

Parts and Accessories

Installation Instructions



Retrofitting folding sunroof (LHD and RHD)

MINI ONE (R50)

MINI COOPER (R50)

MINI COOPER S (R53)

MINI ONE NI (R56)

Installation instructions not valid for vehicles with option 403 (glass sunroof)

Retrofit kit No.: 54 11 0 150 731

Installation time

The installation time of approx. 8.0 hours can vary depending on the condition and equipment of the vehicle.

Important information

These installation instructions are mainly intended for use in the MINI dealership network and by authorised BMW Service Centres;

The target group of these installation instructions are technical personnel trained on MINI vehicles with corresponding technical know-how.

All work is to be carried out with the aid of currently valid MINI repair instructions, schematic circuit diagrams, maintenance manuals and working instructions in rational order with the specified tools (special tools) while paying particular attention to valid safety regulations.


In order to avoid unnecessary additional expenditure/costs, if any problems regarding installation, assembly or operation are encountered, after spending a little time on attempting to finding the problem (approx. 0.5 hour), an enquiry, including the vehicle identification number, part number of the installed retrofit kit and a detailed description of the problem, should be sent immediately via the Aftersales Assistance Portal (ASAP) to Technical Support.

Do not archive the printout of these Installation Instructions as daily updates are conducted through ASAP!

Refer to ASAP for explanations of the pictographs.

All illustrations show LHD vehicles. Carry out the same procedure analogously on RHD vehicles.

Pictographs:

 identifies information that draws attention to danger/hazards.

 identifies information that draws attention to specific requirements.

◀ identifies the end of an information or warning text.

Subject to technical modifications.

When installing cables/wires, particular attention must be paid to ensure that they are not bent, kinked or damaged. The costs incurred will not be reimbursed by BMW AG.

Additionally installed cables/wires must be secured with cable ties.

Bridges, double crimp or parallel connections must be made if the specified PIN chambers are already occupied.

On vehicles with anti-theft alarm system (DWA) there is no radio interior protection and the DWA must be decoded. The customer must then be informed that his vehicle no longer has an alarm system.

Installation information

The installation instructions describe the procedure on the left-hand side of the vehicle only. The same procedure should be followed analogously on the right-hand side of the vehicle.

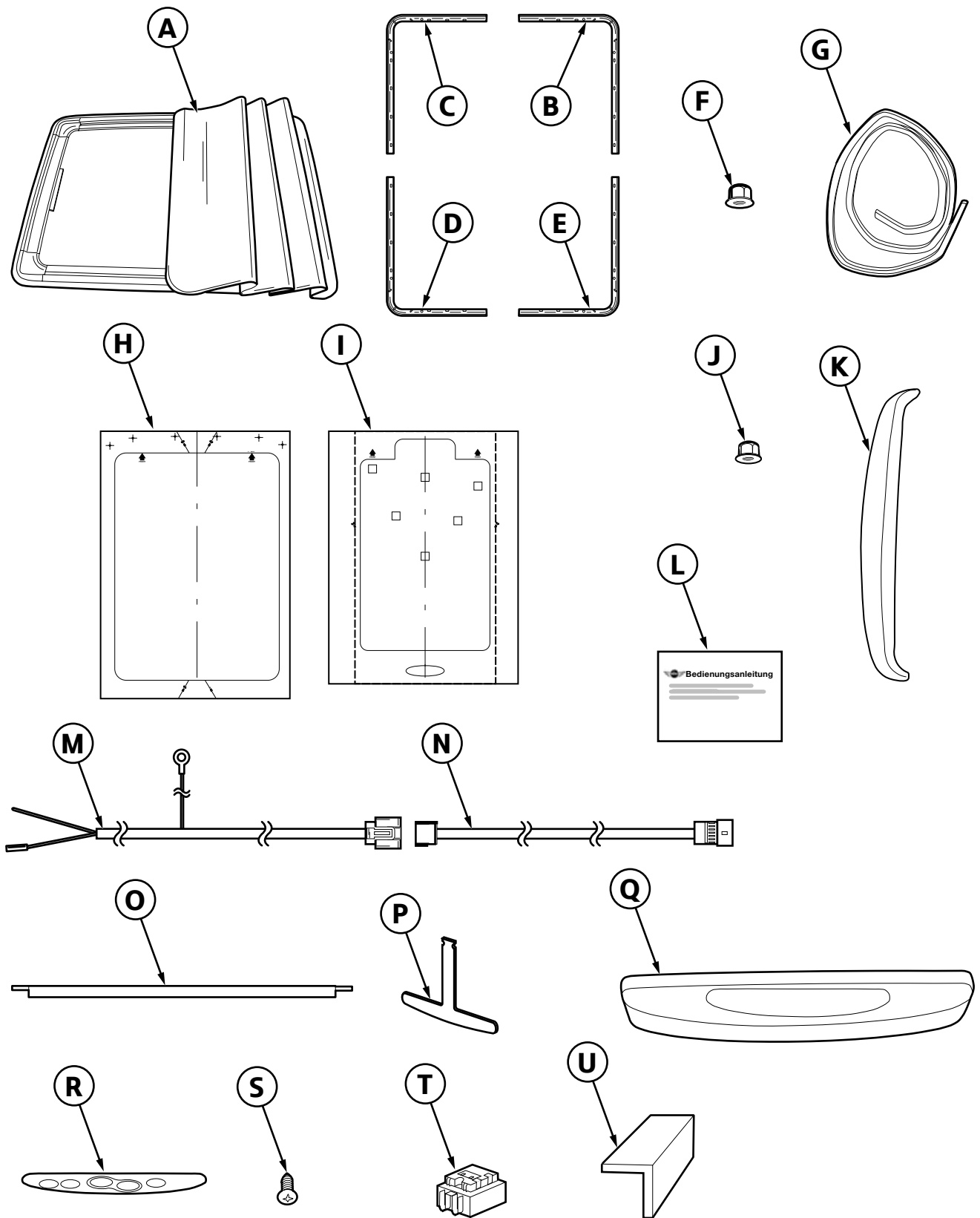
Required special tools

None

Contents

| Section | Page |
|---|------|
| 1. Parts overview | 4 |
| 2. Preparatory work | 6 |
| 3. Installation and layout diagram | 7 |
| 4. Overview of connections | 8 |
| 5. Installing folding sunroof | 9 |
| 6. Installing wiring harness for folding sunroof motor and interior light. | 13 |
| 7. Folding sunroof function check | 15 |
| 8. Final assembly | 17 |
| 9. Finishing off and encoding | 20 |
| 10. Schematic circuit diagram | 21 |

