

PORSCHE

Technical Manual

Boxster

Technical Information

Group 6
Body equipment, exterior

Supplement Overview

Supplement	Edition	Topic	Article number
	05/1996	Basic edition	WKD 483521
2	08/1996	General changes	WKD 483521.02
7	11/1996	General changes	WKD 483521.07
10	04/1997	Assembly instructions for hardtop assembly fixture	WKD 483521.10
12	07/1997	General remarks on the airbag	WKD 483521.12
14	08/1997	General changes	WKD 483521.14
15	08/1997	Folder separation Groups 5 and 6	WKD 483521.15
16	11/1997	General supplement	WKD 483521.16
18	01/1998	General remarks on the airbag	WKD 483521.18
20	03/1998	General supplement	WKD 483521.20
23	07/1998	Assembly instructions for hardtop assembly fixture	WKD 483521.23
25	02/1999	General supplement	WKD 483521.25
26	04/1999	General supplement	WKD 483521.26
29	07/1999	General supplement	WKD 483521.29
30	07/1999	Changes in model year 2000	WKD 483521.30
31	08/1999	Folder separation Groups 6 and 7	WKD 483521.31
32	09/1999	Removing and installing convertible-top roof liner	WKD 483521.32
36	12/1999	Removing and installing the side airbag unit	WKD 483521.36
37	05/2000	General supplement	WKD 483521.37
38	07/2000	General supplement	WKD 483521.38
39	08/2000	Changes in model year 2001	WKD 483521.39
40	09/2000	Replacing folder 6	WKD 483521.40

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Foreword

Foreword

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Use

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Foreword

This manual contains Technical Information as well as instructions on repairs for Porsche vehicles. It is intended for the sole use of workshops belonging to Porsche AG.

The descriptions form the basis for professional and correct maintenance and repair work. The content of the work procedures described is based on the level of training of a fitter who has completed vocational training and has a sound knowledge of the product. This level of knowledge is necessary in order to carry out the work described.

Warning notes

The warning notes and safety instructions are classified by the respective signalling word (Danger, Warning, Caution) beside the warning symbol.



Warns against death or very serious injury which will certainly occur if the instructions are not observed.



Warns against death or very serious injury which may occur if the instructions are not observed.



Warns against minor injury or damage to property if the instructions are not observed.

To prevent injury and restricted operating and traffic safety of the vehicle, or damage to the vehicle as the result of incorrect work, read these instructions carefully and observe them without fail.

It is not possible for Porsche AG to give a detailed evaluation of all danger situations for the persons carrying out the work. It is therefore imperative that all persons carrying out repair and maintenance work on Porsche vehicles use their specialist knowledge to ensure that their own safety is not at risk and the procedure chosen will not have any negative effects on the vehicle - especially with regard to safety.

It is therefore expressly specified that all work involved in the work procedures described should be carried out only in accordance with the valid guidelines and regulations of the local authorities responsible with respect to health and accident prevention and environmen-

tal protection, and in compliance with the legal requirements of individual countries.

Notes

Notes contain advisory information related to the work procedure which makes the fitter's work easier. The following pictogram indicates this information:



Note!

Contains advisory information which makes the work procedure easier.

Due to the continuous development and improvement of our vehicles, there may be discrepancies between the actual technical status of the vehicles and the work descriptions. Any existing deviations are corrected by means of supplements, and the scope of the descriptions is extended with supplements.

Porsche AG retains the right to implement changes at any time and without prior notice.

Use

The workshop documentation for the Boxster (986) model has the designation

-**"Boxster (986)" Technical Manual**- and contains Technical Information as well as instructions on repairs.

The integration of the technical information published in the "Boxster (986)" Technical Manual with the descriptive matter on repairs provides the user with a complex reference work that combines into one book associated or cross-referenced material of relevance to workshops and originating from various information media.

The "Boxster (986)" Technical Manual consists of 15 folders, subdivided into the following Groups

- ◆ 0 Entire vehicle - General
- ◆ 0 Diagnosis, 1 Engine, part 1 (up to Repair Group 45)
- ◆ 0 Diagnosis, 1 Engine, part 2 (as of Repair Group 69)
- ◆ 1 Engine, part 1 (up to Repair Group 13)
- ◆ 1 Engine, part 2 (as of Repair Group 15)
- ◆ 2 Fuel, exhaust, engine electronics
- ◆ 3 Transmission, manual transmission
- ◆ 3 Transmission, automatic transmission
- ◆ 4 Running gear
- ◆ 5 Body
- ◆ 6 Body equipment, exterior
- ◆ 7 Body equipment, interior
- ◆ 8 / 9 Air conditioning / Electrics
- ◆ 9 Circuit diagrams, part 1 (up to and including '99 model)
- ◆ 9 Circuit diagrams, part 2 (as of and including '00 model)

The two folders with Group 0 are to be regarded as one folder; i.e. file the "Technical Information" notices only in the folder "Group 0 Diagnosis, part 1" **-up to Repair Group 45-**.

The second folder Group 0 Engine, part 2 **-as of Repair Group 69-** includes the further Repair Groups belonging to Group 1.

The two folders with Group 1 are to be regarded as one folder; i.e. file the "Technical Information" only in front of the repair descriptions in the folder Group 1 – Engine, part 1 **-up to Repair Group 13-**.

The second folder Group 1 – Engine, part 2 **-as of Repair Group 15-** includes the further Repair Groups belonging to Group 1.

The two folders with Group 9 are to be regarded as one folder; i.e. file the "Technical Information" notices only in the folder Group 9 Circuit diagrams, part 1 **-up to '99 model-**.

The second folder Group 9 Engine, part 2 **-as of '00 model-** includes the further Repair Groups belonging to Group 9.

The "Boxster (986)" Technical Manual has the same structure in each folder, with the following breakdown for all Groups:

Title page: "Boxster (986)" Technical Manual

> Foreword

Title page: "Technical information"

> Table of contents, Technical information> Technical information

Title page: "Repair"

> Repair Groups: overview> Table of contents, repairs> General / technical data> Instructions on repairs

As can be seen from the breakdown, the published Technical Information is in the front part of each folder – numbered according to the Groups. The Table of Contents assigned to each Group will be periodically updated.

Following the Technical Information, separated by a title page, the instructions on repairs – assigned according to the Groups or broken down into Repair Groups – are included in the folders.

The instructions on repairs will be extended and updated by means of supplements.



Note!

Sheets that already exist in the "Boxster (986)" Technical Manual and are updated or revised and thereby exchanged by a supplement are designated in the footer with the supplement number corresponding to the current version: e.g. "Printed in Germany - 2,- 2000"



Note!

Due to a system modification in the Technical Literature production, the following procedures have changed in model year 2000!

- 1 - The previous record sheet in the folder "0-General" and the supplement contents sheet -red sheet- have been omitted. A supplement overview now appears separately in each folder. The new supplement contents sheet can be destroyed after the supplement is filed in the folder.

**Note!**

The supplement overview sheet is replaced with the relevant supplement in the corresponding folder and must no longer be maintained by hand.

- 2 - The page numbering in the new and the replaced chapters are no longer continuous. Each new chapter is now given an additional chapter number followed by the page number e.g.-2 Page 11 ⇒ Rep. Gr. 0; General
- 3 - The old page numbering still applies to existing chapters and those that are not replaced.

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6 Colour range for 1997 models

Exterior paintwork solid:

Designation	Code
Snow white	3AT
Snow white	3AU*
Black	747
Black	741 *
Indian red	80K
Indian red	84A*
Turquoise blue	3AR
Turquoise blue	3AS*
Pastel yellow	12L
Pastel yellow	12M*

Exterior paintwork metallic / pearl:

Designation	Code
Arctic silver metallic	92T
Arctic silver metallic	92U*
Azure metallic	3AW
Azure metallic	3AX*
Black pearl	746
Black pearl	744*
Ocean blue metallic	3AY
Ocean blue metallic	3AZ*
Arena red pearl	84R
Arena red pearl	84S*
Dragonfly turquoise metallic	25H
Dragonfly turquoise metallic	25K*

= Water-based paints

6 Colour range for 1999 models**Exterior paintwork solid:**

Designation	Code
Glacier white	3AT
Glacier white	3AU*
Black	747
Black	741*
Guards red	80K
Guards red	84A*
Pastel yellow	12L
Pastel yellow	12M*
Speed yellow	12G
Speed yellow	12H*
Dark blue	374
Dark blue	3C7*

= Water-based paints

Exterior paintwork metallic / pearl:

Designation	Code	Designation	Code
Arctic silver metallic	92T	Wimbledon green metallic	23I
Arctic silver metallic	92U*	Wimbledon green metallic	2B6*
Zenith blue metallic	3AW	Pine-green metallic	22E
Zenith blue metallic	3AX*	Pine-green metallic	2B4*
Black pearl	746	Violet metallic	39G
Black pearl	744*	Violet metallic	3AE*
Ocean blue metallic	3AY	Cobalt blue metallic	37U
Ocean blue metallic	3AZ*	Cobalt blue metallic	3C8*
Arena red pearl	84R	Polar silver metallic	92E
Arena red pearl	84S*	Polar silver metallic	92M*
Ocean jade metallic	25H	Slate metallic	22D
Ocean jade metallic	25K*	Slate metallic	23F*
Iris blue metallic	39N	Midnight blue metallic	37W
Iris blue metallic	39V*	Midnight blue metallic	39CF*

= Water-based paints

6 Colour range for 2000 models**Exterior paintwork solid:**

Designation	Code
Biarritz white	9A3
Biarritz white	9A2*
Black	747
Black	741*
Guards red	80K
Guards red	84A*
Speed yellow	12G
Speed yellow	12H*

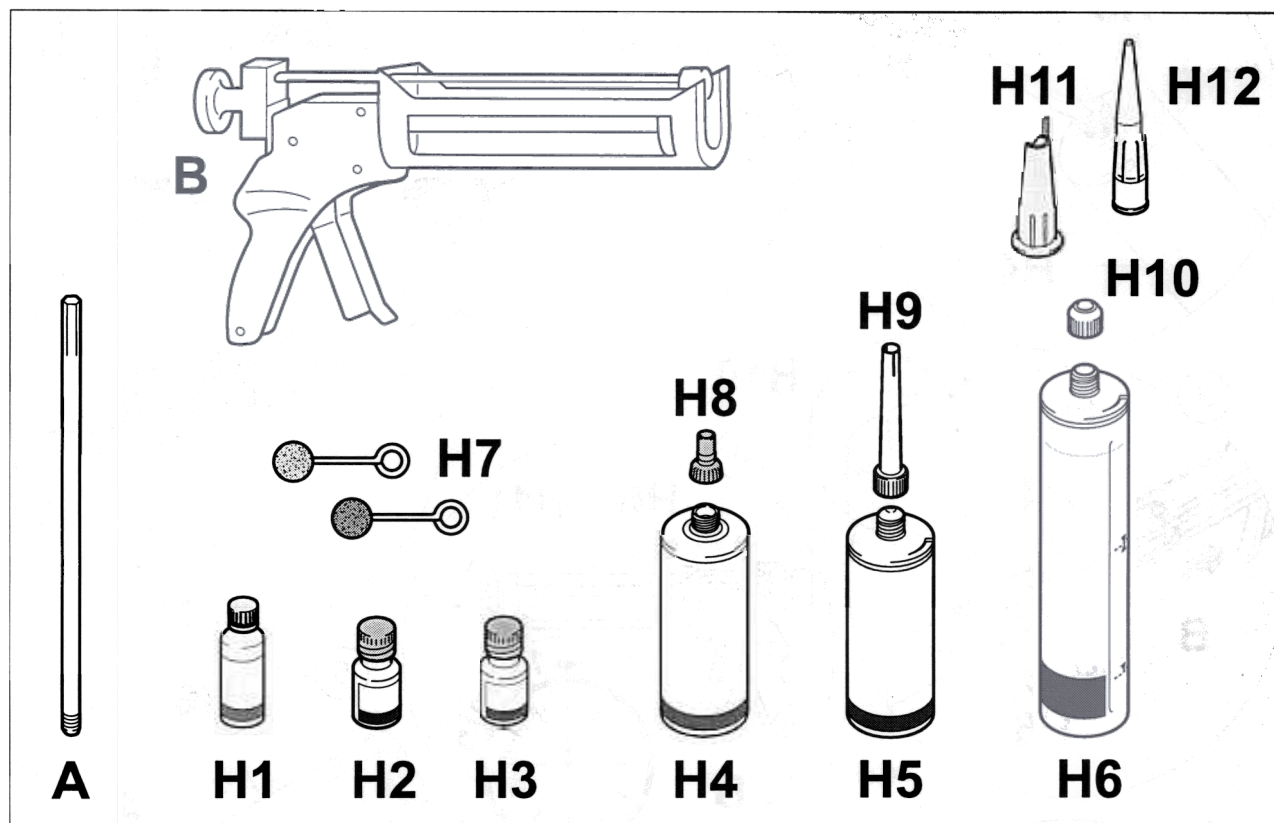
Exterior paintwork metallic / pearl:

Designation	Code
Arctic silver metallic	92T
Arctic silver metallic	92U*
Zenith blue metallic	3AW
Zenith blue metallic	3AX*
Black metallic	746
Black metallic	744*
Ocean blue metallic	3AY
Ocean blue metallic	3AZ*
Arena red metallic	84R
Arena red metallic	84S*
Jungle green metallic	2A2
Jungle green metallic	2A1*
Vesuvio metallic	40W
Vesuvio metallic	40X*
Paladio metallic	554
Paladio metallic	555*

= Water-based paints

Processing of Porsche 2-component window bonding agents

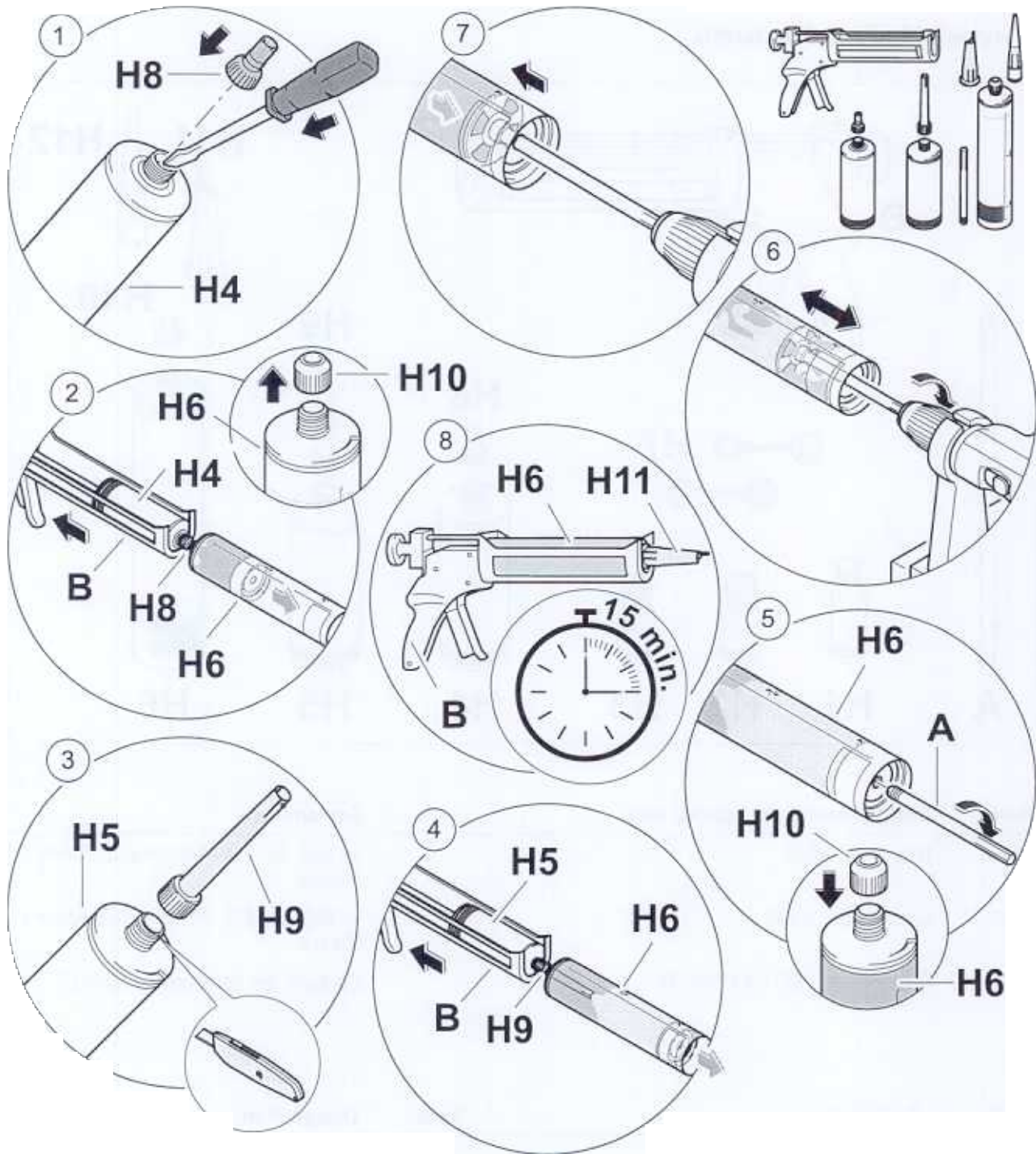
Overview of tools and materials



Item	Designation of the special tool	Explanation
	Mixing rod 9528	⇒ Rep. Gr. 2.2; Workshop Equipment Manual
-B-	Bonding gun 9586	⇒ Rep. Gr. 2.2; Workshop Equipment Manual
-H-	Adhesive set 000.043.204.34	Contains set components H1-H12

Item	Designation	Item	Designation
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Mixing procedure



**Caution!**

- ♦ **Observe the safety instructions of the individual adhesive set components.**

**Note!**

In addition to this manual, observe the relevant job descriptions for installing car windows (Group 64) in the Technical Manual!

No.	Procedure	Instructions
1	Preparing cartridge component A -H4-	Clamp an adjustable electric power drill in a conventional horizontal clamp. Pre-set a speed of 900 - 1,200 rpm. Pierce the membrane in the nozzle connection of component A (aluminium cartridge) -H4- with a screwdriver and extend the opening. Remove the flanged cover from the end of the cartridge. Screw the short filler nozzle (blue) -H8- on to the nozzle connection of component A.
2	Transferring contents of component A	Unscrew the screw cap -H10- on the empty mixing cartridge -H6- , insert the prepared cartridge (component A) -H4- in to the bonding gun -B- and insert the filler nozzle -H8- as far as possible into the mixing cartridge -H6- . Press component A fully into the mixing cartridge. After transferring the contents, pull the filler nozzle of the cartridge (component A) -H8- out of the mixing cartridge.
3	Preparing cartridge component B -H5-	Cut off the point of the nozzle connection of component B (plastic cartridge) -H5- with a knife. Screw the injection nozzle (yellow) -H9- on to the nozzle connection of component B.
4	Transferring contents of component B	Insert the prepared cartridge (component B) -H5- in to the bonding gun -B- and insert the injector nozzle -H9- as far as possible into the mixing cartridge -H6- . Press component B fully into the mixing cartridge. After transferring the contents, pull the injector nozzle of the cartridge (component B) -H9- out of the mixing cartridge.
5	Screwing mixing rod -A- into place	Close the mixing cartridge -H6- with a screw cap -H10- and screw the mixing rod -A- by hand into the mixer of the mixing cartridge.
6	Mixing component A and component B	Clamp the mixing rod in the prepared power drill. Switch the power drill on and allow it to turn at a speed of 900 - 1,200 rpm. During operation, move the mixing cartridge axially from one end stop to the other 25 times -arrows- . Note: perform the stroke movements rapidly. The cartridge piston is secured at the rear and can not fall out during the mixing procedure.

No.	Procedure	Instructions
	Concluding the mixing procedure and engaging the mixer in the piston	To conclude the mixing procedure, pull the mixer during its last stroke so strongly towards the rear against the piston that a rattling noise becomes audible. Then switch off the power drill and unscrew the mixing rod from the mixer; the mixer then engages in the piston.
8	Inserting the mixing cartridge in the bonding gun and affixing the car window within -15 min-	Unscrew the screw cap on the mixing cartridge and screw on the processing nozzle (grey) -H11- . Insert the mixing cartridge -H6- in the bonding gun -B- . Note: the bonding material has an open time of -15 min- , which means that the bonding material must be applied and the car window must be assembled within this period of time.

Colour range for 2001 models

Exterior paintwork solid

Designation	Colour code (conventional)	Colour code (water-based paints)
Biarritz white	9A3	9A2
Black	747	741
Guards red	80K	84A
Speed yellow	12G	12H

Exterior paintwork metallic / pearl

Designation	Colour code (conventional)	Colour code (water-based paints)
Arctic silver metallic	92T	92U
Lapis blue metallic	3A9	3A8
Black metallic	746	744
Orient red metallic	8A4	8A3
Meridian metallic	6A7	6A6
Rainforest green metallic	2A2	2A1
Seal grey metallic	6B5	6B4

Special paintwork metallic / pearl

Designation	Colour code (conventional)	Colour code (water-based paints)
Wimbledon green metallic	23L	2B6
Pine-green metallic	22E	2B4
Violet metallic	39G	3AE
Cobalt blue metallic	37U	3C8
Polar metallic	92E	92M
Slate metallic	22D	23F
Zanzibar red metallic	1A9	1A8
Midnight blue metallic	37W	39C
Iris blue metallic	39N	39V

