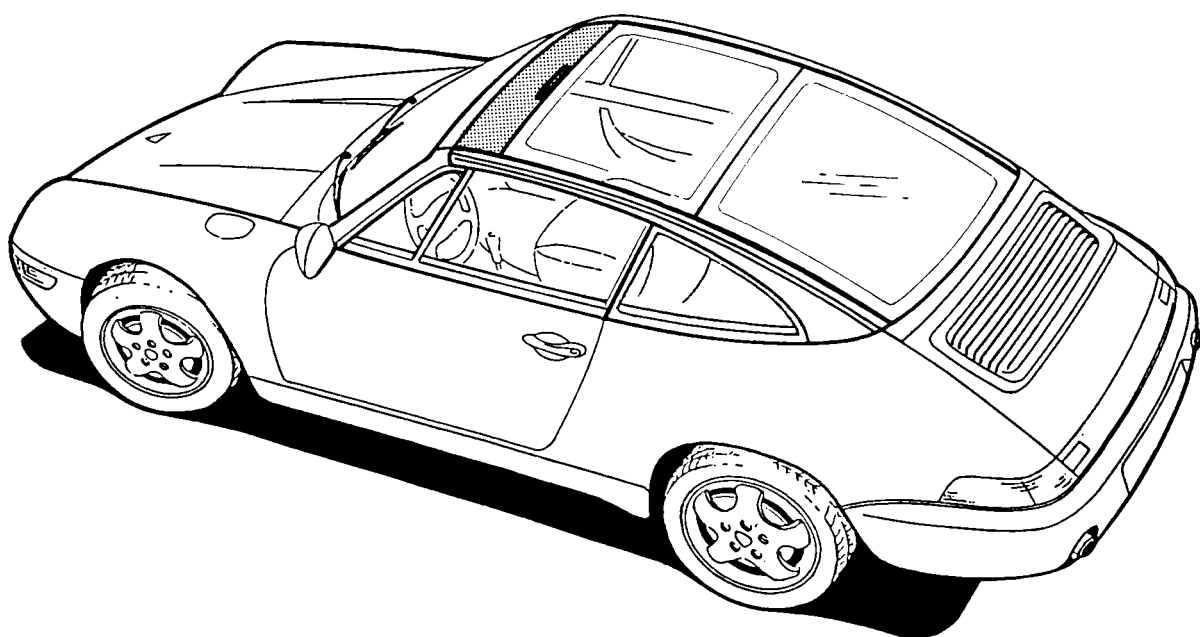
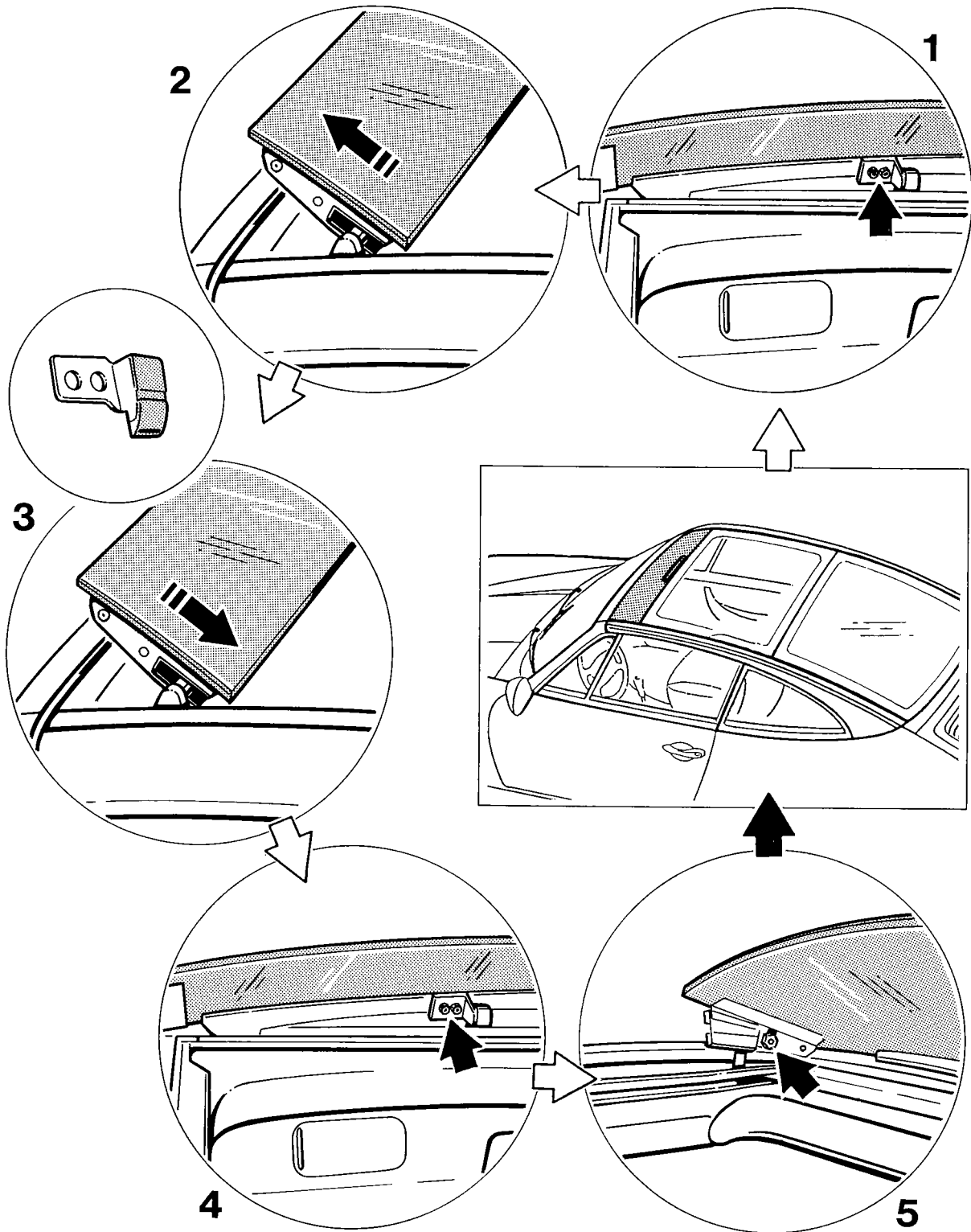


60 33 19 Removing and installing wind deflector



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Removing and installing wind deflector



## Removing and installing wind deflector

### Removal

Open the wind deflector and the glass roof!

No.	Operation	Instructions
1	Remove wind deflector.	Unscrew fastening screws (Torx M5 x 12) of the wind deflector.
2	Take wind deflector off vehicle.	Tilt the wind deflector backwards and lift it forwards out of the guides.

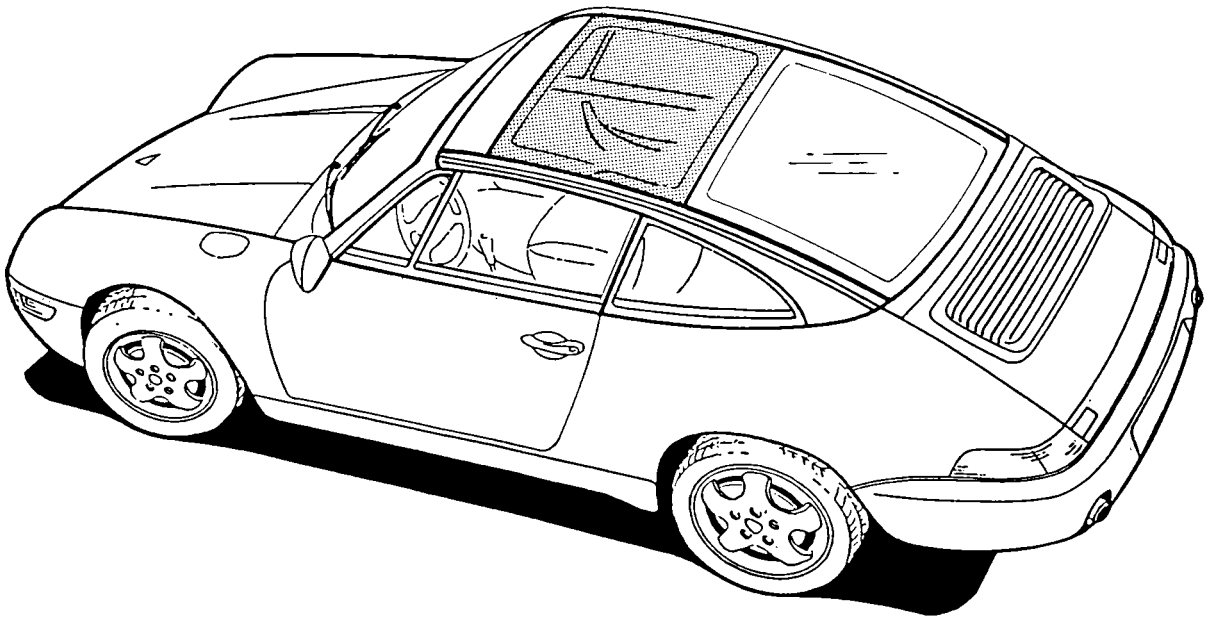
### Installation

No.	Operation	Instructions
3	Place wind deflector in vehicle.	Before installing the wind deflector, check the flocking of the slides for wear. If the flocking is worn, replace the slides. Insert slides. Insert wind deflector in guides from the front.
4	Fasten wind deflector in position.	Fasten wind deflector on the sliding pieces with Torx screws M5 x 12. <b>Tightening torque 5.5 Nm (4 ftlb).</b>

