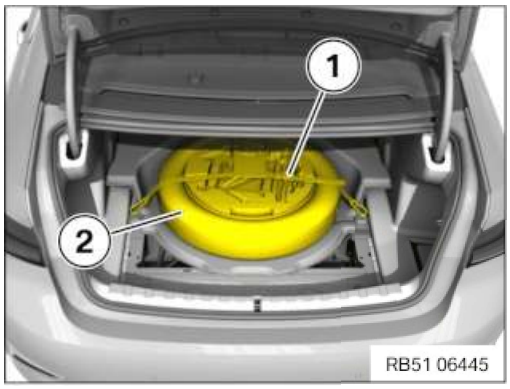
- Check the clamps (1) for damage and renew if necessary.

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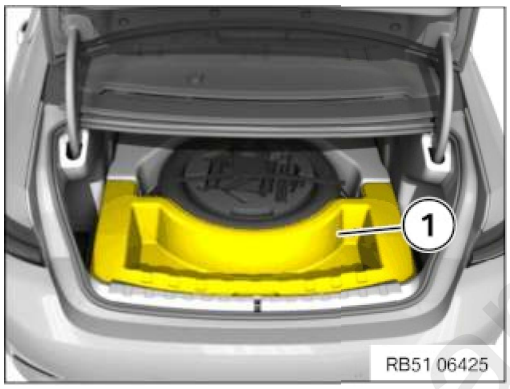
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

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Rear bumper panel guide on rear centre guide Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel Used in step 12

Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel Used in step 12

Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

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66 20 536 Removing and installing/replacing rear middle left ultrasonic sensor

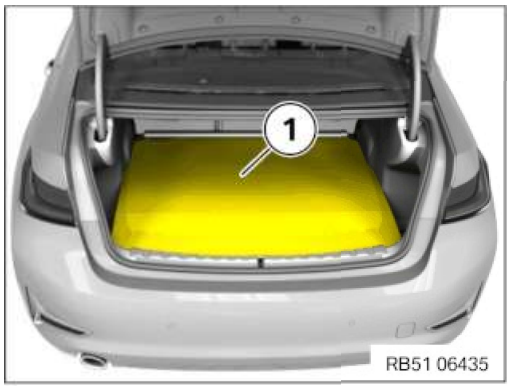
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

PRELIMINARY WORK

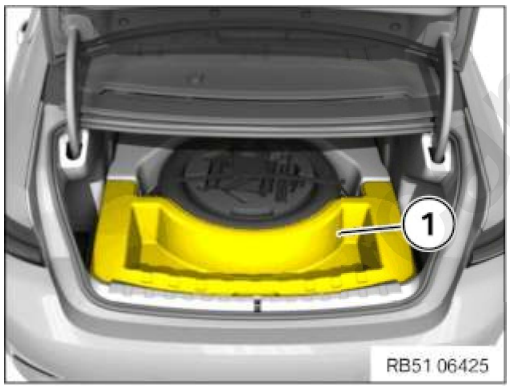
1 – Removing the luggage compartment floor trim panel



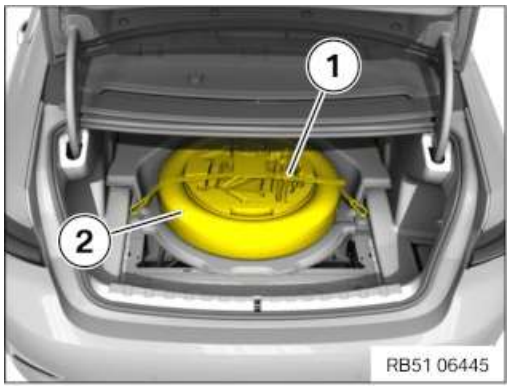
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

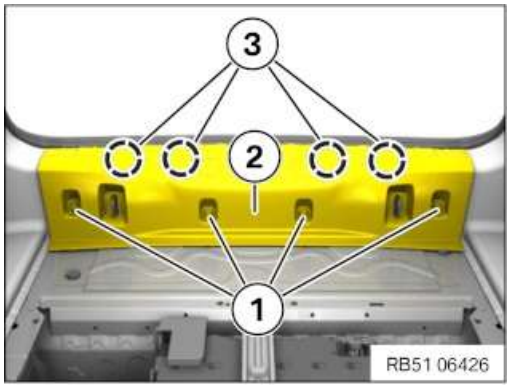


- Remove rear luggage compartment well (1).



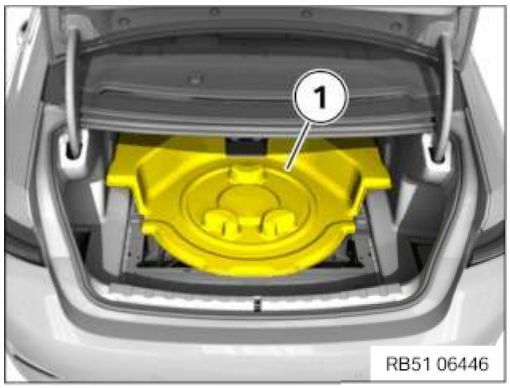
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

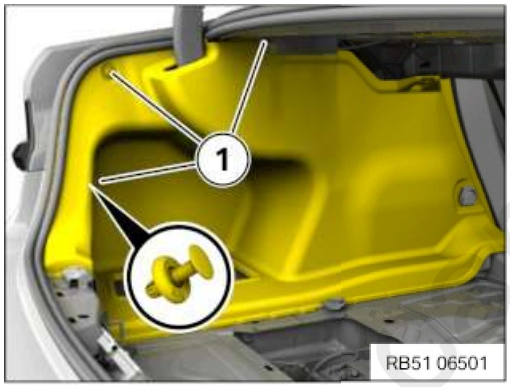
4 – Removing front luggage compartment well



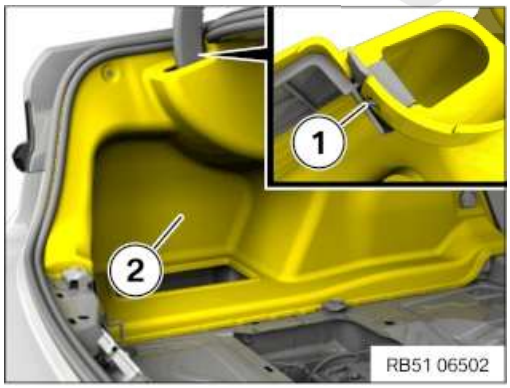
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▸ Partially remove luggage compartment wheel arch trim on left



- Loosen the expanding rivet (1).

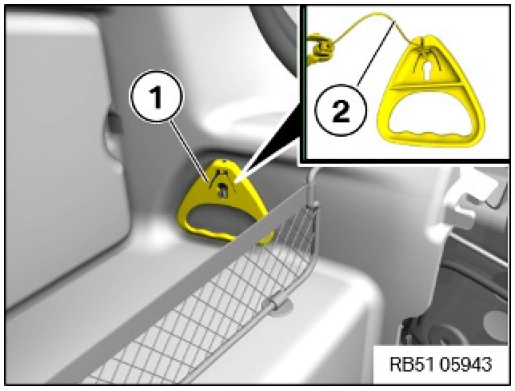


- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ Partially remove luggage compartment wheel arch panel on right

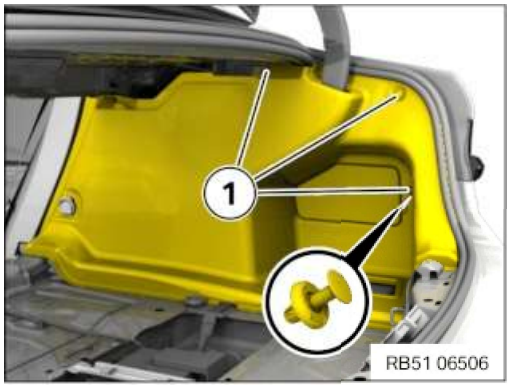
▹ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)

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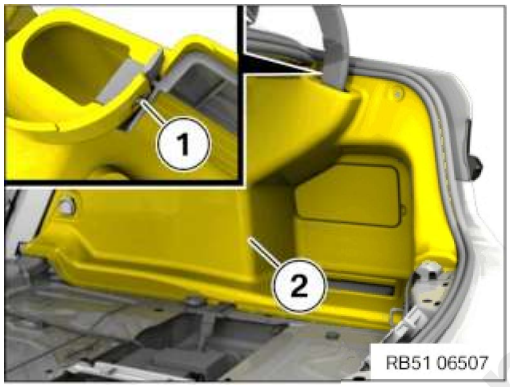


- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

◁



- Loosen the expanding rivet (1).



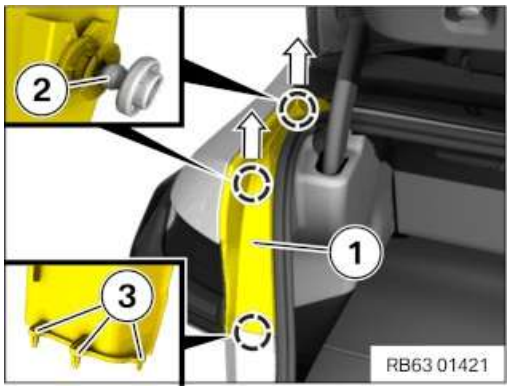
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the trim in the water channel**



- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

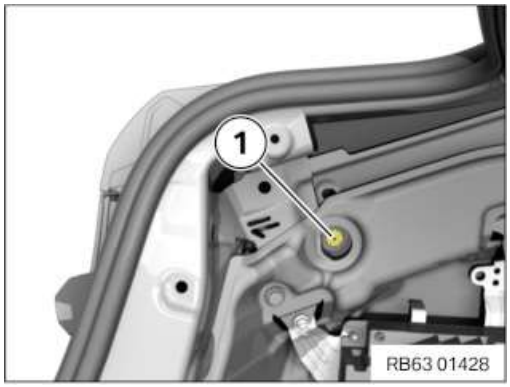
7 – Remove both rear lights from the side panel

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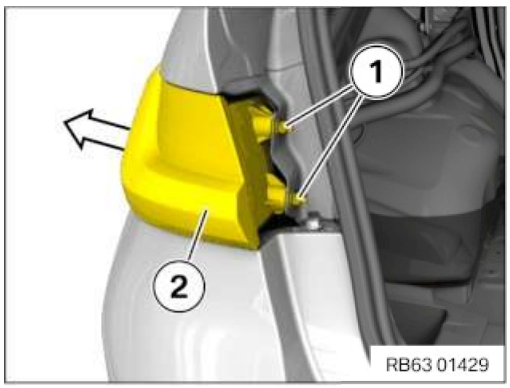
NOTICE

Description is for left component only. Procedure on the right side is identical.

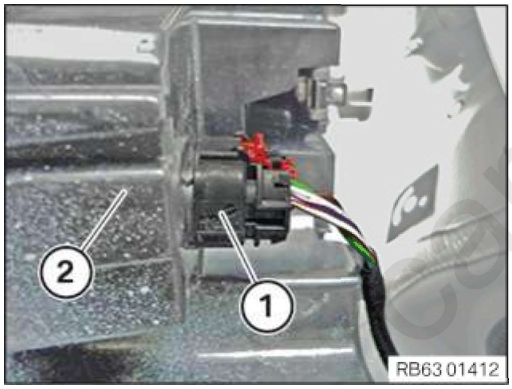
▶ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Remove rear bumper panel

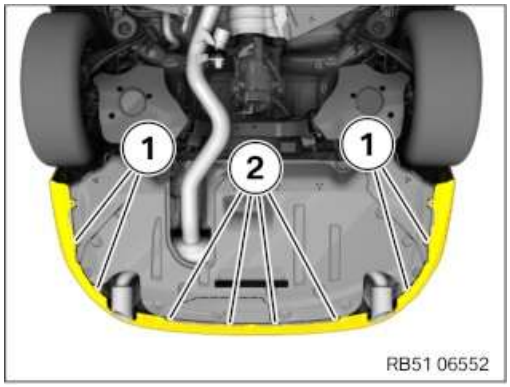


NOTICE

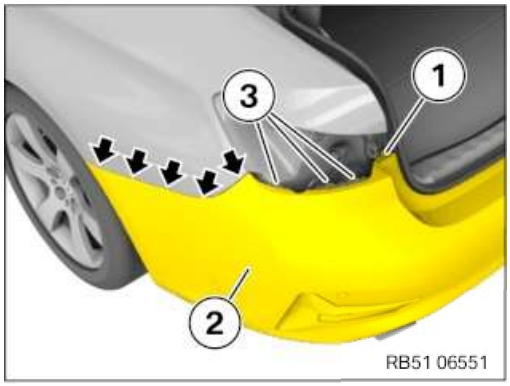
Perform the operations on the left and right side.

- Loosen screws (1).

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- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.



NOTICE

Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).

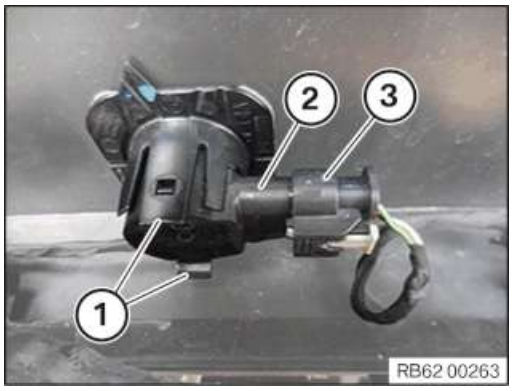


- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

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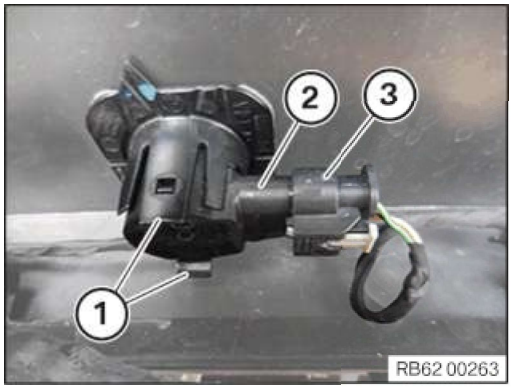
MAIN WORK

9 – Removing the ultrasonic sensor at the rear left in the centre



- Unlock plug connection (3) and disconnect.
- Unlock the latch mechanisms (1).
- Remove the ultrasonic sensor (2).

10 – Installing the ultrasonic sensor at the rear left in the centre

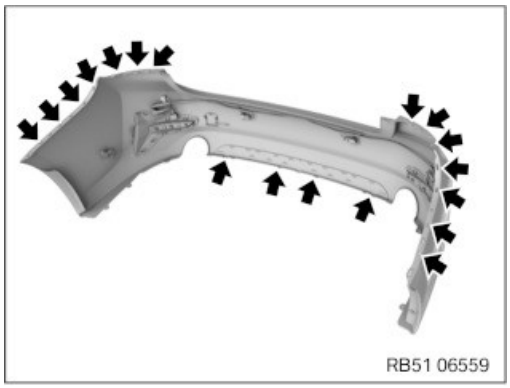


- Position the ultrasonic sensor (2) correctly and engage it in the latch mechanisms (1).
- Connect connectors (3) and lock.

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POSTPROCESSES

11 – Install rear bumper panel



Check

- Check the latch mechanisms (arrows) for damage.

Result

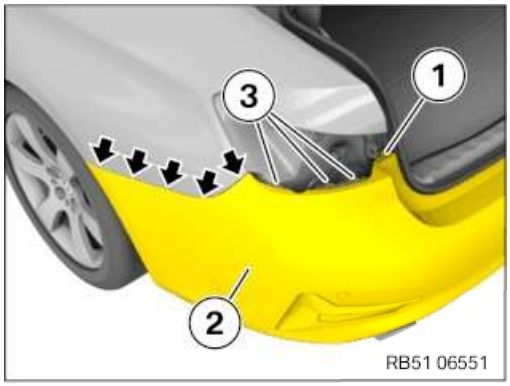
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



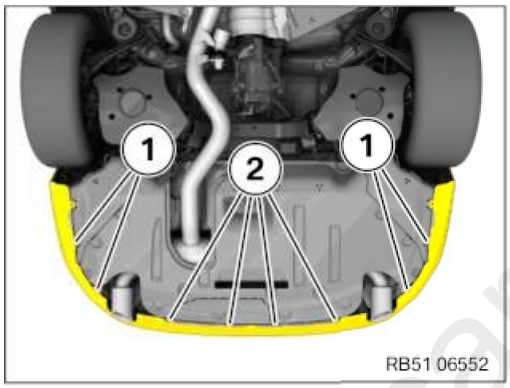
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm



NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

12 – Install both rear lights on the side panel

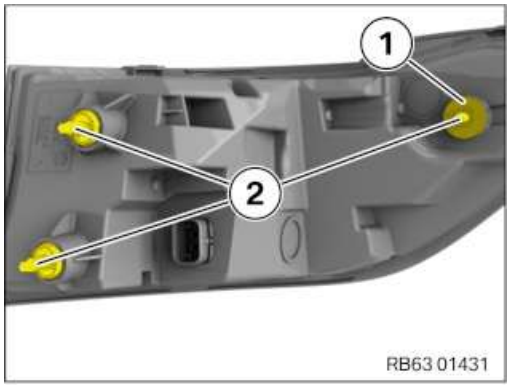
NOTICE

Description is for left component only. Procedure on the right side is identical.

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▸ **Install the rear light on the side panel**

Check



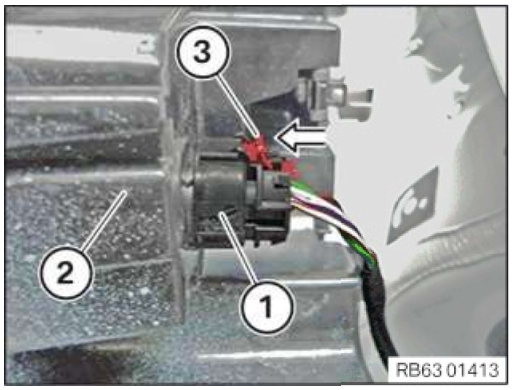
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

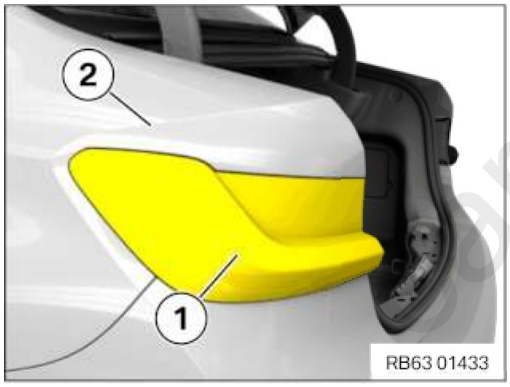
Measure

- Replace rear light.

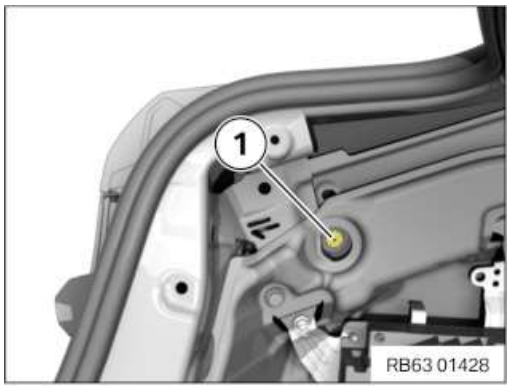


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

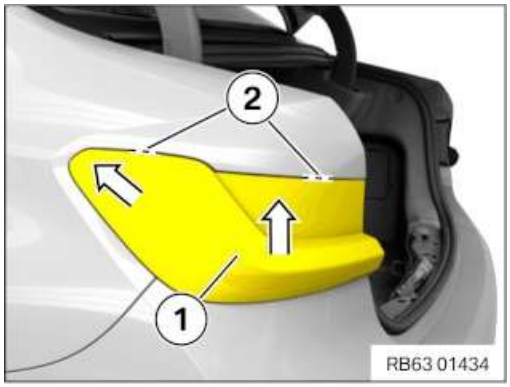


- Position the rear light on the side panel (1) on the side panel (2).

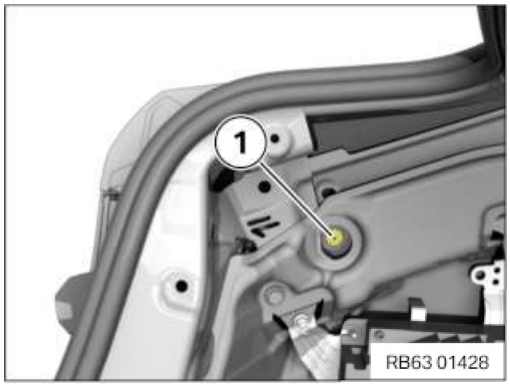


- Position the nut (1).

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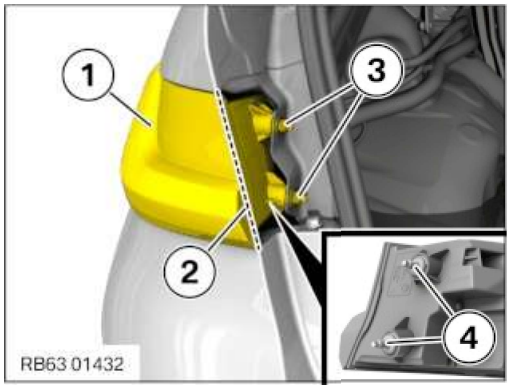
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

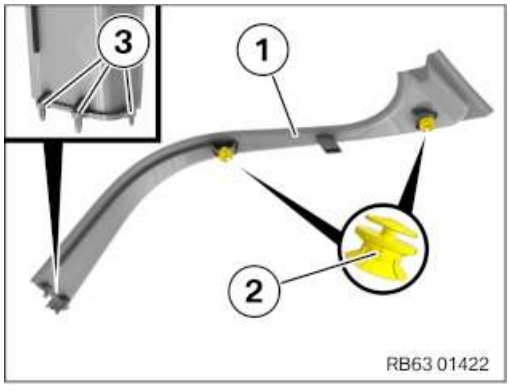
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the trim in the water channel**



Check

- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

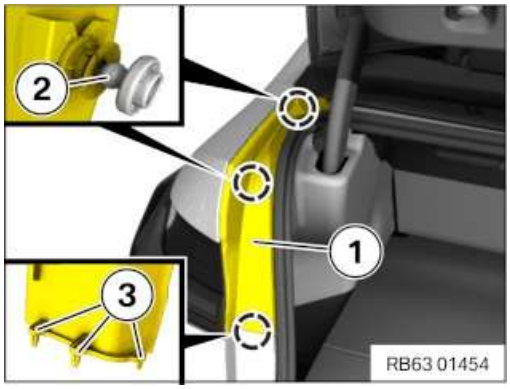
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Result

» The guides are damaged.

Measure

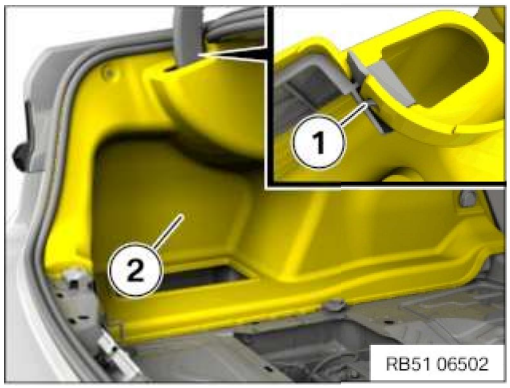
- Renew trim in the water channel .



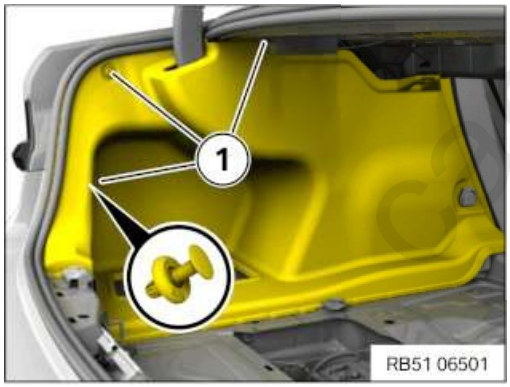
- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

14 – Installing both luggage compartment wheel arch trim panels partially

▸ Partially installing the left luggage compartment wheel arch trim panel

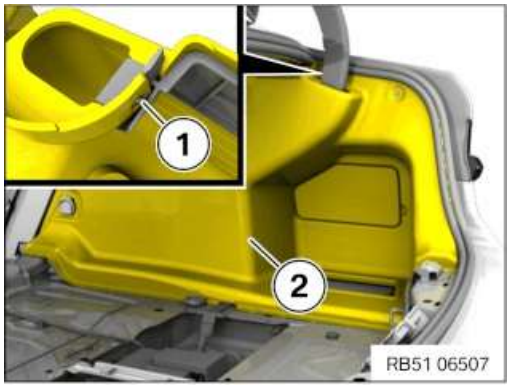


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



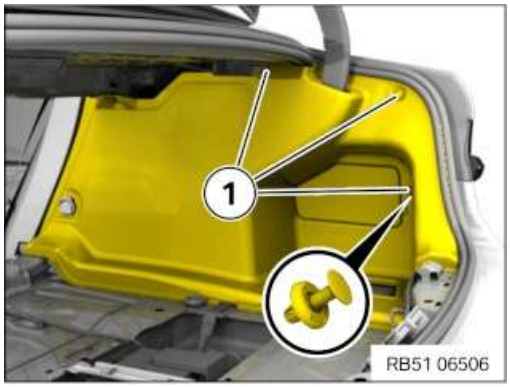
- Secure expanding rivet (1).

▸ Partially installing right luggage compartment wheel arch trim panel



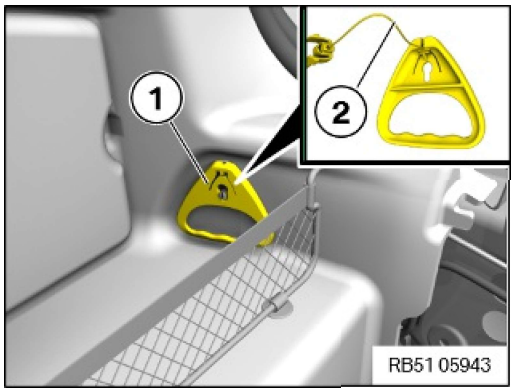
- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).

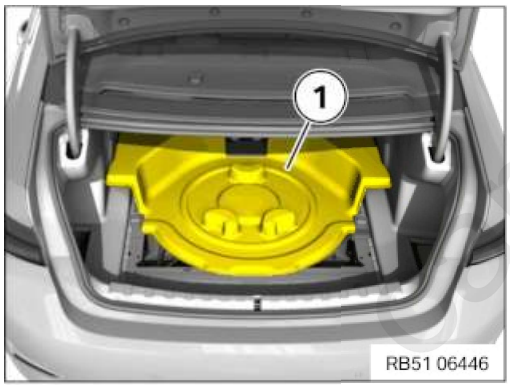
▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

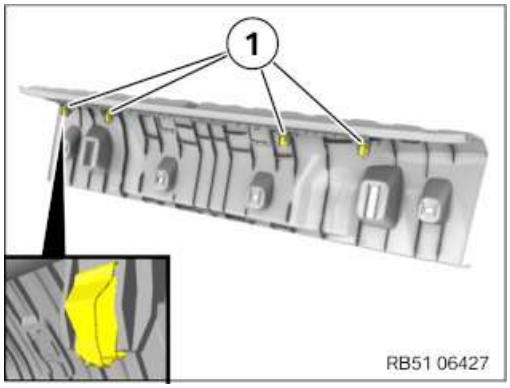
◁

15 – Install the luggage compartment well in front



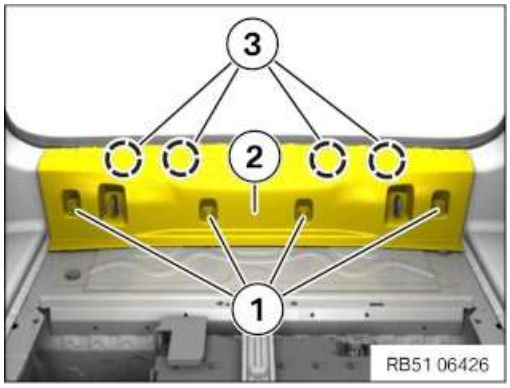
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim



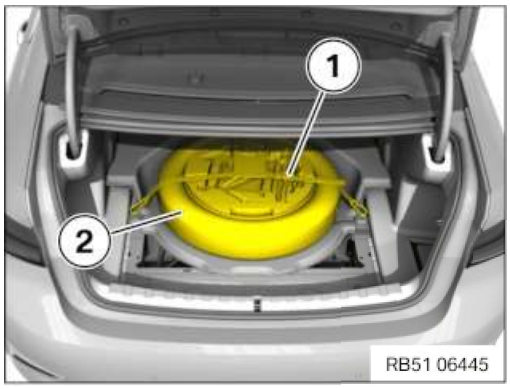
- Check the clamps (1) for damage and renew if necessary.

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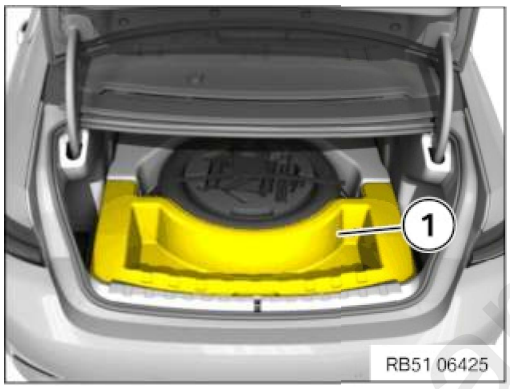
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

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Rear bumper panel guide on rear centre guide Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel Used in step 12

Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel Used in step 12

Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

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66 20 537 Removing and installing/replacing rear middle right ultrasonic sensor

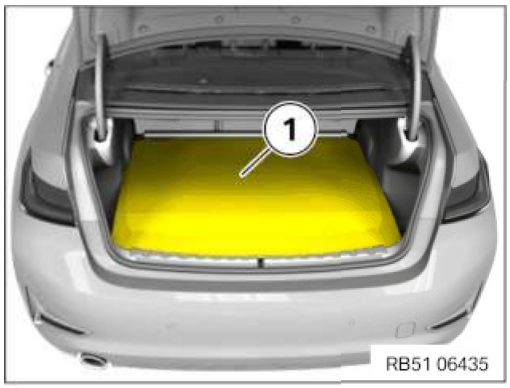
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

PRELIMINARY WORK

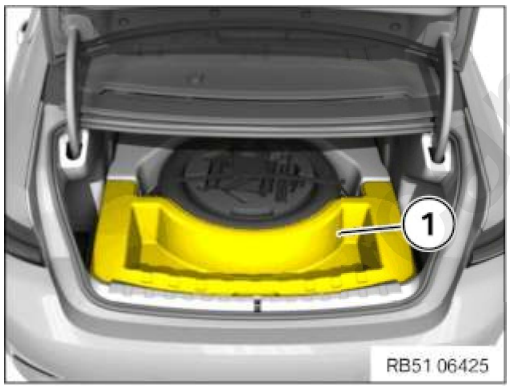
1 – Removing the luggage compartment floor trim panel



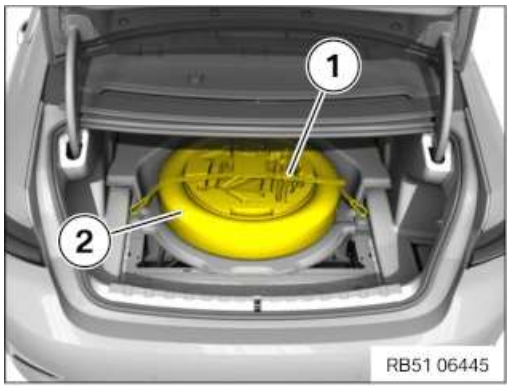
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

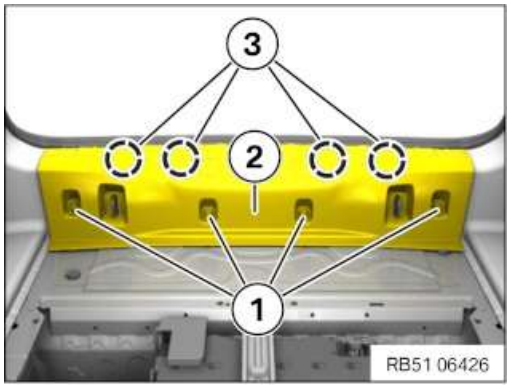


- Remove rear luggage compartment well (1).



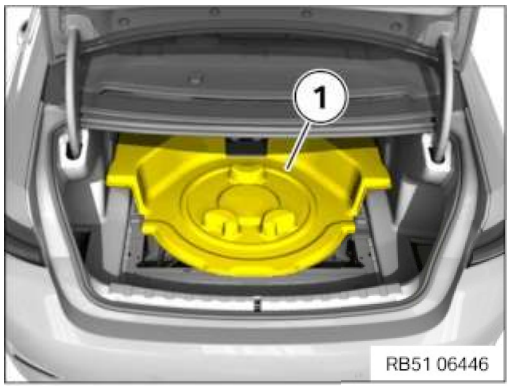
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

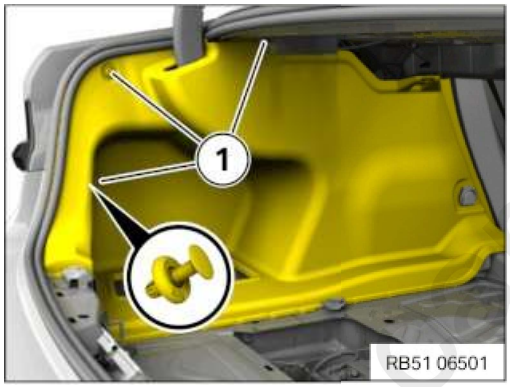
4 – Removing front luggage compartment well



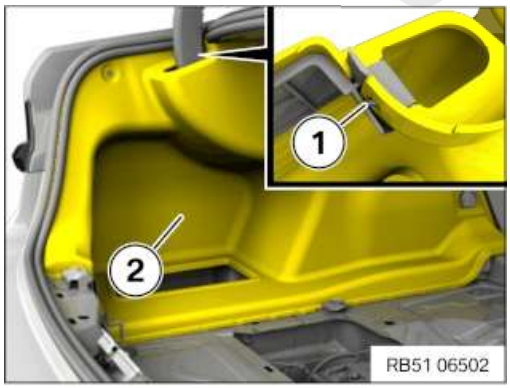
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▸ Partially remove luggage compartment wheel arch trim on left



- Loosen the expanding rivet (1).

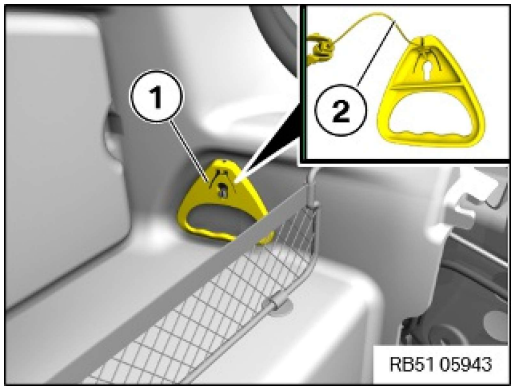


- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ Partially remove luggage compartment wheel arch panel on right

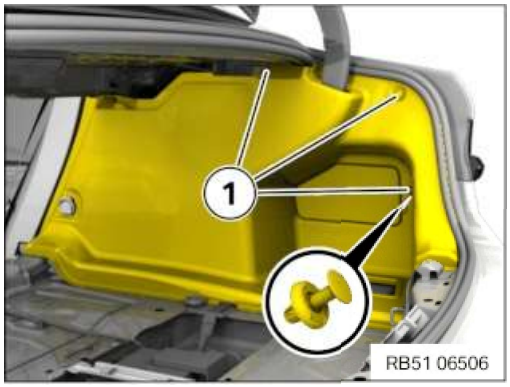
▹ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)

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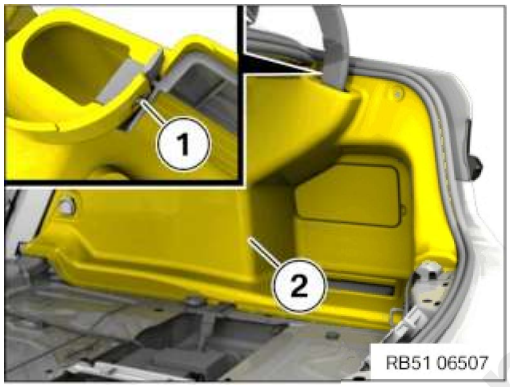


- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

◁



- Loosen the expanding rivet (1).



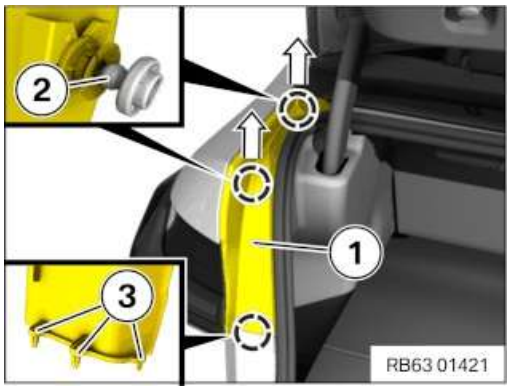
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the trim in the water channel**



- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

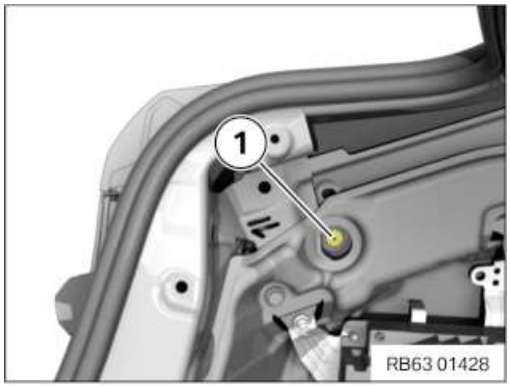
7 – Remove both rear lights from the side panel

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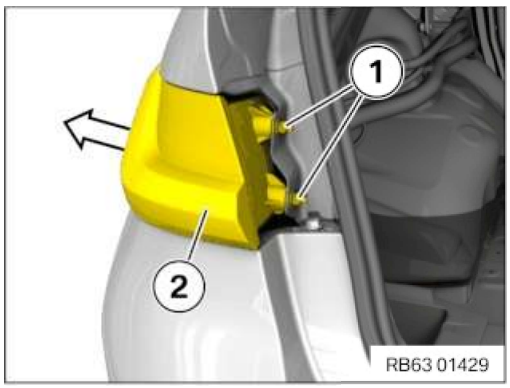
NOTICE

Description is for left component only. Procedure on the right side is identical.

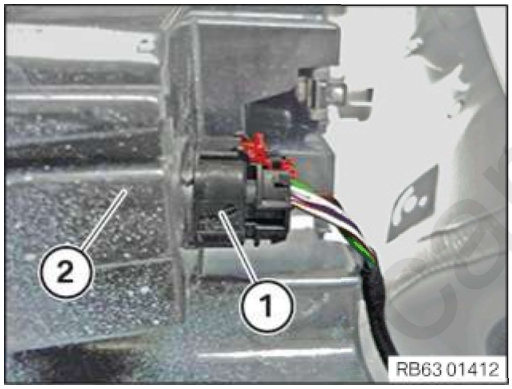
▶ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Remove rear bumper panel

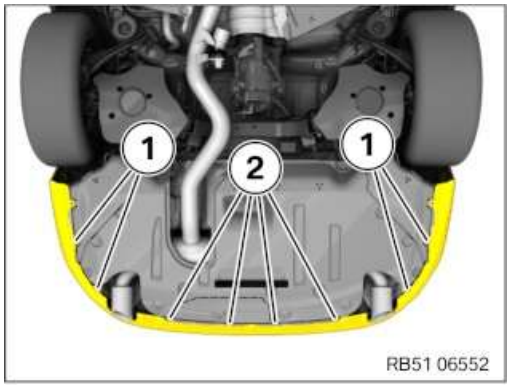


NOTICE

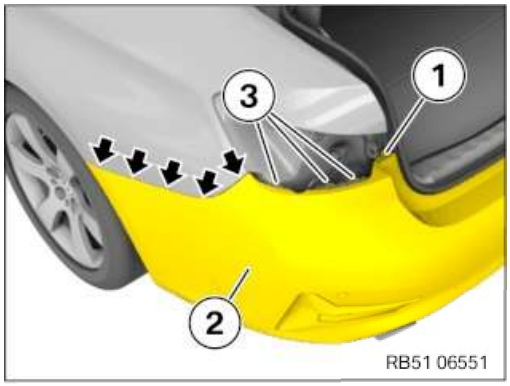
Perform the operations on the left and right side.

- Loosen screws (1).

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- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.



NOTICE

Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).

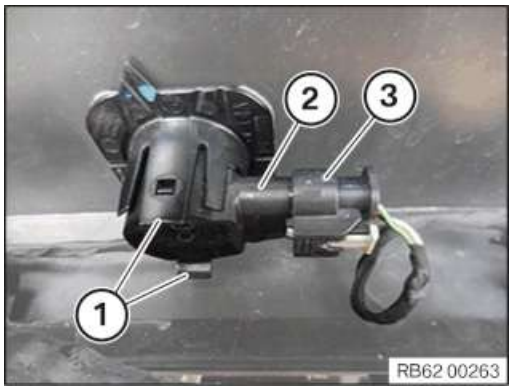


- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

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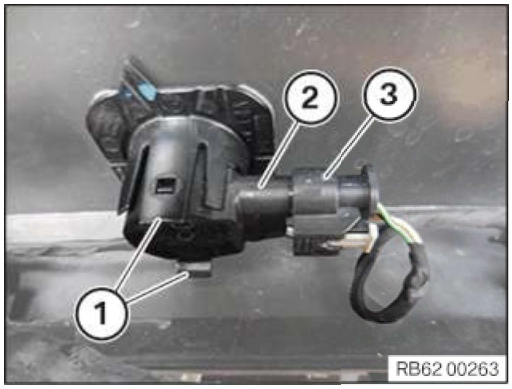
MAIN WORK

9 – Removing the rear right ultrasonic sensor in the centre



- Unlock plug connection (3) and disconnect.
- Unlock the latch mechanisms (1).
- Remove the ultrasonic sensor (2).

10 – Installing the rear right ultrasonic sensor in the centre

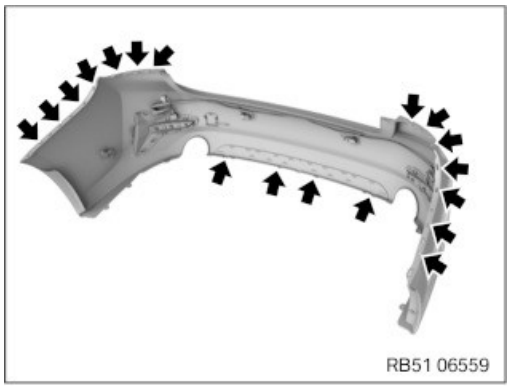


- Position the ultrasonic sensor (2) correctly and engage it in the latch mechanisms (1).
- Connect connectors (3) and lock.

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POSTPROCESSES

11 – Install rear bumper panel



Check

- Check the latch mechanisms (arrows) for damage.

Result

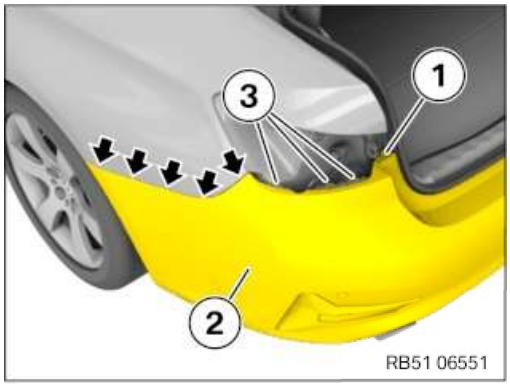
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



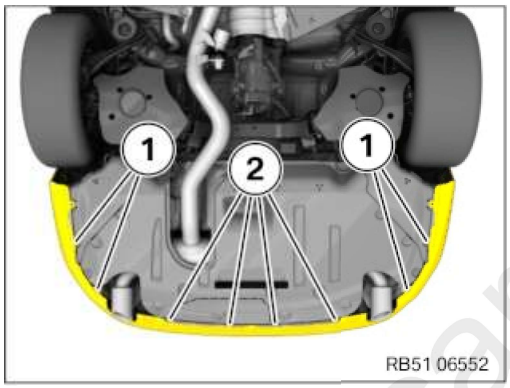
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm



NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

12 – Install both rear lights on the side panel

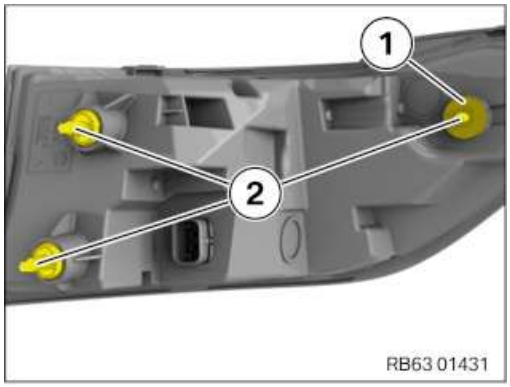
NOTICE

Description is for left component only. Procedure on the right side is identical.

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▸ **Install the rear light on the side panel**

Check



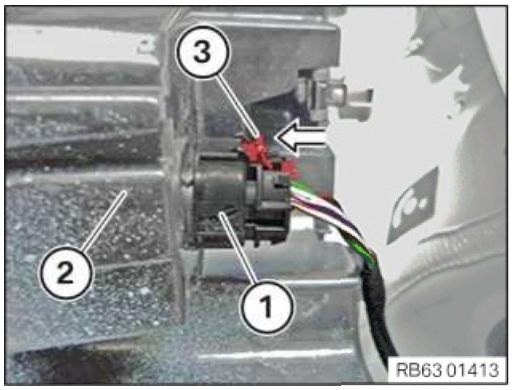
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

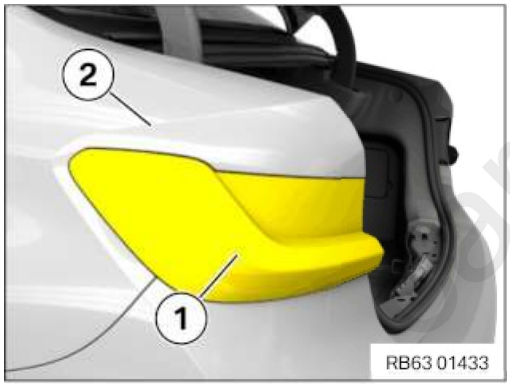
Measure

- Replace rear light.

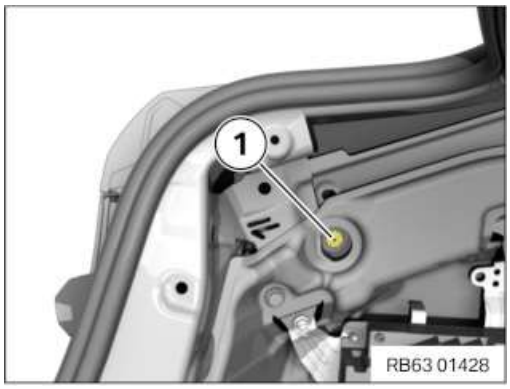


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

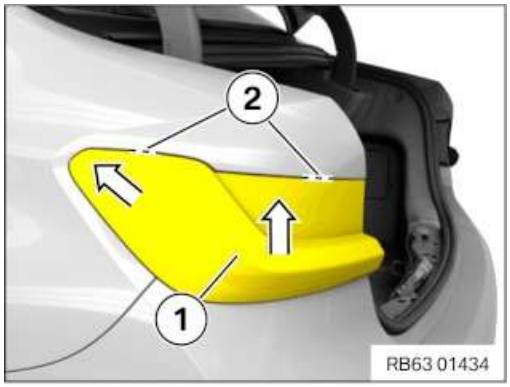


- Position the rear light on the side panel (1) on the side panel (2).

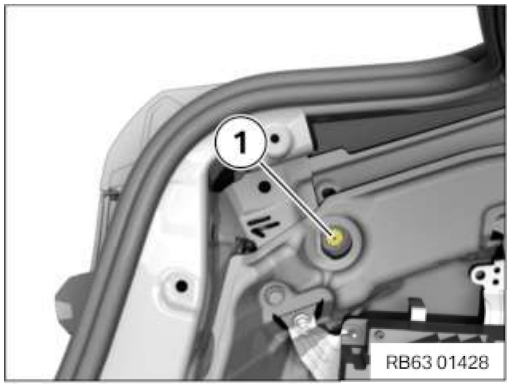


- Position the nut (1).

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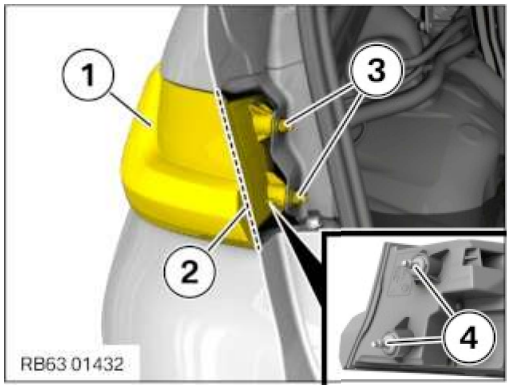
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

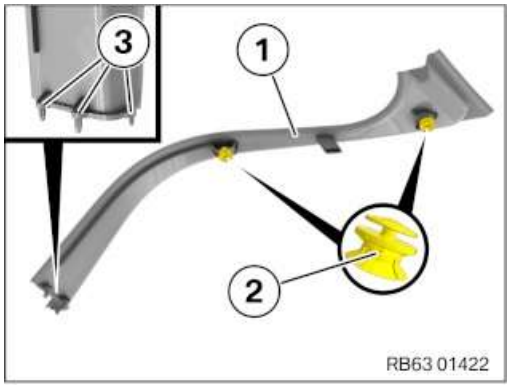
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the trim in the water channel**



Check

- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

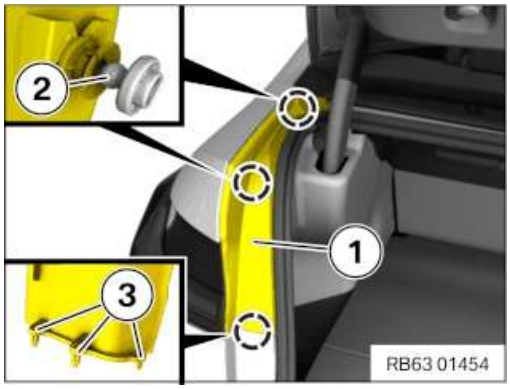
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Result

» The guides are damaged.

Measure

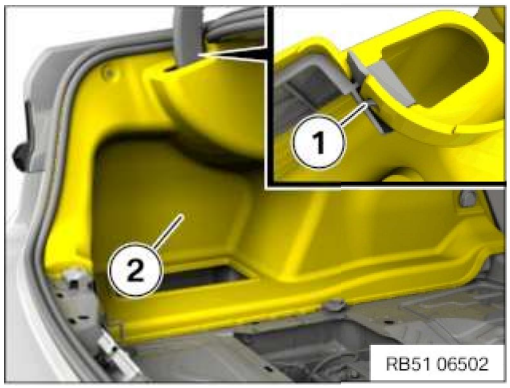
- Renew trim in the water channel .



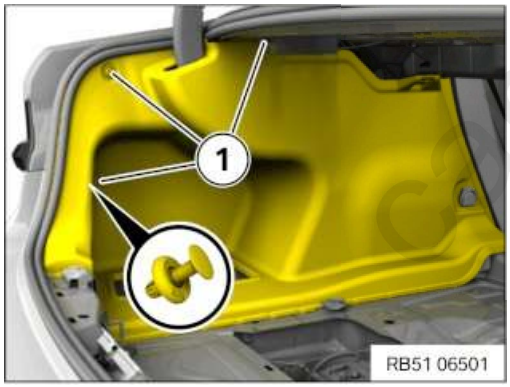
- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

14 – Installing both luggage compartment wheel arch trim panels partially

▸ Partially installing the left luggage compartment wheel arch trim panel

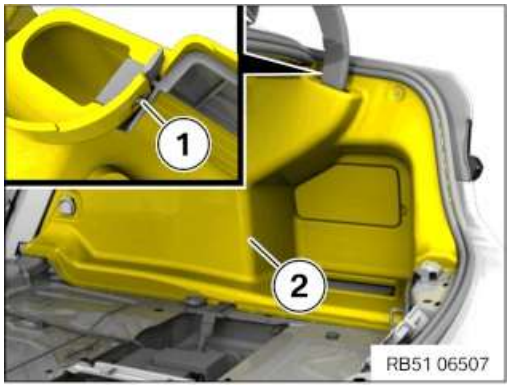


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



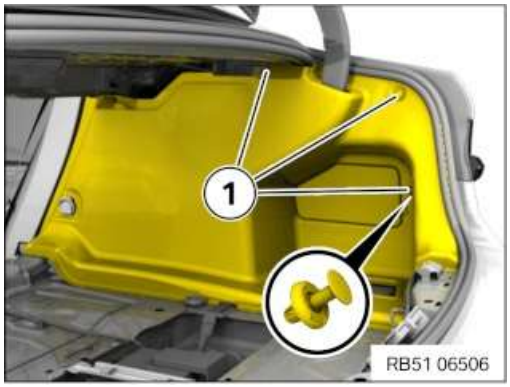
- Secure expanding rivet (1).

▸ Partially installing right luggage compartment wheel arch trim panel



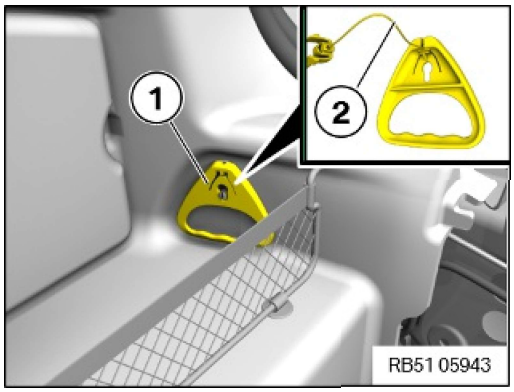
- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).

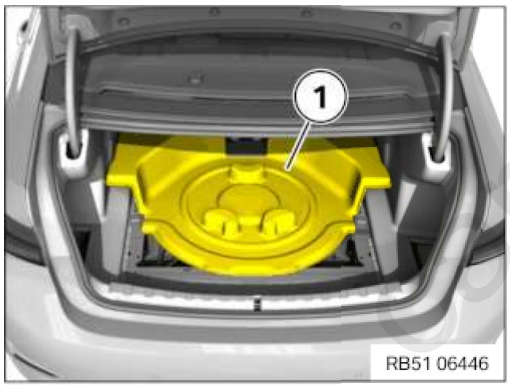
▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

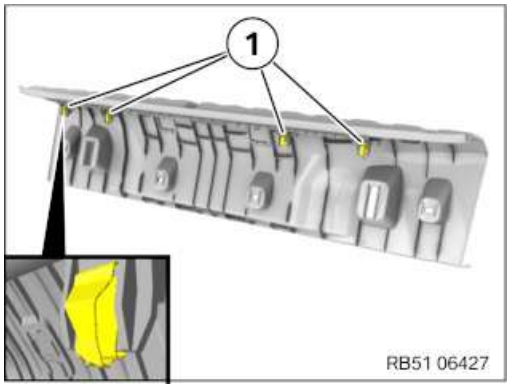
◁

15 – Install the luggage compartment well in front



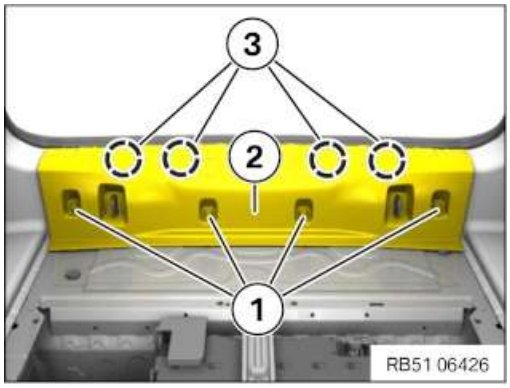
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim



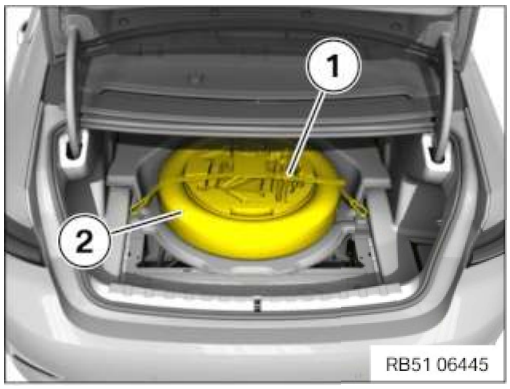
- Check the clamps (1) for damage and renew if necessary.

