# 71 60 051 Remove and install trailer tow hitch completely

**RISK OF DAMAGE**

**Mechanical effects.**

**Paint damage.**

- Mask those working areas at risk with yellow plastic adhesive tape.
- Remove and install heavy or bulky components with the aid of another person/other persons.

**TECHNICAL INFORMATION**

To guarantee the quality of the driver assistance functions in vehicles with concealed radar sensors installed, the component may only be repainted by observing the repair specifications described in the document "Standards for repair painting with sensor systems".

Sourcing reference:

https://colorsystem-paint.com/

Aftersales Information Research (AIR) - Repair and service messages - HG99 - ColorSystem

ISTA - HG99 - ColorSystem

No stickers or foils (transparent or coloured) may be attached in the radiation areas of the radar sensors.

The component may be painted if no radar sensors have been installed.

The following features can be used to identify whether radar sensors are installed on the vehicle:

Radar sensors are installed at the rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame).

Radar sensors are installed at the front and rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame) in conjunction with the optional equipment S5ATA or S5AUA.

## PRELIMINARY WORK

### 1 – Removing the luggage compartment floor trim panel

▶ **Removing the luggage compartment floor trim panel**

**NOTICE**

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



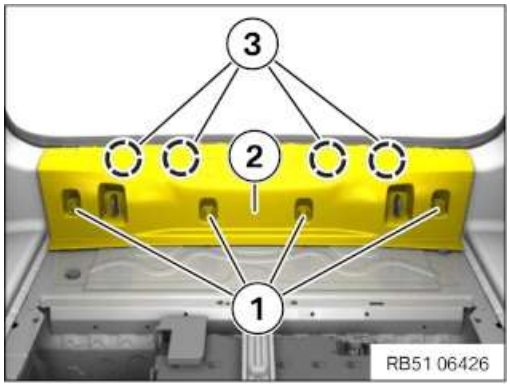

- Remove luggage compartment floor trim panel (1).

### 2 – Removing the loading edge trim

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**NOTICE**

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



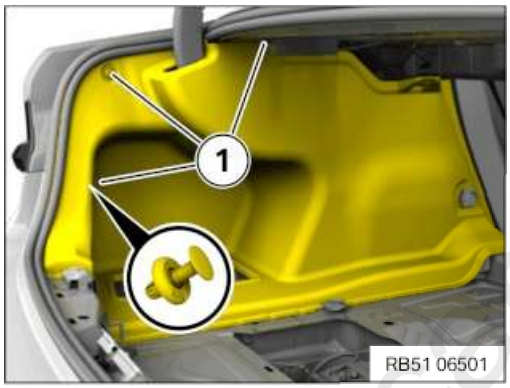

- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

**3 – Removing part of the luggage compartment wheel arch trim panel on the left and right**

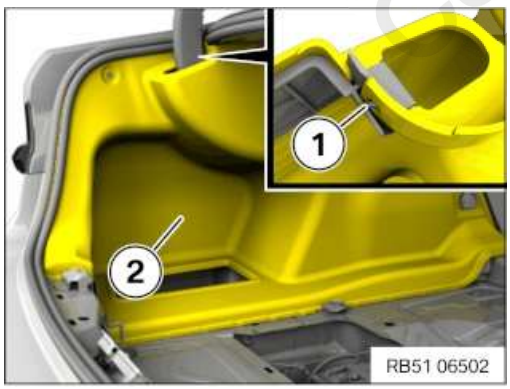
▸ **Partially remove luggage compartment wheel arch panel on left**

**NOTICE**

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




- Loosen the expanding rivet (1).



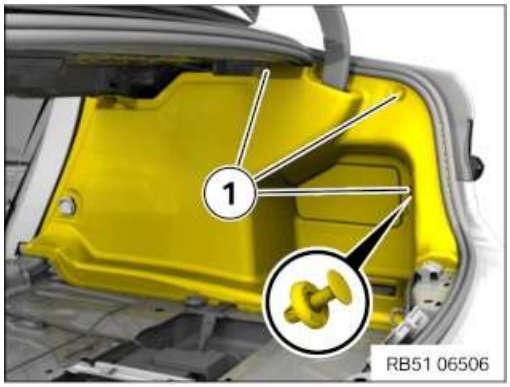

- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ **Partially remove luggage compartment wheel arch panel on right**

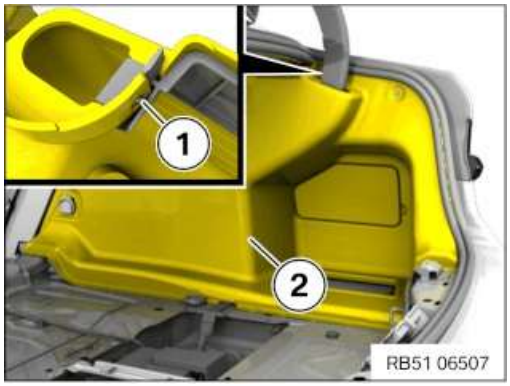
**NOTICE**

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

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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.

### 4 – Removing trim from water channel on left and right

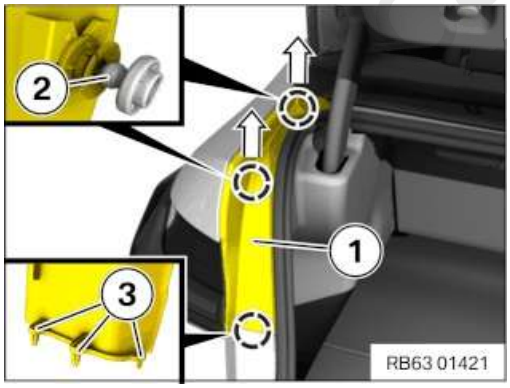
**NOTICE**

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

▸ **Removing trim from water channel**

**NOTICE**

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




- Unclip trim (1) in upward direction from ball pins (2).
- Release trim (1) from guides (3) and remove.

### 5 – Removing the rear light on the left and right side panels

**NOTICE**

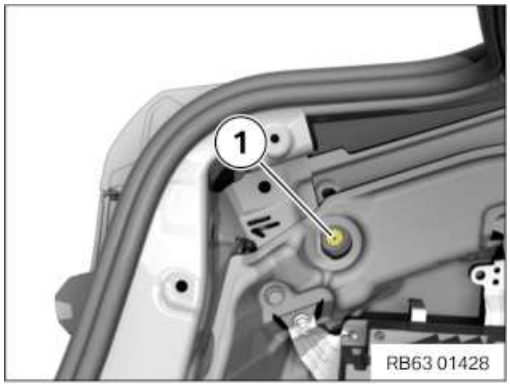
Description is for left component only. Procedure on the right side is identical.

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

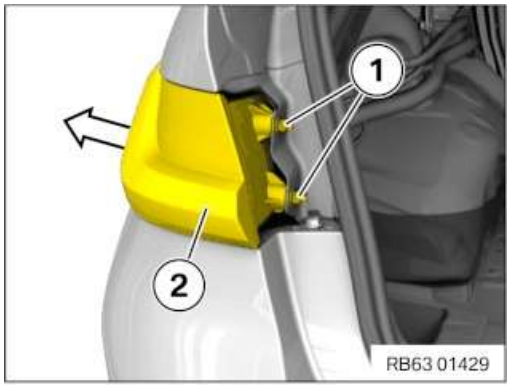
cardiagn.com

**NOTICE**

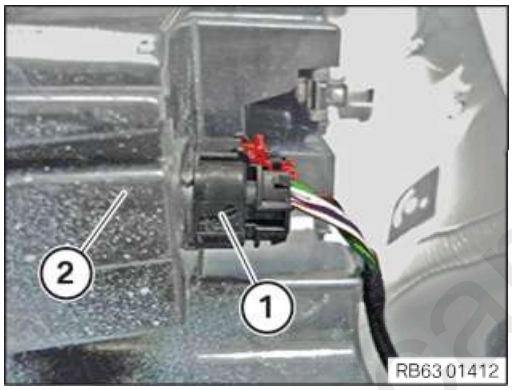
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Loosen nut (1).




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



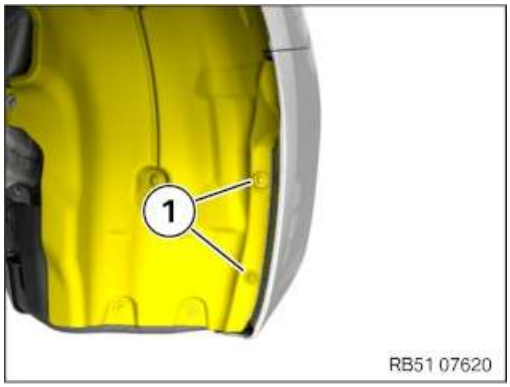

**TECHNICAL INFORMATION**

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock plug connection (1) and disconnect.
- Remove the rear light on the side panel (2).

### 6 – Remove rear bumper panel




**NOTICE**

Perform the operations on the left and right side.

**NOTICE**

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

- Loosen screws (1).

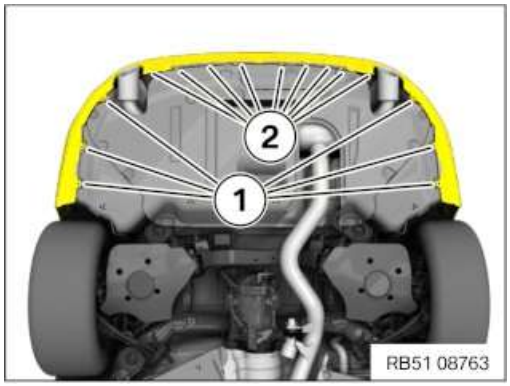
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**NOTICE**

Perform the operations on the left and right side.

- Release the screw (1).




- Loosen screws (1).
- Release the bumper panel at the latch mechanisms (2).




**NOTICE**

Perform the operations on the left and right side.

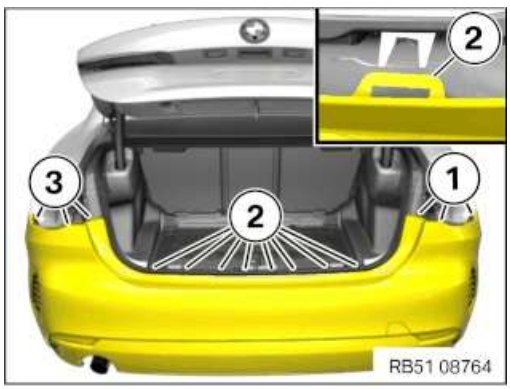
- Release the screw (1).




**NOTICE**

Perform the operations on the left and right side.

- Release the bumper panel with the latch mechanisms (1).

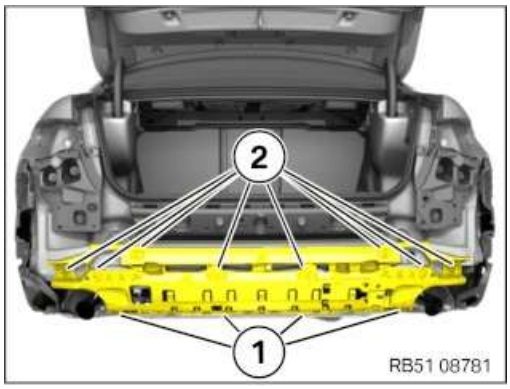



- Release the bumper panel with the latch mechanisms (1).
- Release the bumper panel from the latch mechanisms (2) starting from the right.
- Release the bumper panel from the latch mechanisms (3)

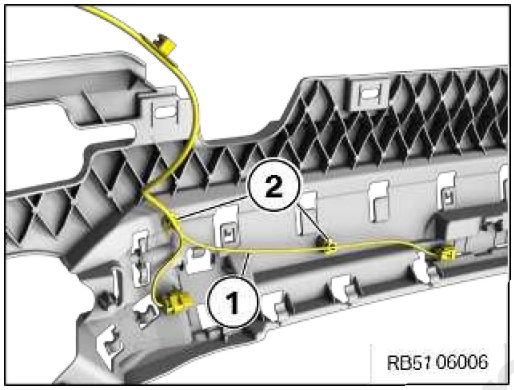



- Unlock plug connection and disconnect.
- Remove bumper panel.

### 7 – Removing the brace for the rear bumper panel




- Loosen screws (1).
- Release the expanding rivets (2) and remove the brace from the support.




**NOTICE**

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

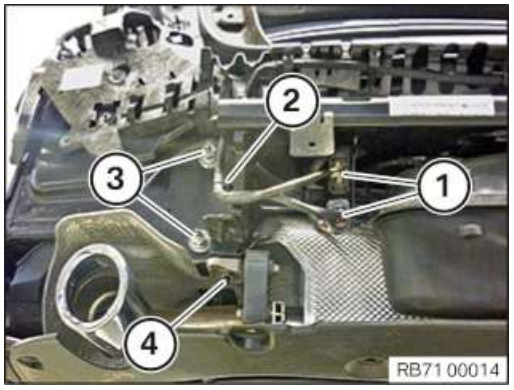
- Unlock and disconnect all plug connections, according to the equipment.
- Release the wiring harness (1) with the holders (2).
- Remove the brace.

## MAIN WORK

### 8 – Removing the trailer tow hitch

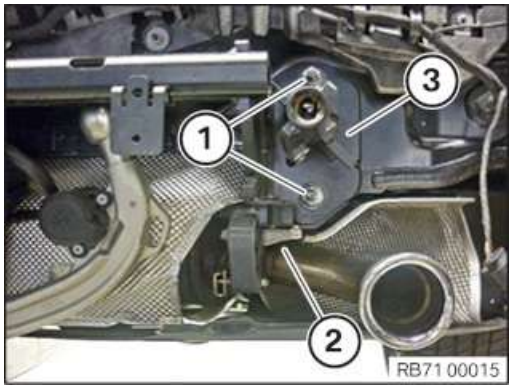
**NOTICE**

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




- Unlock and disconnect plug connections (1).
- Loosen the cable clip (2).
- Loosen nuts (3) and (4).

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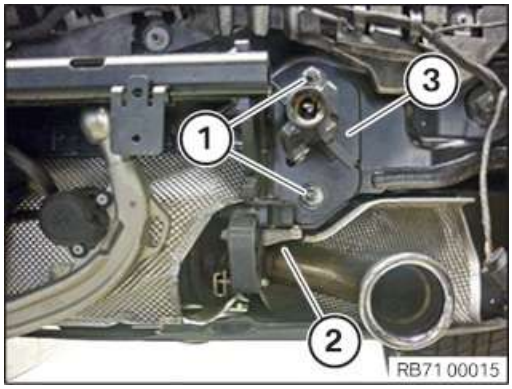



- Loosen nuts (1) and (2).
- Remove trailer tow hitch (3) with the help of a second person.

**9 – Installing the trailer tow hitch**

**NOTICE**

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




- Position the trailer tow hitch (3) with an auxiliary person.
- Renew nuts (1).

  **Parts:** Nuts
- Tighten nuts (1).

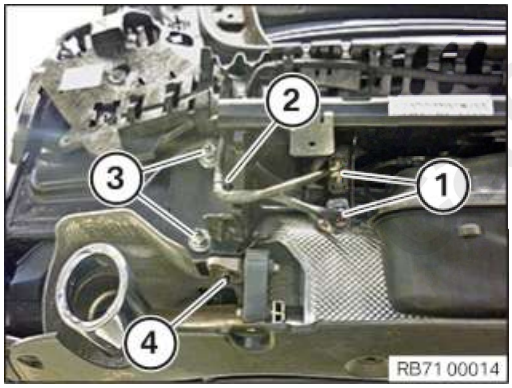
**Trailer tow hitch on body**

| | | | |
|---|---|---|---|
| Nut M12x1 | Replace nuts | Tightening torque | 108 Nm |

- Mount the rear silencer and tighten the nut (2).

**Rear silencer to body / bumper support**

| | | | |
|---|---|---|---|
| M8 | Replace nuts. | Tightening torque | 19 Nm |




- Renew nuts (3).

  **Parts:** Nuts
- Tighten nuts (3).

**Trailer tow hitch on body**

| | | | |
|---|---|---|---|
| Nut M12x1 | Replace nuts | Tightening torque | 108 Nm |

- Mount the rear silencer and tighten the nut (4).

**Rear silencer to body / bumper support**

| | | | |
|---|---|---|---|
| M8 | Replace nuts. | Tightening torque | 19 Nm |

- Secure the cable clips (2).
- Connect connectors (1) and lock.

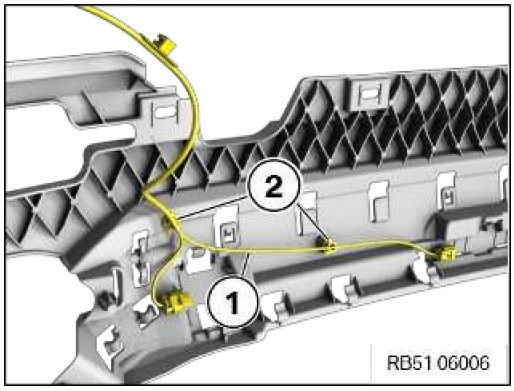


- **Replacement:**

  Perform initialisation in the test module or manual initialisation via the button in the luggage compartment (see operating instructions). The procedure for manual initialisation is described in the test module.

## POSTPROCESSES

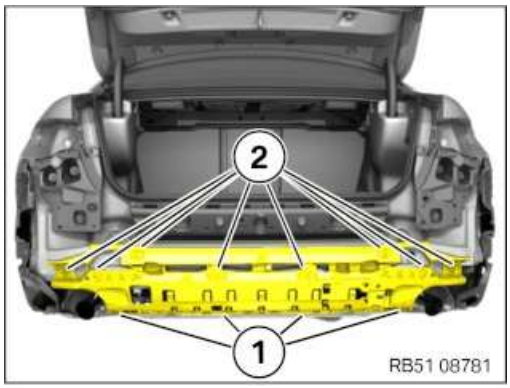
**10 – Installing the brace for the rear bumper panel**




**NOTICE**

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

- Position the brace.
- Clip in the wiring harness (1) with the holders (2).
- Depending on the equipment, connect and lock all connectors.

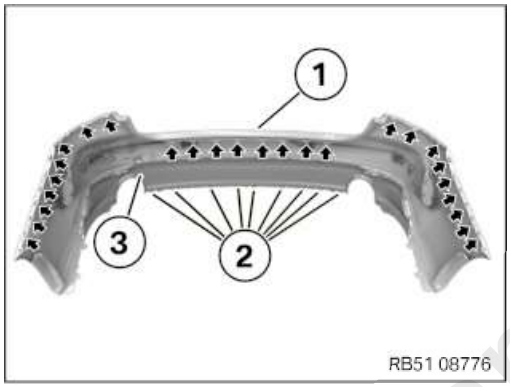



- Position the brace.
- Secure expanding rivet (2).
- Tighten the screws (1).

**Diffuser, rear**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3 Nm |

## 11 – Install rear bumper panel




**Check**

- Check the latch mechanisms (arrows) on the bumper panel (1) for damage.

  Check the latch mechanisms (2) on the bumper trim (3) for damage.

**Result**

» Latch mechanisms (arrows) are damaged.

**Measure**

- Renew the bumper panel (1).

**Result**

» Latch mechanisms (2) are damaged.

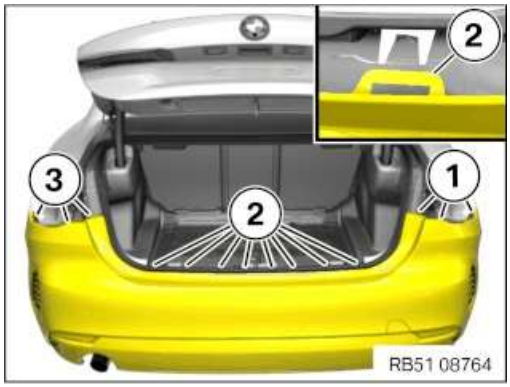
**Measure**

- Renew the bumper trim (3).




- Position the bumper panel.
- Connect connectors (1) and lock.

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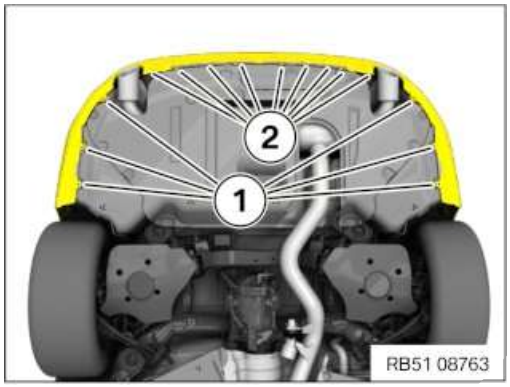

- Clip in the bumper panel with the latch mechanisms (1),(2) and (3).




**NOTICE**

Perform the operations on the left and right side.

- Clip in the bumper panel with latch mechanisms (1).




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

**Rear bumper trim panel to guide**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.5 Nm |




**NOTICE**

Perform the operations on the left and right side.

- Tighten down screw (1).

**Rear bumper trim panel to guide**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.5 Nm |




**NOTICE**

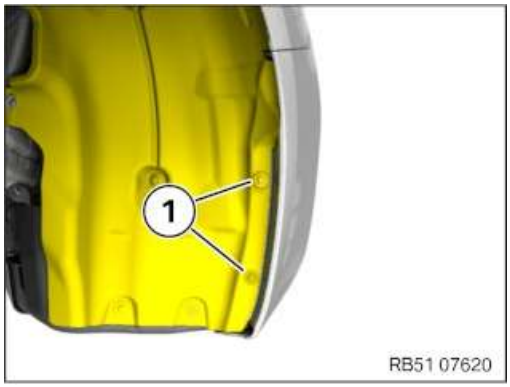
Perform the operations on the left and right side.

- Tighten down screw (1).

**Lower bumper panel to body**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 2.5 Nm |

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**NOTICE**

Perform the operations on the left and right side.

**NOTICE**

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

- Tighten the screws (1).

**Rear wheel arch cover to bumper trim panel**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2,6 Nm |

### 12 – Installing the rear light on the left and right side panels

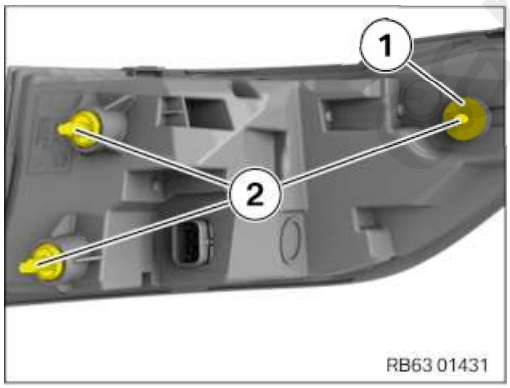
**NOTICE**

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

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

**NOTICE**

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




**Check**

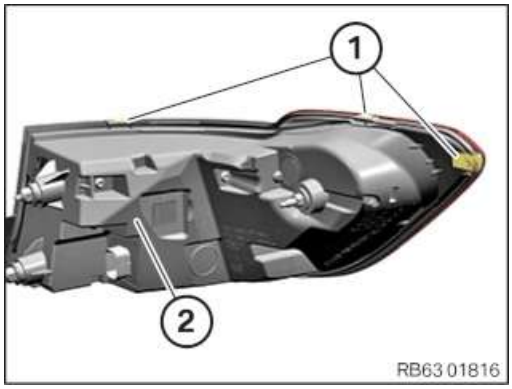
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

**Result**

» The threaded inserts are damaged.

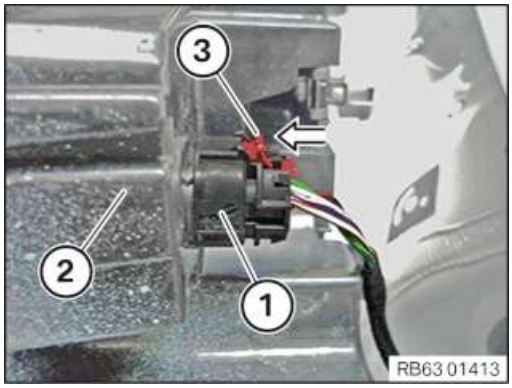
**Measure**

- Replace rear light.



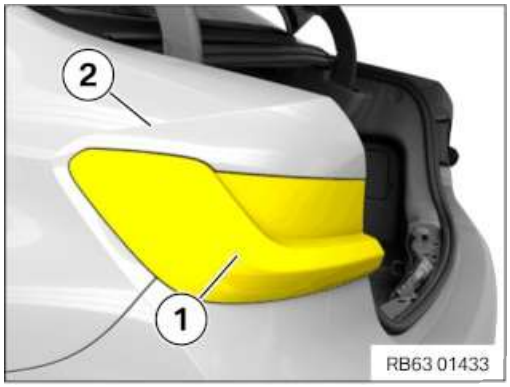

- Contact surfaces (1) on rear light (2) must not be damaged or missing.

  Missing contact surfaces (1) could cause paintwork damage.

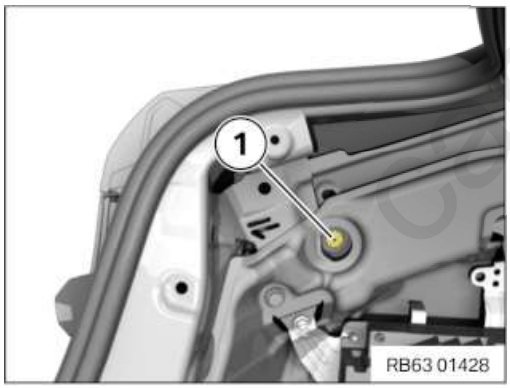



- Connect the connector (1) to the rear light on the side panel (2).

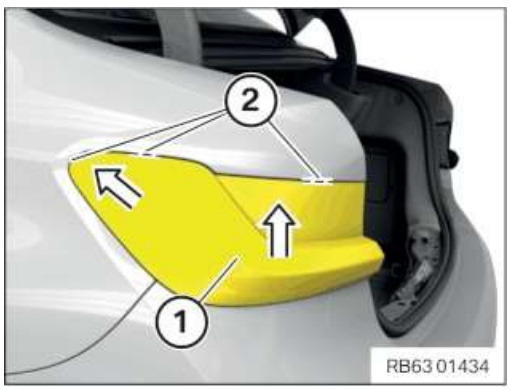
  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).




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

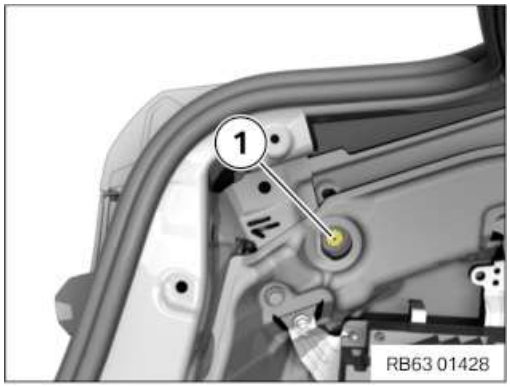



- Position the nut (1).




- 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.

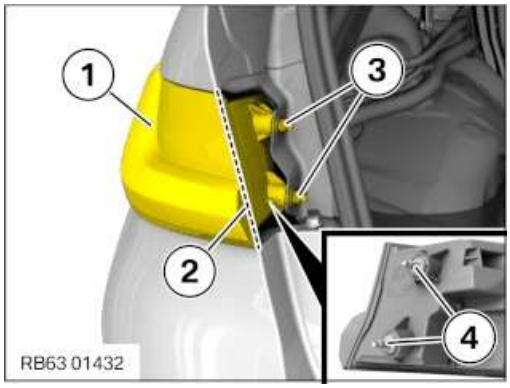
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- Tighten nut (1).

**Rear light to side panel to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 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 to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

### 13 – Installing trim in water channel on left and right

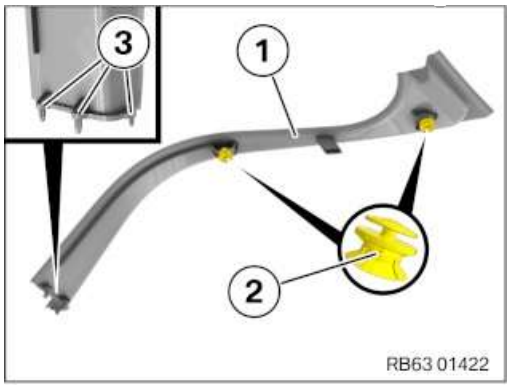
**NOTICE**

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

▸ **Installing trim in water channel**

**NOTICE**

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




**Check**

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

**Result**

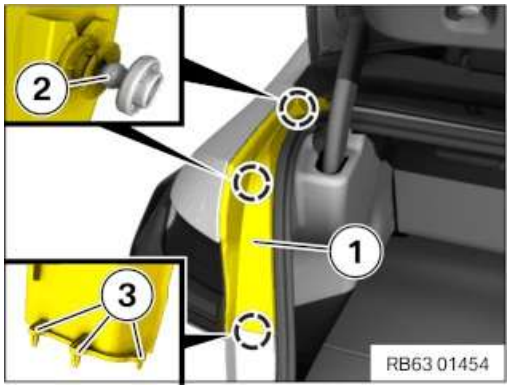
» The guides are damaged.

**Measure**

- Renew the trim .

  **Parts**: trim

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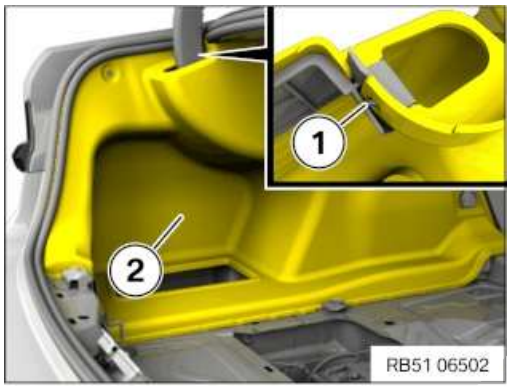

- Insert trim (1) in guides (3).
- Clip trim (1) from above into ball pins (2).

**14 – Partially installing the luggage compartment wheel arch trim panel on the left and right**

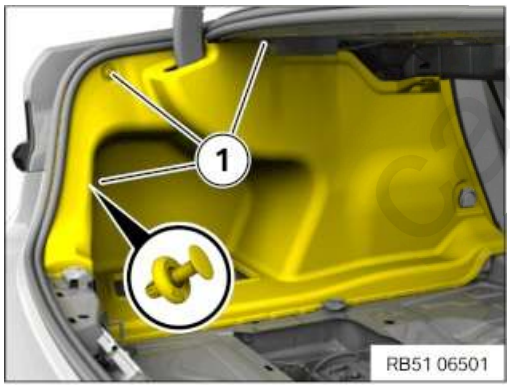
**▸ Partially installing the left luggage compartment wheel arch trim panel**

**NOTICE**

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




- Feed the luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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).



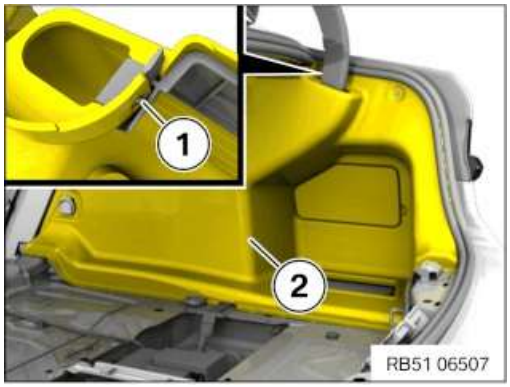

- Secure expanding rivet (1).

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

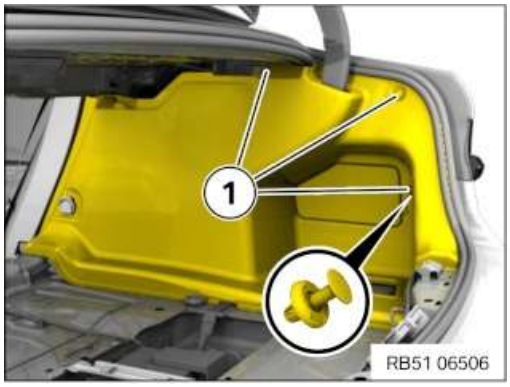
**NOTICE**

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

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- Guide luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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).

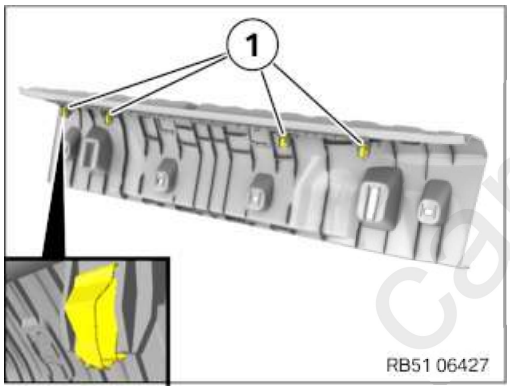



- Secure expanding rivet (1).

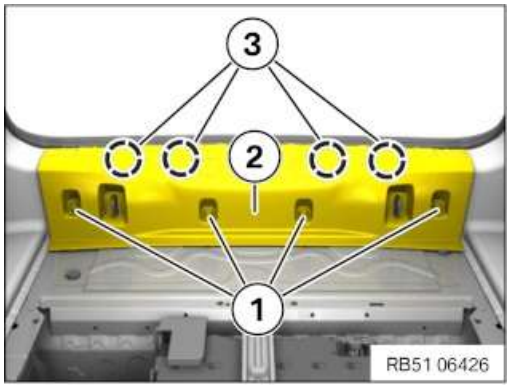
**15 – Installing loading edge trim**

**NOTICE**

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




- 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).

**16 – Installing the luggage compartment floor trim panel**

▸ **Installing the luggage compartment floor trim panel**

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**NOTICE**

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




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

## Additional Information

### Overview of Tightening Torques

| Trailer tow hitch on body | | | Used in step 9 |
|---|---|---|---|
| Nut M12x1 | Replace nuts | Tightening torque | 108 Nm |

| Rear silencer to body / bumper support | | | Used in step 9 |
|---|---|---|---|
| M8 | Replace nuts. | Tightening torque | 19 Nm |

| Diffuser, rear | | | Used in step 10 |
|---|---|---|---|
| Screw | | Tightening torque | 3 Nm |

| Rear bumper trim panel to guide | | | Used in step 11 |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.5 Nm |

| Lower bumper panel to body | | | Used in step 11 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 2.5 Nm |

| Rear wheel arch cover to bumper trim panel | | | Used in step 11 |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2,6 Nm |

| Rear light to side panel to body | | | Used in step 12 |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

### Links

| Repair instructions | Used in step |
|---|---|
| 61 13 ... Unlocking and disconnecting different plug connections | 5 |

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# 71 60 701 Replacing trailer tow hitch control unit

## PRELIMINARY WORK

### 1 – Removing the luggage compartment floor trim panel

▸ **Removing the luggage compartment floor trim panel**

**NOTICE**

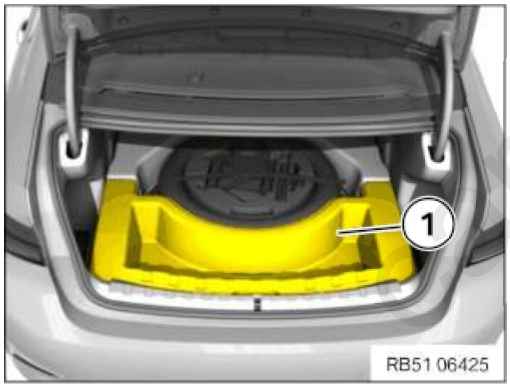
Schematic diagram is for example purposes. Some parts may differ in certain details.



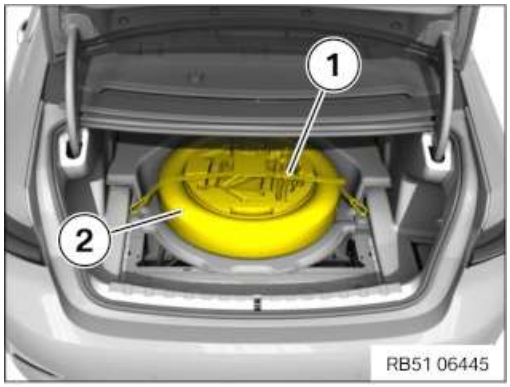

- Remove luggage compartment floor trim panel (1).

### 2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**




- Remove rear luggage compartment well (1).



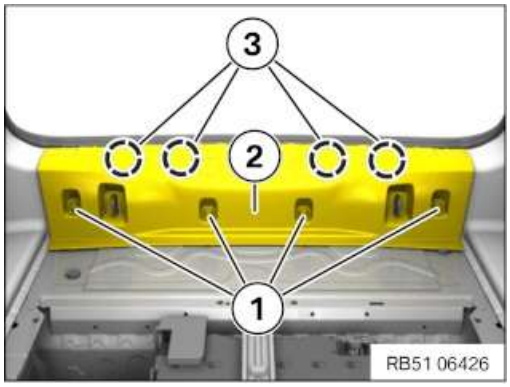

- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

### 3 – Removing the loading edge trim

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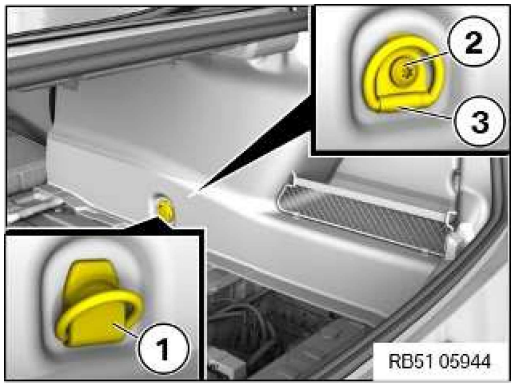
**NOTICE**

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

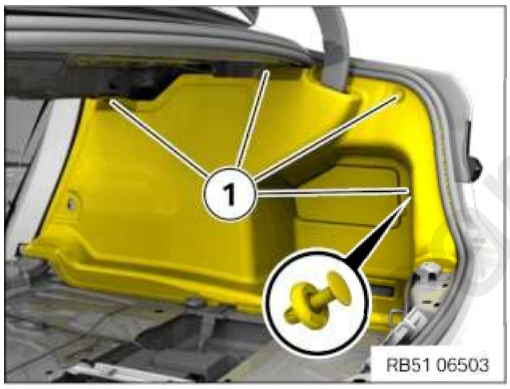



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

**4 – Removing right luggage compartment wheel arch trim panel**

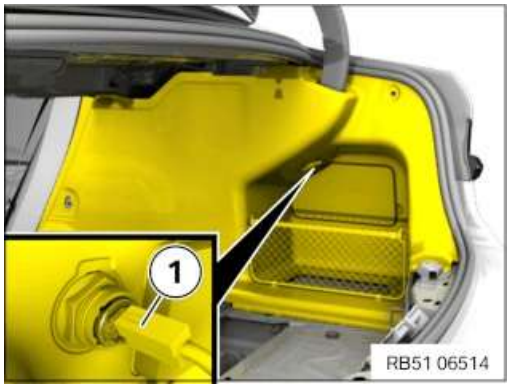



- Remove the cover (1).
- Loosen screw (2).
- Remove the lashing eye (3).

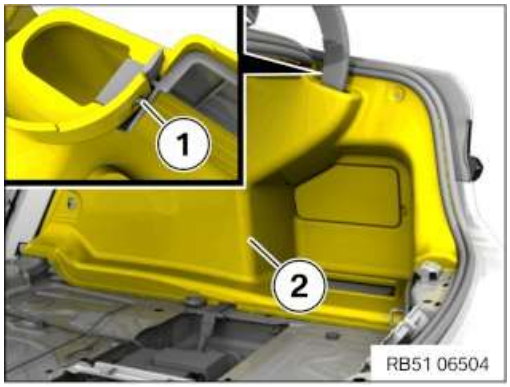



- Reposition the right rear seat backrest.
- Loosen the expanding rivet (1).

**▸ If installed: Disconnect plug connection of the 12 V connection (additional work with storage package equipment specification)**




- Unlock and disconnect the plug connection (1) of the 12 V power socket.




- 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

### 5 – Removing the trailer tow hitch control unit

**NOTICE**

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




- If necessary, release the clips.
- Pull control unit for trailer tow hitch (1) including wiring harness out of the recess.




- Unlock plug connections (1) and disconnect.

### 6 – Installing the trailer tow hitch control unit

**NOTICE**

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




- Connect connectors (1) and lock.




- Push in the control unit for trailer tow hitch (1) including the wiring harness in the recess.
- If necessary, tighten the clips.

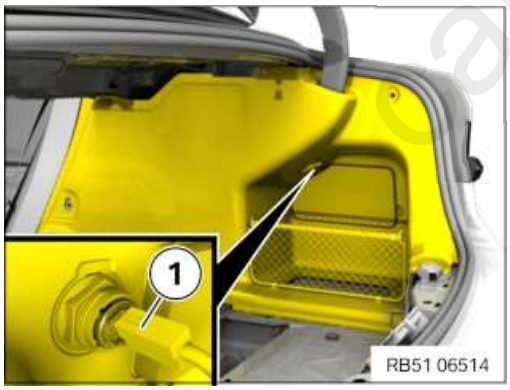
## POSTPROCESSES

### 7 – Installing the luggage compartment wheel arch trim panel on the right

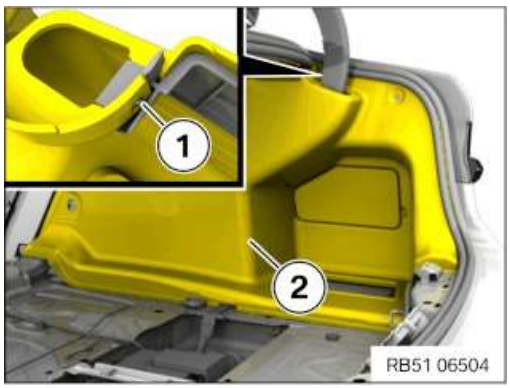
**NOTICE**

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

**▸ If installed: Connecting plug of the 12 V power socket (additional work for equipment specification with storage package)**

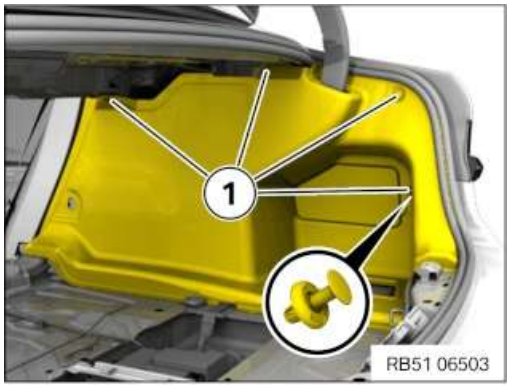



- Connect and lock connector (1) of the 12 V power socket.

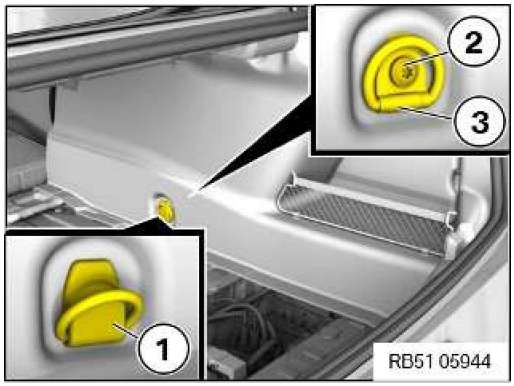



- Feed luggage compartment wheel arch trim panel (2) under the side trim panel in the rear passenger compartment and the sealing lip for the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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




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

**Lashing eye to body**

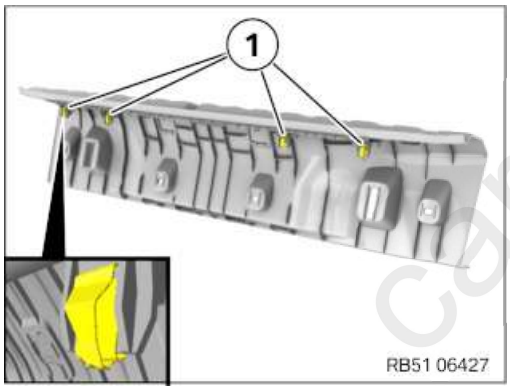
| | | |
|---|---|---|
| | Tightening torque | 19 Nm |

- Install the cover (1) .

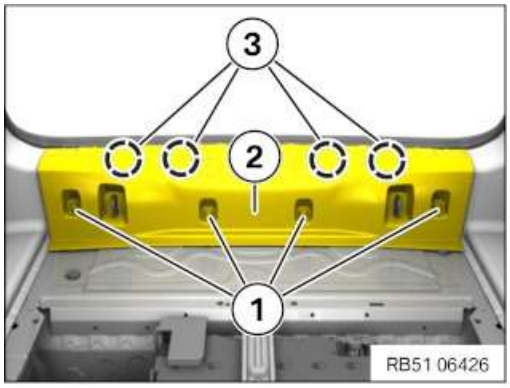
**8 – Installing loading edge trim**

**NOTICE**

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



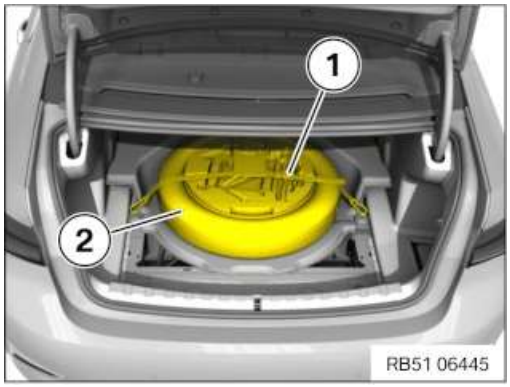

- Check the clamps (1) for damage and renew if necessary.




- 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).

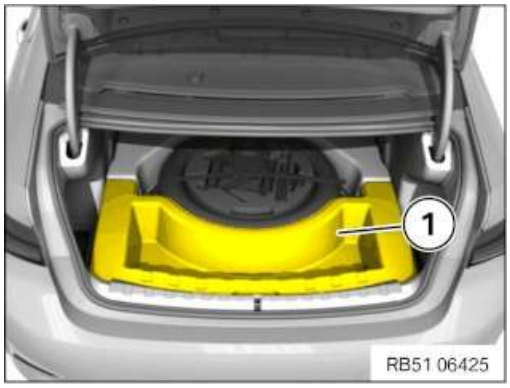
**9 – If installed: Install the emergency wheel**

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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**



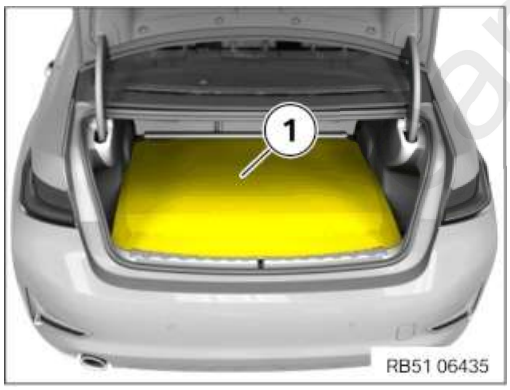

- Install rear luggage compartment well (1).

**10 – Installing the luggage compartment floor trim panel**

▸ **Installing the luggage compartment floor trim panel**

**NOTICE**

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




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

**11 – Encode/program control unit(s)**

**Prerequisite**

The control unit was replaced.

**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.

**Exception:**

BMW I01: Note Product and Measures Management Aftersales measure 55176388.

- Connect the battery charger to the vehicle (activity not included in the flat rate unit).
- 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

**Lashing eye to body** — Used in step 7

| | | |
|---|---|---|
| | Tightening torque | 19 Nm |

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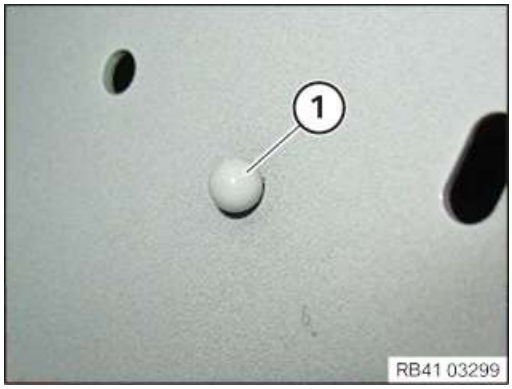
# 72 11 ... Checklist for front seat

| Event | | Check | Action |
|---|---|---|---|
| Has at least one belt tensioner and/or one side airbag been activated? | **Yes** | **Check 1 (when installed):**<br><br>Check all seat adjustment options of both front seats.<br><br>There must be no stiff movement, sticking or other functional problems or noises across the entire adjustment range of all the seat adjustment options.<br><br>Check head restraints for damage.<br><br>Check crash-active headrest for activation.<br><br>**Only 2-door model:**<br><br>Check backrest lock. Backrest must unlock and lock easily without any great physical effort. | If components are OK with regard to checks 1 and 2, only replace activated belt tensioner or side airbag.<br><br>Otherwise, replace faulty parts on the seat/body.<br><br>Replace belt tensioner, seat belt and, if necessary, side airbag. |
| | | **Check 2 (when dismounted):**<br><br>Check for deformation/damage on the following components:<br><br>1. All seat cross members on the body<br><br>2. Threaded support sleeves in the seat cross members<br><br>3. End fittings on the seat mechanism.<br><br>Check for visible damage or deformation. | |
| | **No** | Check all adjustment options of the head restraints.<br><br>Check crash-active headrest for activation. | Replace faulty parts. |
| **Only seat with integrated seat belt:** | | | |
| Does the backrest indicator light turn on when the backrest is locked and also when the backrest is shaken? | **Yes** | Check microswitch of backrest lock and renew if necessary. Check electrical lines and repair if necessary. | If there is still a fault, replace the entire seat |
| | **No** | No further action necessary. | |

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# 41 00 513 Fix bolts on the new part

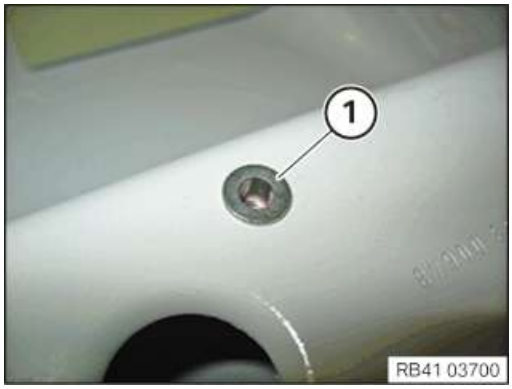
**Note:** On BMW and MINI bodies, various welded and pushed in bolts are being used.




**Single ball/double ball (version 1):**

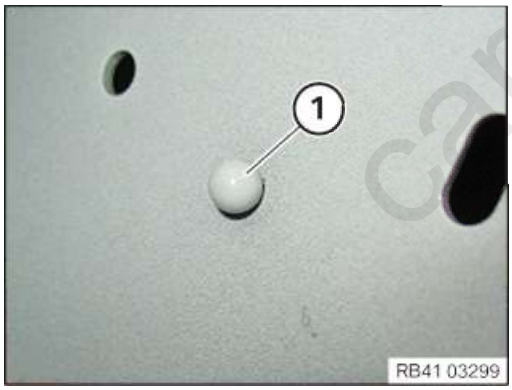
Grind off any residues of the single ball (1), if applicable.

Drill hole with diameter 7 mm.




Set blind rivet nut (1).

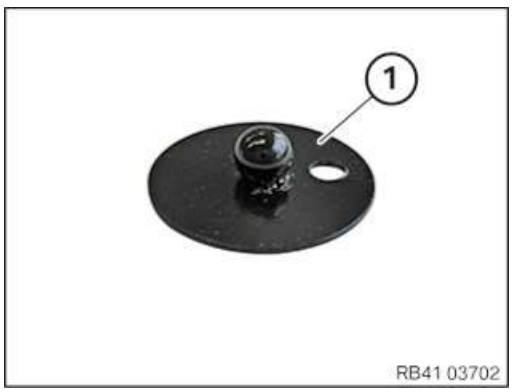
Screw in single ball with thread until a height of 5 mm (double ball 10 mm) is reached.




**Single ball/double ball (version 2):**

Grind off any residues of the single ball (1), if applicable.

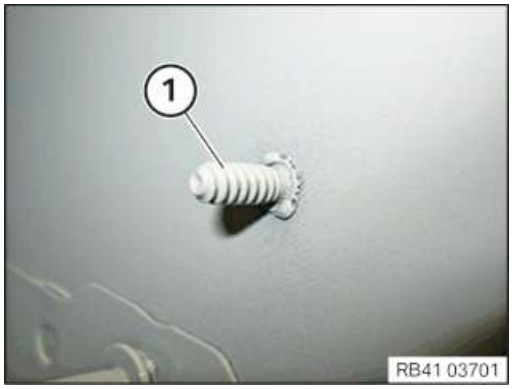
Clean area with solvent cleaner R1.




Clean bonding surface of repair element single ball (1) with solvent cleaner R1.

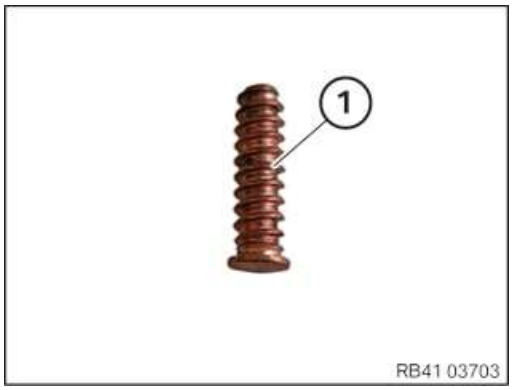
Bond repair element optionally with adhesive K1, K5 or window pane adhesive at the same position.

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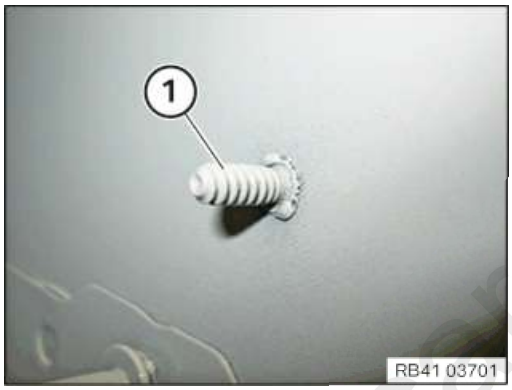



**Coarse threaded bolt (version 1):**

Grind off any residues of the coarse threaded bolt (1), if applicable.




Spot weld coarse threaded bolt to same position.




**Coarse threaded bolt (version 2):**

Grind off any residues of the coarse threaded bolt (1), if applicable.

Drill hole with diameter 7 mm.

Set blind rivet coarse threaded bolt using riveting pliers.

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# 41 00 ... Replacing blind rivets

**Special tools required:**

- 2 348 128
- 72 1 210

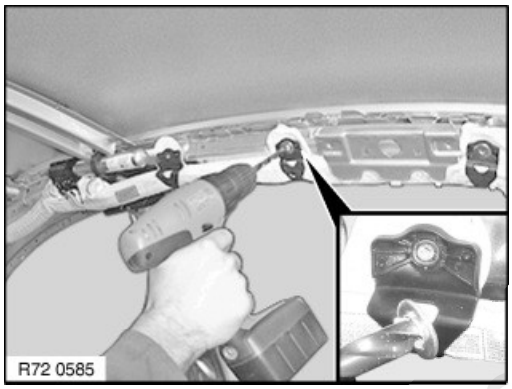



**Important!**

Lay out protective mats to protect the interior equipment against swarf from the drilled-out rivets and damage.

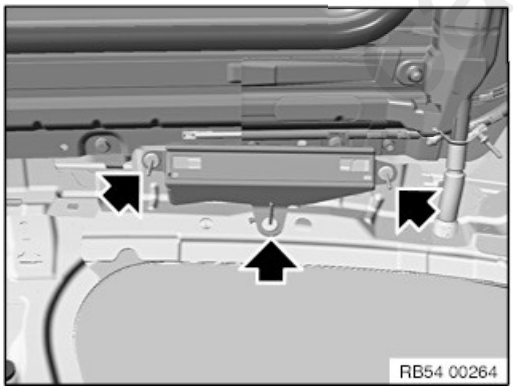
Lay out protective mats in the relevant working area:

- Instrument panel
- Entrance area
- Passenger compartment




<u>Schematic diagram of folding pack holder for head airbag:</u>

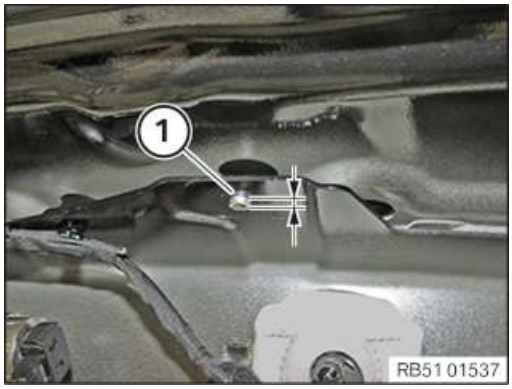
Drill off rivet plate down to rivet shank with a 10 mm twist drill bit.




<u>Described for grab handle holder:</u>

Drill off rivet plate down to rivet shank with a 10 mm twist drill bit.

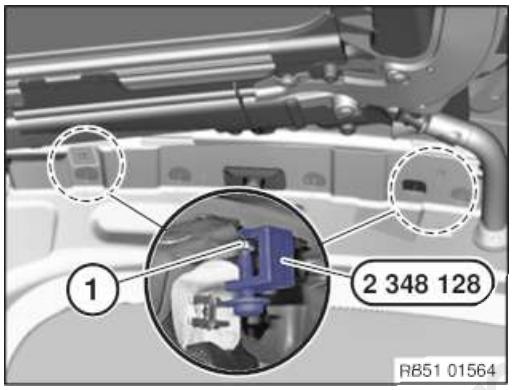
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Drill out all blind rivet protusions (1) up to the body.

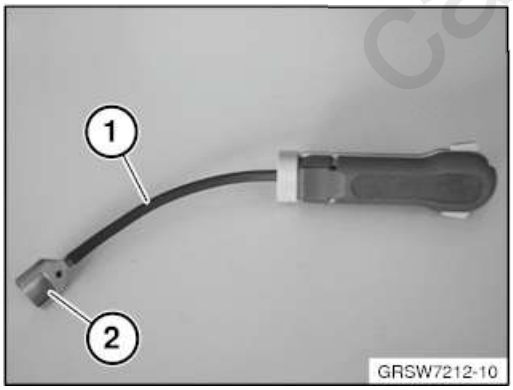
*Installation note:*
Apply primer to paintwork damages on side frame.
*Note:*
Depending on accessibility, the rivet heads will have to be removed using special tool 2 348 128 or 72 1 210 .

In areas that cannot be reached using special tools, cavity foam HS3must first be applied around the rivet head before the rivet head is then punched out immediately..




**Removal of rivet head with special tool 2 348 128:**

Press off rivet heads (1) using special tool 2 348 128 and remove.




**Removal of rivet head with special tool 72 1 210:**

Shank (1) of special tool 72 1 210 is flexible and can be adapted to the relevant body contours.

*Note:*
Insert butyl in the collecting tray (2) to secure rivet heads and prevent them from falling out.

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Insert special tool 72 1 210 through bore hole in body next to attachment points.

Position special tool from rear on rivet head in cavity.

*Note:*
A second person will be needed to help hold the special tool on the rivet head during the driving-out operation.

Make sure collecting tray is correctly fitted on rivet head.

Drive out stem with hammer and 6 mm punch.

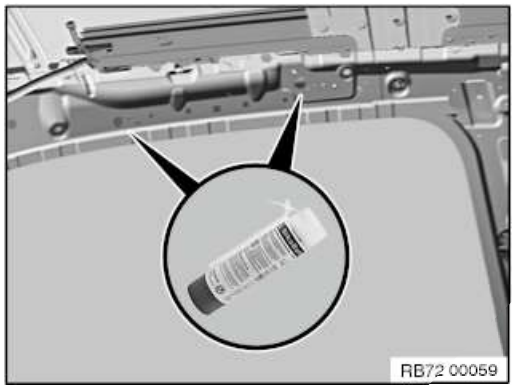
Carefully feed special tool out of body so that rivet head does not fall out of collecting tray.

*Note:*
If the rivet falls out of the collecting tray into the side frame when the special tool is fed out, this area must be generously filled with foam.

For details of procedure for filling cavities with foam, see further operations.

Use cavity preservation (refer to BMW Group Parts) for foam filling.

Cavity foam (refer to BMW Group Parts) may also be used if required.




Fit tube to foam can.

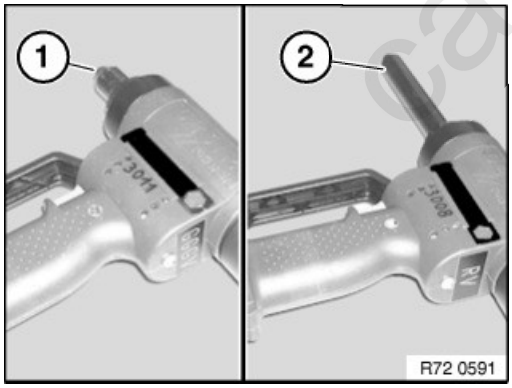
Push the hose in through the pillar holes.

Fill cavity with a filling material.

**Warning!**

Empty foam can completely onto cardboard and after hardening dispose of foam and can in residual waste.

Can may burst if not completely emptied.




<u>Overview of rivet gun:</u>

Riveting of gas generator housing and holders for folding pack with rivet gun (refer to BMW Workshop Catalogue).

The interchangeable head is changed for the different work operations.

Riveting of gas generator housing with:

1.) 17/36 nosepiece and short shank

Riveting of holders for folding pack:

2.) 17/40 nosepiece and long shank

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# 72 00 ... Replacing the seat belt clip

**Special tools required:**

- 00 5 040




*Note:*
If the position of the seat belt clip (1) cannot be identified, the position of the seat belt clip on the opposite side of the vehicle is used.

Insert the seat belt clip (1) in the previous position on the seat belt (2).




Mount the counterpiece (1).

Press the seat belt clip with special tool 00 5 040 .

Check that the seat belt clip and counterpiece (1) are firmly seated.

*Note:*
If the seat belt clip is pressed too firmly, the counterpiece may loosen (1).

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| | |
|---|---|
| **Notes on safety** | > Safety regulations for handling airbag modules and pyrotechnic seat belt tensioners |
| | > Notes on scrapping vehicles with gas generators |
| **Handling electrical system and electronics** | > Unlocking/locking airbag plug connections |
| | > Repairing airbag lines |
| | > Handling optical fibres |
| **Check** | > Check seat belt |
| | > Checklist for seat belt |
| **Airbag system** | > Deactivating airbags |
| | > Procedure after airbag deployment. |
| **Active pedestrian protection** | > Procedure after actuator triggering |

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**Notes on safety**

-- Safety regulations for handling airbag modules, airbag components and
> pyrotechnical seat belt tensioners

-- Notes on scrapping vehicles with gas generators
>

-- Deactivation/activation pyrotechnical components
>

**Handling electrical system and electronics**

-- Unlocking/locking airbag plug connections
>

-- Repairing airbag lines
>

-- Handling optical fibres
>

**Check**

-- Check seat belt
>

-- Checklist for seat belt
>

**Airbag system**

-- Functional description and checking, refer to Diagnosis system
>

-- Deactivating airbags
>

-- Procedure after airbag deployment.
>

**Active pedestrian protection**
AFGS

-- Procedure after actuator triggering
>

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# 72 00 ... Safety regulations for handling components with gas generators

**It is essential to comply with the regulations as specified in the law relating to the use of explosives when working on airbag units and seat belt tensioners.**

Airbags, seat belt tensioners etc. are pyrotechnical objects. Pyrotechnical objects are assigned to different danger classes on the basis of the quantity of propellant that they contain. The assignment can be ascertained from the identification marking on the product:

***Important!***

> Failure to comply with the warning notices and repair instructions for gas generator components can cause accidental deployment and result in injury and vehicle damage!

This applies in particular to the following components:

- Airbag modules (driver's/front passenger airbags, side airbags)
- Seat belt tensioner
- Head airbag
- Active knee protection
- Active head restraint
- Safety battery terminal

**1. Regulations**

The regulations quoted in the following refer to the Federal Republic of Germany.

In all other countries, the relevant legislation and regulations must be observed in each case. Country-specific legal regulations that go beyond this information or court decisions based thereon must be followed in each case or given precedence over these regulations.

The following components used by BMW:

- Pyrotechnical restraint systems are subject to danger class PT1
- Gas generators are pyrotechnical objects belonging to danger class T1

Handling, transporting and storing non-fired gas generators are subject to the ”Explosive Materials Act”.

The relevant trade supervisory authority must be notified at least 2 weeks before pyrotechnical objects are handled for the first time. Here the relevant authority must be notified in writing of the person responsible (e.g. dealership owner, holder of general power of attorney or if necessary workshop supervisor). A certificate of qualification, i.e. specific training, is not required for the person responsible.

