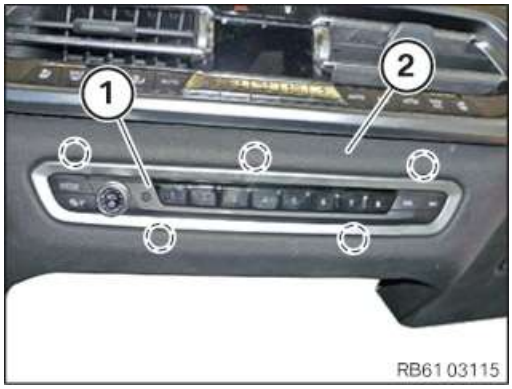
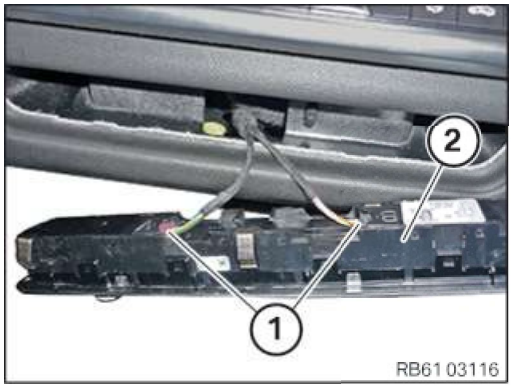
61 31 251 Rem. & install audio operating facility

1 – Remove the audio operating unit

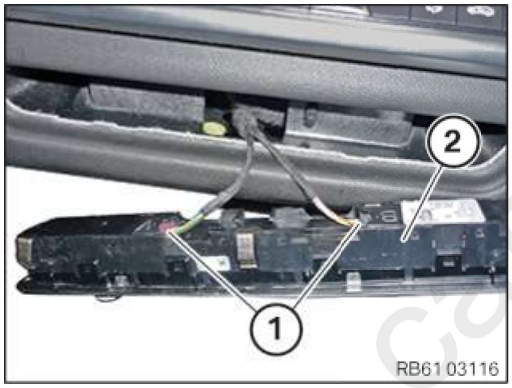


- Unclip the audio operating unit (1) from the instrument panel (2) at the points marked using special tool 0 496 571 (00 9 327).

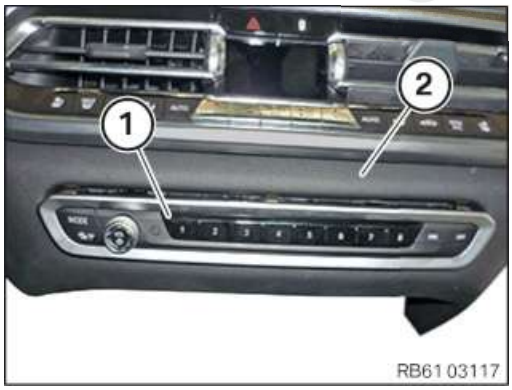


- Disconnect plug connections (1) and remove the audio operating unit (2).

2 – Install the audio operating unit



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



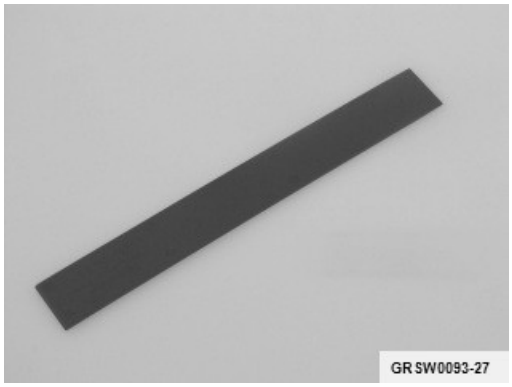
- Correctly position the audio operating unit (1) and install in the instrument panel(2).

Additional Information

Overview of Special Tools

cardiagn.com

0 496 571 (00 9 327) Wedge



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

cardiagn.com

61 31 021 Remove and install/replace ring aerial

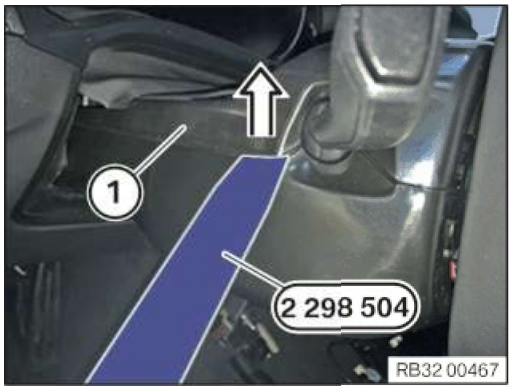
PRELIMINARY WORK

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).

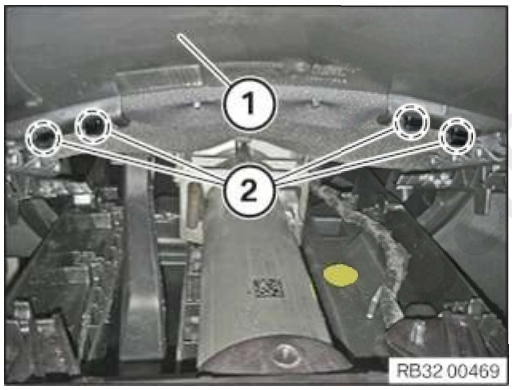
2 – Removing steering column shroud upper section



NOTICE

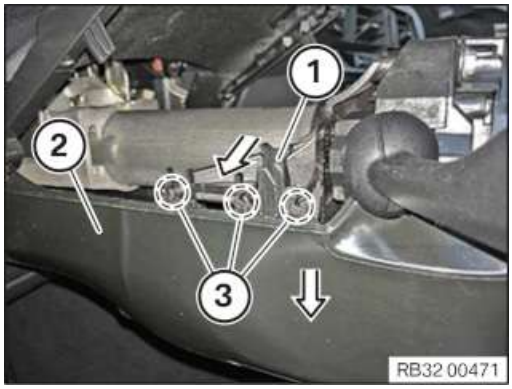
Perform the operations on the left and right side.

- Unlock the steering column shroud upper section (1) with the special tool 2 298 504 and fold up.



- Unclip the steering column shroud upper section (1) from the brackets (2).
- Remove the steering column shroud upper section (1).

3 – Removing steering column shroud lower section



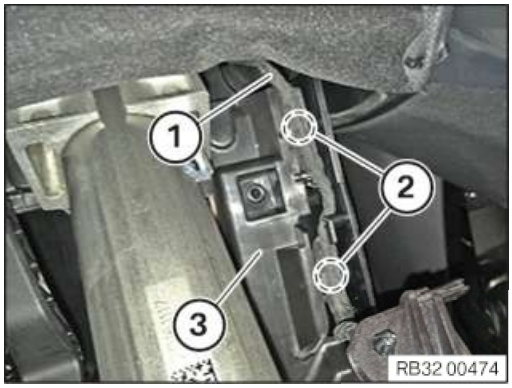
NOTICE

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.



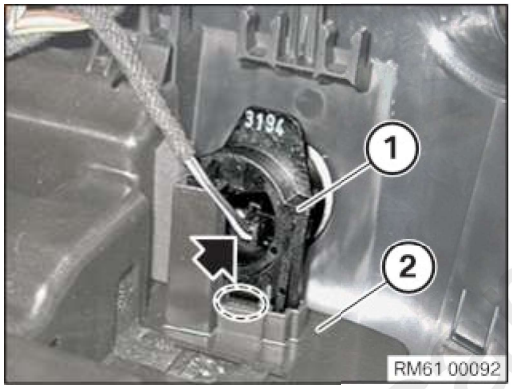
- Fold the steering column shroud lower section down.
- Unlock and disconnect connector (1).



- Detach the cable (1) from the brackets (2).
- Remove the steering column shroud lower section (3).

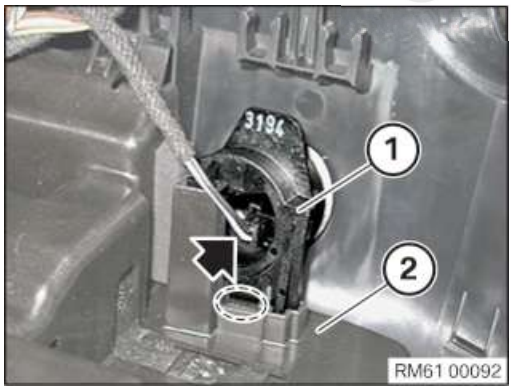
MAIN WORK

4 – Removing the ring aerial



- Unlock connector (arrow) and disconnect.
- Pull ring aerial (1) out of the lower section of the steering column shroud (2).

5 – Installing the ring aerial

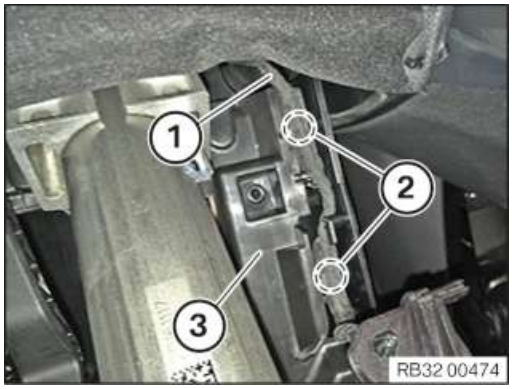


- Join the ring aerial (1) into the steering column shroud lower section (2).
- Connect the connector (arrow).

POSTPROCESSES

6 – Install steering column shroud lower section

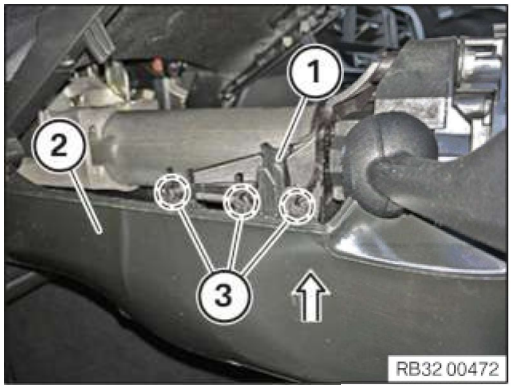
cardiagn.com



- Position the steering column shroud lower section (3).
- Secure the line (1) on the brackets (2).



- Connect the connector (1).

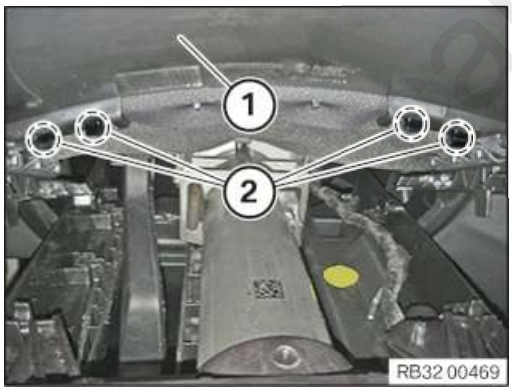


NOTICE

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.

7 – Fit steering column shroud upper section



- Clip in the steering column shroud upper section (1) at the brackets (2).



NOTICE

Perform the operations on the left and right side.

- Clip in the steering column shroud upper section (1)into the guide (2).

ardiag.com



NOTICE

Perform the operations on the left and right side.

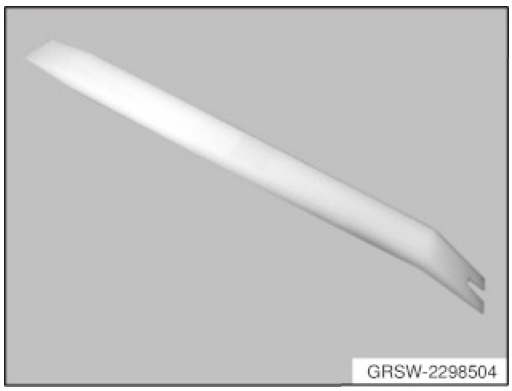
- Press the upper section of the steering column shroud (1) downwards in direction of arrow.

  The upper section of the steering column shroud must engage audibly and perceptibly.

Additional Information

Overview of Special Tools

2 298 504 Wedge



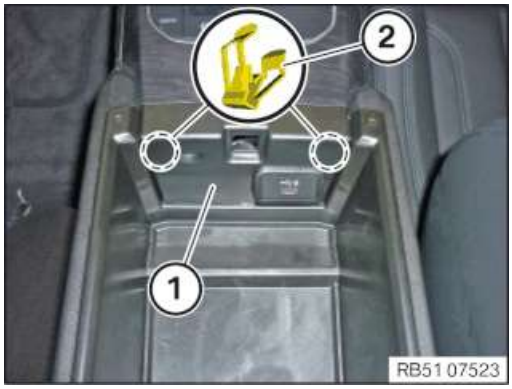
Common	Used in step 2
Usage	Wedge with angled lug
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

cardiagn.com

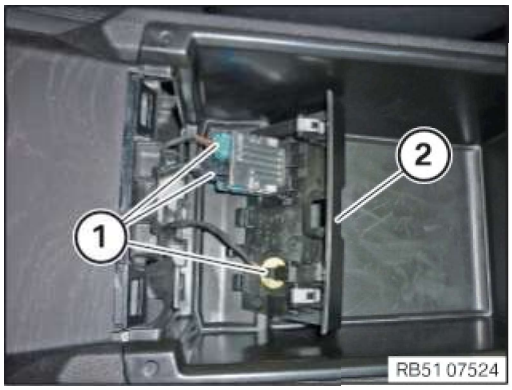
61 31 195 Removing and installing front controller

PRELIMINARY WORK

1 – 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) .

2 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



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

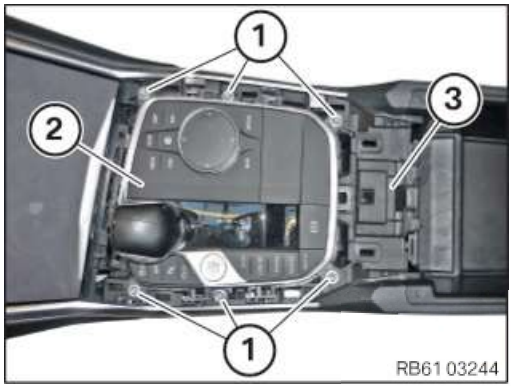
3 – Remove the operating facility in the centre console

▸ **Disconnecting all battery earth leads**

cardiagn.com



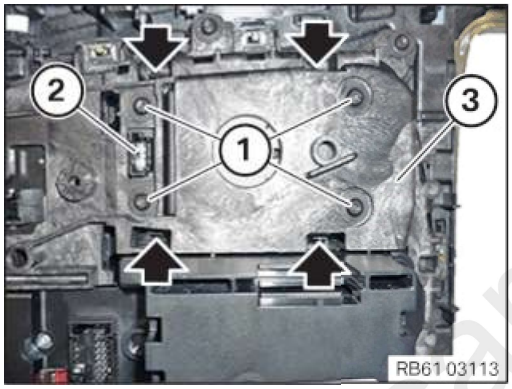
- See additional information.



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

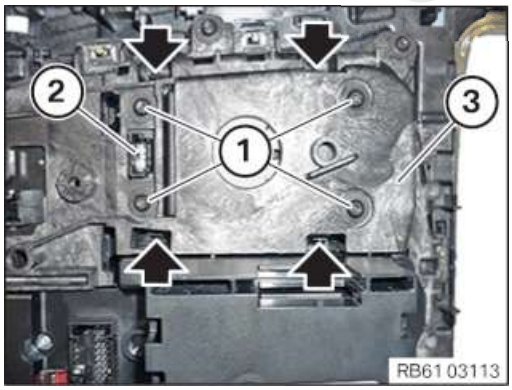
MAIN WORK

4 – Remove controller



- Loosen screws (1).
- Release the latch mechanisms (arrows).
- Remove controller (2) from the gear selector switch(GWS) (3).

5 – Install controller



- Position the controller (2) on gear selector switch (GWS) (3) and engage in the latch mechanisms (arrow).
- Tighten the screws (1).

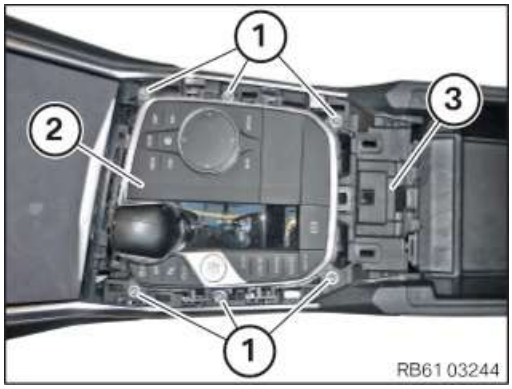
Controller to gear selector switch

Screw		Tightening torque	1,8 Nm

POSTPROCESSES

6 – Install the operating facility in the centre console

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

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

▶ **Disconnecting all battery earth leads**



- See additional information.

7 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



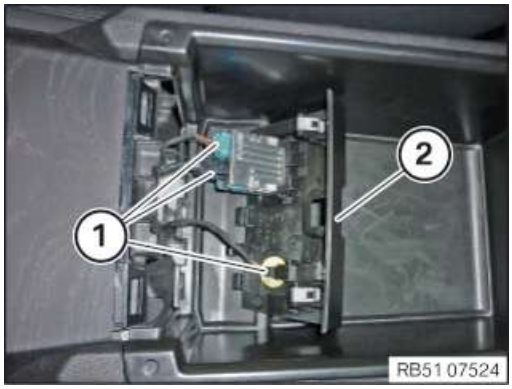
- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .



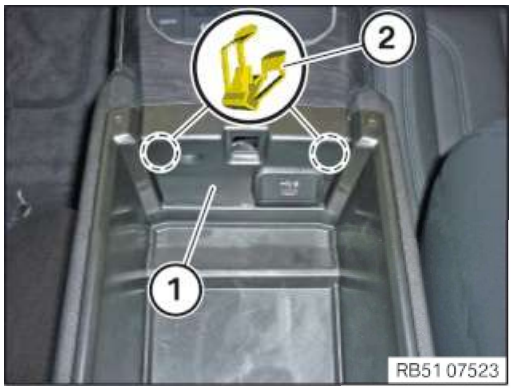
- Correctly position the centre console trim (1) and engage at the latch mechanisms.

cardiagn.com

8 – 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).

Additional Information

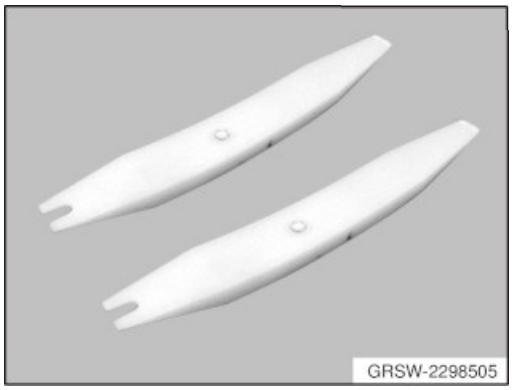
Overview of Tightening Torques

Controller to gear selector switch			Used in step 5
Screw		Tightening torque	1,8 Nm

Gear selector switch to centre console trim			Used in step 6
Screw		Tightening torque	1,8 Nm

Overview of Special Tools

2 298 505 Wedge



Common	Used in step 12
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	Used in step
61 20 900 Disconnecting and connecting battery earth lead	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 battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	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 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 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	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 battery earth lead	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	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36

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61 31 197 Removing and installing operating facility for centre console

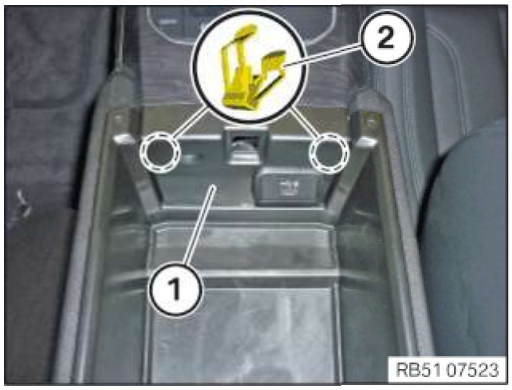
PRELIMINARY WORK

1 – Disconnecting all battery earth leads

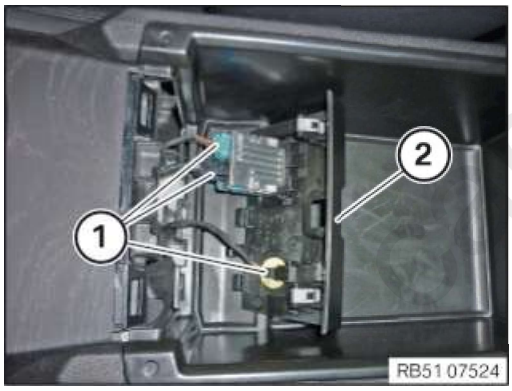


- See additional information.

2 – 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) .

3 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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

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

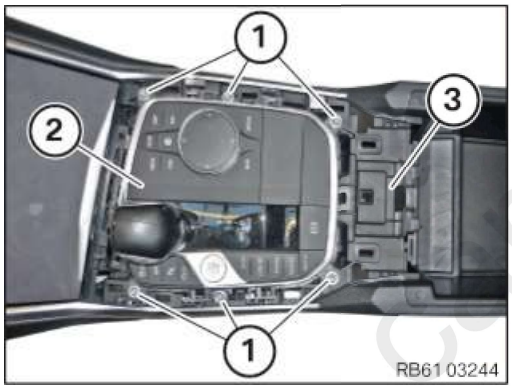
MAIN WORK

4 – Remove the operating facility in the centre console

▸ **Disconnecting all battery earth leads**

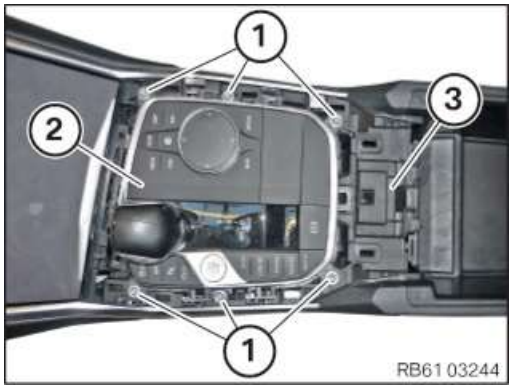


- See additional information.



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

5 – Install the operating facility in the centre console



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

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

▸ **Disconnecting all battery earth leads**

carfdiagn.com



- See additional information.

POSTPROCESSES

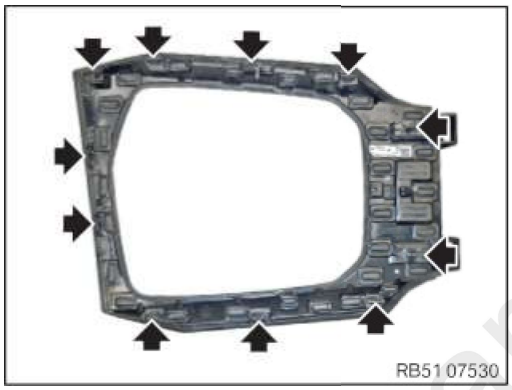
6 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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

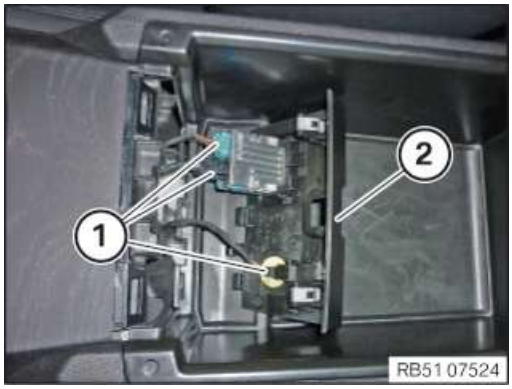


- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .

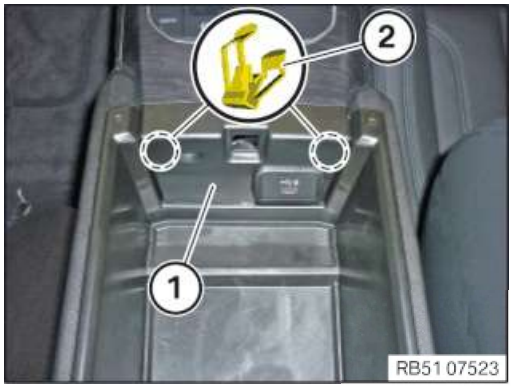


- Correctly position the centre console trim (1) and engage at the latch mechanisms.

7 – 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).

8 – Disconnecting all battery earth leads



- See additional information.

Additional Information

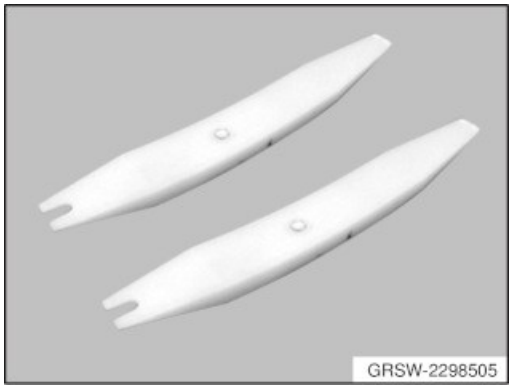
Overview of Tightening Torques

Gear selector switch to centre console trim Used in step 5

Screw		Tightening torque	1,8 Nm

Overview of Special Tools

2 298 505 Wedge



Common Used in step 23

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

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Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	1458
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	1458
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
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61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458
61 20 900 Disconnecting and connecting battery earth lead	1458

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61 31 008 Removing and installing steering column switch cluster

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.

TECHNICAL INFORMATION

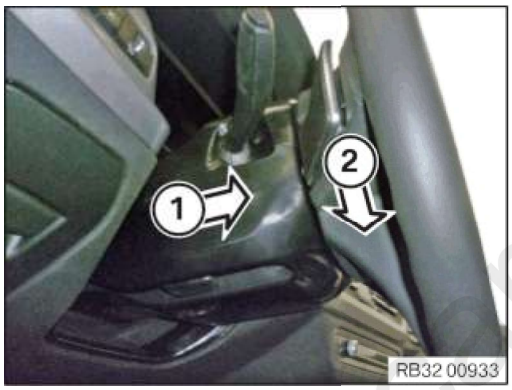
Steering wheel must be replaced if airbag unit has been deployed.

Only with M Sport steering wheel: Impact plate must be replaced if airbag unit has been deployed.

For additional information see: 72 12 ... Procedure after airbag deployment as result of an accident

PRELIMINARY WORK

1 – Adjust the steering column position



- Adjust the length of the steering column to the maximum length in the direction of arrow (1).
- Move the steering column to the lowest steering column position in the direction of arrow (2).

2 – Disconnecting all battery earth leads



- See additional information.

3 – Removing the airbag unit

obdiag.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

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.

▸ **Version A: Removing the airbag unit (sports steering wheel)**



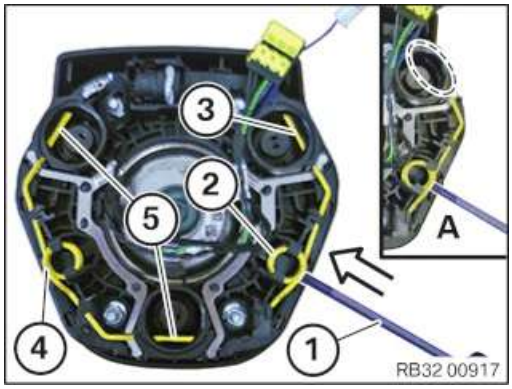
- Insert Torx screwdriver T25 (1) diagonally upwards in the hidden opening (2) on the rear side of the steering wheel until a spring resistance is felt.



NOTICE

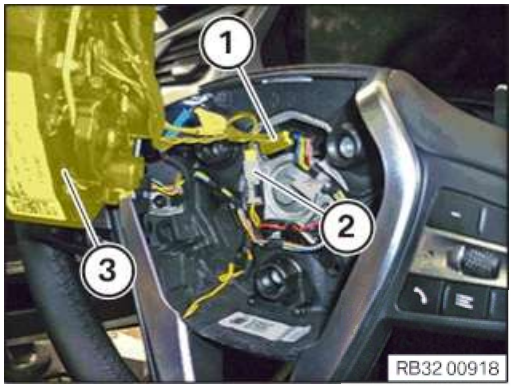
To provide a better overview: Diagram with airbag unit removed.

- 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.
- Then use Torx screwdriver T25 (1) to press wire spring clip (4) in the direction of the arrow towards the centre of the steering wheel and release locks (5).
- Carefully raise the airbag unit.

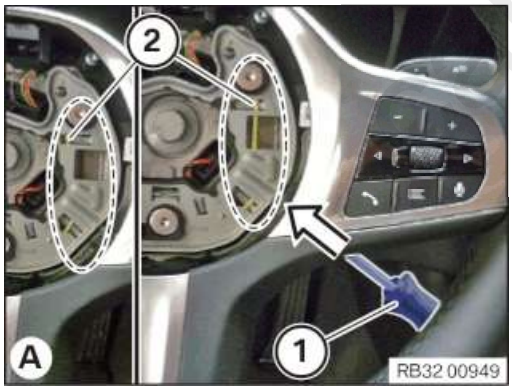


- Unlock and disconnect the plug connections (1) and (2).
- Remove airbag unit (3).

▸ **Version B: Removing airbag unit (M Sport steering wheel)**



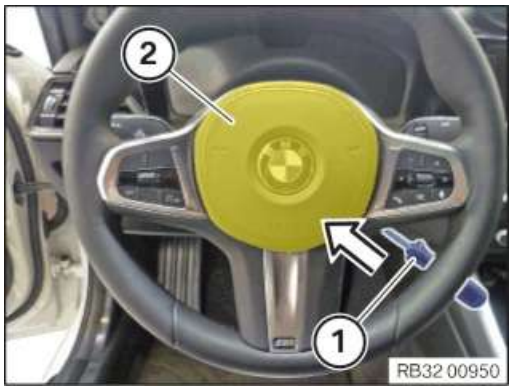
- Locate the pre-punched bore hole (1) on the rear side of the steering wheel by touch.
- Insert the Torx screwdriver T27 (2) diagonally upwards in the pre-punched bore hole (1) on the rear side of the steering wheel until a springing kind of resistance can be felt.



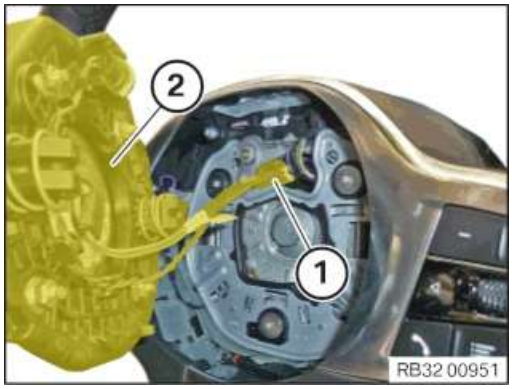
NOTICE

To provide a better overview: Diagram with airbag unit removed.

- Press in Torx screwdriver T27(1) straight in 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).

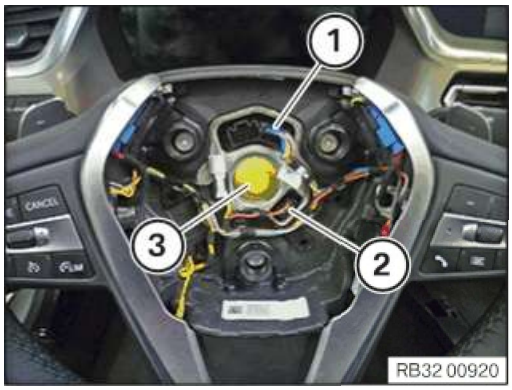


- Press in Torx screwdriver T27 (1) straight in direction of arrow towards the centre of the steering wheel and lift airbag unit (2) on the unlocked side.
- Repeat procedure on left side and carefully remove airbag unit (2) in direction of arrow off the steering wheel.



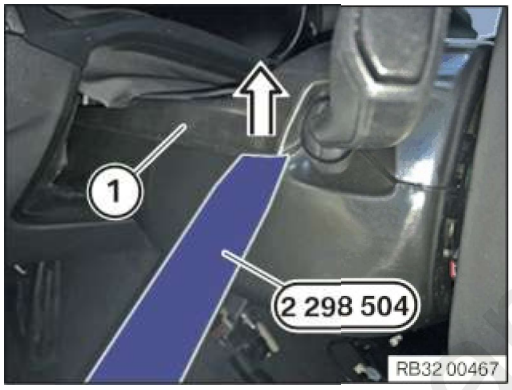
- Unlock and disconnect plug connection (1) and remove the airbag unit (2).

4 – Removing the steering wheel (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.

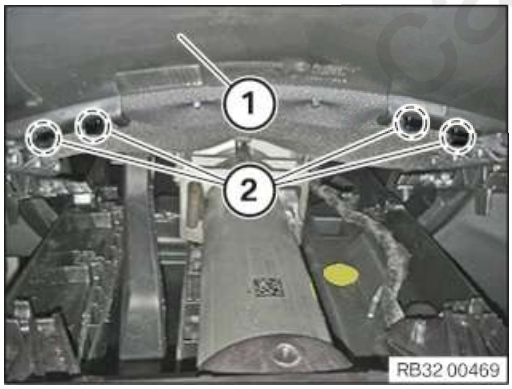
5 – Removing steering column shroud upper section



NOTICE

Perform the operations on the left and right side.

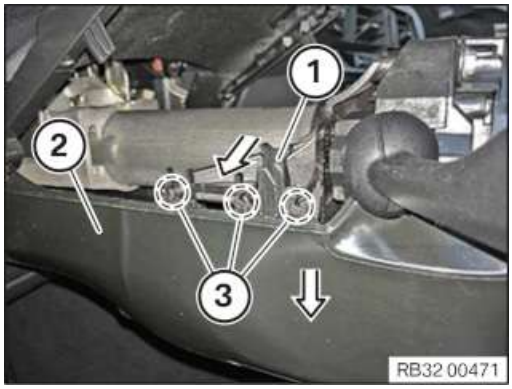
- Unlock the steering column shroud upper section (1) with the special tool 2 298 504 and fold up.



- Unclip the steering column shroud upper section (1) from the brackets (2).
- Remove the steering column shroud upper section (1).

6 – Removing steering column shroud lower section

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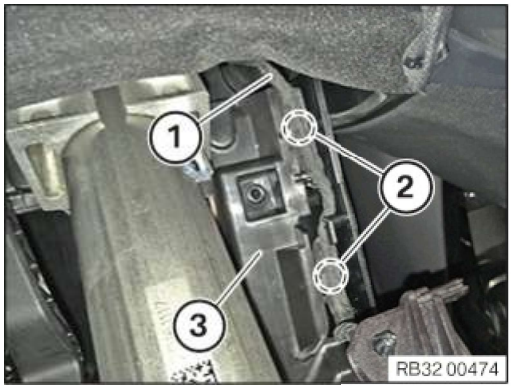
NOTICE

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.