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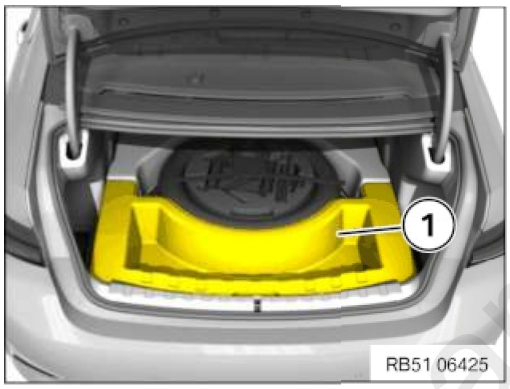
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

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Rear bumper panel guide on rear centre guide Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel Used in step 12

Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel Used in step 12

Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

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66 20 535 Removing and installing/replacing rear right ultrasonic sensor

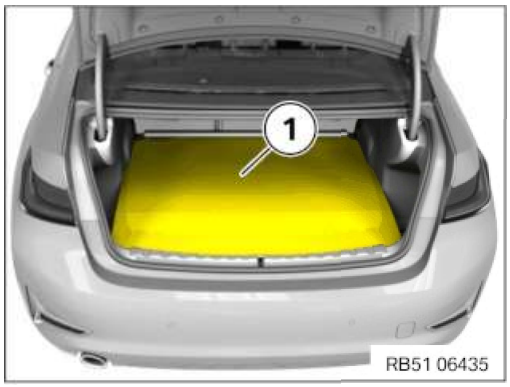
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

PRELIMINARY WORK

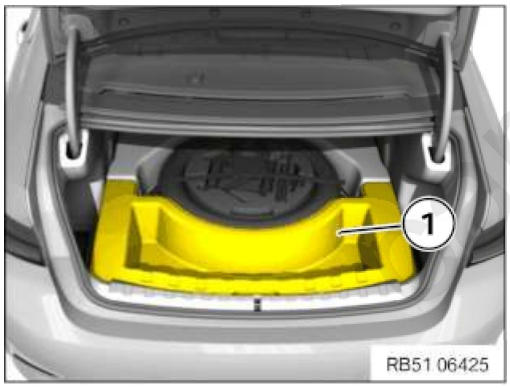
1 – Removing the luggage compartment floor trim panel



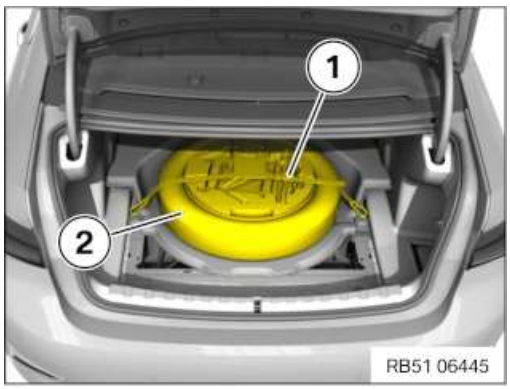
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

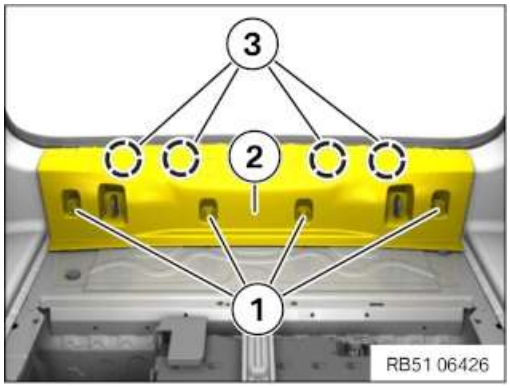


- Remove rear luggage compartment well (1).



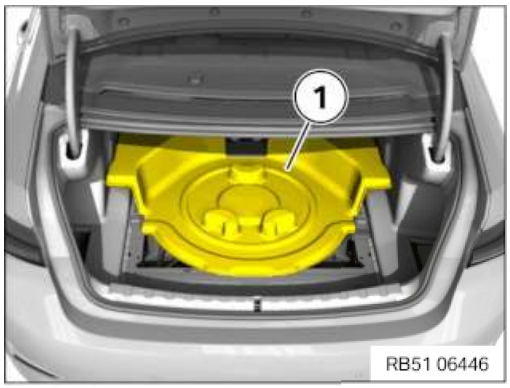
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

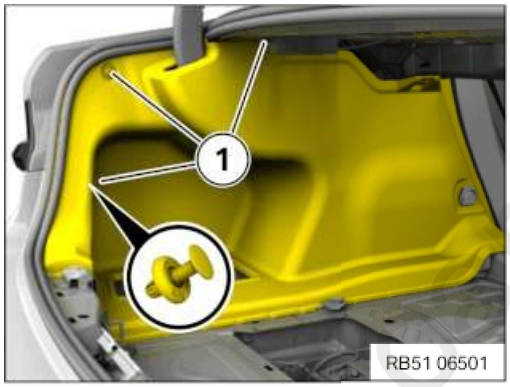
4 – Removing front luggage compartment well



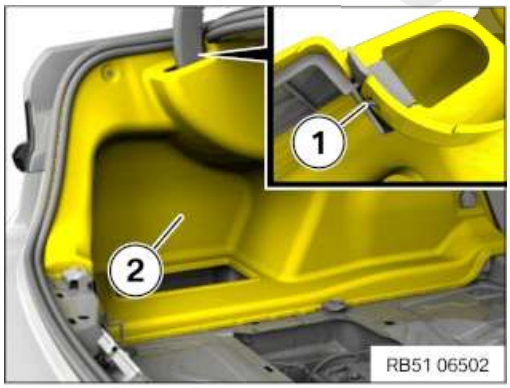
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▸ Partially remove luggage compartment wheel arch trim on left



- Loosen the expanding rivet (1).

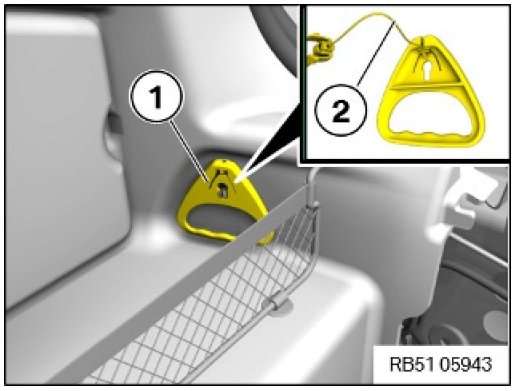


- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ Partially remove luggage compartment wheel arch panel on right

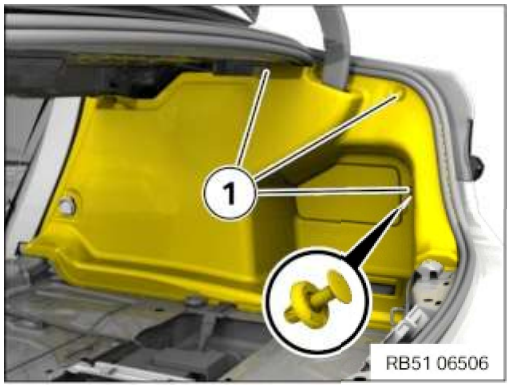
▹ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)

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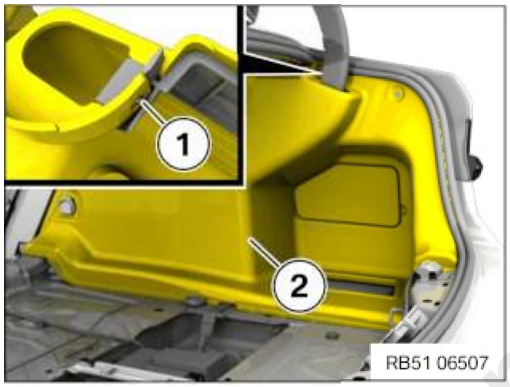


- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

◁



- Loosen the expanding rivet (1).



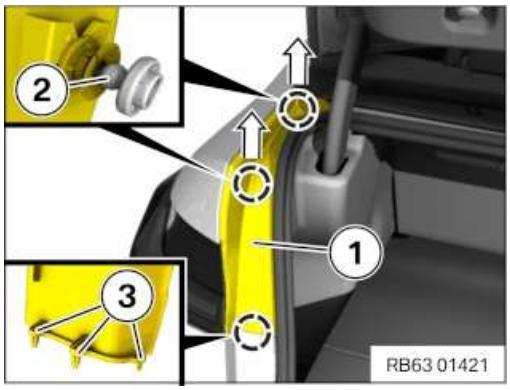
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the trim in the water channel**



- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

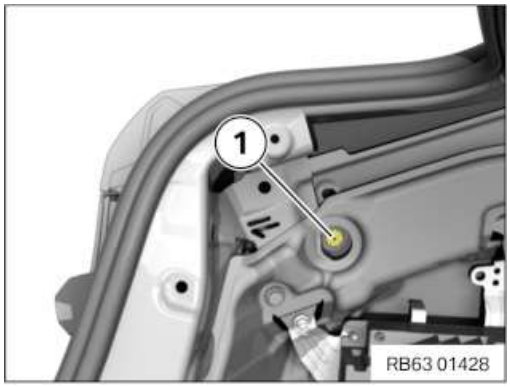
7 – Remove both rear lights from the side panel

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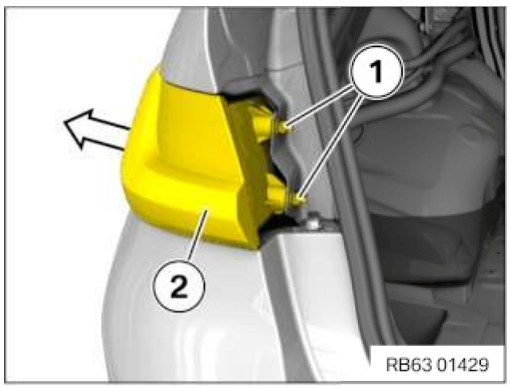
NOTICE

Description is for left component only. Procedure on the right side is identical.

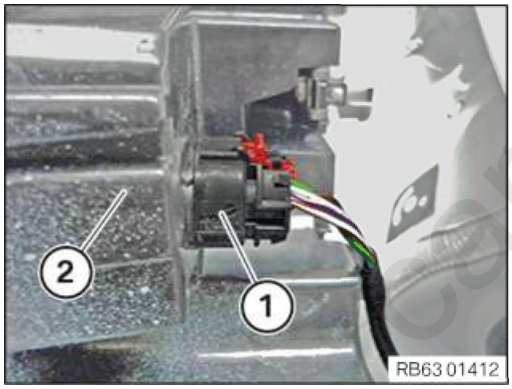
▶ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Remove rear bumper panel

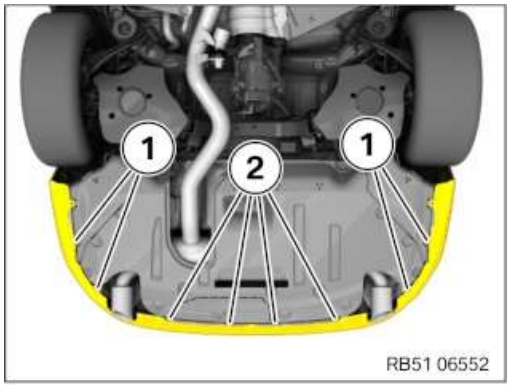


NOTICE

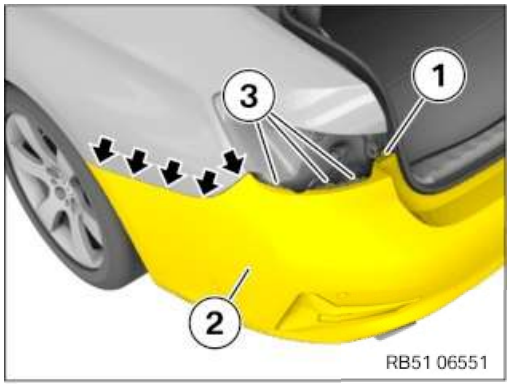
Perform the operations on the left and right side.

- Loosen screws (1).

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- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.



NOTICE

Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).

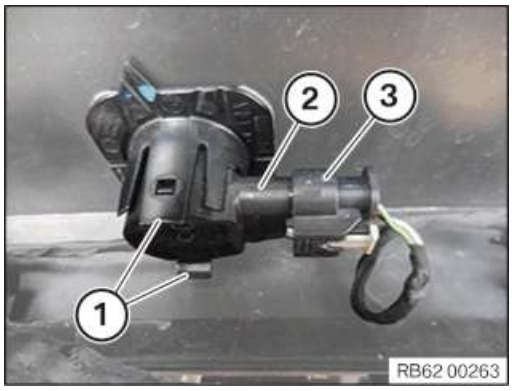


- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

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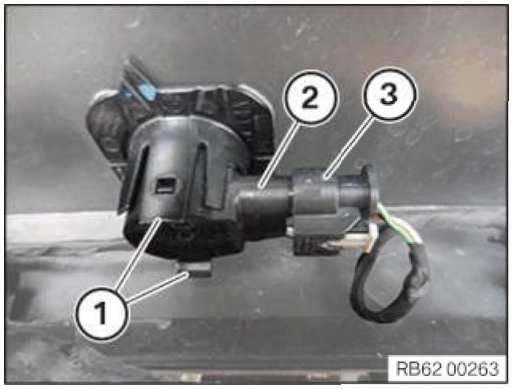
MAIN WORK

9 – Removing the ultrasonic sensor at the rear right



- Unlock plug connection (3) and disconnect.
- Unlock the latch mechanisms (1).
- Remove the ultrasonic sensor (2).

10 – Installing the rear right ultrasonic sensor

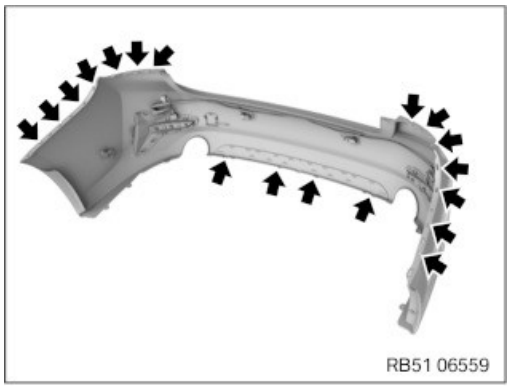


- Position the ultrasonic sensor (2) correctly and engage it in the latch mechanisms (1).
- Connect connectors (3) and lock.

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POSTPROCESSES

11 – Install rear bumper panel



Check

- Check the latch mechanisms (arrows) for damage.

Result

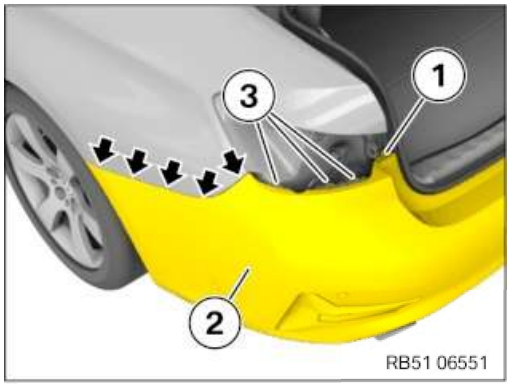
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



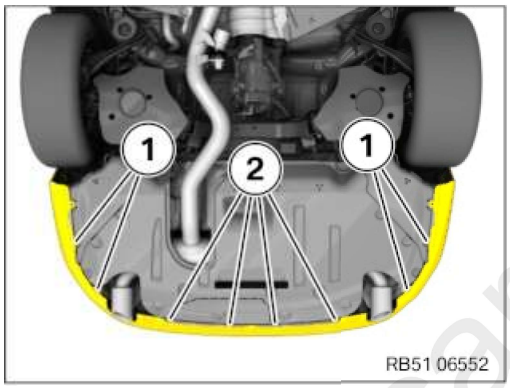
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm



NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

12 – Install both rear lights on the side panel

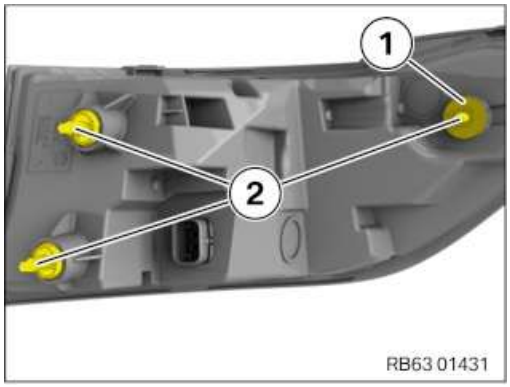
NOTICE

Description is for left component only. Procedure on the right side is identical.

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▸ **Install the rear light on the side panel**

Check



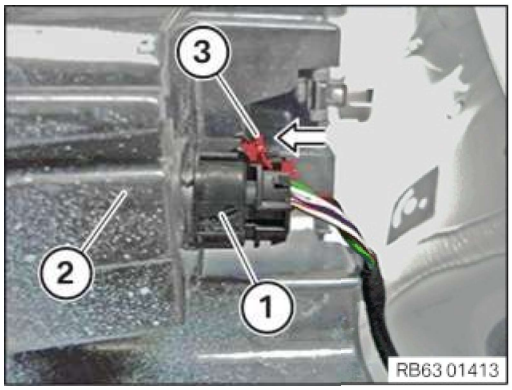
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

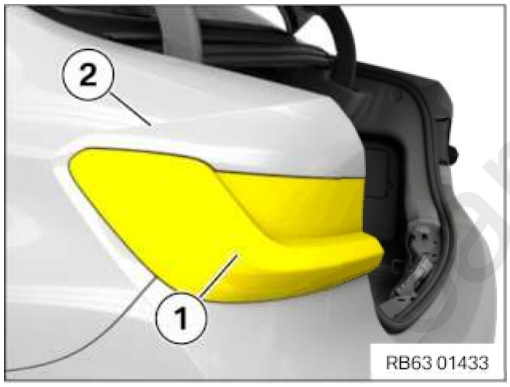
Measure

- Replace rear light.

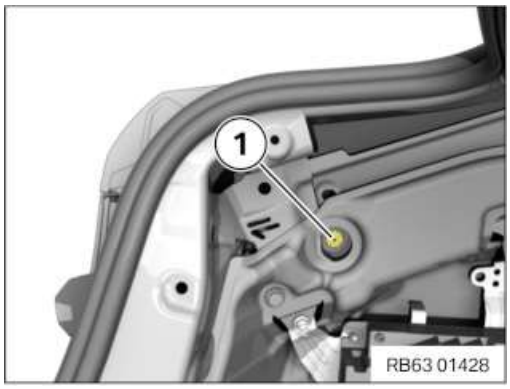


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

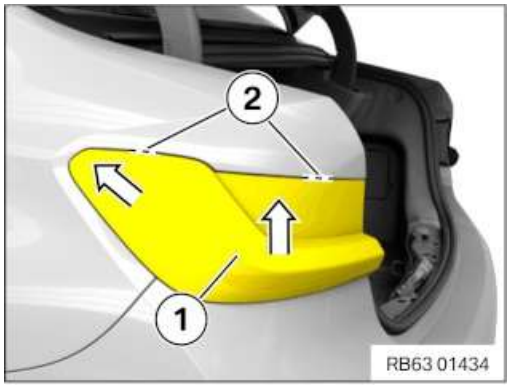


- Position the rear light on the side panel (1) on the side panel (2).

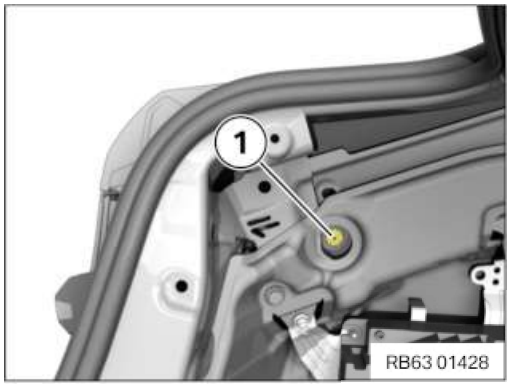


- Position the nut (1).

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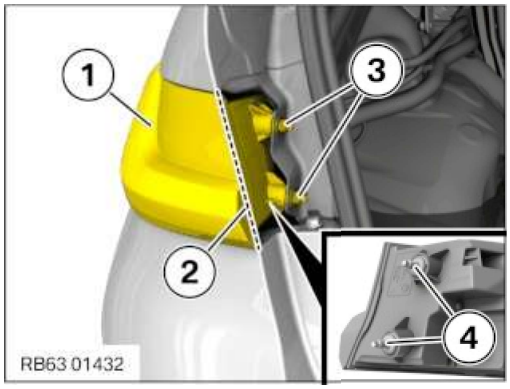
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

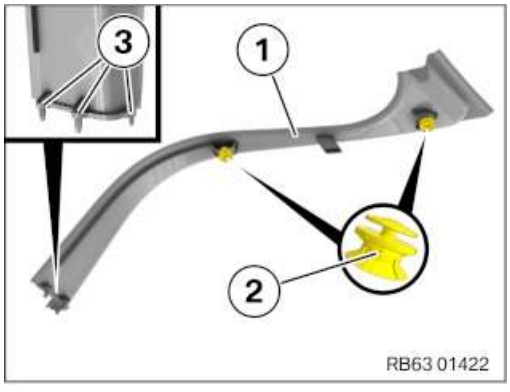
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the trim in the water channel**



Check

- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

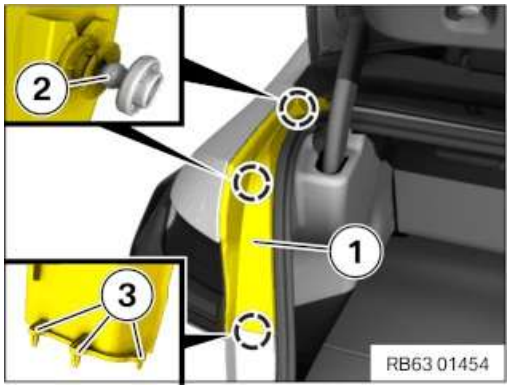
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Result

» The guides are damaged.

Measure

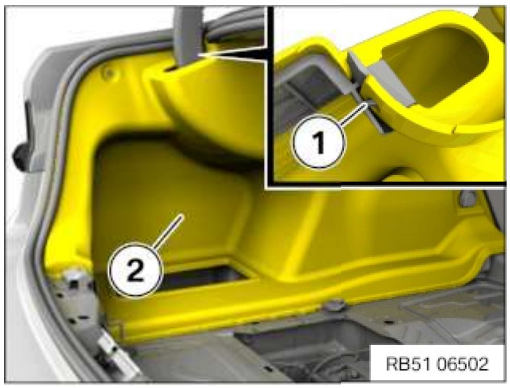
- Renew trim in the water channel .



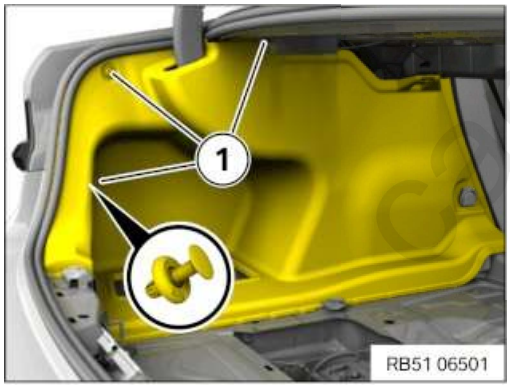
- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

14 – Installing both luggage compartment wheel arch trim panels partially

▸ Partially installing the left luggage compartment wheel arch trim panel

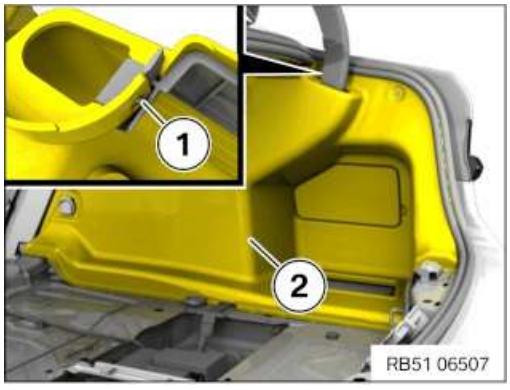


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



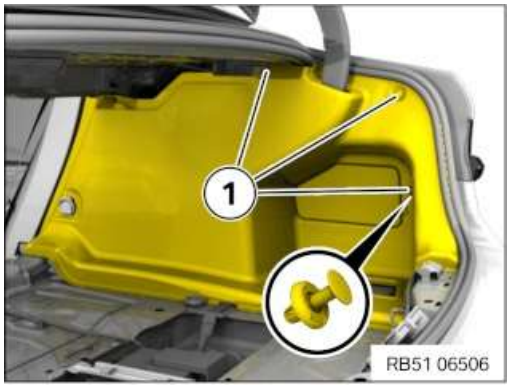
- Secure expanding rivet (1).

▸ Partially installing right luggage compartment wheel arch trim panel



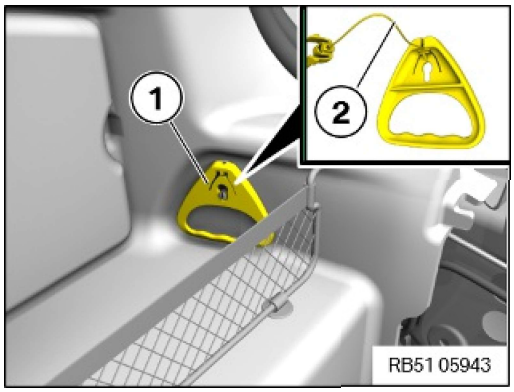
- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).

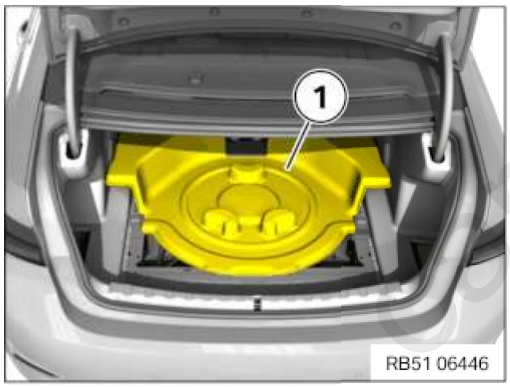
▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

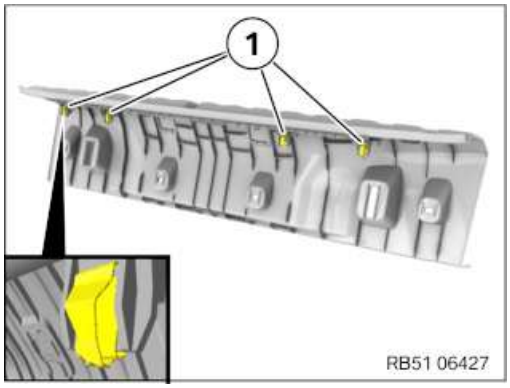
◁

15 – Install the luggage compartment well in front



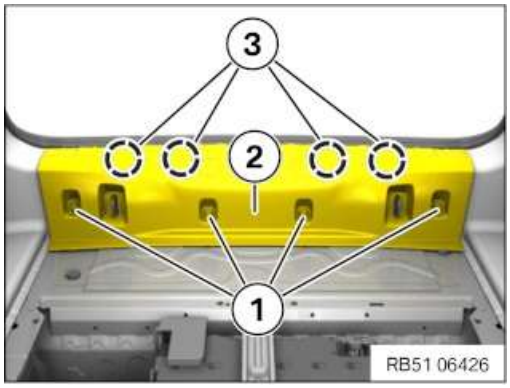
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim



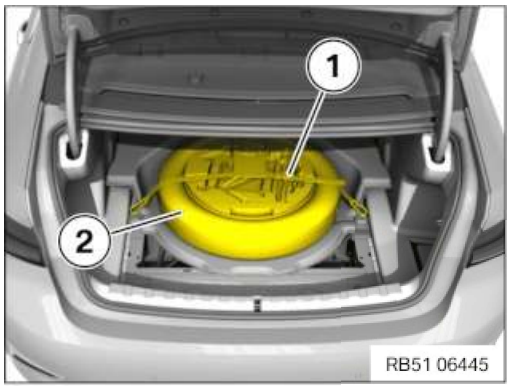
- Check the clamps (1) for damage and renew if necessary.

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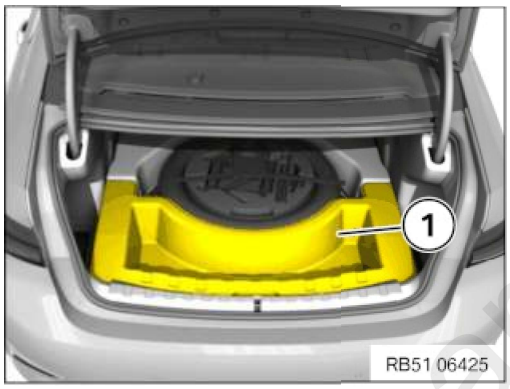
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

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Rear bumper panel guide on rear centre guide Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel Used in step 12

Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel Used in step 12

Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

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66 31 111 Adjust front radar sensor

1 – Adjusting front radar sensor (FRS)

TECHNICAL INFORMATION

Notes on adjusting the ACC sensor are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 66 31 ... Notes on adjusting the ACC sensor

TECHNICAL INFORMATION

If there is a "Sensor misaligned" fault memory entry and the sensor cannot be aligned correctly using the adjusting screw, a front impact damage may be suspected.

In this case, the vehicle must be inspected thoroughly for damage. Damaged parts must be renewed if necessary. Then adjust the ACC sensor again.

A damaged/bent holder indicates mechanical misuse of the vehicle and must not be charged as a warranty case.

▸ **Checking vehicle and components for damage**

Check

- In the visible areas, visually check for:
  - damage
  - Deformation

Result

» Damage or deformation.

Measure

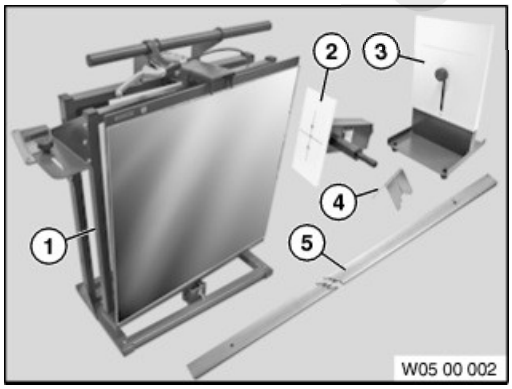
- Identify and renew damaged, deformed vehicle parts.

Result

» No damage or deformation

Measure

- Adjust the front radar sensor (FRS).



- Stage special tools 0 442 898 and 2 338 466.
- Set up special tool as per enclosed operating instructions.



- Connect diagnosis system.
  - Service functions
  - Driver assistance
  - Front radar sensor (FRS)
  - Front radar sensor start-up (FRS)

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NOTICE

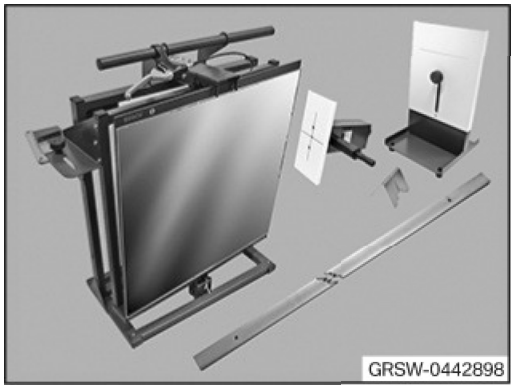
Schematic diagram is for example purposes. Some parts may differ in certain details.

- To adjust the front radar sensor (FRS), twist screw (1) with special tool .

Additional Information

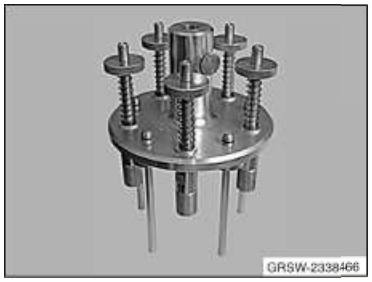
Overview of Special Tools

0 442 898 Measuring device



Common	Used in step 1
Usage	ACC adjusting device. Using this adjusting device, an ACC sensor built into the vehicle can be adjusted in the workshop. Prerequisite is a suitable measuring station.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	02 04 05 (208)

2 338 466 Holder



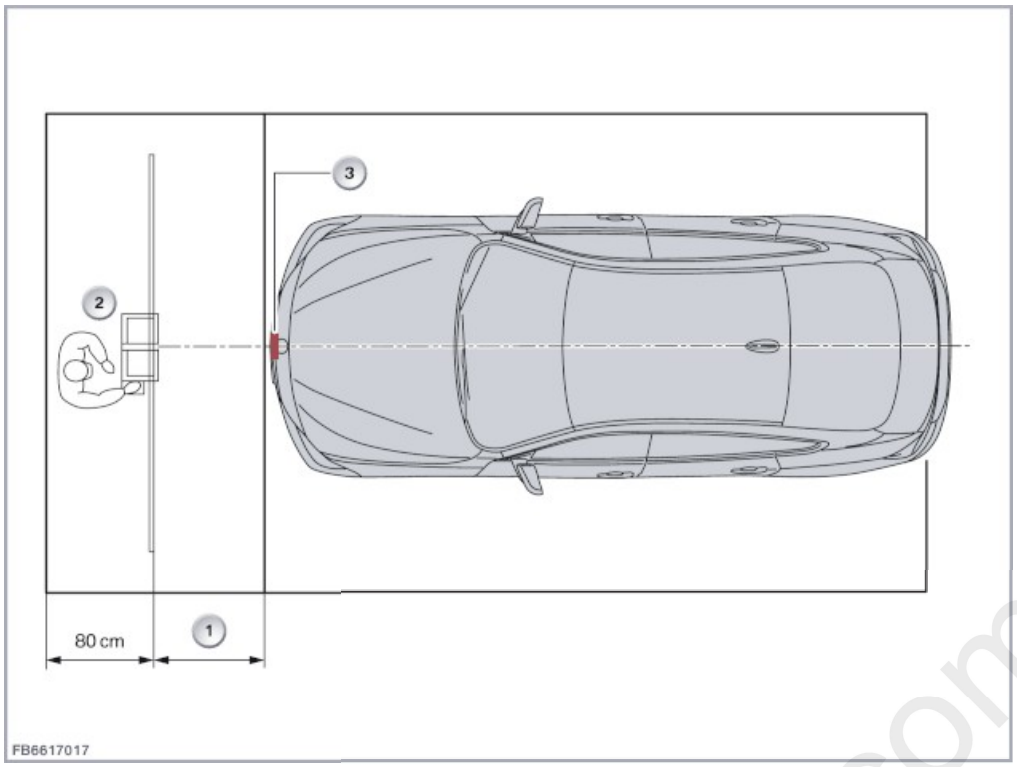
Common	Used in step 1
Usage	Replacement for holder 36 1 100 (0493771). Holder has longer guide pins and lengthened magnetic guides.
Included in the tool or work	
Storage location	Individual
Replaced by	
In connection with	
SI-Number	

Links

Repair instructions	Used in step
66 31 010 Instructions for ACC adjusting device	1
66 31 010 Instructions for ACC adjusting device	

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66 31 010 Instructions for ACC adjusting device



Requirements for the measurement area for ACC adjusting device

Dimensions:

1. Area behind the mirror of at least 80 cm that cane be entered

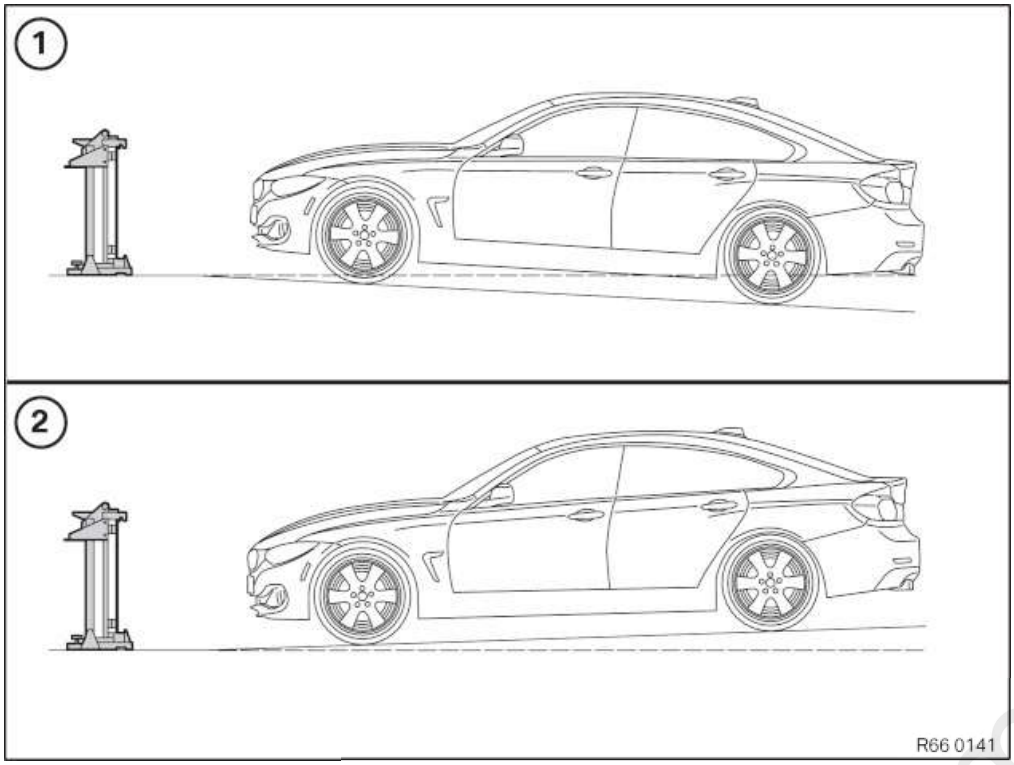
   For information about the required distance (1) between front radar sensor / front radar sensor long range and mirror for the correct adjustment,

   refer to the vehicle-specific service function.
2. Total area of work area 360 cm x 660 cm

Maximum irregularity of floor surface:

- Floor surface - adjusting device ≤ 1 mm
- Floor surface - vehicle ≤ 10 mm

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Maximum angle of inclination of floor surface - vehicle:

- Downward incline of floor surface maximum 3°, see graphic above (1)
- Upward incline of floor surface maximum 1°, see graphic above (2)

Note:
Setting up the ACC adjusting device (one-off task) comprises the following steps:

- Assembly of adjusting device
- Assembly of rail
- Basic setting of adjusting device on measurement area

Detailed setup and operating instructions are enclosed with every ACC adjusting device.

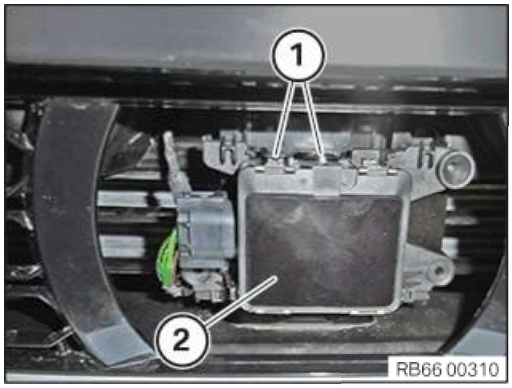
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66 31 120 Removing and installing front radar sensor

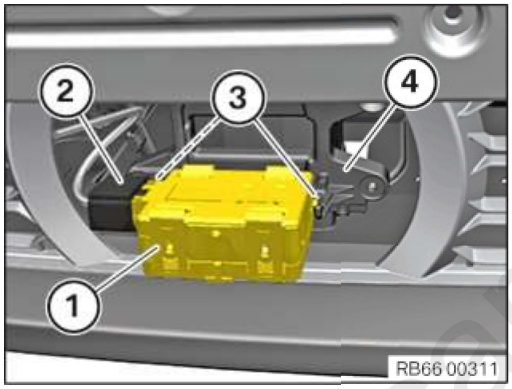
1 – Removing the front radar sensor (FRS)



- Disengage the latch mechanisms (1).
- Remove the cover (2) from the bumper panel grille (3).

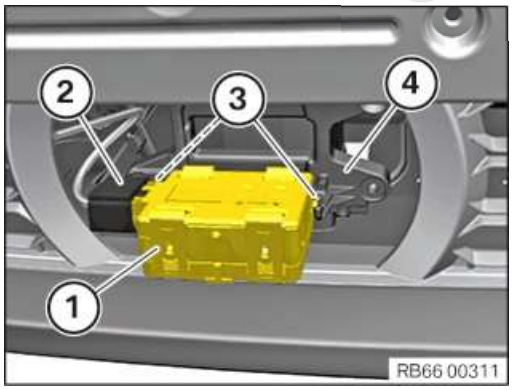


- Disengage the retaining lugs (1) for the front radar sensor (2).



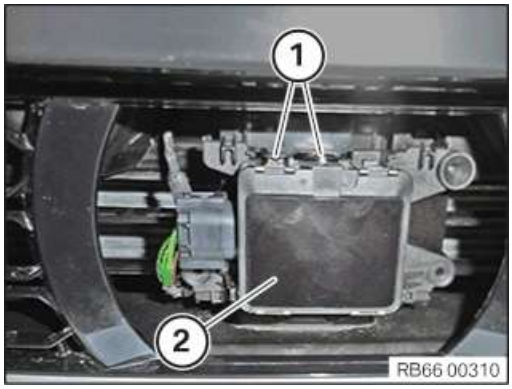
- Fold the front radar sensor (1) towards the front as shown.
- Unlock and disconnect connector (2).
- Remove the front radar sensor (1) including guide pin (3) from the bracket (4).

2 – Installing the front radar sensor (FRS)

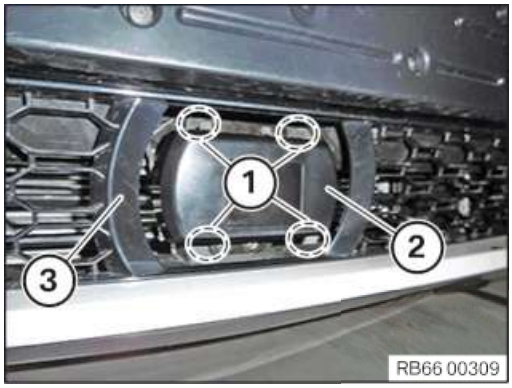


- Feed the front radar sensor (1) with guide pins (3) in holder (4) correctly.
- Connect connectors (2) and lock.

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- Fold front radar sensor (2) to the top and engage in retaining lugs (1).



- Insert cover (2) in the grating of bumper panel (3) correctly.
- Engage the cover (2) at the latch mechanisms (1).

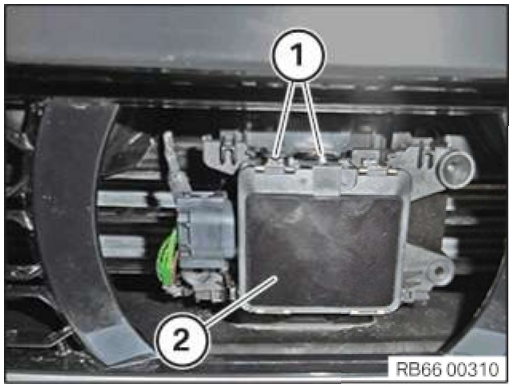
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66 31 120 Removing and installing front radar sensor

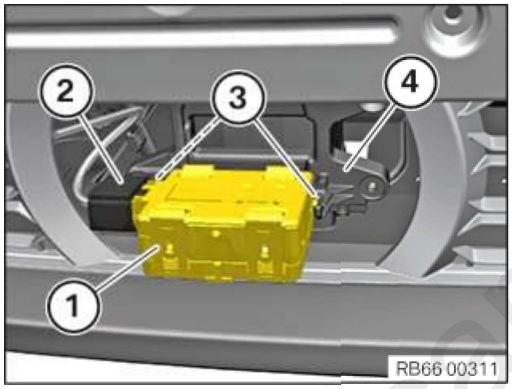
1 – Removing the front radar sensor (FRS)



- Disengage the latch mechanisms (1).
- Remove the cover (2) from the bumper panel grille (3).

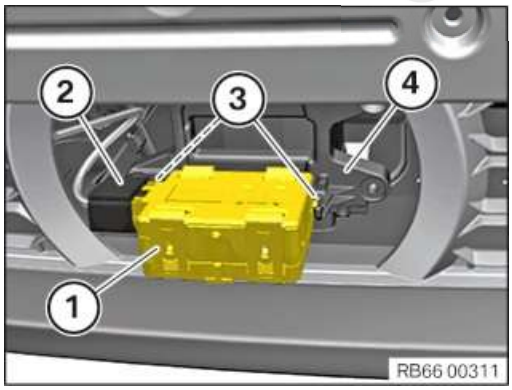


- Disengage the retaining lugs (1) for the front radar sensor (2).



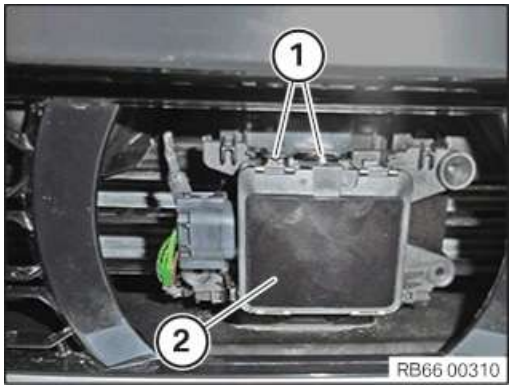
- Fold the front radar sensor (1) towards the front as shown.
- Unlock and disconnect connector (2).
- Remove the front radar sensor (1) including guide pin (3) from the bracket (4).

2 – Installing the front radar sensor (FRS)

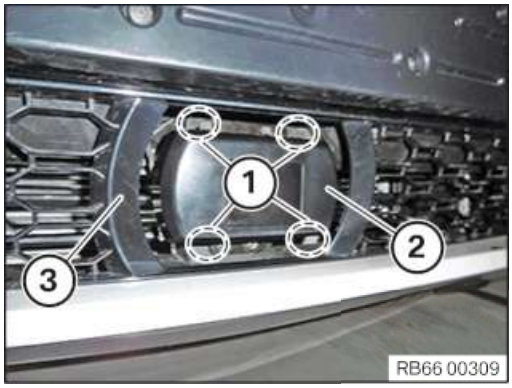


- Feed the front radar sensor (1) with guide pins (3) in holder (4) correctly.
- Connect connectors (2) and lock.

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- Fold front radar sensor (2) to the top and engage in retaining lugs (1).

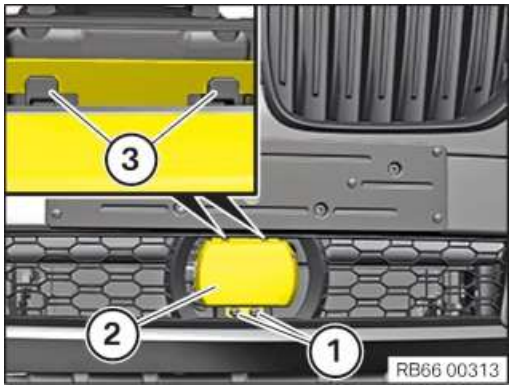


- Insert cover (2) in the grating of bumper panel (3) correctly.
- Engage the cover (2) at the latch mechanisms (1).

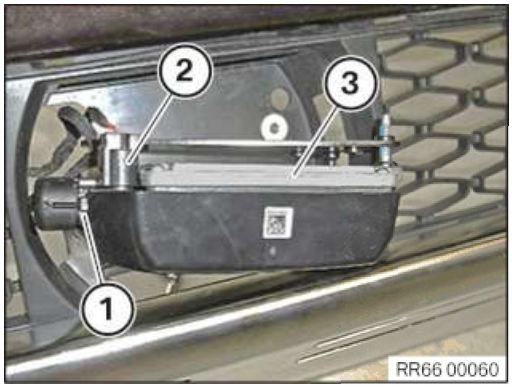
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66 31 115 Removing and installing the front radar sensor long range

1 – Removing the far range front radar sensor (FRS)

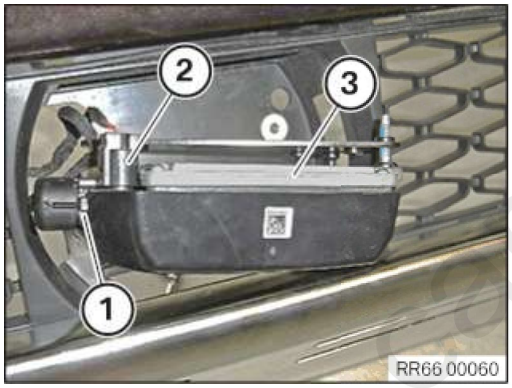


- Loosen screws (1).
- Slide the front radar sensor (2) up slightly and thread it out on the guides (3).
- Pull the front radar sensors (2) out slightly from the grille of the bumper panel.

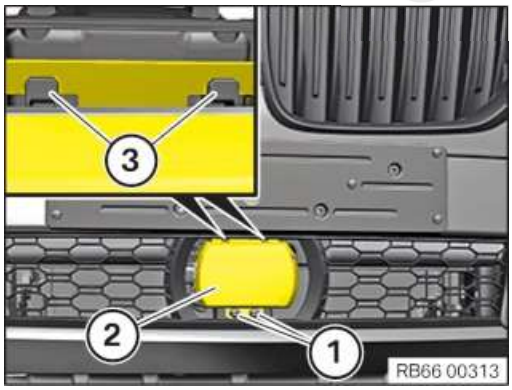


- Unlock and disconnect connector (1).
- Unlock and disconnect connector (2).
- Remove front radar sensor (3).

2 – Installing the front radar sensor long range (FRS)



- Position the front radar sensor (3).
- Connect connectors (2) and lock.
- Connect connectors (1) and lock.



- Guide the front radar sensor (2) into the grille of the bumper panel.
- Guide in the front radar sensor (2) at the guides (3) and position it correctly.
- Tighten the screws (1).

Front radar sensor (FRS) to holder

Screw		Tightening torque	8 Nm

3 – Adjusting front radar sensor (FRS)

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TECHNICAL INFORMATION

Notes on adjusting the ACC sensor are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 66 31 ... Notes on adjusting the ACC sensor

TECHNICAL INFORMATION

If there is a "Sensor misaligned" fault memory entry and the sensor cannot be aligned correctly using the adjusting screw, a front impact damage may be suspected.

In this case, the vehicle must be inspected thoroughly for damage. Damaged parts must be renewed if necessary. Then adjust the ACC sensor again.

A damaged/bent holder indicates mechanical misuse of the vehicle and must not be charged as a warranty case.

▸ **Checking vehicle and components for damage**

Check

- In the visible areas, visually check for:
  - damage
  - Deformation

Result

» Damage or deformation.

Measure

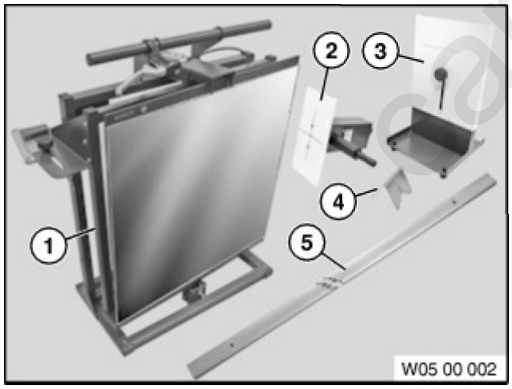
- Identify and renew damaged, deformed vehicle parts.

Result

» No damage or deformation

Measure

- Adjust the front radar sensor (FRS).
- Stage special tools 0 442 898 and 2 338 466.
- Set up special tool as per enclosed operating instructions.





- Connect diagnosis system.
  - Service functions
  - Driver assistance
  - Front radar sensor (FRS)
  - Front radar sensor start-up (FRS)

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NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

- To adjust the front radar sensor (FRS), twist screw (1) with special tool .

Additional Information

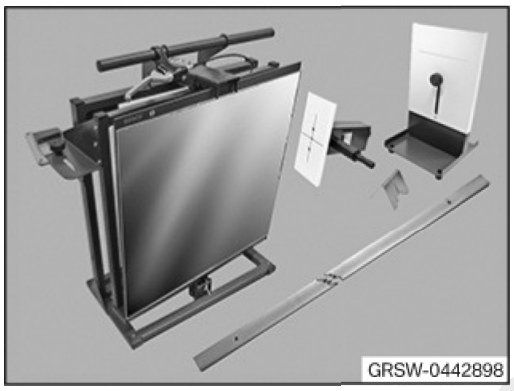
Overview of Tightening Torques

Front radar sensor (FRS) to holder — Used in step 2

Screw		Tightening torque	8 Nm

Overview of Special Tools

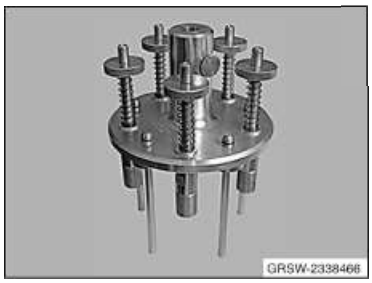
0 442 898 Measuring device



Common — Used in step 3

Usage	ACC adjusting device. Using this adjusting device, an ACC sensor built into the vehicle can be adjusted in the workshop. Prerequisite is a suitable measuring station.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	02 04 05 (208)

2 338 466 Holder



Common — Used in step 3

Usage	Replacement for holder 36 1 100 (0493771). Holder has longer guide pins and lengthened magnetic guides.
Included in the tool or work	
Storage location	Individual
Replaced by	
In connection with	
SI-Number	

Links

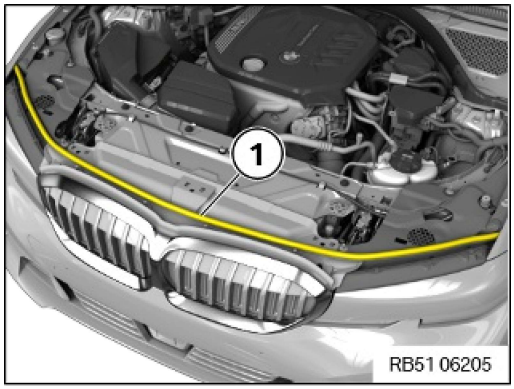
Repair instructions	Used in step
66 31 010 Instructions for ACC adjusting device	3

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66 31 115 Removing and installing the front radar sensor long range

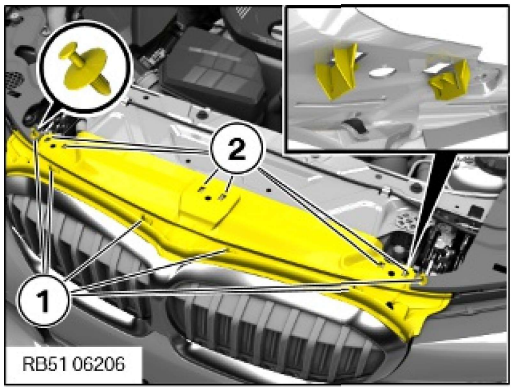
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



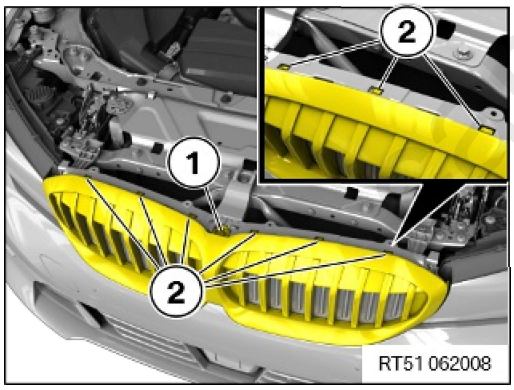
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

3 – Remove centre radiator ornamental grille



- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

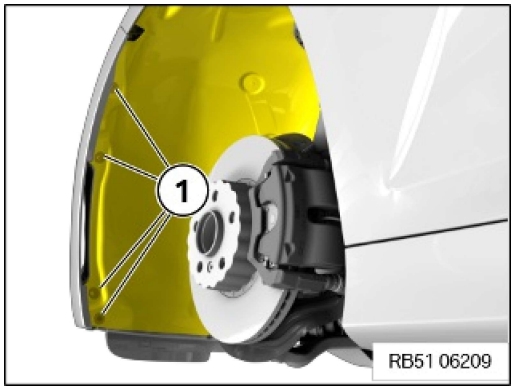
4 – Partially remove both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially removing front wheel arch trim panel**

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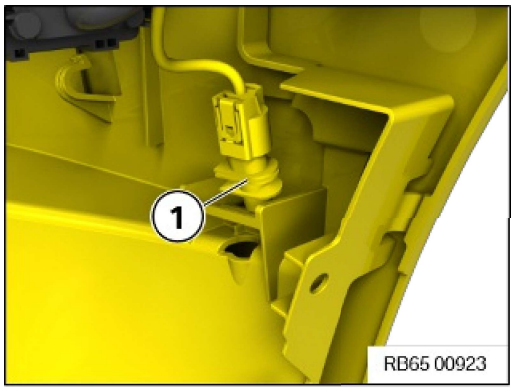


NOTICE

To provide a better overview: Schematic diagram without front wheel.