1. Parts overview



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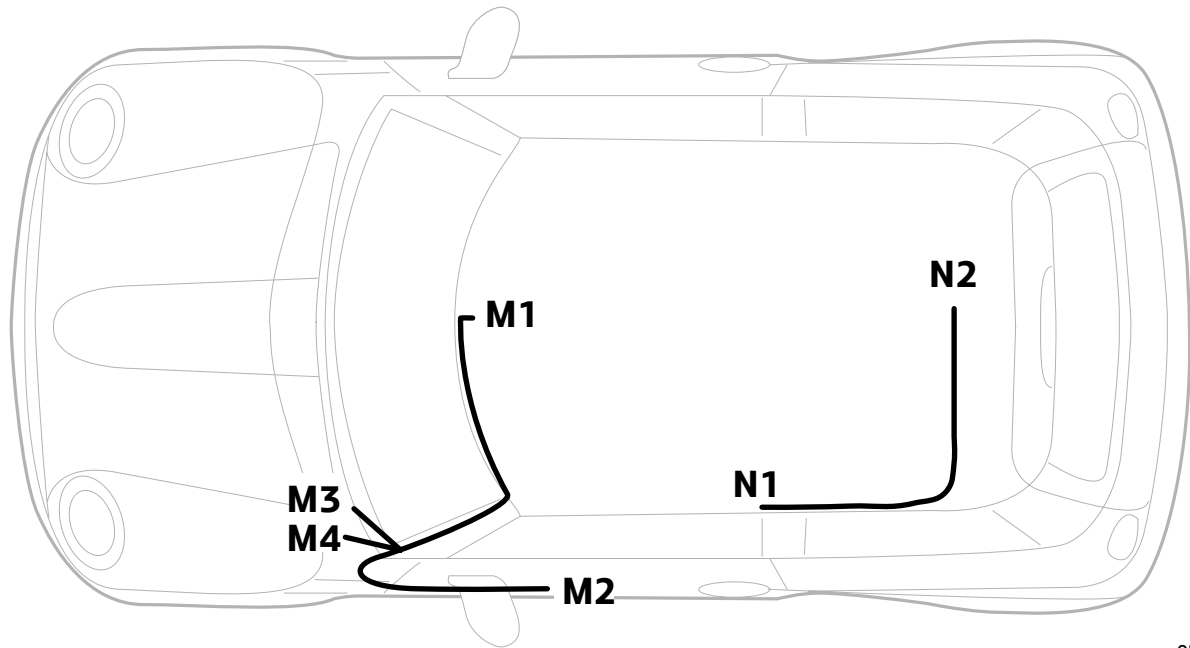
Key

- A Folding sunroof
- B Rail, front left
- C Rail, front right
- D Rail, rear right
- E Rail, rear left
- F Nut M6, self-cutting (40 pcs.)
- G Weatherstrip
- H Template for outer roof panel
- I Template for headliner
- J Nut M4 (6 pcs.)
- K Wind deflector
- L Operating instructions
- M Wiring harness for folding sunroof motor
- N Wiring harness for interior light
- O Transverse strip
- P Hand crank for folding sunroof motor
- Q Trim piece for folding sunroof motor
- R Switch trim
- S Self-tapping screw (2 pcs.)
- T Mini-connector
- U Centring angle

2. Preparatory work

| | TIS No. |
|---|----------------|
| Perform quick test | --- |
| Disconnect negative terminal of battery | 12 00 ... |
| | |
| Remove the following components | |
| Sill panel strip, left | 51 47 000 |
| Undoing fuse box | 61 13 ... |
| Rear bench seat | 52 20 010 |
| Rear backrest | 52 20 070 |
| Side panel trim, rear left/right | 51 43 002 |
| Front passenger seat | 52 13 ... |
| Interior light | 51 31 ... |
| Headliner | 51 44 001 |
| Cleaning roof | --- |

3. Installation and layout diagram



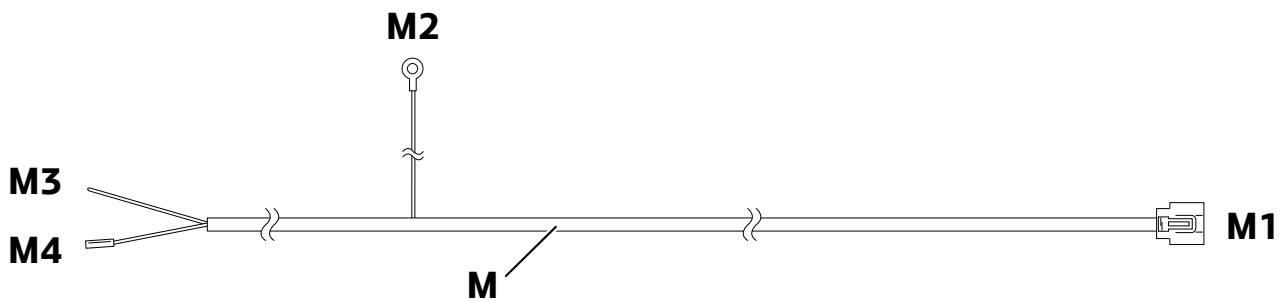
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Key

- M wiring harness for folding sunroof motor
- M1 on folding sunroof motor
- M2 on earth point on sill panel strip, left
- M3 on fuse box with mini-connector
- M4 on fuse box

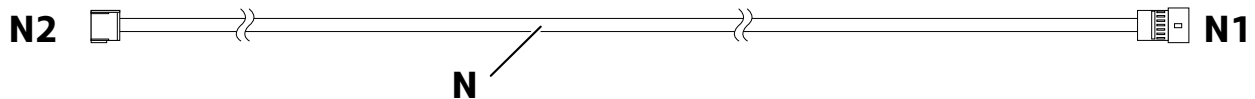
- N wiring harness for interior light
- N1 on interior light connector
- N2 on interior light

4. Overview of connections



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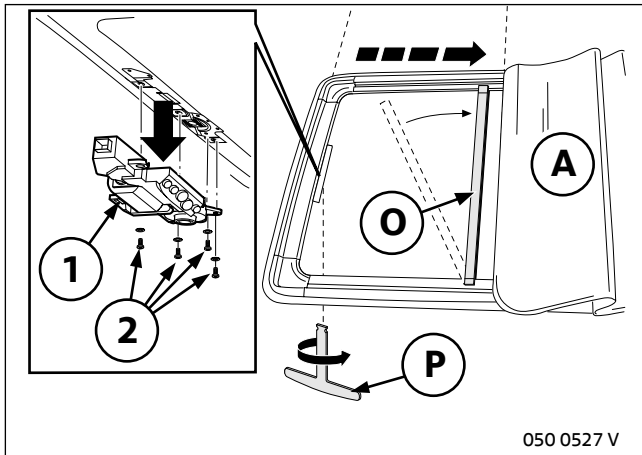
| Item | Description | Signal | Wire colour / cross section | Connection location in vehicle | Designation/ plug-in location |
|------|--|-------------|-----------------------------|--|-------------------------------|
| M | Wiring harness for folding sunroof motor | | | | |
| M1 | WS 3-pin connector | | | on folding sunroof motor | |
| M2 | Cable eye | Terminal 31 | BR | on earth point on sill panel strip, left | X1108 |
| M3 | Open cable end | Terminal 15 | RT/BL | on fuse box with IDC connector | X10205 PIN 12 |
| M4 | Blade contact | Terminal 30 | RT | on fuse box | X10206 PIN 1 |



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| Item | Description | Signal | Wire colour / cross section | Connection location in vehicle | Designation/ plug-in location |
|------|-----------------------------------|--------|-----------------------------|--------------------------------|-------------------------------|
| N | Wiring harness for interior light | | | | |
| N1 | SW 6-pin connector | | | on interior light connector | X336 |
| N2 | SW 6-pin connector | | | on interior light | |

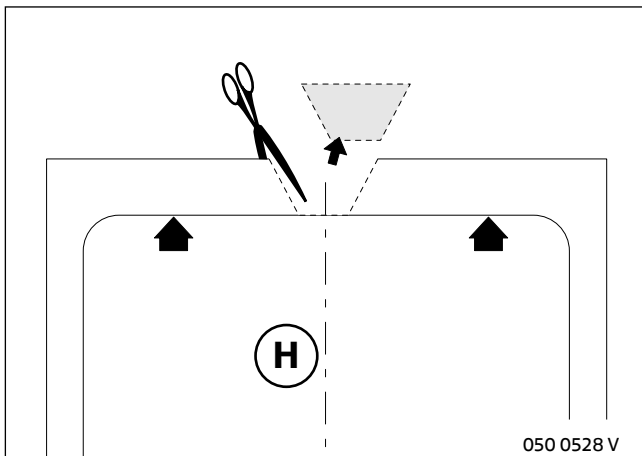
5. Installing folding sunroof



Completely open folding sunroof **A** with hand crank **P** by turning folding sunroof motor (1).