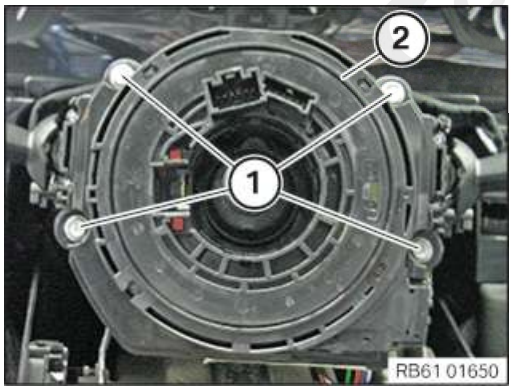
- Fold the steering column shroud lower section down.
- Unlock and disconnect connector (1).



- Detach the cable (1) from the brackets (2).
- Remove the steering column shroud lower section (3).

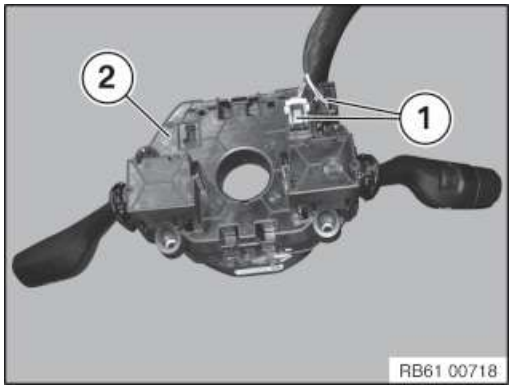
MAIN WORK

7 – Removing the steering column switch cluster (SZL)



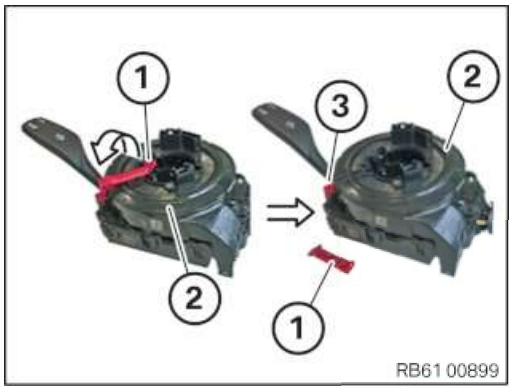
- Loosen screws (1).
- Remove the steering column switch cluster (SZL) (2).

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- Unlock and disconnect the connector (1) on the steering column switch cluster (SZL) (2).

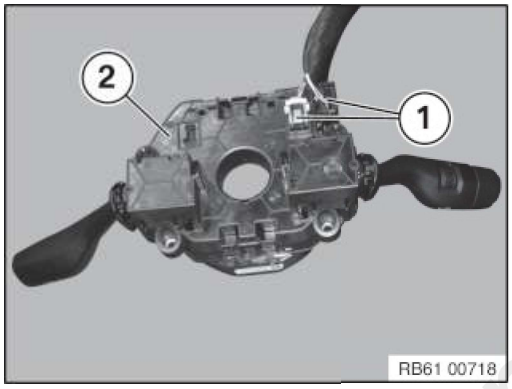
8 – Installing the steering column switch cluster (SZL)



- **Replacement:**

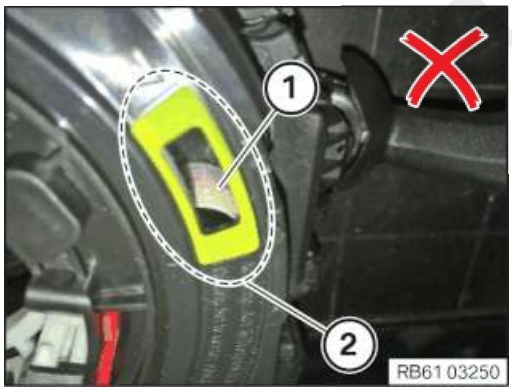
  Break off the transportation retainer (1) on the steering column switch cluster (SZL) (2) in direction of arrow.

  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).

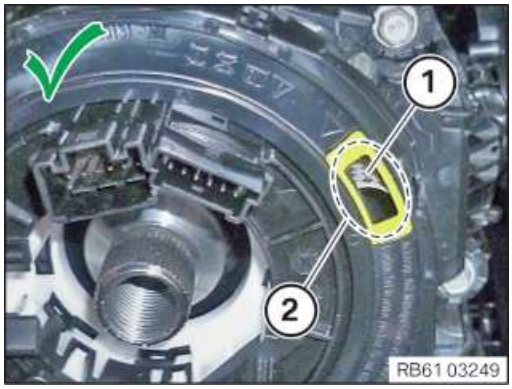
Result

» 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).

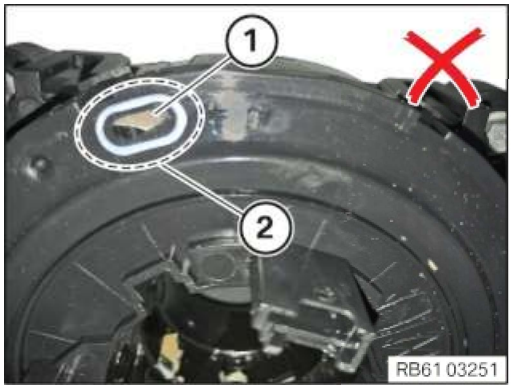
Result

» 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 whether the correct marking (1) is seen in inspection glass (2).

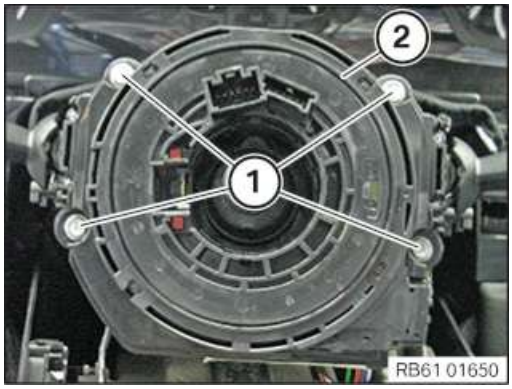
Result

» Correct marking (1) is seen in inspection glass (2).

Measure

- Continue with the next step.

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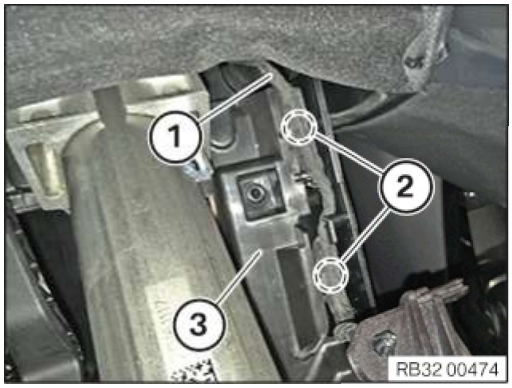
- Position the steering column switch cluster (SZL) (2).
- Tighten the screws (1).

Steering column switch cluster (SZL) on the steering column

Screw TS5x20		Tightening torque	3 Nm

POSTPROCESSES

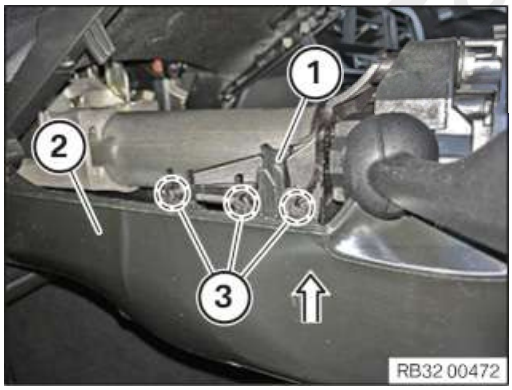
9 – Install steering column shroud lower section



- Position the steering column shroud lower section (3).
- Secure the line (1) on the brackets (2).



- Connect the connector (1).



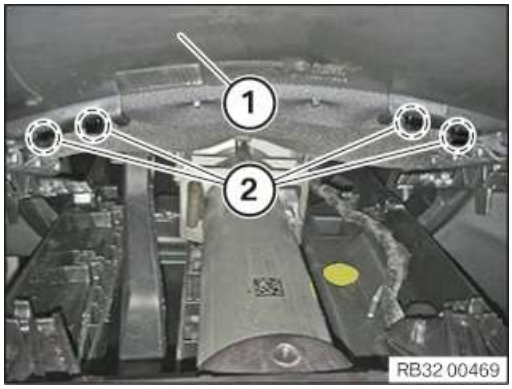
NOTICE

Perform the operations on the left and right side.

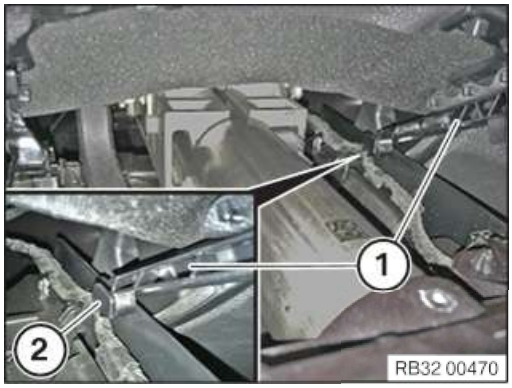
- Align the steering column shroud lower section (2) to the steering column using the retaining lug (1).
- Push the steering column shroud lower section (2) up in the direction of the arrow until the brackets (3) engage.

10 – Fit steering column shroud upper section

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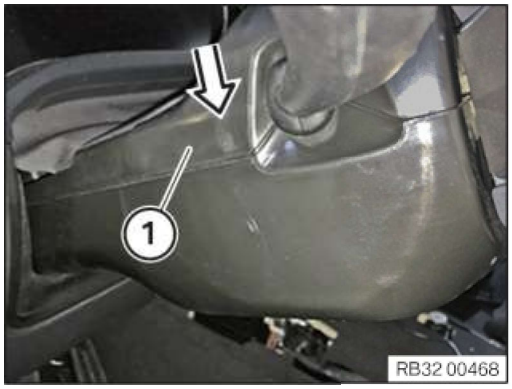
- Clip in the steering column shroud upper section (1) at the brackets (2).



NOTICE

Perform the operations on the left and right side.

- Clip in the steering column shroud upper section (1)into the guide (2).



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.

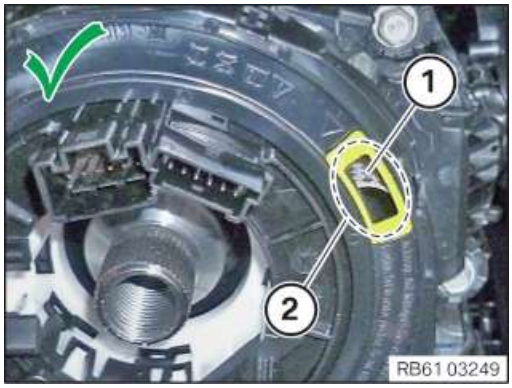
  The upper section of the steering column shroud must engage audibly and perceptibly.

11 – Installing the steering wheel (sports steering wheel)

▶ **Check the neutral position of the clock spring**

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.



Check

- **Version A:**

  Check the mark (1) on the coil spring in the inspection glass (2).

Result

» The mark (1) on the coil spring is not visible.

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Measure

- Turn the coil spring cassette until the mark (1) on the coil spring becomes visible in the inspection glass (2).

Check



- **Version B:**

  Check the mark (1) on the coil spring in the inspection glass (2).

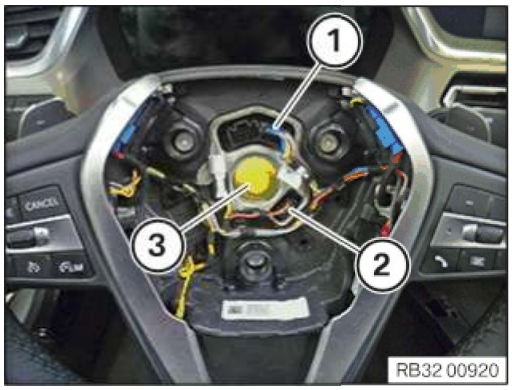
Result

» 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



- A micro-encapsulated screw (3) may be fitted.
- Check the screw connection.

Result

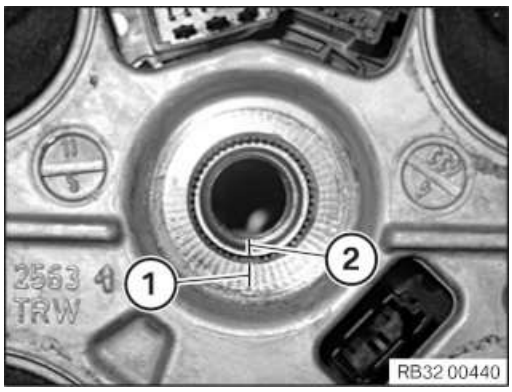
» Screw is (3) micro-encapsulated.

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.

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- Connect connectors (1) and lock.
- If installed: Connect connectors (2) and lock.
- Tighten screw (3) .

Steering wheel to steering column

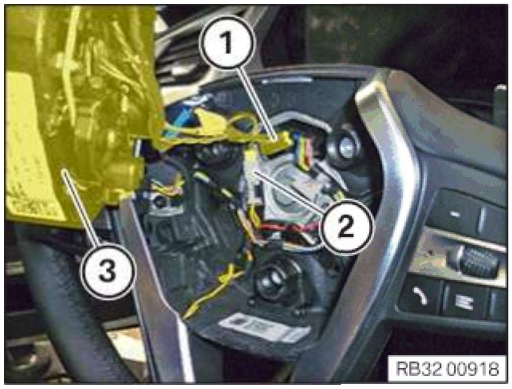
M14	Only for a micro-encapsulated screw: Renew screw.	Tightening torque	62,5 Nm

12 – Installing the airbag unit

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

▸ **Version A: Installing the airbag unit (sports steering wheel)**



- Position airbag unit (3).
- Connect connectors (1) and (2) lock.



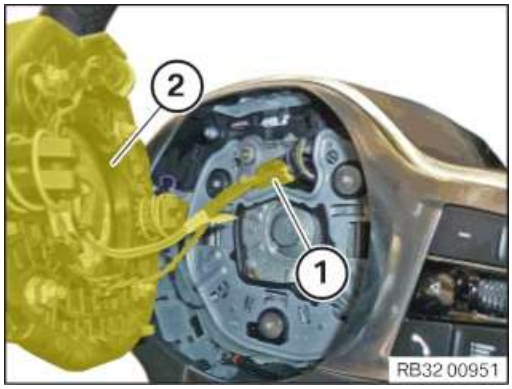
- Press the airbag unit (1) with even pressure in the direction of the arrow into the steering wheel.

  The airbag unit (1) must engage audibly and perceptibly.

▸ **Version B: Installing the airbag unit (M Sport steering wheel)**

TECHNICAL INFORMATION

After replacing the airbag unit (M-sports 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!



- Connect and lock connector (1) of the airbag unit (2).



- 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.

13 – Disconnecting all battery earth leads



- See additional information.

14 – Checking the airbag for function

Check

- Turn steering wheel in both directions to the limit position.

Result

» The airbag indicator light lights up.

Measure

- Renew the coil spring cassette.

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Additional Information

Overview of Tightening Torques

Steering column switch cluster (SZL) on the steering column Used in step 8

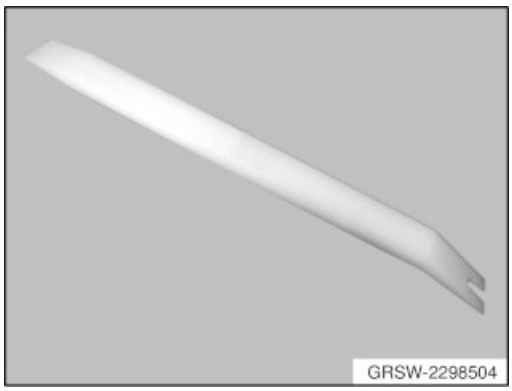
Screw TS5x20		Tightening torque	3 Nm

Steering wheel to steering column Used in step 11

M14	Only for a micro-encapsulated screw: Renew screw.	Tightening torque	62,5 Nm

Overview of Special Tools

2 298 504 Wedge



Common		Used in step 5
Usage	Wedge with angled lug	
Included in the tool or work		
Storage location	C34	
Replaced by		
In connection with		
SI-Number	01 03 12 (792)	

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	3

Repair instructions	Used in step
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
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 battery earth lead	213
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	213
61 20 900 Disconnect and connect 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
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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
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 31 043 Removing and installing the FZD

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

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

TECHNICAL INFORMATION

With the optional equipment SA6UA, the camera for gesture control is integrated in the roof control module. Separate exchange of this camera in the event of a fault is not possible.

1 – Removing the roof function centre (FZD)



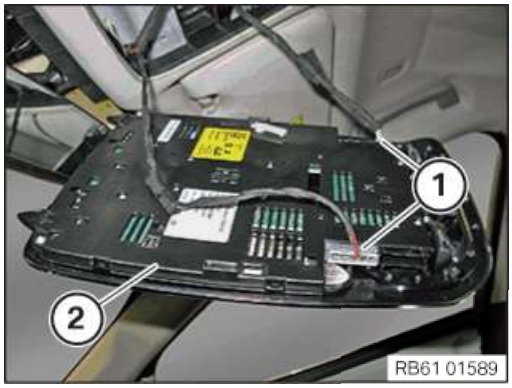
- Unclip the cover (1).



- Loosen screws (1).

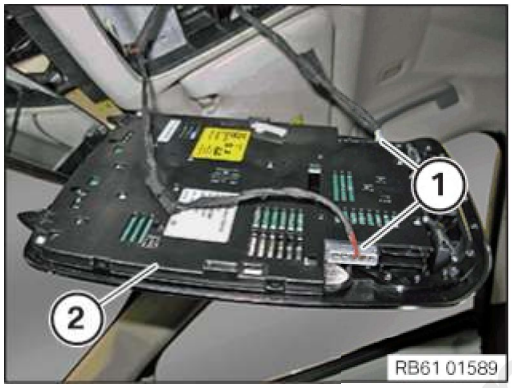


- Unclip the roof function centre (FZD) (1) from the clamps (2).
- Thread the roof function centre (FZD) (1) out of the guides (3).

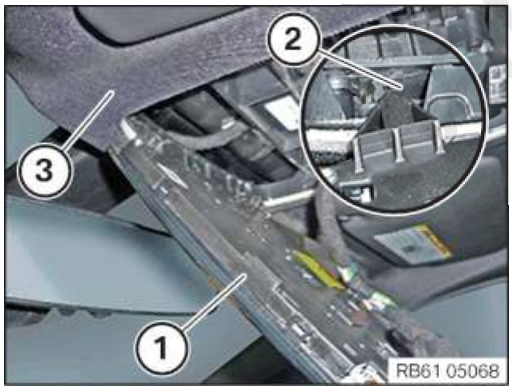


- Unlock and disconnect plug connections (1).
- Unclip the cable for the roof function centre (FZD) (2) from the cable clip.

2 – Installing roof function centre (FZD)



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



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

  Make sure the headlining is not deformed during this operation.



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

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



- Tighten the screws (1).

Roof function centre

	Tightening torque	1,2 Nm



- Clip in the cover (1).

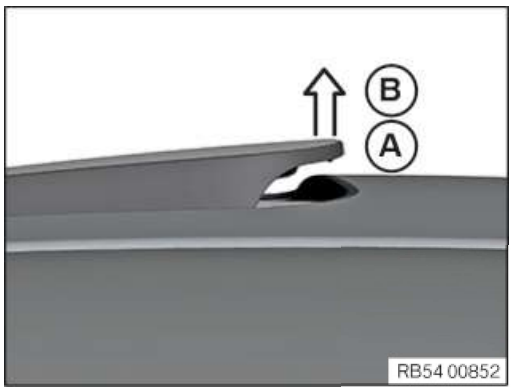
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3 – Initialising the glass slide/tilt sunroof panel



- Press and hold the switch in the "Vent Position" direction.

  The glass slide/tilt sunroof moves to vent position.
- In the event of a delayed start or sudden stop of the glass slide/tilt sunroof, continue operating the switch in the "Vent Position" direction.



- Continue to operate the switch during the entire ABL.
- After having reached the vent position (A) continue to operate the switch for approximately 30 s (initialisation starts).
  - The glass slide/tilt sunroof moves from vent position (A) toward position (B).
  - Screen (sliding headliner) fully closes.
  - Screen (sliding headliner) fully opens.
  - Glass slide/tilt sunroof moves to "closed" position.
  - The glass slide/tilt sunroof moves to the "Open" position and immediately returns to the "Closed" position.
  - After a brief pause, the screen fully closes.

  The initialisation is completed once the glass slide/tilt sunroof and the screen have completely closed.
- Release the switch.

TECHNICAL INFORMATION

If the switch is released in the meantime, the initialisation must be repeated. Following successful initialisation, the corresponding messages in the Check Control and on the control display go out.

- Carry out function check (one-touch function, anti-trapping protection and, if necessary, comfort function).

cardiagn.com

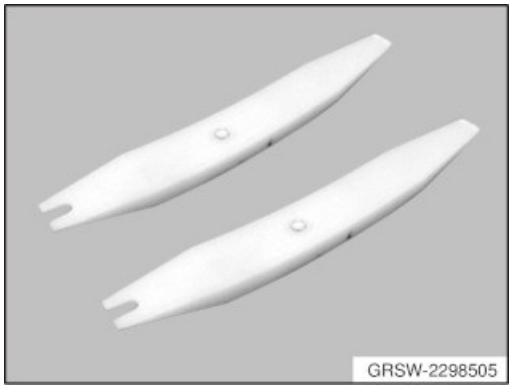
Additional Information

Overview of Tightening Torques

Roof function centre		Used in step 2
	Tightening torque	1,2 Nm

Overview of Special Tools

2 298 505 Wedge



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

Links

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

cardiagn.com

61 31 362 Removing and installing the radio remote control receiver

PRELIMINARY WORK

1 – Removing seat bench



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

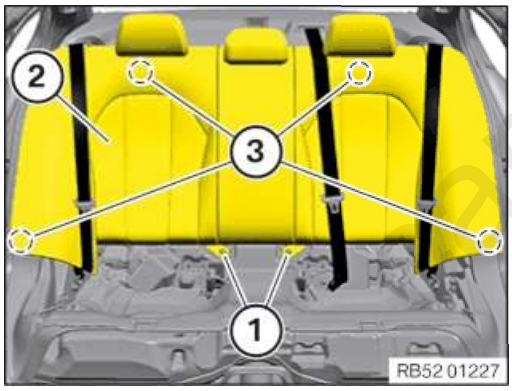


- Pull the seat bench (1) further forward.
- Release screw (2) on the end fitting and guide out belt (3).

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

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

2 – Remove rear seat backrest



- Loosen screws (1).
- Detach the rear seat backrest (2) upwards out of the guides (3).
- Guide the rear seat backrest (2) out of the seat belts and remove it.

3 – Remove both C-pillar trim panels

NOTICE

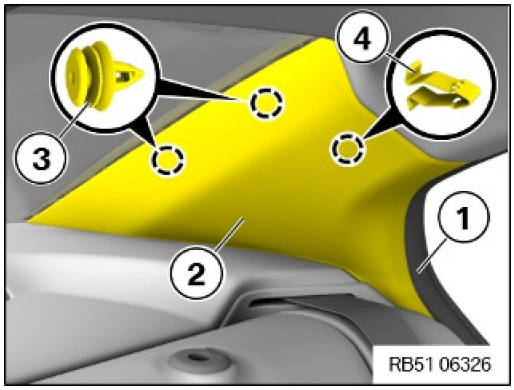
Description is for left component only. Procedure on the right side is identical.

▸ **Remove C-pillar trim panel**

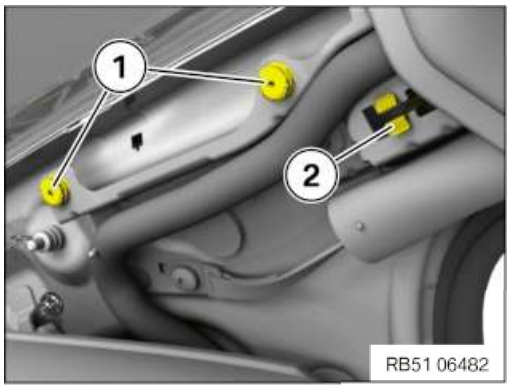
NOTICE

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

erdiagn.com

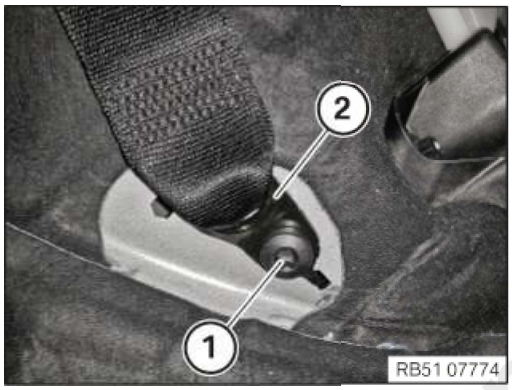


- Unclip clamp (4).
- Unclip clips (3).
- Feed out C-pillar trim panel (2) from the guides to the front.
- Thread out C-pillar trim panel (2) from the lip of edge protection (1).



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

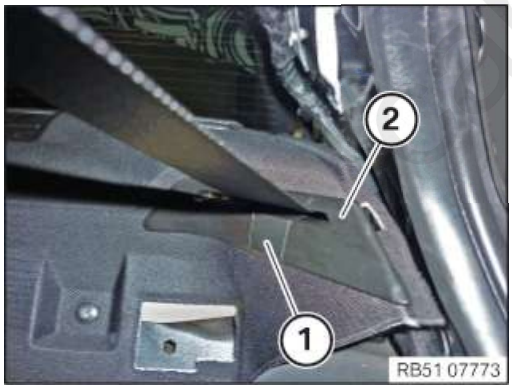
4 – Remove the trim panel for the storage shelf



NOTICE

Perform the operations on the left and right side.

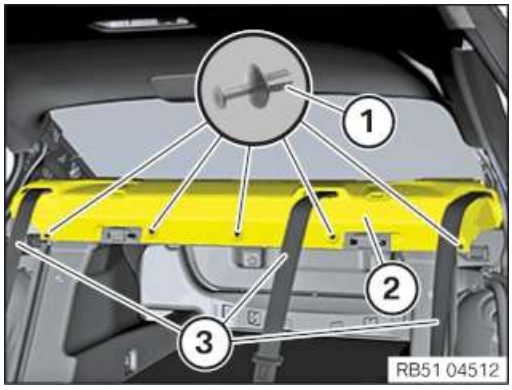
- Release screws (1) on end fitting (2) at rear left and right.
- Feed out the end fitting (2) from the body at rear left and right.



NOTICE

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

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

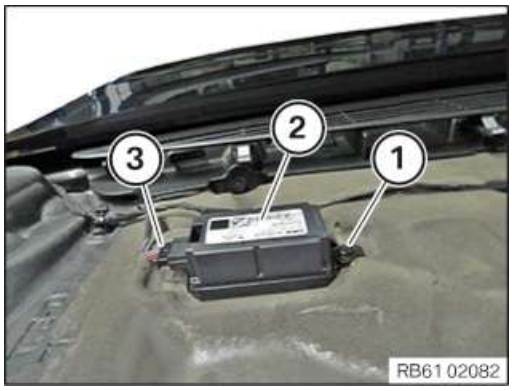


- Loosen the expanding rivet (1).
- Lift the trim panel for the storage shelf (2) a little and disconnect the underlying plug connections.
- Remove the trim panel for the storage shelf (2) to the front and feed out the seat belt (3).

mdiag.com

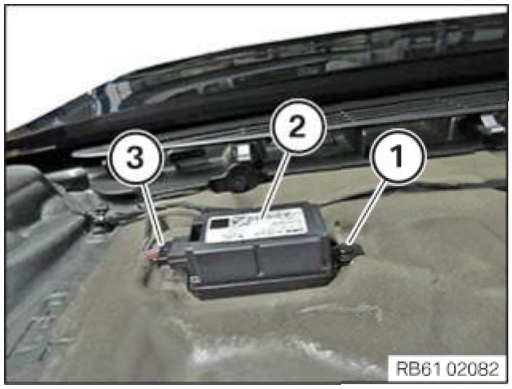
MAIN WORK

5 – Remove the remote control receiver



- Loosen expanding rivet (1).
- Remove the remote control receiver (2).
- Unlock plug connection (3) and disconnect.

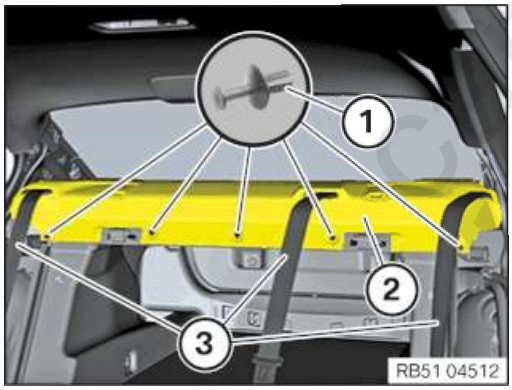
6 – Install the remote control receiver



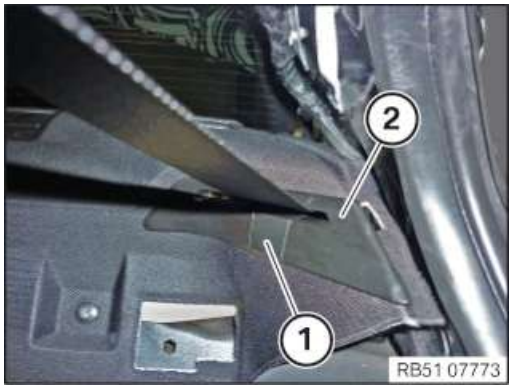
- Connect connector (3).
- Position remote control receiver (2).
- Fasten expanding rivet (1).

POSTPROCESSES

7 – Install the trim panel for the storage shelf



- Install the trim panel for the storage shelf (2) and feed in the seat belts (3).
- Lift the trim panel for the storage shelf (2) a little and connect the underlying connectors.
- Feed in the trim panel for the storage shelf (2) on the rear guide and position it correctly.
- Mount the expanding rivets (1).

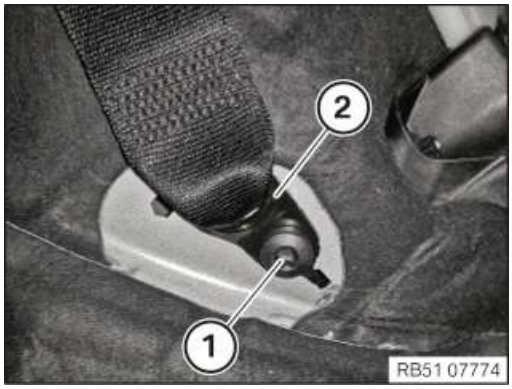


NOTICE

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

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

carldiagn.com



NOTICE

Perform the operations on the left and right side.

- Insert the end fitting (2) on the left and right into the body.
- Renew screws (1).

  Parts: Bolts
- Tighten screws (1) on left and right.

End fitting to body

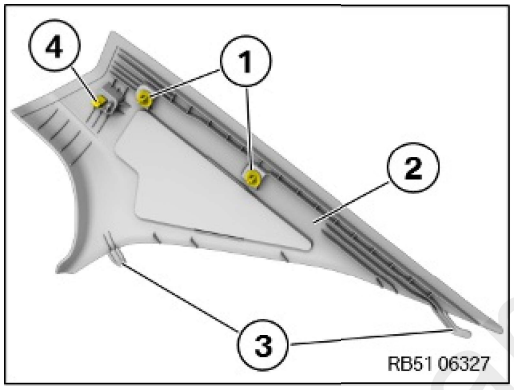
M10	Renew screw.		42 Nm

8 – Install both C-pillar trim panels

NOTICE

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

▸ **Installing C-pillar trim panel**



Check

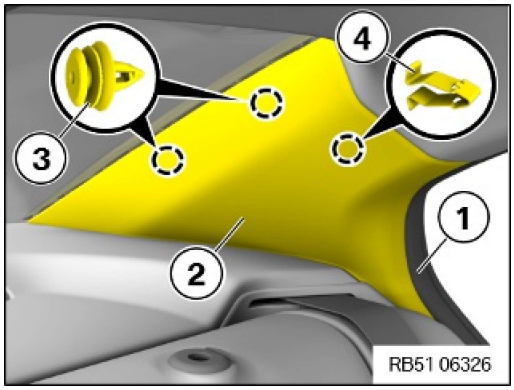
- Check clips (1) and clamp (4) for damage, renew if necessary.
- Check the guides (3) for damage.

Result

» Guide is damaged.

Measure

- Renew the C-pillar trim panel .



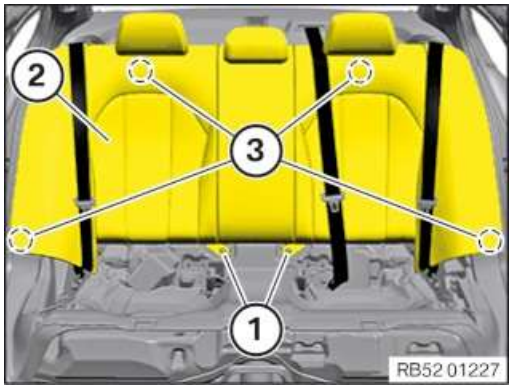
NOTICE

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

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

9 – Remove rear seat backrest

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- Guide the rear seat backrest (2) into the seat belts and position it.
- Attach the rear seat backrest (2) in the guides (3) from the top.
- Renew screws (1).

  Parts: Bolts
- Tighten the screws (1).

Rear seat backrest on body

Screw	Renew screw.	Tightening torque	42 Nm

10 – Installing rear seat bench



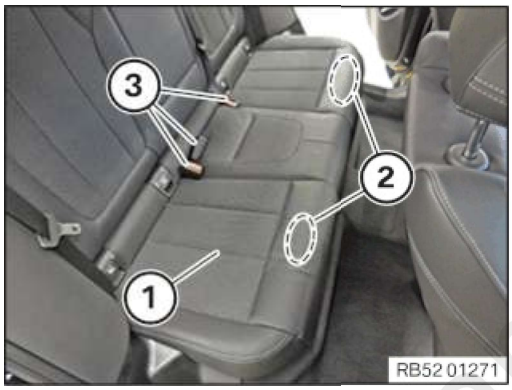
- Lift the seat bench (1) into the vehicle.
- Insert the seat belt (3).
- Renew the screw (2).