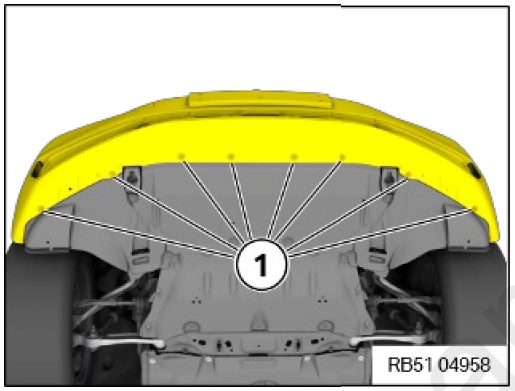
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

5 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

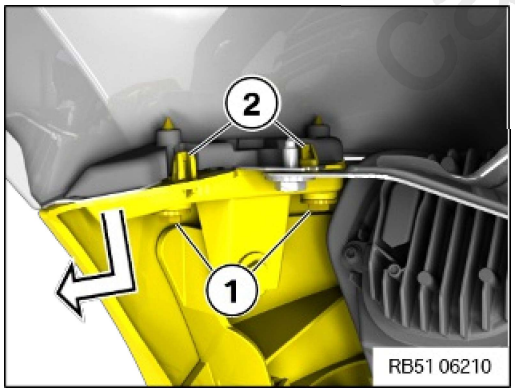
6 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

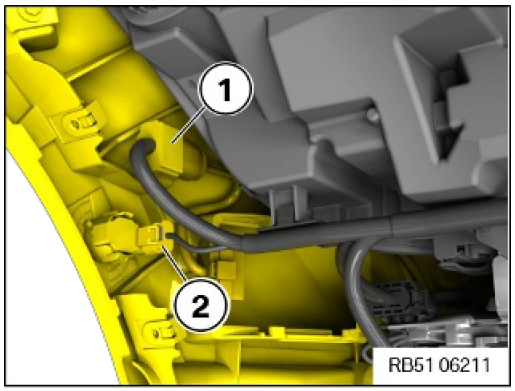
- Loosen screws (1).



NOTICE

Perform the operations on the left and right side.

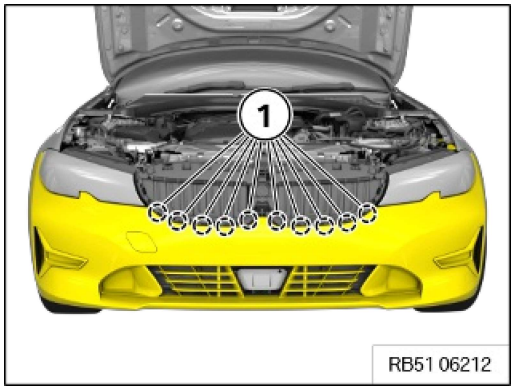
- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.



NOTICE

Perform the operations on the left and right side.

- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.



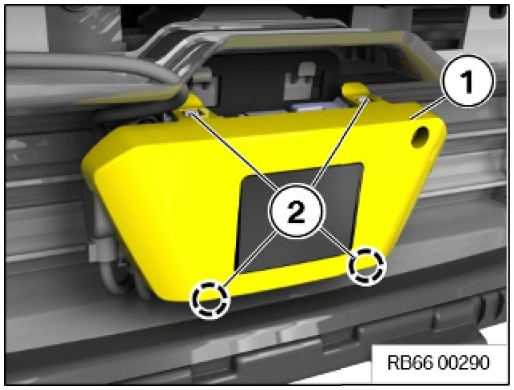
- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

MAIN WORK

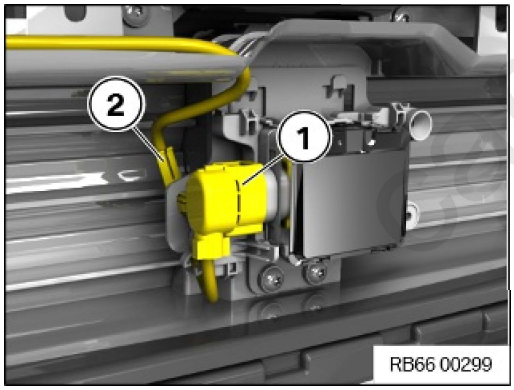
7 – If installed: Removing the front radar sensor (FRS)

NOTICE

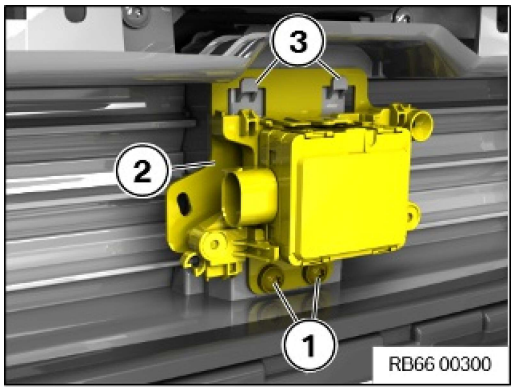
Schematic diagram is for example purposes. Some parts may differ in certain details.



- Release cover (1) from the latch mechanisms (2) and remove it to the front.



- Unlock plug connection (1) and disconnect.
- Unclip the vehicle wiring harness with the bracket (2) and place aside.



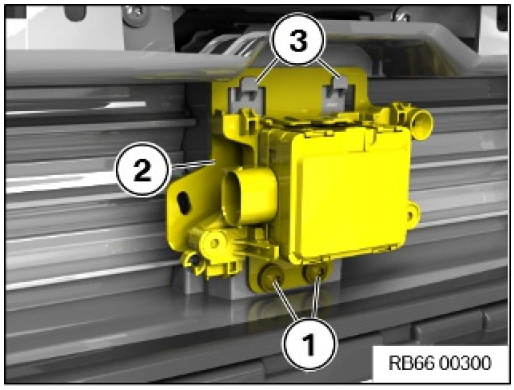
- Loosen screws (1).
- Guide out and remove the front radar sensor (FRS) with holder (2) out of tabs (3) .

8 – If installed: Installing the front radar sensor (FRS)

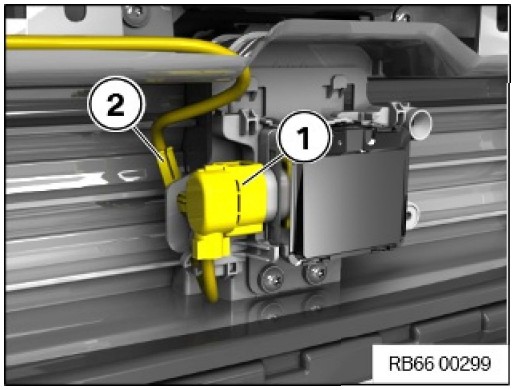
carsdiagn.com

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

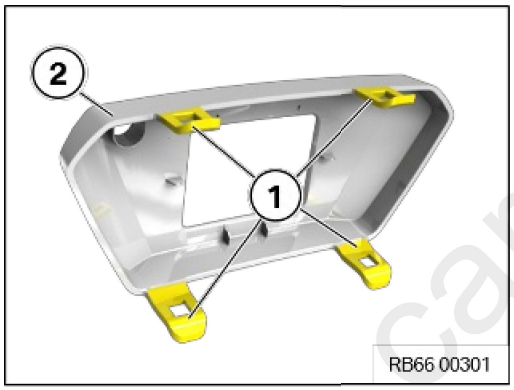


- Fit the front radar sensor (FRS) with the holder (2) in the tabs(3) .
- Tighten the screws (1).



- Clip in the vehicle wiring harness including bracket. (2)
- Connect connectors (1) and lock.

Check



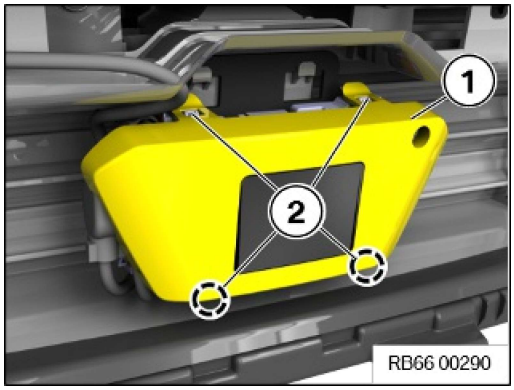
- Check tabs (1) on cover(2) for damage.

Result

» The tab is damaged.

Measure

- Renew the cover.



- Position cover (1) and clip it into latch mechanisms .

▸ **Adjusting front radar sensor (FRS)**

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TECHNICAL INFORMATION

Notes on adjusting the ACC sensor are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 66 31 ... Notes on adjusting the ACC sensor

TECHNICAL INFORMATION

If there is a "Sensor misaligned" fault memory entry and the sensor cannot be aligned correctly using the adjusting screw, a front impact damage may be suspected.

In this case, the vehicle must be inspected thoroughly for damage. Damaged parts must be renewed if necessary. Then adjust the ACC sensor again.

A damaged/bent holder indicates mechanical misuse of the vehicle and must not be charged as a warranty case.

▷ **Checking vehicle and components for damage**

Check

- In the visible areas, visually check for:
  - damage
  - Deformation

Result

» Damage or deformation.

Measure

- Identify and renew damaged, deformed vehicle parts.

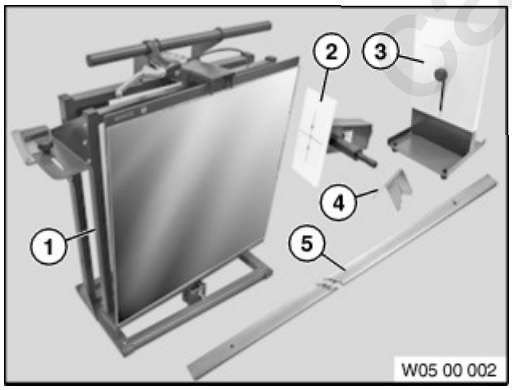
Result

» No damage or deformation

Measure

- Adjust the front radar sensor (FRS).

◁





- Stage special tools 0 442 898 and 2 338 466.
- Set up special tool as per enclosed operating instructions.
- Connect diagnosis system.
  - Service functions
  - Driver assistance
  - Front radar sensor (FRS)
  - Front radar sensor start-up (FRS)

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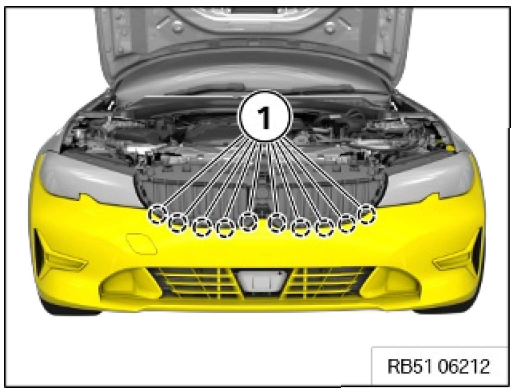
NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

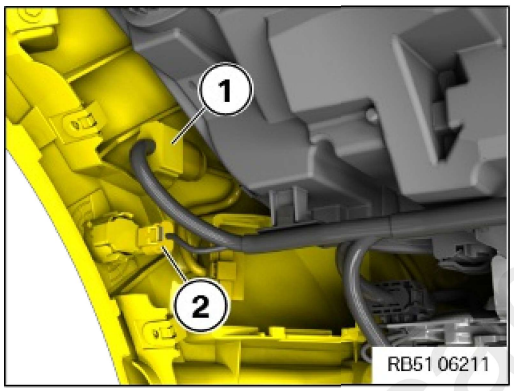
- To adjust the front radar sensor (FRS), twist screw (1) with special tool .

POSTPROCESSES

9 – Install bumper panel, front



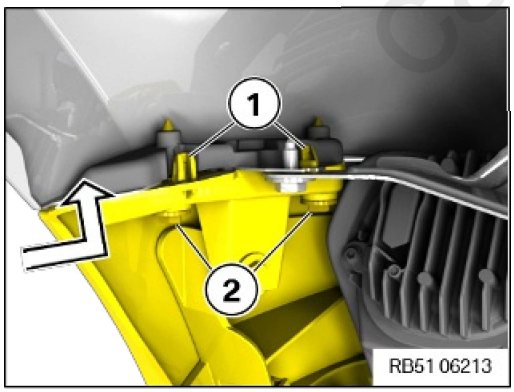
- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).



NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.



NOTICE

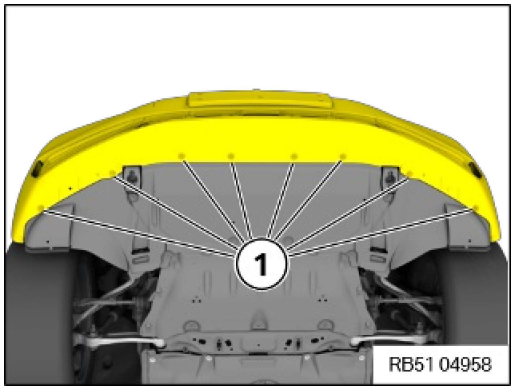
Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm

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NOTICE

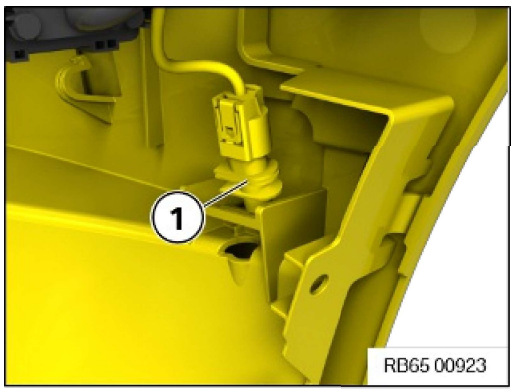
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

10 – Partially installing the temperature sensor



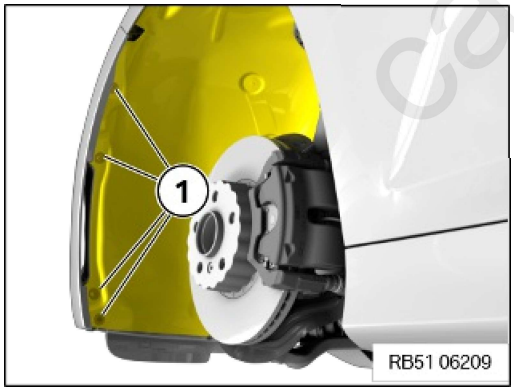
- Clip the temperature sensor (1) downwards into the front bumper panel.

11 – Partially installing both front wheel arch trim panels

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Partially installing front wheel arch trim panel**



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

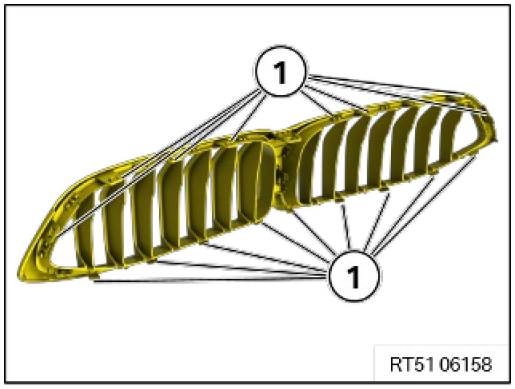
12 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

Check

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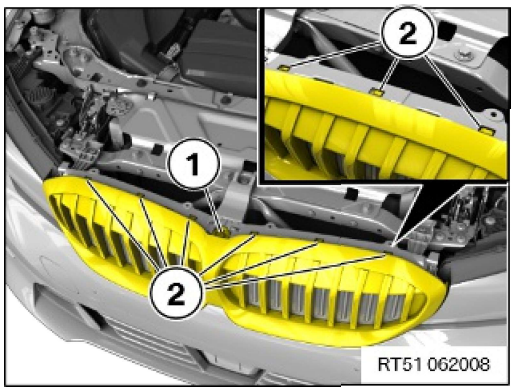
- Check latch mechanisms (1) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

- Renew the front ornamental grille, centre.

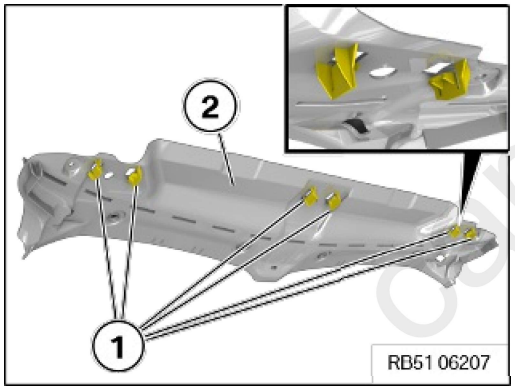


- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

13 – Installing cover for engine compartment centre



Check

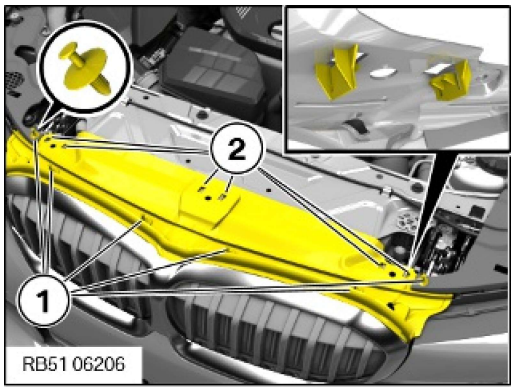
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

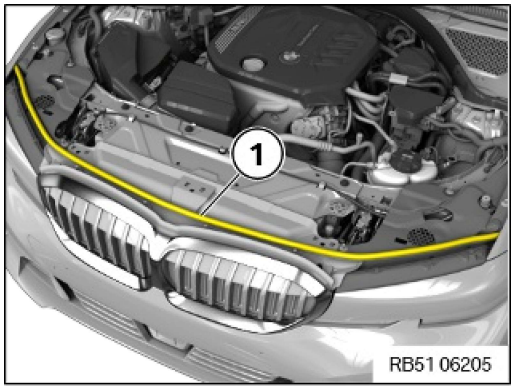
- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

14 – Install the seal for the front bonnet

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- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

Additional Information

Overview of Tightening Torques

Front bumper panel to front side panel — Used in step 9

Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection — Used in step 9

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Wheel arch trim panel, front — Used in step 11

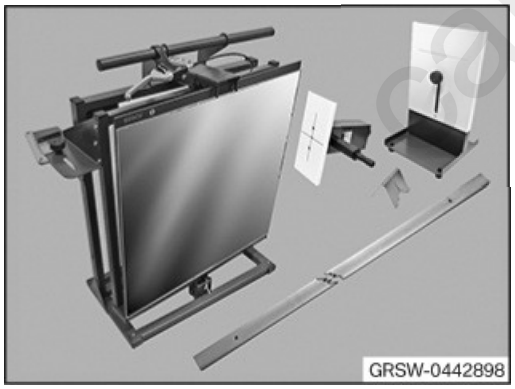
Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control — Used in step 12

Oval-head screwM6		Tightening torque	4,6 Nm

Overview of Special Tools

0 442 898 Measuring device

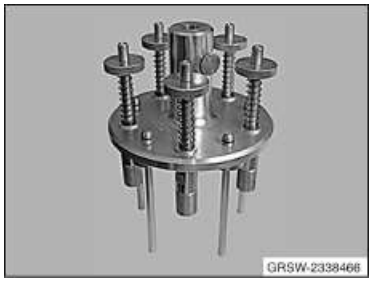


Common — Used in step 8

Usage	ACC adjusting device. Using this adjusting device, an ACC sensor built into the vehicle can be adjusted in the workshop. Prerequisite is a suitable measuring station.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	02 04 05 (208)

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2 338 466 Holder



Common	Used in step 8
Usage	Replacement for holder 36 1 100 (0493771). Holder has longer guide pins and lengthened magnetic guides.
Included in the tool or work	
Storage location	Individual
Replaced by	
In connection with	
SI-Number	

Links

Repair instructions	Used in step
66 31 010 Instructions for ACC adjusting device	8

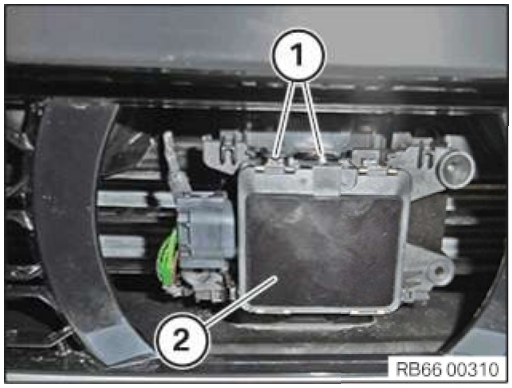
cardiagn.com

66 31 621 Replace front radar sensor

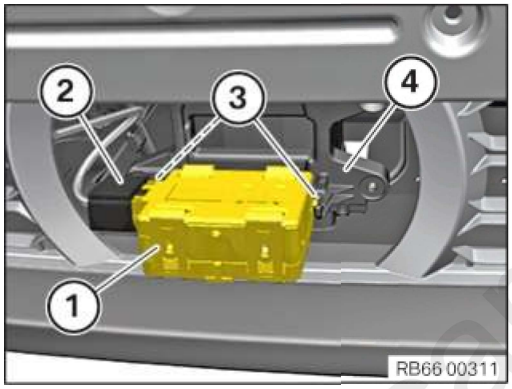
1 – Removing the front radar sensor (FRS)



- Disengage the latch mechanisms (1).
- Remove the cover (2) from the bumper panel grille (3).

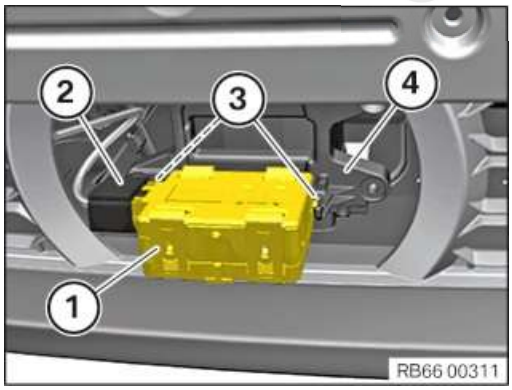


- Disengage the retaining lugs (1) for the front radar sensor (2).



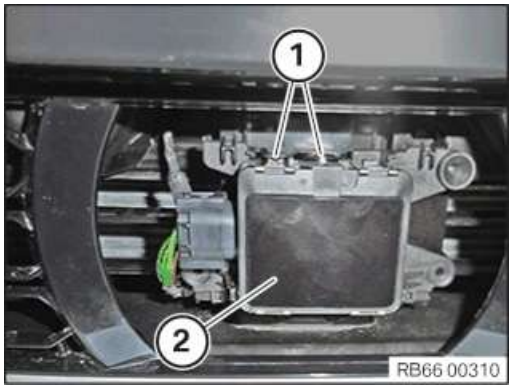
- Fold the front radar sensor (1) towards the front as shown.
- Unlock and disconnect connector (2).
- Remove the front radar sensor (1) including guide pin (3) from the bracket (4).

2 – Installing the front radar sensor (FRS)

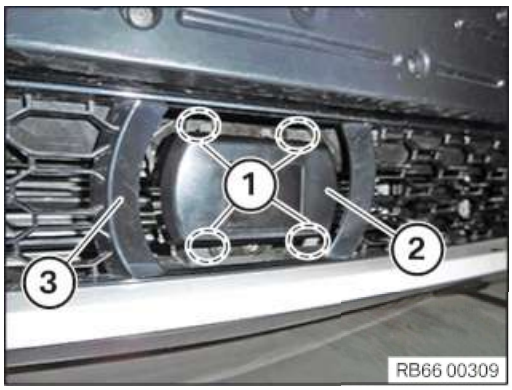


- Feed the front radar sensor (1) with guide pins (3) in holder (4) correctly.
- Connect connectors (2) and lock.

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- Fold front radar sensor (2) to the top and engage in retaining lugs (1).



- Insert cover (2) in the grating of bumper panel (3) correctly.
- Engage the cover (2) at the latch mechanisms (1).

3 – Adjusting front radar sensor (FRS)

TECHNICAL INFORMATION

Notes on adjusting the ACC sensor are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 66 31 ... Notes on adjusting the ACC sensor

TECHNICAL INFORMATION

If there is a "Sensor misaligned" fault memory entry and the sensor cannot be aligned correctly using the adjusting screw, a front impact damage may be suspected.

In this case, the vehicle must be inspected thoroughly for damage. Damaged parts must be renewed if necessary. Then adjust the ACC sensor again.

A damaged/bent holder indicates mechanical misuse of the vehicle and must not be charged as a warranty case.

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▸ **Checking vehicle and components for damage**

Check

- In the visible areas, visually check for:
  - damage
  - Deformation

Result

» Damage or deformation.

Measure

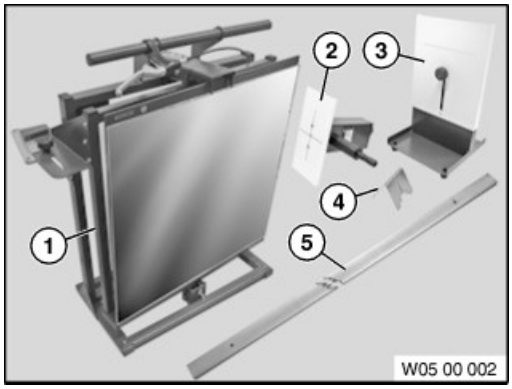
- Identify and renew damaged, deformed vehicle parts.

Result

» No damage or deformation

Measure

- Adjust the front radar sensor (FRS).



- Stage special tools 0 442 898 and 2 338 466.
- Set up special tool as per enclosed operating instructions.



- Connect diagnosis system.
  - Service functions
  - Driver assistance
  - Front radar sensor (FRS)
  - Front radar sensor start-up (FRS)



NOTICE

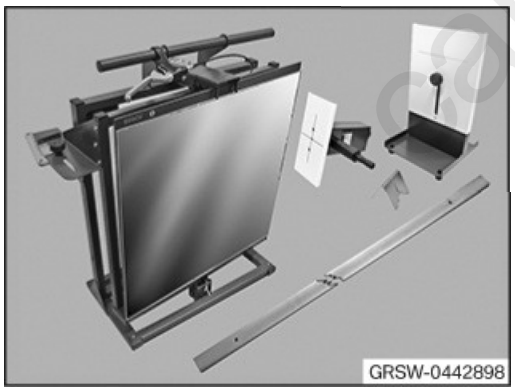
Schematic diagram is for example purposes. Some parts may differ in certain details.

- To adjust the front radar sensor (FRS), twist screw (1) with special tool .

Additional Information

Overview of Special Tools

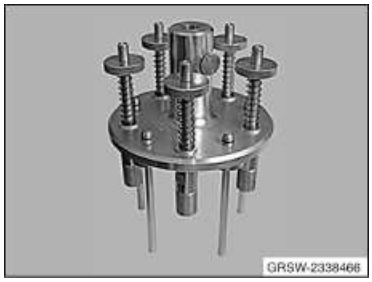
0 442 898 Measuring device



Common	Used in step 3
Usage	ACC adjusting device. Using this adjusting device, an ACC sensor built into the vehicle can be adjusted in the workshop. Prerequisite is a suitable measuring station.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	02 04 05 (208)

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2 338 466 Holder



Common	Used in step 3
Usage	Replacement for holder 36 1 100 (0493771). Holder has longer guide pins and lengthened magnetic guides.
Included in the tool or work	
Storage location	Individual
Replaced by	
In connection with	
SI-Number	

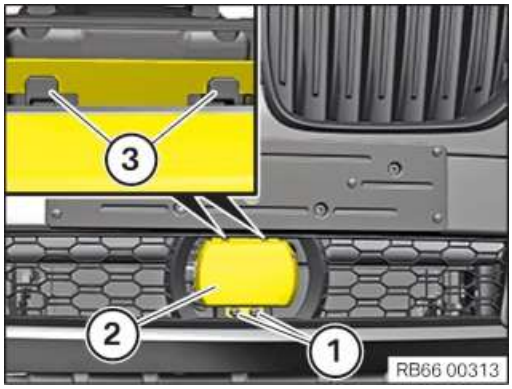
Links

Repair instructions	Used in step
66 31 010 Instructions for ACC adjusting device	3

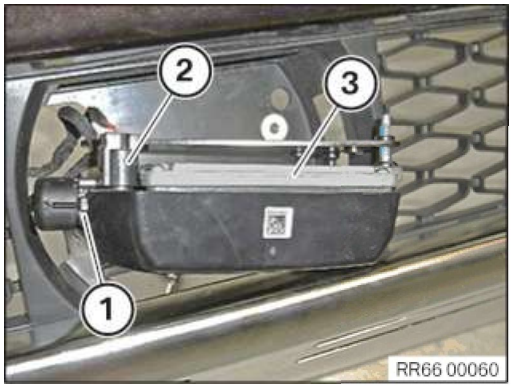
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66 31 616 Replace front radar sensor long range

1 – Removing the far range front radar sensor (FRS)

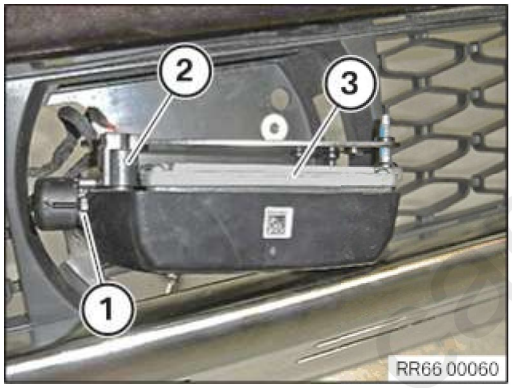


- Loosen screws (1).
- Slide the front radar sensor (2) up slightly and thread it out on the guides (3).
- Pull the front radar sensors (2) out slightly from the grille of the bumper panel.

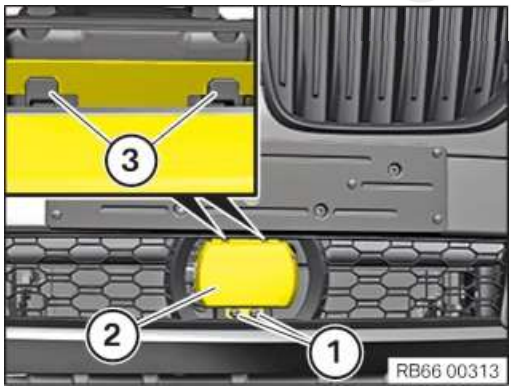


- Unlock and disconnect connector (1).
- Unlock and disconnect connector (2).
- Remove front radar sensor (3).

2 – Installing the front radar sensor long range (FRS)



- Position the front radar sensor (3).
- Connect connectors (2) and lock.
- Connect connectors (1) and lock.



- Guide the front radar sensor (2) into the grille of the bumper panel.
- Guide in the front radar sensor (2) at the guides (3) and position it correctly.
- Tighten the screws (1).

Front radar sensor (FRS) to holder

Screw		Tightening torque	8 Nm

3 – Adjusting front radar sensor (FRS)

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TECHNICAL INFORMATION

Notes on adjusting the ACC sensor are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 66 31 ... Notes on adjusting the ACC sensor

TECHNICAL INFORMATION

If there is a "Sensor misaligned" fault memory entry and the sensor cannot be aligned correctly using the adjusting screw, a front impact damage may be suspected.

In this case, the vehicle must be inspected thoroughly for damage. Damaged parts must be renewed if necessary. Then adjust the ACC sensor again.

A damaged/bent holder indicates mechanical misuse of the vehicle and must not be charged as a warranty case.

▸ **Checking vehicle and components for damage**

Check

- In the visible areas, visually check for:
  - damage
  - Deformation

Result

» Damage or deformation.

Measure

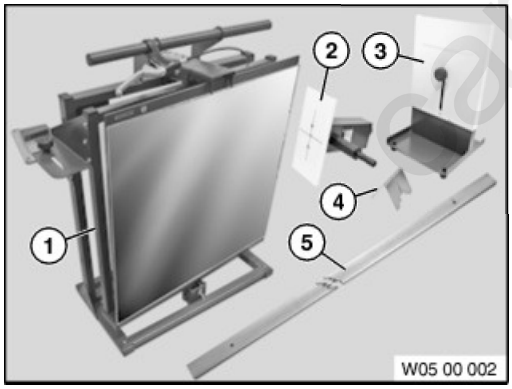
- Identify and renew damaged, deformed vehicle parts.

Result

» No damage or deformation

Measure

- Adjust the front radar sensor (FRS).
- Stage special tools 0 442 898 and 2 338 466.
- Set up special tool as per enclosed operating instructions.





- Connect diagnosis system.
  - Service functions
  - Driver assistance
  - Front radar sensor (FRS)
  - Front radar sensor start-up (FRS)

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NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

- To adjust the front radar sensor (FRS), twist screw (1) with special tool .

Additional Information

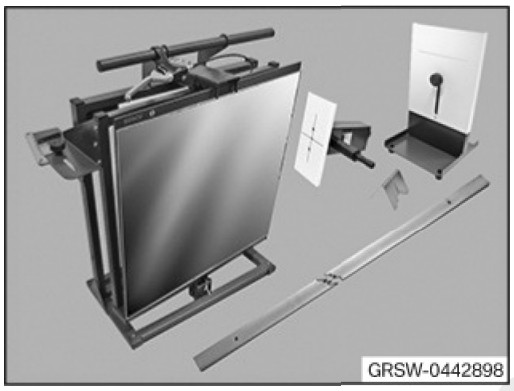
Overview of Tightening Torques

Front radar sensor (FRS) to holder — Used in step 2

Screw		Tightening torque	8 Nm

Overview of Special Tools

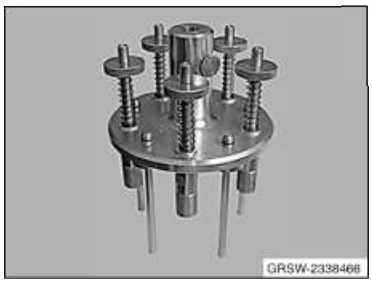
0 442 898 Measuring device



Common — Used in step 3

Usage	ACC adjusting device. Using this adjusting device, an ACC sensor built into the vehicle can be adjusted in the workshop. Prerequisite is a suitable measuring station.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	02 04 05 (208)

2 338 466 Holder



Common — Used in step 3

Usage	Replacement for holder 36 1 100 (0493771). Holder has longer guide pins and lengthened magnetic guides.
Included in the tool or work	
Storage location	Individual
Replaced by	
In connection with	
SI-Number	

Links

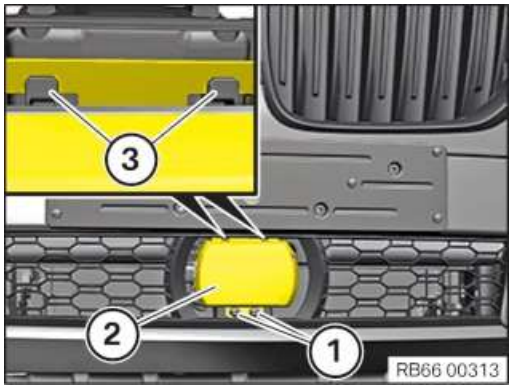
Repair instructions	Used in step
66 31 010 Instructions for ACC adjusting device	3

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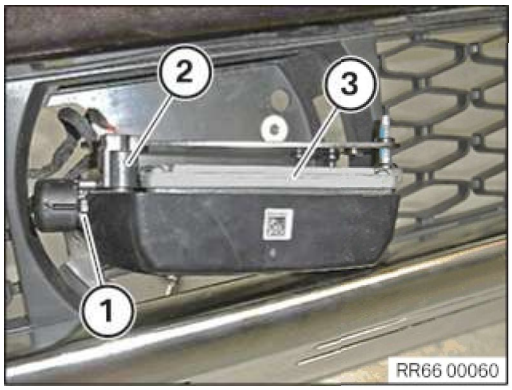
66 31 540 Replace radome

PRELIMINARY WORK

1 – Removing the far range front radar sensor (FRS)



- Loosen screws (1).
- Slide the front radar sensor (2) up slightly and thread it out on the guides (3).
- Pull the front radar sensors (2) out slightly from the grille of the bumper panel.



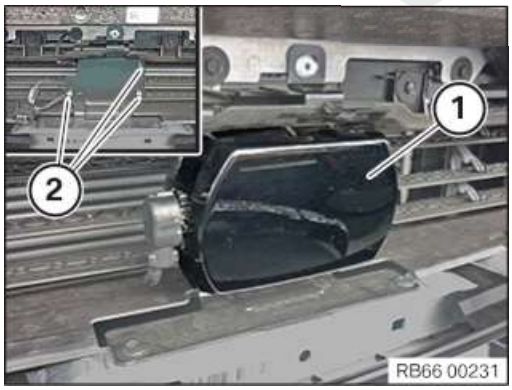
- Unlock and disconnect connector (1).
- Unlock and disconnect connector (2).
- Remove front radar sensor (3).

MAIN WORK

2 – Removing the radome

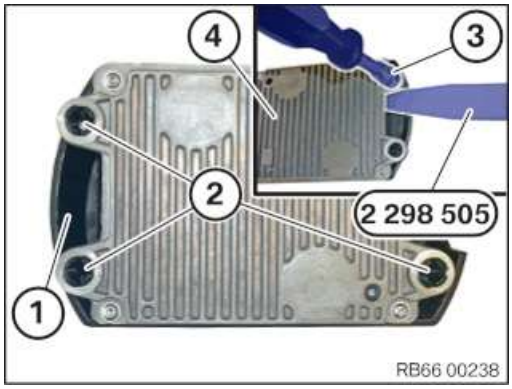
NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



- Disengage front radar sensor (FRS) for the wide area with the radome (1) from the ball pin (2) with the special tool 0 496 569 (00 9 325).

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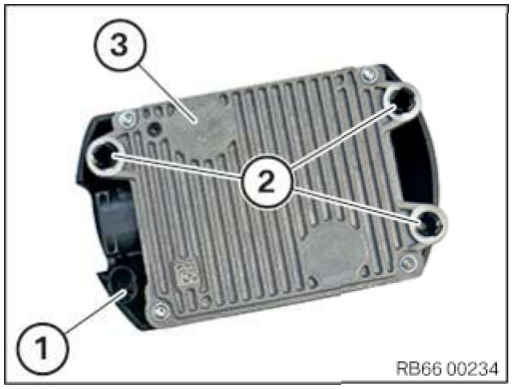
- Release and remove the radome (1) at the latch mechanisms (2) with the special tool 2 298 505 and a socket of 9 mm (3) from the ACC sensor (4).

Note: Carefully clamp front radar sensor (FRS) in a vice at the metal frame. That will ease the disassembly of the radome.

3 – Install radome

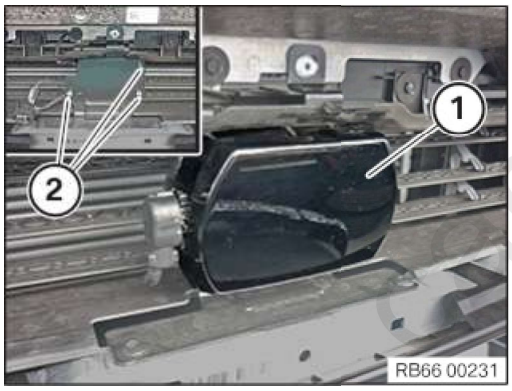
NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



- Check the latch mechanisms (2) and replace the radome as needed.

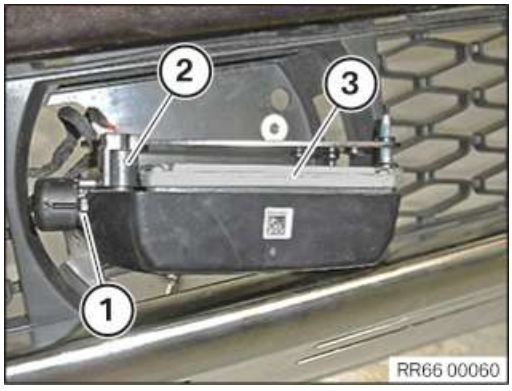
  The latch mechanisms must not be damaged or missing.
- Mount the radome (1) on the front radar sensor (FRS) (3) and engage it.



- Check the ball pin (2) for damage and replace if necessary.
- Engage front radar sensor (FRS) with radome (1) to the ball pin (2).

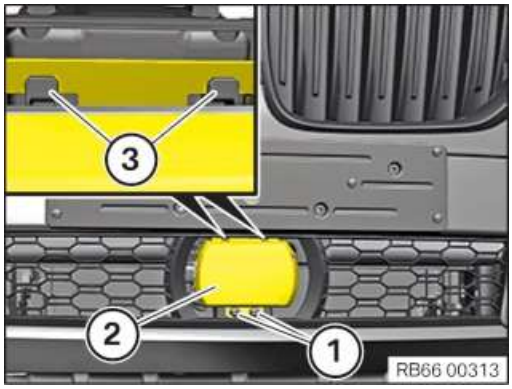
POSTPROCESSES

4 – Installing the front radar sensor long range (FRS)



- Position the front radar sensor (3).
- Connect connectors (2) and lock.
- Connect connectors (1) and lock.

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- Guide the front radar sensor (2) into the grille of the bumper panel.
- Guide in the front radar sensor (2) at the guides (3) and position it correctly.
- Tighten the screws (1).

Front radar sensor (FRS) to holder

Screw		Tightening torque	8 Nm

5 – Adjusting front radar sensor (FRS)

TECHNICAL INFORMATION

Notes on adjusting the ACC sensor are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 66 31 ... Notes on adjusting the ACC sensor

TECHNICAL INFORMATION

If there is a "Sensor misaligned" fault memory entry and the sensor cannot be aligned correctly using the adjusting screw, a front impact damage may be suspected.

In this case, the vehicle must be inspected thoroughly for damage. Damaged parts must be renewed if necessary. Then adjust the ACC sensor again.

A damaged/bent holder indicates mechanical misuse of the vehicle and must not be charged as a warranty case.

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▸ **Checking vehicle and components for damage**

Check

- In the visible areas, visually check for:
  - damage
  - Deformation

Result

» Damage or deformation.

Measure

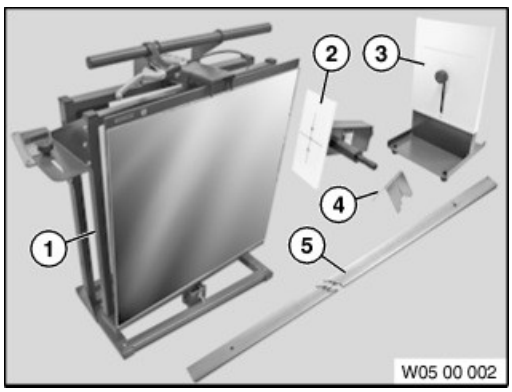
- Identify and renew damaged, deformed vehicle parts.

Result

» No damage or deformation

Measure

- Adjust the front radar sensor (FRS).



- Stage special tools 0 442 898 and 2 338 466.
- Set up special tool as per enclosed operating instructions.

- Connect diagnosis system.
  - Service functions
  - Driver assistance
  - Front radar sensor (FRS)
  - Front radar sensor start-up (FRS)



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

- To adjust the front radar sensor (FRS), twist screw (1) with special tool .

Additional Information

Overview of Tightening Torques

Front radar sensor (FRS) to holder — Used in step 4

Screw		Tightening torque	8 Nm

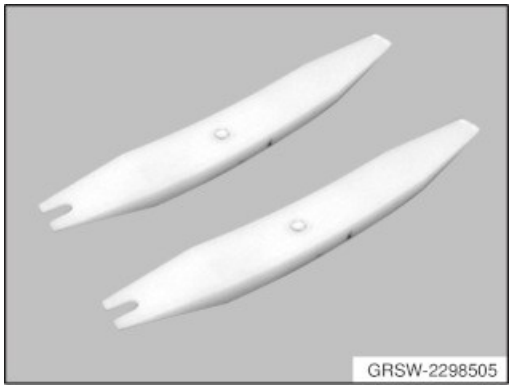
Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common	Used in step 2
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

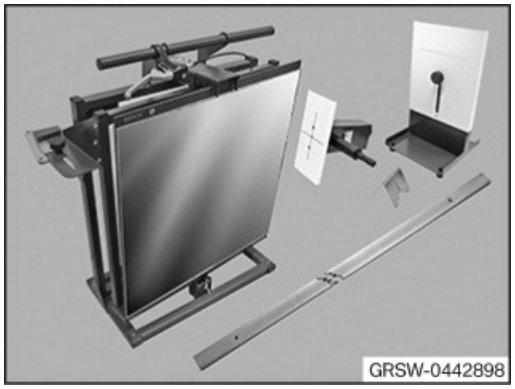
2 298 505 Wedge



Common	Used in step 2
Usage	Set (delivery of 2 pieces)
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

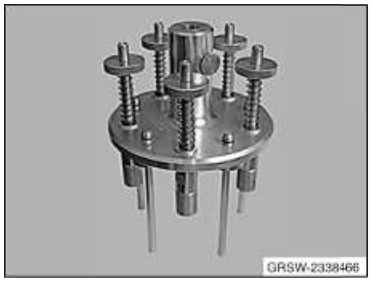
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0 442 898 Measuring device



Common	Used in step 5
Usage	ACC adjusting device. Using this adjusting device, an ACC sensor built into the vehicle can be adjusted in the workshop. Prerequisite is a suitable measuring station.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	02 04 05 (208)

2 338 466 Holder



Common	Used in step 5
Usage	Replacement for holder 36 1 100 (0493771). Holder has longer guide pins and lengthened magnetic guides.
Included in the tool or work	
Storage location	Individual
Replaced by	
In connection with	
SI-Number	

Links

Repair instructions	Used in step
66 31 010 Instructions for ACC adjusting device	5

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66 32 180 Removing and installing rear radar sensor short range left

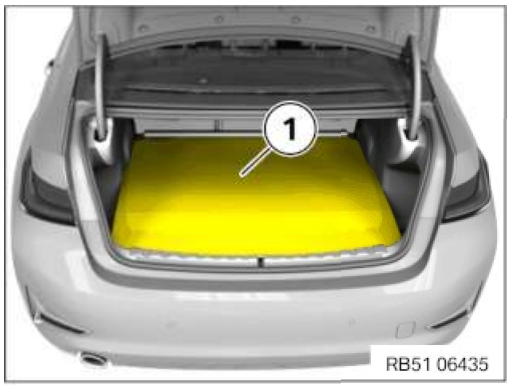
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

PRELIMINARY WORK

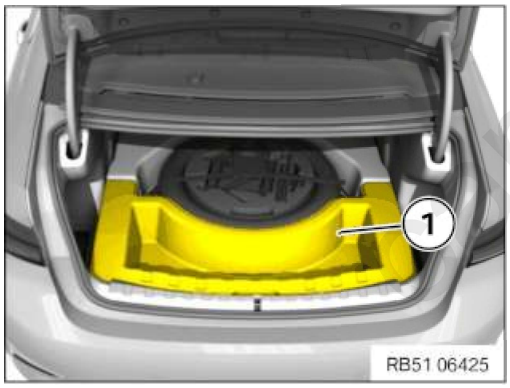
1 – Removing the luggage compartment floor trim panel



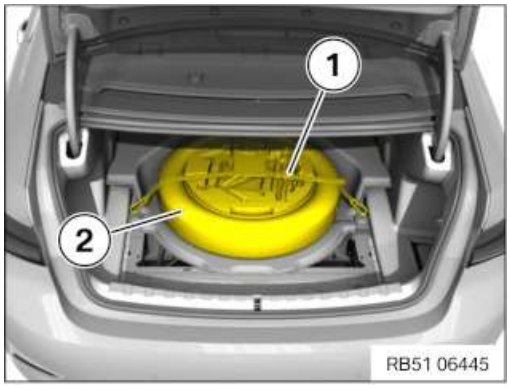
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

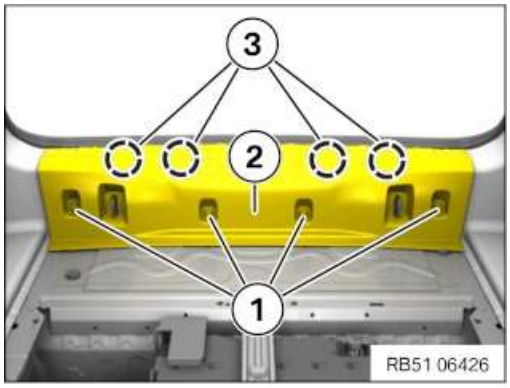


- Remove rear luggage compartment well (1).



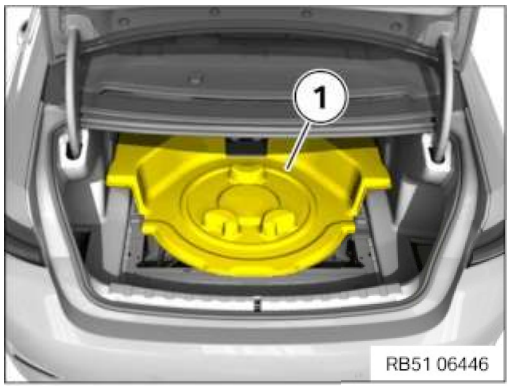
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

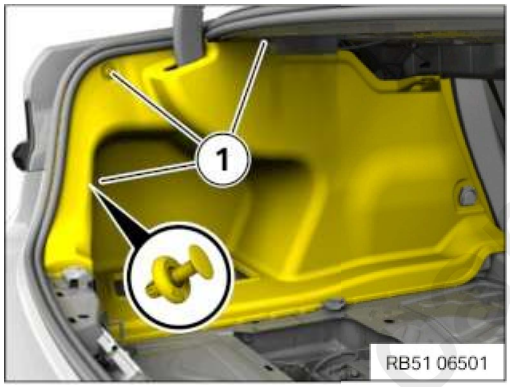
4 – Removing front luggage compartment well



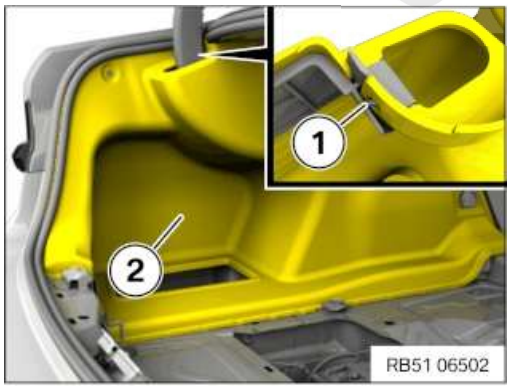
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▸ Partially remove luggage compartment wheel arch trim on left



- Loosen the expanding rivet (1).

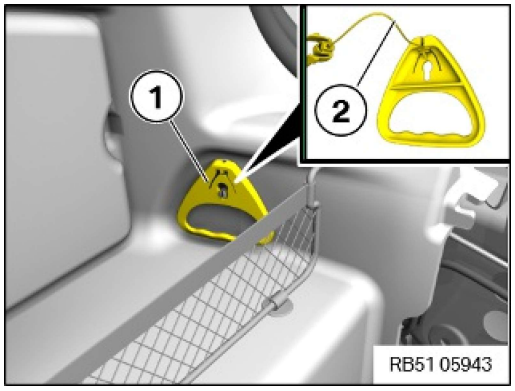


- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ Partially remove luggage compartment wheel arch panel on right

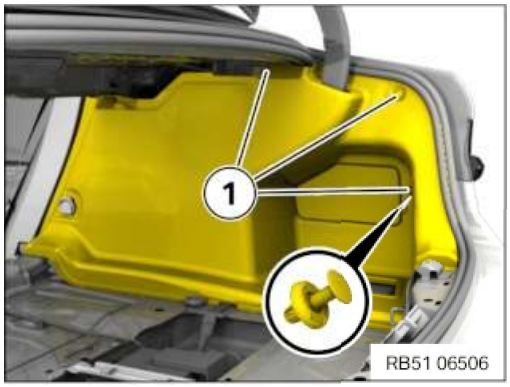
▹ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)

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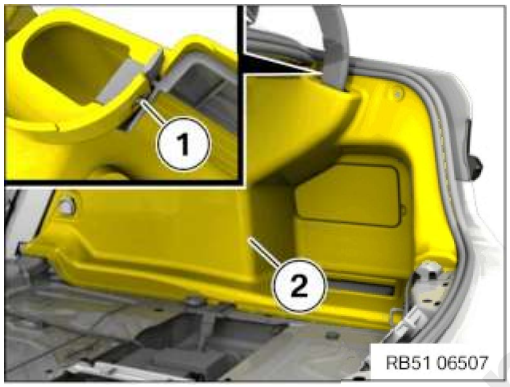


- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

◁



- Loosen the expanding rivet (1).



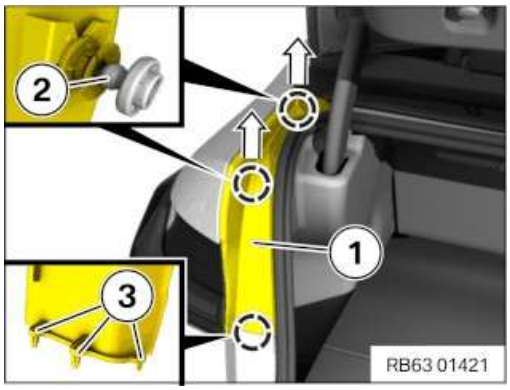
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the trim in the water channel**



- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

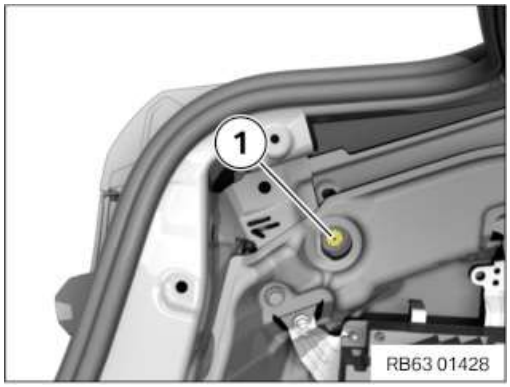
7 – Remove both rear lights from the side panel

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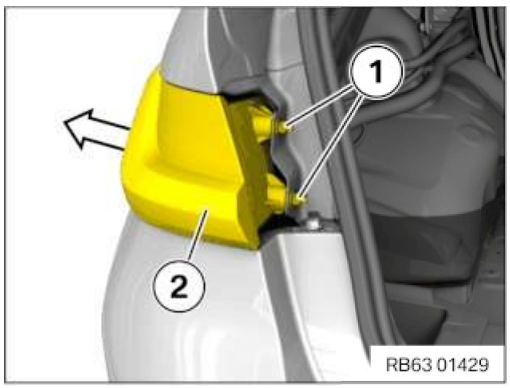
NOTICE

Description is for left component only. Procedure on the right side is identical.