### Adjustment

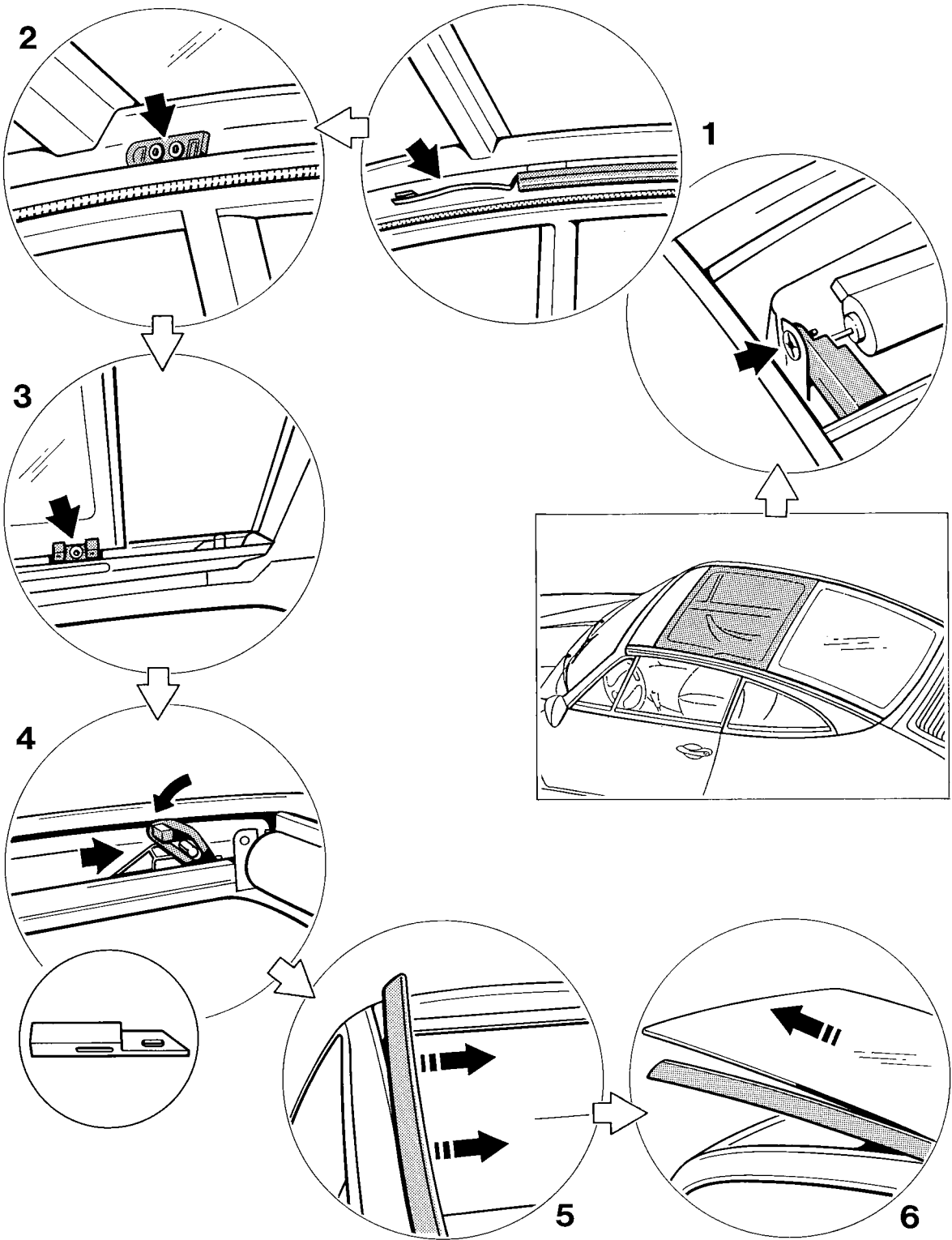
No.	Operation	Instructions
5	Adjust wind deflector.	Loosen fastening nuts at left and right. Adjust the wind deflector in the slots so that it is flush with the (closed) lid for the sunroof and the cover strips. Tighten the fastening nuts. <b>Tightening torque 5.5 Nm (4 ftlb).</b>

60 40 19 Removing and installing cover for sunroof



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Removing and installing cover for sunroof

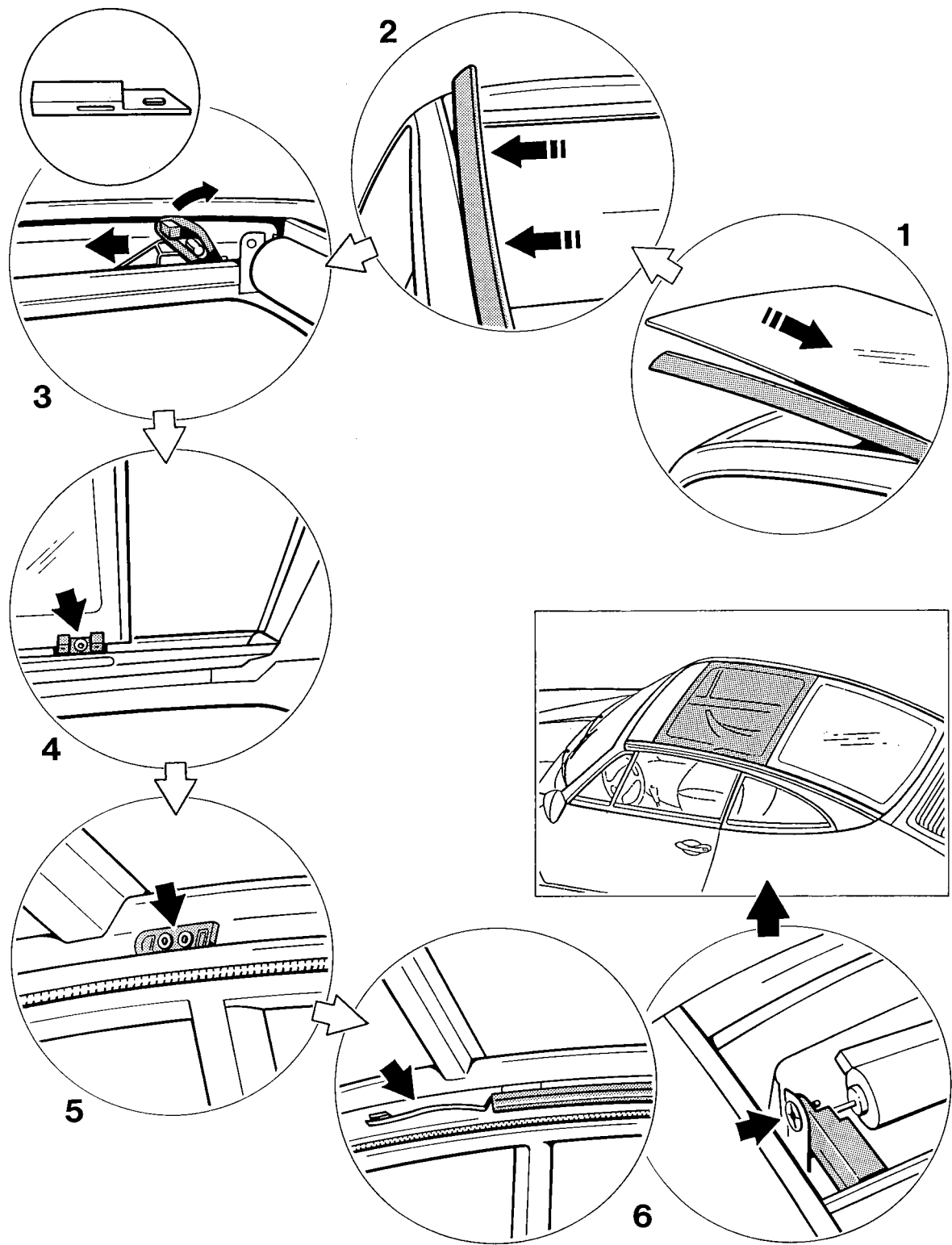


## Removing and installing cover for sunroof

**Before removing the cover for the sunroof, the cowl panel trim, the rear wall trim panel, the upper B-pillar trim, the roof rail trim and the wind deflector must all be partially removed.**

