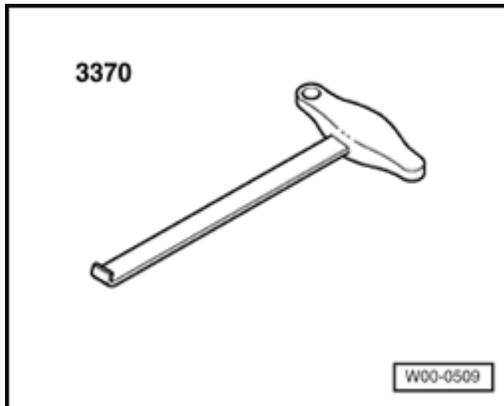




Sliding/tilting sunroof with glass panel from 08.98

Tools

Special tools, workshop equipment, testers, measuring instruments and auxiliary items required



- ◆ 3370 Assembly hook

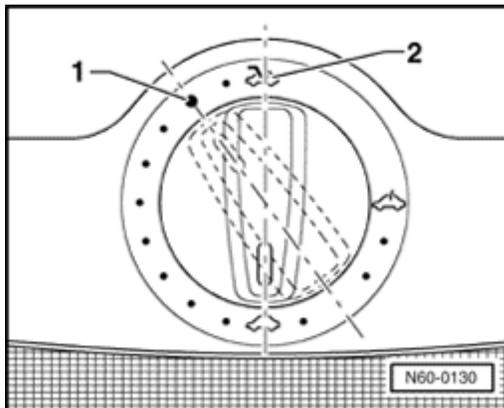


Function

With ignition switched on the sliding/tilting sunroof is opened and closed by turning the rotary switch or tilted and closed through pushing and pulling the switch.

After switching off the ignition the sliding/tilting sunroof can be opened or closed until either the driver's or front passenger's door is opened.

On the rotary switch there are marks for preset opening positions of the glass panel. Any other intermediate opening sliding position can be selected by turning the switch clockwise.



A

Opening the sliding/tilting sunroof to switch position -1-, the so called comfort position, prevents wind noises which to a great extent which would occur if opening fully with switch position -2-.

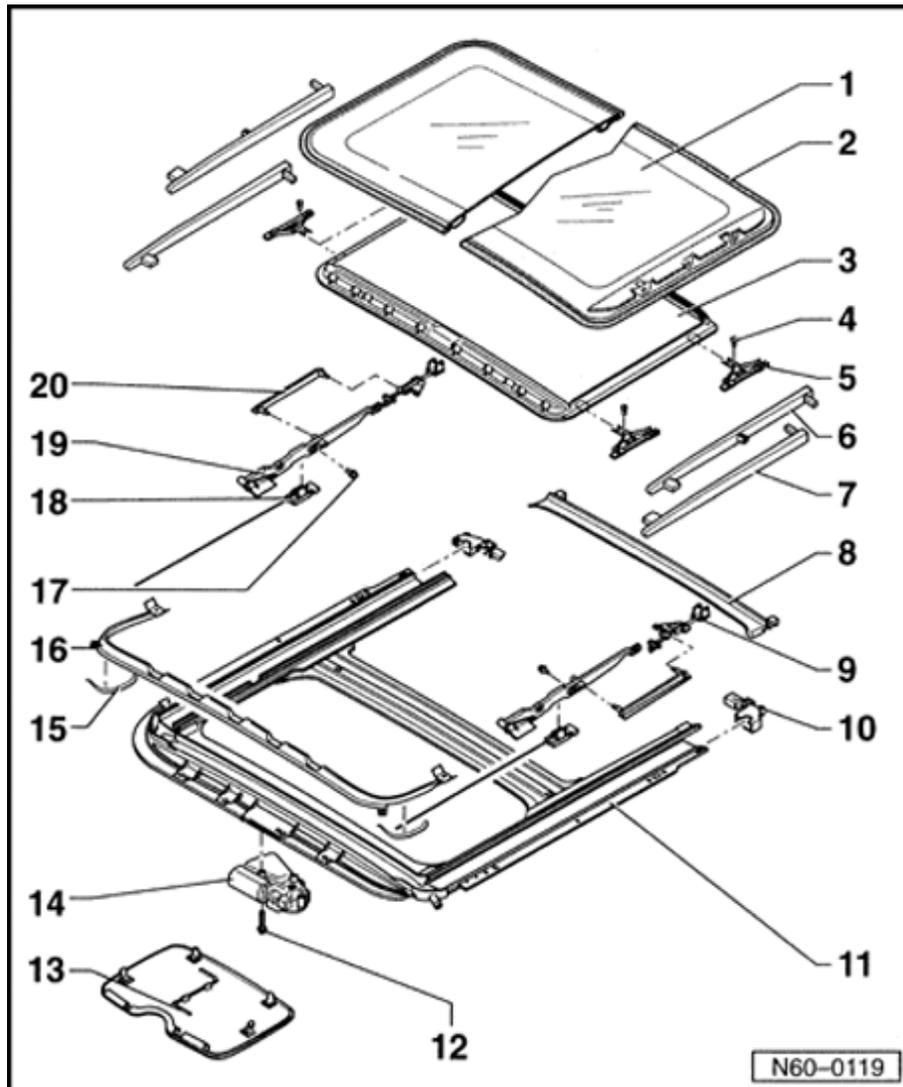
The sliding/tilting sunroof is equipped with a excess force limitation system (roll-back) for the sliding function. The roof will open automatically when contacting an obstruction during the closure sequence.



In addition there is also an emergency closure function. For problems in closing the sunroof, the sunroof can be compulsory closed by pressing the preselector in position "close sunroof".

The "roll back" function is disengaged when using the compulsory closure function.

The sliding/tilting sunroof drive is protected against overheating by a time limiter. The protective mechanism operates when the sunroof is operated continuously for approx. 2 minutes. It is functional again after a cooling-off phase.