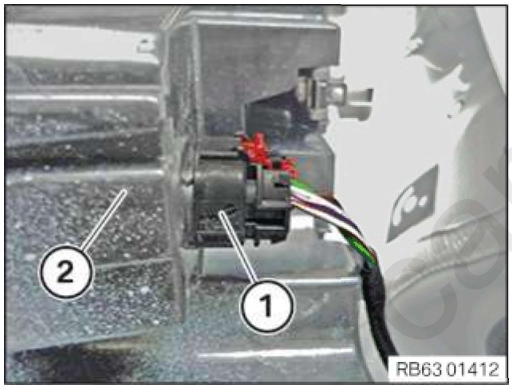
▶ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Remove rear bumper panel

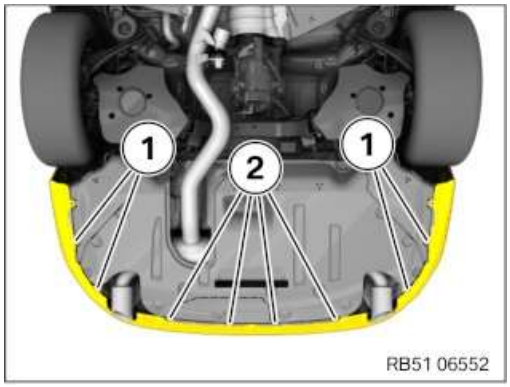


NOTICE

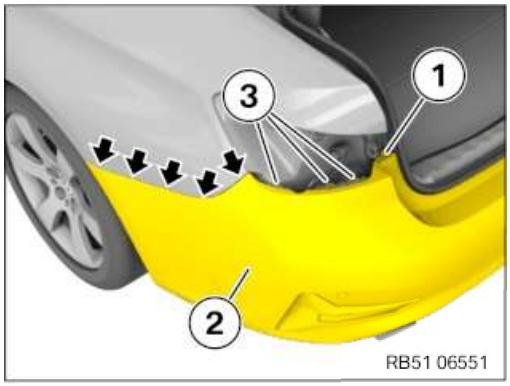
Perform the operations on the left and right side.

- Loosen screws (1).

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- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.



NOTICE

Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).



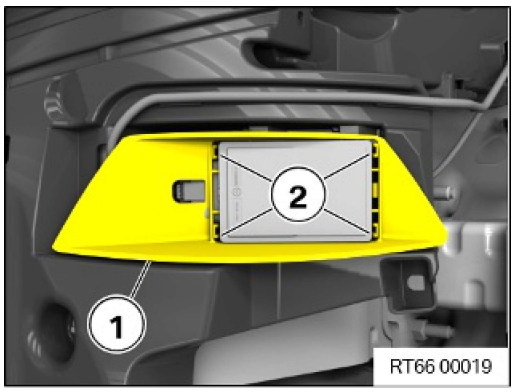
- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

MAIN WORK

9 – Removing the rear side radar sensor

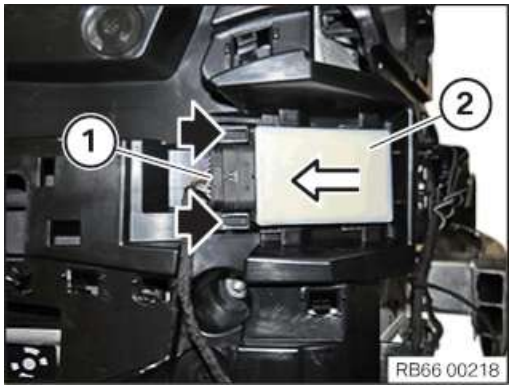
NOTICE

Description is for left component only. Procedure on the right side is identical.



- Unlock and remove funnel (1) from retaining lugs (2).

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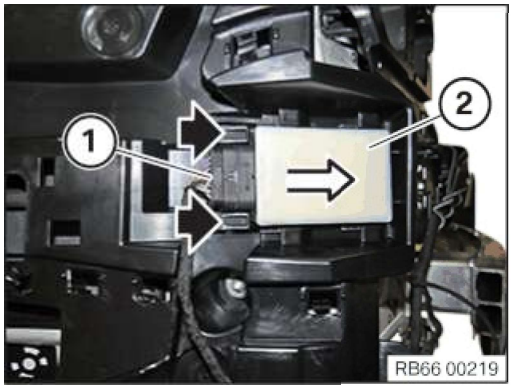


- Unlock and disconnect connector (1).
- Unlock the latch mechanisms and remove the lane change warning sensor (2) in the direction of the arrow.

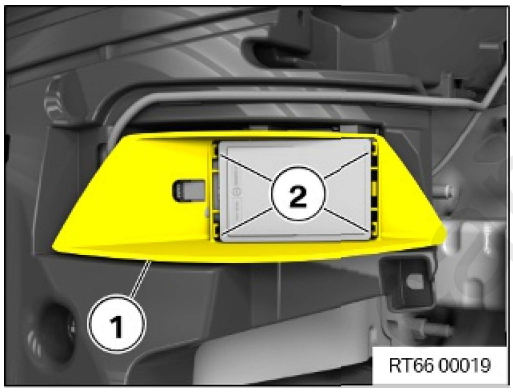
10 – Installing rear side radar sensor

NOTICE

Description is for left component only. Procedure on the right side is identical.



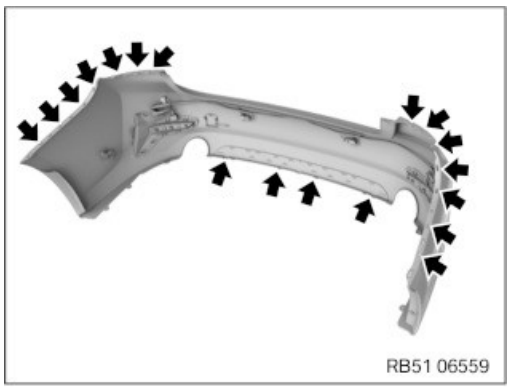
- Correctly position the lane change warning sensor (2) and move it in the direction of the arrow.
- Make sure that the latch mechanisms are properly locked at the marked points.
- Insert and connect the connector (1).



- Position funnel (1) and lock it with the retaining lugs (2).

POSTPROCESSES

11 – Install rear bumper panel



Check

- Check the latch mechanisms (arrows) for damage.

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Result

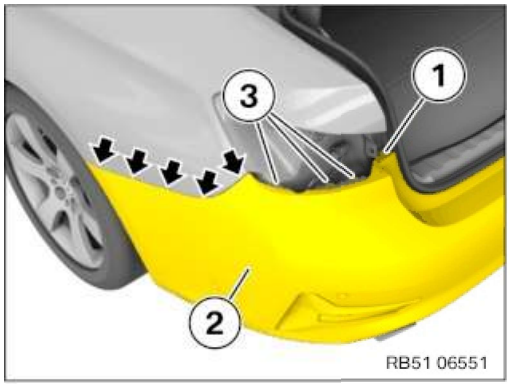
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



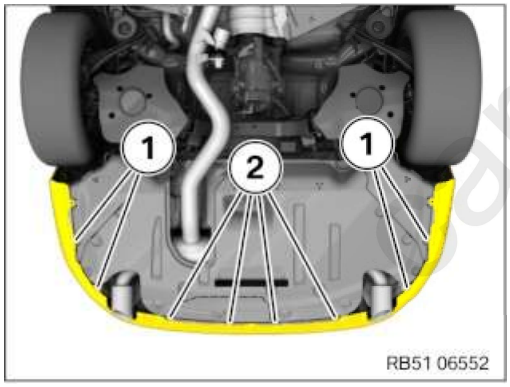
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm



NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

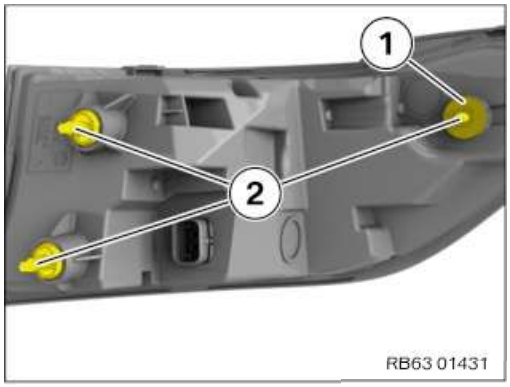
12 – Install both rear lights on the side panel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▶ **Install the rear light on the side panel**

Check



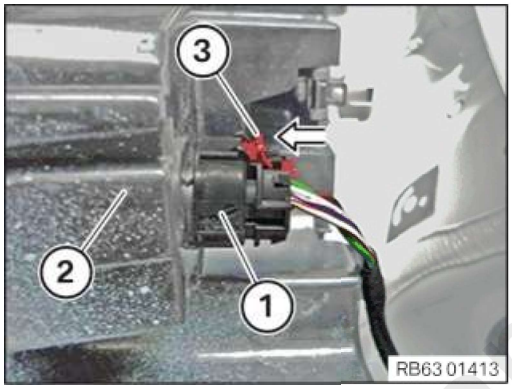
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

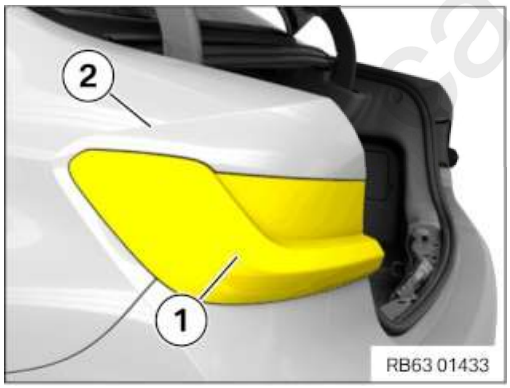
Measure

- Replace rear light.

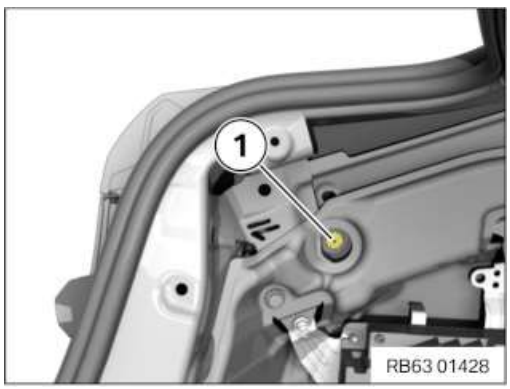


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

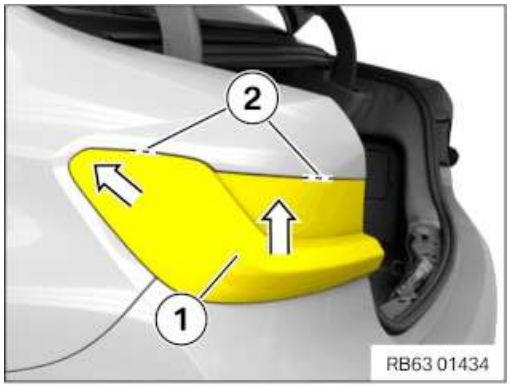


- Position the rear light on the side panel (1) on the side panel (2).

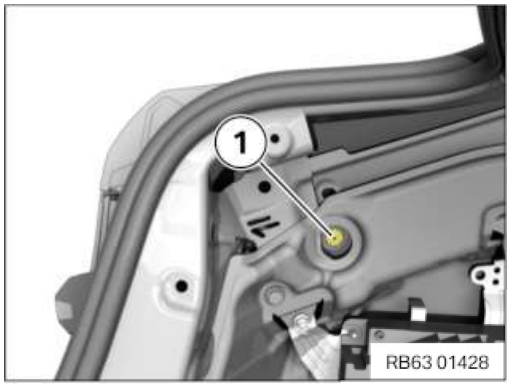


- Position the nut (1).

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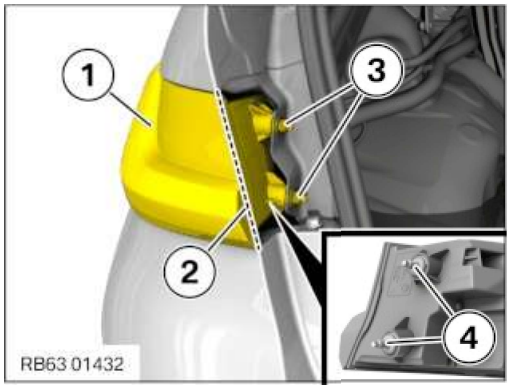
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

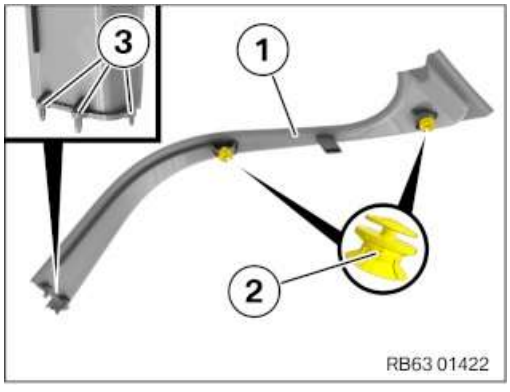
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the trim in the water channel**



Check

- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

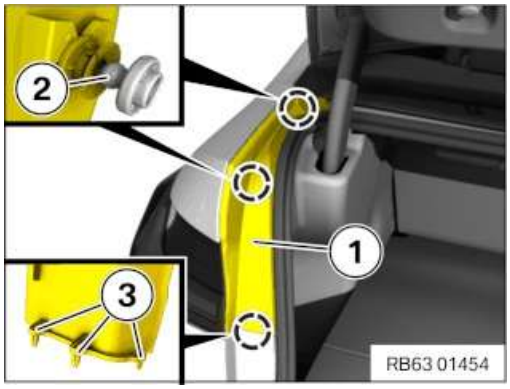
cardiagn.com

Result

» The guides are damaged.

Measure

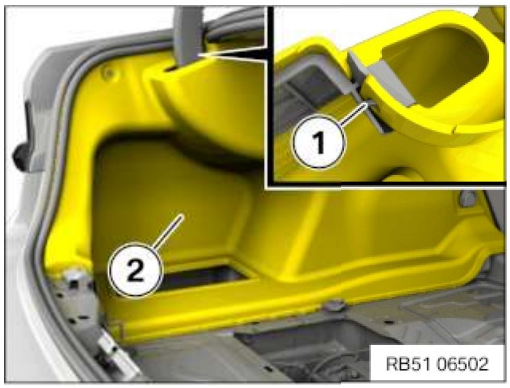
- Renew trim in the water channel .



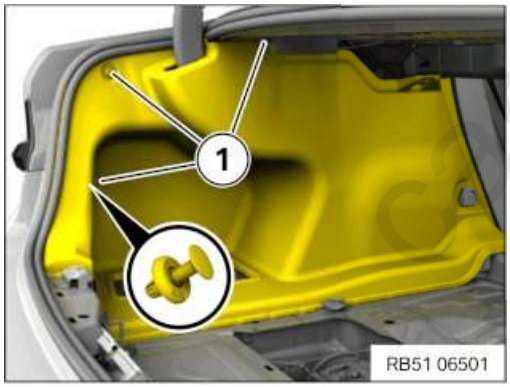
- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

14 – Installing both luggage compartment wheel arch trim panels partially

▸ Partially installing the left luggage compartment wheel arch trim panel

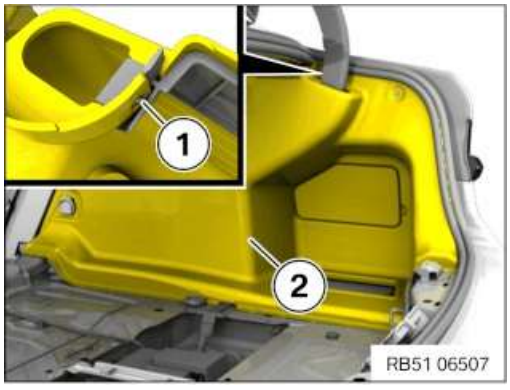


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



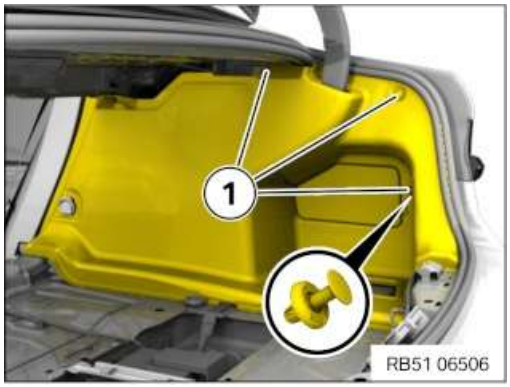
- Secure expanding rivet (1).

▸ Partially installing right luggage compartment wheel arch trim panel



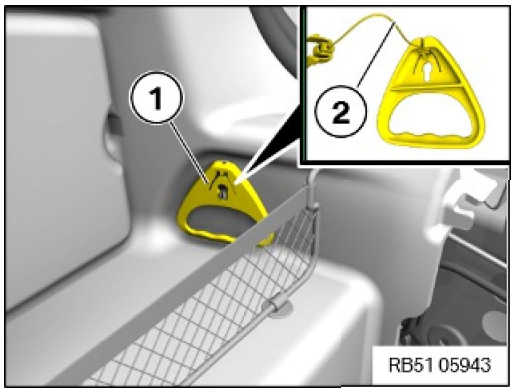
- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).

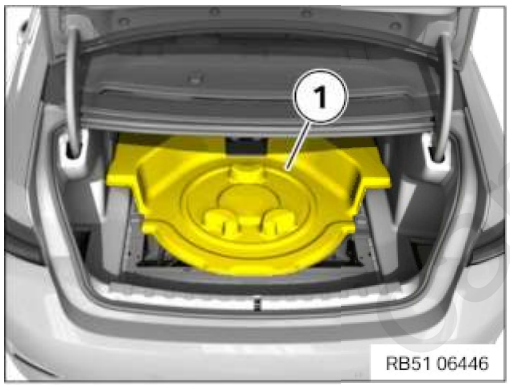
▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

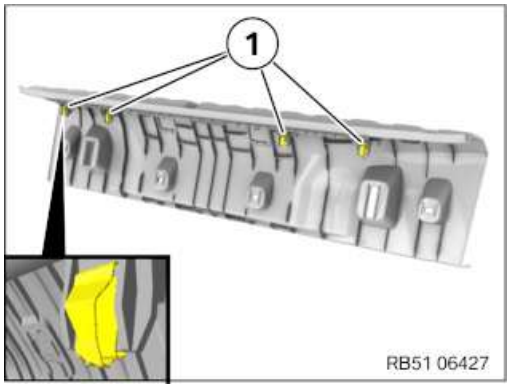
◁

15 – Install the luggage compartment well in front



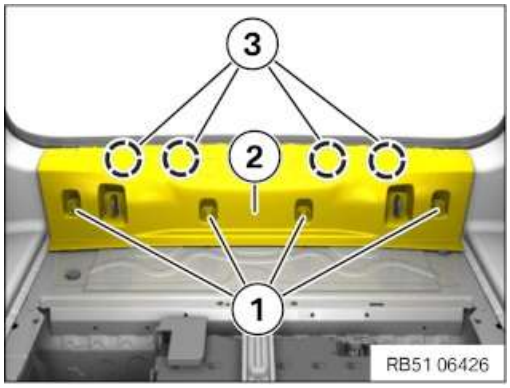
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim



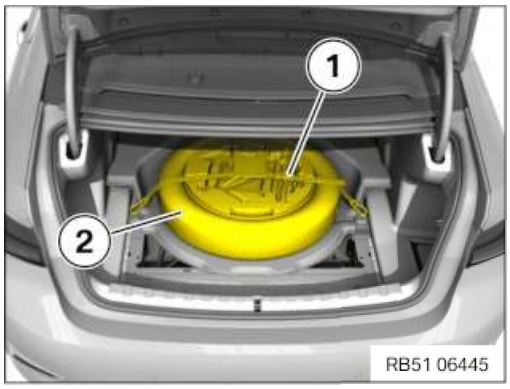
- Check the clamps (1) for damage and renew if necessary.

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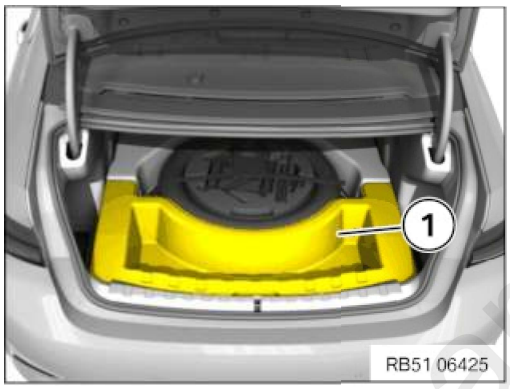
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

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Rear bumper panel guide on rear centre guide Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel Used in step 12

Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel Used in step 12

Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

cardiagn.com

66 32 185 Removing and installing rear radar sensor short range right

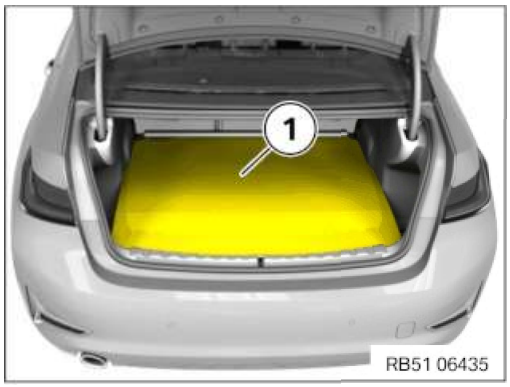
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

PRELIMINARY WORK

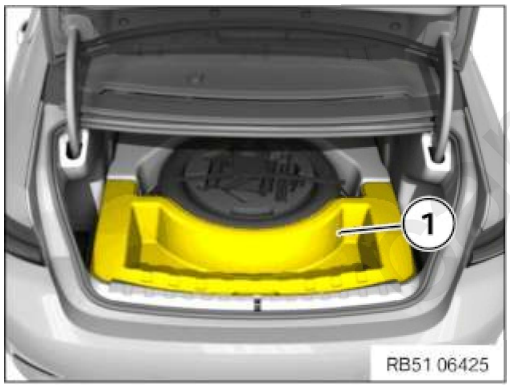
1 – Removing the luggage compartment floor trim panel



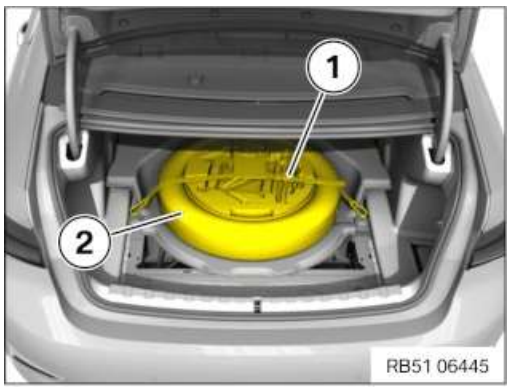
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

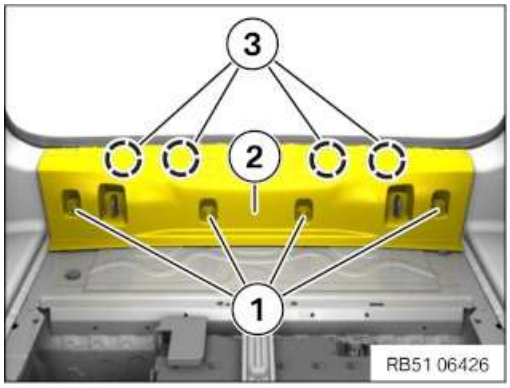


- Remove rear luggage compartment well (1).



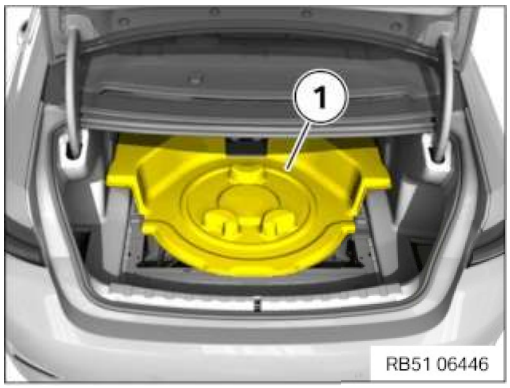
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

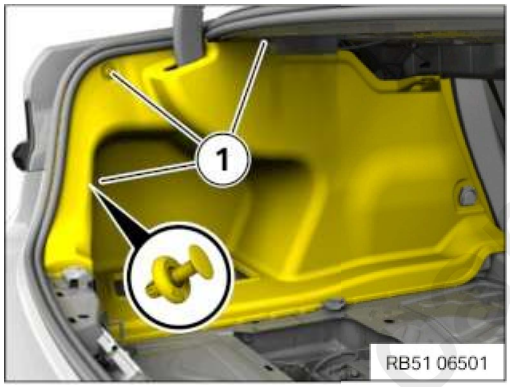
4 – Removing front luggage compartment well



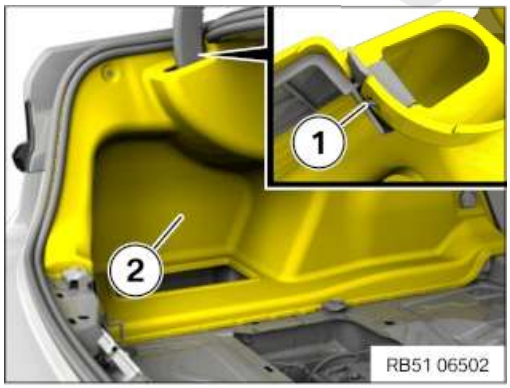
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▸ Partially remove luggage compartment wheel arch trim on left



- Loosen the expanding rivet (1).

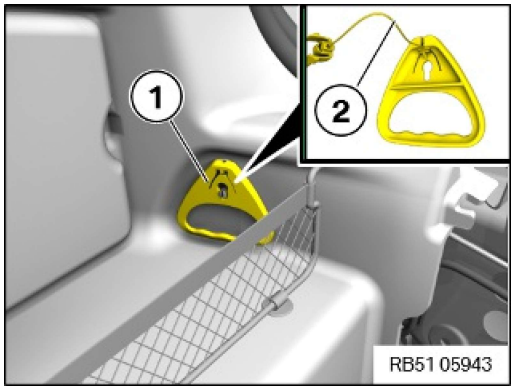


- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ Partially remove luggage compartment wheel arch panel on right

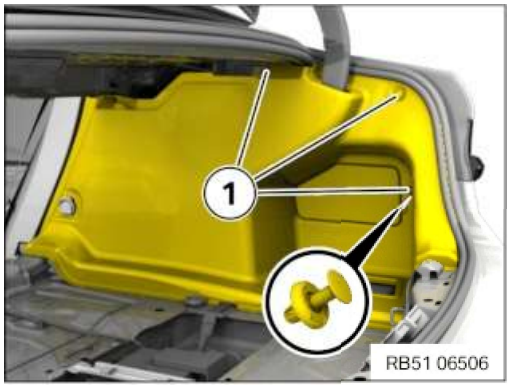
▹ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)

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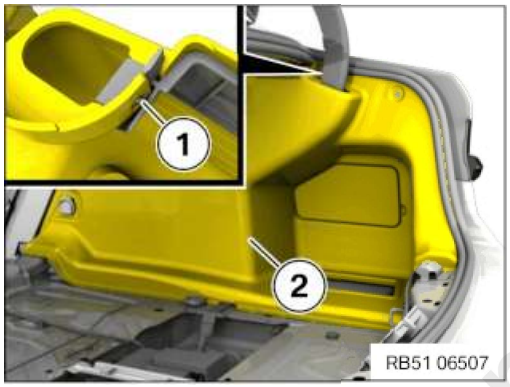


- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

◁



- Loosen the expanding rivet (1).



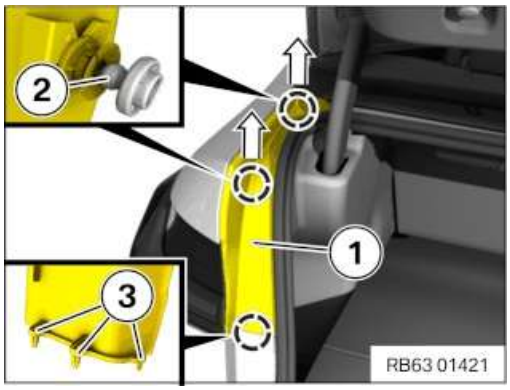
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the trim in the water channel**



- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

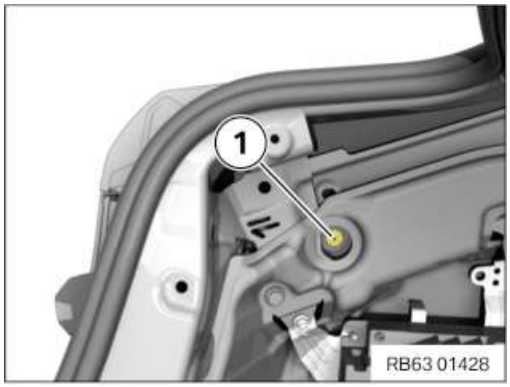
7 – Remove both rear lights from the side panel

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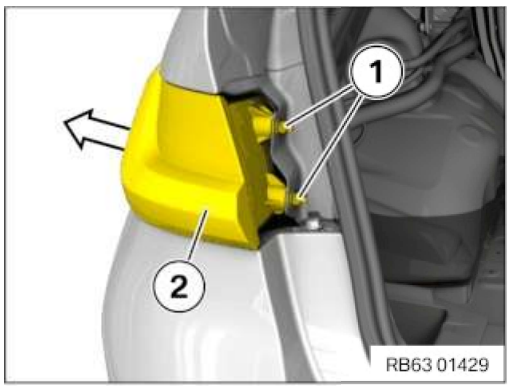
NOTICE

Description is for left component only. Procedure on the right side is identical.

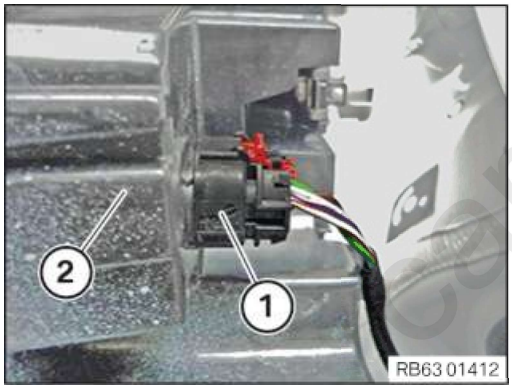
▶ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Remove rear bumper panel

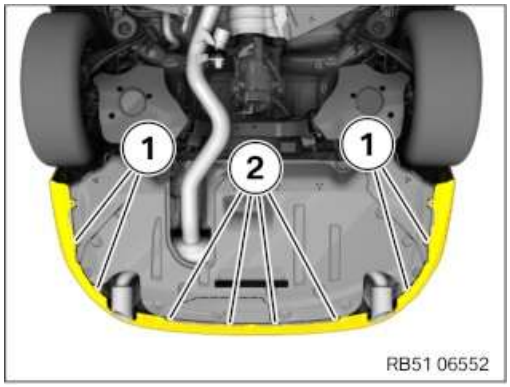


NOTICE

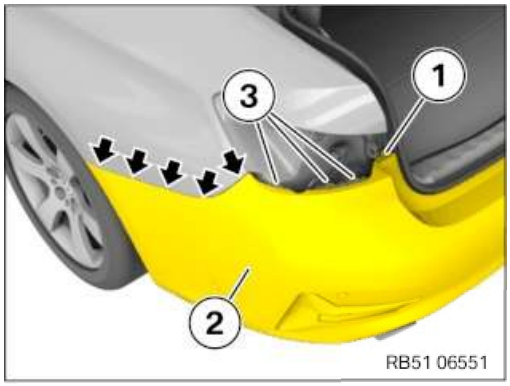
Perform the operations on the left and right side.

- Loosen screws (1).

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- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.



NOTICE

Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).



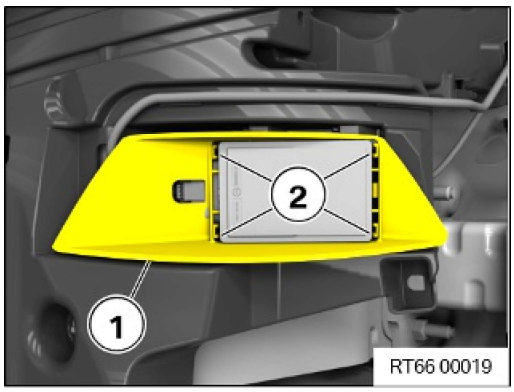
- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

MAIN WORK

9 – Removing the rear side radar sensor

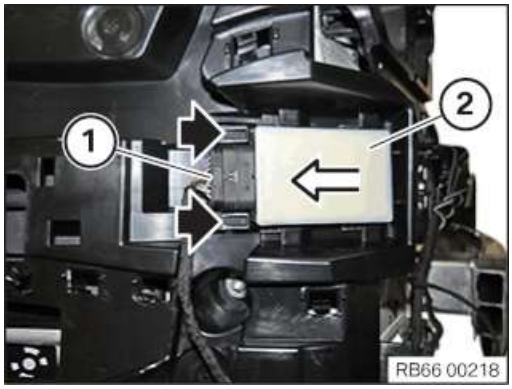
NOTICE

Description is for left component only. Procedure on the right side is identical.



- Unlock and remove funnel (1) from retaining lugs (2).

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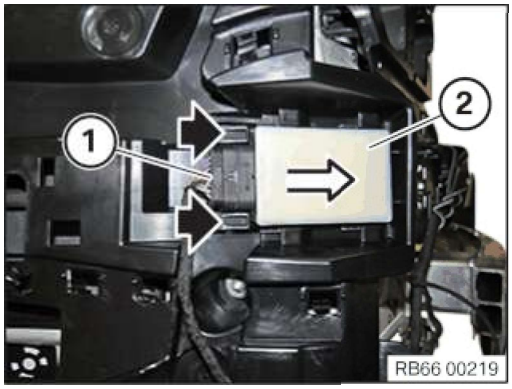


- Unlock and disconnect connector (1).
- Unlock the latch mechanisms and remove the lane change warning sensor (2) in the direction of the arrow.

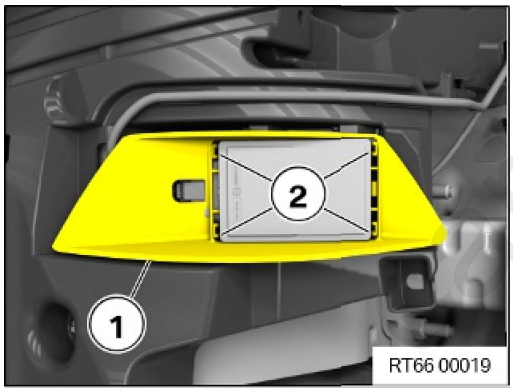
10 – Installing rear side radar sensor

NOTICE

Description is for left component only. Procedure on the right side is identical.



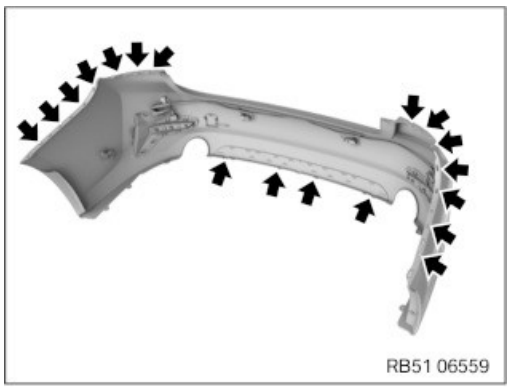
- Correctly position the lane change warning sensor (2) and move it in the direction of the arrow.
- Make sure that the latch mechanisms are properly locked at the marked points.
- Insert and connect the connector (1).



- Position funnel (1) and lock it with the retaining lugs (2).

POSTPROCESSES

11 – Install rear bumper panel



Check

- Check the latch mechanisms (arrows) for damage.

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Result

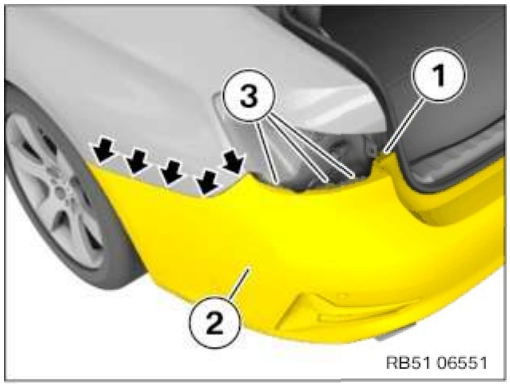
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



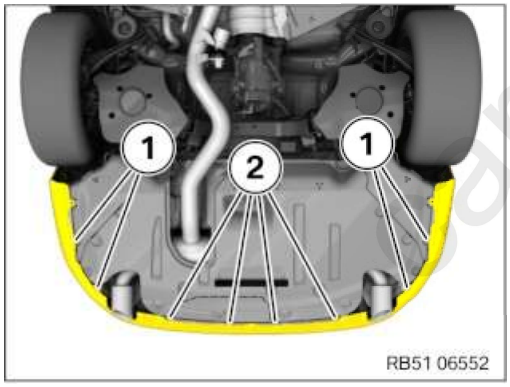
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm



NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

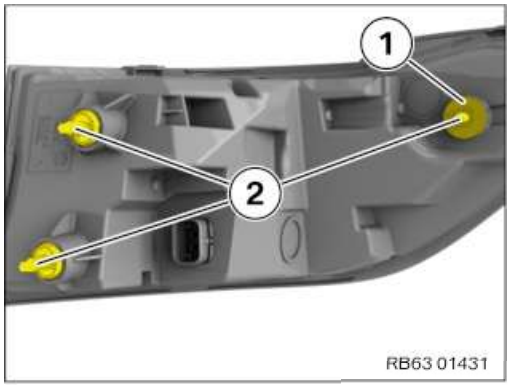
12 – Install both rear lights on the side panel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▶ **Install the rear light on the side panel**

Check



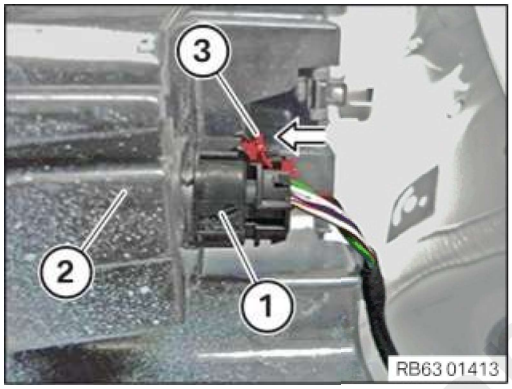
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

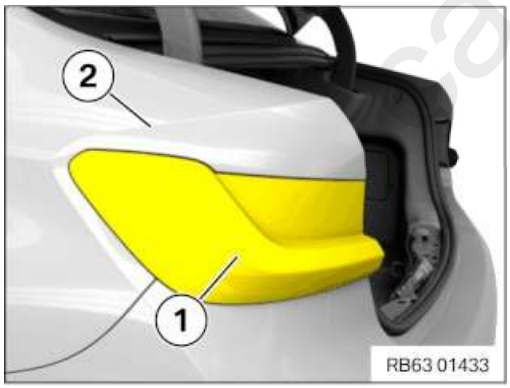
Measure

- Replace rear light.

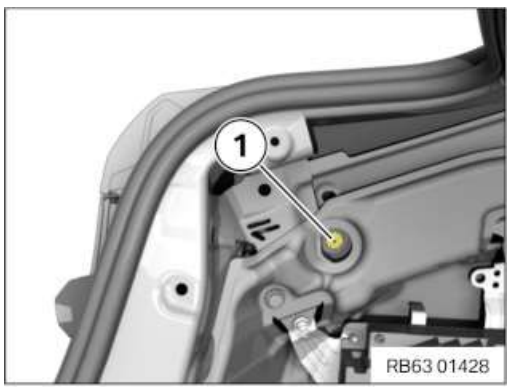


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

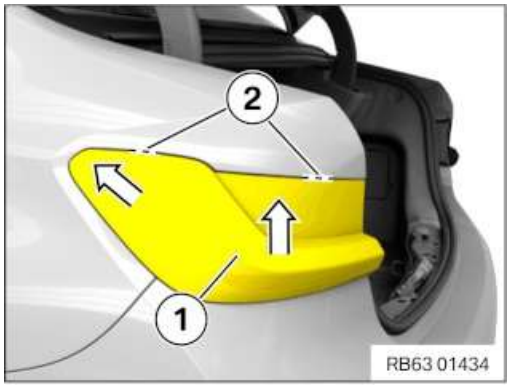


- Position the rear light on the side panel (1) on the side panel (2).

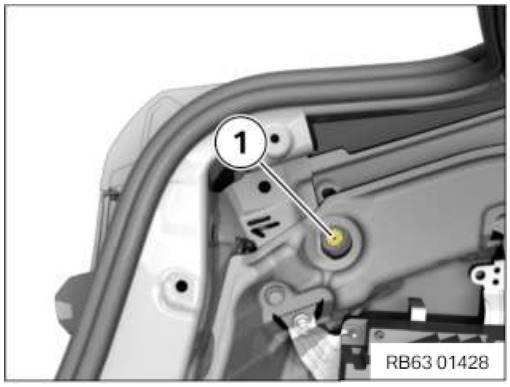


- Position the nut (1).

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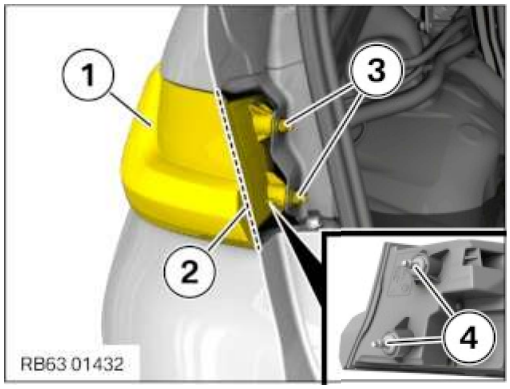
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

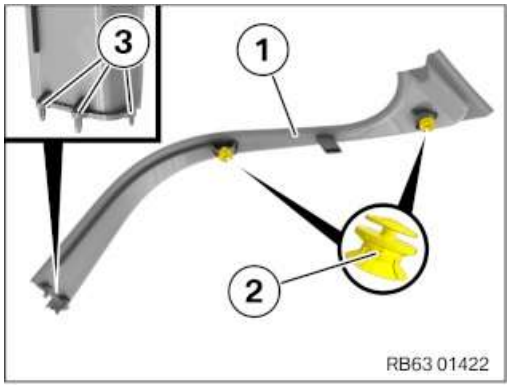
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the trim in the water channel**



Check

- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

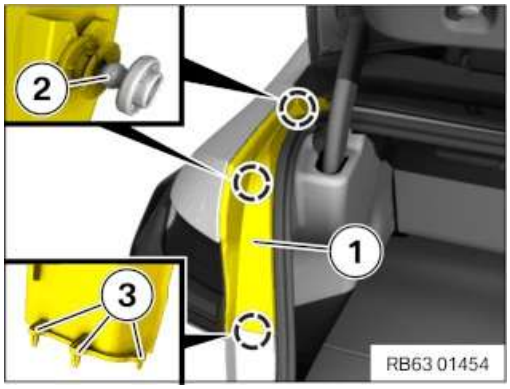
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Result

» The guides are damaged.

Measure

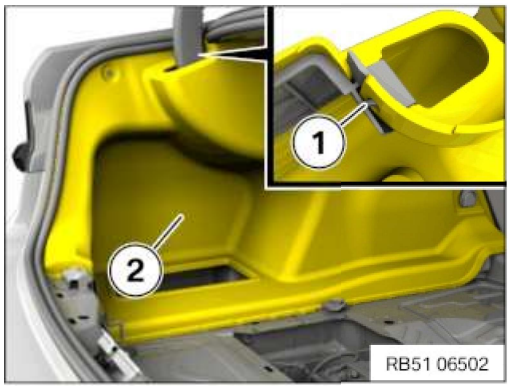
- Renew trim in the water channel .



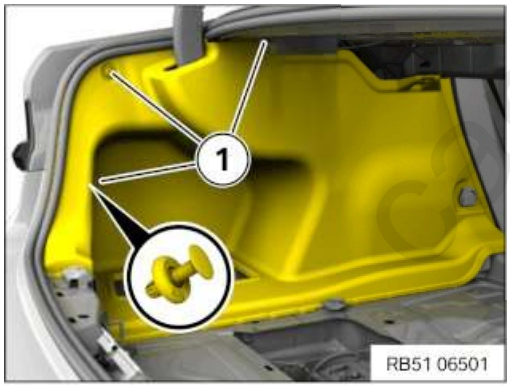
- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

14 – Installing both luggage compartment wheel arch trim panels partially

▸ Partially installing the left luggage compartment wheel arch trim panel

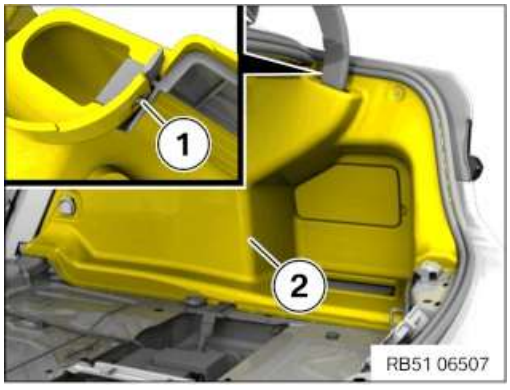


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



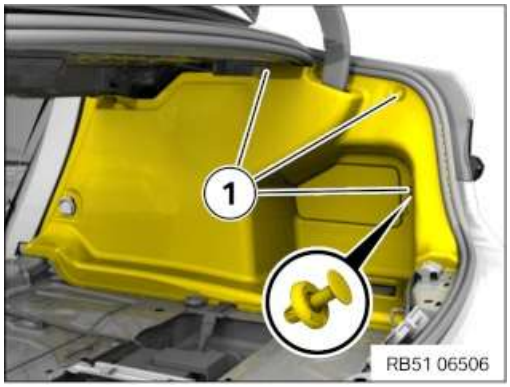
- Secure expanding rivet (1).

▸ Partially installing right luggage compartment wheel arch trim panel



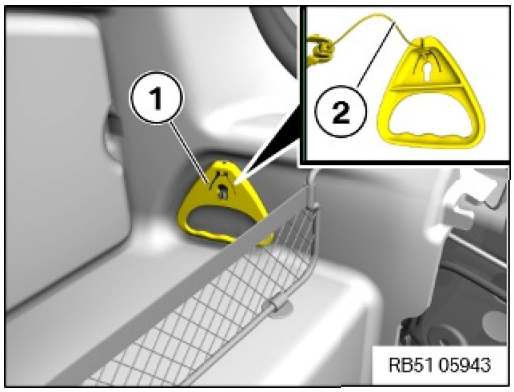
- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).

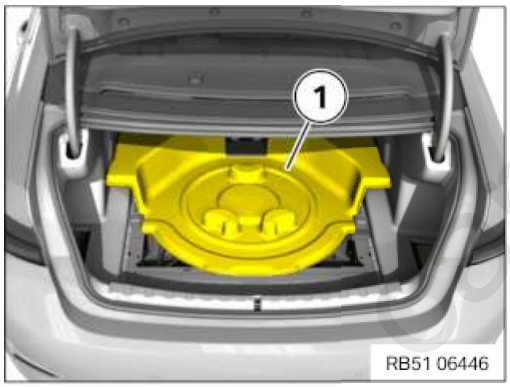
▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

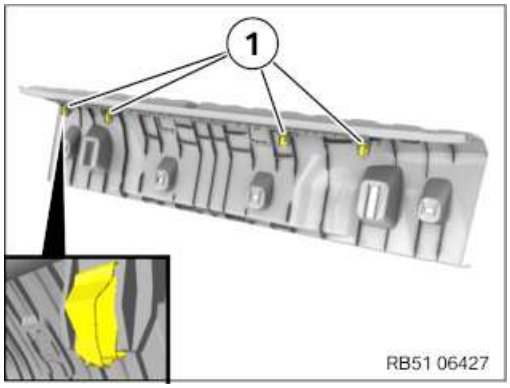
◁

15 – Install the luggage compartment well in front



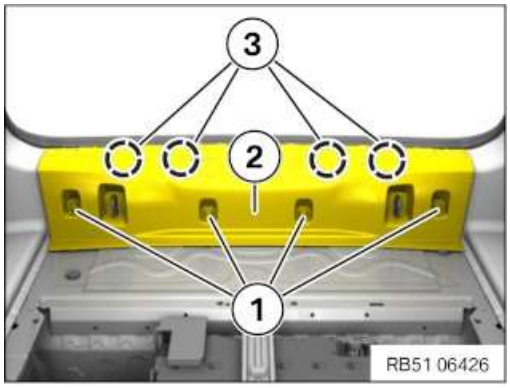
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim



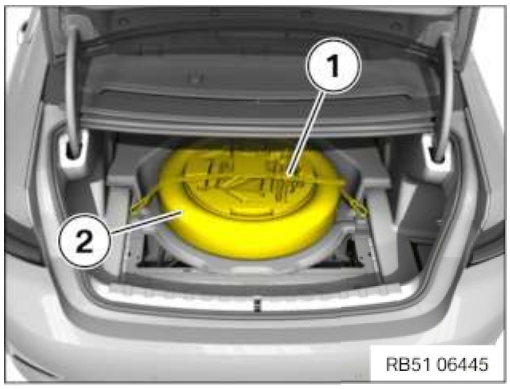
- Check the clamps (1) for damage and renew if necessary.

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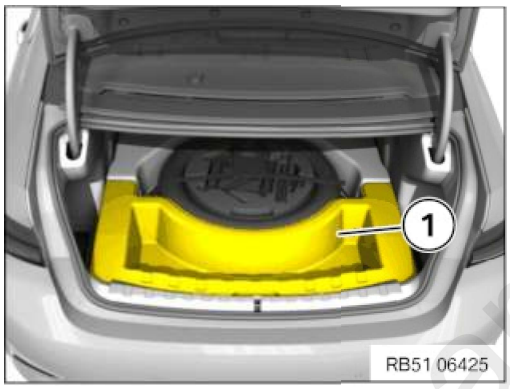
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

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Rear bumper panel guide on rear centre guide Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel Used in step 12

Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel Used in step 12

Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

cardiagn.com

66 32 165 Removing and installing side radar sensor short range front left

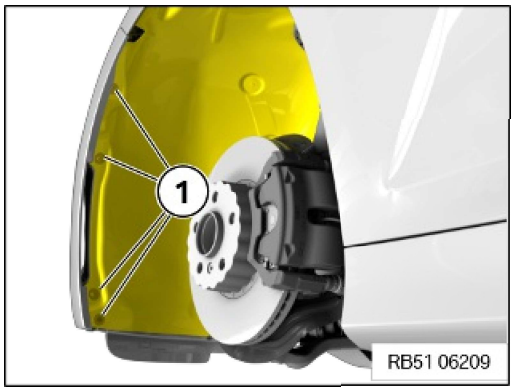
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

PRELIMINARY WORK

1 – Partially removing front wheel arch trim panel



NOTICE

To provide a better overview: Schematic diagram without front wheel.

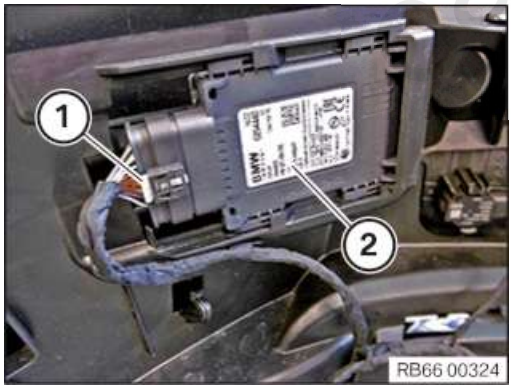
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

MAIN WORK

2 – Removing front side radar

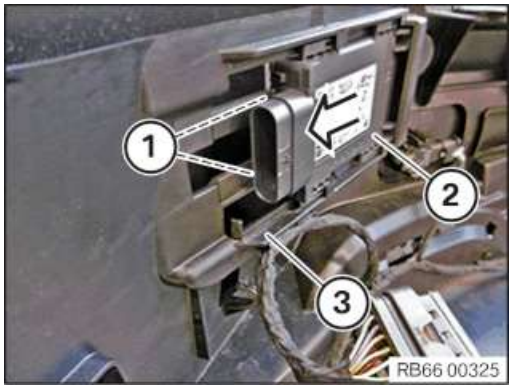
NOTICE

Description is for left component only. Procedure on the right side is identical.



- Unlock and disconnect the connector (1) on the side radar (2).

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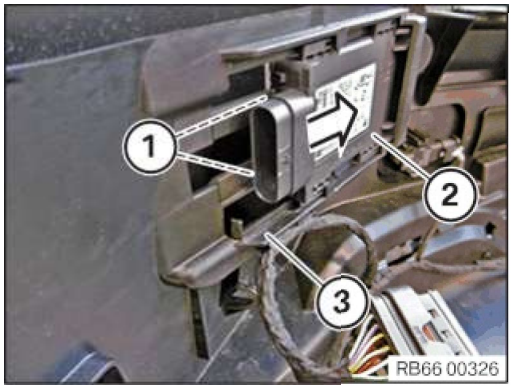


- Unlock lock (1).
- Push the side radar (2) out of the holder in the direction of the arrow (3) and remove it.

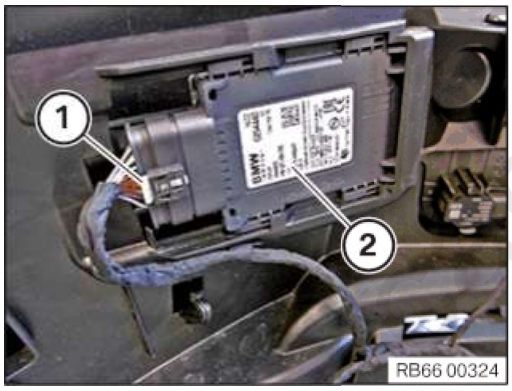
3 – Installing front side radar

NOTICE

Description is for left component only. Procedure on the right side is identical.



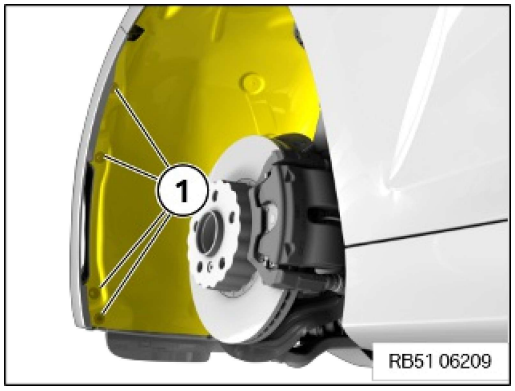
- Slide side radar (2) into holder (3) in the direction of the arrow.
- Lock lock (1).



- Connect and lock connector (1) on side radar (2).

POSTPROCESSES

4 – Partially installing front wheel arch trim panel



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

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Additional Information

Overview of Tightening Torques

Wheel arch trim panel, front Used in step 4

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

cardiagn.com

66 32 170 Removing and installing side radar sensor short range front right

TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

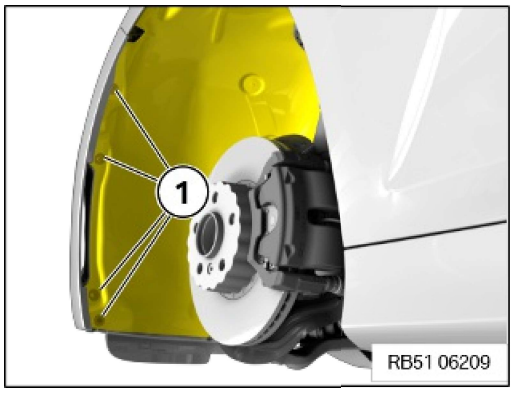
Do not attach labels in the sampling range of the sensor.

PRELIMINARY WORK

1 – Partially removing front right wheel arch trim panel

NOTICE

Description is for left component only. Procedure on the right side is identical.



NOTICE

To provide a better overview: Schematic diagram without front wheel.

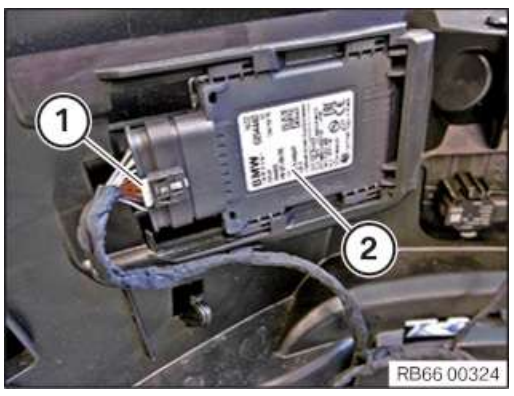
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

MAIN WORK

2 – Removing front side radar

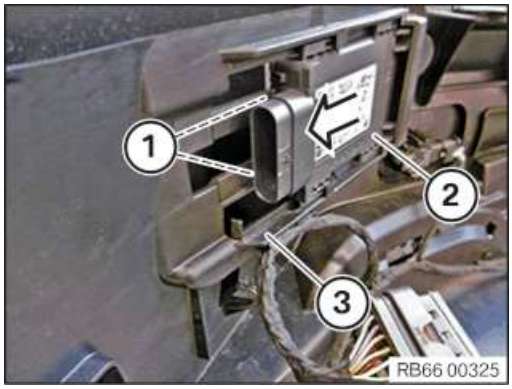
NOTICE

Description is for left component only. Procedure on the right side is identical.