  Parts: Screw
- Tighten down screw (2).

Rear upper seat belt to bottom body

Screw	Renew screw.	Tightening torque	42 Nm

- Connect available connectors.



- Insert seat bench (1).
- Thread seat belt buckles (3) into the seat bench.
- Engage the seat bench (1) in the area (2).

Additional Information

Overview of Tightening Torques

End fitting to body — Used in step 7

M10	Renew screw.		42 Nm

Rear seat backrest on body — Used in step 9

Screw	Renew screw.	Tightening torque	42 Nm

Rear upper seat belt to bottom body — Used in step 10

Screw	Renew screw.	Tightening torque	42 Nm

cardiagn.com

61 31 221 Removing and installing/replacing both multifunction steering wheel switches

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.

TECHNICAL INFORMATION

Steering wheel must be replaced if airbag unit has been deployed.

Only with M Sport steering wheel: Impact plate must be replaced if airbag unit has been deployed.

For additional information see: 72 12 ... Procedure after airbag deployment as result of an accident

PRELIMINARY WORK

1 – Disconnecting all battery earth leads



- See additional information.

2 – Removing the airbag unit (sports steering wheel)

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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RISK OF DAMAGE

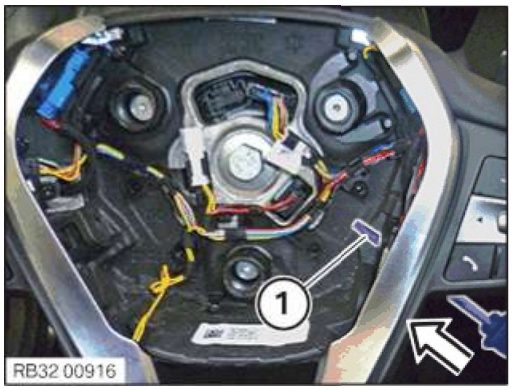
Damage to the steering wheel.

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.



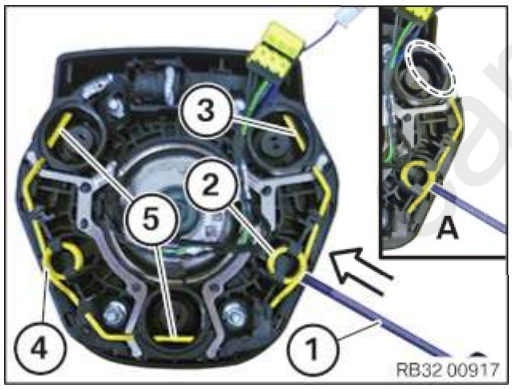
- Insert Torx screwdriver T25 (1) diagonally upwards in the hidden opening (2) on the rear side of the steering wheel until a spring resistance is felt.



NOTICE

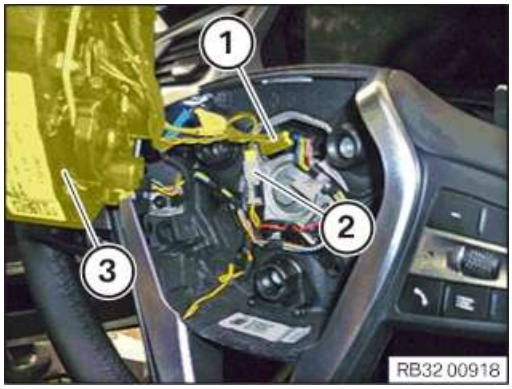
To provide a better overview: Diagram with airbag unit removed.

- 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.
- Then use Torx screwdriver T25 (1) to press wire spring clip (4) in the direction of the arrow towards the centre of the steering wheel and release locks (5).
- Carefully raise the airbag unit.



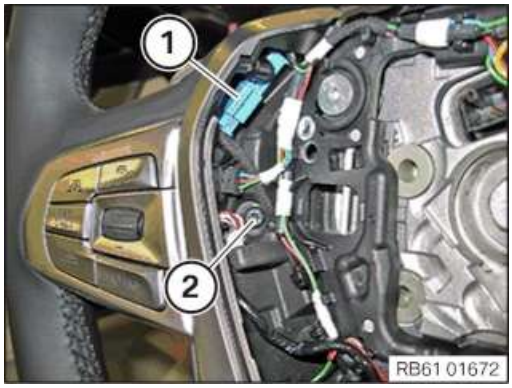
- Unlock and disconnect the plug connections (1) and (2).
- Remove airbag unit (3).

3 – Removing the shift paddle for the automatic transmission

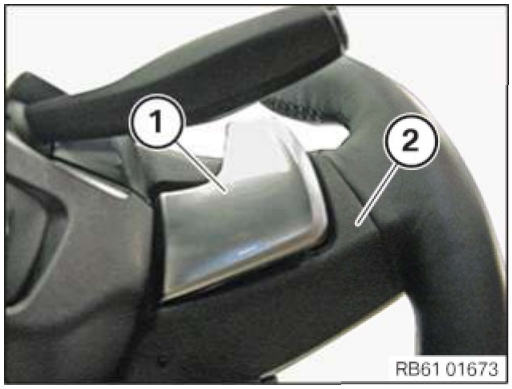
cardiagn.com

NOTICE

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



- Disconnect connector (1) and remove cable to shift paddle.
- Loosen screw (2).



- Remove shift paddle (1) from steering wheel (2) and remove associated access line.

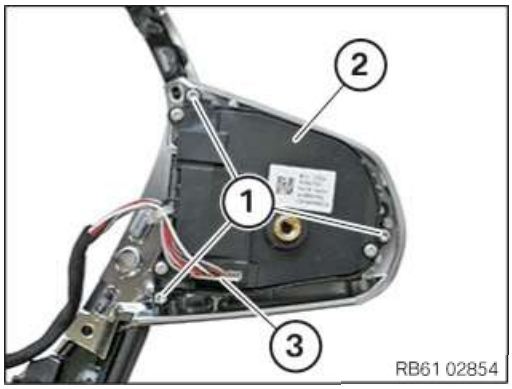
cardiagn.com

MAIN WORK

4 – Remove both leather sports steering wheel switches

NOTICE

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

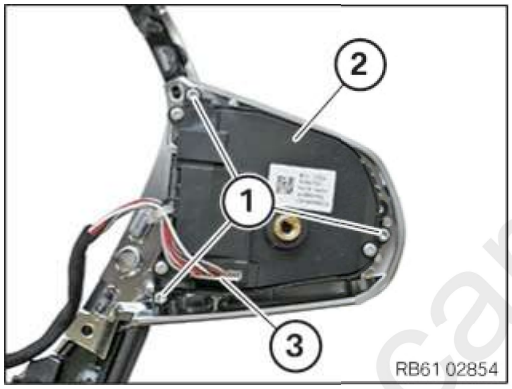


- Loosen screws (1) on the switch (2).
- Remove switch (2) from the design trim.
- Unlock plug connection (3) and disconnect.

5 – Install both sport leather steering wheel switches

NOTICE

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



- Position the switch (2) into design trim and tighten with screws (1).
- Connect connectors (3) and lock.

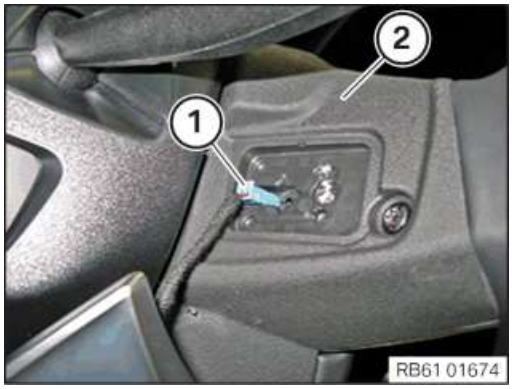
cardiagn.com

POSTPROCESSES

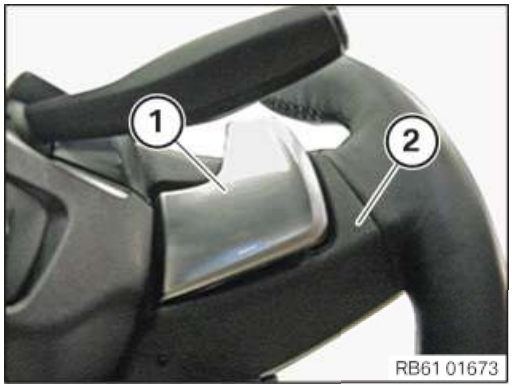
6 – Installing the shift paddle for the automatic transmission

NOTICE

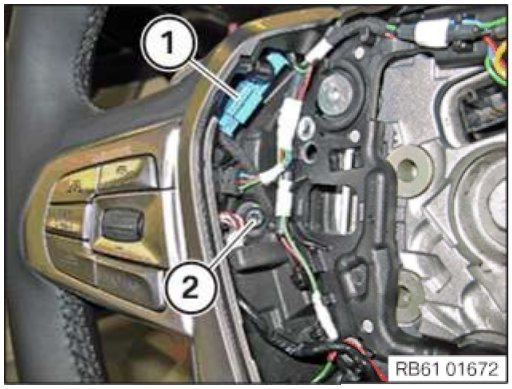
Description is for left component only. Procedure on the right side is identical.



- Insert the access line (1) into the rear of the steering wheel (2).



- Position the shift paddle (1) on the steering wheel (2).



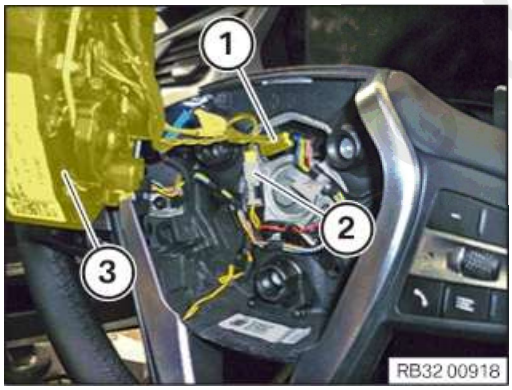
- Tighten down screw (2).

Shift paddle to steering wheel

Screw TS5x12		Tightening torque	2 Nm

- Insert the cable and connect the connector (1).

7 – Installing the airbag unit (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.

8 – Disconnecting all battery earth leads

bmwdiagn.com



- See additional information.

Additional Information

Overview of Tightening Torques

Shift paddle to steering wheel			Used in step 6
Screw TS5x12		Tightening torque	2 Nm

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	2
72 12 ... Procedure after airbag deployment as result of an accident	

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

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61 20 900 Disconnecting and connecting battery earth lead	18
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61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18
61 20 900 Disconnecting and connecting battery earth lead	18

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61 31 011 Removing and installing/replacing coil spring cassette

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.

TECHNICAL INFORMATION

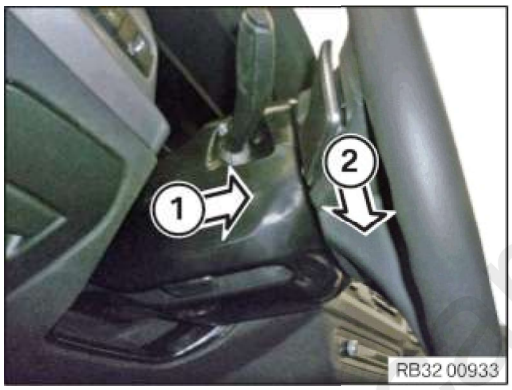
Steering wheel must be replaced if airbag unit has been deployed.

Only with M Sport steering wheel: Impact plate must be replaced if airbag unit has been deployed.

For additional information see: 72 12 ... Procedure after airbag deployment as result of an accident

PRELIMINARY WORK

1 – Adjust the steering column position



- Adjust the length of the steering column to the maximum length in the direction of arrow (1).
- Move the steering column to the lowest steering column position in the direction of arrow (2).

2 – Disconnecting all battery earth leads



- See additional information.

3 – Removing the airbag unit

ordiag.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

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.

▸ **Version A: Removing the airbag unit (sports steering wheel)**



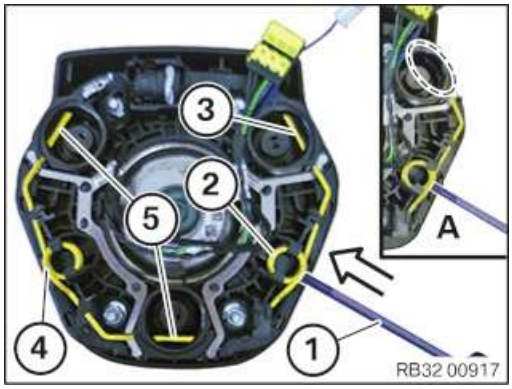
- Insert Torx screwdriver T25 (1) diagonally upwards in the hidden opening (2) on the rear side of the steering wheel until a spring resistance is felt.



NOTICE

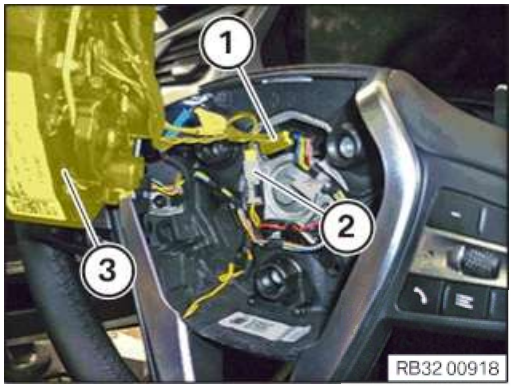
To provide a better overview: Diagram with airbag unit removed.

- 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.
- Then use Torx screwdriver T25 (1) to press wire spring clip (4) in the direction of the arrow towards the centre of the steering wheel and release locks (5).
- Carefully raise the airbag unit.

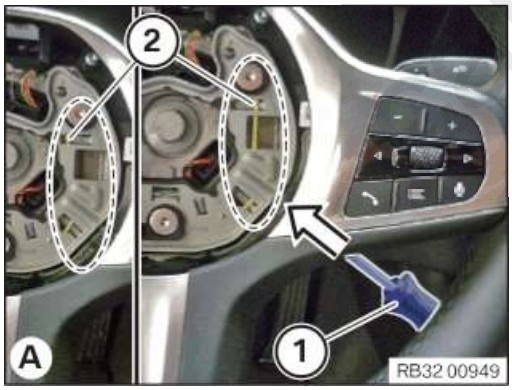


- Unlock and disconnect the plug connections (1) and (2).
- Remove airbag unit (3).

▸ **Version B: Removing airbag unit (M Sport steering wheel)**



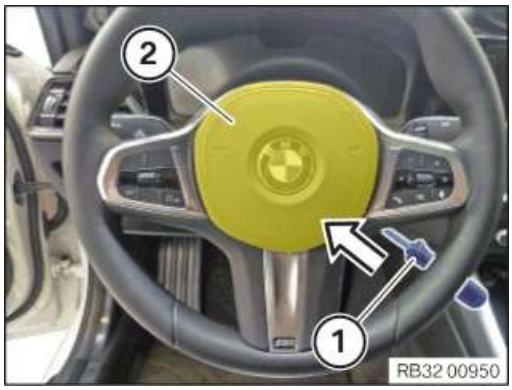
- Locate the pre-punched bore hole (1) on the rear side of the steering wheel by touch.
- Insert the Torx screwdriver T27 (2) diagonally upwards in the pre-punched bore hole (1) on the rear side of the steering wheel until a springing kind of resistance can be felt.



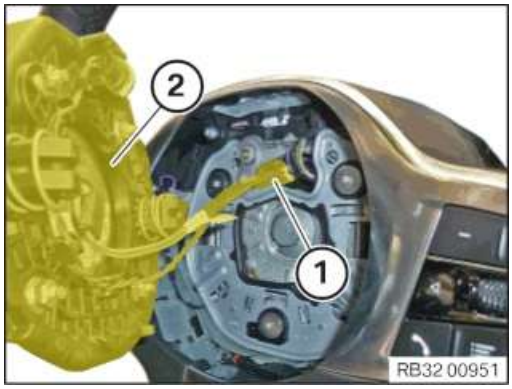
NOTICE

To provide a better overview: Diagram with airbag unit removed.

- Press in Torx screwdriver T27(1) straight in 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).

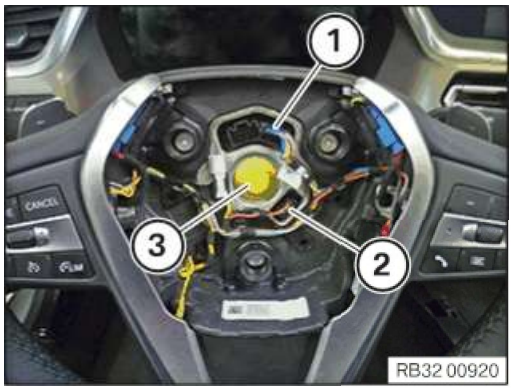


- Press in Torx screwdriver T27 (1) straight in direction of arrow towards the centre of the steering wheel and lift airbag unit (2) on the unlocked side.
- Repeat procedure on left side and carefully remove airbag unit (2) in direction of arrow off the steering wheel.



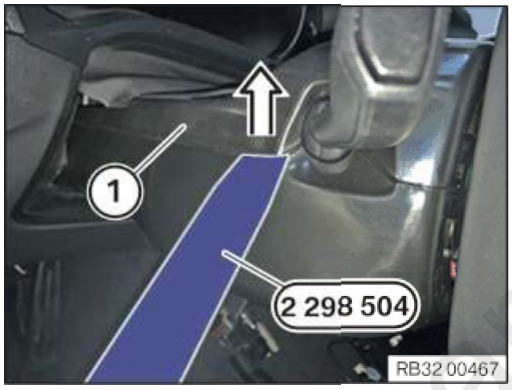
- Unlock and disconnect plug connection (1) and remove the airbag unit (2).

4 – Removing the steering wheel (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.

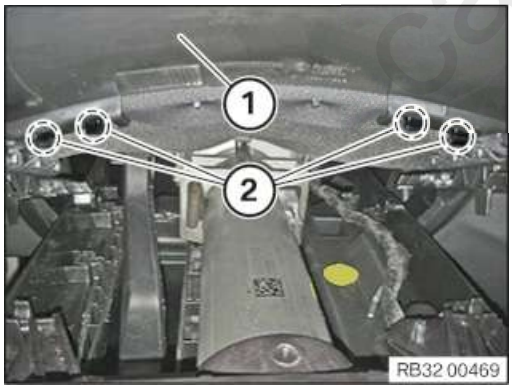
5 – Removing steering column shroud upper section



NOTICE

Perform the operations on the left and right side.

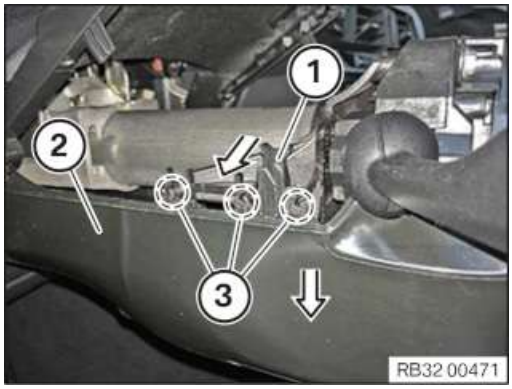
- Unlock the steering column shroud upper section (1) with the special tool 2 298 504 and fold up.



- Unclip the steering column shroud upper section (1) from the brackets (2).
- Remove the steering column shroud upper section (1).

6 – Removing steering column shroud lower section

carcdiagn.com



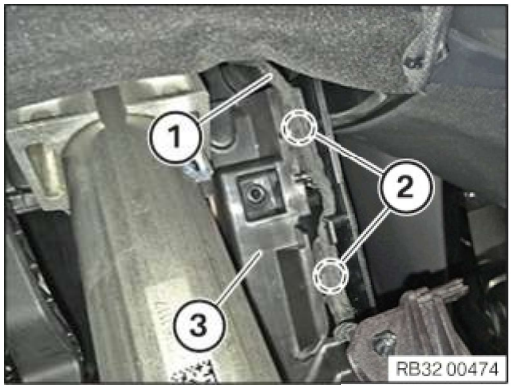
NOTICE

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.

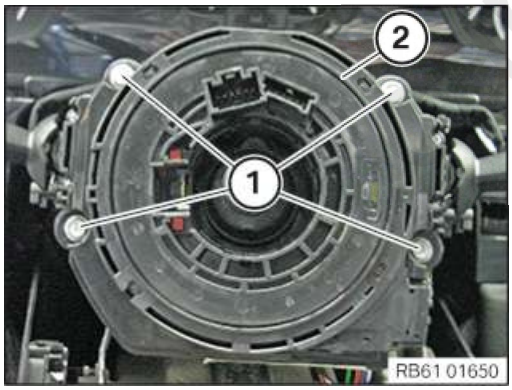


- Fold the steering column shroud lower section down.
- Unlock and disconnect connector (1).

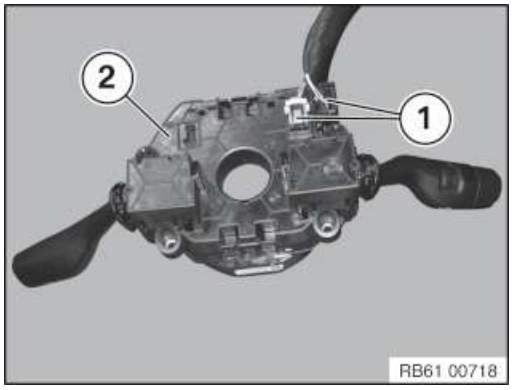


- Detach the cable (1) from the brackets (2).
- Remove the steering column shroud lower section (3).

7 – Removing the steering column switch cluster (SZL)



- Loosen screws (1).
- Remove the steering column switch cluster (SZL) (2).



- Unlock and disconnect the connector (1) on the steering column switch cluster (SZL) (2).

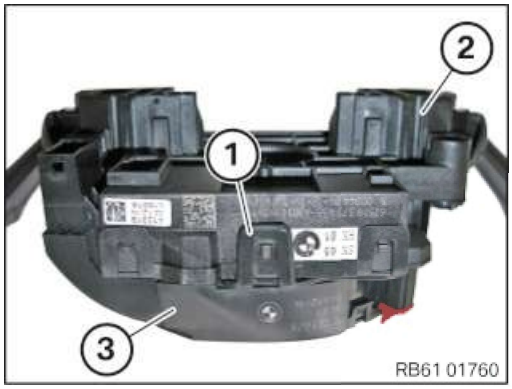
rdiagn.com

MAIN WORK

8 – Remove coil spring cassette

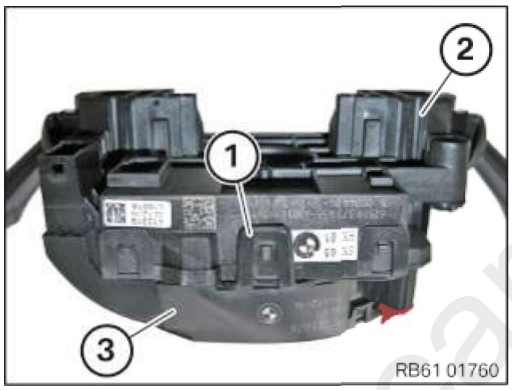


- Loosen both latch mechanisms (1) on the steering column switch cluster (2).



- Loosen the central latch mechanism (1) on the steering column switch cluster (2).
- Remove the coil spring cassette (3) from the steering column switch cluster (2).

9 – Installing the coil spring cassette



- Unclip the coil spring cassette (3) from the steering column switch cluster (sw/clsr) (2).
- Check central latch mechanism (1) on the steering column switch cluster (sw/clsr) (2).

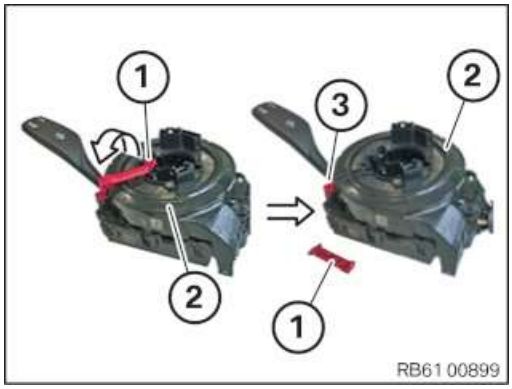


- Check both latch mechanisms (1) on the steering column switch cluster (sw/clsr) (2).

POSTPROCESSES

10 – Installing the steering column switch cluster (SZL)

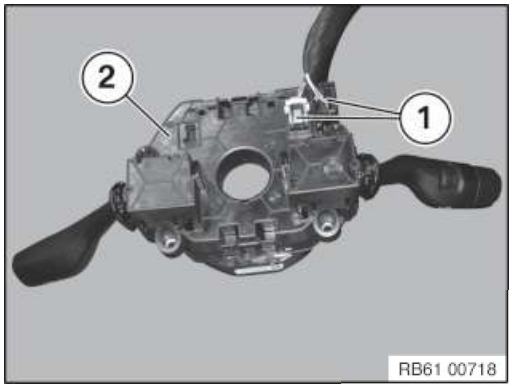
cardiagn.com



- **Replacement:**

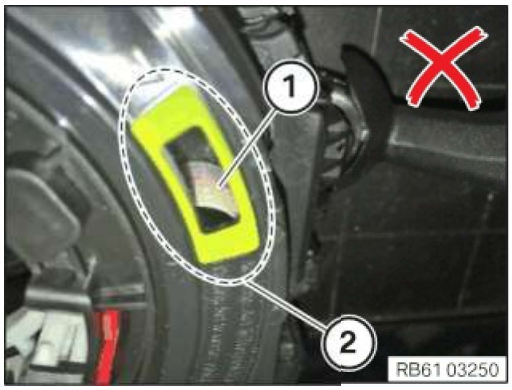
  Break off the transportation retainer (1) on the steering column switch cluster (SZL) (2) in direction of arrow.

  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).

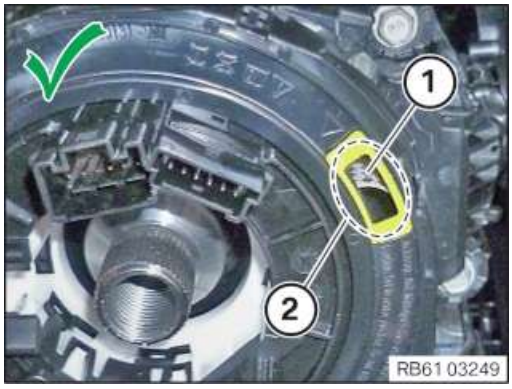
Result

» 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

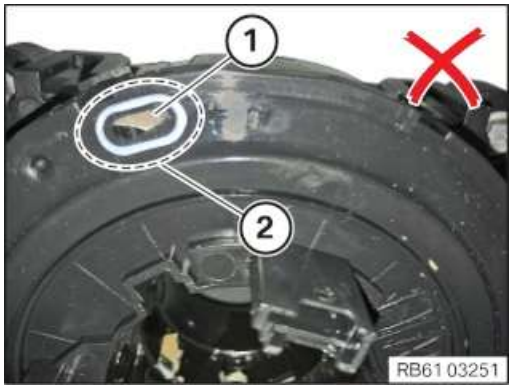
» Correct marking (1) is seen in inspection glass (2).

Measure

- Continue with the next step.

Check

cardiagn.com



- **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:**

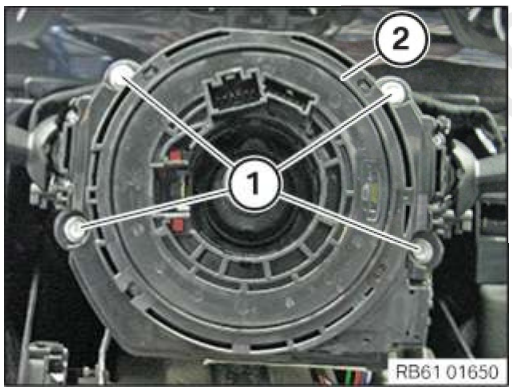
  Check whether the correct marking (1) is seen in inspection glass (2).

Result

» Correct marking (1) is seen in inspection glass (2).

Measure

- Continue with the next step.

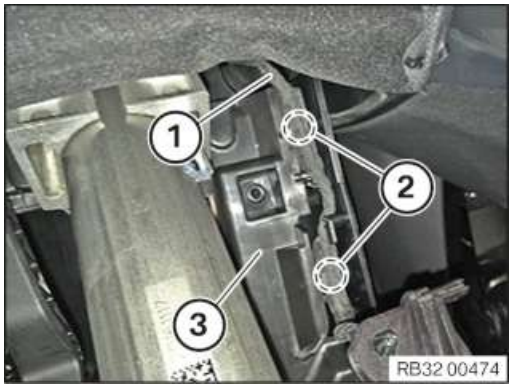


- Position the steering column switch cluster (SZL) (2).
- Tighten the screws (1).

Steering column switch cluster (SZL) on the steering column

Screw TS5x20		Tightening torque	3 Nm

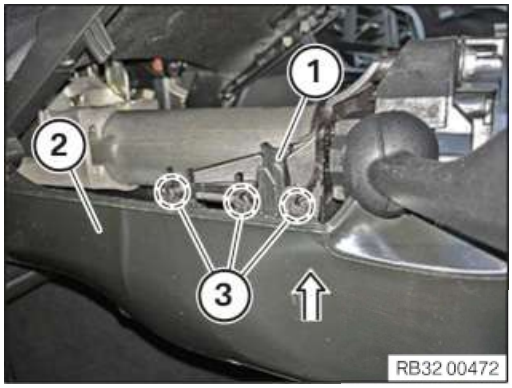
11 – Install steering column shroud lower section



- Position the steering column shroud lower section (3).
- Secure the line (1) on the brackets (2).



- Connect the connector (1).

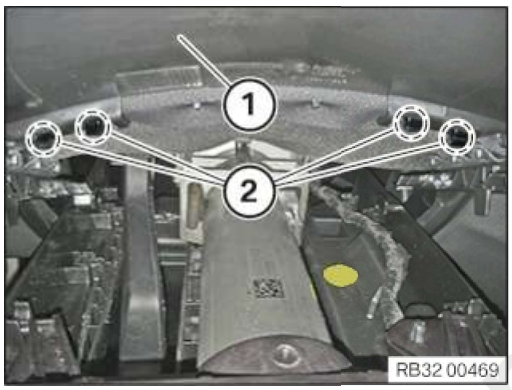


NOTICE

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.

12 – Fit steering column shroud upper section



- Clip in the steering column shroud upper section (1) at the brackets (2).



NOTICE

Perform the operations on the left and right side.

- Clip in the steering column shroud upper section (1)into the guide (2).



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.

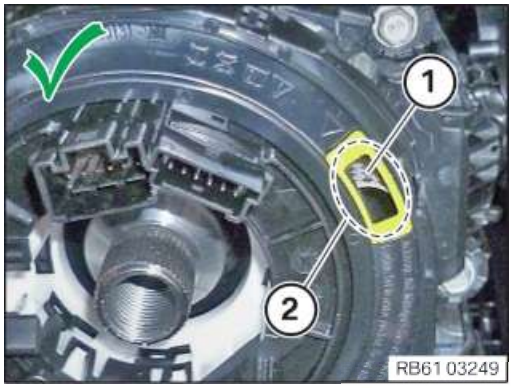
13 – Installing the steering wheel (sports steering wheel)

diag.com

▸ **Check the neutral position of the clock spring**

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.



Check

- **Version A:**

  Check the mark (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

- **Version B:**

  Check the mark (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

- A micro-encapsulated screw (3) may be fitted.
- Check the screw connection.

Result

» Screw is (3) micro-encapsulated.

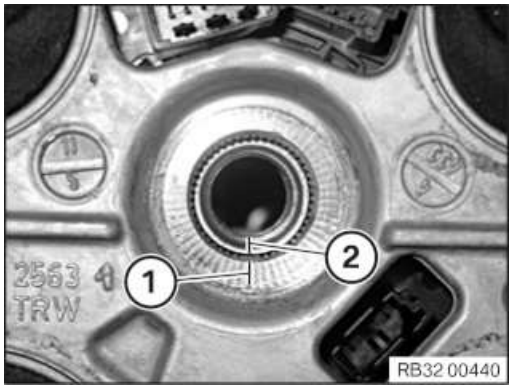
carfdiagn.com

Measure

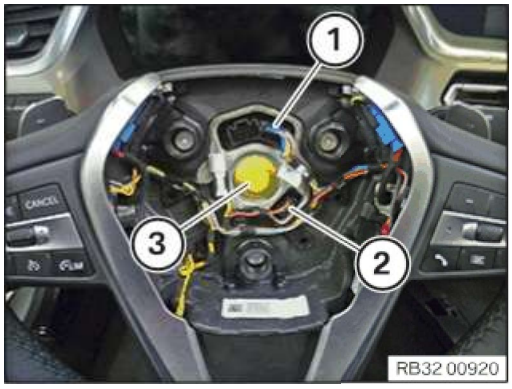
- Clean thread in the steering column.

  Renew the screw (3).

  Parts: Screw



- Align mark (1) on steering wheel to mark (2) on steering column.
- Connect steering wheel.



- Connect connectors (1) and lock.
- If installed: Connect connectors (2) and lock.
- Tighten screw (3) .

Steering wheel to steering column

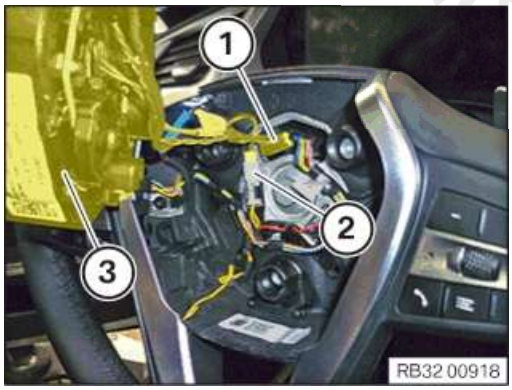
M14	Only for a micro-encapsulated screw: Renew screw.	Tightening torque	62,5 Nm

14 – Installing the airbag unit

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

▸ **Version A: Installing the airbag unit (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.