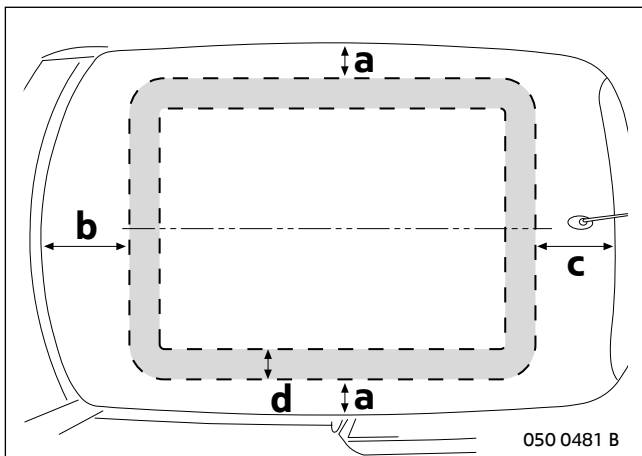
Press on transverse strip **O** for stabilisation.

Loosen the four screws (2) on folding sunroof motor (1) and remove folding sunroof motor.



Cut out template for outer roof panel **H** at the front end along the dotted line.

Depending on auxiliary equipment (roof-mounted aerial for navigation system), the template for outer roof panel **H** may also need to be cut in the rear area. ◀



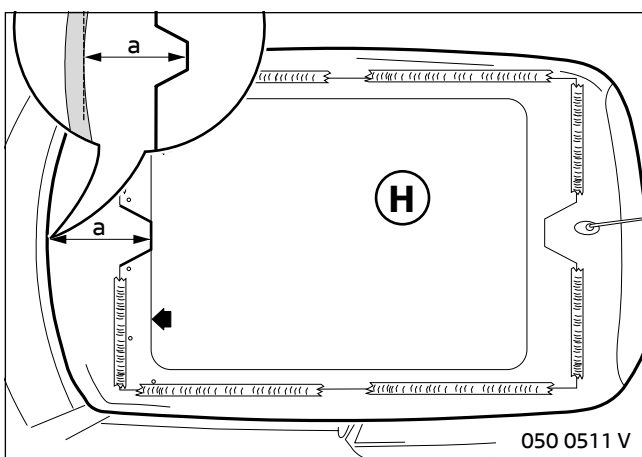
Attach masking tape to the shaded area in the illustration.

Dimension a = 100mm

Dimension b = 290mm

Dimension c = 130mm

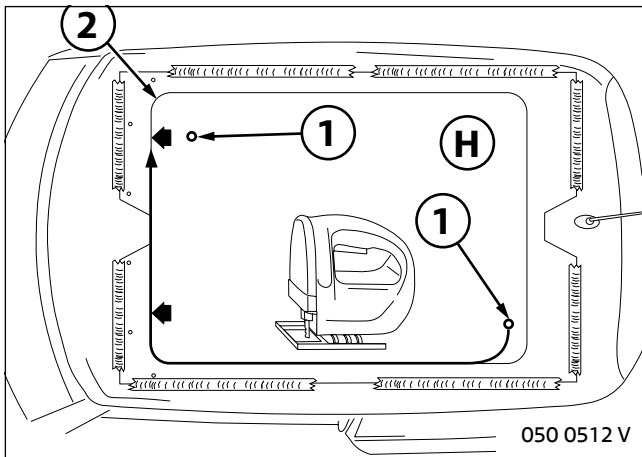
Dimension d = 200mm




Align template for outer roof panel **H**, centralise and fix it in place with adhesive tape.

Dimension a = 390 mm

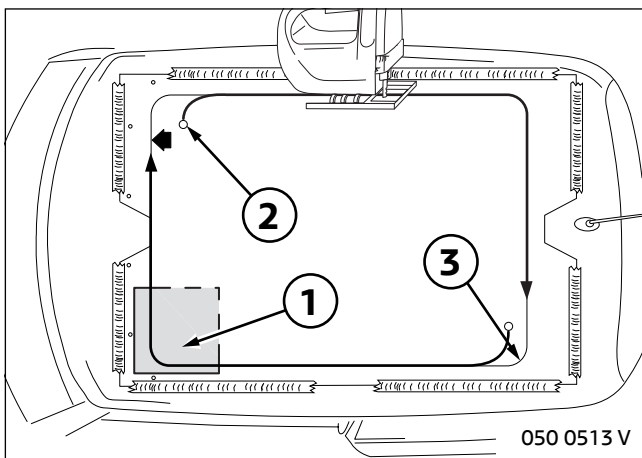
5. Installing folding sunroof



 Lay out a plastic sheet across the entire vehicle interior to collect chippings. ◀

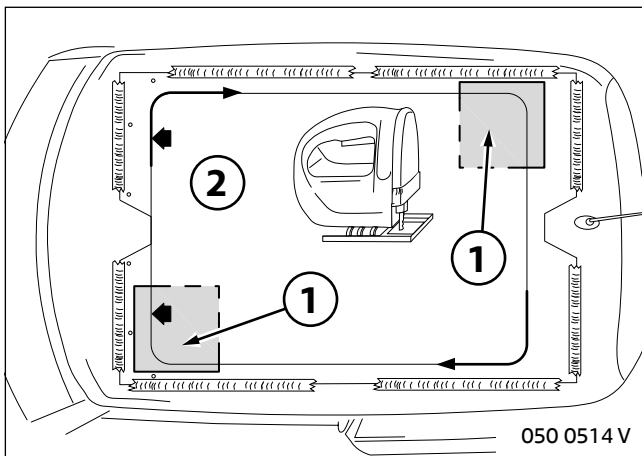
Drill holes $\varnothing 10\text{mm}$ (1) at the rear left and front right corners.

Beginning at hole (1), use a keyhole saw to cut along the cutting line up to approx. 100mm before radius (2).




Insert a piece of cardboard (approx. 200mm x 200mm) (1) at the front left.

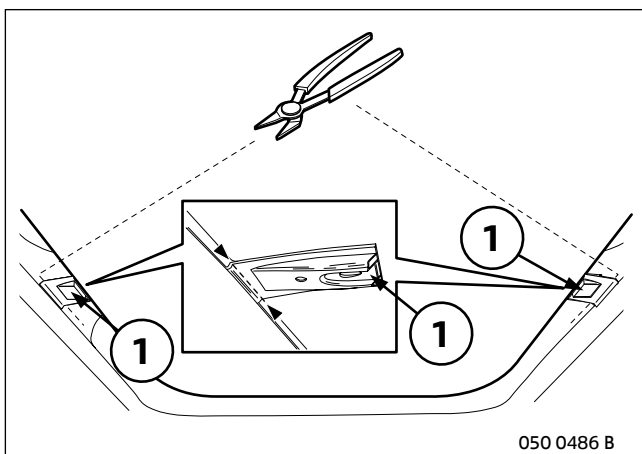
Beginning at hole (2), use a keyhole saw to cut along the cutting line up to approx. 100mm before radius (3).




