61 35 679 Initialise the rain-light-solar-condensation sensor



Note:
Initialisation is necessary:

- after replacing the windscreen
- after replacing the rain-light-solar-condensation sensor
- after removing and installing the rain-light-solar-condensation sensor



Note:

- Connect BMW diagnosis system
- Initialise the rain-light-solar-condensation sensor

cardiagn.com

61 35 679 Initializing rain/light sensor

Note:
Initialisation is necessary:

- after replacing the windscreen
- after replacing the rain-light sensor
- after removing and installing the rain-light sensor

Note:

- Connect BMW diagnosis system
- Initializing rain/light sensor

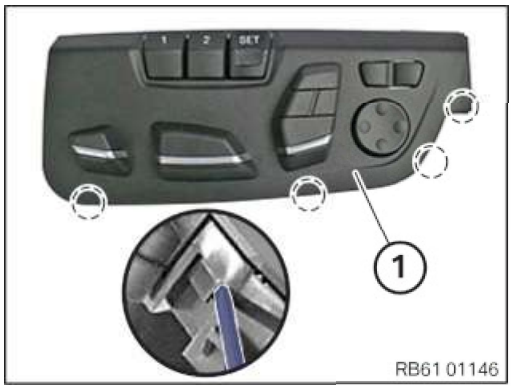
cardiagn.com

61 31 ... Remount operating unit for additional seat function (clipped version)

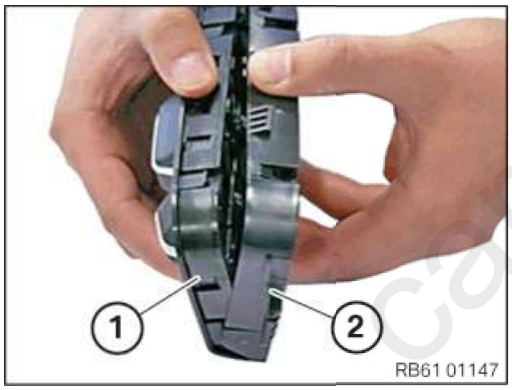
Necessary preliminary tasks:

- Remove operating unit of additional seat function

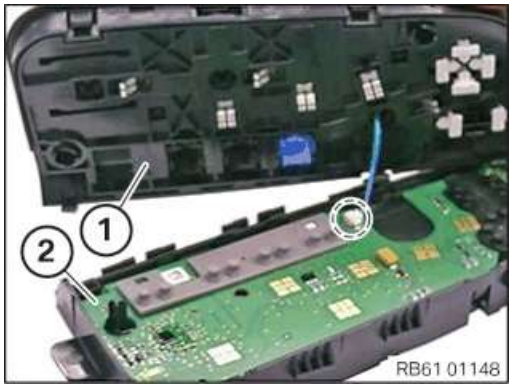
Removal:



Release all latch mechanisms on the operating unit (1) using screwdriver (3-mm blade).

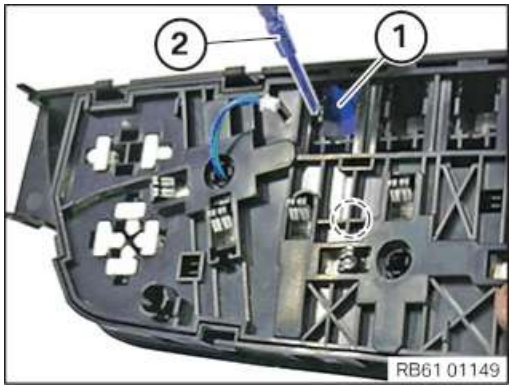


Feed out the operating unit (1) from the rear panel (2).



Disconnect the connector from the printed circuit board (2) and remove the operating unit (1).

cardiagn.com

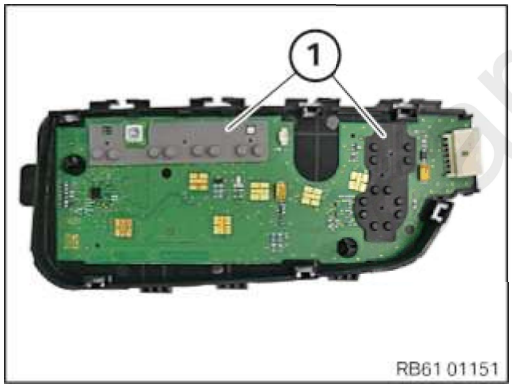


Unclip the button (1) using screwdriver (2) and pull out forwards.

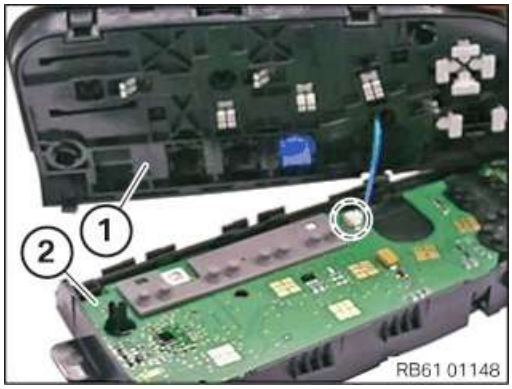
Installation:



Fit the memory button to the operating unit and press to lock into place.



Installation note:
Ensure keypads (1) are seated correctly.



Disconnect the connector from the printed circuit board (2) and remove the operating unit (1).

grdiagn.com



Fit the operating unit (1) to the rear panel (2) and press to lock into place.**Important!**

Pay attention to the freedom of movement and function of the remounted button!

Required follow-up work:

- Remove operating unit of additional seat function

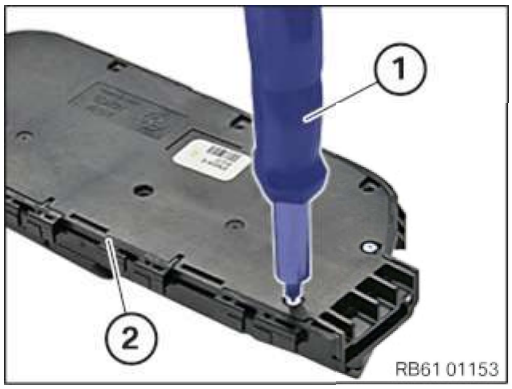
cardiagn.com

61 31 ... Remount operating unit of the additional seat function (screwed version)

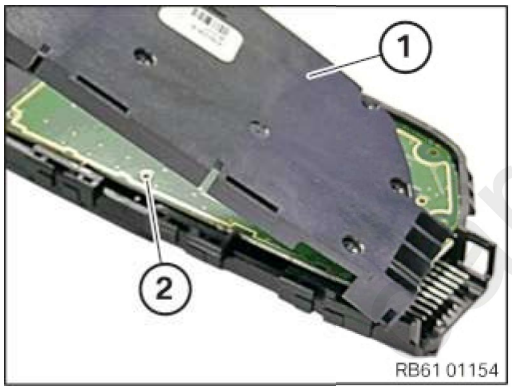
Necessary preliminary tasks:

- Remove operating unit of additional seat function

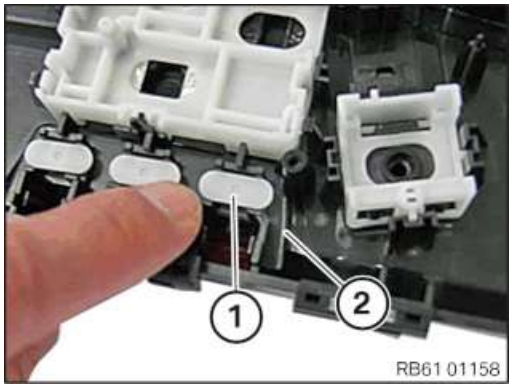
Removal:



Release all screws by means of screwdriver (1) on the operating unit (2).

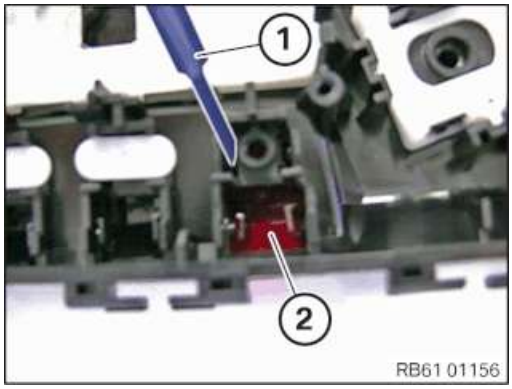


Remove the rear panel (1) and feed out the printed circuit board (2).



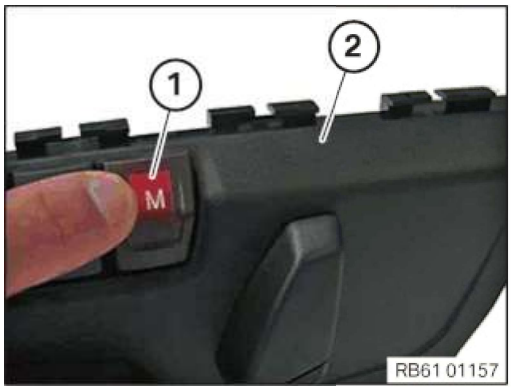
Take out the pressure pin (1) from the operating unit (2).

.com

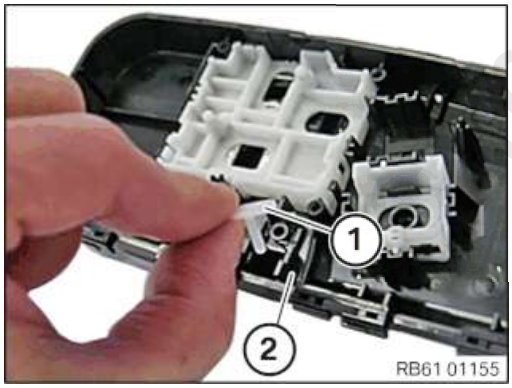


Unclip button (2) with the help of screwdriver (1) and remove.

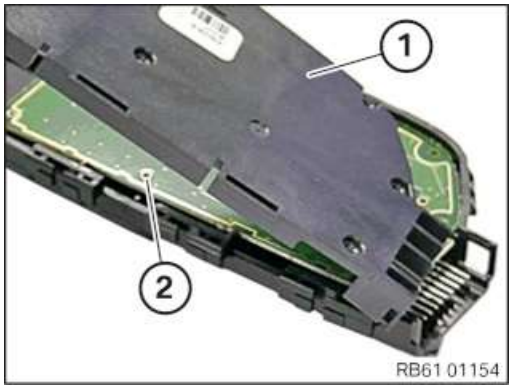
Installation:



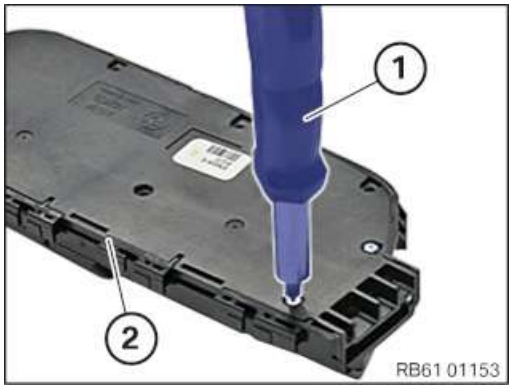
Add the button (1) to the operating unit (2) and lock using pressure.



Add pressure pin (1) to the operating unit (2).



Add the printed circuit board (2) and then the rear panel (2) to the operating unit.



Tighten all screws on the operating unit (2) with the help of screwdriver (1).**Important!**

Pay attention to the freedom of movement and function of the remounted button!

Required follow-up work:

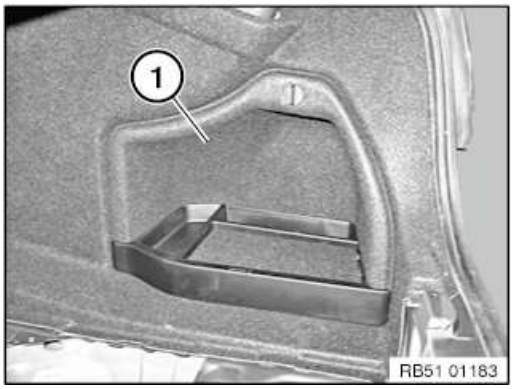
- Remove operating unit of additional seat function

cardiagn.com

61 31 008 Remove and install / replace the steering column switch cluster (SZL) \PREMIUM

PRELIMINARY WORK

1 – Remove right luggage compartment trim panel



- Remove right luggage compartment trim panel (1).

2 – Disconnecting the battery earth lead

Prerequisite

Ignition is switched off.

TECHNICAL INFORMATION

For additional information see:

61 00 ... Safety information on handling the vehicle battery

61 00 / 12 00 ... Notes on disconnecting and connecting the vehicle battery

61 12 ... Notes on the intelligent battery sensor (IBS)



RISK OF DAMAGE

Damage to battery terminal, the safety battery terminal or the intelligent battery sensor (IBS).

Damaged battery terminals can lead to malfunctions or vehicle electrical system faults.

- Pull off battery terminal from battery pole by carefully moving to and fro. Do not pry off using a tool.

- Slacken nut (1).
- Pull off the battery earth lead including intelligent battery sensor (IBS) (2) upwards, put to one side and secure the components.

3 – Removing the airbag unit

▸ **Removing the airbag unit (standard steering wheel)**

carmagn.com

WARNING

Airbag unit.

Danger! Life-threatening injuries!

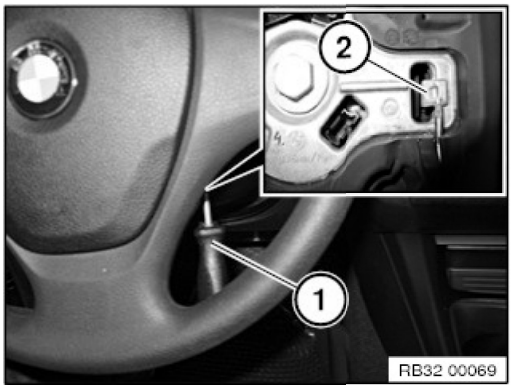
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

TECHNICAL INFORMATION

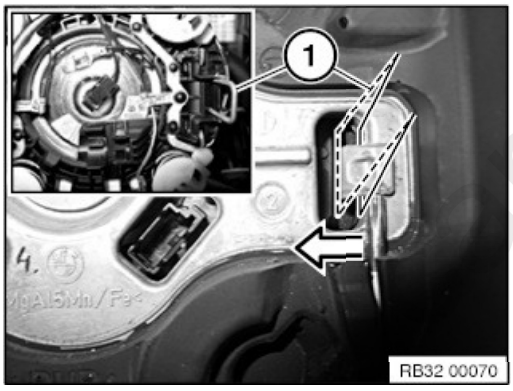
Steering wheel must be replaced if airbag unit has been deployed.

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

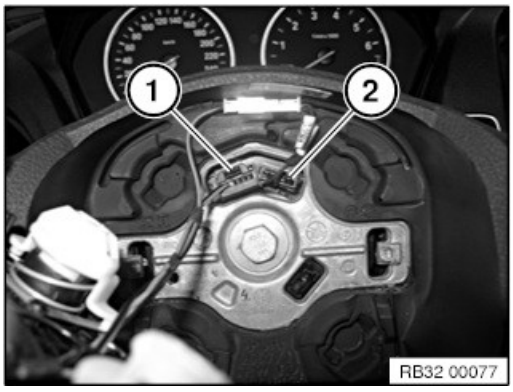
For additional information see: 72 12 ... Procedure after airbag deployment as result of an accident



- Guide Torx screwdriver T20 (1) up to limit position (2) vertically into the covered opening.
- Pull Torx screwdriver approx. 2-3 mm out of opening.
- Carefully push handle of the Torx screwdriver (1) to the centre of the steering wheel and at the same time push back into the opening; while doing so, position the Torx screwdriver (1) behind the retaining spring.



- Press the retaining spring (1) with the Torx screwdriver from the airbag unit inward and at the same time pull the airbag unit upward.
- Repeat process on other side.



- Tilt airbag unit forwards.
- Disconnect plug connections (1) and (2) and remove airbag unit.

▸ **Removing the airbag unit (sports steering wheel)**

WARNING

Airbag unit.

Danger! Life-threatening injuries!