No.	Operation	Instructions
1	Remove guide rails for sun blind.	Unclip the shafts of the guide rails for the sun blind at the front. Unhook the tensioner springs at the rear. Turn the guide rails down and release them from the hooks.
2	Release cover for sunroof at rear.	Close lid for the sliding roof and unscrew the rear Torx screws M5 x 10. Remove the rear axle plates.
3	Release cover for sunroof at rear.	Open lid for the sliding roof by approx. 20 mm and unscrew the front Torx screws M 5 x 10. Remove the front axle plates
4	Retract tilting levers.	Insert special tools 9587 into the left and right guide rails and push them forwards using a screwdriver until the tilting levers are retracted.
5	Pull roof rail cover strips off partially.	Carefully pull the roof rail cover strips off the roof rails as far as the cover for the sunroof is open.
6	Take cover for sunroof off roof module.	Carefully take the cover for the sliding roof out to the front at an angle between the roof rails and the cover strips.

Installing cover for sunroof



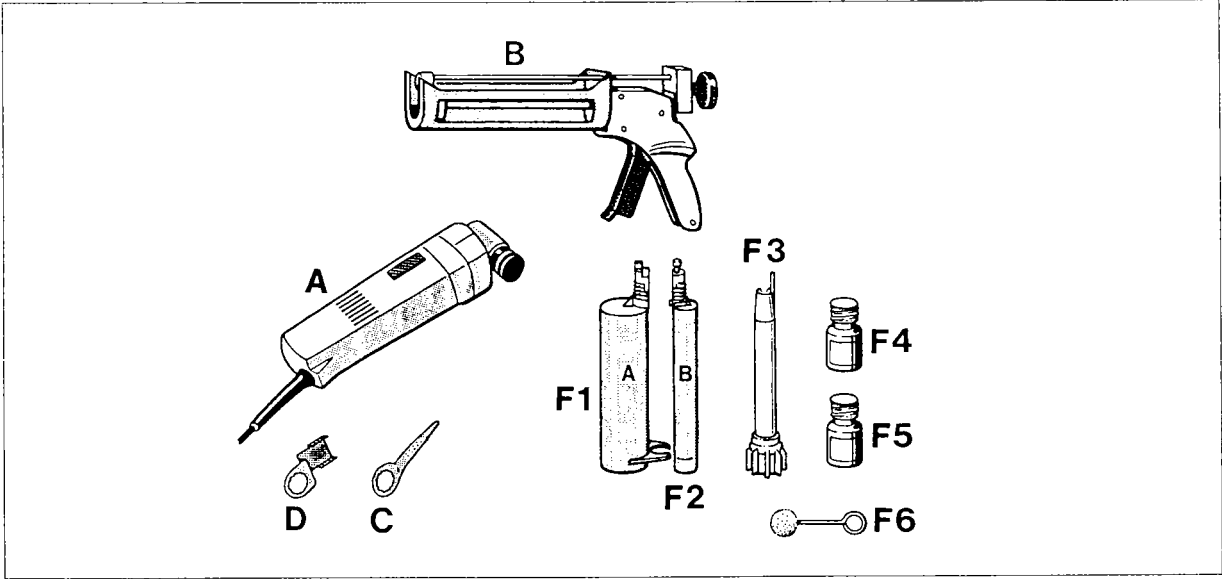
## Installing cover for sunroof

No.	Operation	Instructions
1	Insert cover for sunroof into roof assembly.	Carefully insert the cover for the sunroof into the guide rails from the front at an angle between the roof rails and the cover strips.
2	Clip on roof rail cover strips.	Carefully clip the roof rail cover strips back onto the spot-welded flanges of the roof rails.
3	Extend tilting levers.	Push special tools 9587 at the left and the right back using a screwdriver and then take them out of the guide rails.
4	Insert and fasten axle plates at rear.	Place the rear axle plates on the tilting levers and screw the cover for the sliding roof into place using M 5 x 12 Allen screws. <b>Tightening torque: 5.5 Nm (4.0 ftlb.)</b>
5	Insert and fasten axle plates at front.	Place the front axle plates on the tilting rails and screw the cover for the sliding roof into place using M 6 x 12 Allen screws. <b>Tightening torque: 8.3 Nm (6.0 ftlb)</b> Close the cover for the sliding roof and adjust it in the slots of the front and rear axle plates so that the cover for the sunroof is flush with the rear window pane and the roof rail cover strips.
6	Install guide rails for sun blind.	Hook guide rails into guide hooks and insert tensioner springs at the rear. Insert the sun blind into the guide rails, clip the shafts of the rails into the guide rails and secure them in place.



60 06 19     Removing and installing roof assembly

The following tools and materials are needed for removing and installing the roof assembly



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A	Cutting tool	VAG 1561	e.g. VW AG service equipment sales
B	9586 bonding gun	000.721.958.60	Porsche parts service
C	Straight knife	6.39.03.176.01.5	e.g. C & E FEIN GmbH & Co.
D	Scraper	6.39.03.113.02.2	Postfach 172 70176 Stuttgart
F	Adhesive set	000.043.203.42	Porsche parts service

Contents of adhesive set:

- F 1

=

Component A cartridge
- F 2

=

Component B cartridge
- F 3

=

Mixing tube
- F 4

=

Primer
- F 5

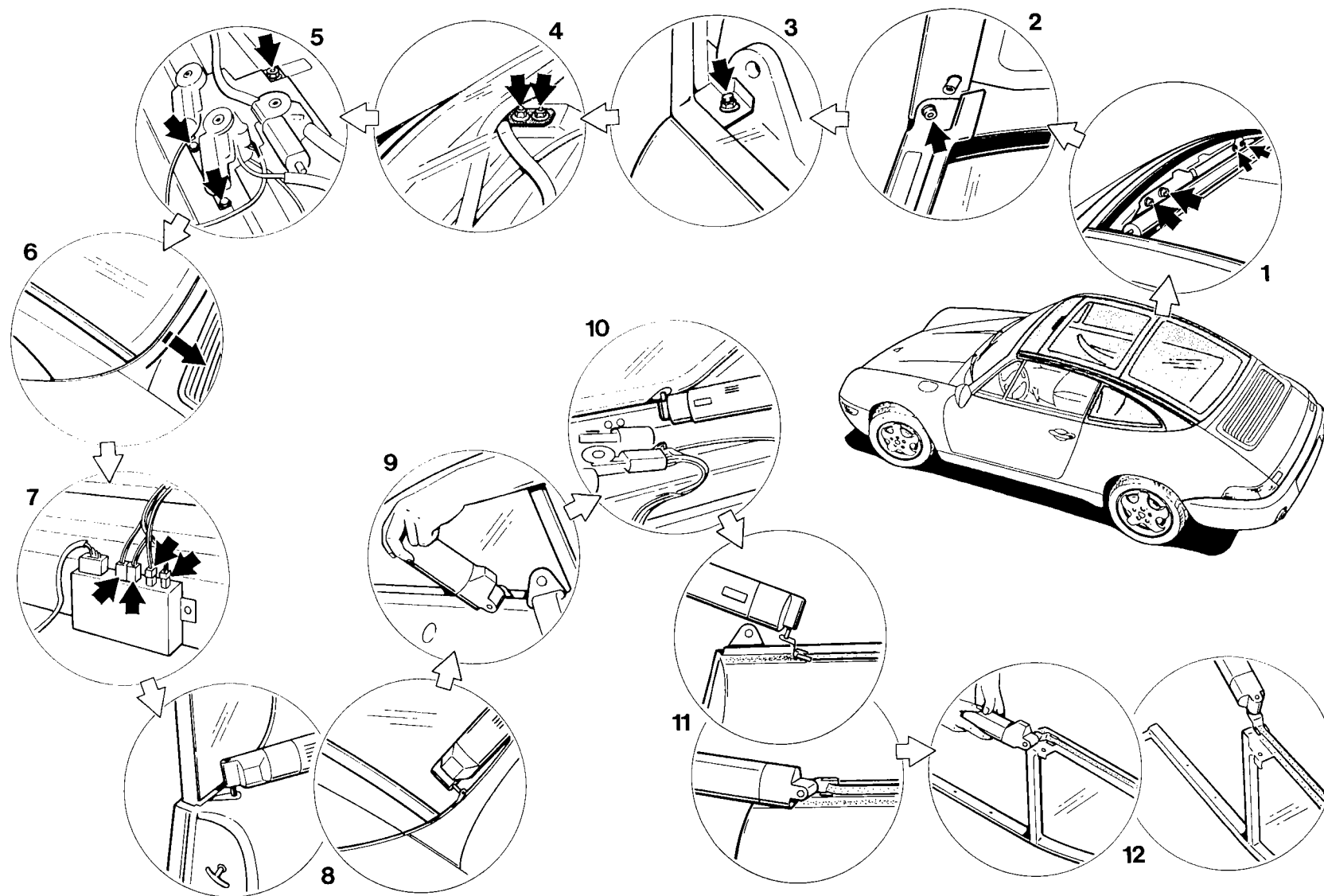
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Activator (solvent cleaner)
- F 6