Removing and installing convertible top

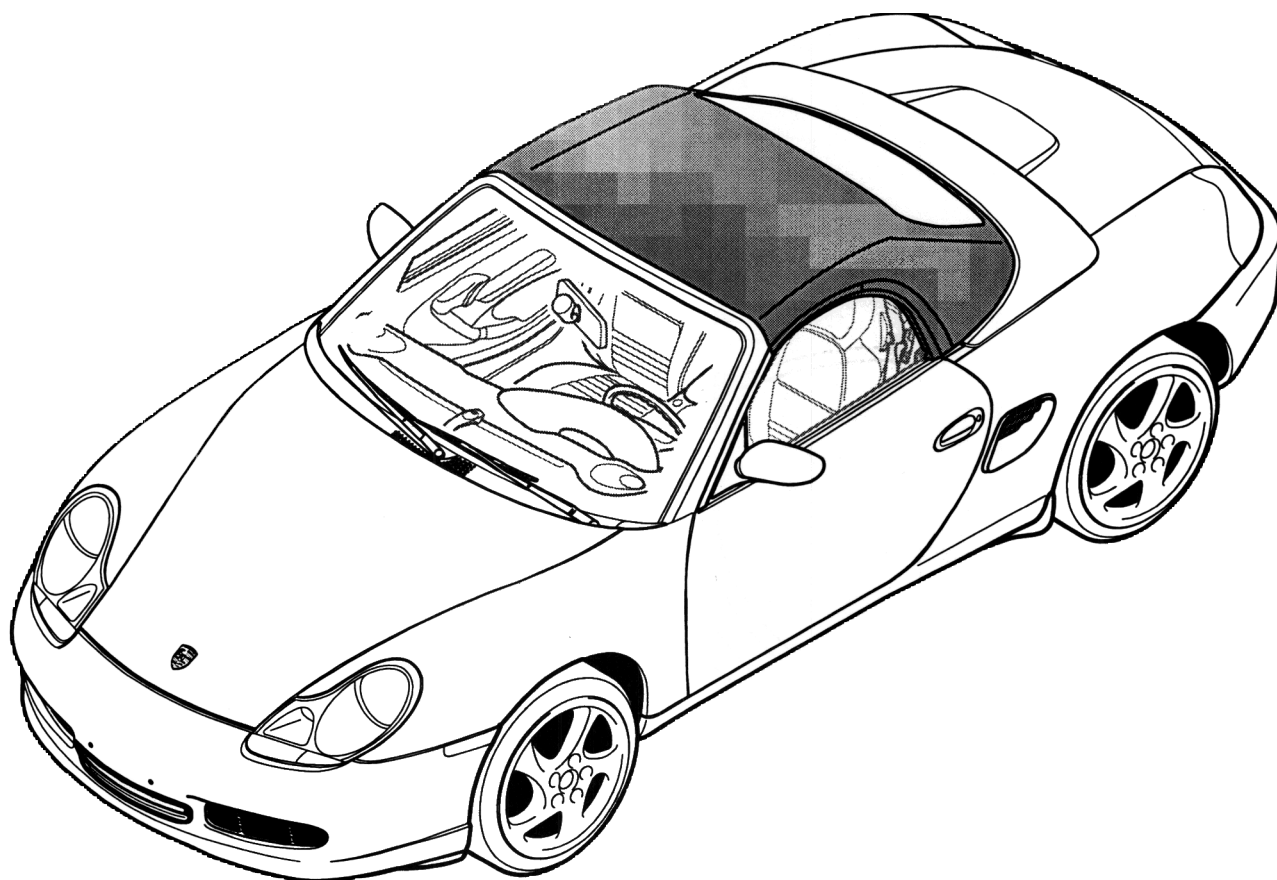
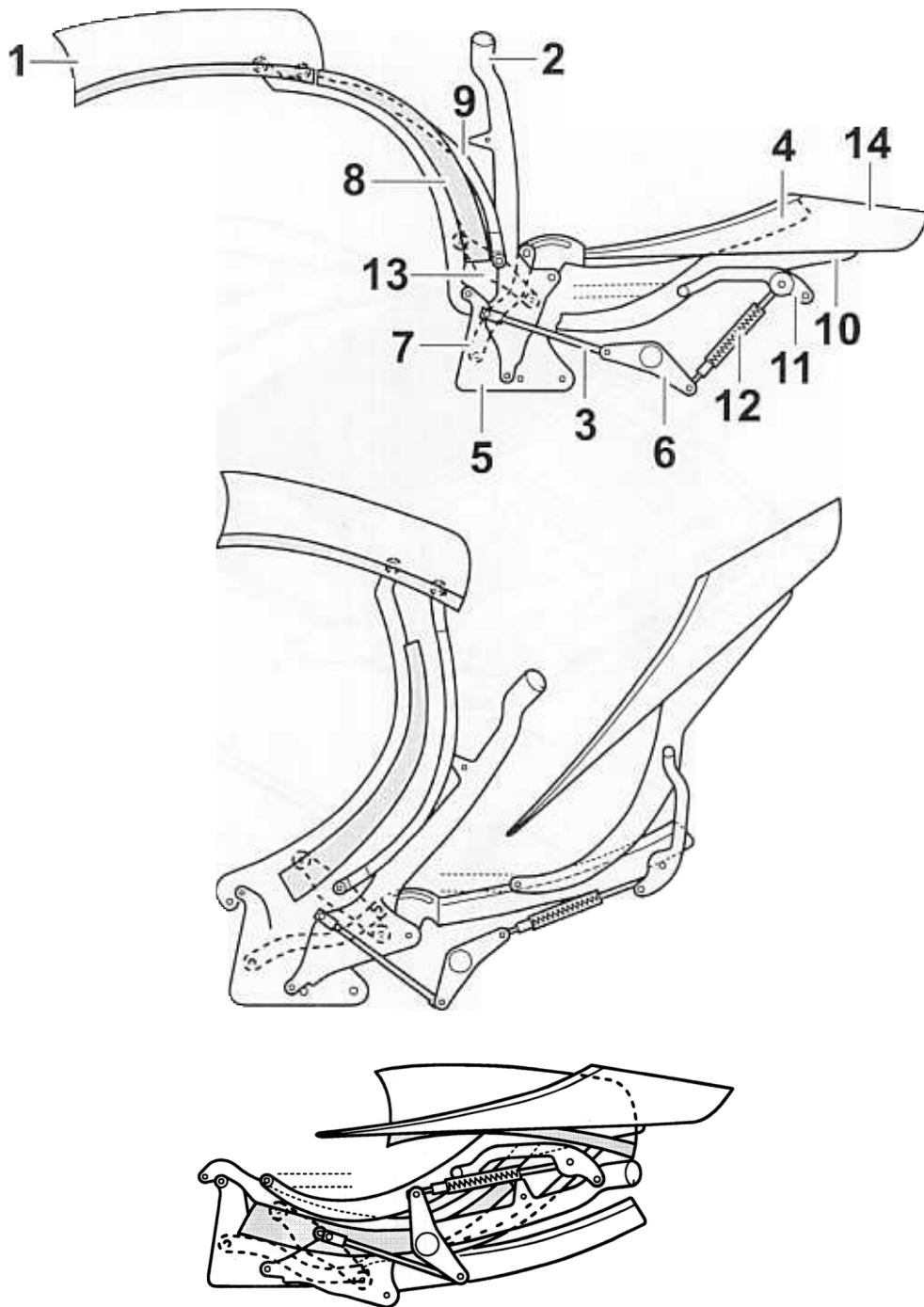
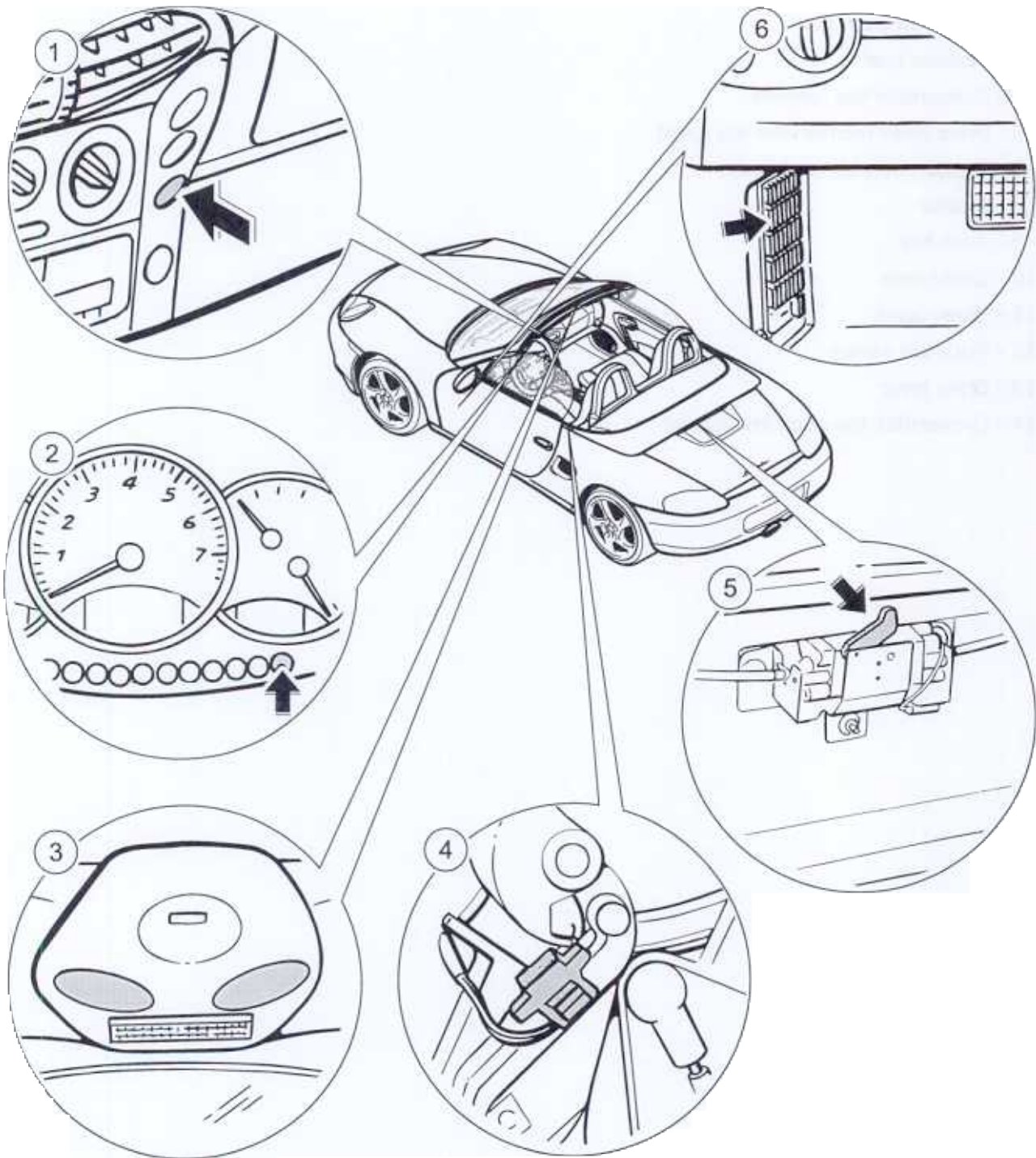


Diagram of convertible top



- 1 - Roof frame
- 2 - Main bow
- 3 - Main bow push bar
- 4 - Tension bow
- 5 - Convertible-top support
- 6 - Drive lever (convertible-top gear)
- 7 - Tension bow steering lever
- 8 - B-pillar
- 9 - Push bar
- 10 - Guide arm
- 11 - Hinge lever
- 12 - Push-bar spring
- 13 - Drive lever
- 14 - Convertible-top compartment lid

Overview of convertible-top components up to model year 1999



- 1 - Rocker switch
- 2 - Indicator light
- 3 - Microswitch, convertible-top lock
- 4 - Microswitch, left B-pillar
- 5 - Microswitch, convertible-top compartment lid
- 6 - Control module (above relay carrier in fuse box)

The motor is activated if:

- ◆ no speedometer signals greater than 5 km/h (3 mph) are present
- ◆ the "convertible top unlocked" signal is connected to ground
- ◆ electric motor plug connection is plugged in
- ◆ the "convertible top unlocked" signal is connected to ground
- ◆ fuse B6 (row: B, number: 6) is in order
- ◆ terminal 15 is connected via ignition lock
- ◆ the parking brake input is connected to ground (parking brake engaged)

Overview of microswitch test plan up to model year 1999

Check microswitches and rocker switches for continuity.

Operate "open convertible top" rocker switch (ground is connected to the "open" input)

Microswitch convertible top to B-pillar	Microswitch convertible-top compartment lid	Status	Open engine activation	Close engine activation
Ground	Open	Convertible top closed	Terminal 15	Ground
Ground	Ground	Con. top flap opens	Terminal 15	Ground
Open	Ground	Con. top opens	Terminal 15	Ground
Open	Open	Con. top opened	Ground *	Ground *
* close after expiry of the after-running time				

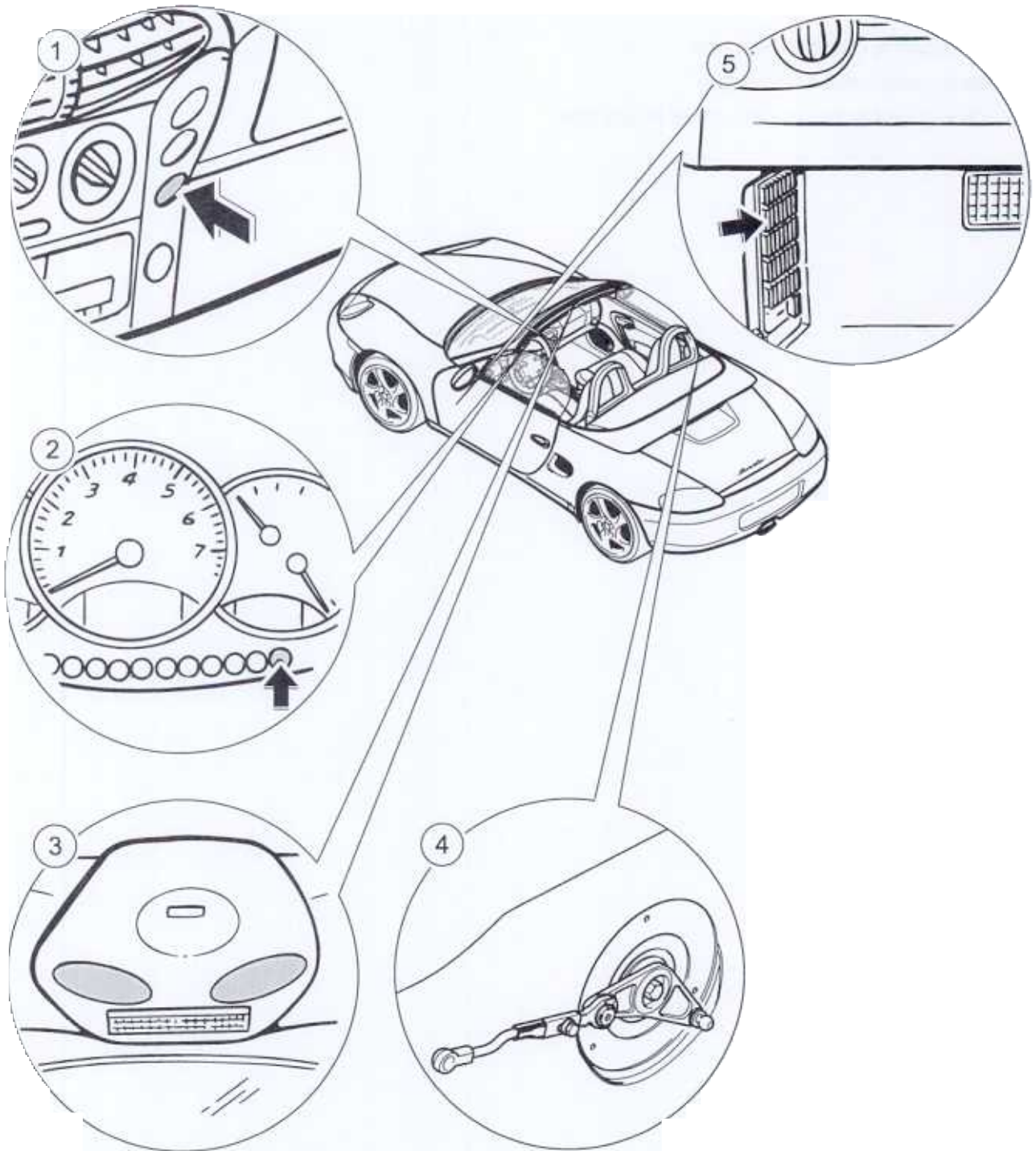
Check microswitches and rocker switches for continuity.

- Operate "close convertible top" rocker switch (ground is connected to the "open" input)

Microswitch convertible top to B-pillar	Microswitch convertible-top compartment lid	Status	Open engine activation	Engine activation
Open	Open	Con. top opened	Ground	Terminal 15
Open	Ground	Con. top flap opens	Ground	Terminal 15
Ground	Ground	Con. top closes	Ground	Terminal 15
Ground	Open	Con. top closed	Ground *	Ground *

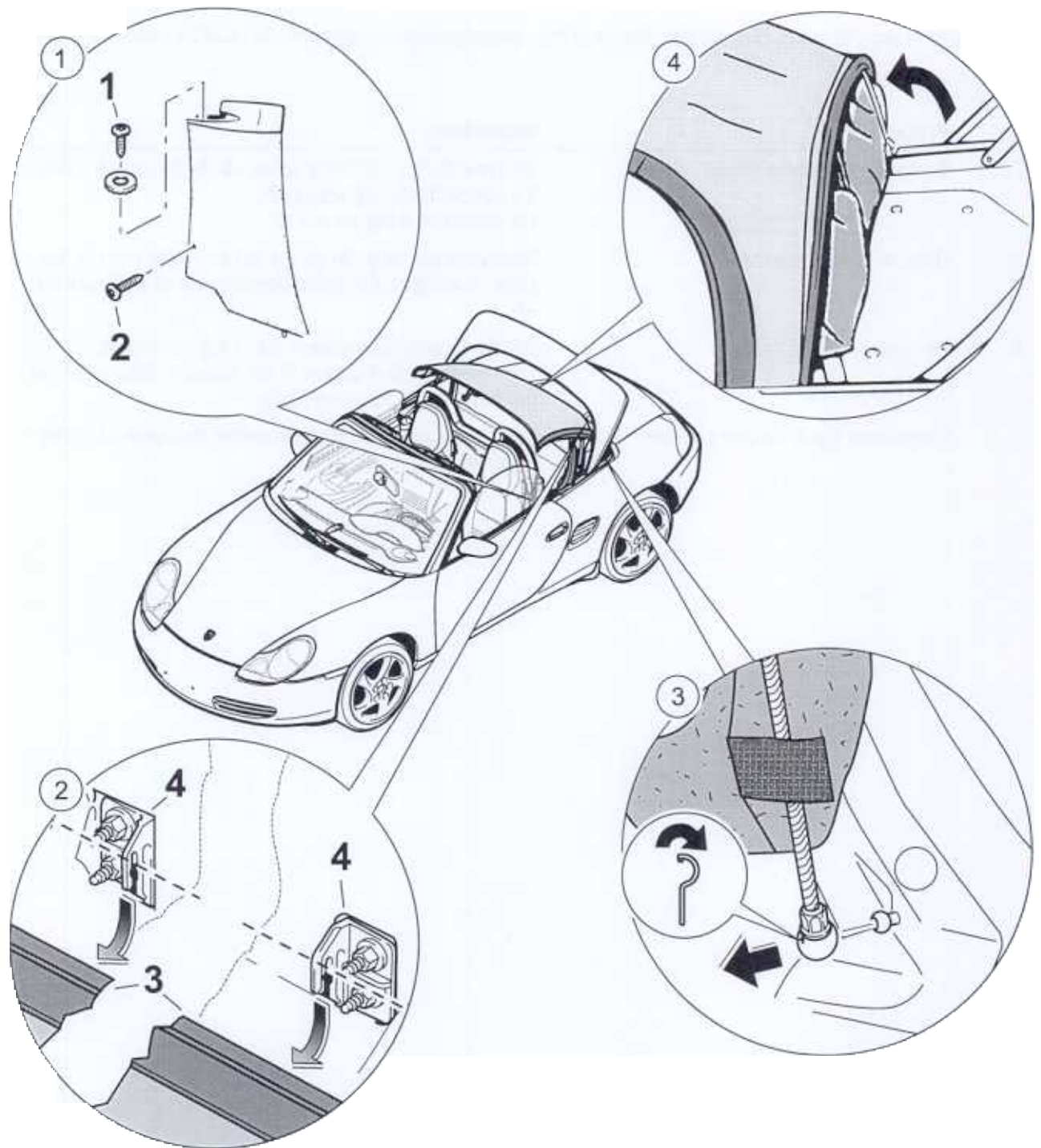
* close after expiry of the after-running time

Overview of convertible-top components as of model year 2000



- 1 - Rocker switch
- 2 - Indicator light
- 3 - Microswitch, convertible-top lock
- 4 - Microswitch convertible-top gear
- 5 - Control module (above relay carrier in fuse box)

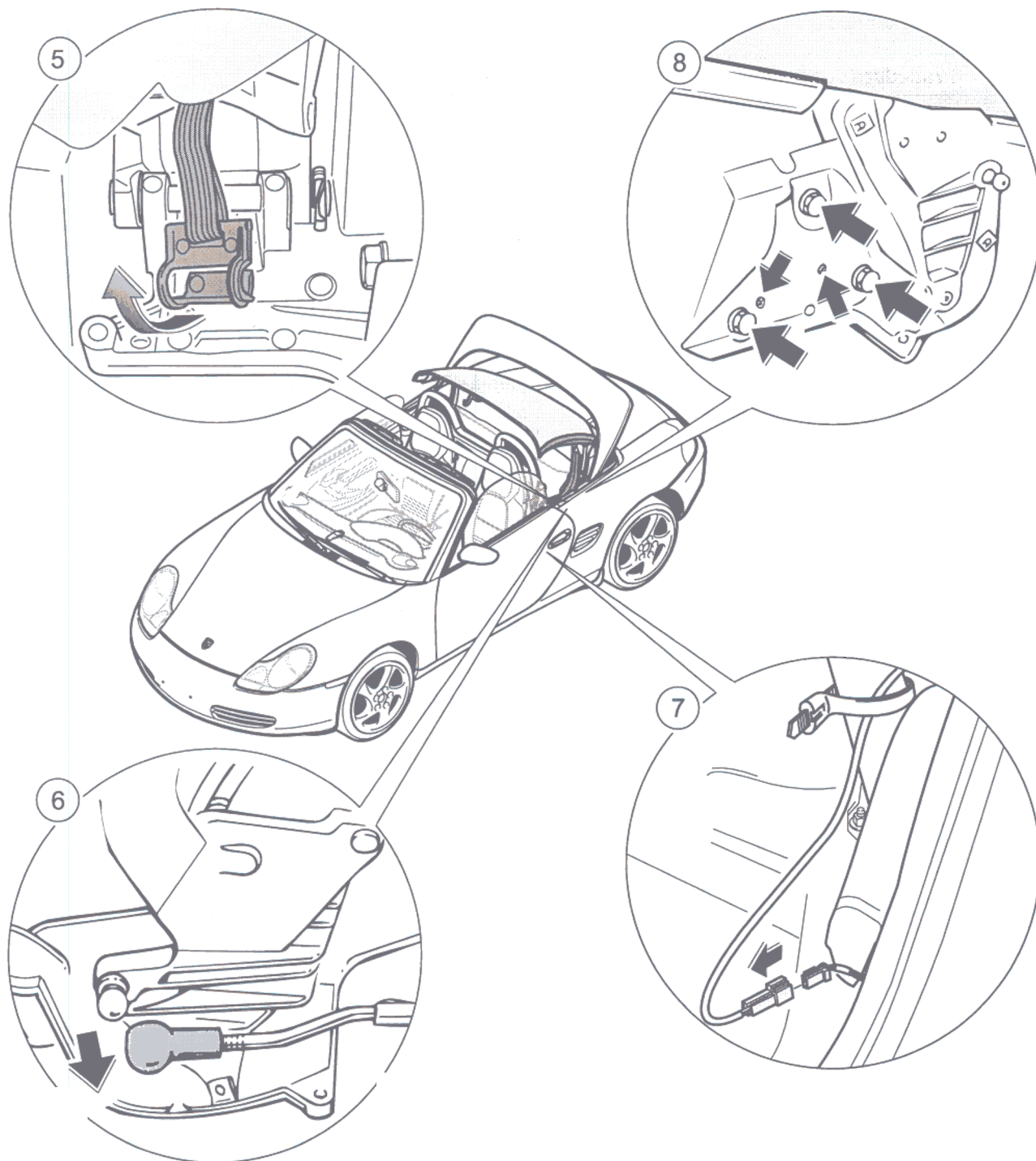
Removing convertible top



**Note!**

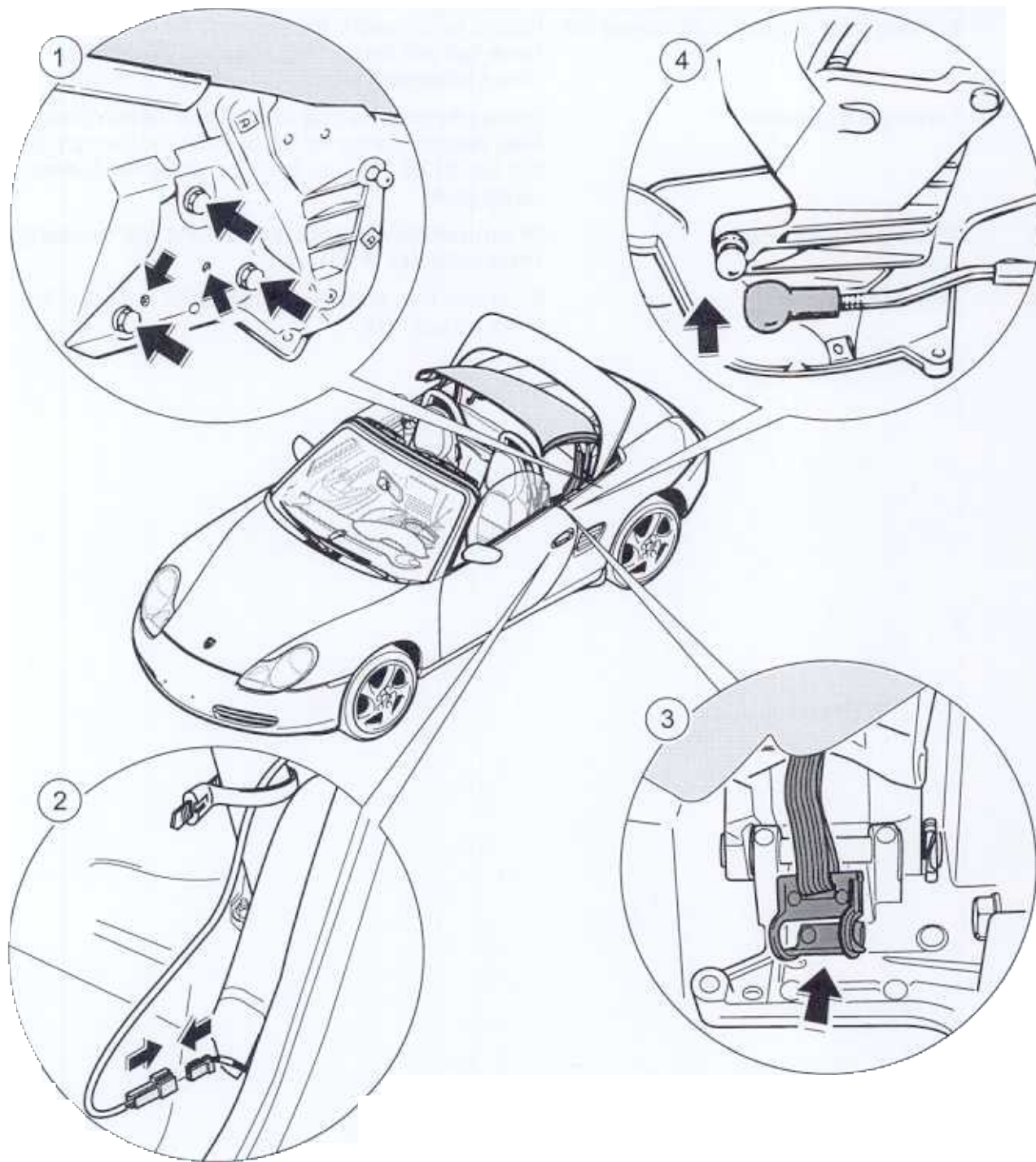
The cabriolet convertible top must be unlocked and the convertible-top compartment lid must be raised to its top position!

No.	Procedure	Instructions
	Removing side-panel linings	Unscrew the top fastening screw -1- by two turns. Undo the bottom fastening screw -2- . Lift side-panel lining up and off.
2	Detaching cloth covering	Disengage the strip -3- on the left and right sides of the cloth covering in downward direction out of the brackets -4- .
3	Detaching tension cable	Pull the retaining pin -inset- out of the ball socket. Then press the ball socket of the tension cable out of the ball head of the adjusting piece.
4	Convertible top in service position	Press tension bow of the convertible top upwards at the main bow until it engages.

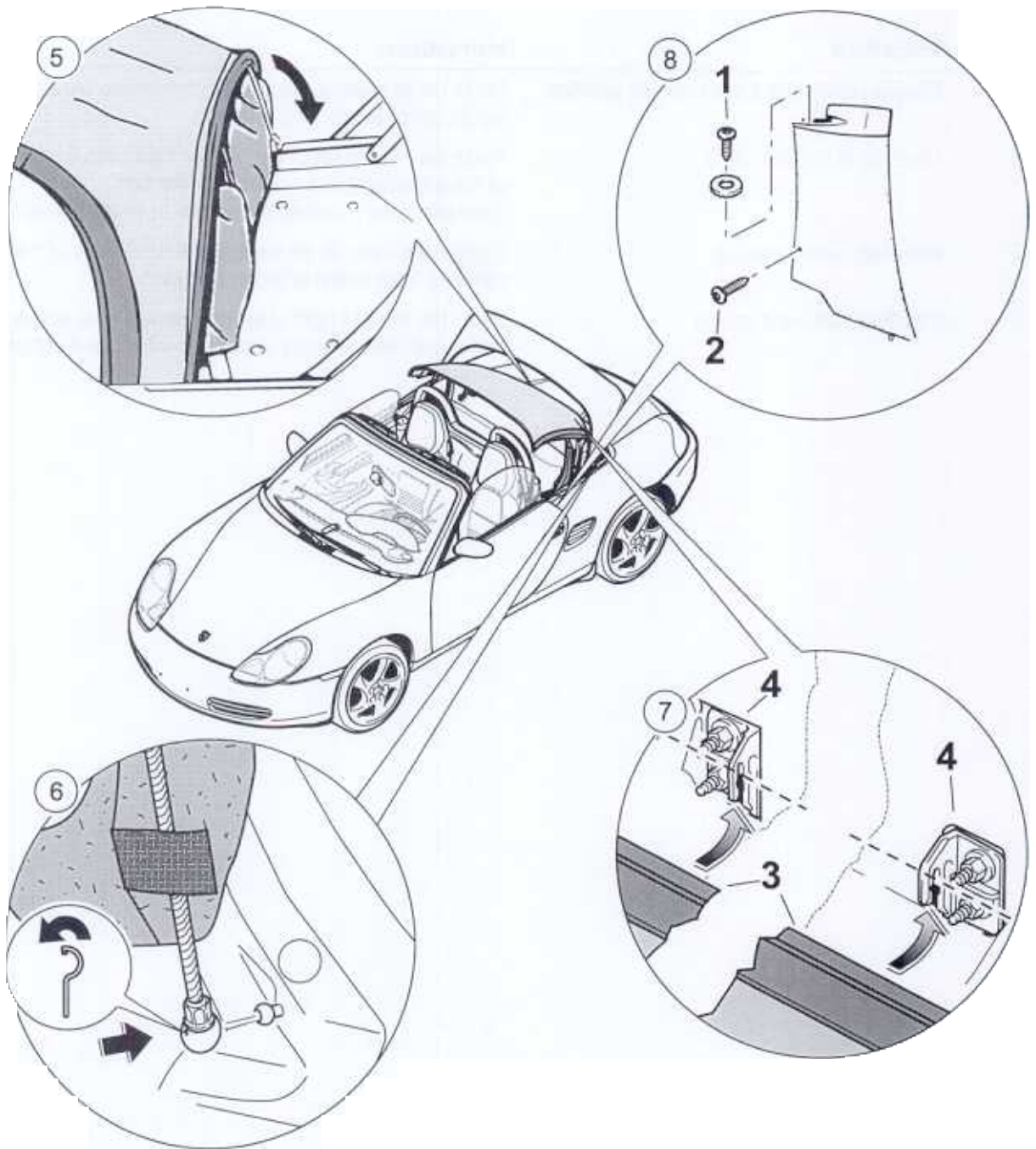


No.	Procedure	Instructions
	Detaching restraining straps	On the cloth covering, disengage the left and right restraining straps from the pins of the main bow.
6	Detaching push bar	At the main bow, press out the ball socket of the push bar on the left and right.
7	Connecting microswitch	Disconnect the electrical plug connection at the microswitch. Note: electrical connection has been omitted since production date 03.05.1999 due to the use of the new convertible-top gears.
8	Detaching convertible-top support	Undo the fastening screw and the centring screws (sheet-metal screw) on the convertible-top support to the roll bar. Lift the convertible top off the vehicle.