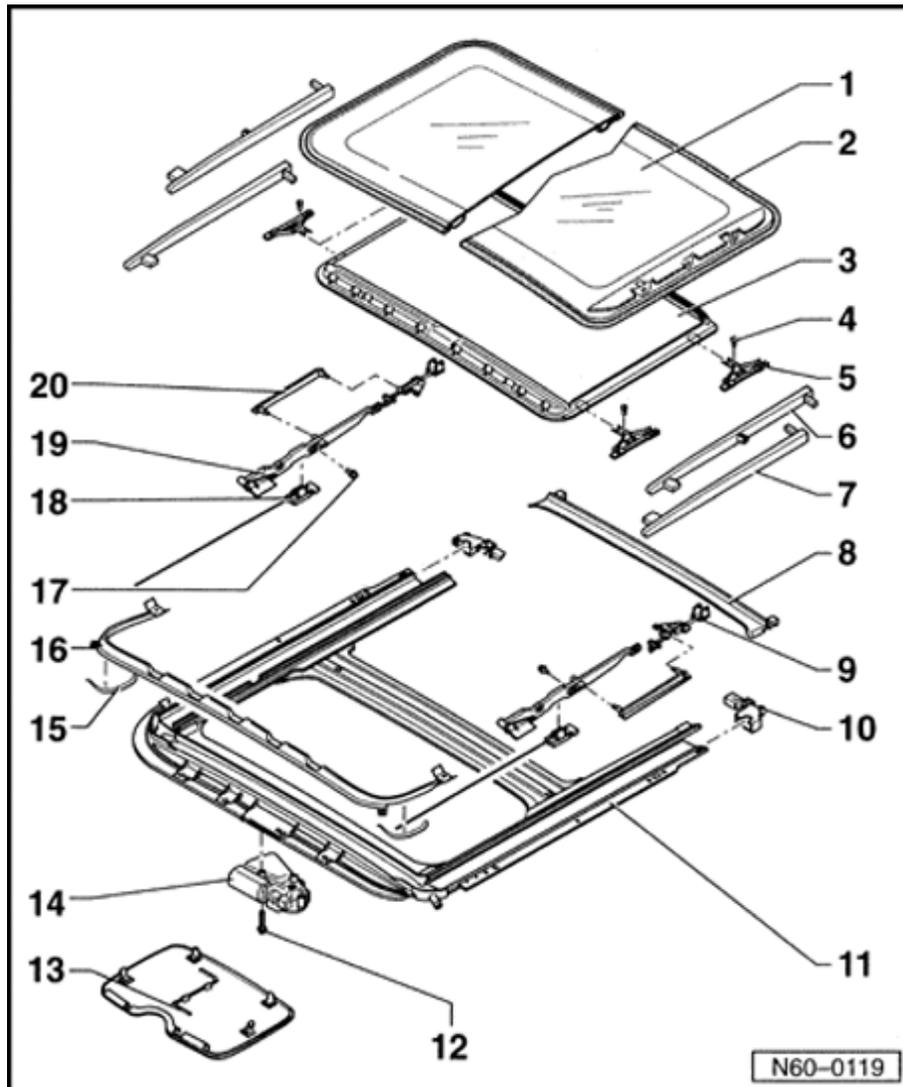
Assembly overview

1 - Glass panel for sliding/tilting roof (single pane safety glass)

- ◆ Removing sliding/tilting sunroof glass panel ⇒ [Page 60-31](#)
- ◆ Installing sliding/tilting sunroof glass panel ⇒ [Page 60-32](#)
- ◆ Adjusting sliding/tilting roof glass panel ⇒ [Page 60-33](#)

2 - Panel seal

- ◆ Adjusting panel seal ⇒ [Page 60-10](#)
- ◆ Seal joint located centrally at rear
- ◆ Replacing panel seal ⇒ [Page 60-10](#)



3 - Sliding headlining

- ◆ Removing and installing sliding headlining
⇒ [Page 60-38](#)

4 - Countersunk screws (micro encapsulated)

- ◆ Always use new countersunk screws
- ◆ 3.5 Nm

5 - Slide

6 - Upper trim

- ◆ Removing ⇒ [Page 60-31](#)

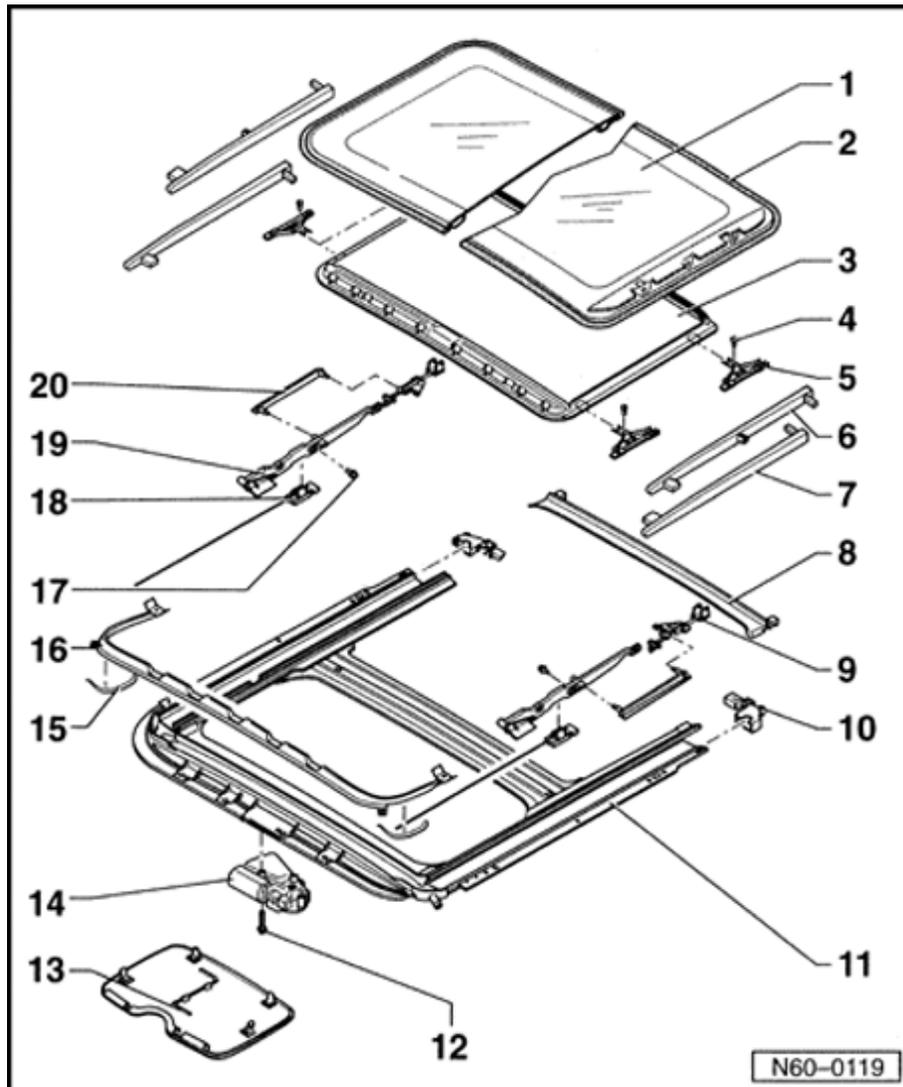
7 - Lower trim

- ◆ Removing ⇒ [Page 60-31](#)

8 - Water channel

- ◆ Removed together with guide rail.

9 - Guide locking hook



10 - End piece

- ◆ Use Butyl adhesive sealing cord AKL 450 005 05 to seal

11 - Carrier unit

- ◆ Removing and installing carrier unit ⇒ [Page 60-44](#)
- ◆ If required, guide channels are to be greased with special grease G 000 450 02 only, otherwise correct operation cannot be guaranteed.

