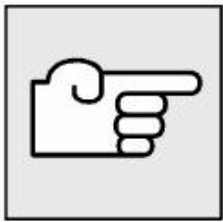


**Important!**

Work may only be carried out at a room/object temperature of 18 ... 28 °C.

If this cannot be guaranteed (cold/hot countries), it is necessary to equalize the temperature of the windscreen, mirror foot and rearview mirror (e.g. car left to stand indoors or in the shade for at least 30 minutes).

Version with remote control for central locking:

If necessary, disconnect negative lead from battery.

Version with compass:

Check compass function if replacing or after disconnecting interior mirror plug connection or battery.

If necessary, calibrate compass in interior rearview mirror.

E60 Security version:

Rain sensor is not installed, cable connection is tied back in roofliner.

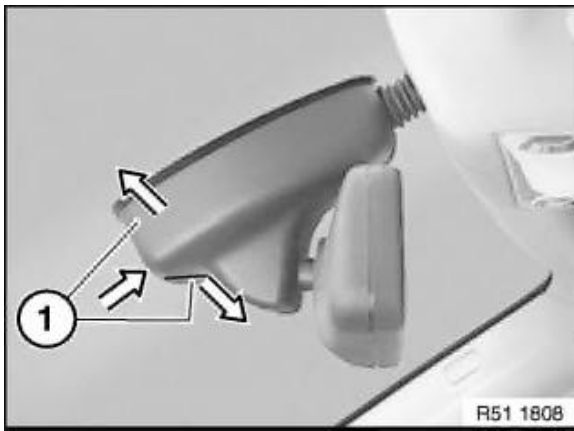
**Important!**To avoid breaking windscreen:

Snap out (press) rearview mirror only in direction of travel towards windscreen.

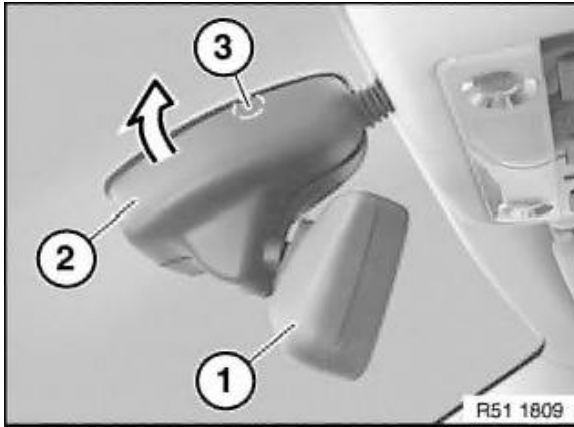
Do not under any circumstances twist the mirror foot when removing.

Twisting the mirror off the mirror mount will damage the rear catch.

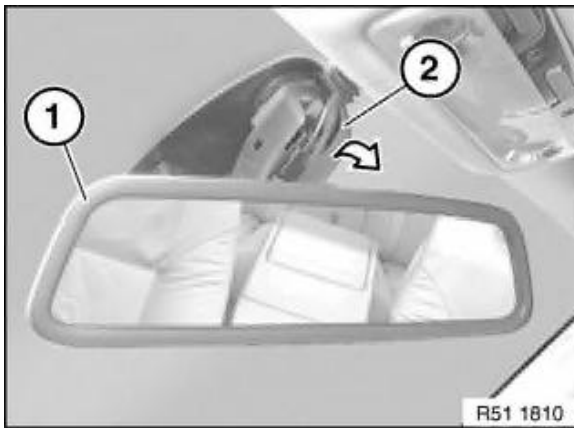
If the rear catch is damaged, the mirror will be loose when installed and must be replaced.