**2. Dismantling and installation**

- Inspection, testing and installation work may only be carried out by expert trained personnel in BMW Service.
- Work on components of the airbag system should only ever be carried out with the battery disconnected, the negative terminal post covered and the plug connection of the cable leading to the gas generator disconnected. If only the battery is disconnected, the following prescribed waiting period must be observed without fail:
  - 1 mins.
- In the event of breaks in work, a component with a gas generator that has been removed must be secured against access by other persons.
- Individual components must never be repaired. Instead, always replace them.
- Do not treat airbag system components with cleaning agents or grease.
- Components of the airbag system must not be exposed to temperatures in excess of 75 °C.
- Airbag system components, including electronic diagnostic components, which have been dropped from heights in excess of 0.5 m must not be reinstalled in the vehicles.
- Do not remove components of the airbag system from the original packaging until immediately before they are

to be installed in the vehicle.

- Before installing, subject components such as housing, connector pins ,etc. of the airbag system (including diagnosis electronics) to a visual inspection for damage and replace if necessary.
- Airbag system components may only be electrically tested while they are installed and only with the BMW ISTA.
- **Danger of injury:** The airbag module may only be set down with the airbag itself facing *upwards*. Otherwise the airbag module will be thrown upwards if the alternator is ignited.
- Do not point the ignition squib of a gas generator at other persons.
- Components with gas generators must not be fired while they are removed. They must be disposed of by special disposal companies or returned to BMW in the packaging of the new components.
- When carrying out straightening and welding work with an electric welder:
  - Disconnect battery
  - Cover negative terminal (post)
- Avoid all contact with the skin when removing a fired airbag module - wear gloves. Wash with water after contact with the skin.

**3. Transport**

- Components with gas generators must be sent off in the packaging of the new components.

**4. Storage**

- Observe the regulations of the relevant trade supervisory authority and the applicable national regulations.

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# 72 11 ... Check list for automatic seat belt

| **Was the automatic seat belt with lower strap replaced after an accident, e.g. frontal and/or oblique collision in which the impact absorbers/deformation elements were permanently deformed?**<br><br>**(only while seat belt was fastened)** | **No** | **Replace complete automatic seat belt**<br><br>**The following must also be checked and replaced, if necessary:**<br><br>**seatbelt mounts on the vehicle body**<br><br>**seatbelt mounts on the seat**<br><br>**seat rails.** |
|---|---|---|
| Yes | | |
| Does seat belt lock when pulled out suddenly? | No | Replace automatic seat belt (upper seat belt). |
| Does the automatic reel eliminate the belt slack? | No | Replace automatic seat belt (upper seat belt). |
| Yes | | |
| Yes | | |
| Can the seat belt strap be pulled out without jamming? | No | Automatic reel is loose - tighten reel.<br><br>If fault persists:<br><br>Return spring broken - replace automatic seat belt (upper seat belt). |
| Yes | | |
| Does the strap on the front seat belts retract automatically?<br><br>Does the strap on the rear seat belts retract automatically,<br><br>a small remaining loop is acceptable<br><br>if this remaining loop is fully retracted when the seat belt strap is readjusted. | No | Automatic reel is loose - tighten reel.<br><br>Excessive friction in belt guides - replace automatic seat belt (upper strap).<br><br>Return spring broken - replace automatic seat belt (upper seat belt). |
| Yes | | |
| Does automatic reel make a squeaking noise when belt is fastened or unfastened? | Yes | Excessive friction in belt guides - replace automatic seat belt (upper strap).<br><br>Automatic reel is loose - tighten reel.<br><br>Return spring broken - replace automatic seat belt (upper seat belt). |
| No | | |

| **Is the plastic casing on the belt tongue free from damage in the area of the belt opening?** | **No** | **Replace complete automatic seat belt** |
|---|---|---|
| Yes | | |

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| | | |
|---|---|---|
| Is the fully extended seat belt strap free from<br>pinches,<br>burn marks,<br>tears and cuts,<br>creasing and<br>unravelling? | No | Replace complete automatic seat belt |
| Yes | | |
| When the seat belt is fastened, is the belt tongue ejected by spring pressure from the buckle when the ”red button” is pressed? | No | Replace complete automatic seat belt |
| Yes | | |
| Does fastened seat belt lock during emergency braking on a dry roadway at double walking speed? | No | Replace complete automatic seat belt |
| Yes | | |
| Is fully pulled-out seat belt strap free of serious dirt and other marks? | No | If dirt and marks cannot be removed with commercially available mild detergent, the automatic seat belt (upper seat belt) must be replaced. |
| Yes | | |
| In the case of seat-integrated seat belts, is front tongue of reclining mechanism or seat rail free of deformation? | No | Replace both damaged parts and complete automatic-reel seat belt.<br>The following must also be checked and replaced, if necessary:<br>seatbelt mounts on the vehicle body<br>seatbelt mounts on the seat<br>seat rails. |
| Yes | | |
| The automatic seat belt is OK! | | |

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# 72 11 ... Check the 3-point automatic-reel belt

*General considerations when checking seat belts:*

**1. After replacing the EMA/REMA* automatic reel**

* EMA = electromotive automatic (seat belt) reel

*REMA = reversible electromotive reel

Check the additional functions for function when replacing the EMA/REMA automatic reel after programming / encoding the vehicle.

For the EMA/REMA automatic reel functional check, it is sufficient to check that the belt slack* has been eliminated.

* Belt slack is seat belt play when the seat belt is fastened. When the seat belt is fastened, it does not immediately lie taut against the body.

Check if belt slack was eliminated for **EMA to 07/12**:

- Get in, close the doors and latch the left seat belt buckle contact
- EMA eliminates belt slack

If belt slack was not eliminated, the procedure described below must be followed:

- Allow vehicle to assume complete sleep mode and repeat the functional check.
- All doors must be closed!
- EMA, left, must be installed and connected correctly.
- Work through all fault code entries before the repeating the functional check

Check if belt slack was eliminated for **REMA from 07/12 onwards**:

- Lock left seat belt buckle contact and perform function check with diagnosis system.
- Alternatively, take a test drive at a speed of > 10 km/h

The automatic reel is completely maintenance-free and must not be opened.

**2. After an accident**

The seat belts must be checked after an accident.

At the beginning of the check, attempt to obtain information about the occupation of the seats in the vehicle that was involved in an accident. If this is not possible, check all of the seat belts in the vehicle and replace them if necessary.

In the event of deformations on the vehicle, you must subject the components of the restraint system affected in this area such as e.g.

- Seat belt
- Anchor fitting tensioner
- Seat belt height adjustment
- Seat belt tensioner
- Impact sensor
- etc.

to a function check and a visual inspection.

**If you are in any doubt as to the unimpaired operability of restraint system components, these components must be replaced in the interests of safety!**

If a seat belt has to be replaced following an accident (e.g. in the event of a frontal and/or oblique collision with permanently deformed impact absorbers/deformation elements or cross-members), the complete seat belt must be replaced! The complete seat belt comprises:

- Upper seat belt
- Lower strap
- Anchor fitting tensioner
- Seat belt buckle (belt tensioner)

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- Seat belt height adjustment
- Mounting bolts of all components

The following must also be checked and replaced, if applicable:

- Belt coding on the body
- Belt coding on the seat
- seat rails.
- Seat structure (frame, etc.)

**Alignment tests on the seat and the seat rails are not permitted!**

The following explanations and the check list for the 3-point automatic-reel seat belt may be helpful.

An unusable seat belt or a seat belt worn in a serious accident should be destroyed immediately after removal to guarantee that it can not be used again.

*Check the automatic reel and seat belt strap:*

The automatic reel has two independent activation systems for seat-belt locking.

The first activation system locks the automatic reel when driving quickly around curves, driving in tight curves, on extreme inclinations (vehicle rolls over) and during sharp braking or crash.

To check, the backrest must be placed in the upright position and both hands held in a supporting position close to the steering wheel. The brakes are then operated with full intensity while driving on a dry roadway and at double walking speed.

The seat belt must lock.

The second activation system provides additional safety and is controlled by inertia mass.

If the reel locks when the seat belt strap is pulled out suddenly, this system is also OK.

In addition, the automatic reel (EMA/REMA) must eliminate belt slack.

Check whether an attempt was made to eliminate belt slack:

- Get in, close the doors and latch the left seat belt buckle contact
- EMA/REMA eliminates belt slack

If belt slack was not eliminated, the procedure described below must be followed:

- Allow vehicle to assume complete sleep mode and repeat the functional check.
- All doors must be closed!
- EM/REMALI must be installed and connected correctly
- Work through all fault entries before the functional check is carried out again.

Replace the faulty or activated automatic reel.

The automatic reel is completely maintenance-free and must not be opened.

Precondition for complete, problem-free retraction of seat belt straps:

- The seat belt straps must not be twisted!
- The seat belt straps must not be damaged!

When placed to one side, the seat belt straps of the front seats must retract fully.

With the seat belt straps in the seat bench, a small remaining loop in the seat belt strap is acceptable due to increased friction between the seat belt strap and the seat bench cover if:

- this remaining loop is fully retracted when the seat belt strap is re-guided.

The seat belt strap should only be cleaned with a lukewarm soap solution or a commercial mild detergent.

Seat belt strap must never be cleaned chemically or dyed.

The automatic reel and seat belt strap must be replaced in the event of:

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1. creasing
2. unravelling
3. pinches
4. cracks and tears
5. traces of melting
6. Traces of wear on the coating of the buckle tongue or on the seat belt guide loop.

*Check the lower strap (belt tensioner):*

To fasten a seat belt, the buckle tongue should insert easily and engage in the seat belt buckle with an audible click.

When the ”Red button” is pressed, the buckle tongue must be ejected from the seat belt buckle under spring pressure.

If the seat belt buckle cover is missing or damaged, the lower strap must be replaced.

Replace the activated belt tensioner including the complete seat belt with seat belt height adjustment and mounting bolts and check the

- Belt coding on the body
- Belt coding on the seat
- seat rails.
- Seat structure

Criteria for an activated mechanical belt tensioner:

- very low position of seat belt buckle (comparisons with new part).

Criteria for an activated pyrotechnic belt tensioner:

- very low position of seat belt buckle (comparisons with new part).
- Airbag indicator light permanently lit: read out airbag system fault memory.

The belt tensioners can be activated under certain circumstances even when the seat is not occupied. If it is definite that the seat belt system was not used (seat was not occupied), there is no need to replace the following components after a check.

- Upper seat belt
- Add-on parts (seat belt height adjustment, screws)
- Belt coding on the body
- Belt coding on the seat
- seat rails.

*Checking end fitting pretensioner:*

Replace the triggered end fitting pretensioner including the complete seat belt with seat belt height adjustment, lower strap and mounting bolts and check the

- Belt coding on the body
- Belt coding on the seat
- seat rails.
- Seat structure

Criteria for a triggered end fitting pretensioner:

- A triggered end fitting pretensioner can be recognised from the wrapped seat belt strap around the shaft.
- Airbag indicator light permanently lit: read out airbag system fault memory.

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# 72 11 ... Checking automatic seat belt

*General considerations when checking seat belts:*

The seat belts must be checked after an accident.

For the check, you should start by trying to get information on which seats in the vehicle involved in the accident were occupied. If this is not possible, check *all* the seat belts in the vehicle and replace them if necessary.

In the event of deformations on the vehicle, you must subject the components of the restraint system affected in this area such as e.g.

- Seat belt
- Anchor fitting tensioner
- Seat belt height adjustment
- Belt buckle tensioner
- Triggering sensors
- etc.

to a function check and a visual inspection.

**If you are in any doubt as to the unimpaired operability of restraint system components, these components must be replaced in the interests of safety!**

If a seat belt has to be replaced following an accident (e.g. in the event of a frontal and/or oblique collision with permanently deformed impact absorbers/deformation elements or cross-members), the complete seat belt must be replaced! The complete seat belt comprises:

- Upper seat belt
- Lower strap
- Anchor fitting tensioner
- Seat belt buckle (buckle tensioner)
- Seat belt height adjustment
- Mounting bolts of all components

The following must also be checked and if necessary replaced:

- seatbelt mounts on the vehicle body
- Seatbelt mounts on the seat
- seat rails.
- Seat structure (frame, etc.)

**Alignment tests on the seat and the seat rails are not permitted!**

The following explanations and the checklist for the automatic seat belt can provide help.

An unusable seat belt or a seat belt worn in a serious accident should be destroyed immediately after removal to guarantee that it can not be used again.

*Checking automatic reel and seat belt strap:*

The automatic reel has two independent activation systems for seat-belt locking.

The first activation system locks the automatic reel when driving quickly around curves, driving in tight curves, on extreme inclinations (vehicle rolls over) and during sharp braking or crash.

To check, the seat backrest must be placed in the upright position and both hands held in a supporting position close to the steering wheel. The brakes are then operated with full intensity while driving on a dry roadway and at double walking speed.

The seat belt must lock.

The second activation system provides additional safety and is controlled by inertia mass.

If the reel locks when the seat belt strap is pulled out suddenly, this system is also OK.

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In addition, the automatic electric reel (EMA) must eliminate belt slack.

Check whether an attempt was made to eliminate belt slack:

- Enter, close doors and latch seat belt buckle contact, left
- EMA eliminates belt slack

If belt slack was not eliminated, the procedure described below must be followed:

- Allow vehicle to assume complete sleep mode and repeat the functional check.
- All doors must be closed!
- EMA, left, must be installed and connected correctly.
- Work through all fault entries before the functional check is carried out again.

Replace defective or actuated automatic electric reels.

Automatic reel does not require servicing and must not be opened.

Precondition for complete, problem-free retraction of seat belt straps:

- The seat belt straps must not be twisted!
- The seat belt straps must not be damaged!

When placed to one side, the seat belt straps of the front seats must retract fully.

With the seat belt straps in the rear seat bench, a small remaining loop is acceptable due to increased friction between the strap and the rear seat bench cover if:

- this remaining loop is fully retracted when the seat belt strap is reguided.

Seat belt strap should only be cleaned with a lukewarm soap solution or a commercial mild detergent.

Seat belt strap must never be cleaned chemically or dyed.

The automatic reel and seat belt strap must be replaced in the event of:

1. creasing
2. unravelling
3. pinches
4. cracks and tears
5. traces of melting
6. traces of wear on coating of buckle tongue or on seat belt guide loop.

*Checking lower strap (belt buckle tensioner):*

To fasten a seat belt, the buckle tongue should insert easily and with a loud click in the lock.

When the ”Red button” is pressed, the buckle tongue must be ejected from the lock under spring pressure.

If the seat belt buckle cover is missing or damaged, the lower strap must be replaced.

Replace the triggered belt buckle tensioner including the complete seat belt with seat belt height adjustment and mounting bolts and check the

- seatbelt mounts on the vehicle body
- Seatbelt mounts on the seat
- seat rails.
- Seat structure

Criteria for a triggered mechanical belt buckle tensioner:

- very low position of seat belt buckle (comparisons with new part).

Criteria for a triggered pyrotechnical belt buckle tensioner:

- very low position of seat belt buckle (comparisons with new part).
- Airbag indicator light permanently lit: read out airbag system fault memory.

The belt buckle tensioners can be triggered under certain circumstances even when the seat is not occupied. If it is

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definite that the seat belt system was not used (seat was not occupied), there is no need to replace the

- Upper seat belt
- Add-on parts (seat belt height adjustment, screws)
- seatbelt mounts on the vehicle body
- Seatbelt mounts on the seat
- seat rails.

after a check.

*Checking end fitting pretensioner:*

Replace the triggered end fitting pretensioner including the complete seat belt with seat belt height adjustment, lower strap and mounting bolts and check the

- seatbelt mounts on the vehicle body
- Seatbelt mounts on the seat
- seat rails.
- Seat structure

Criteria for a triggered end fitting pretensioner:

- A triggered end fitting pretensioner can be recognised from the wrapped seat belt strap around the shaft.
- Airbag indicator light permanently lit: read out airbag system fault memory.

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# 72 11 ... Checklist for front seat

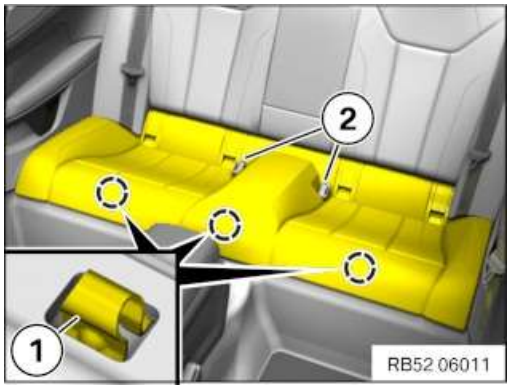
| Event | | Check | Action |
|---|---|---|---|
| Has at least one belt tensioner and/or one side airbag been activated? | **Yes** | **Check 1 (when installed):**<br><br>Check all seat adjustment options of both front seats.<br><br>There must be no stiff movement, sticking or other functional problems or noises across the entire adjustment range of all the seat adjustment options.<br><br>Check head restraints for damage.<br><br>Check crash-active headrest for activation.<br><br>**Only 2-door model:**<br><br>Check backrest lock. Backrest must unlock and lock easily without any great physical effort. | If components are OK with regard to checks 1 and 2, only replace activated belt tensioner or side airbag.<br><br>Otherwise, replace faulty parts on the seat/body.<br><br>Replace belt tensioner, seat belt and, if necessary, side airbag. |
| | | **Check 2 (when dismounted):**<br><br>Check for deformation/damage on the following components:<br><br>1. All seat cross members on the body<br><br>2. Threaded support sleeves in the seat cross members<br><br>3. End fittings on the seat mechanism.<br><br>Check for visible damage or deformation. | |
| | **No** | Check all adjustment options of the head restraints.<br><br>Check crash-active headrest for activation. | Replace faulty parts. |
| **Only seat with integrated seat belt:** | | | |
| Does the backrest indicator light turn on when the backrest is locked and also when the backrest is shaken? | **Yes** | Check microswitch of backrest lock and renew if necessary. Check electrical lines and repair if necessary. | If there is still a fault, replace the entire seat |
| | **No** | No further action necessary. | |

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# 72 11 010 Removing and installing / replacing left or right seat-belt extender

## PRELIMINARY WORK

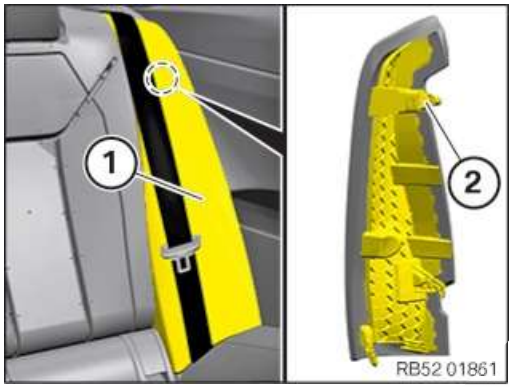
### 1 – Remove rear seat bench




- Unclip the rear seat bench upwards from clamps (1) and guide out seat belt buckles (2).
- Remove the rear seat bench.

### 2 – Remove armrest side section

▸ **Remove armrest side section**




- Reach behind the backrest side section (1) from the top and unclip the backrest side section (1) from the mounting element (2) to the front.
- Remove backrest side section (1) in the upward direction from the guide.

### 3 – Remove C-pillar trim panel

**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.

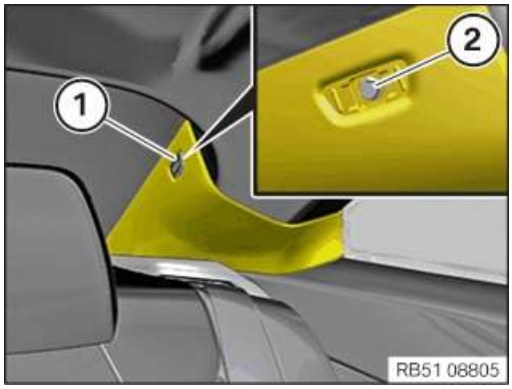
**RISK OF DAMAGE**

**Damage to the head airbag.**

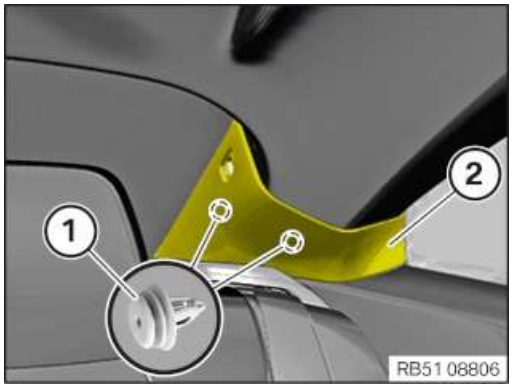
**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

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- Unclip cover (1) of the C-pillar trim panel.
- Release the screw (2).




- Unclip C-pillar trim panel (2) from clips (1) and guide it out.

**4 – Removing the inner door sill cover strip**

**RISK OF DAMAGE**

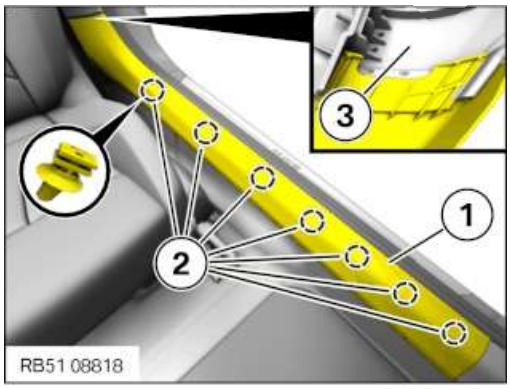
**Bending of plastic parts.**

**Application of too much force can lead to bending of plastic parts.**

- Place special tool directly beside the mounting clip.
- Continue unclipping the part without using the tool if possible.

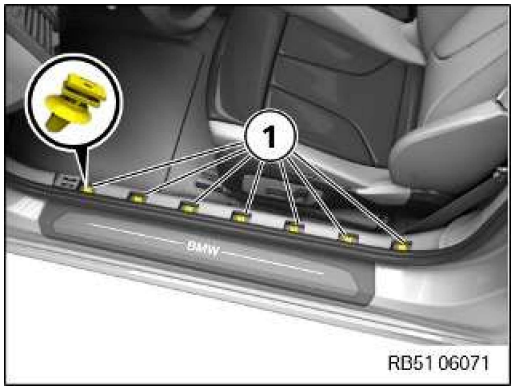
**NOTICE**

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



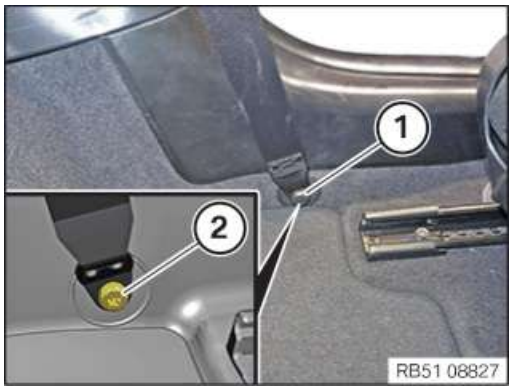

- Release door sill cover strip (1) with clips (2) starting from the front using a suitable special tool from the set of special tools 0 493 752 (00 9 329).
- Guide out and remove door sill cover strip (1) under the rear side trim panel (3) .

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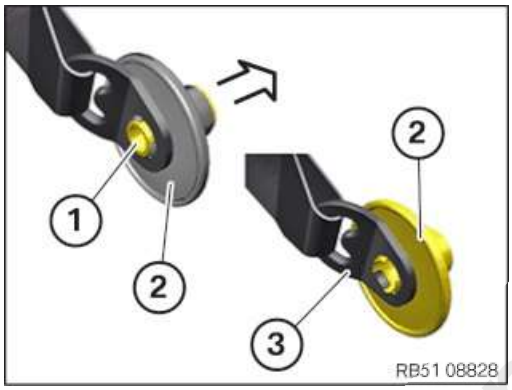



- If necessary, remove clips (1) and connect them to the door sill cover strip.

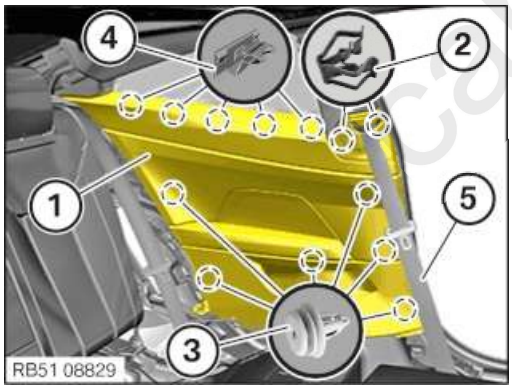
### 5 – Remove rear side trim panel




- Unclip the cover cap (1).
- Release the screw (2).

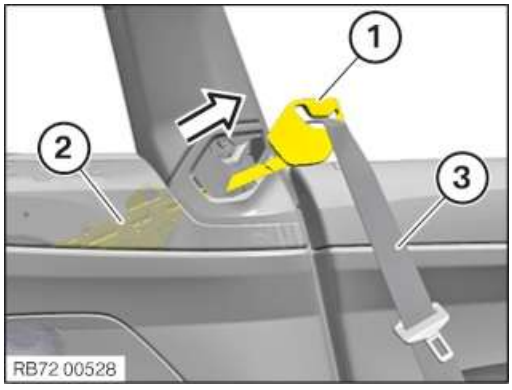



- Pull out the sleeve (1) from the cover (2) of the end fitting (3).
- Unclip the cover (2) of the end fitting (3) from the end fitting (3).




- Unclip the rear side trim panel (1) with a suitable tool at the clamps (2).
- Unclip the rear side trim panel (1) with a suitable tool at the clips (3).
- Release the rear side trim panel (1) at the clamps (4) and feed out at the edge protection.
- Unlock and disconnect all the plug connections at the rear side trim panel (1) of the wiring harness.
- Feed out the upper seat belt (5).

### 6 – Removing seat-belt assistant hand




**NOTICE**

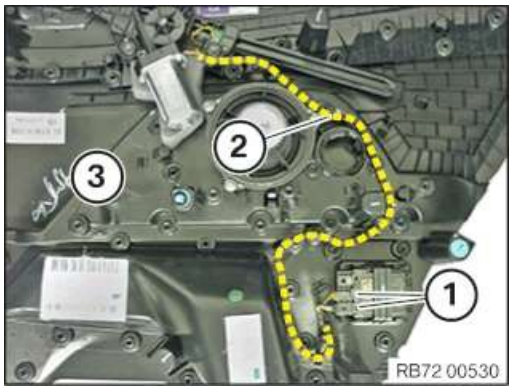
To provide a better overview: Schematic diagram with partially hidden components.

- Feed out the seat-belt assistant hand (1) in direction of arrow from the seat belt extender (2) carefully.
- Feed out upper seat belt (3) from the seat-belt assistant hand (1).

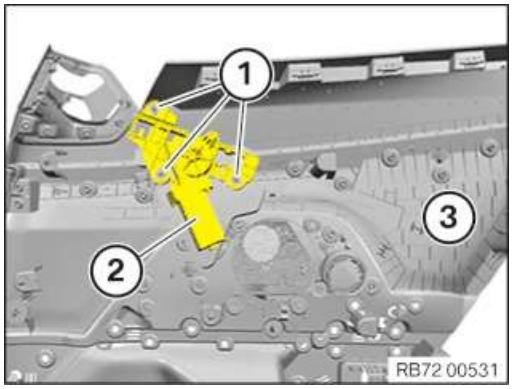
cardiagn.com

## MAIN WORK

### 7 – Removing seat belt extender

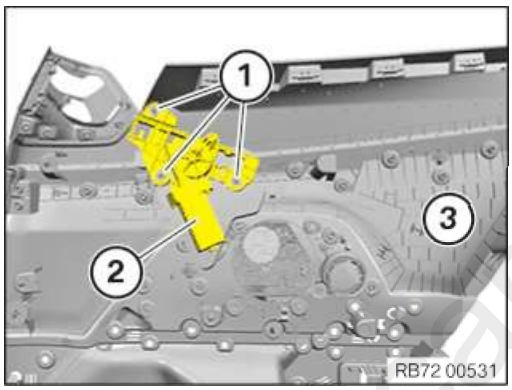



- Unlock plug connections (1) and disconnect.
- Unclip cable marked in yellow (2) from the side trim panel (3).

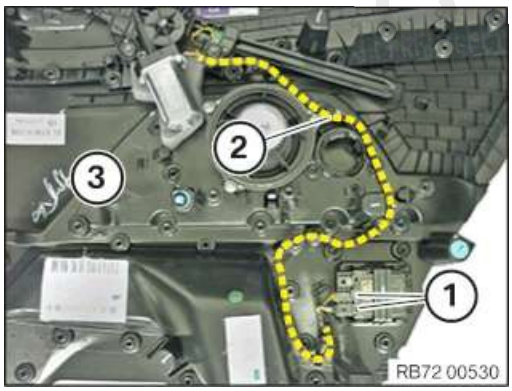



- Release nuts (1).
- Remove seat belt extender (2) from the side trim panel (3).

### 8 – Install the seat belt extender




- Position the seat belt extender (2) on side trim panel (3) as shown.
- Tighten nuts (1).

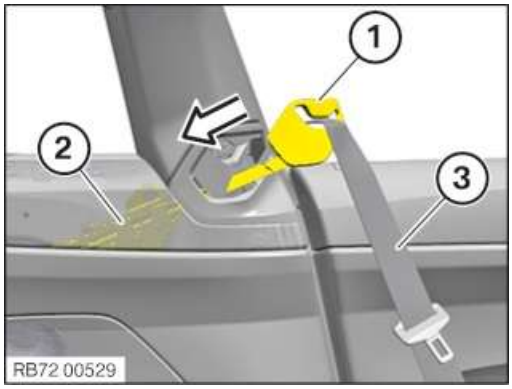



- Clip in yellow-marked cable (2) in side trim panel (3).
- Connect connectors (1) and lock.

## POSTPROCESSES

### 9 – Installing seat-belt assistant hand

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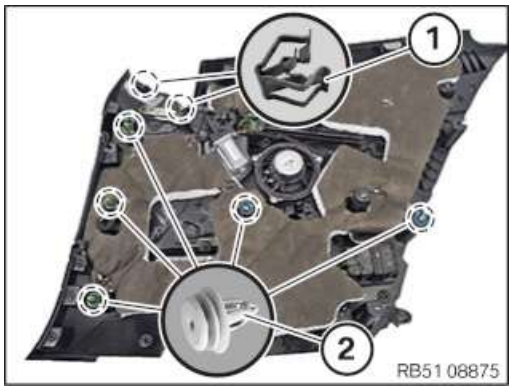



**NOTICE**

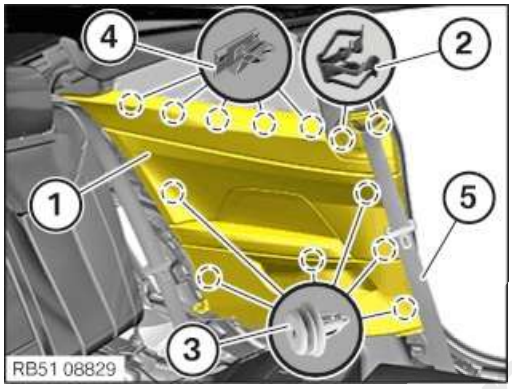
To provide a better overview: Schematic diagram with partially hidden components.

- Guide in upper seat belt (3) into the seat-belt assistant hand (1).
- Guide in seat-belt assistant hand (1) in direction of arrow into the seat belt extender (2) carefully.

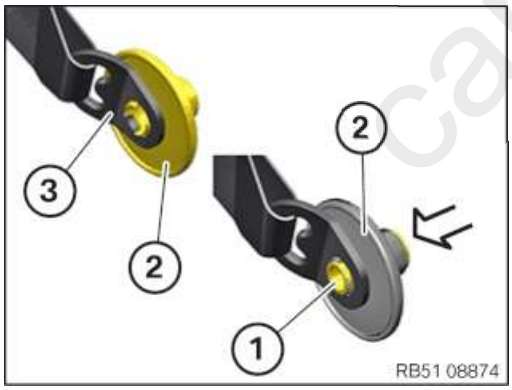
**10 – Install rear side trim panel**



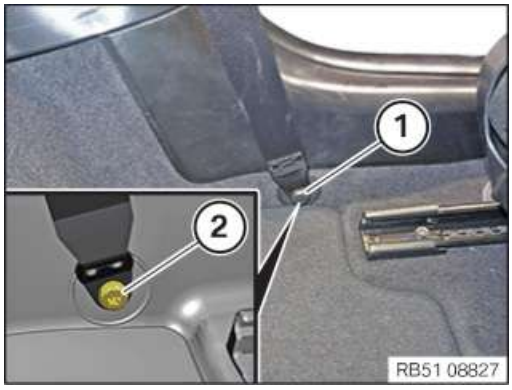

- Check clamps (1) for damage; renew them if necessary.
- Check clips (2) for damage, replace if necessary.




- Connect all the connectors to rear side trim panel (1) of the wiring harness and lock and disconnect them.
- Guide in upper seat belt (5).
- Position rear side trim panel (1) and clip it into clamps (4).
- Clip rear side trim panel (1) into clips (3).
- Clip rear side trim panel (1) into clamps (2).




- Clip cover (2) of end fitting (3) into end fitting (3).
- Slide sleeve (1) into cover (2) of end fitting (3).




- Correctly position the seat belt end fitting.
- Tighten down screw (2).

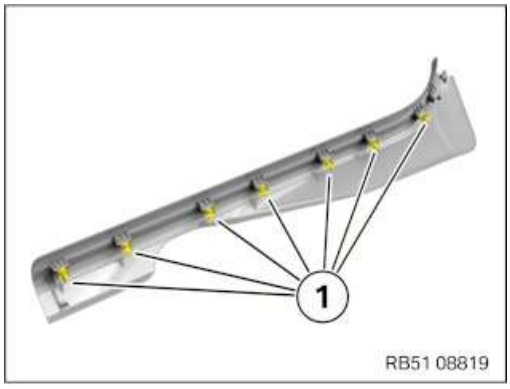
**End fitting to body**

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

- Clip in cover cap (1).

**11 – Installing the inner door sill cover strip**

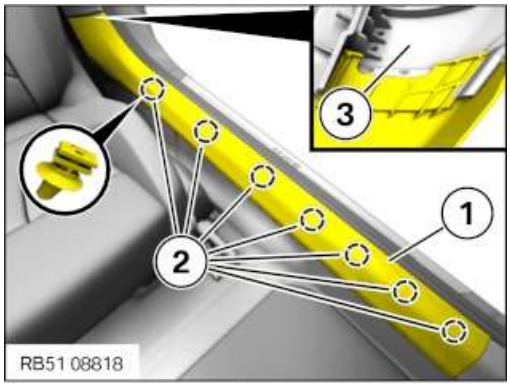
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**NOTICE**

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

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




- Insert the door sill cover strip (1) below the rear side trim panel (3).
- Clip the door sill cover strip (1) in with the clips (2).

### 12 – Installing C-pillar trim panel

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

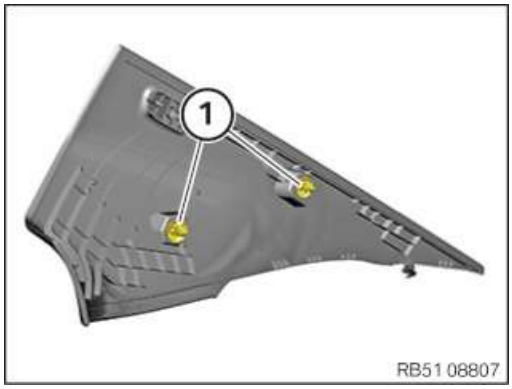
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**RISK OF DAMAGE**

**Damage to the head airbag.**

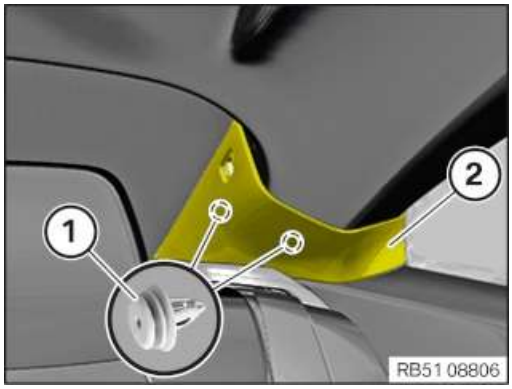
**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

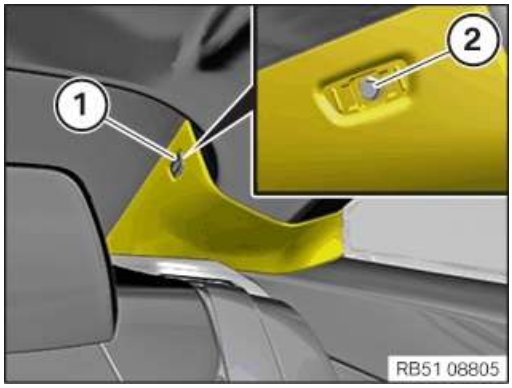



- Check clips (1) for damage and, if necessary, renew them.

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- Position C-pillar trim panel (2) and clip it onto clips (1).




- Tighten down screw (2).

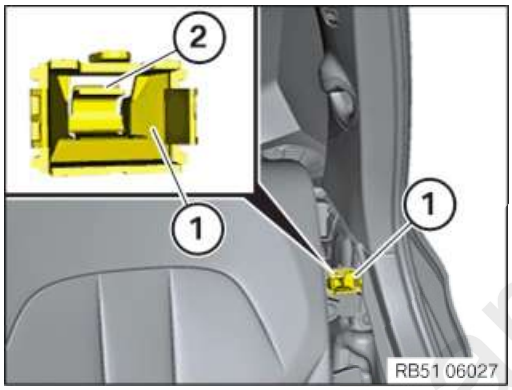
**C-pillar trim panel to body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

- Clip in cover (1) of the C-pillar trim panel.

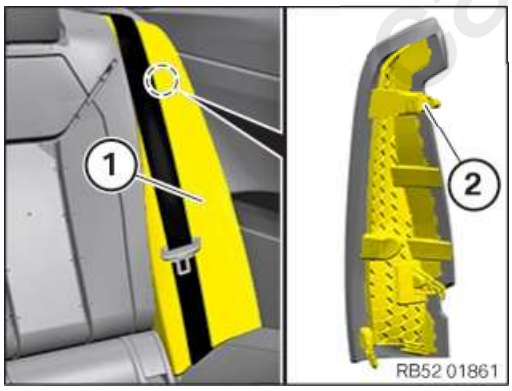
## 13 – Installing backrest side section

▶ **Installing backrest side section**




- Release mounting element (1) from latch mechanism (2) and remove it from the body.
- Check the mounting element (1) for damage, renew if necessary.

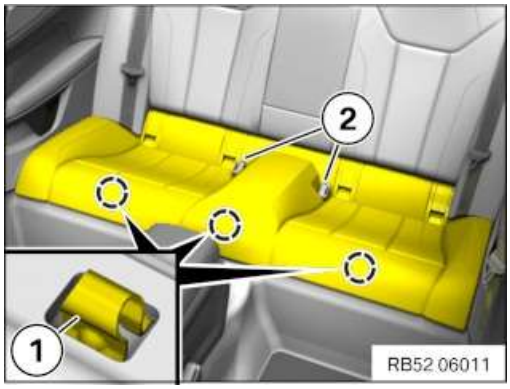
  The mounting element (1) must not be damaged or missing.
- Fit mounting element (1) on the backrest side section.




- Insert lower backrest side section (1) into the guide and position it correctly.
- Clip in backrest side section (1) to mounting element (2).

## 14 – Installing the rear seat bench

carmanualsdiagram.com




- Feed in the seat belt buckles (2).
- Position the rear seat bench and clip into the clamps (1).

## Additional Information

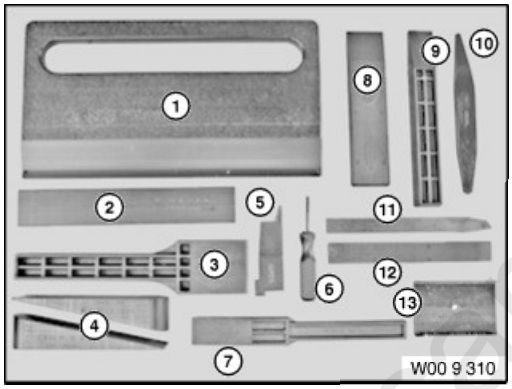
### Overview of Tightening Torques

| End fitting to body | | | Used in step 10 |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

| C-pillar trim panel to body | | | Used in step 12 |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

### Overview of Special Tools

**0 493 752 (00 9 329) Case**




| Common | Used in step 4 |
|---|---|
| Usage | (Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019. |
| 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 (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 213 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 213 |

| Repair instructions | Used in step |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |

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| | |
|---|---|
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 213 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 213 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
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| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 213 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |
| 61 20 900 Disconnecting and connecting battery earth lead | 213 |


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# 72 11 255 Removing and installing/replacing front left lower strap

**TECHNICAL INFORMATION**

**Clean all belt bolted connections** with micro-encapsulated external and internal threads.
Swarf or other residues must not remain in the components.
If a micro-encapsulated screw is reused, it must be filled with screw locking agent: **Loctite 243, intermediate strength**.
The screw connection must be completed within a period of 10 minutes, as after this period the hardening starts.

## PRELIMINARY WORK

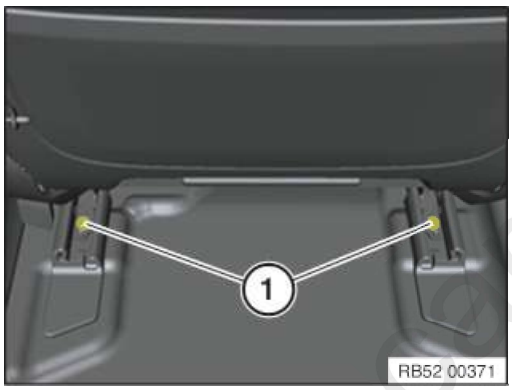
### 1 – Remove front seat

**WARNING**

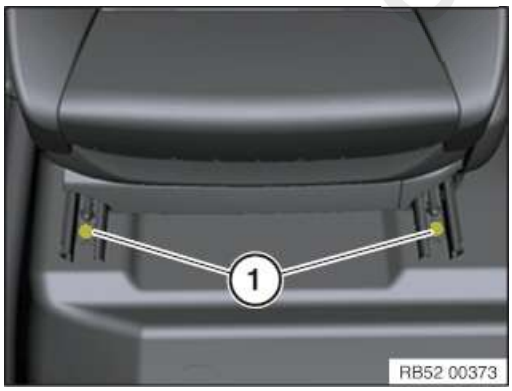
**Pyrotechnic components.**

**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.




- 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.

▸ **Deactivating the 48 V electrical system**

**Prerequisite**
Ignition is switched off.

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**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

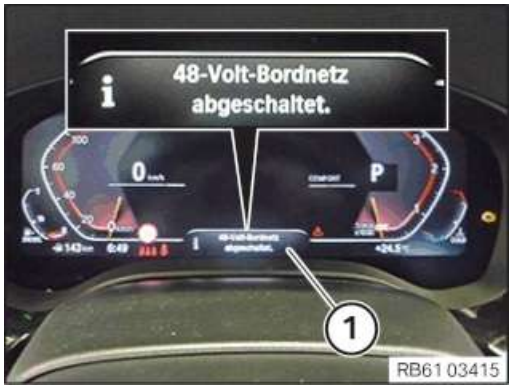
Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.

**Check**




**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

  Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

  **If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.

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**WARNING**

**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

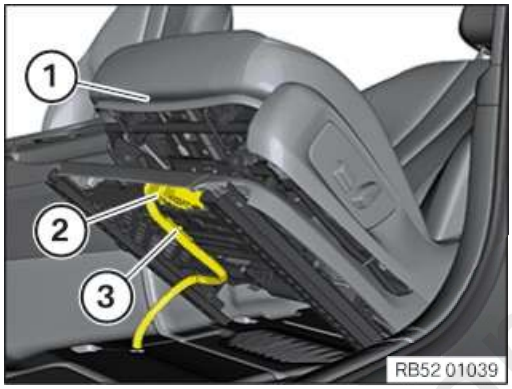
- Cover the vehicle battery.

- Cover the vehicle battery with the special tool  as shown.
- Position the battery earth lead (1) as shown.

▸ **Disconnecting all battery earth leads**




- See additional information.




**RISK OF DAMAGE**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

- 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.**

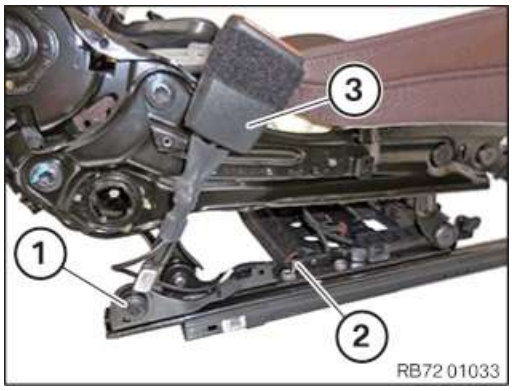
**Heavy components can lead to injury or damage.**

- 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 – Removing front lower strap

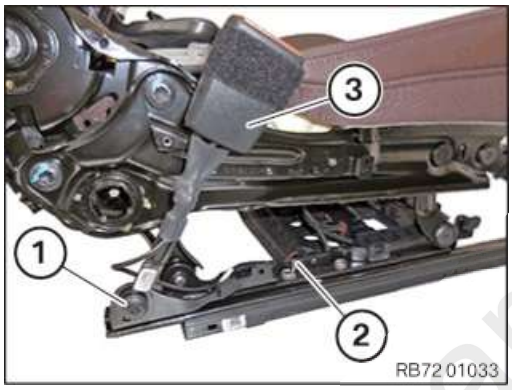



- Loosen screw (1).
- Disconnect the plug connection (2) and unclip available cable clips.
- Guide out and remove the lower strap (3) .

### 3 – Installing the front lower strap

**TECHNICAL INFORMATION**

**Clean all belt bolted connections** with micro-encapsulated external and internal threads.
Swarf or other residues must not remain in the components.
If a micro-encapsulated screw is reused, it must be filled with screw locking agent: **Loctite 243, intermediate strength**.
The screw connection must be completed within a period of 10 minutes, as after this period the hardening starts.




**TECHNICAL INFORMATION**

Component is encoded against incorrect assembly.

- Thread in the lower strap (3) and position it.
- Renew the screw (1).

  **Parts:** Screw
- Tighten down screw (1).

**Lower strap to seat mechanism**

| | | | |
|---|---|---|---|
| M10 screw | Renew screw. | Tightening torque | 38 Nm |

- Connect the plug connection (2) and clip in the existing cable clips.

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## POSTPROCESSES

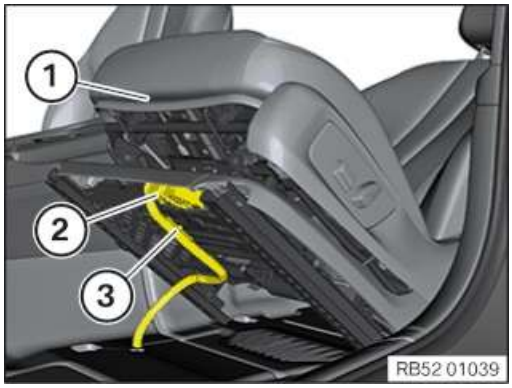
### 4 – Install front seat

**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**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

- 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 connectors (2) and lock.
- Attach the cable clip (3).

▸ **Connecting all battery earth leads**

- See additional information.




▸ **Activating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

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**RISK OF DAMAGE**

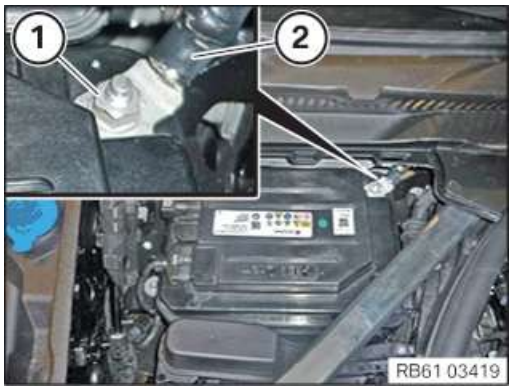
**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .




- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

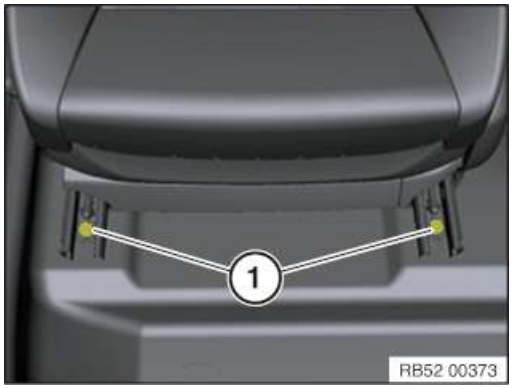



- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).




- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

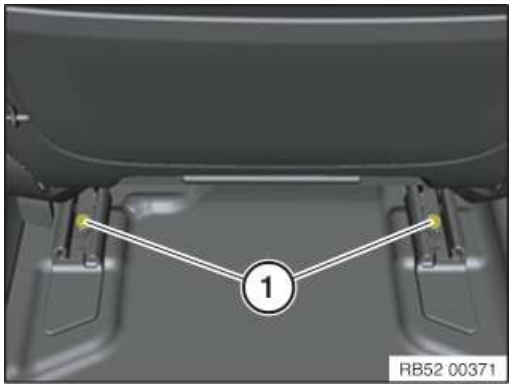



- Move front seat rearwards.
- Renew screws (1).

  **Parts:** Screws
- Tighten the screws (1).

**Seat to body**

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |




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

  **Parts:** Screws
- Tighten the screws (1).

**Seat to body**

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |

## Additional Information

### Overview of Tightening Torques

**Lower strap to seat mechanism** Used in step 3

| | | | |
|---|---|---|---|
| M10 screw | Renew screw. | Tightening torque | 38 Nm |

**Negative battery cable to 48-V battery** Used in step 4

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

**Seat to body** Used in step 4

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |

### Overview of Special Tools

### Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 14 |

| 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 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 |

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| | |
|---|---|
| 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 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 |
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| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 14 |
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| 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 Disconnecting and connecting 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 |


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# 72 11 250 Removing and installing/replacing front left upper seat belt

**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**

**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

## PRELIMINARY WORK

### 1 – Deactivating the 48 V electrical system

**Prerequisite**

Ignition is switched off.

**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

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**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.




**Check**

**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

**If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.




**WARNING**

**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

**2 – Disconnecting all battery earth leads**




- See additional information.

**3 – Remove C-pillar trim panel**

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

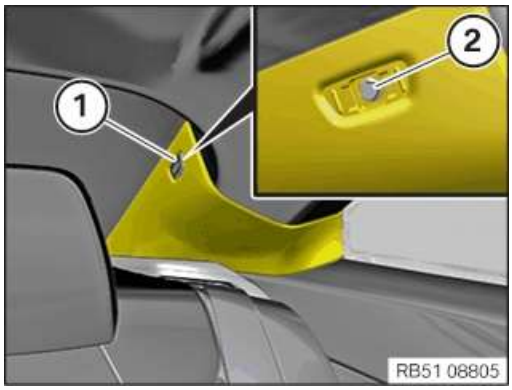
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**RISK OF DAMAGE**

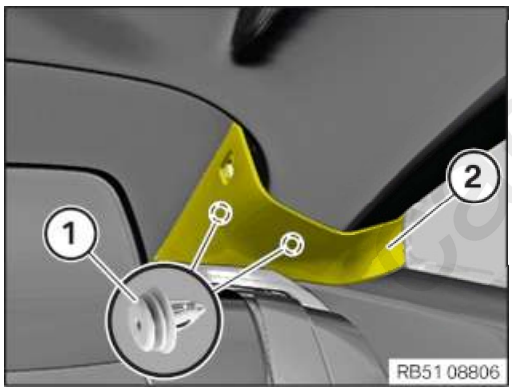
**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

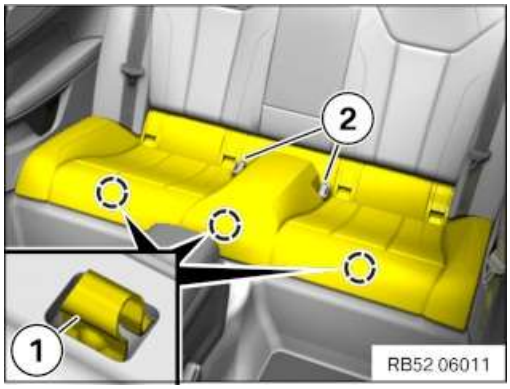



- Unclip cover (1) of the C-pillar trim panel.
- Release the screw (2).




- Unclip C-pillar trim panel (2) from clips (1) and guide it out.

**4 – Remove rear seat bench**

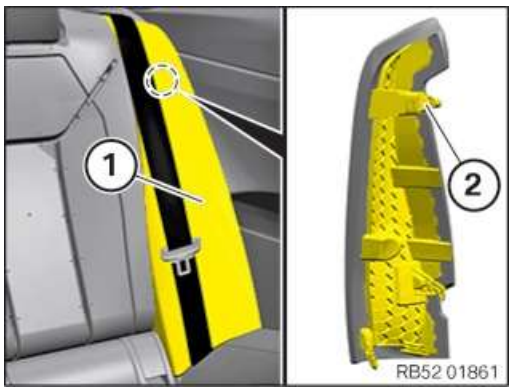



- Unclip the rear seat bench upwards from clamps (1) and guide out seat belt buckles (2).
- Remove the rear seat bench.

**5 – Remove armrest side section**

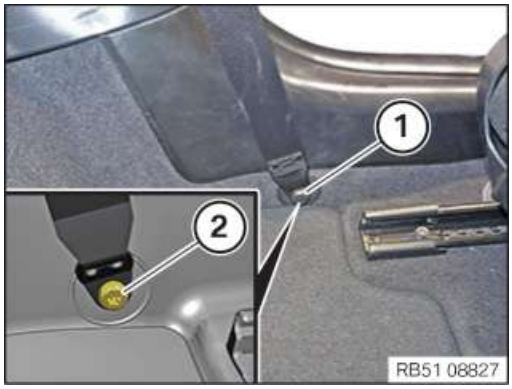
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▸ **Remove armrest side section**

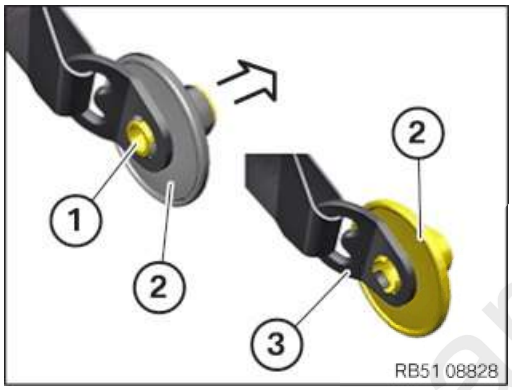



- Reach behind the backrest side section (1) from the top and unclip the backrest side section (1) from the mounting element (2) to the front.
- Remove backrest side section (1) in the upward direction from the guide.

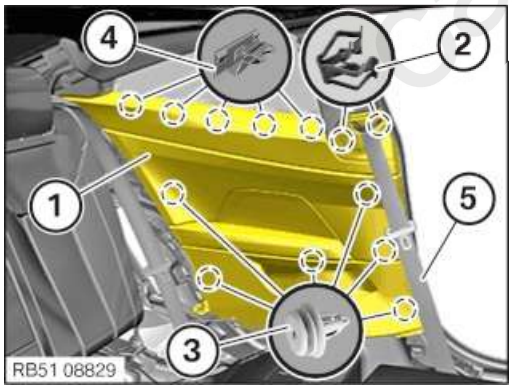
**6 – Remove rear side trim panel**




- Unclip the cover cap (1).
- Release the screw (2).




- Pull out the sleeve (1) from the cover (2) of the end fitting (3).
- Unclip the cover (2) of the end fitting (3) from the end fitting (3).




- Unclip the rear side trim panel (1) with a suitable tool at the clamps (2).
- Unclip the rear side trim panel (1) with a suitable tool at the clips (3).
- Release the rear side trim panel (1) at the clamps (4) and feed out at the edge protection.
- Unlock and disconnect all the plug connections at the rear side trim panel (1) of the wiring harness.
- Feed out the upper seat belt (5).

**MAIN WORK**

**7 – Removing the upper seat belt**

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**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

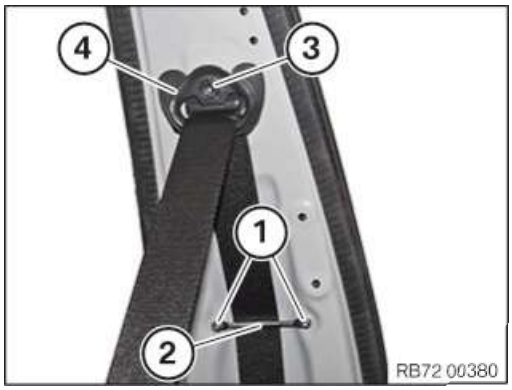
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

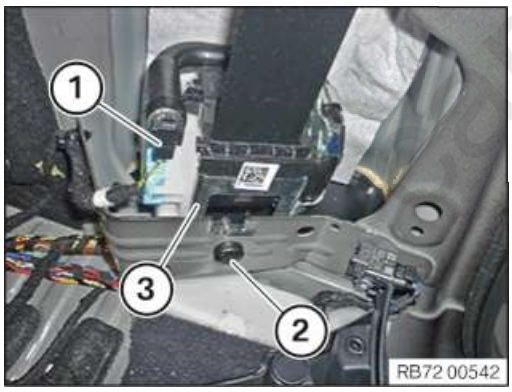
**WARNING**

**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




**NOTICE**

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

- Loosen screws (1).
- Remove the slide bar (2).
- Release the screw (3).
- Unlock plug connections (1) and disconnect.
- Release the screw (2).
- Remove the inertia reel (3).

**8 – Installing the upper seat belt**

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

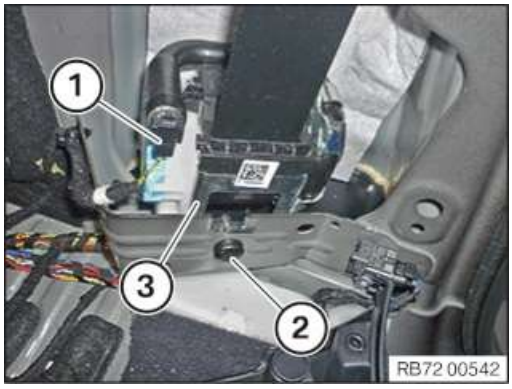
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**WARNING**

**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



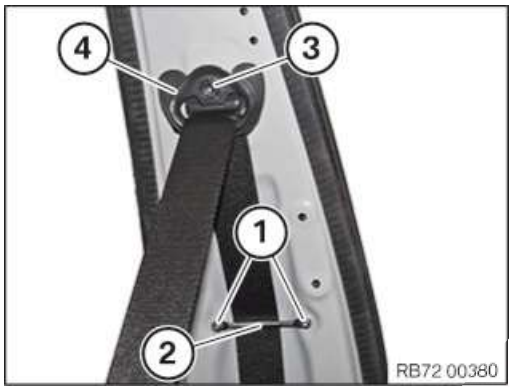

- Position inertia reel (3).
- Renew the screw (2).

  **Parts:** Screw
- Tighten down screw (2).

**Front inertia reel to body**

| | | | |
|---|---|---|---|
| Screw | Renew screw. | Tightening torque | 42 Nm |

- Connect connectors (1) and lock.




**NOTICE**

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

- Position the seat belt guide loop (4).
- Tighten down screw (3).

**Seat belt guide loop on body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 42 Nm |

- Attach the slide bar (2).
- Tighten the screws (1).

**Slide bar to body (B-pillar)**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 5 Nm |

### 9 – Removing upper seat belt (reversible electromotive reel, REMA)

**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.

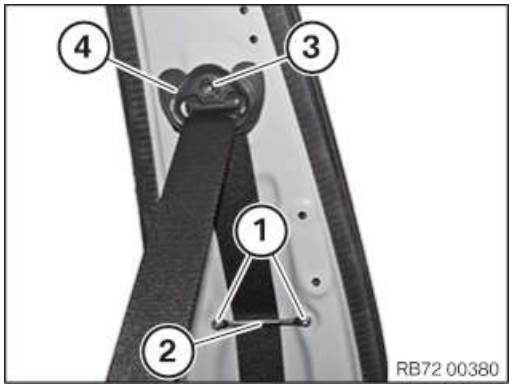
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**WARNING**

**Airbag unit.**

**Danger! Life-threatening injuries!**

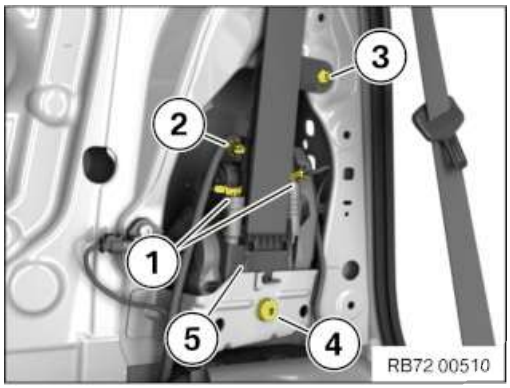
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators




**NOTICE**

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

- Loosen screws (1).
- Remove the slide bar (2).
- Release the screw (3).




**TECHNICAL INFORMATION**

SA5AL Active Protection:
REMA = Reversible electromotive reel.

- Unlock plug connections (1) and disconnect.
- Release the wiring harness with the holder (2).
- Release screws (3) and (4).
- Remove the inertia reel (5).

**10 – Installing upper seat belt (reversible electromotive reel, REMA)**

**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.

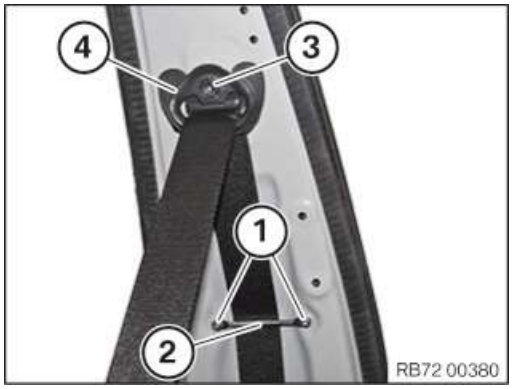
**WARNING**

**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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**NOTICE**

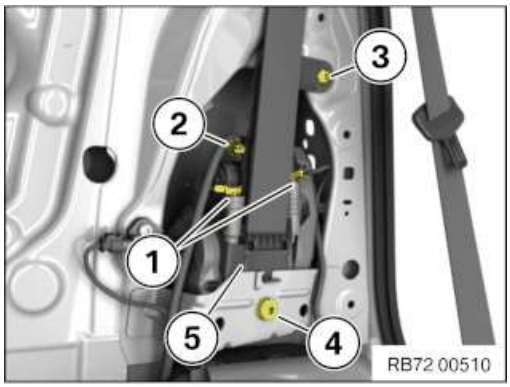
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Position the seat belt guide loop (4).
- Tighten down screw (3).

**Seat belt guide loop on body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 42 Nm |

- Attach the slide bar (2).
- Tighten down screw (1).




**TECHNICAL INFORMATION**

SA5AL Active Protection:
REMA = Reversible electromotive reel.

- Position inertia reel (5).
- Renew screws (3) and (4).

  **Parts:** Screws
- Tighten down screw (4).

**Front inertia reel to body**

| | | | |
|---|---|---|---|
| Screw | Renew screw. | Tightening torque | 42 Nm |

- Tighten down screw (3).

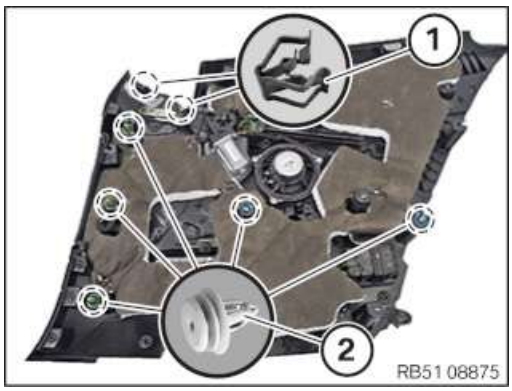
**Additional screw connection of REMA to body**

| | | | |
|---|---|---|---|
| M8 | Renew screw. | Tightening torque | 19 Nm |

- Clip in the wiring harness with the holder (2).
- Connect connectors (1) and lock.