- Unlock and disconnect the connector (1) on the side radar (2).

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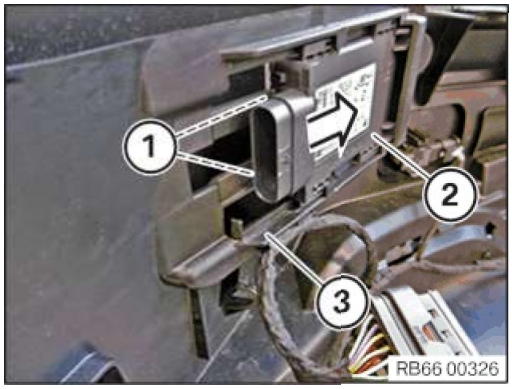


- Unlock lock (1).
- Push the side radar (2) out of the holder in the direction of the arrow (3) and remove it.

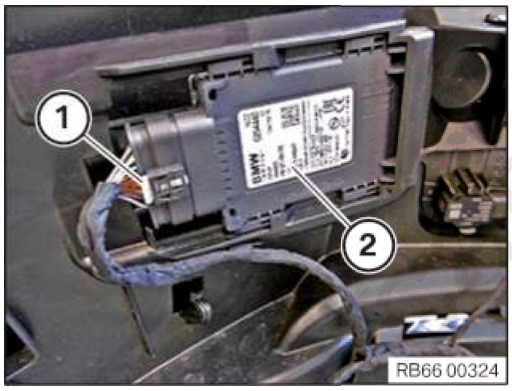
3 – Installing front side radar

NOTICE

Description is for left component only. Procedure on the right side is identical.



- Slide side radar (2) into holder (3) in the direction of the arrow.
- Lock lock (1).



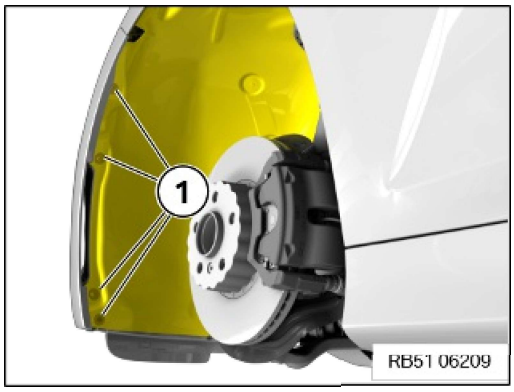
- Connect and lock connector (1) on side radar (2).

fdiagn.com

4 – Partly installing the right front wheel arch trim panel

NOTICE

Description is for left component only. Procedure on the right side is identical.



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Additional Information

Overview of Tightening Torques

Wheel arch trim panel, front Used in step 4

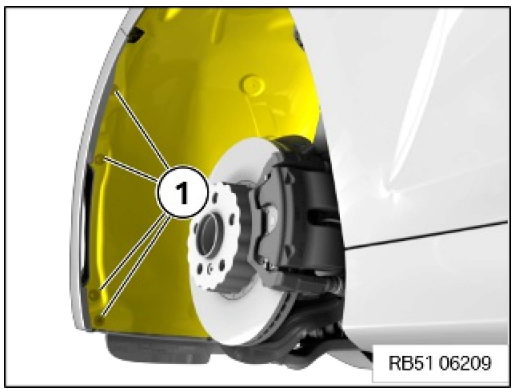
Thermoplastic hexagon screw		Tightening torque	2,6 Nm

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66 33 110 Removing and installing ultrasonic sensor for Parking Manoeuvring Assistant, front left

PRELIMINARY WORK

1 – Partially removing front wheel arch trim panel



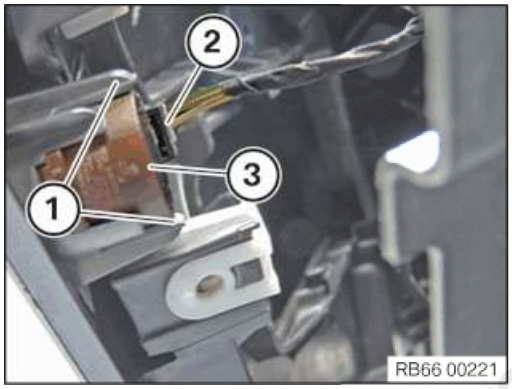
NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

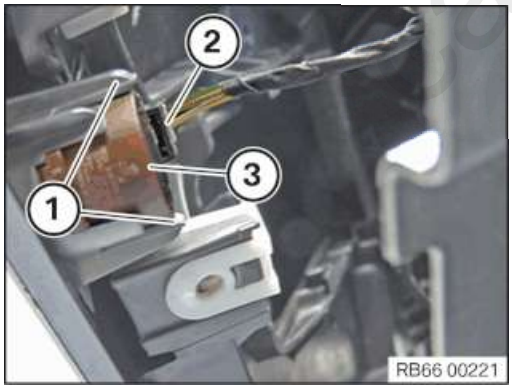
MAIN WORK

2 – Removing the ultrasonic sensor for the front Parking Manoeuvring Assistant (PMA)



- Unlock the latch mechanisms (1).
- Unlock plug connection (2) and disconnect.
- Remove the ultrasonic sensor (3).

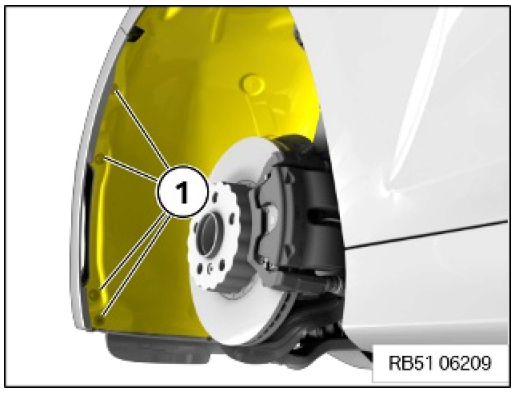
3 – Installing the ultrasonic sensor for the front Parking Manoeuvring Assistant (PMA)



- Position the ultrasonic sensor (3) correctly and engage it in the latch mechanisms (1).
- Connect connectors (2) and lock.

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4 – Partially installing front wheel arch trim panel



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Additional Information

Overview of Tightening Torques

Wheel arch trim panel, front Used in step 4

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

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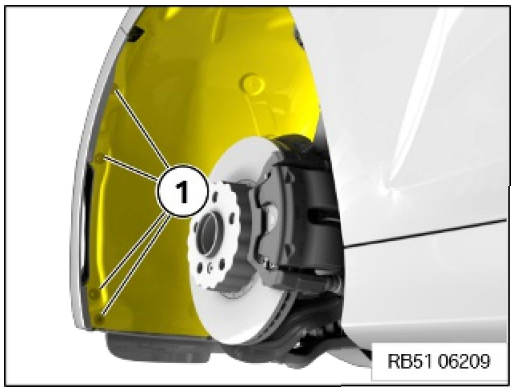
66 33 120 Removing and installing ultrasonic sensor for Parking Manoeuvring Assistant, front right

PRELIMINARY WORK

1 – Partially removing front right wheel arch trim panel

NOTICE

Description is for left component only. Procedure on the right side is identical.



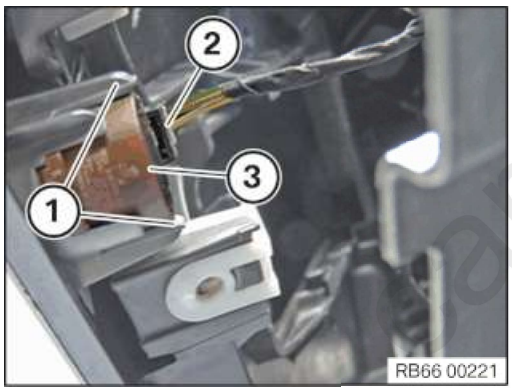
NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

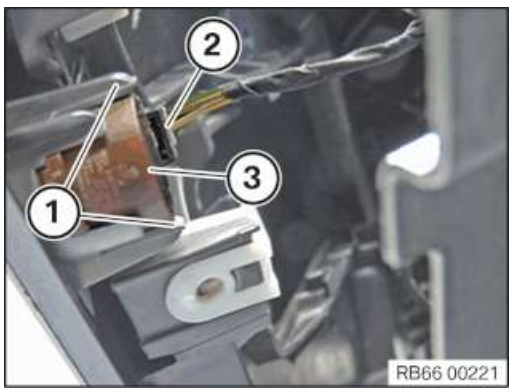
MAIN WORK

2 – Removing the ultrasonic sensor for the front Parking Manoeuvring Assistant (PMA)



- Unlock the latch mechanisms (1).
- Unlock plug connection (2) and disconnect.
- Remove the ultrasonic sensor (3).

3 – Installing the ultrasonic sensor for the front Parking Manoeuvring Assistant (PMA)



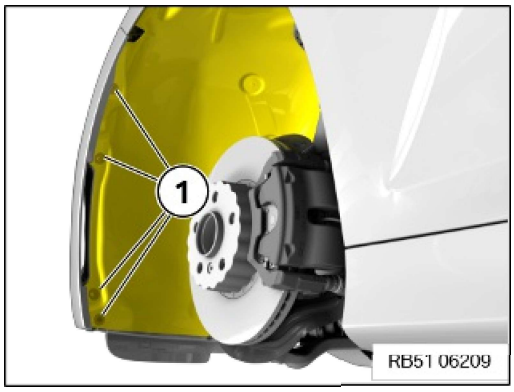
- Position the ultrasonic sensor (3) correctly and engage it in the latch mechanisms (1).
- Connect connectors (2) and lock.

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4 – Partly installing the right front wheel arch trim panel

NOTICE

Description is for left component only. Procedure on the right side is identical.



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Additional Information

Overview of Tightening Torques

Wheel arch trim panel, front Used in step 4

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

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66 33 140 Removing and installing ultrasonic sensor for Parking Manoeuvring Assistant, rear left

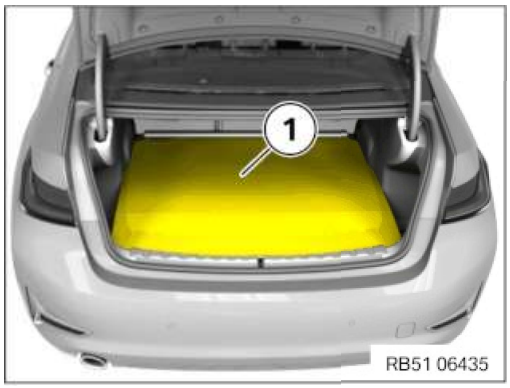
TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

Do not attach labels in the sampling range of the sensor.

PRELIMINARY WORK

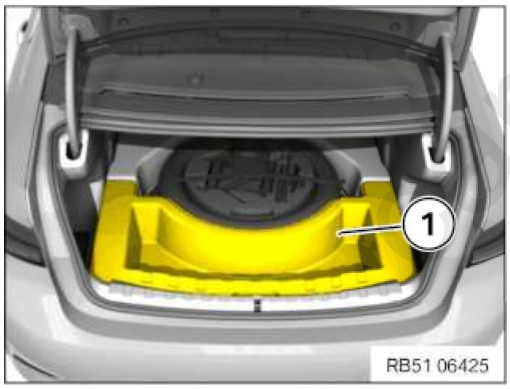
1 – Removing the luggage compartment floor trim panel



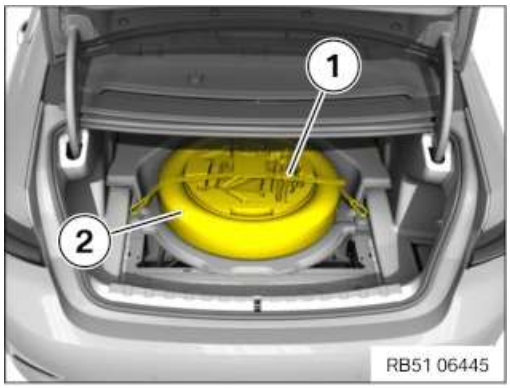
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

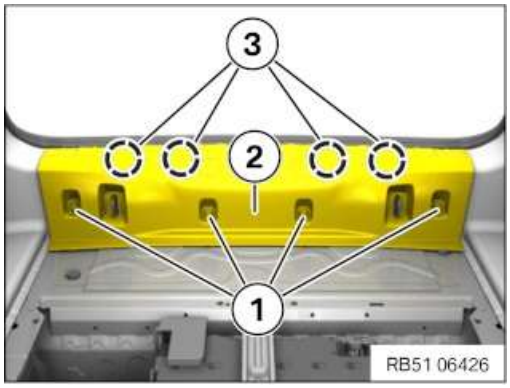


- Remove rear luggage compartment well (1).



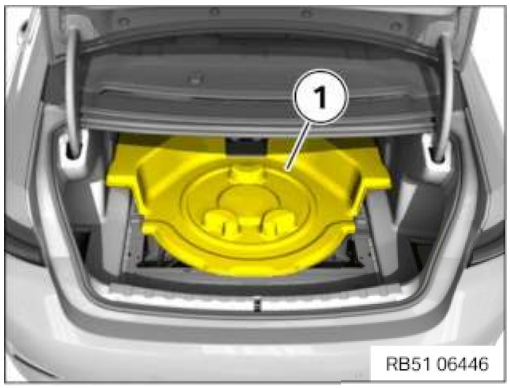
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

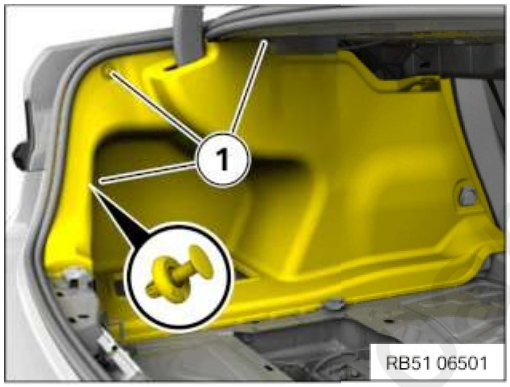
4 – Removing front luggage compartment well



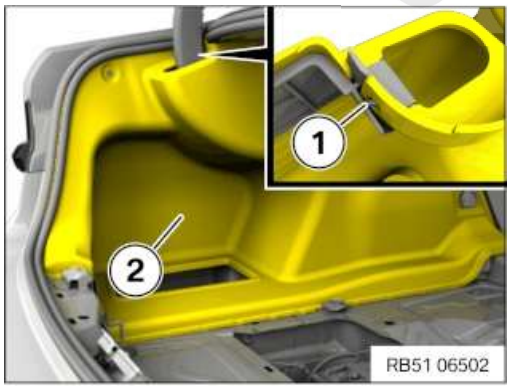
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▸ Partially remove luggage compartment wheel arch trim on left



- Loosen the expanding rivet (1).

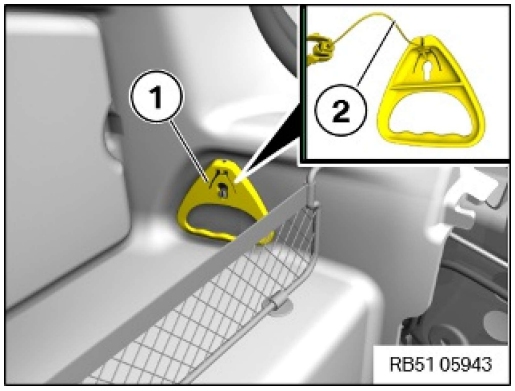


- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ Partially remove luggage compartment wheel arch panel on right

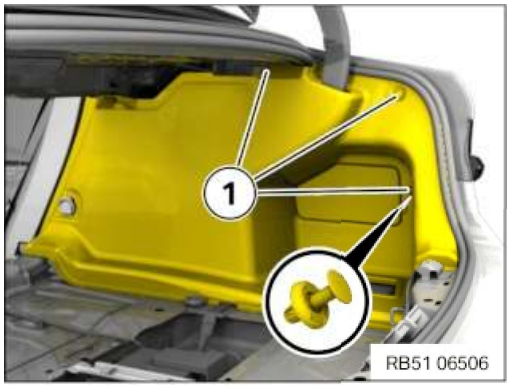
▹ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)

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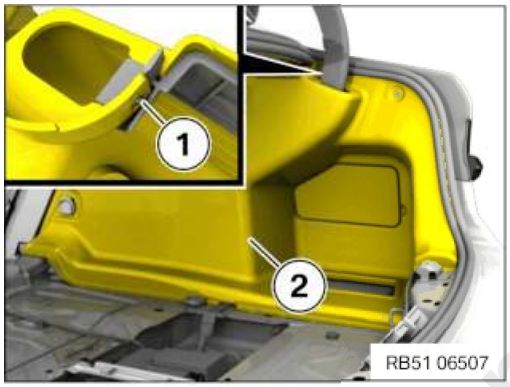


- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

◁



- Loosen the expanding rivet (1).



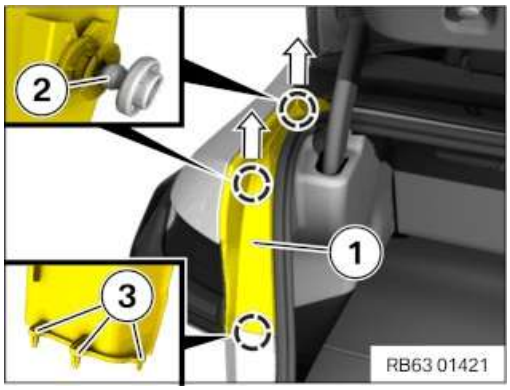
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the trim in the water channel**



- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

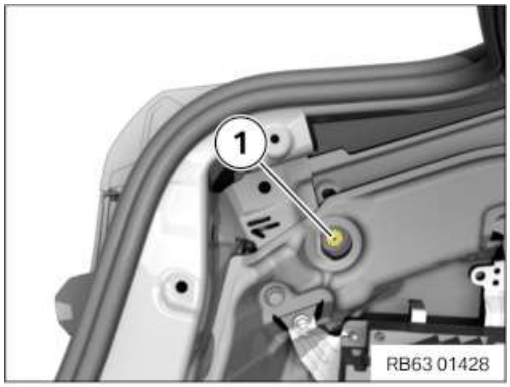
7 – Remove both rear lights from the side panel

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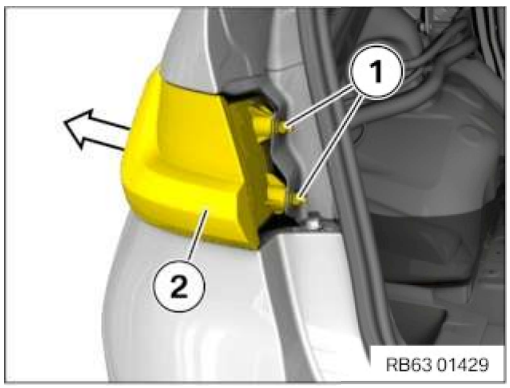
NOTICE

Description is for left component only. Procedure on the right side is identical.

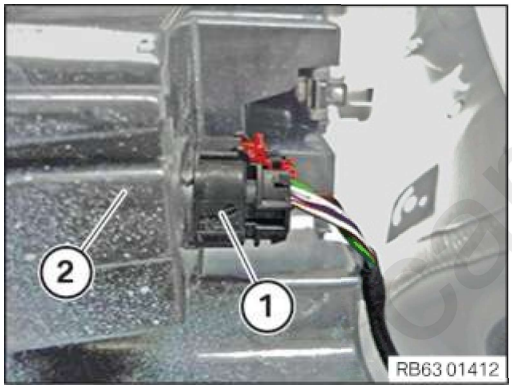
▶ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Remove rear bumper panel

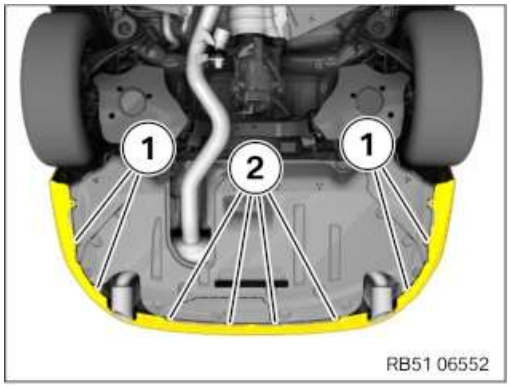


NOTICE

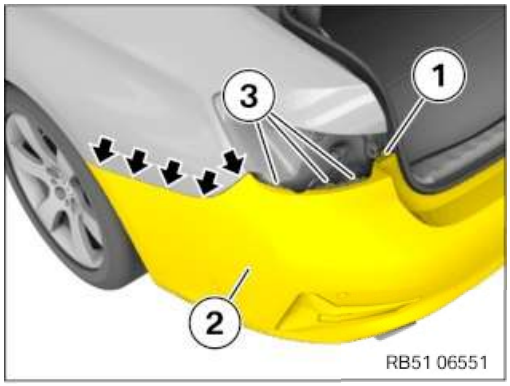
Perform the operations on the left and right side.

- Loosen screws (1).

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- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.



NOTICE

Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).

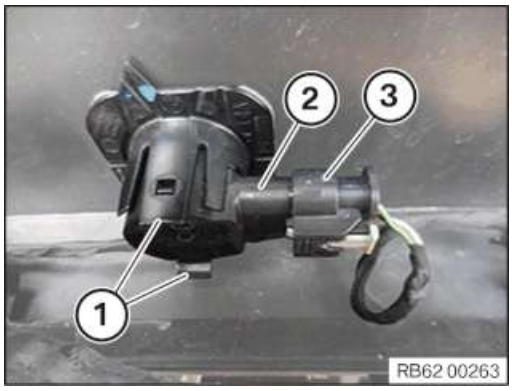


- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

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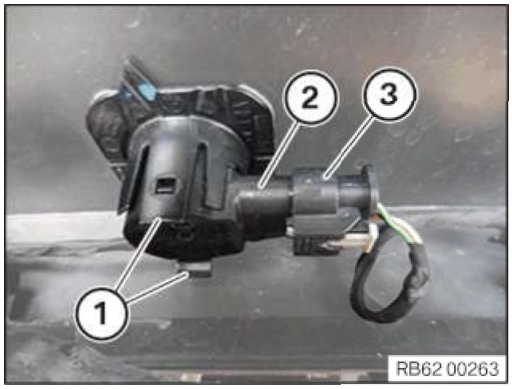
MAIN WORK

9 – Removing the ultrasonic sensor for the rear Parking Manoeuvring Assistant (PMA)



- Unlock the latch mechanisms (1).
- Unlock plug connection (3) and disconnect.
- Remove the ultrasonic sensor (2).

10 – Installing the ultrasonic sensor for the rear Parking Manoeuvring Assistant (PMA)

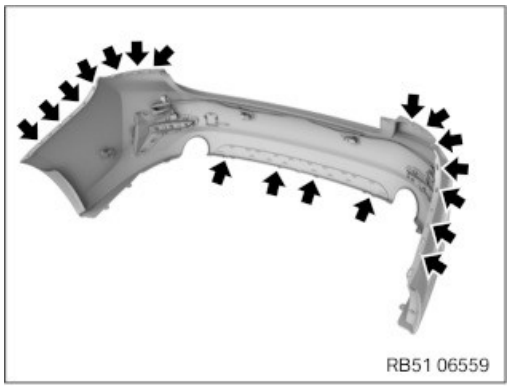


- Position the ultrasonic sensor (2) correctly and engage it in the latch mechanisms (1).
- Connect connectors (3) and lock.

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POSTPROCESSES

11 – Install rear bumper panel



Check

- Check the latch mechanisms (arrows) for damage.

Result

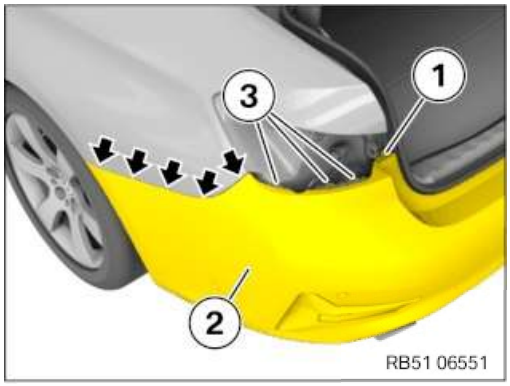
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



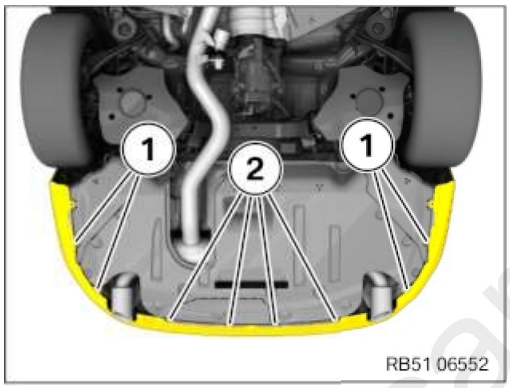
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm



NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

12 – Install both rear lights on the side panel

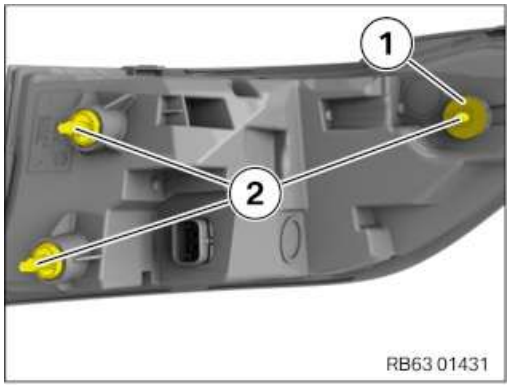
NOTICE

Description is for left component only. Procedure on the right side is identical.

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▸ **Install the rear light on the side panel**

Check



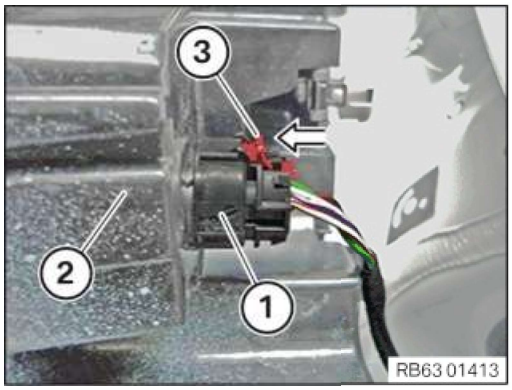
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

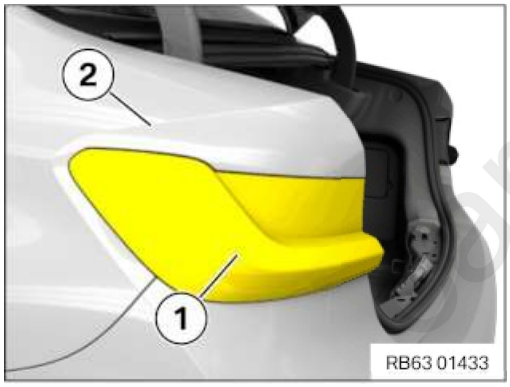
Measure

- Replace rear light.

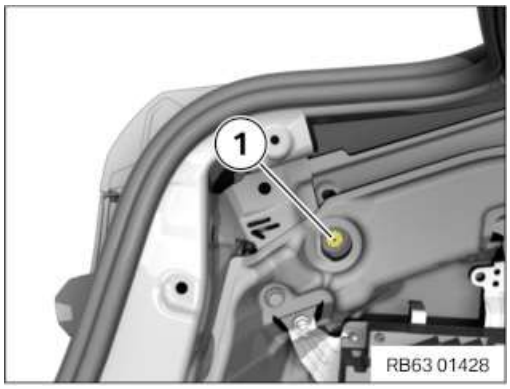


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

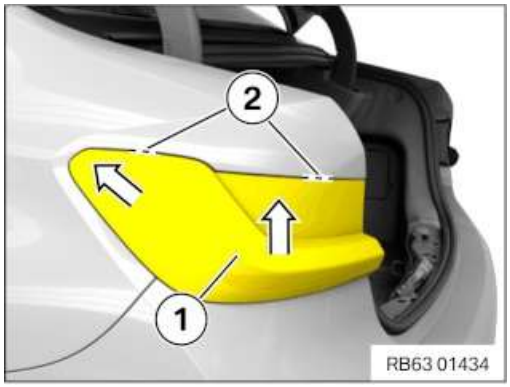


- Position the rear light on the side panel (1) on the side panel (2).

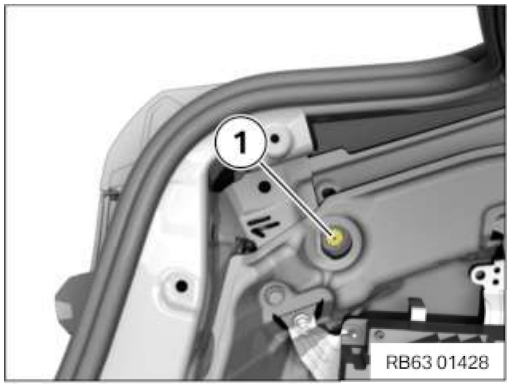


- Position the nut (1).

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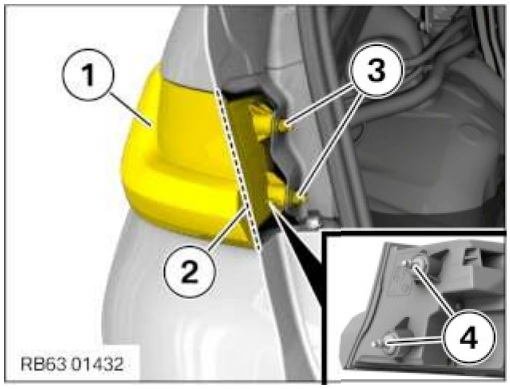
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

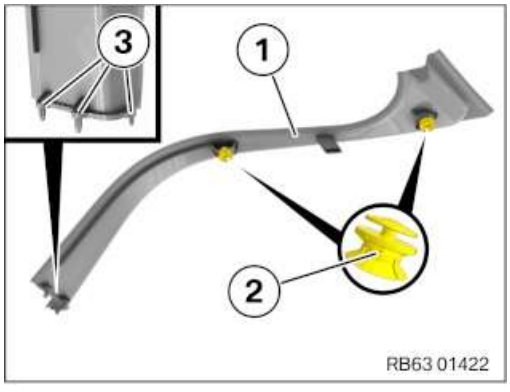
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the trim in the water channel**



Check

- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

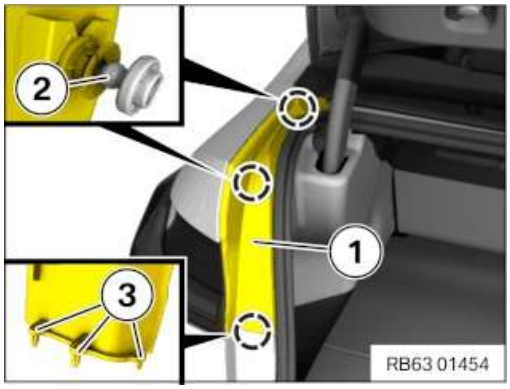
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Result

» The guides are damaged.

Measure

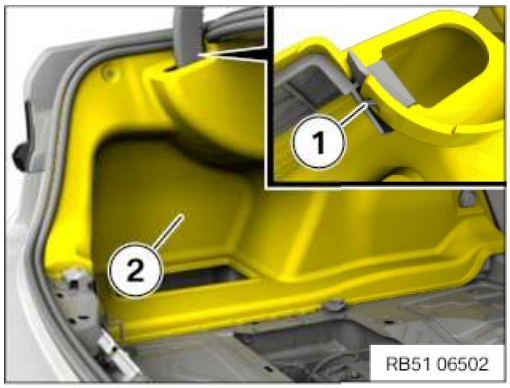
- Renew trim in the water channel .



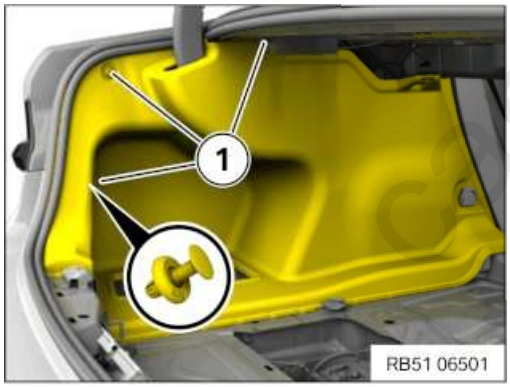
- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

14 – Installing both luggage compartment wheel arch trim panels partially

▸ Partially installing the left luggage compartment wheel arch trim panel

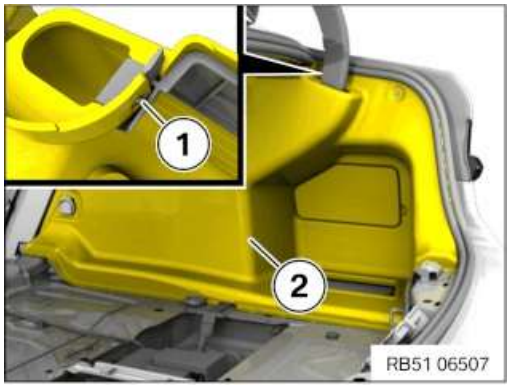


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



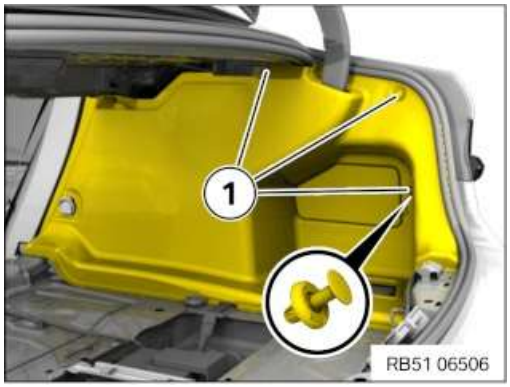
- Secure expanding rivet (1).

▸ Partially installing right luggage compartment wheel arch trim panel



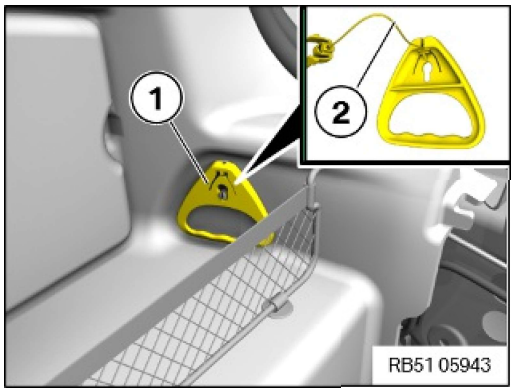
- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).

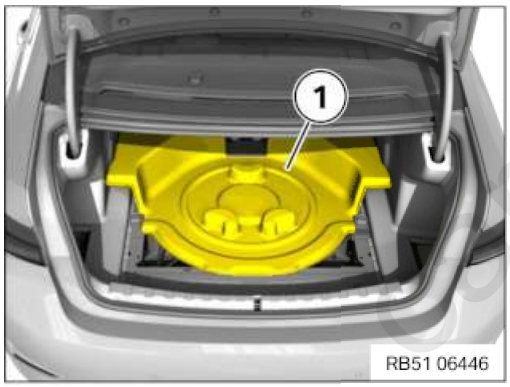
▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

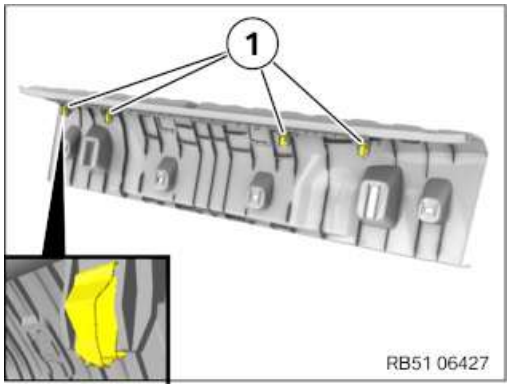
◁

15 – Install the luggage compartment well in front



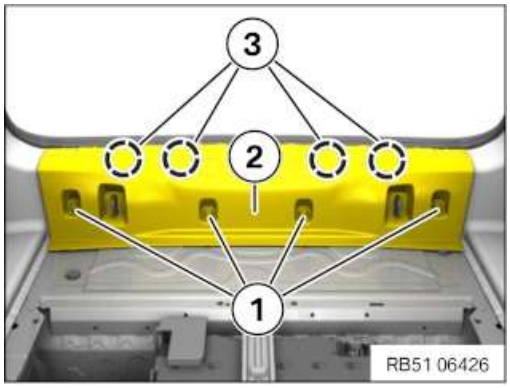
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim



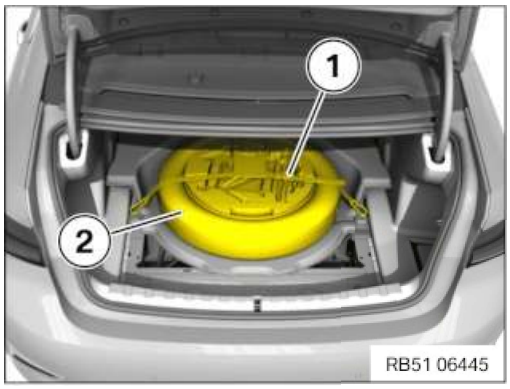
- Check the clamps (1) for damage and renew if necessary.

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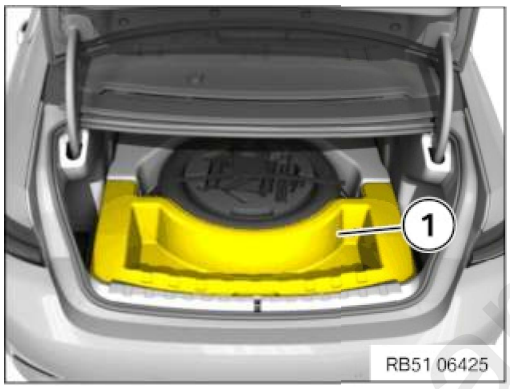
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

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Rear bumper panel guide on rear centre guide Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel Used in step 12

Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel Used in step 12

Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

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66 33 150 Removing and installing ultrasonic sensor for Parking Manoeuvring Assistant, rear right

TECHNICAL INFORMATION

To guarantee the system function in vehicles with lane change warning sensor (optional equipment S5ASA, 05AS, S5ATA, 05AT, S5AUA and 05AU), repainting the bumper panel may not be repainted either in paint stage 1 or paint stage 3.

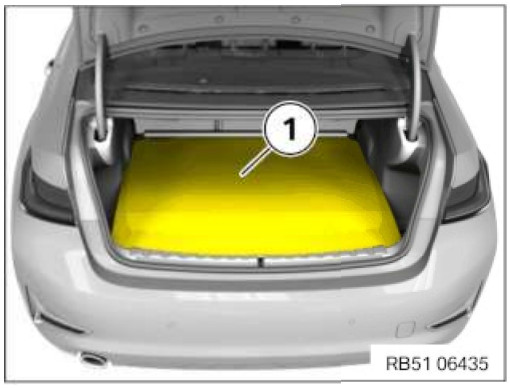
Do not attach labels in the sampling range of the sensor.

NOTICE

Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

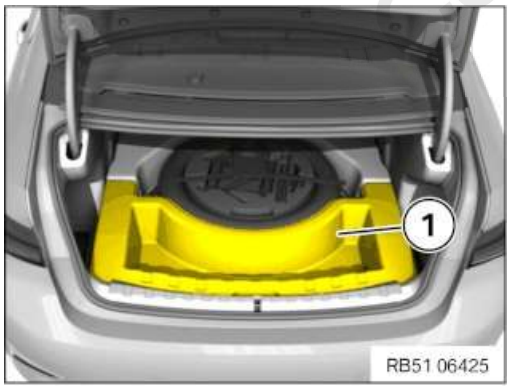
1 – Removing the luggage compartment floor trim panel



- Remove luggage compartment floor trim panel (1).

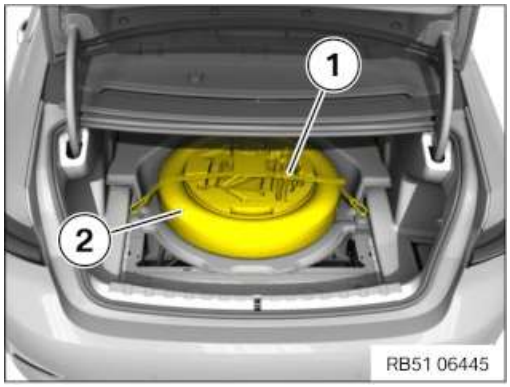
2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**



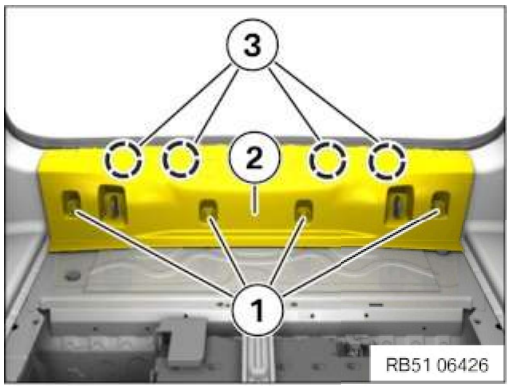
- Remove rear luggage compartment well (1).

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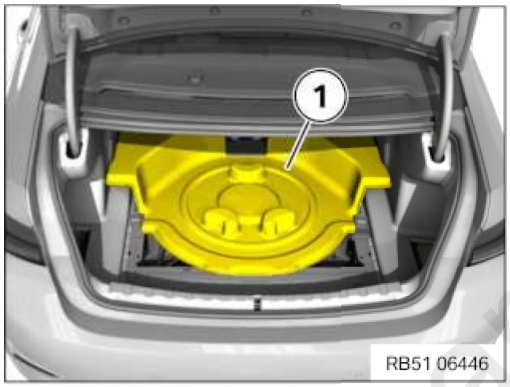
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

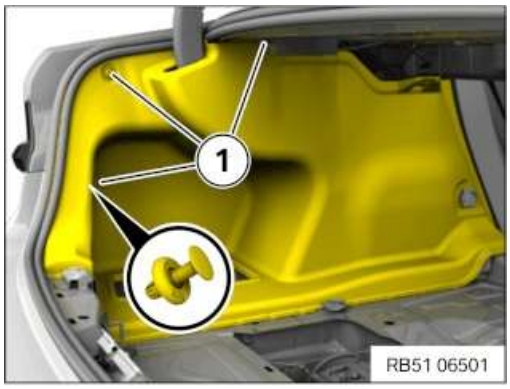
4 – Removing front luggage compartment well



- Guide out and remove front luggage compartment well (1) on the seat belt strap.

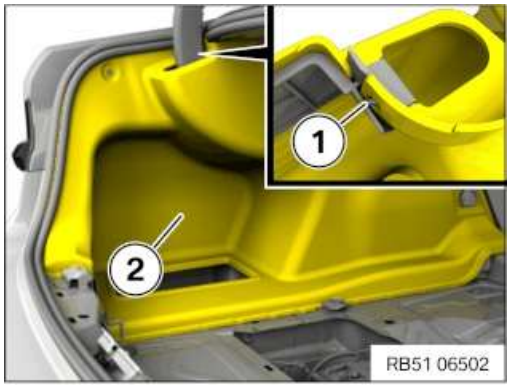
5 – Removing both luggage compartment wheel arch trim panels partially

▸ **Partially remove luggage compartment wheel arch trim on left**



- Loosen the expanding rivet (1).

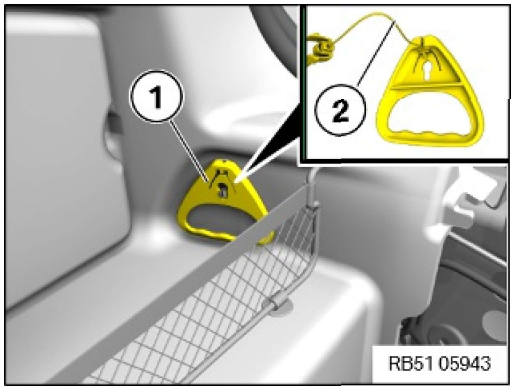
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- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

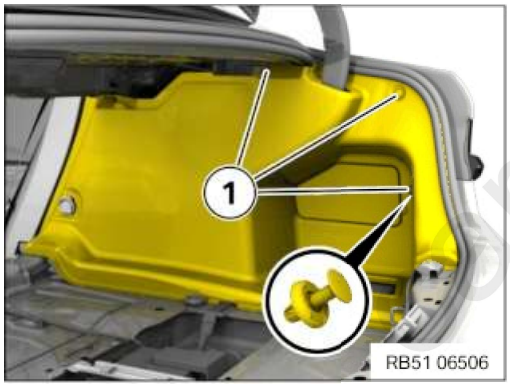
▶ Partially remove luggage compartment wheel arch panel on right

▷ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)

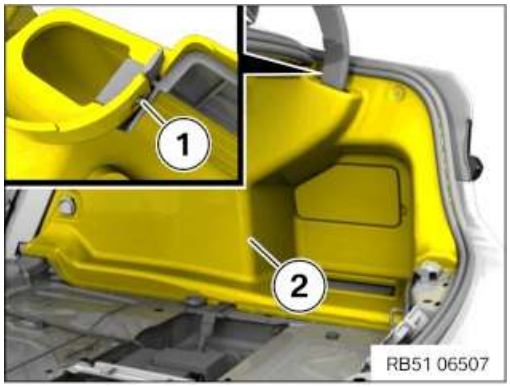


- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

◁



- Loosen the expanding rivet (1).



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

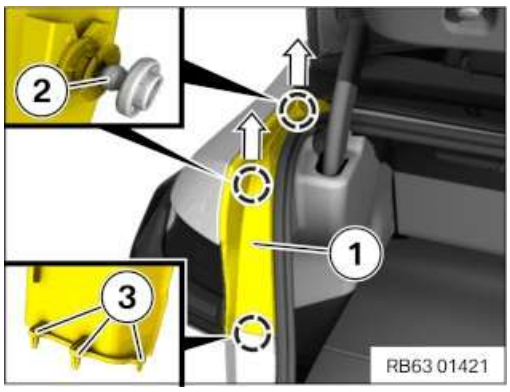
6 – Removing both trims of water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

autodiagn.com

▶ **Remove the trim in the water channel**



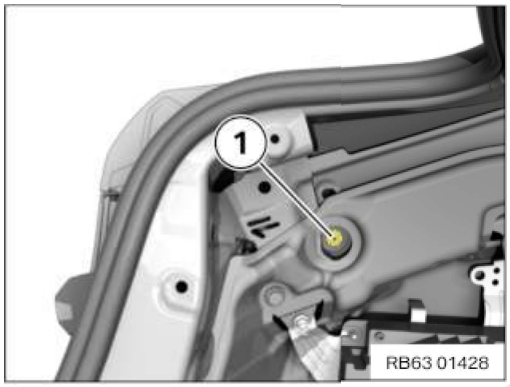
- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

7 – Remove both rear lights from the side panel

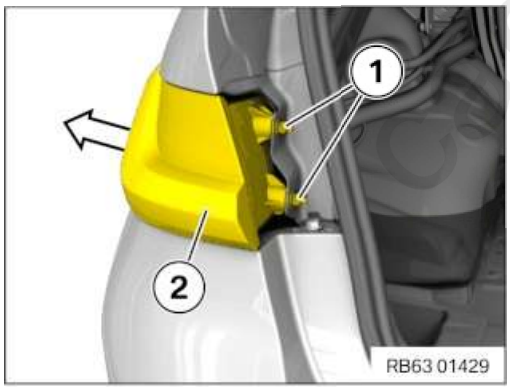
NOTICE

Description is for left component only. Procedure on the right side is identical.

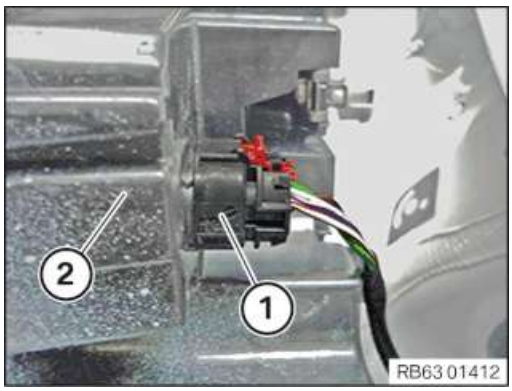
▶ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Remove rear bumper panel

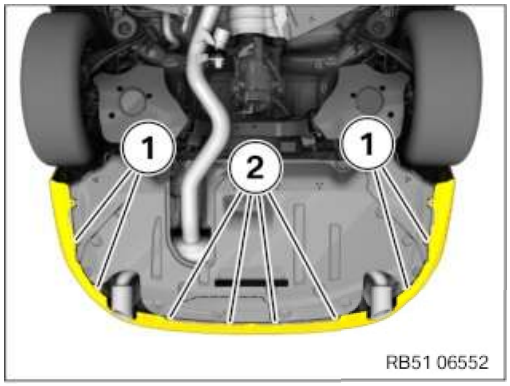
carsdiagn.com



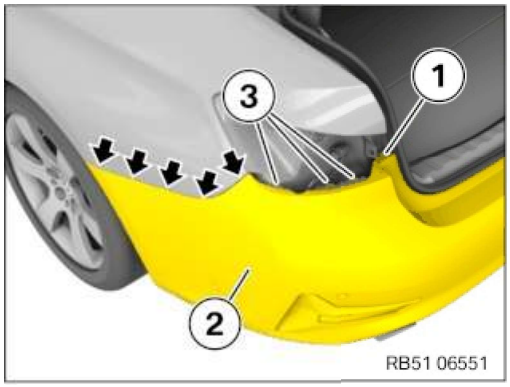
NOTICE

Perform the operations on the left and right side.

- Loosen screws (1).



- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.



NOTICE

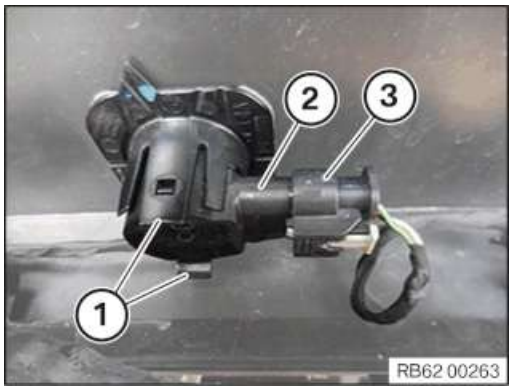
Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).
- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).



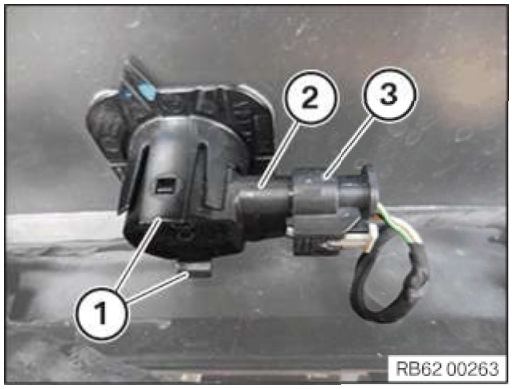
MAIN WORK

9 – Removing the ultrasonic sensor for the rear Parking Manoeuvring Assistant (PMA)



- Unlock the latch mechanisms (1).
- Unlock plug connection (3) and disconnect.
- Remove the ultrasonic sensor (2).

10 – Installing the ultrasonic sensor for the rear Parking Manoeuvring Assistant (PMA)

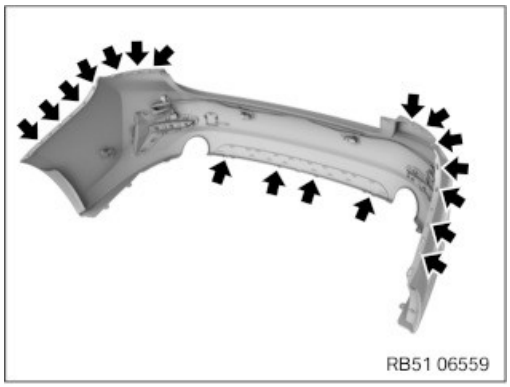


- Position the ultrasonic sensor (2) correctly and engage it in the latch mechanisms (1).
- Connect connectors (3) and lock.

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POSTPROCESSES

11 – Install rear bumper panel



Check

- Check the latch mechanisms (arrows) for damage.

Result

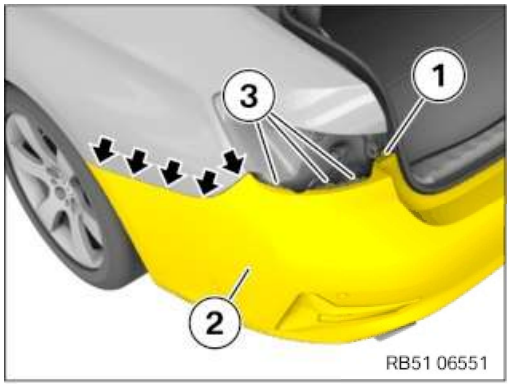
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



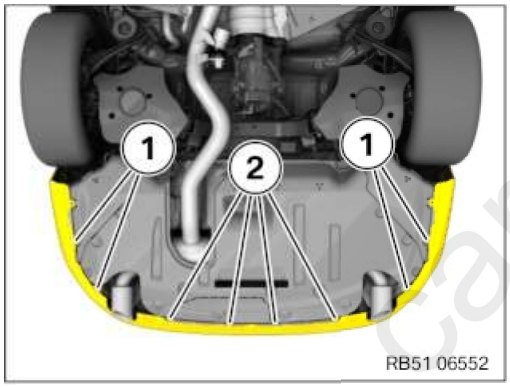
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm



NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

12 – Install both rear lights on the side panel

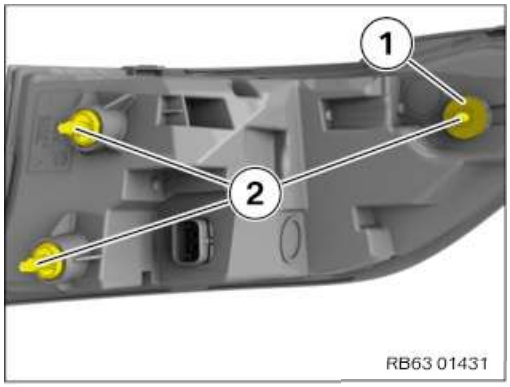
carmagn.com

NOTICE

Description is for left component only. Procedure on the right side is identical.

▶ **Install the rear light on the side panel**

Check



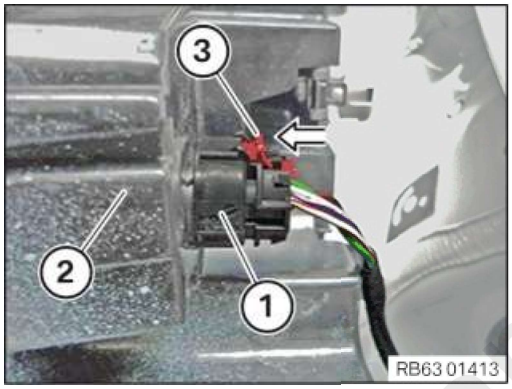
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

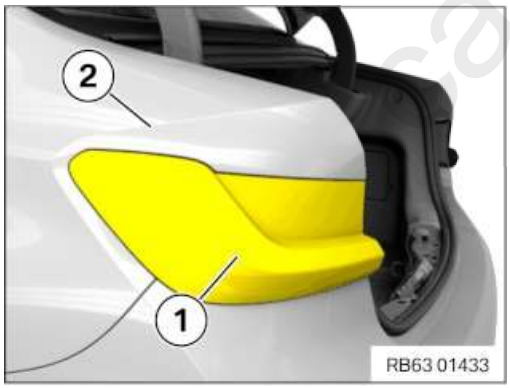
Measure

- Replace rear light.

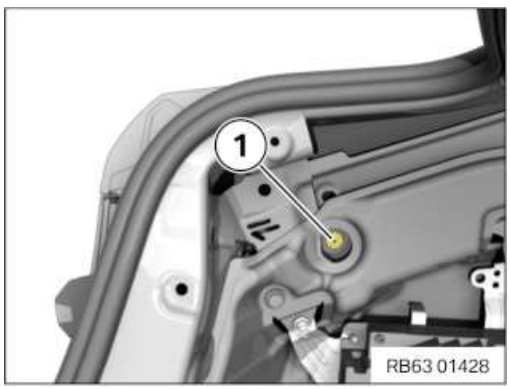


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

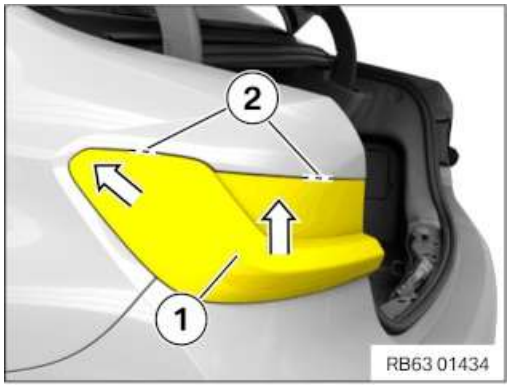


- Position the rear light on the side panel (1) on the side panel (2).