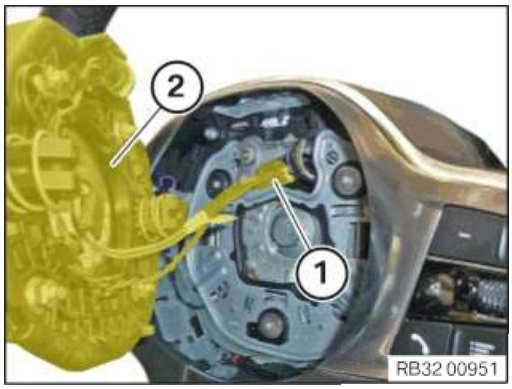
  The airbag unit (1) must engage audibly and perceptibly.

arodiagn.com

▸ **Version B: Installing the airbag unit (M Sport steering wheel)**

TECHNICAL INFORMATION

After replacing the airbag unit (M-sports 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!



- Connect and lock connector (1) of the airbag unit (2).



- 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.

15 – Disconnecting all battery earth leads



- See additional information.

16 – Checking the airbag for function

Check

- Turn steering wheel in both directions to the limit position.

Result

» The airbag indicator light lights up.

Measure

- Renew the coil spring cassette.

Additional Information

Overview of Tightening Torques

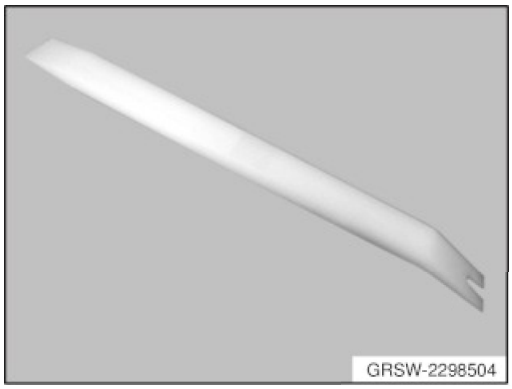
cardiagn.com

Steering column switch cluster (SZL) on the steering column			Used in step 10
Screw TS5x20		Tightening torque	3 Nm

Steering wheel to steering column			Used in step 13
M14	Only for a micro-encapsulated screw: Renew screw.	Tightening torque	62,5 Nm

Overview of Special Tools

2 298 504 Wedge



Common		Used in step 5
Usage	Wedge with angled lug	
Included in the tool or work		
Storage location	C34	
Replaced by		
In connection with		
SI-Number	01 03 12 (792)	

Links

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	3

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	215
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	215
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215
61 20 900 Disconnecting and connecting battery earth lead	215

carsign.com

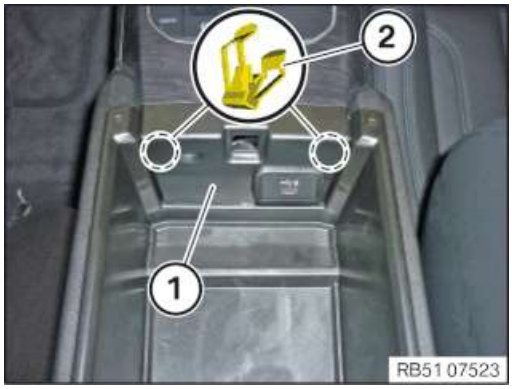
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads) 215
61 20 900 Disconnecting and connecting battery earth lead 215
61 20 900 Disconnecting and connecting battery earth lead 215
61 20 900 Disconnecting and connecting battery earth lead 215
61 20 900 Disconnecting and connecting battery earth lead 215
61 20 900 Disconnecting and connecting battery earth lead 215
61 20 900 Disconnecting and connecting battery earth lead 215
61 20 900 Disconnecting and connecting battery earth lead 215

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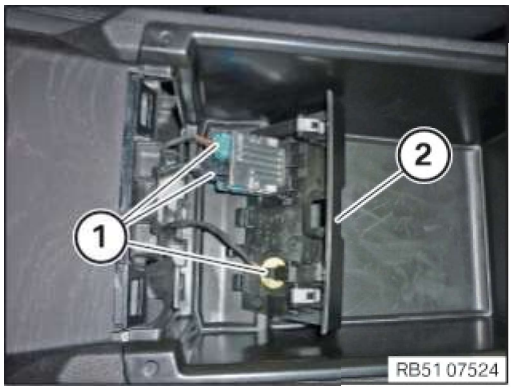
61 31 001 Removing and installing/replacing HDC button

PRELIMINARY WORK

1 – 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) .

2 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



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

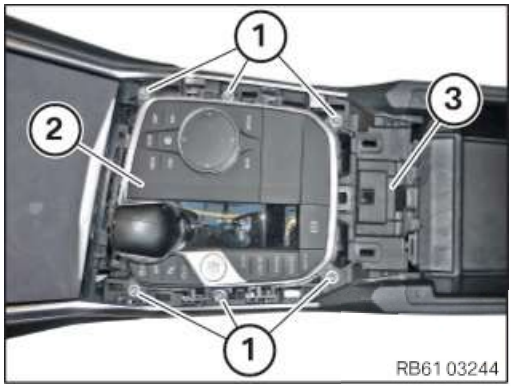
3 – Remove the operating facility in the centre console

▸ **Disconnecting all battery earth leads**

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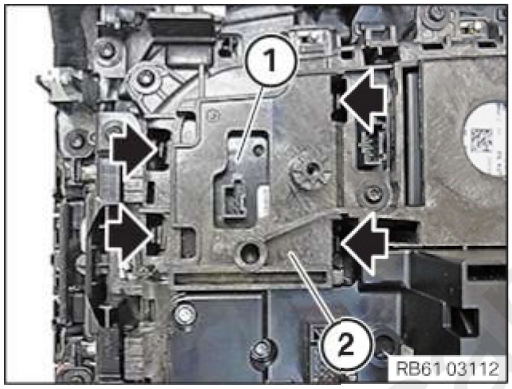
- See additional information.



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

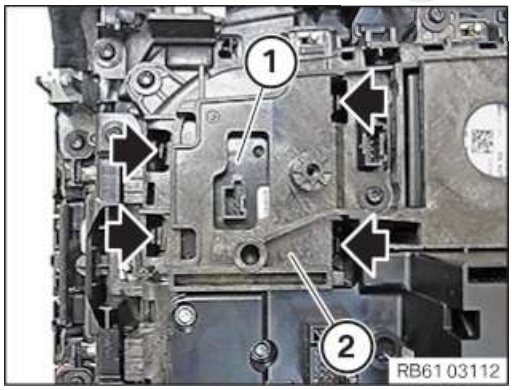
MAIN WORK

4 – Removing the HDC button



- Release the latch mechanisms (arrows).
- Remove HDC button (1) from gear selector switch (GWS) (2).

5 – Installing the HDC button



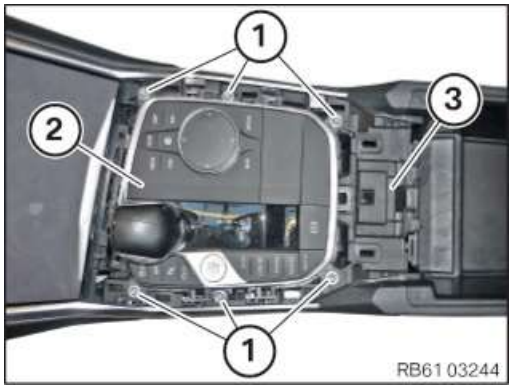
- Position HDC button (1) on gear selector switch (GWS) (2).

  The latch mechanisms (arrows) must engage audibly.

POSTPROCESSES

6 – Install the operating facility in the centre console

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

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

▶ **Disconnecting all battery earth leads**



- See additional information.

7 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



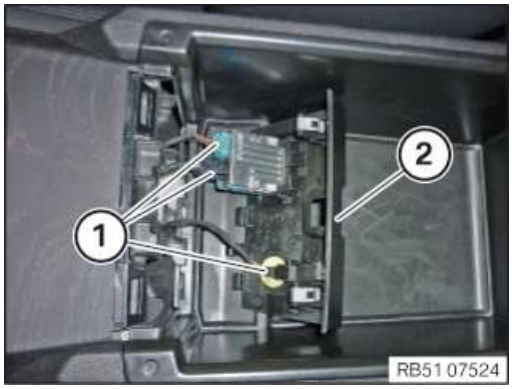
- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .



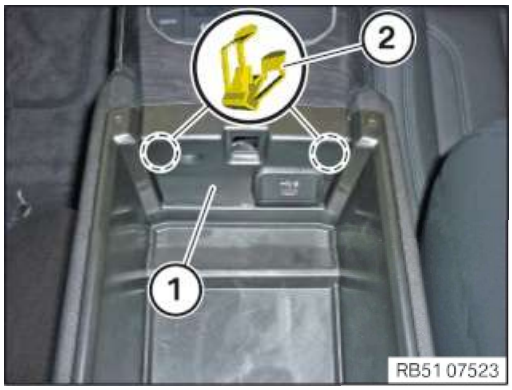
- Correctly position the centre console trim (1) and engage at the latch mechanisms.

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8 – 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).

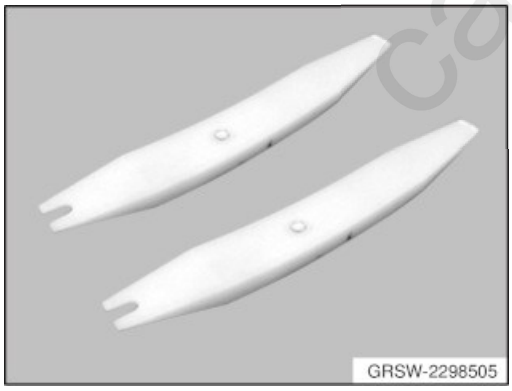
Additional Information

Overview of Tightening Torques

Gear selector switch to centre console trim			Used in step 6
Screw		Tightening torque	1,8 Nm

Overview of Special Tools

2 298 505 Wedge



Common		Used in step 12
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	Used in step
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
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36

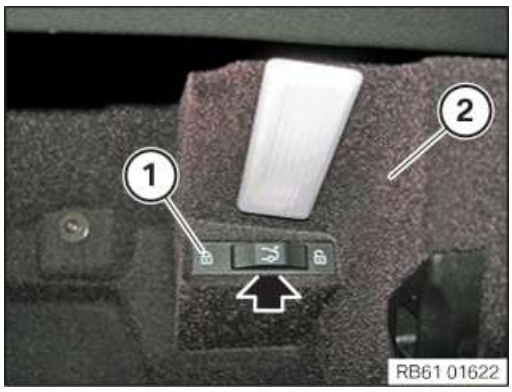
cardiagn.com

61 31 066 Removing and installing/replacing hotel position switch

Prerequisite

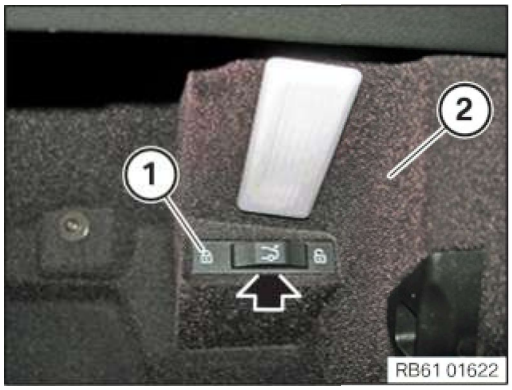
- Glove box open.

1 – Removing the hotel position switch



- Lever out the hotel position switch (1) using special tool 0 496 571 (00 9 327) from the housing (2) in the indicated area.
- Disconnect associated connector.

2 – Installing the hotel position switch

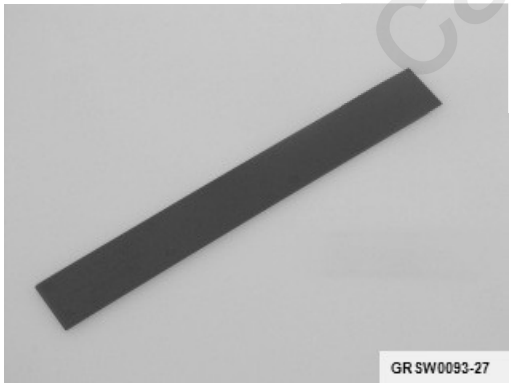


- Connect associated connector with the hotel position switch (1).
- Install hotel position switch (1) in the housing (2).

Additional Information

Overview of Special Tools

0 496 571 (00 9 327) Wedge



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

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61 31 037 Removing and installing/replacing light control unit

RISK OF DAMAGE

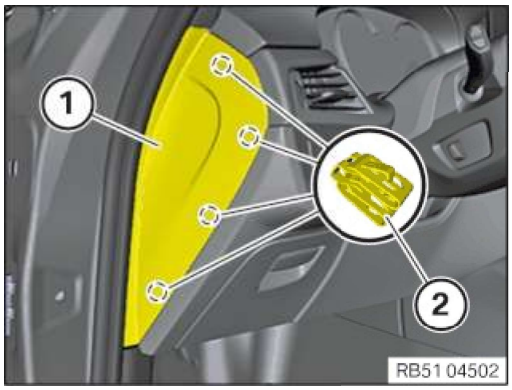
Scratches.

Tools and sharp-edged components can cause scratches.

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

PRELIMINARY WORK

1 – Remove the side panel on the left instrument panel



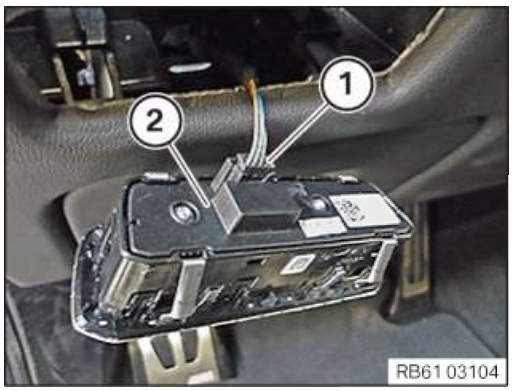
- Unclip and remove the side panel (1) towards the outside from the clamps (2).

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2 – Removing the light operating unit

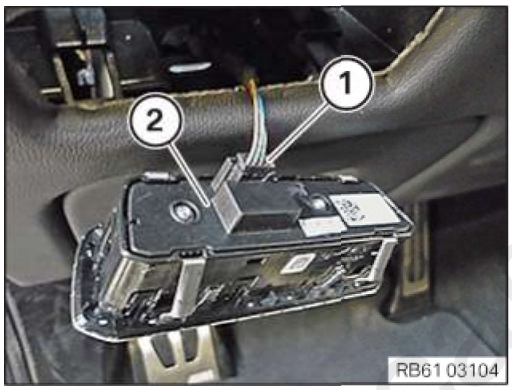


- Unclip light operating unit (1) at the marked positions of the rear.



- Unlock the plug connection (1) on the light operating unit (2) and disconnect it.

3 – Installing the light operating unit



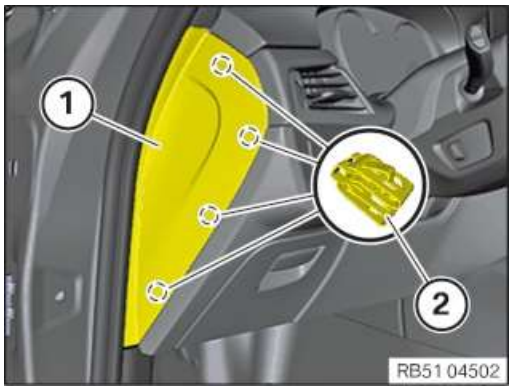
- Connect the connector (1) to the light operating unit (2).



- Correctly position the light operating unit (1) and clip in at the marked points.

rdiag.com

4 – Install the side panel on left instrument panel



- Feed in the side panel (1) and clip it in at the clamps (2).

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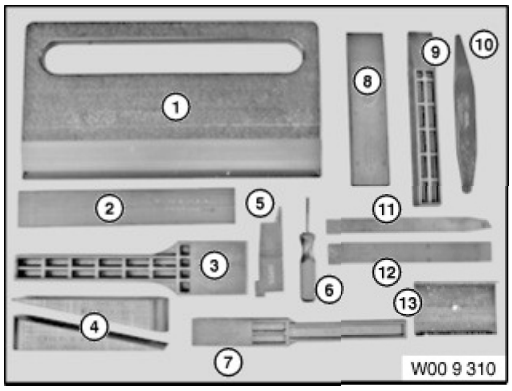
61 31 118 Removing and installing/replacing power window switch on passenger's side

NOTICE

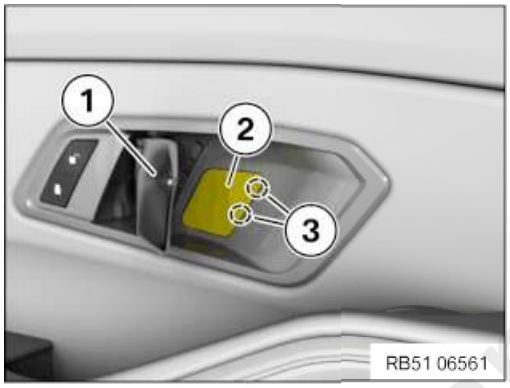
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

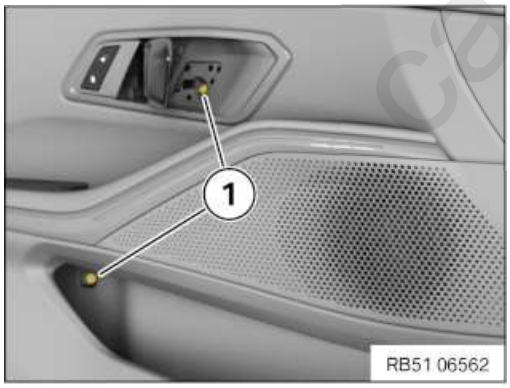
1 – Remove door trim panel



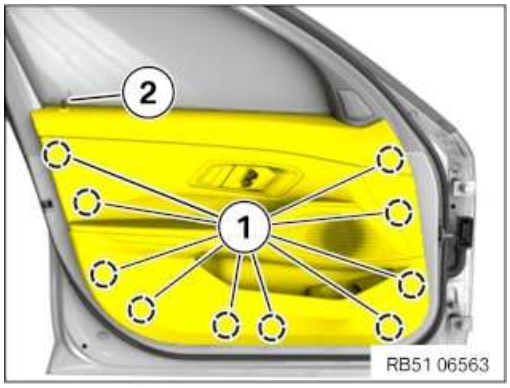
- Have the set of special tools 0 493 752 (00 9 329) ready.



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

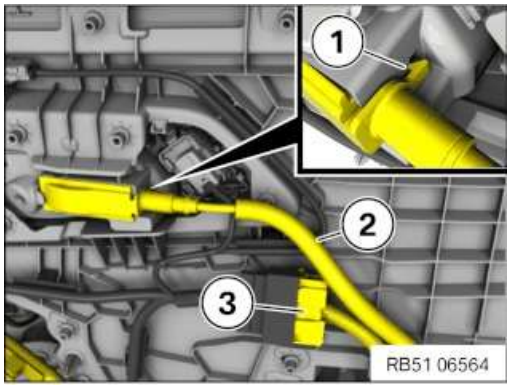


- Loosen screws (1).



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

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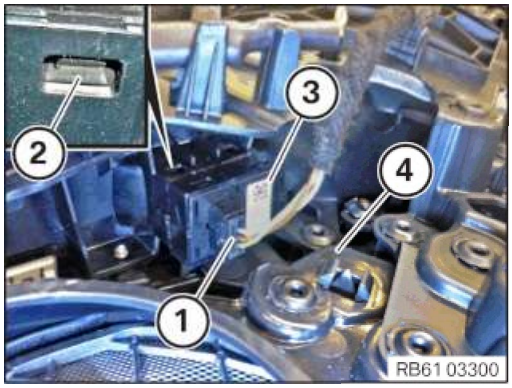


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

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

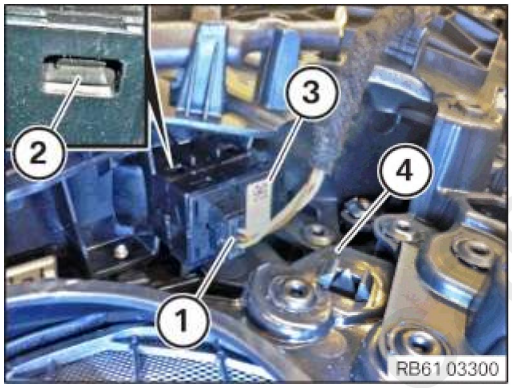
MAIN WORK

2 – Removing the power window switch on the passenger's side



- Disconnect the connector (1) .
- Release latch mechanisms (2) and remove the power window switch (3) from the door trim panel (4).

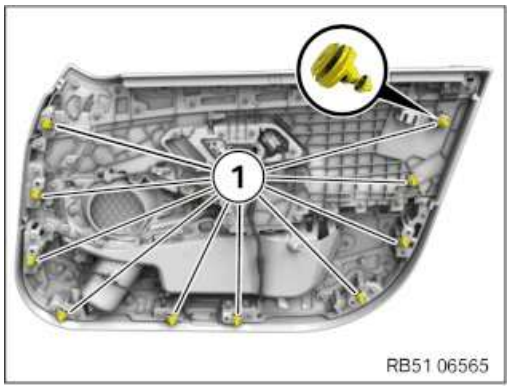
3 – Installing the power window switch on the passenger's side



- Position power window switch (3) on the door trim panel (4) and engage in the latch mechanisms (2).
- Connect connector (1).

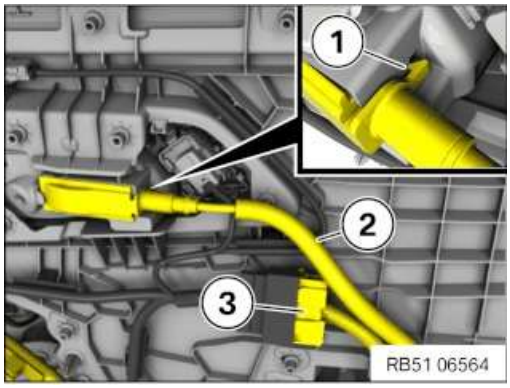
POSTPROCESSES

4 – Install door trim panel

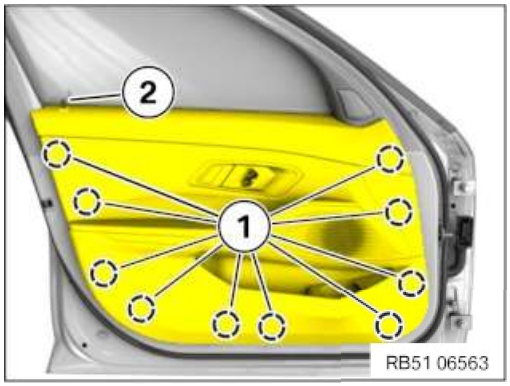


- Renew the clips (1).

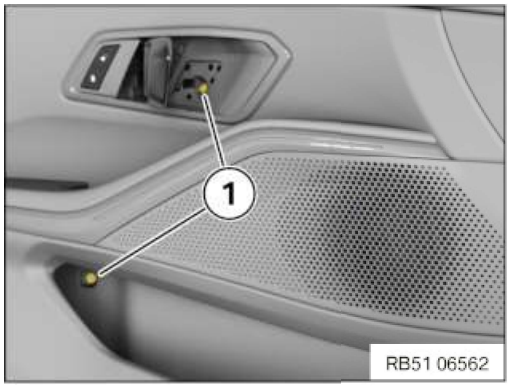
  Parts: Clips



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



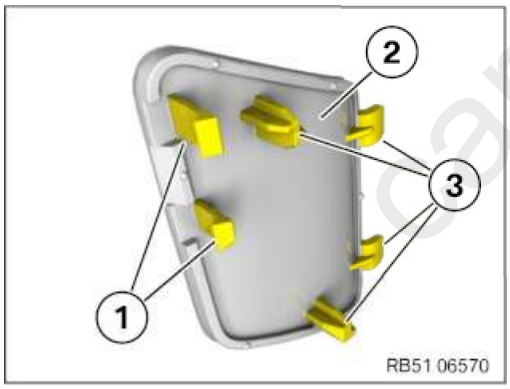
- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).



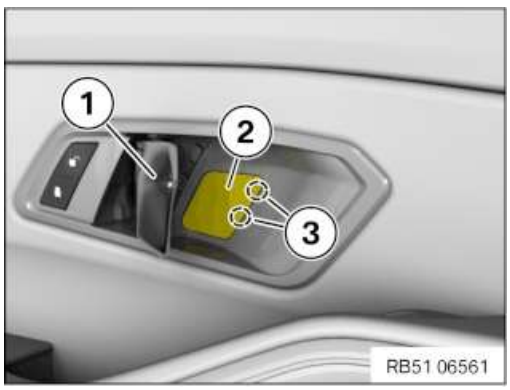
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



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



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

Additional Information

Overview of Tightening Torques

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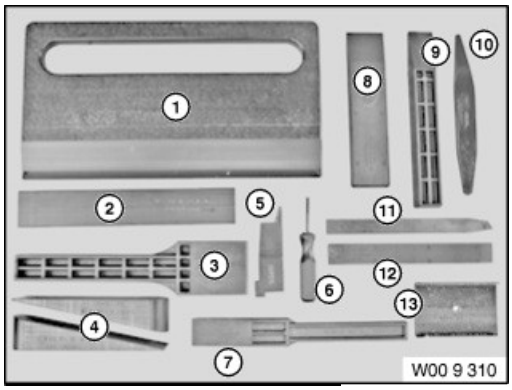
Overview of Tightening Torques

Door trim panel to door — Used in step 4

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common — Used in step 1

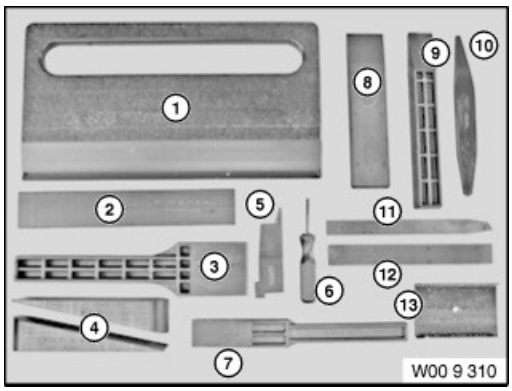
Usage	(Case) with insert not incl. panel wedges
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

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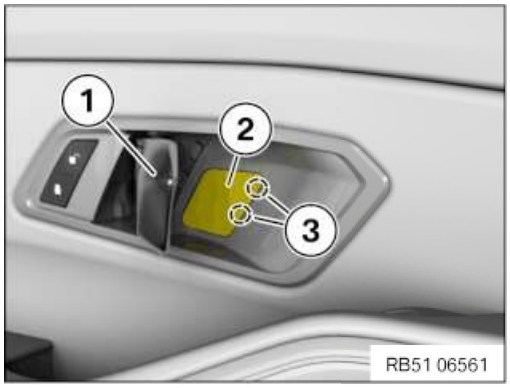
61 31 117 Removing and installing/replacing power window switch, driver's side

PRELIMINARY WORK

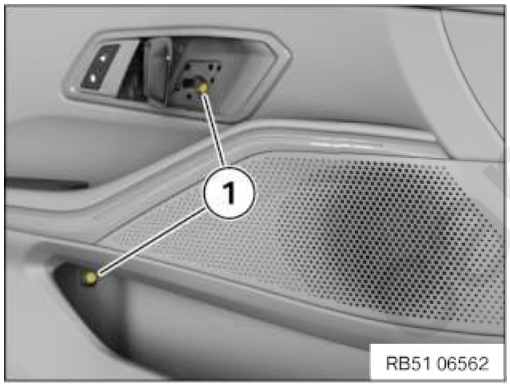
1 – Remove door trim panel



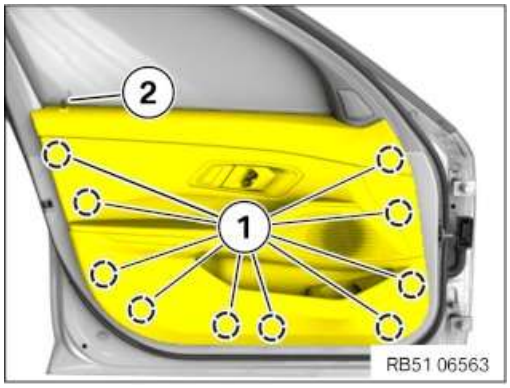
- Have the set of special tools 0 493 752 (00 9 329) ready.



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

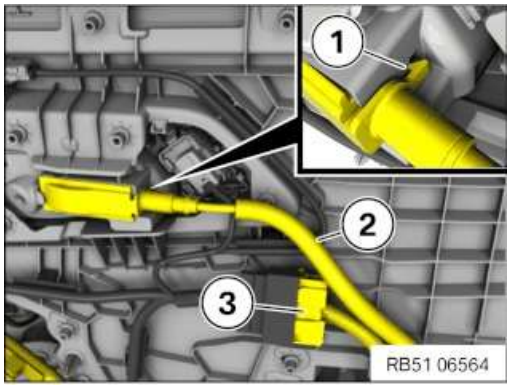


- Loosen screws (1).



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

partdiagn.com

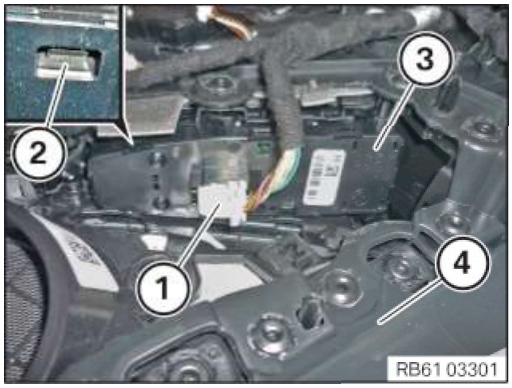


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

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

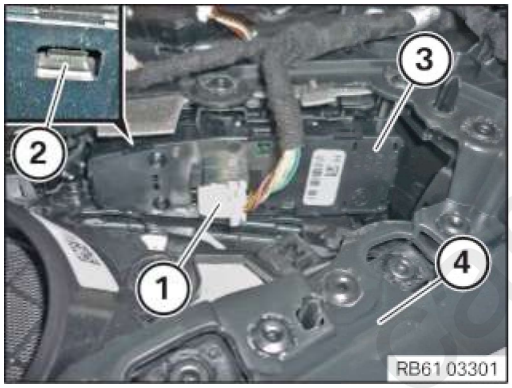
MAIN WORK

2 – Removing power window switch on the driver's side



- Unlock and disconnect connector (1).
- Release latch mechanisms (2) and remove the power window switch (3) from the door trim panel (4).

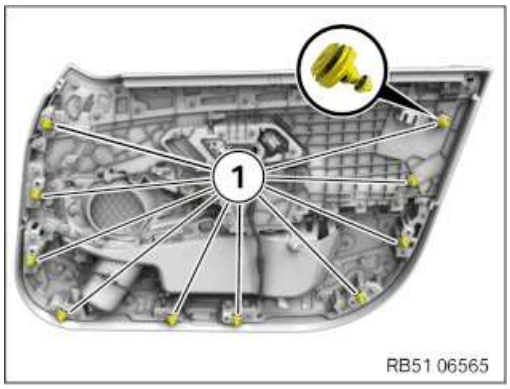
3 – Install the power window switch on the driver's side



- Position power-window switch (3) on the door trim panel (4) and engage in all the latch mechanisms (2).
- Connect connectors (1) and lock.

POSTPROCESSES

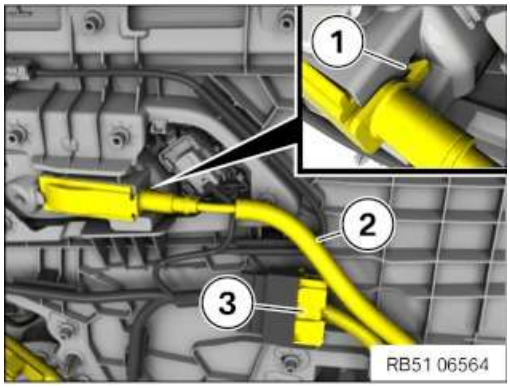
4 – Install door trim panel



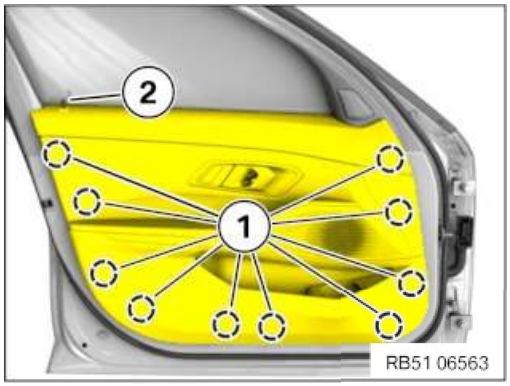
- Renew the clips (1).

  Parts: Clips

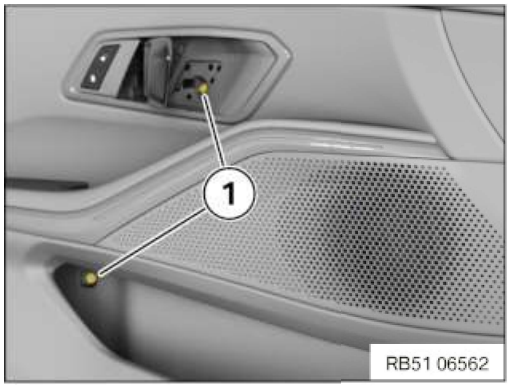
cardiagn.com



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



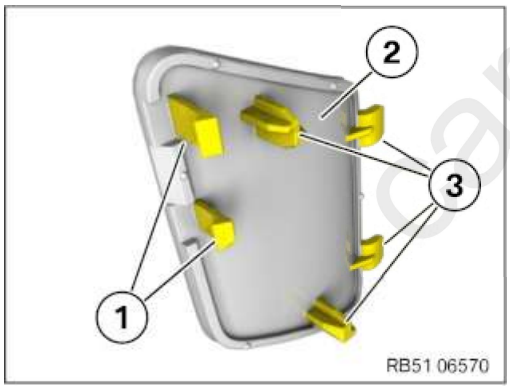
- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).