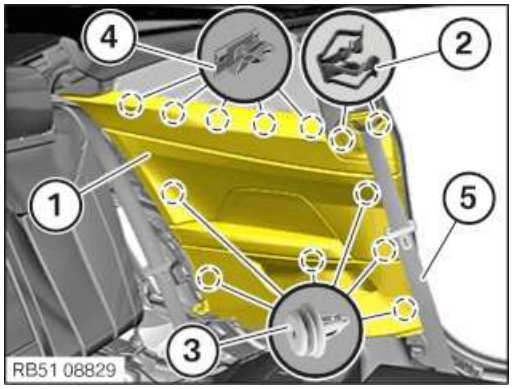
## POSTPROCESSES

### 11 – Install rear side trim panel

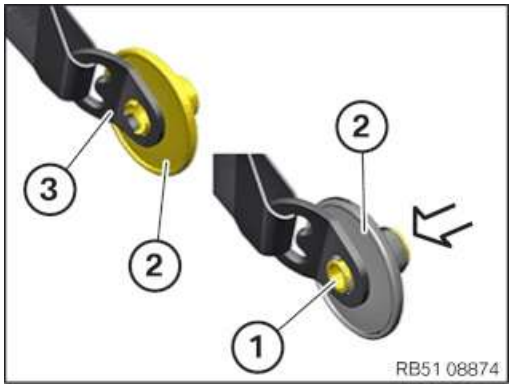



- Check clamps (1) for damage; renew them if necessary.
- Check clips (2) for damage, replace if necessary.

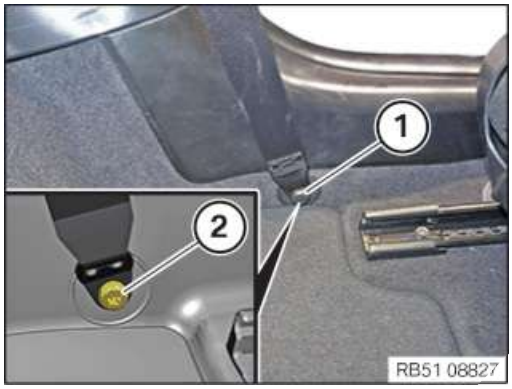
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- Connect all the connectors to rear side trim panel (1) of the wiring harness and lock and disconnect them.
- Guide in upper seat belt (5).
- Position rear side trim panel (1) and clip it into clamps (4).
- Clip rear side trim panel (1) into clips (3).
- Clip rear side trim panel (1) into clamps (2).




- Clip cover (2) of end fitting (3) into end fitting (3).
- Slide sleeve (1) into cover (2) of end fitting (3).




- Correctly position the seat belt end fitting.
- Tighten down screw (2).

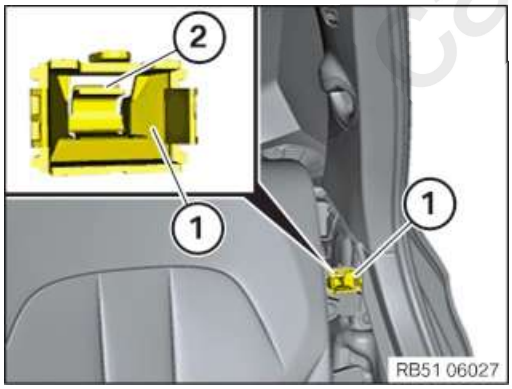
**End fitting to body**

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

- Clip in cover cap (1).

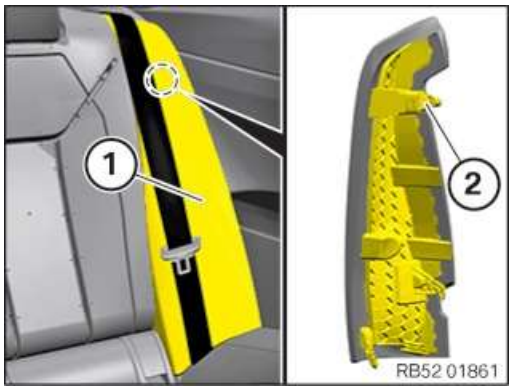
## 12 – Installing backrest side section

▶ **Installing backrest side section**




- Release mounting element (1) from latch mechanism (2) and remove it from the body.
- Check the mounting element (1) for damage, renew if necessary.

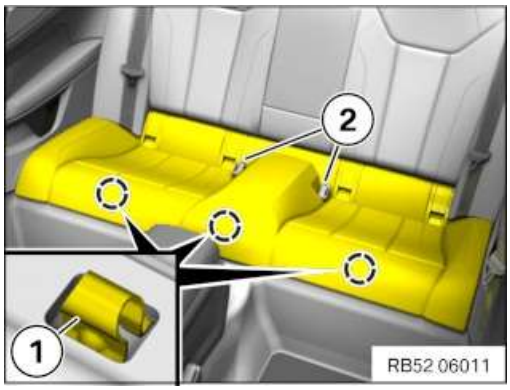
  The mounting element (1) must not be damaged or missing.
- Fit mounting element (1) on the backrest side section.




- Insert lower backrest side section (1) into the guide and position it correctly.
- Clip in backrest side section (1) to mounting element (2).

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### 13 – Installing the rear seat bench




- Feed in the seat belt buckles (2).
- Position the rear seat bench and clip into the clamps (1).

### 14 – Connecting all battery earth leads




- See additional information.

### 15 – Activating the 48 V electrical system

**Prerequisite**

Ignition is switched off.

**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .

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- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |




- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).




- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

**16 – Installing C-pillar trim panel**

**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.

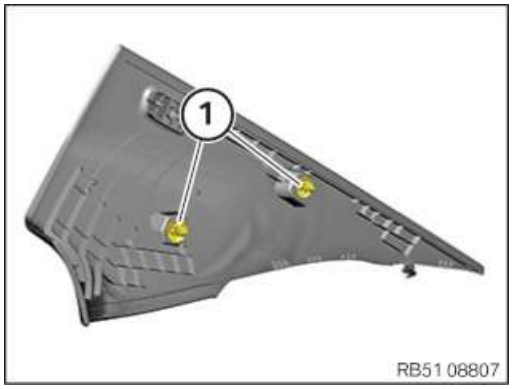
**RISK OF DAMAGE**

**Damage to the head airbag.**

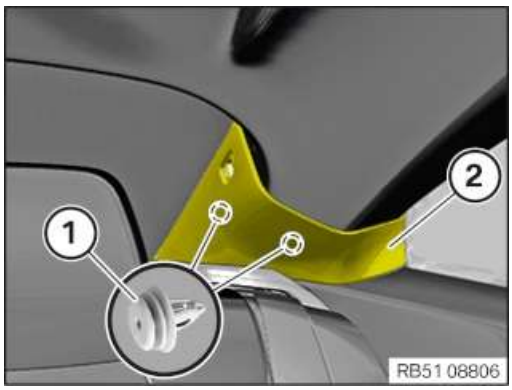
**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

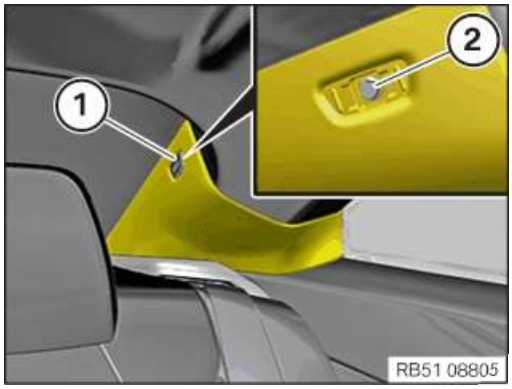
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- Check clips (1) for damage and, if necessary, renew them.




- Position C-pillar trim panel (2) and clip it onto clips (1).




- Tighten down screw (2).

**C-pillar trim panel to body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

- Clip in cover (1) of the C-pillar trim panel.

## Additional Information

### Overview of Tightening Torques

**Front inertia reel to body** — Used in step 810

| | | | |
|---|---|---|---|
| Screw | Renew screw. | Tightening torque | 42 Nm |

**Seat belt guide loop on body** — Used in step 810

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 42 Nm |

**Slide bar to body (B-pillar)** — Used in step 8

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 5 Nm |

**Additional screw connection of REMA to body** — Used in step 10

| | | | |
|---|---|---|---|
| M8 | Renew screw. | Tightening torque | 19 Nm |

**End fitting to body** — Used in step 11

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

**Negative battery cable to 48-V battery** — Used in step 1215

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

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| C-pillar trim panel to body | | | Used in step 16 |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

## Overview of Special Tools

## Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 151215 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 512 |

| Repair instructions | Used in step |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
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| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
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| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
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| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |

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# 72 11 256 Removing and installing/replacing front right lower strap

**TECHNICAL INFORMATION**

**Clean all belt bolted connections** with micro-encapsulated external and internal threads.
Swarf or other residues must not remain in the components.
If a micro-encapsulated screw is reused, it must be filled with screw locking agent: **Loctite 243, intermediate strength**.
The screw connection must be completed within a period of 10 minutes, as after this period the hardening starts.

**NOTICE**

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

## PRELIMINARY WORK

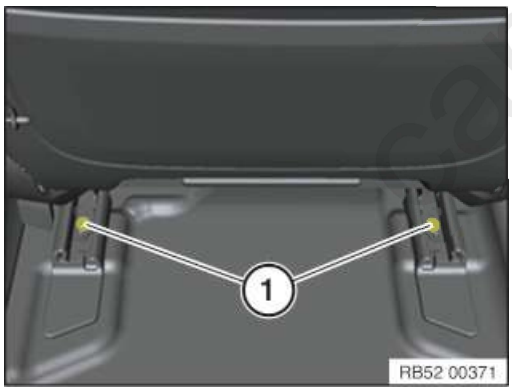
### 1 – Remove front seat

**WARNING**

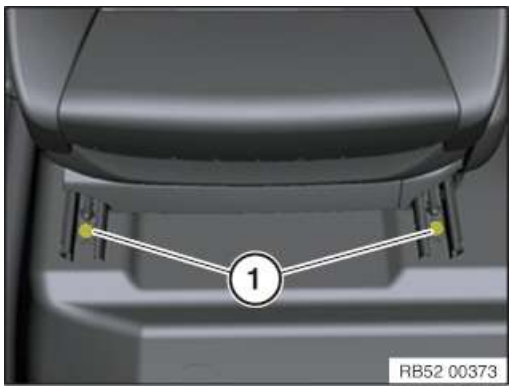
**Pyrotechnic components.**

**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.




- 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.

▸ **Deactivating the 48 V electrical system**

**Prerequisite**

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Ignition is switched off.

**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.

**Check**




**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

  Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

  **If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.




**WARNING**

**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

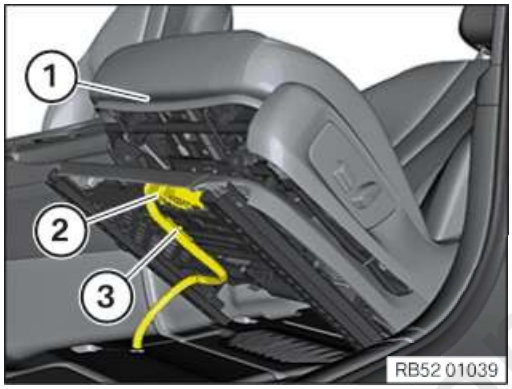
- Cover the vehicle battery.

- Cover the vehicle battery with the special tool  as shown.
- Position the battery earth lead (1) as shown.

▸ **Disconnecting all battery earth leads**




- See additional information.




**RISK OF DAMAGE**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

- 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.**

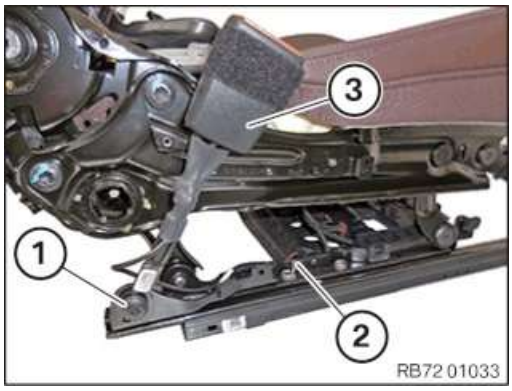
**Heavy components can lead to injury or damage.**

- 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 – Removing front lower strap

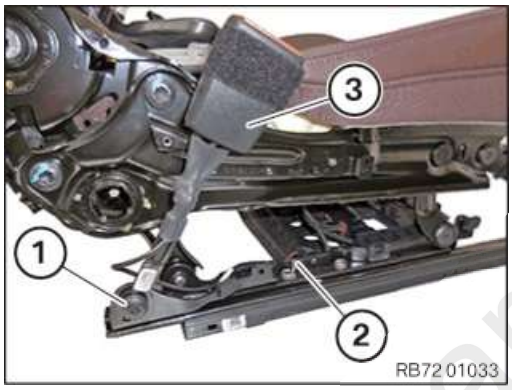



- Loosen screw (1).
- Disconnect the plug connection (2) and unclip available cable clips.
- Guide out and remove the lower strap (3) .

### 3 – Installing the front lower strap

**TECHNICAL INFORMATION**

**Clean all belt bolted connections** with micro-encapsulated external and internal threads.
Swarf or other residues must not remain in the components.
If a micro-encapsulated screw is reused, it must be filled with screw locking agent: **Loctite 243, intermediate strength**.
The screw connection must be completed within a period of 10 minutes, as after this period the hardening starts.




**TECHNICAL INFORMATION**

Component is encoded against incorrect assembly.

- Thread in the lower strap (3) and position it.
- Renew the screw (1).

  **Parts:** Screw
- Tighten down screw (1).

**Lower strap to seat mechanism**

| | | | |
|---|---|---|---|
| M10 screw | Renew screw. | Tightening torque | 38 Nm |

- Connect the plug connection (2) and clip in the existing cable clips.

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## POSTPROCESSES

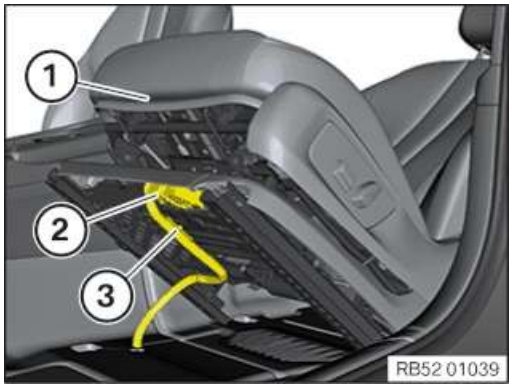
### 4 – Install front seat

**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**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

- 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 connectors (2) and lock.
- Attach the cable clip (3).

▸ **Connecting all battery earth leads**

- See additional information.




▸ **Activating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

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**RISK OF DAMAGE**

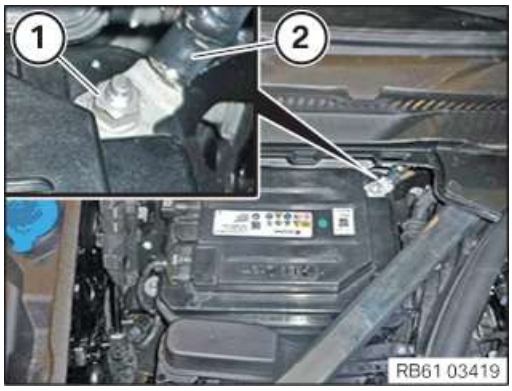
**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .




- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

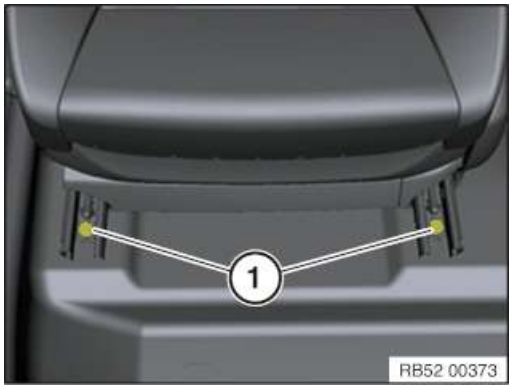



- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).




- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

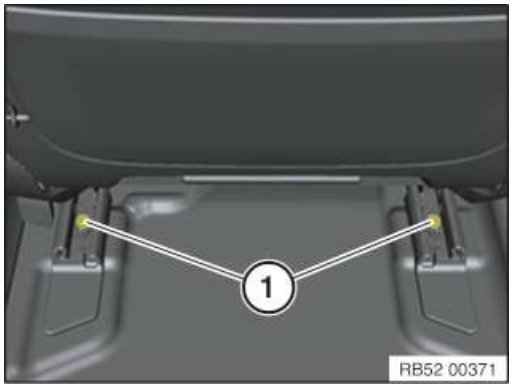



- Move front seat rearwards.
- Renew screws (1).

  **Parts:** Screws
- Tighten the screws (1).

**Seat to body**

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |




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

  **Parts:** Screws
- Tighten the screws (1).

**Seat to body**

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |

## Additional Information

### Overview of Tightening Torques

**Lower strap to seat mechanism** Used in step 3

| | | | |
|---|---|---|---|
| M10 screw | Renew screw. | Tightening torque | 38 Nm |

**Negative battery cable to 48-V battery** Used in step 4

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

**Seat to body** Used in step 4

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |

### Overview of Special Tools

### Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 14 |

| 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 the battery earth lead (all battery earth leads) | 14 |
| 61 20 900 Disconnecting and connecting battery earth lead | 14 |
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# 72 11 251 Removing and installing/replacing front right upper seat belt

**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**

**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

**NOTICE**

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

## PRELIMINARY WORK

### 1 – Deactivating the 48 V electrical system

**Prerequisite**

Ignition is switched off.

**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

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**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.




**Check**

**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

**If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.




**WARNING**

**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

**2 – Disconnecting all battery earth leads**




- See additional information.

**3 – Remove C-pillar trim panel**

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

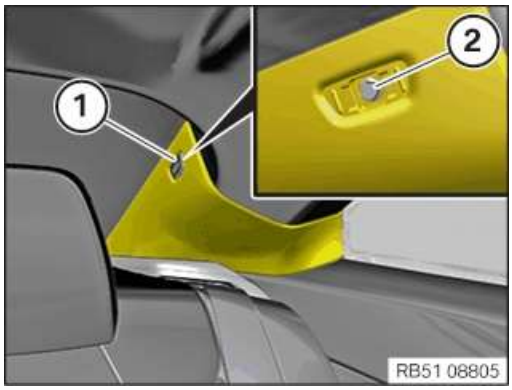
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**RISK OF DAMAGE**

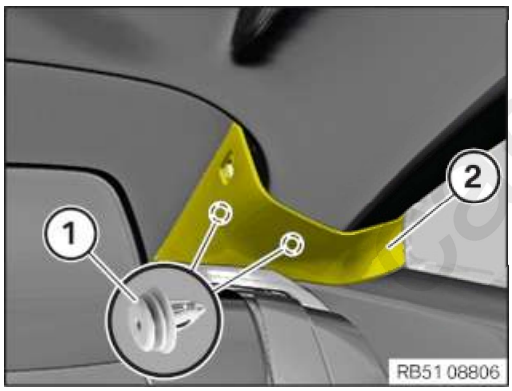
**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

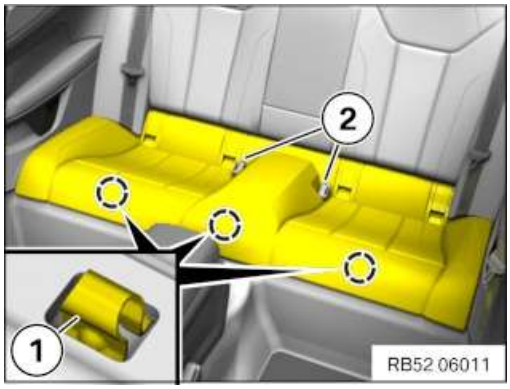



- Unclip cover (1) of the C-pillar trim panel.
- Release the screw (2).




- Unclip C-pillar trim panel (2) from clips (1) and guide it out.

**4 – Remove rear seat bench**

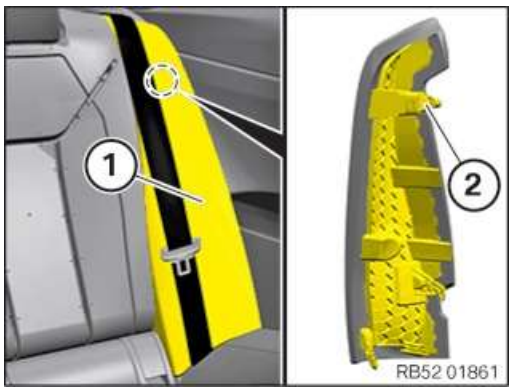



- Unclip the rear seat bench upwards from clamps (1) and guide out seat belt buckles (2).
- Remove the rear seat bench.

**5 – Remove armrest side section**

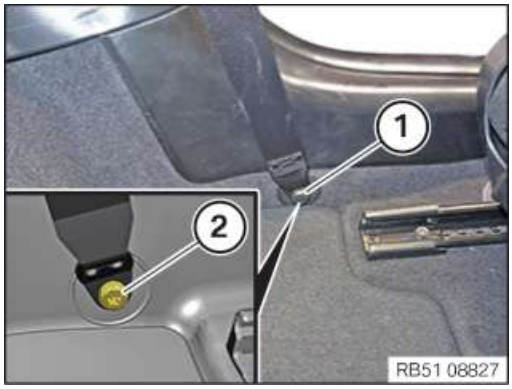
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▸ **Remove armrest side section**

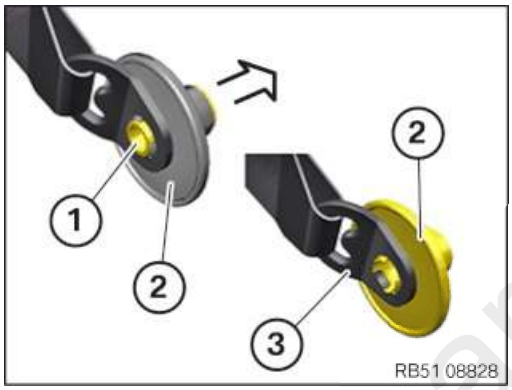



- Reach behind the backrest side section (1) from the top and unclip the backrest side section (1) from the mounting element (2) to the front.
- Remove backrest side section (1) in the upward direction from the guide.

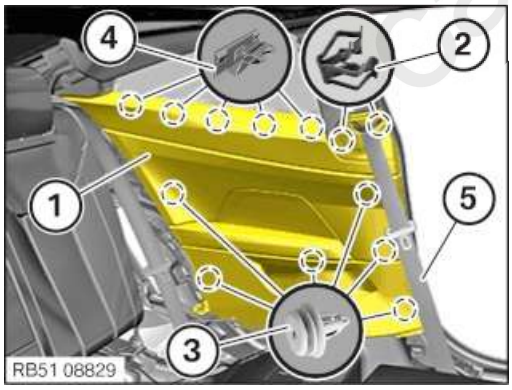
**6 – Remove rear side trim panel**




- Unclip the cover cap (1).
- Release the screw (2).




- Pull out the sleeve (1) from the cover (2) of the end fitting (3).
- Unclip the cover (2) of the end fitting (3) from the end fitting (3).




- Unclip the rear side trim panel (1) with a suitable tool at the clamps (2).
- Unclip the rear side trim panel (1) with a suitable tool at the clips (3).
- Release the rear side trim panel (1) at the clamps (4) and feed out at the edge protection.
- Unlock and disconnect all the plug connections at the rear side trim panel (1) of the wiring harness.
- Feed out the upper seat belt (5).

**MAIN WORK**

**7 – Removing the upper seat belt**

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**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

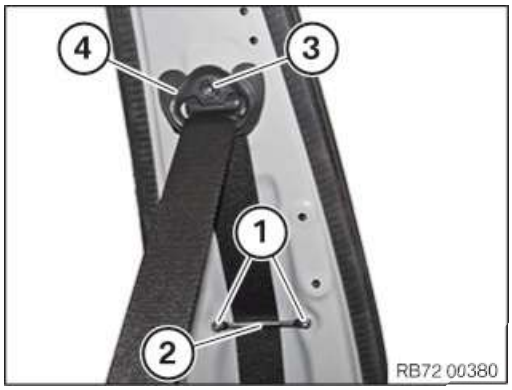
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

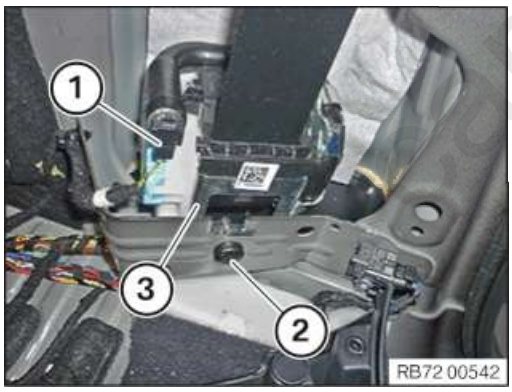
**WARNING**

**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




**NOTICE**

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

- Loosen screws (1).
- Remove the slide bar (2).
- Release the screw (3).
- Unlock plug connections (1) and disconnect.
- Release the screw (2).
- Remove the inertia reel (3).

**8 – Installing the upper seat belt**

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

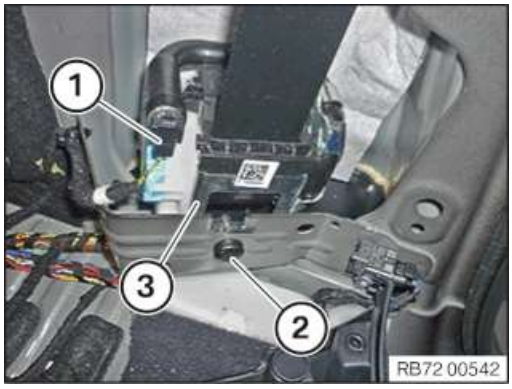
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**WARNING**

**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



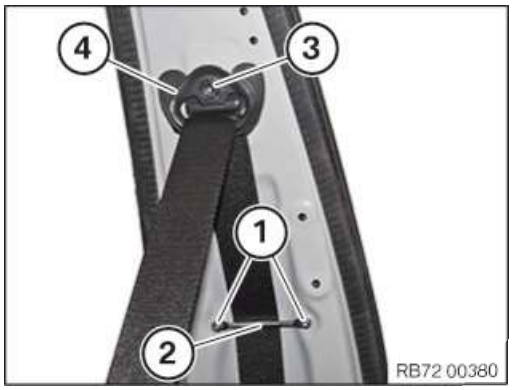

- Position inertia reel (3).
- Renew the screw (2).

  **Parts:** Screw
- Tighten down screw (2).

**Front inertia reel to body**

| | | | |
|---|---|---|---|
| Screw | Renew screw. | Tightening torque | 42 Nm |

- Connect connectors (1) and lock.




**NOTICE**

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

- Position the seat belt guide loop (4).
- Tighten down screw (3).

**Seat belt guide loop on body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 42 Nm |

- Attach the slide bar (2).
- Tighten the screws (1).

**Slide bar to body (B-pillar)**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 5 Nm |

### 9 – Removing upper seat belt (reversible electromotive reel, REMA)

**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.

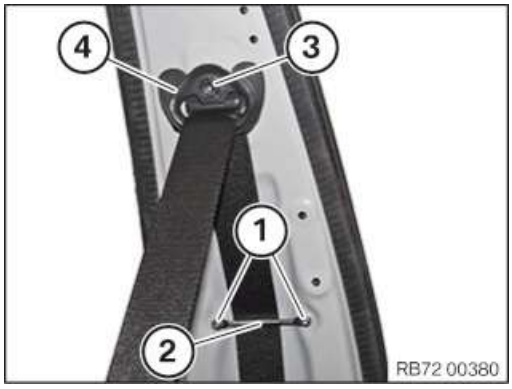
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**WARNING**

**Airbag unit.**

**Danger! Life-threatening injuries!**

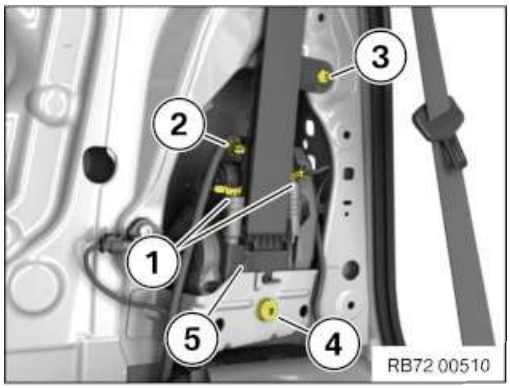
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators




**NOTICE**

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

- Loosen screws (1).
- Remove the slide bar (2).
- Release the screw (3).




**TECHNICAL INFORMATION**

SA5AL Active Protection:
REMA = Reversible electromotive reel.

- Unlock plug connections (1) and disconnect.
- Release the wiring harness with the holder (2).
- Release screws (3) and (4).
- Remove the inertia reel (5).

**10 – Installing upper seat belt (reversible electromotive reel, REMA)**

**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.

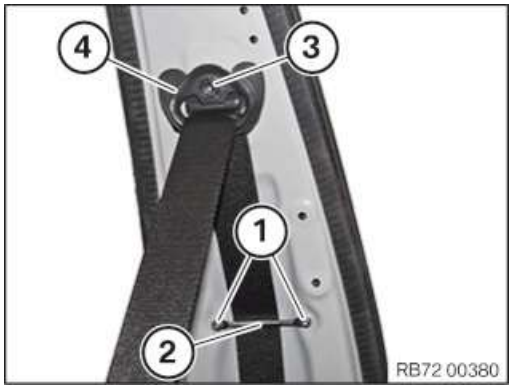
**WARNING**

**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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**NOTICE**

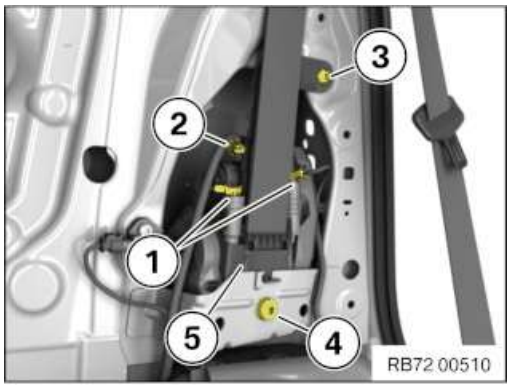
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Position the seat belt guide loop (4).
- Tighten down screw (3).

**Seat belt guide loop on body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 42 Nm |

- Attach the slide bar (2).
- Tighten down screw (1).




**TECHNICAL INFORMATION**

SA5AL Active Protection:
REMA = Reversible electromotive reel.

- Position inertia reel (5).
- Renew screws (3) and (4).

  **Parts:** Screws
- Tighten down screw (4).

**Front inertia reel to body**

| | | | |
|---|---|---|---|
| Screw | Renew screw. | Tightening torque | 42 Nm |

- Tighten down screw (3).

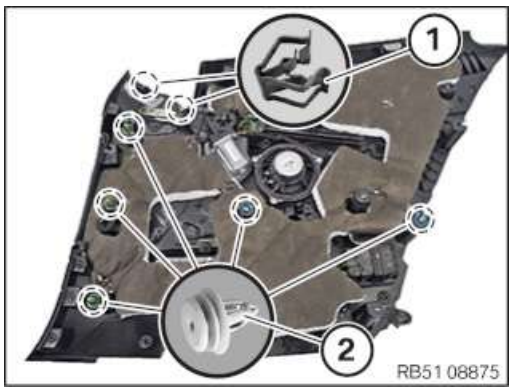
**Additional screw connection of REMA to body**

| | | | |
|---|---|---|---|
| M8 | Renew screw. | Tightening torque | 19 Nm |

- Clip in the wiring harness with the holder (2).
- Connect connectors (1) and lock.

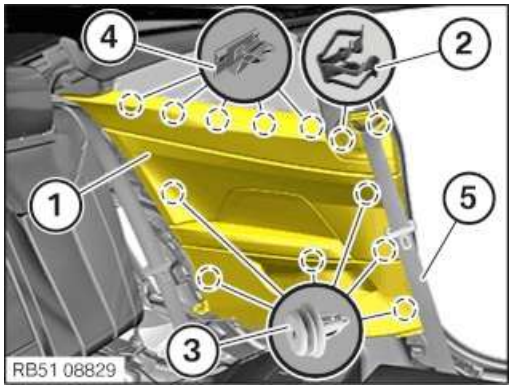
## POSTPROCESSES

### 11 – Install rear side trim panel

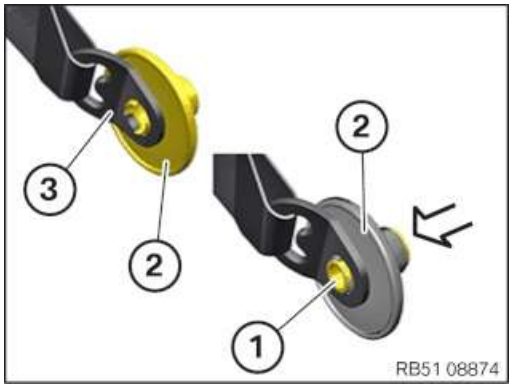



- Check clamps (1) for damage; renew them if necessary.
- Check clips (2) for damage, replace if necessary.

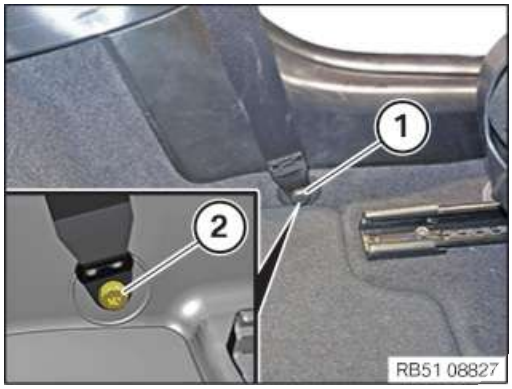
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- Connect all the connectors to rear side trim panel (1) of the wiring harness and lock and disconnect them.
- Guide in upper seat belt (5).
- Position rear side trim panel (1) and clip it into clamps (4).
- Clip rear side trim panel (1) into clips (3).
- Clip rear side trim panel (1) into clamps (2).




- Clip cover (2) of end fitting (3) into end fitting (3).
- Slide sleeve (1) into cover (2) of end fitting (3).




- Correctly position the seat belt end fitting.
- Tighten down screw (2).

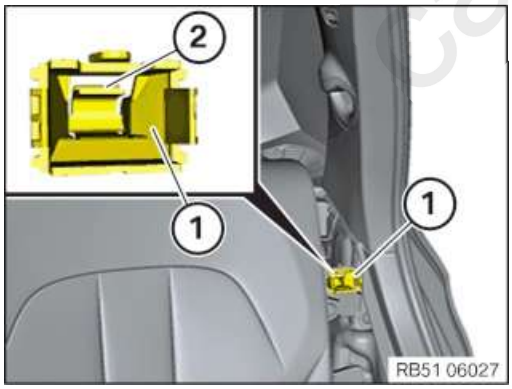
**End fitting to body**

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

- Clip in cover cap (1).

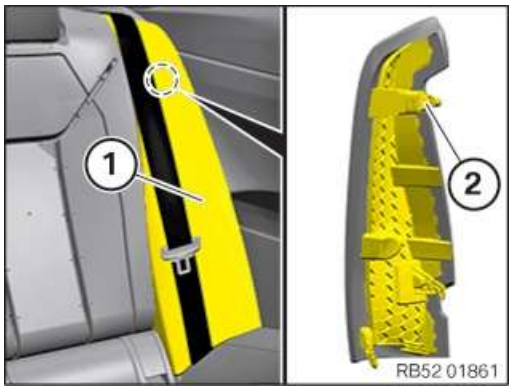
## 12 – Installing backrest side section

▶ **Installing backrest side section**




- Release mounting element (1) from latch mechanism (2) and remove it from the body.
- Check the mounting element (1) for damage, renew if necessary.

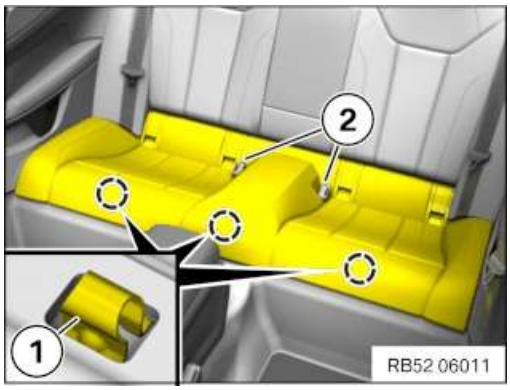
  The mounting element (1) must not be damaged or missing.
- Fit mounting element (1) on the backrest side section.




- Insert lower backrest side section (1) into the guide and position it correctly.
- Clip in backrest side section (1) to mounting element (2).

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### 13 – Installing the rear seat bench




- Feed in the seat belt buckles (2).
- Position the rear seat bench and clip into the clamps (1).

### 14 – Connecting all battery earth leads




- See additional information.

### 15 – Activating the 48 V electrical system

**Prerequisite**

Ignition is switched off.

**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .

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- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |




- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).




- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

**16 – Installing C-pillar trim panel**

**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.

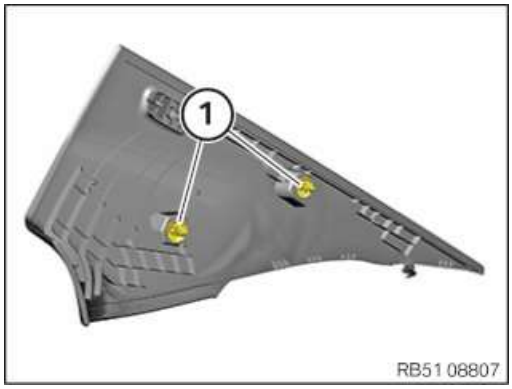
**RISK OF DAMAGE**

**Damage to the head airbag.**

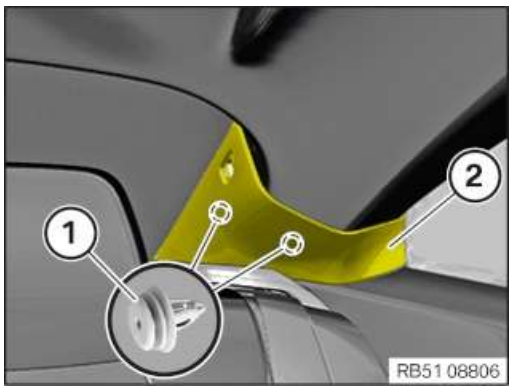
**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

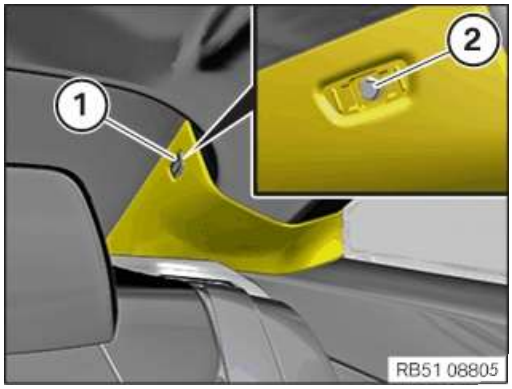
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- Check clips (1) for damage and, if necessary, renew them.




- Position C-pillar trim panel (2) and clip it onto clips (1).




- Tighten down screw (2).

**C-pillar trim panel to body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

- Clip in cover (1) of the C-pillar trim panel.

## Additional Information

### Overview of Tightening Torques

**Front inertia reel to body** — Used in step 810

| | | | |
|---|---|---|---|
| Screw | Renew screw. | Tightening torque | 42 Nm |

**Seat belt guide loop on body** — Used in step 810

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 42 Nm |

**Slide bar to body (B-pillar)** — Used in step 8

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 5 Nm |

**Additional screw connection of REMA to body** — Used in step 10

| | | | |
|---|---|---|---|
| M8 | Renew screw. | Tightening torque | 19 Nm |

**End fitting to body** — Used in step 11

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

**Negative battery cable to 48-V battery** — Used in step 1215

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

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| C-pillar trim panel to body | | | Used in step 16 |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

## Overview of Special Tools

## Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 151215 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 512 |

| Repair instructions | Used in step |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |

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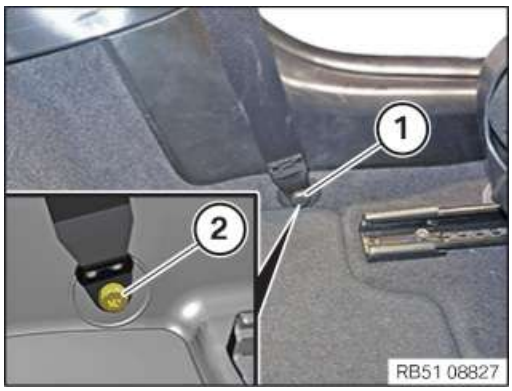
| | |
|---|---|
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |
| 61 20 900 Disconnecting and connecting battery earth lead | 251214 |

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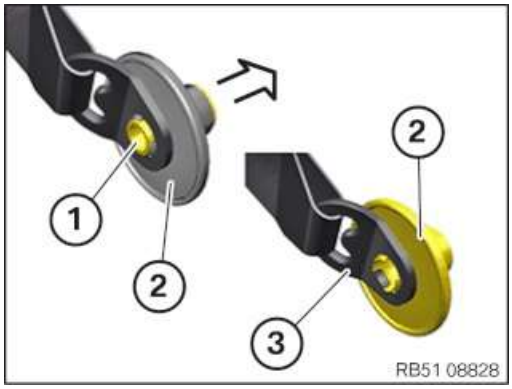
# 72 11 080 Removing and installing/replacing left or right seat-belt extender hand

## PRELIMINARY WORK

### 1 – Remove the front end fitting



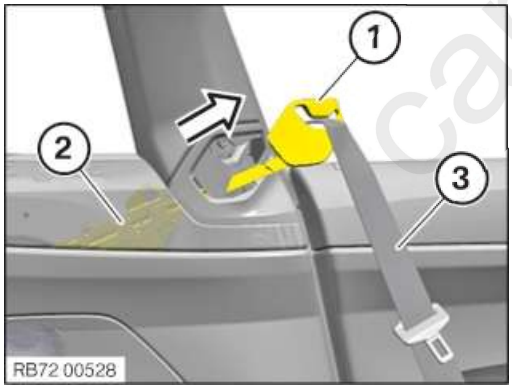

- Unclip the cover cap (1).
- Release the screw (2).




- Pull out the sleeve (1) from the cover (2) of the end fitting (3).
- Unclip the cover (2) of the end fitting (3) from the end fitting (3).

## MAIN WORK

### 2 – Removing seat-belt assistant hand

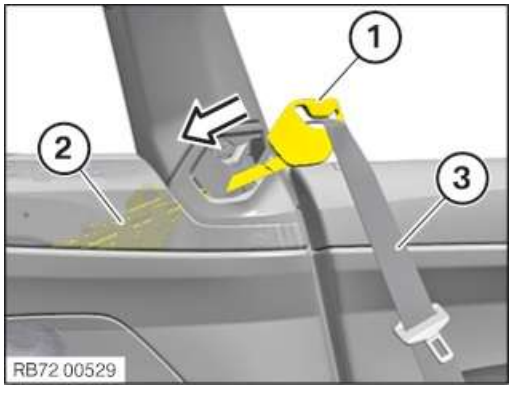



**NOTICE**

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

- Feed out the seat-belt assistant hand (1) in direction of arrow from the seat belt extender (2) carefully.
- Feed out upper seat belt (3) from the seat-belt assistant hand (1).

### 3 – Installing seat-belt assistant hand



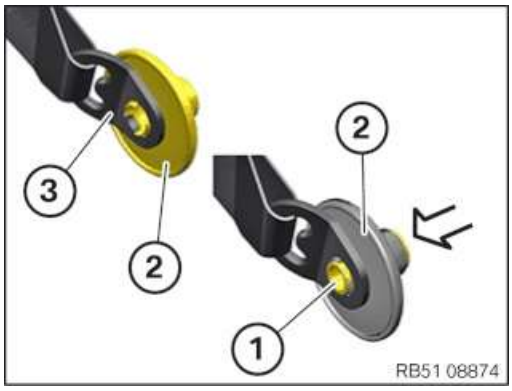

**NOTICE**

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

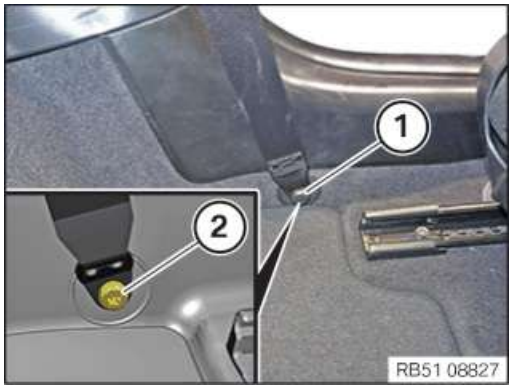
- Guide in upper seat belt (3) into the seat-belt assistant hand (1).
- Guide in seat-belt assistant hand (1) in direction of arrow into the seat belt extender (2) carefully.

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### 4 – Install front end fitting




- Clip cover (2) of end fitting (3) into end fitting (3).
- Slide sleeve (1) into cover (2) of end fitting (3).




- Correctly position the seat belt end fitting.
- Tighten down screw (2).

**End fitting to body**

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

- Clip in cover cap (1).

## Additional Information

## Overview of Tightening Torques

**End fitting to body** — Used in step 4

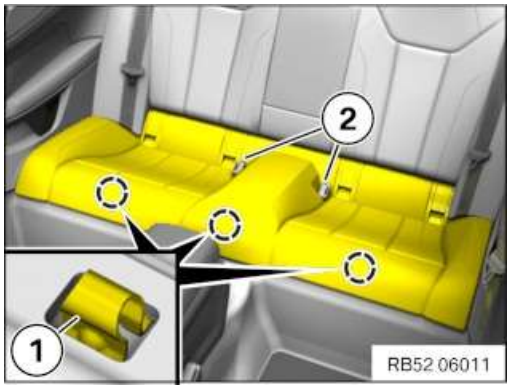
| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

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# 72 11 390 Removing and installing/replacing rear left lower strap

## PRELIMINARY WORK

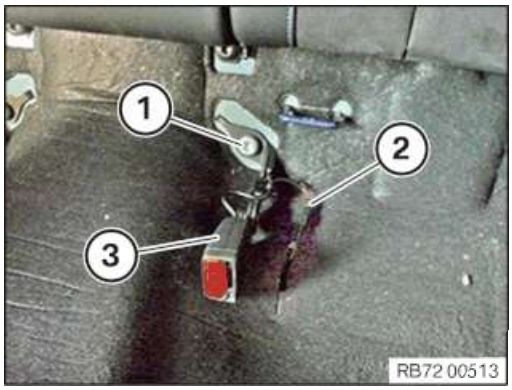
### 1 – Remove rear seat bench




- Unclip the rear seat bench upwards from clamps (1) and guide out seat belt buckles (2).
- Remove the rear seat bench.

## MAIN WORK

### 2 – Remove rear left lower strap

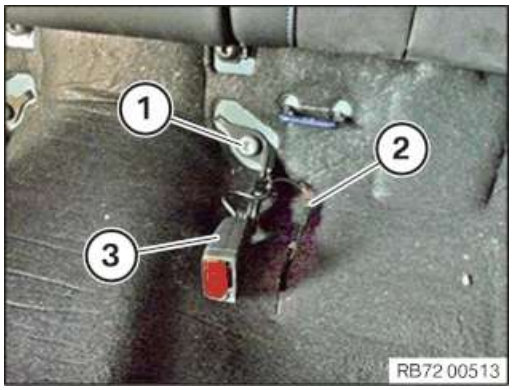



- Release the screw (1).
- Unlock plug connection (2) and disconnect.
- Guide out lower strap (3).

### 3 – Install the rear left lower strap

**TECHNICAL INFORMATION**

Component is encoded against incorrect assembly.



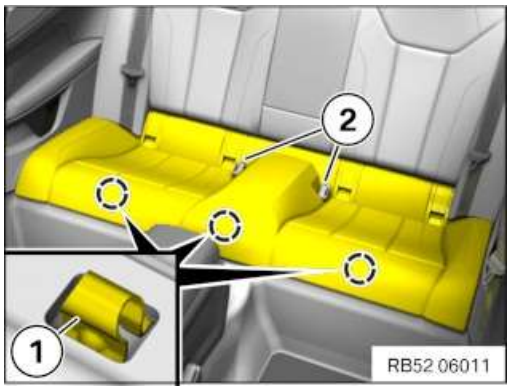

- Guide in lower strap (3) and position it correctly.
- Connect connectors (2) and lock.
- Tighten down screw (1).

**Lower strap to body**

| | | | |
|---|---|---|---|
| M12 screw | | Tightening torque | 42 Nm |

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### 4 – Installing the rear seat bench




- Feed in the seat belt buckles (2).
- Position the rear seat bench and clip into the clamps (1).

## Additional Information

## Overview of Tightening Torques

| **Lower strap to body** | | | Used in step 3 |
|---|---|---|---|
| M12 screw | | Tightening torque | 42 Nm |

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# 72 11 380 Removing and installing/replacing rear left upper seat belt

**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**

**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

## PRELIMINARY WORK

### 1 – Deactivating the 48 V electrical system

**Prerequisite**

Ignition is switched off.

**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

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**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.




**Check**

**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

**If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.




**WARNING**

**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

- Cover the vehicle battery.

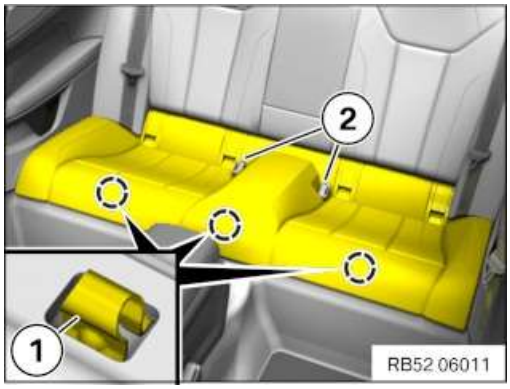
- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

**2 – Disconnecting all battery earth leads**




- See additional information.

**3 – Remove rear seat bench**




- Unclip the rear seat bench upwards from clamps (1) and guide out seat belt buckles (2).
- Remove the rear seat bench.

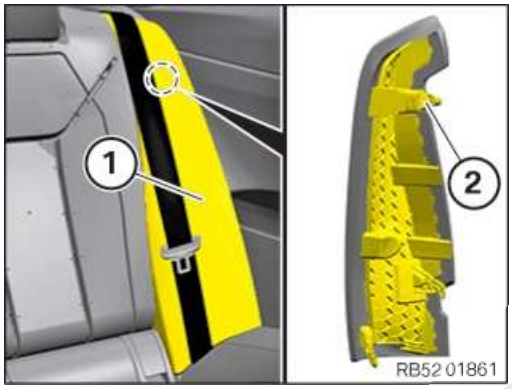
**4 – Remove backrest side section on left and right**

**NOTICE**

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

▸ **Remove armrest side section**

▹ **Remove armrest side section**




- Reach behind the backrest side section (1) from the top and unclip the backrest side section (1) from the mounting element (2) to the front.
- Remove backrest side section (1) in the upward direction from the guide.

◃

**5 – Removing the C-pillar trim panel on the left and right**

**NOTICE**

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

▸ **Remove C-pillar trim panel**

**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.

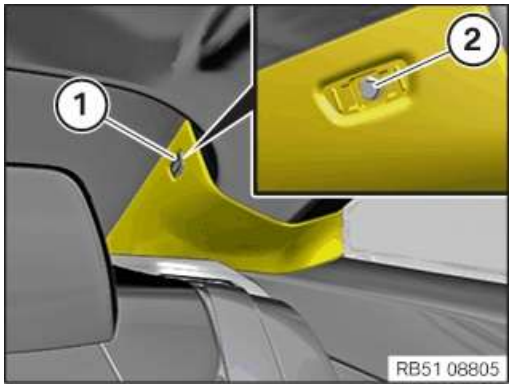
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**RISK OF DAMAGE**

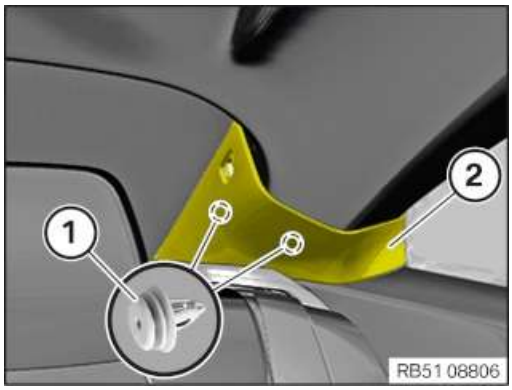
**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.




- Unclip cover (1) of the C-pillar trim panel.
- Release the screw (2).



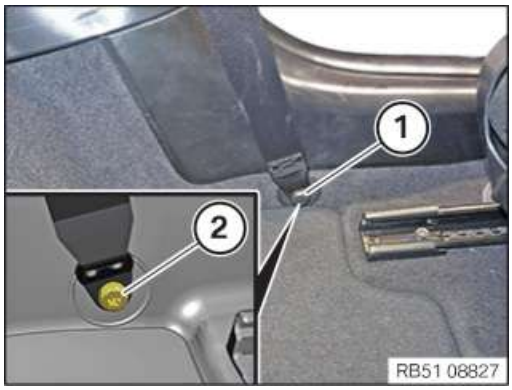

- Unclip C-pillar trim panel (2) from clips (1) and guide it out.

**6 – Remove side trim panel, rear left and right**

**NOTICE**

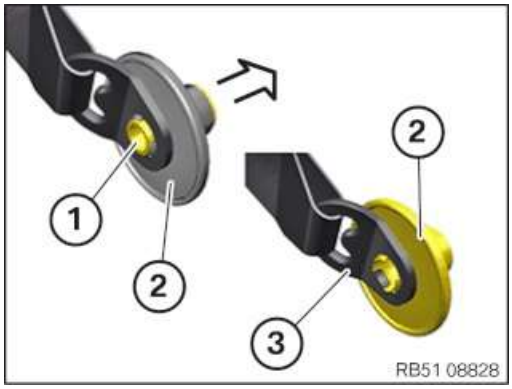
Description is for left component only. Procedure on the right side is identical.

▸ **Remove rear side trim panel**

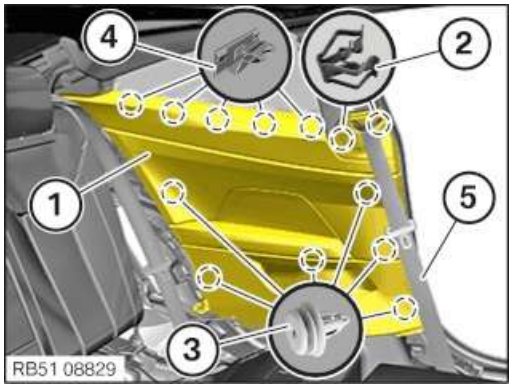



- Unclip the cover cap (1).
- Release the screw (2).

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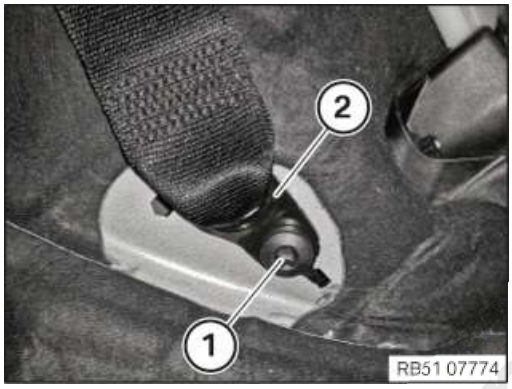



- Pull out the sleeve (1) from the cover (2) of the end fitting (3).
- Unclip the cover (2) of the end fitting (3) from the end fitting (3).




- Unclip the rear side trim panel (1) with a suitable tool at the clamps (2).
- Unclip the rear side trim panel (1) with a suitable tool at the clips (3).
- Release the rear side trim panel (1) at the clamps (4) and feed out at the edge protection.
- Unlock and disconnect all the plug connections at the rear side trim panel (1) of the wiring harness.
- Feed out the upper seat belt (5).

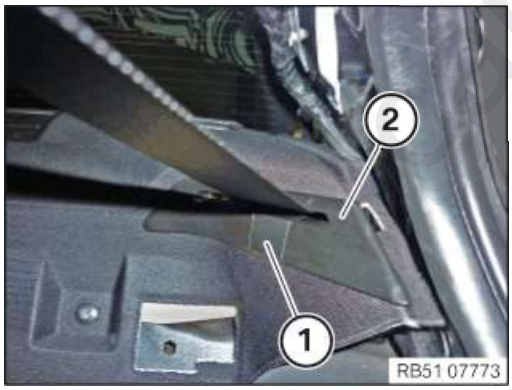
### 7 – Removing the trim panel for the storage shelf




**NOTICE**

Perform the operations on the left and right side.

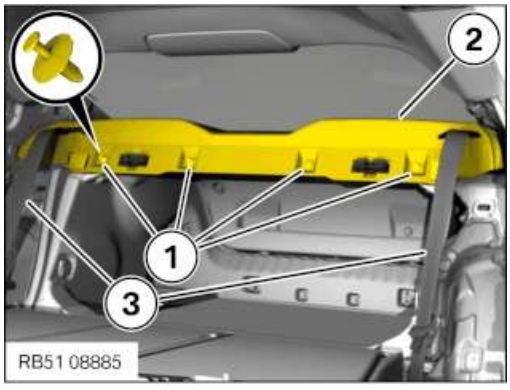
- Release the screw (1) from the rear end fitting (2).
- Feed out the rear end fitting (2) from the body.




**NOTICE**

Perform the operations on the left and right side.

- Unclip the cover (1) to the front.
- Unclip the outer belt feed trim (2) starting from the front and remove it.




- Release the expanding rivet (1).
- Unlock and disconnect the plug connections under the trim panel (2). Lift the trim panel (2) for that.
- Release the wiring harness with all holders from trim panel (2).
- Remove the trim panel (2) to the front and feed out the seat belts (3).

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## 8 – Removing the rear upper seat belt

**WARNING**

**Airbag unit.**

**Danger! Life-threatening injuries!**

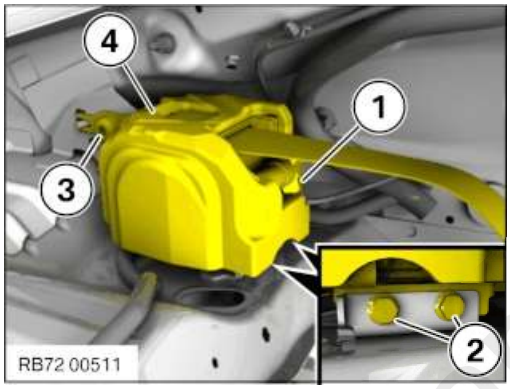
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

**WARNING**

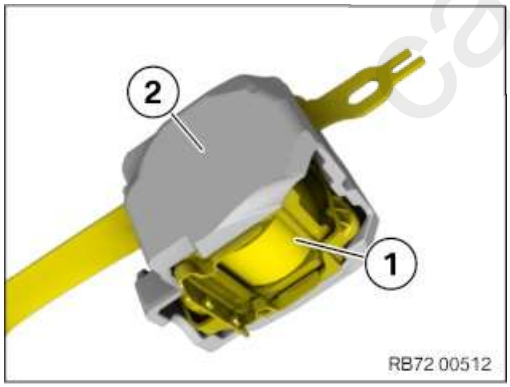
**Pyrotechnic components.**

**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.




- Unlock plug connection (1) and disconnect.
- Loosen screws (2).
- Release the screw (3).
- Remove the inertia reel with the foam part (4).




- Feed out the inertia reel (1) from the foam part (2) and remove.

## 9 – Installing the rear upper seat belt

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**WARNING**

**Airbag unit.**

**Danger! Life-threatening injuries!**

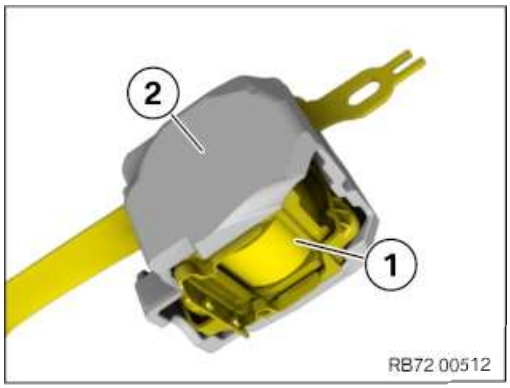
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

**WARNING**

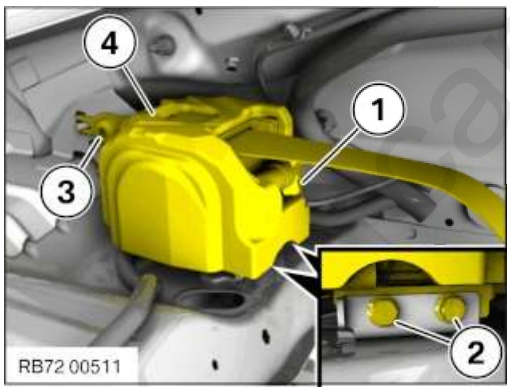
**Pyrotechnic components.**

**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.




- Guide inertia reel (1) into foam part (2).




- Guide in and position the inertia reel with foam part (4).
- Renew the screw (3).

  **Part:** Screw
- Tighten down screw (3).

**Rear inertia reel to body**

| | | | |
|---|---|---|---|
| M10 | Renew screw. | Tightening torque | 42 Nm |

- Tighten the screws (2).

**Additional connection of rear inertia reel to body**

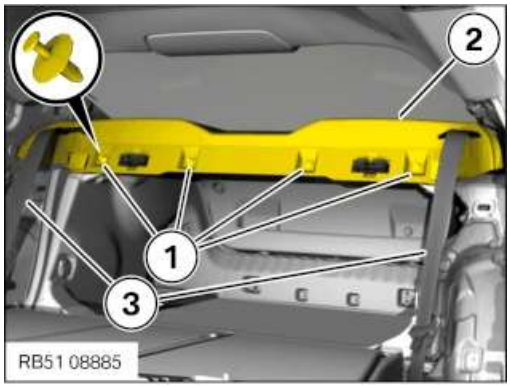
| | | | |
|---|---|---|---|
| Hexagon bolt M6 | | Tightening torque | 4.5 Nm |

- Connect connectors (1) and lock.

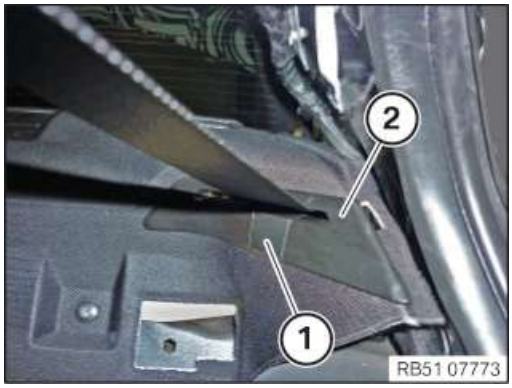
## POSTPROCESSES

**10 – Install the trim panel for the storage shelf**

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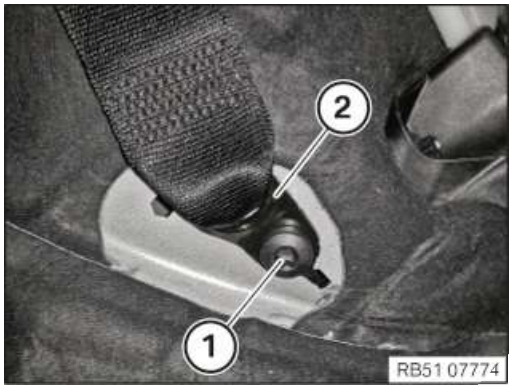

- Install the trim panel (2) and the feed in the seat belts (3).
- Clip in the wiring harness with all the holders to the trim panel for the storage shelf (2).
- Connect all connectors and lock.
- Feed in the trim panel (2) to the rear guides and position it correctly.
- Secure expanding rivet (1).




**NOTICE**

Perform the operations on the left and right side.

- Feed in the belt feed trim (2).
- Clip in the cover (1).




**NOTICE**

Perform the operations on the left and right side.

- Feed the rear end fitting (2) into the body.
- Renew the screw (1).

  **Part:** Screw
- Tighten down screw (1).

**End fitting to body**

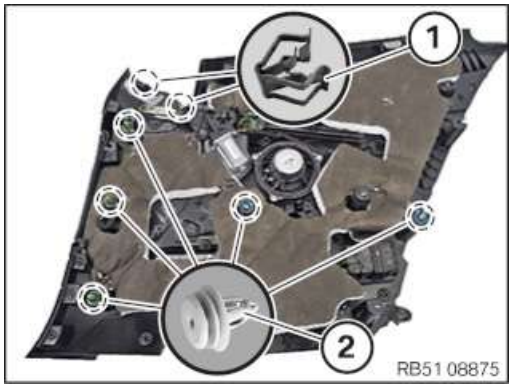
| | | | |
|---|---|---|---|
| M10 | Renew screw. | Tightening torque | 42 Nm |

### 11 – Install side trim panel, rear left and right

**NOTICE**

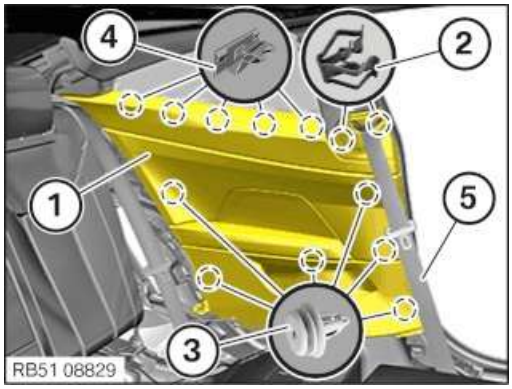
Description is for left component only. Procedure on the right side is identical.