Installing convertible top



No.	Procedure	Instructions
	Screwing convertible top to the roll-over bar	Position the convertible-top support to the roll bar and screw tight with the fastening screw and the centring screws (sheetmetal screw).
2	Connecting microswitch	Connect the electrical plug connection at the microswitch. Note: electrical connection has been omitted since production date 03.05.1999 due to the use of the new convertible-top gears.
3	Attaching restraining straps	On the cloth covering, engage the left and right restraining straps in the pins of the main bow.
4	Detaching push bar	At the main bow, press out the ball socket of the push bar on the left and right.

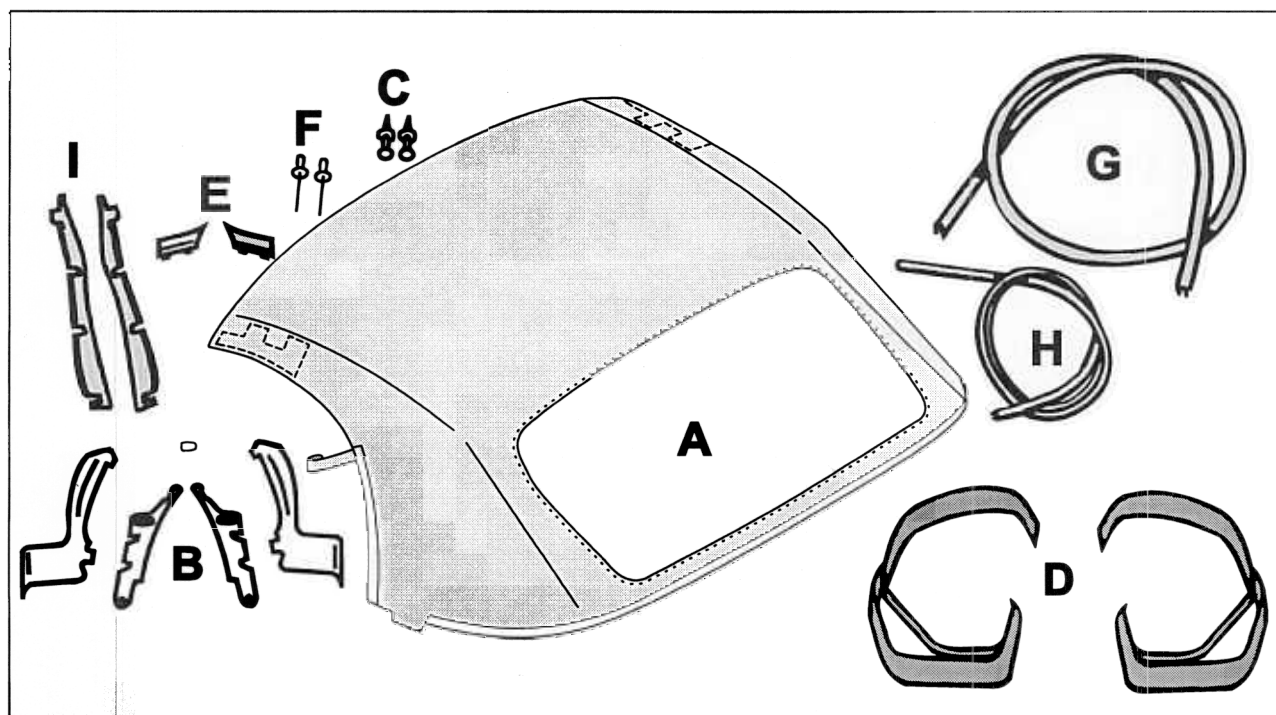


No.	Procedure	Instructions
	Moving convertible top to service position	Press the tensioning bow of the convertible top downwards out of the locking element.
6	Pressing in tension cable	Press the ball socket of the tension cable into the ball head of the adjusting piece on the roll-over bar. Then press the retaining pin -inset- in to the ball socket.
7	Attaching cloth covering	Engage the strip -3- on the left and right sides of the cloth covering from below in to the brackets -4- .
8	Installing side-lining panels	Insert the left and right side-lining panels from above and fasten with the fastening screws -1- at top and bottom -2- .

Replacing convertible-top covering

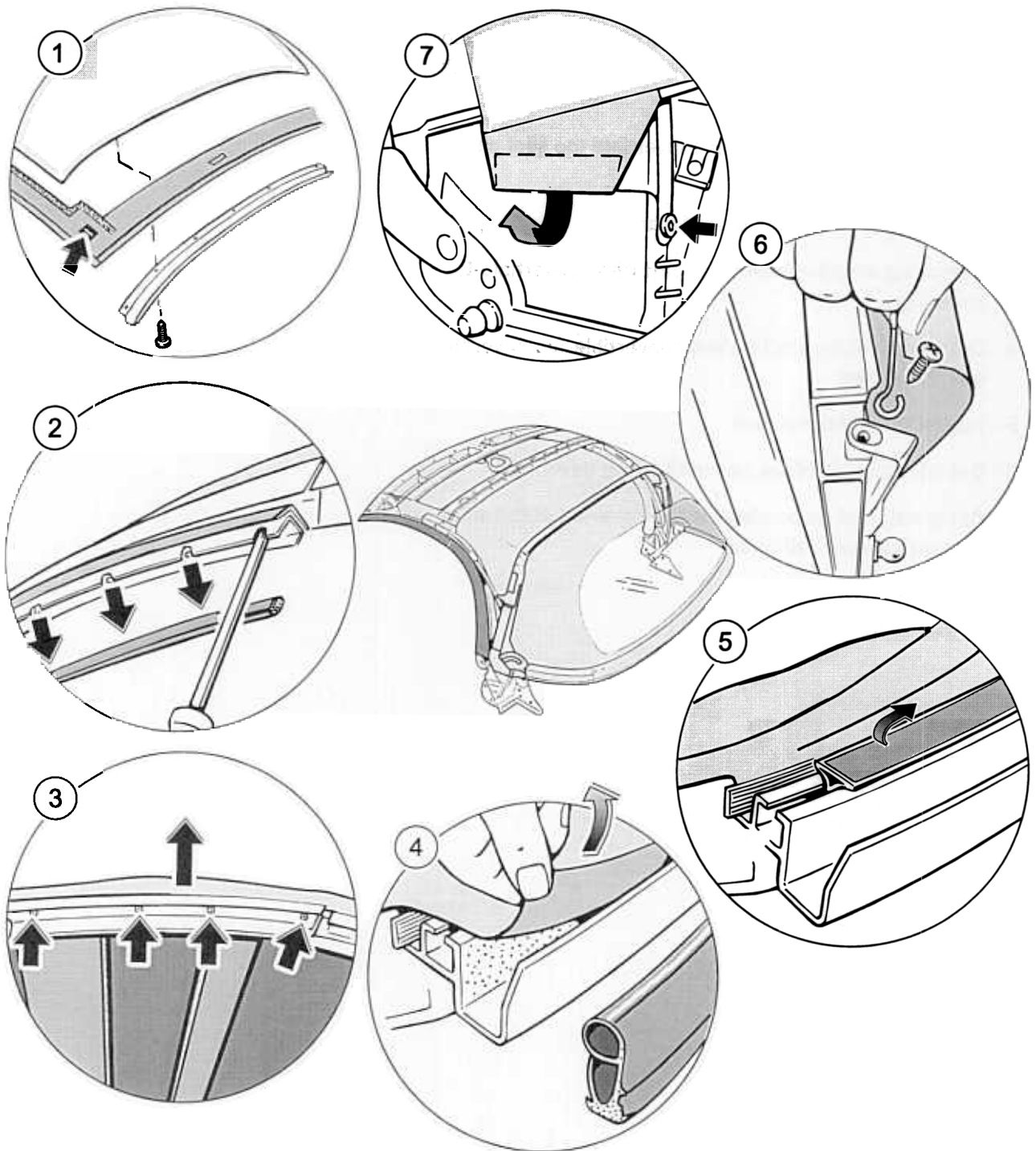
i Note!

- ◆ The following convertible-top covering spare parts are required for replacement of the convertible-top covering!
- ◆ The spare parts contained in the "convertible-top covering" scope of parts must always be replaced!
- ◆ The convertible-top covering must be replaced at a room temperature of at least 15 degrees Celsius (59 Fahrenheit)!
- ◆ The roof liner must be removed when replacing the convertible-top covering on the model version with roof liner!
- ◆ The centre cover moulding is characterised by a second groove for the connection to the roof liner which must be ordered separately!



A = Convertible-top covering	D = Tension strap	G = Tension bow seal
B = Slider / rail	E = Tension strap cover	H = Seal
C = Plastic plug	F = Tubular rivets	I = Side seal

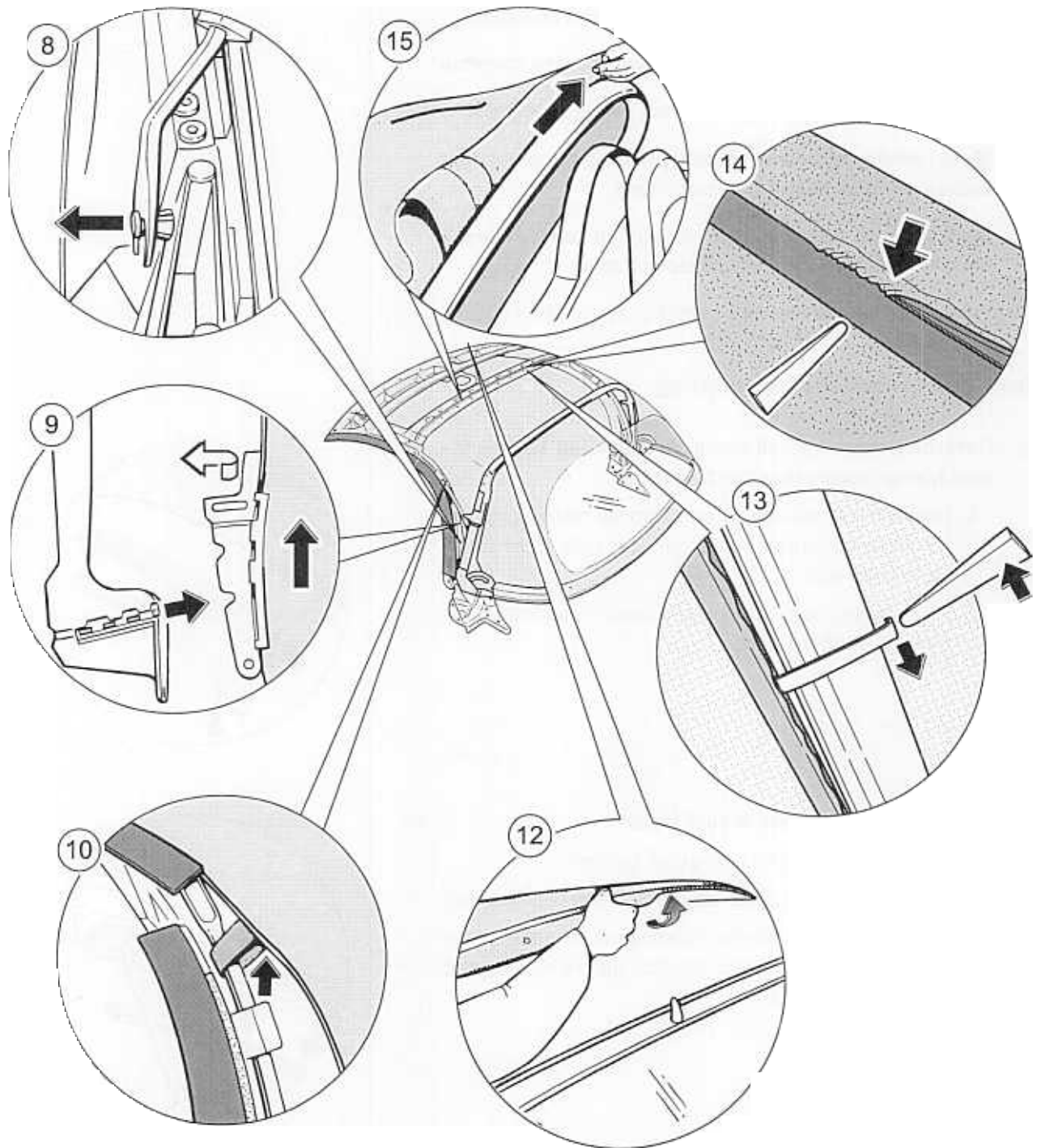
Removal overview of the convertible-top covering components, part 1



**Note!**

*The roof liner must be removed when replacing the convertible-top covering on the model version with roof liner! ⇒ Rep. Gr. 610919;
Removing and installing roof liner*

- 1 - Detaching retaining rail and convertible top seal on the roof frame**
- 2 - Detaching seal at sides of roof frame**
- 3 - Detaching shaped sheetmetal part with convertible-top covering**
- 4 - Detaching rubber section and convertible-top covering on tension bow**
- 5 - Pulling off additional seal**
- 6 - Detaching cable of the convertible-top covering**
- 7 - Detaching fold on convertible-top covering at the sides (convertible top half open)**

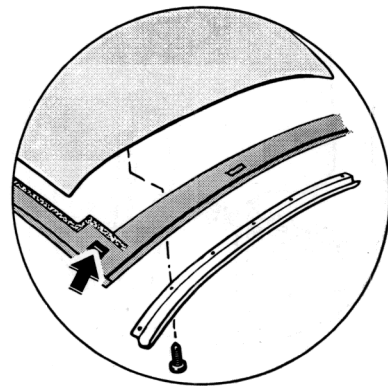
Removal overview of the convertible-top covering components, part 2

- 8 - Removing clamping rail and slider
- 9 - Detaching pull strip from the clamping rail and slider
- 10 - Detaching holding strap of the convertible-top covering
- 11 - Detaching convertible-top covering at the roof frame
- 12 - Model version without roof liner: pressing retaining clips and cover moulding out of roof frame
- 13 - Model version with roof liner: pulling out convertible-top covering and pressing out cover moulding
- 14 - Pulling out convertible-top covering at the main bow

Removing convertible-top covering

1 - Detaching retaining rail and convertible-top seal on the roof frame (convertible top half open) ►

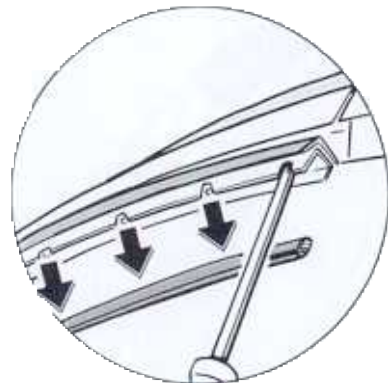
1. Unscrew the fastening screws from the retaining rail or the fastening screws from the left and right of the convertible-top seal.
2. Pull out the convertible-top seal corners on the left and on the right to the front.



2 - Detaching seal at sides of roof frame ►

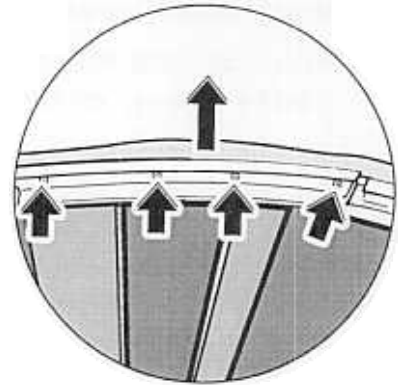
The seal on the roof frame consists of two parts.

1. Pull the lower seal out of the profile of the retaining strip.
2. On the upper seal with the retaining rail, unscrew the fastening screws and remove the seal and the retaining rail from the roof frame.

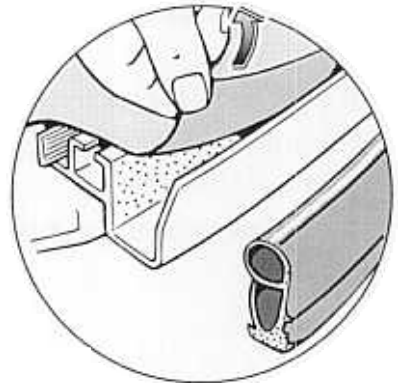


3 - Detaching shaped sheetmetal part with convertible-top covering ►

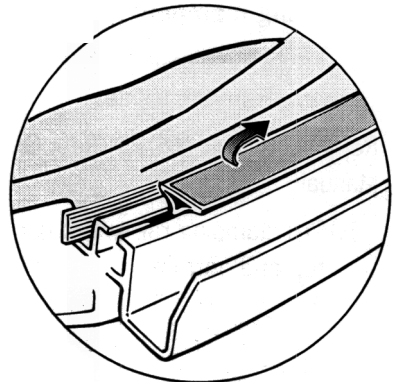
- Undo the fastening screws on the roof frame and raise the shaped sheetmetal part together with the convertible-top covering.

**4 - Detaching rubber section and convertible-top covering on tension bow** ►

- Pull the rubber section out of the profile strip of the tension bow and detach the convertible-top end piece from the tension bow.

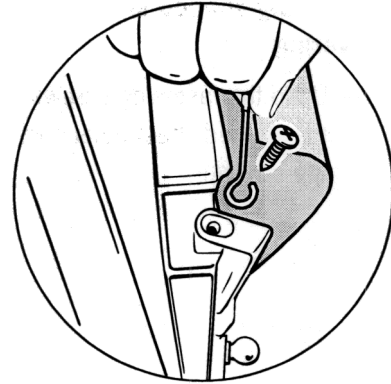
**5 - Pulling off additional seal** ►

- Pull the additional seal out of the lower groove of the tension bow, pull the seal on the convertible-top covering out of the upper groove of the tension bow and pull the convertible-top covering down and off.

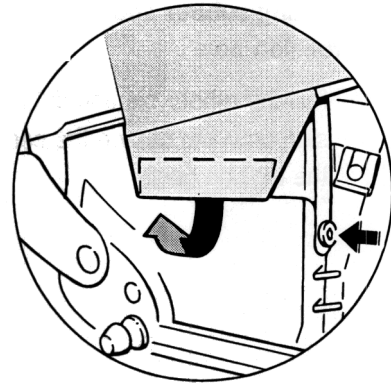


6 - Detaching cable of the convertible-top covering ▶

- At the front B-pillar (main bow), undo the fastening screw from the cable eye and clamping rail.

**7 - Detaching fold at the rear sides (convertible top half open)** ▶

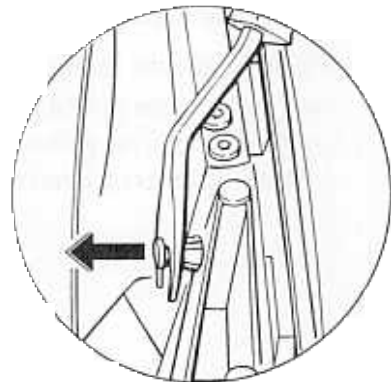
1. Undo the fold of the convertible-top covering edge.
2. Pull the convertible-top covering out of the clamping rails at the bottom sides.
3. Unscrew the fastening screw at the rear of the clamping rail.

**8 - Removing clamping rail and slider** ▶

1. Press the plastic plugs in the clamping rail out of the main bow from the inside.

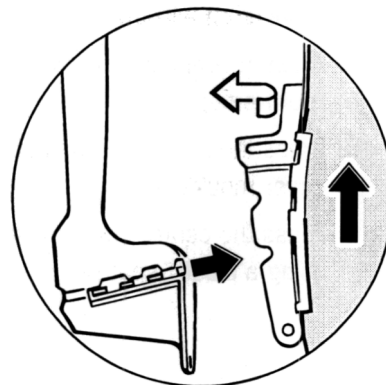
Removal tool ⇒ No. 21; Rep. Gr. 2.4; Workshop Equipment Manual

1. Pull clamping rail with slider out of the main bow at the top and bottom.

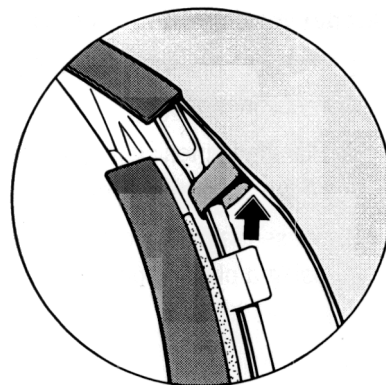


9 - Detaching pull strip from the clamping rail and slider ▶

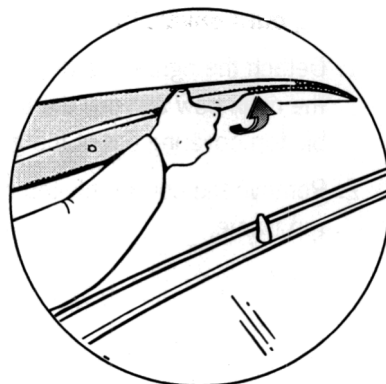
1. Pull the horizontal pull strip of the convertible-top covering out of the groove in the clamping rail and pull the vertical pull strip out of the groove in the slider.

**10 - Detaching holding strap of the convertible-top covering** ▶

- Detach the Velcro fastening of the holding strap around the push bar.

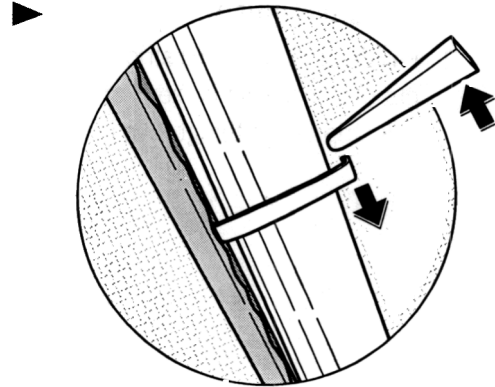
**11 - Detaching convertible-top covering at the roof frame** ▶

- Detach the convertible-top covering on the roof frame at the front and lay it down to the rear.

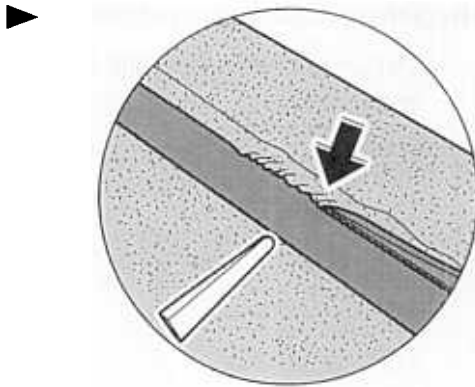


12 - Model version without roof liner

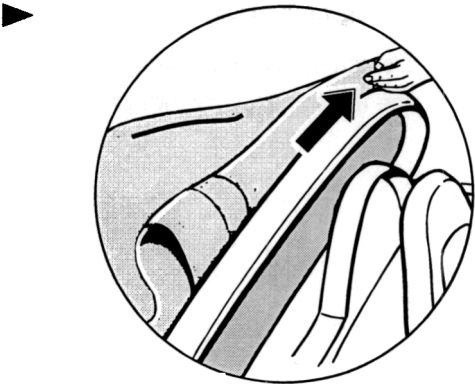
1. Press retaining clips and centre cover moulding out of roof frame.
2. Press the retaining clips out of the groove of the centre cover moulding.
3. Press the centre cover moulding out of the roof frame using a plastic spatula.

**13 - Model version with roof liner**

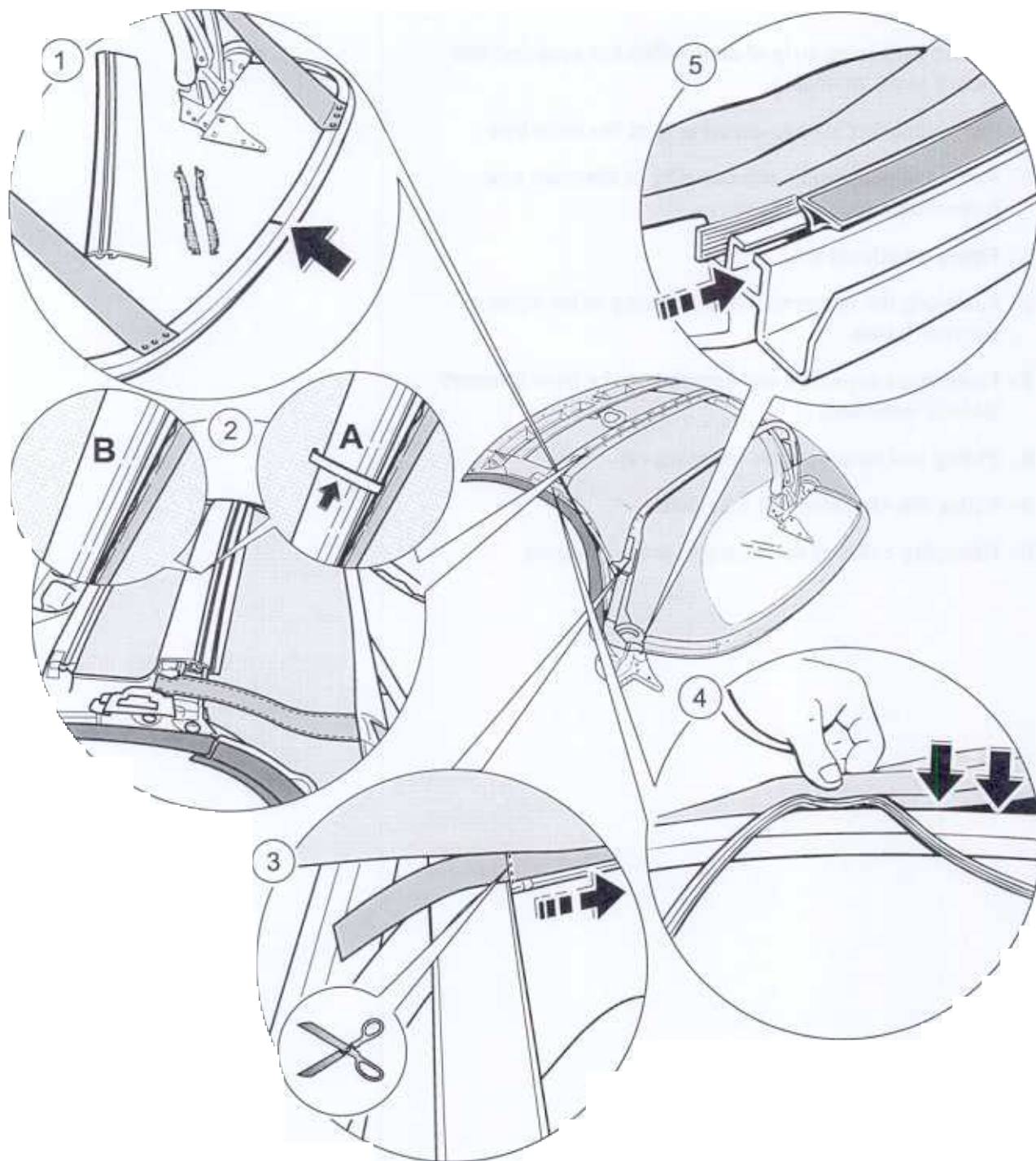
1. Pull out convertible-top covering and press out cover moulding.
2. Pull the tightening strip of the convertible-top covering out of the cover moulding.
3. Press the centre cover moulding out of the roof frame using a plastic spatula.