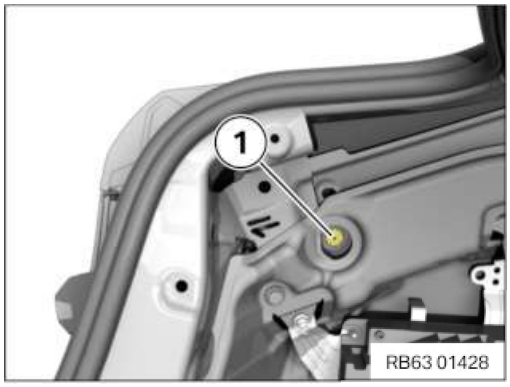


- Position the nut (1).

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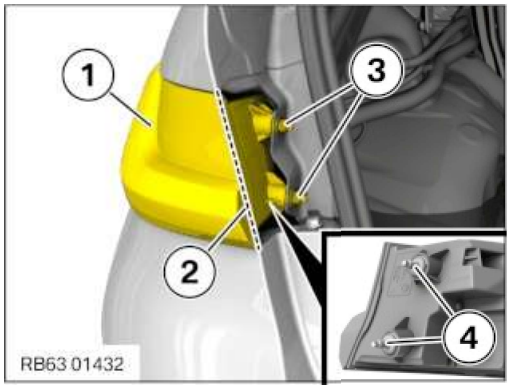
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

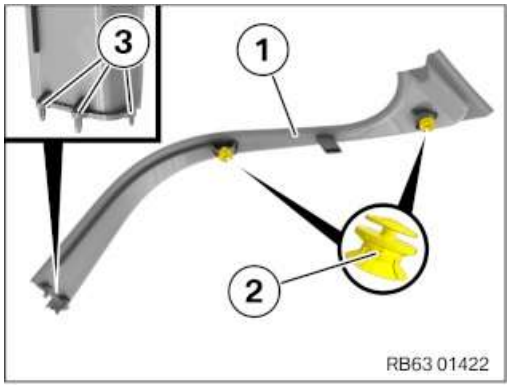
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Install the trim in the water channel**



Check

- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

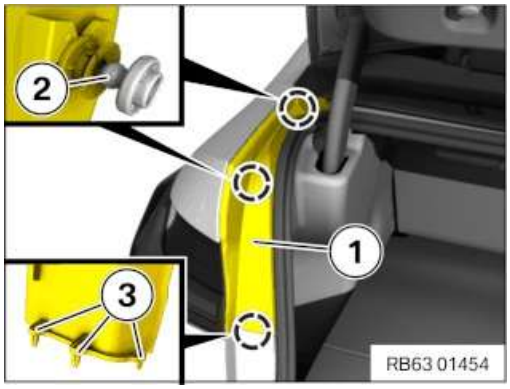
cardiagn.com

Result

» The guides are damaged.

Measure

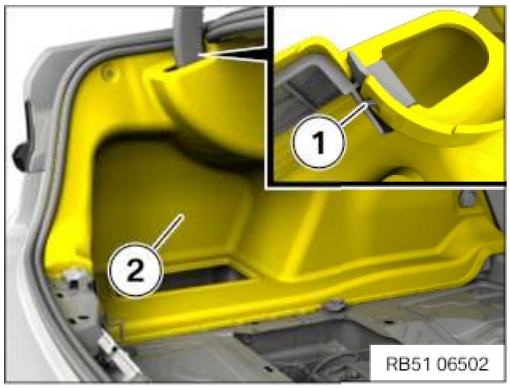
- Renew trim in the water channel .



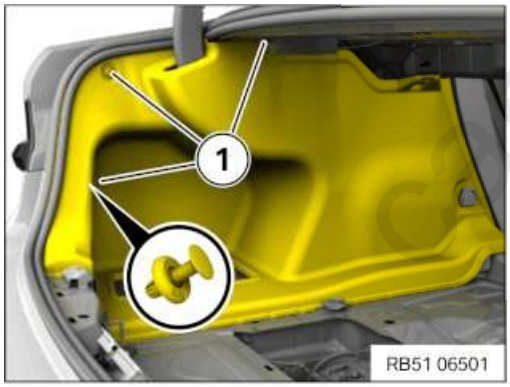
- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

14 – Installing both luggage compartment wheel arch trim panels partially

▸ Partially installing the left luggage compartment wheel arch trim panel

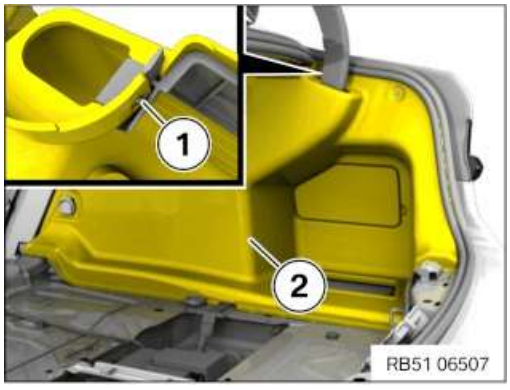


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



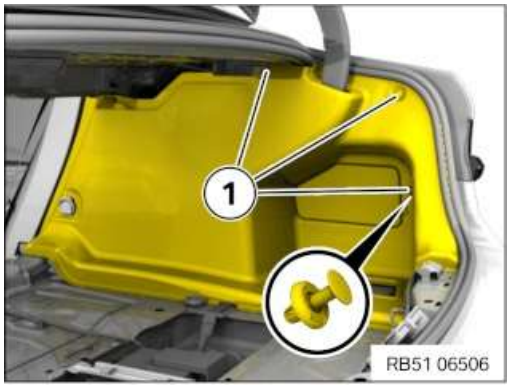
- Secure expanding rivet (1).

▸ Partially installing right luggage compartment wheel arch trim panel



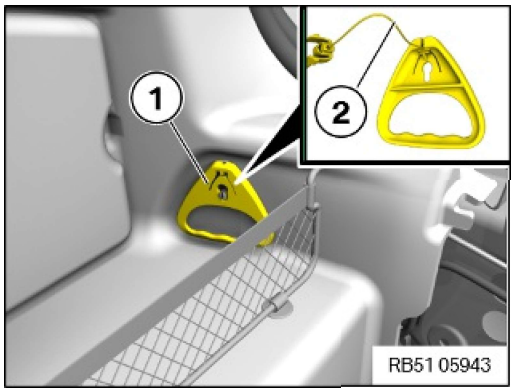
- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).

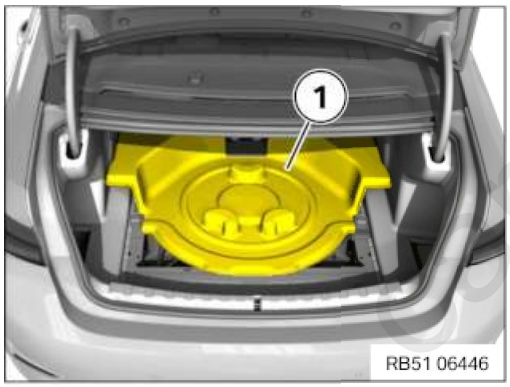
▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

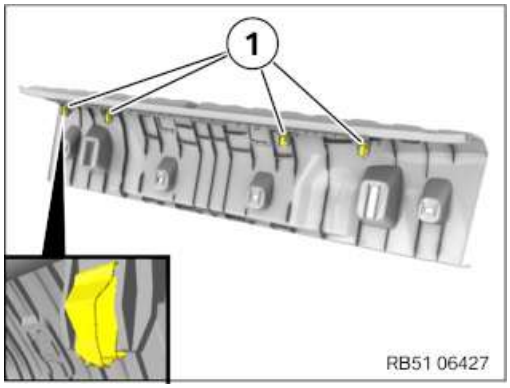
◁

15 – Install the luggage compartment well in front



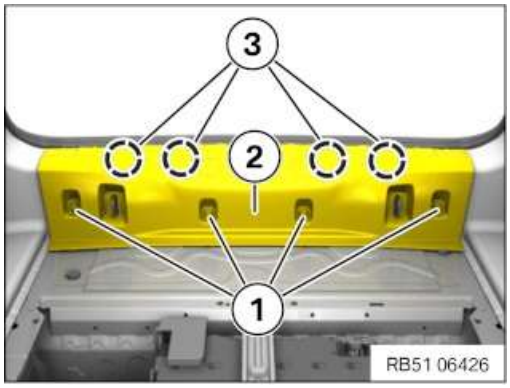
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim



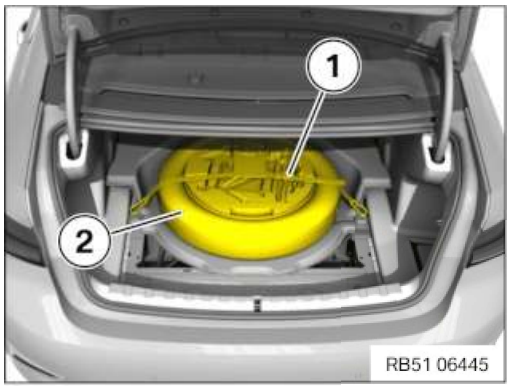
- Check the clamps (1) for damage and renew if necessary.

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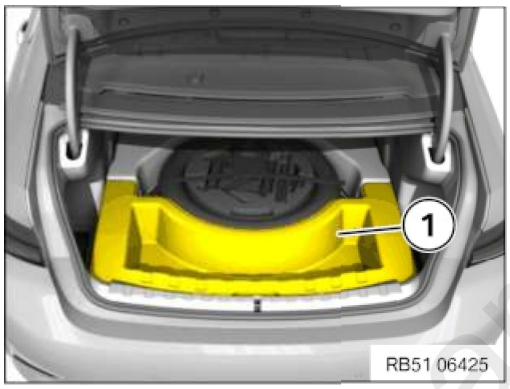
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

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Rear bumper panel guide on rear centre guide Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel Used in step 11

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel Used in step 12

Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel Used in step 12

Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

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66 33 519 Replacing control unit for Parking Manoeuvring Assistant

RISK OF DAMAGE

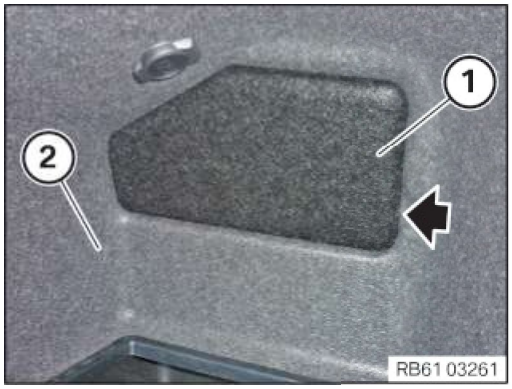
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

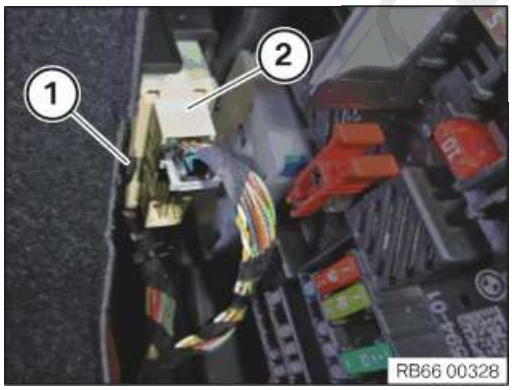
1 – Removing the flap in the luggage compartment wheel arch trim panel on the right



- Remove the flap (1) from the luggage compartment wheel arch trim panel on the right (2)

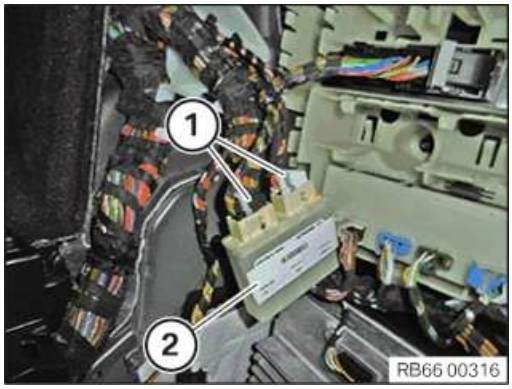
MAIN WORK

2 – Remove the PDC/PMA control unit



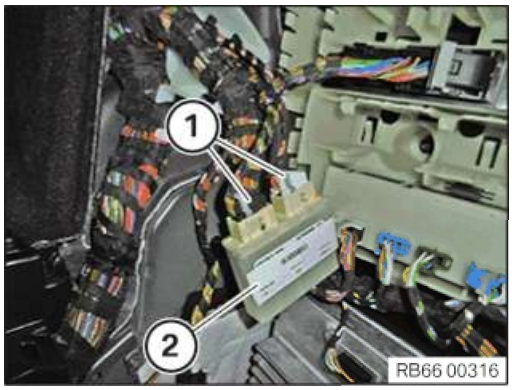
- Unlock lock (1).
- Pull out the PDC-/PMA-control unit(2) downwards form the holder.

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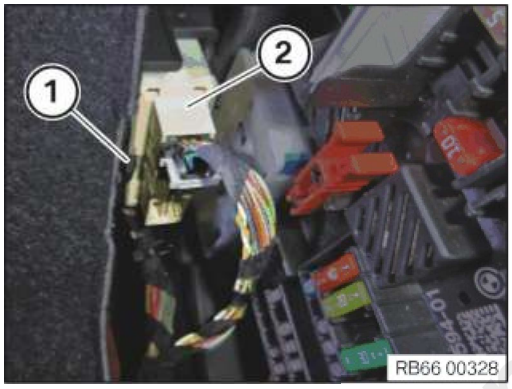


- Unlock and disconnect plug connections (1).
- Remove the PDC/PMA control unit (2).

3 – Install the PDC/PMA control unit



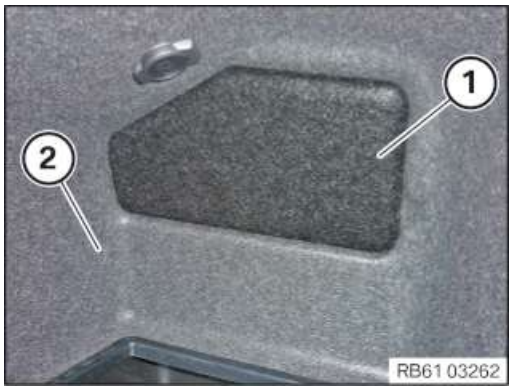
- Position PDC/PMA - control unit (2).
- Connect and lock the plug connections (1).



- Insert PDC-/PMA-control unit (2) upwards into the holder.
- Lock the lock (1).

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4 – Installing the flap in the luggage compartment wheel arch trim panel on the right



- Position the flap (1) correctly in the right luggage compartment wheel arch trim panel (2) and install.

5 – Encode/program control unit(s)

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

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Additional Information

Links

Repair instructions	Used in step
61 35 ... Notes on ESD protection (Electro Static Discharge)	

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66 51 070 Removing and installing KAFAS camera with integrated control unit

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

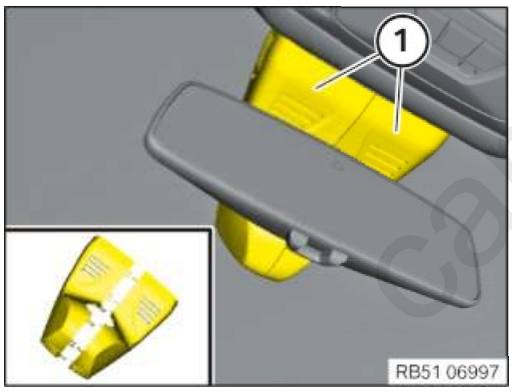
TECHNICAL INFORMATION

The heating of the KAFAS camera is integrated in the windscreen. If the heating is faulty, replace the windscreen.

PRELIMINARY WORK

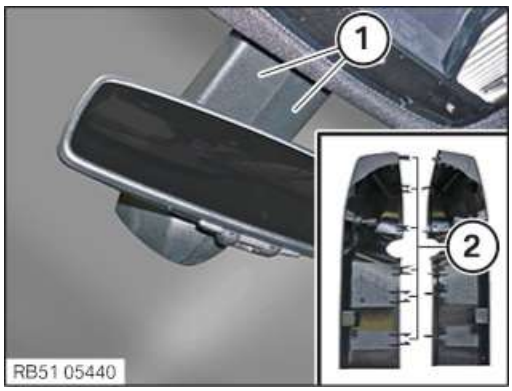
1 – Removing the covers for the interior mirror

- **Version A:**



- Release the cover (1) at the centre from the latch mechanisms (2) with a suitable plastic wedge and remove.

- **Version B:**



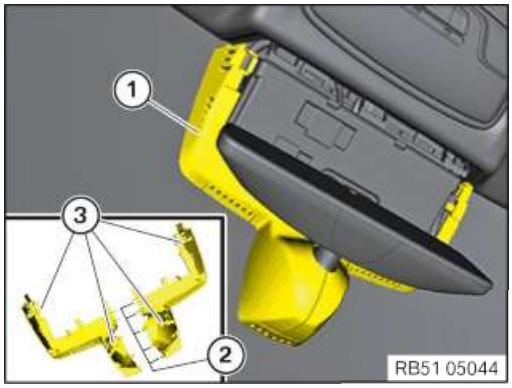
- Release the cover (1) from the latch mechanisms (2) with a suitable plastic wedge and remove sideways.

- **Version C:**

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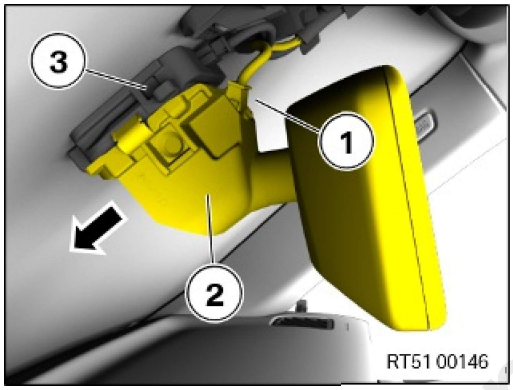


- Detach cover (1) from the clamps (2) in the marked area using a suitable plastic wedge and pull down a certain distance.
- Release cover (1) at the retaining lugs (3) and remove from the guides to the rear.



- Release cover (1) from the latch mechanisms (2) and (3) and remove sideways.
- Remove cover (1) from mirror base (2).

2 – Remove inside mirror



TECHNICAL INFORMATION

Carry out the work at temperatures between 18 °C and 23 °C only.

- Unlock plug connection (1) and disconnect.

RISK OF DAMAGE

Damage to the component.

Excessive force may damage the component.

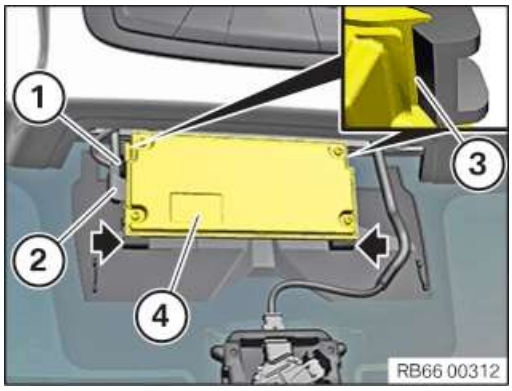
- Handle component carefully.

- Jerk and pull off the interior mirror (2) in the direction of the arrow from the mirror base (3).

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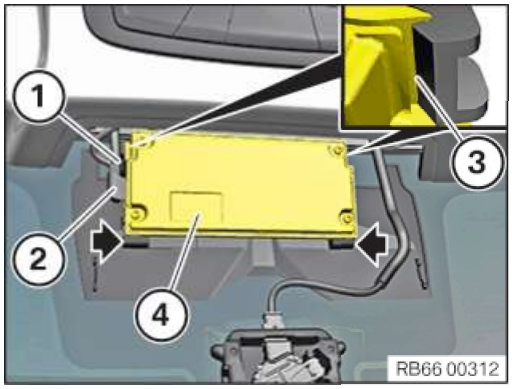
MAIN WORK

3 – Remove KAFAS camera (high version)



- Unlock plug connection (1) and disconnect.
- Unlock plug connection (2) and disconnect.
- Disengage the retaining lugs (3).
- Thread out KAFAS camera (4) at the guides (arrows) and remove.

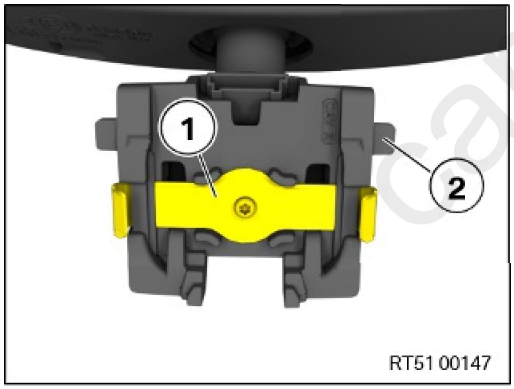
4 – Install KAFAS camera (high version)



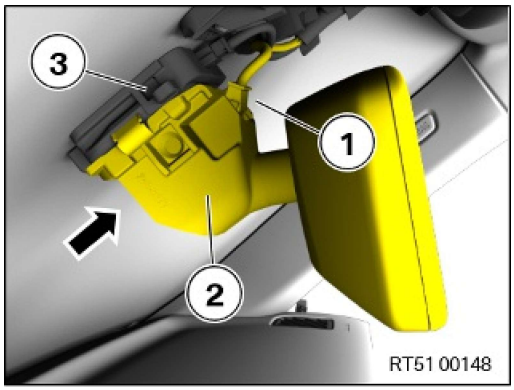
- Guide in the KAFAS camera (4) on the guides (arrows) and engage on the retaining lugs (3).
- Connect and lock the plug connection (2).
- Connect plug connection (1) and lock.

POSTPROCESSES

5 – Install interior mirror



- Check the clamp (1) on both sides of the mirror base (2) for damage and renew as needed.



TECHNICAL INFORMATION

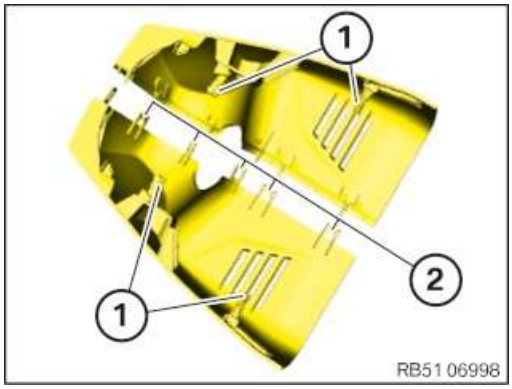
Carry out the work at temperatures between 18 °C and 23 °C only.

- Position the interior mirror (2) at the mirror base and slide it on in direction of the arrow.
- Check the correct installation position of the interior mirror (2) at the mirror base (3).
- Connect connectors (1) and lock.

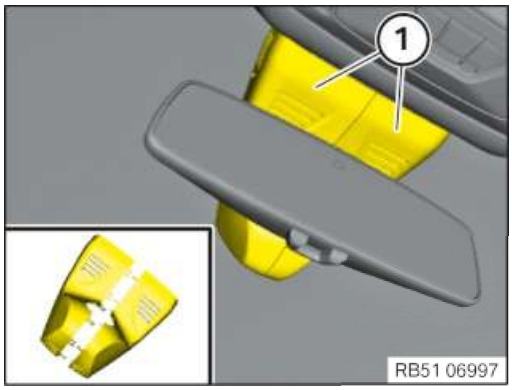
6 – Installing the covers for the interior mirror

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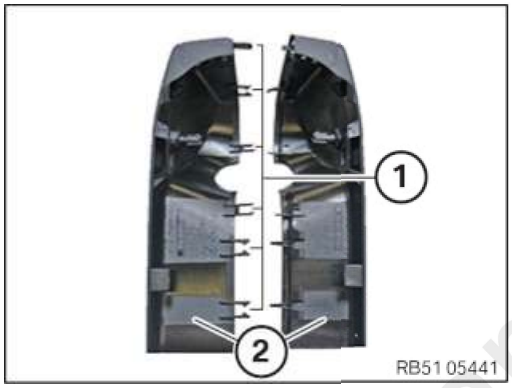
- **Version A:**



- Check latch mechanisms (1) and (2).
- If the latch mechanisms (1) or (2) are faulty, renew the covers.

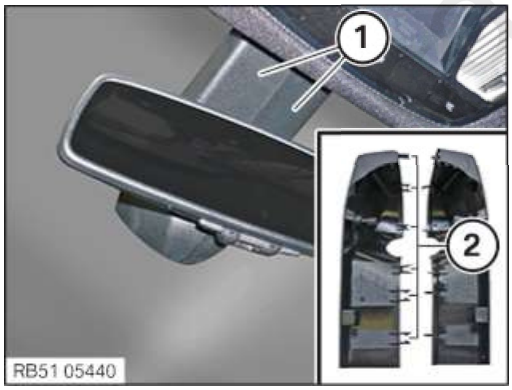


- Feed cover (1) in and lock.
- **Version B:**



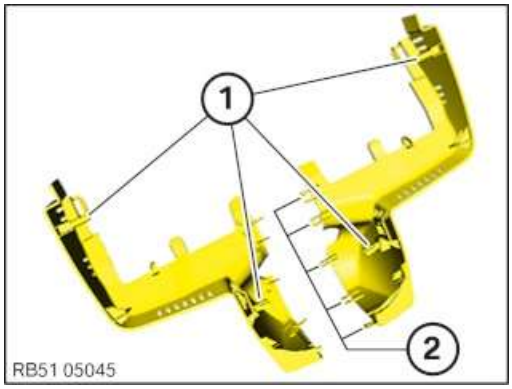
- Check the latch mechanisms (1) on the two covers (2) for damage, renew the covers (2) if necessary.

  The covers (2) must not be damaged or missing.



- Position the covers (1) correctly on the mirror and engage with the latch mechanisms (2).
- **Version C:**

Check



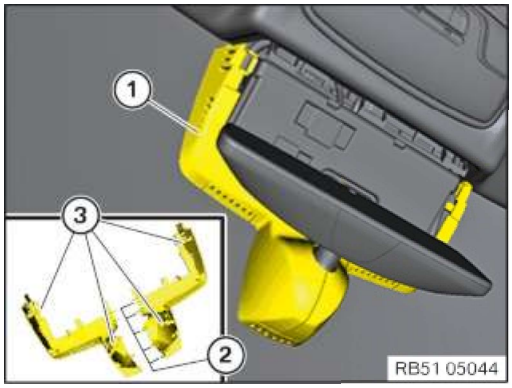
- Check the latch mechanisms (1) and (2) of the covers for damage.

Result

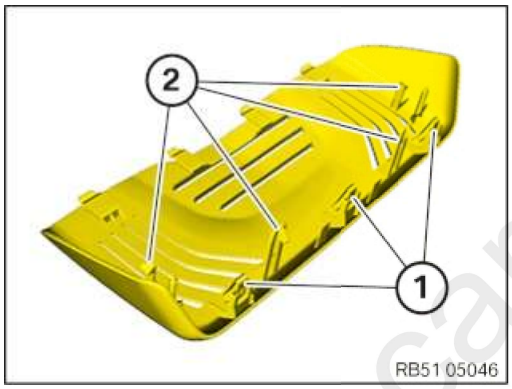
» The latch mechanism is damaged.

Measure

- Renew the cover.



- Guide in cover (1) on left and right and engage using latch mechanisms (2) and (3).



Check

- Check clamps (1) for damage; renew if necessary.
- Check latch mechanisms (2) for damage.

Result

» The latch mechanism is damaged.

Measure

- Renew the cover.



- Guide cover (1) into front guides and engage using retaining lugs (3) and clamps (2).

7 – Calibrate KAFAS camera

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TECHNICAL INFORMATION

The calibration process of the KAFAS camera is not complete until the vehicle drives in traffic. Tell the customer that some assistance systems are temporarily unavailable after vehicle pick-up.

- Perform camera calibration using diagnosis system.

  Under Service Functions menu:

  - Driver assistance
  - Camera-based driver assistance systems
  - Calibration of camera-based driver support systems

Additional Information

Links

Repair instructions	Used in step
61 35 ... Notes on ESD protection (Electro Static Discharge)	

cardiagn.com

66 51 060 Removing and installing KAFAS camera with integrated control unit

RISK OF DAMAGE



Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

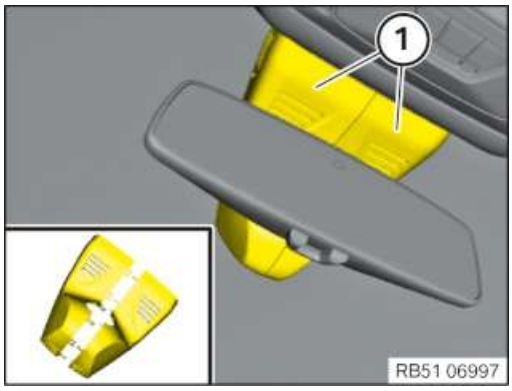
TECHNICAL INFORMATION

The heating of the KAFAS camera is integrated in the windscreen. If the heating is faulty, replace the windscreen.

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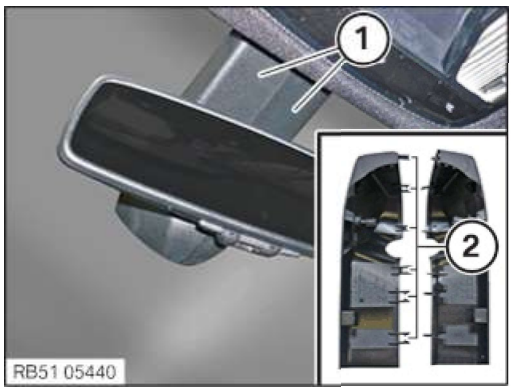
1 – Removing the covers for the interior mirror

- **Version A:**



- Release the cover (1) at the centre from the latch mechanisms (2) with a suitable plastic wedge and remove.

- **Version B:**

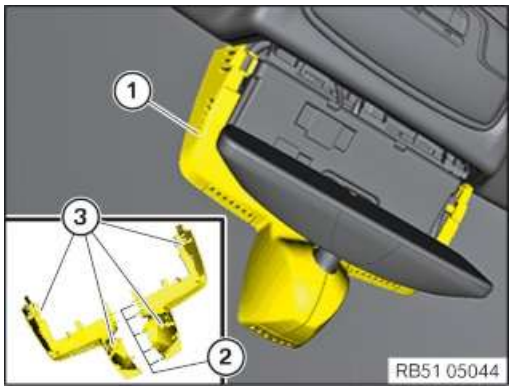


- Release the cover (1) from the latch mechanisms (2) with a suitable plastic wedge and remove sideways.

- **Version C:**



- Detach cover (1) from the clamps (2) in the marked area using a suitable plastic wedge and pull down a certain distance.
- Release cover (1) at the retaining lugs (3) and remove from the guides to the rear.

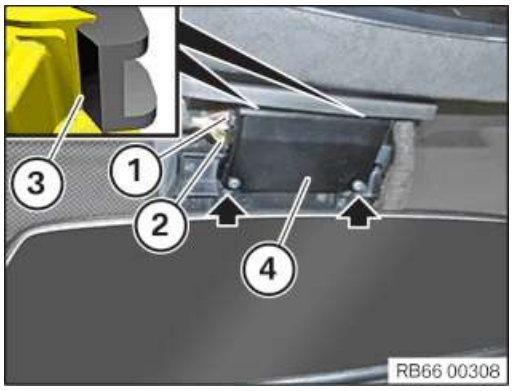


- Release cover (1) from the latch mechanisms (2) and (3) and remove sideways.
- Remove cover (1) from mirror base (2).

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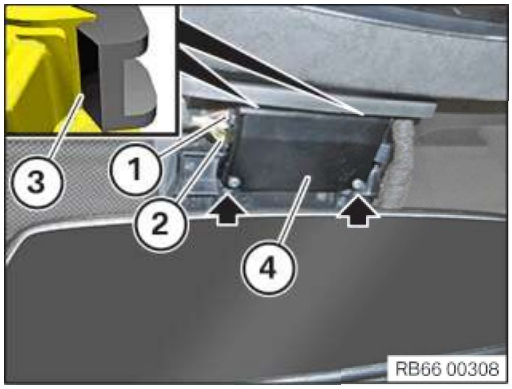
MAIN WORK

2 – Remove KAFAS camera (Mid variant)



- Unlock plug connection (1) and disconnect.
- Unlock plug connection (2) and disconnect.
- Disengage the retaining lugs (3).
- Thread out KAFAS camera (4) at the guides (arrows) and remove.

3 – Install KAFAS camera (Mid variant)

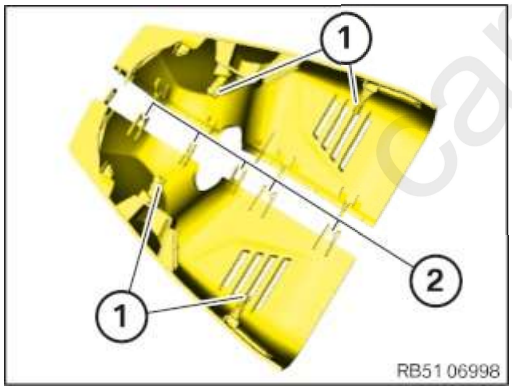


- Feed in KAFAS camera (4) on the guides (arrows) and engage the retaining lugs (3).
- Connect plug connection (2) and lock.
- Connect plug connection (1) and lock.

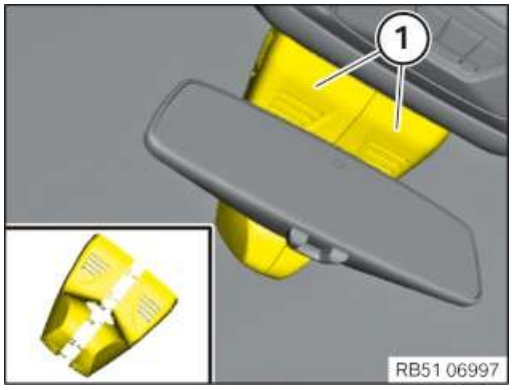
POSTPROCESSES

4 – Installing the covers for the interior mirror

- **Version A:**

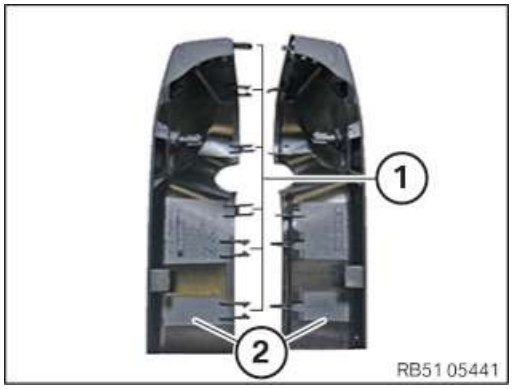


- Check latch mechanisms (1) and (2).
- If the latch mechanisms (1) or (2) are faulty, renew the covers.



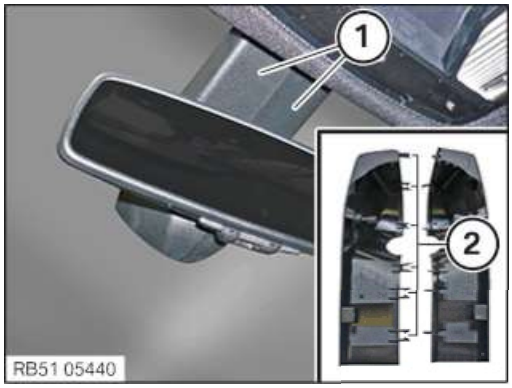
- Feed cover (1) in and lock.
- **Version B:**

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- Check the latch mechanisms (1) on the two covers (2) for damage, renew the covers (2) if necessary.

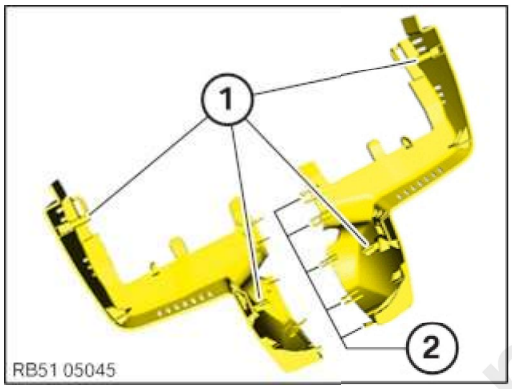
  The covers (2) must not be damaged or missing.



- Position the covers (1) correctly on the mirror and engage with the latch mechanisms (2).

- **Version C:**

Check



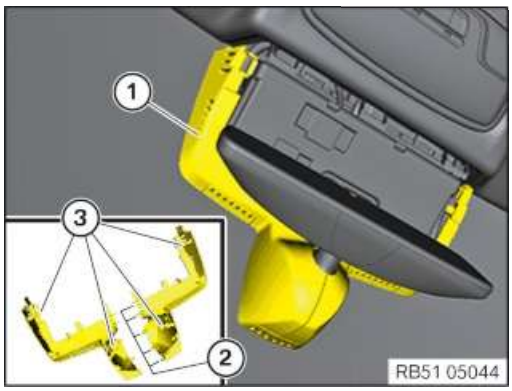
- Check the latch mechanisms (1) and (2) of the covers for damage.

Result

» The latch mechanism is damaged.

Measure

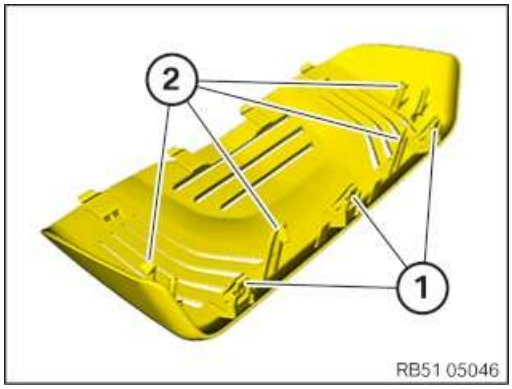
- Renew the cover.



- Guide in cover (1) on left and right and engage using latch mechanisms (2) and (3).

Check

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- Check clamps (1) for damage; renew if necessary.
- Check latch mechanisms (2) for damage.

Result

» The latch mechanism is damaged.

Measure

- Renew the cover.



- Guide cover (1) into front guides and engage using retaining lugs (3) and clamps (2).

5 – Calibrate KAFAS camera



TECHNICAL INFORMATION

The calibration process of the KAFAS camera is not complete until the vehicle drives in traffic. Tell the customer that some assistance systems are temporarily unavailable after vehicle pick-up.

- Perform camera calibration using diagnosis system.

  Under Service Functions menu:

  - Driver assistance
  - Camera-based driver assistance systems
  - Calibration of camera-based driver support systems

Additional Information

Links

Repair instructions	Used in step
61 35 ... Notes on ESD protection (Electro Static Discharge)	

carmagn.com

66 52 511 Replace Driver Camera System (DCS) (After vehicle diagnosis) (without programming/encoding, see 61 00 ...)

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.

RISK OF DAMAGE

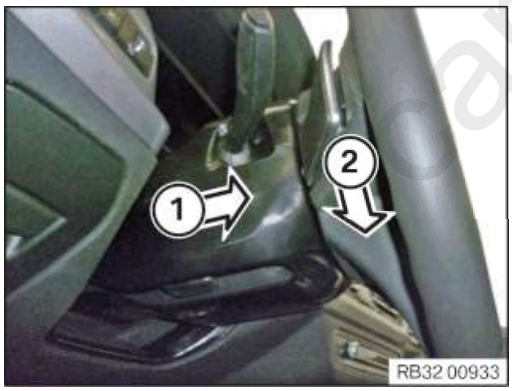
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

1 – Adjust the steering column position



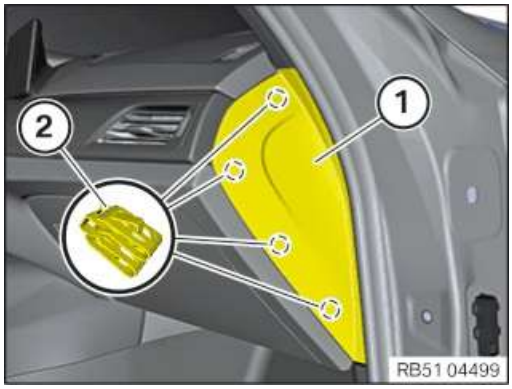
- Adjust the length of the steering column to the maximum length in the direction of arrow (1).
- Move the steering column to the lowest steering column position in the direction of arrow (2).

2 – Disconnecting all battery earth leads



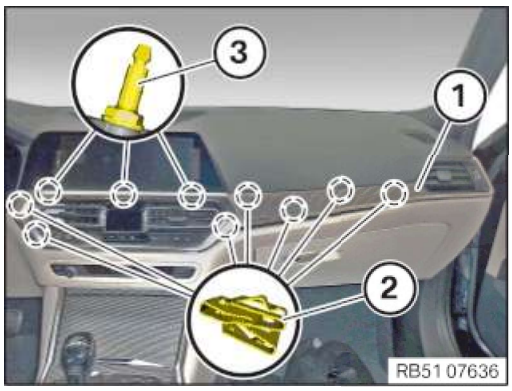
- See additional information.

3 – Remove the side panel on the right instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).
- If necessary, unlock associated plug connection and disconnect.

4 – Remove the finisher on the right instrument panel



- Unclip the decorative strip (1) towards rear at the clamps (2) and the pins (3).
- Unlock associated plug connection and disconnect.

  Remove the decorative strip (1).

5 – Remove Central Information Display (CID)

RISK OF DAMAGE

Electrostatic discharge.

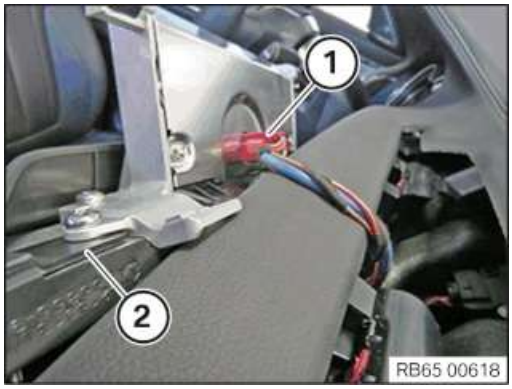
Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.



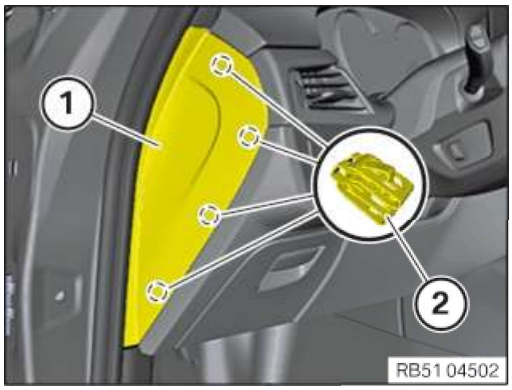
- Loosen screws (1).
- Pull out central information display (CID) (2) slightly off the instrument panel.

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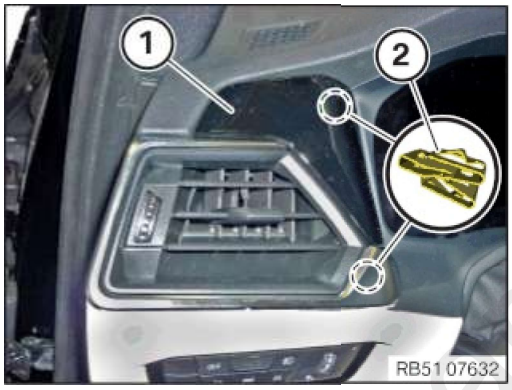
- Unlock plug connection (1) and disconnect.
- Remove the central information display (CID) (2).

6 – Remove the side panel on the left instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).

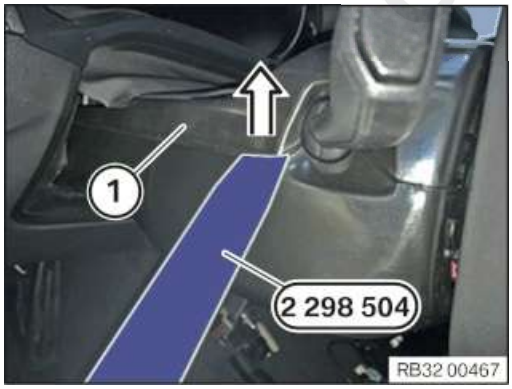
7 – Remove the finisher on the instrument panel on the left



- Unclip decorative strip (1) to the rear out of the clamps (2).
- Unlock associated plug connection and disconnect.

  Remove the decorative strip (1).

8 – Removing steering column shroud upper section

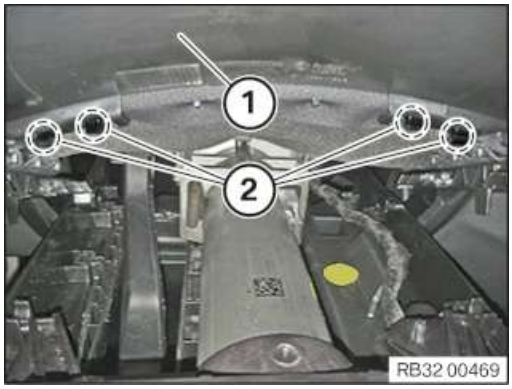


NOTICE

Perform the operations on the left and right side.

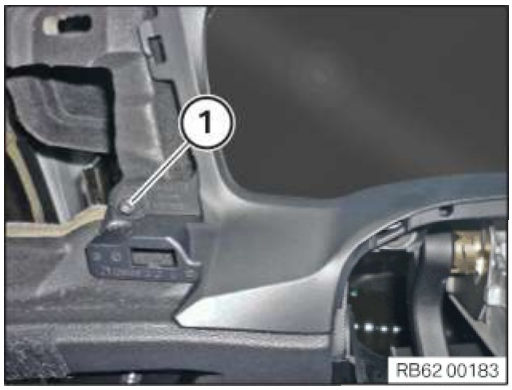
- Unlock the steering column shroud upper section (1) with the special tool 2 298 504 and fold up.

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- Unclip the steering column shroud upper section (1) from the brackets (2).
- Remove the steering column shroud upper section (1).

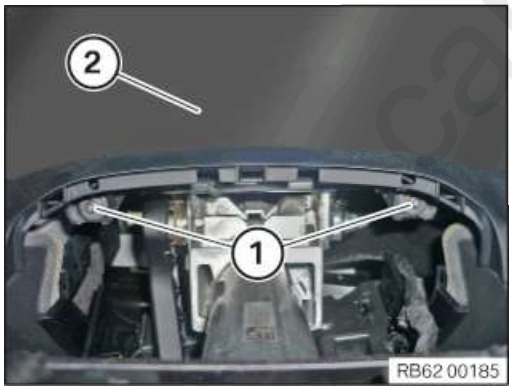
9 – Removing the instrument cluster (KOMBI)



- Loosen screw (1).

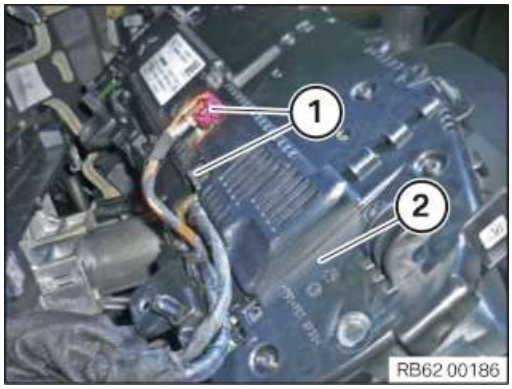


- Loosen screw (1).



- Loosen screws (1).
- Feed out instrument cluster (KOMBI) (2).

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RISK OF DAMAGE

Damage to the instrument cluster (KOMBI)

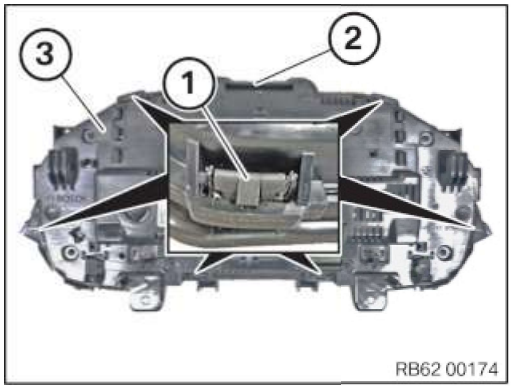
While releasing and connecting the cable, it could lead to a ground offset. Thereby, currents could arise, that make the instrument cluster (KOMBI) useless.

- While releasing: Release APIX data cable (blue) first.
- While connecting: Connect APIX data cable (blue) at the last.

- **If installed:** Release the blue plug connection first.
- Unlock and disconnect plug connections (1) from instrument cluster (KOMBI) (2).
- Remove the instrument cluster (KOMBI) (2).

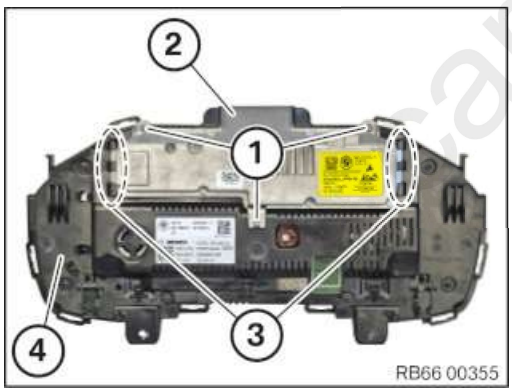
MAIN WORK

10 – Remove the cover of the instrument cluster (cluster)



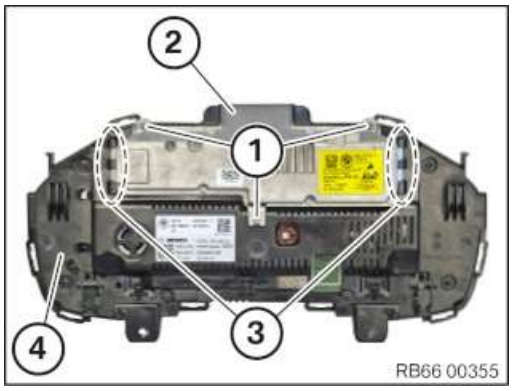
- Loosen the clasps (1).
- Remove the cover adapter (2) from the instrument cluster (cluster) (3).

11 – Remove the Driver Camera System (DCS)



- Release screws (1) on Driver Camera System (DCS) (2).
- Feed out the Driver Camera System (DCS) (2) upwards on the guides (3) of the instrument cluster (4) and remove it.

12 – Installing the Driver Camera System (DCS)



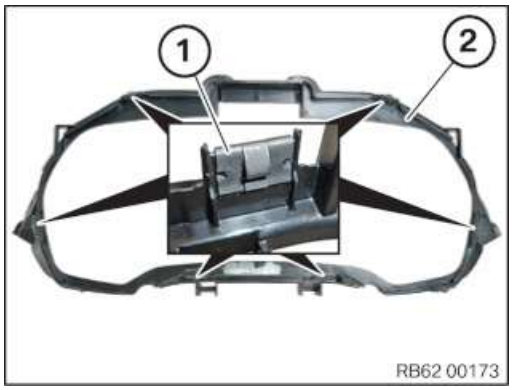
- Feed the Driver Camera System (DCS) (2) into the guides (3) of the instrument cluster (4) from the top.
- Tighten the screws (1) on the Driver Camera System (DCS) (2).

Driver Camera System (DCS) to instrument cluster

Screw		Tightening torque	1.05 Nm

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13 – Install the adapter for the cover of the instrument cluster (cluster)



Check

- Check clasps (1) and guides on the adapter for the cover (2) for damage.

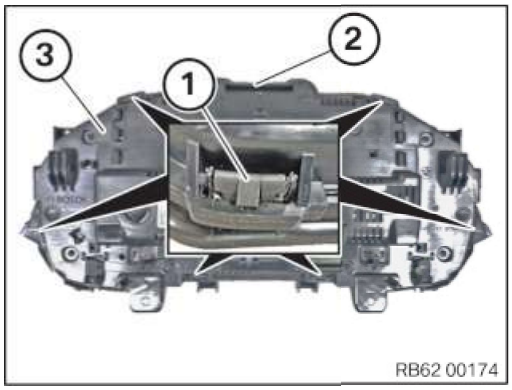
Result

» Clasps (1) or guides are damaged.

Measure

- Replace the adapter for the cover (2).

  Parts: Adapter for the cover of the instrument cluster (cluster)

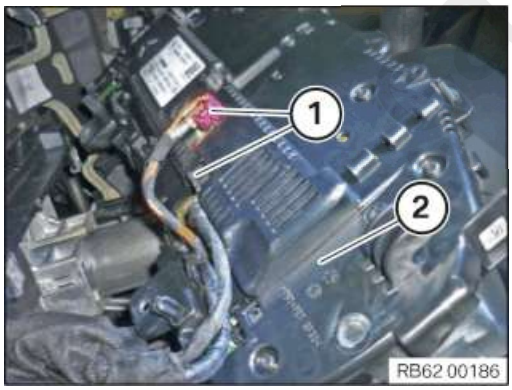


- Position the adapter for the cover (2) on the instrument cluster (cluster) (3) and clip into place.

  The clasps (1) must engage audibly.

POSTPROCESSES

14 – Installing the instrument cluster (KOMBI)



RISK OF DAMAGE

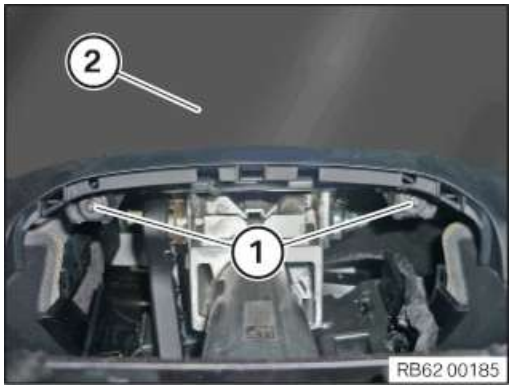
Damage to the instrument cluster (KOMBI)

While releasing and connecting the cable, it could lead to a ground offset. Thereby, currents could arise, that make the instrument cluster (KOMBI) useless.

- While releasing: Release APIX data cable (blue) first.
- While connecting: Connect APIX data cable (blue) at the last.

- **If installed:** Connect the blue connector at the last and lock it.
- Connect and lock connector (1) to the instrument cluster (KOMBI) (2).

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- Feed in and position the instrument cluster (KOMBI) (2).
- Tighten the screws (1).

Instrument cluster (KOMBI) to support

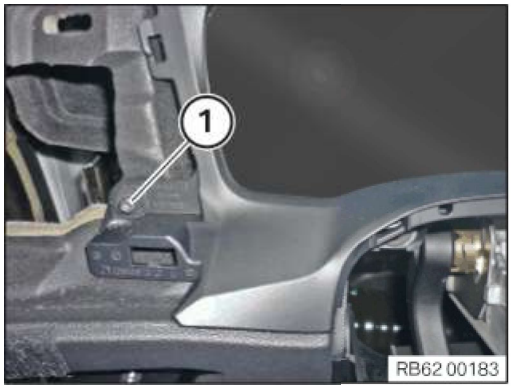
Oval-head screw		Tightening torque	1,8 Nm



- Tighten down screw (1).

Instrument cluster (KOMBI) to support

Oval-head screw		Tightening torque	1,8 Nm

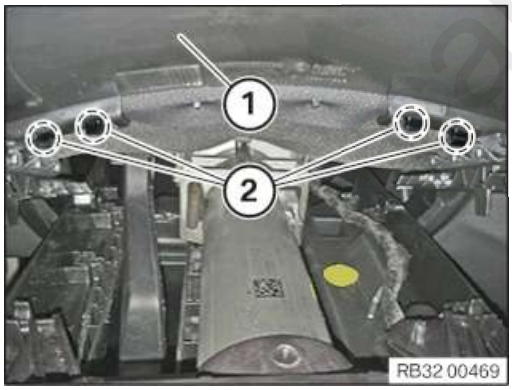


- Tighten down screw (1).