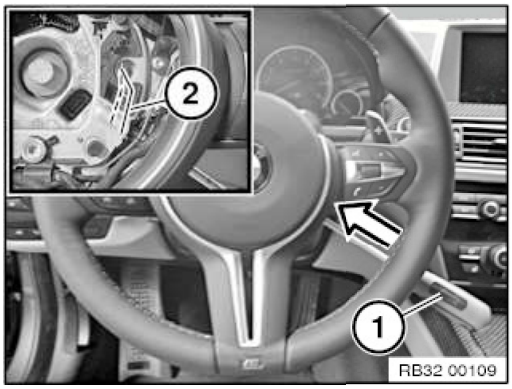
- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

TECHNICAL INFORMATION

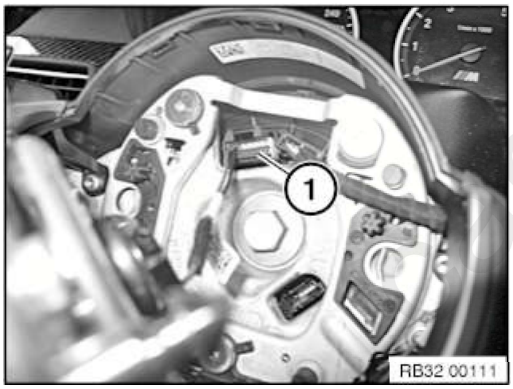
Steering wheel must be replaced if airbag unit has been deployed.

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

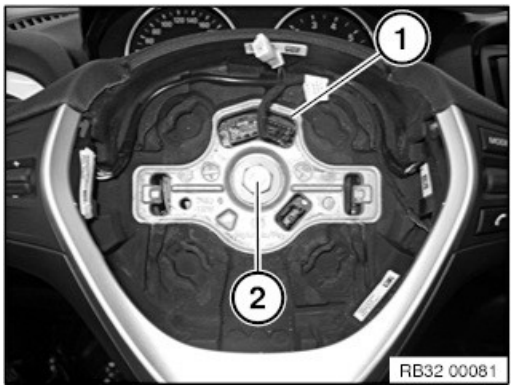


- Insert the Torx screwdriver T27 (1) straight into the concealed opening up to the resistor.
- Press in the retaining spring (2) using the Torx screwdriver (1) in the direction of the arrow until the airbag unit has been unlocked.
- Repeat process on other side.



- Raise airbag unit towards rear.
- Disconnect the plug connection (1) and remove the airbag unit.

4 – Removing the steering wheel



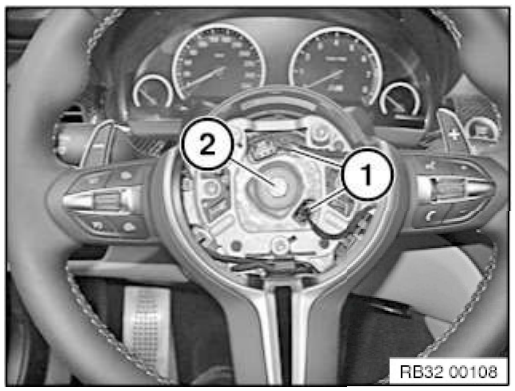
▸ **Removing the steering wheel (standard steering wheel)**

- Move steering to straight-ahead driving position.
- Disconnect plug connection (1).
- Loosen the screw (2) and remove the steering wheel.



- Check the neutral position of the clock spring on the steering column switch cluster (SZL) using the yellow mark (1).
- Do not twist the clock spring.

► **Removing the steering wheel (sports steering wheel)**



- Move steering to straight-ahead driving position.
- Disconnect plug connection (1).
- Loosen the screw (2) and remove the steering wheel.

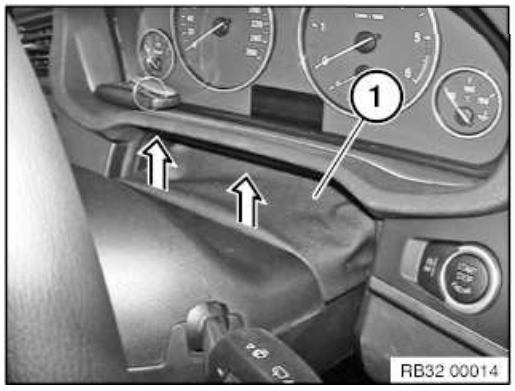


- Check the neutral position of the clock spring on the steering column switch cluster (SZL) using the yellow mark (1).
- Do not twist the clock spring.

5 – Removing steering column shroud upper section

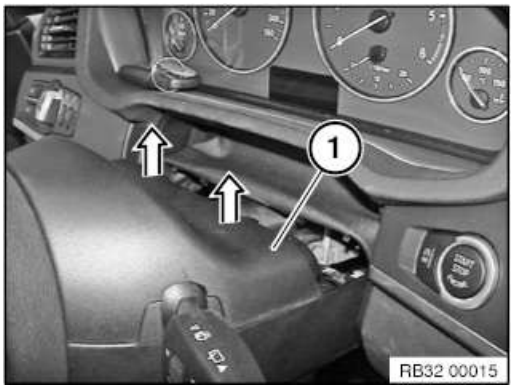
Prerequisite

Steering column in bottom and raised position.



- Carefully pull the gap cover for the steering column (1) upwards and unclip.

cardiagn.com

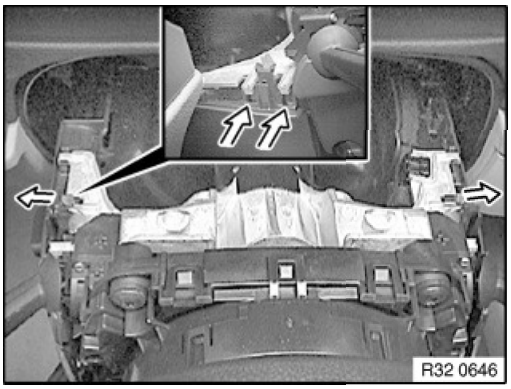


- Carefully pull the steering column shroud upper section (1) upwards at the rear, unclip and remove.

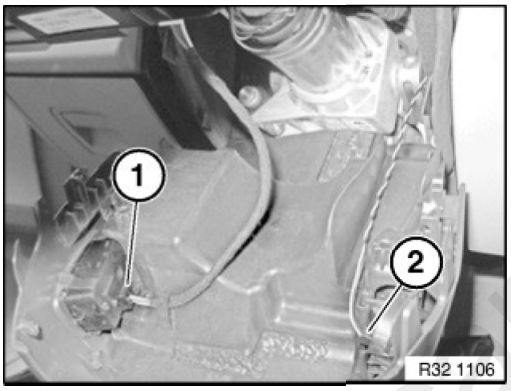
6 – Removing steering column shroud lower section

Prerequisite

Steering column in top and raised position.



- Press retaining lugs outwards gently and unclip steering column shroud lower section downwards.



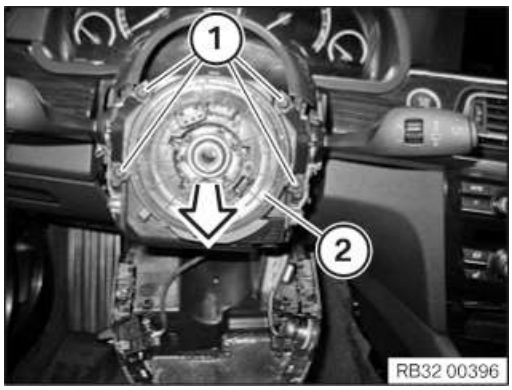
- Tilt steering column shroud lower section in downward direction.
- If necessary disconnect plug connection (1) of the steering column adjustment and the plug connection (2) of the ring aerial.
- Remove steering column shroud lower section.

cardiagn.com

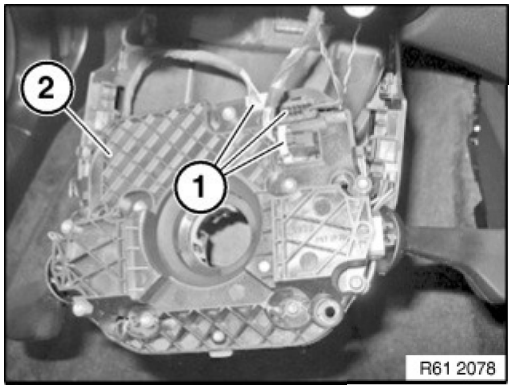
7 – Removing the steering column switch cluster (SZL)

Prerequisite

Steering in straight-ahead driving position.



- Loosen screws (1).
- Pull off the steering column switch cluster (SZL) (2) from the steering column in the direction of the arrow.

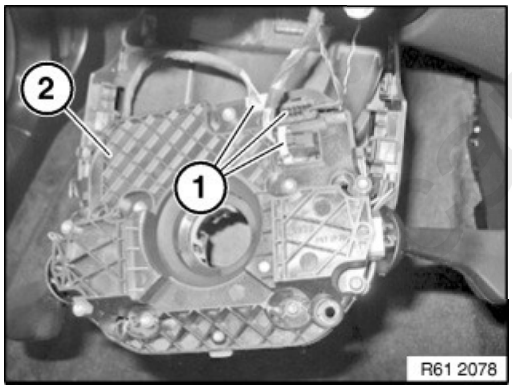


- Disconnect plug connection (1).
- Remove the steering column switch cluster (SZL) (2).

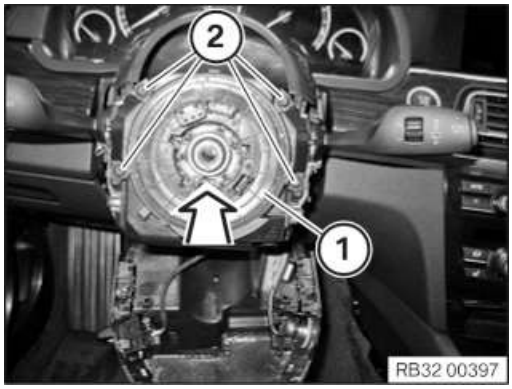
8 – Installing the steering column switch cluster (SZL)

Prerequisite

Steering in straight-ahead driving position.



- Connect the connector (1) to the steering column switch cluster (SZL) (2).



- Connect the steering column switch cluster (SZL) (1) to the steering column in the direction of the arrow.
- Tighten down screws (2).

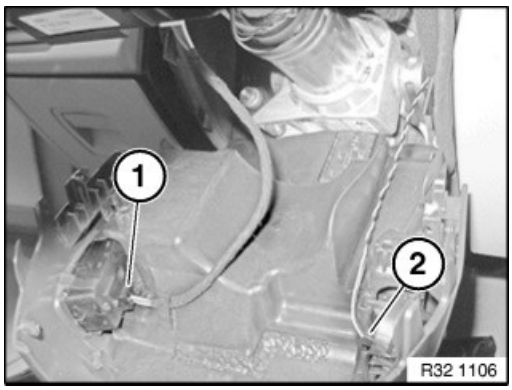
Steering column switch cluster (SZL) on the steering column

			3,6 Nm

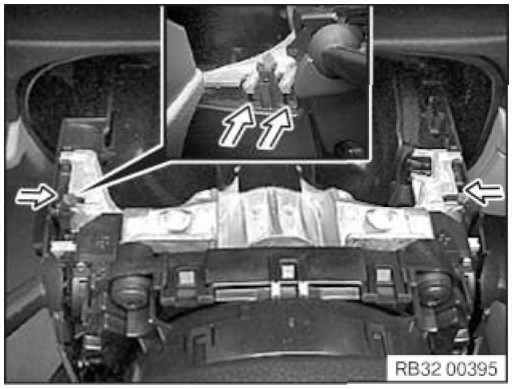
9 – Install steering column shroud lower section

Prerequisite

Steering column in top and raised position.



- Connect the connector (2) of the ring aerial and if applicable the connector (1) of the steering column adjustment.
- Tilt the steering column shroud lower section upwards towards the steering column.

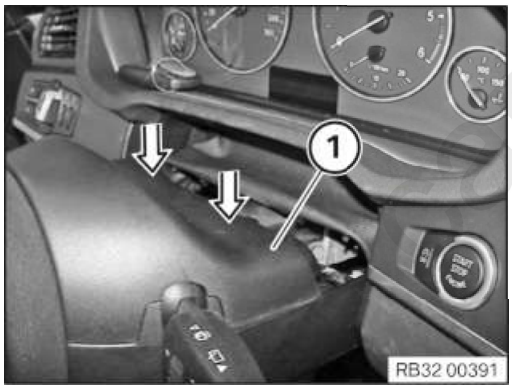


- Align the steering column shroud lower section with the steering column using the retaining lugs and press upwards up to the limit position.
- Slightly press the steering column shroud lower section together on both sides and then completely press it upwards until the retaining lugs engage.

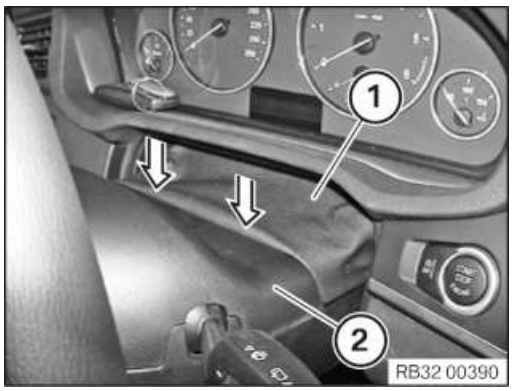
10 – Fit steering column shroud upper section

Prerequisite

Steering column in bottom and raised position.



- Insert the steering column shroud upper section (1) and clip in the direction of the arrow.



- Position and clip in the gap cover (1) for the steering column onto the steering column shroud upper section (2) in the direction of the arrow.

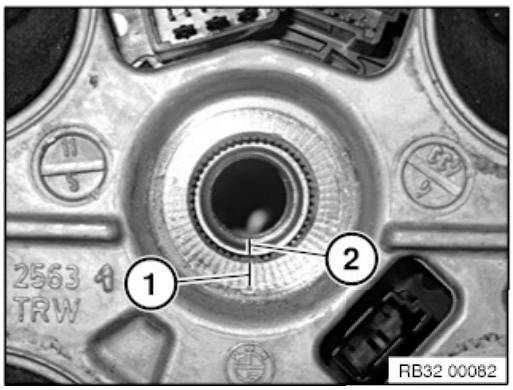
11 – Installing the steering wheel

▸ **Installing the steering wheel (standard steering wheel)**

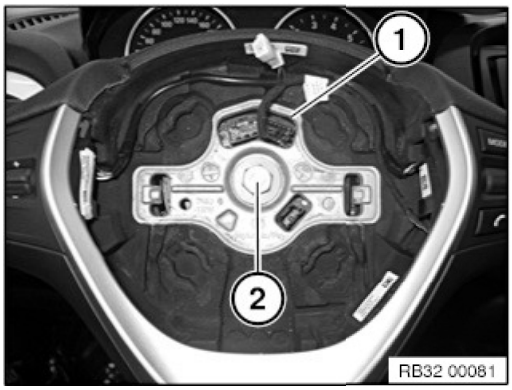
cardiagn.com



- Check the neutral position of the clock spring on the steering column switch cluster (SZL) using the yellow mark (1).



- Align and connect the steering wheel using the mark (1) and the mark (2) on the steering column.



- Route the wiring and connect the connector (1).
- Tighten down screw (2).

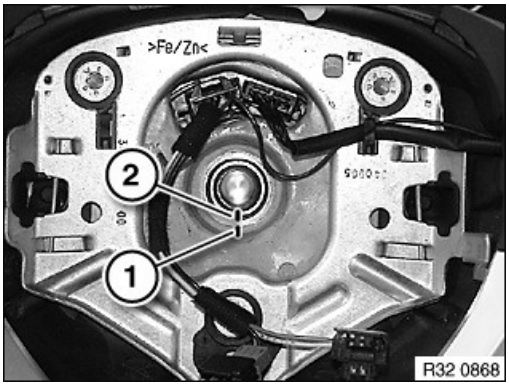
Steering wheel to steering column

M14			62 Nm

▸ **Installing the steering wheel (sports steering wheel)**

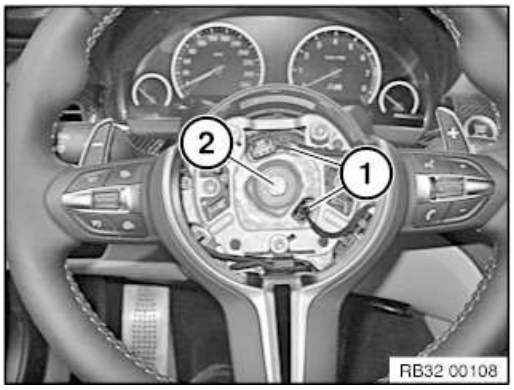


- Check the neutral position of the clock spring on the steering column switch cluster (SZL) using the yellow mark (1).