=

Swab

## Removing and installing roof assembly



## Removing roof assembly

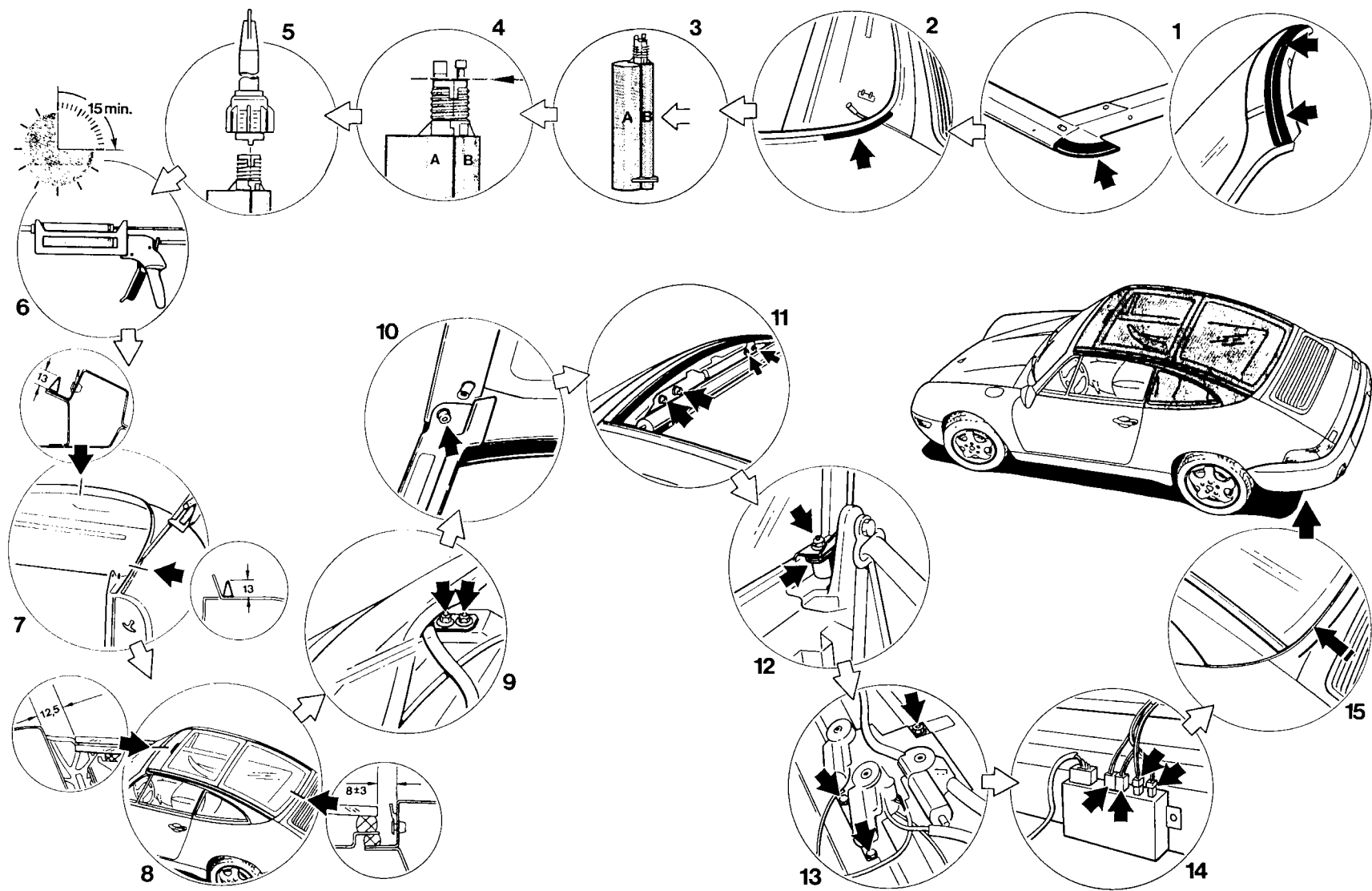
Before removing the assembly, the cowl panel trims, the rear wall trim panel, the B-pillar trims, the roof rail trims, the door seals, the rear side trim panels, the rear side strips, the wind deflector and the gusset plate must all be removed.

No.	Operation	Instructions
1	Unscrew front top fastening screws.	Completely remove the screws fastening the front of the roof assembly to the cowl panel at the top.
2	Unscrew lower front fastening screws.	Completely remove the screws fastening the front of the roof assembly to the cowl panel at the bottom.
3	Remove B-pillar fastening nuts.	Remove the nuts fastening the roof assembly to the B-pillars.
4	Remove rear wall fastening nuts.	Remove the nuts fastening the roof assembly to the rear wall.
5	Remove mounting plate for drive motors.	Unscrew the fastening nuts and bolts of the mounting plate for the drive motors.
6	Pull off cover strip.	Pull out the cover strip between the rear window pane and the rear center body part.
7	Unplug electrical connectors.	Unplug the connectors to the drive motors from the control unit.
8	Separate assembly from outside.	Working from the outside with the knife, separate the roof assembly from the body between the left B-pillar and the right B-pillar via the central rear part of the body.
9	Separate assembly from inside.	Working with the knife between the frame plate and the body, separate the roof assembly from the body from the inside.

No.	Operation	Instructions
10	Separate assembly from central rear part of body from inside.	Lift the assembly slightly at the front and separate the assembly from the body, working with the knife between the spot-welded flange on the central rear part of the body and inside plate of the rear window pane. Lift the assembly off the vehicle.
11	Remove adhesive from body.	Remove adhesive from the section of the body running from the left B-pillar via the central rear part to the right B-pillar using the scraper until there is a uniform layer of adhesive covering the area.
12	Remove adhesive from assembly.	Using the scraper, remove the adhesive until a uniform layer of adhesive is left on the entire adhesive area.

Installing roof assembly

## Installing roof assembly





## Installing roof assembly

Before the assembly is installed, the adhesive areas of the body and the assembly must be cleaned with cleaning solution.

Caution: no traces of the cleaning solution must be left on the body or the assembly. Primer must be applied to any damage to the paintwork on the parts of the body and assembly which are not visible following installation.