Instrument cluster (KOMBI) to support

Oval-head screw		Tightening torque	1,8 Nm

15 – Fit steering column shroud upper section



- Clip in the steering column shroud upper section (1) at the brackets (2).



NOTICE

Perform the operations on the left and right side.

- Clip in the steering column shroud upper section (1)into the guide (2).

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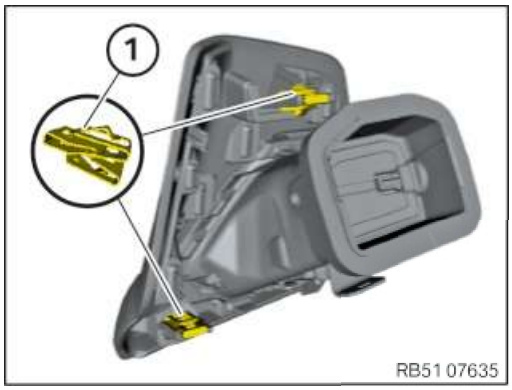
NOTICE

Perform the operations on the left and right side.

- Press the upper section of the steering column shroud (1) downwards in direction of arrow.

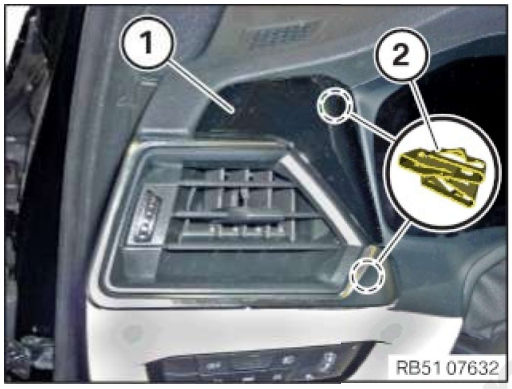
  The upper section of the steering column shroud must engage audibly and perceptibly.

16 – Install the finisher on the instrument panel on the left



- Check the clamps (1).

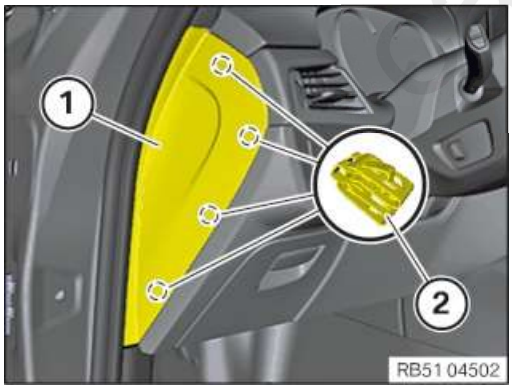
  Replace broken or missing clamps (1).



- Install the decorative strip (1).

  Connect and lock the associated connectors.
- Clip decorative strip (1) into clamps (2).

17 – Install the side panel on left instrument panel



- Feed in the side panel (1) and clip it in at the clamps (2).

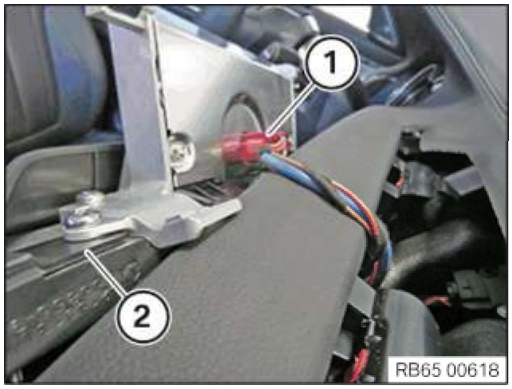
18 – Install the central information display (CID)

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.



- Position Central Information Display (CID) (2).
- Connect plug connection (1) and lock.

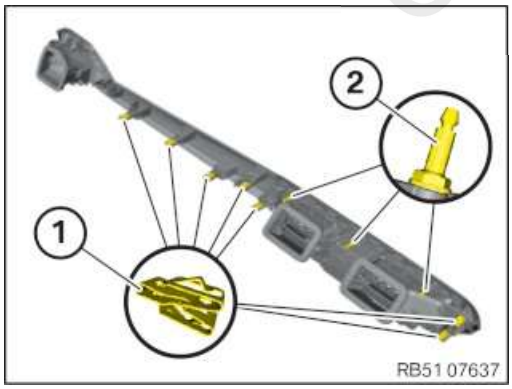


- Insert the central information display (CID) (2) in the instrument panel and position correctly.
- Tighten the screws (1).

Central information display to instrument panel

Screw		Tightening torque	1,8 Nm

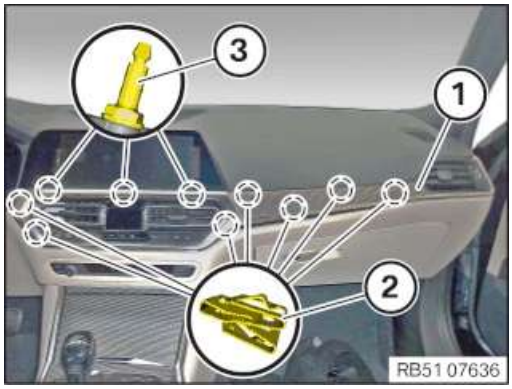
19 – Install the finisher on the right instrument panel



- Check the clamps (1).

  Replace broken or missing clamps (1).
- Check the pins (2) and the corresponding clamps on the instrument panel trim and renew if necessary.

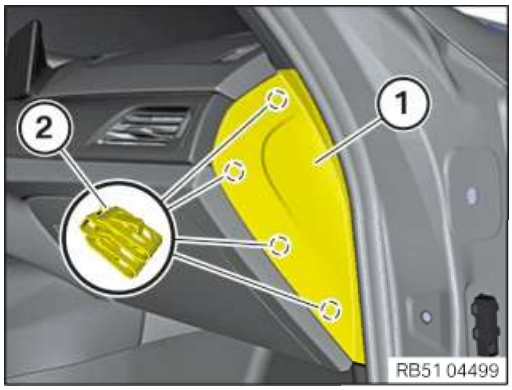
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- Install the decorative strip (1).

  Connect and lock the associated connectors.
- Correctly position the decorative strip (1) and at the clamps (2) and clip in the pins (3).

20 – Install the side panel on instrument panel on the right



- If required, connect the associated connector.
- Feed in the side panel (1) and clip it in at the clamps (2).

21 – Disconnecting all battery earth leads



- See additional information.

22 – Encode/program control unit(s)

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

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- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

Additional Information

Overview of Tightening Torques

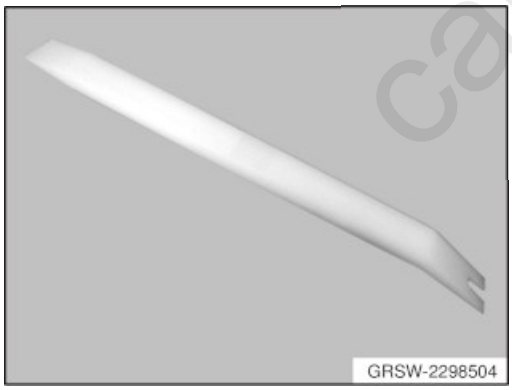
Driver Camera System (DCS) to instrument cluster			Used in step 12
Screw		Tightening torque	1.05 Nm

Instrument cluster (KOMBI) to support			Used in step 14
Oval-head screw		Tightening torque	1,8 Nm

Central information display to instrument panel			Used in step 18
Screw		Tightening torque	1,8 Nm

Overview of Special Tools

2 298 504 Wedge



Common	Used in step 8
Usage	Wedge with angled lug
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

Links

Repair instructions	**Used in step**
61 20 900 Disconnecting and connecting battery earth lead	221
61 20 900 Disconnecting and connecting battery earth lead	221
61 20 900 Disconnecting and connecting battery earth lead	221
61 20 900 Disconnecting and connecting battery earth lead	221
61 20 900 Disconnecting and connecting battery earth lead	221

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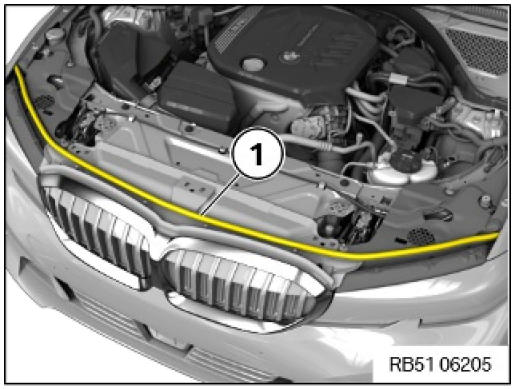
61 20 900 Disconnecting and connecting battery earth lead 221
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 221
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 221
61 20 900 Disconnecting and connecting battery earth lead 221
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 221
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle) 221
61 20 900 Disconnecting and connecting battery earth lead 221
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 221
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61 20 900 Disconnecting and connecting battery earth lead 221
61 20 900 Disconnecting and connecting battery earth lead 221
61 20 900 Disconnecting and connecting battery earth lead 221
61 35 ... Notes on ESD protection (Electro Static Discharge) 518

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66 53 120 Remove and install front camera

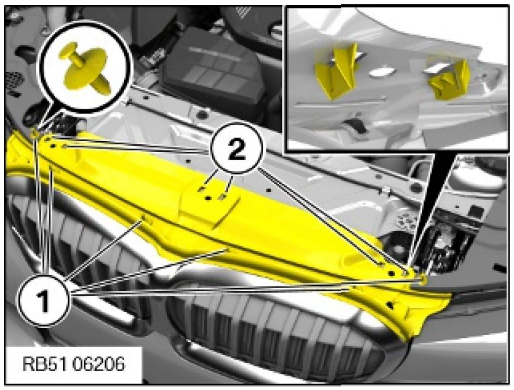
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



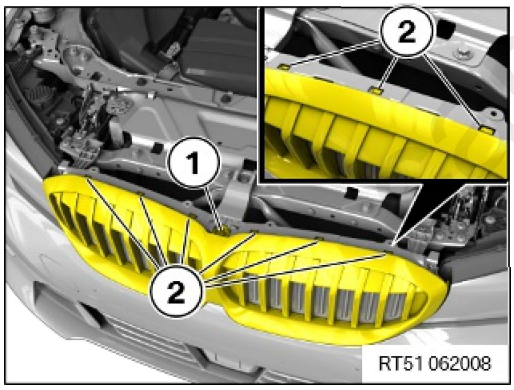
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

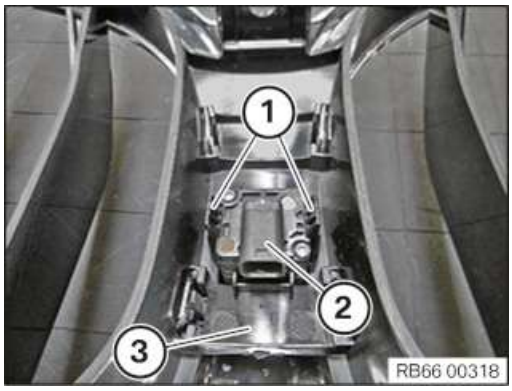
3 – Remove centre radiator ornamental grille



- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

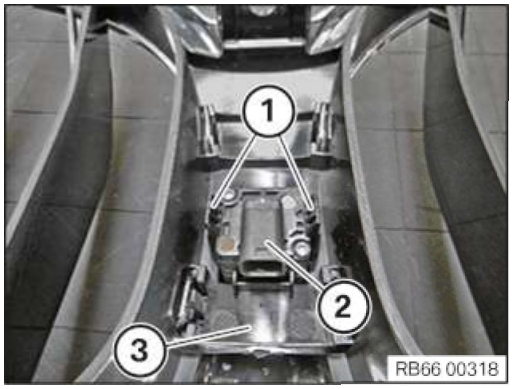
MAIN WORK

4 – Removing the front camera



- Unlock the locks (1).
- Remove front camera (2) from the front radiator grill centre (3).

5 – Installing the front camera



- Insert front camera (2) correctly in the radiator grille (3).
- Lock the locks (1).

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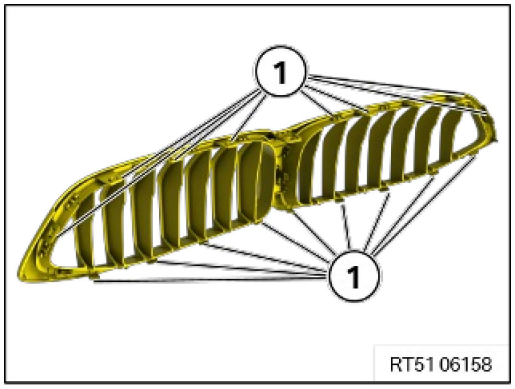
POSTPROCESSES

6 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

Check



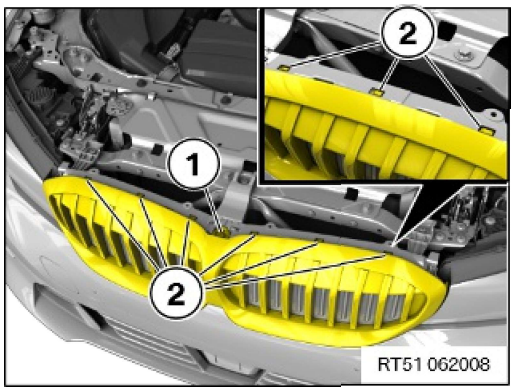
- Check latch mechanisms (1) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

- Renew the front ornamental grille, centre.

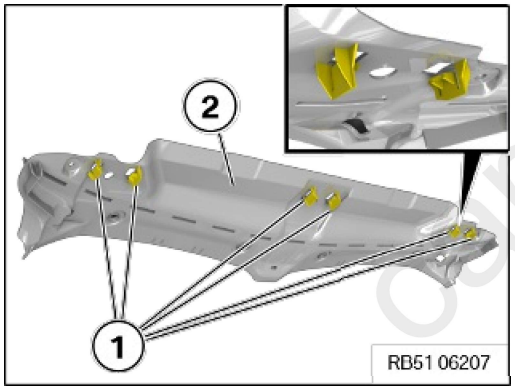


- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

7 – Installing cover for engine compartment centre



Check

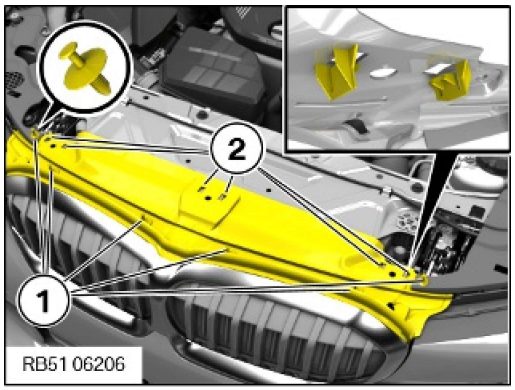
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

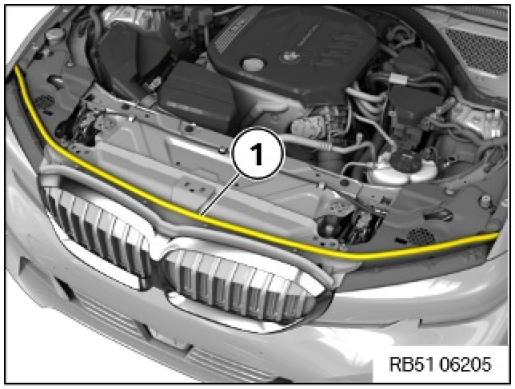
- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

8 – Install the seal for the front bonnet

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- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

Additional Information

Overview of Tightening Torques

Centre of front ornamental grille to top air flap control Used in step 6

Oval-head screwM6		Tightening torque	4,6 Nm

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66 53 060 Removing and installing left or right top view camera

NOTICE

Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

1 – Removing the mirror glass

CAUTION

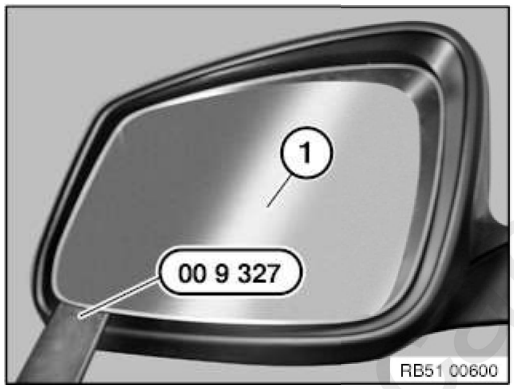
Glass splinters.

Danger of injury!

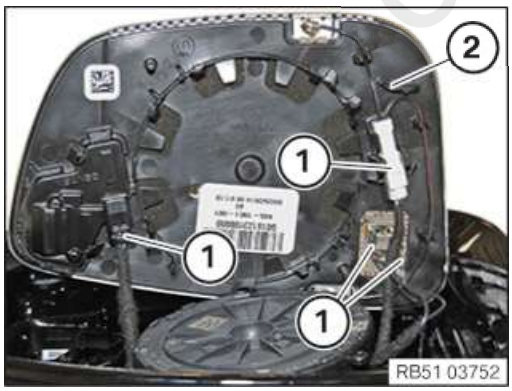
- If the mirror glass is damaged, wear safety goggles and protective gloves.

TECHNICAL INFORMATION

Carry out the work at temperatures between 18 °C and 23 °C only.



- Manually press the mirror glass (1) on the side of vehicle up to the end stop.
- Unclip the mirror glass (1) using special tool 0 496 571 (00 9 327) all the way around, starting with the outer side.



- Disconnect plug connection (1).
- Remove mirror glass (2).

2 – Removing the protective cap of the exterior mirror

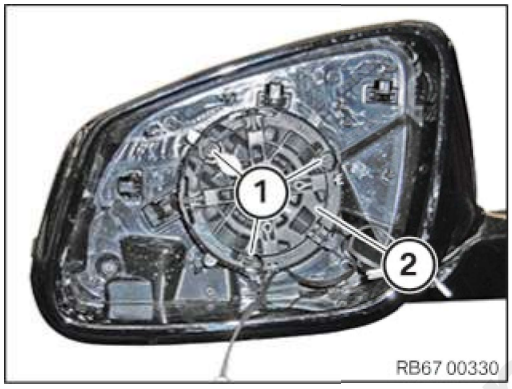


- Spread and release the latch mechanisms (1) of the protective cap on the exterior mirror.



- Remove the protective cap (1) in the direction of the arrow.
- Disconnect associated plug connection.

3 – Removing the drive for exterior mirror adjustment



- **Version A**
- Release the screws (1) and pull out the drive for exterior mirror adjustment (2) a little.

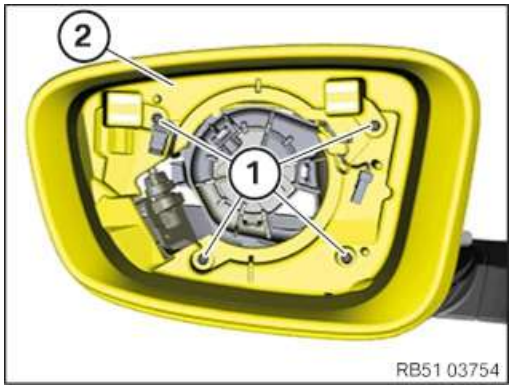


- **Version B**
- Loosen screw (1).
- Pull off the drive for exterior mirror adjustment (2).



- Unlock plug connection (1) and disconnect and remove the drive for exterior mirror adjustment (2) .

4 – Removing retaining ring from exterior rearview mirror



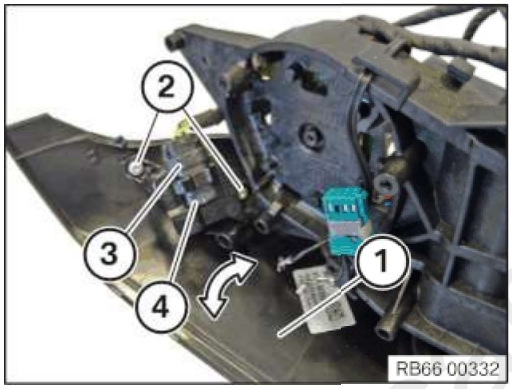
- Loosen screws (1).
- If necessary, feed out cable.
- Guide out retaining ring of exterior rearview mirror (2) in forward direction.

MAIN WORK

5 – Removing the top view camera

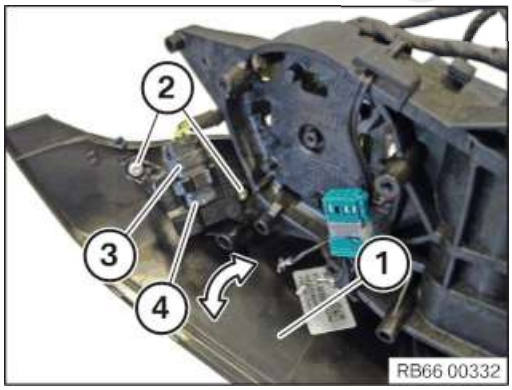


- Loosen the screw (1) on the lower part of the mirror housing (2).



- Carefully pull the lower part of the mirror housing (1) back in the direction of the arrow until the screws (2) are accessible.
- Loosen screws (2).
- Unlock plug connection (3) and disconnect.
- Removing the Top View Camera (4).

6 – Installing the top view camera



- Install and correctly position the top view camera (4).
- Connect connectors (3) and lock.
- Tighten the screws (2).

Top view camera to exterior mirror

Screw		Tightening torque	0,85 Nm

- Push lower section of the mirror housing (1) in the direction of arrow to the front and position it correctly.

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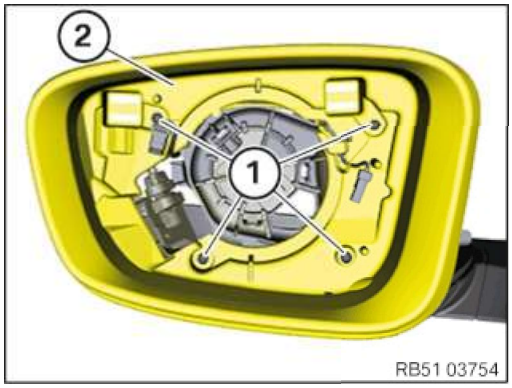
- Tighten screw (1) on the lower section of the mirror housing (2).

Housing to exterior mirror

		Tightening torque	0,85 Nm

POSTPROCESSES

7 – Installing the retaining ring on the exterior rearview mirror



- Feed in the retaining ring on the exterior rearview mirror (2).
- If necessary, feed in cable.
- Tighten the screws (1).

8 – Installing the drive for exterior mirror adjustment



- Position drive for exterior mirror adjustment (2).
- Connect connectors (1) and lock.



- **Version A**
- Position drive for exterior mirror adjustment (2) correctly.
- Tighten the screws (1).

Drive for exterior mirror adjustment

		Tightening torque	1,2 Nm

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- **Version B**
- Correctly position the drive for exterior mirror adjustment (2) and press it in.
- Tighten down screw (1).

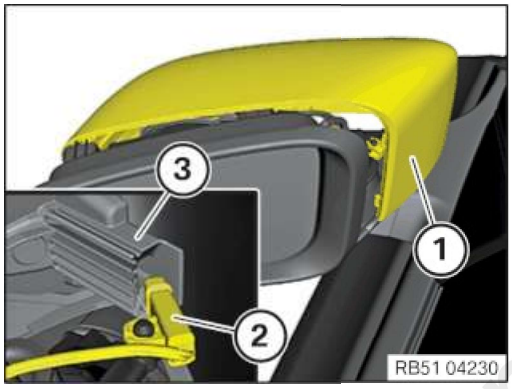
Drive for exterior mirror adjustment

	Tightening torque	1,2 Nm

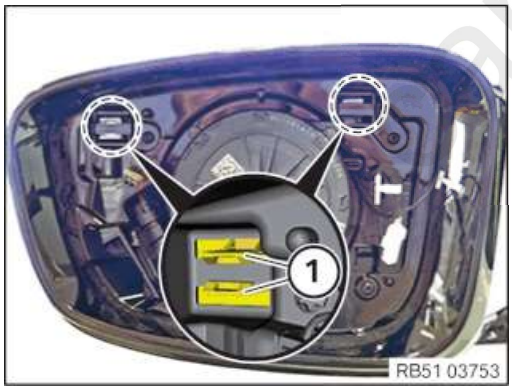
9 – Installing the protective cap of the exterior mirror



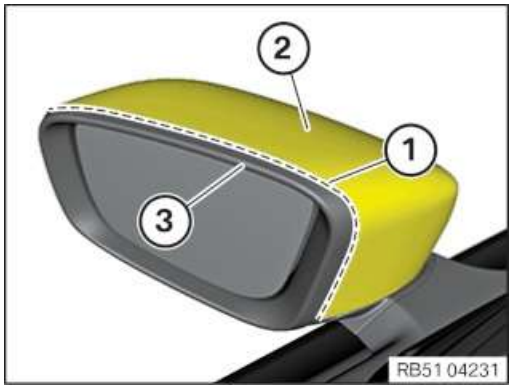
- Position the connector (1) on the mounting (2).
- Position connector (1) as shown.



- Position the protective cap (1) on the exterior mirror.
- Feed in the connector (2) for the side repeater (3).
- Push protective cap (1) on exterior mirror and lock.

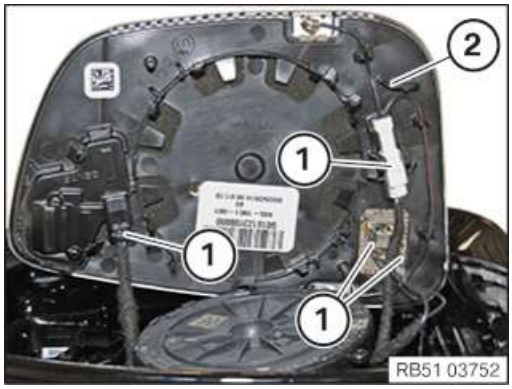


- Make sure that the latch mechanisms (1) are correctly fitted.

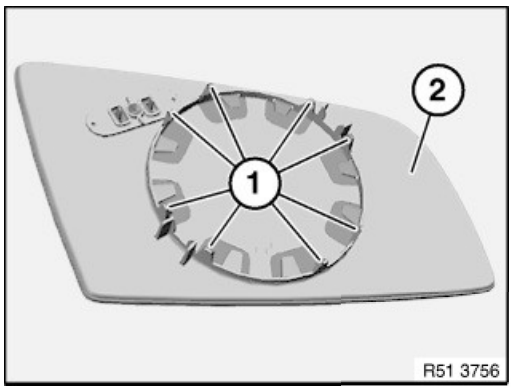


- Check the correct seating of the protective cap (2) on retaining ring (3) around (1).

10 – Installing the mirror glass



- Position mirror glass (2).
- Connect plug connections (1).



- Check whether retaining lugs (1) are missing or damaged and, if required, renew the mirror glass.
- Position the mirror glass (2) with the retaining lugs (1) flush with the drive for exterior mirror adjustment and clip in.
- Ensure correct locking.
- Check if the drive for exterior mirror adjustment is functioning correctly.

Additional Information

Overview of Tightening Torques

Top view camera to exterior mirror — Used in step 6

Screw		Tightening torque	0,85 Nm

Housing to exterior mirror — Used in step 6

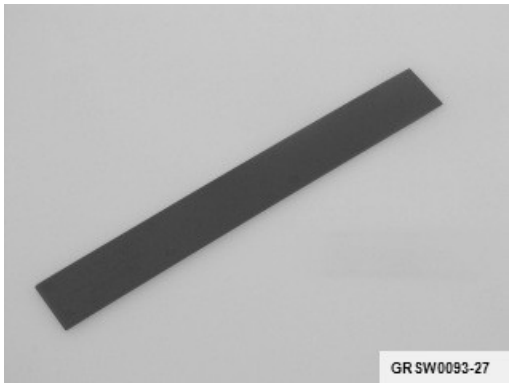
		Tightening torque	0,85 Nm

Drive for exterior mirror adjustment — Used in step 8

		Tightening torque	1,2 Nm

Overview of Special Tools

0 496 571 (00 9 327) Wedge



Common — Used in step 1

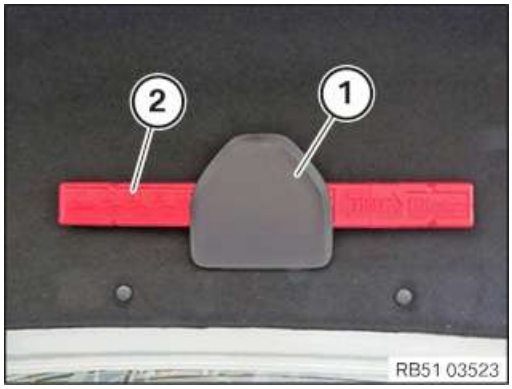
Usage	(Cleaning wedge) From 11/2008 this special tool replaces panel wedge 00 9 323 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

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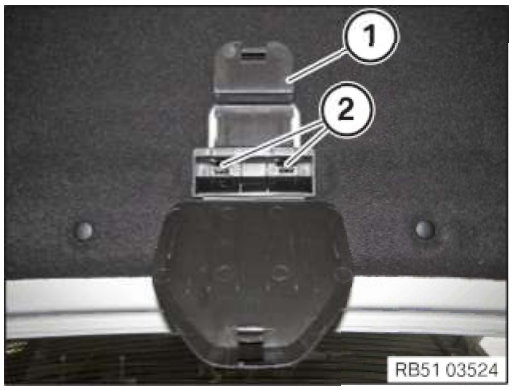
66 53 020 Removing and installing rear view camera

PRELIMINARY WORK

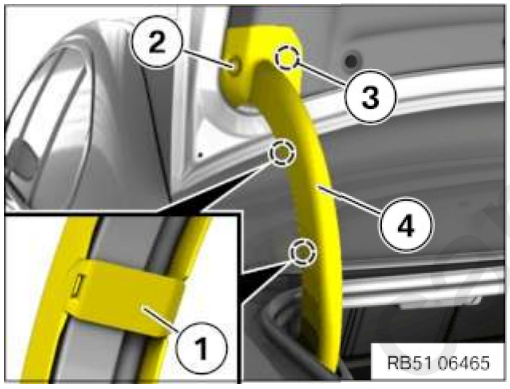
1 – Remove tailgate trim panel



- Fold the cover (1) towards the bottom.
- Remove the warning triangle (2).



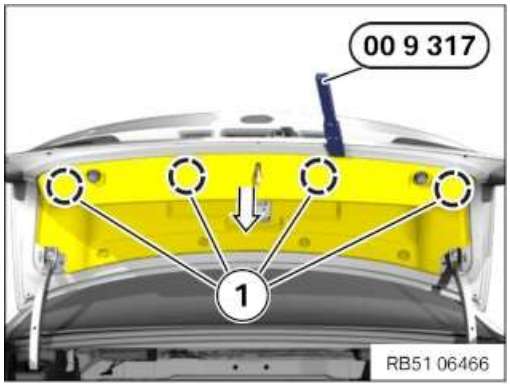
- Detach the warning triangle holder (1) from the latch mechanisms (2) and slide downwards.



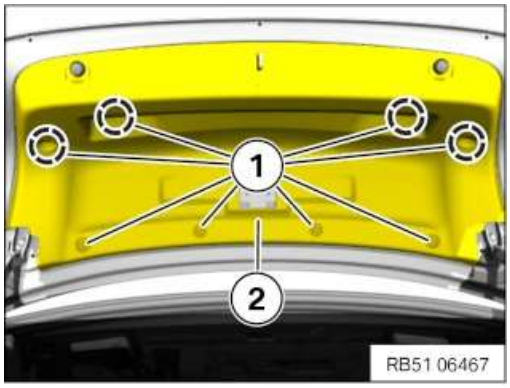
NOTICE

Description is for left component only. Procedure on the right side is identical.

- Unclip the tabs (1).
- Loosen expanding rivet (2).
- To avoid damage, release the trim panel for the hinge of the tailgate (4) without using a tool by jerking it along the hinge bracket and out of the clip fastening (3).



- Unclip clips (1) with special tool 0 490 534 (00 9 317) in the direction of arrow.



- Release expanding rivet (1) on the tailgate trim panel (2).
- Remove tailgate trim panel (2).
- **If installed**: Unlock plug connection of the switch for the tailgate lift and disconnect.

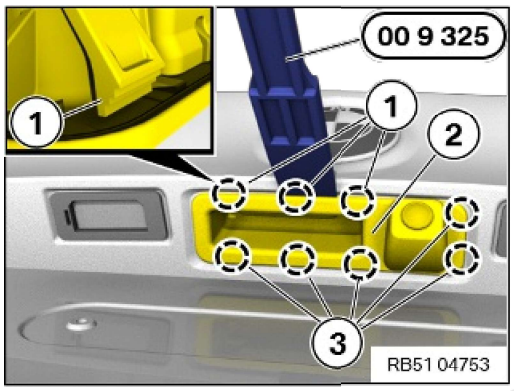
2 – Remove tailgate pushbutton

RISK OF DAMAGE

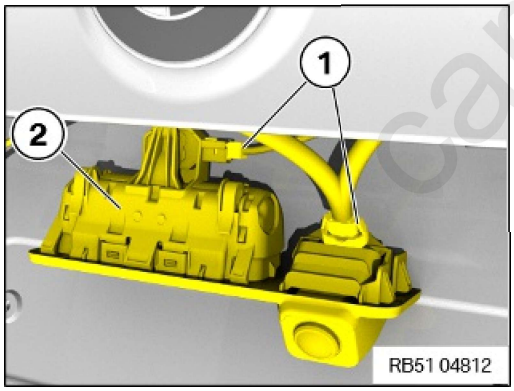
Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



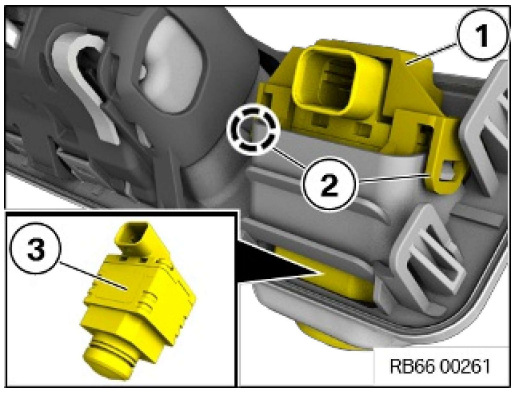
- Mount special tool 0 496 569 (00 9 325) as illustrated.
- Open the latch mechanisms (1) of the tailgate button (2) by carefully knocking onto the special tool 0 496 569 (00 9 325).
- Disengage the latch mechanisms (3) from the inside unclip the tailgate button (2) toward the bottom.



- Disconnect the connector (1) and remove the tailgate button (2).
- If necessary, remove broken off parts of the tailgate button (2) from the tailgate.

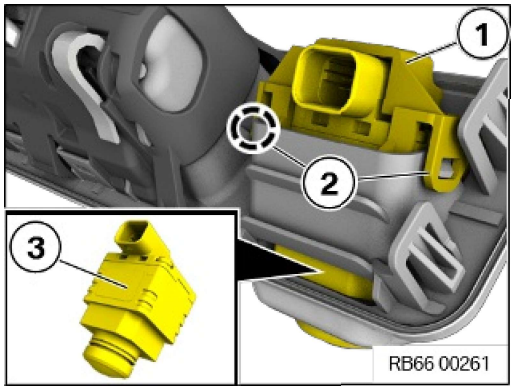
MAIN WORK

3 – Remove rear view camera



- Unclip the holder (1) from the latch mechanisms (2) and remove it.
- Remove the rear view camera (3) from button for tailgate activation.

4 – Installing the rear view camera

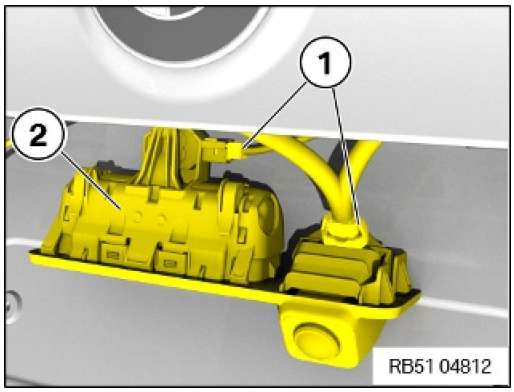


- Insert rear view camera (3) in the button for the tailgate activation.
- Clip the holder (1) into the latch mechanisms (2).

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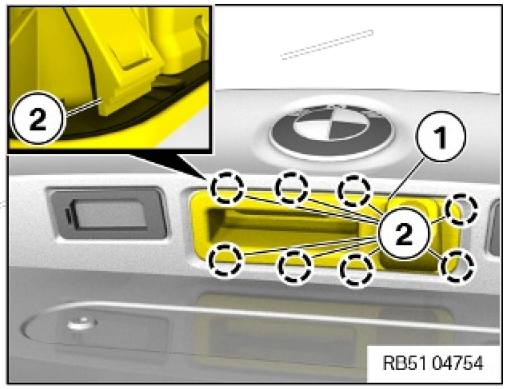
POSTPROCESSES

5 – Install the tailgate button



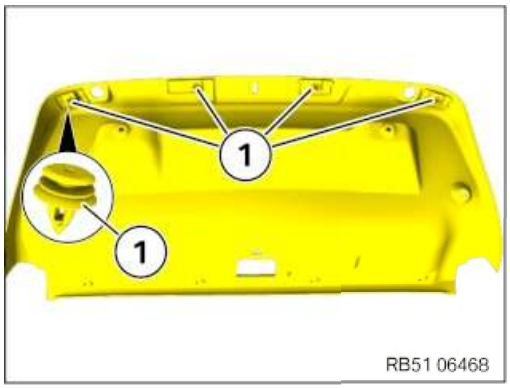
- Renew the tailgate button (2).

  Parts: Tailgate button
- Check the tailgate in the area of the tailgate button (2) for damage and repair where required.
- Connect the connector (1) with the tailgate button (2).

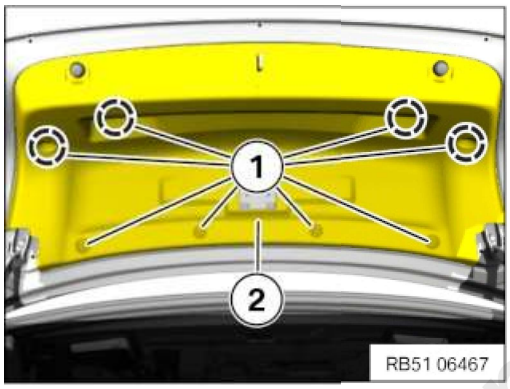


- Insert the tailgate button (1) in the tailgate and clip it into the latch mechanisms (2).

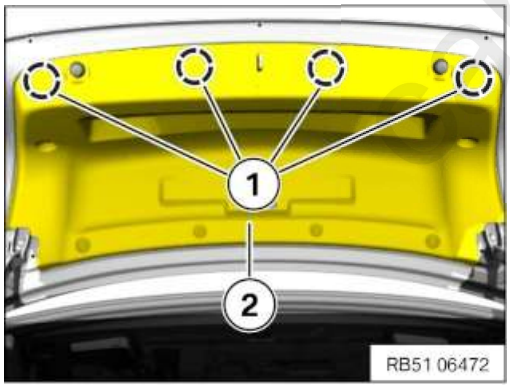
6 – Installing the tailgate trim panel



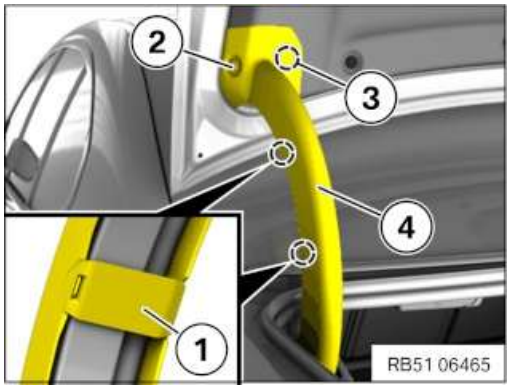
- Check the clips (1) for damage and renew if necessary.



- Fit the tailgate trim panel (2) and fasten in place with the expanding rivets (1).
- **If installed**: Connect and lock plug connection on the switch for the tailgate lift.



- Clip in the tailgate trim panel (2) with the clips (1).

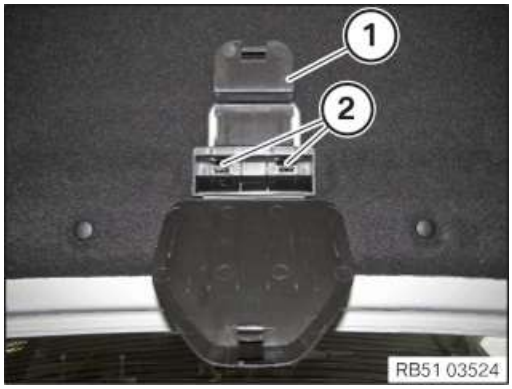


NOTICE

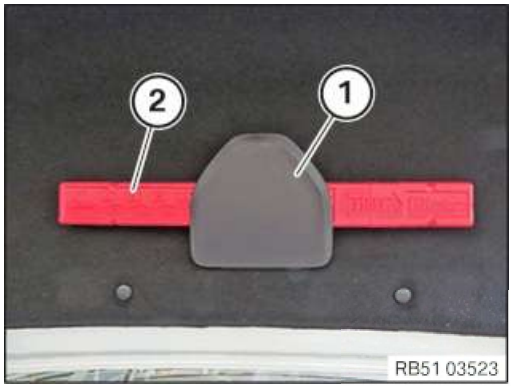
Description is for left component only. Procedure on the right side is identical.

- Clip in the trim panel for the hinge of the tailgate (4) to the clip fastening (3).
- Fasten expanding rivet (2).
- Clip in tabs (1).

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- Position the warning triangle holder (1) and snap into the latch mechanisms (2).

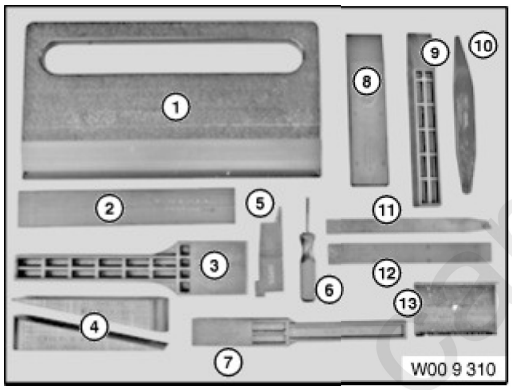


- Install the warning triangle (2).
- Clip in the cover (1).

Additional Information

Overview of Special Tools

0 490 534 (00 9 317) Wedge



Common	Used in step 1
Usage	(Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)
Included in the tool or work	0 490 527
Storage location	
Replaced by	
In connection with	
SI-Number	

0 496 569 (00 9 325) Wedge



Common	Used in step 2
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

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66 53 170 Removing and installing the control unit of the top rear side view camera (TRSVC) (with holder)

RISK OF DAMAGE

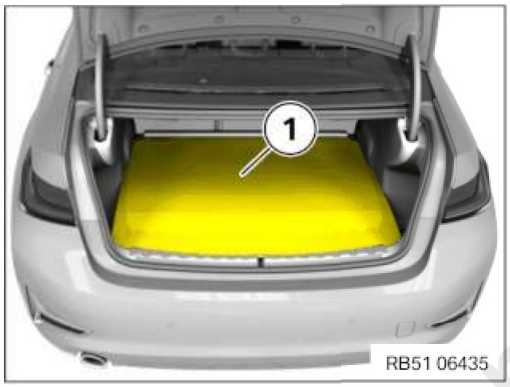
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

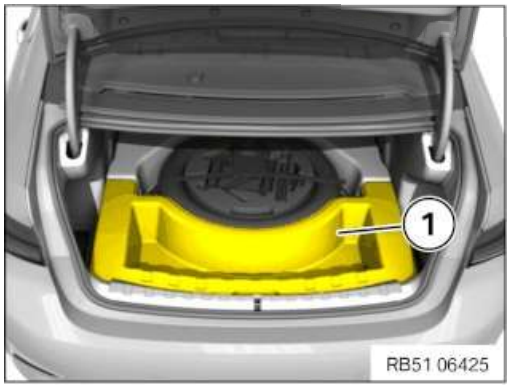
1 – Removing the luggage compartment floor trim panel



- Remove luggage compartment floor trim panel (1).

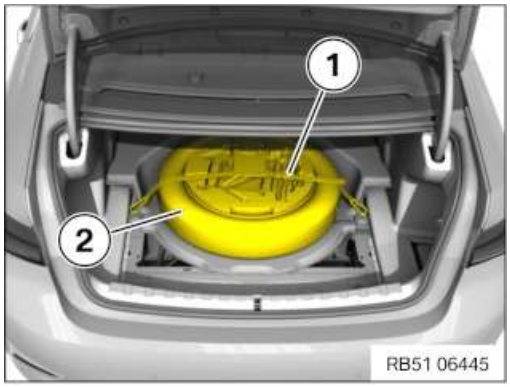
2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**



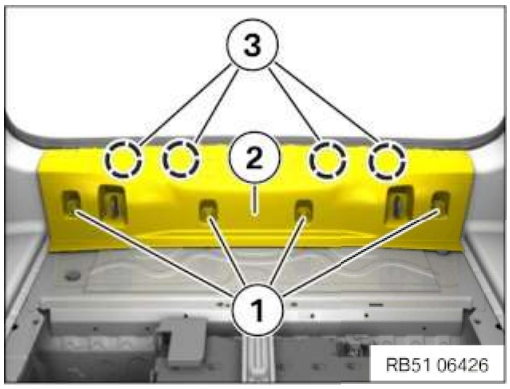
- Remove rear luggage compartment well (1).

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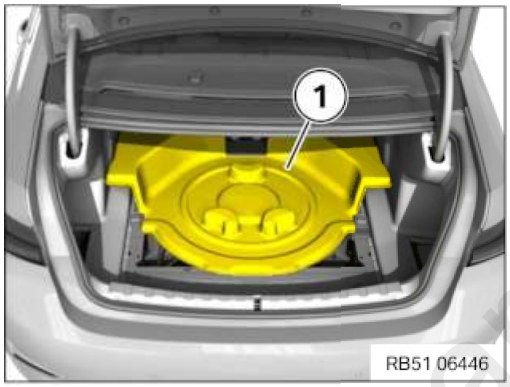
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



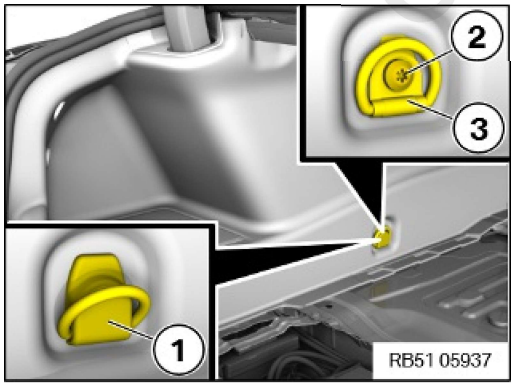
- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

4 – Removing front luggage compartment well



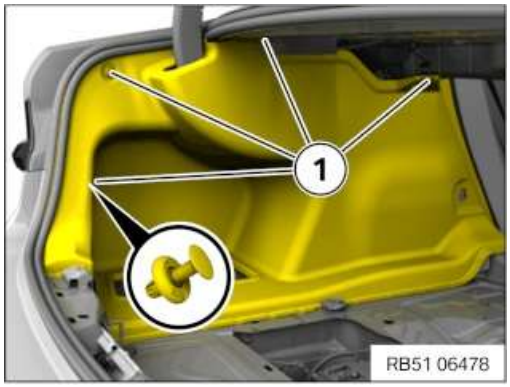
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Remove luggage compartment wheel arch trim panel on left.

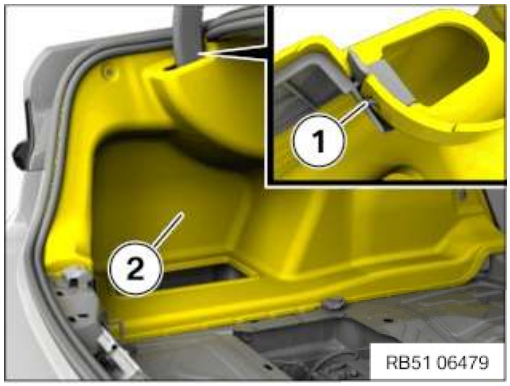


- Remove the cover (1).
- Loosen screw (2).
- Remove lashing eye (3).

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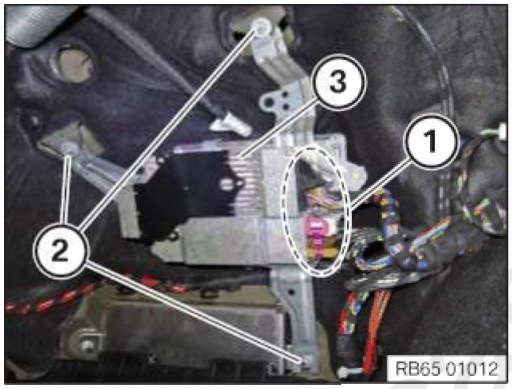
- Reposition left rear seat backrest.
- Loosen the expanding rivet (1).



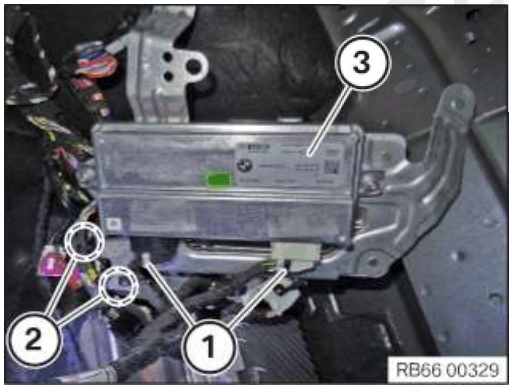
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip for the tailgate and the side trim panel in the rear passenger compartment.
- Remove luggage compartment wheel arch trim panel (2).

MAIN WORK

6 – Remove the TRSVC control unit

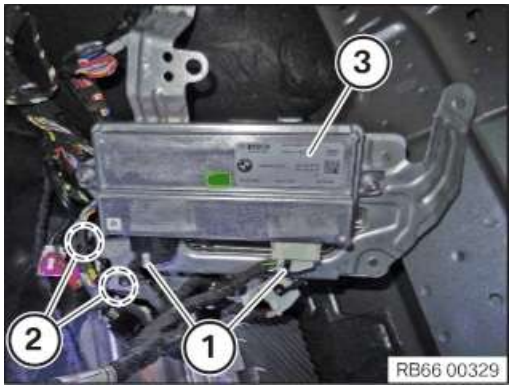


- Unlock and disconnect all connectors in area (1).
- Loosen nuts (2).
- Feed out Receiver audio module (RAM) (3) with the holder and turn.

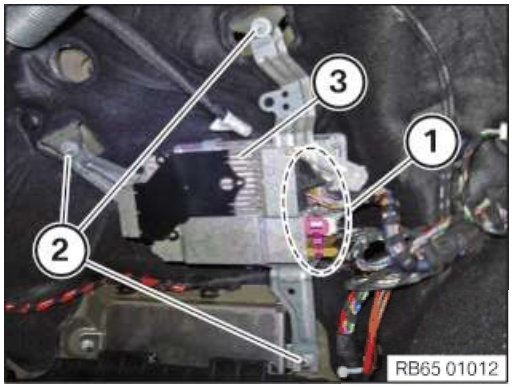


- Unlock and disconnect connector (1).
- Release cable latch mechanisms (2).
- Feed out the TRSVC control unit (3) with the holder and remove it.

7 – Install the TRSVC control unit



- Feed in the TRSVC control unit (3) with the holder and position it.
- Engage the cable latch mechanisms (2).
- Connect connectors (1) and lock.
- Turn the TRSVC-control unit (3) with the holder.



- Feed in the Receiver audio module (RAM) (3) with the holder and position it correctly.
- Tighten nuts (2).

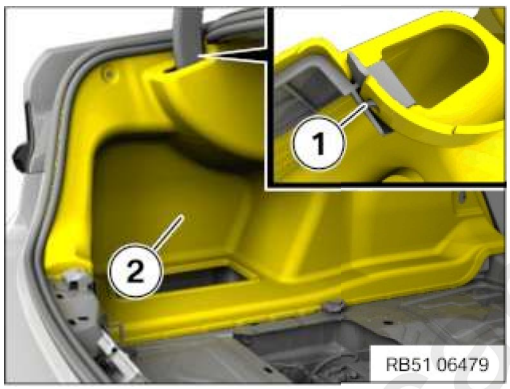
Bracket to body

Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

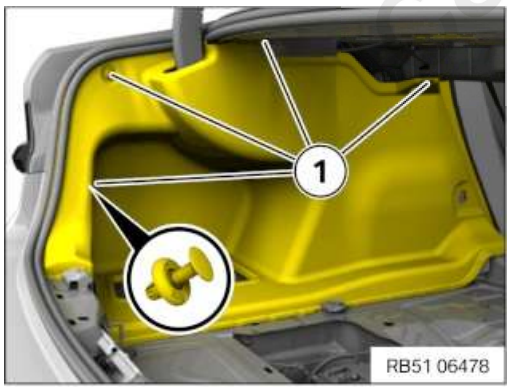
- Connect and lock all connectors in the area (1).

POSTPROCESSES

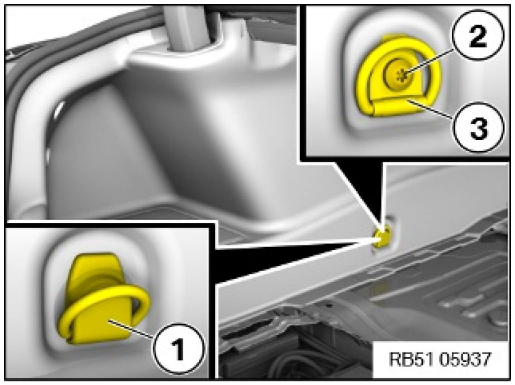
8 – Install luggage compartment wheel arch trim panel at left



- Feed luggage compartment wheel arch trim panel (2) under the side trim panel in the rear passenger compartment and the sealing lip for the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



- Secure expanding rivet (1).
- Raise the link rear seat backrest.



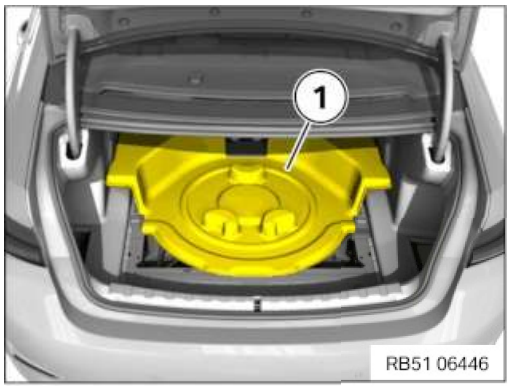
- Position the lashing eye (3).
- Tighten down screw (2).

Lashing eye to body

	Tightening torque	19 Nm

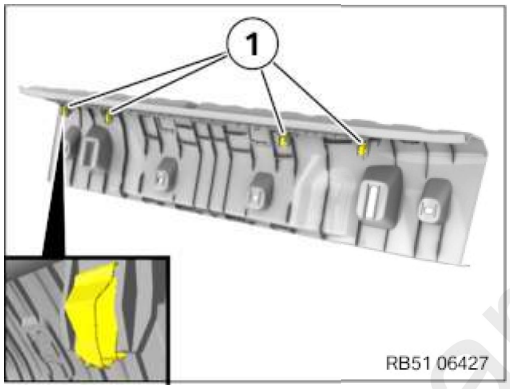
- Install the cover (1).

9 – Install the luggage compartment well in front

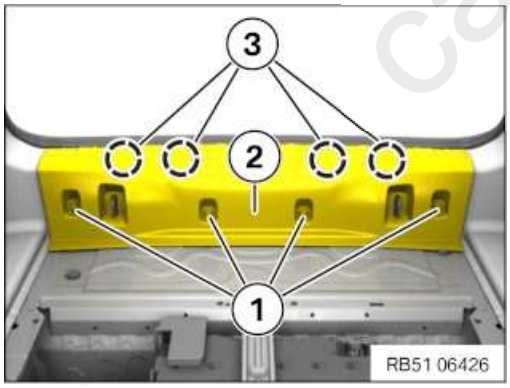


- Feed in and insert front luggage compartment well (1) on the seat belt strap.