**14 - Pulling out convertible-top covering at the main bow**

1. Detach the tightening strip on the left and right sides on the main bow and pull the tightening strip of the convertible-top covering out of the groove of the main bow.
2. Remove the convertible-top covering from the convertible-top frame.

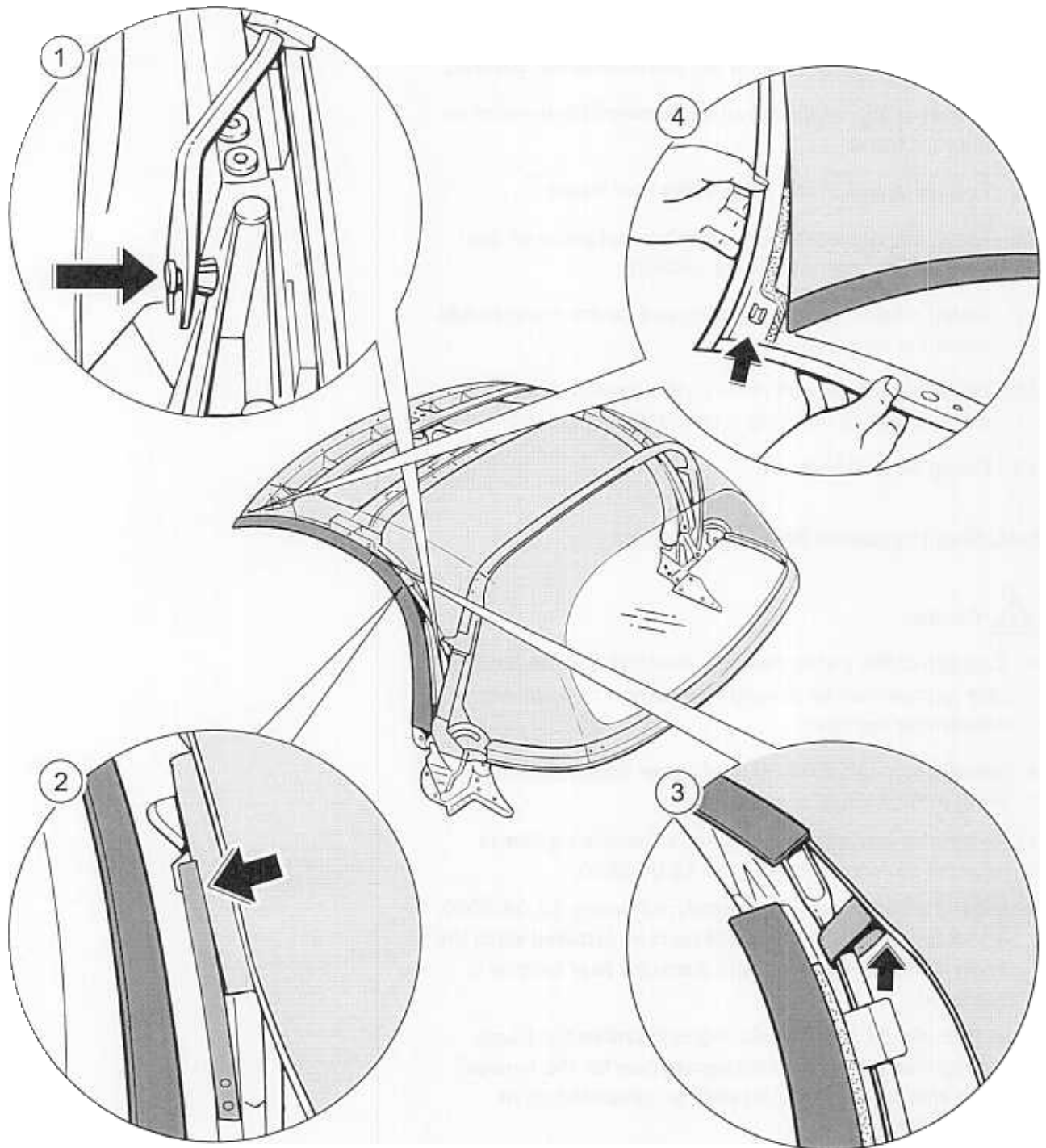


Installation overview of the convertible-top covering components, part 1



- 1 - Preparing convertible-top frame and convertible-top covering
- 2 - Pulling tightening strip of convertible-top covering into centre cover moulding
- 3 - Pulling convertible-top covering in at the main bow
- 4 - Fastening convertible-top covering at the main bow (convertible top unlocked)
- 5 - Fitting additional seal
- 6 - Fastening the convertible-top covering at the sides of the roof frame
- 7 - Fastening convertible-top covering at the front (convertible top unlocked)
- 8 - Pulling pull strip into the clamping rail
- 9 - Fitting the clamping rail with slider
- 10 - Fastening cable of the convertible-top covering

Installation overview of the convertible-top covering components, part 2



- 11 - Securing the clamping rail
- 12 - Fastening convertible-top covering at the sides
- 13 - Fastening holding strap of the convertible-top covering
- 14 - Fastening the retaining rail and convertible-top seal on the roof frame
- 15 - Fastening seal at the sides of the roof frame
- 16 - Fastening convertible-top covering end piece on the tension bow (convertible top closed)
- 17 - Fitting retaining clips, pull strip and centre cover moulding in the roof frame
- 18 - Fastening rubber pull strap on the tension strap of the convertible-top covering (convertible top closed)
- 19 - Fitting tension bow seal

Installing the convertible-top covering

Caution!

- *Damage to the convertible-top covering and the flexible rear window may be caused by incorrect removal with the convertible top open!*
- ◆ *Introduction on 13.04.2000 of a new convertible-top covering with modified rear window!*
- ◆ *Necessary conversion measure for tensioning bow in vehicles up to production date 12.04.2000*
- ◆ *In vehicles with a roof liner produced before 12.04.2000, a new roof liner with a new cut must be installed when the convertible-top covering with a smaller rear window is replaced.*
- ◆ *⇒ Rep. Gr. 613055; Replacing convertible-top frame (conversion measure at tensioning bow for the tension strap and the roof liner on vehicles produced up to 12.04.2000).*

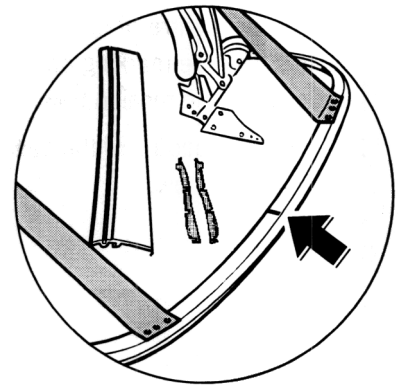
Note!

- ◆ *All pins and screw joints must be checked for tightness before the convertible-top covering is installed!*
- ◆ *When setting down the convertible top for the first time, support the folding of the convertible-top window with your hand!*

- ◆ *It is important that no creasing occurs in the convertible-top window when folding it for the first time!*
- ◆ *If the convertible-top covering is very taut (with new convertible-top covering), close the convertible top and heat the convertible-top covering evenly using a heating lamp!*
- ◆ *Ensure that the convertible-top covering is not heated for longer than 1 hour!*
- ◆ *Maintain a safe distance from the heating lamp of approx. 50 cm, then leave the vehicle overnight with the convertible top closed!*
- ◆ *In order to avoid abrasions when the convertible top is set down for a long period (hardtop operation), insert protective fleece between the folds of the convertible-top window!*

1 - Preparing convertible-top frame and convertible-top covering (convertible top locked) ▶

1. Measure the centre between the restraining straps and mark it on the tension bow.
2. Replace the seals contained in the scope of parts on the left and right of the roof frame, and replace the centre cover moulding.
3. Replace the tension strap. ⇒ Rep. Gr. 613055; Replacing convertible-top frame



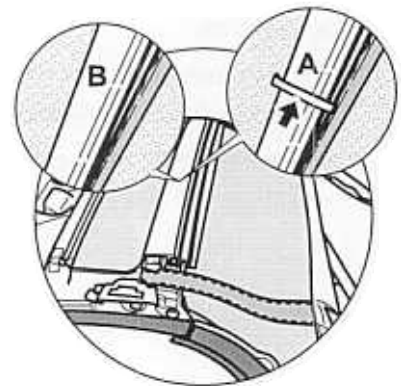
2 - Pulling tightening strip of convertible-top covering into centre cover moulding ▶

Inset A = model version without roof liner

1. Pull tightening strip of convertible-top covering into cover moulding.
2. Position the retaining clips in the groove of the centre cover moulding.

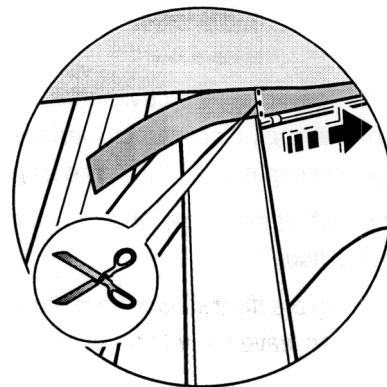
Inset B = model version with roof liner

- Pull tightening strip of convertible-top covering into cover moulding.

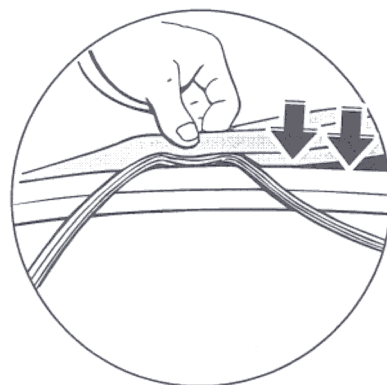


3 - Pulling convertible-top covering in at the main bow ▶

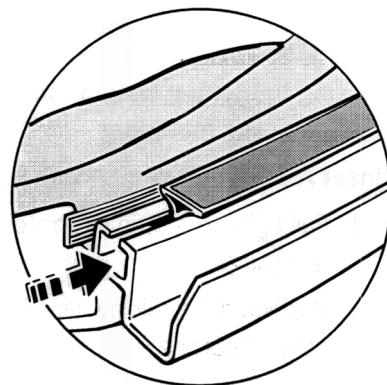
1. Lay the convertible-top covering on the convertible-top frame, fit the tightening strip of the convertible-top covering in the groove of the main bow and centre.
2. For vehicles and convertible-top coverings with extended tightening strips on the left and right, cut off the tightening strips flush at the tension strap.

**4 - Fastening convertible-top covering at the main bow (convertible top unlocked)** ▶

1. Press the centre of the convertible-top covering that coincides with the marking on the tension bow into the upper groove of the tension bow.
2. Centre the middle of the seal and tap into the groove of the tension bow.

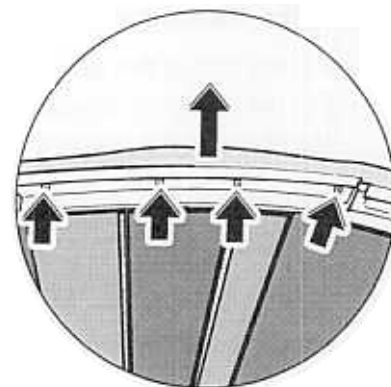
**5 - Fitting additional seal** ▶

1. Press the tension bow seal in the centred groove of the tension bow.
2. Pull the protective paper off the self-adhesive strip of the convertible-top covering and the tension bow seal.
3. Position convertible-top covering on the tension bow seal and press into place.



6 - Fastening the convertible-top covering at the sides of the roof frame

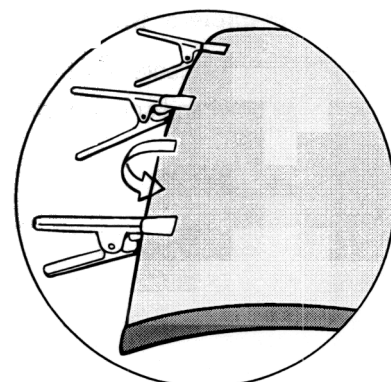
1. Lay the convertible-top covering to the front and guide the shaped sheetmetal part into the roof frame from above.
2. Fasten the convertible-top covering with the fastening screws, starting from the rear bottom side of the roof frame.



7 - Fastening convertible-top covering at the front (convertible top unlocked)

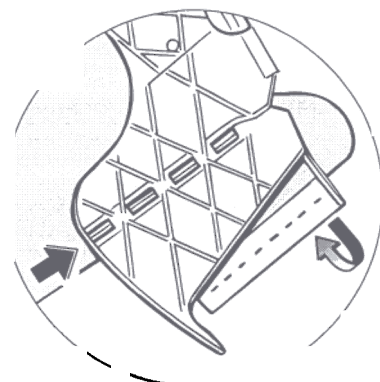
A cardboard strip and a self-adhesive strip are affixed at the front of the convertible-top covering.

1. Pull the protective paper off the adhesive tape and fold the convertible-top material around the roof frame into the groove without wrinkles.
2. The fold is initially held with fixing clips.



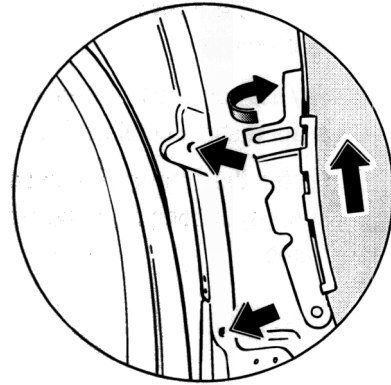
8 - Pulling pull strip into the clamping rail

1. Pull the horizontal pull strip of the convertible-top covering into the groove of the clamping rail.
2. Fold the cardboard insert underneath around the clamping rail.

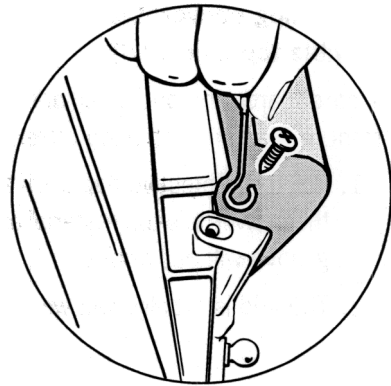


9 - Fitting the clamping rail with slider ▶

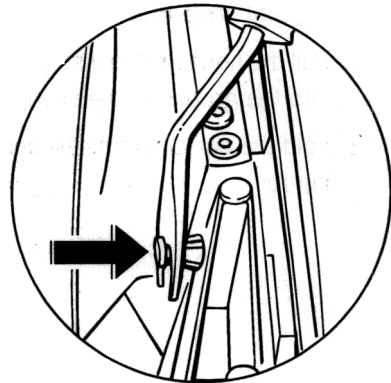
- Pull the vertical pull strip of the convertible-top covering into the slider, turn it inward and push it into the main bow together with the clamping rail.

**10 - Fastening cable of the convertible-top covering** ▶

- Position the cable with the clamping rail at the B-pillar (main bow) and screw in place with the fastening screw.

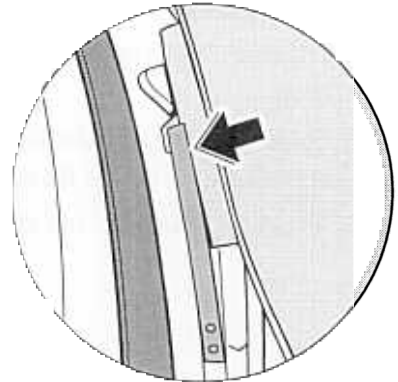
**11 - Securing the clamping rail** ▶

- The clamping rail is secured by pressing the plastic plugs into the clamping rail from the inside.

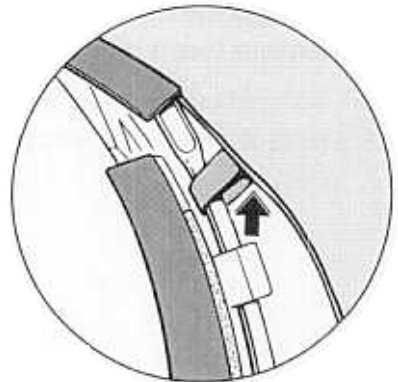


12 - Fastening convertible-top covering at the sides ▶

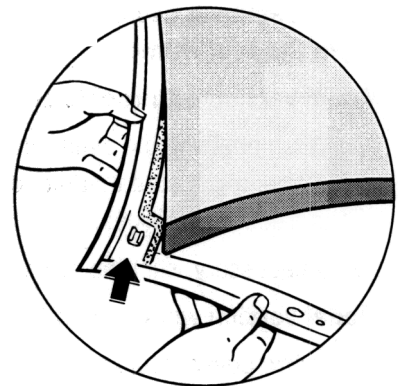
- Clamp the outer pull strip of the convertible-top covering behind the leaf spring.

**13 - Fastening holding strap of the convertible-top covering** ▶

- Guide the Velcro seal of the holding strap around the push bar and close.

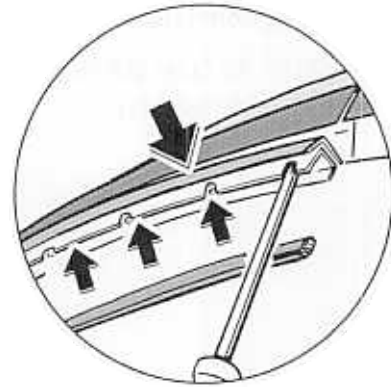
**14 - Fastening the retaining rail and convertible-top seal on the roof frame** ▶

1. Remove the fixing clips and clip the convertible-top seal into the roof frame at the corners from the front.
2. Fasten the retaining rail at the front on the roof frame using the fastening screws.
3. Close and lock the convertible top.

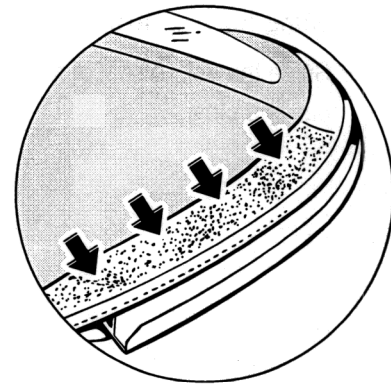


15 - Fastening seal at the sides of the roof frame ▶

1. The seal on the roof frame at the sides consists of two parts.
2. Screw the upper seal to the roof frame together with a retaining rail using the fastening screws.
3. Press the lower seal into the profile of the retaining rail.

**16 - Fastening convertible-top covering end piece on the tension bow (convertible top closed)** ▶

- Apply adhesive over approx. 300 mm on the left and right sides of the convertible-top covering end piece and fold it over.

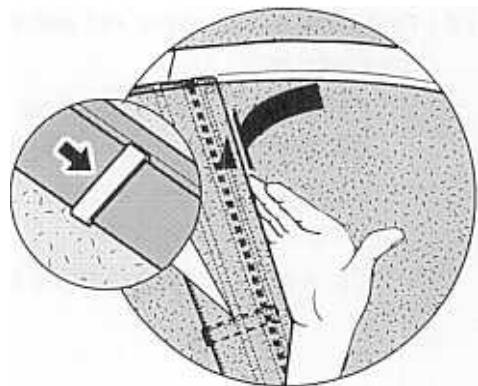
**17 - Fitting retaining clips, pull strip and centre cover moulding in the roof frame** ▶**Model version with roof liner**

1. When pressing the centre cover moulding into the roof frame, make sure that the top side of the convertible top is free from wrinkles.
2. If necessary, shift the pull strip to the left or right.

Model version without roof liner

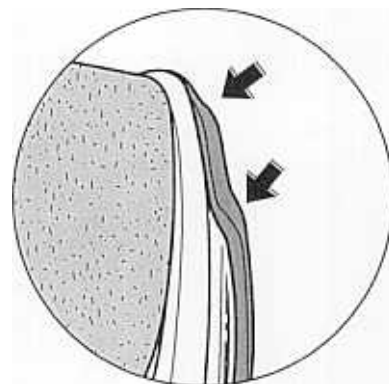
The centre cover moulding is additionally secured using a retaining clip (small inset).

- Press the retaining clip into the groove of the centre cover moulding and pull downwards over the roof frame edge.

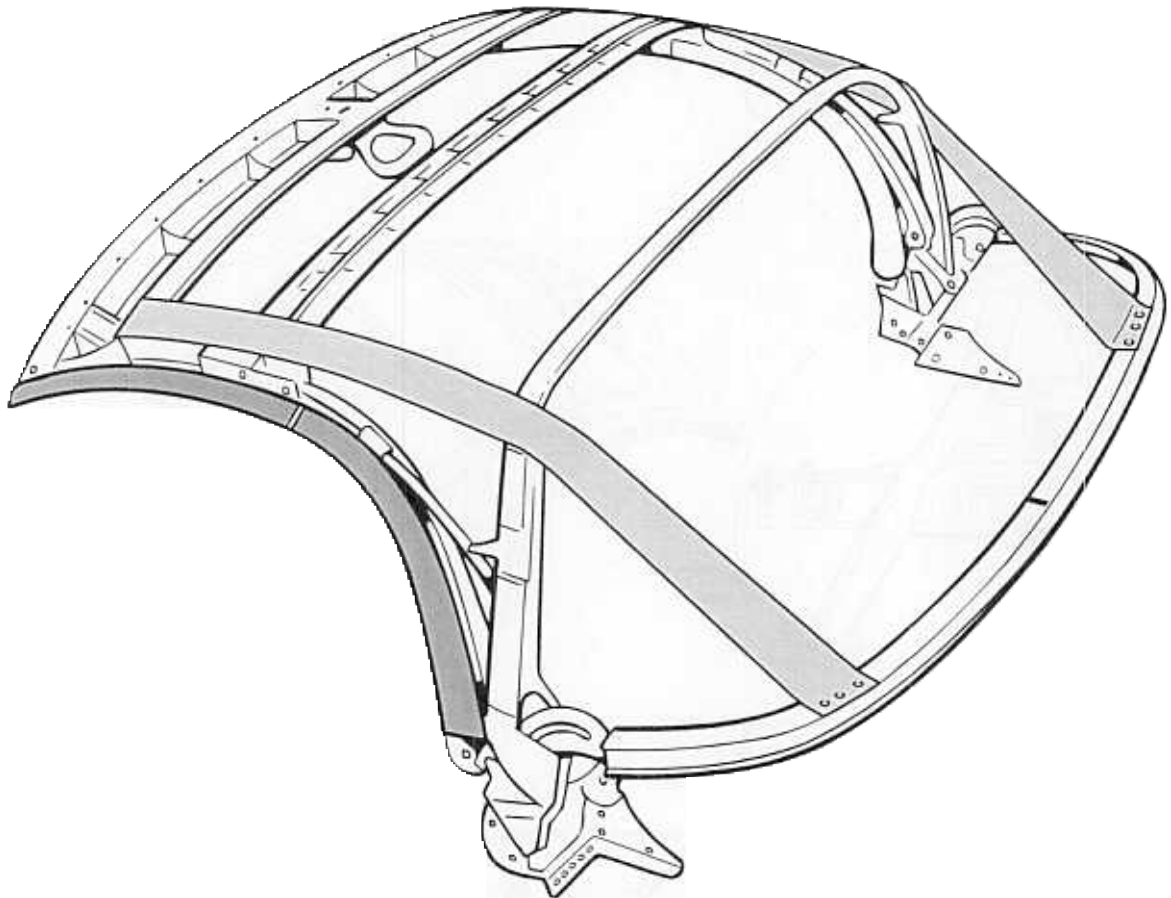


18 - Fitting tension bow seal

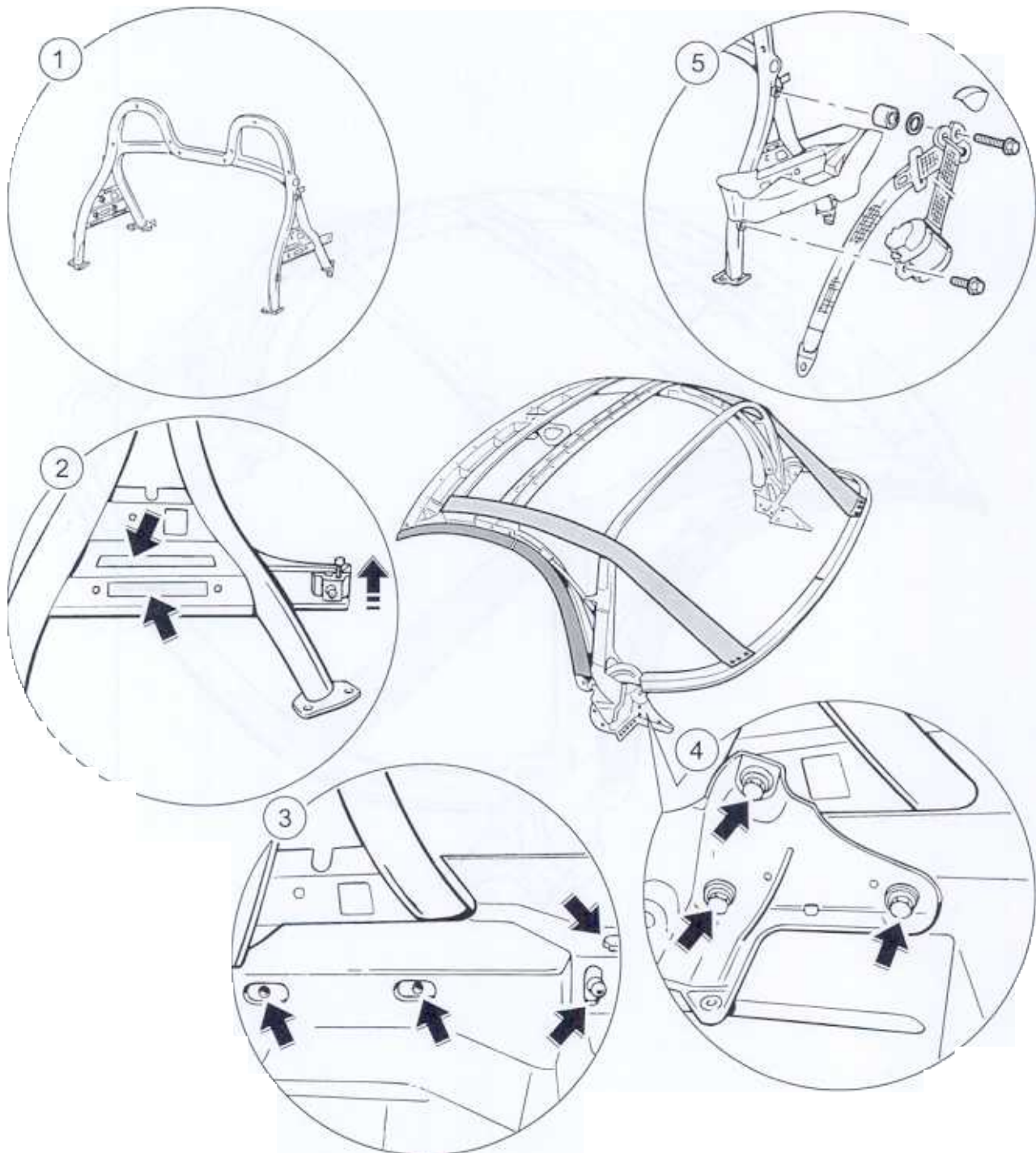
- Press the tension bow seal into the outer groove of the tension bow.