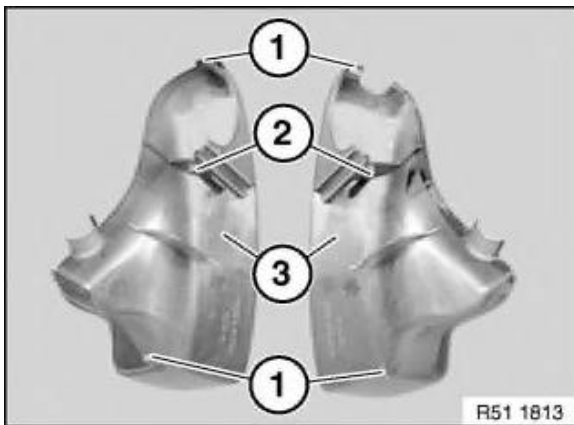
Press on end caps (1) and at same time press them apart; this releases clip connection of both caps (1).



Twist mirror (1) at an angle towards front and right/top.  
Swivel left end cap (2) off ball neck in direction of arrow; this detaches the engagement clip (3) from the metal foot.

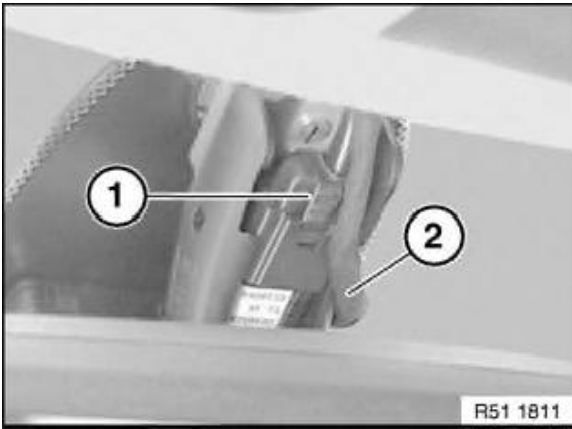


Twist mirror (1) at an angle towards front and left/top.  
Swivel right end cap (2) off ball neck in direction of arrow; this detaches the engagement clip from the metal foot.



*Installation:*

Clips (1) and retaining hooks (2) of end caps (3) must not be damaged, replace if necessary.



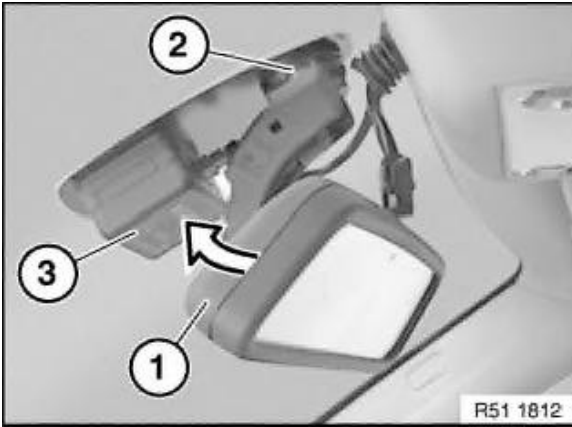
Disconnect plug connection (1).

*Note:*

Pay attention to cable guide (2) for rain sensor.

E60 Security version:

Rain sensor is not installed, cable connection is tied back in roofliner.



**Important!**

Risk of damage!

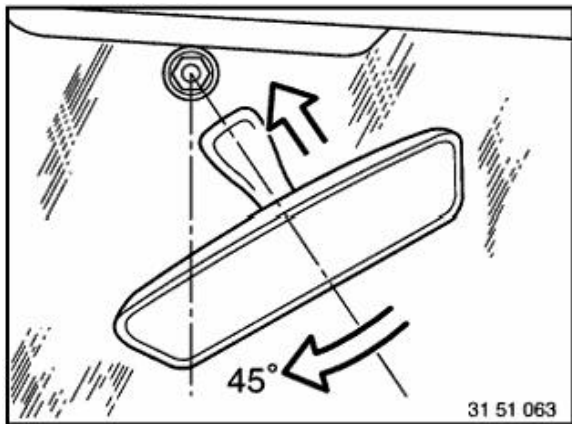
Do not pull off rearview mirror (1) from windscreen against direction of travel and or snap out by turning.