Insert a piece of cardboard (approx. 200mm x 200mm) (1) at the rear right.

Completely cut out and remove roof aperture (2). Also remove the two pieces of cardboard (1).

 Deburr edges of the roof aperture and treat using the customary BMW corrosion protection measures. ◀

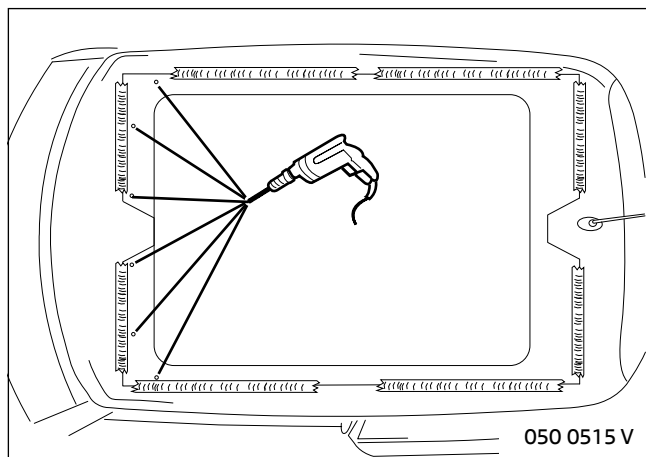


Cut out the rest of the roof brace (1).

 Take care to ensure that the outer roof panel is not damaged. ◀

Detach the interior light frame from the roof brace and place to one side.

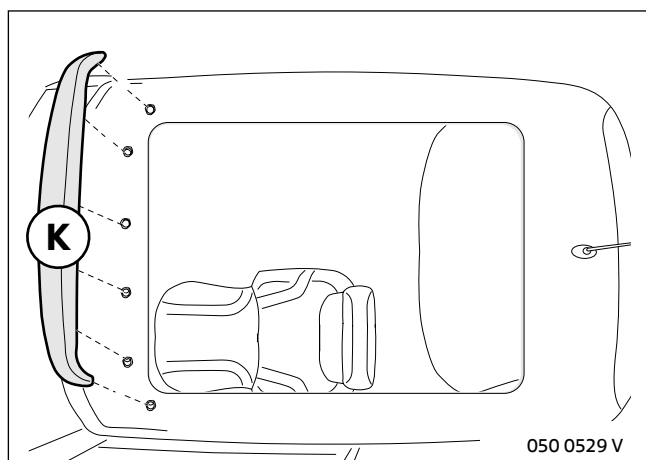
5. Installing folding sunroof



Drill 6 securing holes with \varnothing 7 mm on template for outer roof panel **H** for wind deflector **K**.

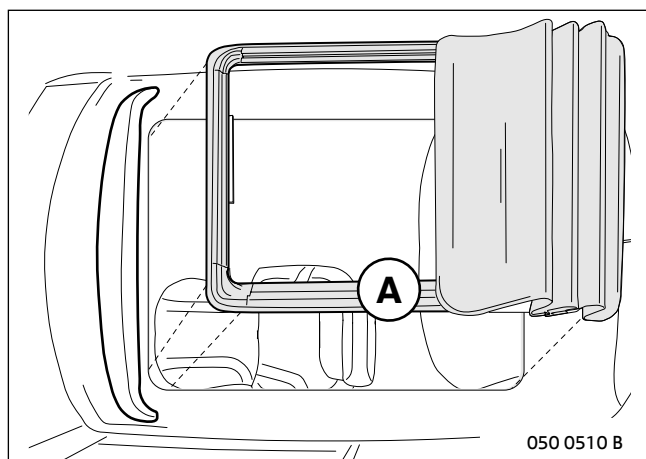
▶ Deburr the holes and treat using the customary BMW corrosion protection measures. ◀

Remove protective tape.



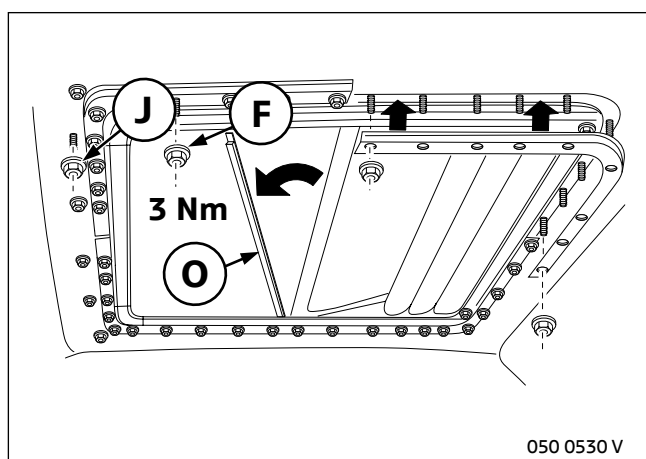
Remove protective film from double-sided adhesive tape on the underside of wind deflector **K**.

Insert wind deflector **K**, align it and press it on firmly.



Insert folding sunroof **A** and centralise.

▶ Make sure the seal is correctly seated. ◀



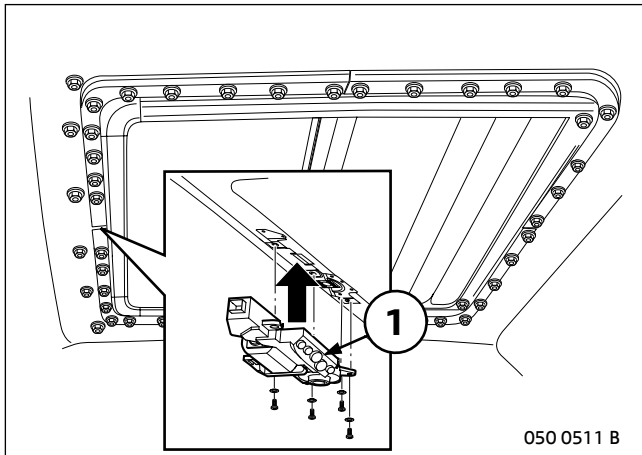
▶ The inside of the outer roof panel can be taped over with cardboard, which must be removed so that the correct seating of the rails is not affected. ◀

Screw folding sunroof **A** and rails **B**, **C**, **D** and **E** tight using nuts **F**.

Screw wind deflector **K** tight using nuts **J**.

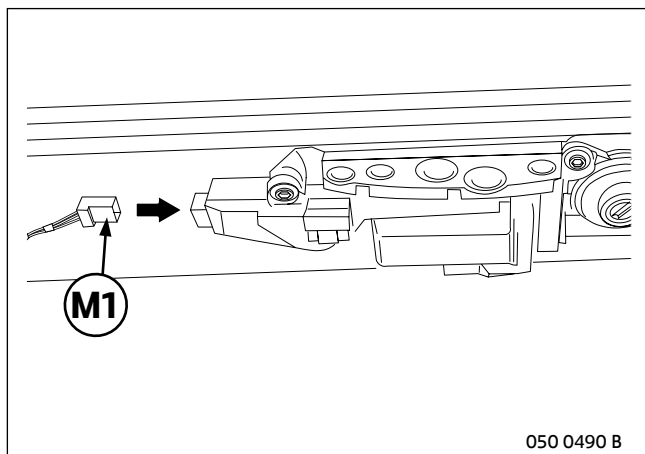
Tightening torque for all screws is 3 Nm.

5. Installing folding sunroof



Refit folding sunroof motor (1).