Replacing convertible-top frame

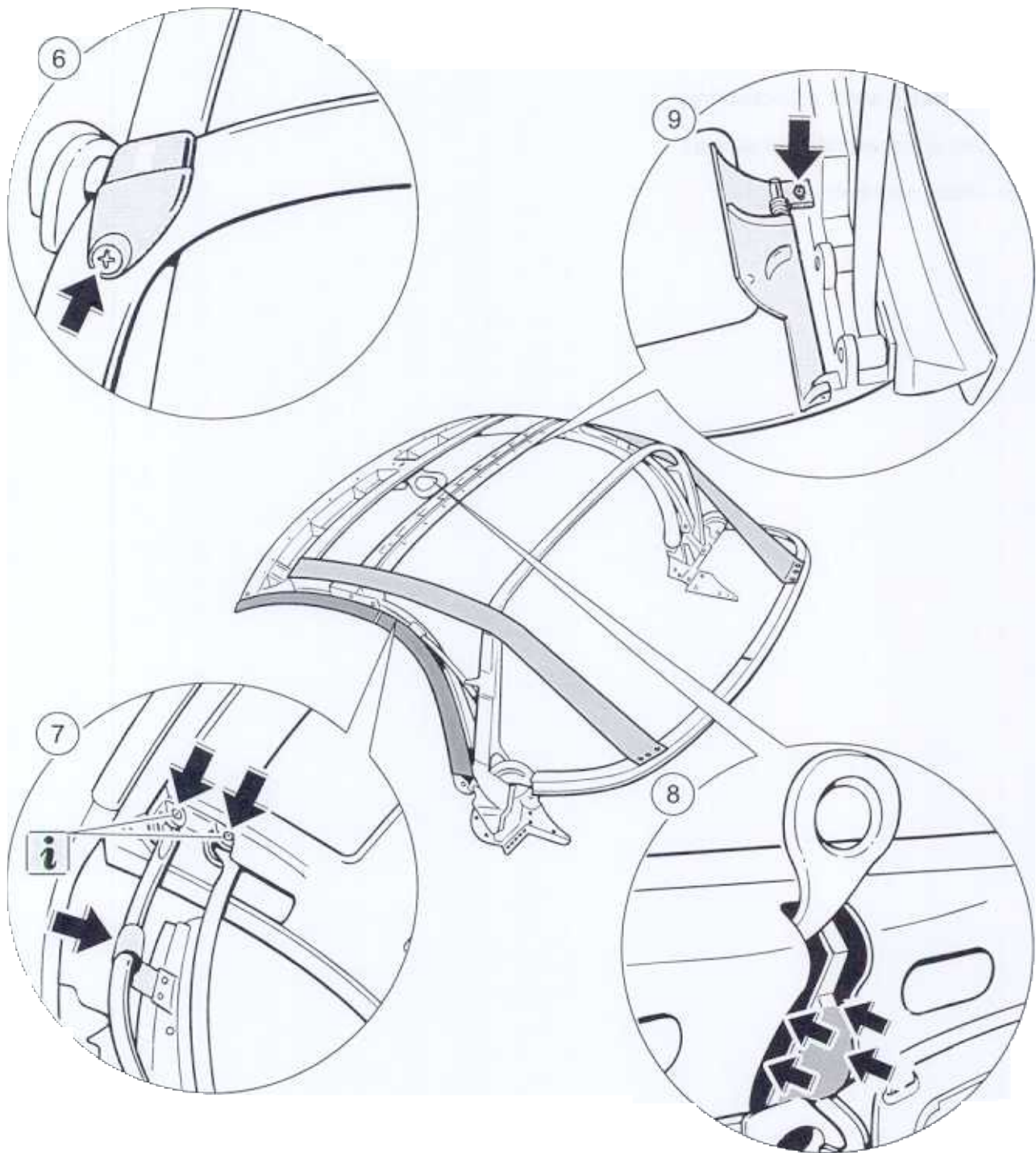


Overview of replacing convertible-top frame, part 1



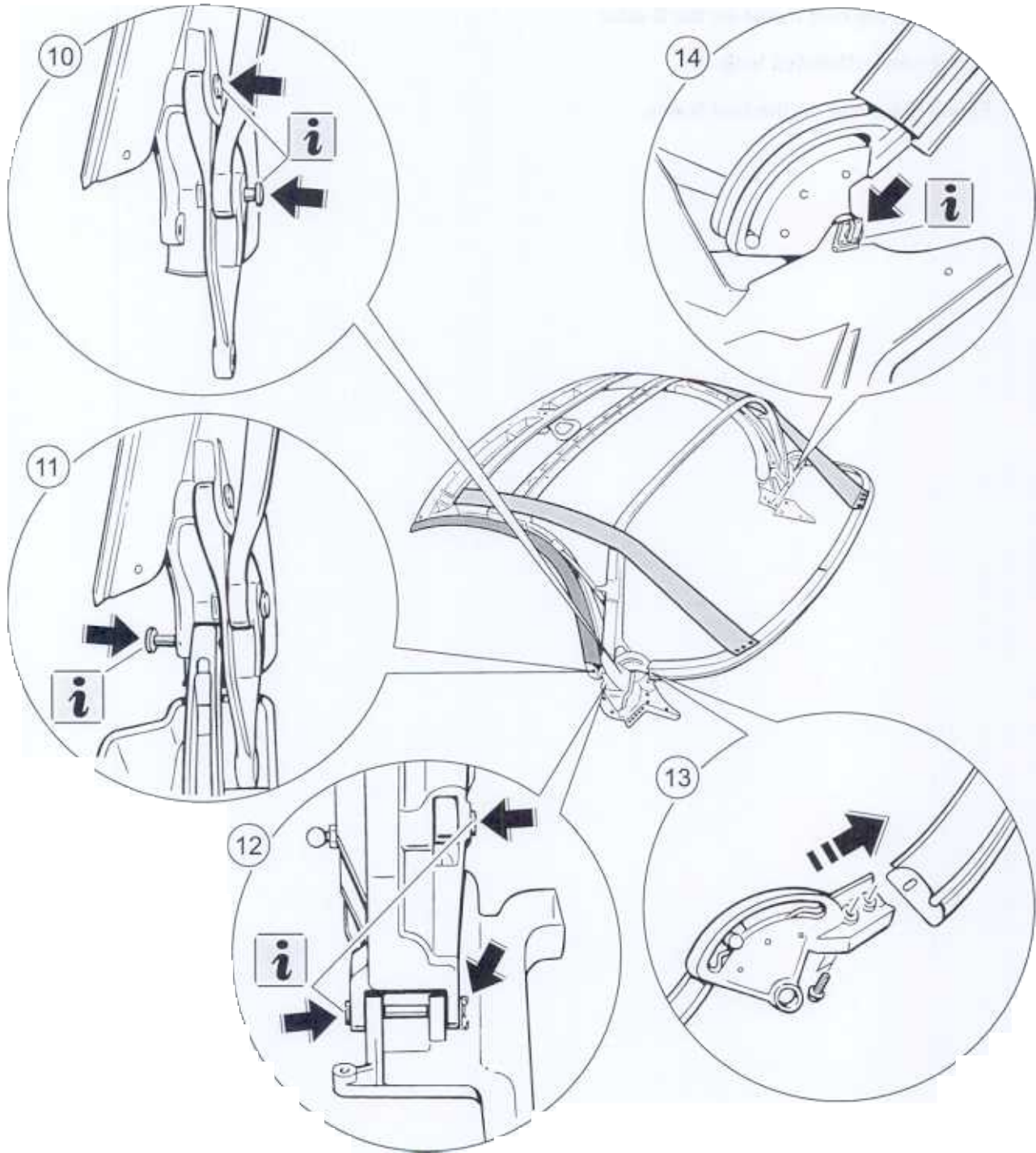
- 1 - Placing the roll-over bar on assembly fixture
- 2 - Fastening the adjusting piece and strips of adhesive tape
- 3 - Fastening water collection tray
- 4 - Fitting convertible-top support
- 5 - Fitting seat belt

Overview of replacing convertible-top frame, part 2



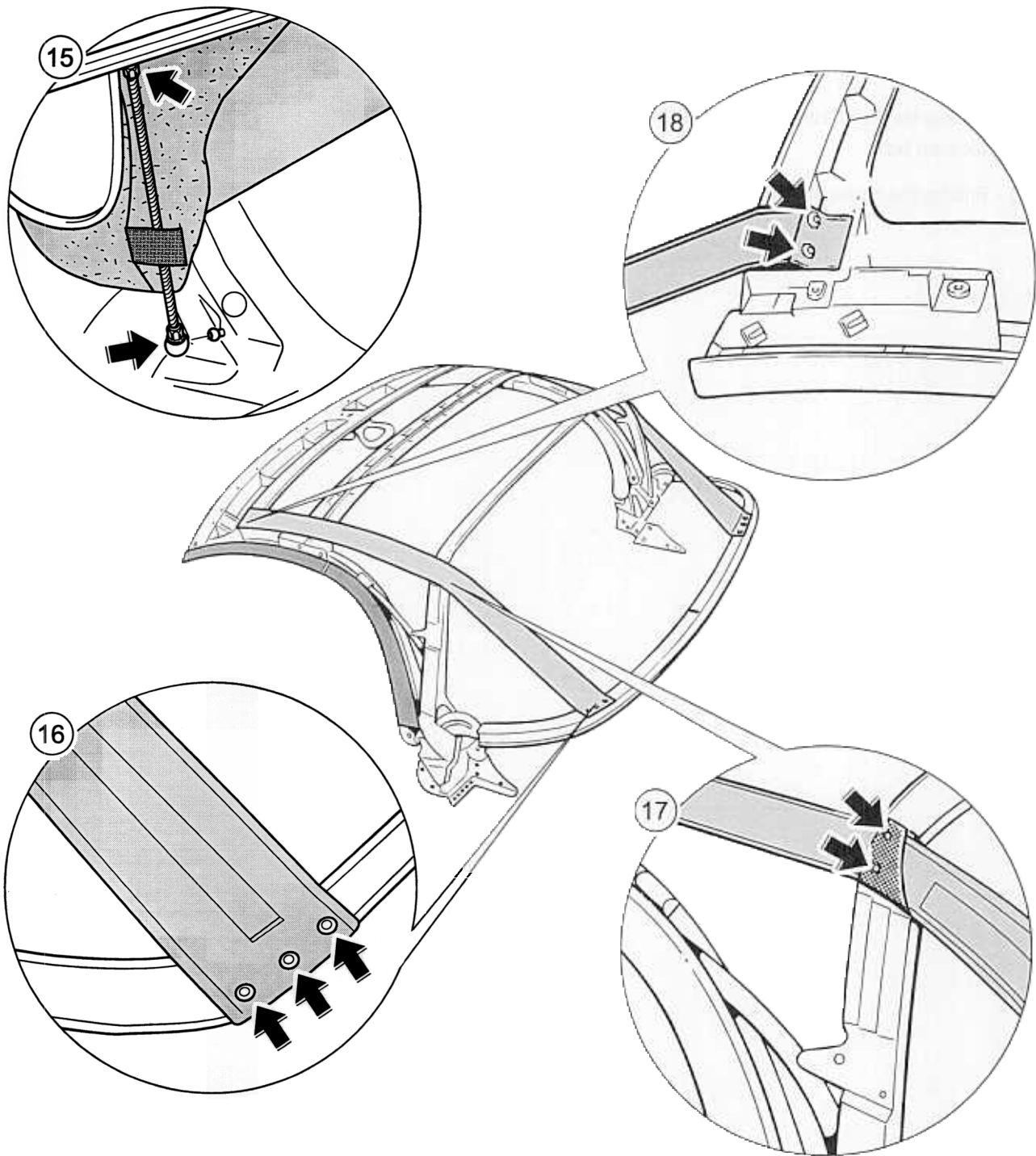
- 6 - Fitting stop buffer**
- 7 - Fastening the roof frame on the B-pillar**
- 8 - Fitting convertible-top lock**
- 9 - Fitting the cover on the roof frame**

Overview of replacing convertible-top frame, part 3



- 10 - Fitting the drive lever on the B-pillar
- 11 - Fitting the roof frame with the B-pillar
- 12 - Fitting the main bow
- 13 - Fitting the connection piece with steering lever on the tension bow
- 14 - Fitting the tension bow

Overview of replacing convertible-top frame, part 4



15 - Fitting the tension cable

16 - Riveting the tension strap to the tension bow

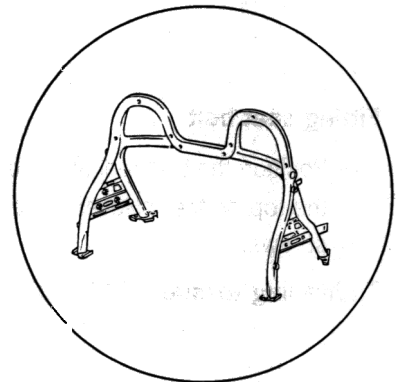
17 - Fitting tension strap on the main bow

18 - Fitting the tension strap on the roof frame

Replacing convertible-top frame

1 - Placing the roll-over bar on assembly fixture

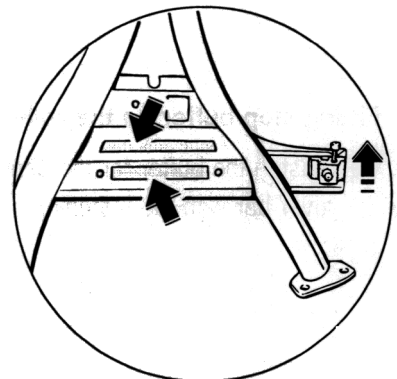
- Place the roll-over bar outside the vehicle on a workbench or assembly fixture and secure.



2 - Fastening the adjusting piece and strips of adhesive tape

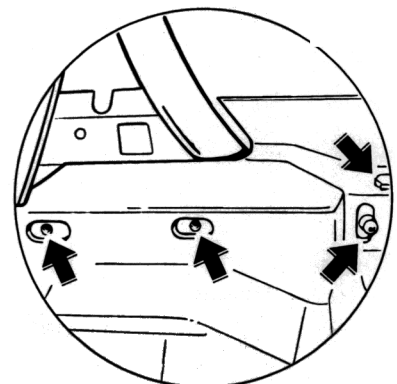
1. Insert the adjusting piece, which is used to brace the tension bow, into the guides of the roll-over bar and fasten the adjusting piece with the fastening screw.
2. Affix two strips of double-sided adhesive tape in the area of the convertible-top support fastening point.

The strips of tape are used to fasten the water collection tray.



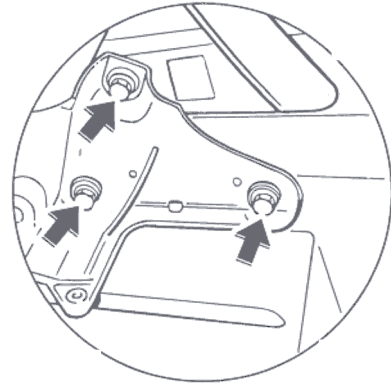
3 - Fastening water collection tray

- Position the hole pattern of the water collection tray on the hole pattern of the roll-over bar, and press the tray onto the two strips of double-sided adhesive tape.



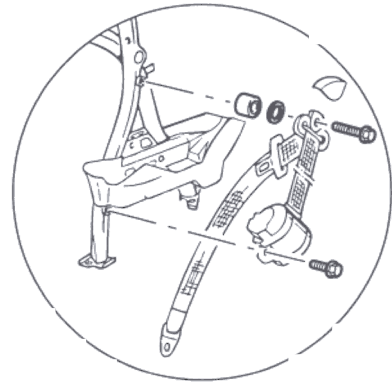
4 - Fitting convertible-top support

- Position the convertible-top support on the roll-over bar and fasten it with the fastening screws.

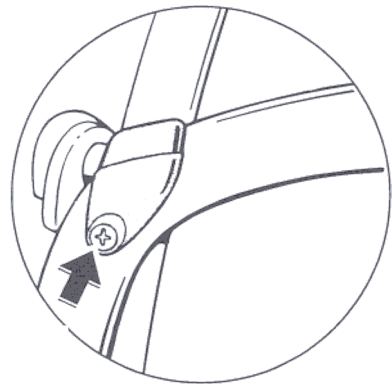
**5 - Fitting seat belt**

- Position the belt reel at the bottom and the deflector at the top on the roll-over bar and fasten with the fastening screws.

Tightening torque 50 Nm (37 ftlb.)

**6 - Fitting stop buffer on the roll-over bar**

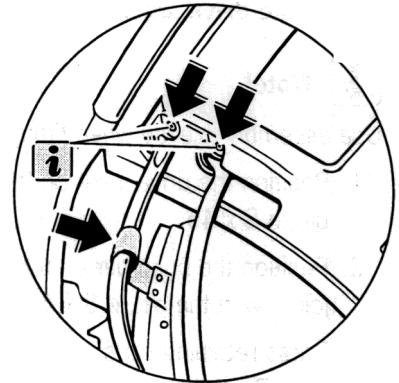
- Fasten the buffer for the convertible-top rest on the roll-over bar with the fastening screws.



7 - Fastening the roof frame on the B-pillar

i Note!

- ◆ When inserting the push bar of the roof frame into the roof frame, make sure that it is routed through the rubber strap of the B-pillar!
 - ◆ Use assembly grease when fitting the pins!
1. Fit the pre-assembled B-pillar in the roof frame and connect with the pins $\varnothing 8 \times 45$.
 2. Secure the pins with a clip.



8 - Fitting convertible-top lock

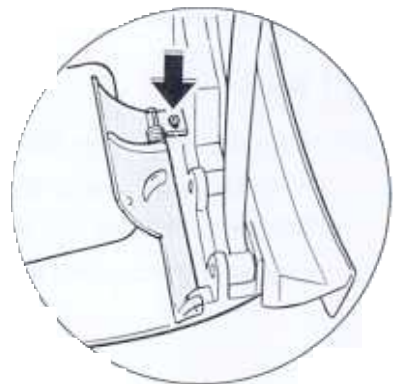
1. Position the convertible-top lock in the front of the roof frame and fasten with the fastening screws.
2. Lock the convertible-top frame.



9 - Fitting the cover on the roof frame

- Insert the cover on the roof frame at the rear and tighten the fastening screws.

The cover is spring-supported and covers the screw and pivot points on the roof frame.

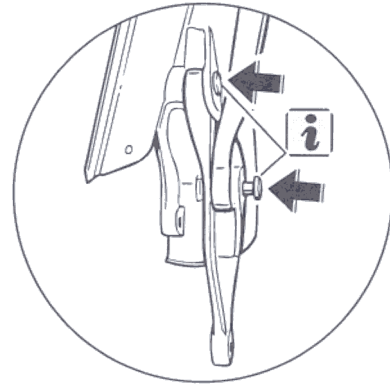


10 - Fitting the drive lever on the B-pillar

i Note!

Use assembly grease when fitting the pins!

1. Position the drive lever on the B-pillar and join it with the pin, \varnothing 8 x 45.
2. Position the push bar on the centre of the drive lever and join it with the pin, \varnothing 8 x 45.
3. Press retaining clips into the pins \Rightarrow No.131; Rep. Gr. 2.4; Workshop Equipment Manual.

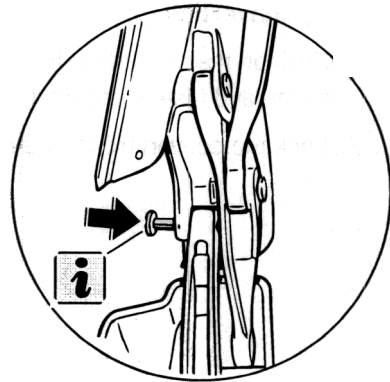


11 - Fitting the roof frame with the B-pillar

i Note!

Use assembly grease when fitting the pins!

1. Position the roof frame with the B-pillar on the convertible-top support and join it with the pin, \varnothing 8 x 45.
2. Press retaining clips into the pins.

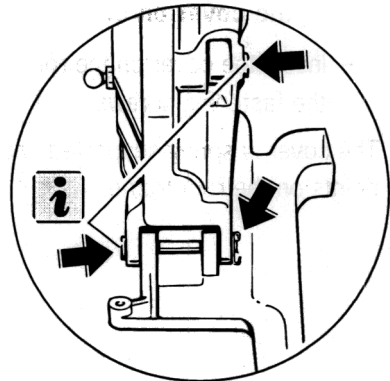


12 - Fitting the main bow

i Note!

Use assembly grease when fitting the pins!

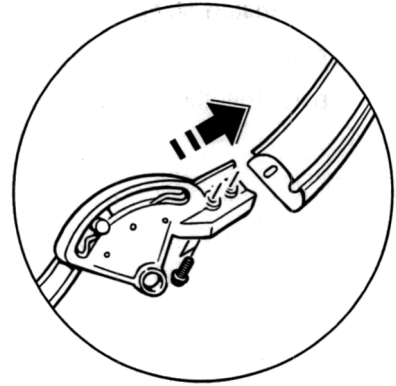
1. Position the main bow on the convertible-top support and drive lever. Then join with the pins, \varnothing 8 x 70 and \varnothing 8 x 45.
2. Press retaining clips into the pins.



13 - Fitting the connection piece with steering lever on the tension bow ▶

- Insert the pre-assembled connecting piece with steering lever in the tension bow and fasten with the fastening screws.

The connecting piece contains a clip in which the pin of the steering lever engages and thereby produces the position "tension bow closed" or "tension bow open" (service position).

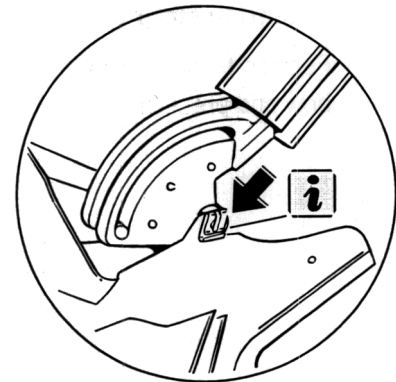


14 - Fitting the tension bow ▶

i Note!

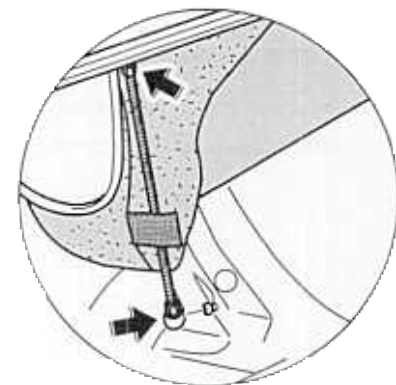
Use assembly grease when fitting the pins!

1. Position the tension bow with connection piece on the main bow and join the parts with the pin \varnothing 8 x 25.
2. Position the steering lever on the convertible-top support and join the parts with the pin \varnothing 8 x 30.
3. Press retaining clips into the pins.



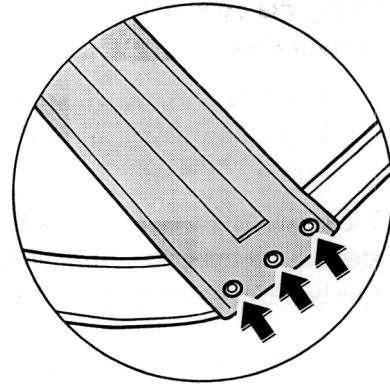
15 - Fitting the tension cable ▶

- Press the ball socket of the tension cable into the ball head of the adjusting piece on the roll-over bar.

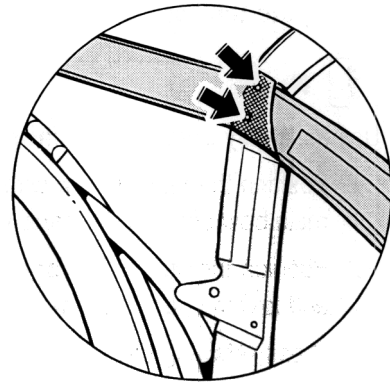


16 - Fitting tension strap on the tension bow ▶

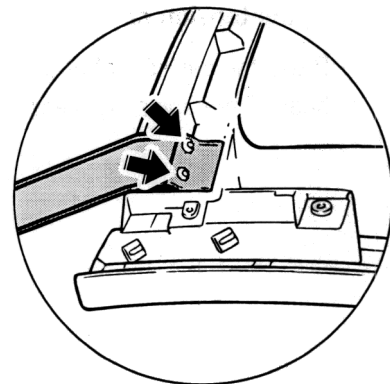
- Position the tension strap on the tension bow and rivet the parts together with the 5.0 x 8 pop rivets.

**17 - Fitting tension strap on the main bow** ▶

- Position tension strap with the strap cover on the main bow and press in.