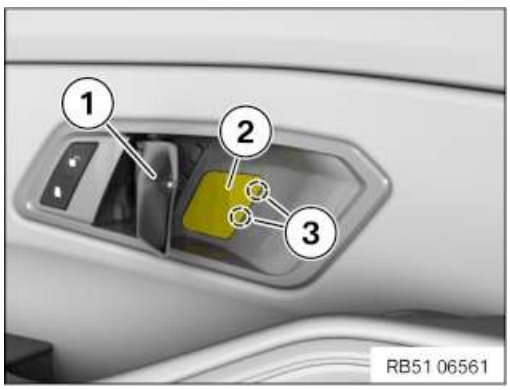
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



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



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

Additional Information

Overview of Tightening Torques

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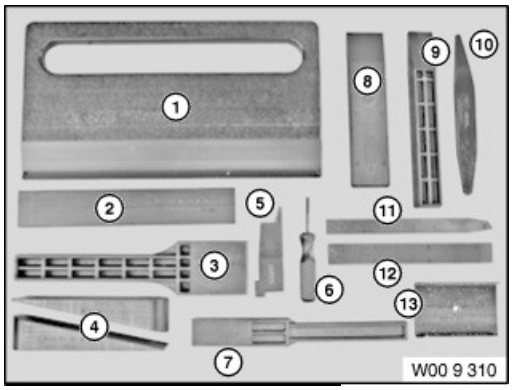
Overview of Tightening Torques

Door trim panel to door — Used in step 4

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common — Used in step 1

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

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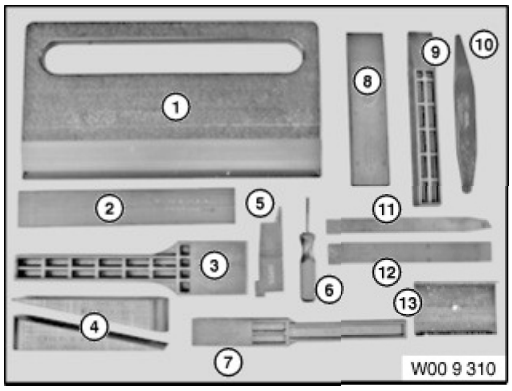
61 31 082 Removing and installing/replacing switch for central locking system

NOTICE

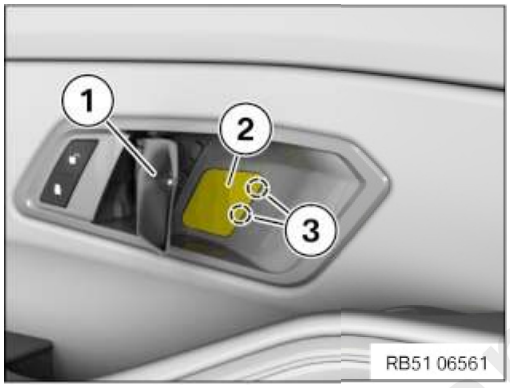
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

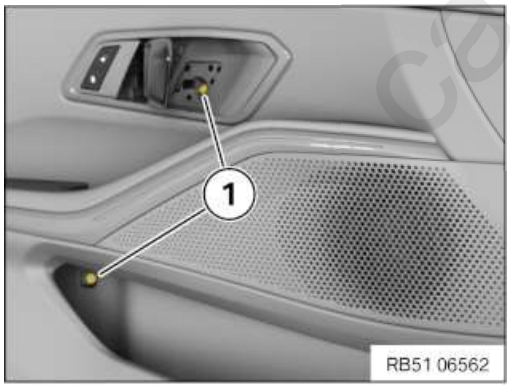
1 – Remove door trim panel



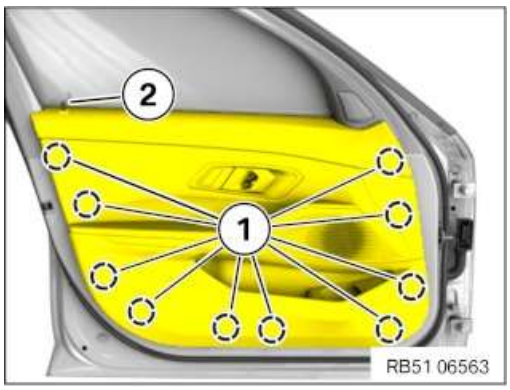
- Have the set of special tools 0 493 752 (00 9 329) ready.



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

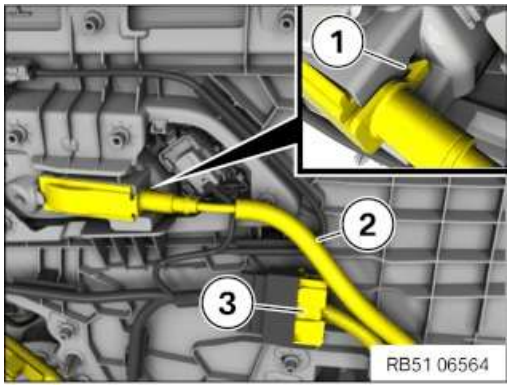


- Loosen screws (1).



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

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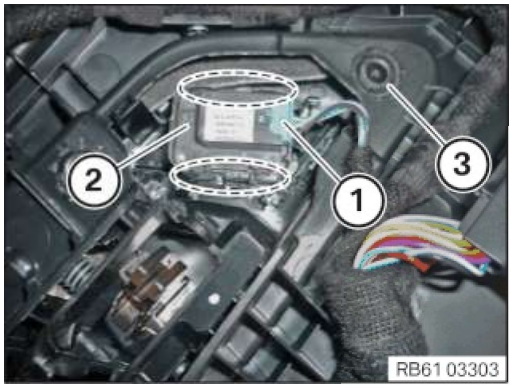


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

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

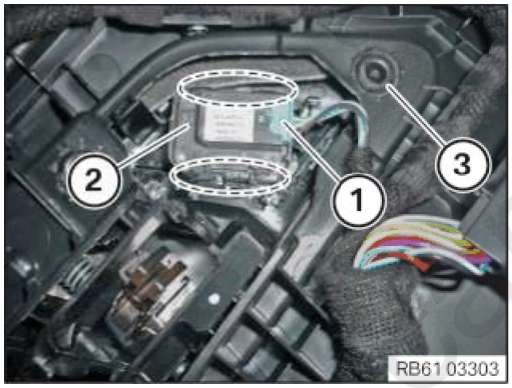
MAIN WORK

2 – Remove the central locking button



- Disconnect the connector (1) .
- Release latch mechanisms in the marked area.
- Remove the central locking button (2)from door trim panel (3).

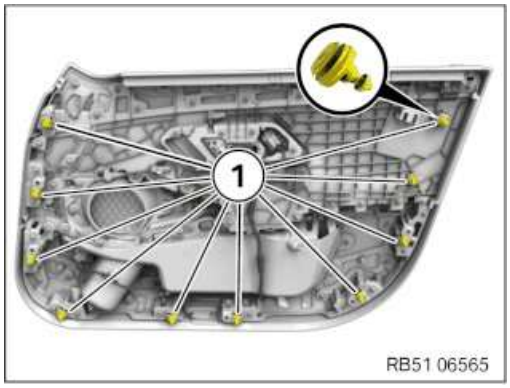
3 – Install the central locking button



- Position central locking button (2) on door trim panel (3) and clip it in the latch mechanisms in the marked area.
- Connect connector (1).

POSTPROCESSES

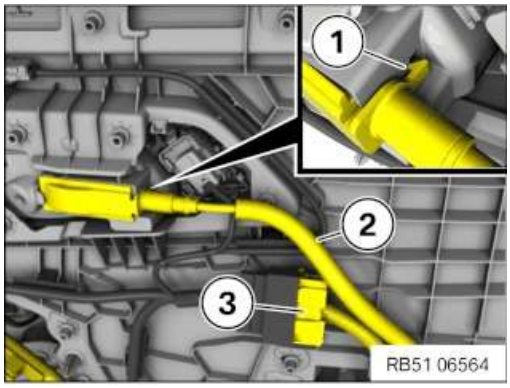
4 – Install door trim panel



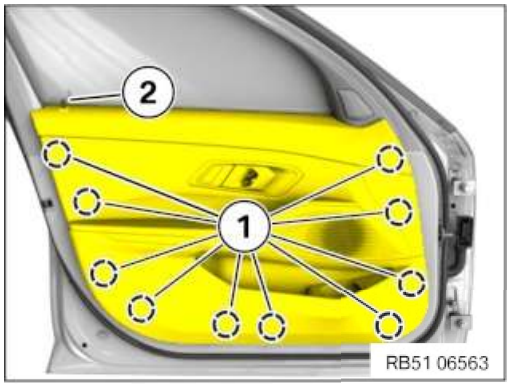
- Renew the clips (1).

  Parts: Clips

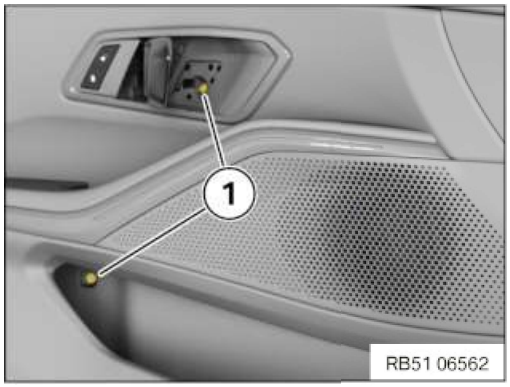
carfdiagn.com



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



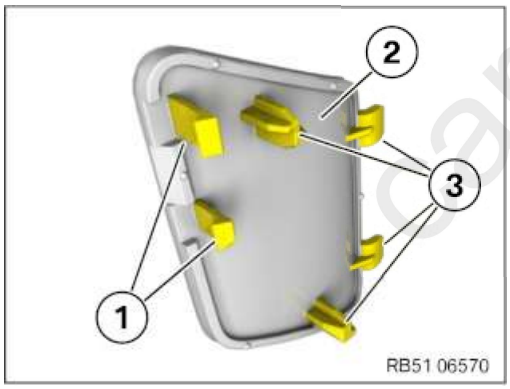
- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).



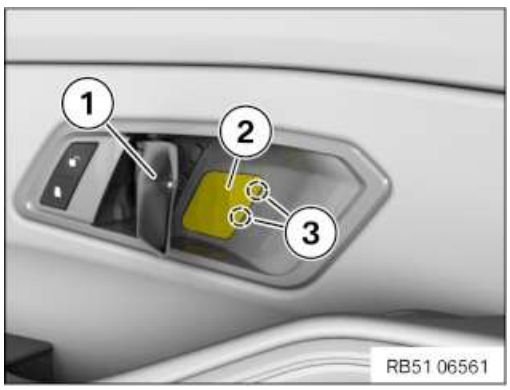
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



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



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

Additional Information

Overview of Tightening Torques

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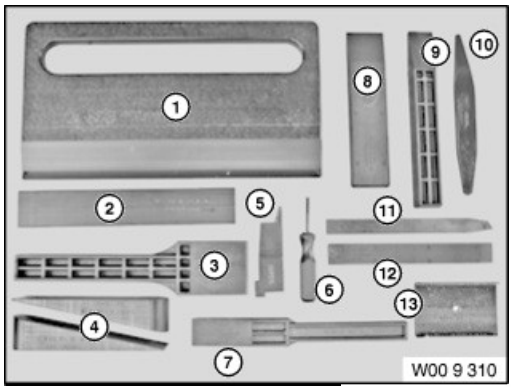
Overview of Tightening Torques

Door trim panel to door — Used in step 4

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common — Used in step 1

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

cardiagn.com

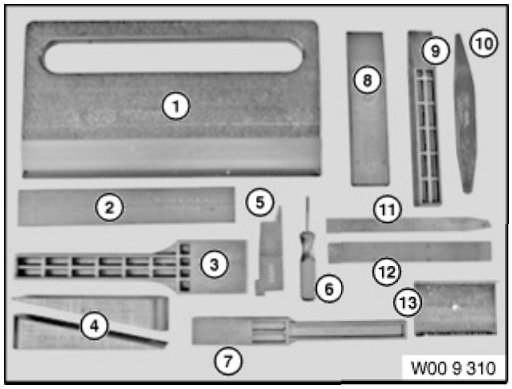
61 31 083 Removing and installing/replacing switch for unlocking tailgate

NOTICE

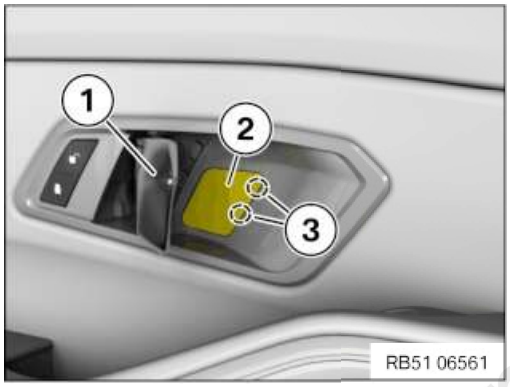
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

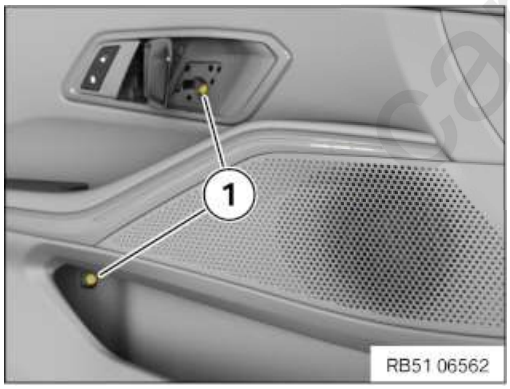
1 – Remove door trim panel



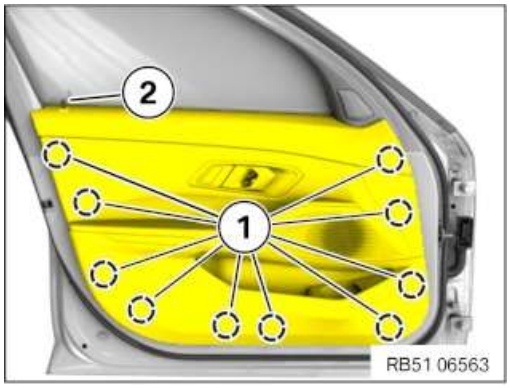
- Have the set of special tools 0 493 752 (00 9 329) ready.



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

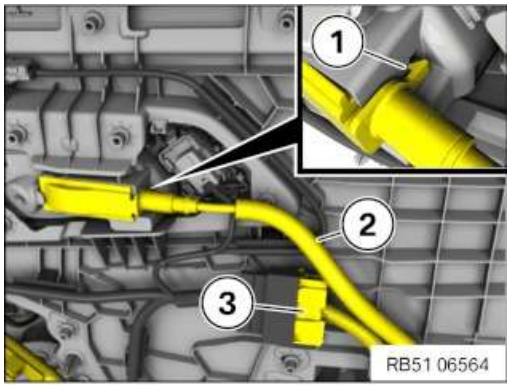


- Loosen screws (1).



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

cardiagn.com

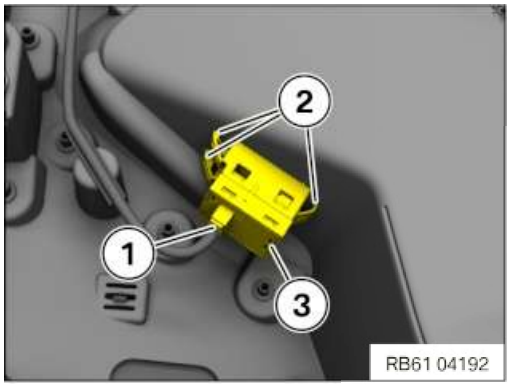


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

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

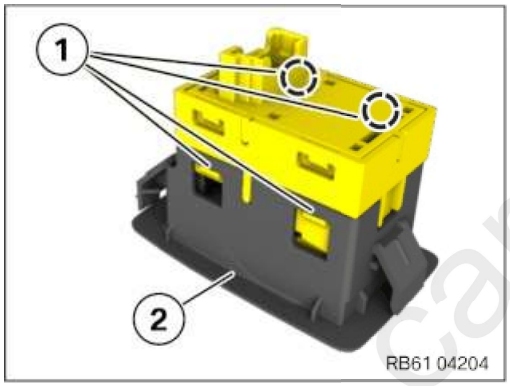
MAIN WORK

2 – Removing the tailgate release switch

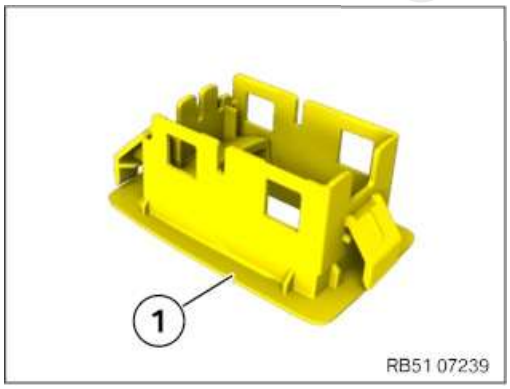


- Unlock plug connection (1) and disconnect.
- Release latch mechanisms (2) and remove the tailgate release switch (3) out of the front door trim panel.

3 – Replacement: Tailgate release switch

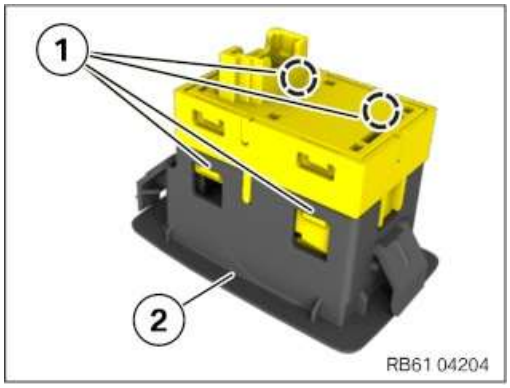


- Unclip clips (1) and remove the rear lid unlocking switches from the tailgate release switch cover (2).



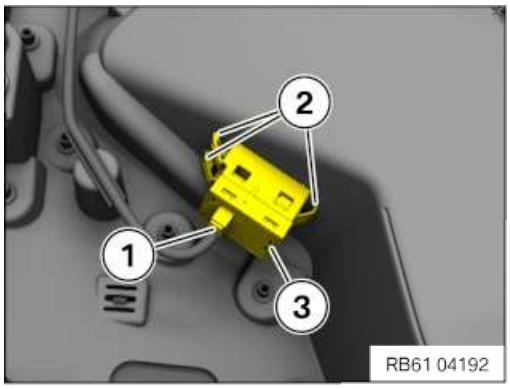
- Check tailgate release switch cover (1) for damage and renew if necessary.

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- Install tailgate release switch in the rear lid unlocking switch cover (2) and clip into the clips (1).

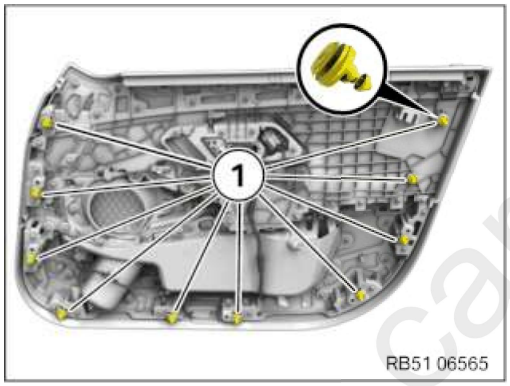
4 – Installing the tailgate release switch



- Install switch for tailgate release (3) in the front door trim panel and clip in using latch mechanisms (2).
- Connect connectors (1) and lock.

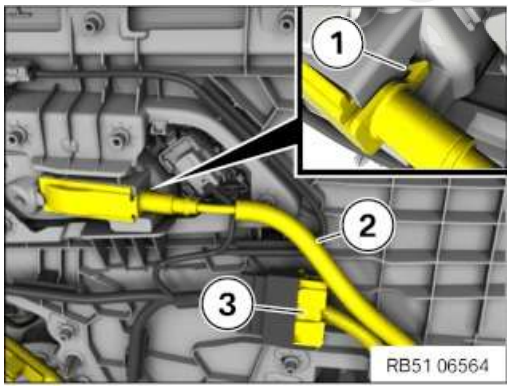
POSTPROCESSES

5 – Install door trim panel



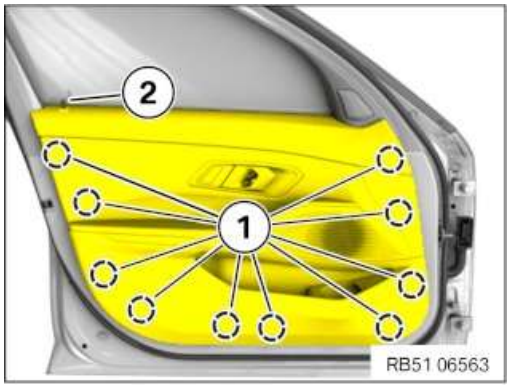
- Renew the clips (1).

  Parts: Clips

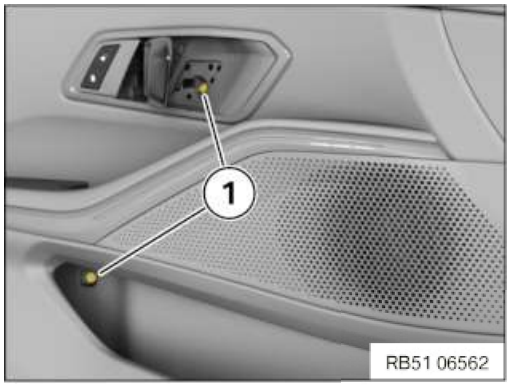


- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door opener (2) and clip in the latch mechanism (1).
- Connect connectors (3) and lock.

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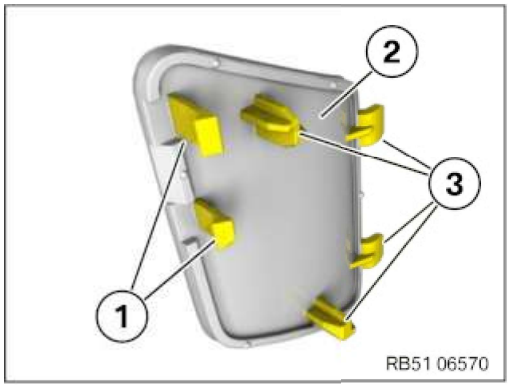
- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).



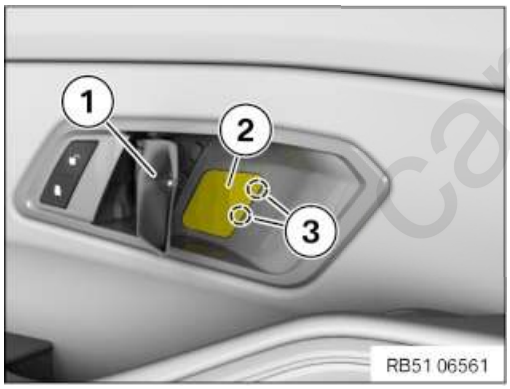
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



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



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

Additional Information

Overview of Tightening Torques

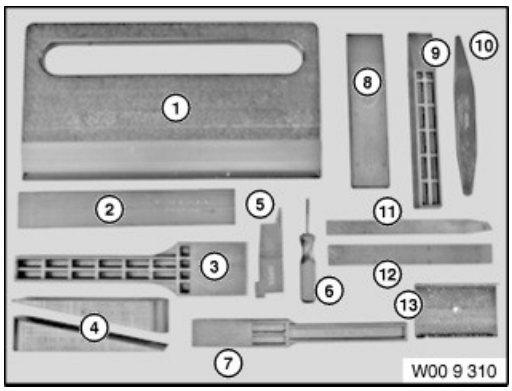
Door trim panel to door Used in step 5

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

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0 493 752 (00 9 329) Case



Common	Used in step 1
Usage	(Case) with insert not incl. panel wedges
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

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61 31 327 Removing and installing/replacing the shift knob of gear selector switch

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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

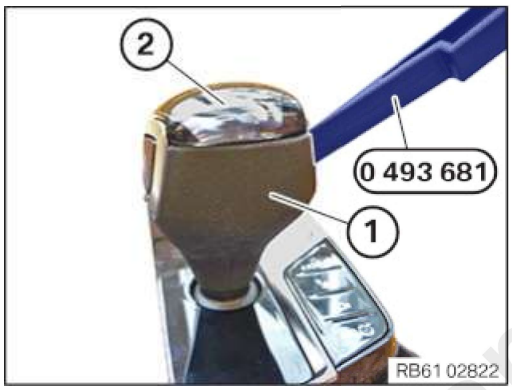
1 – Remove gearshift lever knob

RISK OF DAMAGE

Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

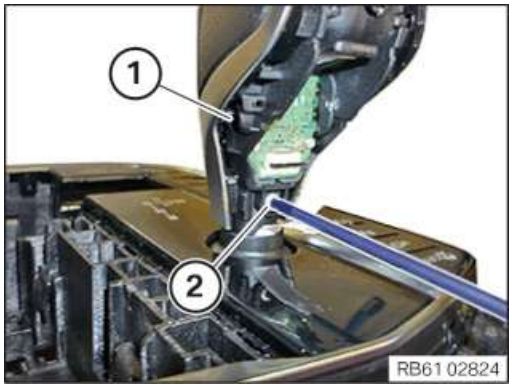
- Protect surfaces from damage.



- Lever the trim (1) with the special tool 0 493 681 (64 1 020) out of the gearshift lever knob (2) on both sides.



- Unlock the connector (1) in the direction of the arrow.
- Thread out the ribbon cable (2).

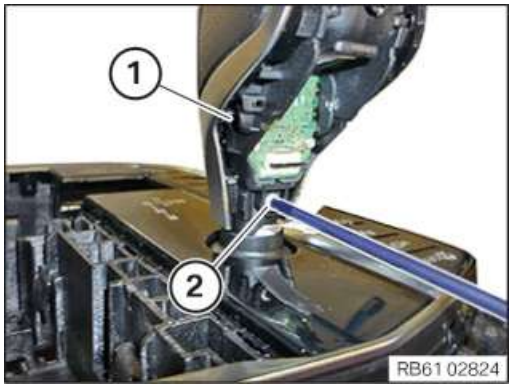


- Loosen screw (2).
- Remove the shift knob (1) upwards.

2 – Installing gearshift lever knob

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2 – Installing gearshift lever knob

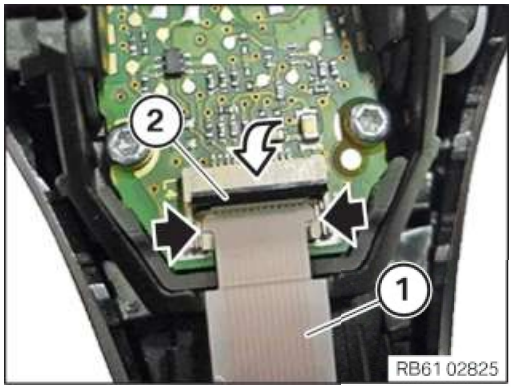


- Position the gearshift lever knob (1).
- Replace the screw of the gearshift lever knob.

  Parts: Screw
- Tighten down screw (2).

Gearshift lever knob

Screw	Renew screw.	Tightening torque	0,8 Nm



- Position ribbon cable (1) correctly on the gearshift lever knob (arrow).
- Lock the connector (2) in the direction of the arrow.



- Position and lock the trim (1) to the gearshift lever knob (2).

  Parts: Gearshift lever knob trim

  Retaining lugs must audibly snap into place.

Additional Information

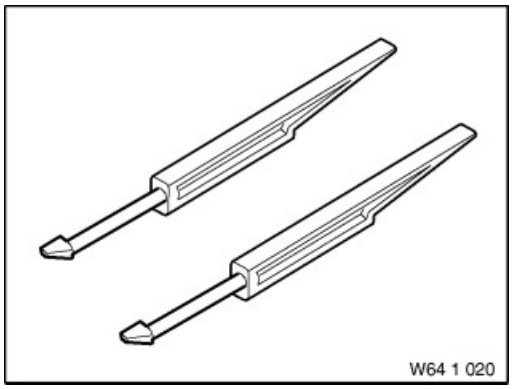
Overview of Tightening Torques

Gearshift lever knob Used in step 2

Screw	Renew screw.	Tightening torque	0,8 Nm

Overview of Special Tools

0 493 681 (64 1 020) Hook



Common Used in step 1

Usage	(release hook) For releasing and removing fresh air grille. For removing various covers.
Included in the tool or work	
Storage location	C2
Replaced by	
In connection with	
SI-Number	01 15 99 (483)

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61 31 068 Removing and installing/replacing the switch for front passenger airbag deactivation

RISK OF DAMAGE

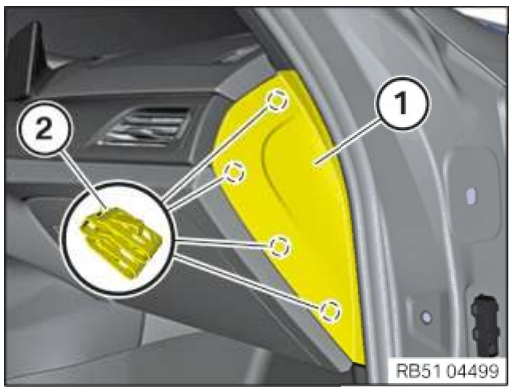
Scratches.

Tools and sharp-edged components can cause scratches.

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

PRELIMINARY WORK

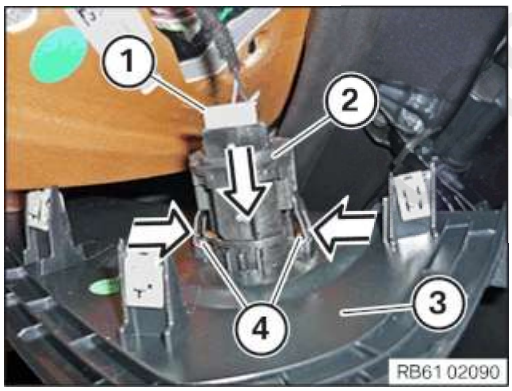
1 – Remove the side panel on the right instrument panel



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

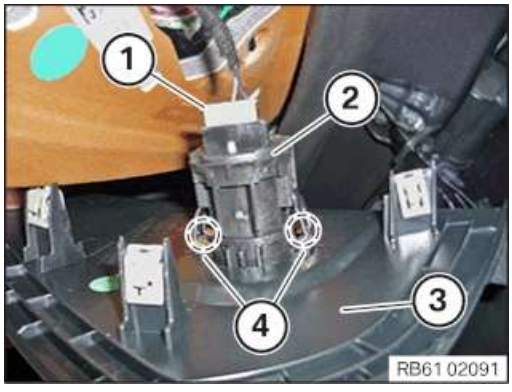
MAIN WORK

2 – Removing the switch for front passenger airbag deactivation



- Disconnect plug connection (1).
- Unlock the latch mechanism (4) in the direction of the arrow.
- Feed the switch for front passenger airbag deactivation (2) out of the cover (3) in the direction of the arrow.

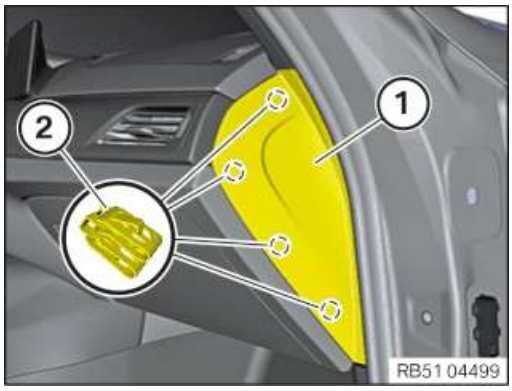
3 – Installing the switch for front passenger airbag deactivation



- Install the switch for front passenger airbag deactivation (2) in the side panel of the instrument panel (3).

  The latch mechanism (4) must engage audibly.
- Connect the connector (1) with the switch for front passenger airbag deactivation.

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

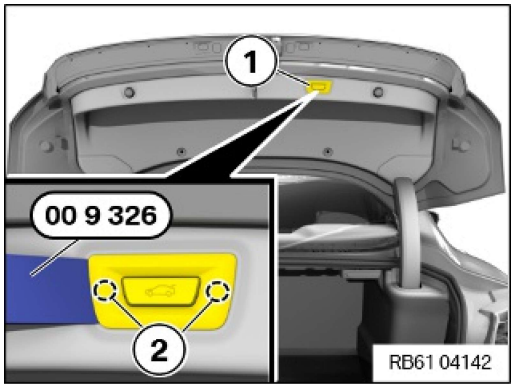


- If required, connect the associated connector.
- Feed in the side panel (1) and clip it in at the clamps (2).

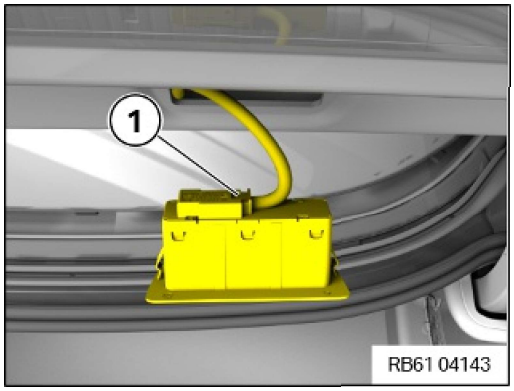
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61 31 084 Removing and installing/replacing the switch for the automatic operation of tailgate

1 – Removing the tailgate lift switch

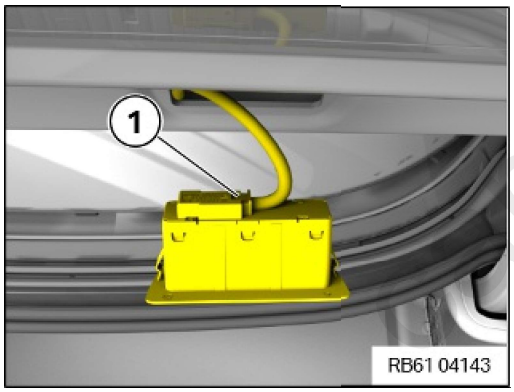


- Unclip the switch for the automatic tailgate operation (1) using special tool 0 496 570 (00 9 326) at the lateral latch mechanisms (2).

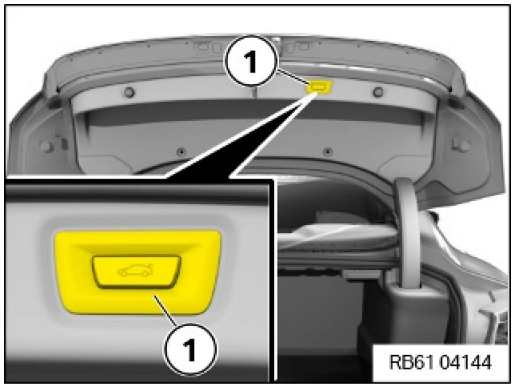


- Unlock plug connection (1) and disconnect.