- Align and connect the steering wheel using the mark (1) and the mark (2) on the steering column.

rdiagn.com



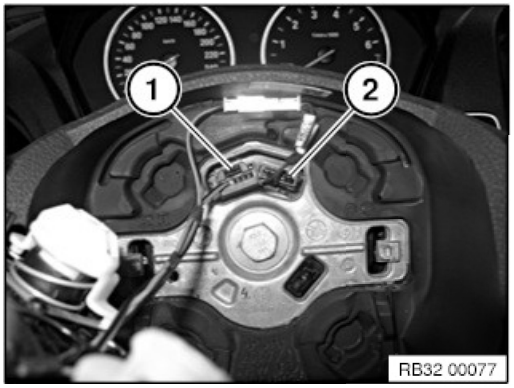
- Route the wiring and connect the connector (1).
- Tighten down screw (2).

Steering wheel to steering column

M14			62 Nm

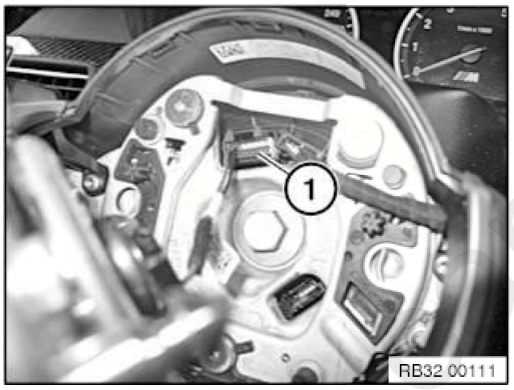
12 – Installing the airbag unit

▸ **Installing the airbag unit (standard steering wheel)**



- Connect connectors (1) and (2).
- Attach airbag unit and lock with even pressure into retaining springs.

▸ **Installing the airbag unit (sports steering wheel)**



- Connect connector (1).
- Attach airbag unit and lock with even pressure into retaining springs.

13 – Connecting the battery earth lead

TECHNICAL INFORMATION

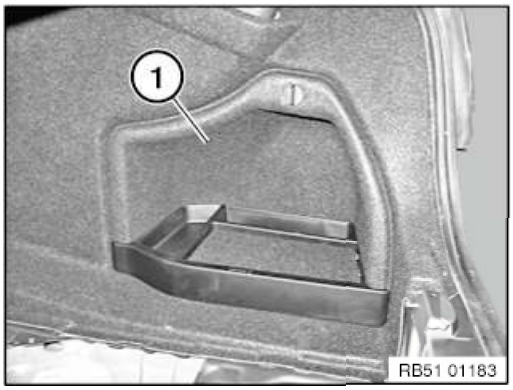
For additional information see:
61 00 ... Safety information on handling the vehicle battery
61 00 / 12 00 ... Notes on disconnecting and connecting the vehicle battery
61 12 ... Notes on the intelligent battery sensor (IBS)



- Connect battery earth lead with intelligent battery sensor (IBS) (2) to negative battery terminal.
- Tighten nut (1).

Battery cable on the battery			
M6			5 Nm

14 – Install right luggage compartment trim panel



- Insert right luggage compartment trim panel (1).

Additional Information

Overview of Tightening Torques

Steering column switch cluster (SZL) on the steering column			Used in step 8
			3,6 Nm

Steering wheel to steering column			Used in step 11
M14			62 Nm

Battery cable on the battery			Used in step 13
M6			5 Nm

Links

General repair instructions	Used in step
61 20 ... Notes on AGM battery	213
61 12 ... Notes on intelligent battery sensor (IBS)	213
61 00 ... Notes for disconnecting and connecting battery	213
72 00 ... Safety regulations for handling components with gas generators	3
72 12 ... Procedure after airbag deployment as result of an accident	3

cardiagn.com

61 35 177 Removing and installing (replacing) rain/light sensor



Operation is described in:

Removing solar rain/light sensor and condensation sensor

cardiagn.com

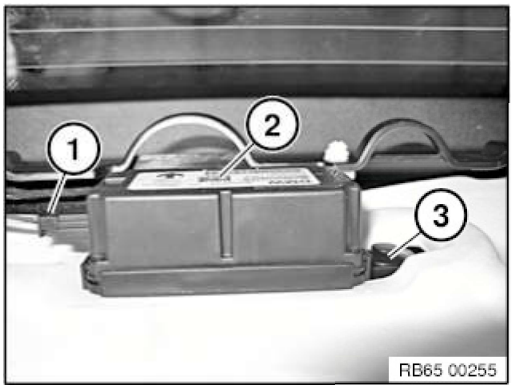
61 31 362 Removing and installing (replacing) receiver for radio remote control

Caution!

Read and comply with notes on protection against electrostatic damage (ESD protection).

Necessary preliminary work:

- Remove trim panel for storage shelf (parcel shelf)



Unlock plug connection (1) and disconnect.

Lift out expanding rivet (3).

Remove the receiver (2).

Installation note:
Position the receiver (2) so that the positioning pin on the rear side engages in the associated bore hole.

cardiagn.com

61 31 008 Removing and installing (replacing) steering column switch cluster

Important!

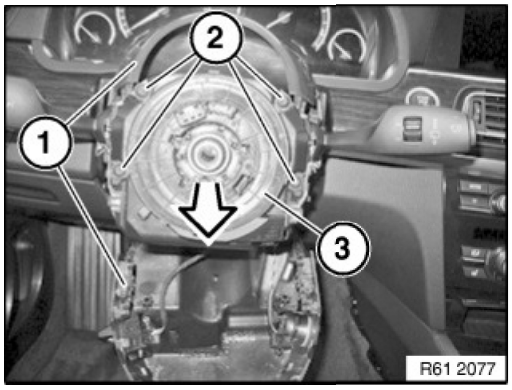
Move wheels into straight-ahead position and do not alter this position during the repair work.

Do not under any circumstances turn the steering column switch cluster when the steering wheel is removed.

Make sure the anti-twist lock locks during removal, the clock spring must not twist until installation.

Necessary preliminary tasks:

- Remove steering wheel



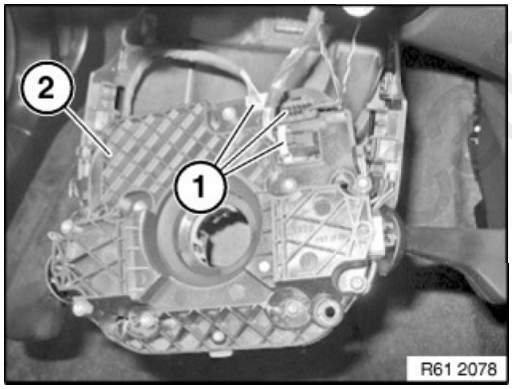
Unclip steering column shroud upper section and lower section (1).

Unfasten screws (2).

Tightening torque 61 31 3AZ.

Remove steering column switch cluster (3) in direction of arrow.

Installation note:
Make sure during installation that the anti-twist lock is positioned correctly on the coil spring cassette.



Disconnect plug connection (1).

Remove steering column switch cluster (2).

61 31 041 Removing and installing operating element for assist system

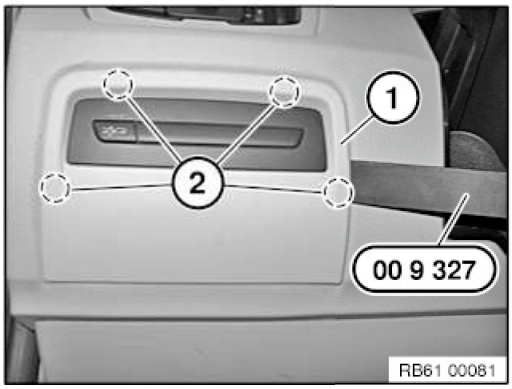
Special tools required:

- 00 9 327

When working on trim panel components, make sure that visible surfaces are not scratched or damaged (e.g. by sharp-edged tools).

Important!

Read and comply with notes on protection against electrostatic discharge (ESD protection).

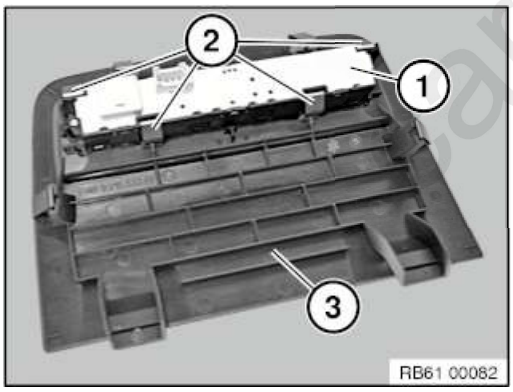


Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Carefully release cover (1) from clamps (2) with special tool 00 9 327 .

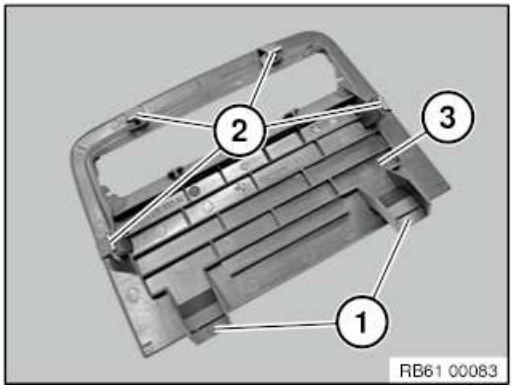
Disconnect associated plug connection and remove cover (1).

Installation note:
Make sure cover (1) is correctly seated.



Remove operating element (1) by releasing retaining clips (2) from cover (3).*Installation note:*
Make sure operating element (1) is correctly seated in cover (2).

cardiagn.com



Installation note:
Guides (1) and clamps (2) on cover (3) must not be damaged or missing.

cardiagn.com

61 31 197 Removing and installing operating facility for centre console \PREMIUM

RISK OF DAMAGE

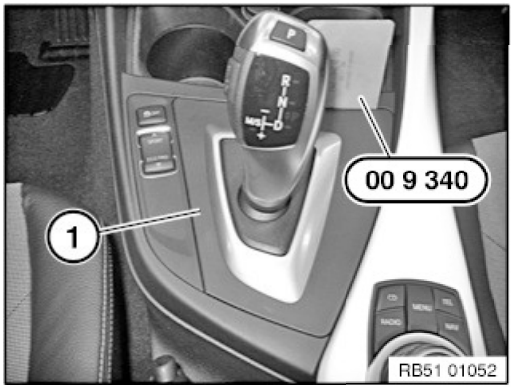
Scratches.

Tools and sharp-edged components can cause scratches.

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

PRELIMINARY WORK

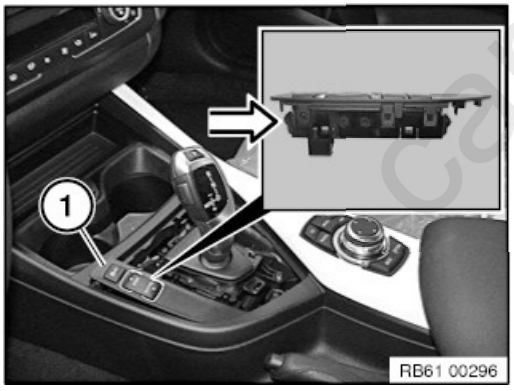
1 – Remove trim for selector lever



- Partially fit special tool 0 493 687 (00 9 340) as pictured.
- Lift trim for selector lever (1) all around and remove upwards.
- If necessary, unlock associated plug connection and disconnect.

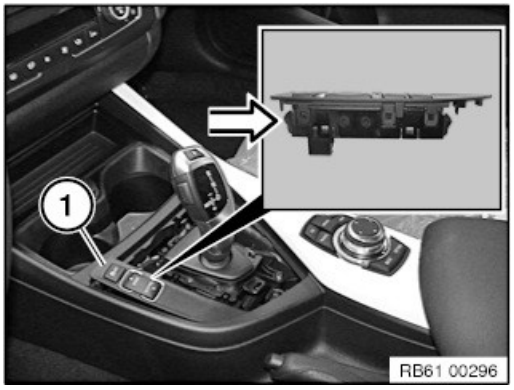
MAIN WORK

2 – Remove the operating facility in the centre console



- Reach under the front section of the operating facility in the centre console (1).
- Push the front latch mechanism in the direction of the arrow and simultaneously raise the operating facility in the centre console (1).
- Disconnect the associated plug connection and remove the operating facility in the centre console (1).

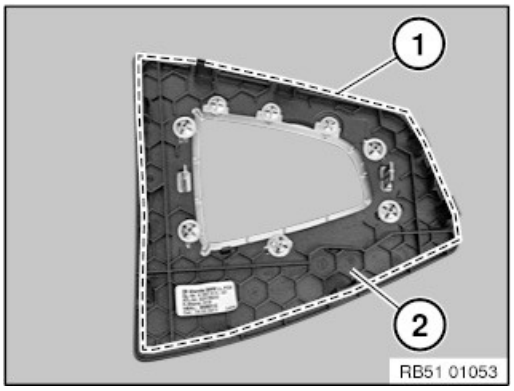
3 – Install the operating facility in the centre console



- Clip in the operating facility in the centre console.

cardiagn.com

4 – Install trim for selector lever



TECHNICAL INFORMATION

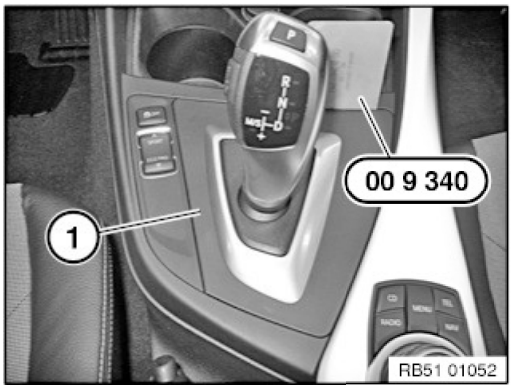
Latch mechanisms, guides and mounting elements must not be damaged or missing.

TECHNICAL INFORMATION

Remount the Drivelogic button when replacing the trim for the selector lever in F80/F82/F83.

For more information see: 61 31 ... Removing and installing/replacing Drivelogic button

- Check latch mechanisms for damage, if necessary replace trim for selector lever.



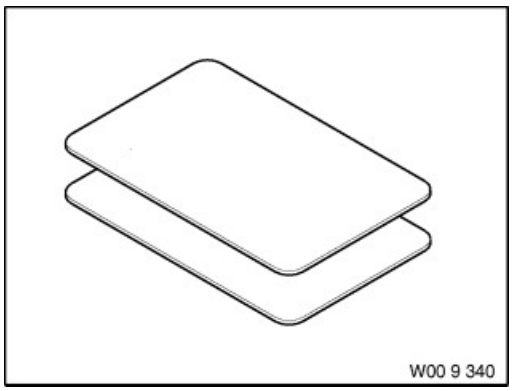
- Clip in trim for selector lever (1).

Additional Information

Overview of Special Tools

cardiagn.com

0 493 687 (00 9 340) Removal aid



Common Used in step 1

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

Consisting of

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

Links

Repair instructions	Used in step
61 31 ... Removing and installing/replacing Drivelogic button	4

cardiagn.com

61 31 197 Removing and installing operating facility for centre console \PREMIUM

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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

PRELIMINARY WORK

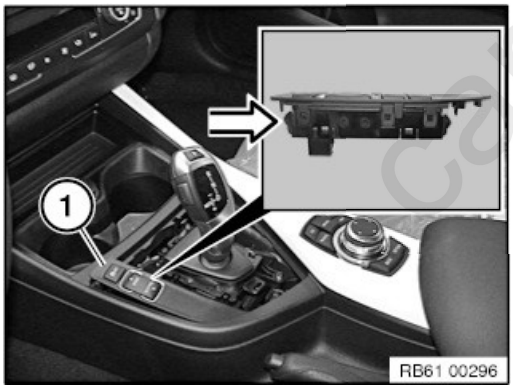
1 – Detaching the gearshift lever cover



- Pull installation frame of gaiter at the sides upwards out of centre console.