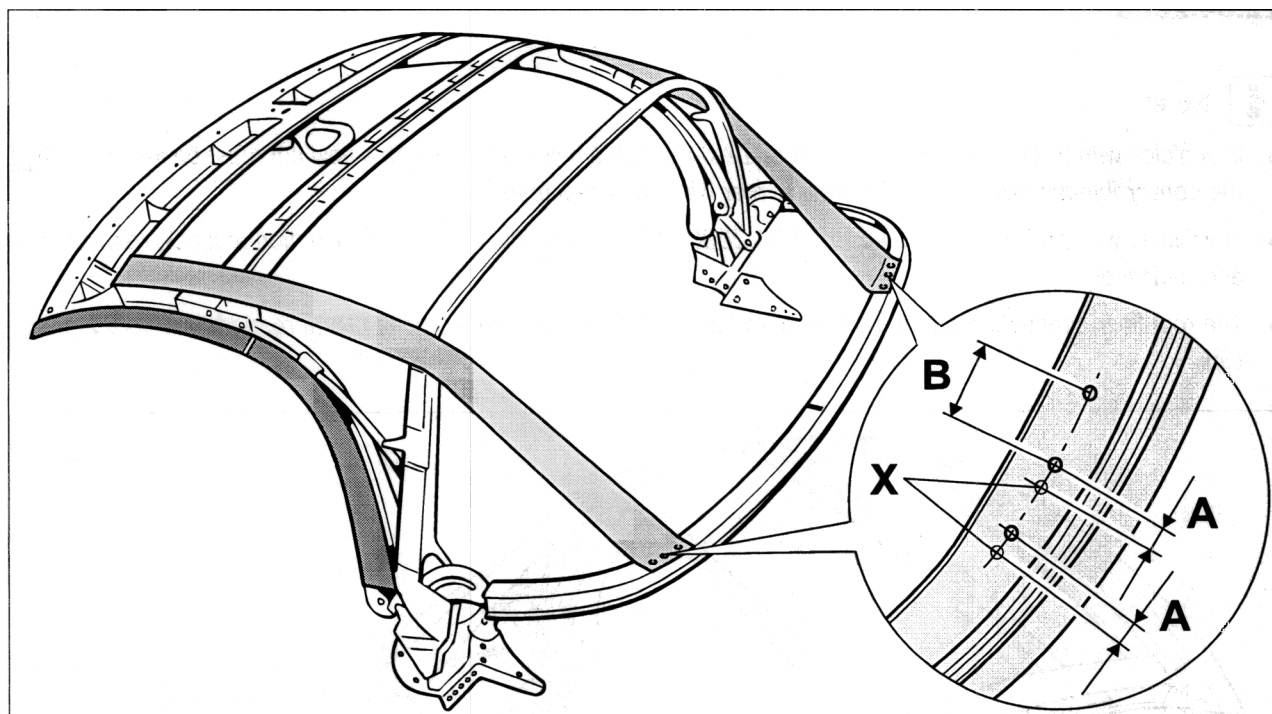
**18 - Fitting the tension strap on the roof frame (convertible-top frame locked)** ▶

- Position the tension strap on the roof frame at the rear, and fasten the tension strap with the fastening screws.



Conversion measure on the tension bow for the tension strap in vehicles produced before 12.04.2000**i Note!**

- ◆ Introduction on 13.04.2000 of a new convertible-top covering with modified rear window and wider tension strap for improved setting down of the convertible-top covering!
- ◆ In vehicles with production date up to 12.04.2000, the holes for the tension strap connection must be re-measured and re-drilled!
- ◆ The rivet connection on the tension bow has changed from a 2-point to a 3-point rivet connection!



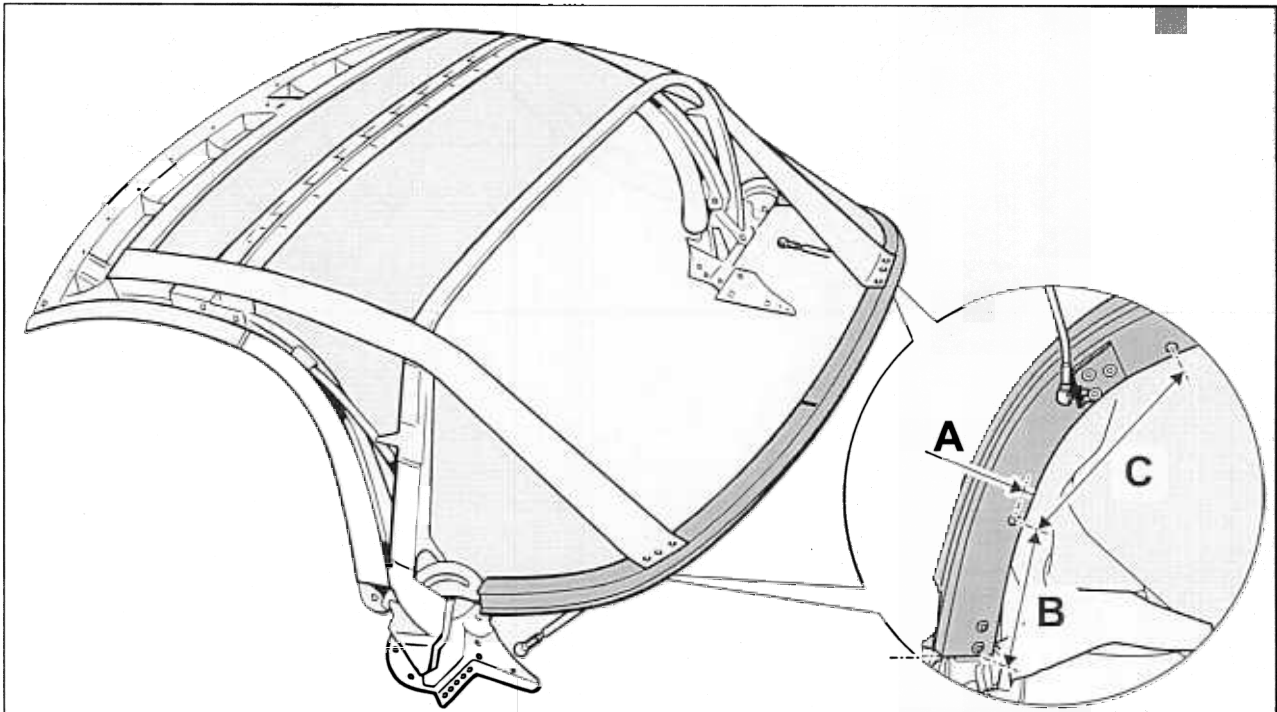
1 - Measuring and drilling the rivet holes for the tension strap

- Measure the dimensions **-A = 10 mm-** centrally starting from the old rivet holes **-X-** of the tension bow on the left and right.
- Measure the dimension **-B = 30 mm-** centrally starting from the measured dimension **-A-** of the tension bow on the left and right.
- Centre the measured dimensions using a prick punch. Drill the centrings with a drill bit \varnothing 5 mm.

Conversion measure on the tension bow for the roof liner in vehicles produced before 12.04.2000

Note!

- ◆ In vehicles with a roof liner produced before 12.04.2000, a new roof liner with a new cut must be installed when the convertible-top covering with a smaller rear window is replaced.
- ◆ In vehicles with production date up to 12.04.2000, the holes for the roof liner connection must be re-measured and re-drilled!
- ◆ The roof liner connection on the tension bow has been modified from a 1-point clip (threaded part) to a 2-point clip



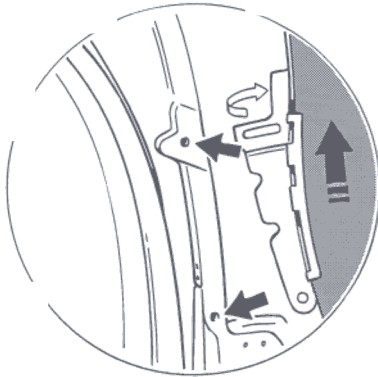
1 - Measuring and drilling the holes for the roof liner

1. Measure the dimensions -**A = 10 mm**- centrally starting from the inner edge of the tension bow.
2. Measure the dimension -**B = 128 mm**- starting from the beginning of the tension bow.
3. Measure the dimension -**C = 193 mm**- starting from the centre of the hole for dimension B.
4. Centre the measured dimensions using a prick punch. Drill the centrings with a drill bit \varnothing 5 mm.

No. Procedure

Instructions

9

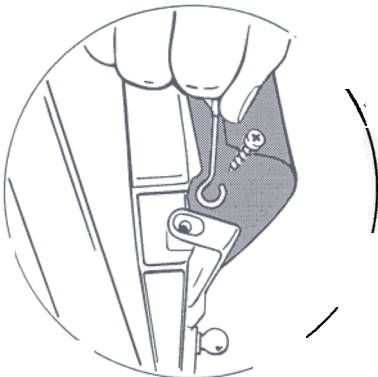


545_H_96

Fitting clamping rail with slider

Pull the vertical pull strip of the convertible-top covering into the slider, turn it inward and push it into the main bow together with the clamping rail.

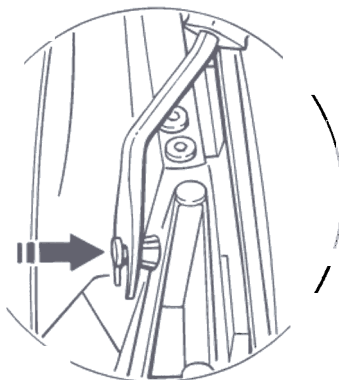
10



545_L_96

Fastening cable of the convertible-top covering

Position the cable with the clamping rail on the B-pillar (main bow) and fasten with the T25 x 8 Torx screw.



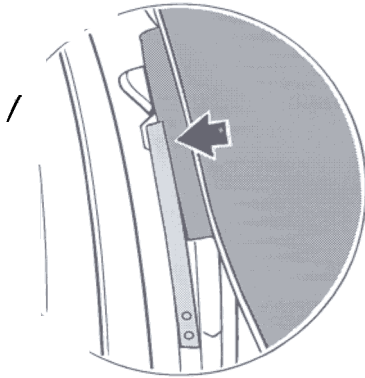
545_K_96

Securing clamping rail

The clamping rail is secured by pressing the plastic plugs into the clamping rail from the inside.

No. Procedure**Instructions**

12

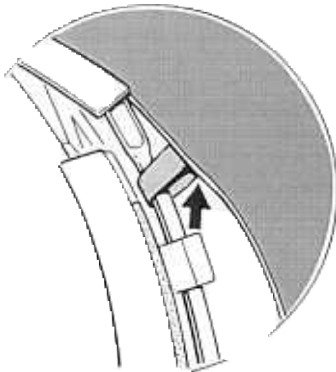


545_L_96

Fastening the convertible-top covering at the sides

Clamp the outer pull strip of the convertible-top covering behind the leaf spring.

13

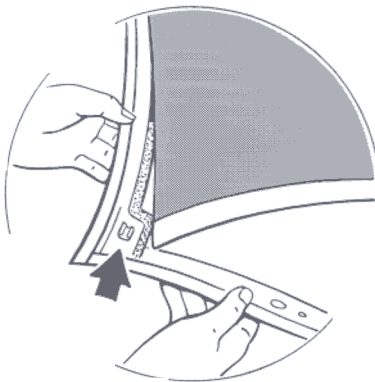


545_M_96

Fastening holding strap of the convertible-top covering

Guide the Velcro closure of the holding strap around the push bar and close.

14



545_N_96

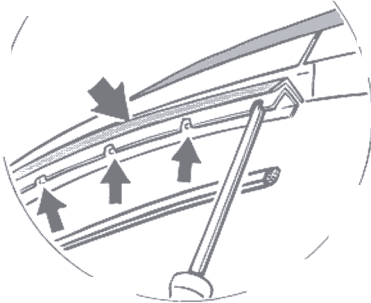
Fastening retaining rail and convertible-top seal on the roof frame

Remove the fixing clips and clip the convertible-top seal into the roof frame at the corners from the front. Fasten the retaining rail at the front on the roof frame using T25 x 8 Torx screws. Close and lock the convertible top.

No. Procedure

Instructions

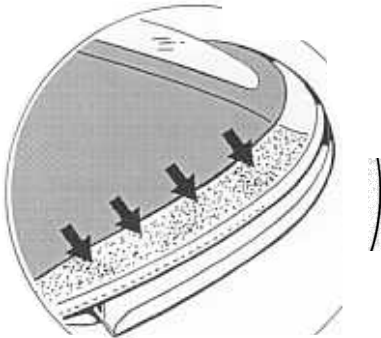
15

Fastening seal at sides of roof frame

545_O_96

The seal on the roof frame consists of two parts. Screw the upper seal to the roof frame together with a retaining rail using the T15 x 9 Torx screws. Press the lower seal into the profile of the retaining rail.

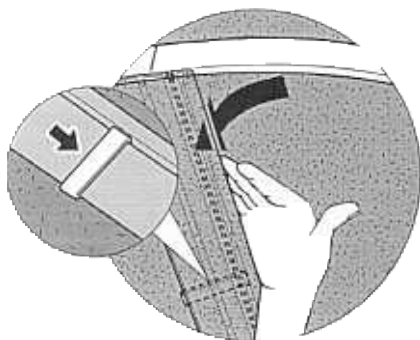
16

Fastening convertible-top covering end piece on the tension bow (convertible top closed)

545_Q_96

Apply adhesive over approx. 300 mm on the left and right sides of the convertible-top covering end piece and fold it over.

17

Fitting retaining clips, pull strip and centre cover moulding in the roof frame

61270003

Model version with roof liner

When pressing the centre cover moulding into the roof frame, make sure that the top side of the convertible-top covering is free from wrinkles. If necessary, shift the pull strip to the left or right.

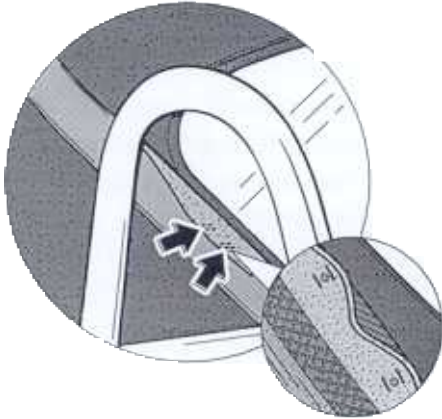
Model version without roof liner

The centre cover moulding is additionally secured using a retaining clip (small inset). Press the retaining clip into the groove of the centre cover moulding and pull downwards over the roof frame edge.

No. Procedure

Instructions

18

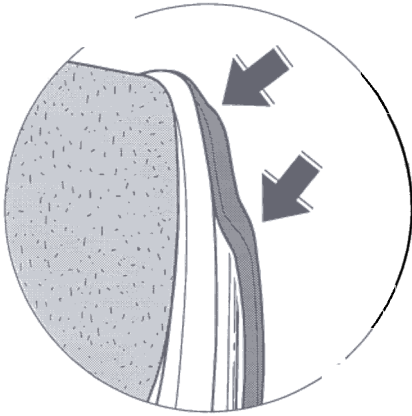


61280004

Fastening rubber pull strap on the tension strap of the convertible-top covering (convertible top closed)

A rubber pull strap is additionally attached on the tension strap. This is joined with the pull strip of the convertible-top window. Two retaining clips are placed on the left and right of the bores in the convertible-top window. The clip positions are covered by the strap. Their position in relation to each other is identified in colour on the rubber pull strap. The rubber pull strap ensures that the convertible-top window is positioned correctly when the convertible top is opened.

19

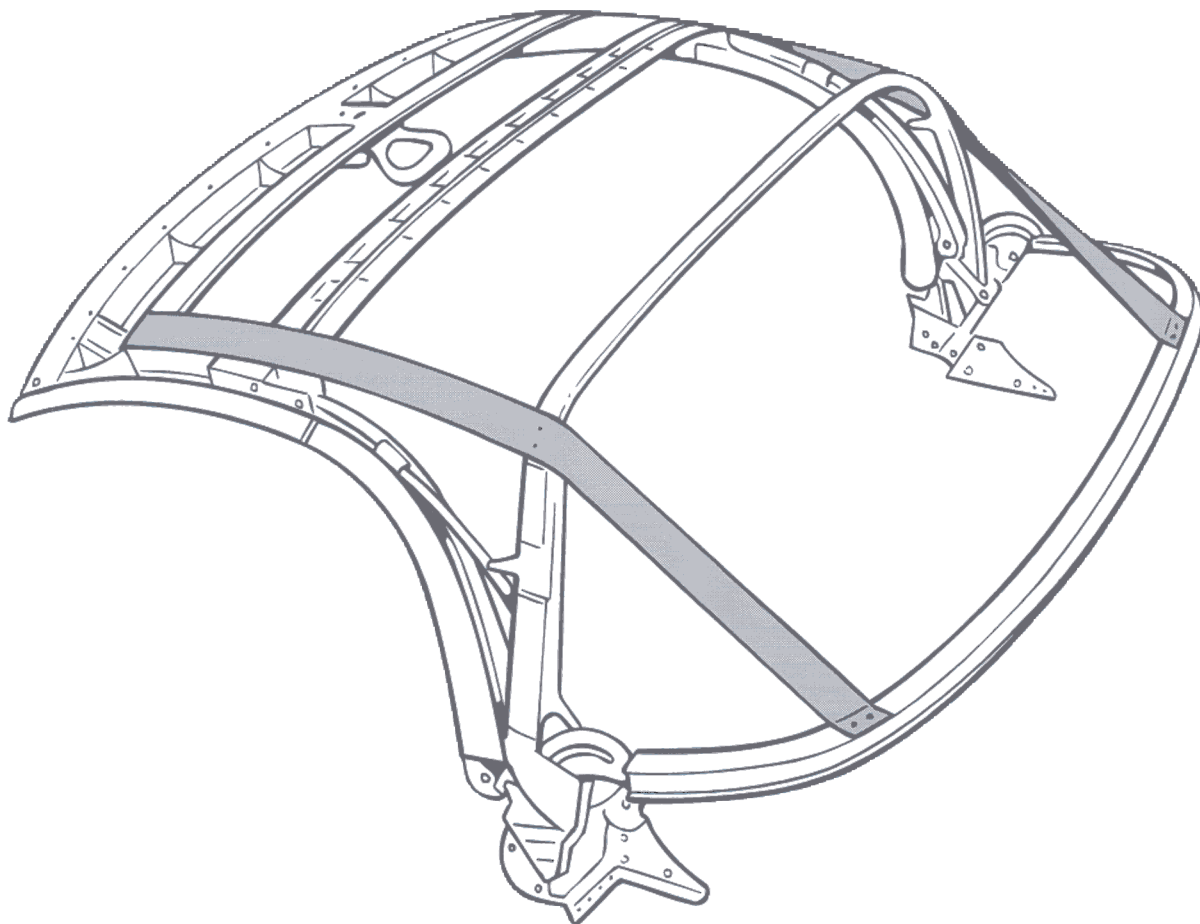


61280034

Fitting tension bow seal

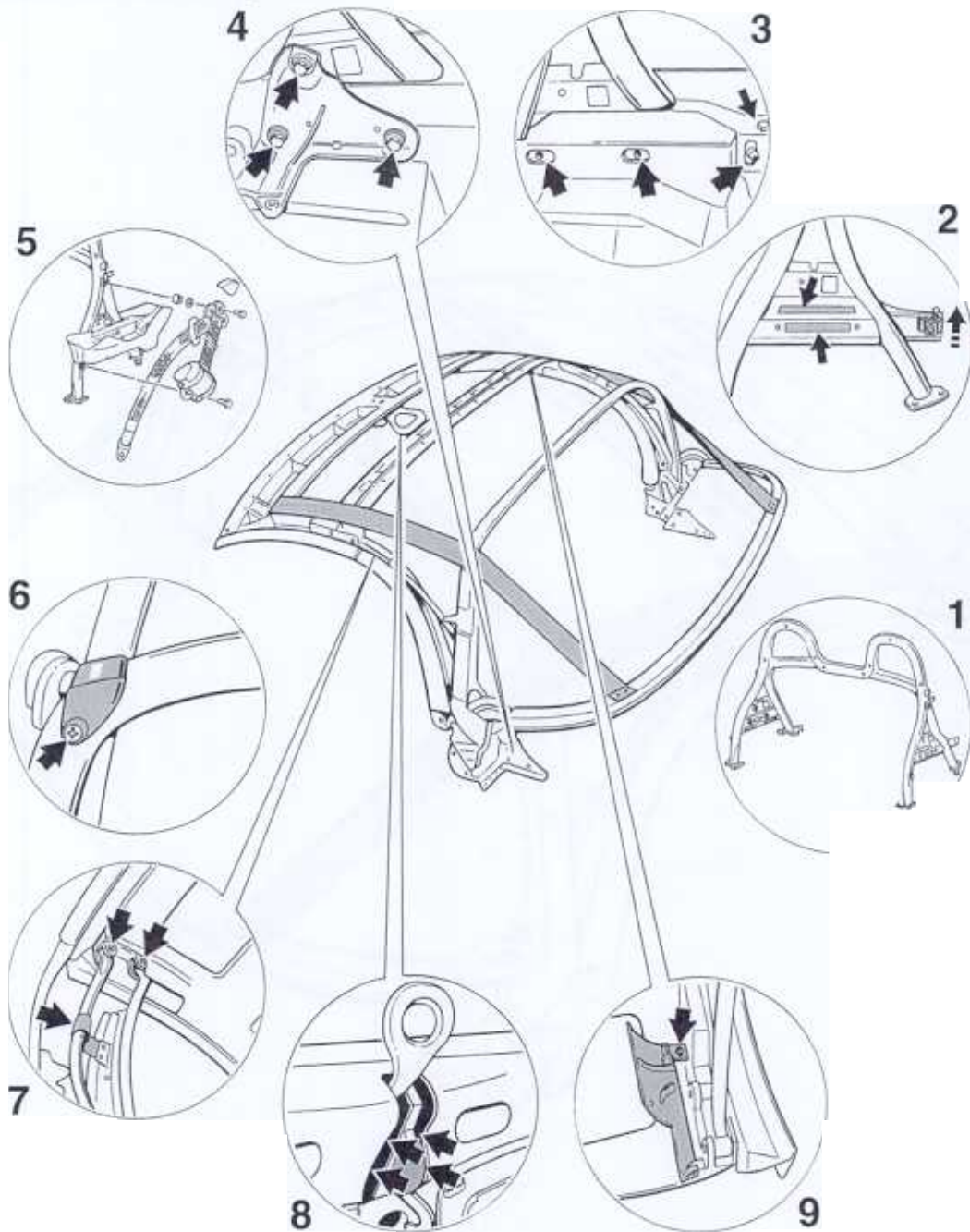
Press the tension bow seal into the outer groove of the tension bow.

61 30 55 Replacing convertible top frame



517_96

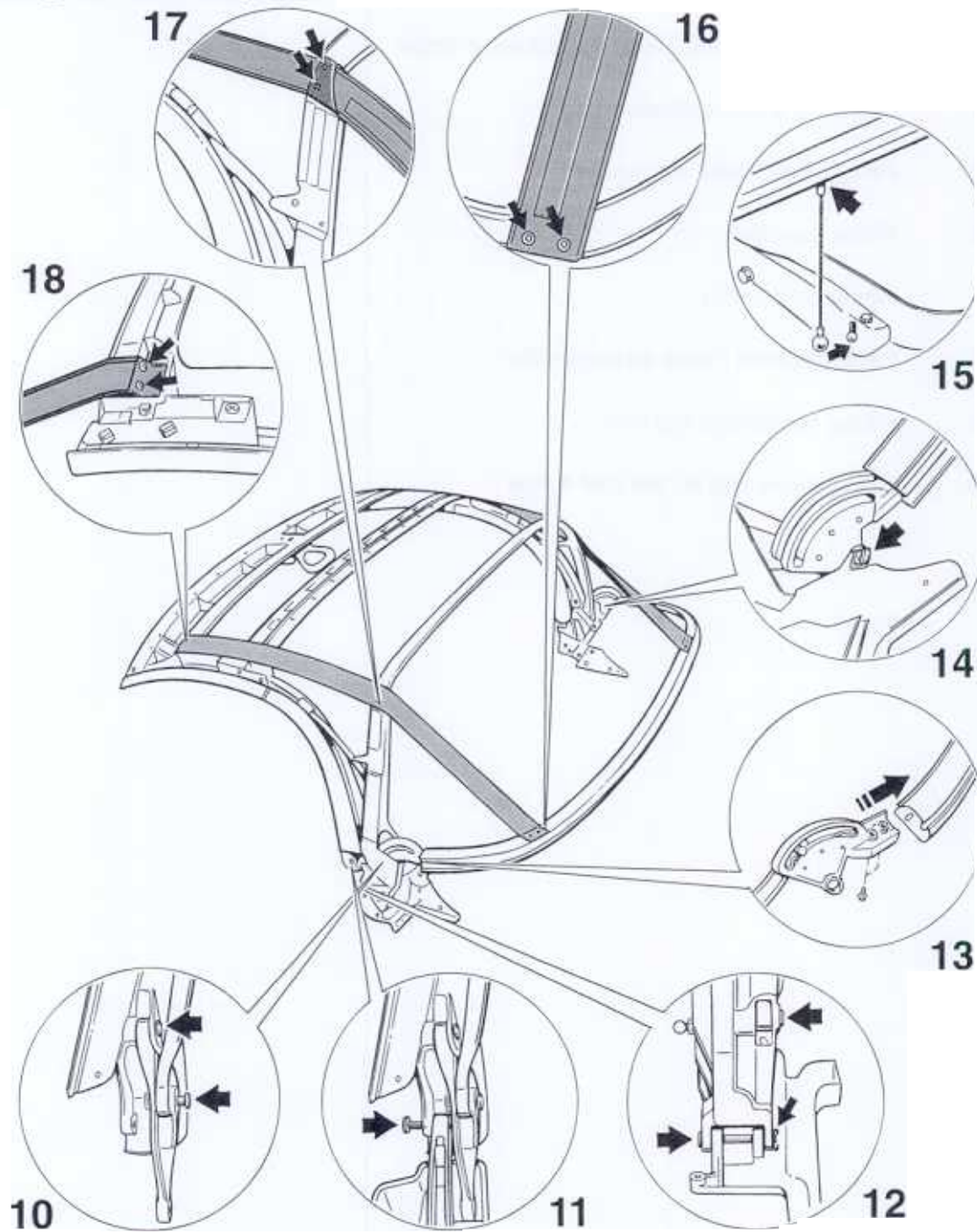
Replacing convertible top frame



544_1_96

- 5 1 Placing roll-over bar on the assembly fixture
- 2 Fastening adjusting piece and adhesive strips
- 3 Fastening water collection tray
- 4 Fitting convertible top support
- 5 Fitting seat belt
- 6 Fitting stop buffer
- 7 Fastening roof frame on the B-pillar
- 8 Fitting convertible top lock
- 9 Fitting cover flap on the roof frame

Replacing convertible top frame



544_2_96

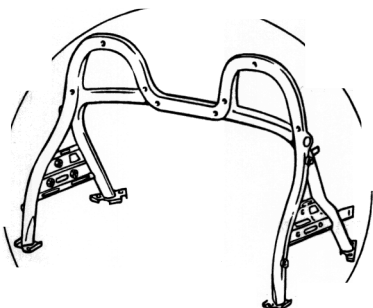
Replacing convertible top frame

- 10 Fitting drive shaft to the B-pillar
- Fitting roof frame with B-pillar to the convertible top support
- Fitting main bow
- Fitting connection piece with steering level to the tension bow
- 14 Fitting tension bow
- Fitting tension cable
- Attaching tension strap to the tension bow
- Fitting tension strap to the main bow
- Fitting tension strap to the roof frame

Replacing convertible top frame

No. Procedure

Instructions

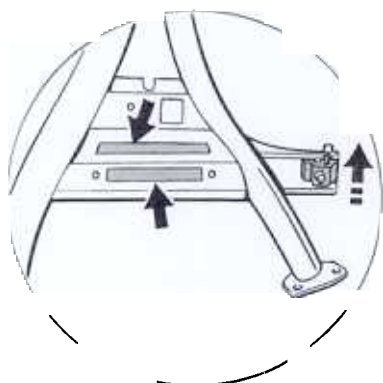


544_a_96

Placing roll-over bar on the assembly fixture

Place the roll-over bar outside the vehicle on a workbench or assembly fixture and fasten.