▸ **Install rear side trim panel**

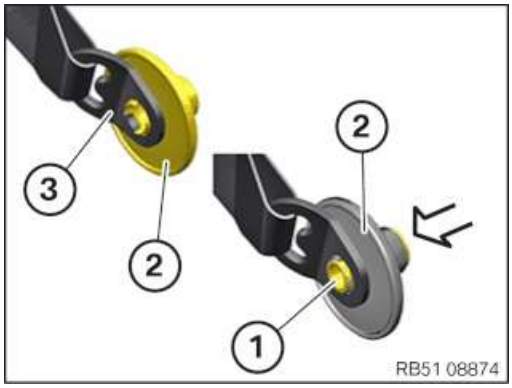



- Check clamps (1) for damage; renew them if necessary.
- Check clips (2) for damage, replace if necessary.

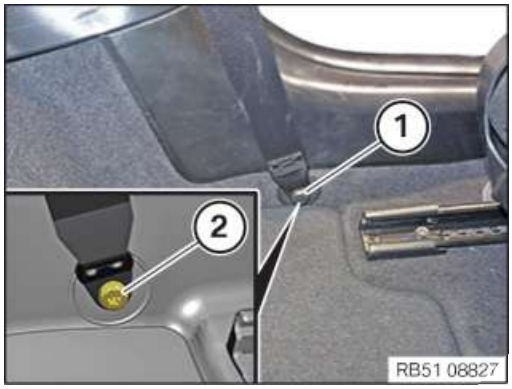
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- Connect all the connectors to rear side trim panel (1) of the wiring harness and lock and disconnect them.
- Guide in upper seat belt (5).
- Position rear side trim panel (1) and clip it into clamps (4).
- Clip rear side trim panel (1) into clips (3).
- Clip rear side trim panel (1) into clamps (2).




- Clip cover (2) of end fitting (3) into end fitting (3).
- Slide sleeve (1) into cover (2) of end fitting (3).




- Correctly position the seat belt end fitting.
- Tighten down screw (2).

**End fitting to body**

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

- Clip in cover cap (1).

### 12 – Installing the C-pillar trim panel on the left and right

**NOTICE**

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

▸ **Installing C-pillar trim panel**

**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.

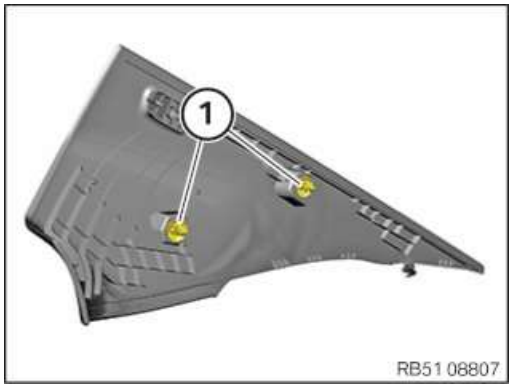
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**RISK OF DAMAGE**

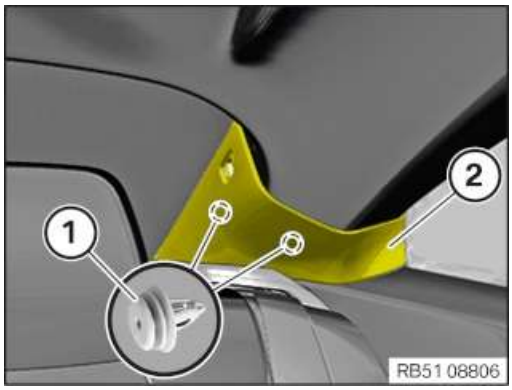
**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

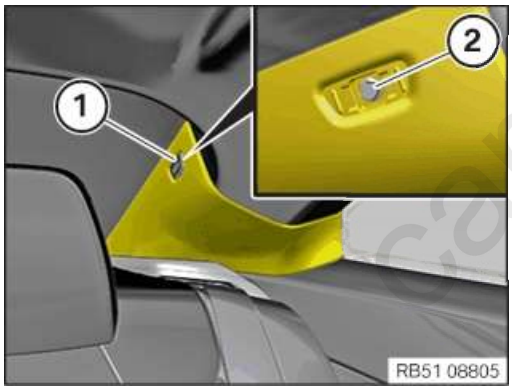
- Do not use sharp-edged tools when removing the trim panel.




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




- Position C-pillar trim panel (2) and clip it onto clips (1).




- Tighten down screw (2).

**C-pillar trim panel to body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

- Clip in cover (1) of the C-pillar trim panel.

**13 – Install the backrest side section on the left and right**

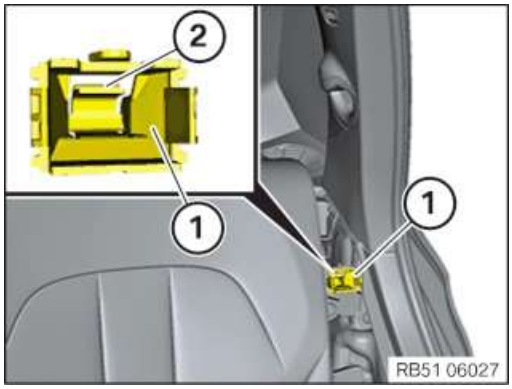
**NOTICE**

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

▸ **Installing backrest side section**

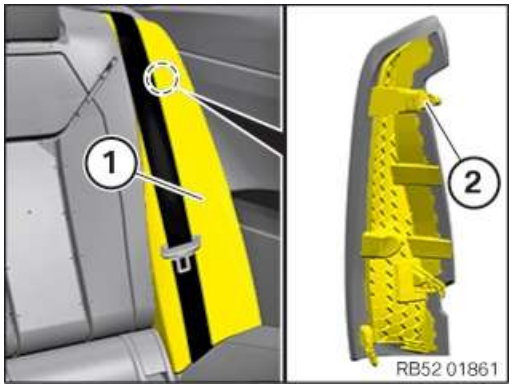
▹ **Installing backrest side section**

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- Release mounting element (1) from latch mechanism (2) and remove it from the body.
- Check the mounting element (1) for damage, renew if necessary.

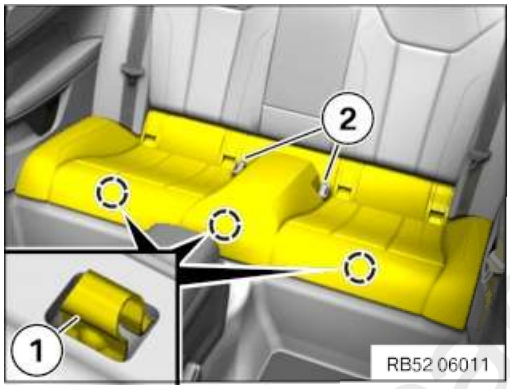
  The mounting element (1) must not be damaged or missing.
- Fit mounting element (1) on the backrest side section.




- Insert lower backrest side section (1) into the guide and position it correctly.
- Clip in backrest side section (1) to mounting element (2).

◁

**14 – Installing the rear seat bench**




- Feed in the seat belt buckles (2).
- Position the rear seat bench and clip into the clamps (1).

**15 – Connecting all battery earth leads**




- See additional information.

**16 – Activating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

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**RISK OF DAMAGE**

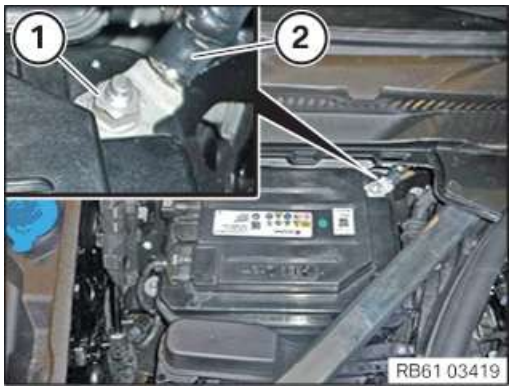
**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .




- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |




- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).




- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

## Additional Information

### Overview of Tightening Torques

| Rear inertia reel to body | | | Used in step 9 |
|---|---|---|---|
| M10 | Renew screw. | Tightening torque | 42 Nm |

| Additional connection of rear inertia reel to body | | | Used in step 9 |
|---|---|---|---|
| Hexagon bolt M6 | | Tightening torque | 4.5 Nm |

| End fitting to body | | | Used in step 10 |
|---|---|---|---|
| M10 | Renew screw. | Tightening torque | 42 Nm |

| End fitting to body | | | Used in step 11 |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

| C-pillar trim panel to body | | | Used in step 12 |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

| Negative battery cable to 48-V battery | | | Used in step 1316 |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

## Overview of Special Tools

## Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 141316 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 48913 |

| Repair instructions | Used in step |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 241315 |
| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
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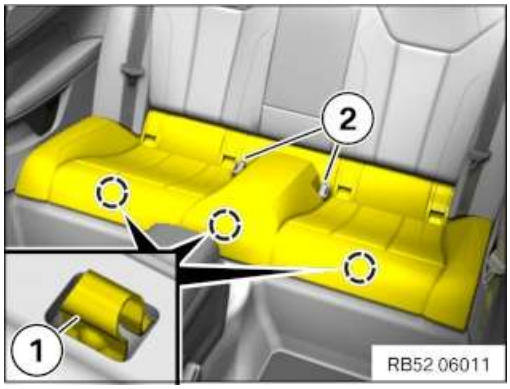
| | |
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| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 241315 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 241315 |
| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 241315 |
| 61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) | 241315 |
| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
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| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 241315 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |

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# 72 11 391 Removing and installing/replacing rear right lower strap

## PRELIMINARY WORK

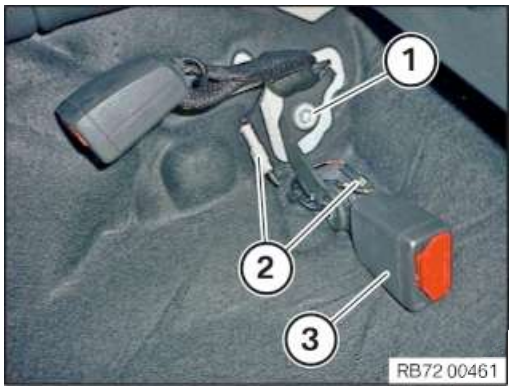
### 1 – Remove rear seat bench




- Unclip the rear seat bench upwards from clamps (1) and guide out seat belt buckles (2).
- Remove the rear seat bench.

## MAIN WORK

### 2 – Install the rear right lower strap




**TECHNICAL INFORMATION**

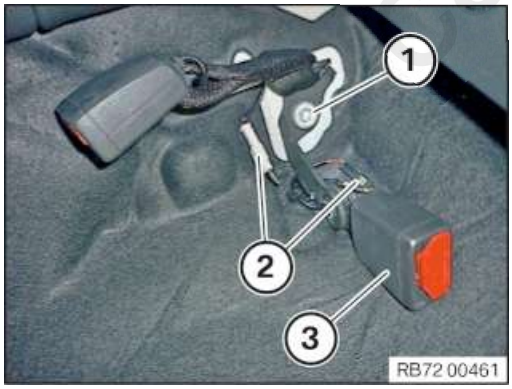
Component is encoded against incorrect assembly.

- Guide in rear right lower strap (3) and position it correctly.
- Connect connectors (2) and lock.
- Tighten down screw (1).

**Lower strap to body**

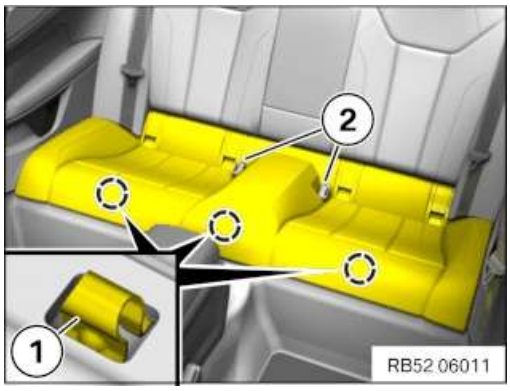
| | | | |
|---|---|---|---|
| M12 screw | | Tightening torque | 42 Nm |

### 3 – Remove rear right lower strap




- Loosen screw (1).
- Unlock and disconnect plug connections (2).
- Feed out rear right lower strap (3).

### 4 – Installing the rear seat bench




- Feed in the seat belt buckles (2).
- Position the rear seat bench and clip into the clamps (1).

## Additional Information

### Overview of Tightening Torques

| **Lower strap to body** | | | Used in step 2 |
|---|---|---|---|
| M12 screw | | Tightening torque | 42 Nm |

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# 72 11 381 Removing and installing/replacing rear right upper seat belt

**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**

**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

**NOTICE**

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

## PRELIMINARY WORK

### 1 – Deactivating the 48 V electrical system

**Prerequisite**

Ignition is switched off.

**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

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**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.




**Check**

**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

**If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.




**WARNING**

**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

- Cover the vehicle battery.

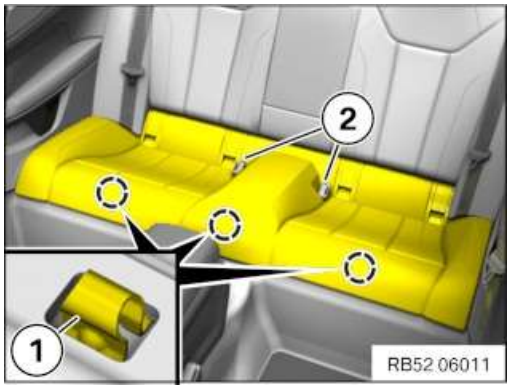
- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

**2 – Disconnecting all battery earth leads**




- See additional information.

**3 – Remove rear seat bench**




- Unclip the rear seat bench upwards from clamps (1) and guide out seat belt buckles (2).
- Remove the rear seat bench.

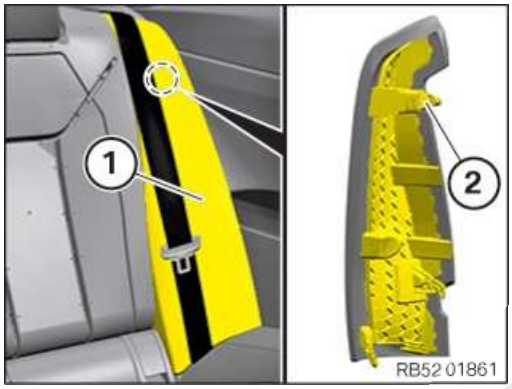
**4 – Remove backrest side section on left and right**

**NOTICE**

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

▸ **Remove armrest side section**

▹ **Remove armrest side section**




- Reach behind the backrest side section (1) from the top and unclip the backrest side section (1) from the mounting element (2) to the front.
- Remove backrest side section (1) in the upward direction from the guide.

◃

**5 – Removing the C-pillar trim panel on the left and right**

**NOTICE**

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

▸ **Remove C-pillar trim panel**

**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.

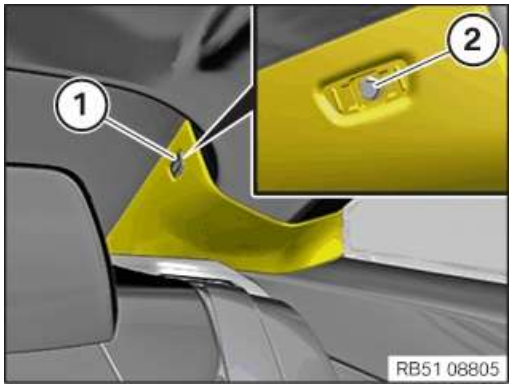
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**RISK OF DAMAGE**

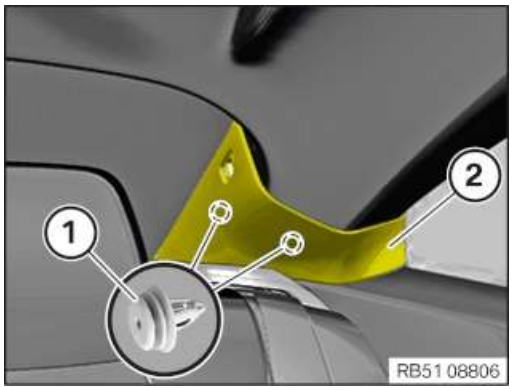
**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.




- Unclip cover (1) of the C-pillar trim panel.
- Release the screw (2).



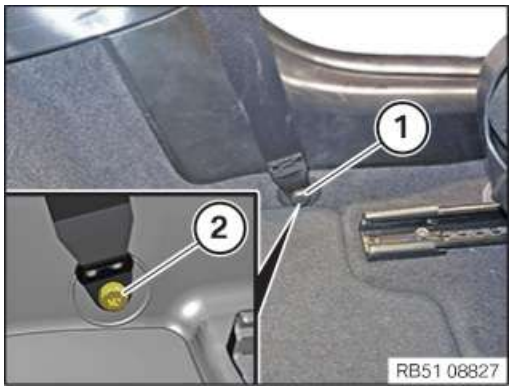

- Unclip C-pillar trim panel (2) from clips (1) and guide it out.

**6 – Remove side trim panel, rear left and right**

**NOTICE**

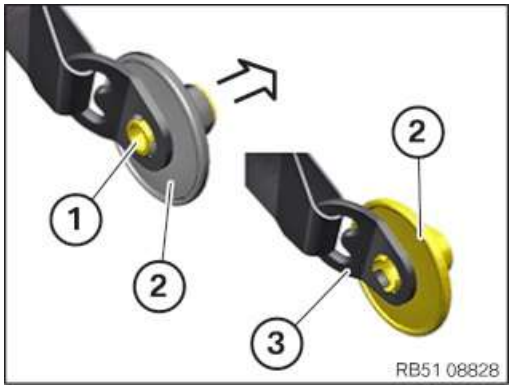
Description is for left component only. Procedure on the right side is identical.

▸ **Remove rear side trim panel**

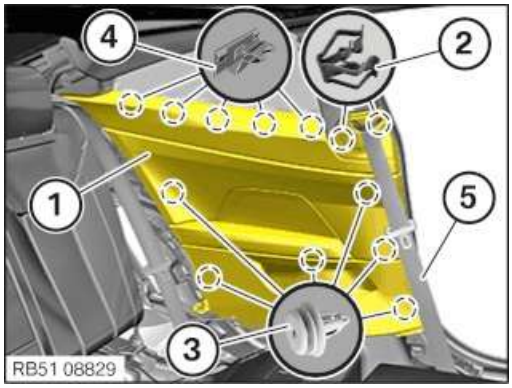



- Unclip the cover cap (1).
- Release the screw (2).

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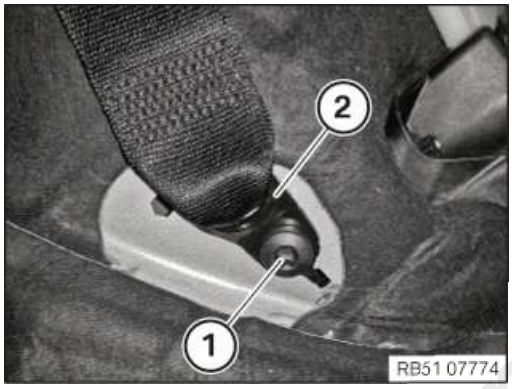



- Pull out the sleeve (1) from the cover (2) of the end fitting (3).
- Unclip the cover (2) of the end fitting (3) from the end fitting (3).




- Unclip the rear side trim panel (1) with a suitable tool at the clamps (2).
- Unclip the rear side trim panel (1) with a suitable tool at the clips (3).
- Release the rear side trim panel (1) at the clamps (4) and feed out at the edge protection.
- Unlock and disconnect all the plug connections at the rear side trim panel (1) of the wiring harness.
- Feed out the upper seat belt (5).

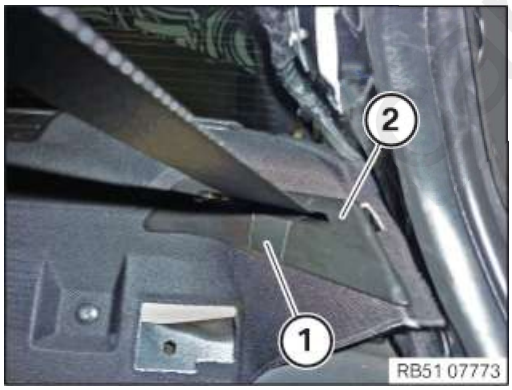
### 7 – Removing the trim panel for the storage shelf




**NOTICE**

Perform the operations on the left and right side.

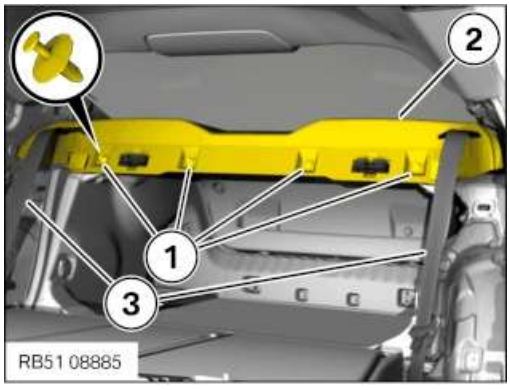
- Release the screw (1) from the rear end fitting (2).
- Feed out the rear end fitting (2) from the body.




**NOTICE**

Perform the operations on the left and right side.

- Unclip the cover (1) to the front.
- Unclip the outer belt feed trim (2) starting from the front and remove it.




- Release the expanding rivet (1).
- Unlock and disconnect the plug connections under the trim panel (2). Lift the trim panel (2) for that.
- Release the wiring harness with all holders from trim panel (2).
- Remove the trim panel (2) to the front and feed out the seat belts (3).

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## 8 – Removing the rear upper seat belt

**WARNING**

**Airbag unit.**

**Danger! Life-threatening injuries!**

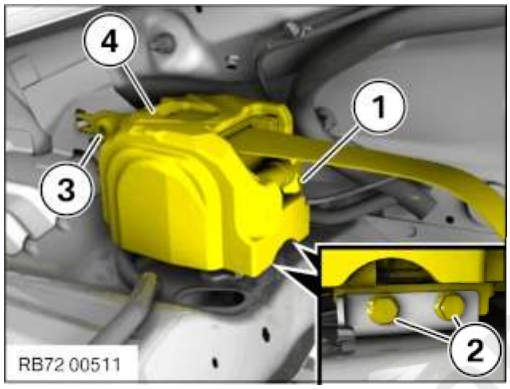
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

**WARNING**

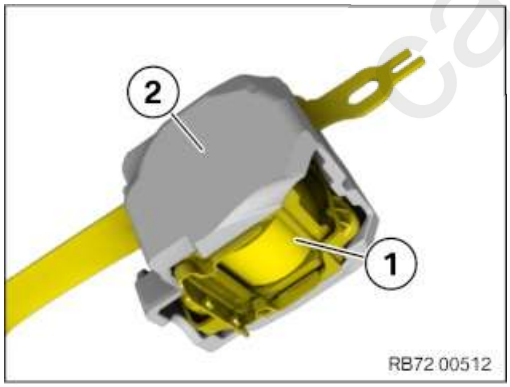
**Pyrotechnic components.**

**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.




- Unlock plug connection (1) and disconnect.
- Loosen screws (2).
- Release the screw (3).
- Remove the inertia reel with the foam part (4).




- Feed out the inertia reel (1) from the foam part (2) and remove.

## 9 – Installing the rear upper seat belt

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**WARNING**

**Airbag unit.**

**Danger! Life-threatening injuries!**

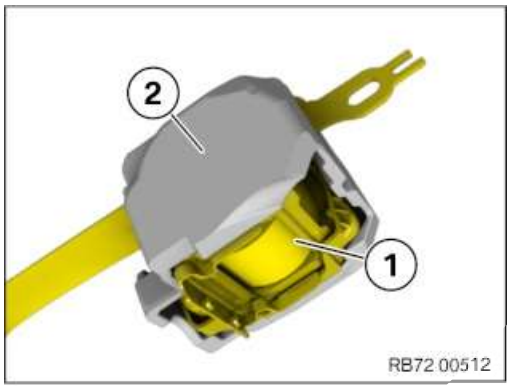
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

**WARNING**

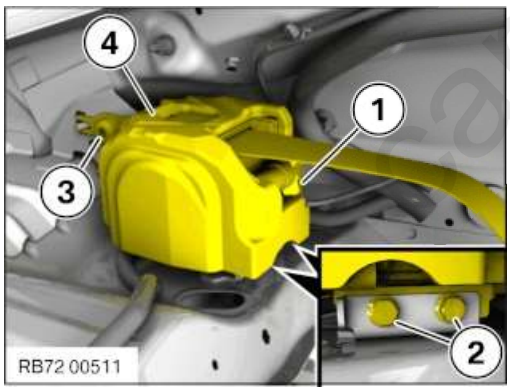
**Pyrotechnic components.**

**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.




- Guide inertia reel (1) into foam part (2).




- Guide in and position the inertia reel with foam part (4).
- Renew the screw (3).

  **Part:** Screw
- Tighten down screw (3).

**Rear inertia reel to body**

| | | | |
|---|---|---|---|
| M10 | Renew screw. | Tightening torque | 42 Nm |

- Tighten the screws (2).

**Additional connection of rear inertia reel to body**

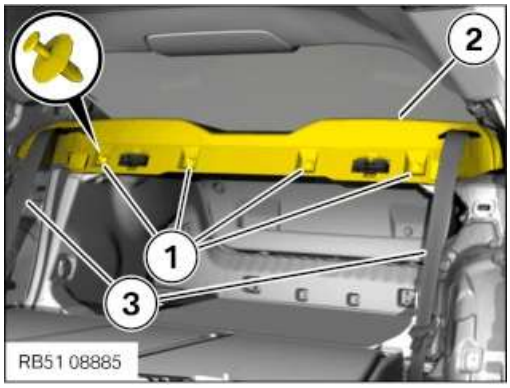
| | | | |
|---|---|---|---|
| Hexagon bolt M6 | | Tightening torque | 4.5 Nm |

- Connect connectors (1) and lock.

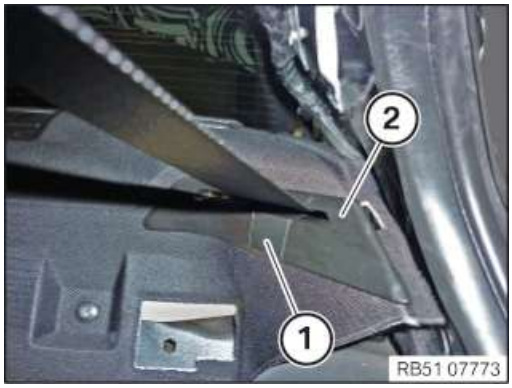
## POSTPROCESSES

**10 – Install the trim panel for the storage shelf**

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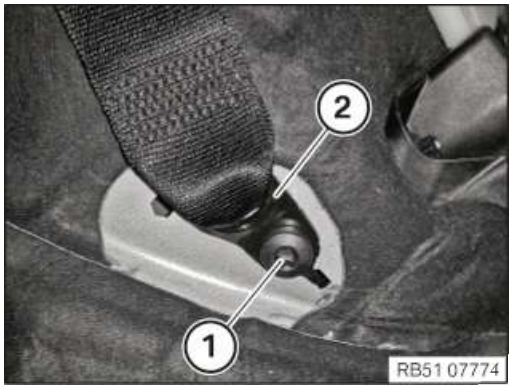

- Install the trim panel (2) and the feed in the seat belts (3).
- Clip in the wiring harness with all the holders to the trim panel for the storage shelf (2).
- Connect all connectors and lock.
- Feed in the trim panel (2) to the rear guides and position it correctly.
- Secure expanding rivet (1).




**NOTICE**

Perform the operations on the left and right side.

- Feed in the belt feed trim (2).
- Clip in the cover (1).




**NOTICE**

Perform the operations on the left and right side.

- Feed the rear end fitting (2) into the body.
- Renew the screw (1).

  **Part:** Screw
- Tighten down screw (1).

**End fitting to body**

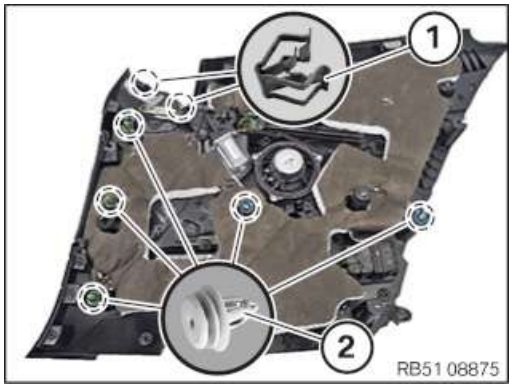
| | | | |
|---|---|---|---|
| M10 | Renew screw. | Tightening torque | 42 Nm |

### 11 – Install side trim panel, rear left and right

**NOTICE**

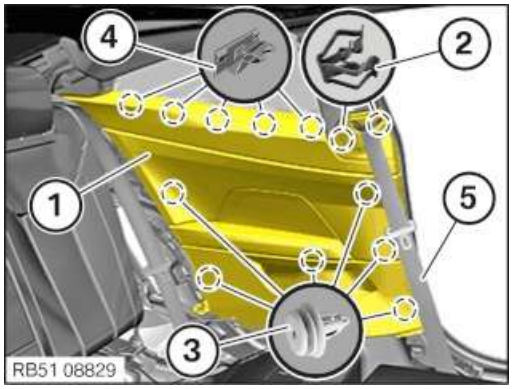
Description is for left component only. Procedure on the right side is identical.

▸ **Install rear side trim panel**

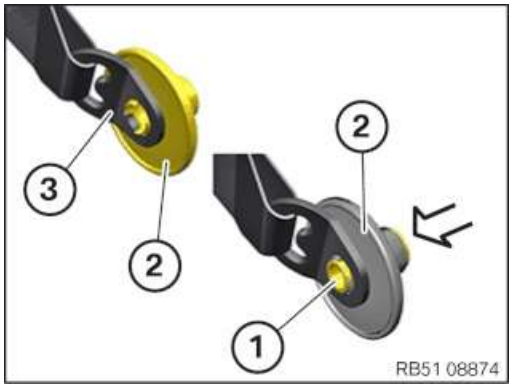



- Check clamps (1) for damage; renew them if necessary.
- Check clips (2) for damage, replace if necessary.

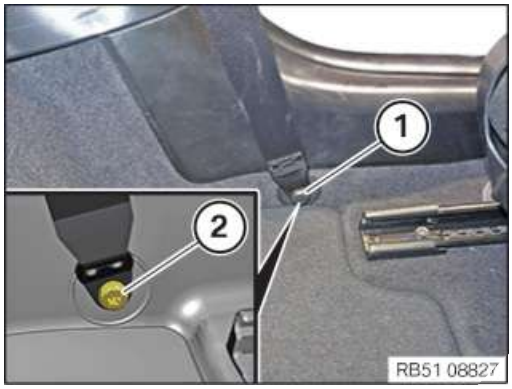
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- Connect all the connectors to rear side trim panel (1) of the wiring harness and lock and disconnect them.
- Guide in upper seat belt (5).
- Position rear side trim panel (1) and clip it into clamps (4).
- Clip rear side trim panel (1) into clips (3).
- Clip rear side trim panel (1) into clamps (2).




- Clip cover (2) of end fitting (3) into end fitting (3).
- Slide sleeve (1) into cover (2) of end fitting (3).




- Correctly position the seat belt end fitting.
- Tighten down screw (2).

**End fitting to body**

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

- Clip in cover cap (1).

### 12 – Installing the C-pillar trim panel on the left and right

**NOTICE**

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

▸ **Installing C-pillar trim panel**

**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.

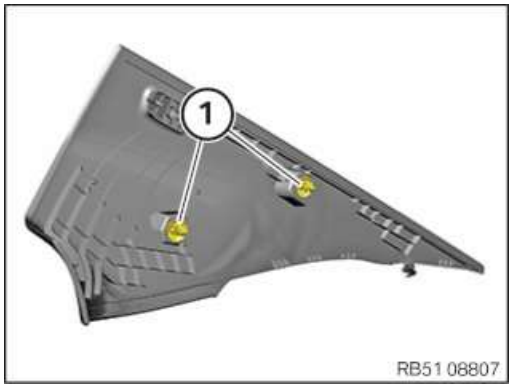
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**RISK OF DAMAGE**

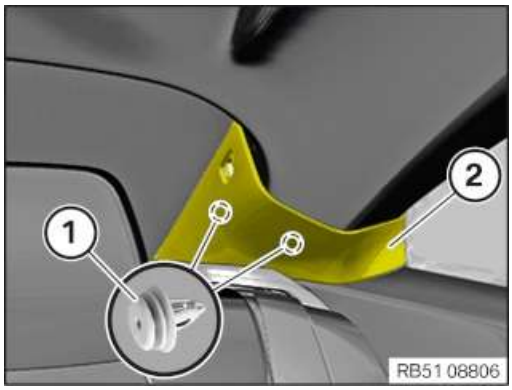
**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

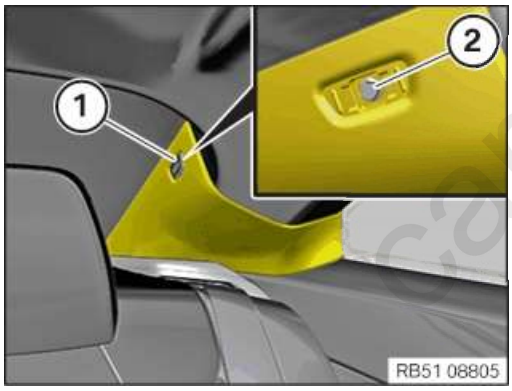
- Do not use sharp-edged tools when removing the trim panel.




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




- Position C-pillar trim panel (2) and clip it onto clips (1).




- Tighten down screw (2).

**C-pillar trim panel to body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

- Clip in cover (1) of the C-pillar trim panel.

**13 – Install the backrest side section on the left and right**

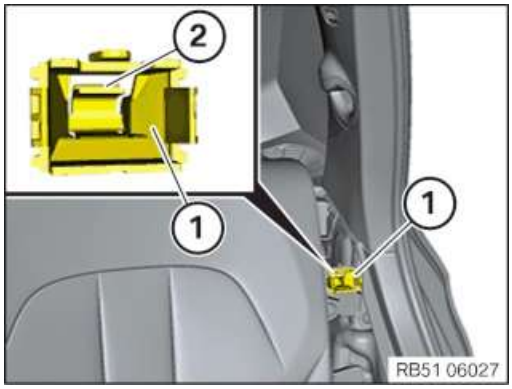
**NOTICE**

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

▸ **Installing backrest side section**

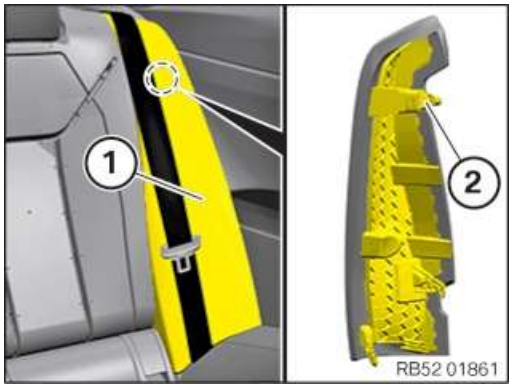
▹ **Installing backrest side section**

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- Release mounting element (1) from latch mechanism (2) and remove it from the body.
- Check the mounting element (1) for damage, renew if necessary.

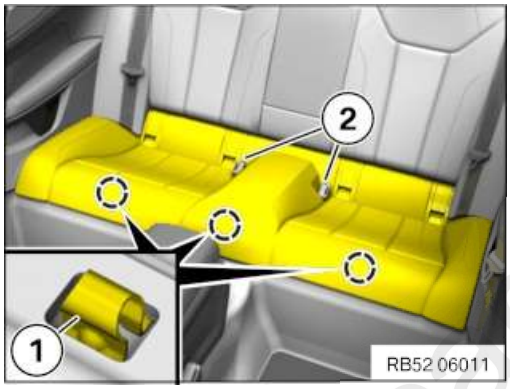
  The mounting element (1) must not be damaged or missing.
- Fit mounting element (1) on the backrest side section.




- Insert lower backrest side section (1) into the guide and position it correctly.
- Clip in backrest side section (1) to mounting element (2).

◁

**14 – Installing the rear seat bench**




- Feed in the seat belt buckles (2).
- Position the rear seat bench and clip into the clamps (1).

**15 – Connecting all battery earth leads**




- See additional information.

**16 – Activating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

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**RISK OF DAMAGE**

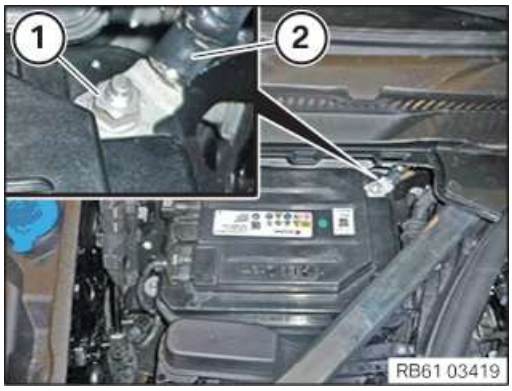
**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .




- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |




- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).




- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

## Additional Information

### Overview of Tightening Torques

| Rear inertia reel to body | | | Used in step 9 |
|---|---|---|---|
| M10 | Renew screw. | Tightening torque | 42 Nm |

| Additional connection of rear inertia reel to body | | | Used in step 9 |
|---|---|---|---|
| Hexagon bolt M6 | | Tightening torque | 4.5 Nm |

| End fitting to body | | | Used in step 10 |
|---|---|---|---|
| M10 | Renew screw. | Tightening torque | 42 Nm |

| End fitting to body | | | Used in step 11 |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

| C-pillar trim panel to body | | | Used in step 12 |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

| Negative battery cable to 48-V battery | | | Used in step 1316 |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

## Overview of Special Tools

## Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 141316 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 48913 |

| Repair instructions | Used in step |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 241315 |
| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
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| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 241315 |
| 61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) | 241315 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 241315 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 241315 |
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| | |
|---|---|
| **Notes on safety** | > Safety regulations for handling airbag modules and pyrotechnic seat belt tensioners |
| | > Notes on scrapping vehicles with gas generators |
| **Handling electrical system and electronics** | > Unlocking/locking airbag plug connections |
| | > Repairing airbag lines |
| | > Handling optical fibres |
| **Check** | > Check seat belt |
| | > Checklist for seat belt |
| **Airbag system** | > Deactivating airbags |
| | > Procedure after airbag deployment. |
| **Active pedestrian protection** | > Procedure after actuator triggering |

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**Notes on safety**

-- Safety regulations for handling airbag modules, airbag components and
> pyrotechnical seat belt tensioners

-- Notes on scrapping vehicles with gas generators
>

-- Deactivation/activation pyrotechnical components
>

**Handling electrical system and electronics**

-- Unlocking/locking airbag plug connections
>

-- Repairing airbag lines
>

-- Handling optical fibres
>

**Check**

-- Check seat belt
>

-- Checklist for seat belt
>

**Airbag system**

-- Functional description and checking, refer to Diagnosis system
>

-- Deactivating airbags
>

-- Procedure after airbag deployment.
>

**Active pedestrian protection**
AFGS

-- Procedure after actuator triggering
>

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# 72 12 ... Notes on scrapping vehicles with gas generators (airbag system)

The gas generator is a pyrotechnic component and is for the most part permanently mounted on the following components:

- Airbag module
  - Driver's/ front passenger airbag
  - Side airbag
  - Head airbag
  - Knee airbag
- Electromotive automatic reel
- Belt end fitting tensioner
- Seat belt tensioner
- Safety battery terminal
- Active head restraint

In accordance with accident prevention regulations and specific national regulations, gas generators must be rendered unusable before they are scrapped. This is necessary because pyrotechnical objects can cause injury if improperly activated (e.g. scrapping with flame cutters).

In vehicles intended for scrapping it is paramount prior to draining and further stripping work to ensure that all gas generators **in the vehicle** have been activated. The fired gas generators can then be scrapped together with the vehicle.

**Gas generators that have not fired constitute a hazard (also to the environment)!**

**Ignition failure:**

If correct ignition is not possible, the relevant components must be removed and disposed of by special waste disposal companies!

Comply with safety regulations **for handling airbag system components**.

If an ignition has failed:

- Disconnect the igniter from the vehicle battery and
- Wait a few minutes before approaching the vehicle

**The components of an airbag system must always be disposed of. Such components must not be sold on as used parts.**

**ignition:**

Ignition of the gas generators may only be carried out by expert personnel and under the supervision of a responsible person. Other standard accident prevention regulations (safety goggles, ear defenders etc.) must also be observed.

The gas generators must be fired from the outside in this vehicle which has been earmarked for scrapping. In this process

- the doors must be closed
- the tailgate must be open
- the side windows must be open and
- Slide/tilt sunroof open

.

Use igniters with the appropriate cables to activate the gas generators.

**Warning!**

> Once gas generators have been fired, observe a ventilation period of 10 minutes with the doors opened. Only then is it permitted to continue work inside the vehicle.
>
> Wear protective goggles and protective gloves when handling a fired gas generator!

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The burning of solid propellant will heat up the airbag unit - danger of burns!

Wash skin with water after contact with fired gas generators!

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# 72 12 ... Procedure after airbag deployment as result of an accident

**Replace all components that were affected by the accident and check all others!**

Check and/or replace following components after airbag deployment:

- Components
  - Sensor B-pillar (left/right)
  - Sensor front door (left/right)
  - Sensor seat, Driver-/passenger's side
  - Airbag control unit, vehicle interior
  - Sensor, pedestrian protection
  - Front sensor (engine compartment)
- Procedure
  - Inspect visually for mechanical damage (housing, plug connections). Replace damaged components.
  - Connect BMW diagnosis system
  - Read fault memory
  - Disconnect the vehicle battery and adhere to the waiting period (at least 30 seconds)
  - Rectify faults
  - Reconnect the vehicle battery and adhere to the waiting period (at least 10 seconds)
  - Delete fault memory
  - Switch off ignition and wait at least 2 minutes (no consumers may be switched on during this period such as interior light, radio, etc.)
  - Switch the ignition on (wait for at least 10 seconds)
  - Delete fault memory
  - If you cannot delete the fault memory: Replace the component that is causing the fault

*Replace the airbag control unit in the following cases only:*

- In the case of visible external damage
- In the case of a corresponding fault memory entry (airbag indicator light is illuminated)

*Cables and connectors*

- Components and procedure
  - Check cables and connectors for damage, replace if necessary.
    (e. g. corrosion, correct engagement, bent pin)

*Seat belt system*

- Components
  - Automatic reel
  - Seat belt tensioner
  - Seat belt height adjustment
  - End fitting pretensioner
  - Seat belt buckle
- Procedure
  - Check components, replace if necessary
  - Additional door lock: Check for foreign body, remove it if necessary.

*Seats*

- Components
  - Seat
  - Airbag module
  - Active head restraint
- Procedure
  - Check seats (functional check of seat mechanism), replace if necessary
  - Check seat connection

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- Replace gas generator of active head restraint

  If the severity of the crash has not caused any other damage to the seat, only the triggered gas generator needs to be replaced.
  External feature: The triggered head restraint is folded forwards and engaged.
  The repair work can be carried out in the vehicle with the rear panel removed. The entire system can be pushed back into its original position and the new gas generator installed.
  The gas generator can be replaced up to 5 times.
- Replace airbag module and seat cover with upholstery

*Driver's airbag*

- Components
  - Airbag module
  - Steering wheel
  - Steering column (if damaged)
- Procedure
  - Check components, replace if necessary
  - Replace steering wheel
  - Only with M Sport steering wheel: Replacing impact plate

*Front passenger airbag*

- Components
  - Airbag module
  - Dashboard trim panel (must be replaced!)
  - Supporting tube (if damaged)
- Procedure
  - Check components, replace if necessary

*Side airbag, front/rear*

- Components
  - Airbag module
  - Door trim panel
  - Door in white
  - Seat
- Procedure
  - Check components; replace if necessary

*Head airbag*

- Components
  - Airbag module
  - A-pillar trim panel
  - Roofliner
  - Cover, B-pillar (if damaged)
  - C-pillar trim panel (if damaged)
  - Connection/mount (on side frame)
- Procedure
  - Check components, replace if necessary

*Knee airbag*

- Components
  - Trim panel (driver's side)
  - Lower section of glove box
  - Knee protection(Driver- and passenger's side)
- Procedure
  - Check components, replace if necessary

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*Passive knee protection*

- Components
  - Trim panel (driver's side)
  - Glove box incl. knee protection (passenger's side)
- Procedure
  - Check components for damage, replace if necessary
  - Check retaining elements

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# 72 12 050 Remove and install/replace the side airbag for the front left or right seat

## PRELIMINARY WORK

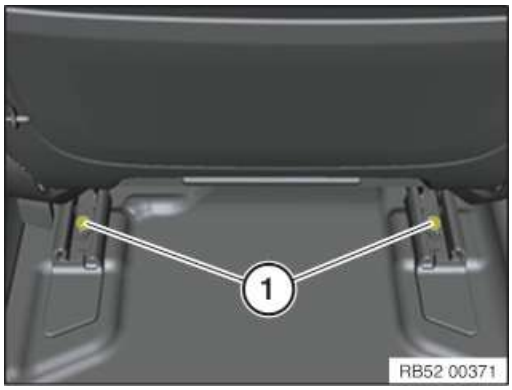
### 1 – Remove front seat

**WARNING**

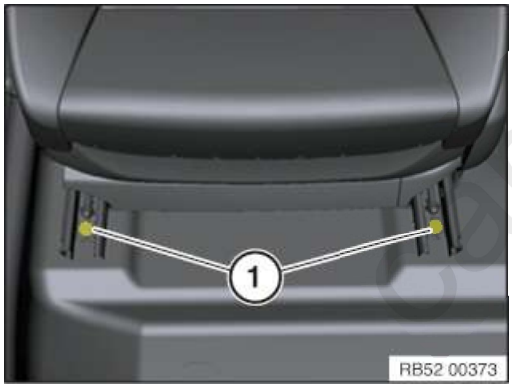
**Pyrotechnic components.**

**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.




- 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.

▸ **Deactivating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

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**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.

**Check**




**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

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**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

  Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

  **If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

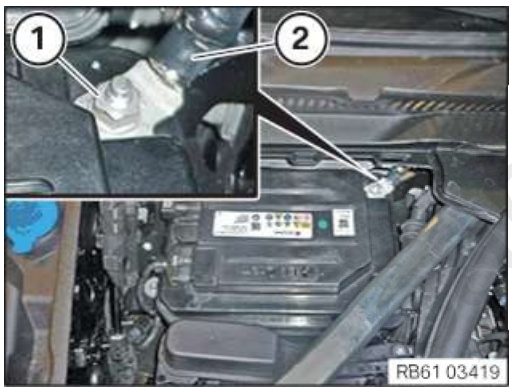
**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.




**WARNING**

**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

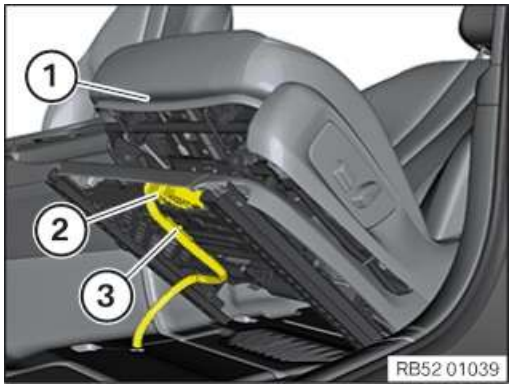
- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

▸ **Disconnecting all battery earth leads**




- See additional information.




**RISK OF DAMAGE**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

- 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 front head restraint



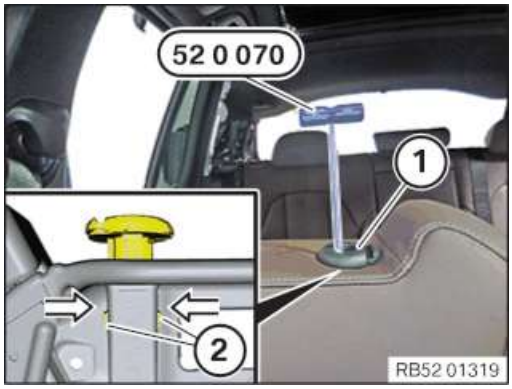

- Press the lock (2) and remove the head restraint (1) from the backrest toward the top.

### 3 – Removing the guide sleeve for the front head restraint

**NOTICE**

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

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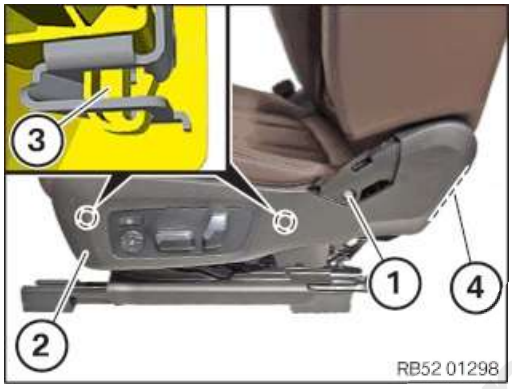



- Push the latch mechanisms (2) inward in direction of the arrow with the special tool .
- Remove the guide sleeve (1) towards the top.

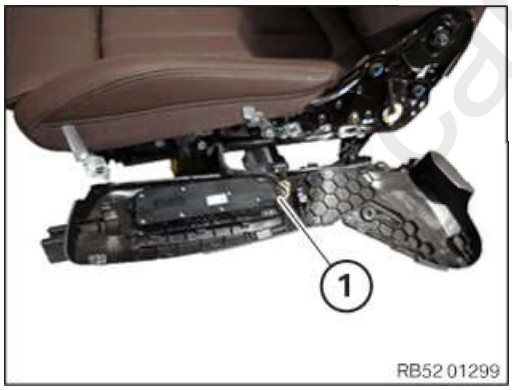
**4 – Remove outer cover on front seat**




- Unclip the cover (1).




- 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.

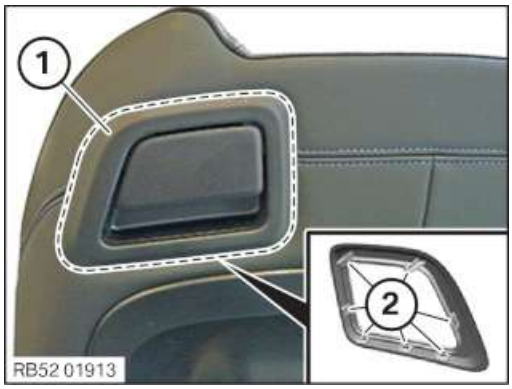
**5 – Remove inner cover on front seat**




- Loosen screw (1).
- Guide the cover (2) out to the rear and remove.

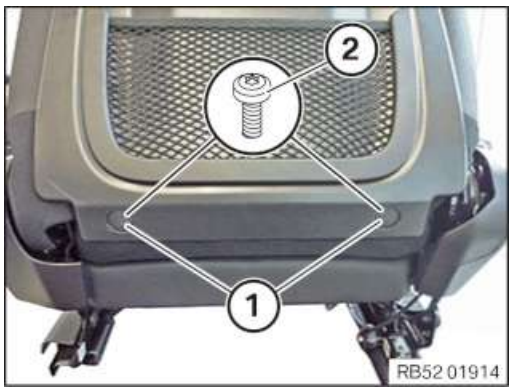
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### 6 – Removing the cover for the backrest release

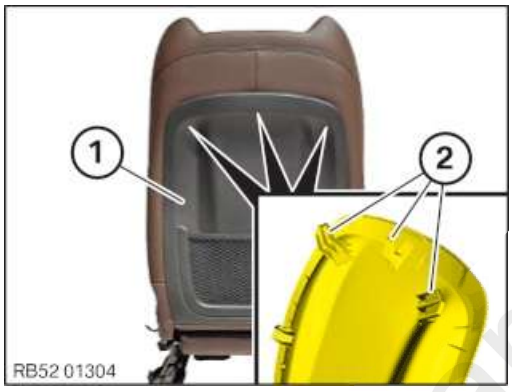



- Unclip and remove cover (1) for the backrest release in the marked area from latch mechanisms (2) using a suitable tool.

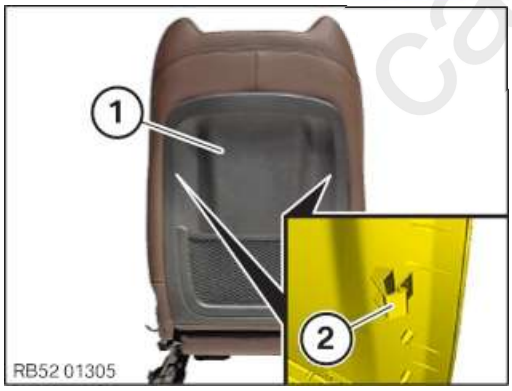
### 7 – Removing rear panel on the front seat backrest




- Unclip the cover caps (1) with a suitable tool.
- Loosen screws (2).




- Slide the rear panel (1) down and guide it out at the guides (2).




- Unclip the rear panel (1) from the clamps (2) and remove.

### 8 – Removing the backrest cover with the cushion for the front seat

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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

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

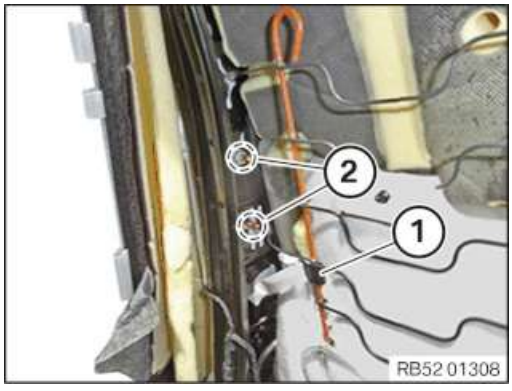
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.




- Detach the backrest cover (1) in this area (2).
- Unhook seat cover (3).

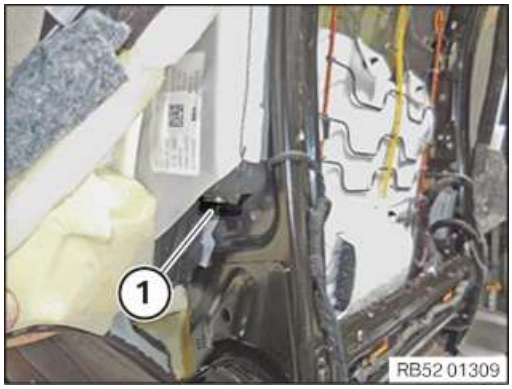



- Unclip clips (1).
- Unlock plug connection (2) and disconnect.




- Detach the holder (1).
- Loosen nuts (2).

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- Unlock plug connection (1) and disconnect.




- Carefully guide out backrest cover (1) in the marked area (2).
- Remove the backrest cover (1) with the cushion damage-free in marked area (2).
- Guide out the backrest cover (1) with cushion complete with the side airbag in the direction of the arrow.

## MAIN WORK

### 9 – Remove side airbag from front seat

**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

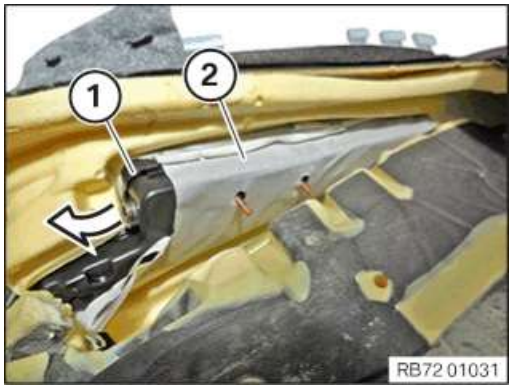
**WARNING**

**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.

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- Pull the side airbag (1) out in the direction of arrow from the seat cover bag (2) on the backrest cover.

**10 – Install side airbag on front seat**

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

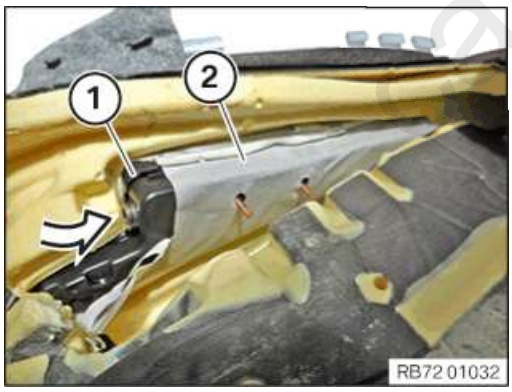
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**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




- Feed the side airbag (1) in the direction of arrow into the seat cover pocket (2) on the backrest cover and position it correctly.

## POSTPROCESSES

**11 – Install the backrest cover with the cushion for the front seat**

**WARNING**

**Airbag unit.**

**Danger! Life-threatening injuries!**

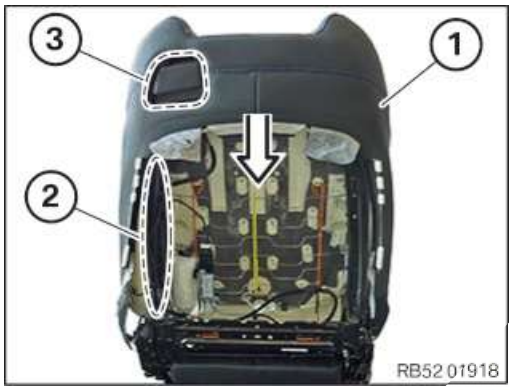
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

**WARNING**

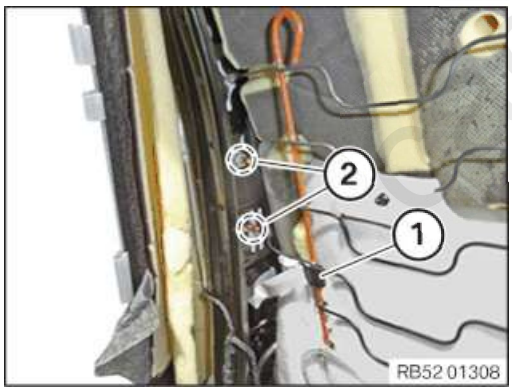
**Pyrotechnic components.**

**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.




- Position backrest cover (1) with the cushion without damaging it in marked area (2).
- Position the backrest cover (1) completely with the side airbag in the direction of the arrow.
- Position the stud bolt of the side airbag in the area (2) correctly.
- Position backrest cover (1) correctly in the marked area (3).

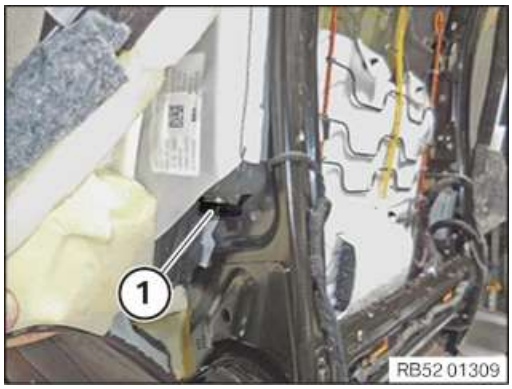



- Attach the holder (1).
- Renew nuts (2).

  **Parts:** Nuts
- Tighten nuts (2).

**Airbag on backrest frame**

| | | | |
|---|---|---|---|
| Nut | Renew nut. | Tightening torque | 6,5 Nm |




- Connect connectors (1) and lock.

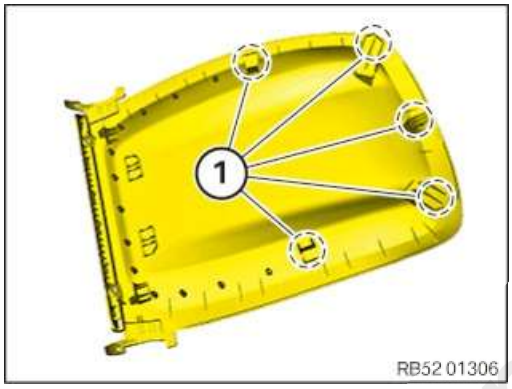



- Clip in clips (1).
- Connect connectors (2) and lock.

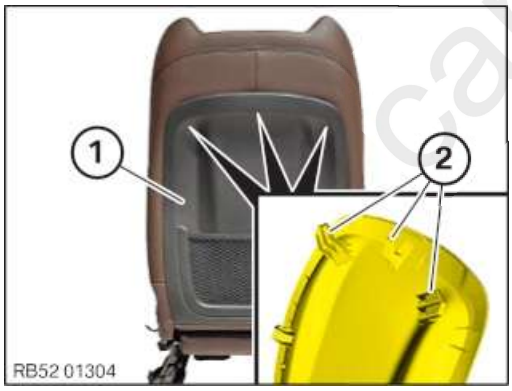



- Attach the backrest cover (1) in this area (2).
- Hook the seat cover (3).

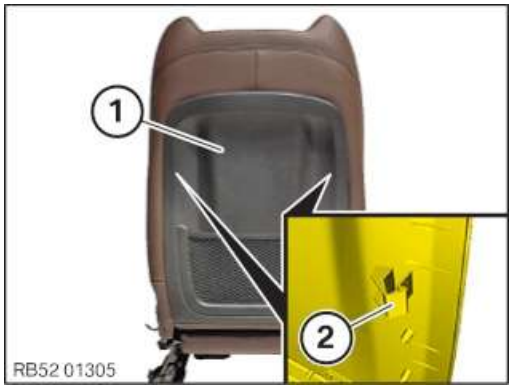
**12 – Installing rear panel on the front seat backrest**




- Check the guides and clamps (1) for damage and renew the rear panel as needed.

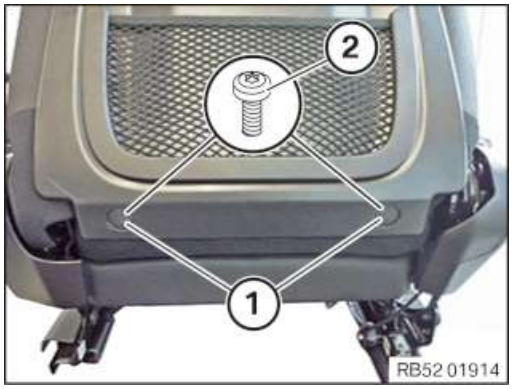



- Thread the rear panel (1) in at the clamps (2).




- Position the rear panel (1) and clip it in at the clamps (2).

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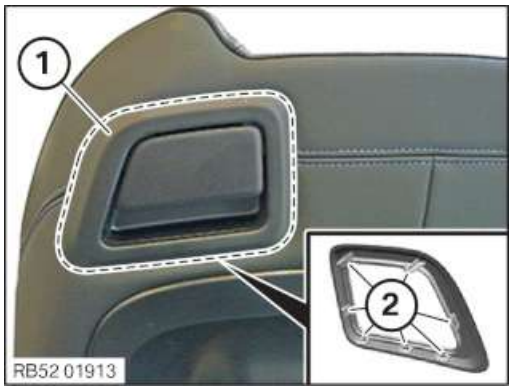

- Tighten the screws (2).

**Rear panel on rear seat backrest**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3 Nm |

- Clip in cover caps (1).

### 13 – Installing a cover for backrest release




- Position the cover for backrest release (1) correctly in the marked area.
- Clip in the latch mechanism (2) of the cover for backrest release (1).

### 14 – Installing the inner cover on front seat




- Feed in the cover (2) from the rear and position it.
- Tighten down screw (1).

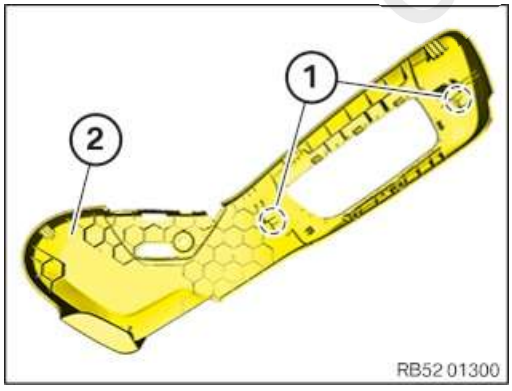
**Seat trim to seat frame**

| | | | |
|---|---|---|---|
| Sheet metal screw | | Tightening torque | 2.5 Nm |

**Inner seat trim to seat frame**

| | | | |
|---|---|---|---|
| Oval-head screw | Renew screw. | Tightening torque | 3.3 Nm |

### 15 – Install outer cover on front seat

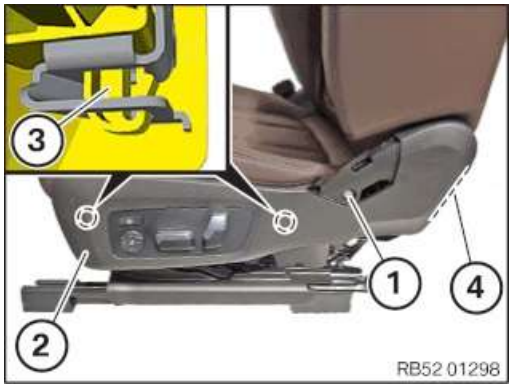



- Check the locking units (1) for damages, and replace the cover if necessary (2).