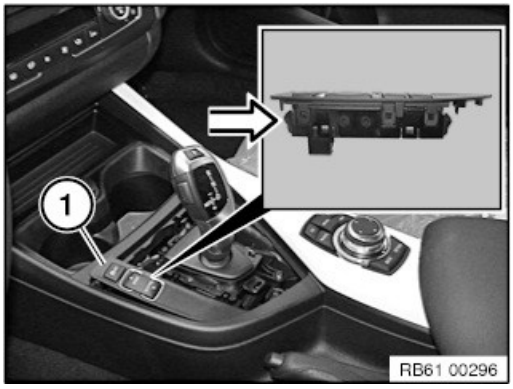
MAIN WORK

2 – Remove the operating facility in the centre console



- Reach under the front section of the operating facility in the centre console (1).
- Push the front latch mechanism in the direction of the arrow and simultaneously raise the operating facility in the centre console (1).
- Disconnect the associated plug connection and remove the operating facility in the centre console (1).

3 – Install the operating facility in the centre console



- Clip in the operating facility in the centre console.

cardiagn.com

4 – Installing the gearshift lever cover



- Press the installation frame of gaiter on the sides and position.

cardiagn.com

61 31 321 Removing and installing radio and A/C control panel

Special tools required:

- 00 9 340

Attention!
Risk of damage!

A hard disk is installed in the Car Information Computer (CIC).

Carry out mechanical work on the CIC and adjacent components with care.

Avoid subjecting the CIC to vibration/shocks.

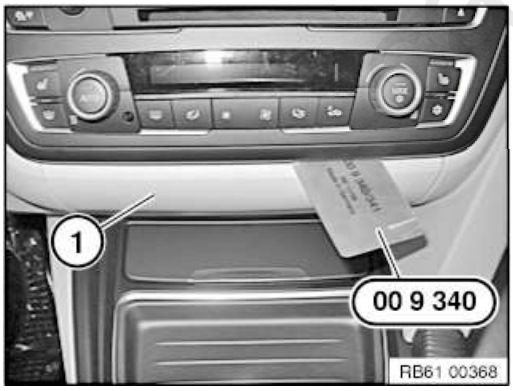
Attention!
Read and comply with notes on protection against electrostatic damage (ESD protection).

Attention!
Carry out installation in a dust-free workshop area only.

To avoid damage, do not touch or dirty the display area.

Necessary preliminary tasks:

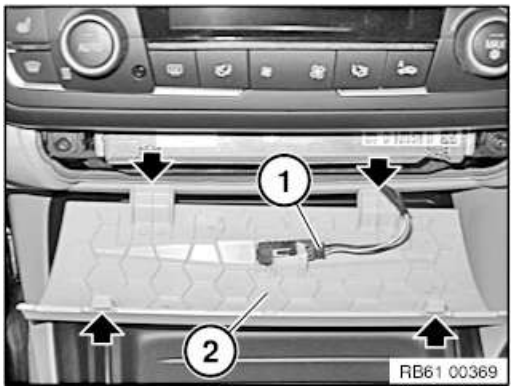
- Remove decorative strip on dashboard in middle



Insert special tool 00 9 340 as illustrated.

Carefully lever out trim (1) towards front and unclip.

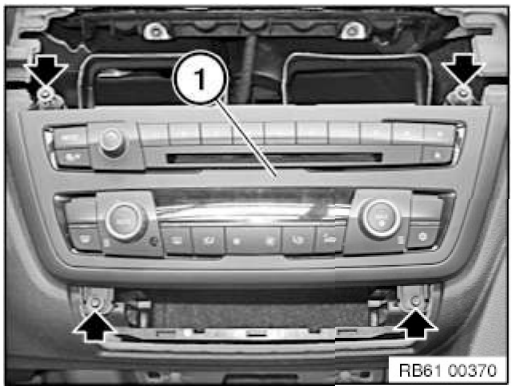
cardiagn.com



Unfasten plug connection (1) and disconnect.

Remove cover (2).

Installation note:
Retaining lugs and guides must not be missing or damaged.



Release all screws (arrow).

Pull control panel (1) forwards slightly.

Unlock associated plug connections and disconnect.

Remove the control panel (1).

cardiagn.com

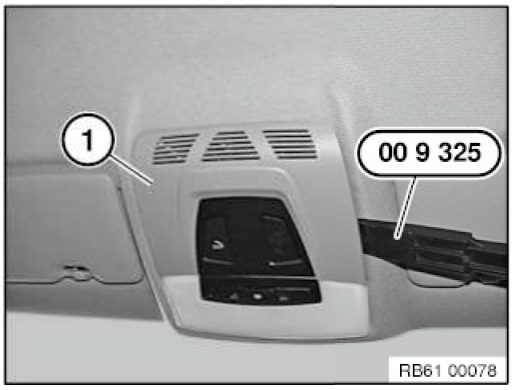
61 31 043 Removing and installing roof switch cluster (front)

Special tools required:

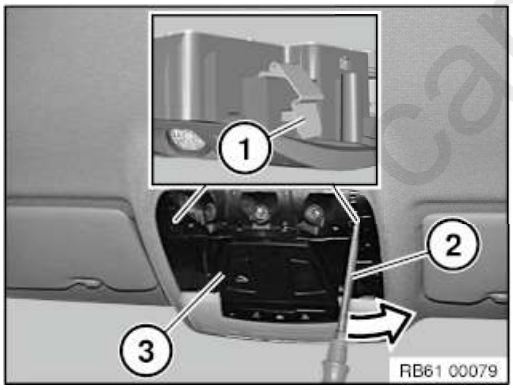
- 00 9 325

Important!
Follow notes for handling light bulbs (interior lighting).

Important!
Read and comply with notes on protection against electrostatic damage (ESD protection).



Carefully unclip cover (1) with special tool 00 9 325 and remove.*Installation note:*
Ensure cover (1) is correctly seated.



Unlock left/right retaining lugs (1) with screwdriver (2) in direction of arrow.

Remove roof switch cluster (3).

Unlock plug connections underneath and disconnect.

Installation note:
Retaining lugs (1) must not be damaged.

Make sure roof switch cluster (3) is correctly fitted.

If necessary, initialise slide/tilt sunroof.

Important!
Disconnecting the plug connection for the SOS emergency call button results in fault entries in the telephone control unit (restriction in the emergency call system).

After installation, read out fault memory and if necessary delete fault code entry.

cardiagn.com

61 31 229 Removing and installing/renewing both switches on sports steering wheel



Operation is described in:

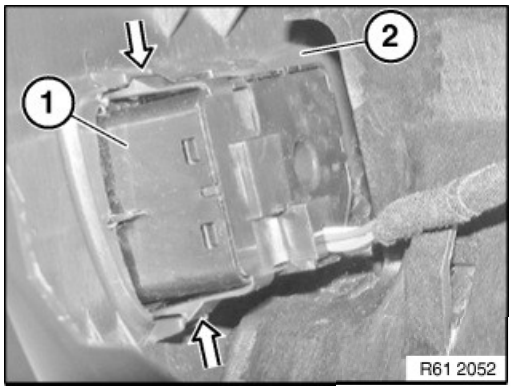
Removing both multifunction steering wheel switches.

cardiagn.com

61 31 062 Removing and installing/renewing button for steering wheel heating

Necessary preliminary work:

- Remove lower section of steering column shroud.



Note:
Similar to graphic.

Unlock associated plug connection and disconnect.

Unlock switch (1) on both sides and press out from steering column shroud (2).

Installation note:
Make sure switch (1) is correctly seated in steering column shroud (2).

cardiagn.com

61 31 197 Removing and installing/renewing centre console operating facility

Necessary preliminary tasks:

Version with manual gearbox only:

- Partially remove gearshift lever gaiter

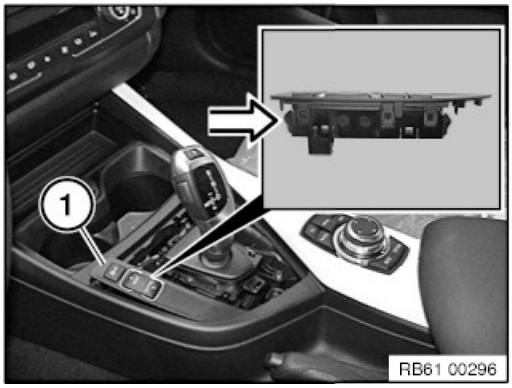
Version with automatic transmissions only:

- Remove cover for selector lever

Important!

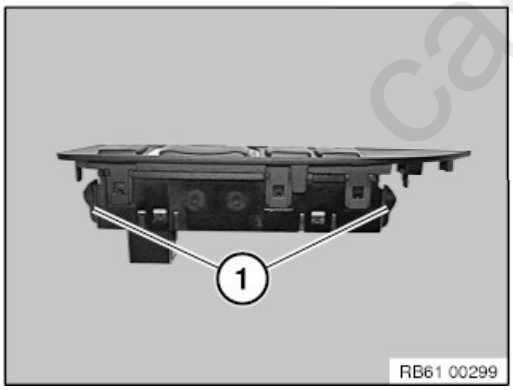
Risk of damage!

Centre console operating facility must not be pried out from the outside.



Note:
Graphic shows example of F20 with automatic transmission.

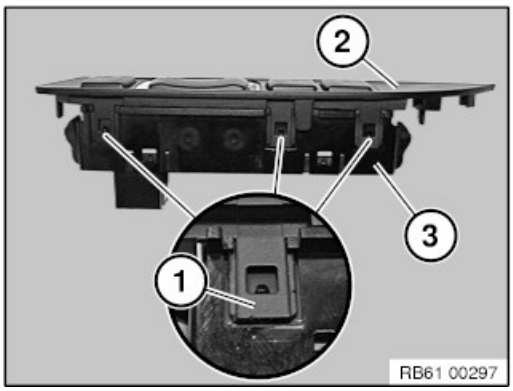
1. Reach under front section of operating facility (1).
2. Press front latch mechanism in direction of arrow and simultaneously raise operating facility (1) towards top.
3. Disconnect associated plug connection and remove operating facility (1).



Installation note:
Latch mechanisms (1) must not be damaged or missing.

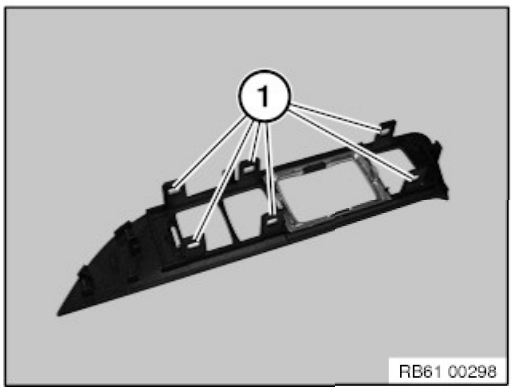
Make sure operating facility is correctly fitted in centre console.

cardiagn.com



<u>In case of replacement, remount operating unit cover:</u>

Release latch mechanism (1) and remount cover (2), depending on equipment.



Installation note:
Latch mechanisms (1) must not be damaged or missing.

cardiagn.com

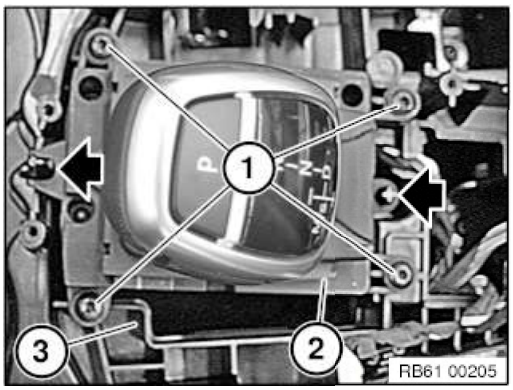
61 31 342 Removing and installing/renewing gear selector switch

Attention!

Read and comply with notes on protection against electrostatic damage (ESD protection).

Necessary preliminary work:

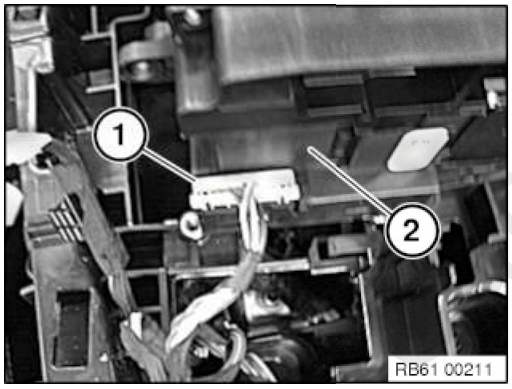
- Clamp off battery lead from negative connection point
- Remove the centre console trim



Release screws (1).

Tightening torque 61 31 1AZ.

Installation note:
Insert gear selector switch (2) correctly in front and rear fixation of centre console support (3).



Lift gear selector switch (2) and unlock plug connection (1) at gear selector switch (2) and disconnect.

Replacement:

Carry out vehicle programming/coding.

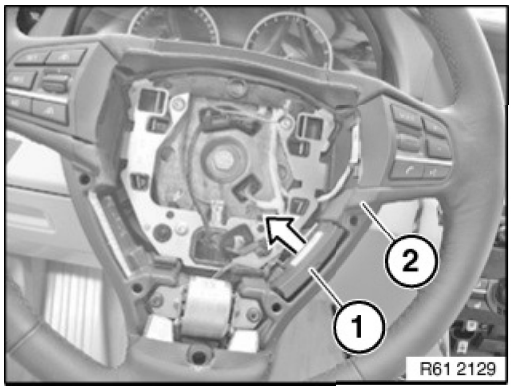
61 31 231 Removing and installing/renewing steering wheel module control unit

Important!

Read and comply with notes on protection against electrostatic damage (ESD protection).

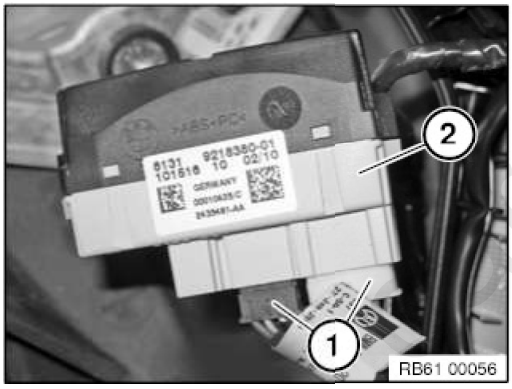
Necessary preliminary tasks:

- Remove airbag unit



Note:
Steering wheel cover is shown removed for purposes of clarity.

Remove control unit for steering wheel module (1) from steering wheel (2) in direction of arrow.



Disconnect plug connection (1).

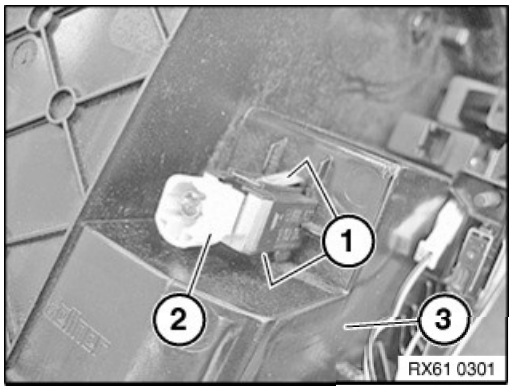
Remove steering wheel electronics control unit (2).

Installation note:
Make sure electronic steering wheel module (2) is fitted correctly.

61 31 137 Removing and installing/renewing USB interface connecting socket

Necessary preliminary tasks:

- Remove glove box with housing



Note:
Similar to graphic.

Release retaining clamps (1).

Push USB interface connecting socket (2) to the front from glove box (3).

Installation note:
Retaining clips (1) must not be damaged.