10 – Installing loading edge trim



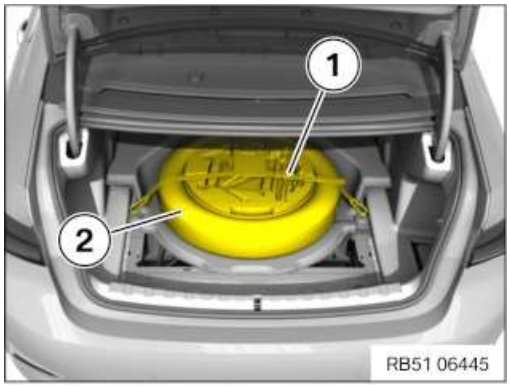
- Check the clamps (1) for damage and renew if necessary.



- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

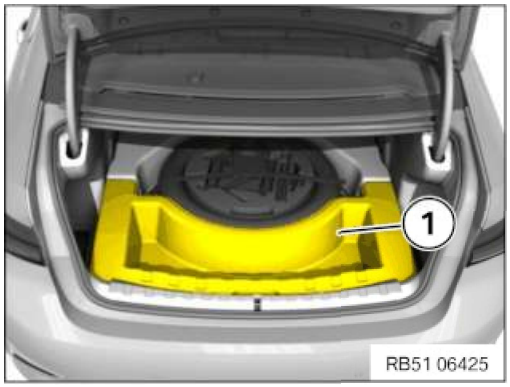
11 – If installed: Install the emergency wheel

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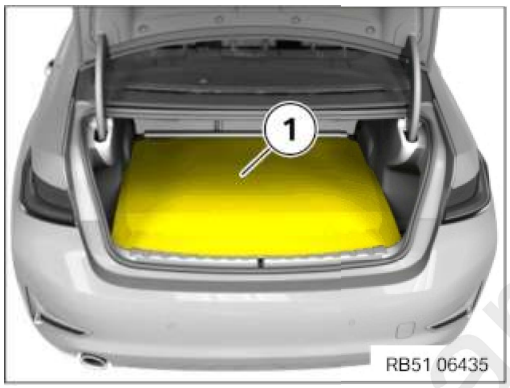
- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

12 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

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Additional Information

Overview of Tightening Torques

Bracket to body			Used in step 7
Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

Lashing eye to body			Used in step 8
		Tightening torque	19 Nm

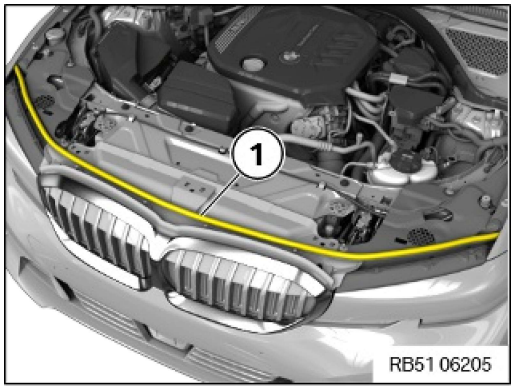
Links

Repair instructions	**Used in step**
61 35 ... Notes on ESD protection (Electro Static Discharge)	

66 53 621 Replace front camera

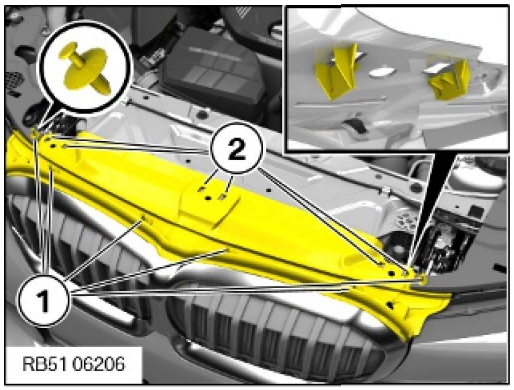
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



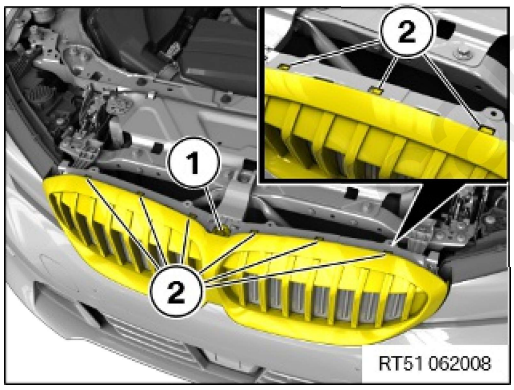
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

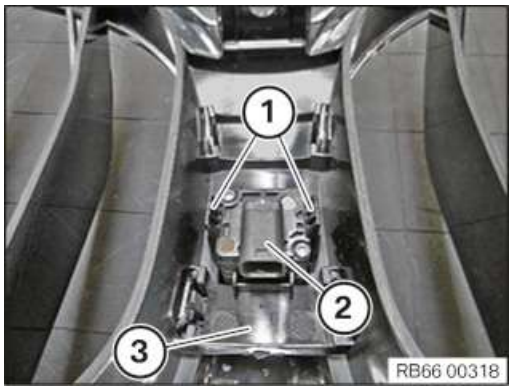
3 – Remove centre radiator ornamental grille



- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

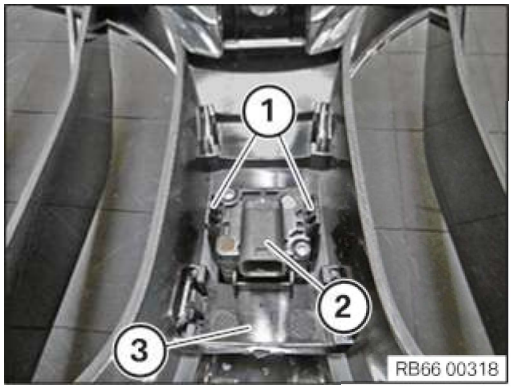
MAIN WORK

4 – Removing the front camera



- Unlock the locks (1).
- Remove front camera (2) from the front radiator grill centre (3).

5 – Installing the front camera



- Insert front camera (2) correctly in the radiator grille (3).
- Lock the locks (1).

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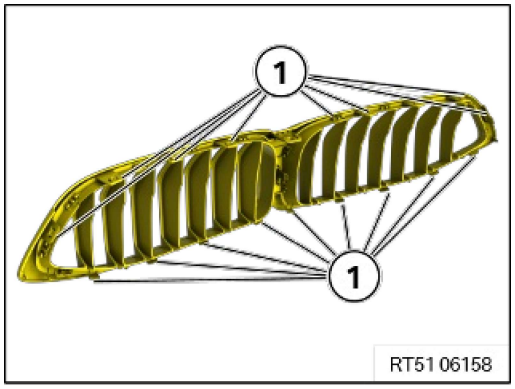
POSTPROCESSES

6 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

Check



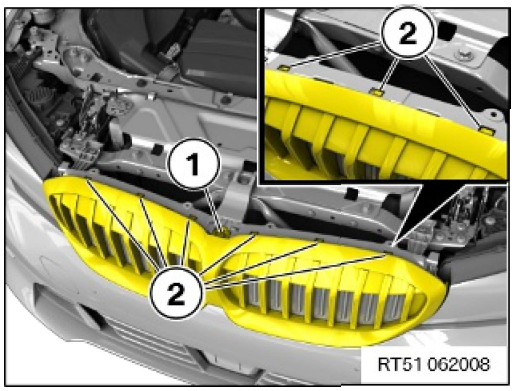
- Check latch mechanisms (1) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

- Renew the front ornamental grille, centre.

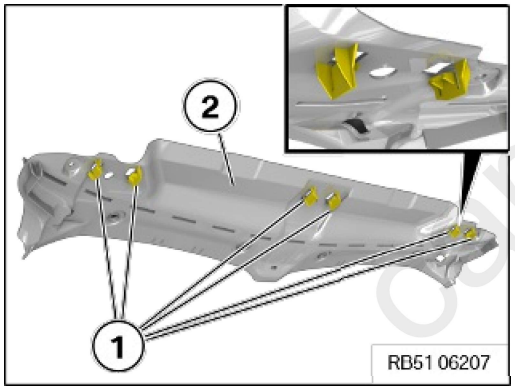


- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

7 – Installing cover for engine compartment centre



Check

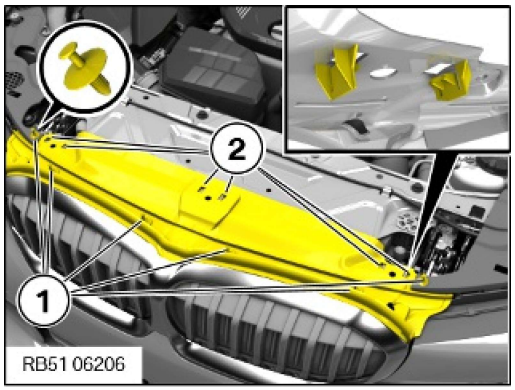
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

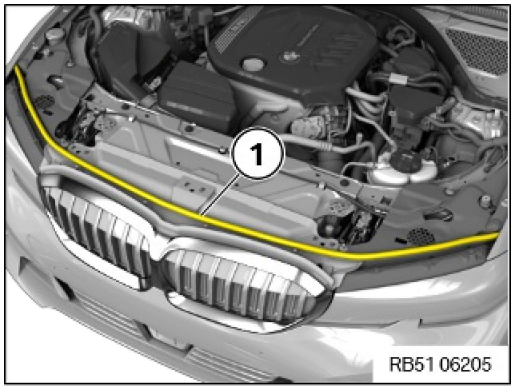
- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

8 – Install the seal for the front bonnet

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- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

9 – Encode/program control unit(s)

- **Replacement**.
- **This task is not included in this flat rate unit item.**

▶ **Encode/program control unit(s)**

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

Additional Information

Overview of Tightening Torques

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Centre of front ornamental grille to top air flap control Used in step 6

Oval-head screwM6		Tightening torque	4,6 Nm

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66 53 582 Replacing left or right top view camera

NOTICE

Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

1 – Removing the mirror glass

CAUTION

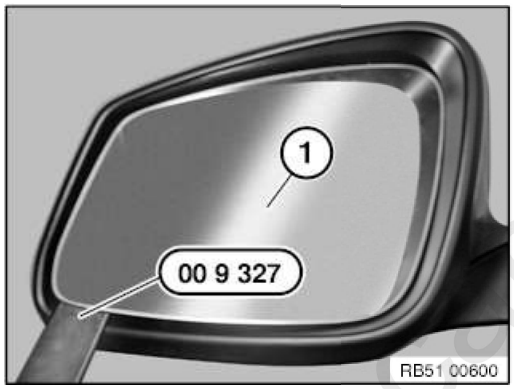
Glass splinters.

Danger of injury!

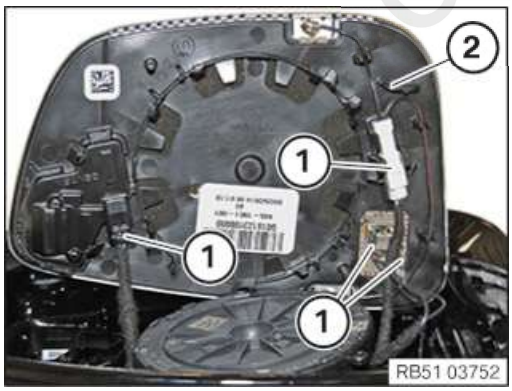
- If the mirror glass is damaged, wear safety goggles and protective gloves.

TECHNICAL INFORMATION

Carry out the work at temperatures between 18 °C and 23 °C only.



- Manually press the mirror glass (1) on the side of vehicle up to the end stop.
- Unclip the mirror glass (1) using special tool 0 496 571 (00 9 327) all the way around, starting with the outer side.



- Disconnect plug connection (1).
- Remove mirror glass (2).

2 – Removing the protective cap of the exterior mirror

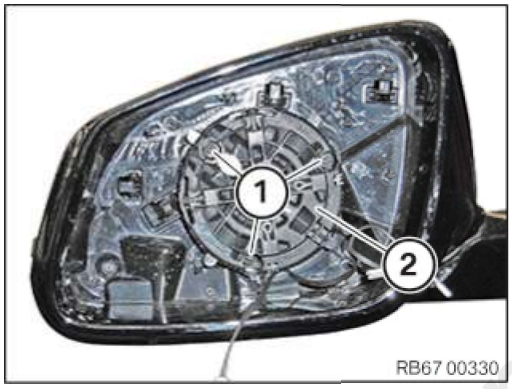


- Spread and release the latch mechanisms (1) of the protective cap on the exterior mirror.



- Remove the protective cap (1) in the direction of the arrow.
- Disconnect associated plug connection.

3 – Removing the drive for exterior mirror adjustment



- **Version A**
- Release the screws (1) and pull out the drive for exterior mirror adjustment (2) a little.

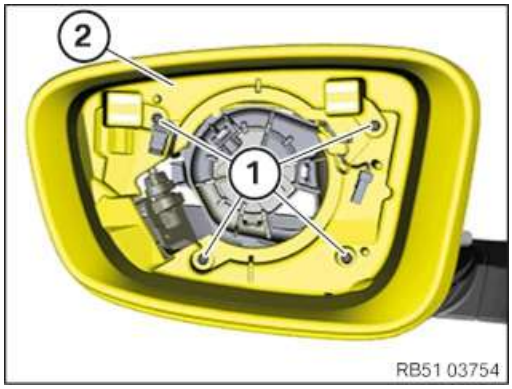


- **Version B**
- Loosen screw (1).
- Pull off the drive for exterior mirror adjustment (2).



- Unlock plug connection (1) and disconnect and remove the drive for exterior mirror adjustment (2) .

4 – Removing retaining ring from exterior rearview mirror



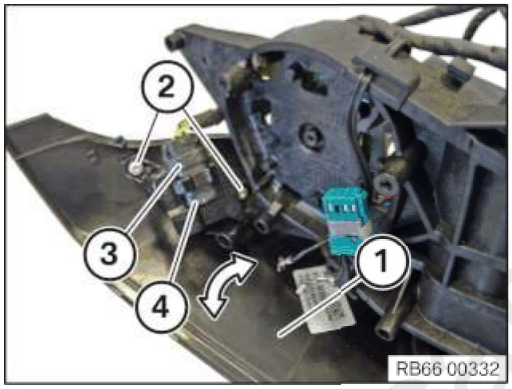
- Loosen screws (1).
- If necessary, feed out cable.
- Guide out retaining ring of exterior rearview mirror (2) in forward direction.

MAIN WORK

5 – Removing the top view camera

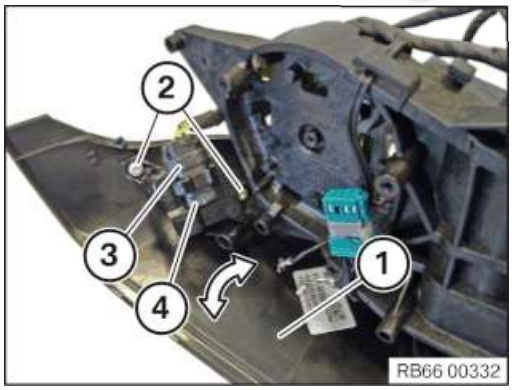


- Loosen the screw (1) on the lower part of the mirror housing (2).



- Carefully pull the lower part of the mirror housing (1) back in the direction of the arrow until the screws (2) are accessible.
- Loosen screws (2).
- Unlock plug connection (3) and disconnect.
- Removing the Top View Camera (4).

6 – Installing the top view camera



- Install and correctly position the top view camera (4).
- Connect connectors (3) and lock.
- Tighten the screws (2).

Top view camera to exterior mirror

Screw		Tightening torque	0,85 Nm

- Push lower section of the mirror housing (1) in the direction of arrow to the front and position it correctly.

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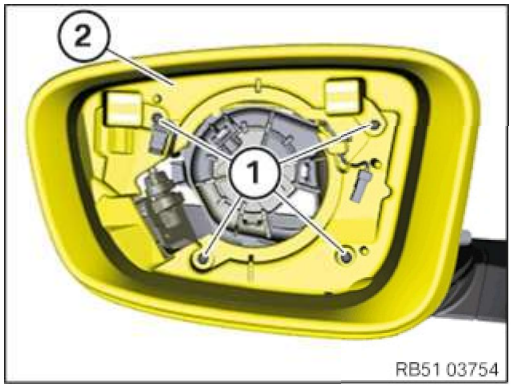
- Tighten screw (1) on the lower section of the mirror housing (2).

Housing to exterior mirror

		Tightening torque	0,85 Nm

POSTPROCESSES

7 – Installing the retaining ring on the exterior rearview mirror



- Feed in the retaining ring on the exterior rearview mirror (2).
- If necessary, feed in cable.
- Tighten the screws (1).

8 – Installing the drive for exterior mirror adjustment



- Position drive for exterior mirror adjustment (2).
- Connect connectors (1) and lock.



- **Version A**
- Position drive for exterior mirror adjustment (2) correctly.
- Tighten the screws (1).

Drive for exterior mirror adjustment

		Tightening torque	1,2 Nm

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- **Version B**
- Correctly position the drive for exterior mirror adjustment (2) and press it in.
- Tighten down screw (1).

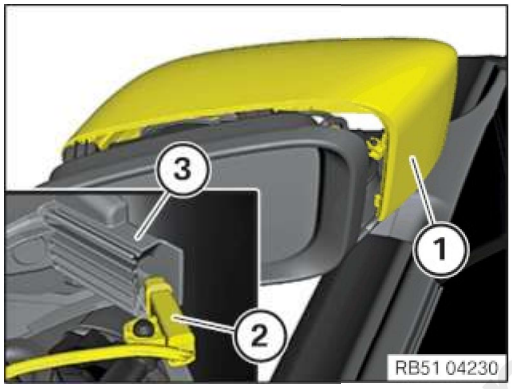
Drive for exterior mirror adjustment

	Tightening torque	1,2 Nm

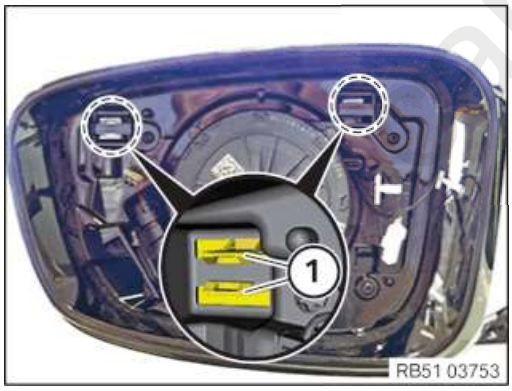
9 – Installing the protective cap of the exterior mirror



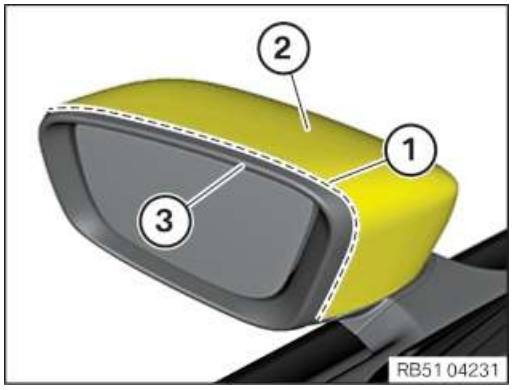
- Position the connector (1) on the mounting (2).
- Position connector (1) as shown.



- Position the protective cap (1) on the exterior mirror.
- Feed in the connector (2) for the side repeater (3).
- Push protective cap (1) on exterior mirror and lock.

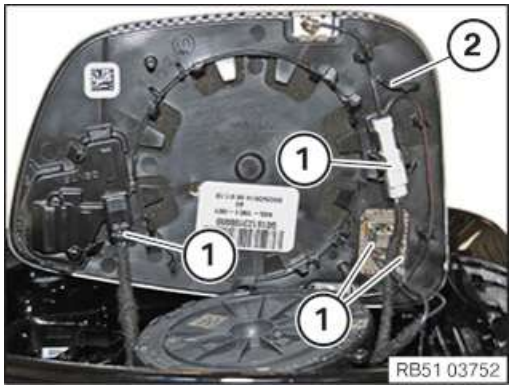


- Make sure that the latch mechanisms (1) are correctly fitted.

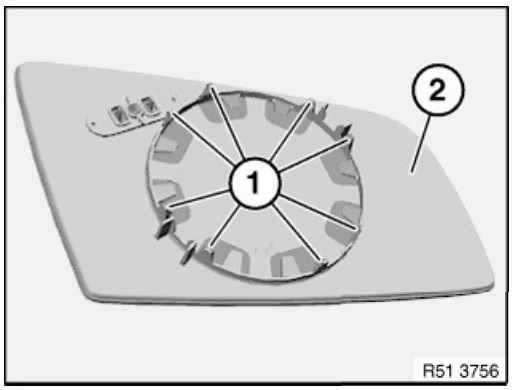


- Check the correct seating of the protective cap (2) on retaining ring (3) around (1).

10 – Installing the mirror glass



- Position mirror glass (2).
- Connect plug connections (1).



- Check whether retaining lugs (1) are missing or damaged and, if required, renew the mirror glass.
- Position the mirror glass (2) with the retaining lugs (1) flush with the drive for exterior mirror adjustment and clip in.
- Ensure correct locking.
- Check if the drive for exterior mirror adjustment is functioning correctly.

11 – Calibrating the top view camera



- Calibration is performed via BMW diagnosis system:
  - Service functions
  - Body
  - All-round vision camera
  - Calibrate the 360 degree view functions

Additional Information

Overview of Tightening Torques

Top view camera to exterior mirror			Used in step 6
Screw		Tightening torque	0,85 Nm

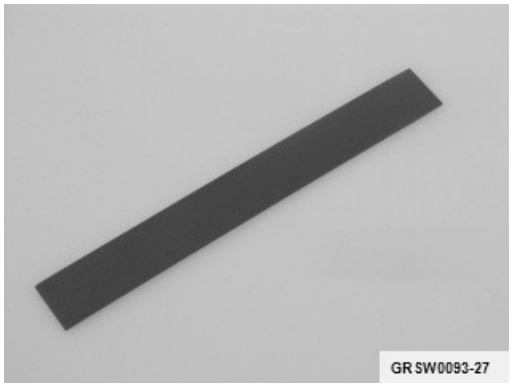
Housing to exterior mirror			Used in step 6
		Tightening torque	0,85 Nm

Drive for exterior mirror adjustment			Used in step 8
		Tightening torque	1,2 Nm

Overview of Special Tools

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0 496 571 (00 9 327) Wedge



Common	Used in step 1
Usage	(Cleaning wedge) From 11/2008 this special tool replaces panel wedge 00 9 323 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

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66 53 671 Replacing the control unit for the Top Rear Side View Camera (TRSVC) (after vehicle diagnosis) (flat rate specification without programming/encoding, see 61 00 ...)

RISK OF DAMAGE

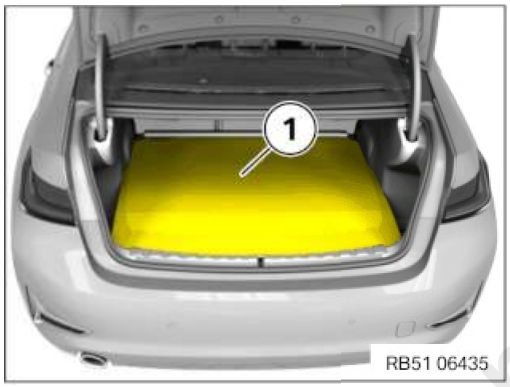
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

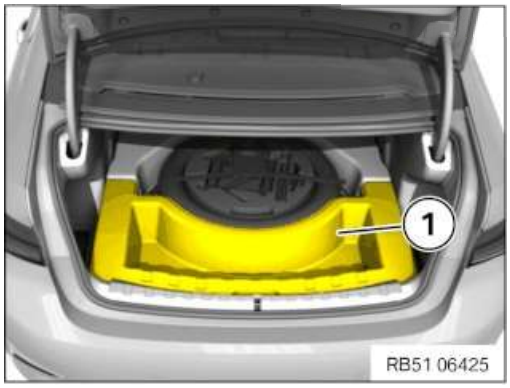
1 – Removing the luggage compartment floor trim panel



- Remove luggage compartment floor trim panel (1).

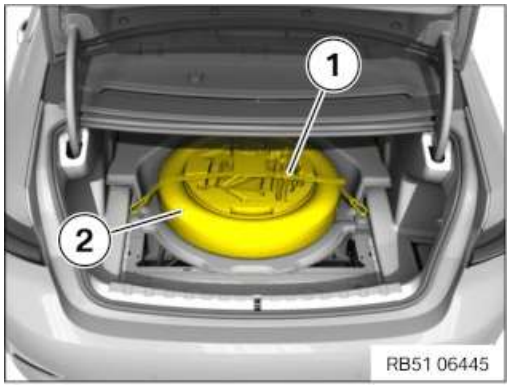
2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**



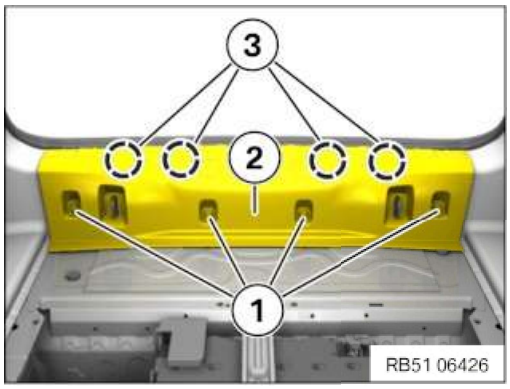
- Remove rear luggage compartment well (1).

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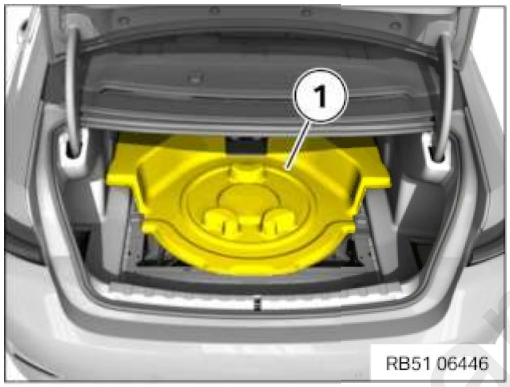
- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

3 – Removing the loading edge trim



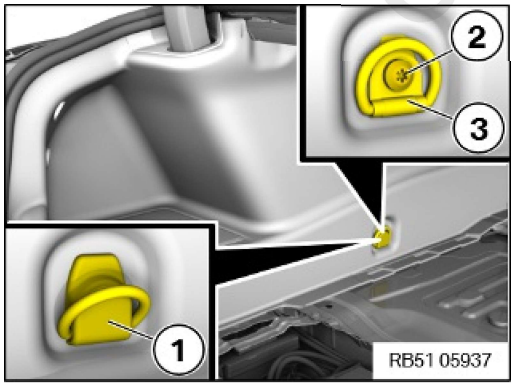
- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

4 – Removing front luggage compartment well



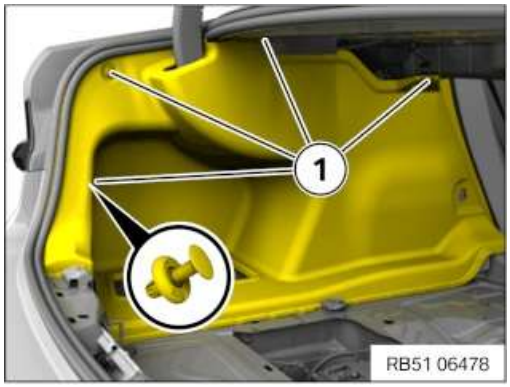
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Remove luggage compartment wheel arch trim panel on left.

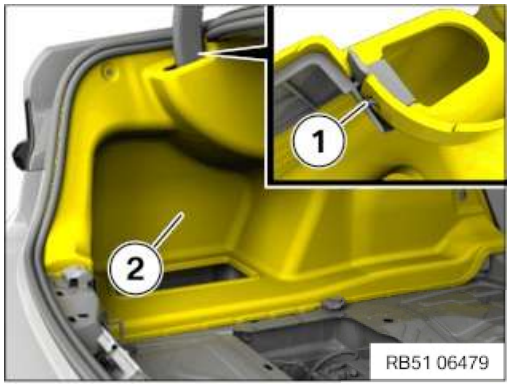


- Remove the cover (1).
- Loosen screw (2).
- Remove lashing eye (3).

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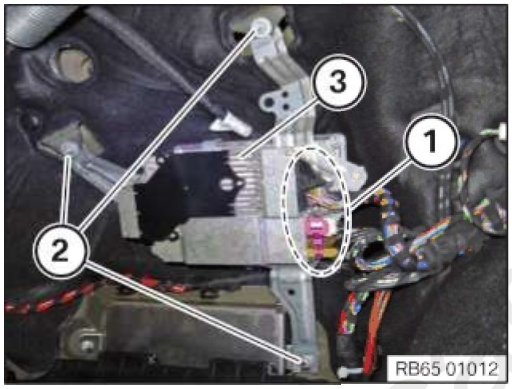
- Reposition left rear seat backrest.
- Loosen the expanding rivet (1).



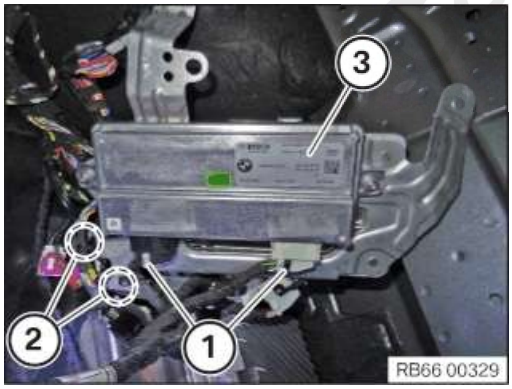
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip for the tailgate and the side trim panel in the rear passenger compartment.
- Remove luggage compartment wheel arch trim panel (2).

MAIN WORK

6 – Remove the TRSVC control unit

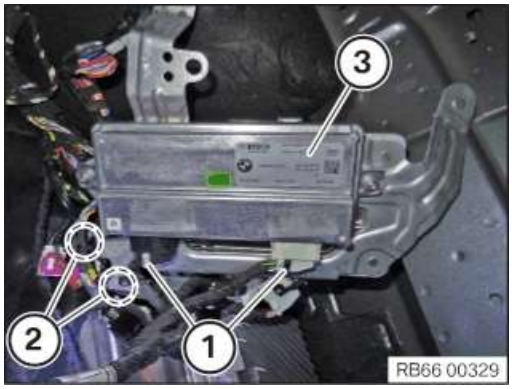


- Unlock and disconnect all connectors in area (1).
- Loosen nuts (2).
- Feed out Receiver audio module (RAM) (3) with the holder and turn.

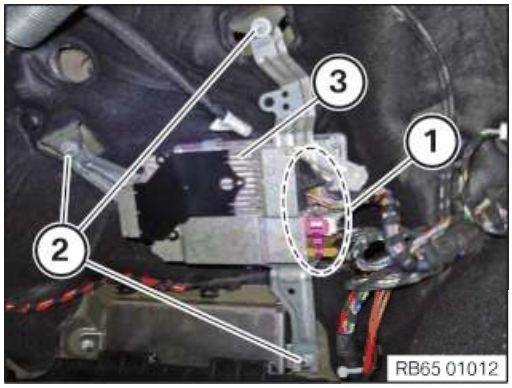


- Unlock and disconnect connector (1).
- Release cable latch mechanisms (2).
- Feed out the TRSVC control unit (3) with the holder and remove it.

7 – Install the TRSVC control unit



- Feed in the TRSVC control unit (3) with the holder and position it.
- Engage the cable latch mechanisms (2).
- Connect connectors (1) and lock.
- Turn the TRSVC-control unit (3) with the holder.



- Feed in the Receiver audio module (RAM) (3) with the holder and position it correctly.
- Tighten nuts (2).

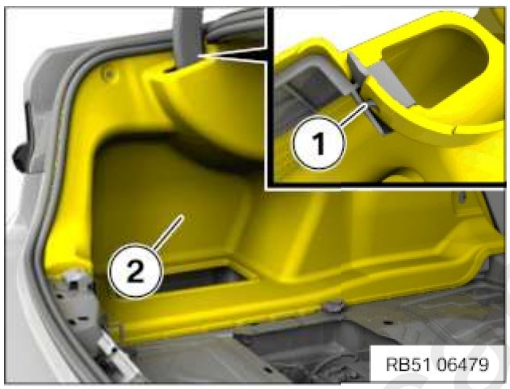
Bracket to body

Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

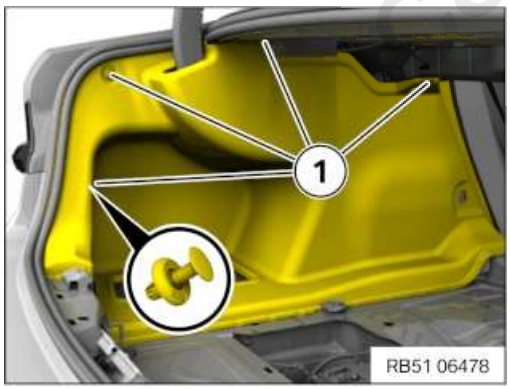
- Connect and lock all connectors in the area (1).

POSTPROCESSES

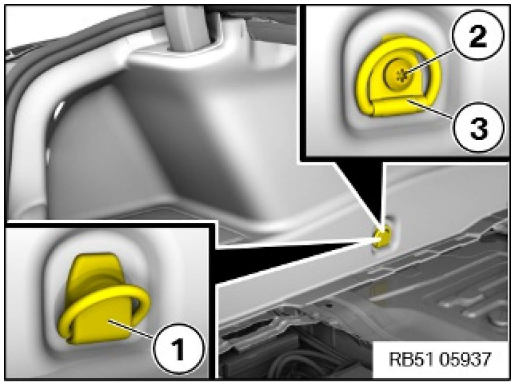
8 – Install luggage compartment wheel arch trim panel at left



- Feed luggage compartment wheel arch trim panel (2) under the side trim panel in the rear passenger compartment and the sealing lip for the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



- Secure expanding rivet (1).
- Raise the link rear seat backrest.



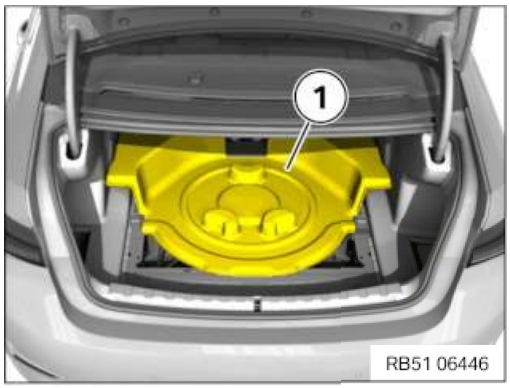
- Position the lashing eye (3).
- Tighten down screw (2).

Lashing eye to body

	Tightening torque	19 Nm

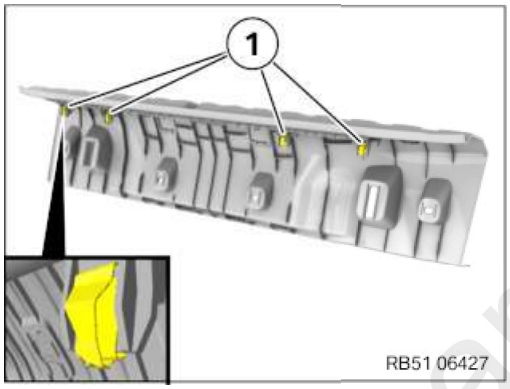
- Install the cover (1).

9 – Install the luggage compartment well in front

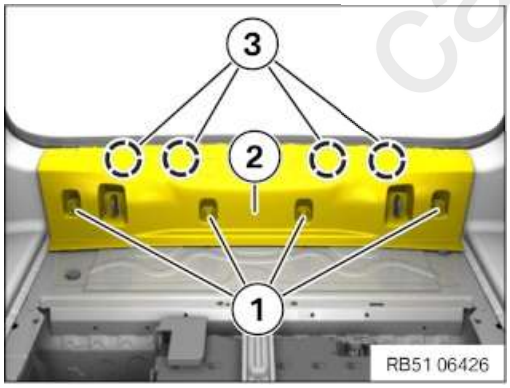


- Feed in and insert front luggage compartment well (1) on the seat belt strap.

10 – Installing loading edge trim



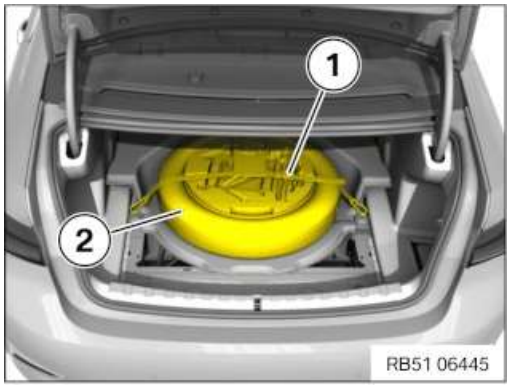
- Check the clamps (1) for damage and renew if necessary.



- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

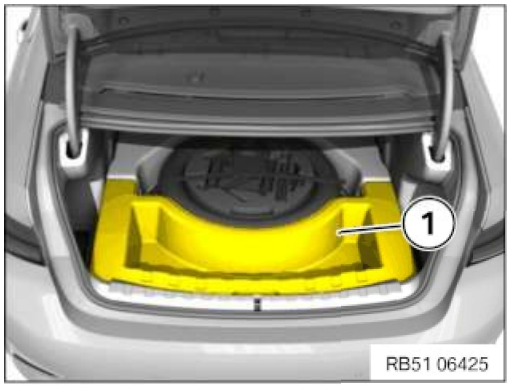
11 – If installed: Install the emergency wheel

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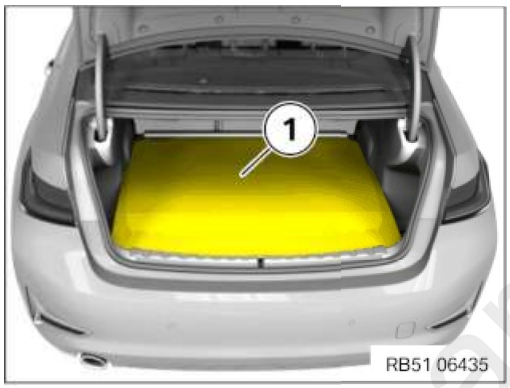
- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

12 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

13 – Encode/program control unit(s)

- **Replacement.**
- **This task is not included in this flat rate unit item.**

▶ **Encode/program control unit(s)**

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

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TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

14 – Checking the depiction of the vehicle in CID

TECHNICAL INFORMATION

A different vehicle model could be shown in the CID after programming/encoding.

Check
- After programming/encoding, check whether the correct vehicle model is displayed in the CID.

Result
» An incorrect vehicle model is display in the CID.

Measure
- Connect diagnosis system and carry out the service function.
  - Driver assistance
  - All-round vision camera
  - Transmit vehicle profile

Additional Information

Overview of Tightening Torques

Bracket to body — Used in step 7

Nut		Tightening torque	6 Nm
Screw		Tightening torque	6 Nm

Lashing eye to body — Used in step 8

		Tightening torque	19 Nm

Links

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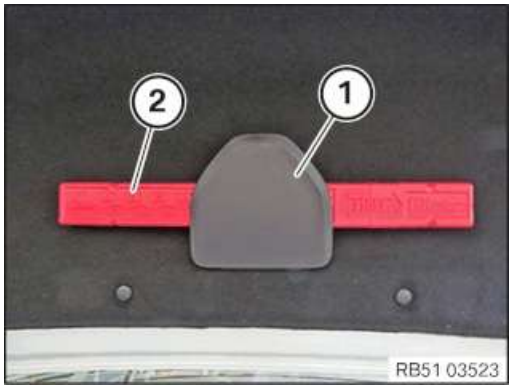
Repair instructions	Used in step
61 35 ... Notes on ESD protection (Electro Static Discharge)	

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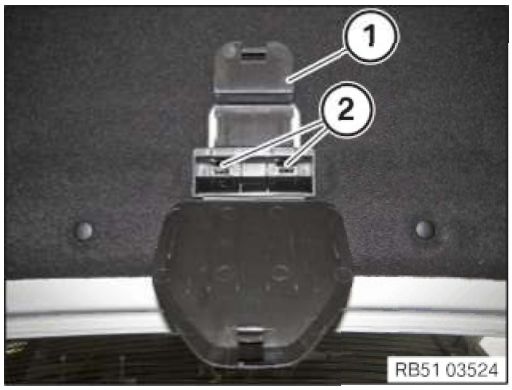
66 53 524 Replacing the rear view camera

PRELIMINARY WORK

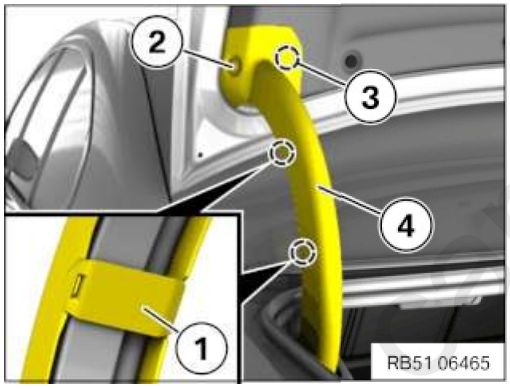
1 – Remove tailgate trim panel



- Fold the cover (1) towards the bottom.
- Remove the warning triangle (2).



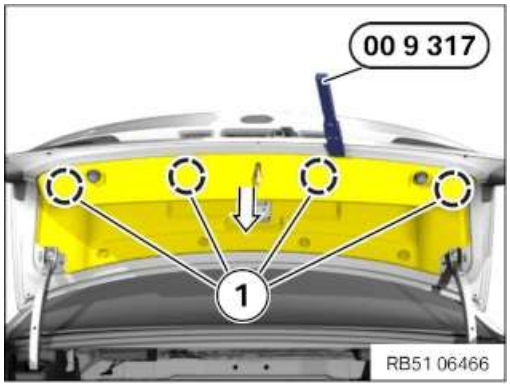
- Detach the warning triangle holder (1) from the latch mechanisms (2) and slide downwards.



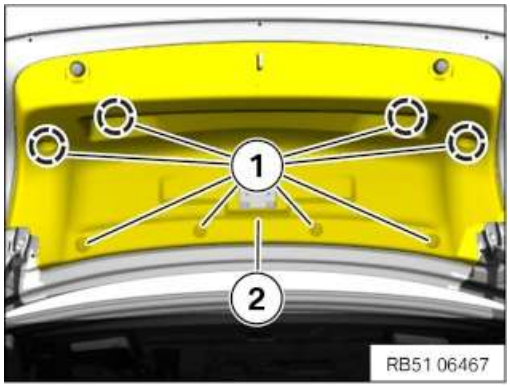
NOTICE

Description is for left component only. Procedure on the right side is identical.

- Unclip the tabs (1).
- Loosen expanding rivet (2).
- To avoid damage, release the trim panel for the hinge of the tailgate (4) without using a tool by jerking it along the hinge bracket and out of the clip fastening (3).



- Unclip clips (1) with special tool 0 490 534 (00 9 317) in the direction of arrow.



- Release expanding rivet (1) on the tailgate trim panel (2).
- Remove tailgate trim panel (2).
- **If installed**: Unlock plug connection of the switch for the tailgate lift and disconnect.

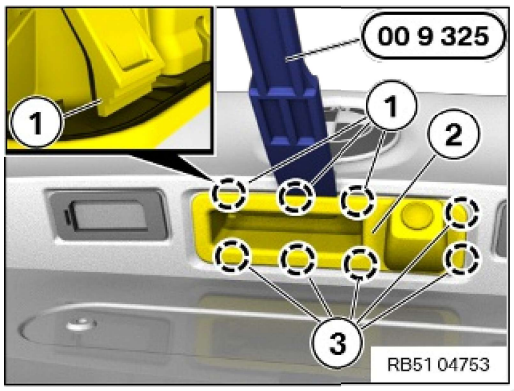
2 – Remove tailgate pushbutton

RISK OF DAMAGE

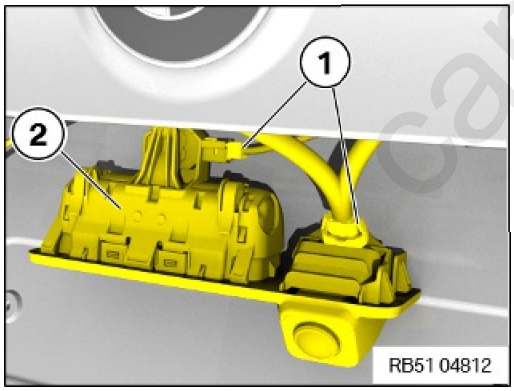
Scratches.

Tools and sharp-edged components can cause scratches.

- Protect working area.
- Handle tools and components carefully.



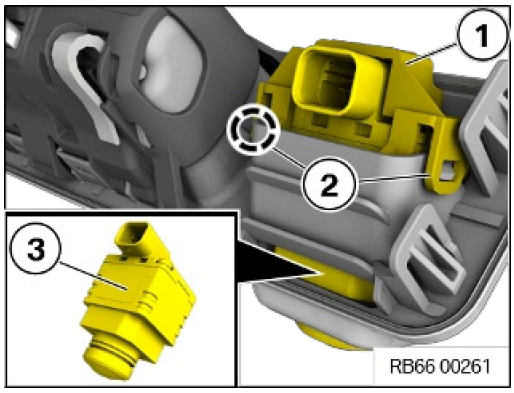
- Mount special tool 0 496 569 (00 9 325) as illustrated.
- Open the latch mechanisms (1) of the tailgate button (2) by carefully knocking onto the special tool 0 496 569 (00 9 325).
- Disengage the latch mechanisms (3) from the inside unclip the tailgate button (2) toward the bottom.



- Disconnect the connector (1) and remove the tailgate button (2).
- If necessary, remove broken off parts of the tailgate button (2) from the tailgate.

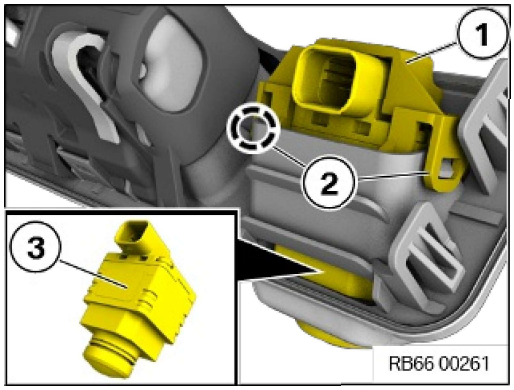
MAIN WORK

3 – Remove rear view camera



- Unclip the holder (1) from the latch mechanisms (2) and remove it.
- Remove the rear view camera (3) from button for tailgate activation.

4 – Installing the rear view camera

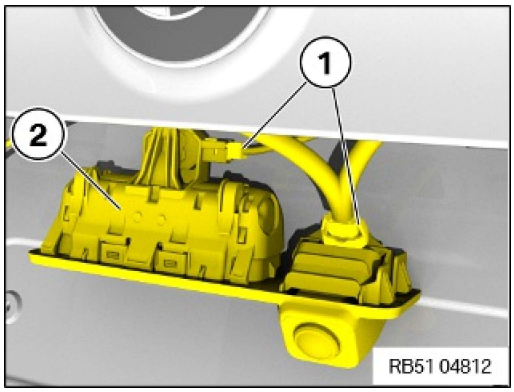


- Insert rear view camera (3) in the button for the tailgate activation.
- Clip the holder (1) into the latch mechanisms (2).

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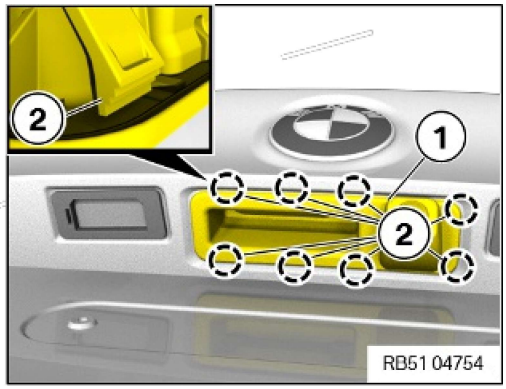
POSTPROCESSES

5 – Install the tailgate button



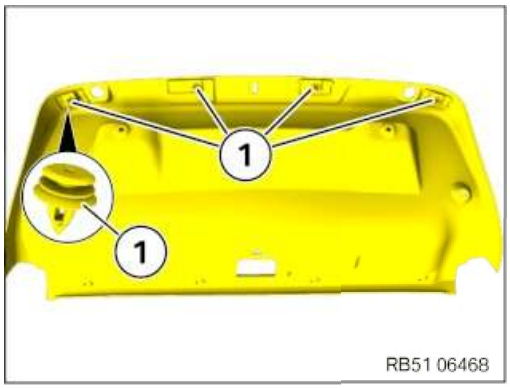
- Renew the tailgate button (2).

  Parts: Tailgate button
- Check the tailgate in the area of the tailgate button (2) for damage and repair where required.
- Connect the connector (1) with the tailgate button (2).

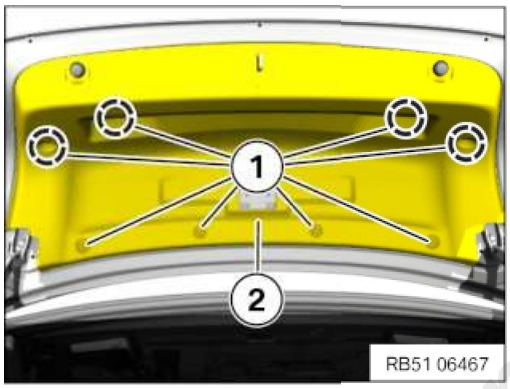


- Insert the tailgate button (1) in the tailgate and clip it into the latch mechanisms (2).

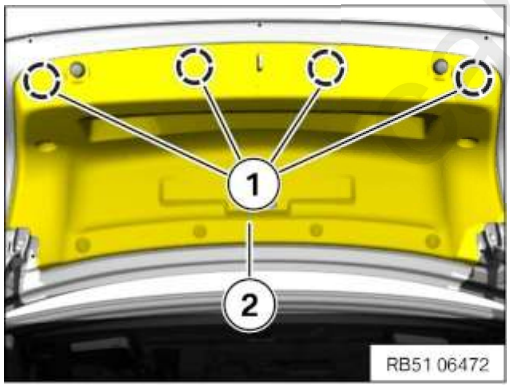
6 – Installing the tailgate trim panel



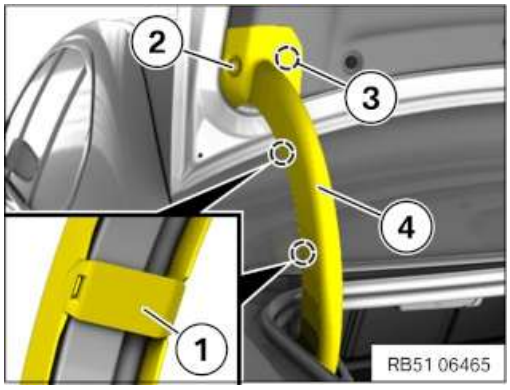
- Check the clips (1) for damage and renew if necessary.



- Fit the tailgate trim panel (2) and fasten in place with the expanding rivets (1).
- **If installed**: Connect and lock plug connection on the switch for the tailgate lift.



- Clip in the tailgate trim panel (2) with the clips (1).

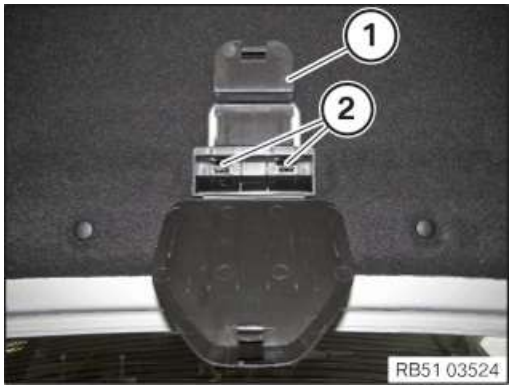


NOTICE

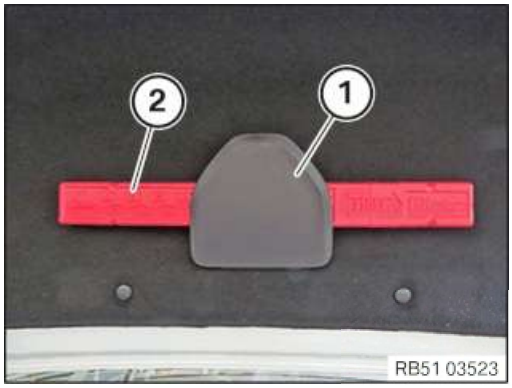
Description is for left component only. Procedure on the right side is identical.

- Clip in the trim panel for the hinge of the tailgate (4) to the clip fastening (3).
- Fasten expanding rivet (2).
- Clip in tabs (1).

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- Position the warning triangle holder (1) and snap into the latch mechanisms (2).



- Install the warning triangle (2).
- Clip in the cover (1).

7 – Encode/program control unit(s)

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

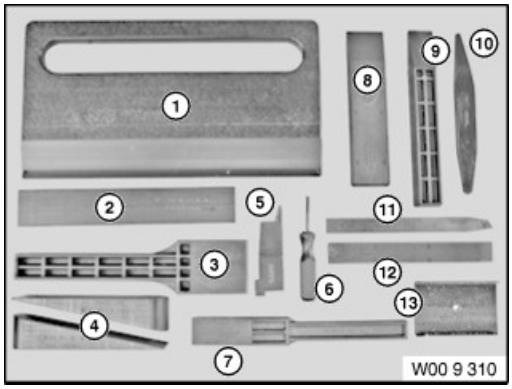
- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

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Additional Information

Overview of Special Tools

0 490 534 (00 9 317) Wedge



Common	Used in step 1
Usage	(Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)
Included in the tool or work	0 490 527
Storage location	
Replaced by	
In connection with	
SI-Number	

0 496 569 (00 9 325) Wedge



Common	Used in step 2
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

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61 00 ... Parking-residing-driving

Vehicles of the G series feature a new type of terminal control:

Functional description of the parking-residing-driving terminal control

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00 Safety information for working on vehicles with automatic engine start-stop function (MSA)

Warning!

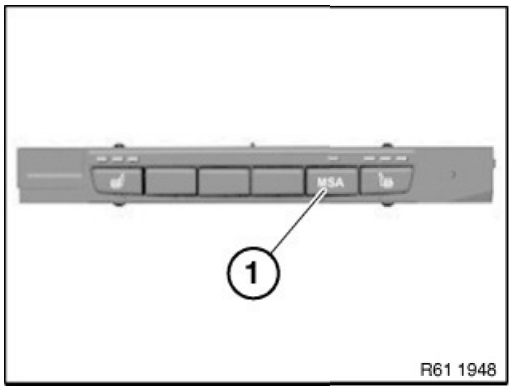
If the engine hood/bonnet contact is pulled upwards (workshop mode), the information "switch closed" is output. The automatic engine start-stop function is active.

An automatic engine start is possible.

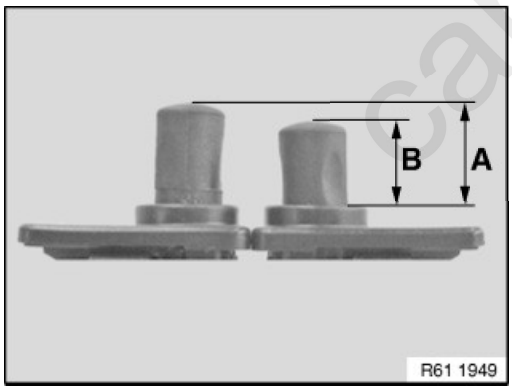
Observe safety precautions when working on MSA vehicles.

Before carrying out practical work on the engine, always ensure that the MSA functionality is deactivated so as to prevent automatic engine starting while work is being carried out in the engine compartment.

MSA function is deactivated by:



- Deactivate MSA by means of button (1) in passenger compartment
- Open seat belt buckle and driver's door



- Open engine bonnet/hood and ensure that engine hood/bonnet contact is not in workshop mode
  - Workshop mode

    A = 10 mm
  - Basic setting (engine hood/bonnet open)

    B = 7 mm

  To make sure that the engine hood/bonnet contact is at the basic setting, if necessary press the hood/bonnet contact up to the limit position before starting work and slowly release.

When working with diagnosis tools:

- Observe instructions in diagnosis tool

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Note:
For further information on automatic engine start-stop function (MSA):

- Refer to the Service Information (bulletin) (for manual transmissions) Service Information (bulletin) 61 01 07 335
- Refer to the Service Information (bulletin) (for automatic transmissions or twin-clutch gearboxes) Service Information (bulletin) 61 01 10 629

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