2 – Install the tailgate lift switch



- Connect connectors (1) and lock.

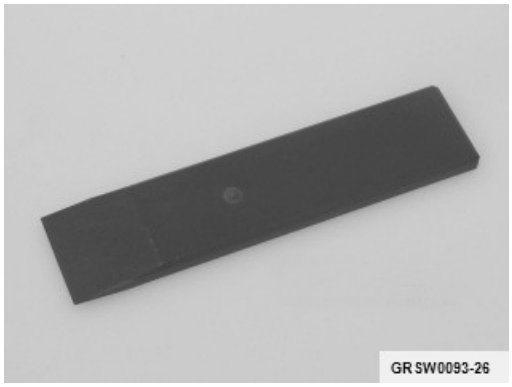


- Clip in the switch for automatic tailgate operation (1).

Additional Information

Overview of Special Tools

0 496 570 (00 9 326) Wedge



Common	Used in step 1
Usage	(Universal wedge) From 11/2008 this special tool replaces panel wedge 00 9 318 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

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61 31 349 Replace the cap for the electromechanical parking brake and cover below the gear selector switch

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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

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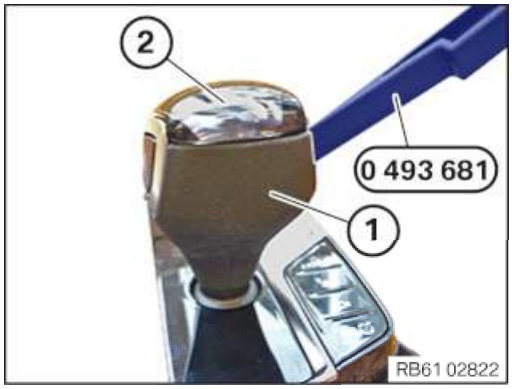
1 – Remove gearshift lever knob

RISK OF DAMAGE

Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

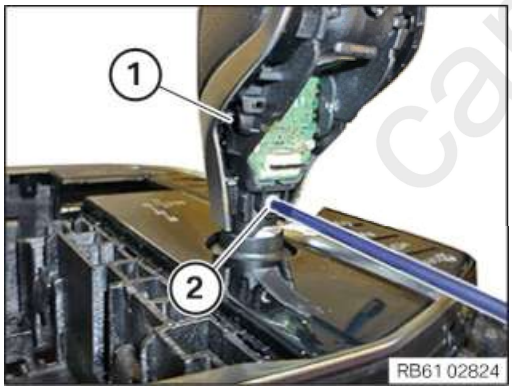
- Protect surfaces from damage.



- Lever the trim (1) with the special tool 0 493 681 (64 1 020) out of the gearshift lever knob (2) on both sides.



- Unlock the connector (1) in the direction of the arrow.
- Thread out the ribbon cable (2).



- Loosen screw (2).
- Remove the shift knob (1) upwards.

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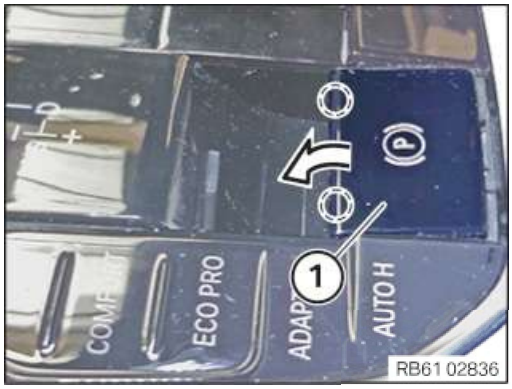
2 – Removing cover on the operating unit in the centre console

RISK OF DAMAGE

Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

- Protect surfaces from damage.



- Press the parking brake button cover (1) forwards and downwards in the direction of the arrow.

Note: The parking brake button cover can be loosened by pressing strongly out of the catch mechanisms.



- Lever out the cover (1) on the operating facility in the centre console using the special tool 0 493 681 (64 1 020) in the marked area.

3 – Installing trim on the operating facility in the centre console



- Feed out and renew swivel (1).

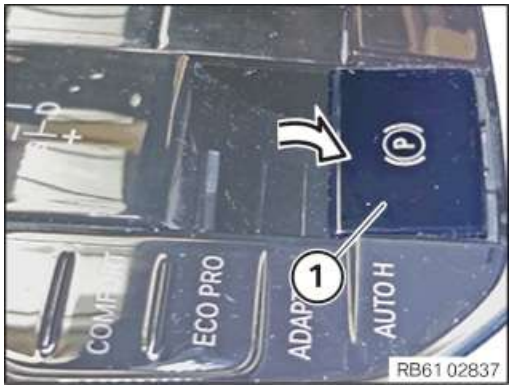
  Parts: Swivel

- Position ribbon cable (2) correctly through swivel (1).



- Feed in trim (1) on the operating facility in the centre console in the marked area.
- Clip in trim (1) on the operating facility in the centre console in direction of arrow.

  Trim (1) on the operating facility in the centre console must engage audibly.

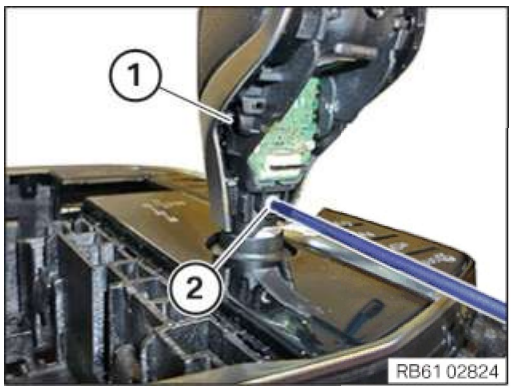


- Position parking brake button cover (1) and snap into place in the direction of the arrow.

  The parking brake button cover (1) must engage audibly.

POSTPROCESSES

4 – Installing gearshift lever knob

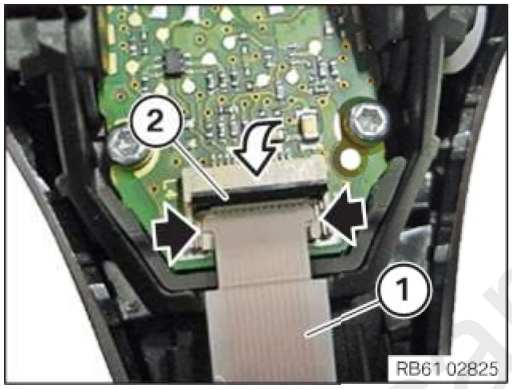


- Position the gearshift lever knob (1).
- Replace the screw of the gearshift lever knob.

  Parts: Screw
- Tighten down screw (2).

Gearshift lever knob

Screw	Renew screw.	Tightening torque	0,8 Nm



- Position ribbon cable (1) correctly on the gearshift lever knob (arrow).
- Lock the connector (2) in the direction of the arrow.



- Position and lock the trim (1) to the gearshift lever knob (2).

  Parts: Gearshift lever knob trim

  Retaining lugs must audibly snap into place.

Additional Information

Overview of Tightening Torques

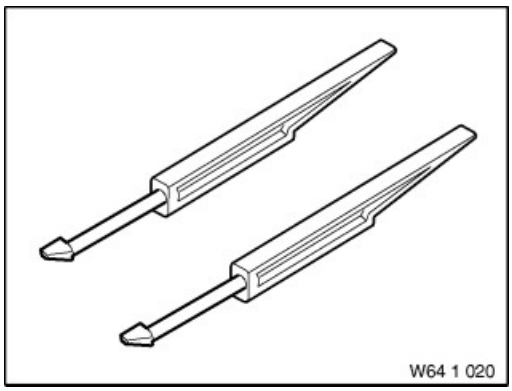
Gearshift lever knob Used in step 4

Screw	Renew screw.	Tightening torque	0,8 Nm

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Overview of Special Tools

0 493 681 (64 1 020) Hook



Common Used in step 12

Usage	(release hook) For releasing and removing fresh air grille. For removing various covers.
Included in the tool or work	
Storage location	C2
Replaced by	
In connection with	
SI-Number	01 15 99 (483)

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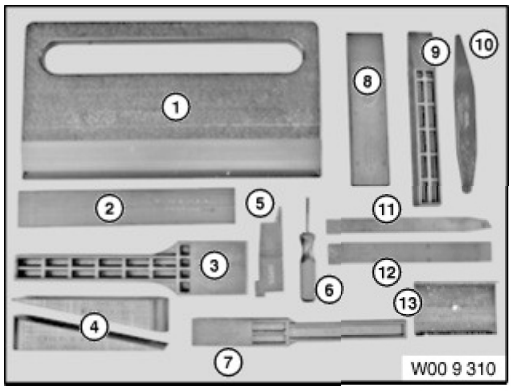
61 31 676 Replace the operating facility for the front left or right additional seat function

NOTICE

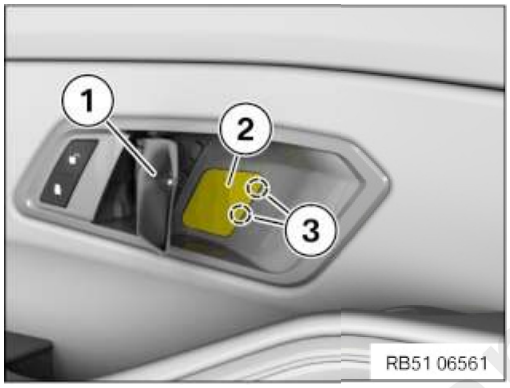
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

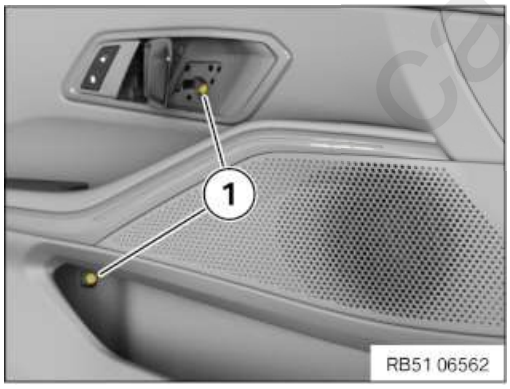
1 – Remove door trim panel



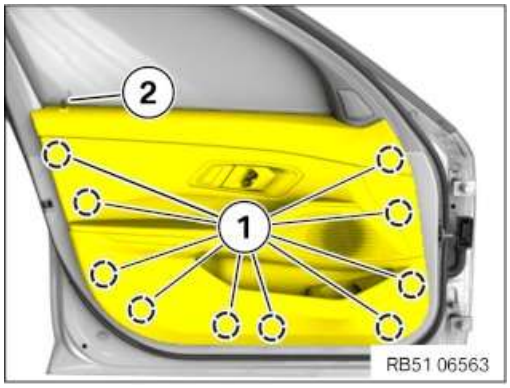
- Have the set of special tools 0 493 752 (00 9 329) ready.



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

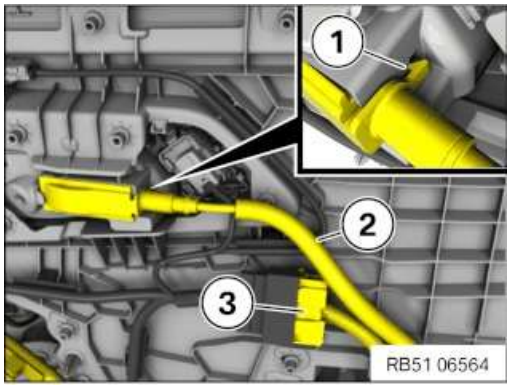


- Loosen screws (1).



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

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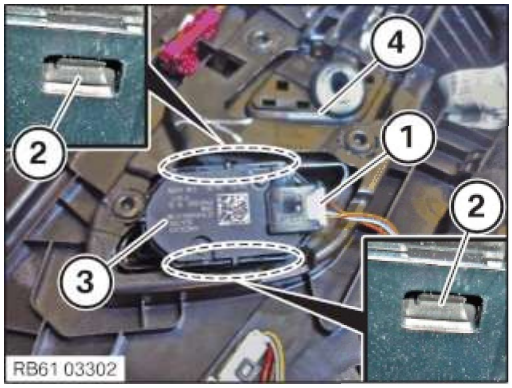


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

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

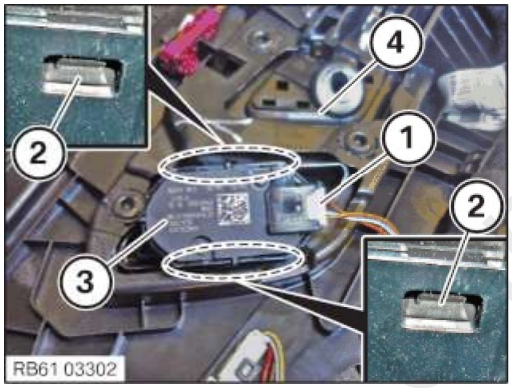
MAIN WORK

2 – Removing operating facility for the additional seat function



- Disconnect the connector (1) .
- Release latch mechanism (2) in the marked area.
- Remove operating unit (3) from the door trim panel (4).

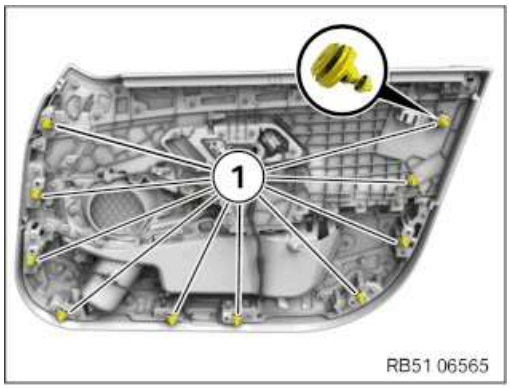
3 – Installing the operating facility for the additional seat function



- Position the operating unit (3) correctly on the door trim panel (4).
- Clip in the operating unit (3) in the latch mechanisms (2) in the marked area.
- Connect connector (1).

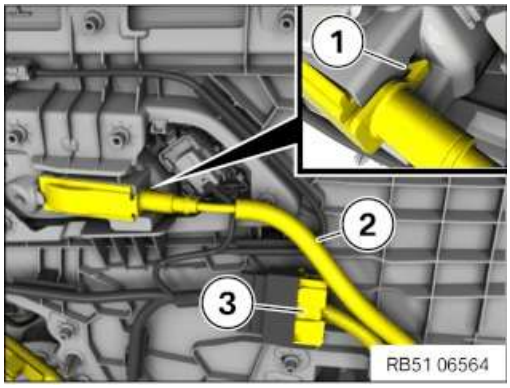
POSTPROCESSES

4 – Install door trim panel

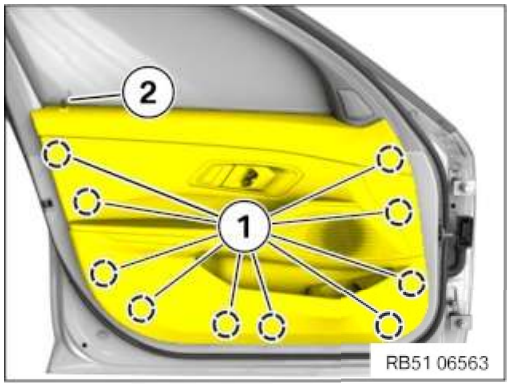


- Renew the clips (1).

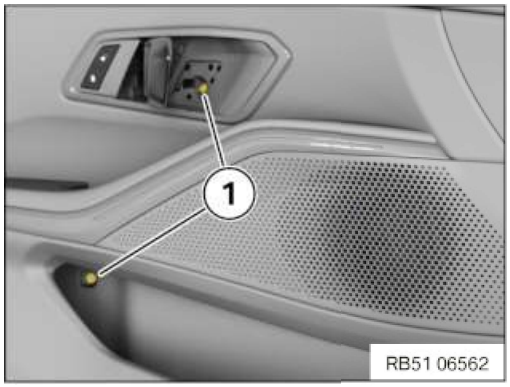
  Parts: Clips



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



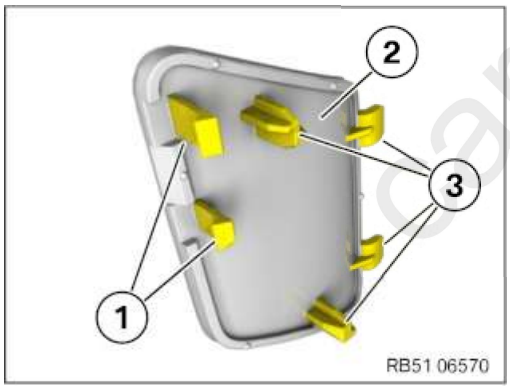
- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).



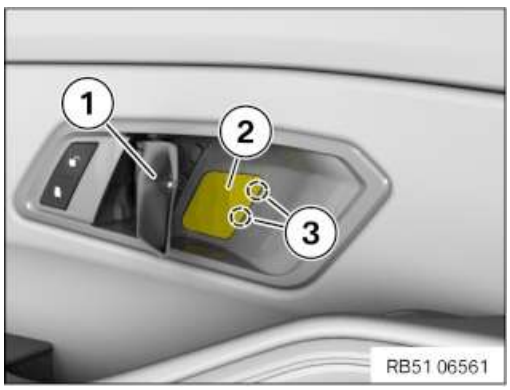
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



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



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

Additional Information

Overview of Tightening Torques

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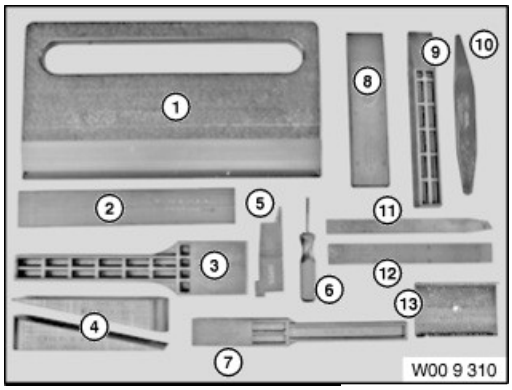
Overview of Tightening Torques

Door trim panel to door — Used in step 4

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common — Used in step 1

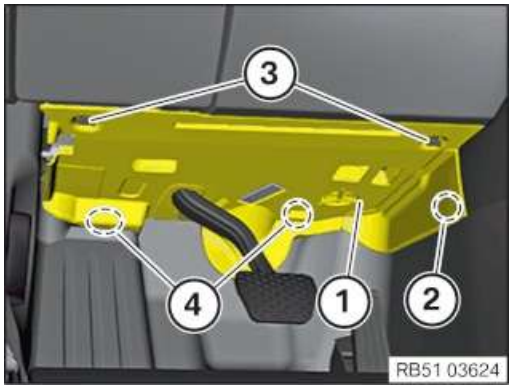
Usage	(Case) with insert not incl. panel wedges
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

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61 31 310 Replacing brake light switch

PRELIMINARY WORK

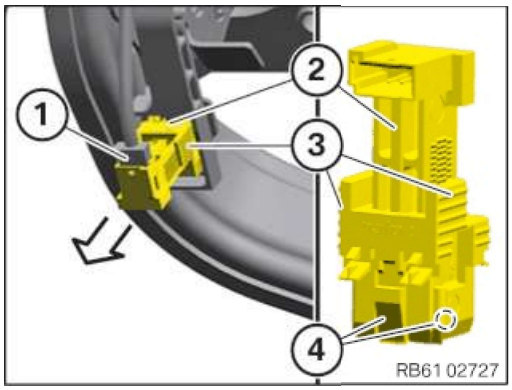
1 – Removing the trim panel for pedal mechanism



- 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.

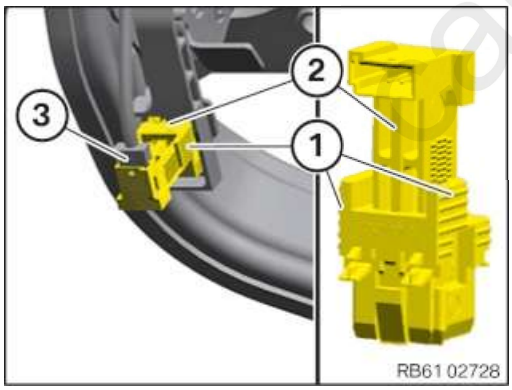
MAIN WORK

2 – Remove the brake light switch



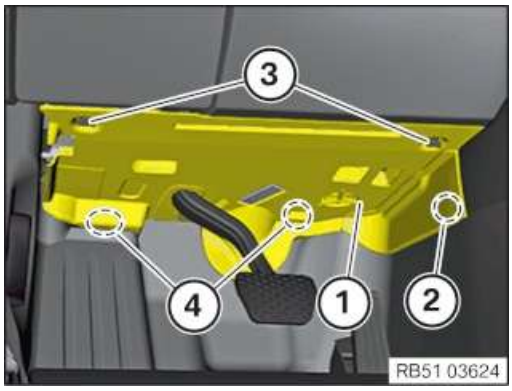
- Unlock and disconnect connector (1).
- Operate and hold brake pedal.
- Pull the brake light switch (2) from the holder for the brake light switch (3) in the direction of the arrow.
- Press together the latch mechanisms (4) and unclip the holder for the brake light switch (3) from the brake pedal.

3 – Install brake light switch



- Clip the holder for the brake light switch (1) into the brake pedal.
- Press brake pedal.
- Push the brake light switch (2) in the opposite direction to the arrow into the holder for the brake light switch (1) up to the limit position.
- Counter support the holder for the brake light switch (1) and move back the brake pedal slowly to the initial position at the same time.
- Slowly pull brake pedal back to limit position.
- Connect connector (3).

4 – Installing the trim panel for the pedal mechanism



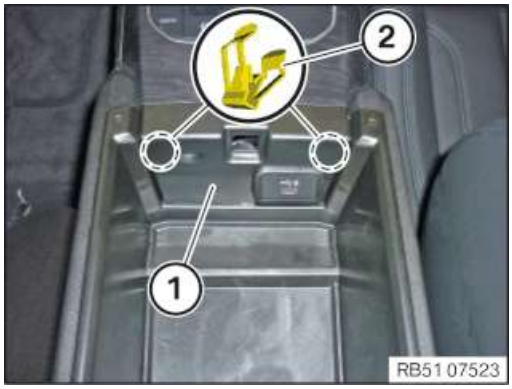
- Connect associated connector.
- Attach the trim panel for the pedal mechanism (1) in the guides (4) and fold it up.
- Clip the trim panel for the pedal mechanism (1) into the centre console in this area (2).
- Insert locks (3) correctly and turn 90°.

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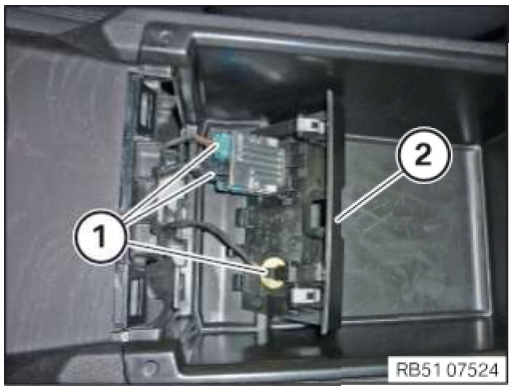
61 31 696 Replacing front controller

PRELIMINARY WORK

1 – 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) .

2 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



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

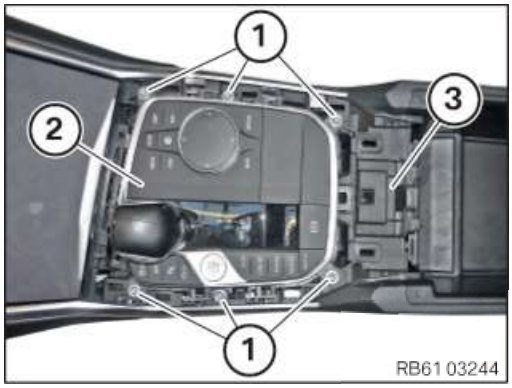
3 – Remove the operating facility in the centre console

▸ **Disconnecting all battery earth leads**

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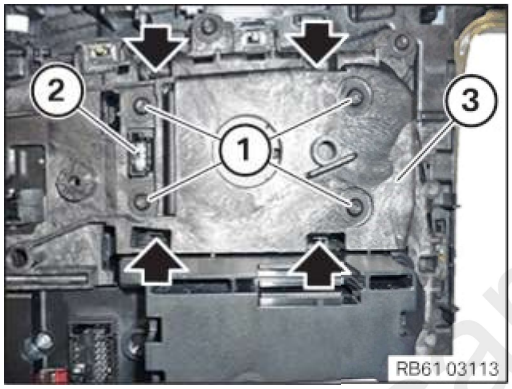
- See additional information.



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

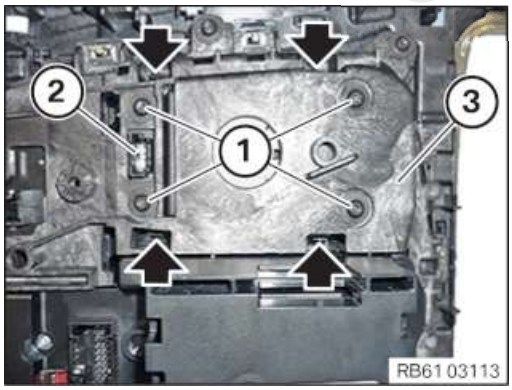
MAIN WORK

4 – Remove controller



- Loosen screws (1).
- Release the latch mechanisms (arrows).
- Remove controller (2) from the gear selector switch(GWS) (3).

5 – Install controller



- Position the controller (2) on gear selector switch (GWS) (3) and engage in the latch mechanisms (arrow).
- Tighten the screws (1).

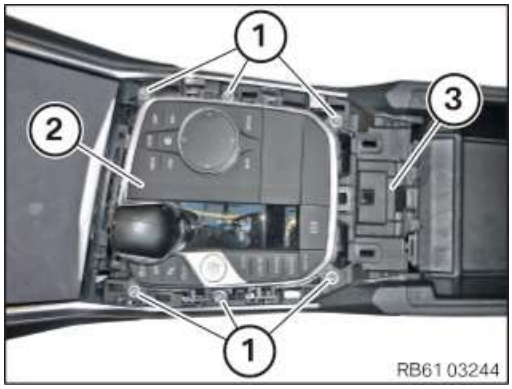
Controller to gear selector switch

Screw		Tightening torque	1,8 Nm

POSTPROCESSES

6 – Install the operating facility in the centre console

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

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

▶ **Disconnecting all battery earth leads**



- See additional information.

7 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



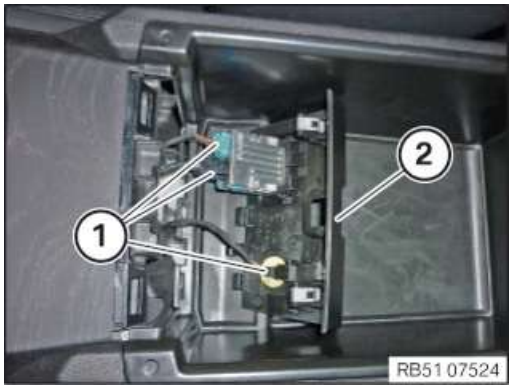
- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .



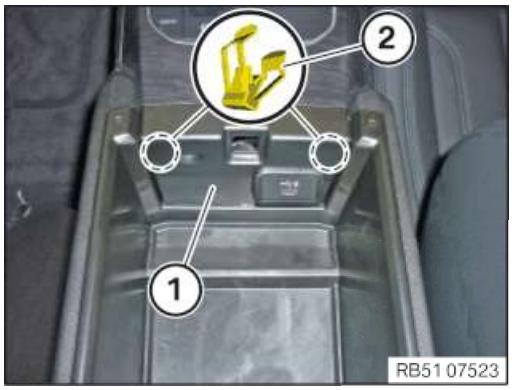
- Correctly position the centre console trim (1) and engage at the latch mechanisms.

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8 – 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).

9 – Encode/program control unit(s)

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

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

TECHNICAL INFORMATION

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

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

Additional Information

Overview of Tightening Torques

Controller to gear selector switch — Used in step 5

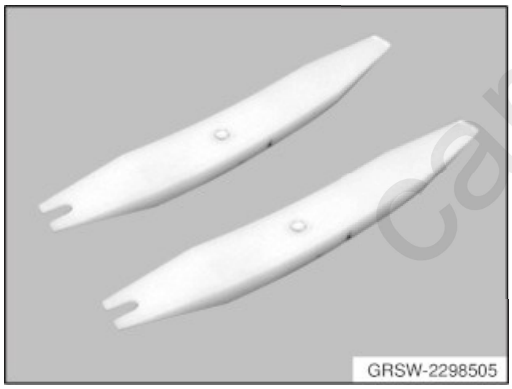
Screw		Tightening torque	1,8 Nm

Gear selector switch to centre console trim — Used in step 6

Screw		Tightening torque	1,8 Nm

Overview of Special Tools

2 298 505 Wedge



Common — Used in step 12

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	Used in step
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	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 the battery earth lead (all battery earth leads)	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
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	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 battery earth lead	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	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36
61 20 900 Disconnecting and connecting battery earth lead	36

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61 31 204 Replacing operating unit for seat adjustment

Prerequisite

- Move front seat completely towards the front top.

NOTICE

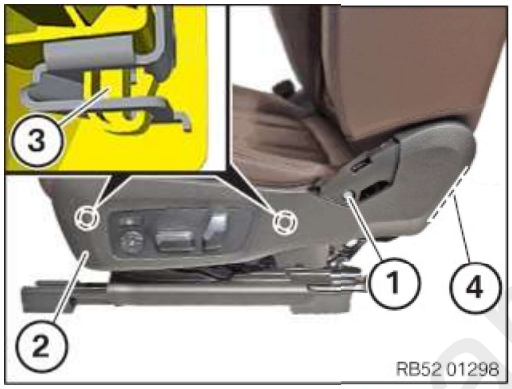
For a better overview the removed condition is shown here.

PRELIMINARY WORK

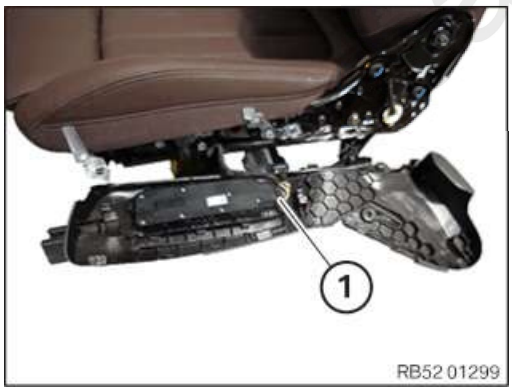
1 – Remove outer cover on front seat



- Unclip the cover (1).



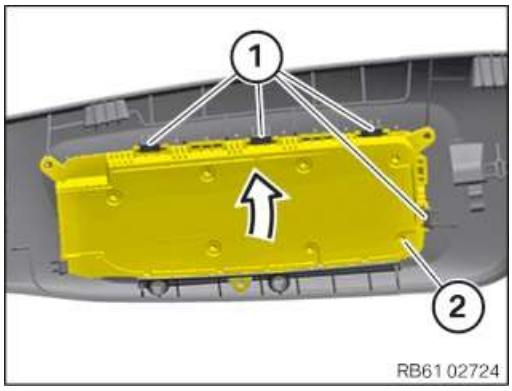
- Loosen screw (1).
- Disengage the cover (2) at the latch mechanisms (3) toward the top.
- Guide out and remove the cover (2) in the area (4).



- Disconnect plug connection (1) and, if necessary, unclip the cable clip.

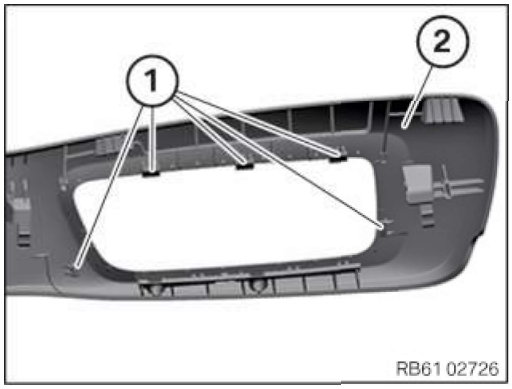
erdiagn.com

2 – Removing operating unit for seat adjustment

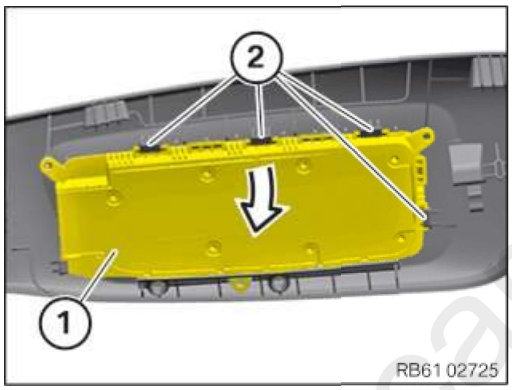


- Loosen latch mechanism (1).
- Remove the operating unit (2) in the direction of the arrow.

3 – Install the operating unit for the seat adjustment



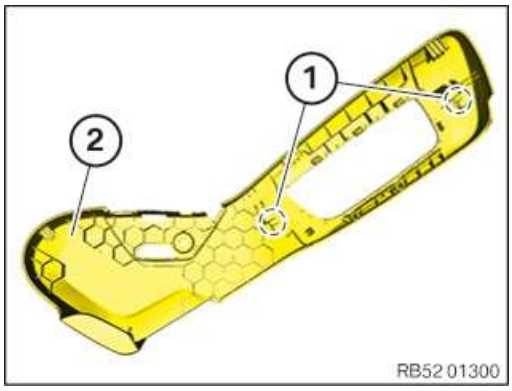
- Check the retaining lugs (1) for damage and renew the seat trim (2) if necessary.



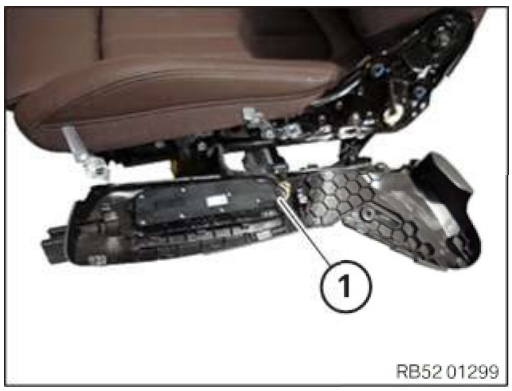
- Install the operating unit (1) in the direction of the arrow.
- Check the latch mechanism (2) is fitted correctly.