Make sure USB interface connecting socket (2) is correctly seated.

cardiagn.com

61 31 133 Removing and installing/replacing A/V connecting socket

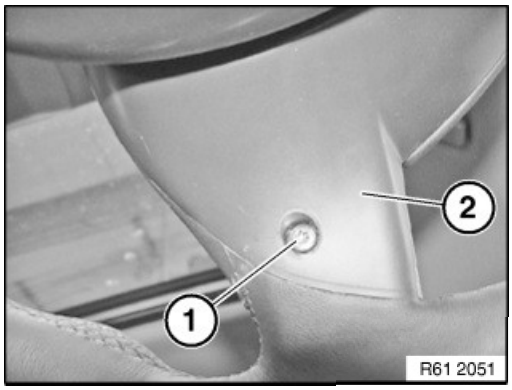
Note:
Operation is described in:
Remove USB audio interface connecting socket.

cardiagn.com

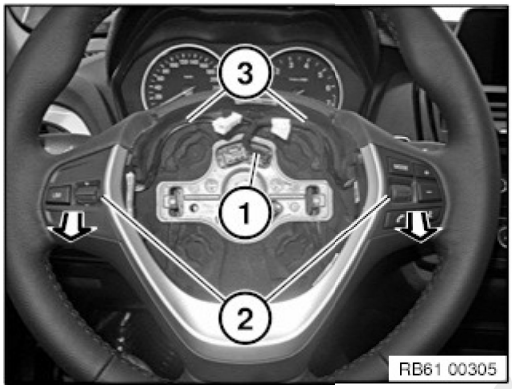
61 31 221 Removing and installing/replacing both multifunction steering wheel switches

Necessary preliminary tasks:

- Remove airbag unit



Release screws (1) on left/right on back of steering wheel (2).

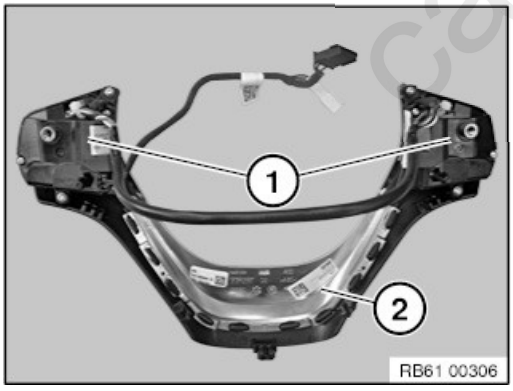


Disconnect plug connection (1).

Remove both multifunction steering wheel switches (2) together with cover from steering wheel in direction of arrow.

Installation note:
Make sure multifunction steering wheel switch (2) is fitted correctly.

Make sure electrical wiring (3) is correctly routed.



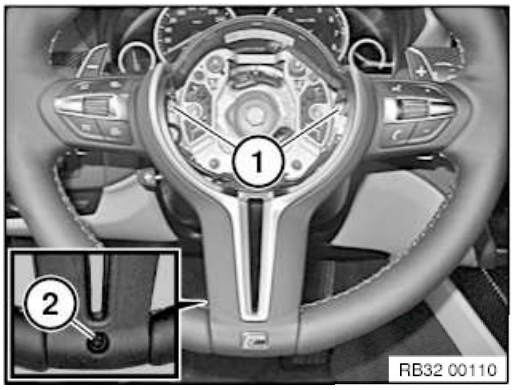
Remove switch of multifunction steering wheel (1) from cover (2).*Installation note:*
Make sure electrical wiring is correctly routed.

icardiagn.com

61 31 221 Removing and installing/replacing both multifunction steering wheel switches (M sports steering wheel)

Necessary preliminary tasks:

- Remove airbag unit

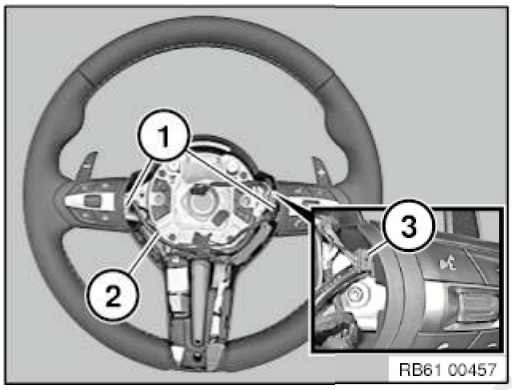


Release screws (1) on steering wheel.

Release screw (2) on rear side of steering wheel.

Remove design cover.

Installation note:
Make sure design cover is correctly seated.



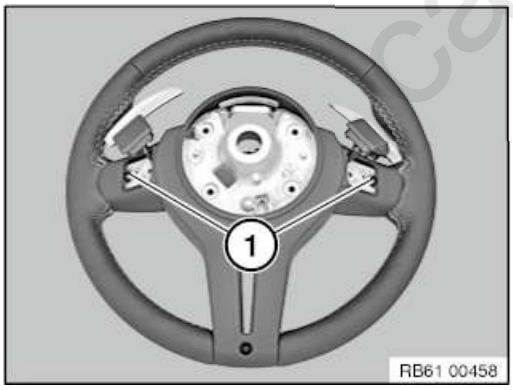
Note:
Steering wheel is shown removed for purposes of clarity.

Both multifunction steering wheel switches are connected to each other by wiring harness (2).

Release screws (1) for shift paddles.

Feed out wiring harness (2) and disconnect plug connection (3).

Installation note:
Make sure electrical wiring is correctly routed.



Note:
Steering wheel is shown removed for purposes of clarity.

Lift off shift paddles and release screws (1) on rear side of steering wheel.

Remove both multifunction steering wheel switches with wiring harness on front side of steering wheel.

Installation note:
Make sure electrical wiring is correctly routed.

Make sure shift paddles are correctly seated.

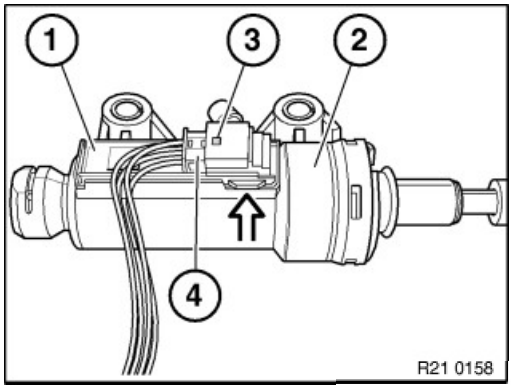
Make sure multifunction steering wheel switches are correctly seated.

Cardiagn.com

61 31 299 Removing and installing/replacing clutch switch module

Necessary preliminary work:

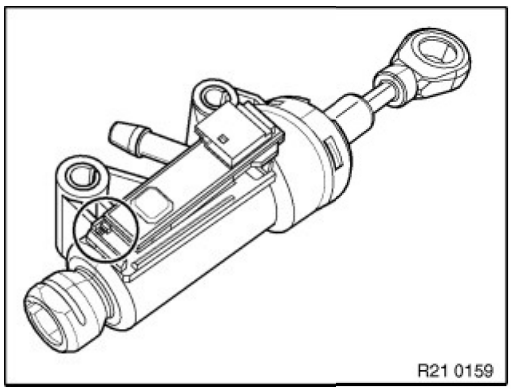
- Remove trim panel for pedal mechanism.



Note:
For purposes of clarity, clutch master cylinder (2) is shown removed.

Lever out clutch switch module (1) from clutch master cylinder (2) with screwdriver.

Unlock plug (4) and disconnect from housing (3).



Installation note:
Clutch switch module is secured against incorrect installation.

Clutch switch module must snap audibly into place.

cardiagn.com

61 31 195 Removing and installing/replacing controller

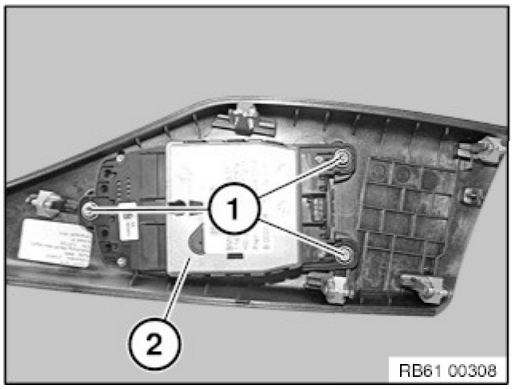
Attention!

Risk of damage!

The button for the controller must not be removed!

Necessary preliminary tasks:

- Remove decorative trim on centre console



Release screws (1).

Tightening torque 61 31 2AZ.

Remove controller (2).

Replacement:

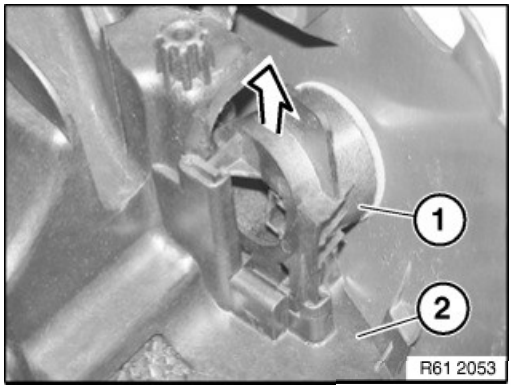
Carry out programming/encoding.

cardiagn.com

61 31 021 Removing and installing/replacing emergency starting coil

Necessary preliminary tasks:

- Remove steering column shroud lower section



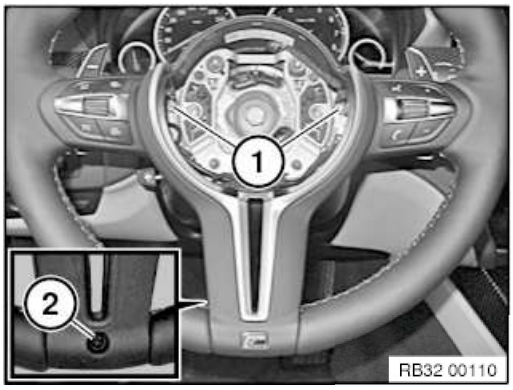
Release emergency starting coil (1) and pull in direction of arrow out of steering column shroud (2).*Installation note:*
Make sure emergency starting coil (1) is correctly seated.

cardiagn.com

61 31 233 Removing and installing/replacing engine electrical system for lane departure warning (M sports steering wheel)

Necessary preliminary tasks:

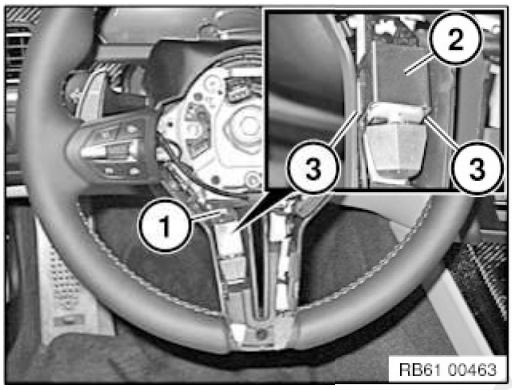
- Remove airbag unit



Release screws (1) on steering wheel.

Release screw (2) on rear side of steering wheel.

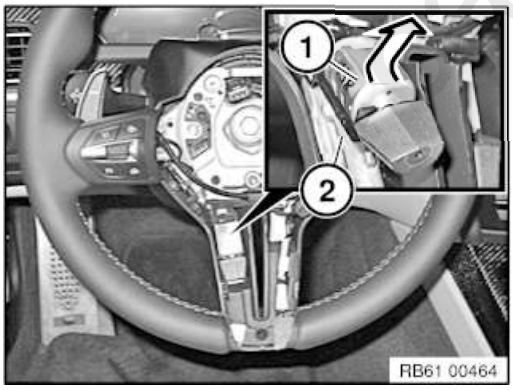
Remove design cover.



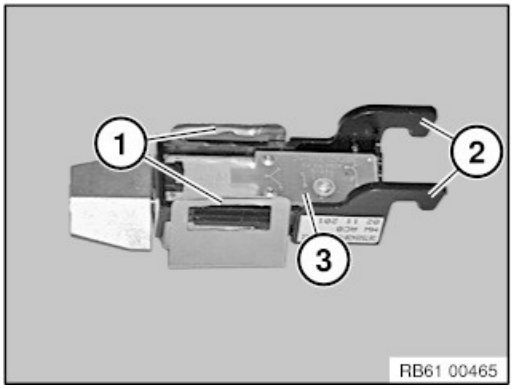
Disconnect plug connection (1).

Carefully unlock retaining clip (2) on latch mechanisms (3) with suitable tool (e. g. screwdriver with 3-mm blade).

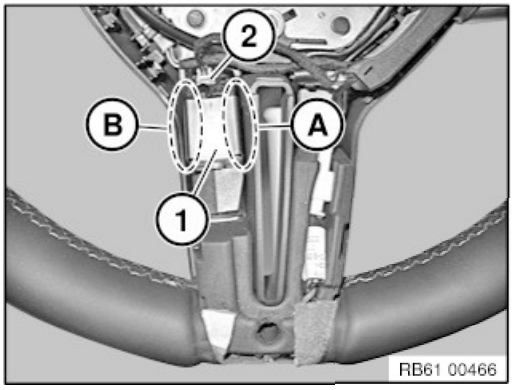
Note:
The unlocking procedure is simplified by pressing down the retaining clip (2).



Remove engine electrical system of Lane Departure Warning (1) from steering wheel (2) in direction of arrow.



Installation note:
Retaining clip (2) and guides (1) on engine electrical system of Lane Departure Warning (3) must not be damaged or missing.



Installation note:
First press down retaining clip (1) in area (A) until it engages. Then press down in area (B) until it engages.

Make sure engine electrical system of Lane Departure Warning is correctly seated.

Make sure plug connection (2) is correctly locked.



Replacement:

From version 03/2009 onwards, the engine electrical system must be adjusted.

For the adjustment, the resonance frequency stamped on the actuator is required. Note the resonance frequency of the new part.

Carry out service function under following path:

- Driver assistance
- Camera-based driver assistance systems
- Actuator comparison

cardiagn.com

61 31 334 Removing and installing/replacing grip trim for gear selector switch

Special tools required:

- 00 9 327



Note:
Symbol plate (1) is glued on.

Mount special tool 00 9 327 as illustrated.

Detach symbol plate (1) from upper shell (2) in direction of arrow.

Important!

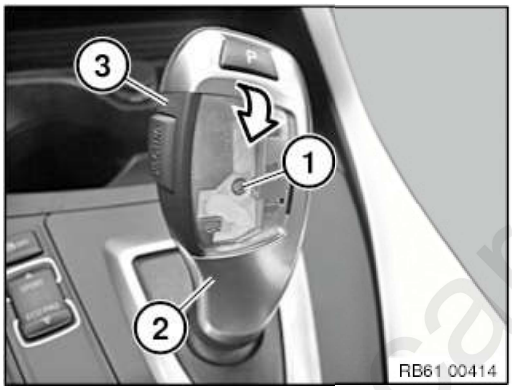
Risk of damage!

Do not leverage side panel (3) out of upper shell (2).

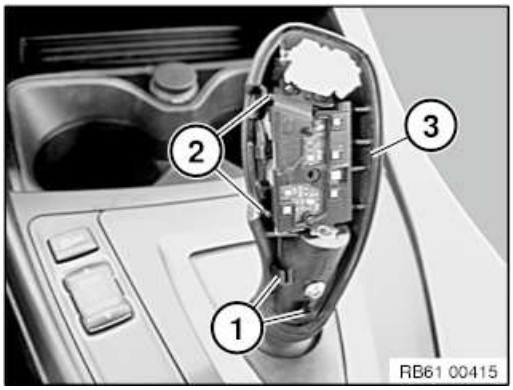
Installation note:
Remove any adhesive residue.

Remove the protective film from the back of the symbol plate before installing.

Make sure symbol plate (1) is correctly seated on upper shell (2).

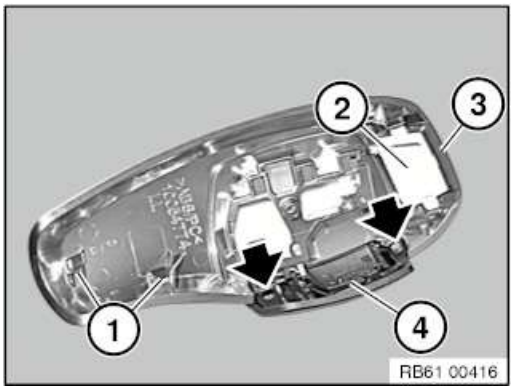


Release screw (1) and remove upper shell (2) with side panel (3) in direction of arrow.



Installation note:
Fixtures (1) and guide pins (2) on gear selector switch (3) must not be damaged or missing.

cardiagn.com



Installation note:
Guides (1) and P-button (2) must not be damaged or missing.

Make sure P-button (2) is correctly seated in upper shell (3).

Make sure side panel (4) is correctly seated in upper shell (3)!

For better installation, secure UNLOCK button outside on the side panel (4) using adhesive tape.