When snapping out, do not damage control unit (3) for rain sensor.

E60 Security version:

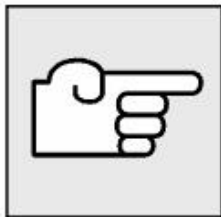
Rain sensor is not installed.

Snap out interior mirror (1) from mirror mount (2) towards front by striking with ball of thumb and remove.



*Installation:*

1. Twist mirror foot by approx. 45° and fit to mirror mount.
2. Turn mirror foot until it engages on mirror base.



**Only replace with version with remote control for central locking:**

If necessary, initialize all transmitters (ignition keys), refer to Owner's Handbook.

Observe safety instructions for handling vehicle battery.

**Before disconnecting battery:**

Switch off ignition.

*Note:*

If the ignition is not turned off when the battery is disconnected, fault memories may be set in some control units.

**Important!**

- There is a danger of mixing up battery leads: If the battery positive and negative leads are the same color and you are in doubt, follow the polarity to the battery, then mark and cover the leads.
- On vehicles with radio code: After disconnecting the battery, the radio code must be re-entered. Therefore obtain the radio code card from the customer beforehand. Note stored stations and restore them after connecting the battery.
- Stored settings of the on-board computer and clock will also be lost.
- All available central keys must be recoded for cars with first generation infrared transmitter locking systems.

**General notes on disconnecting battery:**

- Do not disconnect battery leads and leads from alternator and starter motor while engine is running.
- Cars with IBS on battery negative terminal:  
Do not under any circumstances pull/lever off pole shoes by force.  
Do not under any circumstances release socket-head cap screw of IBS.
- Detach terminal of battery negative lead from car battery and second battery if fitted. Cover battery negative terminal(s) and secure.
- When work is carried out on the electrical system, faults may be caused in the fault memories of some control units when the battery is connected.
- When installing battery terminal: Tightening torque 61 21 1AZ .

**After connecting battery:****Important!**

After a power supply interruption some equipment is disabled and must be reactivated.

Likewise, individual settings are lost and must be activated.

Example:

- If necessary, activate sliding sunroof
- If necessary, carry out adjustment of active front steering
- If necessary, activate power windows
- If necessary, activate mirror with compass

For further information and instructions on vehicle-specific activation, please refer to the point

"Procedure for initialization" under the document type "SI Diagnosis Coding" from the IDC (index number 11).

**Vehicles with a two-battery system**

### Starter and equipment batteries

A two-battery system has a starter battery circuit and an equipment battery circuit. A secondary control unit monitors both battery circuits. Depending on the situation, the battery circuits are connected to or isolated from the secondary control unit via an isolating relay.

Two AGM batteries are used as a storage battery; the design and features of these batteries are described in BMW Technology (SBT) 610102 (005).

#### **Important!**

These batteries must not under any circumstances be charged with a voltage in excess of 14.8 V. Rapid programs must not be used either.

### Receiving/giving starting assistance via jump start terminal

The engine can be jump-started with an external voltage supply via the jump start terminal on the right side of the engine compartment.

#### *Note:*

The starter battery is isolated from the alternators when the engine hood/bonnet is open.

Giving starting assistance via the jump start terminal is thus limited by the capacity of the starter battery when the engine hood/bonnet is open.

### Charging starter and equipment batteries via jump start terminal

The starter battery is charged as a matter of priority with a charger connected to the jump start terminal. The voltage at the starter battery is the decisive factor in determining whether the equipment battery is also included in the charging operation. The secondary control unit automatically detects a charging operation at a charging voltage at the starter battery of  $\geq 13.5$  V. The isolating relay is closed and thus the equipment battery is connected in parallel. Both batteries are now charged.

#### Prerequisite:

- Terminal 61 inactive
- Terminal 15 inactive

If terminal 15 becomes "active" during the charging operation, the isolating relay is opened immediately and again only the starter battery is charged.