2

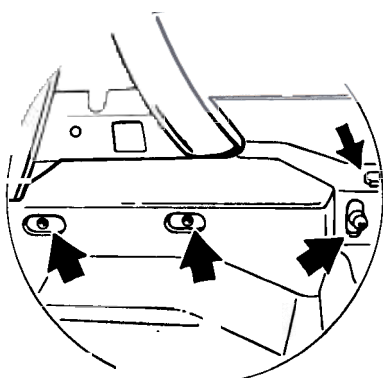


544_b_96

Affixing adjusting piece and adhesive strips

Insert the adjusting piece, which is used to brace the tension bow, into the guides of the roll-over bar and fasten the adjusting piece with the M 8 x 60 hexagon-head bolt. Affix two strips of double-sided adhesive tape in the area of the convertible top support fastening point. The strips of tape are used to fasten the water collection tray.

3



544_c_96

Fastening water collection tray

Position the hole pattern of the water collection tray on the hole pattern of the roll-over bar and press the tray onto the two strips of double-sided adhesive tape.

No. Procedure**Instructions**

4

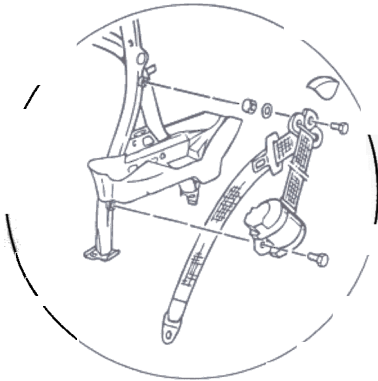


544_d_96

Fitting convertible top support

Position the convertible top support on the roll-over bar and fasten it with the M 8 x 25 screws.

5

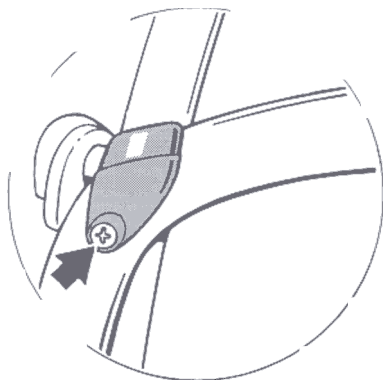


544_e_96

Fitting seat belt

Position the belt reel at the bottom and the deflector at the top on the roll-over bar and fasten with the hexagon-head bolt. (**Tightening torque 50 Nm**)

6



544_f_96

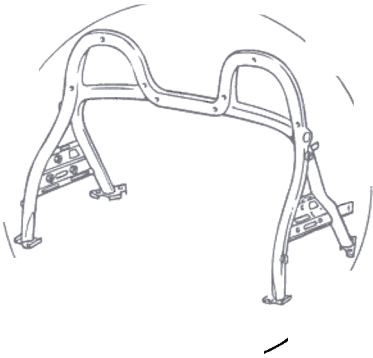
Fitting stop buffer on the roll-over bar

Fasten the buffer for the convertible top rest on the roll-over bar with a 3.5 x 8 oval-head screw.

Replacing convertible top frame

No. Procedure

Instructions

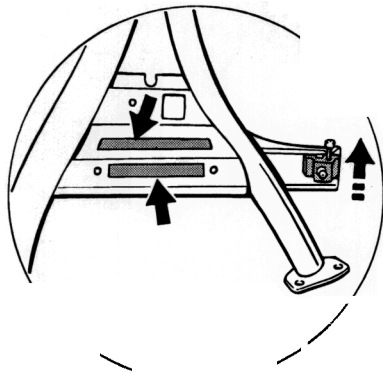


544_a_96

Placing roll-over bar on the assembly fixture

Place the roll-over bar outside the vehicle on a workbench or assembly fixture and fasten.

2

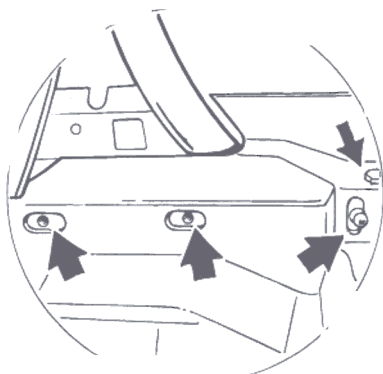


544_b_96

Affixing adjusting piece and adhesive strips

Insert the adjusting piece, which is used to brace the tension bow, into the guides of the roll-over bar and fasten the adjusting piece with the M 8 x 60 hexagon-head bolt. Affix two strips of double-sided adhesive tape in the area of the convertible top support fastening point. The strips of tape are used to fasten the water collection tray.

3



544_c_96

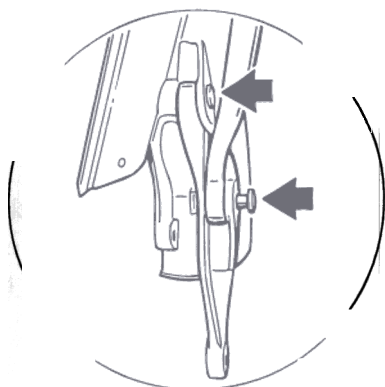
Fastening water collection tray

Position the hole pattern of the water collection tray on the hole pattern of the roll-over bar and press the tray onto the two strips of double-sided adhesive tape.

No. Procedure

Instructions

10



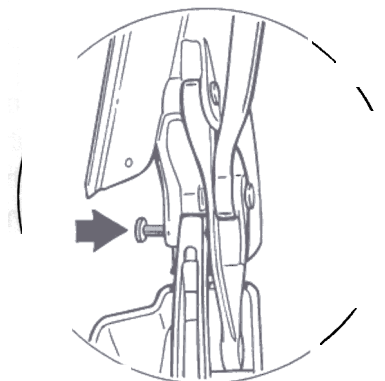
544_k_96

Fitting drive lever on the B-pillar

Position the drive lever on the B-pillar and join with the pin, $\varnothing 8 \times 45$. Position the push bar on the centre of the drive lever and join it with the pin, $\varnothing 8 \times 45$. Press retaining clips into the pins.

Assembly tool, see: Workshop Equipment Manual, Chapter 2.4, No. 131

11

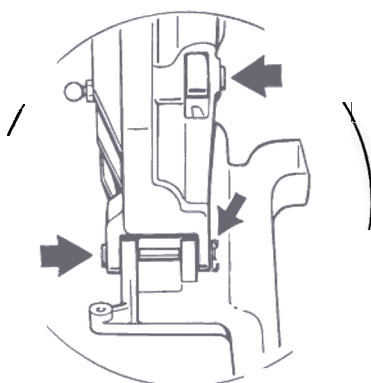


544_l_96

Fitting roof frame with B-pillar

Position the roof frame with B-pillar on the convertible top support and join with the pin $\varnothing 8 \times 45$. Press retaining clip into the pin.

12



544_m_96

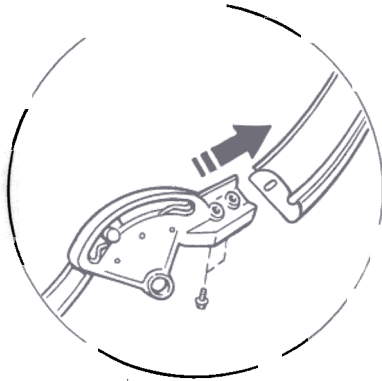
Fitting main bow

Position the main bow on the convertible top support and drive lever. Then join with the pins, $\varnothing 8 \times 70$ and $\varnothing 8 \times 45$. Press retaining clips into the pins.

No. Procedure

Instructions

13

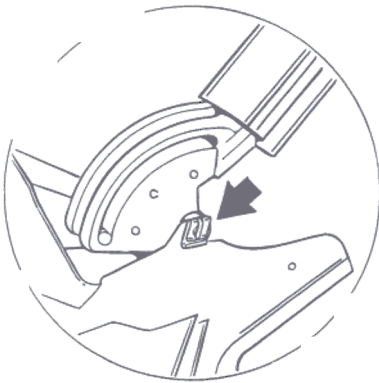


544_n_96

Fitting connecting piece with steering lever on the tension bow

Insert the preassembled connecting piece with steering lever in the tension bow and fasten with two M 6 x 12 hexagon-head bolts. The connecting piece contains a clip in which the pin of the steering lever engages and thereby produces the position "tension bow closed" or "tension bow open" (service position).

14

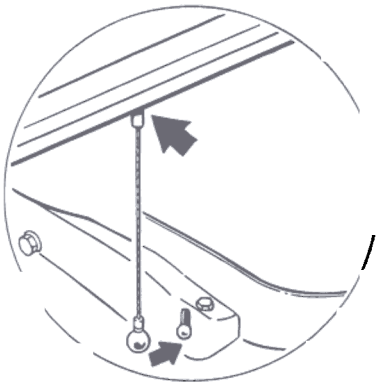


544_o_96

Fitting tension bow

Position the tension bow with connection piece on the main bow and join the parts with the pin $\varnothing 8 \times 25$. Position the steering lever on the convertible top support and join the parts with the pin $\varnothing 8 \times 30$. Press retaining clips into the pins.

15



544_p_96

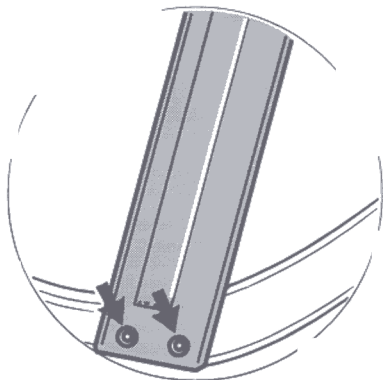
Fitting tension cable

Press the ball socket of the tension cable into the ball head of the adjusting piece on the roll-over bar.

No. Procedure

Instructions

16

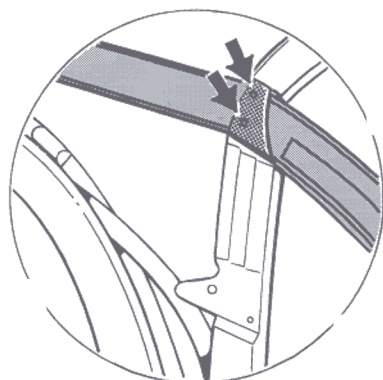


544_q_96

Fitting tension strap on the tension bow

Position the tension strap on the tension bow and rivet the parts together with the 5.0 x 8 pop rivets.

17

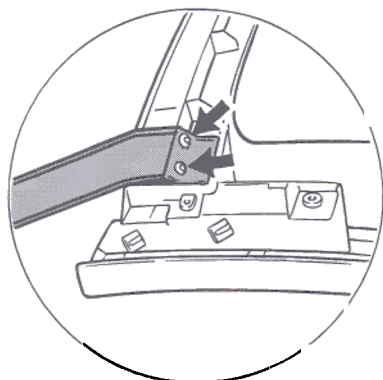


544_r_96

Fitting tension strap on the main bow

Position the tension strap with the strap cover on the main bow and press in.

18



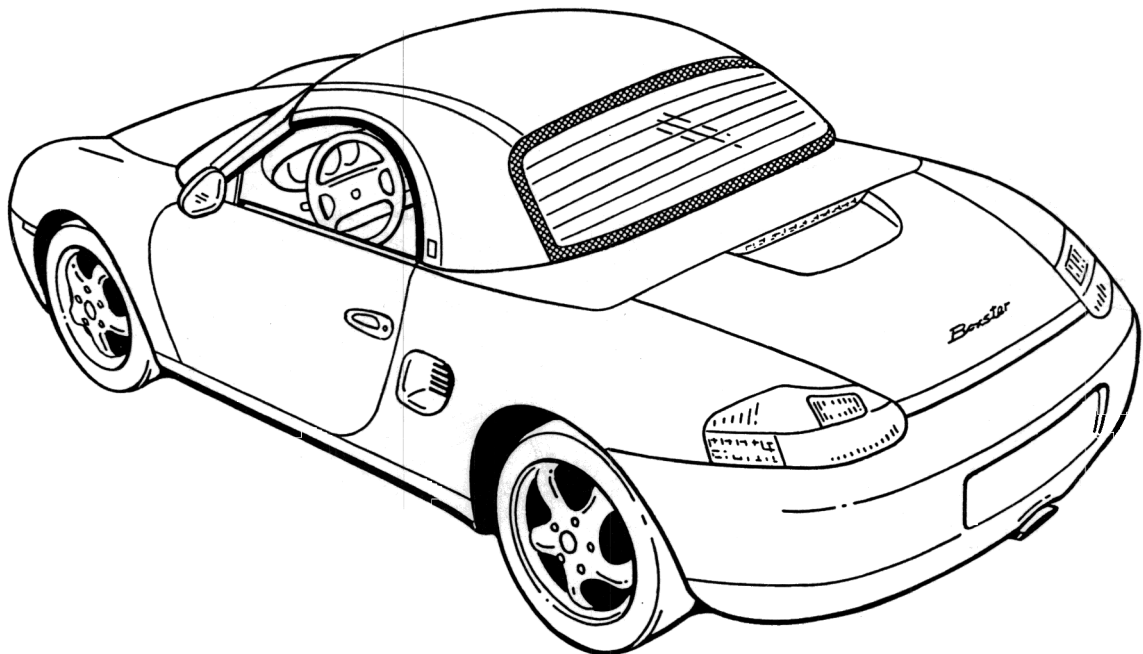
544_s_96

Fitting tension strap on the roof frame

(convertible top frame locked)

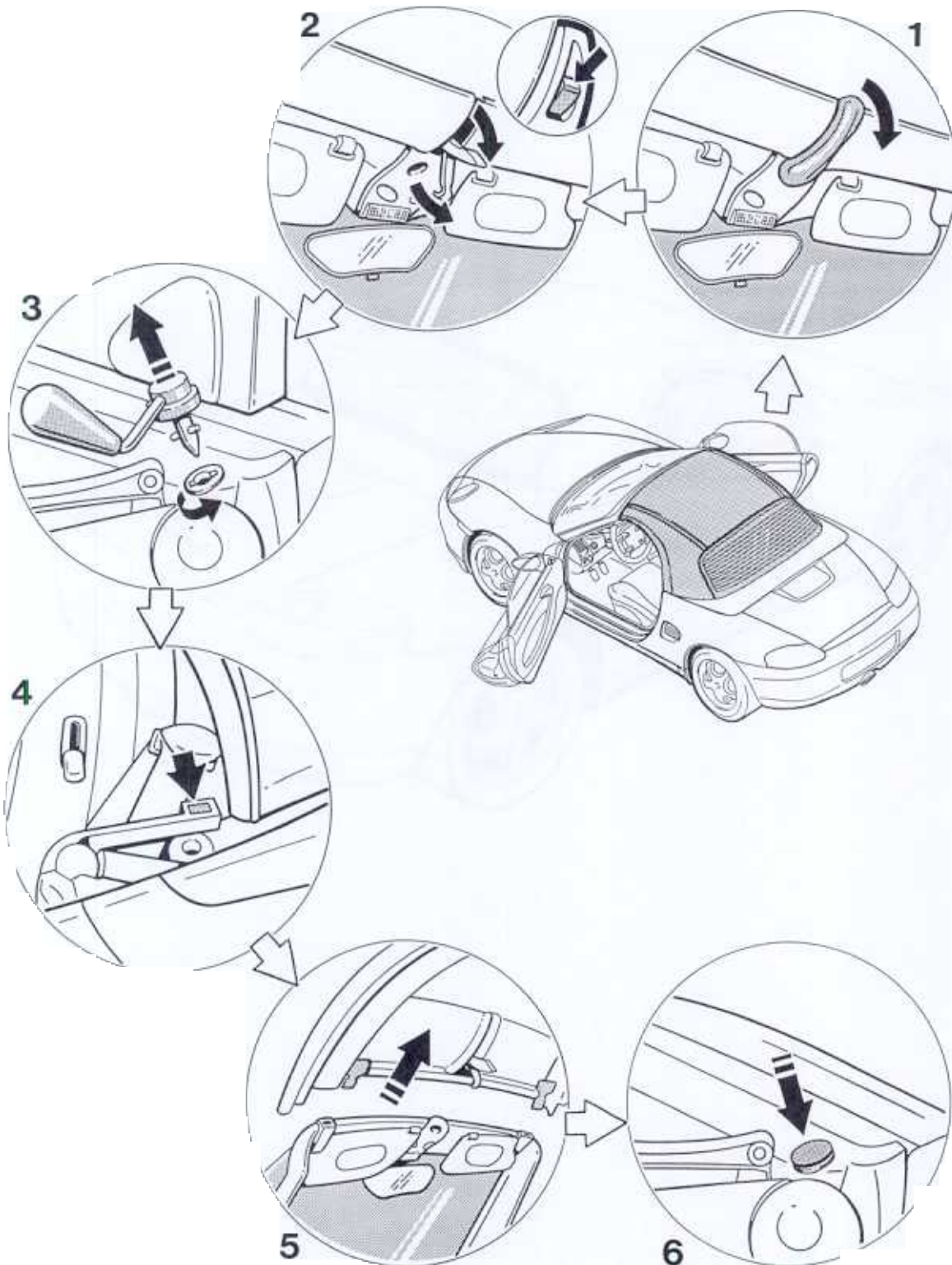
Position the tension strap at the rear on the roof frame, and fasten the tension strap with the 5.0 x 12 oval-head screws.

61 02 19 Removing and installing hardtop



518 - 96

Removing hardtop

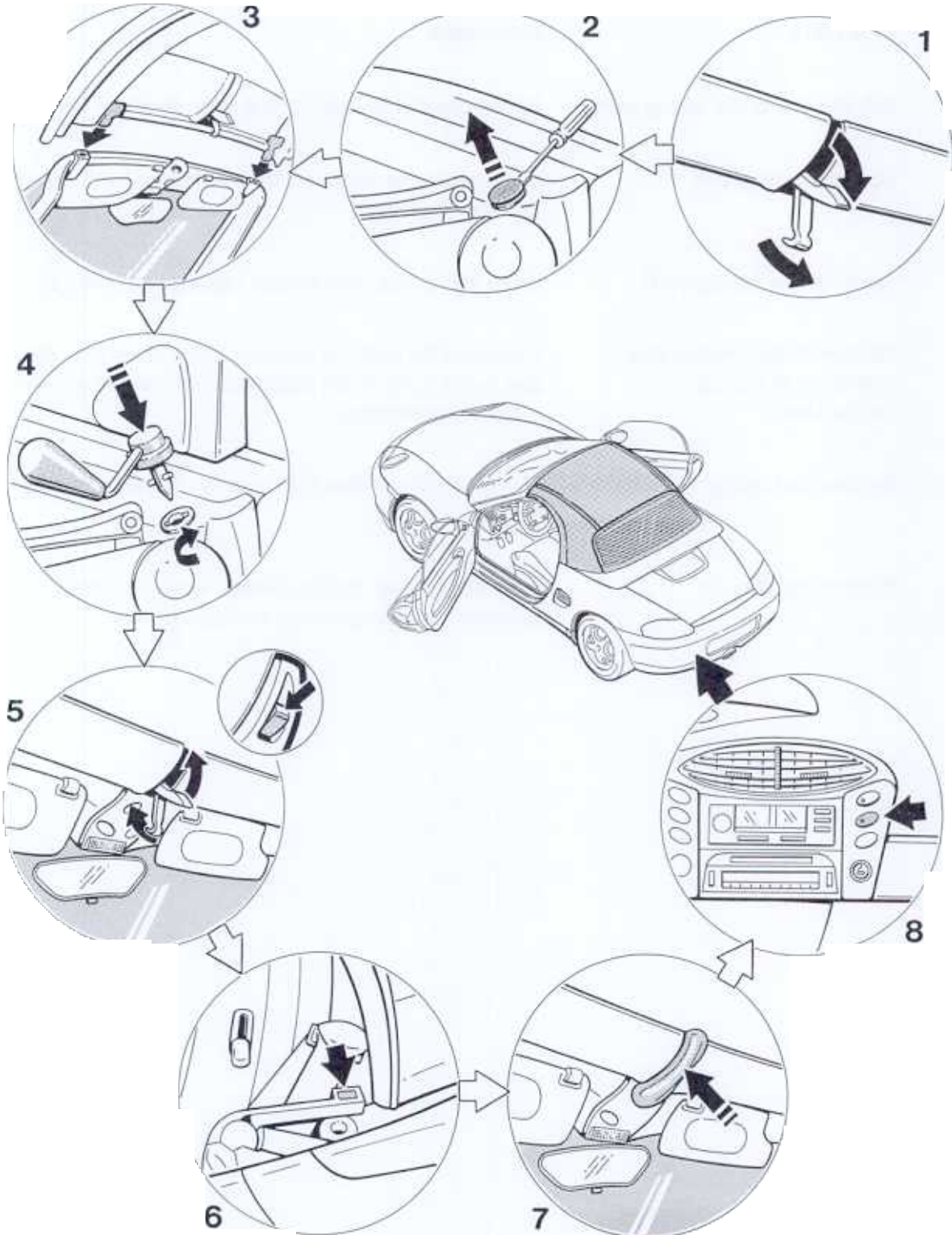


Removing and installing hardtop

Removing hardtop

No.	Procedure	Instructions
1	Pull off cover of the locking lever.	Pull the cover of the front locking lever down and off.
2	Open the locking lever.	Press red locking button on the front locking lever and fully open the latch.
3	Open the rear latching lever.	Swivel the latching lever forward until the pivot locks lift.
4	Disconnect the electrical plug connection of the rear window heater.	Disconnect the electrical plug connection of the rear window heater, push on the plastic cover of the rear window heater plug connection.
5	Remove the hardtop.	Carefully lift the hardtop at the rear window and lift off to the rear.
6	Press in plastic cover.	Press plastic cover into the pivot-pin locks. Assembly instructions for pivot-pin locks on Page 61 - 48

Installing the hardtop



Removing and installing hardtop

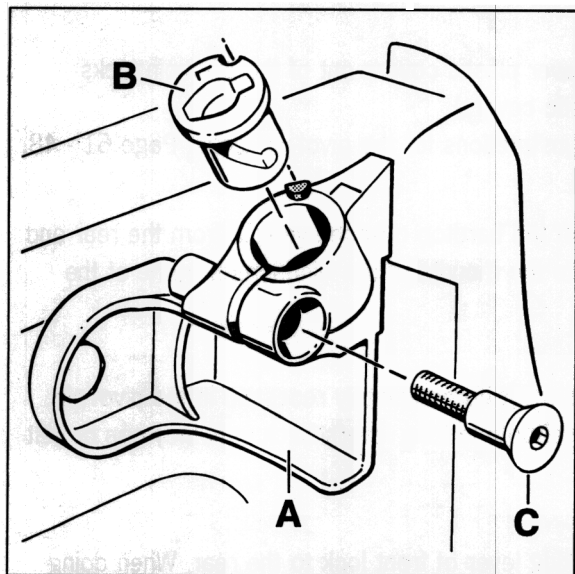
Installing hardtop

No.	Procedure	Instructions
1	Opening the locking lever.	The locking lever must be completely opened.
2	Removing plastic cover.	Carefully lever plastic covers out of the pivot-pin locks (keep plastic covers). Assembly instructions for the pivot-pin locks: Page 61 48.
3	Putting on the hardtop.	Carefully lift the hardtop over the vehicle from the rear and insert it into the mounts of the windscreen frame at the front.
4	Closing latching lever at rear.	Pivot locks must be completely recessed in the pivot-pin locks; swivel both locking levers back until they can be felt to engage.
5	Closing locking lever at the front.	Swivel locking lever of front lock to the rear. When doing so, the locking hook must engage in the windscreen frame. The white marking line on the red locking button must become visible when the hardtop is locked properly.
6	Connecting electrical plug connection of the rear window heater.	Remove plastic cover from the plug connection and connect electrical plug connection of the rear window heater.
7	Pushing on cover of the front locking lever.	Push on cover of the front locking lever.
8	Testing the rear window heater.	Press symbol of the rocker switch. The indicator light lights up; pressing the indicator light again switches off the rear window heater.