Feed in upper shell with side panel into fixtures and guide pins on gear selector switch.

cardiagn.com

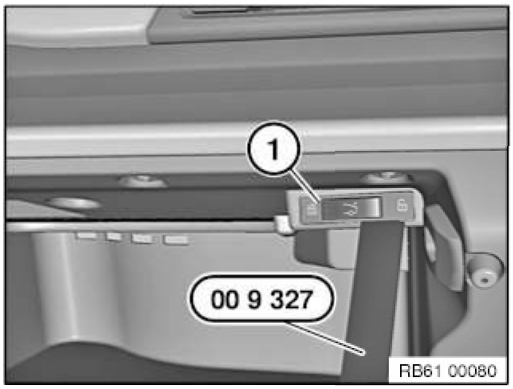
61 31 066 Removing and installing/replacing hotel position switch

Special tools required:

- 00 9 327

Necessary preliminary tasks:

- Open glove box.



Lift out hotel position switch (1) with special tool 00 9 327 toward the front.

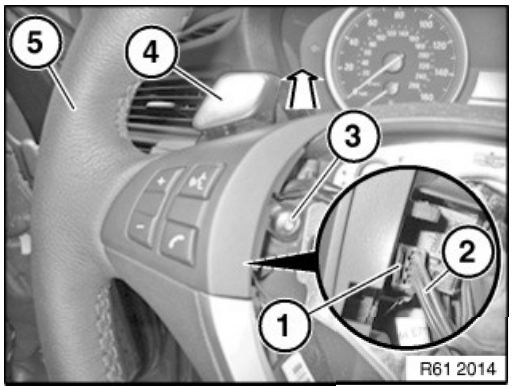
Disconnect associated plug connection and remove hotel position switch (1).

cardiagn.com

61 31 112 Removing and installing/replacing left or right shift paddle for automatic transmission

Necessary preliminary tasks:

- Remove airbag unit



Disconnect plug connectionÂ (1).

Release screw (3).

Feed out wiring harness (2) and remove shift paddle for automatic transmission (4) in direction of arrow from steering wheel (5).

Installation note:
Make sure shift paddle for automatic transmission (4) is correctly seated on steering wheel (5)

Make sure wiring harness (2) is laid exactly.

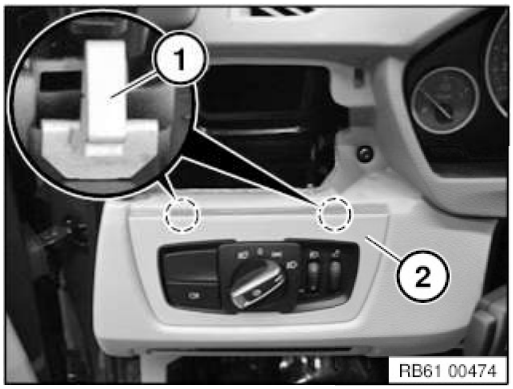
cardiagn.com

61 31 037 Removing and installing/replacing light control unit

Note:
When working on trim panel components, make sure that the sensitive surfaces are not scratched or damaged.

Necessary preliminary tasks:

- Remove decorative strip on dashboard on left

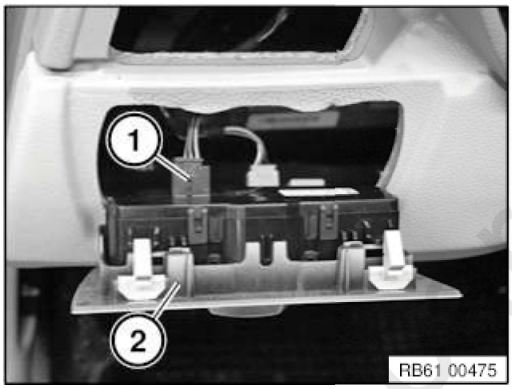


Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Reach behind the opening.

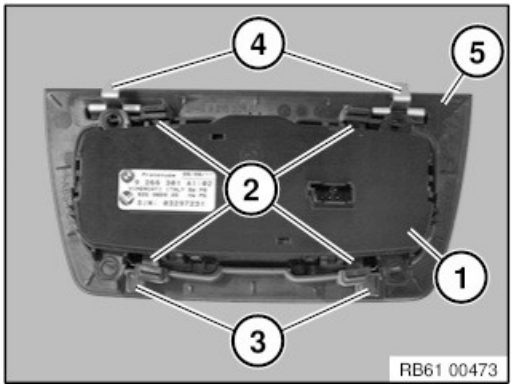
Unlock retaining clips (1) by pushing down.

Fold cover with light control unit (2) out of instrument panel.



Unfasten plug connection (1) and disconnect.

Remove cover with light control unit (2).



Replacement:

Remove light control unit (1) from latch mechanism (2) and remove from trim (5).

Installation note:
Ensure the light control unit (1) is latched correctly in the trim (5).

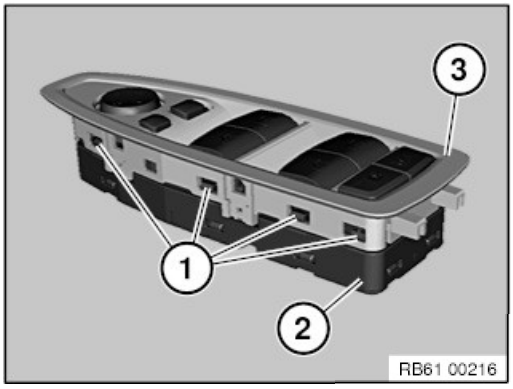
Guides (3) and clamps (4) on cover (5) must not be damaged or missing.

cardiagn.com

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

Necessary preliminary tasks:

- Remove switch cover on front door trim panel



Release catches (1) on both sides.

Remove switch (2) from cover (3).

Installation note:
Latch mechanisms (1) must not be damaged or missing.

cardiagn.com

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

PRELIMINARY WORK

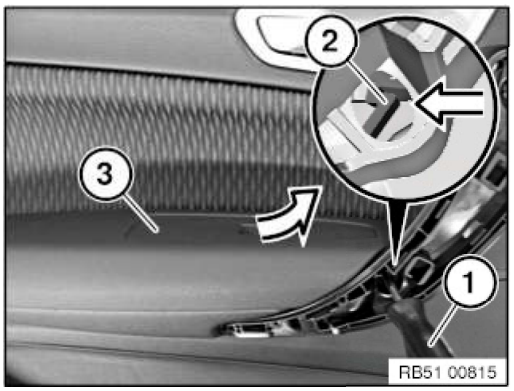
1 – Removing the switch trim on left or right front door trim panel

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



- With a suitable tool (1), release the latch mechanism (2) of the switch trim (3) in direction of arrow.
- Release switch trim (3) from the door trim panel towards front/top.
- Disconnect plug connection and remove the switch trim (3).

cardiagn.com

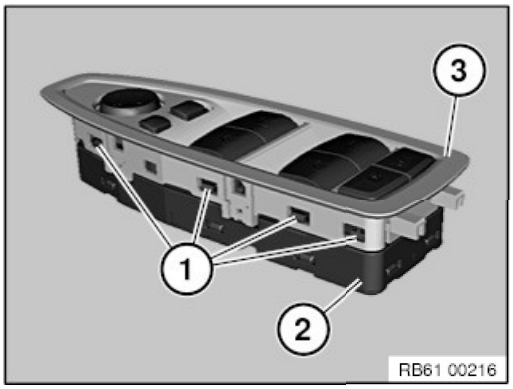
2 – Remove power window switch

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



- Release latch mechanisms (1) on both sides.
- Remove the power window switch (2) from the switch trim (3).

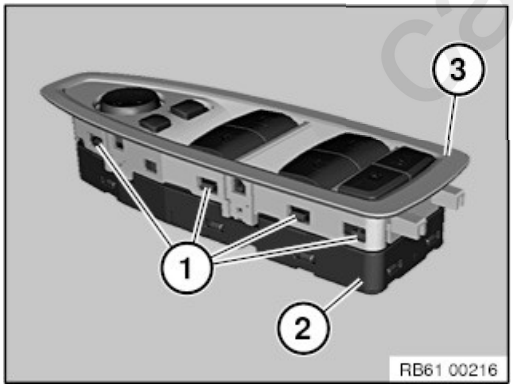
3 – Install power window switch

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



- Position the switch trim (3) on the power window switch (2).
- Engage the latch mechanisms (1) on both sides.

cardiagn.com

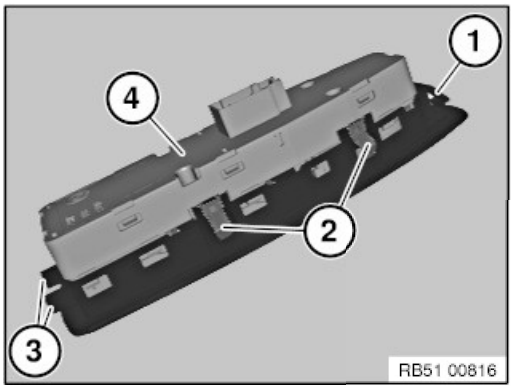
4 – Installing switch trim on the front left or right front door trim panel

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



TECHNICAL INFORMATION

Latch mechanisms, guides and mounting elements must not be damaged or missing.

- Check latch mechanism (1), retaining clip (2) and guide (3) of the switch unit (4) for damages.

TECHNICAL INFORMATION

The switch trim must be replaced if the latch mechanisms, clamps or guides are damaged.

For more information see: 6131117-F30 Removing and installing/replacing power window switch on the driver's side

- Connect connector.
- Position and clip in switch trim.

cardiagn.com

Additional Information

Links

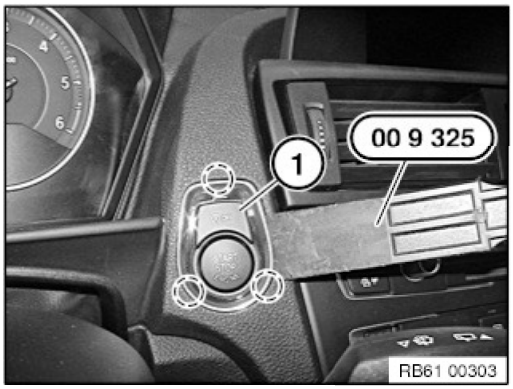
Repair instructions	Used in step
61 31 117 Removing and installing/replacing power window switch (driver's side)	4

61 31 014 Removing and installing/replacing Start/Stop switch

Special tools required:

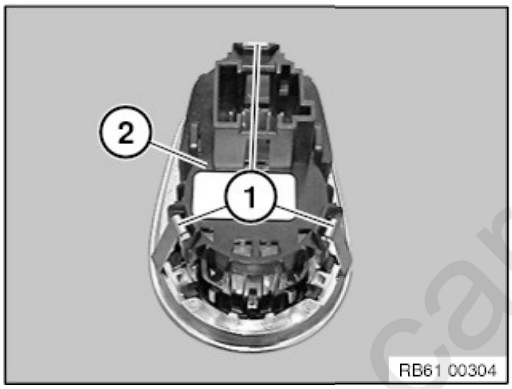
- 00 9 325

Note:
When working on trim panel components, make sure that the sensitive surfaces are not scratched or damaged.



Pry out Start/Stop switch (1) at the marked retaining points using special tool 00 9 325 .

Disconnect associated plug connection and remove Start/Stop switch (1).



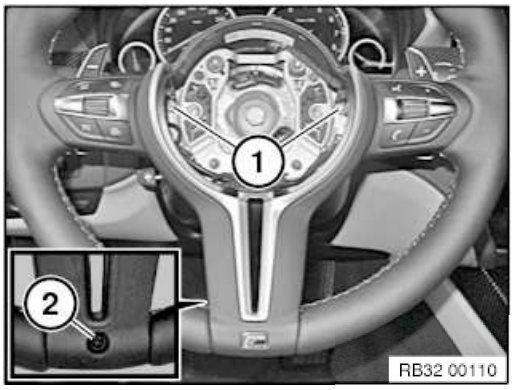
Installation note:
Retaining clips (1) on Start/Stop switch (2) must not be bent or damaged.

cardiagn.com

61 31 231 Removing and installing/replacing steering wheel module (M sports steering wheel)

Necessary preliminary tasks:

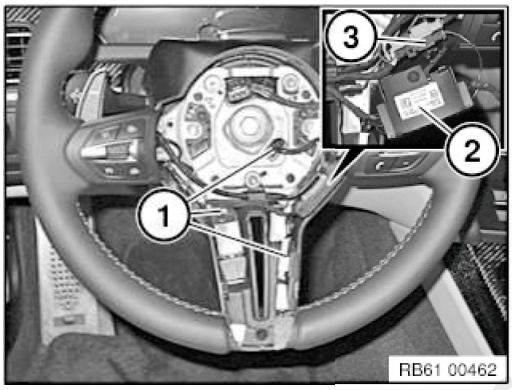
- Remove airbag unit



Release screws (1) on steering wheel.

Release screw (2) on rear side of steering wheel.

Remove design cover.



Disconnect plug connection (1).

Release steering wheel module (2) from bracket.

Release underlying plug connector (3) from bracket and disconnect.

Remove steering wheel module (2).

Installation note:
Make sure cables are correctly routed.

Make sure the plug connections (1; 3) are correctly locked.

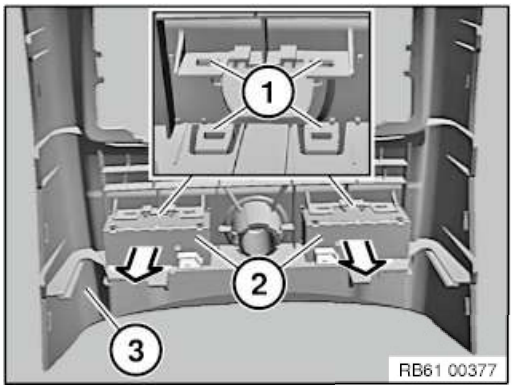
Make sure steering wheel module (2) and plug connection (3) are correctly seated in bracket.

cardiagn.com

61 31 091 Removing and installing/replacing switch for (rear) left or right seat heating

Necessary preliminary tasks:

- Remove rear centre console trim



Use a suitable tool to release latch mechanisms (1) on left/right switch (2).

Remove switch (2) from cover (3) in direction of arrow.

Installation note:
Latch mechanisms (1) on cover (3) must not be missing or damaged.

Make sure switch (2) is correctly fitted in cover (3).

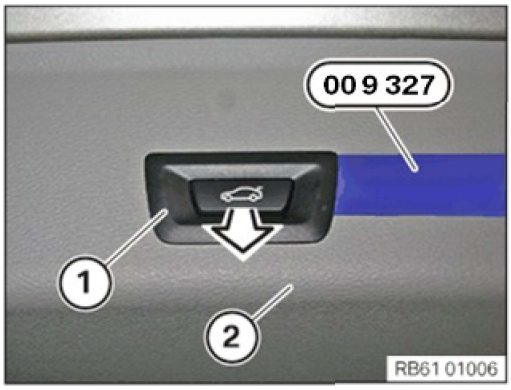
cardiagn.com

61 31 084 Removing and installing/replacing switch for automatic tailgate activation

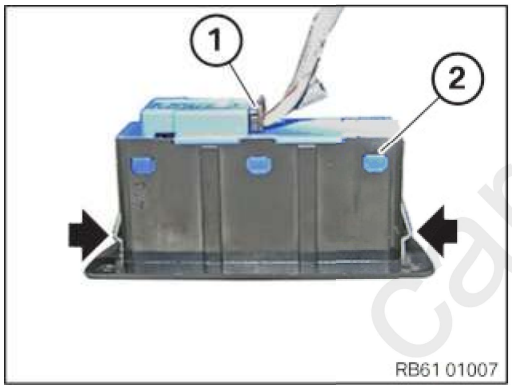
Special tools required:

- 00 9 327

Removal:



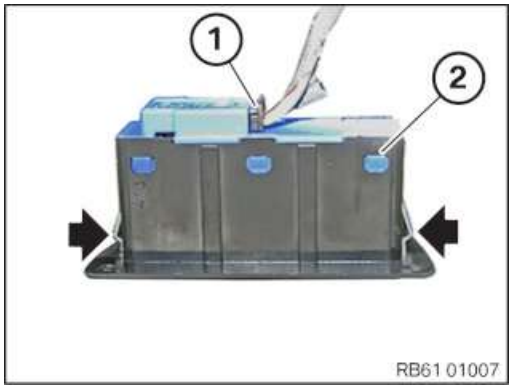
Lever switch for automatic operation of tailgate (1) out of tailgate trim panel (2) with special tool 00 9 327 .