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- 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 |

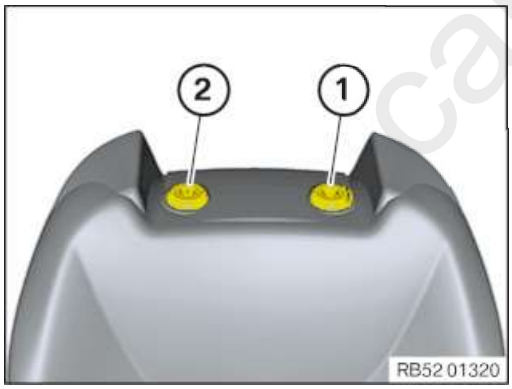
**Outer seat trim to seat frame**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3.5 Nm |




- Clip in the cover (1).

### 16 – Install the guide sleeve for the front head restraint




- Pay attention to the installation position:

  Insert the guide sleeve (1) **with** unlocking towards the left in the direction of travel.

  Insert the guide sleeve (2) **without** unlocking towards the right in the direction of travel.




**NOTICE**

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

- Insert the guide sleeve (1) into the rear seat backrest in the direction of arrow from the top and lock it.

  You have to feel the guide sleeve (1) engage.

### 17 – Install the front head restraint

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- Insert the head restraint (1) in the direction of the arrow into the guides (2).
- Slide the head restraint (1) in until the lock (3) is securely engaged.

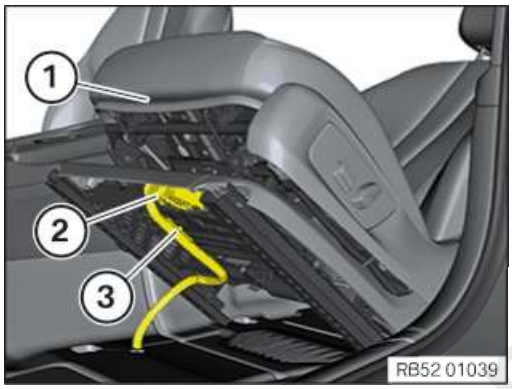
**18 – Install front seat**

**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**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

- 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 connectors (2) and lock.
- Attach the cable clip (3).

▸ **Connecting all battery earth leads**

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- See additional information.

▸ **Activating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

**RISK OF DAMAGE**

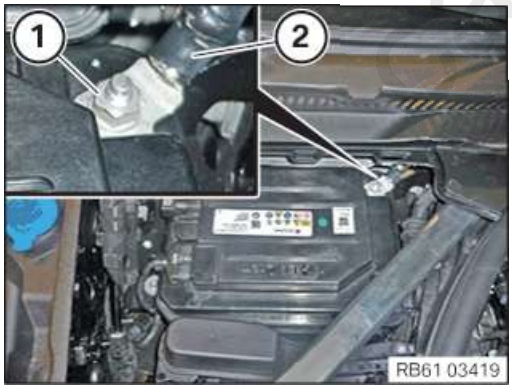
**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .




- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

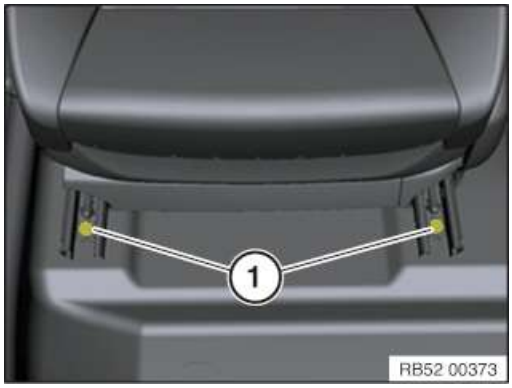



- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).




- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

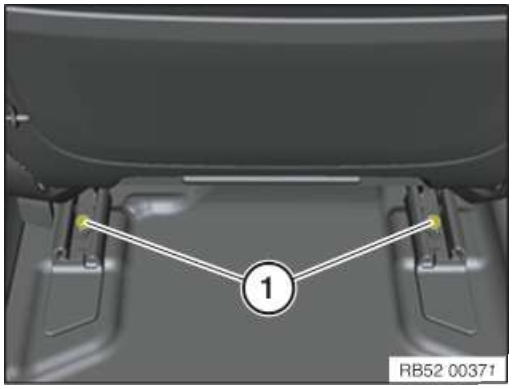



- Move front seat rearwards.
- Renew screws (1).

  **Parts:** Screws
- Tighten the screws (1).

**Seat to body**

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |




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

  **Parts:** Screws
- Tighten the screws (1).

**Seat to body**

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |

## Additional Information

### Overview of Tightening Torques

**Airbag on backrest frame** Used in step 11

| | | | |
|---|---|---|---|
| Nut | Renew nut. | Tightening torque | 6,5 Nm |

**Rear panel on rear seat backrest** Used in step 12

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3 Nm |

**Seat trim to seat frame** Used in step 1415

| | | | |
|---|---|---|---|
| Sheet metal screw | | Tightening torque | 2.5 Nm |

**Inner seat trim to seat frame** Used in step 14

| | | | |
|---|---|---|---|
| Oval-head screw | Renew screw. | Tightening torque | 3.3 Nm |

**Outer seat trim to seat frame** Used in step 15

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3.5 Nm |

**Negative battery cable to 48-V battery** Used in step 18

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

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| Seat to body | | | Used in step 18 |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |

## Overview of Special Tools

## Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 118 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 118 |

| Repair instructions | Used in step |
|---|---|
| 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 |
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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 (Plug-in Hybrid Electric Vehicle) | 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 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 118 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 118 |


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# 72 12 000 Removing and installing or replacing airbag module on passenger's side

**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**

**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

## 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 – Remove cupholder

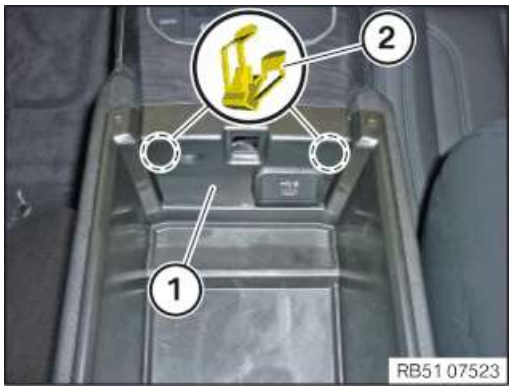



- Remove the insert (1).

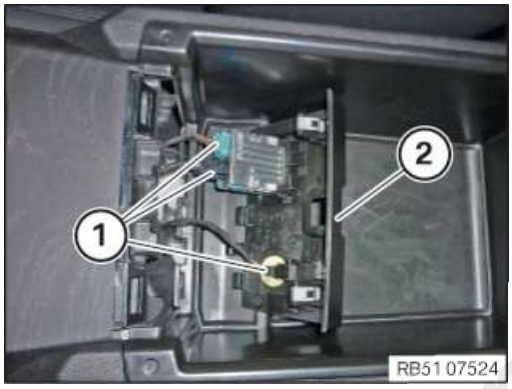



- Loosen screws (1).
- Feed the cup holder (2) out to the top.
- Unlock associated plug connections and disconnect.

**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**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

- 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 on the left and right**

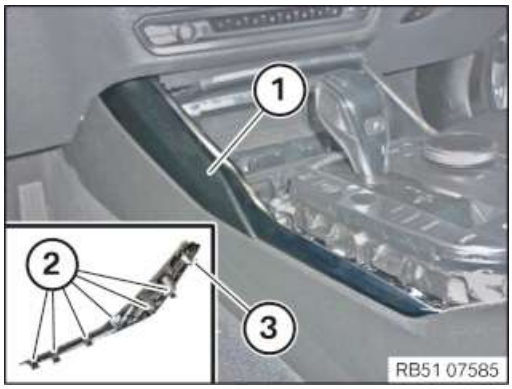
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### 5 – Removing the decorative trim on the centre console on the left and right

▸ **Remove the decorative trim from the centre console**

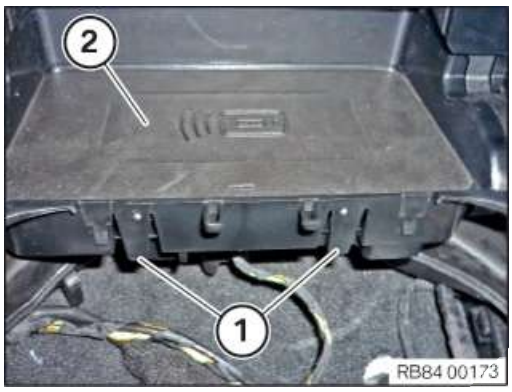
**NOTICE**

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

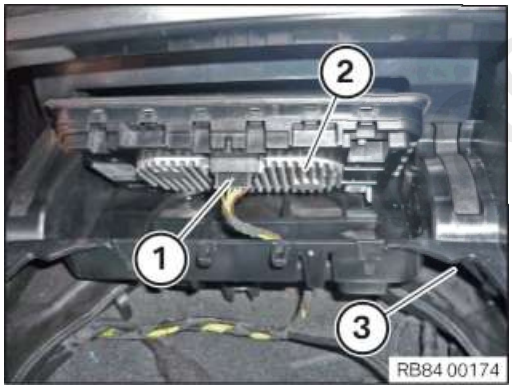



- Lever out the rear decorative trim (1) from the latch mechanisms (2) starting from the top.
- Feed out the decorative trim (1) backwards out of the guide (3) and remove.

### 6 – Removing the wireless charging station




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




- Unlock and disconnect the plug connection (1) and remove the wireless charging tray (2) from the centre console (3).

### 7 – Remove the operating facility in the centre console

▸ **Deactivating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

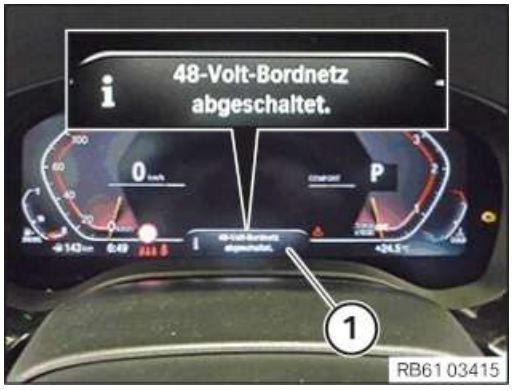
Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.

**Check**




**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

  Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

  **If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.




**WARNING**

**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

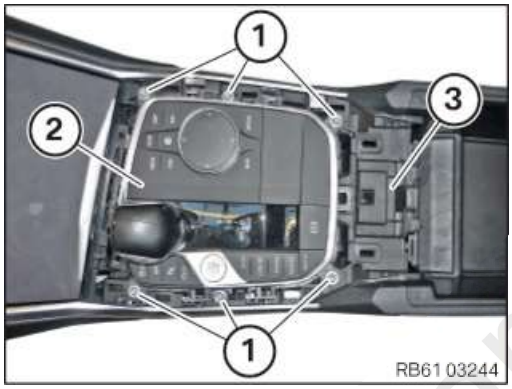
- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

▶ **Disconnecting all battery earth leads**

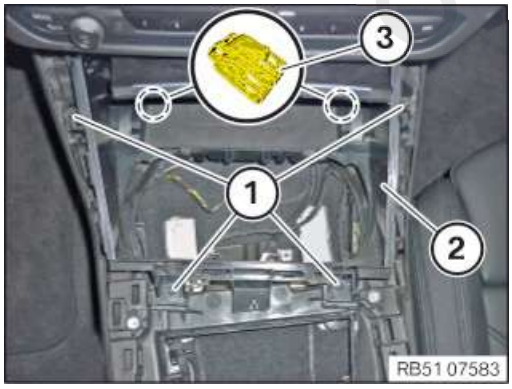



- See additional information.



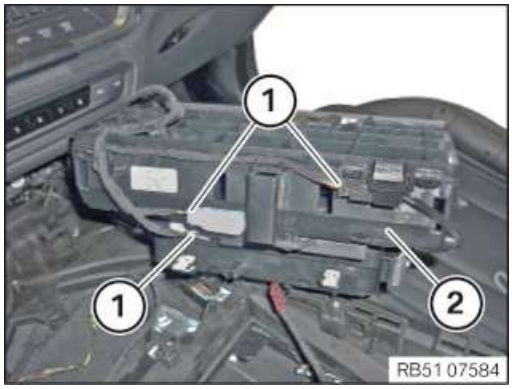

- Loosen screws (1).
- Remove the operating facility in the centre console (2) from the centre console (3).

**8 – Removing the storage compartment in the front centre console**




- Loosen screws (1).
- Pull the storage compartment in front centre console (2) backwards from the clamps (3).

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- Unlock and disconnect the plug connections (1) and remove the storage compartment in centre console (2).

### 9 – Removing the rear centre console trim

**RISK OF DAMAGE**

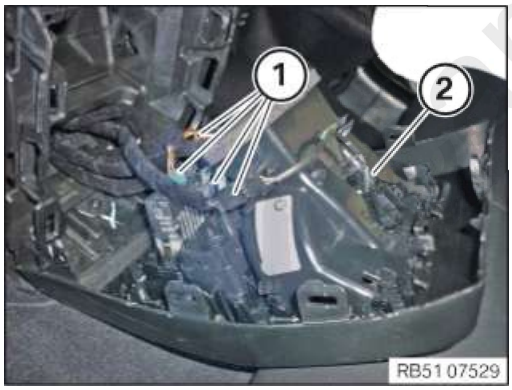
**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

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




- Release centre console trim (1) backwards from the latch mechanisms at the side and remove it slightly at the back.

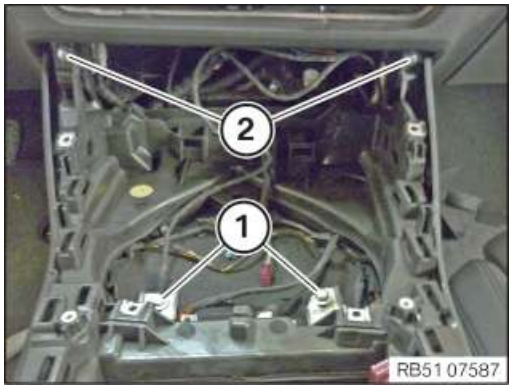



- Unlock and disconnect plug connections (1).
- Remove the centre console trim (2).

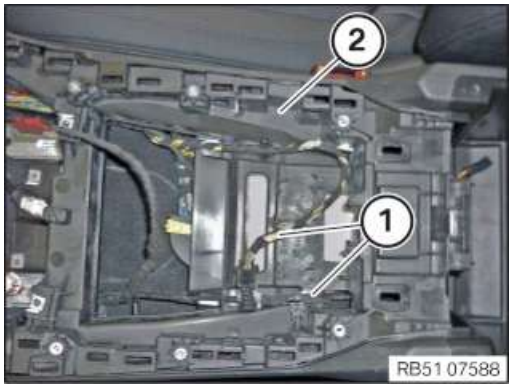
### 10 – Removing the centre console



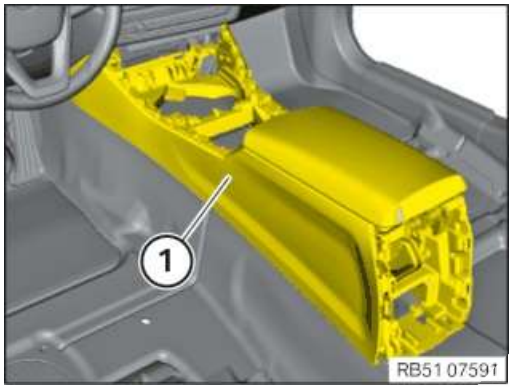

- Loosen screws (1).




- Loosen screws (1) and (2).




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

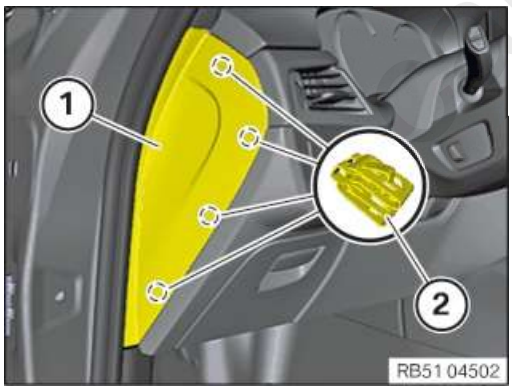



**NOTICE**

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

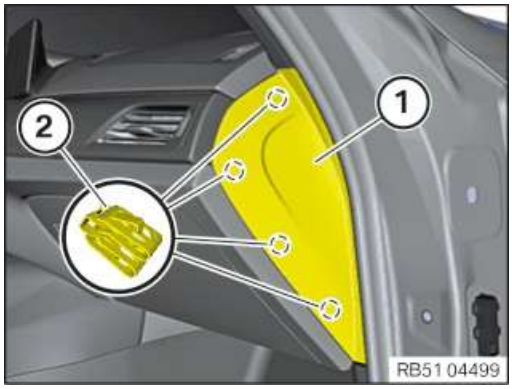
- Carefully raise rear centre console (1).
- Feed out wiring harness from the centre console (1) and unlock and disconnect existing plug connections, if required.
- Feed out and remove the centre console (1) on the instrument panel .

**11 – Remove the side panel on the left instrument panel**




- Unclip and remove the side panel (1) towards the outside from the clamps (2).

**12 – 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.

**13 – Remove left and right A-pillar trim panel**

**NOTICE**

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

▸ **Remove the A-pillar trim panel**

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

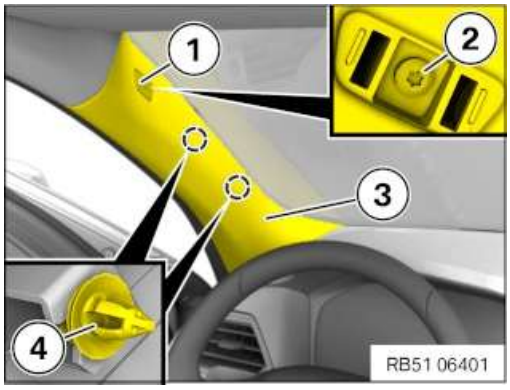
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**RISK OF DAMAGE**

**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

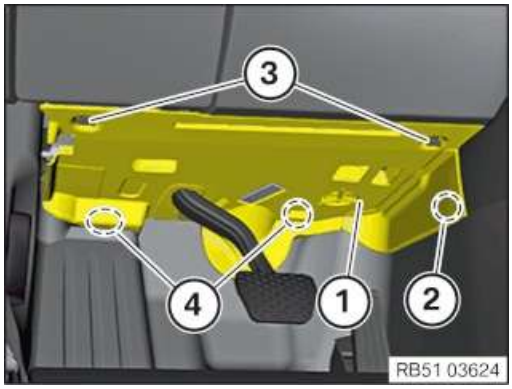
- Do not use sharp-edged tools when removing the trim panel.




- Unclip cover (1) with a suitable special tool from the special tool kit 0 493 752 (00 9 329).
- Loosen screw (2).
- Unclip A-pillar trim panel (3) with clips (4) and feed it out to the top.

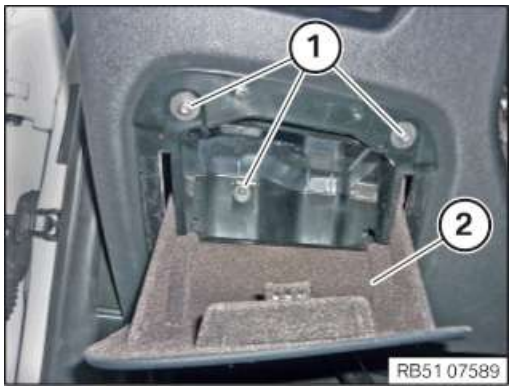
**14 – Removing the trim panel for pedal mechanism**

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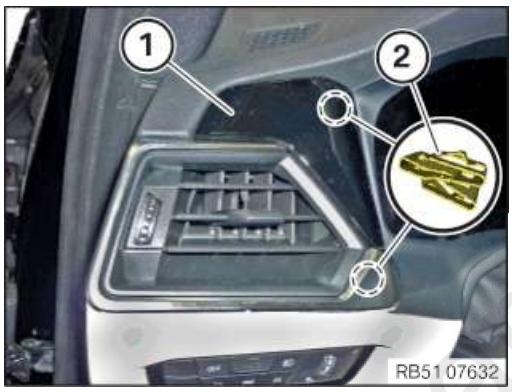

- Unclip the trim panel for the pedal mechanism (1) towards the inside in this area (2).
- Turn the locks (3) by 90°.
- Detach the trim panel for the pedal mechanism (1) inwards out of the guides (4).
- Unlock associated plug connection and disconnect.

**15 – Removing the left fold-down compartment**




- Loosen screws (1).
- Remove the fold-down compartment (2) toward the bottom.

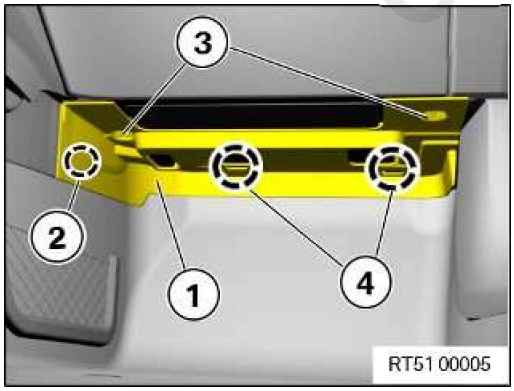
**16 – Remove the finisher on the instrument panel on the left**




- Unclip decorative strip (1) to the rear out of the clamps (2).
- Unlock associated plug connection and disconnect.

  Remove the decorative strip (1).

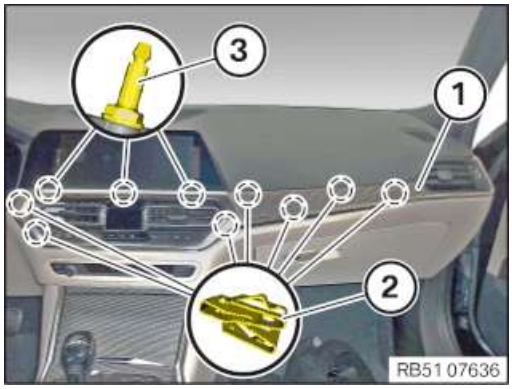
**17 – Remove the right footwell trim**




- Turn the locks (3) by 90°.
- Feed the footwell trim (1) out of the guide (2).
- Detach the footwell trim (1) inward out of the guides (4).
- Unlock associated plug connection and disconnect.

**18 – Remove the finisher on the right instrument panel**

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- 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).

**19 – Remove Central Information Display (CID)**

**RISK OF DAMAGE**

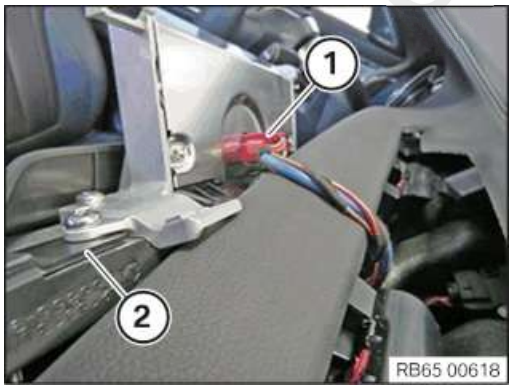
**Electrostatic discharge.**

**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 ... Notes for ESD protection (electrostatic discharge)




- 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).

**20 – Removing the airbag 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**

**Damage to the steering wheel.**

**Incorrect handling of the tool may damage the steering wheel.**

- Ensure the tool is positioned correctly (angle and inclination).
- When unlocking, do not use "levering" action. Instead, press in the Torx screwdriver toward the centre of steering wheel only.

**TECHNICAL INFORMATION**

Different variants may be installed depending on the vehicle equipment.

▸ **Removing the airbag unit for sports steering wheel**



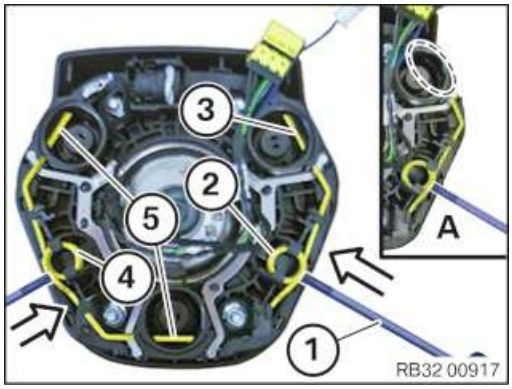

- Insert Torx screwdriver T25 (1) diagonally upwards in the hidden opening (2) on the rear side of the steering wheel until a spring resistance is felt.




**NOTICE**

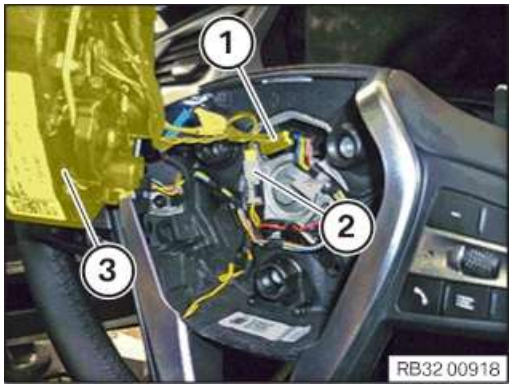
To provide a better overview: Diagram with airbag unit removed.

- To unlock the airbag unit, press Torx screwdriver T25 (1) diagonally upwards in the direction of the arrow to the centre of the steering wheel.




- Press the airbag unit over a large area of the steering wheel.
- Use Torx screwdriver T25 (1) to press wire spring clip (2) in the direction of the arrow towards the centre of the steering wheel and release lock (3).

  (A): Wire spring clip (2) is unlocked.
- Press wire spring clip (4) with Torx screwdriver T25 (1) in the direction of the arrow towards the centre of the steering wheel and release locks (5).
- Carefully raise the airbag unit.




- Unlock and disconnect the plug connections (1) and (2).
- Remove airbag unit (3).

### ▸ Removing the airbag unit for M Sport steering wheel




**NOTICE**

Perform the operations on the left and right side.

- Locate the mark (1) for unlocking the airbag unit on the steering wheel by touching it.




**NOTICE**

Perform the operations on the left and right side.

- Cut the mark (1) carefully with a knife (2) to an approx. length of 4 mm .

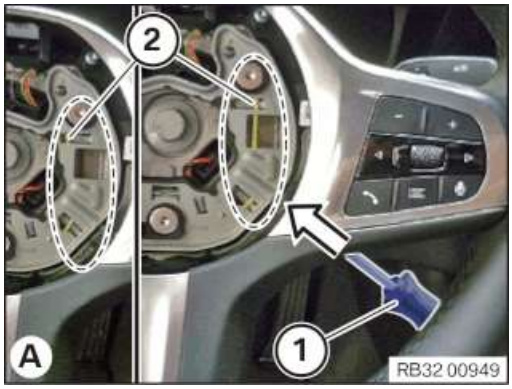



**TECHNICAL INFORMATION**

Different variants may be installed depending on the vehicle equipment.

- In case of vehicles with shift paddles (2) made of carbon-fibre-reinforced plastic, use a Torx socket T15 (1) for unlocking the airbag unit.

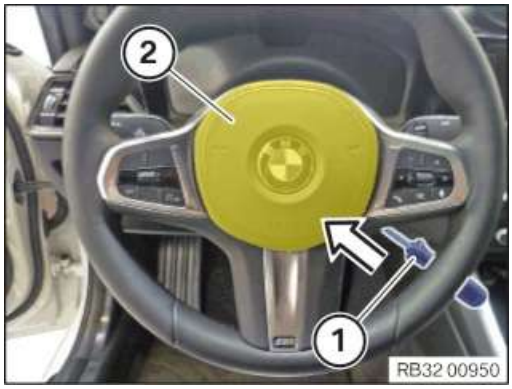
...diagn.com



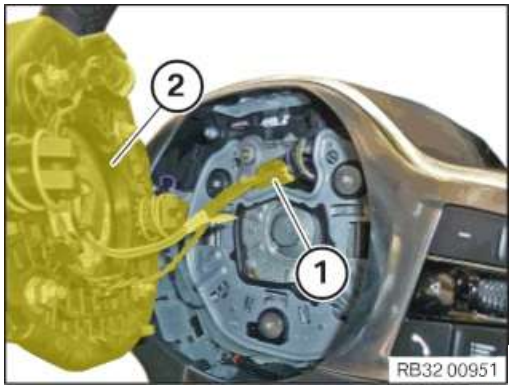

**NOTICE**

To provide a better overview: Diagram with airbag unit removed.

- Insert the Torx socket T15 (1) diagonally upwards until a resilient resistance is felt.
- Press in Torx socket T15(1) straight in the direction of arrow towards the centre of the steering wheel in order to unlock the wire spring clip (2) or to unlock the airbag unit (A).

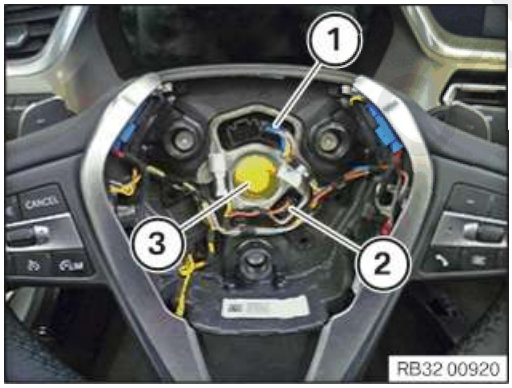



- Press in Torx screwdriver T15 ( 1) straight in direction of arrow towards the centre of the steering wheel and lift the airbag unit (2) on the unlocked side.
- Repeat procedure on left side and carefully release airbag unit (2) from the steering wheel.



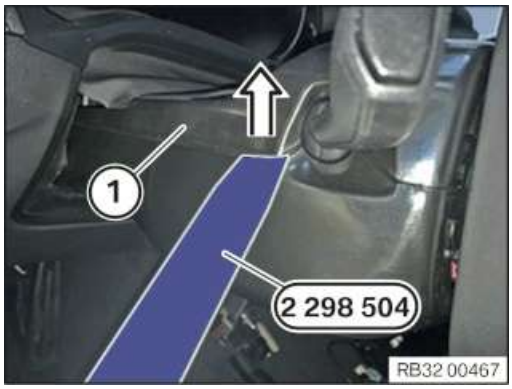

- Unlock and disconnect the plug connection (1) and remove the airbag unit (2).

### 21 – Remove sports steering wheel




- Move the steering wheel and wheels to the straight-ahead position.
- Unlock plug connection (1) and disconnect.
- If installed: Unlock plug connection (2) and disconnect.
- Release the screw (3) and pull off and remove the steering wheel.

### 22 – Removing steering column shroud upper section

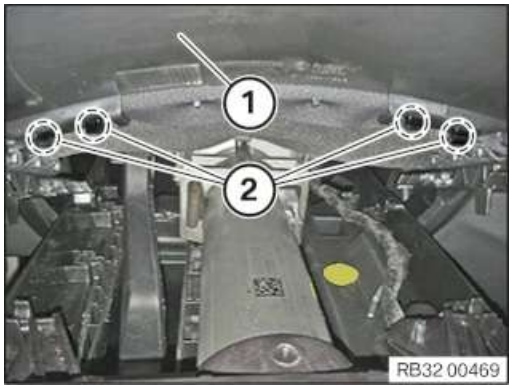



**NOTICE**

Perform the operations on the left and right side.

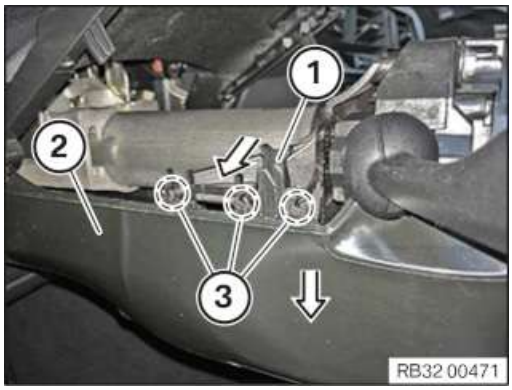
- Unlock the steering column shroud upper section (1) with the special tool 2 298 504 and fold up.

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- Unclip the steering column shroud upper section (1) from the brackets (2).
- Remove the steering column shroud upper section (1).

### 23 – Removing steering column shroud lower section



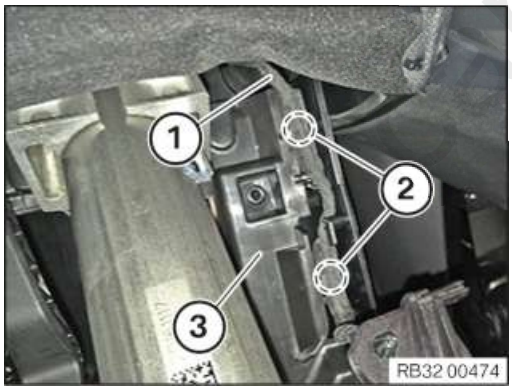

**NOTICE**

Perform the operations on the left and right side.

- Push the retaining lug (1) to the outside in the direction of the arrow and unclip the steering column shroud lower section (2) from the holders (3) in the direction of the arrow to the bottom at the same time.

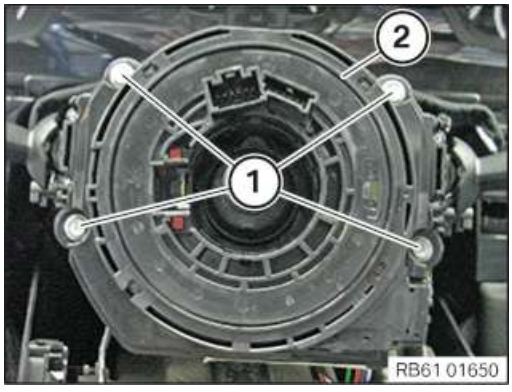



- Fold the steering column shroud lower section down.
- Unlock and disconnect connector (1).



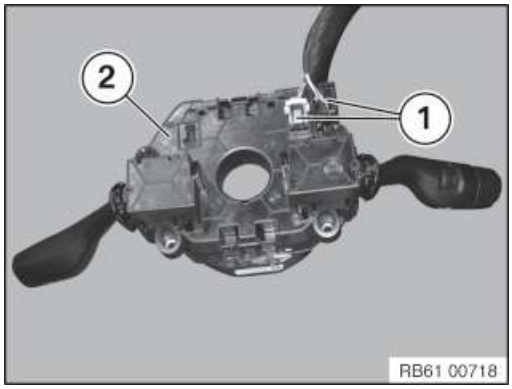

- Detach the cable (1) from the brackets (2).
- Remove the steering column shroud lower section (3).

### 24 – Removing the steering column switch cluster (SZL)




- Loosen screws (1).
- Remove the steering column switch cluster (SZL) (2).

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- Unlock and disconnect plug connections (1) on the SZL (2).

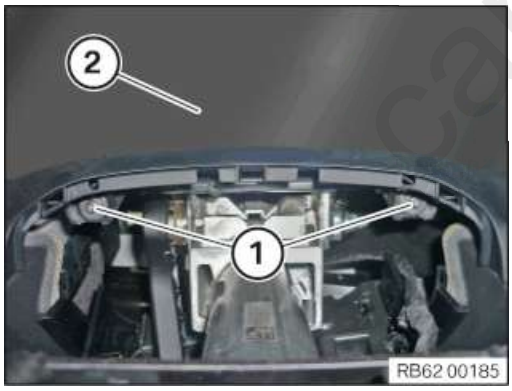
**25 – Removing the instrument cluster (KOMBI)**



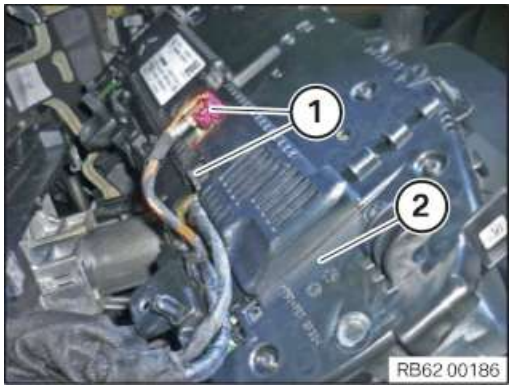

- Loosen screw (1).




- Loosen screw (1).



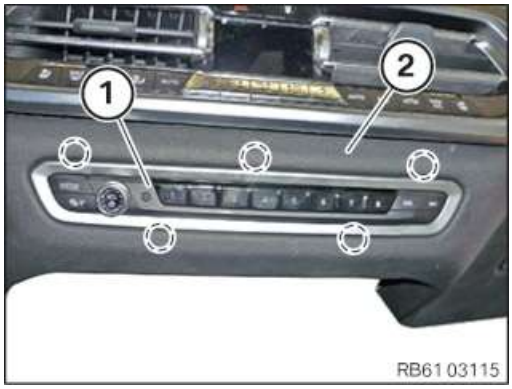

- Loosen screws (1).
- Feed out instrument cluster (KOMBI) (2).



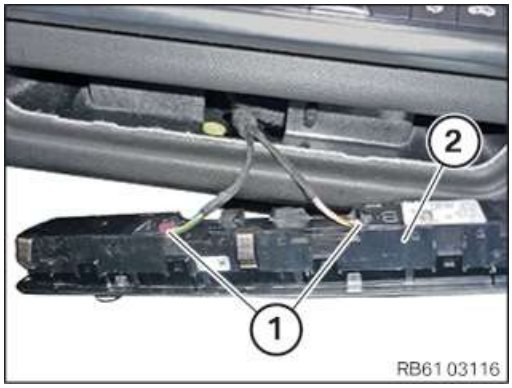

- Unlock and disconnect plug connections (1) from instrument cluster (KOMBI) (2).
- Remove the instrument cluster (KOMBI) (2).

**26 – Remove the audio operating unit**

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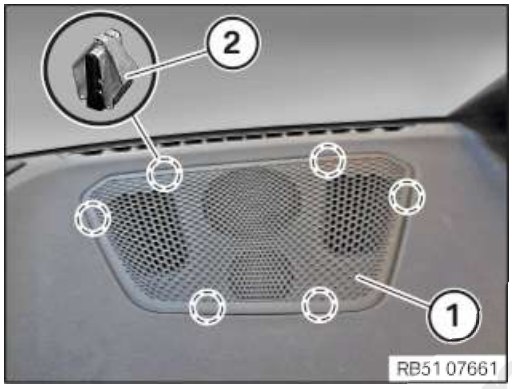



- Unclip the audio operating unit (1) from the instrument panel (2) at the points marked using special tool 0 496 571 (00 9 327).



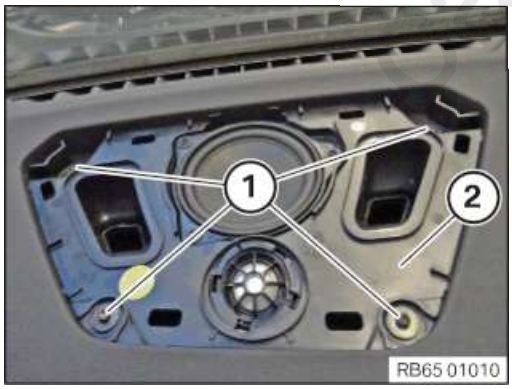

- Disconnect plug connections (1) and remove the audio operating unit (2).

**27 – Remove the speaker trim at the instrument panel**

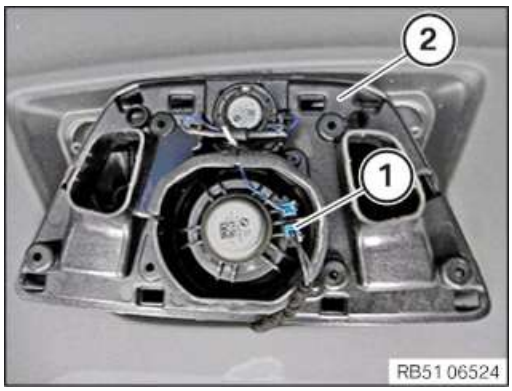



- Lever out the speaker trim (1) with the special tool 0 496 569 (00 9 325) from the clamps (2) toward the top and remove.

**28 – Remove the speaker holder at the instrument panel**



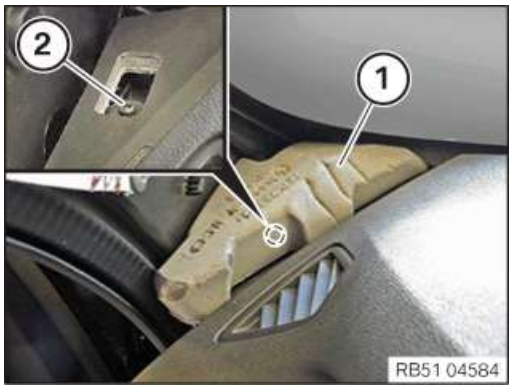

- Loosen screws (1).
- Pull out speaker holder (2) slightly with the loudspeakers and tilt it to the side.




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

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**29 – Remove the instrument panel trim panel**




**NOTICE**

Perform the operations on the left and right side.

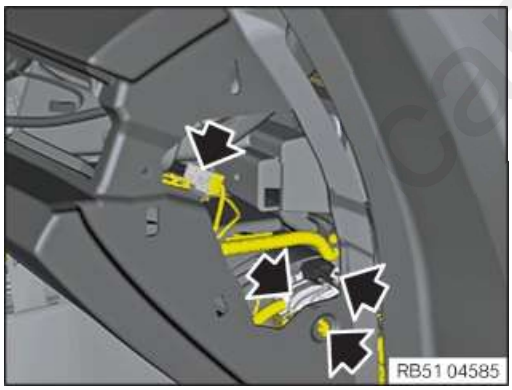
- Remove the sound insulation (1).
- Loosen screw (2).



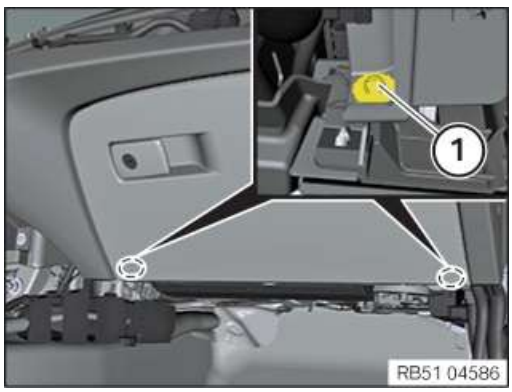

- Loosen screws (1).




- Loosen screws (1).

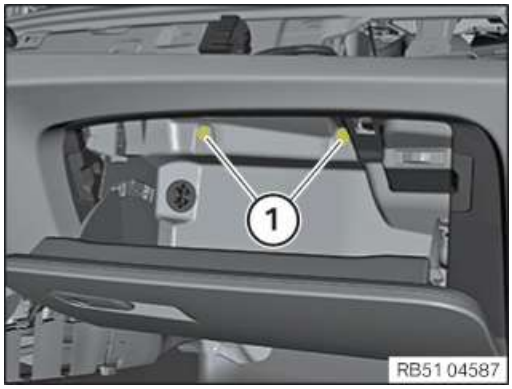



- Release all plug connections and cable clips (arrows) behind the glove box.

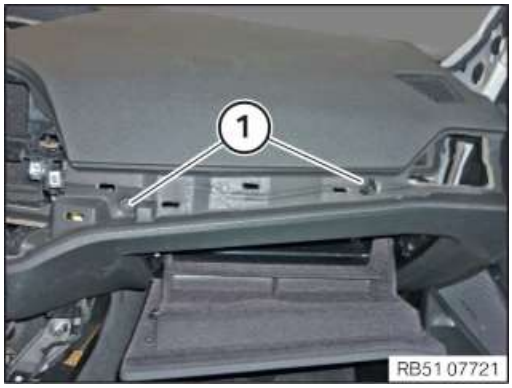



- Release the screws (1) on the lower side of the glove box.

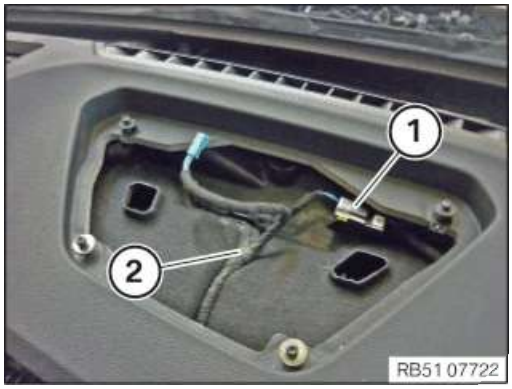
cardiagn.com




- Open glovebox.
- Loosen screws (1).




- Loosen screws (1).




- Unlock plug connection (1) and disconnect.
- Release the wiring harness (2) on the holders.




- Unlock the plug connection (1) on the light operating unit and disconnect it.




- Loosen screws (1).

**TECHNICAL INFORMATION**

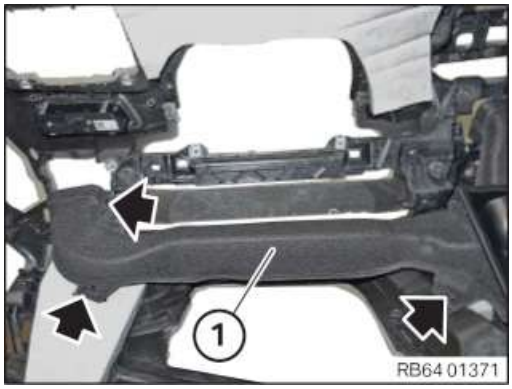
Conduct the following operation with the assistance of a second person.

- Pull the instrument panel trim back slightly.

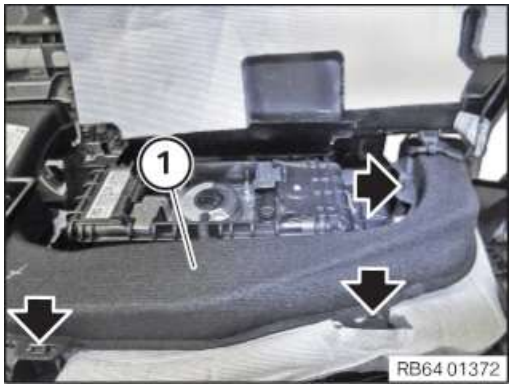
  If necessary, unlock and disconnect additional plug connections.
- Remove the instrument panel trim from the vehicle.

**30 – Removing the air duct in the instrument panel**

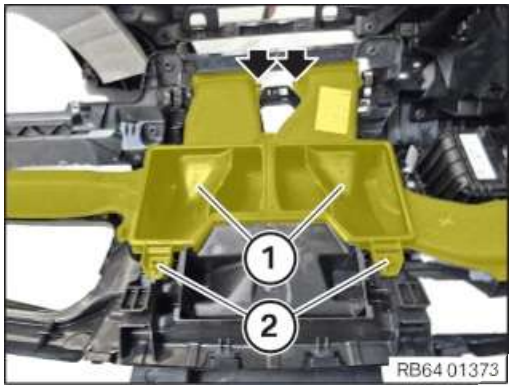
rdiagn.com




- Disengage left air duct (1) from latch mechanisms (arrows).




- Disengage right air duct (1) from latch mechanisms (arrows).




- Disengage air ducts (1) from latch mechanisms (arrows).
- Disengage the air ducts (1) from the latch mechanisms (2) towards the top.
- Feed the air ducts (1) out of the instrument panel and remove it.

## MAIN WORK

### 31 – Remove front passenger airbag

**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.

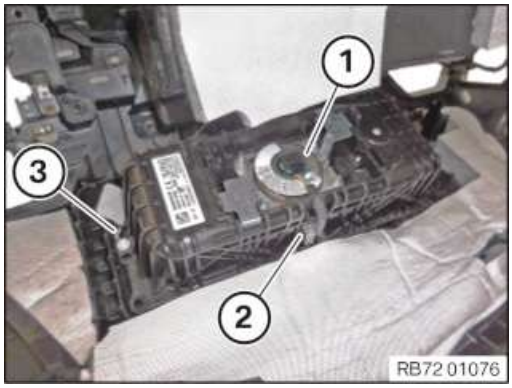
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**WARNING**

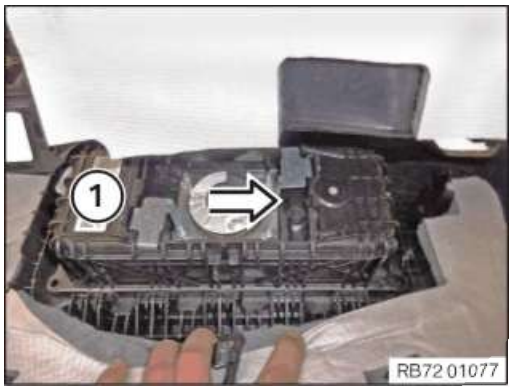
**Airbag unit.**

**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




- Unlock plug connection (1) and disconnect.
- Unclip the cable clip (2).
- Loosen screw (3).




- Unlock front passenger airbag (1) in direction of arrow and remove upwards.

**32 – Installing front passenger airbag**

**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

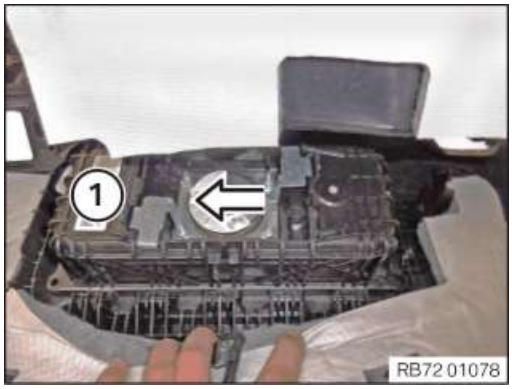
**WARNING**

**Pyrotechnic components.**

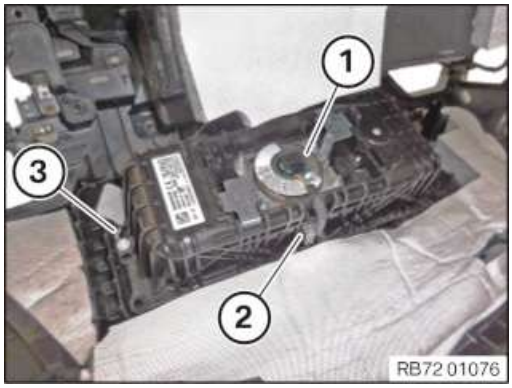
**Danger! Life-threatening injuries!**

- 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.

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- Correctly position front passenger airbag (1) correctly and lock in the direction of the arrow.




- Tighten down screw (3).

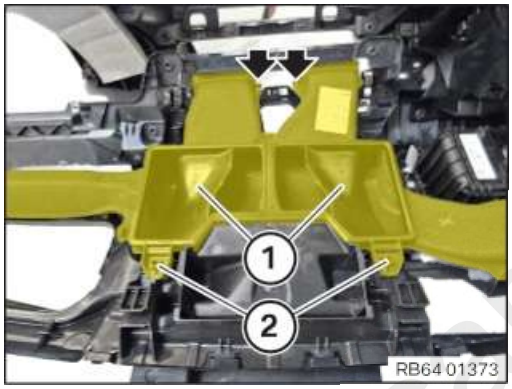
**Front passenger airbag on instrument panel trim**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 2 Nm |

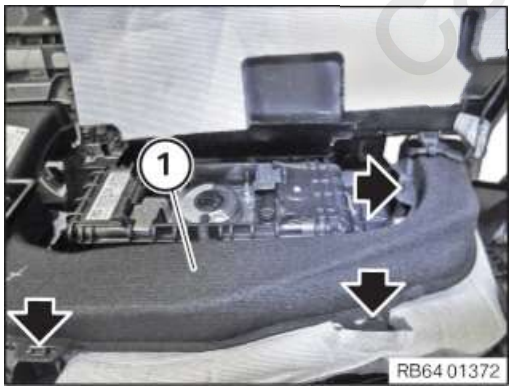
- Clip in the cable clip (2).
- Connect plug connection (1) and lock.

## POSTPROCESSES

### 33 – Installing air ducts in the instrument panel

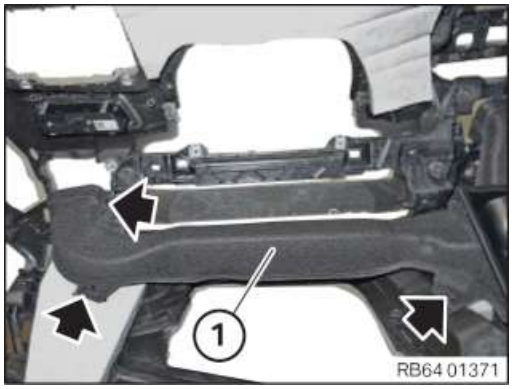



- Guide in and position air ducts (1) in the instrument panel.
- Engage the air ducts (1) into the latch mechanisms (2) from the top.
- Engage the air ducts (1) into the latch mechanisms (arrows).




- Engage the right air duct (2) into the latch mechanisms (arrows).

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- Engage the left air duct (1) into the latch mechanisms (arrows).

**34 – Install the trim panel for the instrument panel**




**TECHNICAL INFORMATION**

Conduct the following operation with the assistance of a second person.

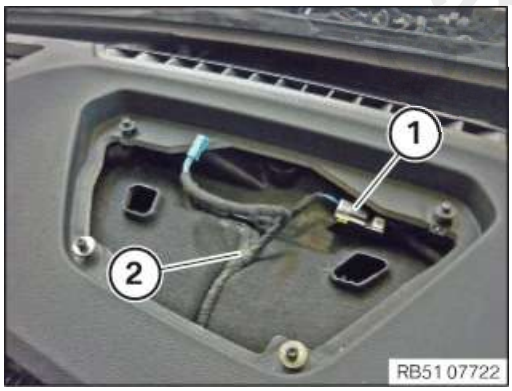
- Insert the instrument panel trim in the vehicle and position it at the support.
- Insert the associated wiring harnesses and connect the connectors.
- Tighten the screws (1).

**Dashboard to support**

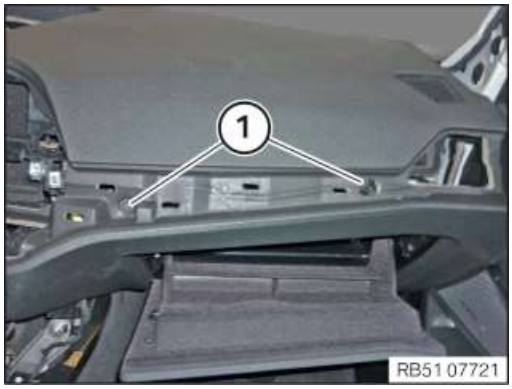
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |




- Connect connector (1) to the light operating unit and lock.




- Secure the wiring harness (2) on the holders.
- Connect connectors (1) and lock.

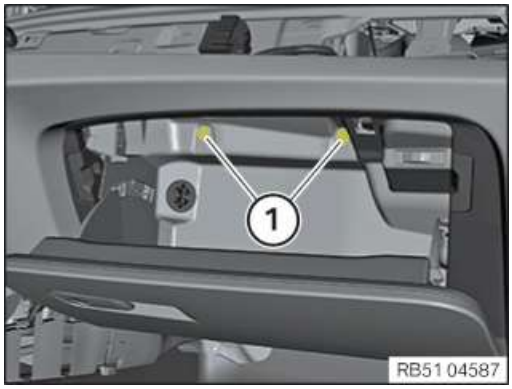



- Tighten the screws (1).

**Dashboard to support**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |

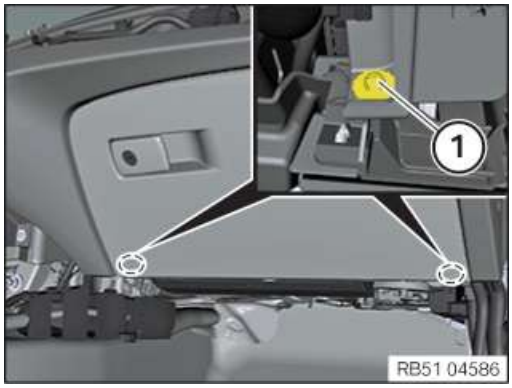
rdiagn.com




- Open glovebox.
- Tighten the screws (1).

**Dashboard to support**

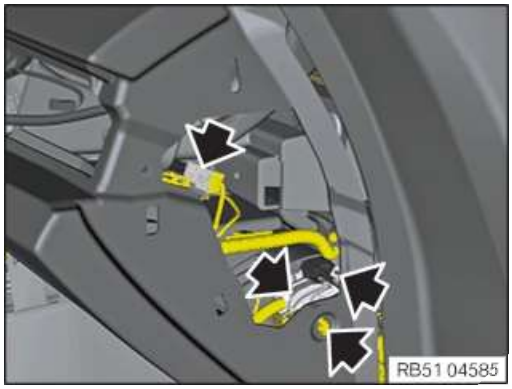
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |



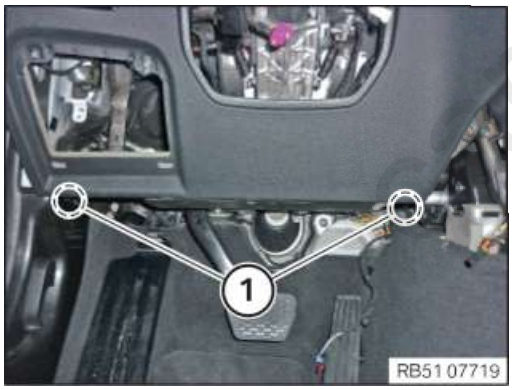

- Tighten the screws (1) on the lower side of the glove box button.

**Dashboard to support**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |




- Connect all plug connections and cable clips (arrows) behind the glove box.




- Tighten the screws (1).

**Dashboard to support**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |

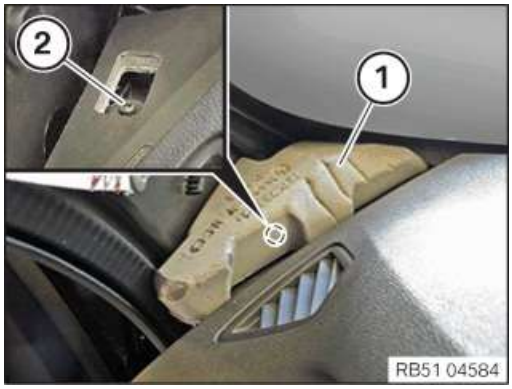



- Tighten the screws (1).

**Dashboard to support**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |

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**NOTICE**

Perform the operations on the left and right side.

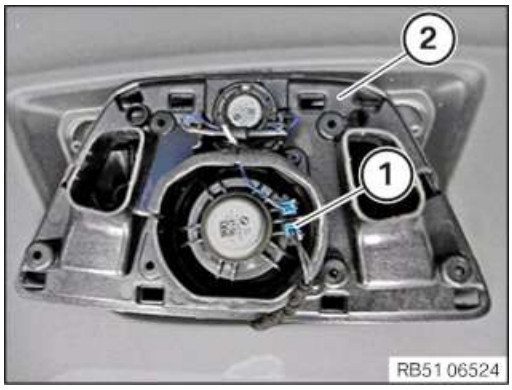
- Tighten down screw (2).

**Dashboard to support**

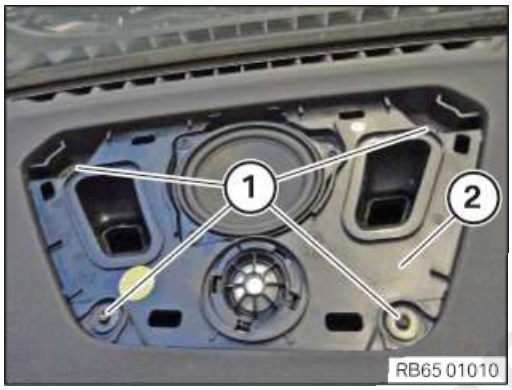
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |

- Use sound insulation (1).

### 35 – Install the speaker holder at the instrument panel




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

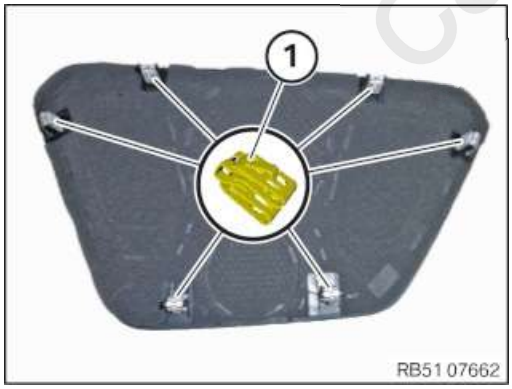



- Install the speaker holder (2).
- Tighten the screws (1).

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

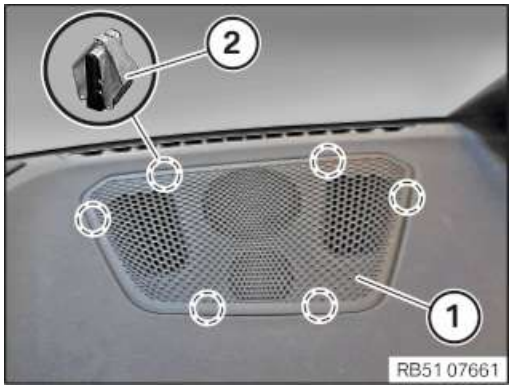
| | | |
|---|---|---|
| Screw | Tightening torque | 1,8 Nm |

### 36 – Install the speaker trim at the instrument panel



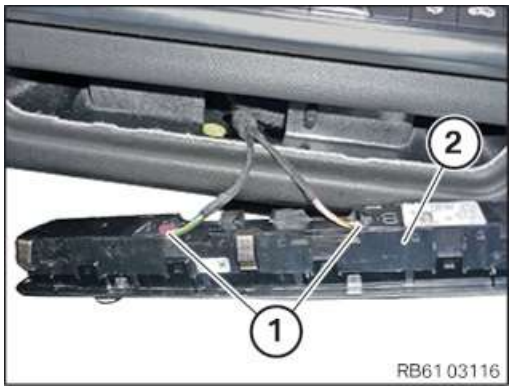

- Check clamps (1) for damage.
- Replace broken or missing clamps (1).

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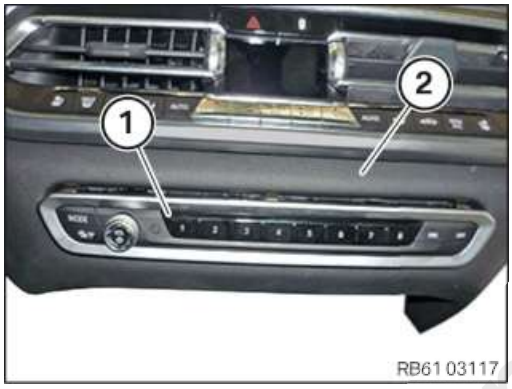



- Position the speaker trim (1) correctly and engage it at the clamps (2).

**37 – Install the audio operating unit**

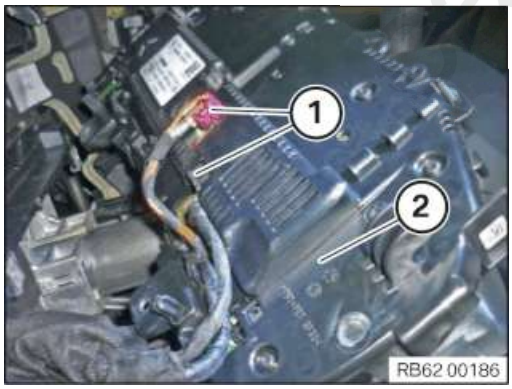



- Connect the connector (1) to the audio operating unit (2).

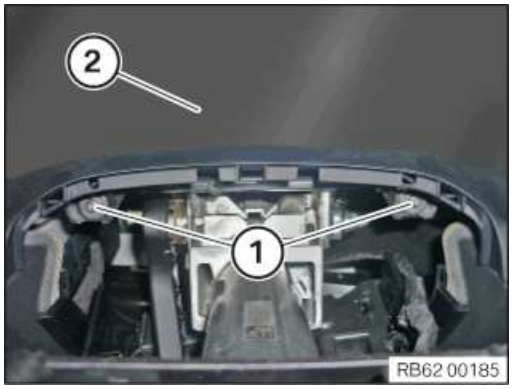



- Correctly position the audio operating unit (1) and install in the instrument panel(2).

**38 – Installing the instrument cluster (KOMBI)**




- Connect and lock connector (1) to the instrument cluster (KOMBI) (2).




- Feed in and position the instrument cluster (KOMBI) (2).
- Tighten the screws (1).

**Instrument cluster (KOMBI) to support**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 1,8 Nm |

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- Tighten down screw (1).