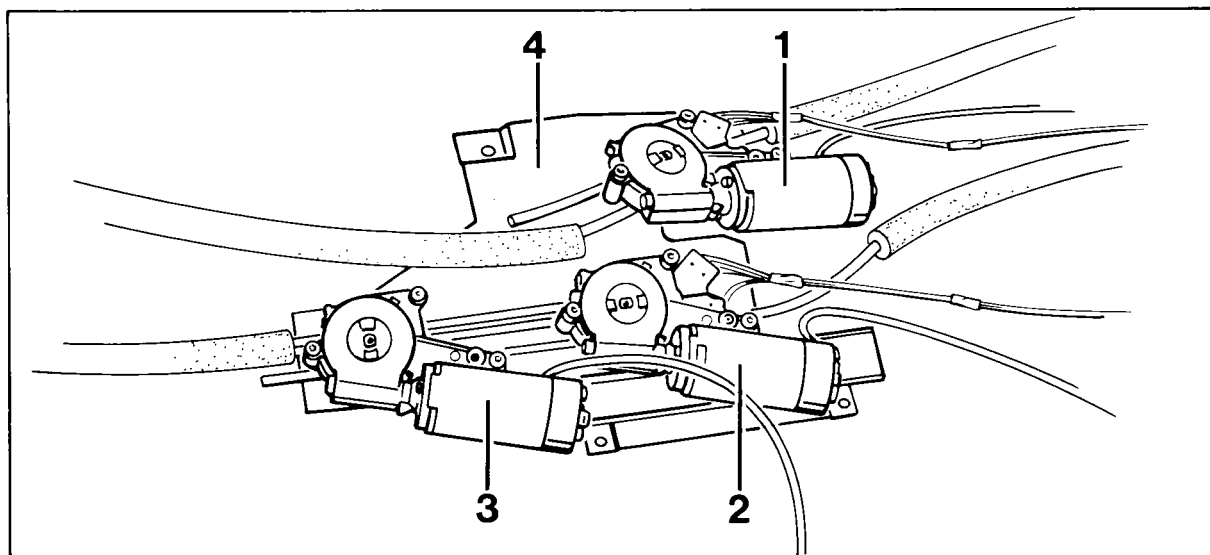
No.	Operation	Instructions
1	Check rubber seal	Check the rubber seal between the body at the front and the roof assembly for wear. If necessary, replace the seal.
2	Insert cover strips between roof rails and rear side parts.	Place the roof assembly on the body to mark the edges. Mark the position of the edges of the roof rails on the rear side parts and remove the roof assembly from the body. Take the protective backing off the cover strips. Bond the cover strips to the marked areas of the rear side parts at the left and right.
	Activate adhesive areas.	Activate the adhesive areas on the body and the roof assembly (F5). <b>Caution:</b> Allow the parts at least 10 minutes to air!
3	Clip cartridges with components A and B together.	Clip the component B cartridge to the component A cartridge.
4	Open assembled cartridge.	Cut the closures of the two cartridges off level using a knife.
5	Install mixing tube.	Push mixing tube (F3) into the groove on the assembled cartridge and screw it into place using the union nut.
6	Place cartridges in bonding gun.	Place the assembled cartridge with mixing tube in the bonding gun.

**Caution: observe open time of 15 minutes!**

**The open time is the time in which the adhesive must be applied and the roof assembly must be positioned on the body.**

No.	Operation	Instructions
7	Apply adhesive to body.	2 Apply a triangular bead of adhesive, <b>height 13 mm</b> , to the rear side parts and the rear central part of the body. When applying the adhesive, you must make sure that it overlaps.
8	Place roof assembly on body.	As you place the roof assembly on the body, insert the drain hoses of the roof assembly into the drain hoses of the rear central part of the body. Align the roof assembly in accordance with the dimensions given on the illustration.
9	Fasten roof assembly in place at rear.	Screw the roof assembly to the rear wall using the M 6 fastening nuts — <b>tightening torque 8 Nm (6.0 ftlb)</b> .
10	Fasten roof assembly at front (lower mount).	Screw front lower part of roof assembly to cowl panel using M 8 x 16 pan head screws and washers — <b>tightening torque 23 Nm (17 ftlb)</b> .
11	Fasten roof assembly at front (upper mount).	Screw front upper part of roof assembly to cowl panel using M 6 x 16 Allen screws with washers — <b>tightening torque 9.7 Nm (7.0 ftlb)</b> .
12	Fasten roof assembly to B-pillar.	Even out gap between roof assembly mounting point and B-pillar using spacers. Fasten the roof assembly to the B-pillars using M 6 hexagonal nuts — <b>tightening torque 9.7 Nm (7.0 ftlb)</b> .

No.	Operation	Instructions
13	Attach mounting plate for drive motors.	Hook the mounting plate into the fixed bolts at the rear. Align the mounting plate on the mounts on the rear wall. Fasten mounting plate in position on the rear wall using M 5 x 10 hexagonal bolts with washers — <b>tightening torque 9.7 Nm (7.0 ftlb)</b> — and M 6 nuts — <b>tightening torque 9.7 Nm (7.0 ftlb)</b> .
14	Establish electrical connections.	Establish electrical connections between drive motors and control unit.
15	Install cover strip.	Clip the cover strip between the rear window pane and the rear central part of the body into the retaining bracket.

**60 14 15 Basic setting of drive motors****Drive unit**

- 1 - Electric motor for sun blind
- 2 - Electric motor for wind deflector / cover for sunroof
- 3 - Electric motor for wind deflector / cover for sunroof
- 4 - Mounting plate

**Motor for sun blind****Note**

The electric motor for the sun blind operates the left and right cable at the same time. A microswitch stops the motor when the sun blind has reached the fully open or closed position.

**Basic setting of sun blind operating cable relative to electric motor**

1. Push the left and right sun blind operating cables forwards up to the stop for the sun blind in the guide rail.
2. Connect the electric motor (1), which must not be installed at the time, to the control unit and hold the electric motor.
3. Press the sun blind rocker switch until the blind is completely rolled up and the motor is stopped.
4. Screw the motor to the mounting plate (4). The Torx T 25 M 5 x 28 mounting bolts must always be replaced as they are micro-encapsulated. Tightening torque: 3 Nm (2 ftlb).

**Motor for wind deflector / cover for sunroof****Note**

The two electric motors for the wind deflector/cover for sunroof are operated at the same time and are mechanically interlocked by the left and right operating cables. When the completely open or closed position is reached, the two motors are stopped by a microswitch on motor (2).

**Caution!**

During work on the drive system, the two electric motors (2 and 3) must **not** be removed from the support panel at the same time. One of the motors should be left on the panel to hold the operating cables in position and to prevent displacement from left to right. If only one motor (2 or 3) is mounted on the support panel, this motor must **not** be operated electrically. The operating cables are not guided by the gear wheel on the motor which has been removed and could therefore be damaged.

**Basic setting of wind deflector / sunroof cover operating cables relative to electric motors**

1. The left and right operating cables must be moved to the closed position of sliding roof cover and wind deflector (roof closed). The slide at the front, which is connected to the cables, must touch the bearing supports at the left and right sides.
2. The two electric motors (2 and 3) must not be installed at this stage. The electric motor (1) for the blind must be connected to the control unit.
3. Connect motor (2, with microswitch) to control unit and hold motor.

4. Operate the rocker switch for the sliding roof cover / wind deflector until the sliding roof cover and wind deflector are in their final position (operate pushbutton four times, open and close roof twice) and the motor is stopped.
5. The electric motors (2 and 3) and the operating cables are now in the closed position.  
Screw the drive motors (2 and 3) to the mounting plate (4). The Torx T 25 M 5 x 28 mounting bolts must always be replaced as they are microencapsulated.  
Tightening torque: 3 Nm (2 ftlb).

**Note**

In emergency operation, the electric motors are only disconnected by unhooking the plastic lugs. It is only necessary to reset the operating cables if the two electric motors or operating cables have been removed.

## 60 06 Emergency operation of roof assembly

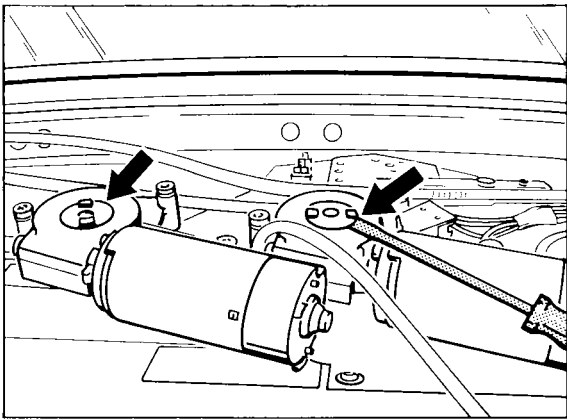
### Note

In the case of problems with the electric drive system, the wind deflector, the sun blind and the cover for the sunroof can also be closed manually.

### Sun blind

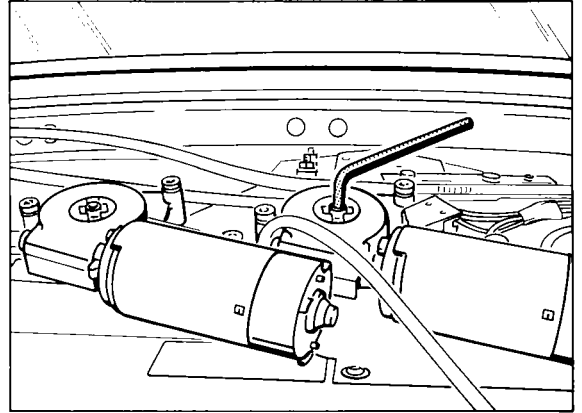
1. Loosen rear wall trim panel (4 screws) and pull it forward carefully until the motor is accessible.
2. Carefully unhook the red plastic lug from the motor using a screwdriver (this disconnects the motor from the operating mechanism).