12 - Bolt

13 - Hexagon key for emergency operation

- ◆ Clipped into cover for electric drive

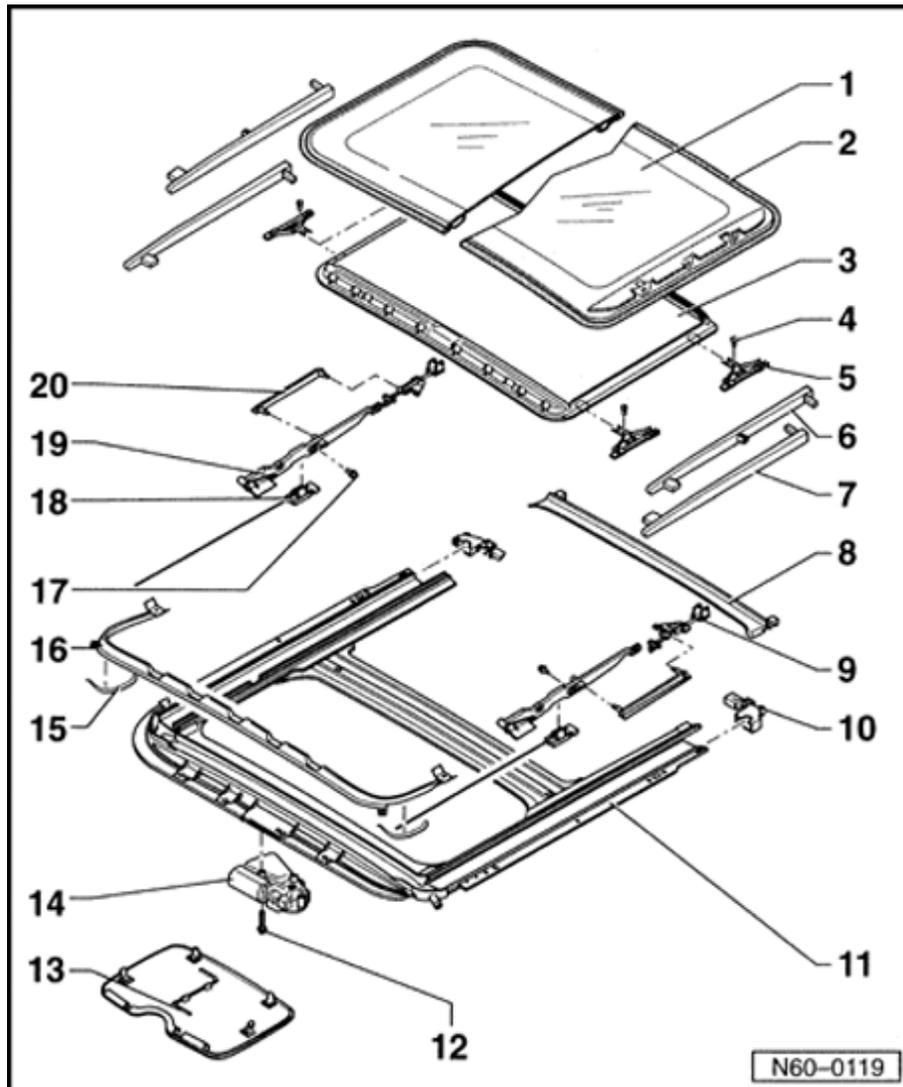
14 - Electric drive

- ◆ Removing ⇒ [Page 60-39](#)
- ◆ Adjusting drive (0 position) ⇒ [Page 60-40](#)

15 - Spring

16 - Wind deflector

- ◆ Removing ⇒ [Page 60-37](#)



17 - Torx screw

◆ Torx key T 25

◆ 4.5 Nm

18 - Rear guide

◆ Removed together with guide rail.

19 - Guide rail

◆ Removing ⇒ [Page 60-46](#)

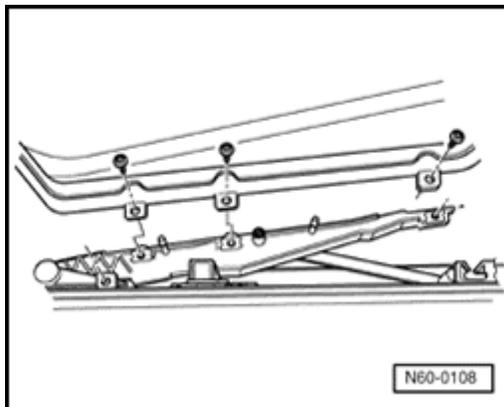
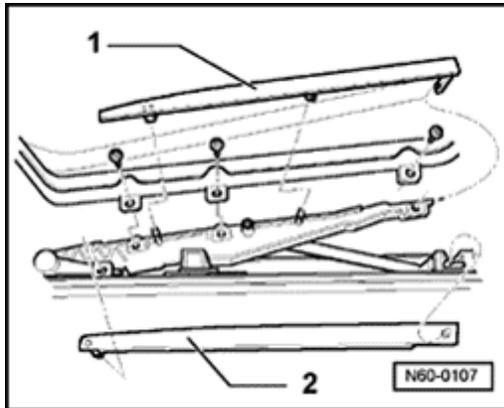
20 - Spacer

◆ Removed together with guide rail.



Sliding/tilting sunroof glass panel, removing

- Slide sun blind to rear.
- Tilt sliding/tilting roof open.
- Unclip lower trim -2- in forward area, inwards to center of vehicle and unhook at rear.
- Unclip upper trim -1- at front and center and unhook at rear.



- Remove securing screws (Torx insert T 25; 4.5 Nm).
- Take sliding/tilting roof panel out upwards.

Note:

The sliding/tilting sunroof must not be moved to position "Open" when removed, because the water channel will not be compressed by the glass panel and can cant inside the roof.



Sliding/tilting sunroof glass panel, installing

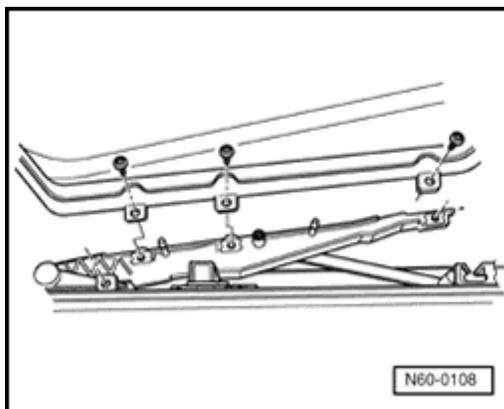
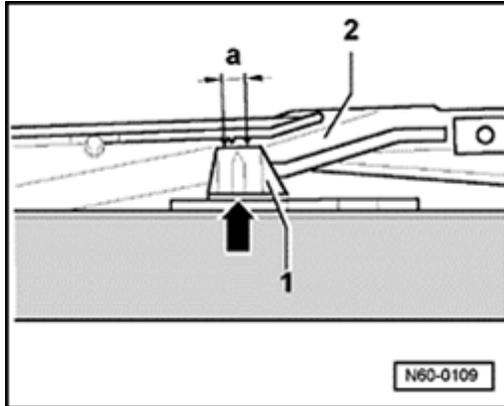
Panel must be installed in "0 position" (panel closed).

"0" position:

- ▲ The mark -arrow- on the rear of the guide upper section -1- must, on both sides, lie within the marks -dimension a- on the guide rail gate -2-.

The guide rail -2- must be located in the guide rails (cannot be moved by hand).

If this is not the case, adjust parallel running ⇒ [Page 60-43](#) .



- ▲ - Place sliding/tilting roof on from above and screw in securing screws (guide rail/panel).
- Lightly tighten securing screws (Torx T 25).

Note:

After adjusting panel height tighten securing screws (4.5 Nm).