#### *Note:*

When the engine hood is open, the isolating relay is also opened in normal operation when the engine is running.

A special mode can be set by means of diagnosis for workshop/garage operation. The isolating relay is closed from terminal R in this operating mode. This mode is automatically reset once a distance of 5 km has been driven.

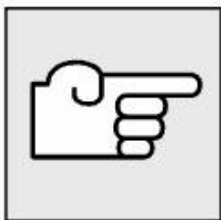
### Trickle charging

Increased closed-circuit current consumption can be compensated with the aid of the battery trickle charger (special tool 61 2 410 ) via the jump start terminal.

#### **Important!**

The cigarette lighter is isolated from the electrical system after terminal R "OFF" on a timed basis (60 mins.), thereby interrupting charging of the equipment battery via the cigarette lighter. This is prevented if the battery master switch (on the right side of the luggage compartment behind the panel) is turned on and off again twice within 2 seconds. (Cigarette light battery charging function).

Refer also to Service Information bulletin "Instructions for charging battery" (SI) 61 08 01 (776)



*Note:*

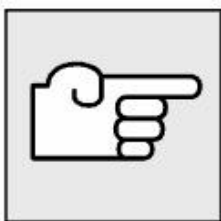
**Initialization** comprises:

- Normalization
- Learning characteristic curve

The mechanical end positions are recorded and stored during normalization.

The characteristic curve is learnt immediately after normalization.

When the characteristic curve is learnt, the mechanical closing forces of the slide/tilt sunroof are recorded and stored for correct operation of the anti-trapping mechanism.



*Note:*

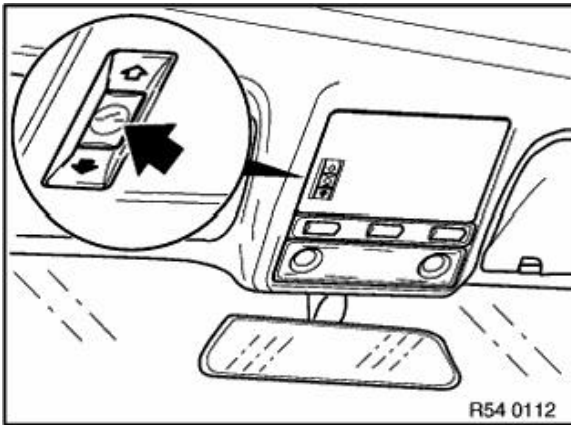
Then carry out an **initialization**:

- if the slide/tilt sunroof has been mechanically moved by means of the emergency actuator
- in the event of malfunctions, e.g. no one-touch function, no opening or no comfort function possible
- after disengagement of the drive unit
- after work is carried out on the mechanism of the slide/tilt sunroof
- after the control unit has been replaced



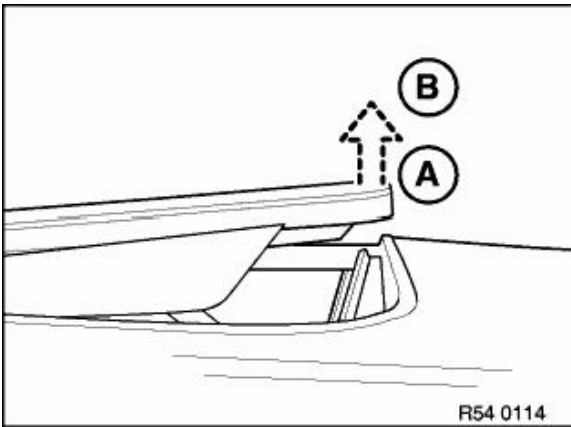
**Warning!**

There is no anti-trapping protection during initialization.