The illustration shows electric motor (2).



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3. Turn the operating shaft anticlockwise using an offset screwdriver (4 mm Allen key) until the blind is rolled up.



2286-60

4. Push plastic lug back onto motor and fasten rear wall trim panel in place.

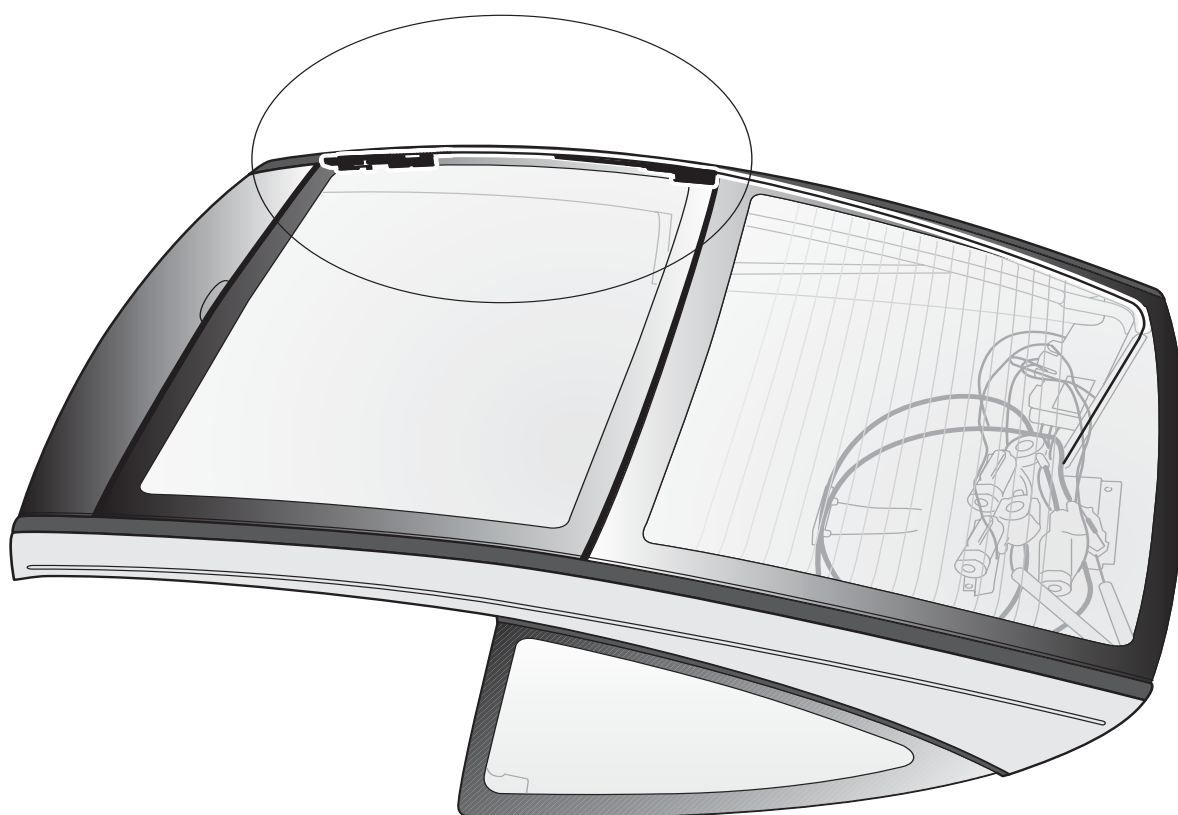
### Wind deflector / cover for sunroof

1. The same procedure also applies to the wind deflectors /sunroof covers.
2. The red plastic lugs must be unhooked from the electric motors (2 and 3). This disconnects the motors from the operating mechanism.
3. The operating shaft on electric motor 2 (with microswitch) must be turned anticlockwise using an offset screwdriver (4 mm Allen key) until the roof and the wind deflector are fully closed.
4. Push plastic lugs back onto motors and fasten rear wall trim panel in place.

As of model year 1996

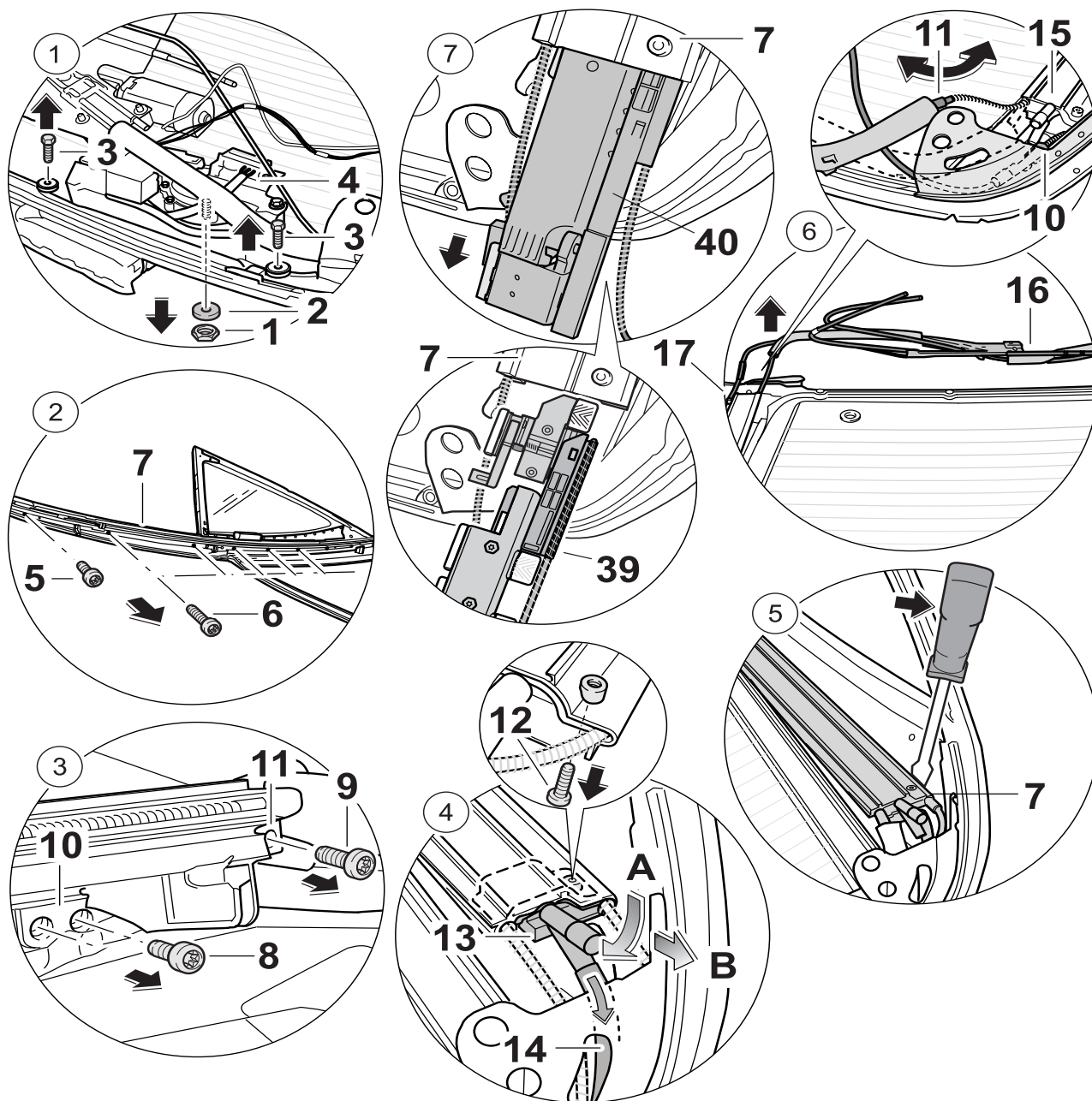
## Replacing powered sunroof mechanism (drive mechanism)

To ensure the functioning of the drive mechanism, the replacement parts contained in the scope of replacement parts for the "powered sunroof mechanism" should always be replaced!