**Instrument cluster (KOMBI) to support**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 1,8 Nm |

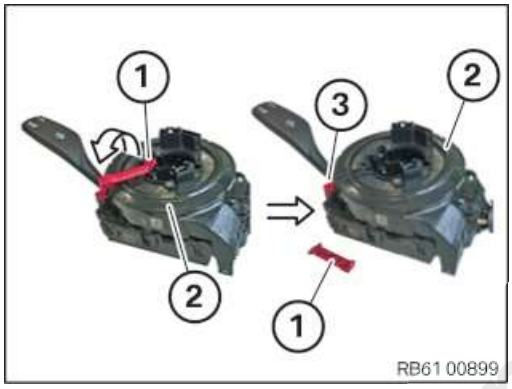



- Tighten down screw (1).

**Instrument cluster (KOMBI) to support**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 1,8 Nm |

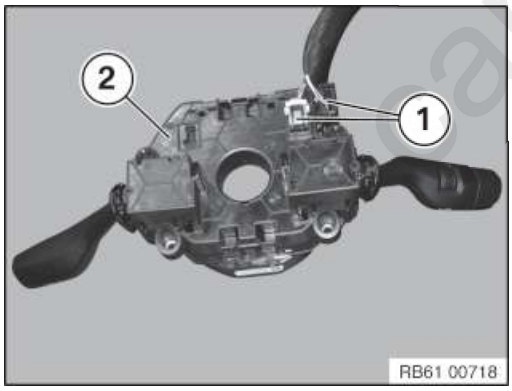
### 39 – Installing the steering column switch cluster (SZL)




- **Replacement:**

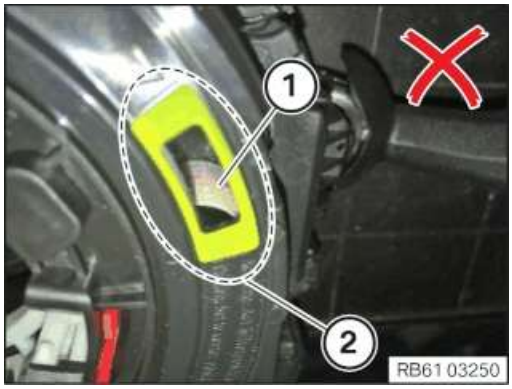
  Break off the transportation retainer (1) on the steering column switch cluster (SZL) (2) in direction of arrow.

  The broken off piece (3) of the transportation retainer (1) remains in the steering column switch cluster (SZL) (2).




- Connect the connector (1) with the steering column switch cluster (SZL) (2).

**Check**




- **Version A:**

  Check whether the correct marking (1) is seen in inspection glass (2).

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**Result**

» Ensure that no incorrect marking (1) is seen in inspection glass (2).

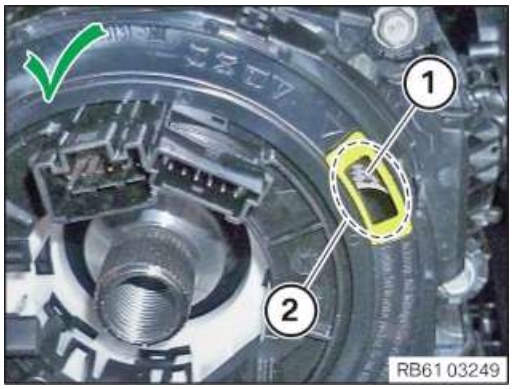
**Measure**

- Turn the coil spring cassette until the right mark (1) becomes visible in the inspection glass (2).

**Check**

- **Version A:**

  Check whether the correct marking (1) is seen in inspection glass (2).




**Result**

» Correct marking (1) is seen in inspection glass (2).

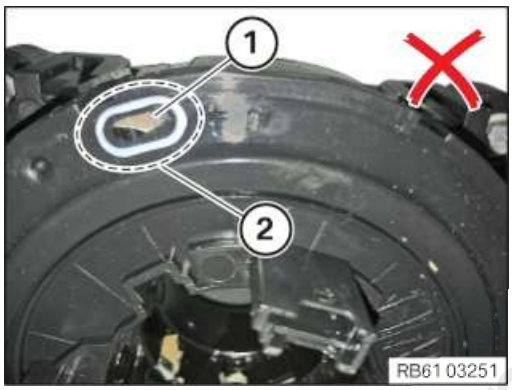
**Measure**

- Continue with the next step.

**Check**

- **Version B:**

  Check whether the correct marking (1) is seen in inspection glass (2).




**Result**

» Ensure that no incorrect marking (1) is seen in inspection glass (2).

**Measure**

- Turn the coil spring cassette until the right mark (1) becomes visible in the inspection glass (2).

**Check**

- **Version B:**

  Check if the correct mark (1) can be seen in the inspection glass (2).



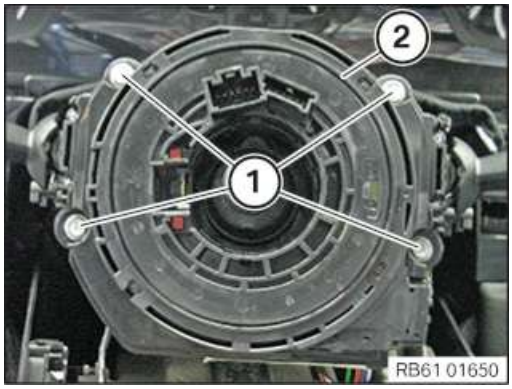

**Result**

» Correct marking (1) is seen in inspection glass (2).

**Measure**

- Continue with the next work step.

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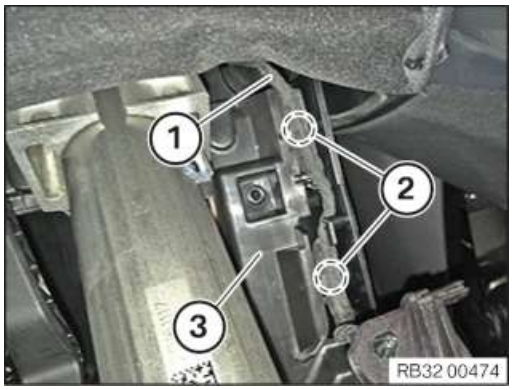



- Position the steering column switch cluster (SZL) (2).
- Tighten the screws (1).

**Steering column switch cluster (SZL) on the steering column**

| | | | |
|---|---|---|---|
| Screw TS5x20 | | Tightening torque | 3 Nm |

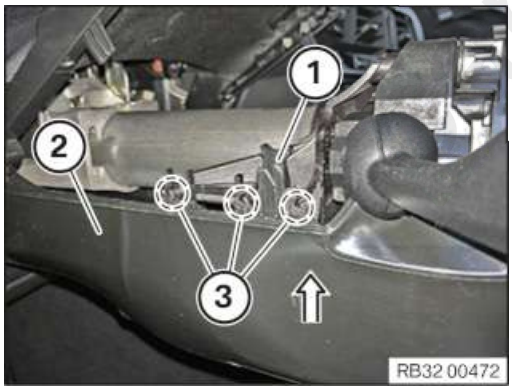
### 40 – Install steering column shroud lower section




- Position the steering column shroud lower section (3).
- Secure the line (1) on the brackets (2).




- Connect the connector (1).

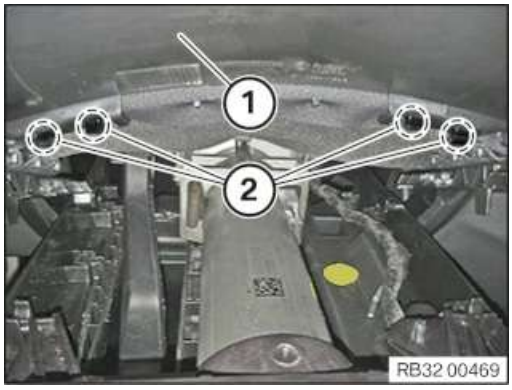



**NOTICE**

Perform the operations on the left and right side.

- Align the steering column shroud lower section (2) to the steering column using the retaining lug (1).
- Push the steering column shroud lower section (2) up in the direction of the arrow until the brackets (3) engage.

### 41 – Fit steering column shroud upper section




- Clip in the steering column shroud upper section (1) at the brackets (2).

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**NOTICE**

Perform the operations on the left and right side.

- Clip in the steering column shroud upper section (1)into the guide (2).




**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.

**42 – Installing the sports steering wheel**

▸ **Check the neutral position of the clock spring**

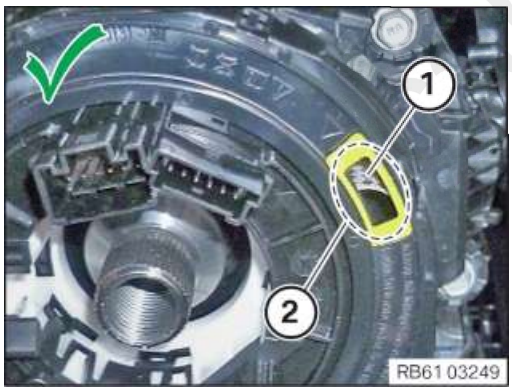
**TECHNICAL INFORMATION**

Different variants may be installed depending on the vehicle equipment.

▹ **Version A: Checking the visibility of the marking on the coil spring**

**Check**

- Check the visibility of the marking (1) on the coil spring in the inspection glass (2) .




**Result**

» The mark (1) on the coil spring is not visible.

**Measure**

- Turn the coil spring cassette until the mark (1) on the coil spring becomes visible in the inspection glass (2).

◃

▹ **Version B: Checking the visibility of the marking on the coil spring**

**Check**

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- Check the visibility of the marking (1) on the coil spring in the inspection glass (2) .

**Result**

» The mark (1) on the coil spring is not visible.

**Measure**

- Turn the coil spring cassette until the mark (1) on the coil spring becomes visible in the inspection glass (2).

◁

**Check**




- Check if a microencapsulated screw (3) is installed.

**Result**

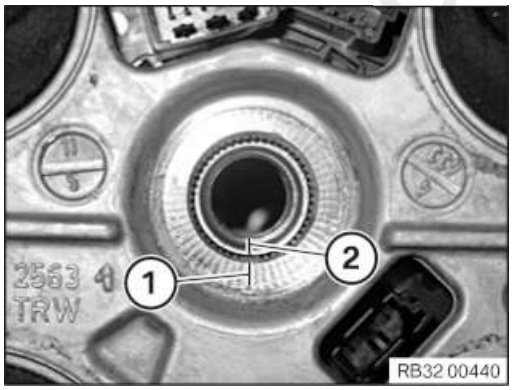
» Screw (3) is micro-encapsulated.

**Measure**

- Clean thread in the steering column.

  Renew the screw (3).

  **Parts:** Screw




- Align mark (1) on steering wheel to mark (2) on steering column.
- Connect steering wheel.

carmagn.com




- Connect connectors (1) and lock.
- If installed: Connect connectors (2) and lock.
- Tighten screw (3) .

**Steering wheel to steering column**

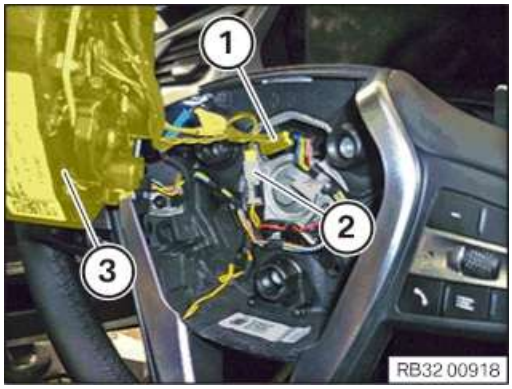
| | | | |
|---|---|---|---|
| M14 | Only for a micro-encapsulated screw: Renew screw. | Tightening torque | 62,5 Nm |

### 43 – Installing the airbag unit

**TECHNICAL INFORMATION**

Different variants may be installed depending on the vehicle equipment.

▸ **Installing the airbag unit for the sports steering wheel**




- Position airbag unit (3).
- Connect connectors (1) and (2) lock.




- Press the airbag unit (1) with even pressure in the direction of the arrow into the steering wheel.

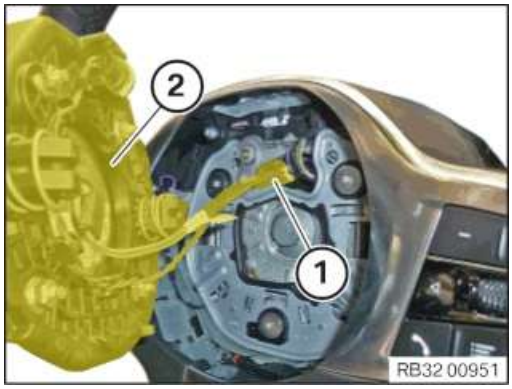
  The airbag unit (1) must engage audibly and perceptibly.

▸ **Installing the airbag unit for M Sport steering wheel**

**TECHNICAL INFORMATION**

After replacing the airbag unit (M sport steering wheel) or after a possible conversion of standard steering wheel and airbag unit to M-sports steering wheel, a software update or a programming/encoding via ISTA must be performed!

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- Connect and lock the connector (1) of the airbag unit (2).




- Press the airbag unit further (1) with even pressure in the direction of the arrow into the steering wheel.

  The airbag unit (1) must engage audibly and perceptibly.

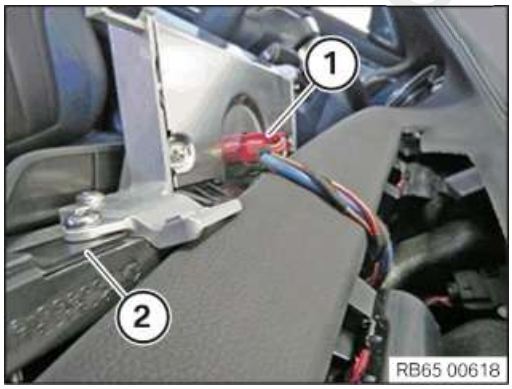
**44 – Install the central information display (CID)**

**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 ... Notes for ESD protection (electrostatic discharge)




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

carbagn.com

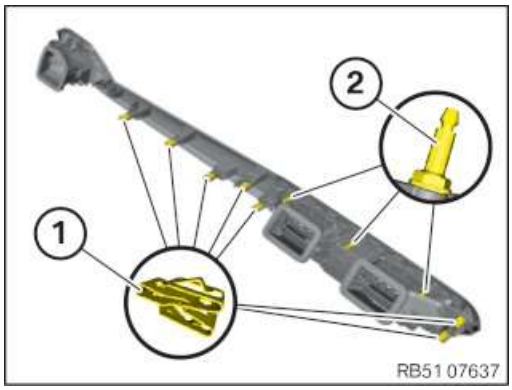



- Insert the central information display (CID) (2) in the instrument panel and position correctly.
- Tighten the screws (1).

**Central information display to instrument panel**

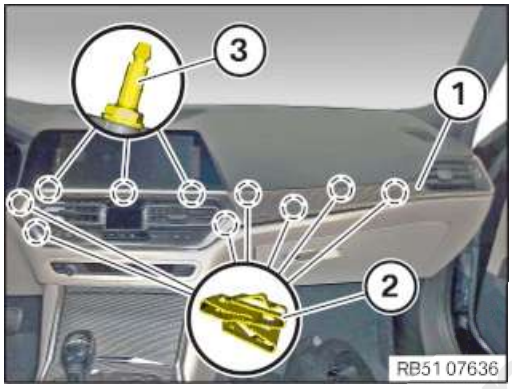
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |

### 45 – Install the finisher on the right instrument panel



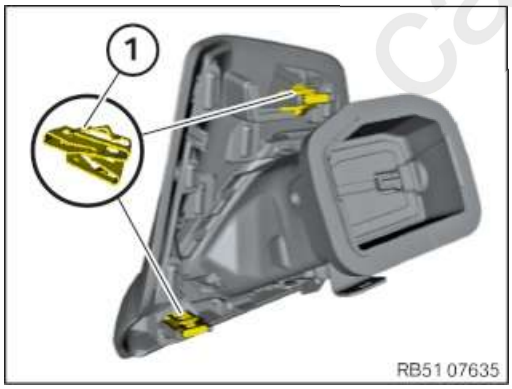

- Checks clamps (1) for damage.

  Defective or missing clamps (1) need to be renewed.
- Check the pins (2) and the accompanying clamps at the instrument panel trim for damage, renew if necessary.



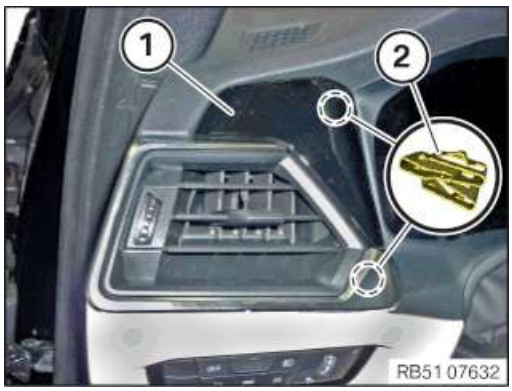

- Install the decorative strip (1).
- Connect and lock corresponding connectors.
- Correctly position the decorative strip (1) and at the clamps (2) and clip in the pins (3).

### 46 – Install the finisher on the instrument panel on the left




- Check the clamps (1) for damage and that they are present.

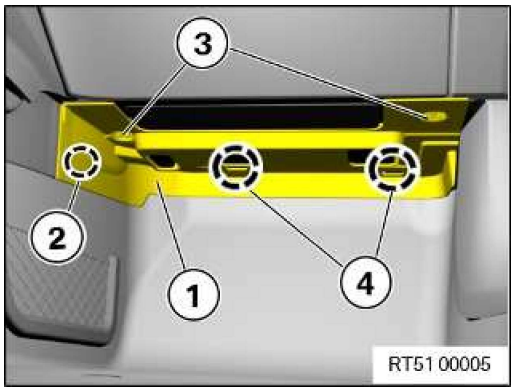
  Damaged or missing clamps (1) must be renewed.




- Install the decorative strip (1).
- Connect and lock the associated connectors.
- Clip decorative strip (1) into clamps (2).

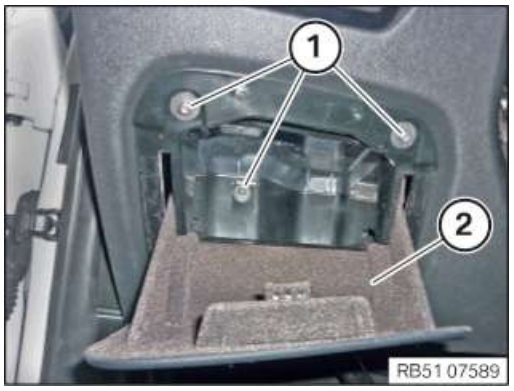
cardiagn.com

### 47 – Install the right footwell trim panel




- Connect associated connector.
- Attach the footwell trim (1) to the guides (4) and fold up.
- Guide the footwell trim (1) into the guide (2) of the centre console.
- Position the locks (3) correctly and turn by 90°.

### 48 – Installing the left fold-down compartment

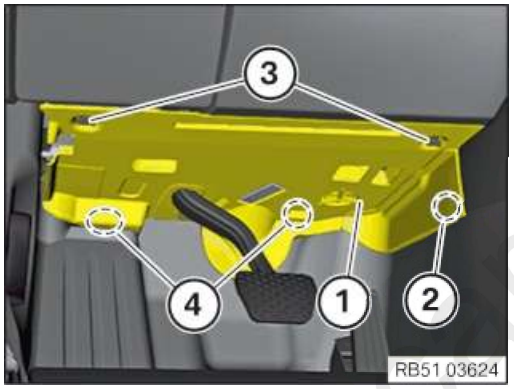



- Install the fold-down compartment (2).
- Tighten the screws (1).

**Fold-down compartment to instrument panel**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 1,8 Nm |

### 49 – Installing the trim panel for the pedal mechanism




- Connect associated connector.
- Attach the trim panel for the pedal mechanism (1) in the guides (4) and fold it up.
- Clip the trim panel for the pedal mechanism (1) into the centre console in this area (2).

**TECHNICAL INFORMATION**

It is **imperative** that the screws caps of the trim panel be correctly locked. This is the only way to ensure that the trim panel does not come loose and potentially tilt into the pedal area.

- Insert screw caps (3) correctly and turn by 90° to lock.

### 50 – Install the A-pillar trim panel on the left and right

**NOTICE**

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

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

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

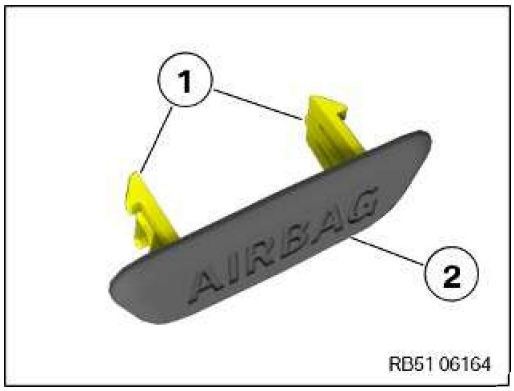
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**RISK OF DAMAGE**

**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.




**Check**

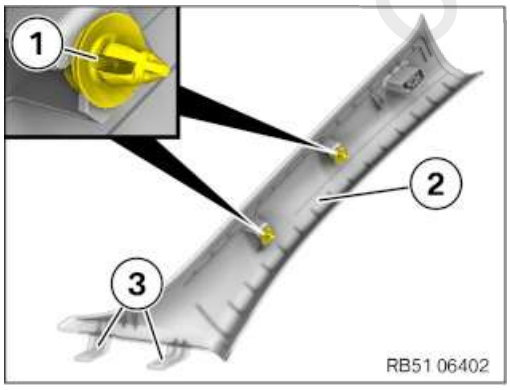
- Check retaining lugs (1) of cover (2) for damage.

**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.

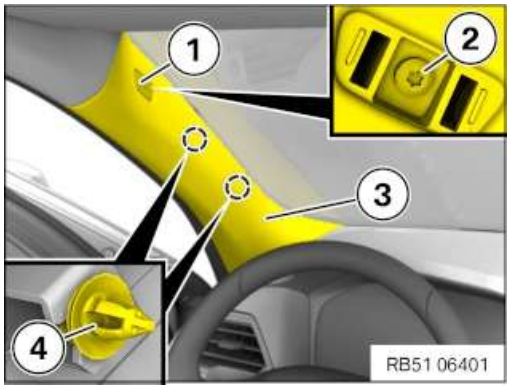
**Result**

» Guide is damaged.

**Measure**

- Renew the A-pillar trim panel.

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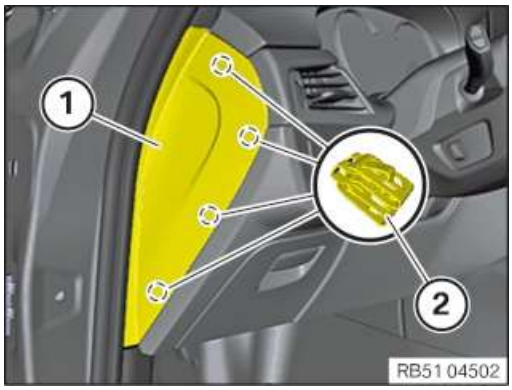

- Guide in A-pillar trim panel (3) downwards and clip it in with clips (4).
- Tighten down screw (2).

**A-pillar trim panel to body**

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

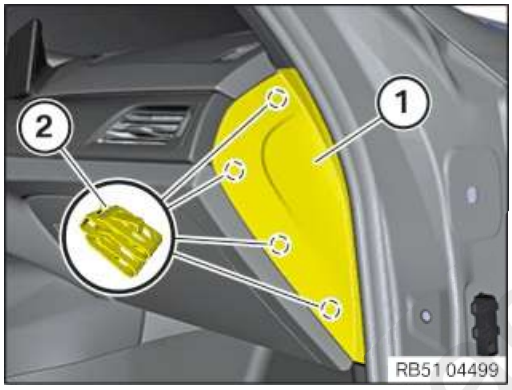
- Clip in the cover (1).

### 51 – Install the side panel on left instrument panel



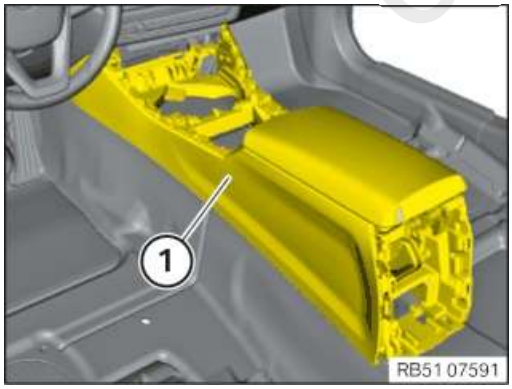

- Feed in the side panel (1) and clip it in at the clamps (2).

### 52 – 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).

### 53 – Installing the centre console

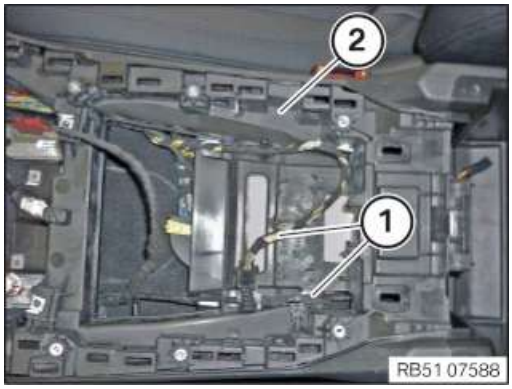



**NOTICE**

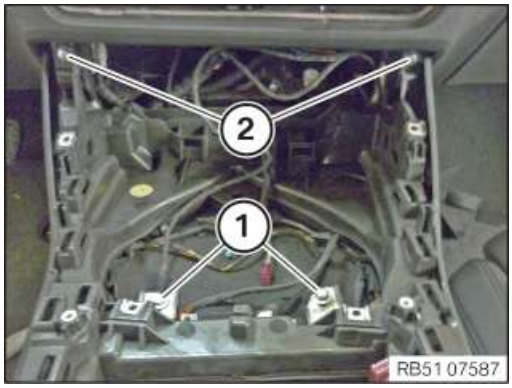
To provide a better overview: Schematic diagram with partially hidden components.

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

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- 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 |

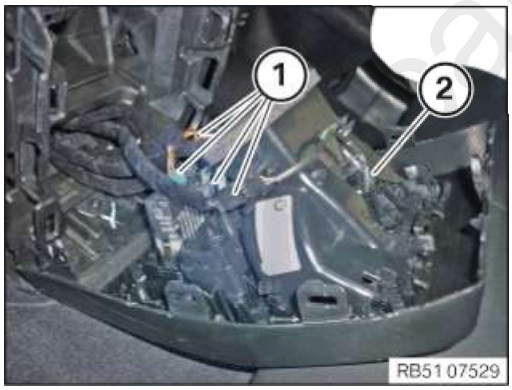



- Tighten the screws (1).

**Centre console on tunnel**

| | | | |
|---|---|---|---|
| M6x18 Hexagon screw | | Tightening torque | 4,6 Nm |

**54 – Installing the rear centre console trim**




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

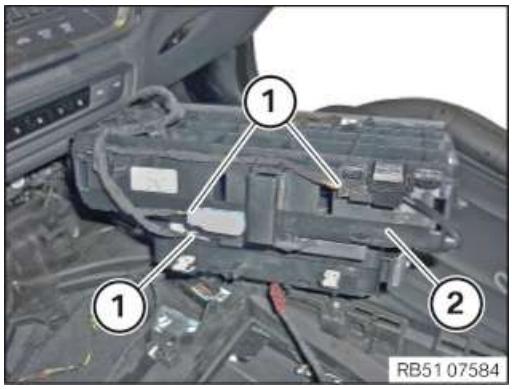



- Position centre console trim (1) and engage at the latch mechanisms at the side.

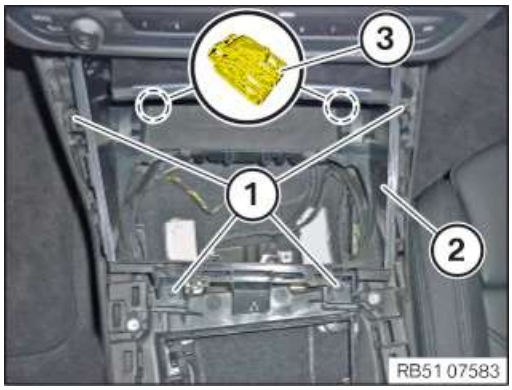
**55 – Installing the storage compartment in the centre console in the front**

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### 55 – Installing the storage compartment in the centre console in the front




- Mount the storage compartment in the centre console in the front (2) and connect and lock connectors (1).

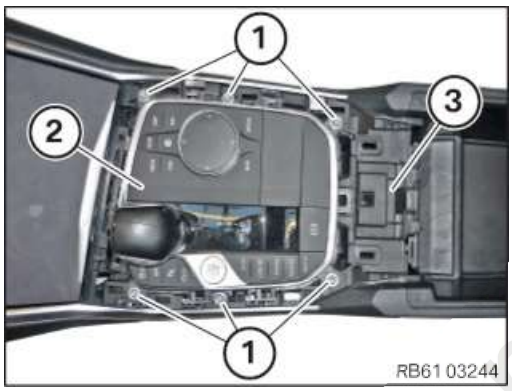



- Engage the storage compartment in the centre console in the front (2) into clamps (3) in the rear.
- Tighten the screws (1).

**Storage compartment in centre console**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 1,8 Nm |

### 56 – Install the operating facility in the centre console




- Position the 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 |

▸ **Connecting all battery earth leads**




- See additional information.

▸ **Activating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

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**RISK OF DAMAGE**

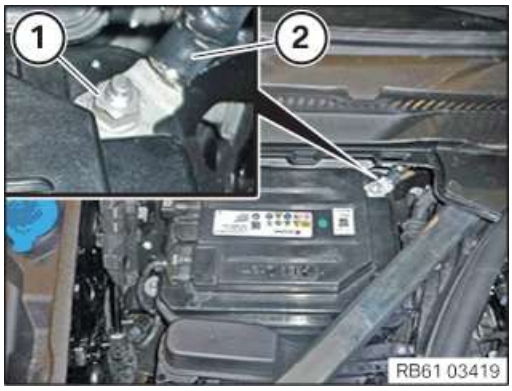
**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .




- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |



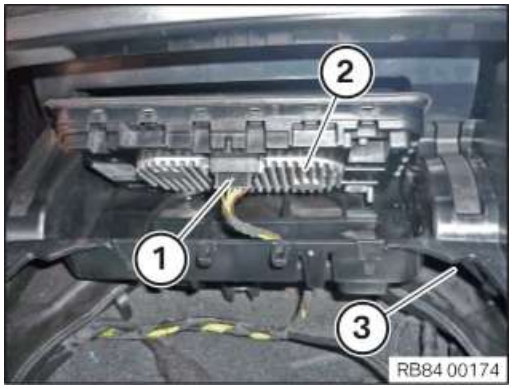

- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).



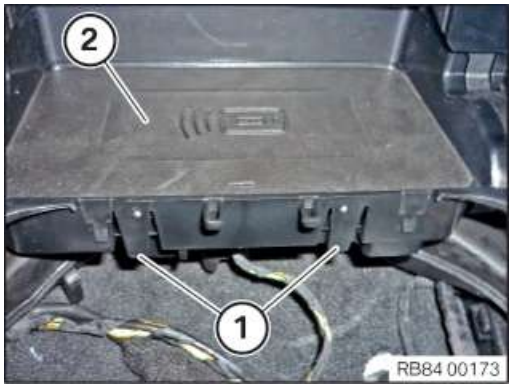

- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

**57 – Installing the wireless charging station**




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




- Push the wireless charging tray (2) down.

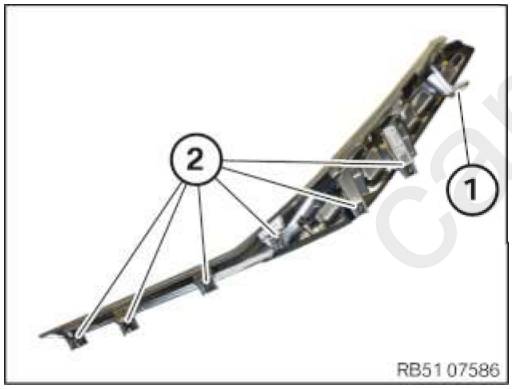
  The latch mechanisms (1) must engage correctly.

**58 – Installing the decorative trim on the centre console on the left and right**

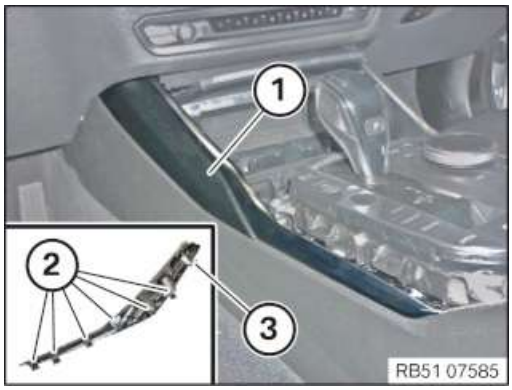
▸ **Installing the decorative trim on the centre console**

**NOTICE**

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




- Check the guide (1) and the latch mechanisms (2) for damage, renew the decorative trim if necessary.




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

**59 – Installing the centre console trim**

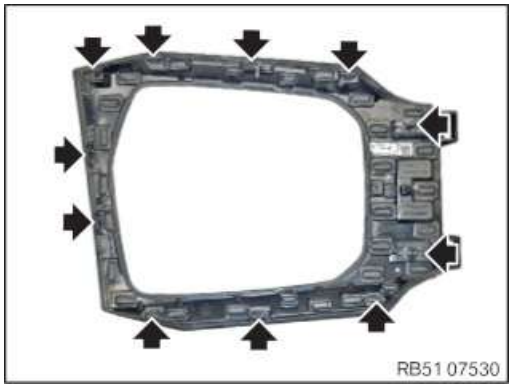
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**RISK OF DAMAGE**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

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

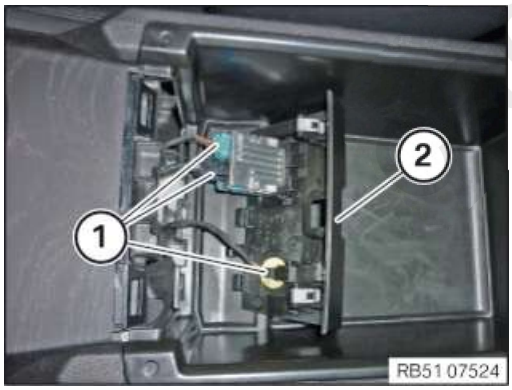



- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .

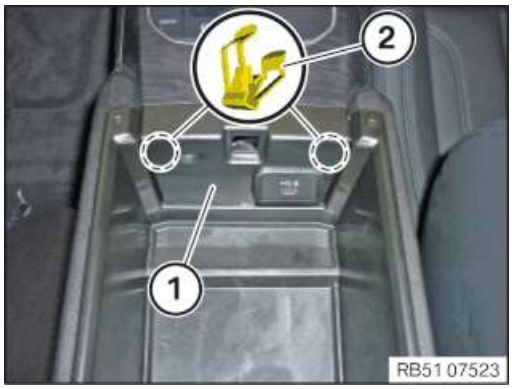



- Correctly position the centre console trim (1) and engage at the latch mechanisms.

**60 – Installing the trim in the storage compartment of the centre armrest**




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




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

**61 – Install the cup holder**

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

**Cup holder to centre console**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 1,8 Nm |




- Insert the insert (1).

## Additional Information

### Overview of Tightening Torques

**Front passenger airbag on instrument panel trim** — Used in step 32

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 2 Nm |

**Dashboard to support** — Used in step 34

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |

**Speaker to support / support to instrument panel / support to body** — Used in step 35

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 1,8 Nm |

**Instrument cluster (KOMBI) to support** — Used in step 38

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 1,8 Nm |

**Steering column switch cluster (SZL) on the steering column** — Used in step 39

| | | | |
|---|---|---|---|
| Screw TS5x20 | | Tightening torque | 3 Nm |

**Steering wheel to steering column** — Used in step 42

| | | | |
|---|---|---|---|
| M14 | Only for a micro-encapsulated screw: Renew screw. | Tightening torque | 62,5 Nm |

**Central information display to instrument panel** — Used in step 44

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,4 Nm |

**Fold-down compartment to instrument panel** — Used in step 48

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 1,8 Nm |

**A-pillar trim panel to body** — Used in step 50

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

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| Centre console on tunnel | | | Used in step 53 |
|---|---|---|---|
| M6x18 Hexagon screw | | Tightening torque | 4,6 Nm |

| Centre console to instrument panel | | | Used in step 53 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 1,8 Nm |

| Storage compartment in centre console | | | Used in step 55 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 1,8 Nm |

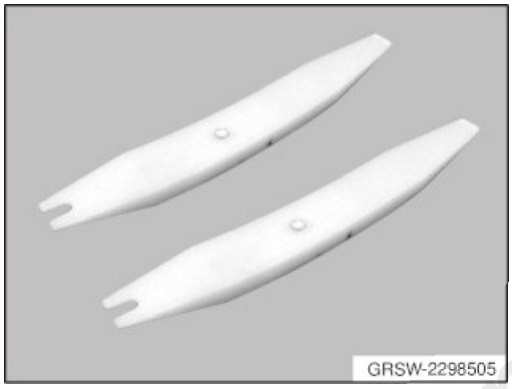
| Gear selector switch to centre console trim | | | Used in step 56 |
|---|---|---|---|
| Screw | | Tightening torque | 1,8 Nm |

| Negative battery cable to 48-V battery | | | Used in step 56 |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

| Cup holder to centre console | | | Used in step 61 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 1,8 Nm |

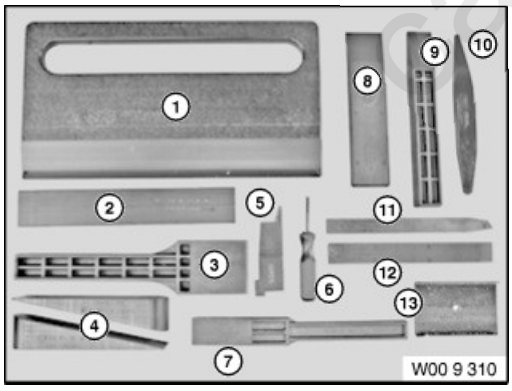
## Overview of Special Tools

### 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) |

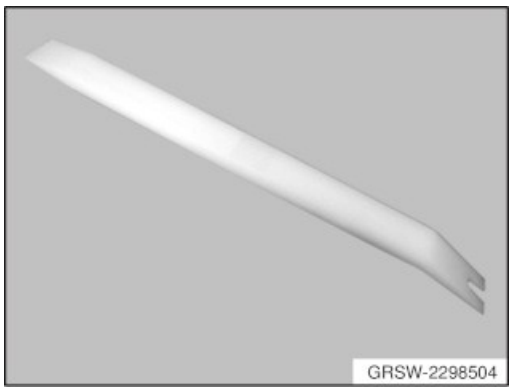
### 0 493 752 (00 9 329) Case




| Common | Used in step 13 |
|---|---|
| Usage | (Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019. |
| Included in the tool or work | 0 490 527 |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 01 07 09 (530) |

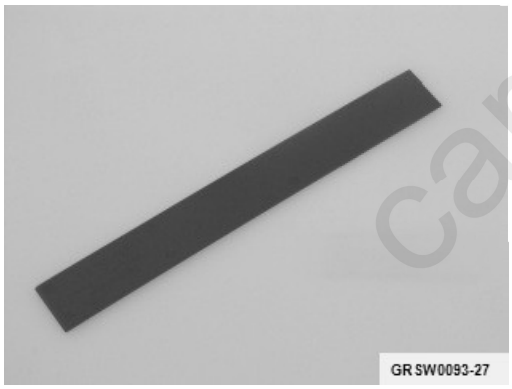
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**2 298 504 Wedge**




| Common | Used in step 22 |
|---|---|
| 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) |

**0 496 571 (00 9 327) Wedge**




| Common | Used in step 26 |
|---|---|
| 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) |

**0 496 569 (00 9 325) Wedge**




| Common | Used in step 27 |
|---|---|
| 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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## Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 756 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 1320 |
| 72 00 ... Safety regulations for handling components with gas generators | 13 |

| Repair instructions | Used in step |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 756 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 756 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 756 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |

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|---|---|
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 20 900 Disconnecting and connecting battery earth lead | 756 |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | 1944 |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | 1944 |


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# 72 12 061 Removing and installing or replacing left or right head airbag

**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**

**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

## PRELIMINARY WORK

### 1 – Remove left and right A-pillar trim panel

**NOTICE**

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

▸ **Remove the A-pillar trim panel**

**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.

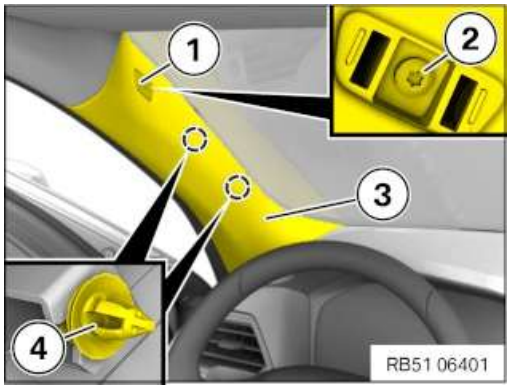
**RISK OF DAMAGE**

**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

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- Unclip cover (1) with a suitable special tool from the special tool kit 0 493 752 (00 9 329).
- Loosen screw (2).
- Unclip A-pillar trim panel (3) with clips (4) and feed it out to the top.

**2 – Removing the sun visors and the end support on the left and right**

**NOTICE**

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

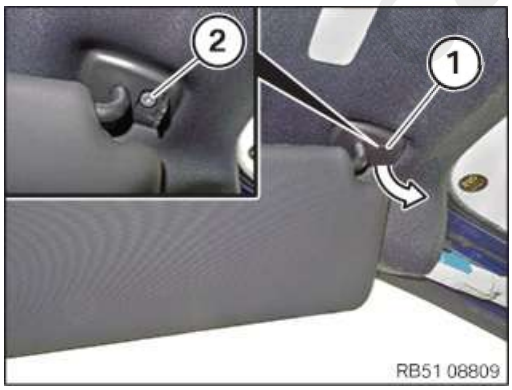
▸ **Remove the sun visor and the counter support**

**NOTICE**

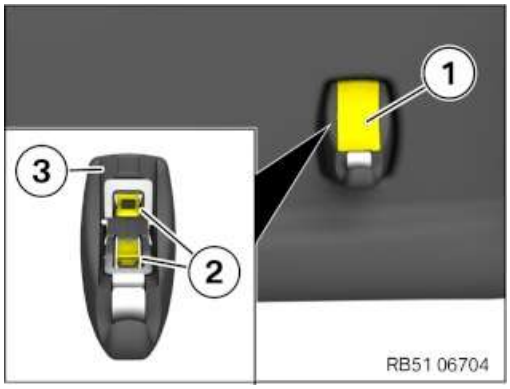
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Detach sun visors (1) from end support (2) and swivel to the side.




- Fold open cover (1).
- Loosen screw (2).
- Remove sun visors and unlock and disconnect the associated plug connection.




- Unclip cover (1) using a suitable tool.
- Push the clamps (2) together and pull the counter support (3) out of the headlining.

**3 – Removing the roof function centre (FZD)**



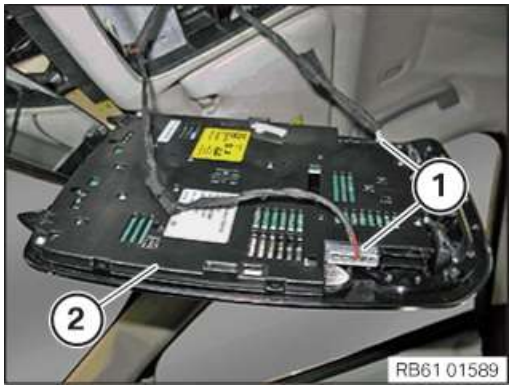

- Unclip the cover (1).




- Loosen screws (1).



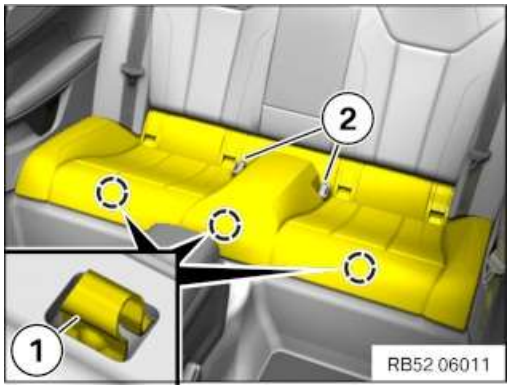

- Unclip the roof function centre (FZD) (1) from the clamps (2).
- Thread the roof function centre (FZD) (1) out of the guides (3).




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

**4 – Remove rear seat bench**

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- Unclip the rear seat bench upwards from clamps (1) and guide out seat belt buckles (2).
- Remove the rear seat bench.

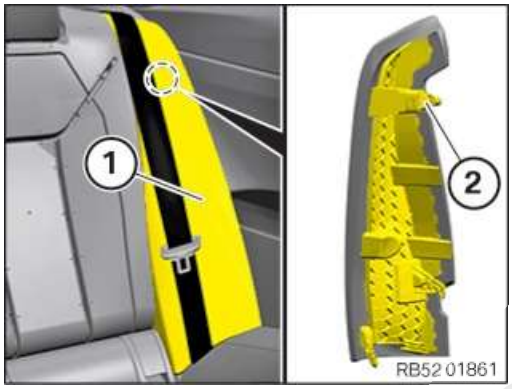
**5 – Remove backrest side section on left and right**

**NOTICE**

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

▸ **Remove armrest side section**

▹ **Remove armrest side section**




- Reach behind the backrest side section (1) from the top and unclip the backrest side section (1) from the mounting element (2) to the front.
- Remove backrest side section (1) in the upward direction from the guide.

◃

**6 – Removing the C-pillar trim panel on the left and right**

**NOTICE**

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

▸ **Remove C-pillar trim panel**

**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.

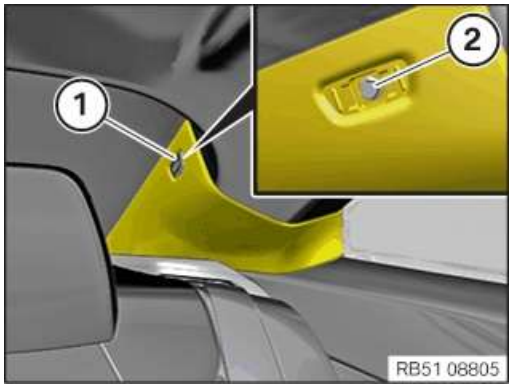
cardiagn.com

**RISK OF DAMAGE**

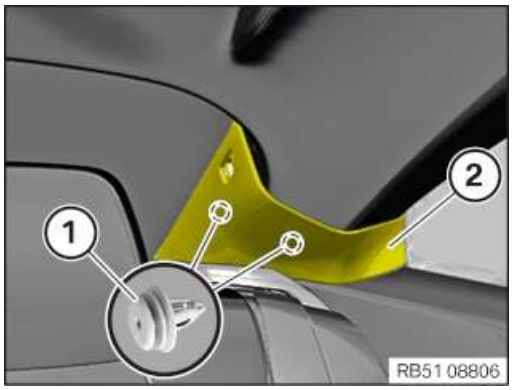
**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.




- Unclip cover (1) of the C-pillar trim panel.
- Release the screw (2).




- Unclip C-pillar trim panel (2) from clips (1) and guide it out.

**7 – Removing the inner door sill cover strip on the left and right**

**NOTICE**

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

▸ **Removing the inner door sill cover strip**

**RISK OF DAMAGE**

**Bending of plastic parts.**

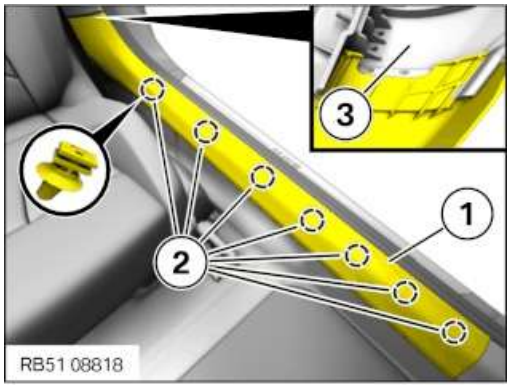
**Application of too much force can lead to bending of plastic parts.**

- Place special tool directly beside the mounting clip.
- Continue unclipping the part without using the tool if possible.

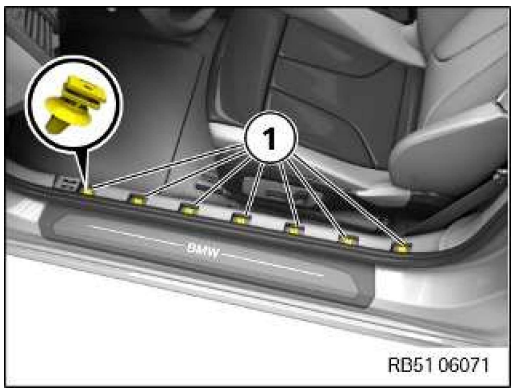
**NOTICE**

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

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- Release door sill cover strip (1) with clips (2) starting from the front using a suitable special tool from the set of special tools 0 493 752 (00 9 329).
- Guide out and remove door sill cover strip (1) under the rear side trim panel (3) .



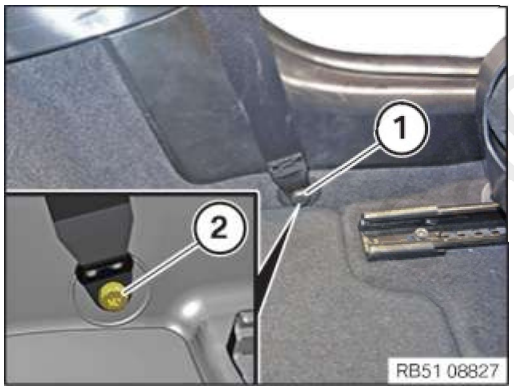

- If necessary, remove clips (1) and connect them to the door sill cover strip.

### 8 – Remove side trim panel, rear left and right

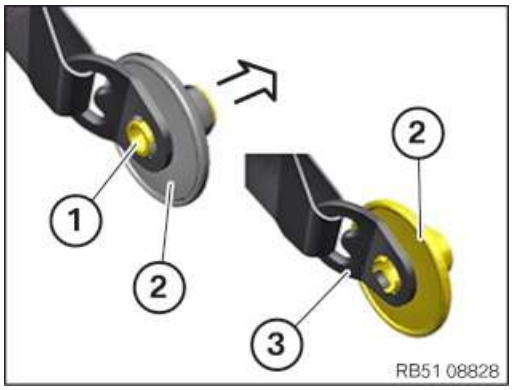
**NOTICE**

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

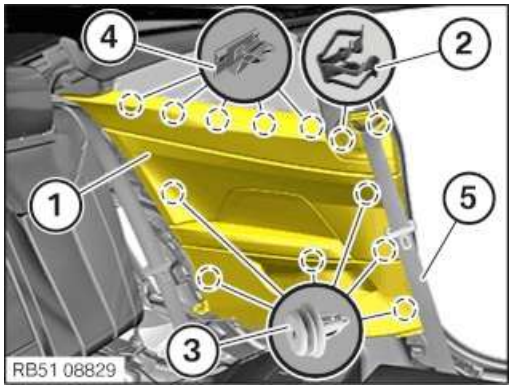
▸ **Remove rear side trim panel**




- Unclip the cover cap (1).
- Release the screw (2).




- Pull out the sleeve (1) from the cover (2) of the end fitting (3).
- Unclip the cover (2) of the end fitting (3) from the end fitting (3).



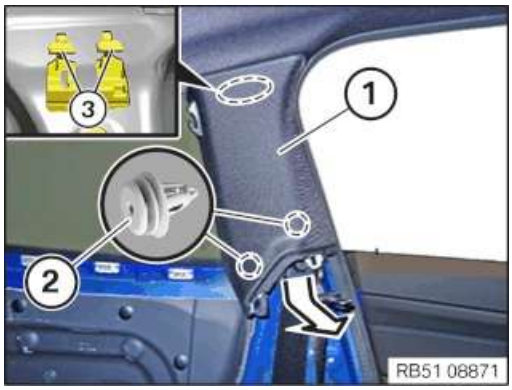

- Unclip the rear side trim panel (1) with a suitable tool at the clamps (2).
- Unclip the rear side trim panel (1) with a suitable tool at the clips (3).
- Release the rear side trim panel (1) at the clamps (4) and feed out at the edge protection.
- Unlock and disconnect all the plug connections at the rear side trim panel (1) of the wiring harness.
- Feed out the upper seat belt (5).

### 9 – Removing left and right B-pillar trim panel

**NOTICE**

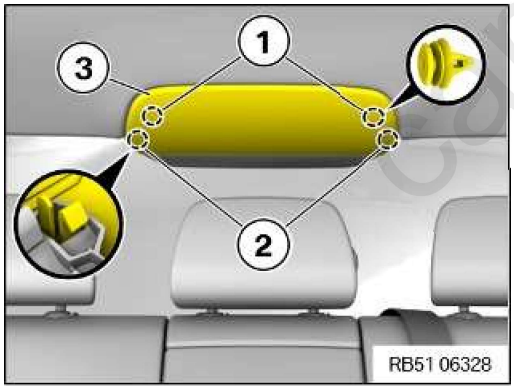
Description is for left component only. Procedure on the right side is identical.

▸ **Remove the B-pillar trim panel**




- Unclip the B-pillar trim panel (1) at the clips (2).
- Remove the B-pillar trim panel (1) from the lip of the edge protection and the guides (3) in the direction of the arrow.

### 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 – Lower the headlining (with SHD)

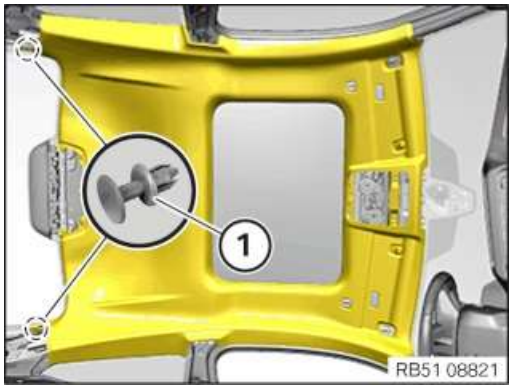
**Prerequisite**

The front seats have been fully adjusted towards the bottom.

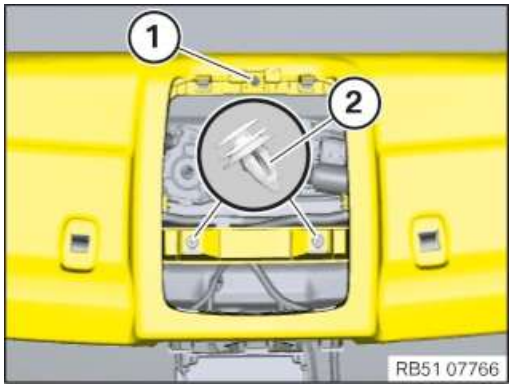
The front seat backrests have been fully adjusted towards the rear.

The rear seat backrest is folded down toward the front.

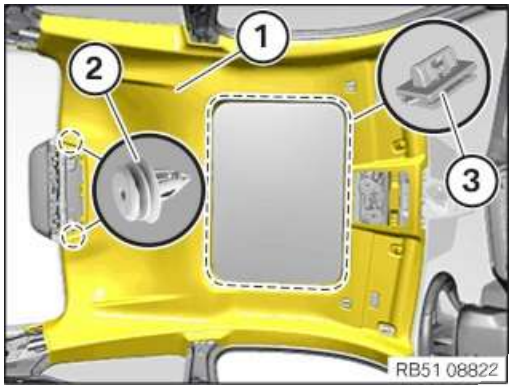
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- Loosen the expanding rivet (1).




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




- Unclip headlining (1) downwards from clips (2).
- Carefully unclip headlining (1) from the slide/tilt sunroof unit and clamps and the clamps (3) in the area of the dotted line.




**NOTICE**

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

- Feed out headlining (1) from the respective lips of edge protection with the assistance of a second person.
- Place the headlining (1) in the vehicle with an auxiliary person.

**MAIN WORK**

**12 – Removing head airbag.**

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

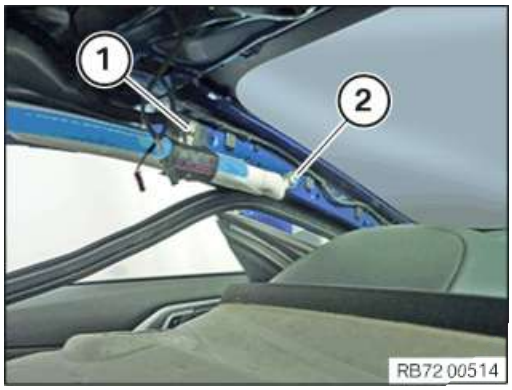
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**WARNING**

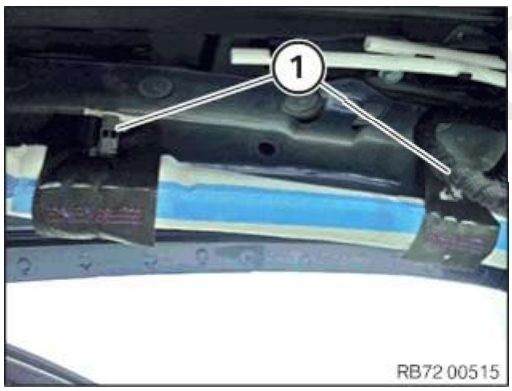
**Airbag unit.**

**Danger! Life-threatening injuries!**

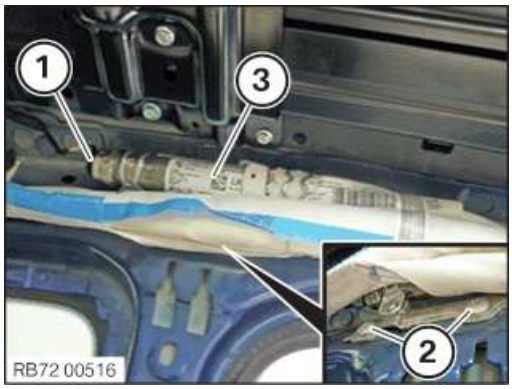
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators



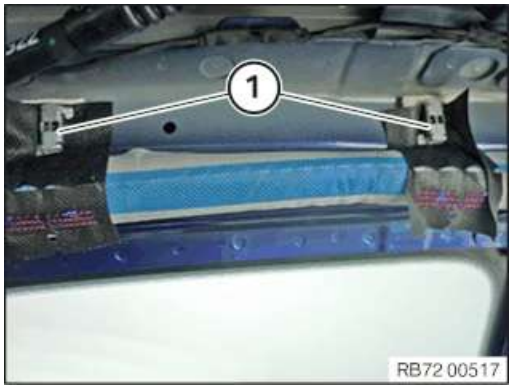

- Release the clamp (1) with the correctly selected special tool.
- Release the screw (2).




- Release the clamps (1) with the correctly selected special tool.



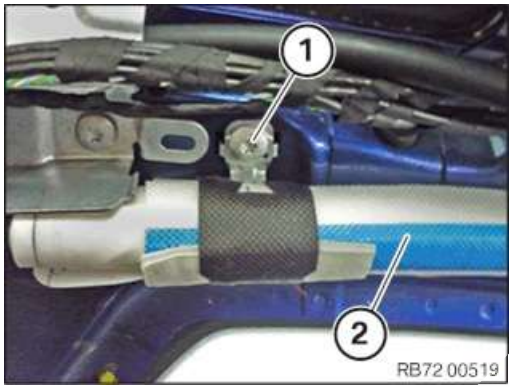

- Unlock plug connection (1) and disconnect.
- Loosen screws (2).
- Feed out the gas generator (3) with the folding pack.




- Release the clamps (1) with the correctly selected special tool.




- Unclip the cable clip (1).




- Release the screw (1).
- Feed out the head airbag (2).

**13 – Mounting head airbag**

**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**

**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

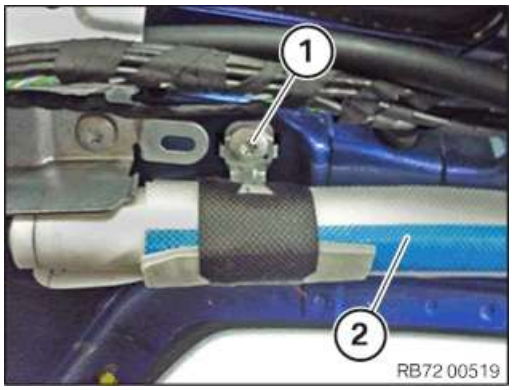
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**NOTICE**

In order to ensure correct function, the head airbag **must** be positioned so that the printed, coloured line points towards the vehicle interior across the entire component length.

**NOTICE**

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



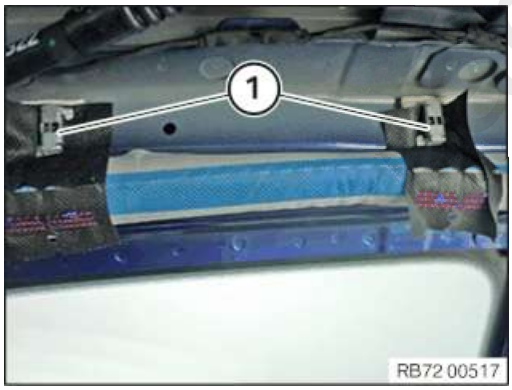

- Feed in the head airbag (2) and position it correctly.
- Tighten down screw (1).

**Head airbag on bodyshell**

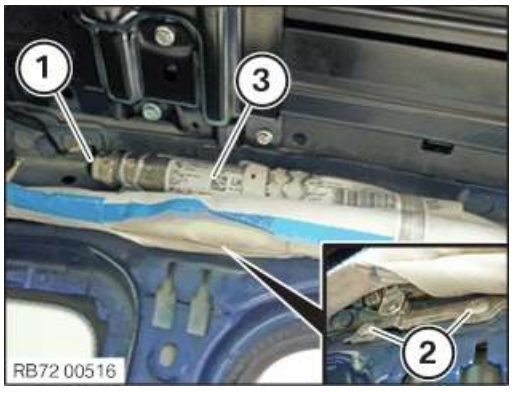
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 8 Nm |




- Clip in the cable clip (1).




- Clip in the clamps (1).



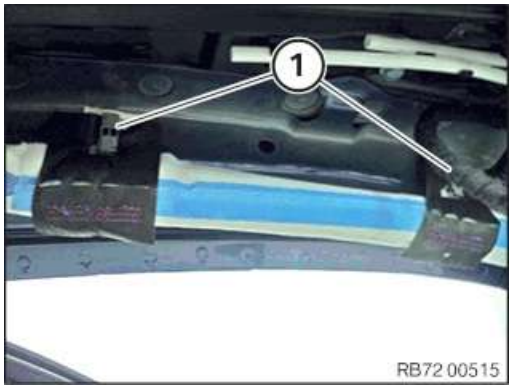

- Feed in the gas generator (3) with the folding pack and correctly position.
- Tighten the screws (2).

**Head airbag on bodyshell**

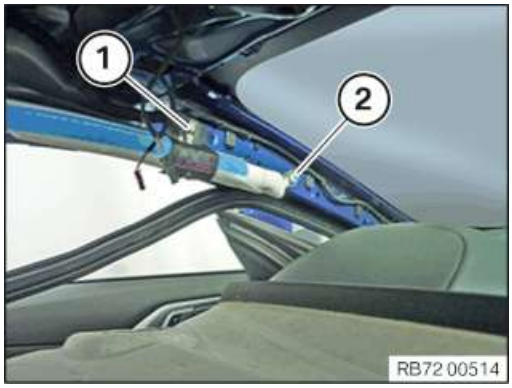
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 8 Nm |

- Connect connectors (1) and lock.

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- Clip in the clamps (1).




- Clip in the clamp (1).
- Tighten down screw (2).

**Head airbag on bodyshell**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 8 Nm |

## POSTPROCESSES

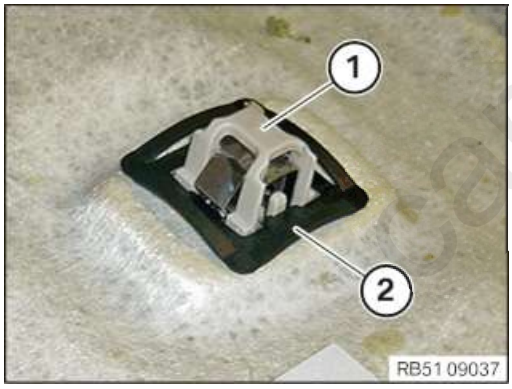
### 14 – Install the headlining (with slide/tilt sunroof) (lowered)

**Prerequisite**

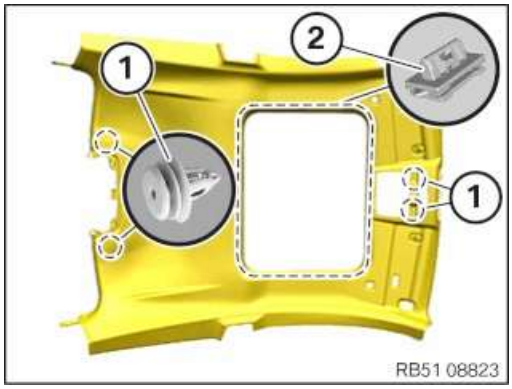
The front seats have been fully adjusted towards the bottom.