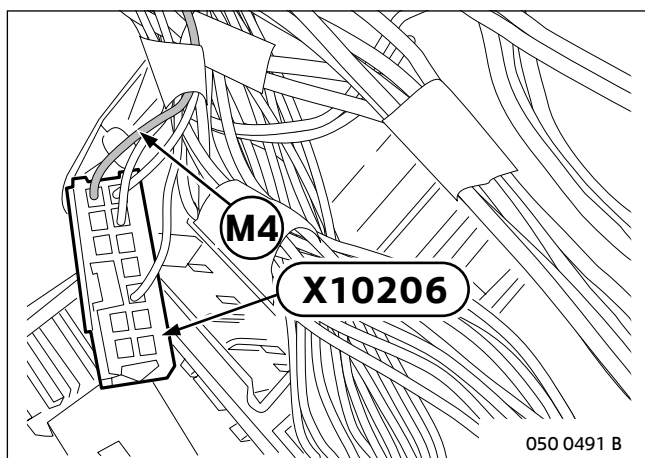
6. Installing wiring harness for folding sunroof motor and interior light



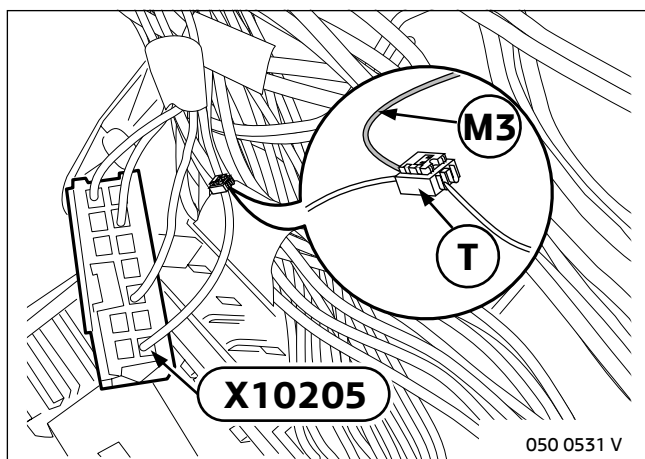
Wiring harness for folding sunroof motor

Connect junction **M1** to folding sunroof motor.

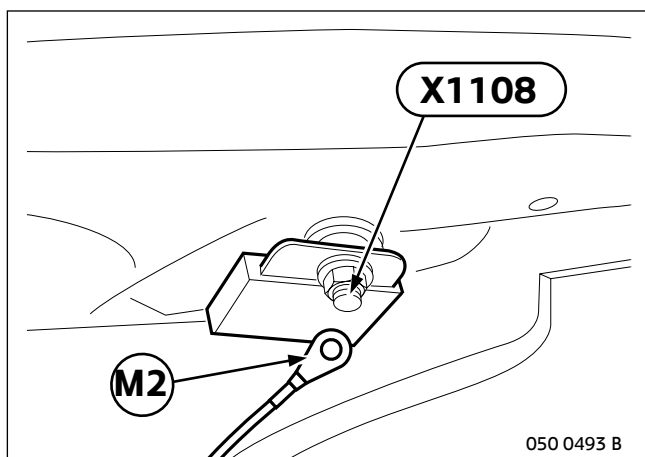
Route junctions **M2 - M4** to the left along the A-pillar and down to the fuse box.



Plug junction **M4** into **PIN 1** of the green, 12-pin socket housing **X10206**, on the fuse box.

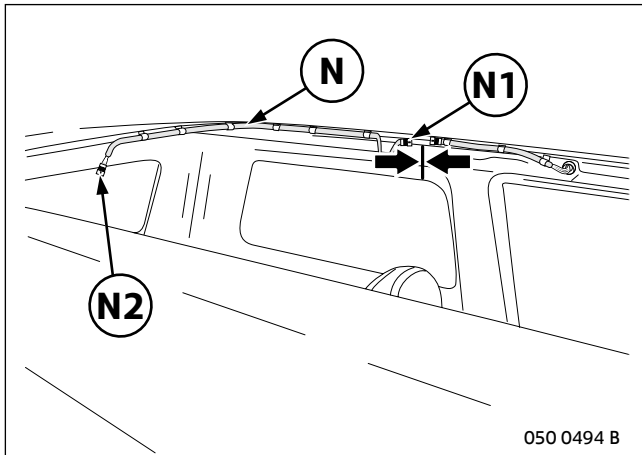


Connect junction **M3**, wire colours RT/BL, with mini-connector **T** to GN/BL wire from **PIN 12** of blue, 12-pin connector **X10205**.



Connect junction **M2** to earth point **X1108** in front part of left-hand sill.

6. Installing wiring harness for folding sunroof motor and interior light

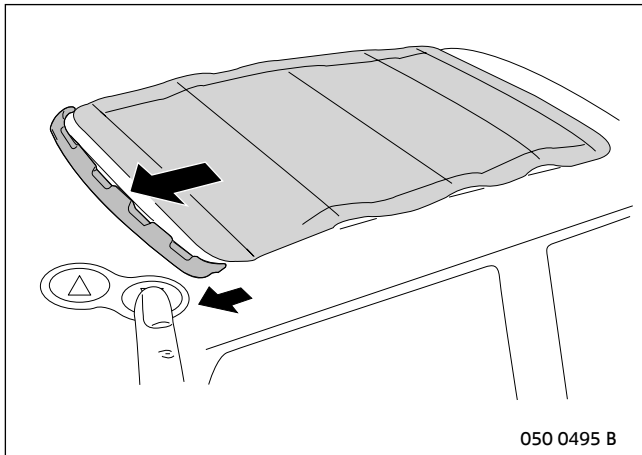


Wiring harness for interior light

Connect junction **N1** to interior light connector **X336**.

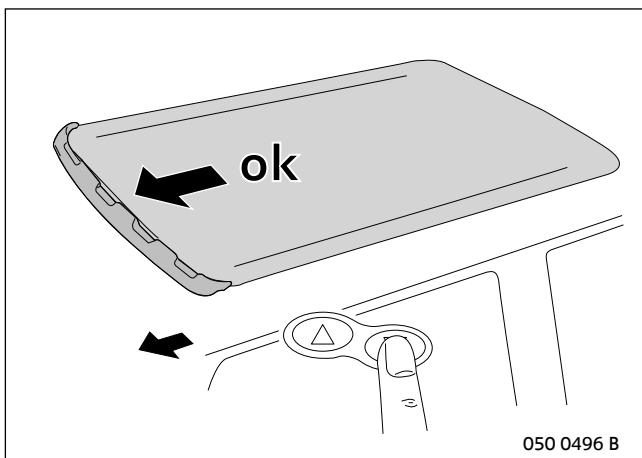
Route junction **N2** to the rear along the roof edge to the middle of the roof and fix in place with fabric adhesive tape.

7. Folding sunroof function check




Reconnect battery.

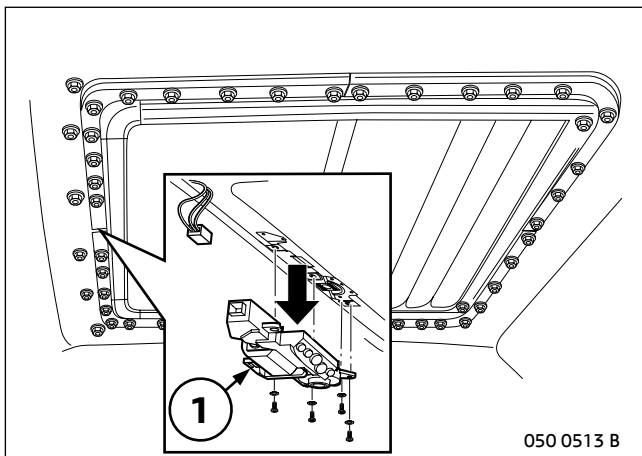
Close folding sunroof **A** with the switch.