# Removing powered sunroof mechanism (drive mechanism)



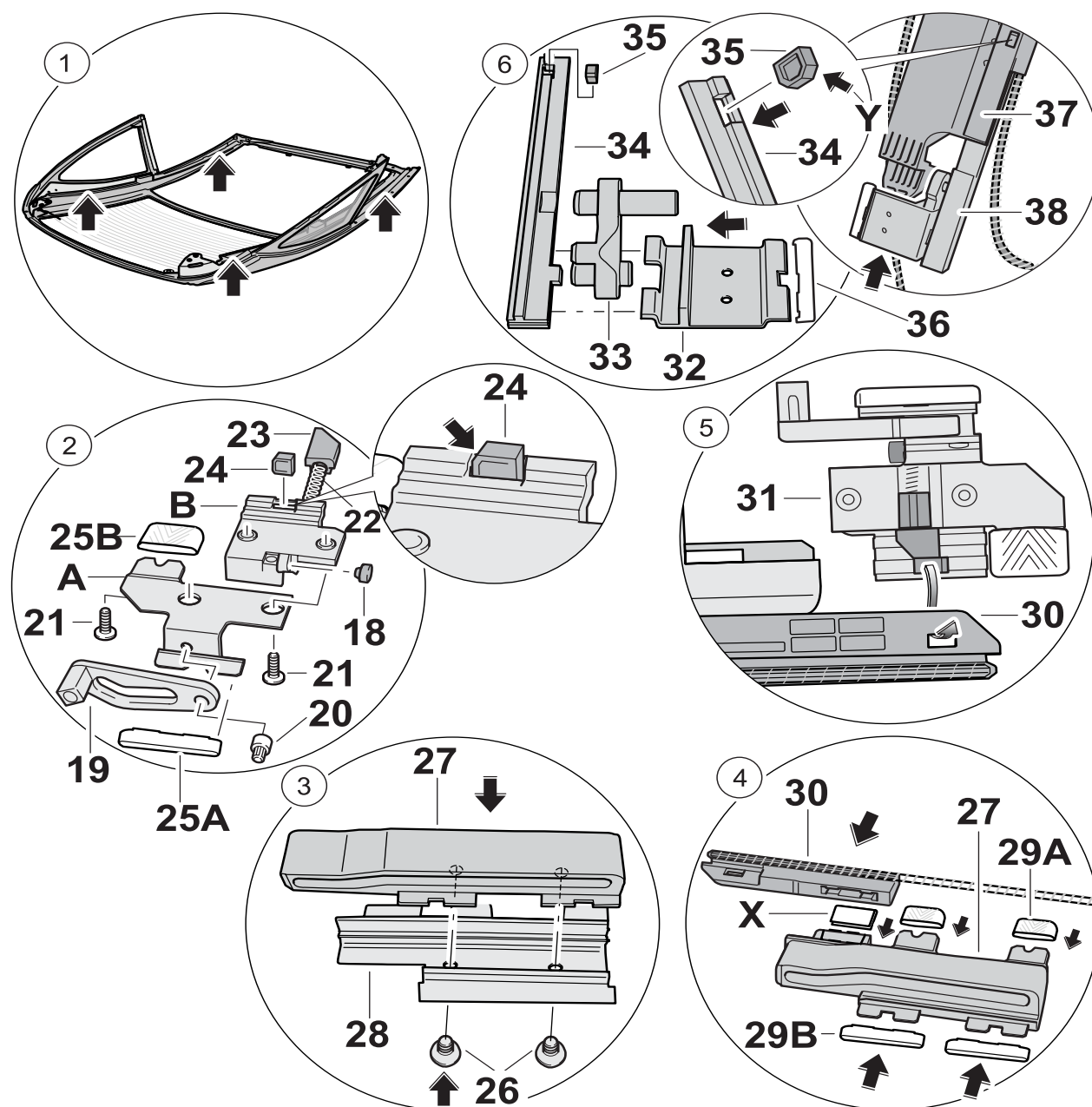
<i>No.</i>	<i>Procedure</i>	<i>Instructions</i>
	Removing draught deflector	⇒ Rep. Gr. 603319; Removing and installing draught deflector
	Removing sun blind	⇒ Rep. Gr. 689619; Removing and installing sun blind
	Removing interior trim parts	⇒ Rep. Gr. 70xx19; Removing and installing interior trim parts
	Removing cover for sliding roof	⇒ Rep. Gr. 604019; Removing and installing cover for sliding roof
	Removing roof module	⇒ Rep. Gr. 601415; Removing and installing roof module
1	Remove rear window wiper	Unscrew the fastening screws of the window wiper -1- and -3-. Remove the plastic part -2-. Pull the rear window wiper -4- out of the rear window.
2	Unscrew the guide rail fastening screws	Unscrew the fastening screws -5- and -6- from the guide rail -7-left and right.
3	Loosen guide tube	Unscrew fastening screws Torx -8, 9- from the U-profile guide tube -10- and from the sheet metal bracket guide tube -11-.
4	Remove water guide bracket	Unscrew fastening screws Torx T20 -12- from the water guide bracket -13-. Pull off water drainage hose -14- from the water guide bracket -13-. Turn water guide bracket -13- inward -arrow A- and pull out to the rear -arrow B-.
5	Partly loosen guide rail	Partly loosen the bonded-on guide rail -7- at the rear. To do this, insert a screwdriver between the guide rail -7- and the roof module and carefully press apart.

**Note!**

- ◆ *Carefully bend the metal guide tubes inwards when pulling out.*
- ◆ *When pulling out the cables, the metal guide tubes of the cable guide element should not be kinked!*

<i>No.</i>	<i>Procedure</i>	<i>Instructions</i>
6	Remove cable guide element	To pull out the metal guide tubes -10, 11-, first carefully bend inwards and then bend over the bracket -15-. Pull the cable guide element -16- out of the cables -17- on the left and right.
7	Pull out mount slide at the front, gate guide at the rear	Pull the rear front gate guide -40- out of the guide rail -7- with the front -39- mount slide.