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

The rear seat backrest is folded down toward the front.




- Install the end support of the sun visors (1) in the headlining and mount it with clamps (2).

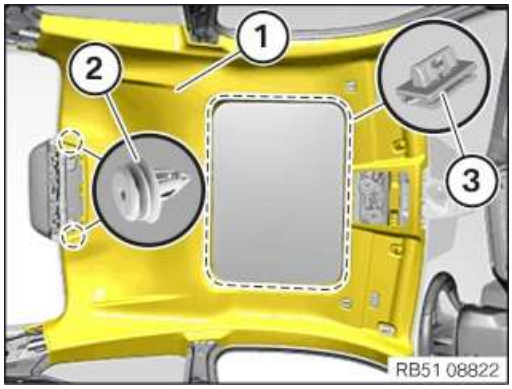



- Check the clips (1) on the headlining for damage.

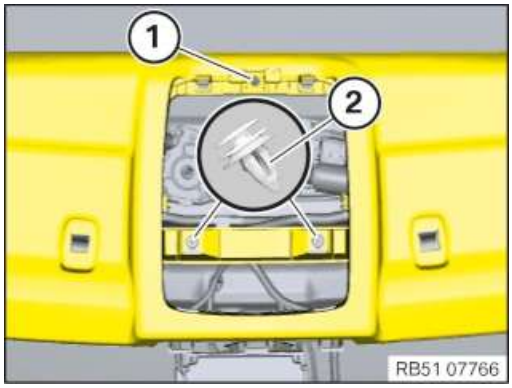
  Defective or missing clips (1) must be renewed.
- Check the clamps (2) along the dotted line for damage.

  Defective or missing clamps (2) need to be renewed.

carmanualsdiagn.com



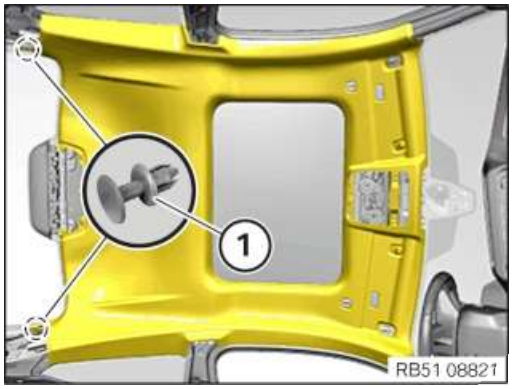

- Insert the headlining (1) with the help of an auxiliary person onto the respective edge protection.
- Clip in headlining (1) on the clips (2).
- Clip the headlining (1) in the area of the dotted line at the slide/tilt sunroof unit and the clamps (3).




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

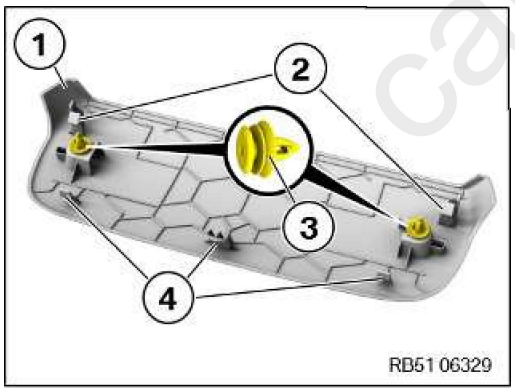
**Headlining to frame**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 1,5 Nm |




- Secure expanding rivet (1).

**15 – 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.

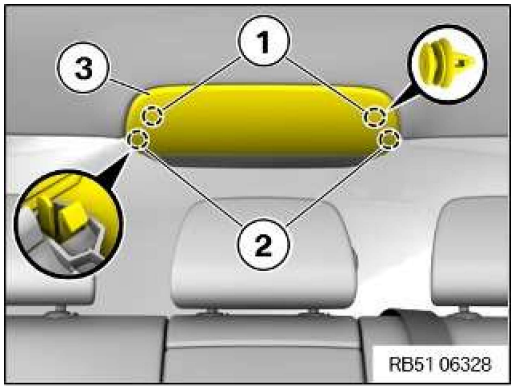
**Result**

» The latch mechanism or the guide is damaged.

**Measure**

- Renew the trim for the additional brake light.

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

**16 – Installing the left and right B-pillar trim panel**

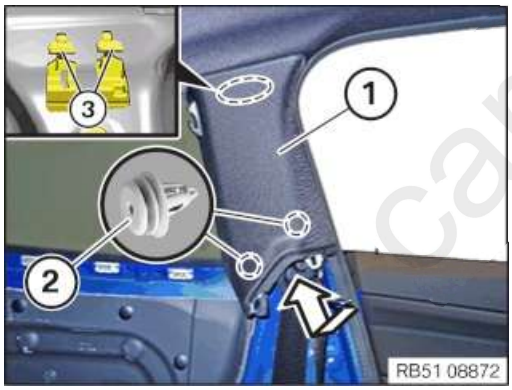
**NOTICE**

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

▸ **Install the B-pillar trim panel**




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




- Insert B-pillar trim panel (1) in direction of arrow into the guides (3) and under the lip of edge protection.
- Clip in the B-pillar trim panel (1) at the clips (2).

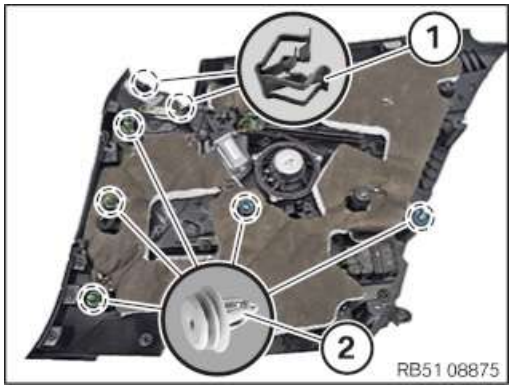
**17 – Install side trim panel, rear left and right**

**NOTICE**

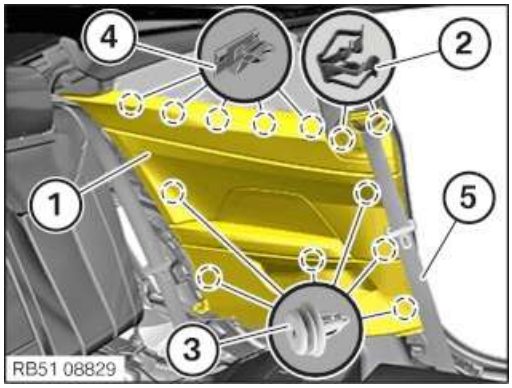
Description is for left component only. Procedure on the right side is identical.

▸ **Install rear side trim panel**

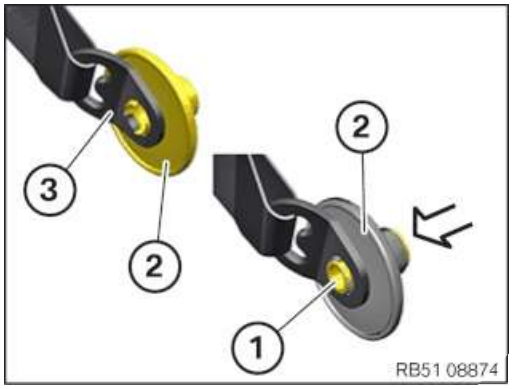
cardiagn.com



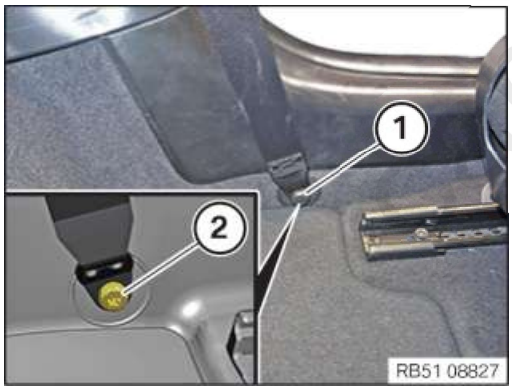

- Check clamps (1) for damage; renew them if necessary.
- Check clips (2) for damage, replace if necessary.




- Connect all the connectors to rear side trim panel (1) of the wiring harness and lock and disconnect them.
- Guide in upper seat belt (5).
- Position rear side trim panel (1) and clip it into clamps (4).
- Clip rear side trim panel (1) into clips (3).
- Clip rear side trim panel (1) into clamps (2).




- Clip cover (2) of end fitting (3) into end fitting (3).
- Slide sleeve (1) into cover (2) of end fitting (3).




- Correctly position the seat belt end fitting.
- Tighten down screw (2).

**End fitting to body**

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

- Clip in cover cap (1).

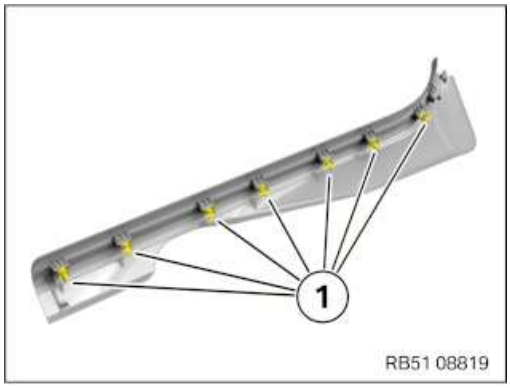
### 18 – Installing the inner door sill cover strip on the left and right

**NOTICE**

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

▸ **Installing the inner door sill cover strip**

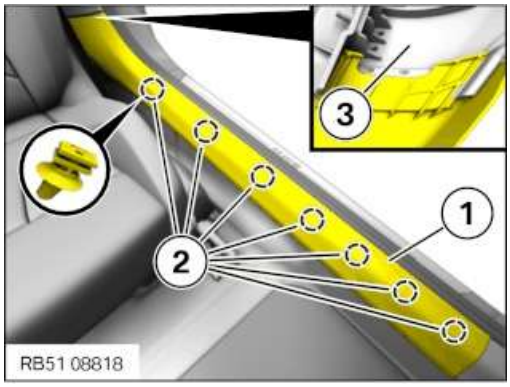
rdiagn.com




**NOTICE**

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

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




- Insert the door sill cover strip (1) below the rear side trim panel (3).
- Clip the door sill cover strip (1) in with the clips (2).

### 19 – Installing the C-pillar trim panel on the left and right

**NOTICE**

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

▸ **Installing C-pillar trim panel**

**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.

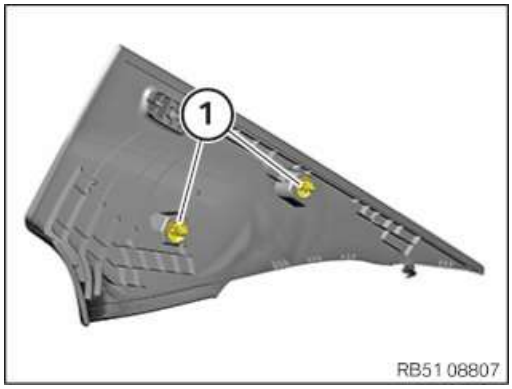
**RISK OF DAMAGE**

**Damage to the head airbag.**

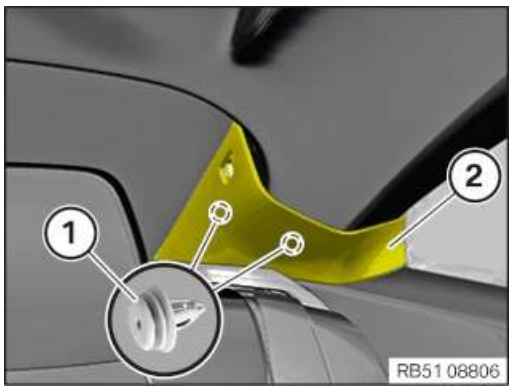
**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

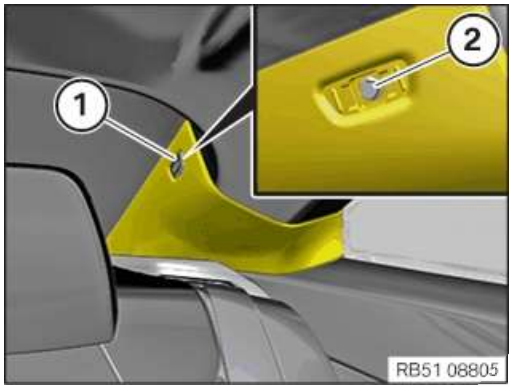
cardiagn.com




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




- Position C-pillar trim panel (2) and clip it onto clips (1).




- Tighten down screw (2).

**C-pillar trim panel to body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

- Clip in cover (1) of the C-pillar trim panel.

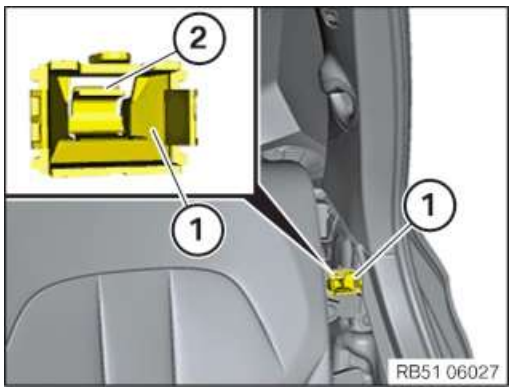
**20 – Install the backrest side section on the left and right**

**NOTICE**

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

▸ **Installing backrest side section**

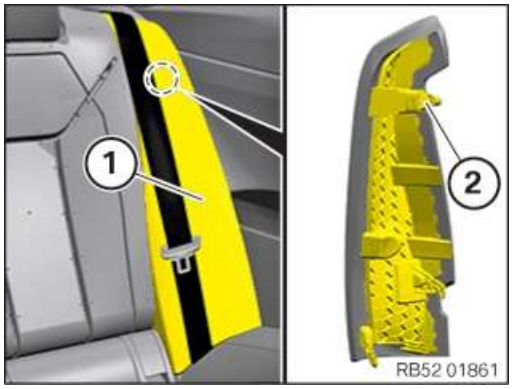
▹ **Installing backrest side section**




- Release mounting element (1) from latch mechanism (2) and remove it from the body.
- Check the mounting element (1) for damage, renew if necessary.

  The mounting element (1) must not be damaged or missing.
- Fit mounting element (1) on the backrest side section.

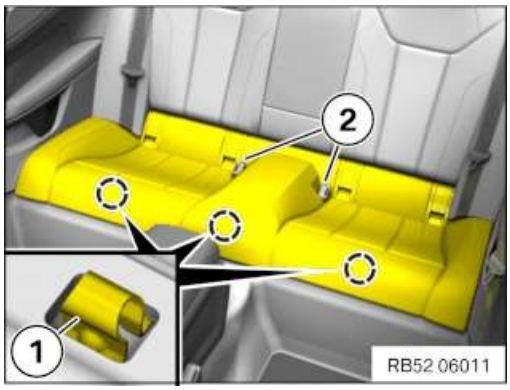
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- Insert lower backrest side section (1) into the guide and position it correctly.
- Clip in backrest side section (1) to mounting element (2).

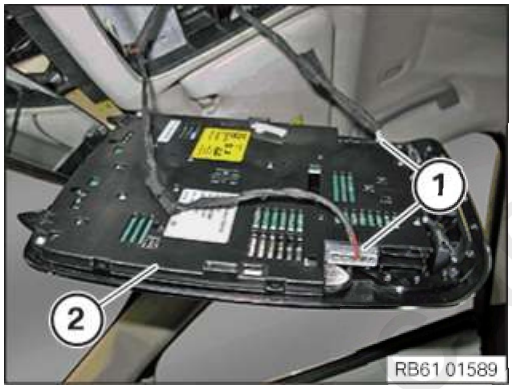
◁

**21 – Installing the rear seat bench**

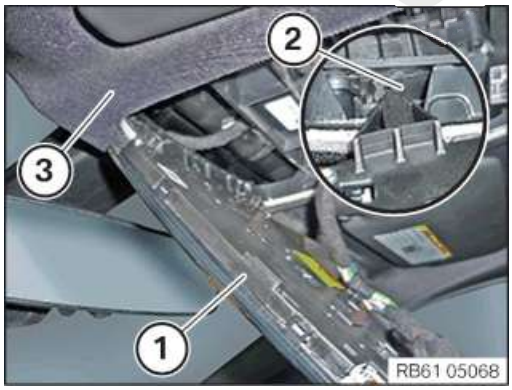



- Feed in the seat belt buckles (2).
- Position the rear seat bench and clip into the clamps (1).

**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.




- Insert the roof function centre (FZD) (1) as shown at a steep angle in the two guides (2) on the headlining (3).
- Make sure the headlining is not deformed during this operation.

.com




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




- Slide the special tool 2 298 505 in the direction of arrow between the FZD frame and the headlining along the dotted line to adjust the headlining correctly.




- Tighten the screws (1).

**Roof function centre (FZD)**

| | | |
|---|---|---|
| | Tightening torque | 1.2 Nm |




- Clip in the cover (1).

### 23 – Installing the sun visors and the end support on the left and right

**NOTICE**

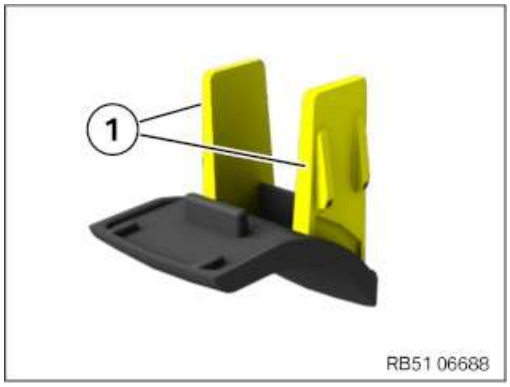
Description is for left component only. Procedure on the right side is identical.

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

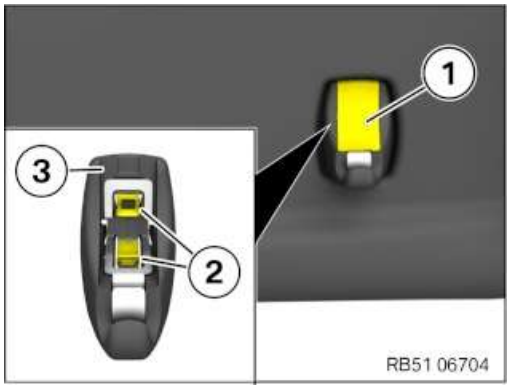
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**NOTICE**

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




- Check the guides (1) on the cover of the end support for damage, renew if necessary.




- Clip in the counter support (3) to the headlining.
- Make sure the clamps (2) are engaged correctly.
- Clip in the cover (1).




- Connect and lock corresponding connectors.
- Install the sun visors.
- Tighten down screw (2).

**Sun visor to body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3.3 Nm |

- Close the cover (1).




- Hook the sun visors (1) to the end support (2).

**24 – Install the A-pillar trim panel on the left and right**

**NOTICE**

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

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

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

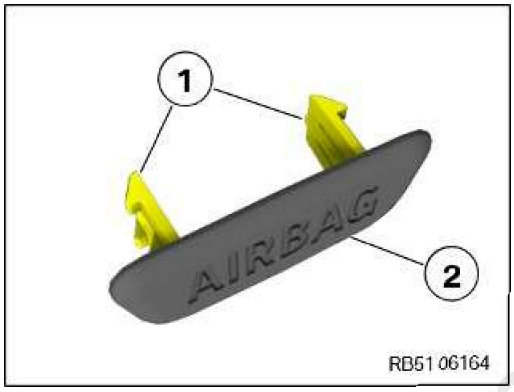
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**RISK OF DAMAGE**

**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.




**Check**

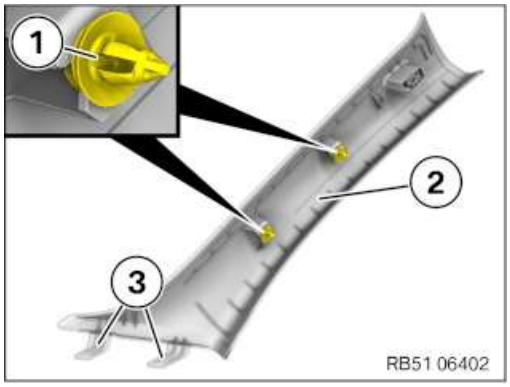
- Check retaining lugs (1) of cover (2) for damage.

**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.

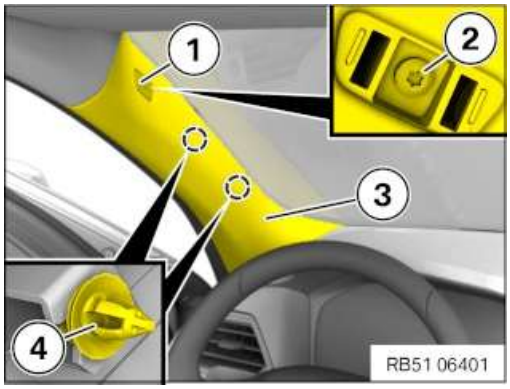
**Result**

» Guide is damaged.

**Measure**

- Renew the A-pillar trim panel.

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- 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).

## Additional Information

### Overview of Tightening Torques

**Head airbag on bodyshell** — Used in step 13

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 8 Nm |

**Headlining to frame** — Used in step 14

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 1,5 Nm |

**End fitting to body** — Used in step 17

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

**C-pillar trim panel to body** — Used in step 19

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

**Roof function centre (FZD)** — Used in step 22

| | | | |
|---|---|---|---|
| | | Tightening torque | 1.2 Nm |

**Sun visor to body** — Used in step 23

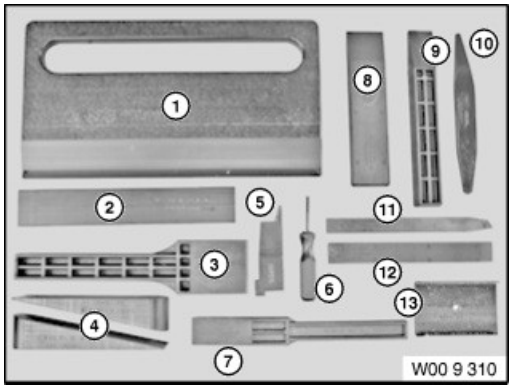
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3.3 Nm |

**A-pillar trim panel to body** — Used in step 24

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

### Overview of Special Tools

**0 493 752 (00 9 329) Case**

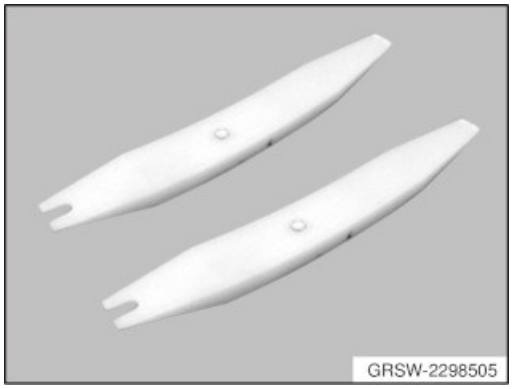



**Common** — Used in step 17

| | |
|---|---|
| Usage | (Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019. |
| 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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**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) | |

## Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 520 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 1520 |
| 72 00 ... Safety regulations for handling components with gas generators | 1 |

| Repair instructions | Used in step |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |

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| | |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |

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# 72 12 060 Removing and installing or replacing left or right head airbag

**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**

**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

## PRELIMINARY WORK

### 1 – Remove left and right A-pillar trim panel

**NOTICE**

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

▸ **Remove the A-pillar trim panel**

**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.

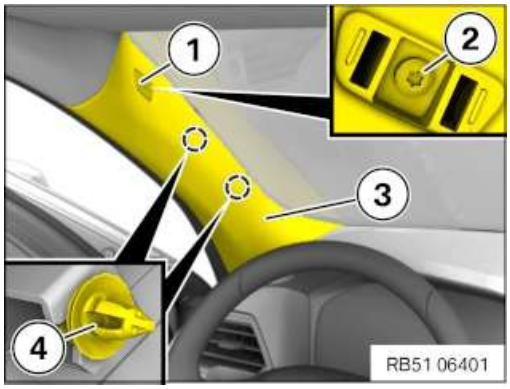
**RISK OF DAMAGE**

**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

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- Unclip cover (1) with a suitable special tool from the special tool kit 0 493 752 (00 9 329).
- Loosen screw (2).
- Unclip A-pillar trim panel (3) with clips (4) and feed it out to the top.

**2 – Removing the sun visors and the end support on the left and right**

**NOTICE**

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

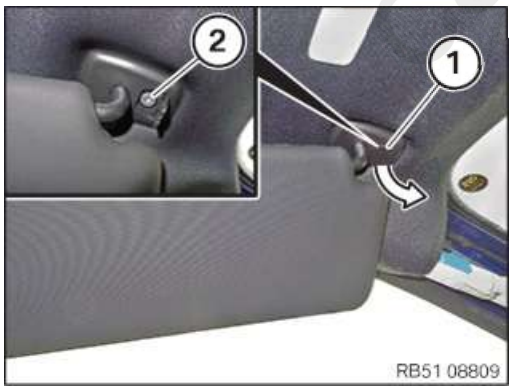
▸ **Remove the sun visor and the counter support**

**NOTICE**

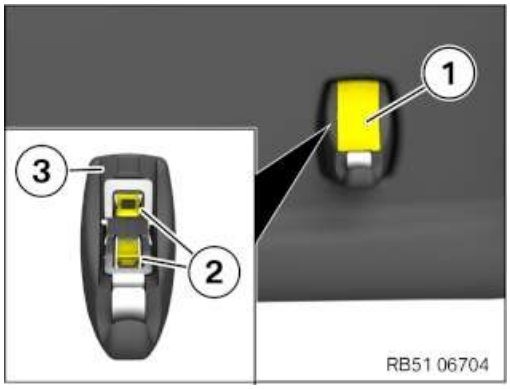
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Detach sun visors (1) from end support (2) and swivel to the side.




- Fold open cover (1).
- Loosen screw (2).
- Remove sun visors and unlock and disconnect the associated plug connection.




- Unclip cover (1) using a suitable tool.
- Push the clamps (2) together and pull the counter support (3) out of the headlining.

**3 – Removing the roof function centre (FZD)**



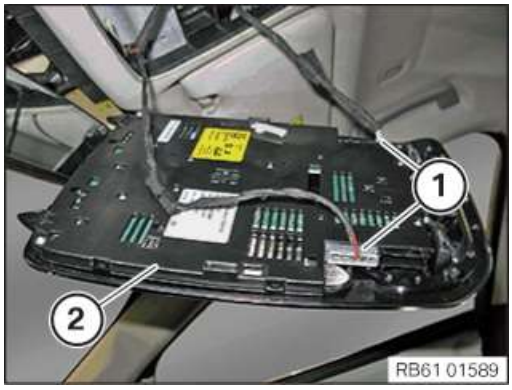

- Unclip the cover (1).




- Loosen screws (1).



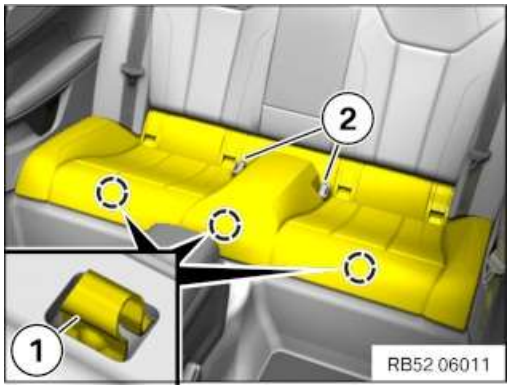

- Unclip the roof function centre (FZD) (1) from the clamps (2).
- Thread the roof function centre (FZD) (1) out of the guides (3).




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

**4 – Remove rear seat bench**

ardiagn.com




- Unclip the rear seat bench upwards from clamps (1) and guide out seat belt buckles (2).
- Remove the rear seat bench.

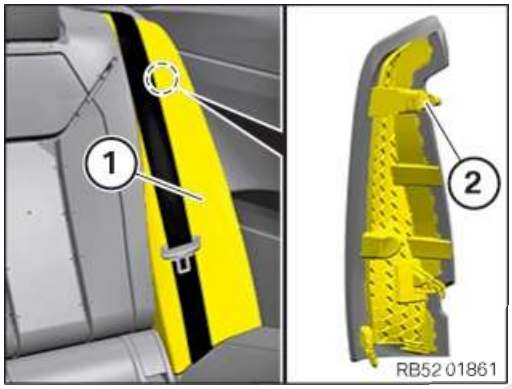
**5 – Remove backrest side section on left and right**

**NOTICE**

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

▸ **Remove armrest side section**

▹ **Remove armrest side section**




- Reach behind the backrest side section (1) from the top and unclip the backrest side section (1) from the mounting element (2) to the front.
- Remove backrest side section (1) in the upward direction from the guide.

◃

**6 – Removing the C-pillar trim panel on the left and right**

**NOTICE**

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

▸ **Remove C-pillar trim panel**

**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.

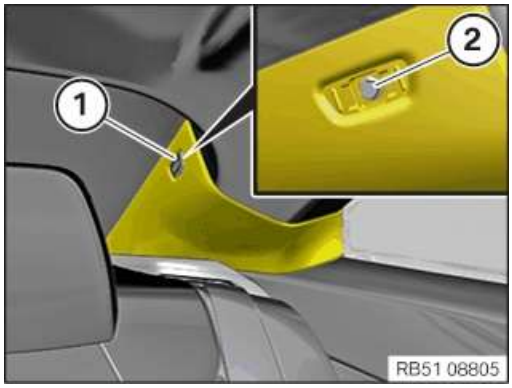
cardiagn.com

**RISK OF DAMAGE**

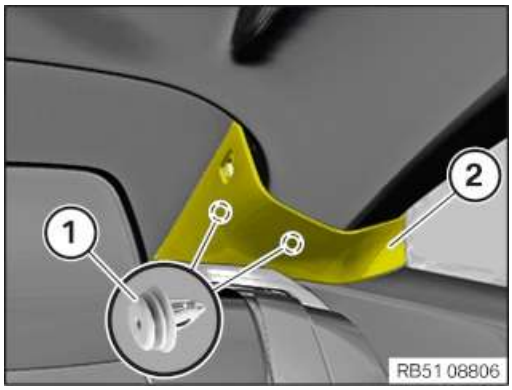
**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.




- Unclip cover (1) of the C-pillar trim panel.
- Release the screw (2).




- Unclip C-pillar trim panel (2) from clips (1) and guide it out.

**7 – Removing the inner door sill cover strip on the left and right**

**NOTICE**

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

▸ **Removing the inner door sill cover strip**

**RISK OF DAMAGE**

**Bending of plastic parts.**

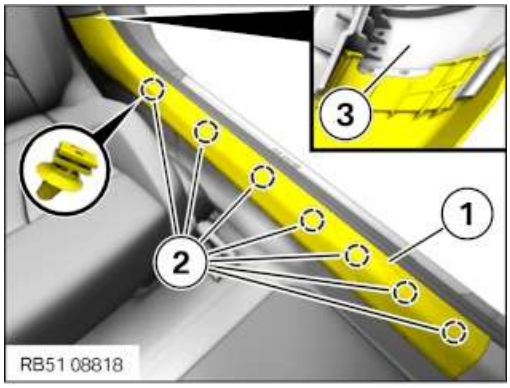
**Application of too much force can lead to bending of plastic parts.**

- Place special tool directly beside the mounting clip.
- Continue unclipping the part without using the tool if possible.

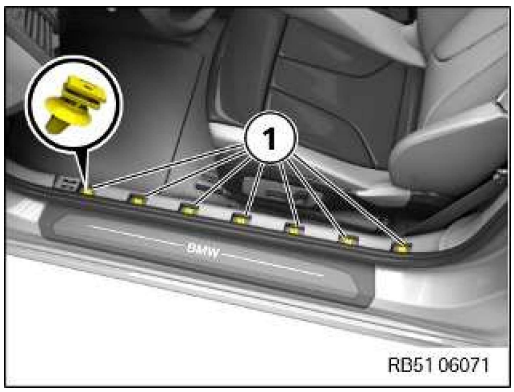
**NOTICE**

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

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- Release door sill cover strip (1) with clips (2) starting from the front using a suitable special tool from the set of special tools 0 493 752 (00 9 329).
- Guide out and remove door sill cover strip (1) under the rear side trim panel (3) .



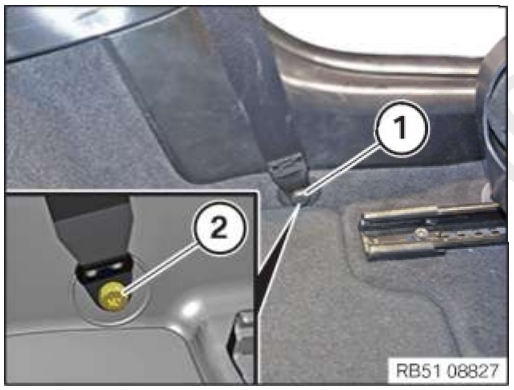

- If necessary, remove clips (1) and connect them to the door sill cover strip.

### 8 – Remove side trim panel, rear left and right

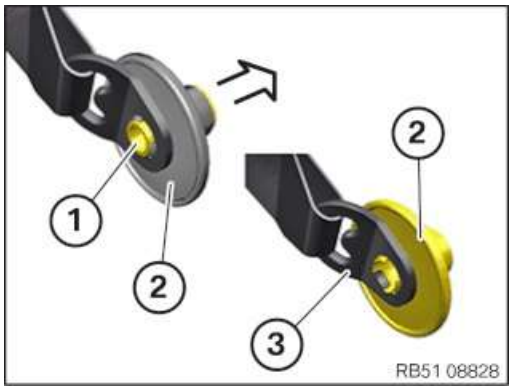
**NOTICE**

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

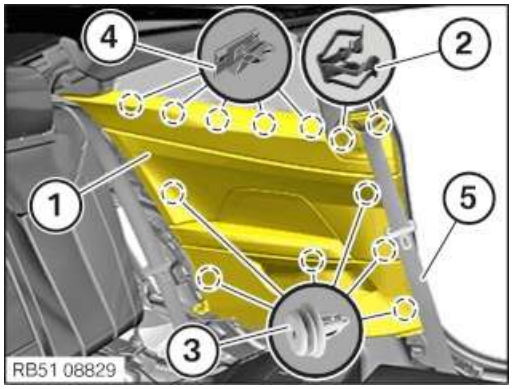
▸ **Remove rear side trim panel**




- Unclip the cover cap (1).
- Release the screw (2).




- Pull out the sleeve (1) from the cover (2) of the end fitting (3).
- Unclip the cover (2) of the end fitting (3) from the end fitting (3).



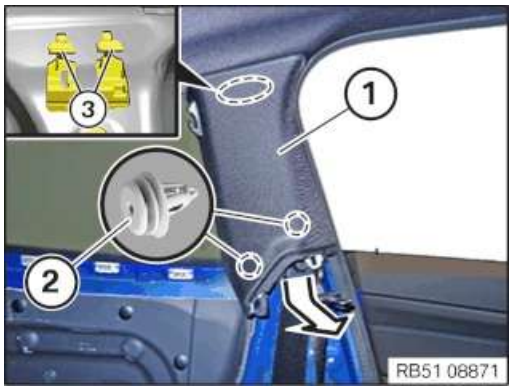

- Unclip the rear side trim panel (1) with a suitable tool at the clamps (2).
- Unclip the rear side trim panel (1) with a suitable tool at the clips (3).
- Release the rear side trim panel (1) at the clamps (4) and feed out at the edge protection.
- Unlock and disconnect all the plug connections at the rear side trim panel (1) of the wiring harness.
- Feed out the upper seat belt (5).

### 9 – Removing left and right B-pillar trim panel

**NOTICE**

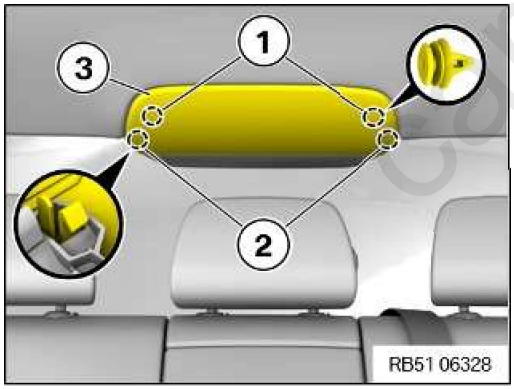
Description is for left component only. Procedure on the right side is identical.

▸ **Remove the B-pillar trim panel**




- Unclip the B-pillar trim panel (1) at the clips (2).
- Remove the B-pillar trim panel (1) from the lip of the edge protection and the guides (3) in the direction of the arrow.

### 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 – Lower roofliner

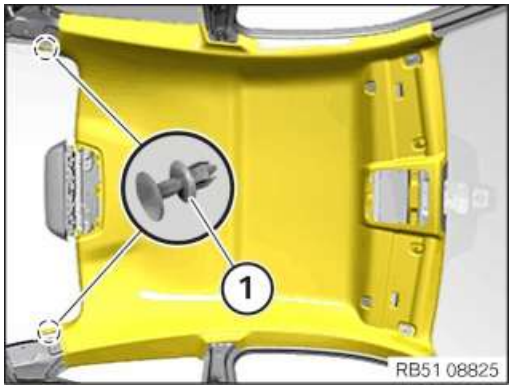
**Prerequisite**

The front seats have been fully adjusted towards the bottom.

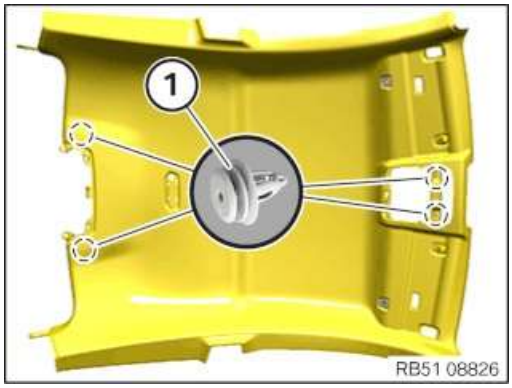
The front seat backrests have been fully adjusted towards the rear.

The rear seat backrest is folded down toward the front.

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- Loosen the expanding rivet (1).




- Unclip the headlining at the clips (1) downwards.




**NOTICE**

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

- Feed out headlining (1) from the respective lips of edge protection with the assistance of a second person.
- Place the headlining (1) in the vehicle with an auxiliary person.

## MAIN WORK

### 12 – Removing head airbag.

**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.

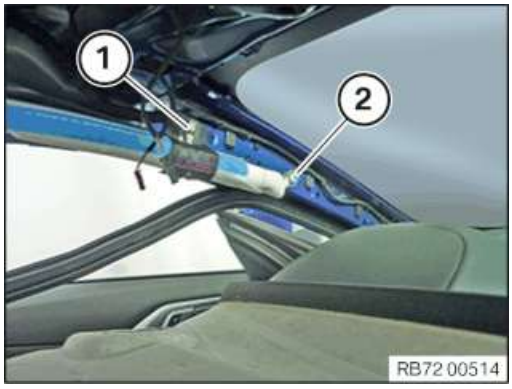
cardiagn.com

**WARNING**

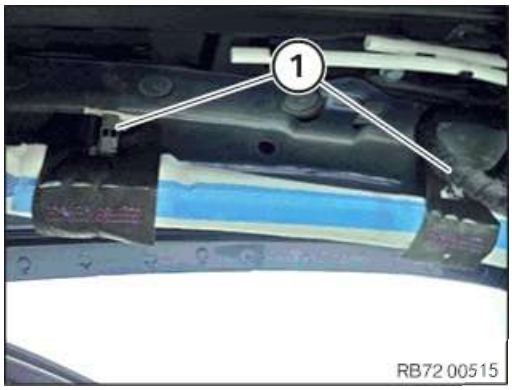
**Airbag unit.**

**Danger! Life-threatening injuries!**

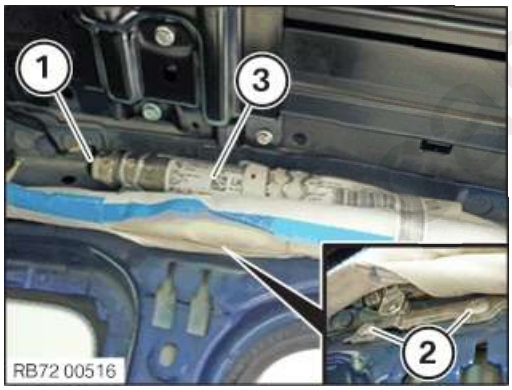
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators



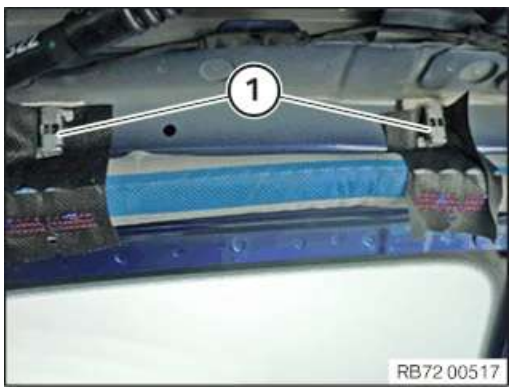

- Release the clamp (1) with the correctly selected special tool.
- Release the screw (2).




- Release the clamps (1) with the correctly selected special tool.




- Unlock plug connection (1) and disconnect.
- Loosen screws (2).
- Feed out the gas generator (3) with the folding pack.

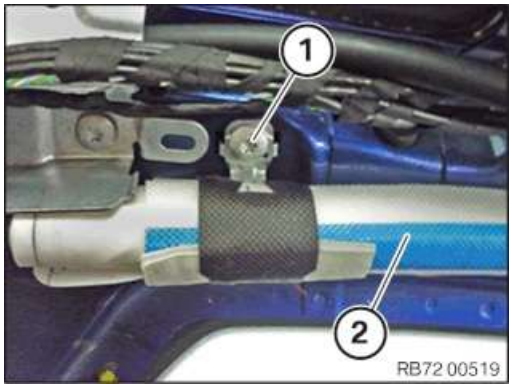



- Release the clamps (1) with the correctly selected special tool.

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- Unclip the cable clip (1).




- Release the screw (1).
- Feed out the head airbag (2).

**13 – Mounting head airbag**

**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**

**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

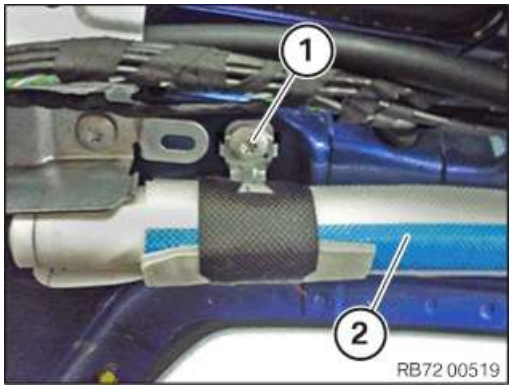
**NOTICE**

In order to ensure correct function, the head airbag **must** be positioned so that the printed, coloured line points towards the vehicle interior across the entire component length.

**NOTICE**

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

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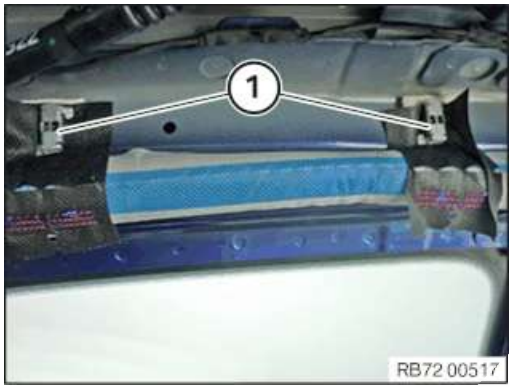

- Feed in the head airbag (2) and position it correctly.
- Tighten down screw (1).

**Head airbag on bodyshell**

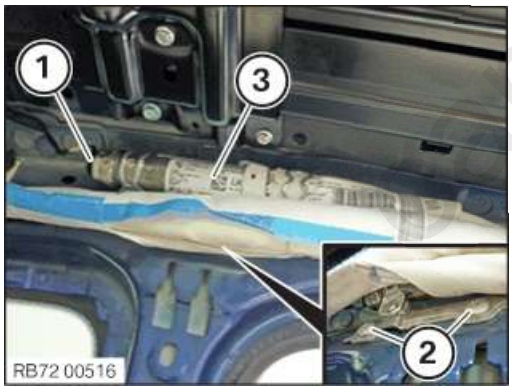
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 8 Nm |




- Clip in the cable clip (1).




- Clip in the clamps (1).

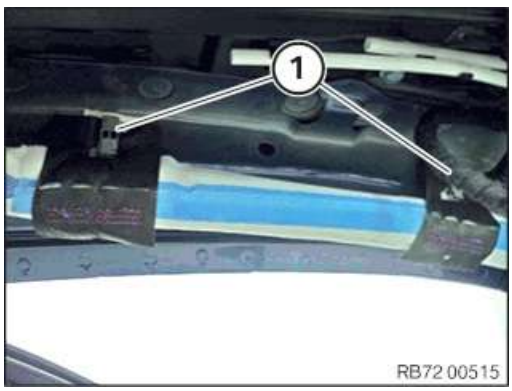



- Feed in the gas generator (3) with the folding pack and correctly position.
- Tighten the screws (2).

**Head airbag on bodyshell**

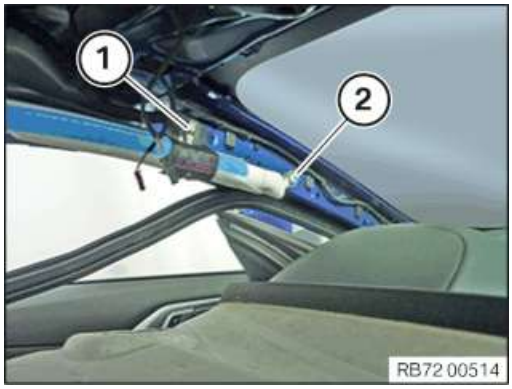
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 8 Nm |

- Connect connectors (1) and lock.




- Clip in the clamps (1).

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- Clip in the clamp (1).
- Tighten down screw (2).

**Head airbag on bodyshell**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 8 Nm |

## POSTPROCESSES

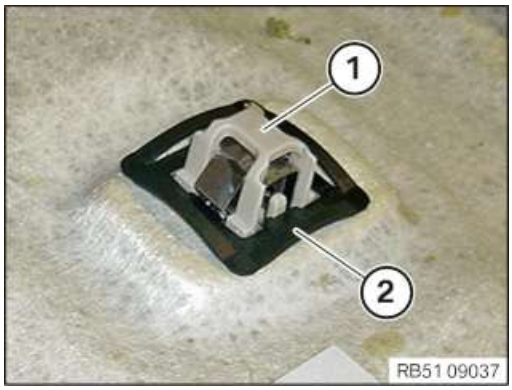
### 14 – Install the headlining (lowered)

**Prerequisite**

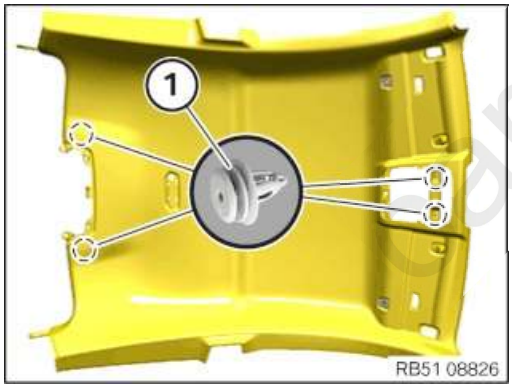
The front seats have been fully adjusted towards the bottom.

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

The rear seat backrest is folded down toward the front.

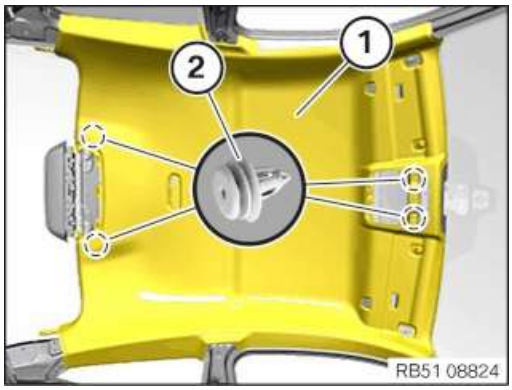



- Install the end support of the sun visors (1) in the headlining and mount it with clamps (2).



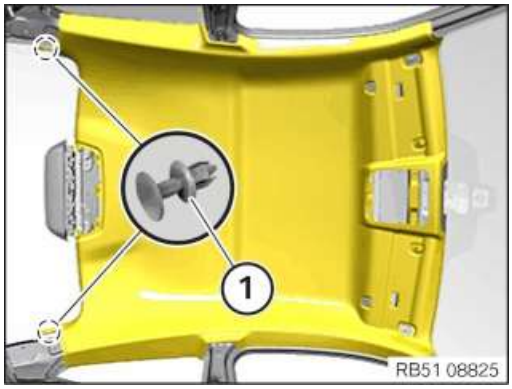

- Check the clips (1) on the headlining for damage.

  Defective or missing clips (1) must be renewed.



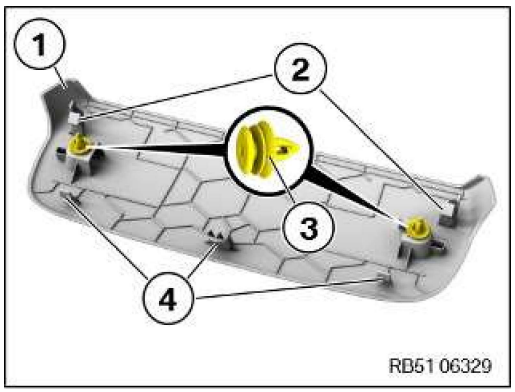

- Insert the headlining (1) with the help of an auxiliary person onto the respective edge protection.
- Clip in headlining (1) on the clips (2).

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- Secure expanding rivet (1).

### 15 – Installing trim for additional brake light




**Check**

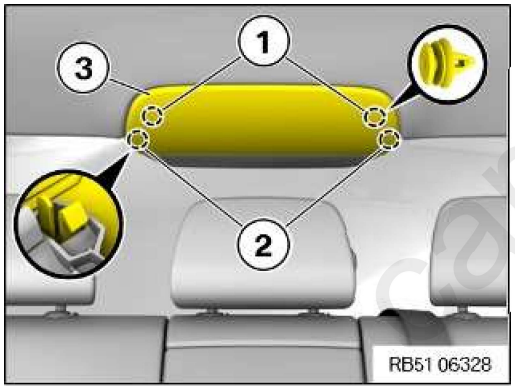
- Check the clips (3) for damage and renew if necessary.
- Check latch mechanisms (2) and guides (4) for damage.

**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).

### 16 – Installing the left and right B-pillar trim panel

**NOTICE**

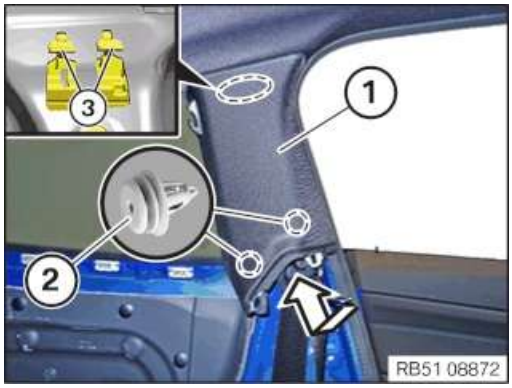
Description is for left component only. Procedure on the right side is identical.

▸ **Install the B-pillar trim panel**

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



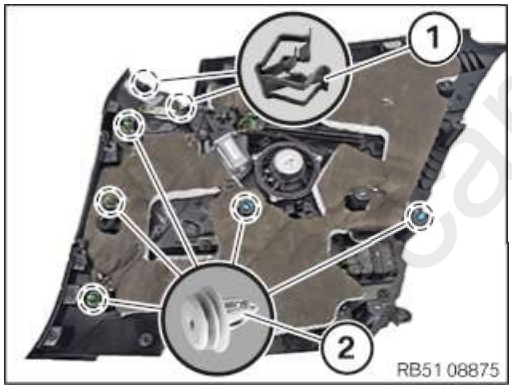

- Insert B-pillar trim panel (1) in direction of arrow into the guides (3) and under the lip of edge protection.
- Clip in the B-pillar trim panel (1) at the clips (2).

**17 – Install side trim panel, rear left and right**

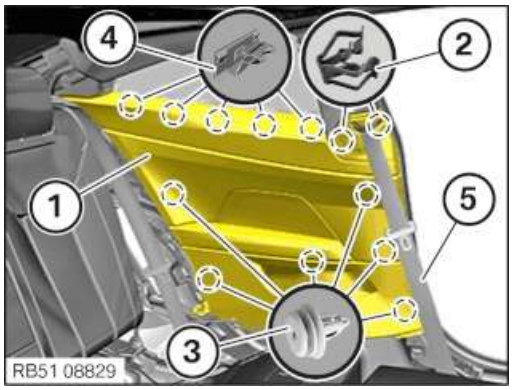
**NOTICE**

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

**▸ Install rear side trim panel**

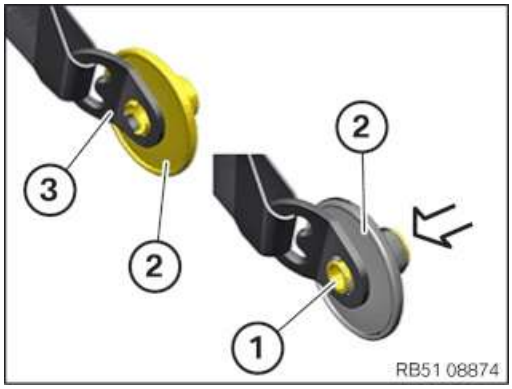



- Check clamps (1) for damage; renew them if necessary.
- Check clips (2) for damage, replace if necessary.

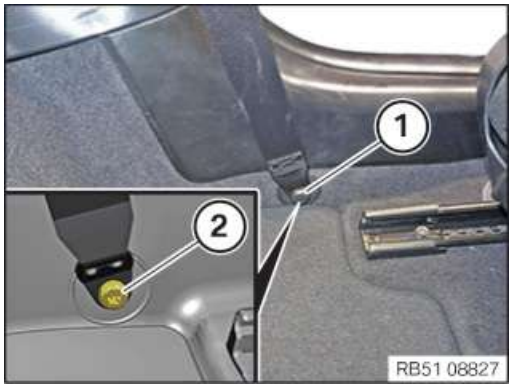



- Connect all the connectors to rear side trim panel (1) of the wiring harness and lock and disconnect them.
- Guide in upper seat belt (5).
- Position rear side trim panel (1) and clip it into clamps (4).
- Clip rear side trim panel (1) into clips (3).
- Clip rear side trim panel (1) into clamps (2).

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- Clip cover (2) of end fitting (3) into end fitting (3).
- Slide sleeve (1) into cover (2) of end fitting (3).




- Correctly position the seat belt end fitting.
- Tighten down screw (2).

**End fitting to body**

| | | | |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

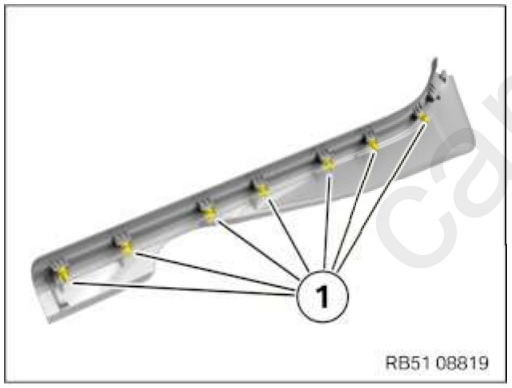
- Clip in cover cap (1).

### 18 – Installing the inner door sill cover strip on the left and right

**NOTICE**

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

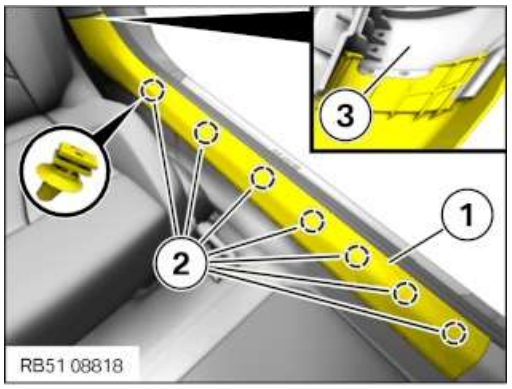
▸ **Installing the inner door sill cover strip**




**NOTICE**

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

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




- Insert the door sill cover strip (1) below the rear side trim panel (3).
- Clip the door sill cover strip (1) in with the clips (2).

### 19 – Installing the C-pillar trim panel on the left and right

**NOTICE**

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

▸ **Installing C-pillar trim panel**

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

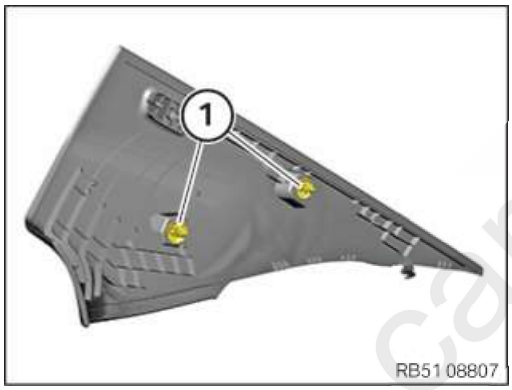
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

**RISK OF DAMAGE**

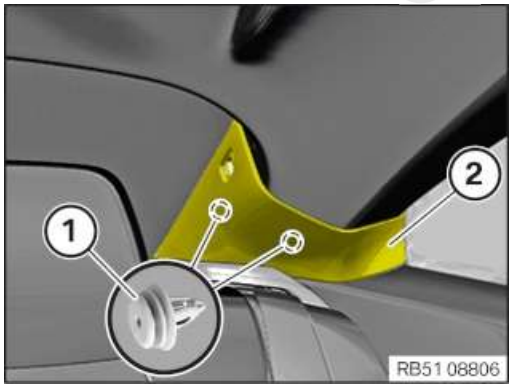
**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.

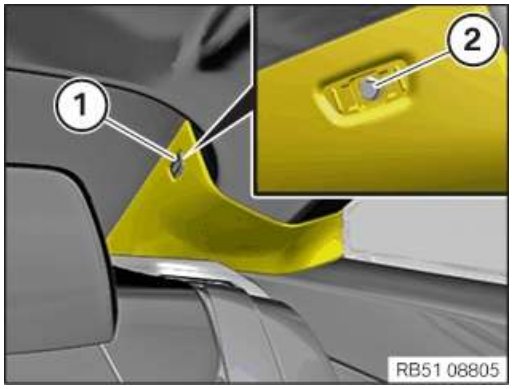



- Check clips (1) for damage and, if necessary, renew them.




- Position C-pillar trim panel (2) and clip it onto clips (1).

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- Tighten down screw (2).

**C-pillar trim panel to body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

- Clip in cover (1) of the C-pillar trim panel.

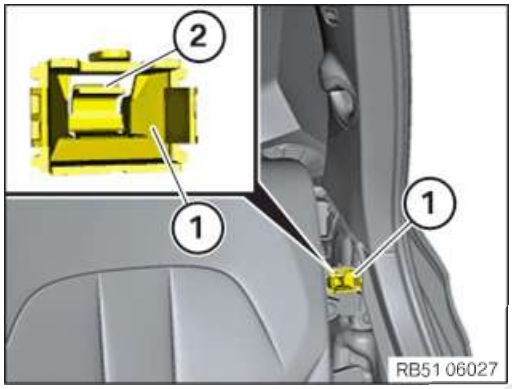
## 20 – Install the backrest side section on the left and right

**NOTICE**

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

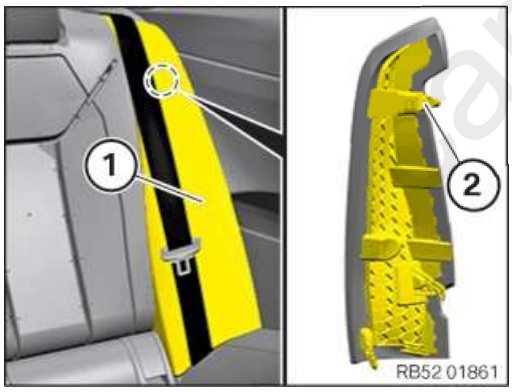
▶ **Installing backrest side section**

▷ **Installing backrest side section**




- Release mounting element (1) from latch mechanism (2) and remove it from the body.
- Check the mounting element (1) for damage, renew if necessary.

  The mounting element (1) must not be damaged or missing.
- Fit mounting element (1) on the backrest side section.

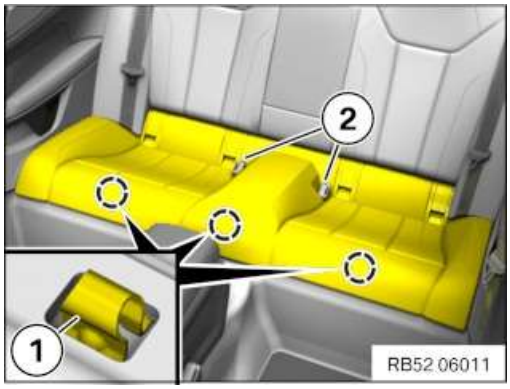



- Insert lower backrest side section (1) into the guide and position it correctly.
- Clip in backrest side section (1) to mounting element (2).

◁

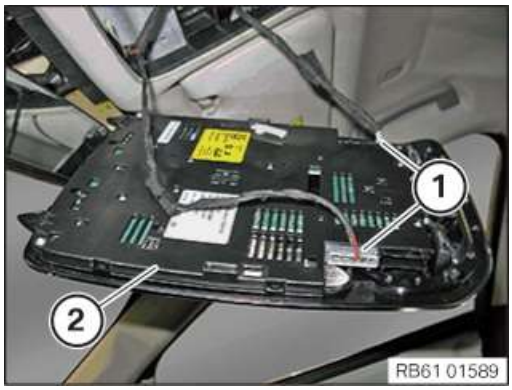
## 21 – Installing the rear seat bench

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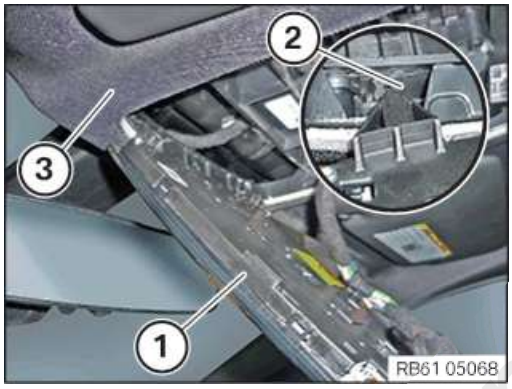



- Feed in the seat belt buckles (2).
- Position the rear seat bench and clip into the clamps (1).

**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.




- Insert the roof function centre (FZD) (1) as shown at a steep angle in the two guides (2) on the headlining (3).
- Make sure the headlining is not deformed during this operation.




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




- Slide the special tool 2 298 505 in the direction of arrow between the FZD frame and the headlining along the dotted line to adjust the headlining correctly.

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- Tighten the screws (1).

**Roof function centre (FZD)**

| | | |
|---|---|---|
| | Tightening torque | 1.2 Nm |




- Clip in the cover (1).