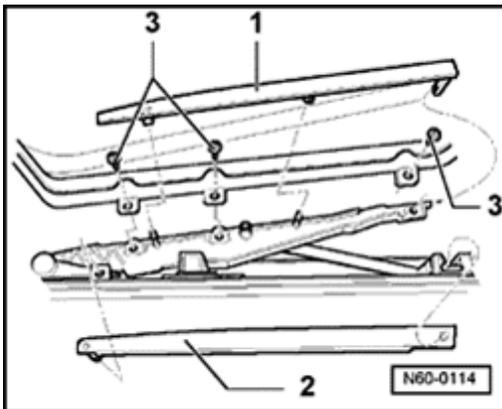


Sliding/tilting roof glass panel (height adjustment)

Sliding/tilting roof "0" position OK.

- Tilt sliding/tilting roof open.

- Slide sun blind to rear.



A

- Unclip lower trim -2- in forward area, inwards to center of vehicle and unhook at rear.

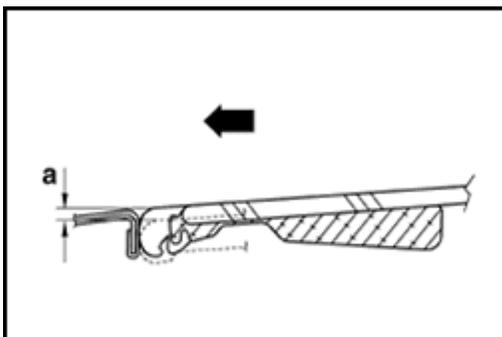
- Unclip upper trim -1- at front and center and unhook at rear.

- Remove securing screws -3- (Torx key T 25; 4.5 Nm).

- Run glass panel into "open" position.

- Run glass panel into "closed" position.

- Carry out height adjustment of glass panel at front and rear on both sides as follows:

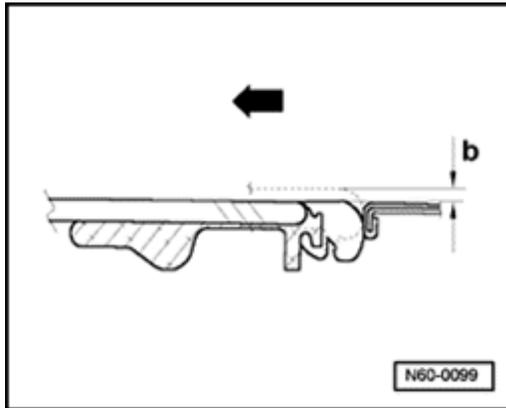


A

Panel adjustment front:

a = 0...1 mm lower than roof level

Arrow = Direction of travel (forwards)



Panel adjustment rear:

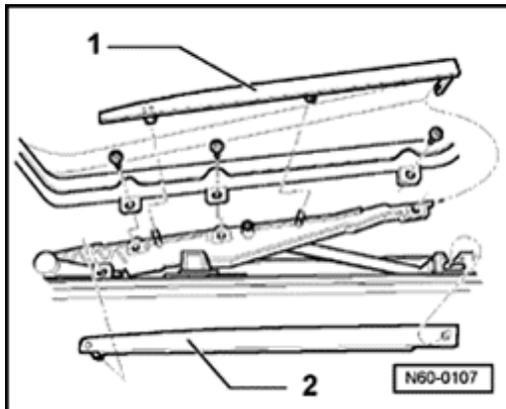
$b = 0 \dots 1$ mm higher than roof level

Arrow = Direction of travel (forwards)

- Tighten screws for glass panel (4.5 Nm).

Always tighten left and right-hand glass panel sides symmetrically.

- Tilt sliding/tilting roof open.



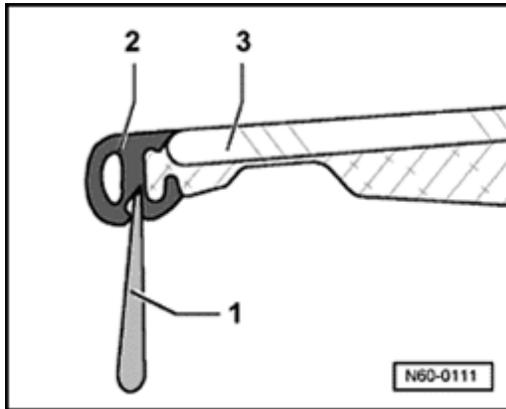
- Hook in upper trim -1- at rear and clip front and center in.

- Hook in rear of lower trim -2- and clip front in.



Panel seal, adjusting

A

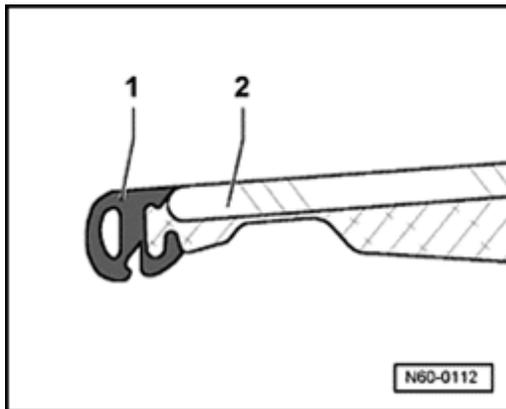


- Check that the pre-tension between panel seal -2- and body is uniform all-round using a 0.3 mm thick strip of paper (a visiting card for example). It must be possible to pull the paper strip through between the panel seal and body under tension.
- If the pre-tension is insufficient, the panel seal can be pushed apart with a wedge -1-, or if the pre-tension is excessive pushed together. To adjust the panel seal the glass panel -3- must be removed.



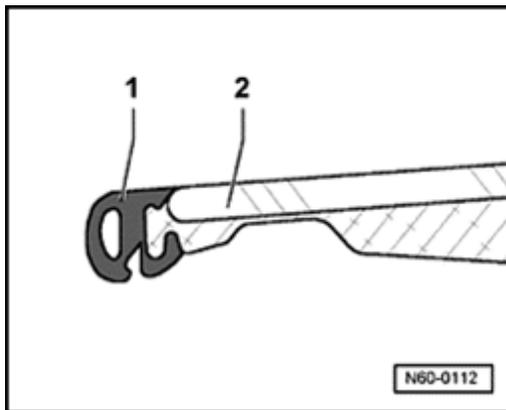
Panel seal, replacing

- Removing glass panel for sliding/tilting sunroof
⇒ [Page 60-31](#) .



A

- Pull seal -1- off glass panel.



A

- Pull new seal onto glass panel -2- from bottom to top starting at center of rear.

Note:

To ease fitting of seal, coat panel edge with a soapy solution.

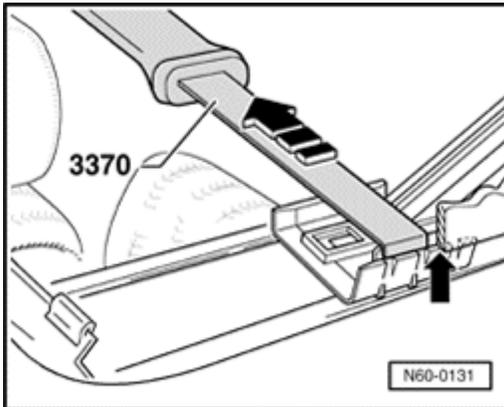
If the seal is not correctly installed the upper surface will be wavy.