Unlock connector (1) on switch for automatic operation of tailgate (2) and disconnect.

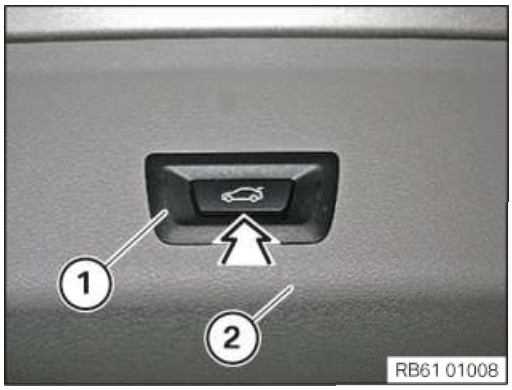
Installation:

cardiagn.com



Note:
Retaining clips on switch for automatic operation of tailgate (2) must not be missing or damaged.

Connect connector (1) to switch for automatic operation of tailgate (2).



Insert switch for automatic operation of tailgate (1) into tailgate trim panel (2).

cardiagn.com

61 31 038 Removing and installing/replacing switch for front passenger airbag deactivation

Special tools required:

- 00 9 323

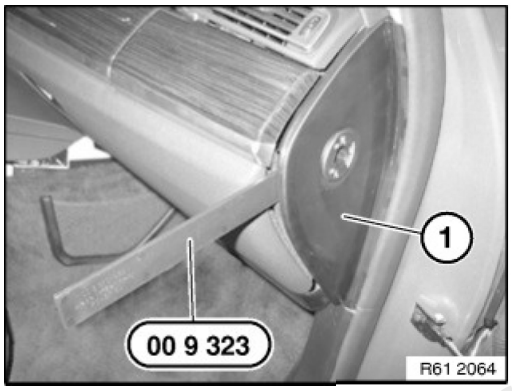
Warning!

Read and comply with safety regulations for handling airbag modules and pyrotechnical belt tensioners.

Incorrect handling can activate airbag and cause injury.

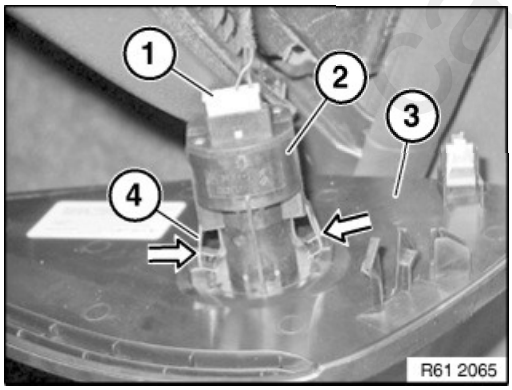
Necessary preliminary tasks:

- Disconnect battery earth lead



Note:
Work shown on the F20 by way of example, deviations in detail are possible in other models.

Carefully lever out side cover (1) with special tool 00 9 323 .



Disconnect plug connection (1).

Unlock latch mechanisms (4) in direction of arrow.

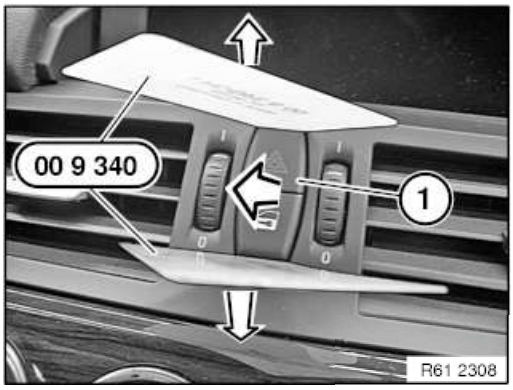
Feed switch for front passenger airbag deactivation (2) out of side cover (3).

Installation note:
Make sure switch for passenger airbag deactivation (2) is correctly seated in side cover (3).

61 31 079 Removing and installing/replacing switch for hazard warning flashers/central locking

Special tools required:

- 00 9 340



Carefully lever out switch for hazard warning system/central locking (1) with special tool 00 9 340 in direction of arrow.

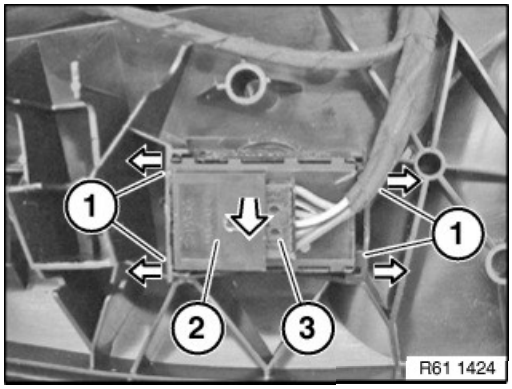
Remove switch for hazard warning system/central locking (1) in direction of arrow and disconnect plug connection behind.

cardiagn.com

61 31 208 Removing and installing/replacing switch for lumbar support

Necessary preliminary tasks:

- Remove outer cover on front seat



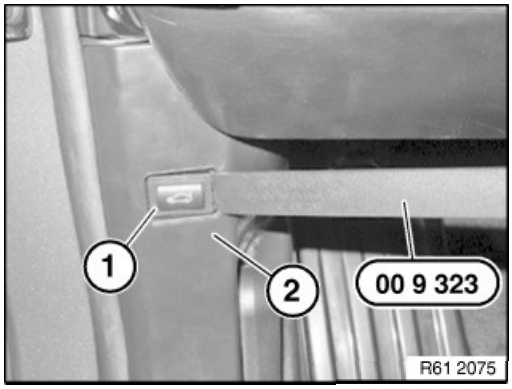
Disconnect plug connectionÂ (3).
Unlock latch mechanisms (1).
Remove switch for lumbar support (2) in direction of arrow.

cardiagn.com

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

Special tools required:

- 00 9 323



Note:
Graphic similar!

Lever switch for tailgate unlocking (1) sideways out of A-pillar trim panel (2) using special tool00 9 323 .

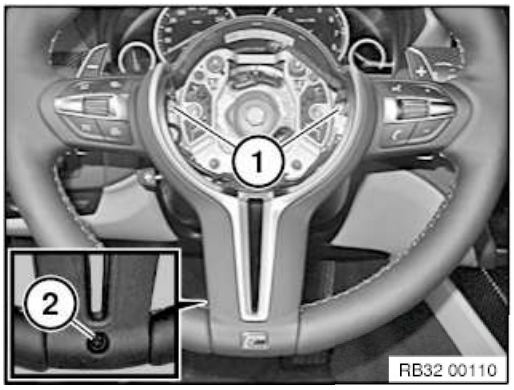
Disconnect associated plug connection and remove switch for unlocking rear lid (1).

cardiagn.com

61 31 132 Removing and installing/replacing the shift paddles for the transmission (M sports steering wheel)

Necessary preliminary tasks:

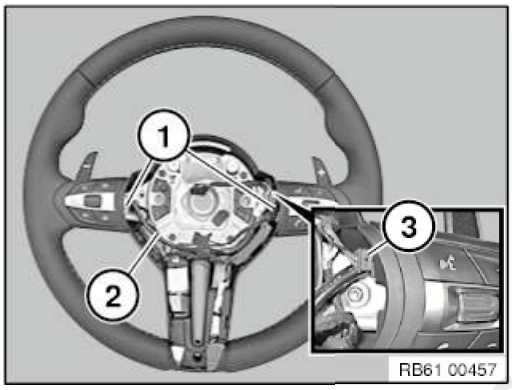
- Remove airbag unit



Release screws (1) on steering wheel.

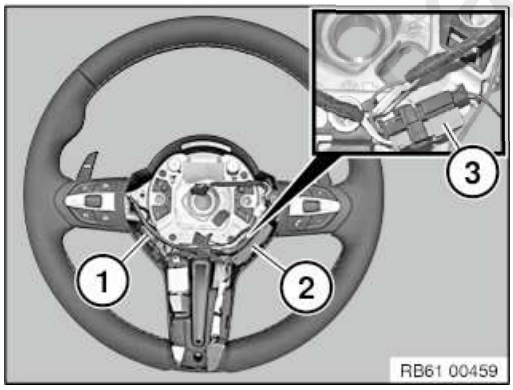
Release screw (2) on rear side of steering wheel.

Remove design cover.



Note:
Steering wheel is shown removed for purposes of clarity.

Release the screws (1) and feed out the wiring harness (2).



Note:
Steering wheel is shown removed for purposes of clarity.

Pull the steering wheel module (2) out of the steering wheel.

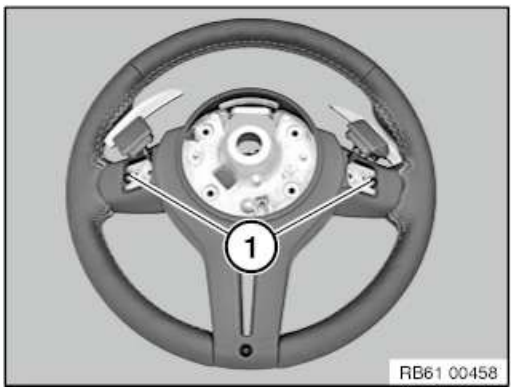
Release the plug connections (1, 3) from the steering wheel and disconnect.

Installation note:
Make sure electrical wiring is correctly routed.

Make sure the plug connections (1, 3) are correctly seated.

Ensure that the steering wheel module (2) is correctly seated.

cardiagn.com



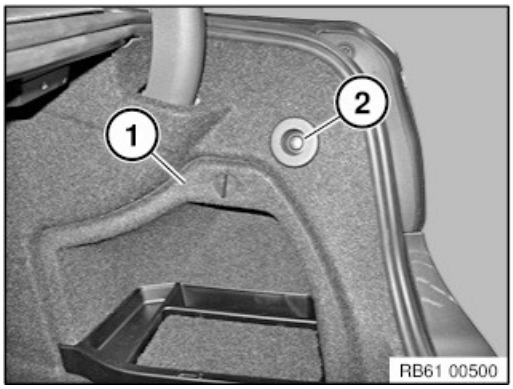
Note:
Steering wheel is shown removed for purposes of clarity.

Feed out the cable though the steering wheel spokes (1) and take off the shift paddles.*Installation note:*
Make sure electrical wiring is correctly routed.

Ensure that the shift paddles are correctly seated.

cardiagn.com

61 31 122 Removing and installing/replacing trailer tow hitch switch



Open flap (1).

Grip behind trim panel.

Press trailer tow hitch (1) out of trim panel, releasing the catch.

Disconnect plug connection behind.

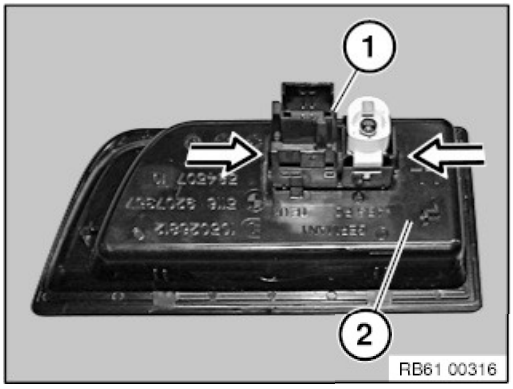
Installation note:
Make sure trailer tow hitch switch (2) is correctly fitted.

cardiagn.com

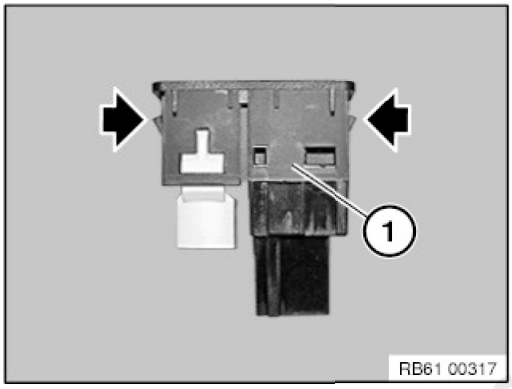
61 31 134 Removing and installing/replacing USB audio interface connecting socket

Necessary preliminary tasks:

- Remove insert in centre armrest storage compartment



Release connecting socket (1) from latch mechanism on both sides.
Remove connecting socket from storage compartment (2).



Installation note:

- Connecting socket latch mechanisms (1) must not be damaged or missing
- Make sure connecting socket (1) is correctly fitted in storage compartment

cardiagn.com

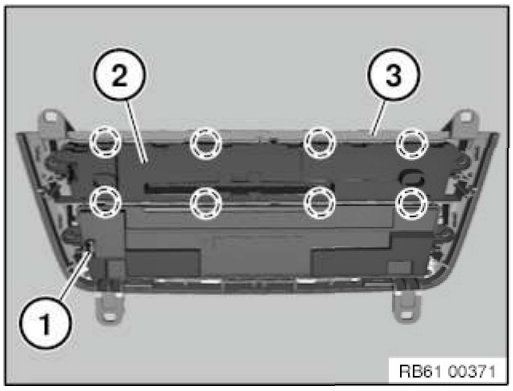
61 31 823 Replace ACP (for vehicles equipped with CID)

Important!

Read and comply with notes on protection against electrostatic damage (ESD protection).

Necessary preliminary tasks:

- Remove radio and IHKA controls



Disconnect plug connection (1).

Unclip audio operating unit (2) at the marked points using a suitable tool (such as a screwdriver - 3 mm blade).

Remove the audio operating unit (2) from the cover (3) toward the rear.

Installation note:
Audio control unit (2) must noticeably and audibly snap into cover (3).

cardiagn.com

61 35 179 Replacing and installing (replacing) the solar rain/light sensor and condensation sensor

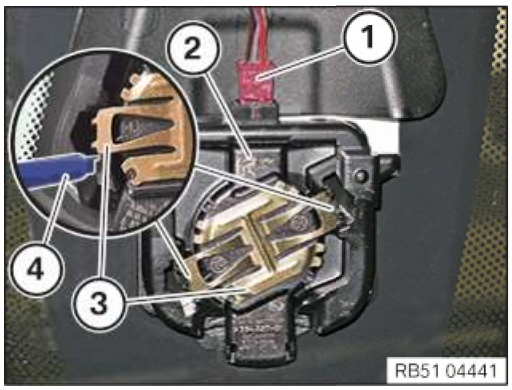
Caution!

Observe the information on protection from electrostatic discharge.

Necessary preliminary work:

- Remove inside mirror

Removal:



Disconnect connector (1).

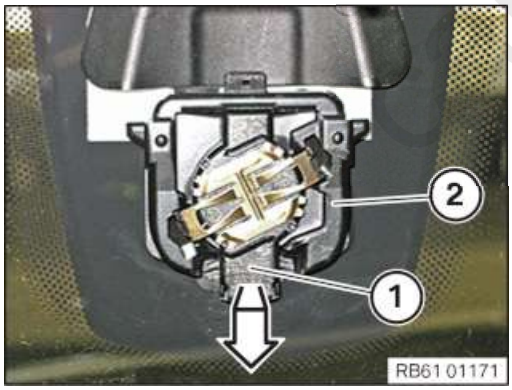
Unlock rain/light/solar and condensation sensor (2) at metal spring (3).

For this purpose, press both sides of the metal spring (3), insert the screwdriver (4) on the side and raise the latch mechanism.

Caution!

Risk of damage!

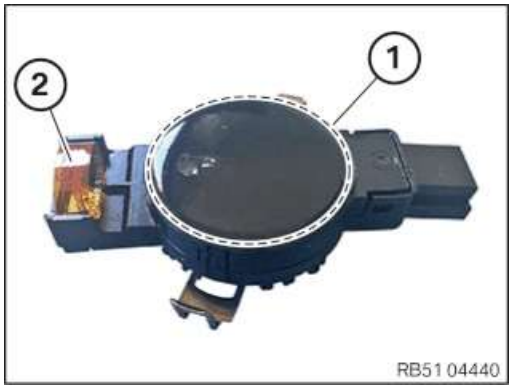
After loosening lock, wait approx. 30 min. at 20 °C for silicone surface to relax.



Pull the rain/light/solar and condensation sensor (1) slowly from holder (2) in direction of arrow.*Note:*
When replacing the windscreen, only remount the rain/light/solar and condensation sensor (1) after disassembly of the windscreen.

Pull off the rain/light/solar and condensation sensor (1) slowly while observing *from outside the release of the silicone* surface.

The silicone surface must evenly loosen from the windscreen, if applicable, pull off slower.