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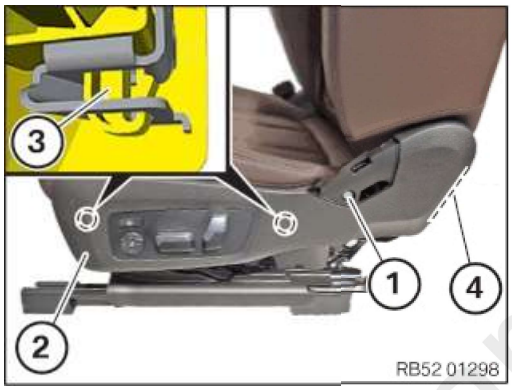
4 – Install outer cover on front seat



- 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



- Clip in the cover (1).

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Additional Information

Overview of Tightening Torques

Seat trim to seat frame Used in step 4

Sheet metal screw		Tightening torque	2.5 Nm

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61 31 329 Replacing START-STOP button cover

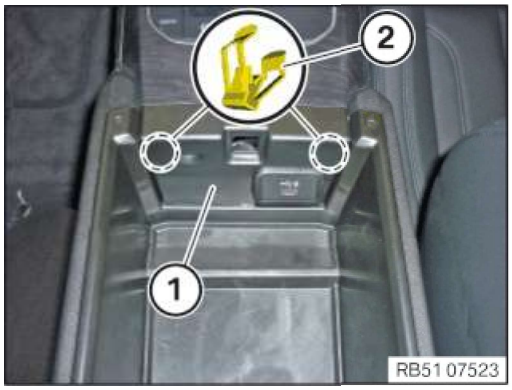
PRELIMINARY WORK

1 – Disconnecting all battery earth leads

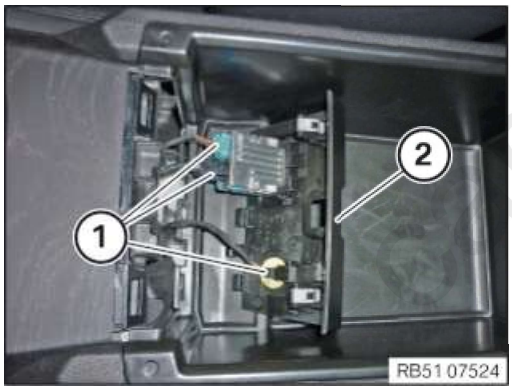


- See additional information.

2 – 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) .

3 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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

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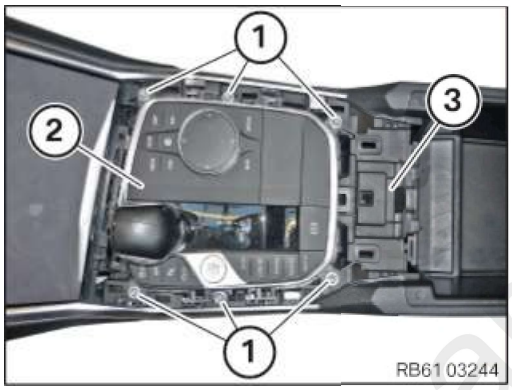
- Release and remove the centre console trim upwards (1) as shown using the special tool 2 298 505 from the latch mechanisms.

4 – Remove the operating facility in the centre console

► **Disconnecting all battery earth leads**

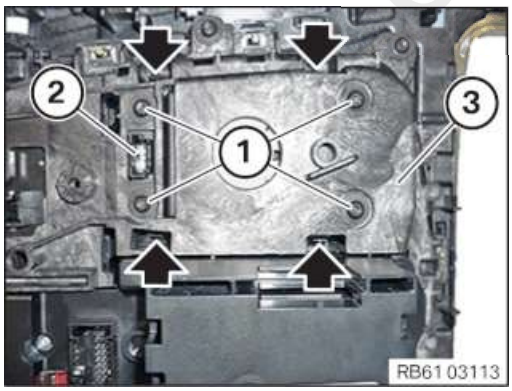


- See additional information.



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

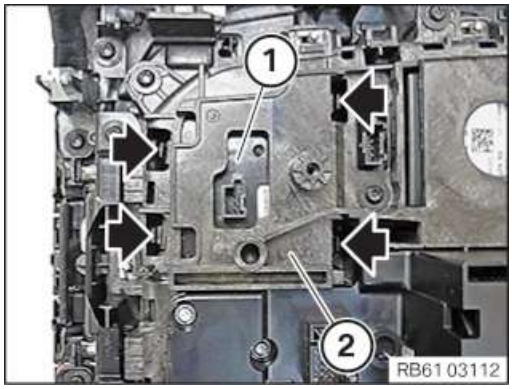
5 – Remove controller



- Loosen screws (1).
- Release the latch mechanisms (arrows).
- Remove controller (2) from the gear selector switch(GWS) (3).

6 – Removing the HDC button

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- Release the latch mechanisms (arrows).
- Remove HDC button (1) from gear selector switch (GWS) (2).

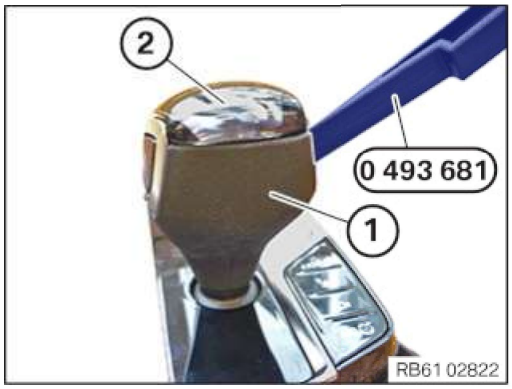
7 – Remove gearshift lever knob

RISK OF DAMAGE

Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

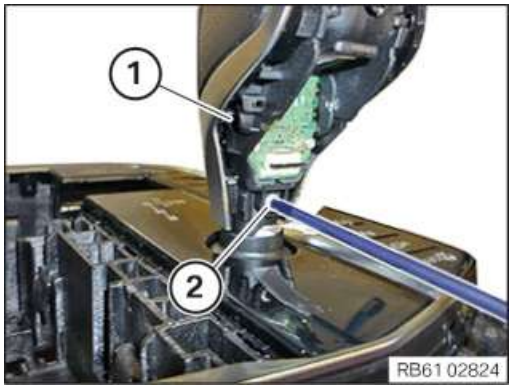
- Protect surfaces from damage.



- Lever the trim (1) with the special tool 0 493 681 (64 1 020) out of the gearshift lever knob (2) on both sides.



- Unlock the connector (1) in the direction of the arrow.
- Thread out the ribbon cable (2).



- Loosen screw (2).
- Remove the shift knob (1) upwards.

8 – Remove covers on the operating unit in the centre console

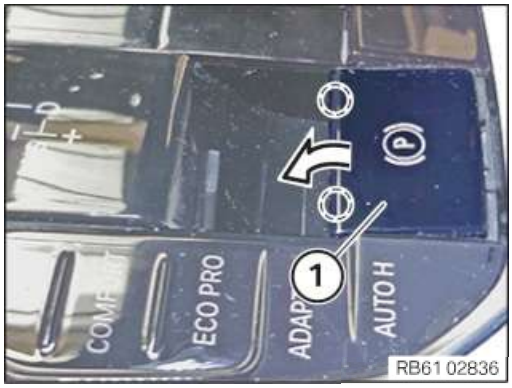
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RISK OF DAMAGE

Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

- Protect surfaces from damage.

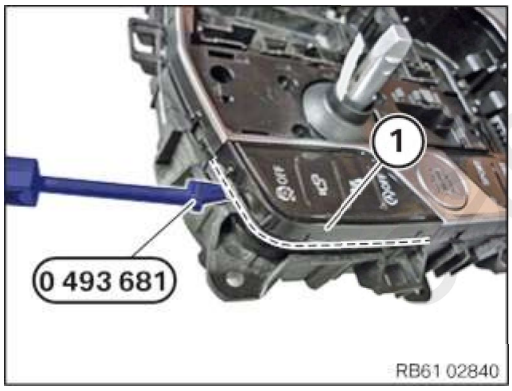


- Press the parking brake button cover (1) forwards and downwards in the direction of the arrow.

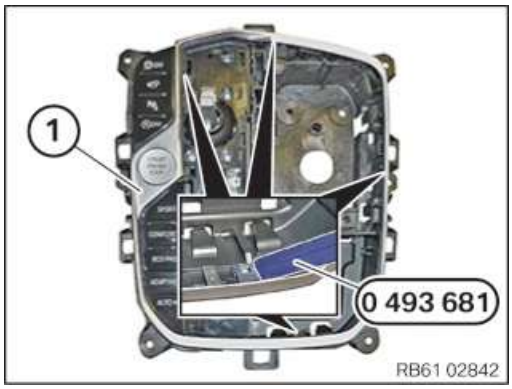
Note: The parking brake button cover can be loosened by pressing strongly out of the catch mechanisms.



- Lever the cover (1) out on the operating unit in the centre console (2) using the special tool 0 493 681 (64 1 020).



- Unclip the trim (1) using special tool 0 493 681 (64 1 020).



- Unclip cover (1) using the special tool 0 493 681 (64 1 020) at the locations marked.

MAIN WORK

9 – Replacing the START-STOP button trim

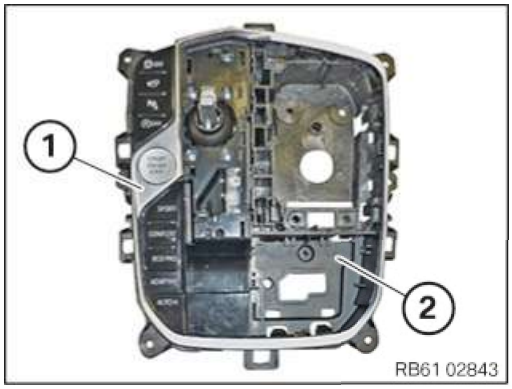
10 – Installing trims on the operating facility in the centre console

RISK OF DAMAGE

Damage of high-quality surfaces.

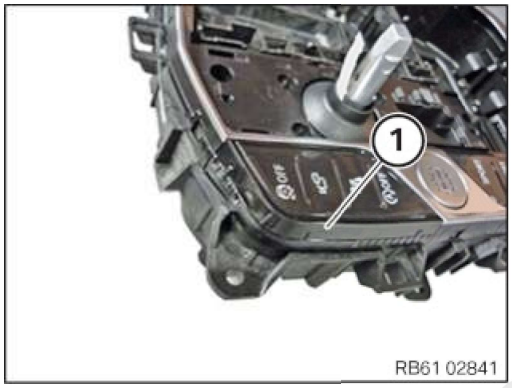
Plastic wedges can damage high-quality surfaces.

- Protect surfaces from damage.



- Position cover (1) on the operating unit in the centre console (2) and clip into place.

  All retaining lugs must engage audibly.

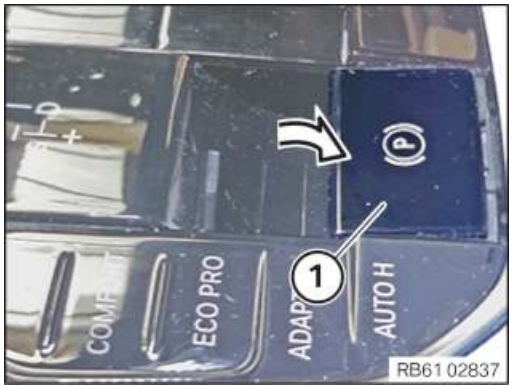


- Position and clip in trim (1).



- Position cover (1) on the operating unit in the centre console (2) and clip into place.

  All retaining lugs must engage audibly.

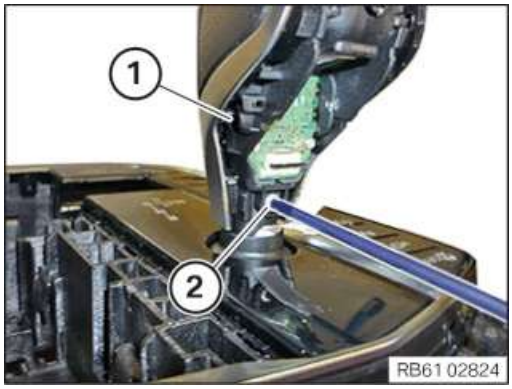


- Position parking brake button cover (1) and snap into place in the direction of the arrow.

  The parking brake button cover (1) must engage audibly.

11 – Installing gearshift lever knob

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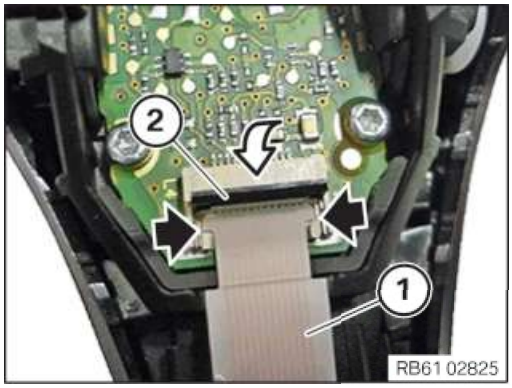


- Position the gearshift lever knob (1).
- Replace the screw of the gearshift lever knob.

  Parts: Screw
- Tighten down screw (2).

Gearshift lever knob

Screw	Renew screw.	Tightening torque	0,8 Nm



- Position ribbon cable (1) correctly on the gearshift lever knob (arrow).
- Lock the connector (2) in the direction of the arrow.

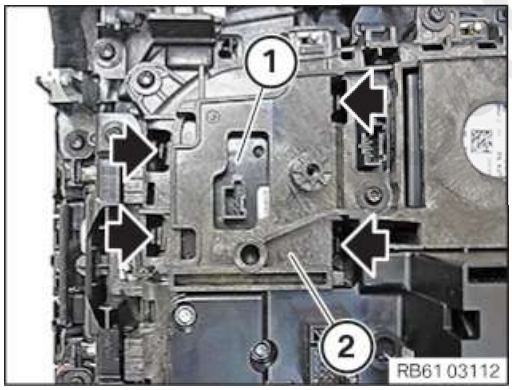


- Position and lock the trim (1) to the gearshift lever knob (2).

  Parts: Gearshift lever knob trim

  Retaining lugs must audibly snap into place.

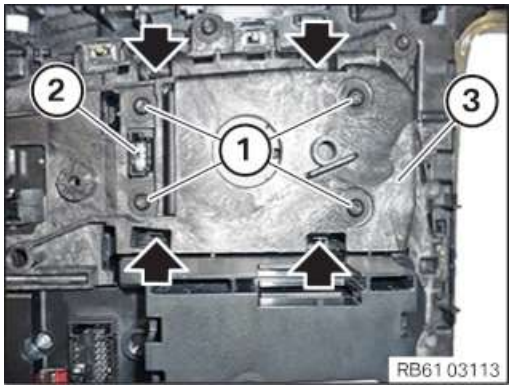
12 – Installing the HDC button



- Position HDC button (1) on gear selector switch (GWS) (2).

  The latch mechanisms (arrows) must engage audibly.

13 – Install controller



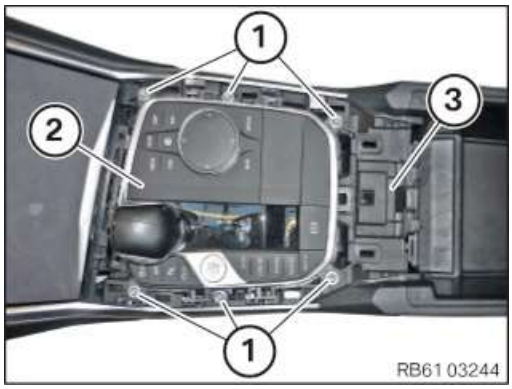
- Position the controller (2) on gear selector switch (GWS) (3) and engage in the latch mechanisms (arrow).
- Tighten the screws (1).

Controller to gear selector switch

Screw		Tightening torque	1,8 Nm

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14 – Install the operating facility in the centre console



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

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

▶ **Disconnecting all battery earth leads**



- See additional information.

15 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



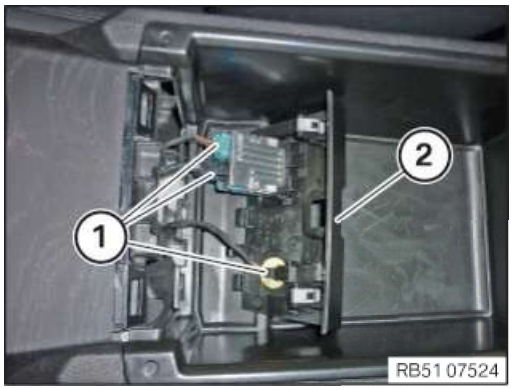
- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .

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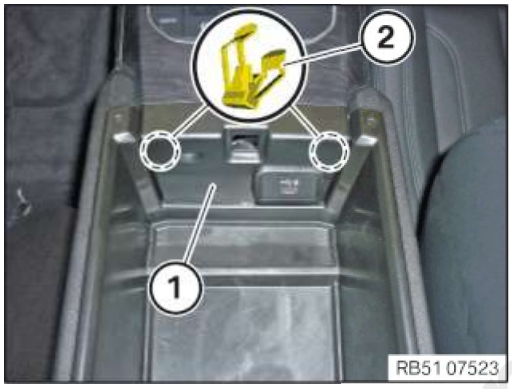


- Correctly position the centre console trim (1) and engage at the latch mechanisms.

16 – 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).

17 – Encode/program control unit(s)

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

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

TECHNICAL INFORMATION

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

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

18 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

Gearshift lever knob — Used in step 11

Screw	Renew screw.	Tightening torque	0,8 Nm

Controller to gear selector switch — Used in step 13

Screw		Tightening torque	1,8 Nm

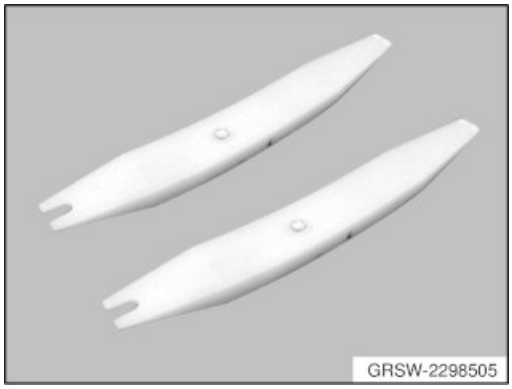
Gear selector switch to centre console trim — Used in step 14

Screw		Tightening torque	1,8 Nm

Overview of Special Tools

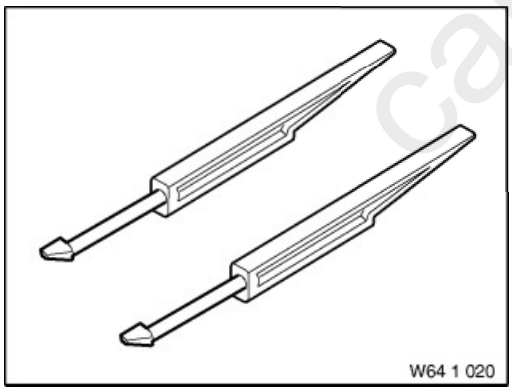
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2 298 505 Wedge



Common	Used in step 23
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)

0 493 681 (64 1 020) Hook



Common	Used in step 78
Usage	(release hook) For releasing and removing fresh air grille. For removing various covers.
Included in the tool or work	
Storage location	C2
Replaced by	
In connection with	
SI-Number	01 15 99 (483)

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418

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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141418
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141418
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
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61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418
61 20 900 Disconnecting and connecting battery earth lead	141418

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61 31 704 Replacing the centre console operating facility

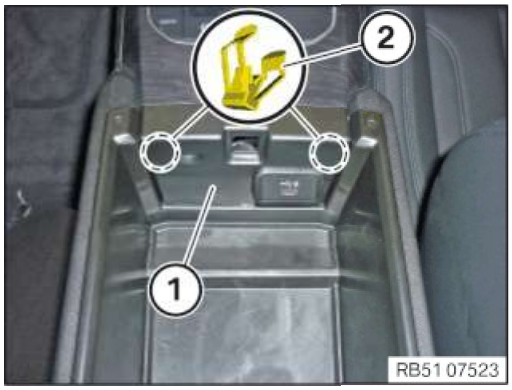
PRELIMINARY WORK

1 – Disconnecting all battery earth leads

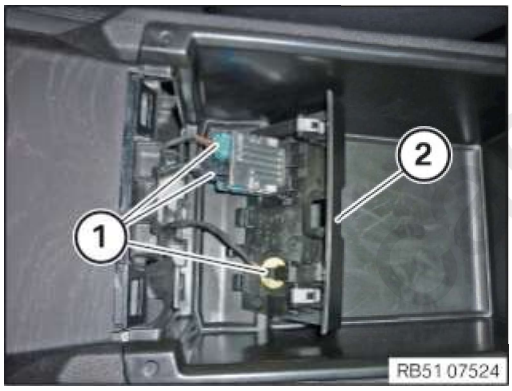


- See additional information.

2 – 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) .

3 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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

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

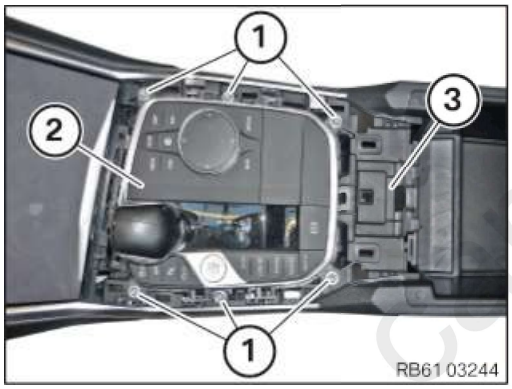
MAIN WORK

4 – Remove the operating facility in the centre console

► **Disconnecting all battery earth leads**

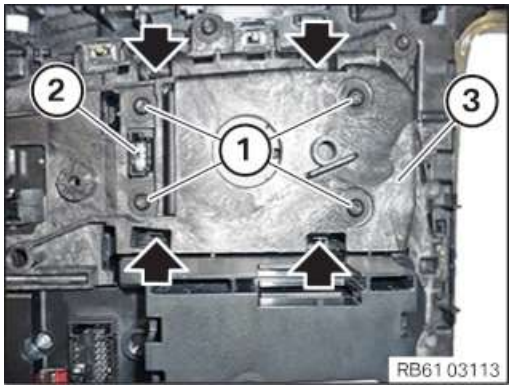


- See additional information.



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

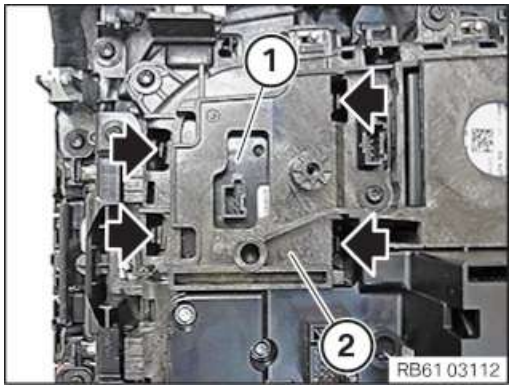
5 – Remove controller



- Loosen screws (1).
- Release the latch mechanisms (arrows).
- Remove controller (2) from the gear selector switch(GWS) (3).

6 – Removing the HDC button

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- Release the latch mechanisms (arrows).
- Remove HDC button (1) from gear selector switch (GWS) (2).

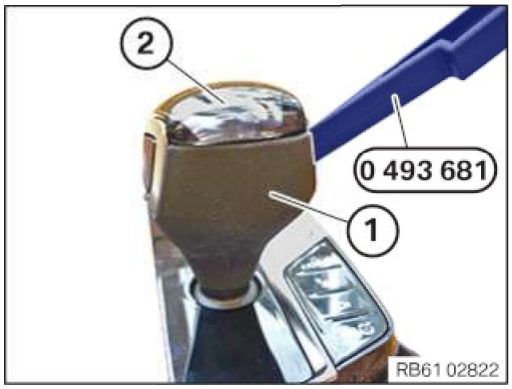
7 – Remove gearshift lever knob

RISK OF DAMAGE

Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

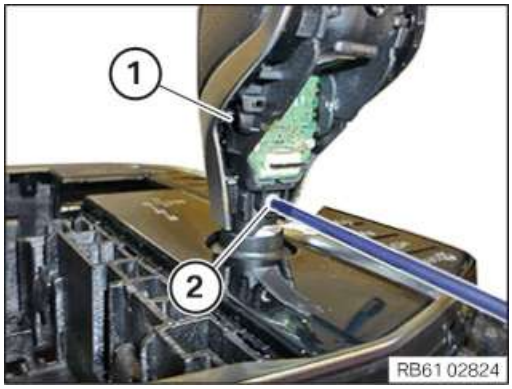
- Protect surfaces from damage.



- Lever the trim (1) with the special tool 0 493 681 (64 1 020) out of the gearshift lever knob (2) on both sides.



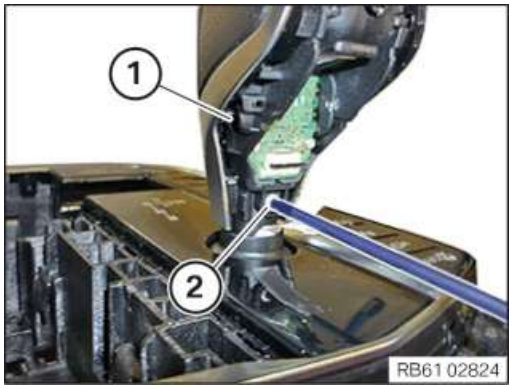
- Unlock the connector (1) in the direction of the arrow.
- Thread out the ribbon cable (2).



- Loosen screw (2).
- Remove the shift knob (1) upwards.

8 – Installing gearshift lever knob

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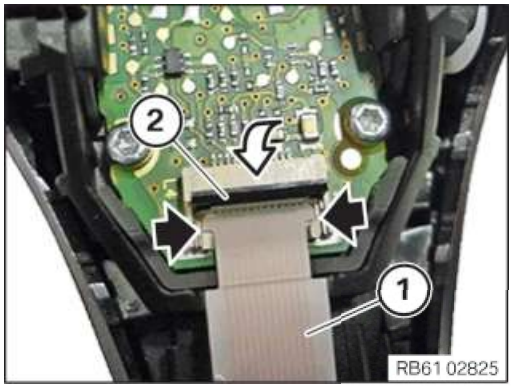


- Position the gearshift lever knob (1).
- Replace the screw of the gearshift lever knob.

  Parts: Screw
- Tighten down screw (2).

Gearshift lever knob

Screw	Renew screw.	Tightening torque	0,8 Nm



- Position ribbon cable (1) correctly on the gearshift lever knob (arrow).
- Lock the connector (2) in the direction of the arrow.

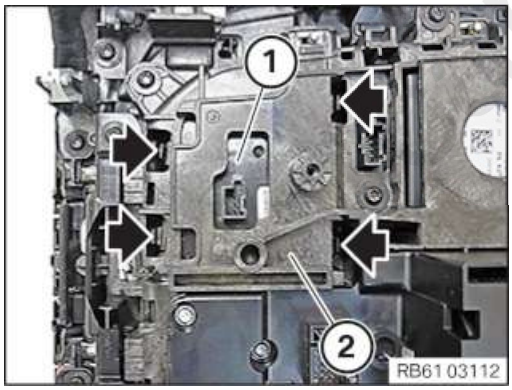


- Position and lock the trim (1) to the gearshift lever knob (2).

  Parts: Gearshift lever knob trim

  Retaining lugs must audibly snap into place.

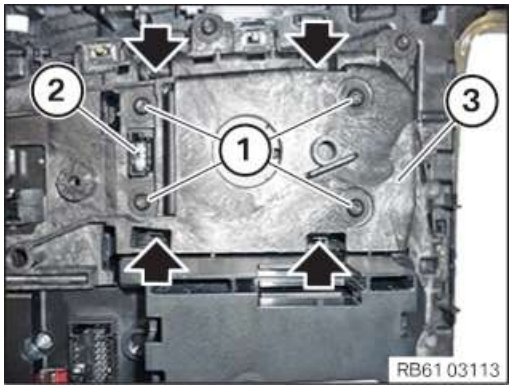
9 – Installing the HDC button



- Position HDC button (1) on gear selector switch (GWS) (2).

  The latch mechanisms (arrows) must engage audibly.

10 – Install controller



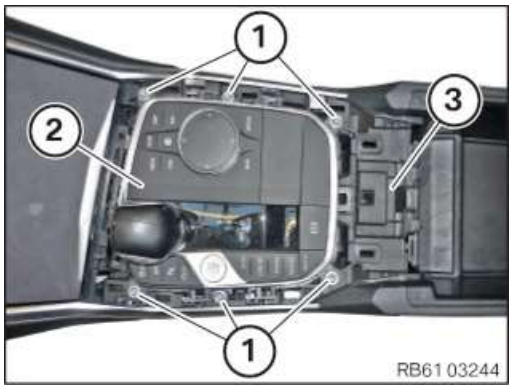
- Position the controller (2) on gear selector switch (GWS) (3) and engage in the latch mechanisms (arrow).
- Tighten the screws (1).

Controller to gear selector switch

Screw		Tightening torque	1,8 Nm

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11 – Install the operating facility in the centre console



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

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

▶ **Disconnecting all battery earth leads**



- See additional information.

POSTPROCESSES

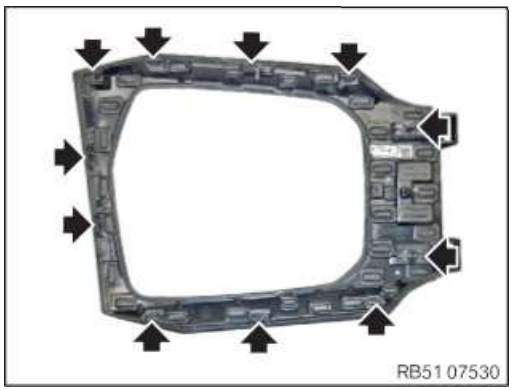
12 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



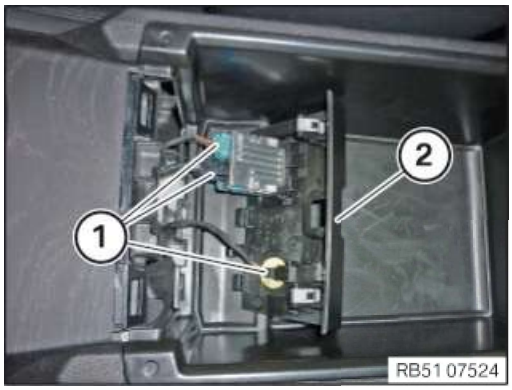
- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .

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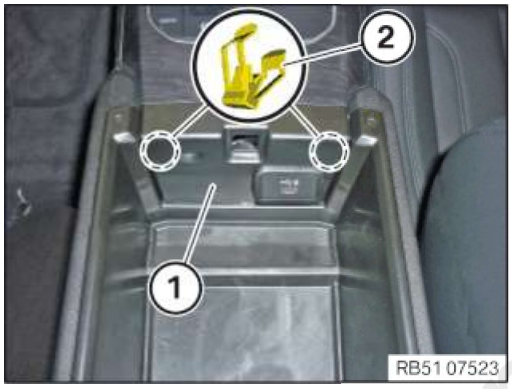


- Correctly position the centre console trim (1) and engage at the latch mechanisms.

13 – 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).

14 – Encode/program control unit(s)

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

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

TECHNICAL INFORMATION

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

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

15 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

Gearshift lever knob			Used in step 8
Screw	Renew screw.	Tightening torque	0,8 Nm

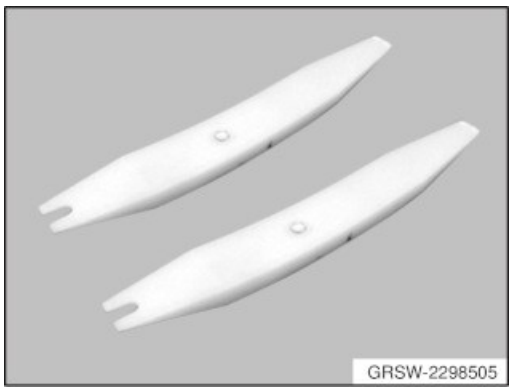
Controller to gear selector switch			Used in step 10
Screw		Tightening torque	1,8 Nm

Gear selector switch to centre console trim			Used in step 11
Screw		Tightening torque	1,8 Nm

Overview of Special Tools

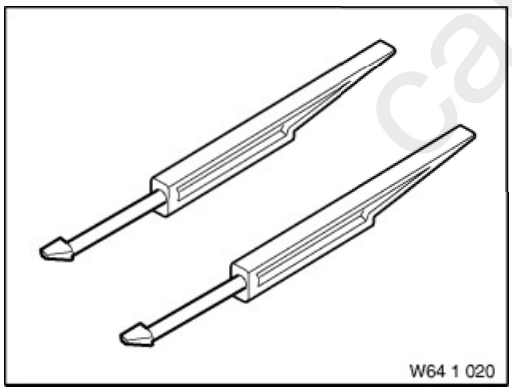
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2 298 505 Wedge



Common	Used in step 23
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)

0 493 681 (64 1 020) Hook



Common	Used in step 7
Usage	(release hook) For releasing and removing fresh air grille. For removing various covers.
Included in the tool or work	
Storage location	C2
Replaced by	
In connection with	
SI-Number	01 15 99 (483)

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115

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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141115
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141115
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
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61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115
61 20 900 Disconnecting and connecting battery earth lead	141115

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61 31 116 Replacing the rocker switch for side window operation

RISK OF DAMAGE

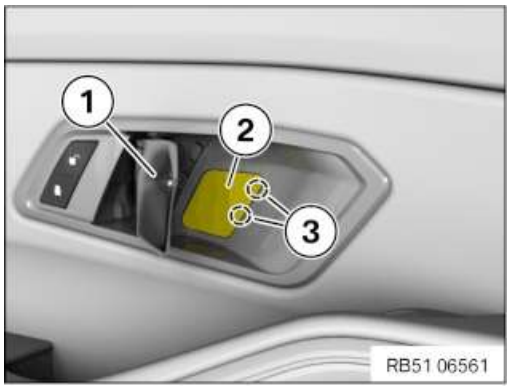
Scratches.

Tools and sharp-edged components can cause scratches.