The panel seal must be shortened to suit the panel circumference.



Wind deflector, removing

- Sliding/tilting roof completely open.



A

- Insert special tool 3370 between edge of roof and wind deflector and release wind deflector side mountings from locking devices on left and right sides by pulling on special tool 3370.
- Lever wind deflector mounting out of guide rail (on left and right) with a screwdriver.
- Take out wind deflector.



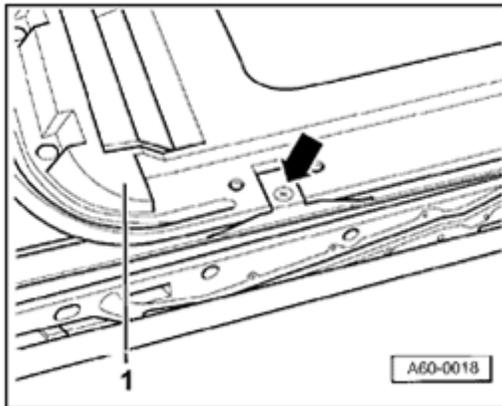
Sliding sun blind, removing

- Removing glass panel for sliding/tilting sunroof
⇒ [Page 60-31](#) .

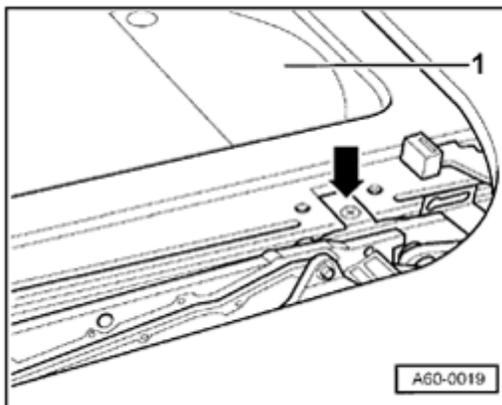
- Slide sun blind to rear.

A

- Remove forward bolts -arrow- on left and right-hand sides. Pull out slide forwards over the stop -1-.
- Slide sun blind forwards.

**A**

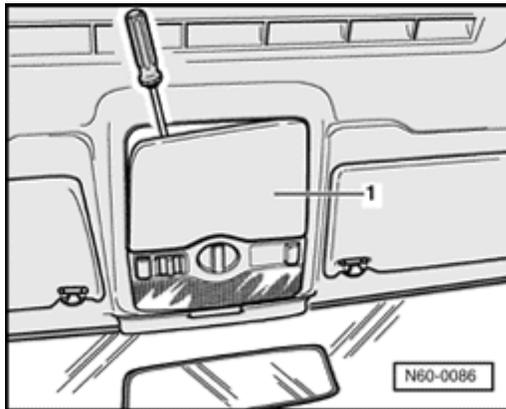
- Remove rear bolts -arrow- on left and right-hand sides. Pull out slide to rear and take out sun blind -1-.





Drive for sliding/tilting sunroof, removing

- Disconnect battery Ground (GND) strap from battery.



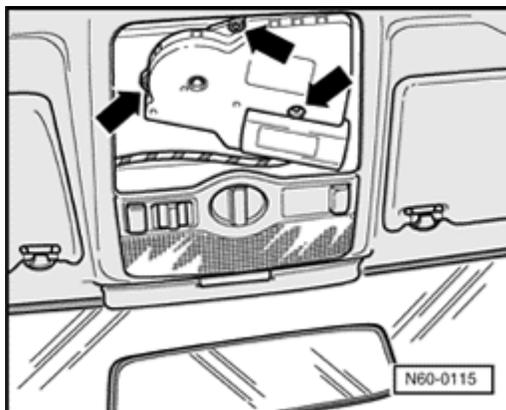
A

- Unclip cover -1- for drive.

Note:

Remove and install drive for sliding/tilting roof only when roof is closed ("0" position).

- Unclip and separate connector.



A

- Remove bolts -arrows- and pull out drive for sliding/tilting roof.

The bolts for the drive are micro encapsulated and must always be replaced (3.5 Nm).



Drive for sliding/tilting sunroof, adjusting ("0" position)

There may be a requirement to adjust the "0" position if the drive was removed when not in "0" position or the sliding/tilting sunroof was closed using the emergency key.

Drive removed but still connected electrically.

- Select "tilt roof" with preselection control rotary switch.

- Select "closed roof" with preselection control rotary switch.

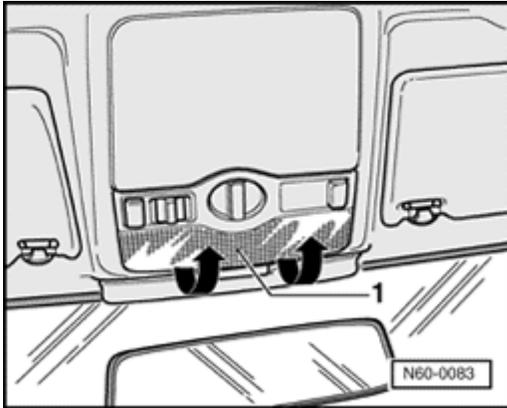
- Select "open roof" with preselection control rotary switch.

- Select "close roof" with preselection control rotary switch.

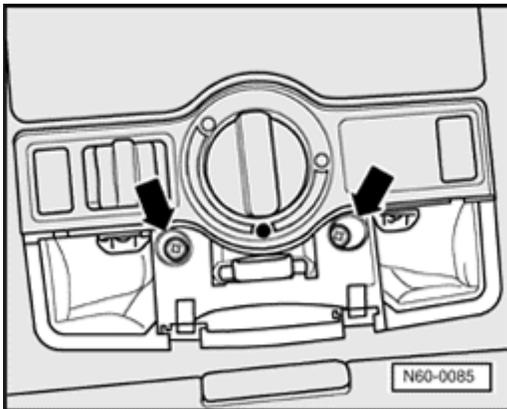
- Install drive in this position ("0" position) with sliding/tilting roof closed.



Preselection control for sliding/tilting sunroof, removing



- A - Unclip trim -1- in direction of arrow and remove.

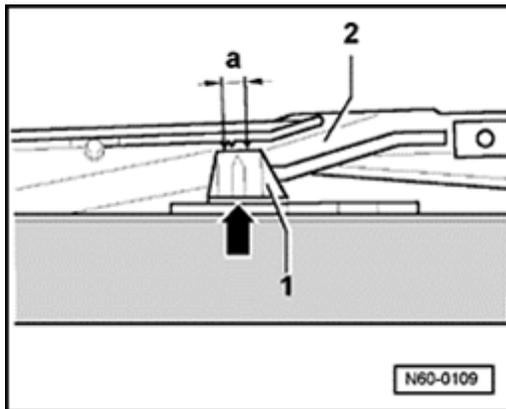


- A - Remove screws -arrows- and pull off preselection control.
- Unclip and separate connector.



Parallel running, checking

- Removing glass panel for sliding/tilting sunroof
⇒ [Page 60-31](#) .



- ▲ The mark -arrow- on the rear of the guide upper section -1- must, on both sides, lie within the marks -dimension a- on the guide rail gate -2-.