**Normalization:**

- Press and hold the switch in the "Lift" direction
- In the event of delayed starting or sudden stopping of the slide/tilt sunroof, continue pressing the switch in the "Lift" direction

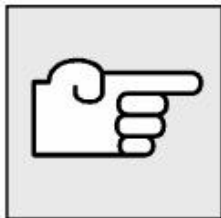
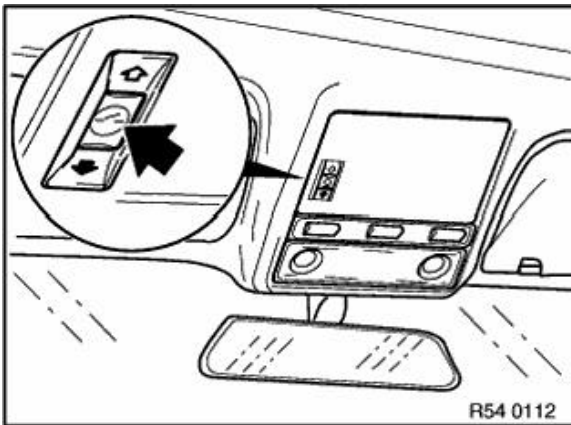


- After reaching the lift end position (A), keep the switch pressed for approx. 15 seconds further
- Normalization is completed when the slide/tilt sunroof in lift end position (A) presses again briefly in the direction of position (B).

**Learning characteristic curve:**

The curve is learnt manually in the following steps:

- After normalization, keep switch pressed in "Lift" direction.
- The slide/tilt sunroof stops for 5 seconds in the final raise position after normalization. It then moves into the "Closed" position (learning of the "Closing from raising" curve)
- The slide/tilt sunroof then moves into the "Open" end position and immediately back into the "Closed" position (learning of the "Closing" curve)
- Release switch.



*Note:*

- The entire operation lasts approx. 75 secs.
- Learning of the curve is terminated when the switch is released
- If the switch is released in the meantime, the entire procedure must be repeated
- On completion of successful initialization, the corresponding messages in the check control and the control display go out
- Carry out function check (tip function, anti-trapping protection and, if necessary, comfort function)



*Note:*

Version with AFS:

After reconnecting the vehicle battery, carry out the following procedure for setting the steering angle:

- Start engine.
- Turn steering wheel left to full lock.
- Turn steering wheel right to full lock.
- Turn steering wheel to central position.
- Turn off engine.
- Turn on ignition (terminal 15), AFS telltale and Check Control message go out.



*Note:*

Entry in the fault memory remains unaffected by this procedure, therefore if necessary

- Connect diagnosis system
- Clear fault memory





*Note:*

**Initialization** is performed on the power window switch of the relevant door.

**Initialization** comprises:

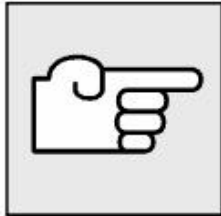
- Normalization
- Learning characteristic curve

With normalization, the mechanical end stops of the power window are recorded and stored.

The characteristic curve is learnt immediately after normalization.

When the characteristic curve is learnt, the mechanical closing forces of the power window are recorded and stored for correct operation of the anti-trapping mechanism.

Initialization, i.e. normalization and learning of characteristic curve, is performed in a continuous operation.



*Note:*

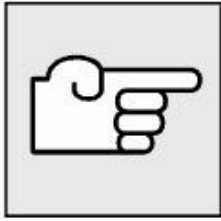
An **initialization** must be performed:

- In the event of malfunctions, e.g. no one-touch function, no opening or no comfort function possible.
- After the power window drive or door module has been replaced.
- After work is carried out on the power window mechanism.



### **Warning!**

There is no anti-trapping protection during initialization.



Operating sequence for initialization:

- Move side window into lower end position.
- Press switch into "Open one-touch operation" (second switch position) for approx. 15 to 25 s and hold down.
- Release switch, then immediately press into "Close one-touch operation" (second switch stage) and hold down.
- The side window now moves to the lower end position and then back to the upper end position.

Initialization is completed once the side window has returned to the upper end position.

*Note:*

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