## Preparing the powered sunroof mechanism for installation

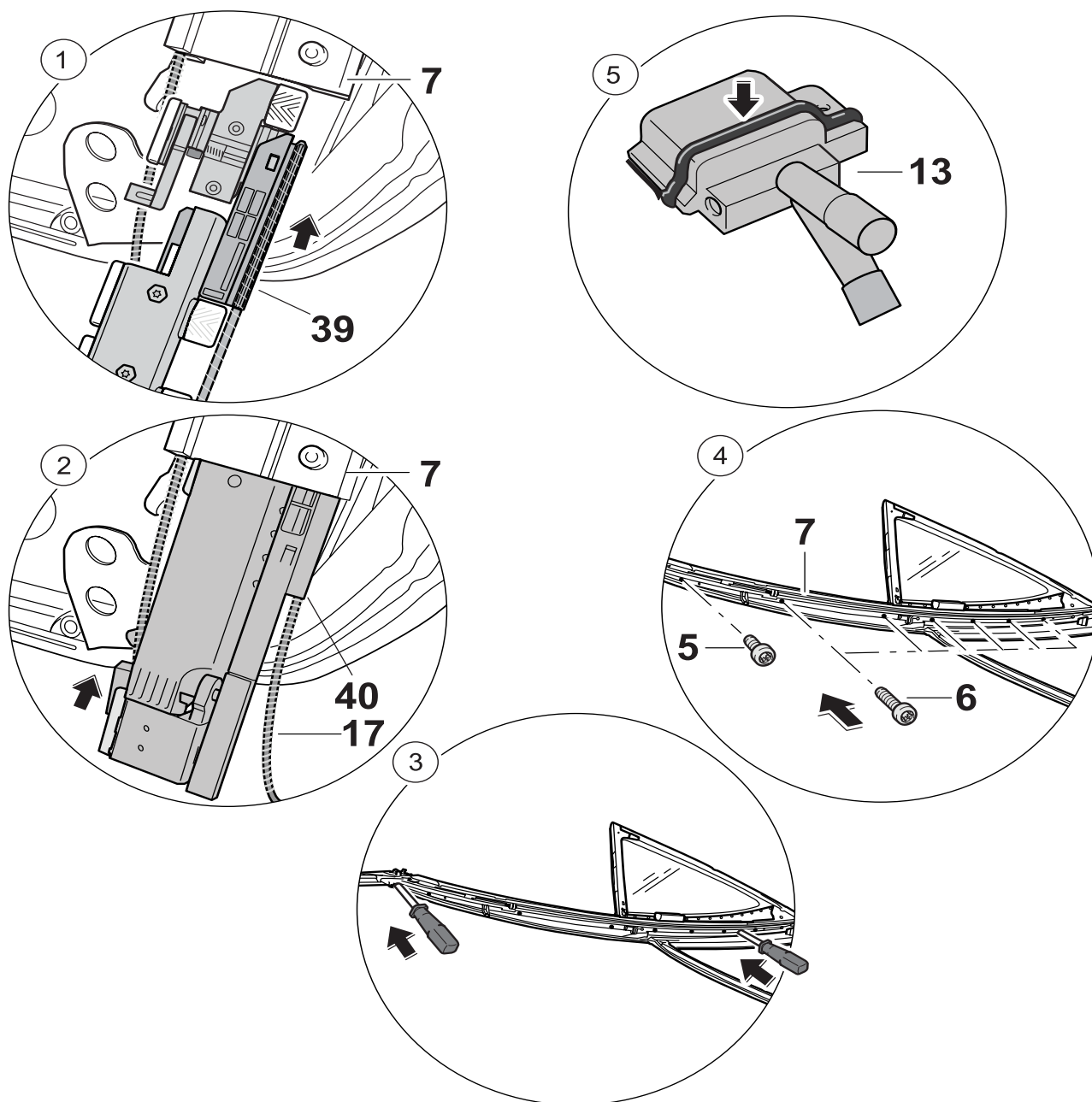


**Note!**

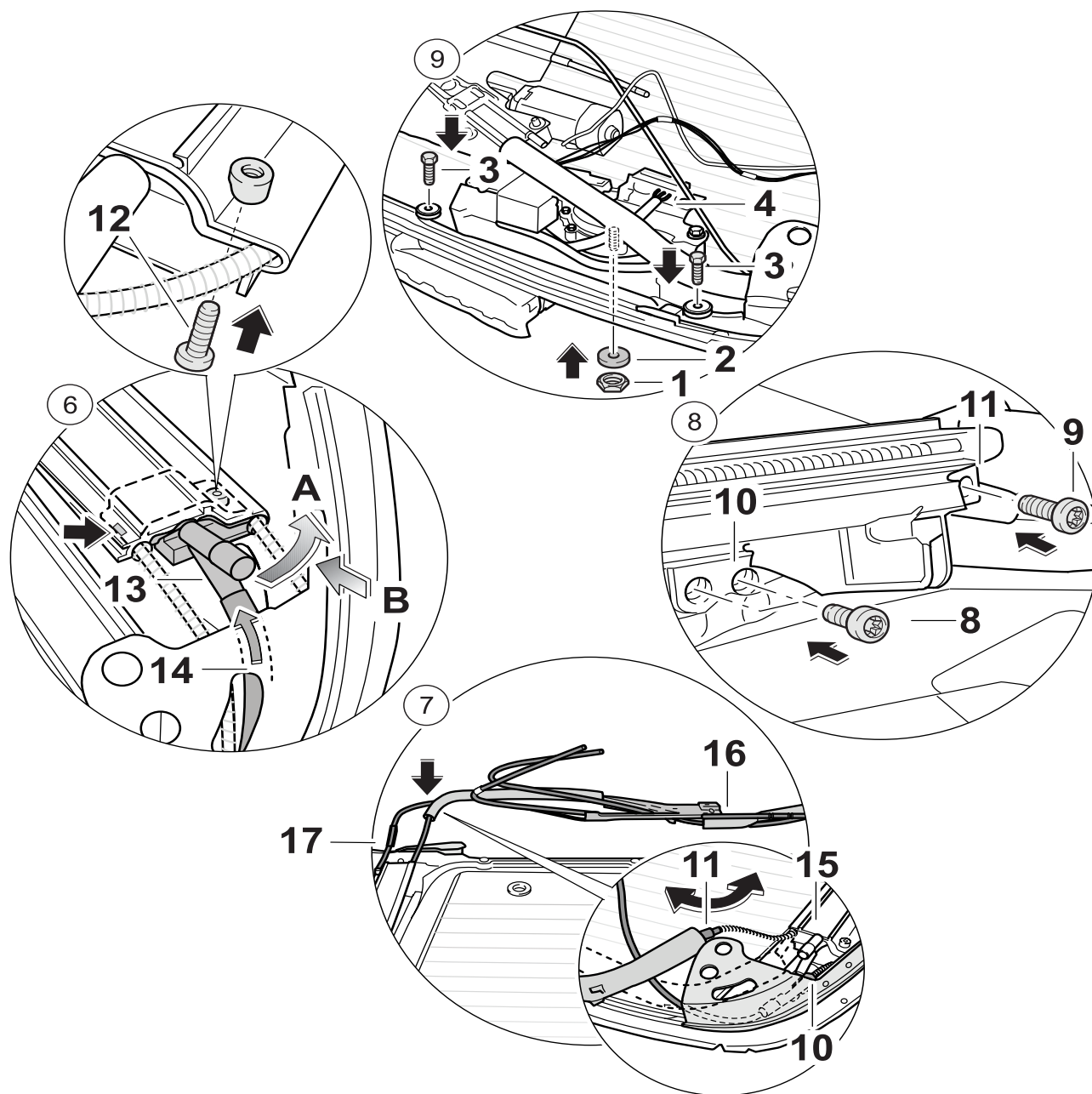
*The guide rail, cables and front and rear mount should not be greased.*

<i>No.</i>	<i>Procedure</i>	<i>Instructions</i>
1	Clean guide rail	Clean the guide rail -7- to remove grease and dirt.
2	Assemble front mount slide	Fit stop puffer -18- in the locking segment -B-. Position mount -19-, ensure that the pin points -20- inwards. Press in pin -20- with the water pump pliers. Connect driver -A- to the locking segment -B- with the fastening screws -21-. Push on sliding block -36-. Insert spring -22- and slide -23- into locking segment -B-. In doing so, the slant -arrow X- of the locking block -24- must point forwards. Push sliding block -25A and 25B- onto the driver -A- and locking segment -B-.
3	Replace gate guide	Unscrew fastening screws -26- on the underside of the gate guide -28-. Replace gate -27- and tighten onto the gate guide with the fastening screws -26-. Tightening torque: 3 Nm (2 ftlb.)
4	Connect gate guide to the shaft connection	Push brass disk -X- onto gate guide -27-. Push shaft connection -30- and gate guide -27- together. Push sliding block -29A and 29B- onto the gate guide -27-.
5	Connect gate guide and mount slide	Connect the gate guide -30- to the mount slide -31- ensuring that the locking block is correctly locked.
6	Assemble rear gate slide	Connect lever mount -34- to the lever -33-. Connect support plate -32- to the lever mount -34- thereby ensuring that the lever is horizontal and facing upwards. Insert locking block -35- into the groove of the lever mount thereby ensuring that the slant -arrow Y- of the locking block is facing to the rear. Push sliding block -36- onto the support plate -32-. Connect the shaft connection -37- to the gate slide -38- thereby ensuring that the locking block -35- is correctly locked.

## Installing powered sunroof mechanism (drive mechanism)



<i>No.</i>	<i>Procedure</i>	<i>Instructions</i>
1	Install mount slide	Insert the mount slide for the draught deflector -39- into the guide rail -7- .
2	Install gate slide	Insert the rear gate slide -40- into the guide rail -7-.
3	Centre guide rail	Fix the guide rail with an awl at the front and rear of the roof module.
4	Tighten guide rail	Tighten the guide rail -7-with the fastening screws-5, 6-. Tightening torque 10 Nm (7.5 ftlb.).
5	Apply adhesive material to the water guide bracket	Apply a sealing cord (butyl cord) -C- to the upper side of the water guide bracket -13-.



No.	Procedure	Instructions
6	Install water guide bracket	Insert the water guide bracket -13- to the side in the guide rail -7- thereby ensuring that the locking tab -arrow- is locked. Screw tight with the Torx fastening screw T20 -12-. Tightening torque: 5.5 Nm (4 ftlb.)

**Note!**

- ◆ Carefully bend the metal guide tubes inwards when inserting.
- ◆ When inserting the cables, the metal guide tubes of the cable guide element should not be kinked!

No.	Procedure	Instructions
7	Fit cable guide element	Bend the metal guide tube -10, 11- over the bracket -15- to insert.
8	Fit guide tubes	Position the guide tube -10- U-profile of the guide rail -7- and the guide tube -11- sheetmetal brackets. Tighten Torx fastening screws -8, 9-. Tightening torque: 5.5 Nm (4 ftlb.)
9	Fit rear window wiper module	Position the rear window wiper module -4- in the rear window and in the cable guide element -16-. Push on plastic part -2- and tighten with the tightening screws -1- and -3-.
	Install roof module	⇒ Rep. Gr. 601415; Removing and installing roof module
	Install cover for sliding roof	⇒ Rep. Gr. 604019; Removing and installing cover for sliding roof
	Install interior trim parts	⇒ Rep. Gr. 70xx19; Removing and installing interior trim parts
	Install sun blind	⇒ Rep. Gr. 689619; Removing and installing sun blind
	Install draught deflector	⇒ Rep. Gr. 603319; Removing and installing draught deflector