The guide rail -2- must be located in the guide rails (cannot be moved by hand).

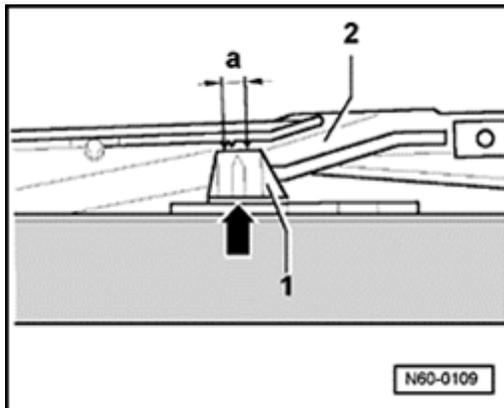


Parallel running, adjusting

Note:

The parallel running adjustment can only be undertaken when the drive and glass panel are removed ("0" position).

- Removing sliding/tilting sunroof ⇒ [Page 60-39](#) .

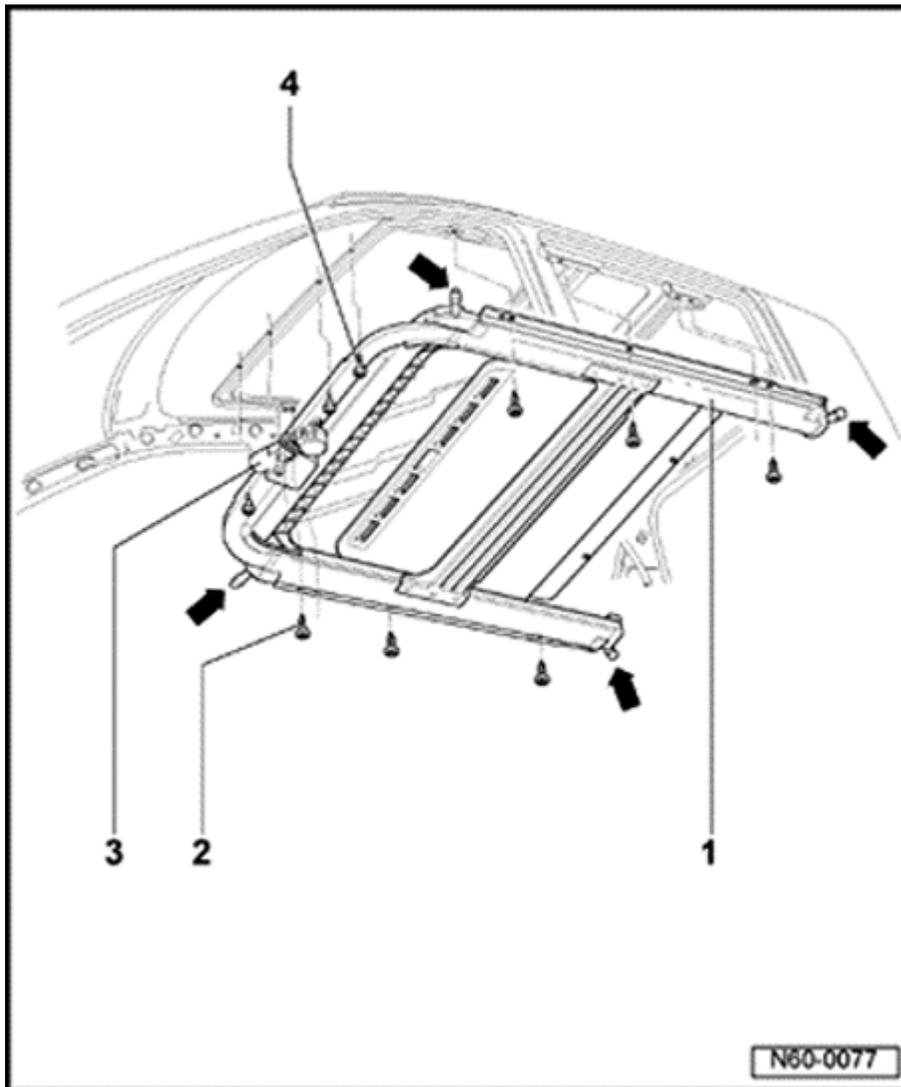


The mark -arrow- on the rear of the guide upper section -1- must, on both sides, lie within the marks -dimension a- on the guide rail gate -2-.

The guide rail -2- must be located in the guide rails (cannot be moved by hand).

- Slide guide upper part -1- from front to rear only centrally between the marks.
- Install drive in this position ("0" position).

Then check "0" position.



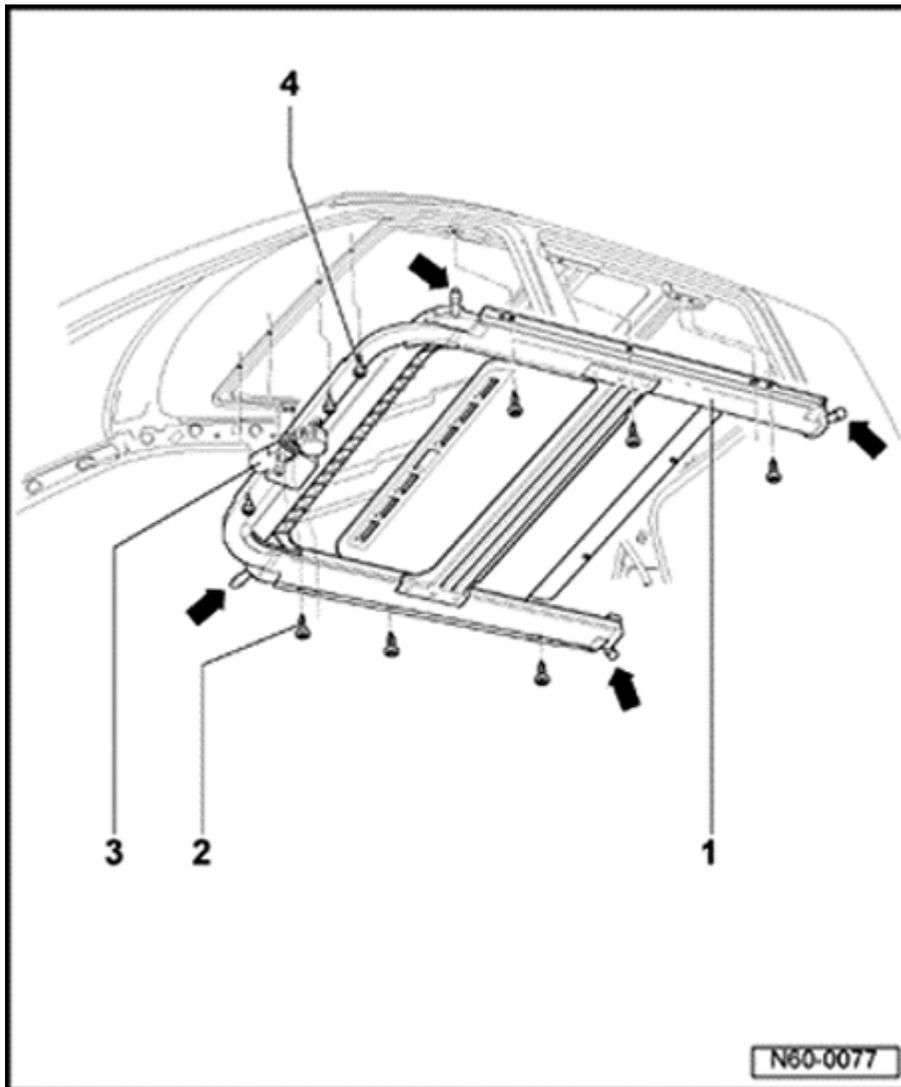
Carrier unit, removing and installing

Removing

- Removing preselection control for sliding/tilting sunroof ⇒ [Page 60-41](#) .
- Remove moulded headlining

⇒ [Repair Manual, Body Interior, Repair Group 70; Roof trim](#)

- Pull water drain hoses -arrows- off carrier unit -1- .
- Remove bolts -2- and -4- (with sleeves) and lift carrier unit out of vehicle with help of second mechanic.