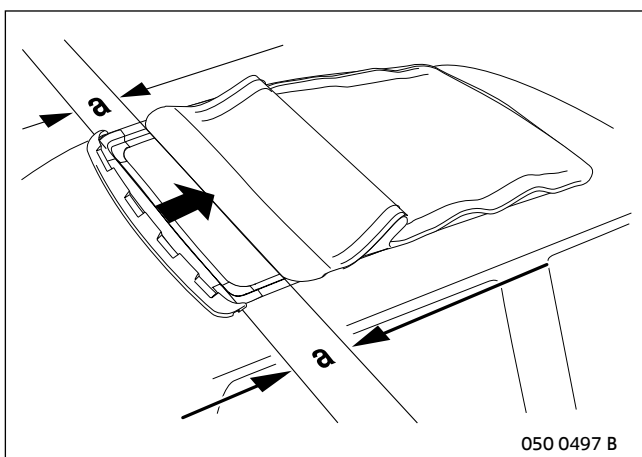
Briefly press the "open" switch once
- folding sunroof **A** opens.

Briefly press the "close" switch once
- folding sunroof **A** closes.

 If folding sunroof **A** closes completely, the function check is complete. If folding sunroof **A** does not close completely, it must be reset as described below. ◀



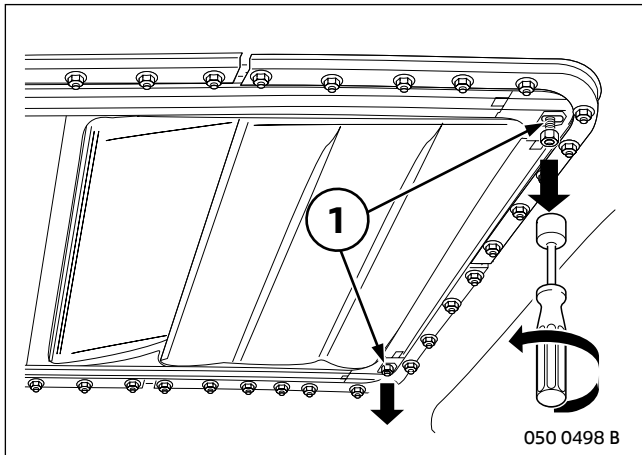
Once the function check has been completed, disconnect and remove folding sunroof motor (1).



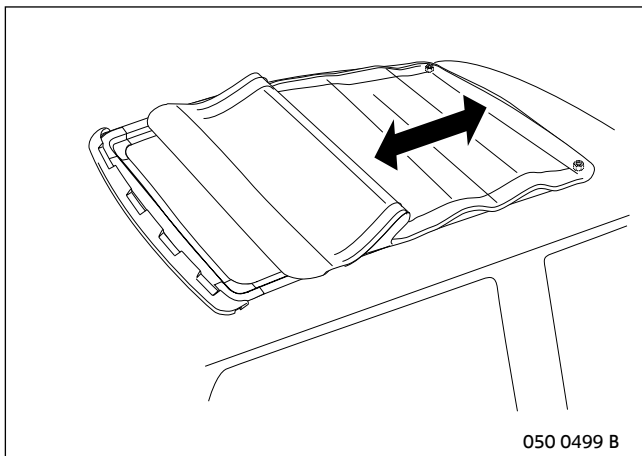
Resetting folding sunroof **A**

Open folding sunroof **A** by $a = 100 - 150\text{mm}$. To do this, briefly press "open" and to stop the opening movement, briefly press "close".

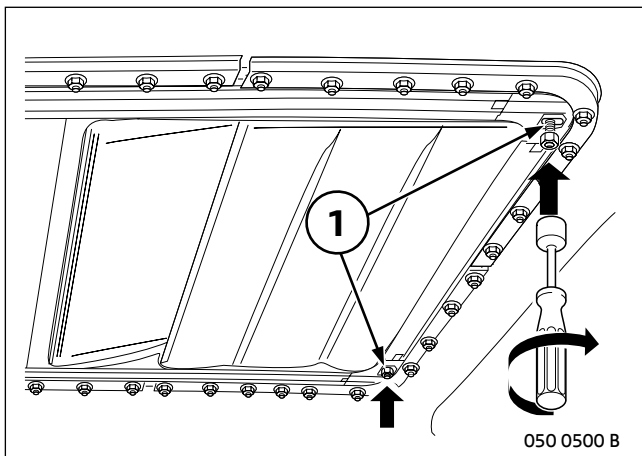
7. Folding sunroof function check



Loosen lock screws (1).

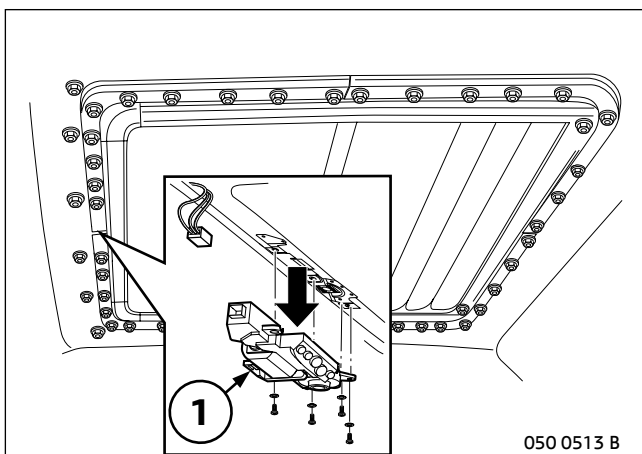


Move folding sunroof **A** to the front or rear until the folding sunroof **A** is correctly seated.



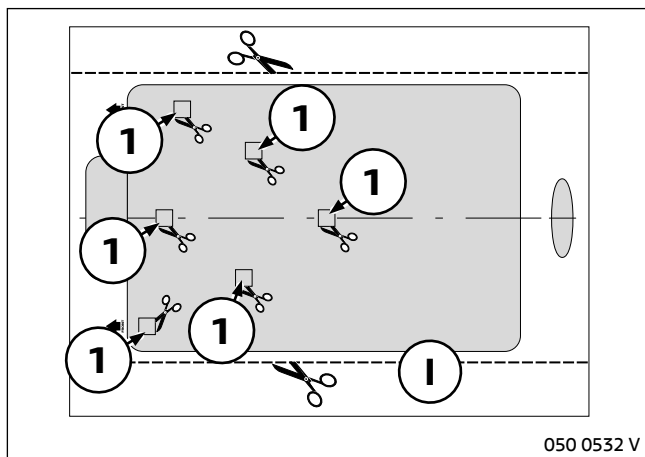
Tighten lock screws (1).

Check that folding sunroof **A** closes correctly.