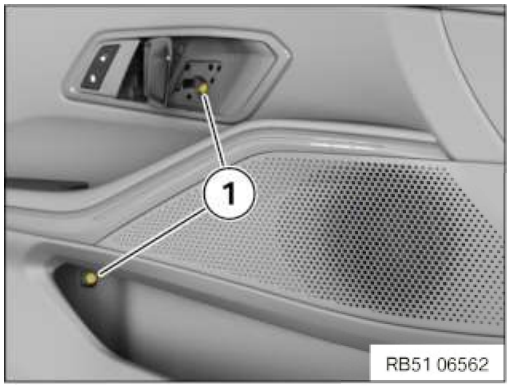
- Protect working area.
- Handle tools and components carefully.

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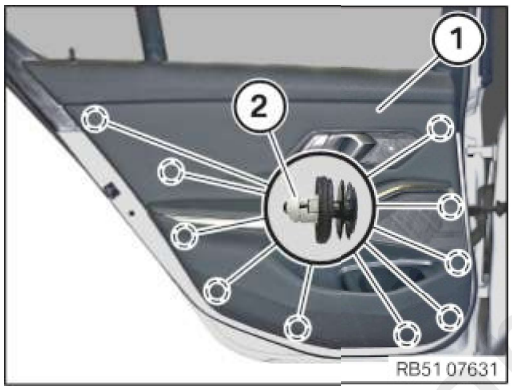
1 – Remove rear door trim



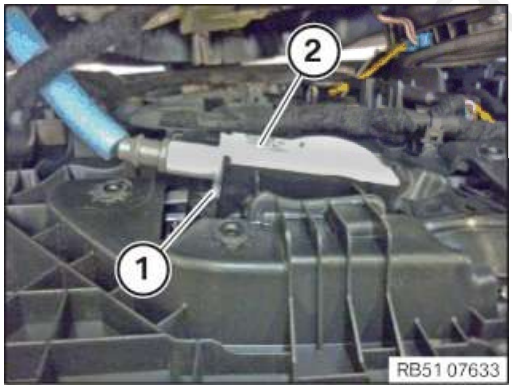
- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable tool.
- Remove trim (2).



- Loosen screws (1).



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

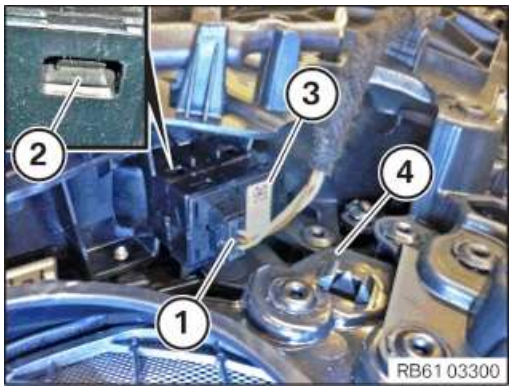


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

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

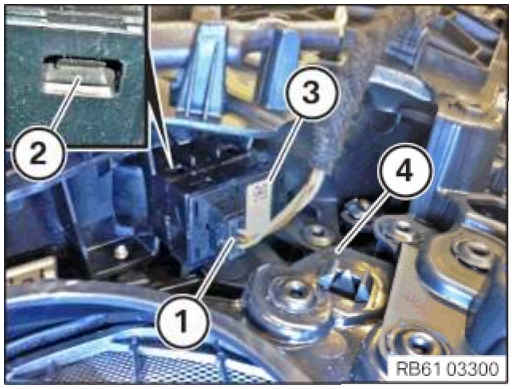
MAIN WORK

2 – Removing the rear power window switch



- Disconnect the connector (1) .
- Release latch mechanisms (2) and remove the power window switch (3) from the door trim panel (4).

3 – Installing the rear power window switch

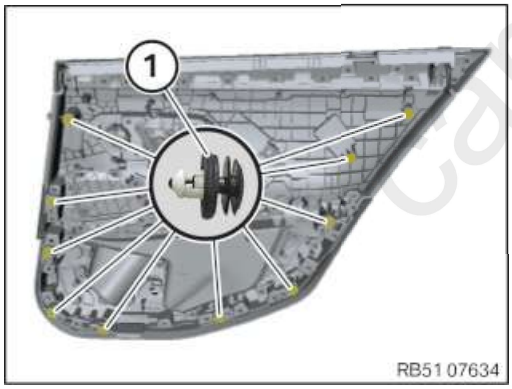


- Position power window switch (3) on the door trim panel (4) and engage in the latch mechanisms (2).
- Connect connector (1).

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POSTPROCESSES

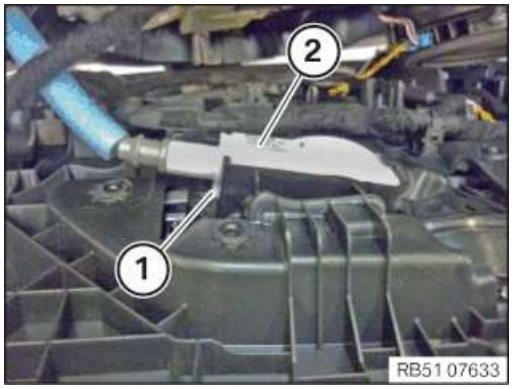
4 – Installing rear door trim panel



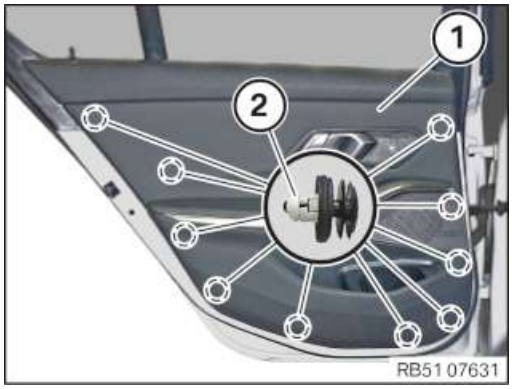
- Renew the clips (1).

  Parts: Clips

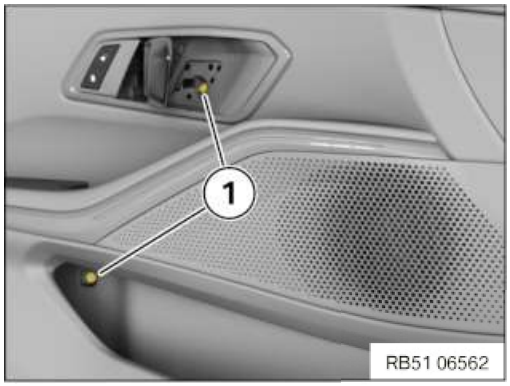
  The clips (1) **must not be engaged. The disengaged state is shown.**



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



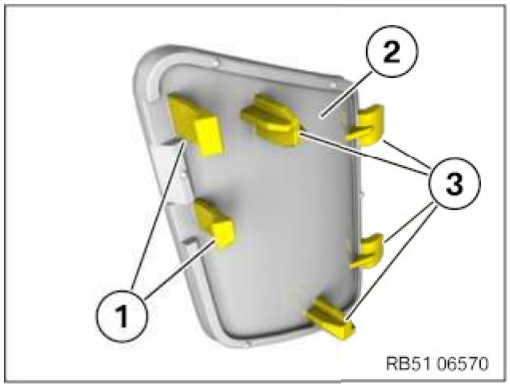
- Feed door trim panel from the top into the inner window recess finisher strip.
- Carefully clip in the door trim panel onto the clips (1).



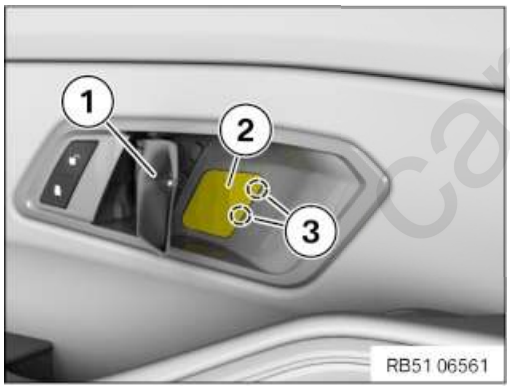
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



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



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

Additional Information

Overview of Tightening Torques

Door trim panel to door Used in step 4

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

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0 496 569 (00 9 325) Wedge



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

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61 31 346 Replacing trim on gear selector switch and all trim of the operating facility in the centre console

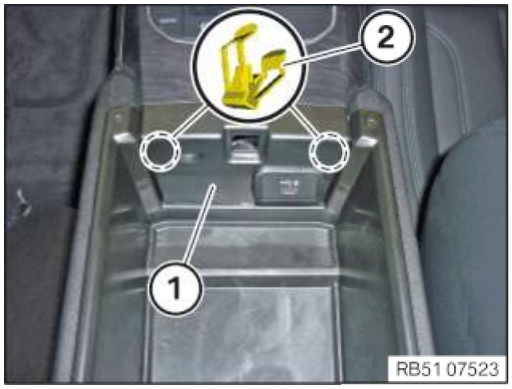
PRELIMINARY WORK

1 – Disconnecting all battery earth leads

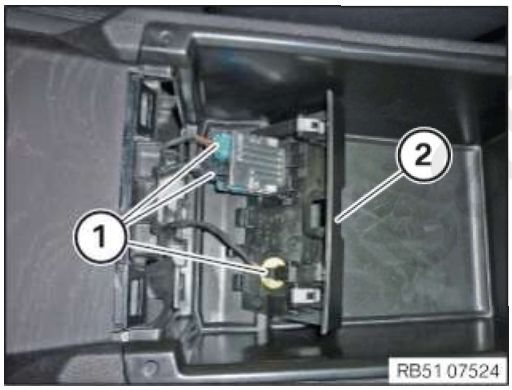


- See additional information.

2 – 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) .

3 – Remove the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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

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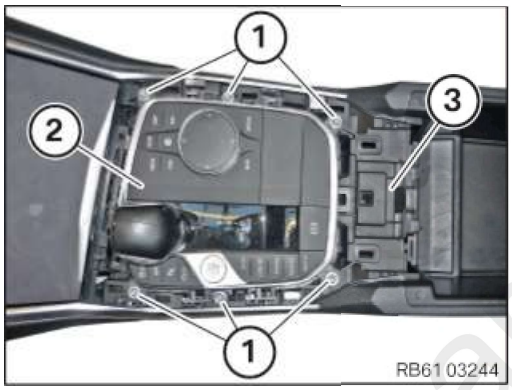
- Release and remove the centre console trim upwards (1) as shown using the special tool 2 298 505 from the latch mechanisms.

4 – Remove the operating facility in the centre console

► **Disconnecting all battery earth leads**

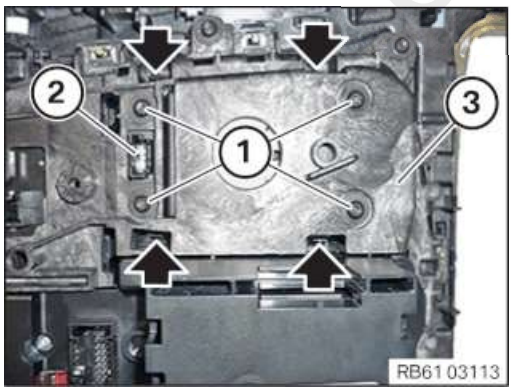


- See additional information.



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

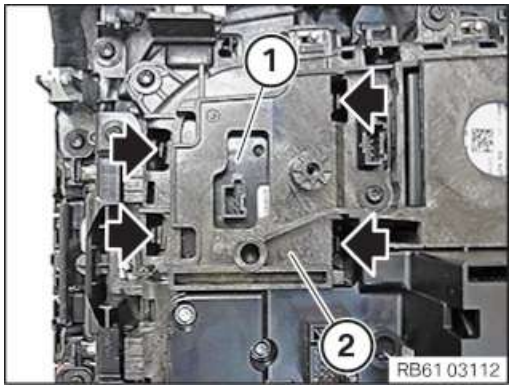
5 – Remove controller



- Loosen screws (1).
- Release the latch mechanisms (arrows).
- Remove controller (2) from the gear selector switch(GWS) (3).

6 – Removing the HDC button

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- Release the latch mechanisms (arrows).
- Remove HDC button (1) from gear selector switch (GWS) (2).

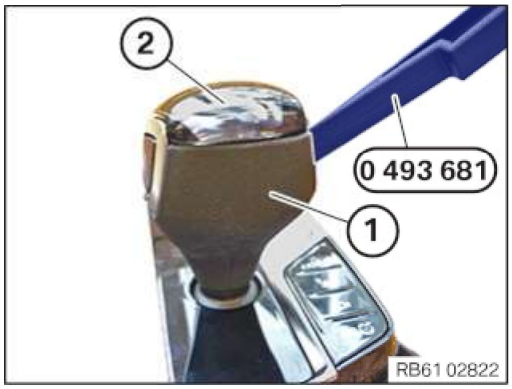
7 – Remove gearshift lever knob

RISK OF DAMAGE

Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

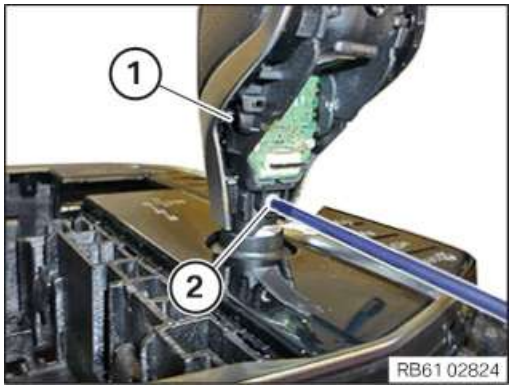
- Protect surfaces from damage.



- Lever the trim (1) with the special tool 0 493 681 (64 1 020) out of the gearshift lever knob (2) on both sides.



- Unlock the connector (1) in the direction of the arrow.
- Thread out the ribbon cable (2).



- Loosen screw (2).
- Remove the shift knob (1) upwards.

MAIN WORK

8 – Replacing the trims on the gearshift lever knob

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8 – Replacing the trims on the gearshift lever knob

▸ **Remove dazzle from gearshift lever knob**

RISK OF DAMAGE

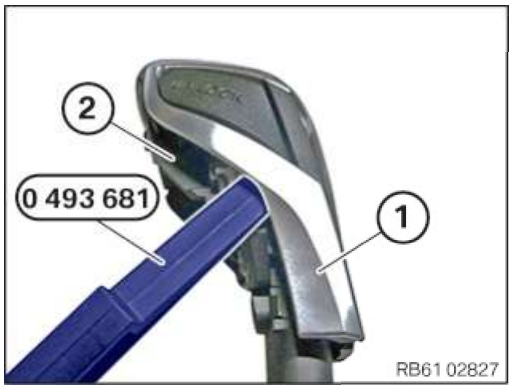
Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

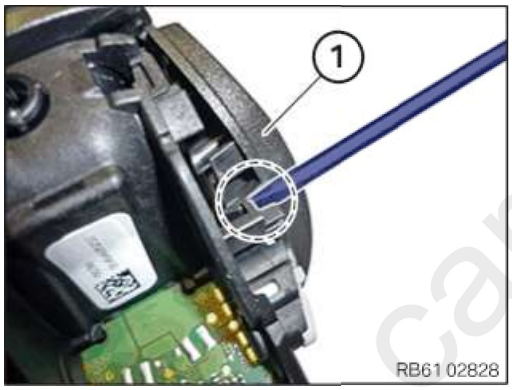
- Protect surfaces from damage.

NOTICE

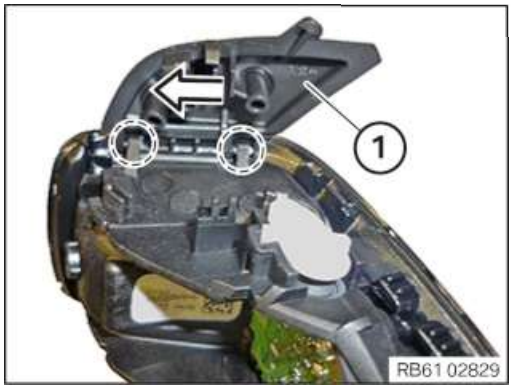
The operations shown only for one side must be carried out on both sides.



- Lever the chrome clasp (1) with the special tool 0 493 681 (64 1 020) out of the gearshift lever knob (2).



- Lever out button (1) with a flat-head screwdriver in the marked area.



- Slightly lift the button (1) and remove it in the direction of the arrow.

▸ **Install the covers on the shift knob**

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RISK OF DAMAGE

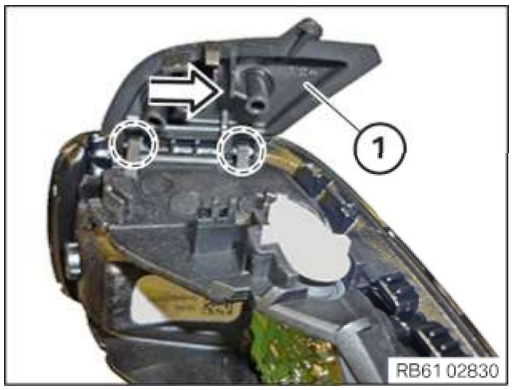
Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

- Protect surfaces from damage.

NOTICE

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



- Insert unlock button (1) in the area marked in the direction of the arrow.



- Fold down unlock button (1) and clip into place in the area marked.



- Position chrome bar (1) on the shift knob (2) and clip into place.

9 – Replacing trims on the operating facility in the centre console

▸ **Remove covers on the operating unit in the centre console**

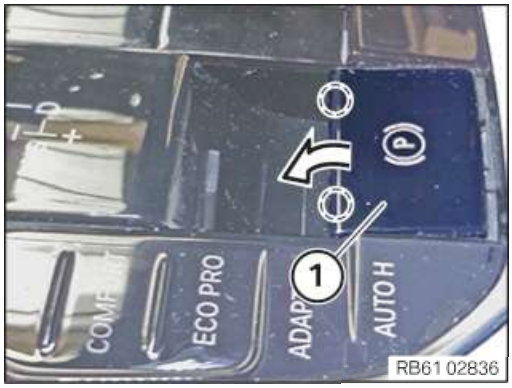
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RISK OF DAMAGE

Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

- Protect surfaces from damage.

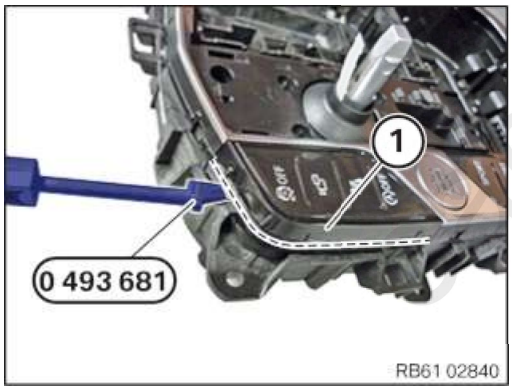


- Press the parking brake button cover (1) forwards and downwards in the direction of the arrow.

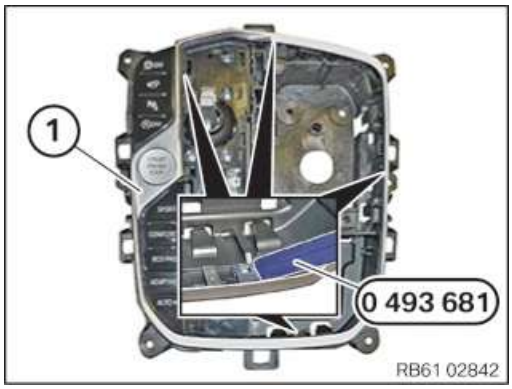
Note: The parking brake button cover can be loosened by pressing strongly out of the catch mechanisms.



- Lever the cover (1) out on the operating unit in the centre console (2) using the special tool 0 493 681 (64 1 020).



- Unclip the trim (1) using special tool 0 493 681 (64 1 020).



- Unclip cover (1) using the special tool 0 493 681 (64 1 020) at the locations marked.

▸ **Installing trims on the operating facility in the centre console**

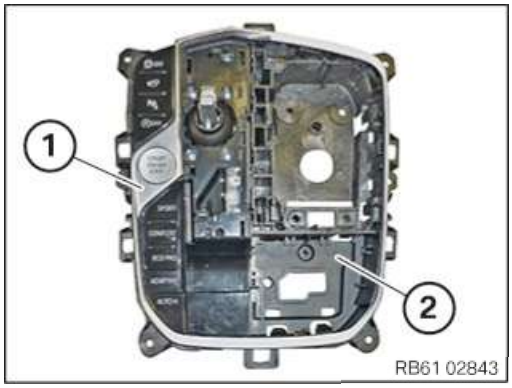
carsdiagn.com

RISK OF DAMAGE

Damage of high-quality surfaces.

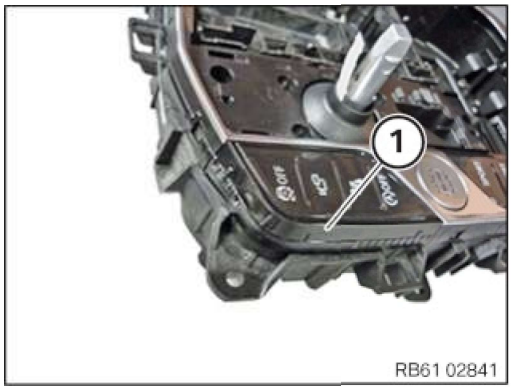
Plastic wedges can damage high-quality surfaces.

- Protect surfaces from damage.



- Position cover (1) on the operating unit in the centre console (2) and clip into place.

  All retaining lugs must engage audibly.

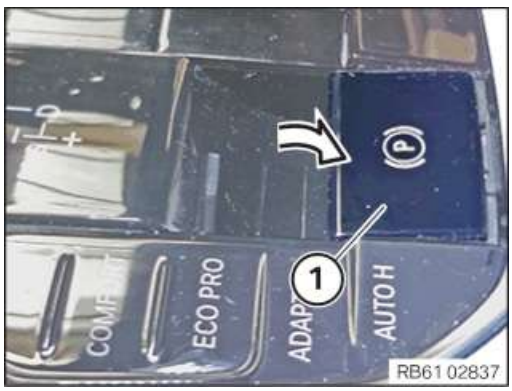


- Position and clip in trim (1).



- Position cover (1) on the operating unit in the centre console (2) and clip into place.

  All retaining lugs must engage audibly.

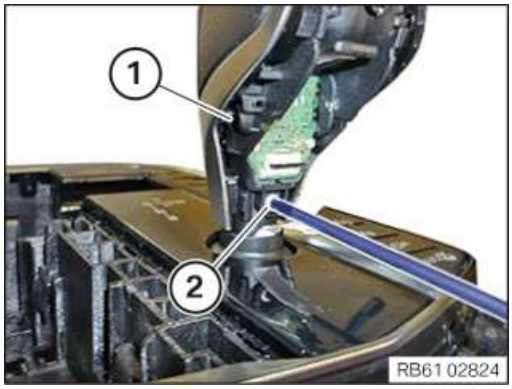


- Position parking brake button cover (1) and snap into place in the direction of the arrow.

  The parking brake button cover (1) must engage audibly.

POSTPROCESSES

10 – Installing gearshift lever knob

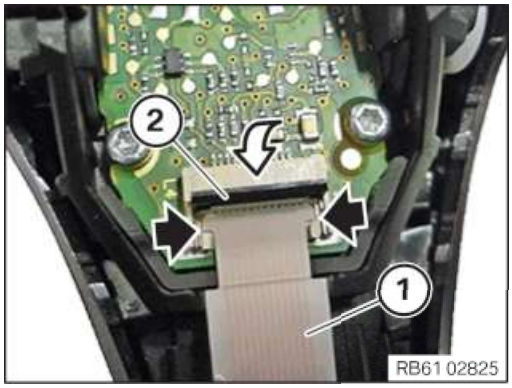


- Position the gearshift lever knob (1).
- Replace the screw of the gearshift lever knob.

  Parts: Screw
- Tighten down screw (2).

Gearshift lever knob

Screw	Renew screw.	Tightening torque	0,8 Nm



- Position ribbon cable (1) correctly on the gearshift lever knob (arrow).
- Lock the connector (2) in the direction of the arrow.

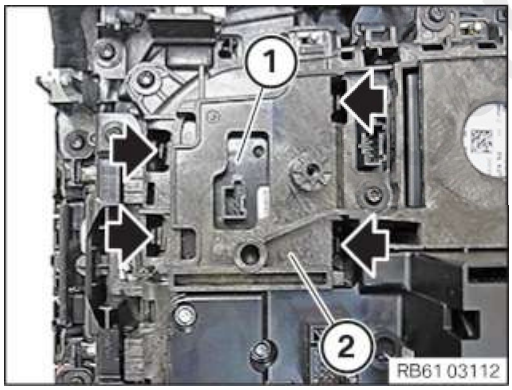


- Position and lock the trim (1) to the gearshift lever knob (2).

  Parts: Gearshift lever knob trim

  Retaining lugs must audibly snap into place.

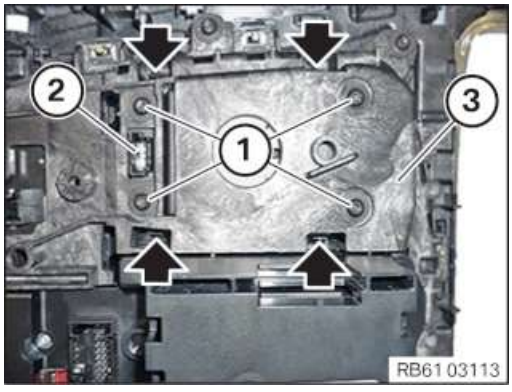
11 – Installing the HDC button



- Position HDC button (1) on gear selector switch (GWS) (2).

  The latch mechanisms (arrows) must engage audibly.

12 – Install controller



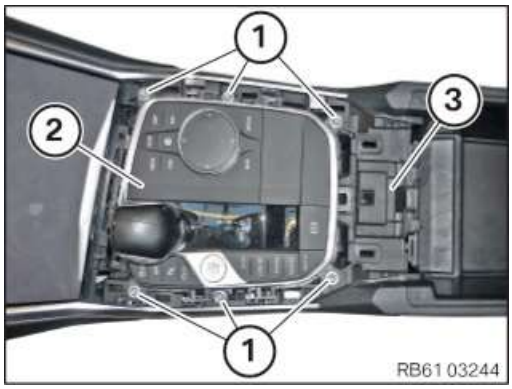
- Position the controller (2) on gear selector switch (GWS) (3) and engage in the latch mechanisms (arrow).
- Tighten the screws (1).

Controller to gear selector switch

Screw		Tightening torque	1,8 Nm

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13 – Install the operating facility in the centre console



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

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

▶ **Disconnecting all battery earth leads**



- See additional information.

14 – Installing the centre console trim

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



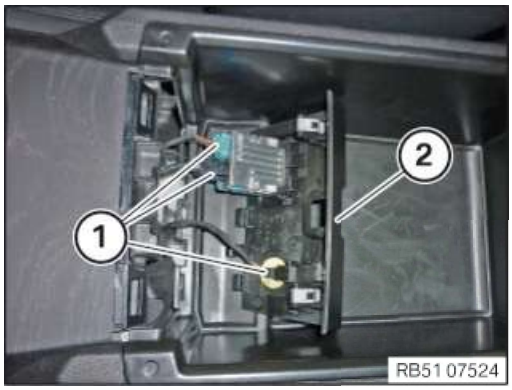
- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .

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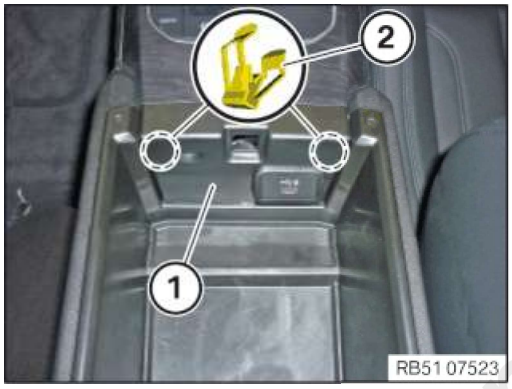


- Correctly position the centre console trim (1) and engage at the latch mechanisms.

15 – 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).

16 – Encode/program control unit(s)

Prerequisite

Replacement of component.

TECHNICAL INFORMATION

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

TECHNICAL INFORMATION

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

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

17 – Disconnecting all battery earth leads



- See additional information.

Additional Information

Overview of Tightening Torques

Gearshift lever knob			Used in step 10
Screw	Renew screw.	Tightening torque	0,8 Nm

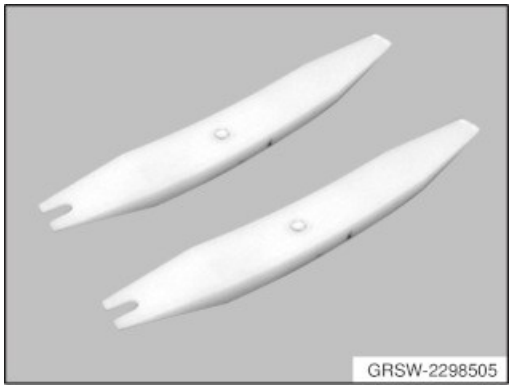
Controller to gear selector switch			Used in step 12
Screw		Tightening torque	1,8 Nm

Gear selector switch to centre console trim			Used in step 13
Screw		Tightening torque	1,8 Nm

Overview of Special Tools

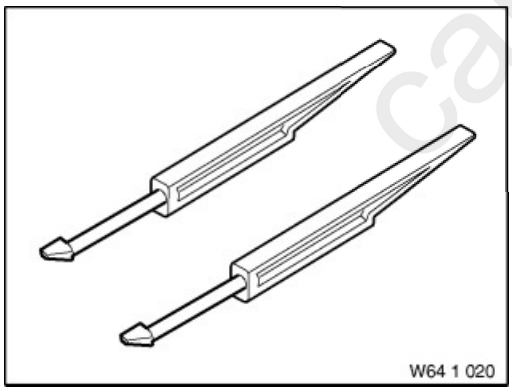
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2 298 505 Wedge



Common	Used in step 23
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)

0 493 681 (64 1 020) Hook



Common	Used in step 789
Usage	(release hook) For releasing and removing fresh air grille. For removing various covers.
Included in the tool or work	
Storage location	C2
Replaced by	
In connection with	
SI-Number	01 15 99 (483)

Links

Repair instructions	Used in step
61 20 900 Disconnecting and connecting battery earth lead	141317
61 20 900 Disconnecting and connecting battery earth lead	141317
61 20 900 Disconnecting and connecting battery earth lead	141317
61 20 900 Disconnecting and connecting battery earth lead	141317
61 20 900 Disconnecting and connecting battery earth lead	141317
61 20 900 Disconnecting and connecting battery earth lead	141317

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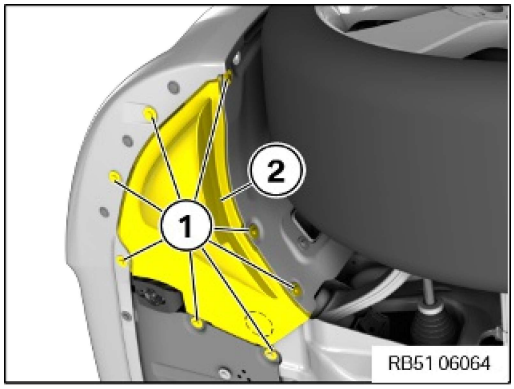
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141317
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141317
61 20 900 Disconnecting and connecting battery earth lead	141317
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141317
61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)	141317
61 20 900 Disconnecting and connecting battery earth lead	141317
61 20 900 Disconnecting and connecting battery earth lead	141317
61 20 900 Disconnecting and connecting battery earth lead	141317
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	141317
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61 33 050 Removing and installing/replacing left fanfare horn

PRELIMINARY WORK

1 – Removing the lower front cover at the side



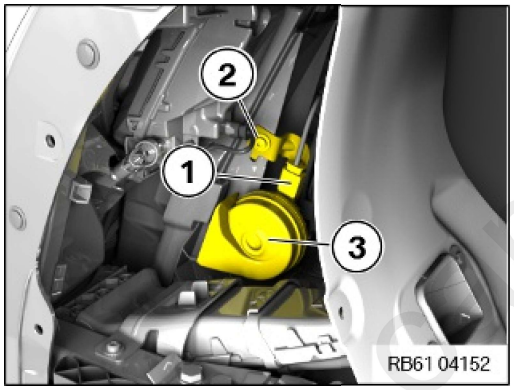
- Loosen screws (1).
- Removing the lower front cover at the side (2).

MAIN WORK

2 – Removing the fanfare on the left

TECHNICAL INFORMATION

Replace the fanfare only complete with the holder.

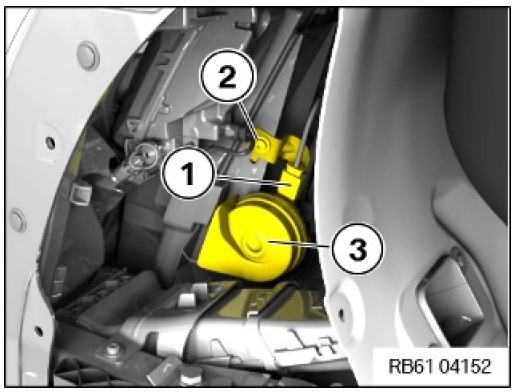


- Unlock plug connection (1) and disconnect.
- Release the screw (2) and remove the left fanfare horn (3) with the bracket.

3 – Installing the fanfare on the left

TECHNICAL INFORMATION

Replace the fanfare only complete with the holder.



- Correctly position the left fanfare horn (3) and tighten screw(2) .

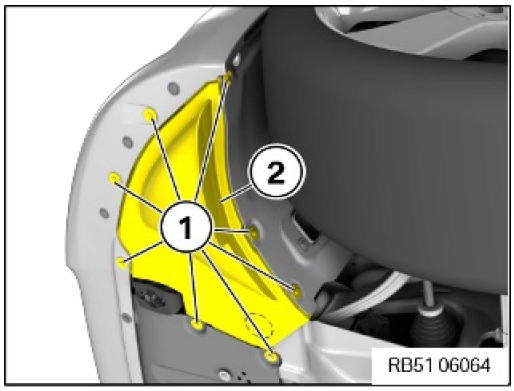
Fanfare to support for bumper panel

M6x20 screw		Tightening torque	8,8 Nm

- Connect connectors (1) and lock.

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4 – Install the lower front cover at the side



- Install front bottom side cover(2).
- Tighten the screws (1).

Cover, front bottom on side

Hexagon screw for thermoplastic		Tightening torque	3 Nm

Additional Information

Overview of Tightening Torques

Fanfare to support for bumper panel — Used in step 3

M6x20 screw		Tightening torque	8,8 Nm

Cover, front bottom on side — Used in step 4

Hexagon screw for thermoplastic		Tightening torque	3 Nm

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