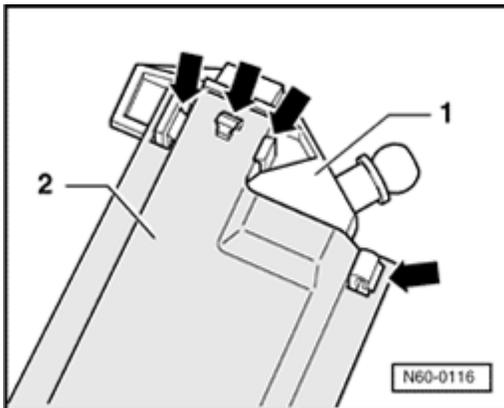
Installing

- Fit carrier unit -1- into roof cut-out with aid of a second mechanic.
- Align carrier unit in roof frame with cylindrical pins (shaft of twist drill), 12 mm in front right and 10 mm in rear left. Carrier unit must not lie on roof frame.
- Check electrical consumers electrical wiring and connections on roof and reinstate if necessary.
- Tighten carrier unit -1-, starting at sliding/tilting sunroof drive -3- on left and right-hand sides moving rearward (8 Nm).
- Fit water drain hoses -arrows-.
- Fit connection for drive -3-.



Guide, removing

- Removing glass panel for sliding/tilting sunroof
⇒ [Page 60-31](#) .
- Removing carrier unit ⇒ [Page 60-44](#) .
- Removing sliding/tilting sunroof ⇒ [Page 60-39](#) .



A

- Unclip end cap -1- -arrows- from guide rail -2- and then pull off.

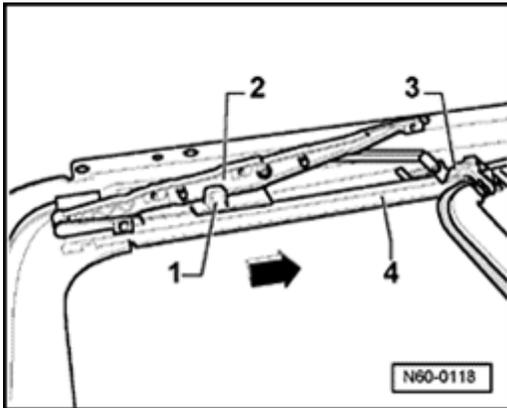
Note:

When installing seal end piece -1- to guide rail with Butyl adhesive sealing cord AKL 450 005 05.



A

- Unclip water channel -1- from locking lug guide -2- on both sides carefully with a screwdriver and take off.

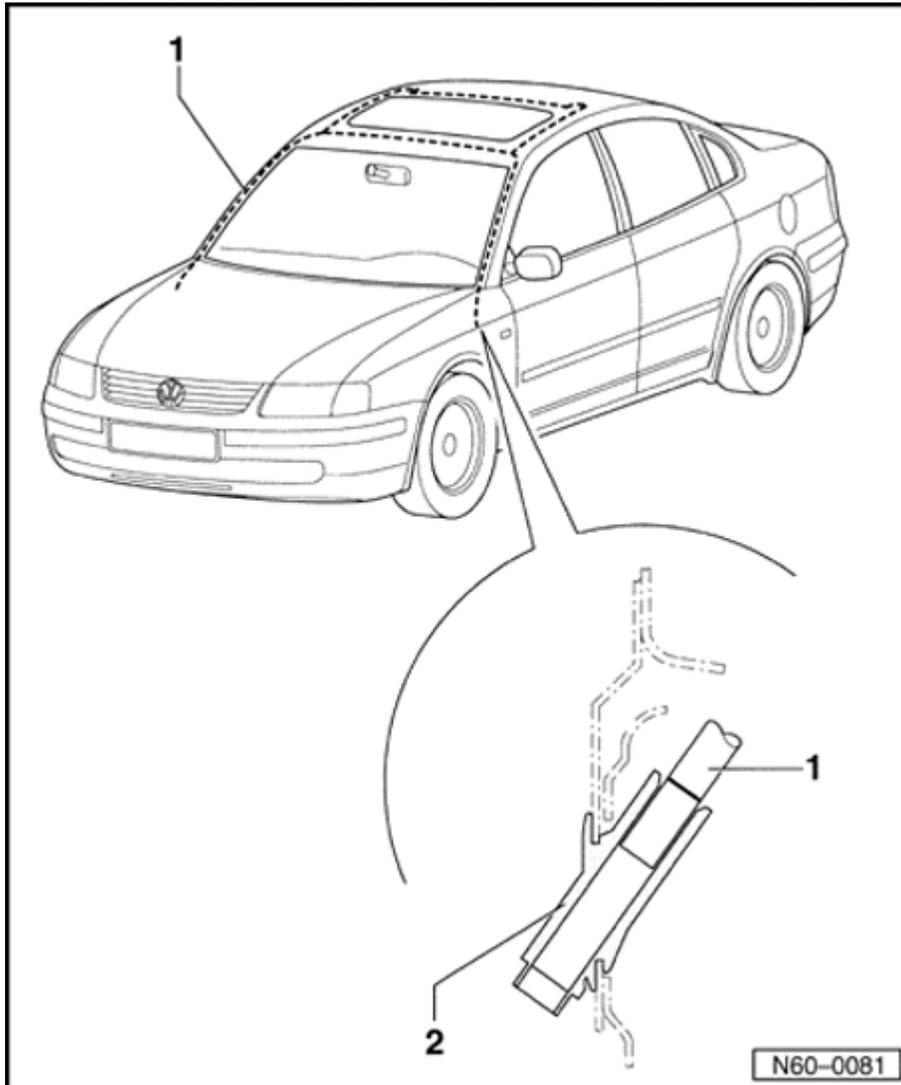


A

- Slide rear guide -1- in guide rail -4- in direction of arrow until the locking lug guide -3- is released.
- Pull rear guide -1-, locking lug guide -3- and guide -2- out of guide rail -4-.

Note:

Always replace guide with cable as a pair.