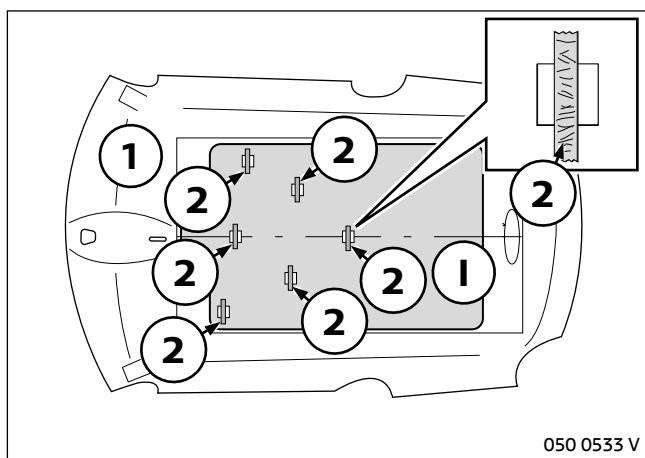


Once the function check has been completed, disconnect and remove folding sunroof motor (1).

8. Final assembly

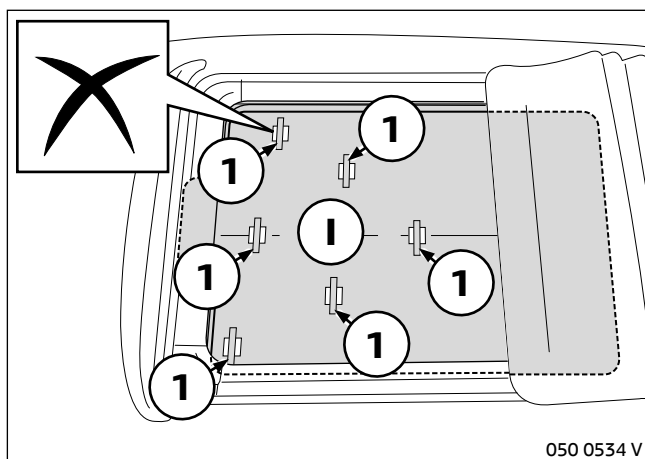


Cut out template for headliner I along the dotted line. Also cut out holes (1) in template for headliner I.

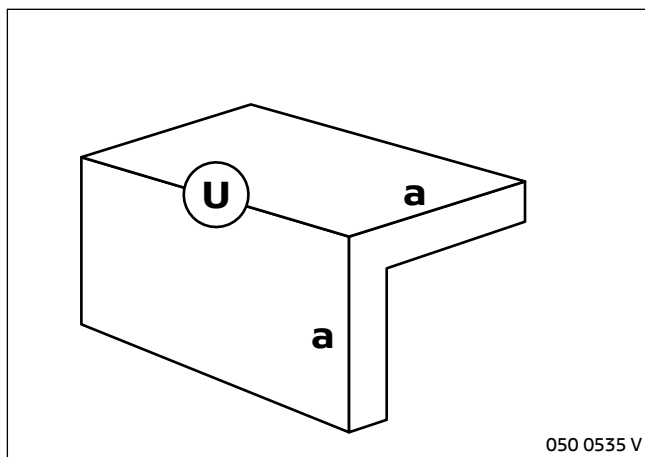



Provisionally secure template for headliner I with adhesive tape (2) on the top of headliner (1).

Provisionally install headliner (1). To do this, fit the handles at the rear and the expander rivet at the front.

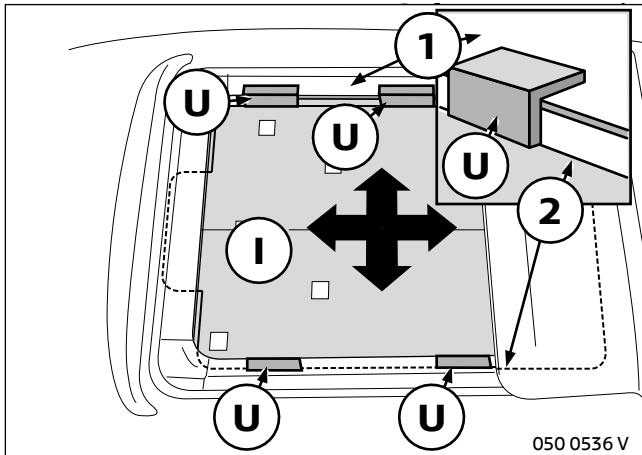


Remove adhesive tape (1) from template for headliner I again.

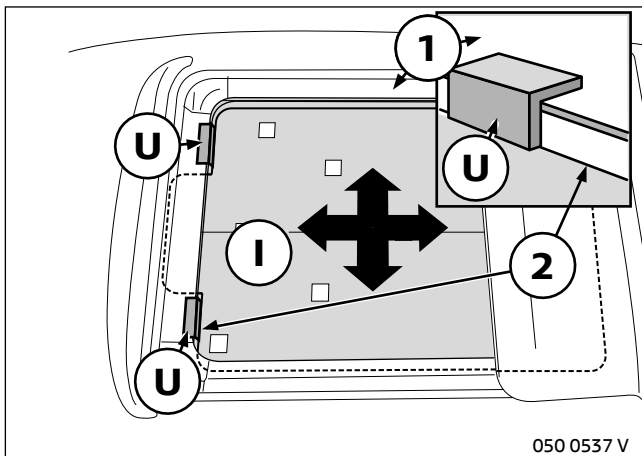


 Both edges of centring angle U have a length of $a = 30\text{mm}$. ◀

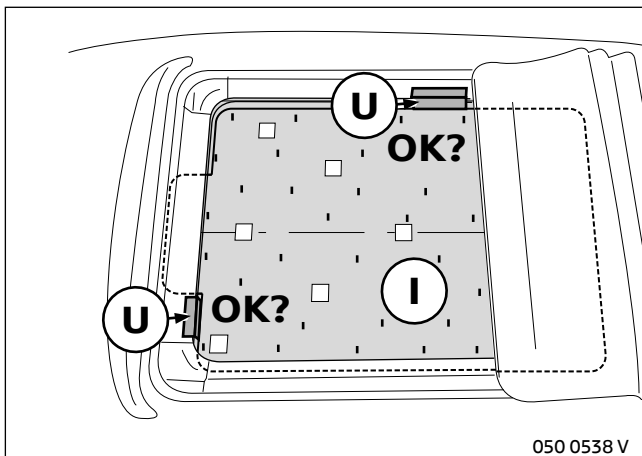
8. Final assembly



Place centring angles **U** (4 pcs) on folding sunroof frame (1) and template for headliner **I** on centring angles **U** on line (2), as illustrated.



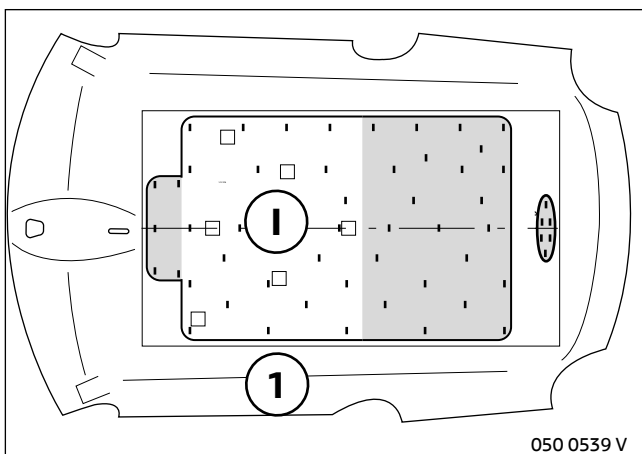
Place centring angles **U** (2 pcs) on folding sunroof frame (1) and template for headliner **I** on centring angle **U** on line (2) as illustrated.



Before tacking template for headliner **I** check again with centring angle **U** that template for headlining **I** is correctly located on the headlining.