### 23 – Installing the sun visors and the end support on the left and right

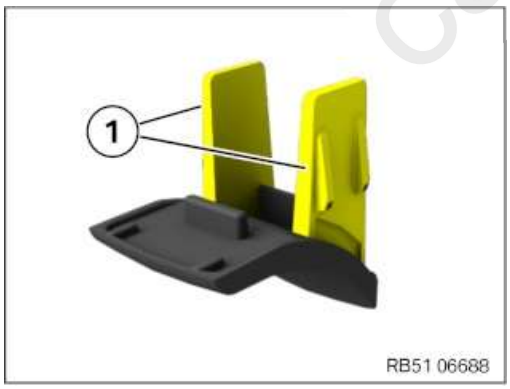
**NOTICE**

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

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

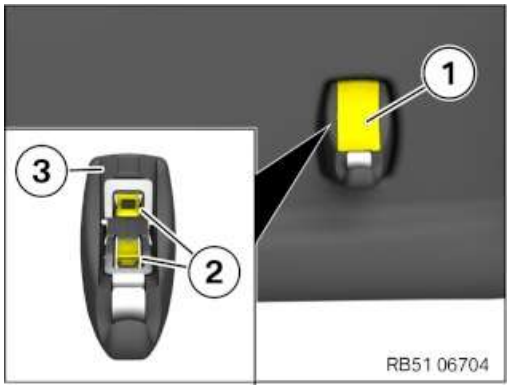
**NOTICE**

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

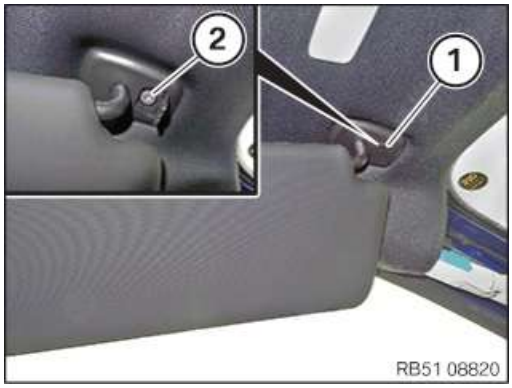



- Check the guides (1) on the cover of the end support for damage, renew if necessary.

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- Clip in the counter support (3) to the headlining.
- Make sure the clamps (2) are engaged correctly.
- Clip in the cover (1).




- Connect and lock corresponding connectors.
- Install the sun visors.
- Tighten down screw (2).

**Sun visor to body**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3.3 Nm |

- Close the cover (1).




- Hook the sun visors (1) to the end support (2).

**24 – Install the A-pillar trim panel on the left and right**

**NOTICE**

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

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

**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.

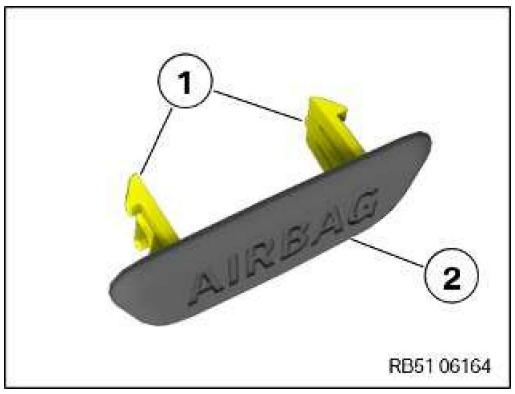
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**RISK OF DAMAGE**

**Damage to the head airbag.**

**Improper use of a tool when removing the trim panel may damage the head airbag.**

- Do not use sharp-edged tools when removing the trim panel.




**Check**

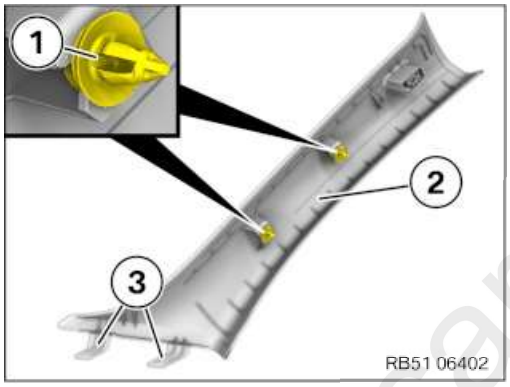
- Check retaining lugs (1) of cover (2) for damage.

**Result**

» Retaining lug is damaged.

**Measure**

- Renew the cover.




**Check**

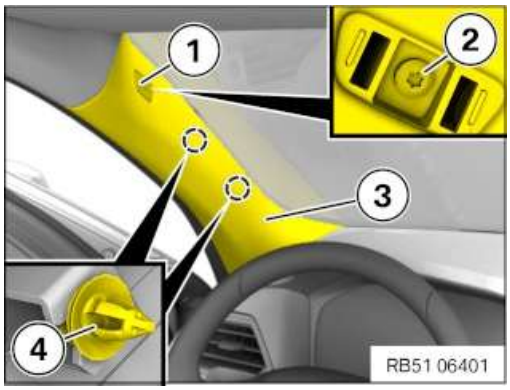
- Check the clips (1) for damage and renew if necessary.
- Check the guides (3) for damage.

**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).

## Additional Information

### Overview of Tightening Torques

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| Head airbag on bodyshell | | | Used in step 13 |
|---|---|---|---|
| Screw | | Tightening torque | 8 Nm |

| End fitting to body | | | Used in step 17 |
|---|---|---|---|
| M10 | | Tightening torque | 42 Nm |

| C-pillar trim panel to body | | | Used in step 19 |
|---|---|---|---|
| Screw | | Tightening torque | 2,6 Nm |

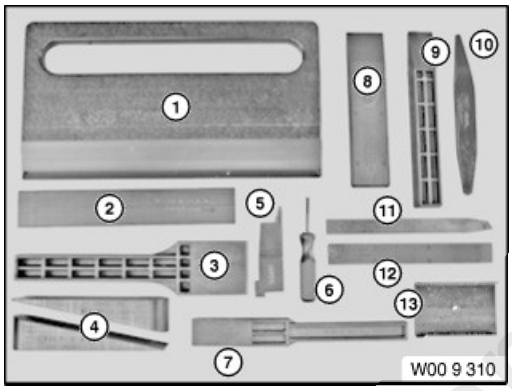
| Roof function centre (FZD) | | | Used in step 22 |
|---|---|---|---|
| | | Tightening torque | 1.2 Nm |

| Sun visor to body | | | Used in step 23 |
|---|---|---|---|
| Screw | | Tightening torque | 3.3 Nm |

| A-pillar trim panel to body | | | Used in step 24 |
|---|---|---|---|
| Sheet metal screw 4,8x38 | | Tightening torque | 2,6 Nm |

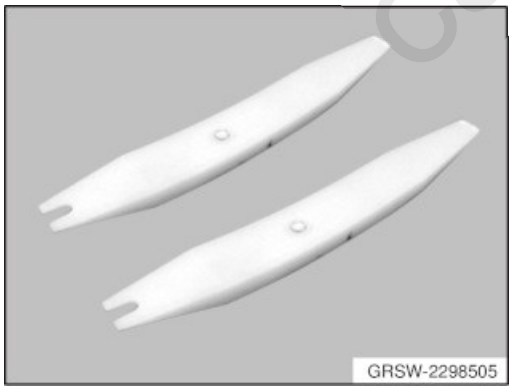
## Overview of Special Tools

### 0 493 752 (00 9 329) Case




| Common | Used in step 17 |
|---|---|
| Usage | (Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019. |
| Included in the tool or work | 0 490 527 |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 01 07 09 (530) |

### 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) |

## Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 520 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 1520 |

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| Repair instructions | Used in step |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
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| | |
|---|---|
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |
| 61 20 900 Disconnecting and connecting battery earth lead | 520 |


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# 72 12 004 Removing and installing/replacing airbag module for driver's knee protection

**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**

**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

## PRELIMINARY WORK

### 1 – Deactivating the 48 V electrical system

**Prerequisite**

Ignition is switched off.

**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

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**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.




**Check**

**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

**If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.




**WARNING**

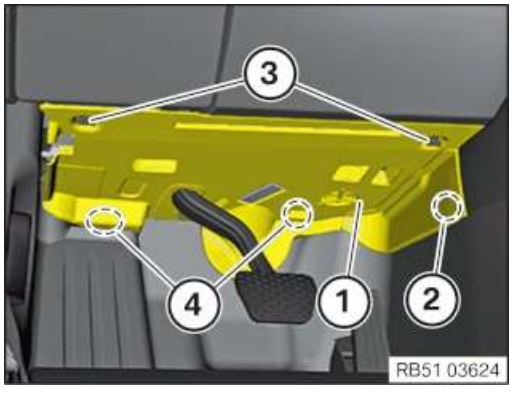
**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

**2 – Removing the trim panel for pedal mechanism**




- Unclip the trim panel for the pedal mechanism (1) towards the inside in this area (2).
- Turn the locks (3) by 90°.
- Detach the trim panel for the pedal mechanism (1) inwards out of the guides (4).
- Unlock associated plug connection and disconnect.

**3 – Disconnecting all battery earth leads**




- See additional information.

## MAIN WORK

### 4 – Removing knee airbag

**WARNING**

**Airbag unit.**

**Danger! Life-threatening injuries!**

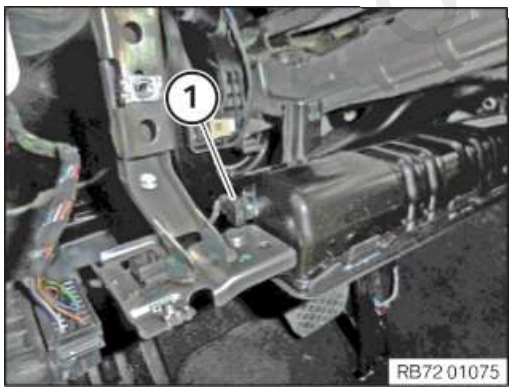
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

**WARNING**

**Pyrotechnic components.**

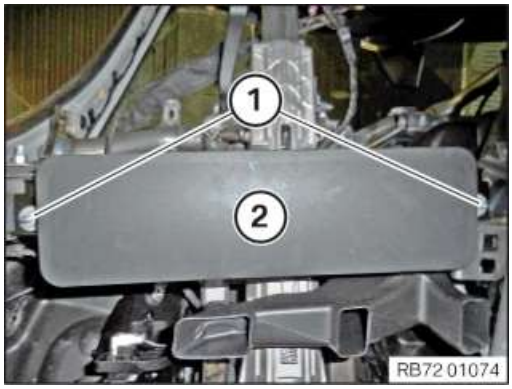
**Danger! Life-threatening injuries!**

- 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.




- Unlock plug connection (1) and disconnect.

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- Loosen nuts (1).
- Remove knee airbag (2).

**5 – Installing knee airbag**

**WARNING**

**Airbag unit.**

**Danger! Life-threatening injuries!**

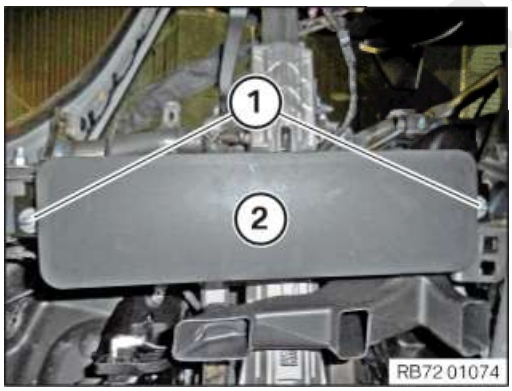
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

**WARNING**

**Pyrotechnic components.**

**Danger! Life-threatening injuries!**

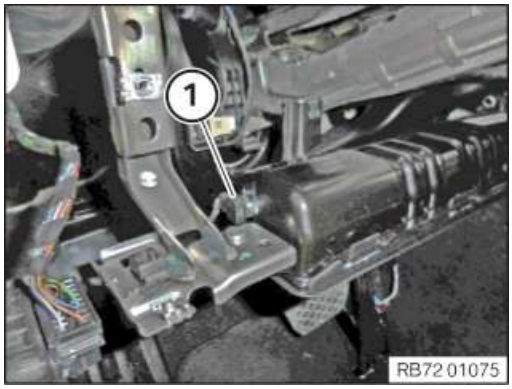
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.




- Position knee airbag (2) correctly.
- Tighten nuts (1).

**Knee airbag on support structure**

| | | | |
|---|---|---|---|
| Nut | | Tlghtening torque | 8 Nm |



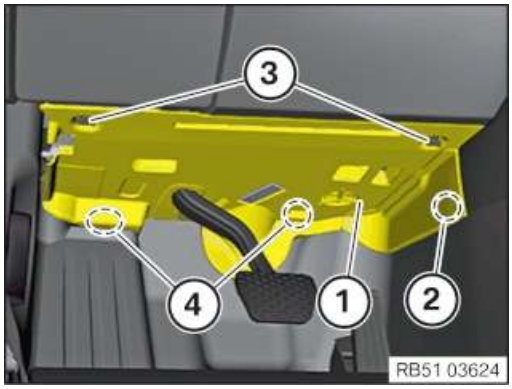

- Connect connectors (1) and lock.

### 6 – Connecting all battery earth leads




- See additional information.

### 7 – Installing the trim panel for the pedal mechanism




- Connect associated connector.
- Attach the trim panel for the pedal mechanism (1) in the guides (4) and fold it up.
- Clip the trim panel for the pedal mechanism (1) into the centre console in this area (2).

**TECHNICAL INFORMATION**

It is **imperative** that the screws caps of the trim panel be correctly locked. This is the only way to ensure that the trim panel does not come loose and potentially tilt into the pedal area.

- Insert screw caps (3) correctly and turn by 90° to lock.

### 8 – Activating the 48 V electrical system

**Prerequisite**

Ignition is switched off.

**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .

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- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |




- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).




- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

## Additional Information

### Overview of Tightening Torques

**Knee airbag on support structure** Used in step 5

| | | | |
|---|---|---|---|
| Nut | | Tlghtening torque | 8 Nm |

**Negative battery cable to 48-V battery** Used in step 8

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

### Overview of Special Tools

### Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 18 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 45 |

| Repair instructions | Used in step |
|---|---|

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| | |
|---|---|
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 36 |
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| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 36 |
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| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 36 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 36 |
| 61 20 900 Disconnecting and connecting battery earth lead | 36 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 36 |
| 61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) | 36 |
| 61 20 900 Disconnecting and connecting battery earth lead | 36 |
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| 61 20 900 Disconnecting and connecting battery earth lead | 36 |
| 61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) | 36 |


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61 20 900 Disconnecting and connecting battery earth lead 36
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61 20 900 Disconnecting and connecting battery earth lead 36

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# 72 12 050 Removing and installing/replacing the side airbag for the front left or right seat

## PRELIMINARY WORK

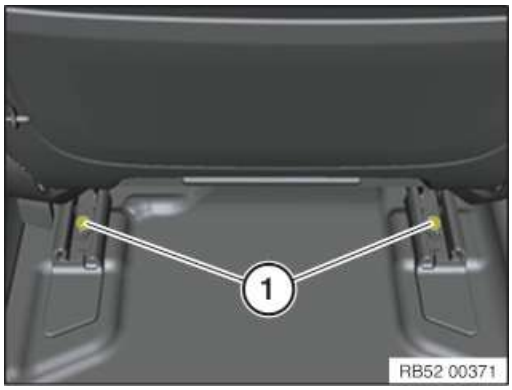
**1 – Remove driver's seat.**

**WARNING**

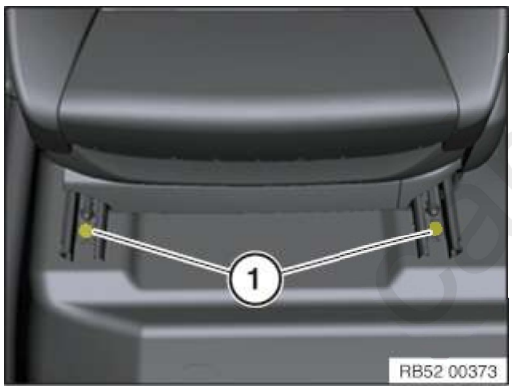
**Pyrotechnic components.**

**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.




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




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

  Move the steering column to the fully retracted position and move upwards fully.

▸ **Deactivating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

**WARNING**

**Deactivation of the 12 V vehicle electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

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**WARNING**

**Deactivation of the 48 V electrical system.**

**Risk of short circuits! Risk of fire!**

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

**RISK OF DAMAGE**

**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

**TECHNICAL INFORMATION**

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.




- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.

**Check**




**TECHNICAL INFORMATION**

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

**desired state**

- The Check Control message "48V electrical system switched off." (1) is displayed.

**Result**

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

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**Measure**

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

  Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

  **If the absence of voltage is not indicated clearly, contact Technical Support.**

**Result**

» The Check Control message signals that the 48V electrical system has been switched off.

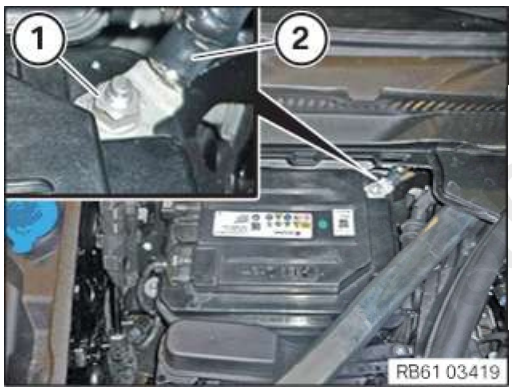
**Measure**

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.




- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).




- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.




**WARNING**

**Unprotected battery terminals.**

**Risk of short circuits! Risk of fire!**

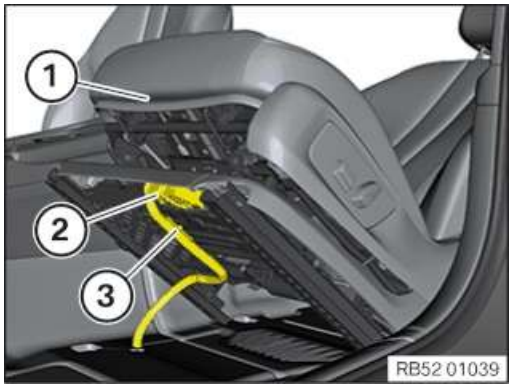
- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

▸ **Disconnecting all battery earth leads**




- See additional information.




**RISK OF DAMAGE**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

- 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 – Mounting the front seat to the universal seat mount**

**TECHNICAL INFORMATION**

Use of the universal seat mount is recommended for carrying out expert repairs.

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- Mount special tool  on special tool 0 495 187 (00 2 300).

**CAUTION**

**Heavy component.**

**Heavy components can lead to injury or damage.**

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

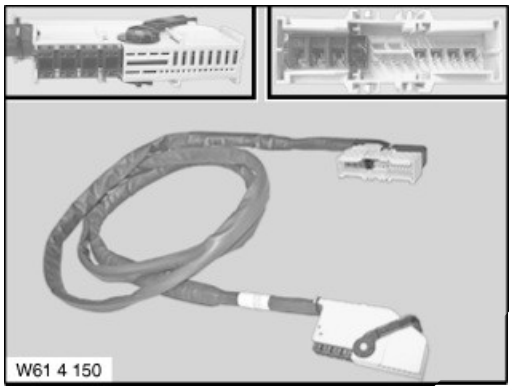
- Mount the front seat onto the special tool .

  To ensure a correct and professional repair, it is recommended to use special tool 0 495 187 (00 2 300) and .

▸ **Connect the removed front seat to the wiring harness.**

**TECHNICAL INFORMATION**

Only use the following steps if the front seat has to be adjusted electrically.




- The special tool  will be required to connect the wiring harness of the vehicle and the removed front seat to adjust the front seat when it is in removed state.



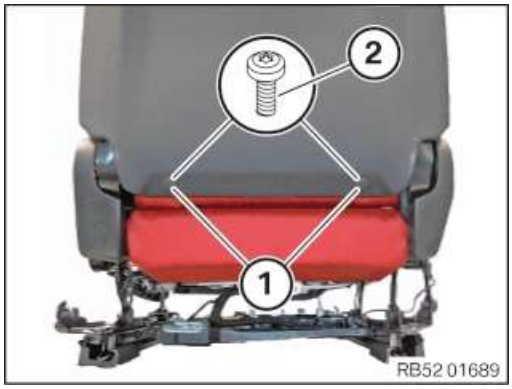

- Connect special tool  to the wiring harness of the vehicle and the removed front seat to adjust the front seat.

**3 – Remove rear panel on front seat backrest**

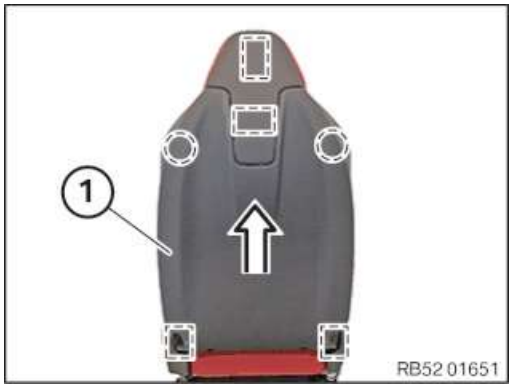



- Loosen screw (1).

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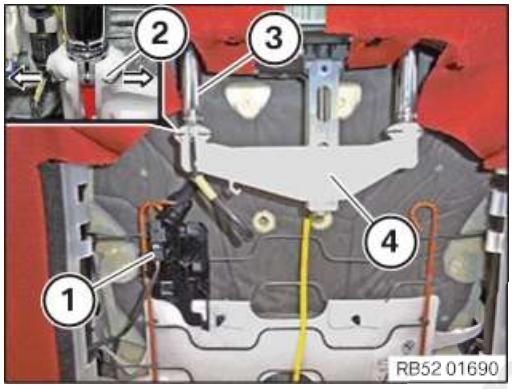



- Remove cover caps (1) with a suitable tool.
- Release screws (2) underneath.




- Carefully unclip rear panel on front seat backrest (1) at marked points and feed out in direction of arrow.

### 4 – Removing the head restraint

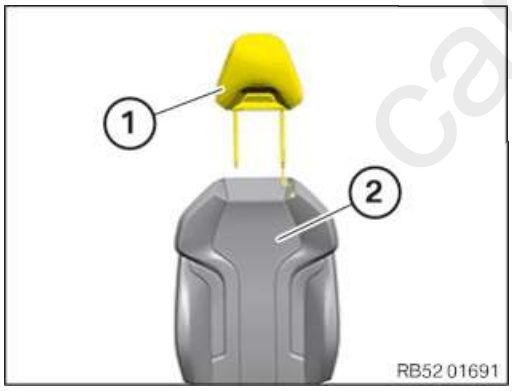



- Unlock plug connection (1) and disconnect.

**TECHNICAL INFORMATION**

The drivetrain for the head restraint height adjustment must be replaced as soon as the head restraint is removed.

- Lightly pull clamps (2) in the direction of the arrow. Detach the head rest (3) from the drive (4).




- Carefully remove the head rest with cable (1) from the front seat (2).

### 5 – Remove outer cover on front seat




- Unclip the cover (1).

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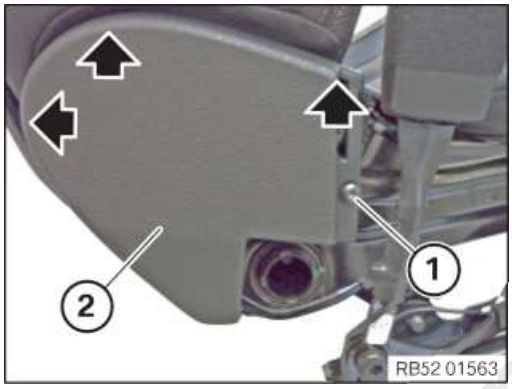



- Loosen screw (1).
- Disengage the cover (2) at the latch mechanisms (3) toward the top.
- Guide out and remove the cover (2) in the area (4).



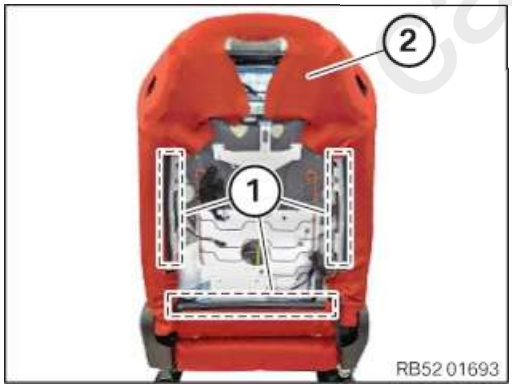

- Disconnect plug connection (1) and, if necessary, unclip the cable clip.

**6 – Remove inner cover on front seat**




- Loosen screw (1).
- Guide out the cover (2) at the arrows.

**7 – Removing the backrest cover with cushion**




- Unclip edge stripping (1) in the marked area using suitable tool.
- Carefully detach seat cover (2) from backrest frame at all other attachment points.



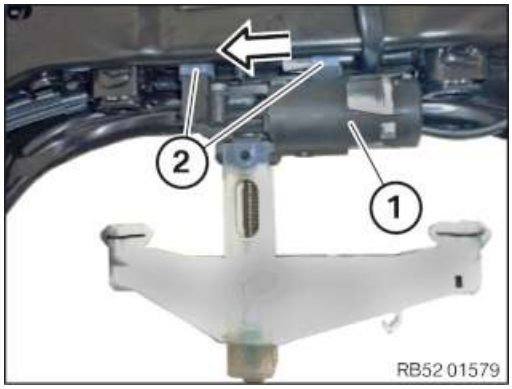

- Carefully disconnect seat cover with upholstery (1) from seat frame (2).
- If necessary, unlock existing plug connections and disconnect.

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**8 – Remove head restraint height adjuster motor**




- Unlock plug connection (1) and disconnect.




- Remove the drive for the head restraint height adjuster (1) at the attachment points (2) in the direction of the arrow.

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## MAIN WORK

### 9 – Remove the backrest cover from front seat-backrest

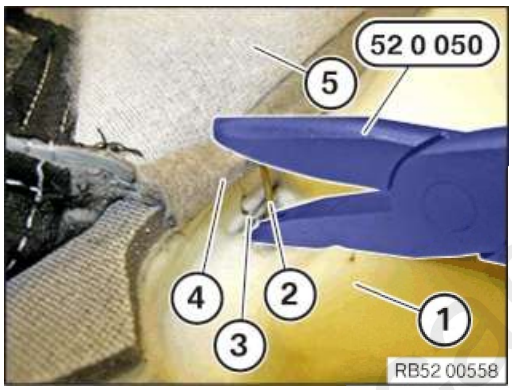



- Loosen all clamp on the trim wires (1).
- Remove the backrest cover (2) from the upholstery.
- Completely remove clamps from the backrest cover (2) and the cushion.

### 10 – Install the backrest cover of the front seat backrest




- Place the backrest cover (2) onto the upholstery.
- Secure all trim wires (1) with the clamps.

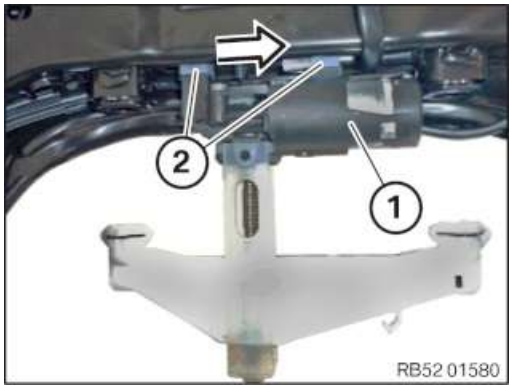



- Renew the clamps (2).

  **Parts:** Clamps
- Insert the clamp (2) with the special tool 0 492 668 (52 0 050).
- Surround the trim wire (3) of the cushion (1) and the trim wire (4) of the backrest cover (5) with the clamp (2) and bend the clamp (2) to close it.

## POSTPROCESSES

### 11 – Installing the drive for head restraint height adjustment




**TECHNICAL INFORMATION**

The drivetrain for the head restraint height adjustment must be replaced as soon as the head restraint is removed.

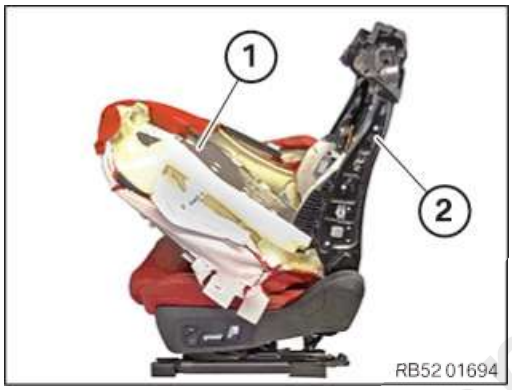
- Renew drivetrain for head restraint height adjustment (1).

  **Parts:** Drive unit for head restraint height adjustment
- Installing drive for head restraint height adjustment (1) at the attachment points (2) in the direction of arrow.

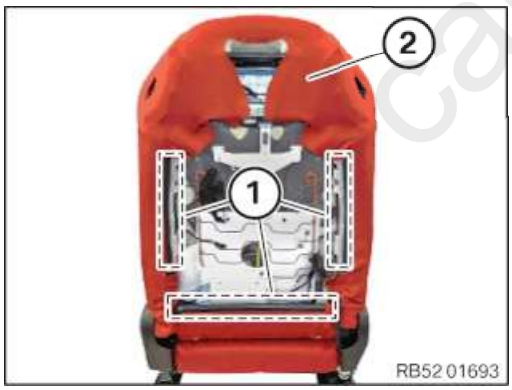



- Connect connectors (1) and lock.

**12 – Installing the backrest cover with cushion**



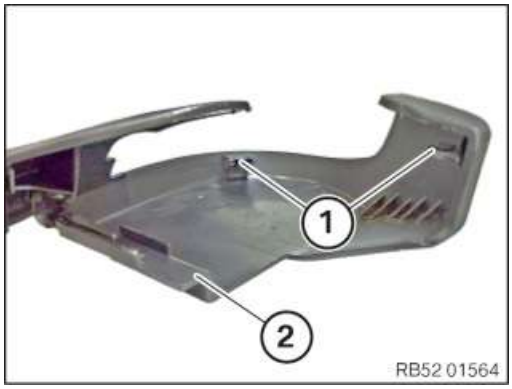

- Position backrest cover with cushion (1) as pictured on backrest frame (2).
- If necessary, connect and lock available plug connections.



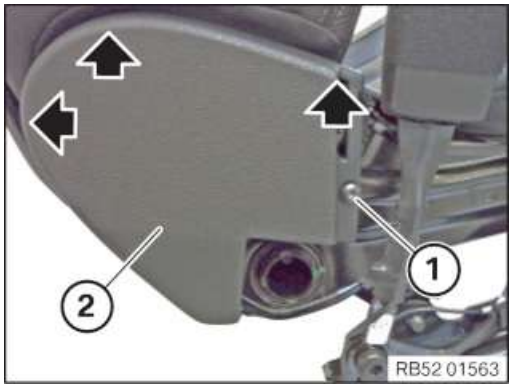

- Position seat cover (2) correctly and hook in at all attachment points.
- Clip in edge stripping (1) in the marked area.

**13 – Installing the inner cover on the front seat**

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- Check guides (1) of cover (2) for damage, renew the cover if necessary.

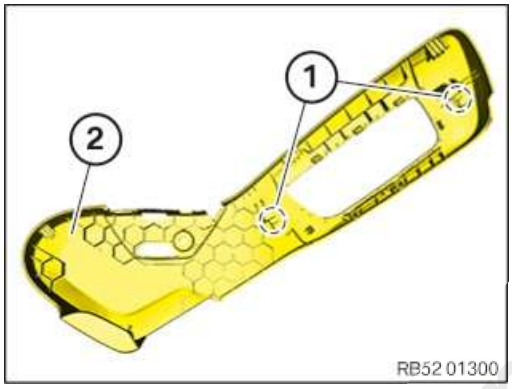



- Guide in the cover (2) on the arrows and position correctly.
- Tighten down screw (1).

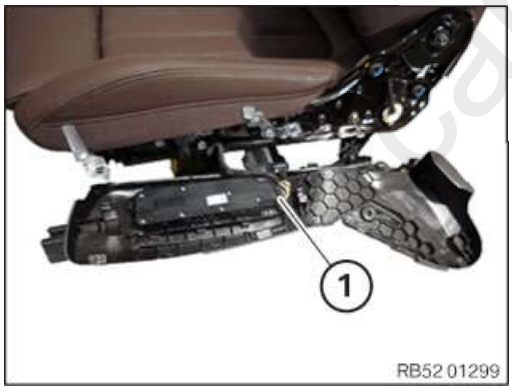
**Inner cover on seat frame**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2.5 Nm |

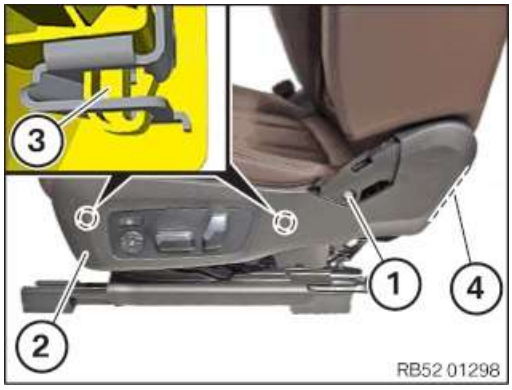
**14 – Install outer cover on front seat**




- 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 |

**Outer seat trim to seat frame**

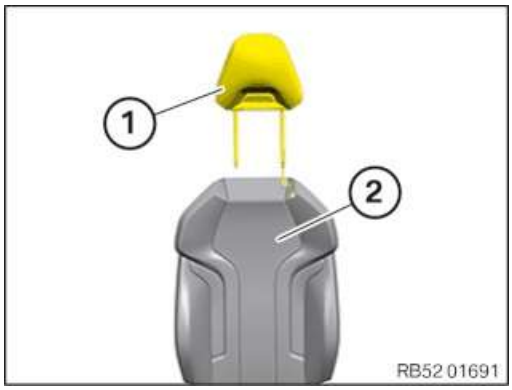
| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3.5 Nm |

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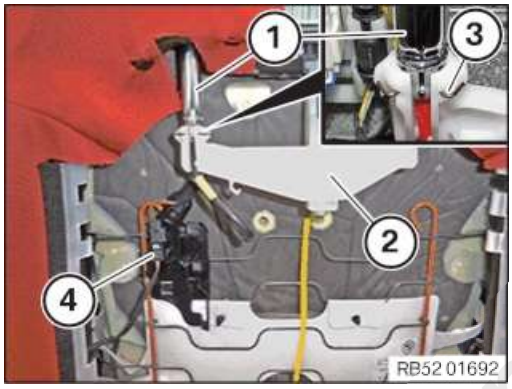



- Clip in the cover (1).

**15 – Installing the head restraint**




- Carefully feed head restraint with cable (1) into front seat (2).




- Clip head restraint (1) into drive (2).

  The clamps (3) must engage audibly.
- Check the correct fit of the head restraint (1) in the clamps (3).
- Connect and lock plug connection (4) and clip into cable clip.

**Check**

- Check the correct latch mechanism of the head restraint with a pulling test.
- Pull the head restraint upwards by hand.

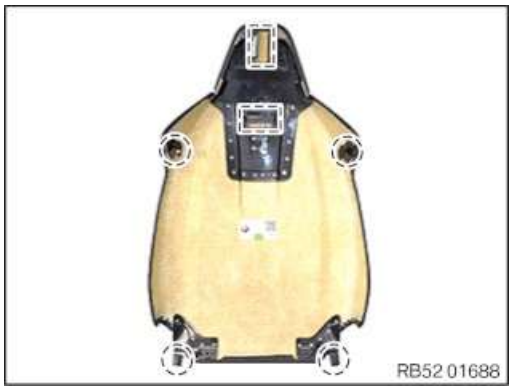
**Result**

» The head restraint cannot be pulled off.

**Measure**

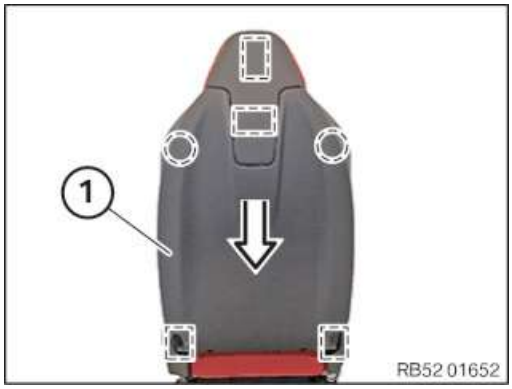
- Continue installation.

**16 – Install the rear panel on the front seat backrest**

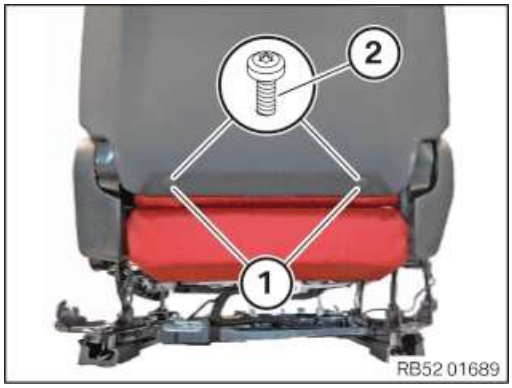



- Check guides and latch mechanisms in marked areas for damage.

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- Position rear panel on front seat backrest (1) correctly and clip into place in arrow direction.




- Position screws (2) correctly and tighten.

**Rear panel on rear seat backrest**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3 Nm |

- Position cover caps (1) correctly and clip in.




- Tighten down screw (1).

**Release handle to backrest frame**

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,7 Nm |

## 17 – Removing the seat from the universal seat mount

▶ **Disconnecting the removed front seat from the wiring harness**

**TECHNICAL INFORMATION**

Only use the following steps if the front seat has to be adjusted electrically.




- Disconnect special tool from the wiring harness of the vehicle and the removed front seat.

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**CAUTION**

**Heavy component.**

**Heavy components can lead to injury or damage.**

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

- Remove front seat from the special tool .

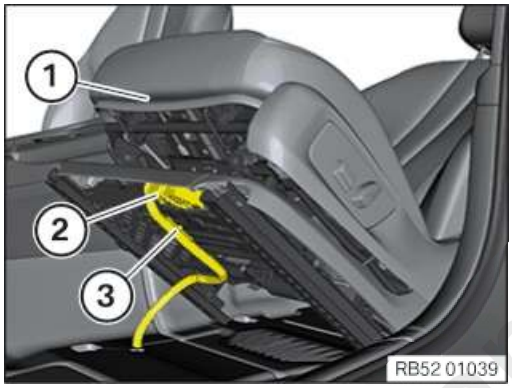
**18 – Install driver's seat**

**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**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

- 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 connectors (2) and lock.
- *Check all plug connections for completeness, correct fit and locking where required.*
- Attach the cable clip (3).

▸ **Connecting all battery earth leads**

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- See additional information.

▸ **Activating the 48 V electrical system**

**Prerequisite**

Ignition is switched off.

**RISK OF DAMAGE**

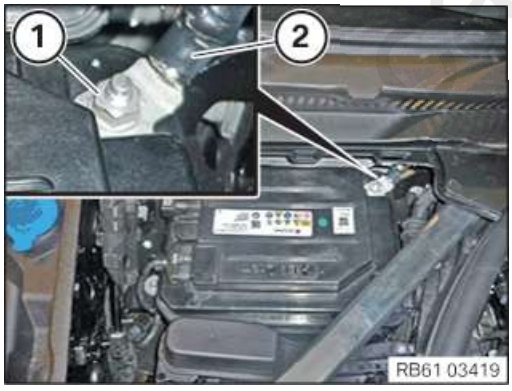
**Damage to 48-V battery**

**If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.**

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.




- Lift battery earth lead (1).
- Remove special tool .




- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

**Negative battery cable to 48-V battery**

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

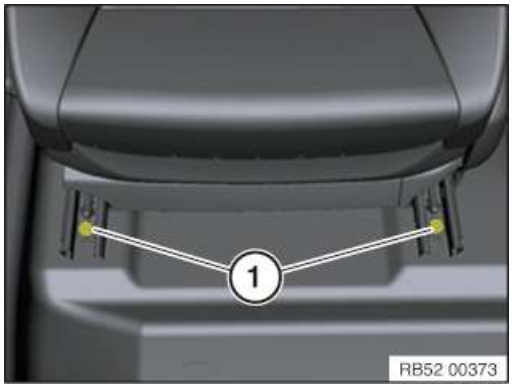



- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).




- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

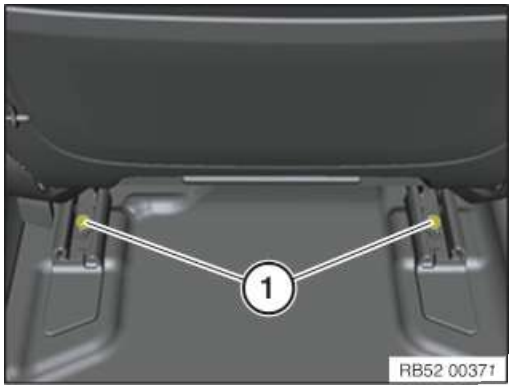



- Move front seat rearwards.
- Renew screws (1).

  **Parts:** Screws
- Tighten the screws (1).

**Seat to body**

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |




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

  **Parts:** Screws
- Tighten the screws (1).

**Seat to body**

| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |

## Additional Information

### Overview of Tightening Torques

**Inner cover on seat frame** Used in step 13

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2.5 Nm |

**Seat trim to seat frame** Used in step 14

| | | | |
|---|---|---|---|
| Sheet metal screw | | Tightening torque | 2.5 Nm |

**Outer seat trim to seat frame** Used in step 14

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3.5 Nm |

**Rear panel on rear seat backrest** Used in step 16

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 3 Nm |

**Release handle to backrest frame** Used in step 16

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 2,7 Nm |

**Negative battery cable to 48-V battery** Used in step 18

| | | | |
|---|---|---|---|
| Nut M8 | | Tightening torque | 19 Nm |

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**Seat to body** Used in step 18

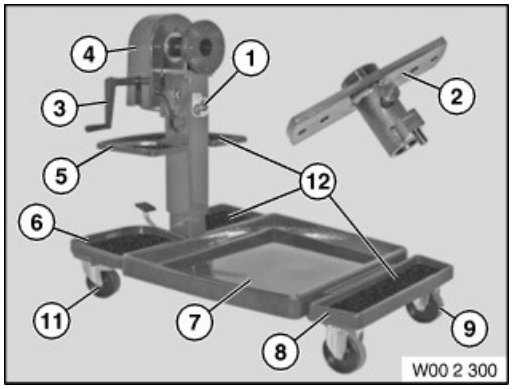
| | | | |
|---|---|---|---|
| Cheese head screw with collar | Renew screw. | Tightening torque | 42 Nm |

## Overview of Special Tools

**0 495 187 (00 2 300) Assembly stand**

Used in step 2

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**Common**

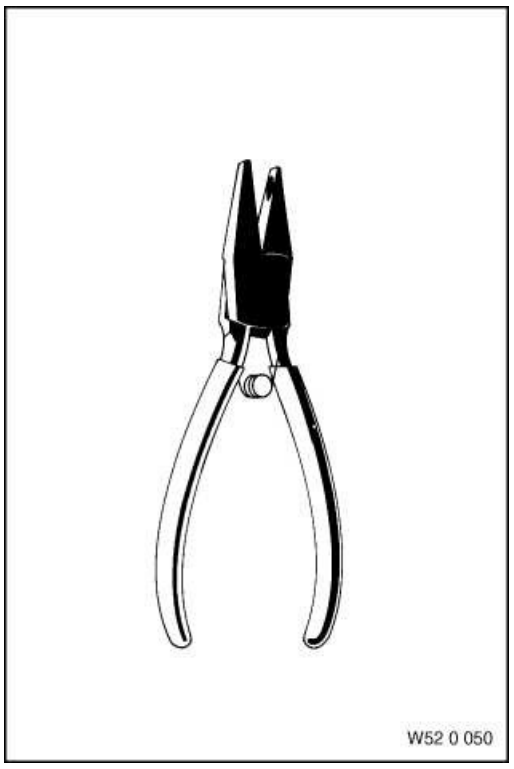
| | |
|---|---|
| Usage | Assembly stand with universal flange for mounting engines from S85 |
| Included in the tool or work | |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 01 25 04 (155) |

**Consisting of**

| Pos | BMW Order number | Replaced by | Designation | In Connection with |
|---|---|---|---|---|
| 1 | 0 495 188 (00 2 301) | | **Assembly stand** available only as complete assembly stand 83 30 0 495 187. | |
| 2 | 0 495 189 (00 2 302) | 2 299 563 | **Tool** (Universal flange). Do not use any more!!! Technically locked. Is replaced by a new flange with part number 83 30 2 299 563. All flanges delivered by the end of 2011 will be replaced free of charge. From 2012, only the new flange will be supplied. Also applies to the complete engine mounting stand 00 2 300. | |
| 3 | 0 495 200 (00 2 303) | | **Crank** | |
| 4 | 0 495 201 (00 2 304) | | **Cover** (Protective hood) | |
| 5 | 0 495 202 (00 2 305) | | **oddments tray** (Oddments tray for small parts) | |
| 6 | 0 495 203 (00 2 306) | | **Shaped element** (Rear shaped pan) | |
| 7 | 0 495 204 (00 2 307) | | **Collection pan** (Oil collection pan) | |
| 8 | 0 495 205 (00 2 308) | | **Shaped element** (Front shaped pan) | |
| 9 | 0 495 206 (00 2 309) | | **Wheel** (Front wheel (without stop)) | |
| 10 | 0 495 207 (00 2 311) | | **Wheel** (Rear wheel (with stop)) | |
| 11 | 0 495 208 (00 2 312) | | **Mat** (Checker mat set) | |
| 2 | 2 299 563 | | **Adapter** New adapter for the engine assembly stand. Replacement for 83 30 0 495 189 - 00 2 302. | |

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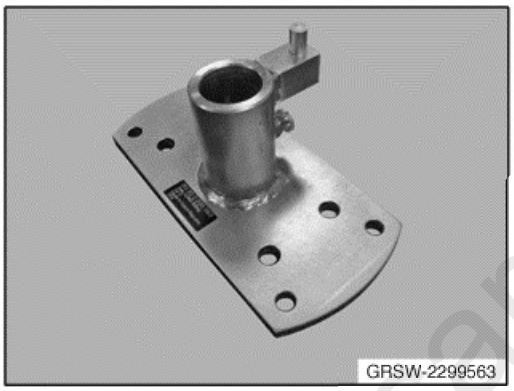
**0 492 668 (52 0 050) Pliers**




| Common | Used in step 10 |
|---|---|
| Usage | For securing clamps on seat cover |
| Included in the tool or work | |
| Storage location | C14 |
| Replaced by | |
| In connection with | |
| SI-Number | 52 06 87 (808) |

## Replacement tools:

**2 299 563 Adapter**




| Common | Used in step 2 |
|---|---|
| Usage | New adapter for the engine assembly stand. Replacement for 83 30 0 495 189 - 00 2 302. |
| Included in the tool or work | 0 495 187 |
| Storage location | |
| Replaced by | |
| In connection with | |
| SI-Number | |

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## Links

| Repair instructions (PRE) | Used in step |
|---|---|
| Notes on 48-V battery | 118 |

| General repair instructions | Used in step |
|---|---|
| 72 00 ... Safety regulations for handling components with gas generators | 118 |

| Repair instructions | Used in step |
|---|---|
| 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 |
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61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle) 118
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 118
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61 20 900 Disconnecting and connecting battery earth lead 118
61 20 900 Disconnecting and connecting battery earth lead 118
72 12 ... Unlocking/locking airbag plug connections 712

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# 61 00 ... Repairing airbag cables

**Caution!**

> **Only repair those cables which show visible signs of damage. In the event of visible damage, make sure there is only one cable repair in effect after the repair work. If no visible damage can be identified, the entire cable must be replaced. When carrying out repairs to the airbag wiring harness, you must use the spare parts offered in the Electronic Parts Catalogue (EPC).**

Safety regulations for handling components of airbag system.

Instructions for disconnecting and connecting battery.

**In event of non-visible damage to wiring harness:**

Disconnect plug connection on airbag module or on plug adapter. It is absolutely vital to disconnect the contacts in succession as there is a risk of mixing up (similar parts)! Cut through one cable after the other at an appropriate position, do not under any circumstances cut through both cables at the same time. Insulate cables remaining in wiring harness with insulating tape. Now disconnect the plug connection from the airbag control unit. Unpin contacts. Cut through one cable after the other at an appropriate position and insulate with insulating tape, do not under any circumstances cut through both cables at the same time. Pin the contacts of the repair cable for the airbag control unit into the control-unit connector, the allocation of the repair cables is relevant. Lay repair cable in vehicle parallel to existing airbag lead. Now pin the contacts for the airbag module or the contacts of the plug adapter, the allocation of the repair cables is relevant. Cut off excess length of repair cable in proximity (visible area) of airbag module or of plug adapter. Twist open cables. With the butt connectors and heat-shrink tubings in the Electronic Parts Catalogue (EPC), reconnect the cables with the same cable colours. Twist cables again, open length (twist) must not exceed 40 mm. Secure interface (heat-shrink tubing) with insulating tape to prevent cables from twisting open.

**In event of visible damage:**

Expose cable at damaged areas. Cut through one cable after the other at an appropriate position and insulate cables no longer required in wiring harness with insulating tape, do not under any circumstances cut through both cables at the same time. Now, depending on the work scope, unpin the contacts either on the airbag control unit or on the airbag module or plug adapter. Cut off unpinned cables. Insulate cables remaining in wiring harness with insulating tape. Now pin in contacts of repair cable, assignment of repair cables is relevant. Lay repair cable in vehicle parallel to existing airbag lead up to separation point. Cut off excess length of repair cable. Twist open cables. Connect cables with butt connectors and heat-shrink tubings in Electronic Parts Catalogue (EPC), assignment of repair cables is relevant. Twist cables again, open length (twist) must not exceed 40 mm. Secure interface (heat-shrink tubing) with insulating tape to prevent cables from twisting open.

*Instructions for cutting off, insulating, crimping cables, installing and removing contacts:*

Cutting off and insulating cables.

Repairing a plug connection using butt connectors.

Installing and removing contacts.

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| | |
|---|---|
| **Notes on safety** | > Safety regulations for handling airbag modules and pyrotechnic seat belt tensioners |
| | > Notes on scrapping vehicles with gas generators |
| **Handling electrical system and electronics** | > Unlocking/locking airbag plug connections |
| | > Repairing airbag lines |
| | > Handling optical fibres |
| **Check** | > Check seat belt |
| | > Checklist for seat belt |
| **Airbag system** | > Deactivating airbags |
| | > Procedure after airbag deployment. |
| **Active pedestrian protection** | > Procedure after actuator triggering |

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**Notes on safety**

-- Safety regulations for handling airbag modules, airbag components and
> pyrotechnical seat belt tensioners

-- Notes on scrapping vehicles with gas generators
>

-- Deactivation/activation pyrotechnical components
>

**Handling electrical system and electronics**

-- Unlocking/locking airbag plug connections
>

-- Repairing airbag lines
>

-- Handling optical fibres
>

**Check**

-- Check seat belt
>

-- Checklist for seat belt
>

**Airbag system**

-- Functional description and checking, refer to Diagnosis system
>

-- Deactivating airbags
>

-- Procedure after airbag deployment.
>

**Active pedestrian protection**
AFGS

-- Procedure after actuator triggering
>

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# 72 00 ... Safety regulations for handling components with gas generators

**It is essential to comply with the regulations as specified in the law relating to the use of explosives when working on airbag units and seat belt tensioners.**

Airbags, seat belt tensioners etc. are pyrotechnical objects. Pyrotechnical objects are assigned to different danger classes on the basis of the quantity of propellant that they contain. The assignment can be ascertained from the identification marking on the product:

***Important!***

> Failure to comply with the warning notices and repair instructions for gas generator components can cause accidental deployment and result in injury and vehicle damage!

This applies in particular to the following components:

- Airbag modules (driver's/front passenger airbags, side airbags)
- Seat belt tensioner
- Head airbag
- Active knee protection
- Active head restraint
- Safety battery terminal

**1. Regulations**

The regulations quoted in the following refer to the Federal Republic of Germany.

In all other countries, the relevant legislation and regulations must be observed in each case. Country-specific legal regulations that go beyond this information or court decisions based thereon must be followed in each case or given precedence over these regulations.

The following components used by BMW:

- Pyrotechnical restraint systems are subject to danger class PT1
- Gas generators are pyrotechnical objects belonging to danger class T1

Handling, transporting and storing non-fired gas generators are subject to the ”Explosive Materials Act”.

The relevant trade supervisory authority must be notified at least 2 weeks before pyrotechnical objects are handled for the first time. Here the relevant authority must be notified in writing of the person responsible (e.g. dealership owner, holder of general power of attorney or if necessary workshop supervisor). A certificate of qualification, i.e. specific training, is not required for the person responsible.

**2. Dismantling and installation**

- Inspection, testing and installation work may only be carried out by expert trained personnel in BMW Service.
- Work on components of the airbag system should only ever be carried out with the battery disconnected, the negative terminal post covered and the plug connection of the cable leading to the gas generator disconnected. If only the battery is disconnected, the following prescribed waiting period must be observed without fail:
  - 1 mins.
- In the event of breaks in work, a component with a gas generator that has been removed must be secured against access by other persons.
- Individual components must never be repaired. Instead, always replace them.
- Do not treat airbag system components with cleaning agents or grease.
- Components of the airbag system must not be exposed to temperatures in excess of 75 °C.
- Airbag system components, including electronic diagnostic components, which have been dropped from heights in excess of 0.5 m must not be reinstalled in the vehicles.
- Do not remove components of the airbag system from the original packaging until immediately before they are

to be installed in the vehicle.

- Before installing, subject components such as housing, connector pins ,etc. of the airbag system (including diagnosis electronics) to a visual inspection for damage and replace if necessary.
- Airbag system components may only be electrically tested while they are installed and only with the BMW ISTA.
- **Danger of injury:** The airbag module may only be set down with the airbag itself facing *upwards*. Otherwise the airbag module will be thrown upwards if the alternator is ignited.
- Do not point the ignition squib of a gas generator at other persons.
- Components with gas generators must not be fired while they are removed. They must be disposed of by special disposal companies or returned to BMW in the packaging of the new components.
- When carrying out straightening and welding work with an electric welder:
  - Disconnect battery
  - Cover negative terminal (post)
- Avoid all contact with the skin when removing a fired airbag module - wear gloves. Wash with water after contact with the skin.

**3. Transport**

- Components with gas generators must be sent off in the packaging of the new components.

**4. Storage**

- Observe the regulations of the relevant trade supervisory authority and the applicable national regulations.

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# 72 12 ... Unlocking/locking airbag plug connections

**Warning!**

Read and comply with safety regulations for handling airbag modules and pyrotechnical belt tensioners.

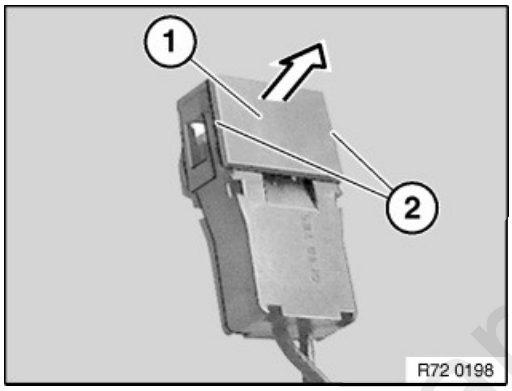
**Caution!**

An airbag plug connection must be replaced if it is damaged.

Sourcing reference for airbag repair instructions (with plug connection), see Electronic Parts Catalogue.

Following versions of plug connections on airbag module/gas generator are possible:

- Airbag plug connection on gas generator/airbag module is offset by 90°
- Airbag plug connection on gas generator/airbag module is straight (3 versions)

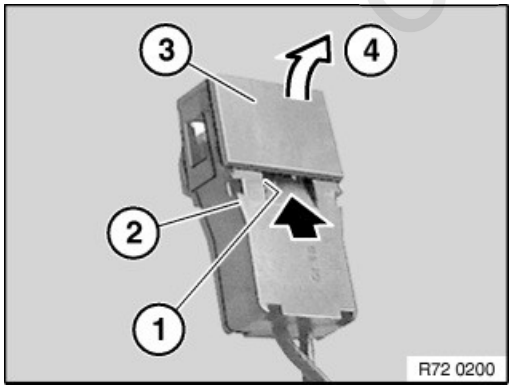



Airbag plug connection on gas generator/airbag module offset by 90°:

There are two ways of unlocking this airbag plug connection on the gas generator/airbag module:

Method 1:

Simultaneously pull cover (1) upwards at lugs on left and right (2).

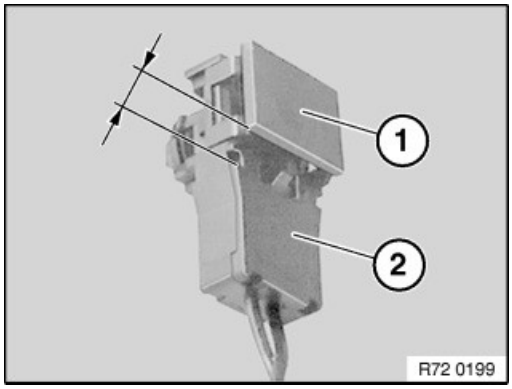



Method 2:

Insert a narrow screwdriver into recess (1) in housing (2).

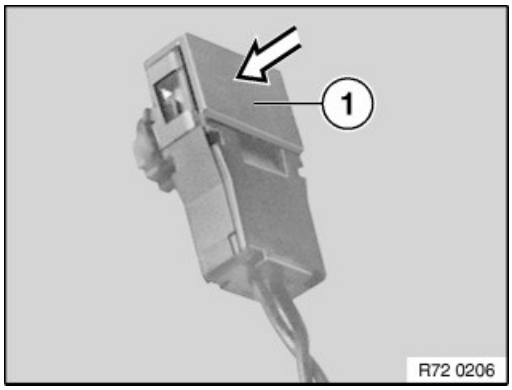
Carefully prise cover (3) off (4).

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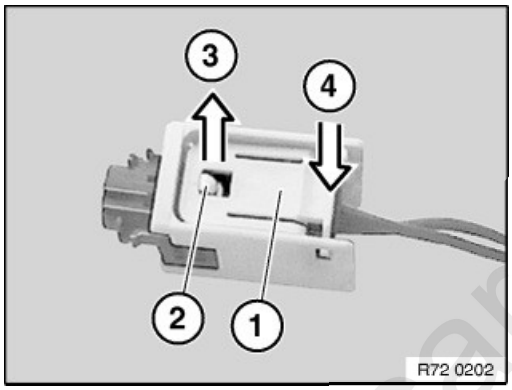

Cover (1) is not positioned higher than housing (2).

The airbag plug connection is unlocked and can now be detached from the gas generator/airbag module.




*Installation note:*
After attaching airbag plug connection to gas generator/airbag module, press cover (1) downwards until it rests flat on housing.

Check that it catches properly.

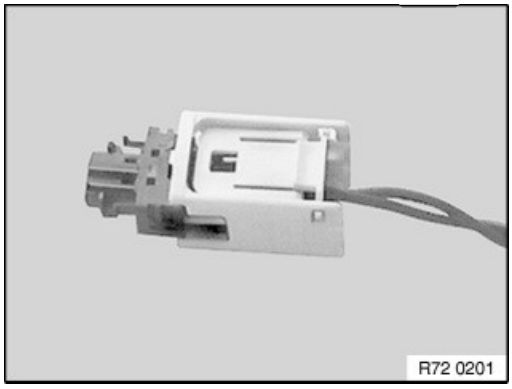



**Airbag plug connection on gas generator/airbag module is straight (2 versions)**

Version 1:

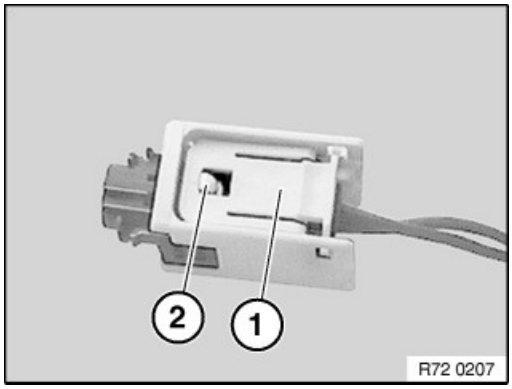
Press locking/unlocking plate (1) at edge (4).

Locking/unlocking plate (1) snaps upwards at opposite edge (3) and releases detent lug (2).



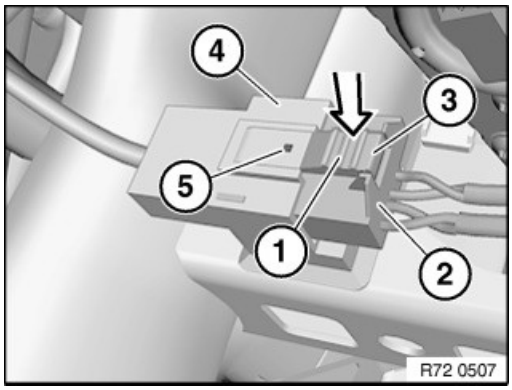

The airbag plug connection is unlocked and can now be detached from the gas generator/airbag module.

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*Installation note:*
After attaching airbag plug connection to gas generator/airbag module, check whether detent lug (2) is visible in opening of locking/unlocking plate (1).

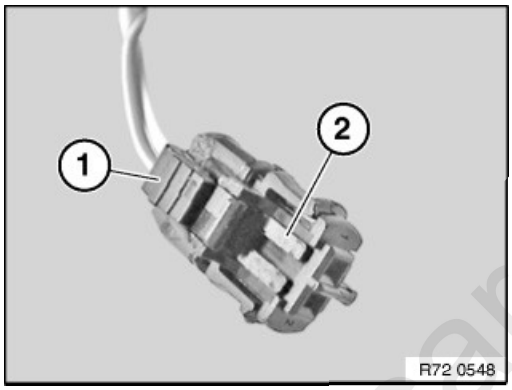
Only if the detent lug (2) is visible will the airbag plug connection gas generator/airbag module be correctly engaged.




Version 2:

Press locking/release plate (1) on edge (3) and pull connector (2) out of connector housing (4).

*Installation note:*
Only if the retaining lug is visible in opening (5) will the gas generator/airbag module plug connection be correctly engaged.




Version 3:

Press the lock (1) and pull out the connector (2) up to initial engagement position.

Detach connector (2) from firing pellet.

*Installation note:*
Insert plug connection in initial engagement position in gas generator/airbag module and engage in final engagement position.

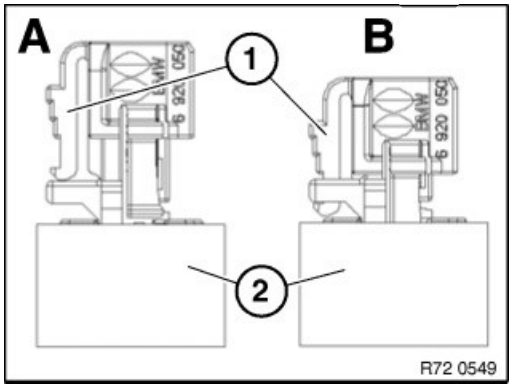
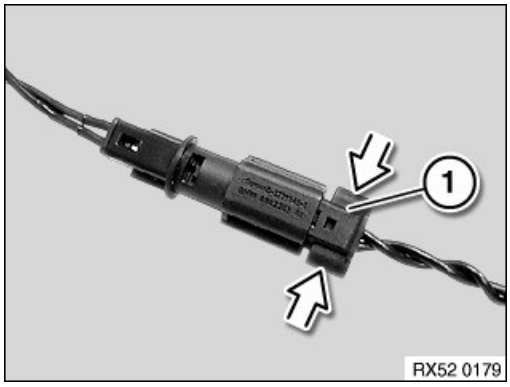



Illustration of version 3 with gas generator:

A. Initial engagement position
B. Final engagement position

1. Lock
2. Gas generator

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Version 4 - crash-active headrest:

Press locking clip at edge and disconnect connector (1).

*Installation note:*
Check for correct engagement.

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# 00 00 ... Microencapsulated screws

Screw securing adhesive is a means of preventing a screwed connection from being loosened by external influences.

Once the screw has been coated with adhesive, the adhesive remains inactive until such time that it is activated by the encapsulation breaking when the screw is inserted and then cures (hardens) at room temperature.

*Installation note:*

- Screw connection must be completed within 20 mins. (start of curing)
- Microencapsulated screws must not be retightened
- Thread of nut must be cleaned beforehand in event of repeated use

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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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| | |
|---|---|
| **Notes on safety** | > Safety regulations for handling airbag modules and pyrotechnic seat belt tensioners |
| | > Notes on scrapping vehicles with gas generators |
| **Handling electrical system and electronics** | > Unlocking/locking airbag plug connections |
| | > Repairing airbag lines |
| | > Handling optical fibres |
| **Check** | > Check seat belt |
| | > Checklist for seat belt |
| **Airbag system** | > Deactivating airbags |
| | > Procedure after airbag deployment. |
| **Active pedestrian protection** | > Procedure after actuator triggering |

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**Notes on safety**

-- Safety regulations for handling airbag modules, airbag components and
> pyrotechnical seat belt tensioners

-- Notes on scrapping vehicles with gas generators
>

-- Deactivation/activation pyrotechnical components
>

**Handling electrical system and electronics**

-- Unlocking/locking airbag plug connections
>

-- Repairing airbag lines
>

-- Handling optical fibres
>

**Check**

-- Check seat belt
>

-- Checklist for seat belt
>

**Airbag system**

-- Functional description and checking, refer to Diagnosis system
>

-- Deactivating airbags
>

-- Procedure after airbag deployment.
>

**Active pedestrian protection**
AFGS

-- Procedure after actuator triggering
>

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