Water drain hoses, cleaning

Front water drain hoses

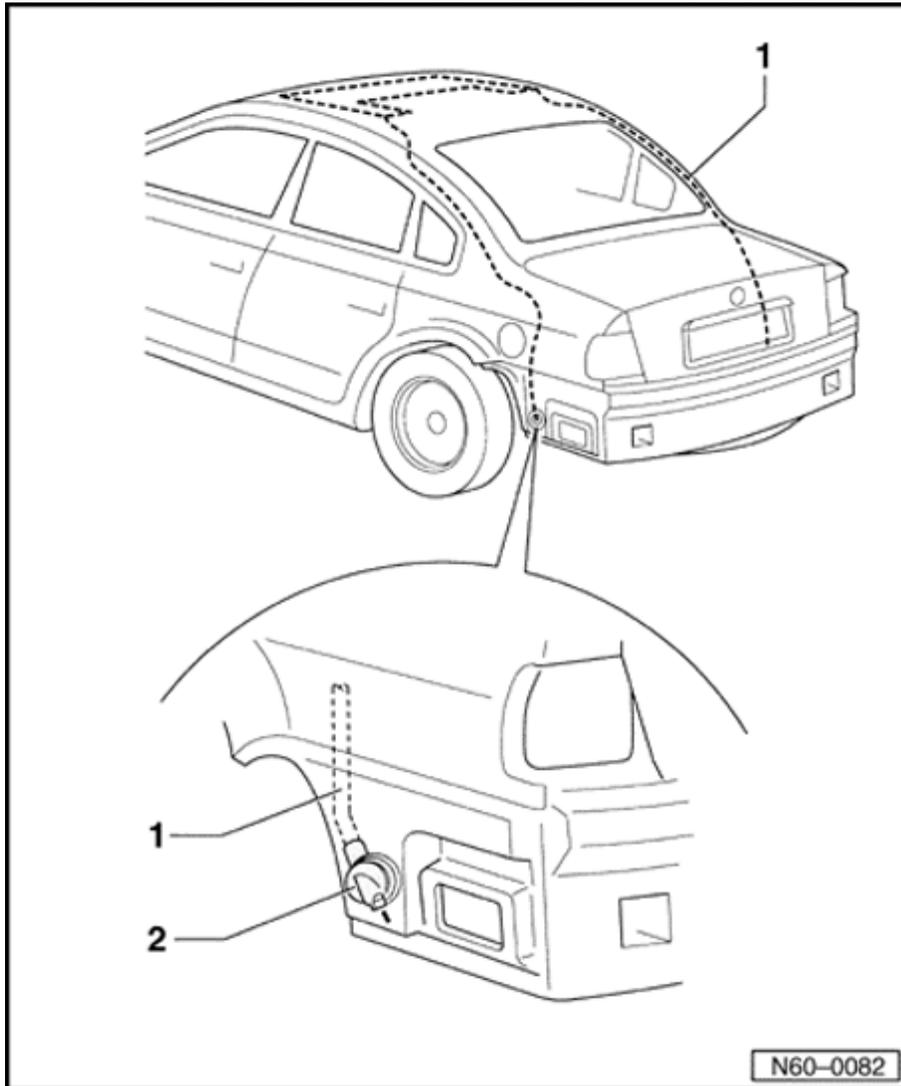
The front water drain hoses -1- are routed in the "A pillars" and end between door and A pillar. Cleaning is done from the sliding/tilting roof panel aperture.

1 - Front water drain hoses

2 - Hose grommet

Note:

For cleaning, a locally manufactured tool made from a speedometer inner cable, approx. 2300 mm long is recommended.



Rear water drain hoses

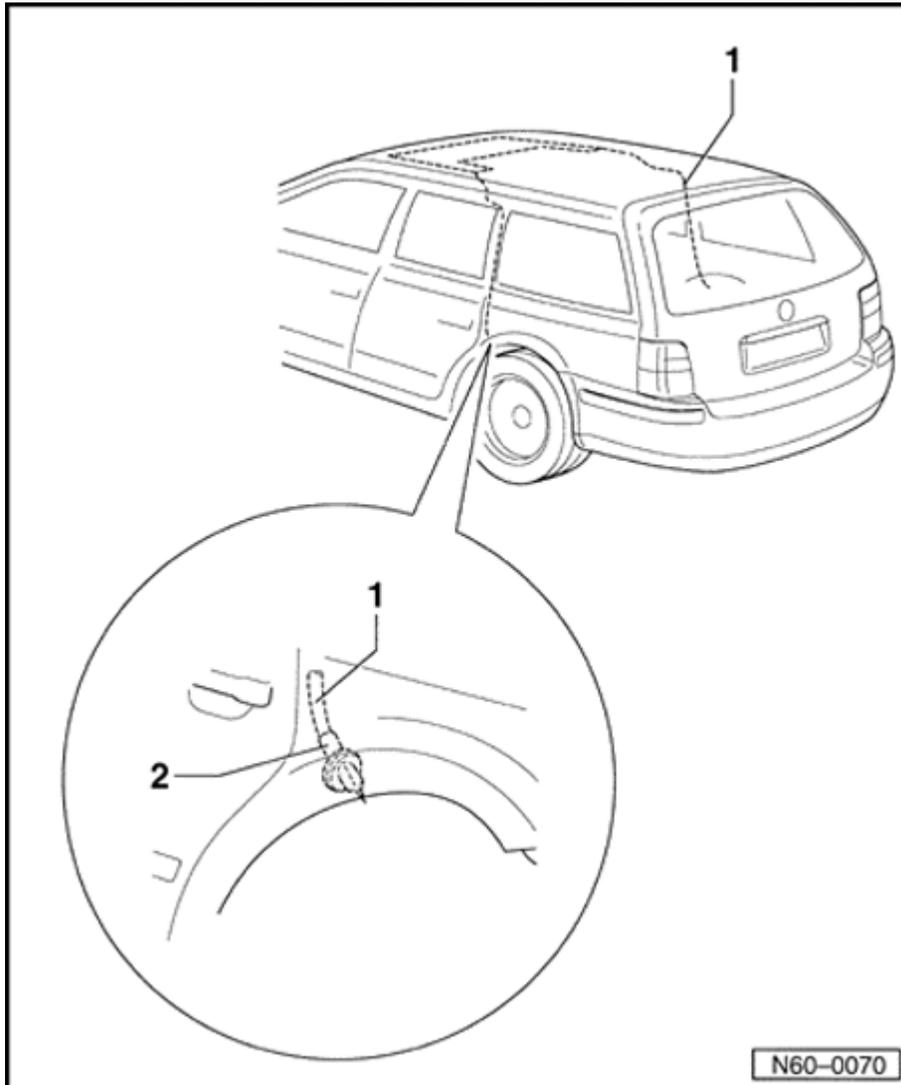
The rear water drain hoses -2- are routed in the "C pillars" and end at the side behind the bumper cover. Cleaning is performed from the lower end of the hose. To do this, the bumper must be removed.

1 - Water drain hose

2 - Hose grommet

Note:

For cleaning, a locally manufactured tool made from a speedometer inner cable, approx. 2300 mm long is recommended.



Rear water drain hoses, wagon

The rear water drain hoses -1- are routed through the "C pillars" and end in the rear wheel housing. Cleaning is performed from the lower end of the hose. To do this, the wheel housing liner must be removed.

1 - Water drain hose

2 - Hose grommet

Note:

For cleaning, a locally manufactured tool made from a speedometer inner cable, approx. 2300 mm long is recommended.