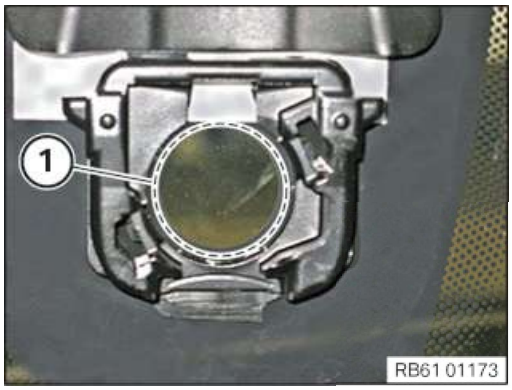
Caution!

Risk of damage!

The silicone-coated surface (1) and the printed circuit board (2) on the rain/light/solar and condensation sensor must not be touched or damaged!

Replace damaged gel pad.

When replacing the windscreen, immediately install the rain/light/solar and condensation sensor into the new windscreen following removal.



Caution!

Risk of damage!

The area (1) on the windscreen must not be touched or damaged!

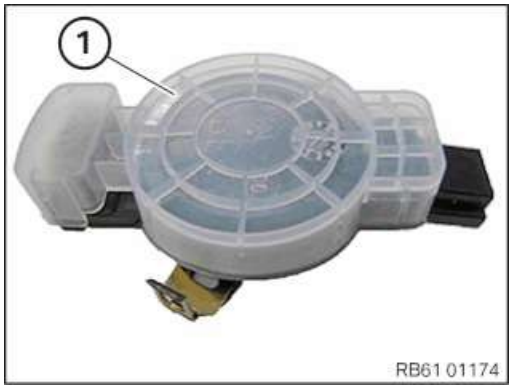
The area (1) may have remnants of the separation oil of the rain/light/solar and condensation sensor that are easy to remove. This does not indicate that the rain/light/solar and condensation sensor is damaged.

Remove all separating oil residue within and outside of the area (1).

Replacement:

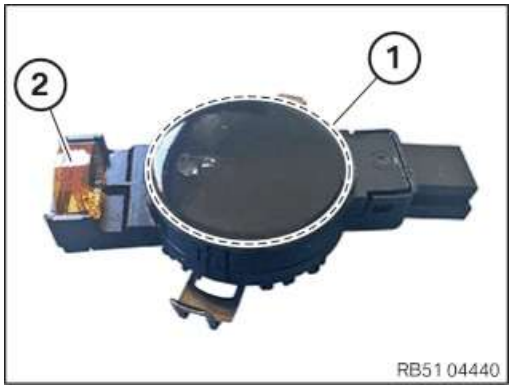


Carefully clean the windscreen at the contact area (1) with the rain/light/solar and condensation sensor! All silicone and separation oil residue must be removed!



Remove protective cover (1) from new rain/light/solar and condensation sensor.

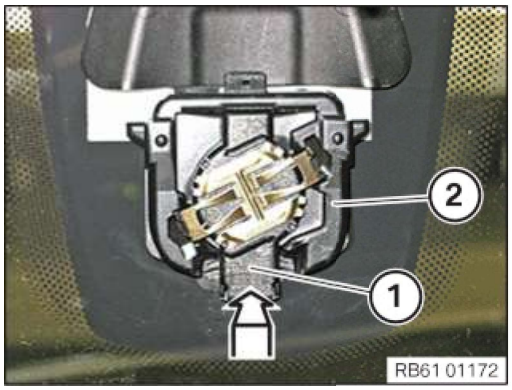
cardiagn.com



Caution!

The silicone-coated surface (1) and the printed circuit board (2) on the rain/light/solar and condensation sensor must not be touched or damaged!

Installation:

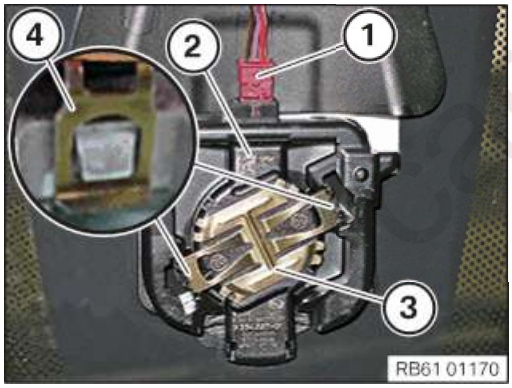


Caution!

Risk of damage!

The silicone-coated surface on the rain/light/solar and condensation sensor must not be touched or damaged.

Feed the rain/light/solar and condensation sensor (1) into holder (2) in direction of arrow.

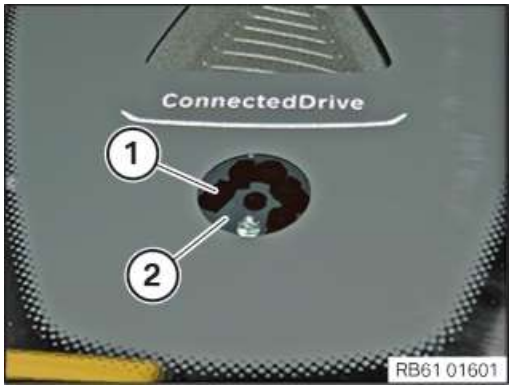


Installation note:
Connect connector (1) only after the rain/light/solar and condensation sensor has been locked.

Press on the rain/light/solar and condensation sensor (2) at the metal spring (3) in a centred position.

To lock, consecutively press down both sheet metal tabs (4) on each side.

Connect connector (1) with the rain/light/solar and condensation sensor (2).



Installation note:
Visible shades (1 and 2) do not have any air pockets, but show the optical element of the sensor.

Visible shades (1 and 2) do not represent <u>any</u> functional limitation.

carsdiagn.com



For vehicles up to 03/2014:

Initialise sensor.

Note:

- For F2x; (not F25/F26); F3x and F80/F82/F83 the encoding is **automatically** implemented by **JBBFE**.
- For F25/F26 the encoding is implemented **automatically** with a terminal change (terminal 15) using the **junction box**.

For vehicles built after 03/2014 (except F25 / F26):

Initialisation and encoding are performed **automatically** by BDC control unit.



Required follow-up work:

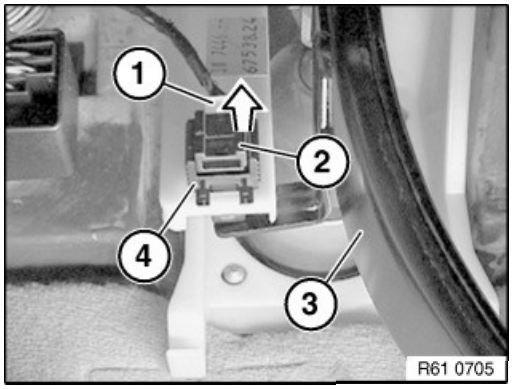
- Install interior mirror

cardiagn.com

61 31 310 Replacing brake light switch

Necessary preliminary tasks:

- Remove trim panel for pedal mechanism.

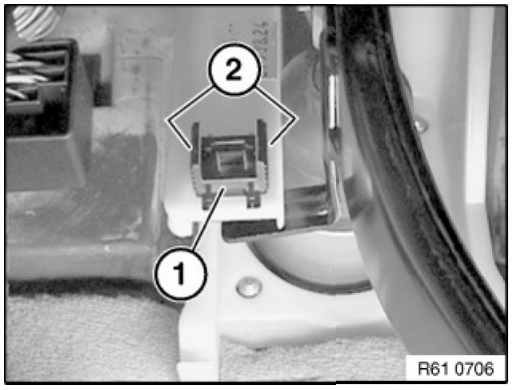


Disconnect plug connection (1).

Pull brake light switch (2) in direction of arrow out of brake light switch holder (4).

Installation note:

- Press brake pedal (3) to floor.
- Push brake light switch (2) as far as it will go into brake light switch holder (4).
- Counter hold brake light switch (4) holder, slowly return brake pedal (3) to initial position and tighten to stop.



Note:
Removing brake light switch holder (1):

Press brake pedal.

Unclip brake light switch holder (1) at shanks (2) and remove towards rear.

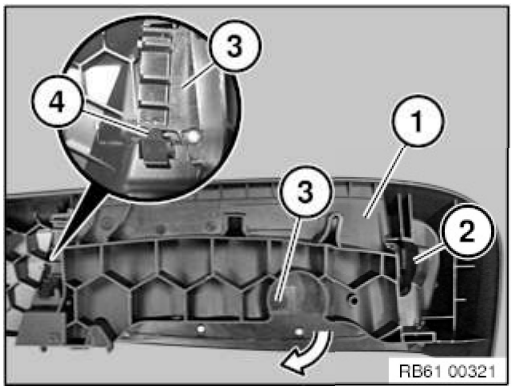
cardiagn.com

61 31 204 Replacing operating unit for seat adjustment

Important!
Observe the information on protection from electrostatic discharge.

Necessary preliminary tasks:

- Remove cover from front seat



Unlock catch (2).

Unscrew the operating unit (3) in the direction of arrow from front seat cover (1).

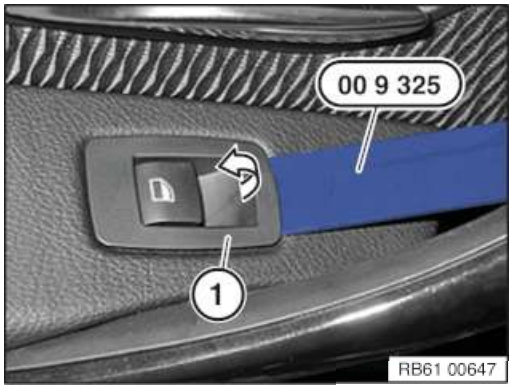
Installation note:
Operating unit (3) must be fitted correctly under the latch mechanism (4).

cardiagn.com

61 31 116 Replacing rocker switch for side window operation (rear)

Special tools required:

- 00 9 325



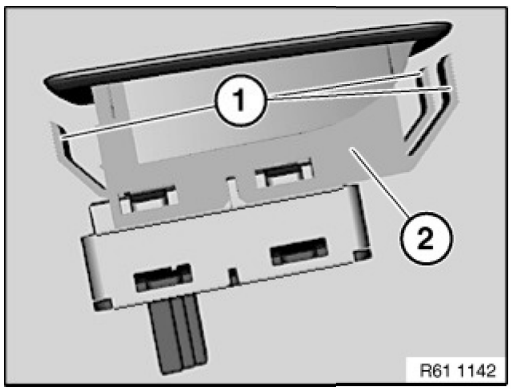
Important!

Carry out the following operation carefully so as to avoid damaging the door trim panel and switch.

If necessary, tape off working area.

Lever rocker switch for side window operation (1) with special tool 00 9 325 in direction of arrow out of armrest.

Disconnect associated plug connection and remove rocker switch for side window operation (1).



Installation note:
Retaining hooks (1) of rocker switch for side window operation (2) must not be damaged.

Make sure rocker switch for side window operation (2) is correctly seated in armrest.

cardiagn.com

61 31 116 Replacing rocker switch for side window operation (rear) \PREMIUM

NOTICE

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

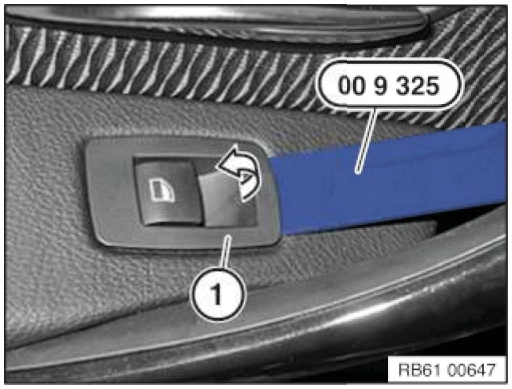
1 – Removing the rocker switch for rear side window operation

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



- Lever the rocker switch (1) for the rear side window operation out of the armrest 0 496 569 (00 9 325) in the direction of the arrow using the special tool.
- Disconnect the associated plug connection and remove the rocker switch (1) for the rear side window operation.

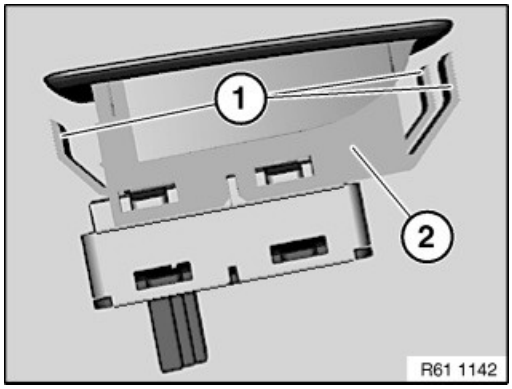
2 – Installing the rocker switch for rear side window operation

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

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



TECHNICAL INFORMATION

Latch mechanisms, guides and mounting elements must not be damaged or missing.

- Check the retaining hook (1) of the rocker switch (2) for side window operation for damage; if necessary, renew the rocker switch and/or the switch trim.
- Connect connector.
- Clip in the rocker switch (2) for side window operation into the armrest.

Additional Information

cardiagn.com

Overview of Special Tools

0 496 569 (00 9 325) Wedge



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

cardiagn.com

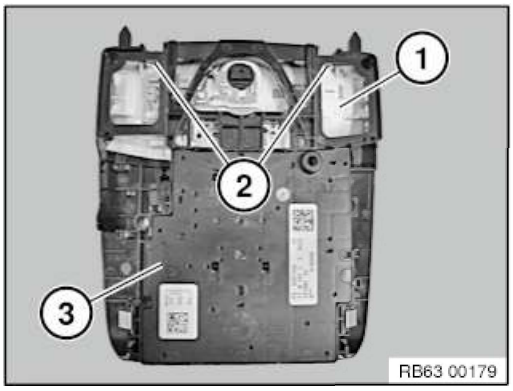
61 31 544 Replacing roof switch cluster (front)

Important!

Read and comply with notes on protection against electrostatic discharge (ESD protection).

Necessary preliminary tasks:

- Remove roof switch cluster



Release interior roof light (1) at clamps (2) and feed out of roof switch cluster (3).*Installation note:*
Clips (2) must not be missing or damaged.

Make sure interior roof light (1) is correctly seated in roof switch cluster (3).

High-spec roof function centre only:

Carry out vehicle programming/coding.

cardiagn.com

61 31 255 Replacing switch for exterior mirror



Operation is described in:

Removing power window switch (driver's side).

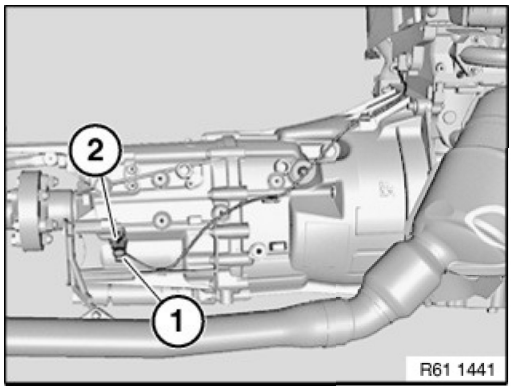
cardiagn.com

61 31 270 Replacing switch for reversing light

Note:
The installation location of the switch for the reversing light can vary depending on the transmission variant.

Necessary preliminary tasks:

- Remove rear underbody protection if necessary

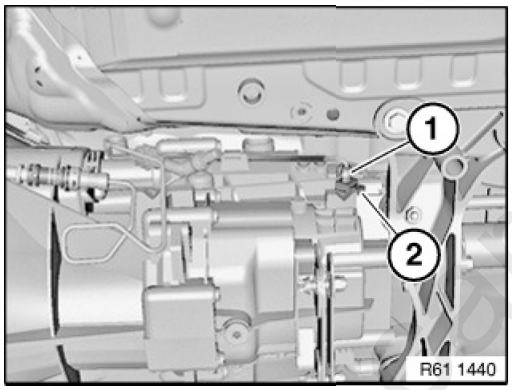


Version A:

Disconnect plug connection (1).

Release switch for reversing light (2).

Tightening torque 23 14 1AZ.



Version B:

Disconnect plug connection (1).

Release switch for reversing light (2).

Tightening torque 23 14 1AZ.

cardiagn.com

61 31 118 Replacing the power windows regulator on the passenger's side



Operation is described in:

Remove/install/replace switch for power window on driver's side.

cardiagn.com