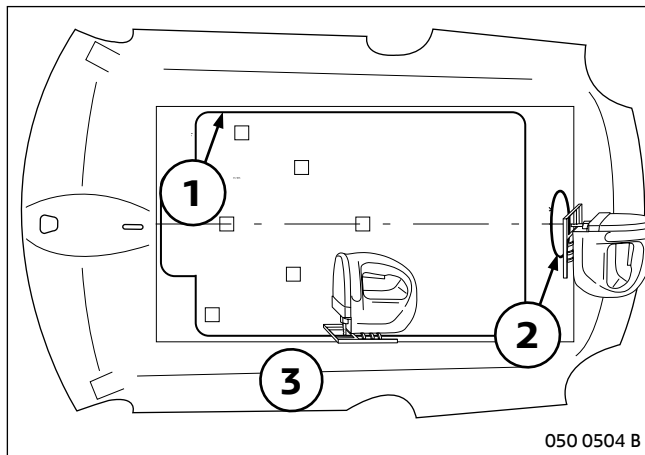
If the position is correct, template for headliner **I** can be tacked onto the headliner.

Remove the headliner again.



Tack template for headliner **I** onto the shaded area of the headliner (1).

8. Final assembly

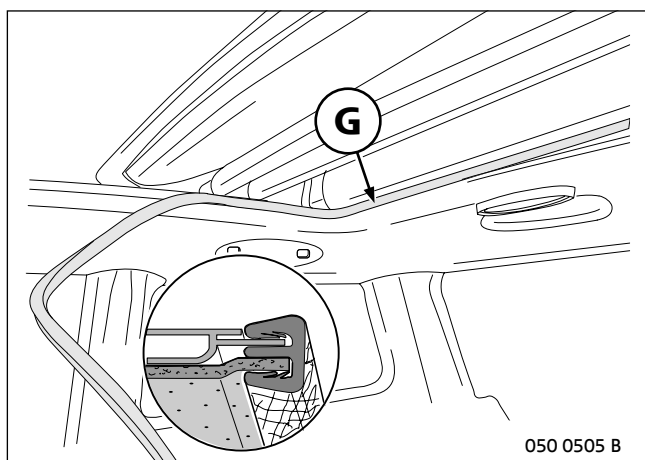


- ▶ Carefully cut along the cutting edges. ◀
Cut out the apertures for folding sunroof (1) and interior light (2).

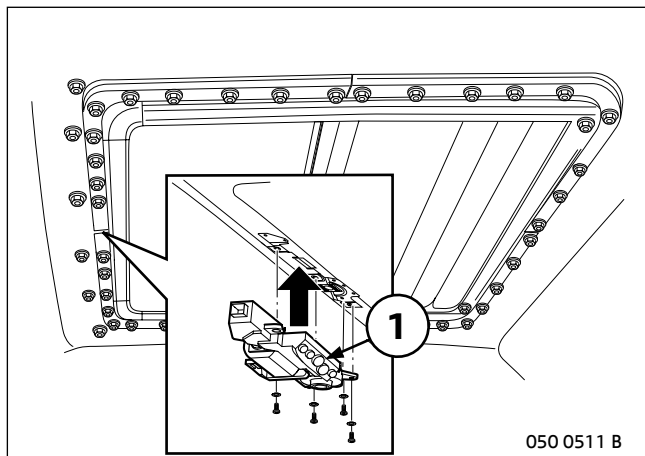
Fit interior light with frame to headliner (3).

Preposition headliner (3) in the vehicle and connect up interior light.

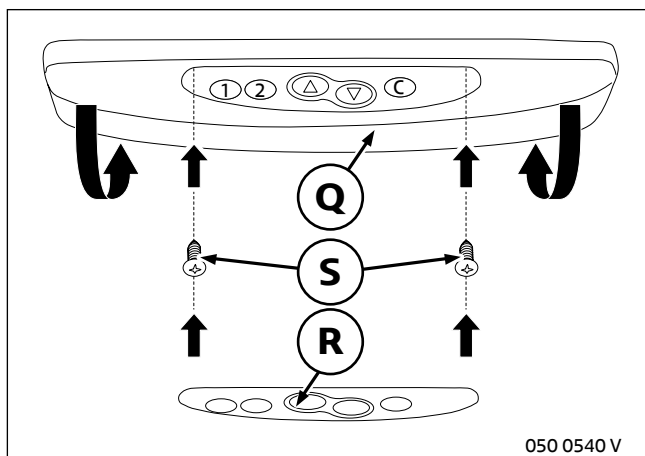
Completely install headliner (3).



Starting in the middle, route weatherstrip **G** along the inside edge of the folding sunroof and headlining aperture.



Refit and connect folding sunroof motor (1).




Clip in trim piece for folding sunroof motor **Q** and secure with two screws **S**.

Clip in switch trim **R**.

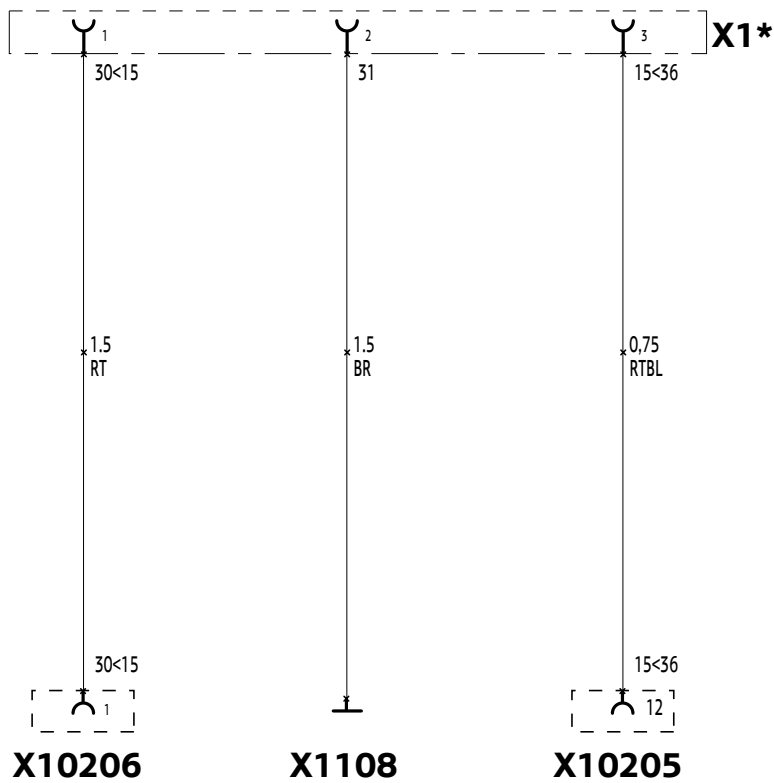
9. Finishing off and encoding

The retrofit system does not require encoding.

- Reconnect battery
- Reassemble vehicle in reverse order of removal.
- Perform quick test
- Perform function test

 Before performing the quick test, reassemble the vehicle to ensure that no faults are recorded due to components that may be missing. ◀

10. Schematic circuit diagram



050 0507 B

Key

- X1108** Earth point
- X10206** Green connector on fuse box
- X10205** Blue connector on fuse box
- X1*** Connector on folding sunroof motor

All designations marked * only apply to these installation instructions or this circuit diagram

Wire colours

| | |
|----|--------|
| BL | Blue |
| BR | Brown |
| GE | Yellow |
| GN | Green |
| GR | Grey |
| OR | Orange |
| RT | Red |
| SW | Black |
| VI | Violet |
| WS | White |