Removing and installing hardtop

Installing pivot-pin locks

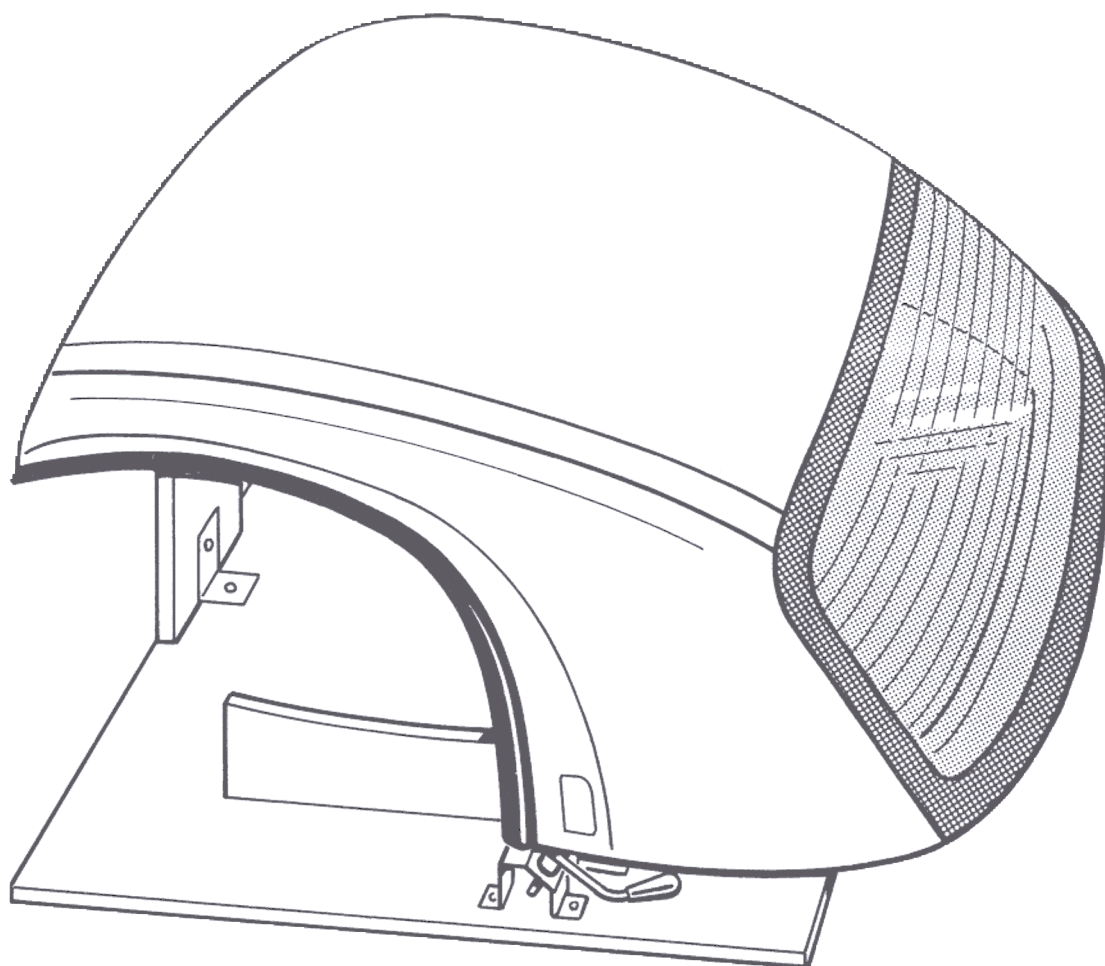
Note: Insert the pivot-pin locks (B) with the convertible top open. The fitting bolt (C) can be screwed in only with the convertible top closed.



653_96

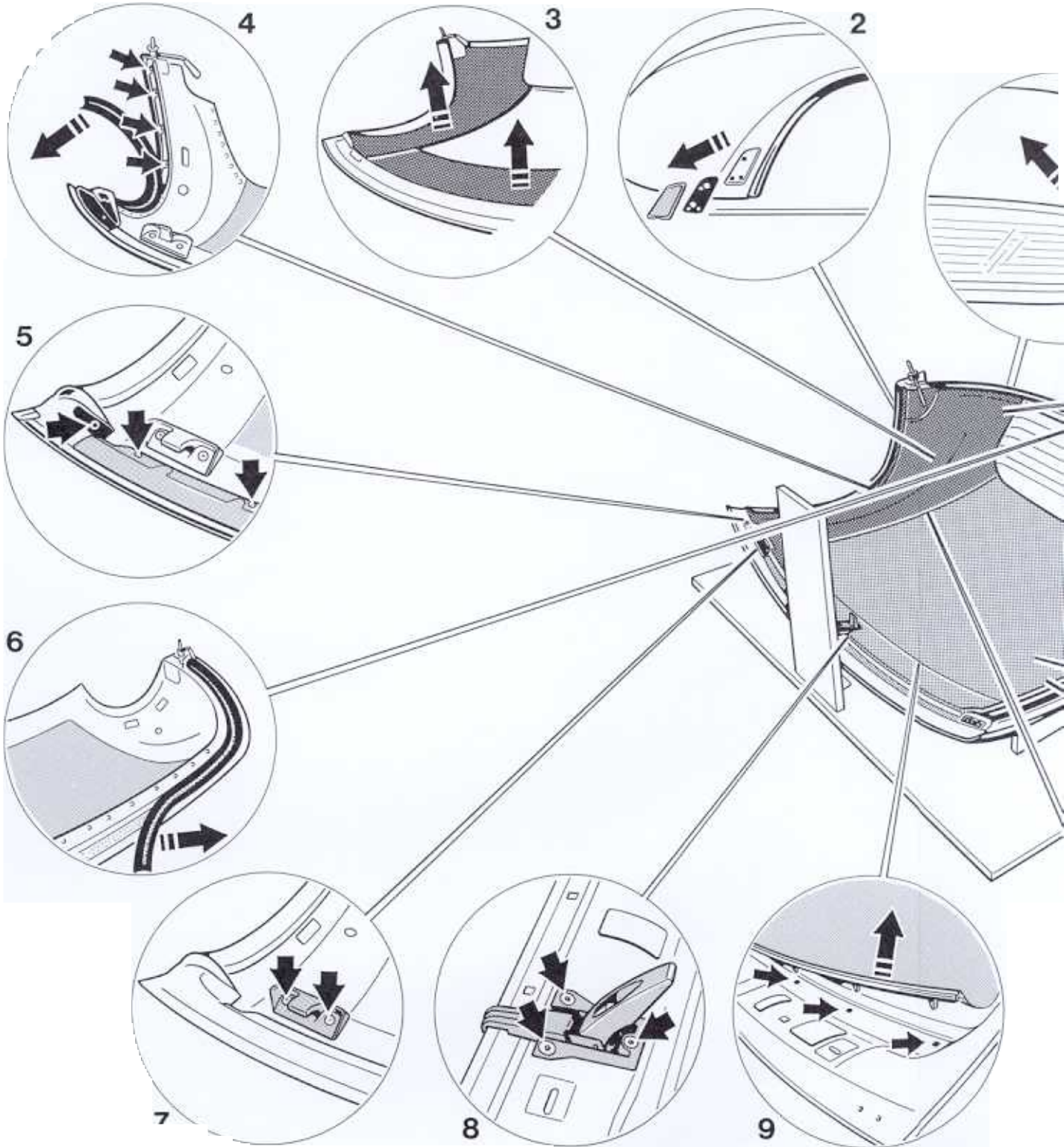
The pivot-pin lock (B) is fitted in the bracket (A). Bear in mind here that there are left-handed and right-handed pivot-pin locks (observe the L or R identification on the pivot-pin lock). The locking tab of the bracket must line up with the recess of the pivot-pin lock. The pivot-pin lock (B) is clamped in the bracket (A) when the fitting bolt (C) is tightened.

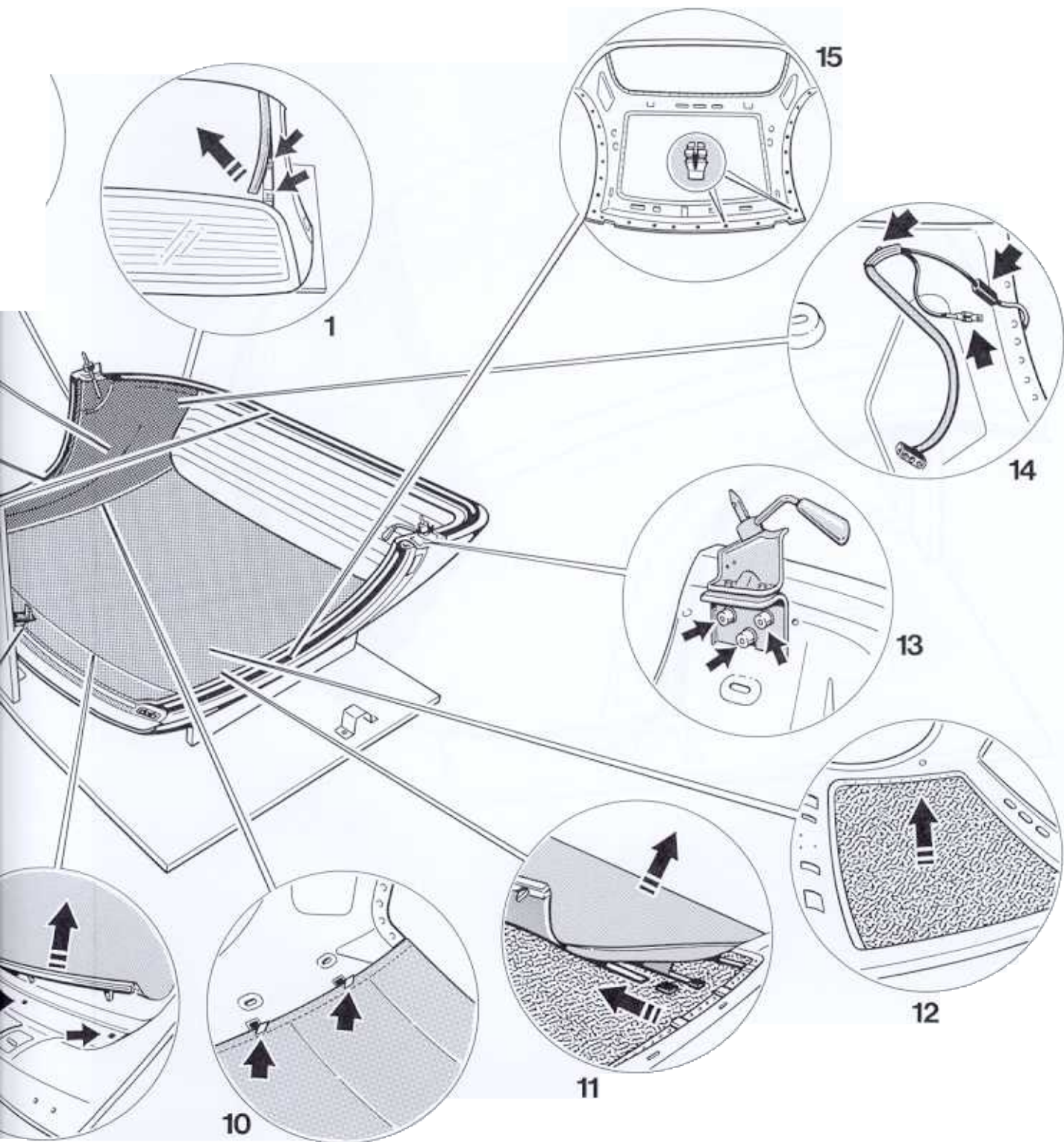
61 02 37 Disassembling and assembling hardtop



601 - 96

Removal overview of the hardtop components





Removal overview of the hardtop components

- 1 Removing cover strips and roof strip clips
- 2 Removing cover and bracket
- 3 Unclipping inner linings
- 4 Detaching seal at sides of roof frame
- 5 Detaching and disengaging retaining rail and roof frame seal at the corners
- 6 Detaching rubber seal
- 7 Detaching centring pin
- 8 Detaching locking lever
- 9 Detaching roof liner at front
- 10 Detaching roof liner at sides
- 11 Detaching roof liner at rear and at transverse struts
- 12 Detaching insulation from the hardtop body
- 13 Detaching latching lever
- 14 Detaching wiring harness from the rear window
- 15 Pressing expanding nuts out of the hardtop body

Disassembling hardtop

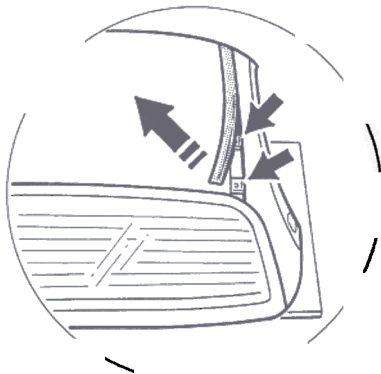
No. Procedure

Instructions

Set down hardtop

Place hardtop on the assembly fixture and lock with the latching levers and the locking lever at front.

1



Removing cover strips and roof strip clips

Lift cover strip at the left and right with a plastic spatula and pull off. The roof strip clips are destroyed when they are removed and must always be replaced.

2



Removing cover and bracket

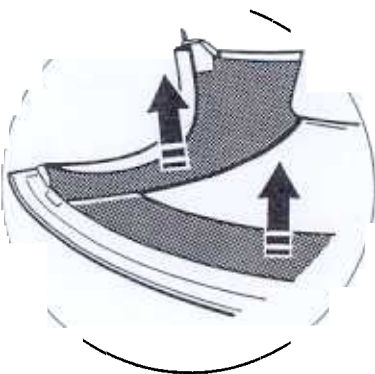

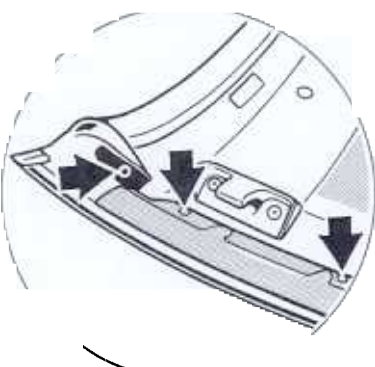
Pull off cover and press out the bracket at the top and bottom with a plastic spatula.

Remove rear window

See: Repair Group 64, Page 64 - 9

Turn hardtop

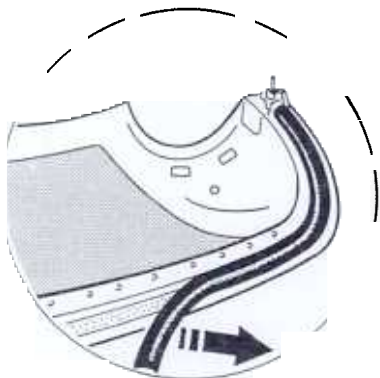
Place outer side of hardtop on the assembly fixture.

No.	Procedure	Instructions
3		<p data-bbox="741 356 984 391"><i>Unclipping inner lining</i></p> <p data-bbox="741 433 1409 504">Unclip inner lining from hardtop body at the sides, front and rear.</p>
4		<p data-bbox="741 805 1157 840"><i>Detaching seal at sides of roof frame</i></p> <p data-bbox="741 882 1409 1057">The seal at the sides of the roof frame has two parts. Pull the lower seal out of the profile of the retaining rail. On the upper seal with retaining rail, undo the B 3.5 x 16 fastening screws and remove the seal with retaining strip from the roof frame.</p>
5		<p data-bbox="741 1362 1409 1433"><i>Detaching and disengaging retaining rail and roof frame seal at the corners</i></p> <p data-bbox="741 1475 1409 1583">Undo the B 3.5 x 16 sheetmetal screws from the retaining rail, undo the M 6 x 20 pan-head screw from the roof frame seal, disengage the seal at the corners and remove.</p>

No. Procedure

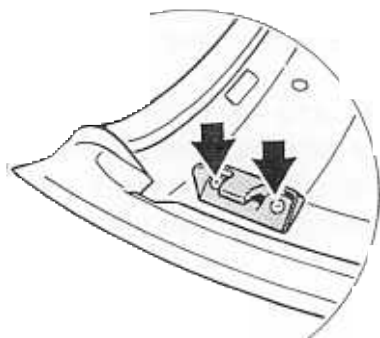
Instructions

6

*Detaching rubber seal*

Pull off the all-round rubber seal at the rear.

7

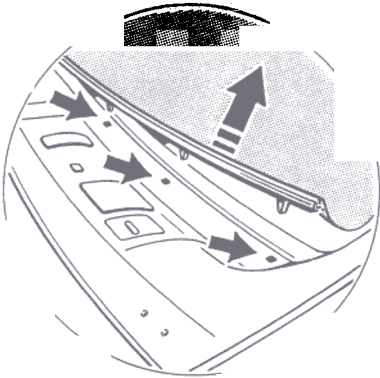
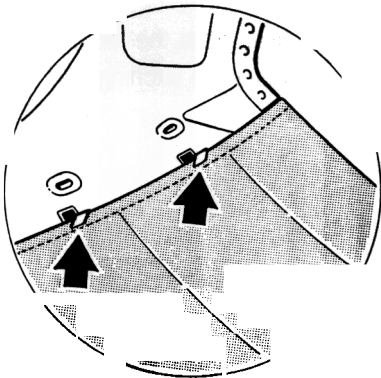
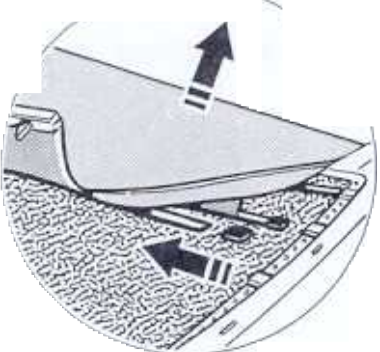
*Detaching centring pin*

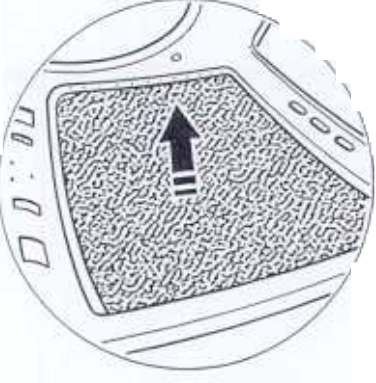
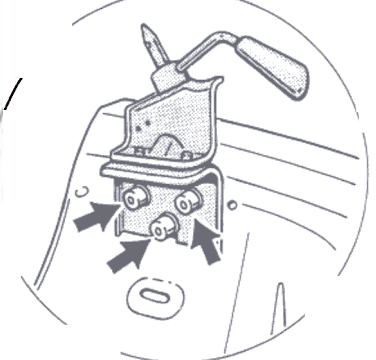
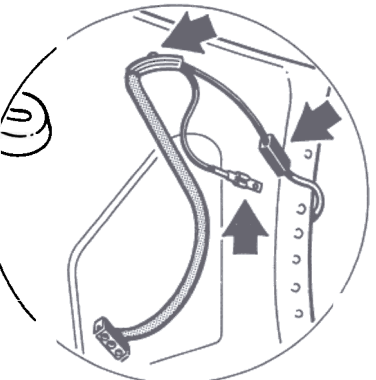
Undo the M 6 x 20 pan-head screws from the centring pin and remove.

8

*Detaching locking lever*

Undo the M 6 x 20 countersunk screws from the locking lever and remove.

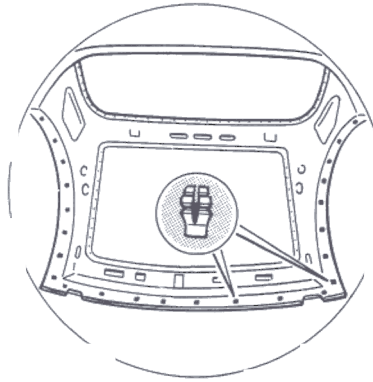
No.	Procedure	Instructions
9		<p><i>Detaching roof liner at front</i></p> <p>Lift the front retaining rail of the roof liner with a plastic spatula and pull off.</p>
10		<p><i>Detaching roof liner at sides</i></p> <p>Lift the roof liner on the left and right sides with a plastic spatula and disengage from the sheetmetal clips.</p>
1		<p><i>Detaching roof liner at rear and transverse struts</i></p> <p>Pull back and disengage the plastic rail on the roof liner. Pull out the transverse struts with the plastic sleeves and remove the roof liner.</p>

- | No. | Procedure | Instructions |
|-----|---|--|
| 12 |  | <p><i>Detaching insulation from the hardtop body</i></p> <p>Detach insulation from the hardtop body with a spatula.</p> |
| 13 |  | <p><i>Detaching latching lever</i></p> <p>Undo M 6 x 20 collar screws from the latching lever on the hardtop body and remove the latching lever.</p> |
| 14 |  | <p><i>Detaching wiring harness from the rear window</i></p> <p>Drill open tubular rivet with a \varnothing 3.2 mm drill bit. Disconnect electrical plug connection and unclip wiring harness from the hardtop body.</p> |

No. Procedure

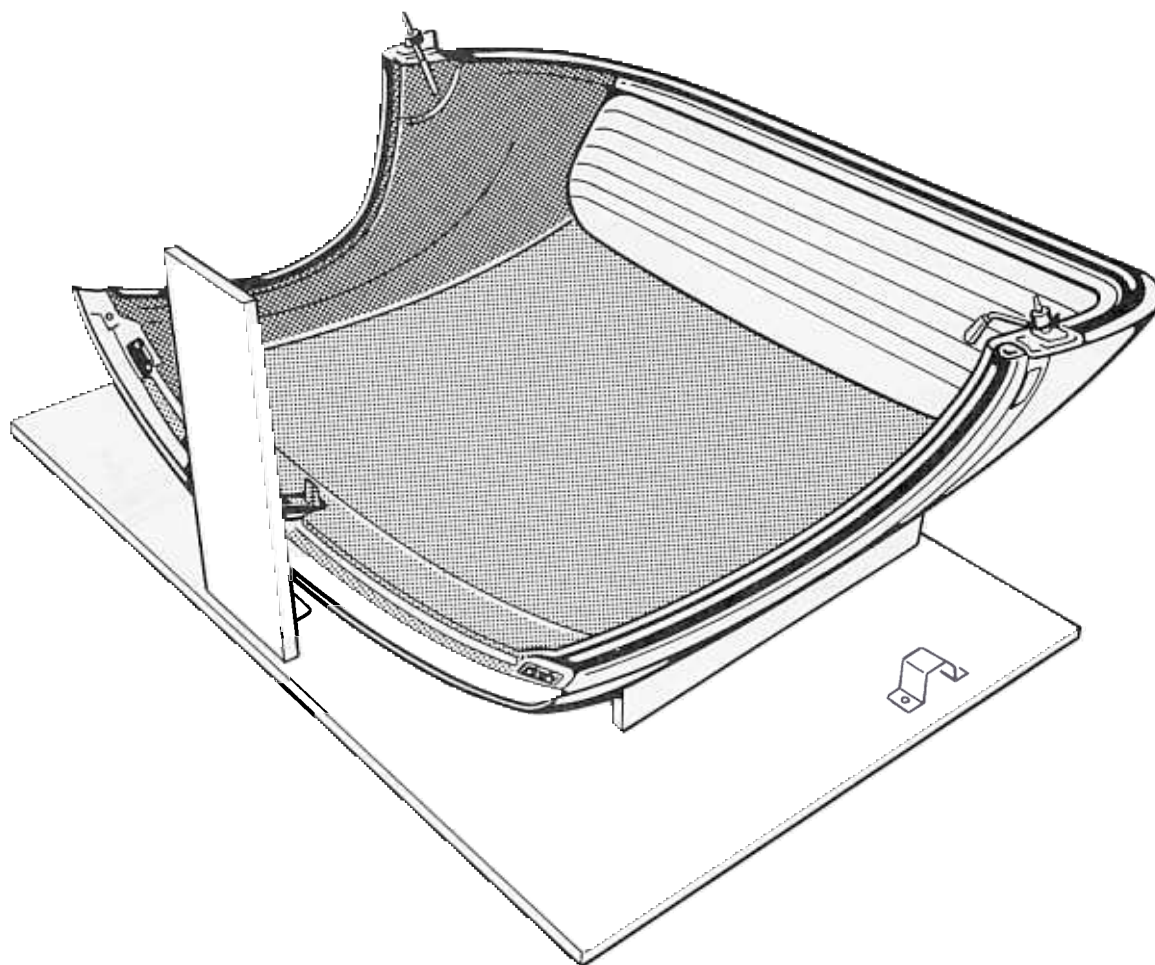
Instructions

15

*Pressing expanding nuts out of the hardtop body*

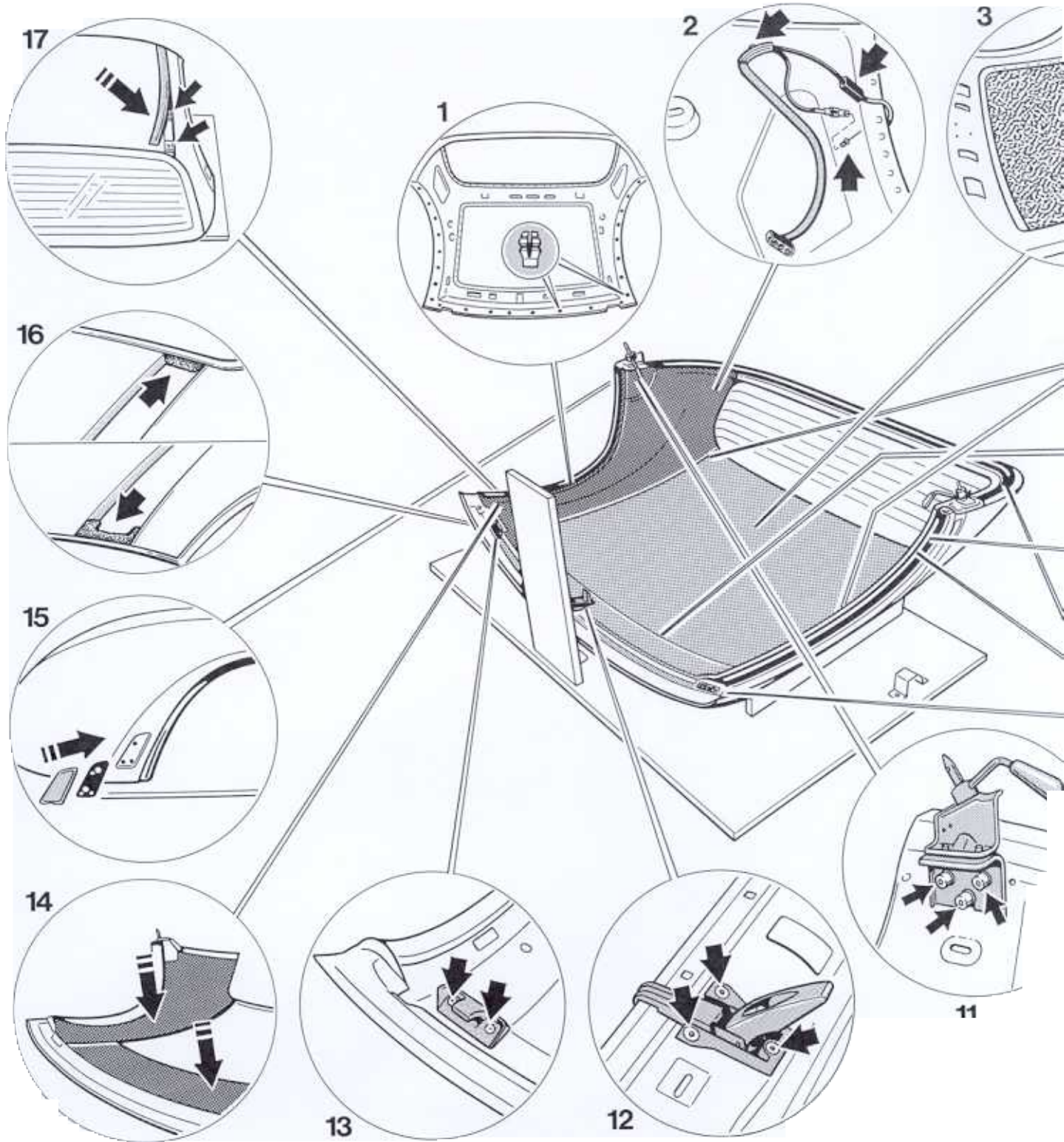
Press out the expanding nuts on the sides and front of the roof frame.

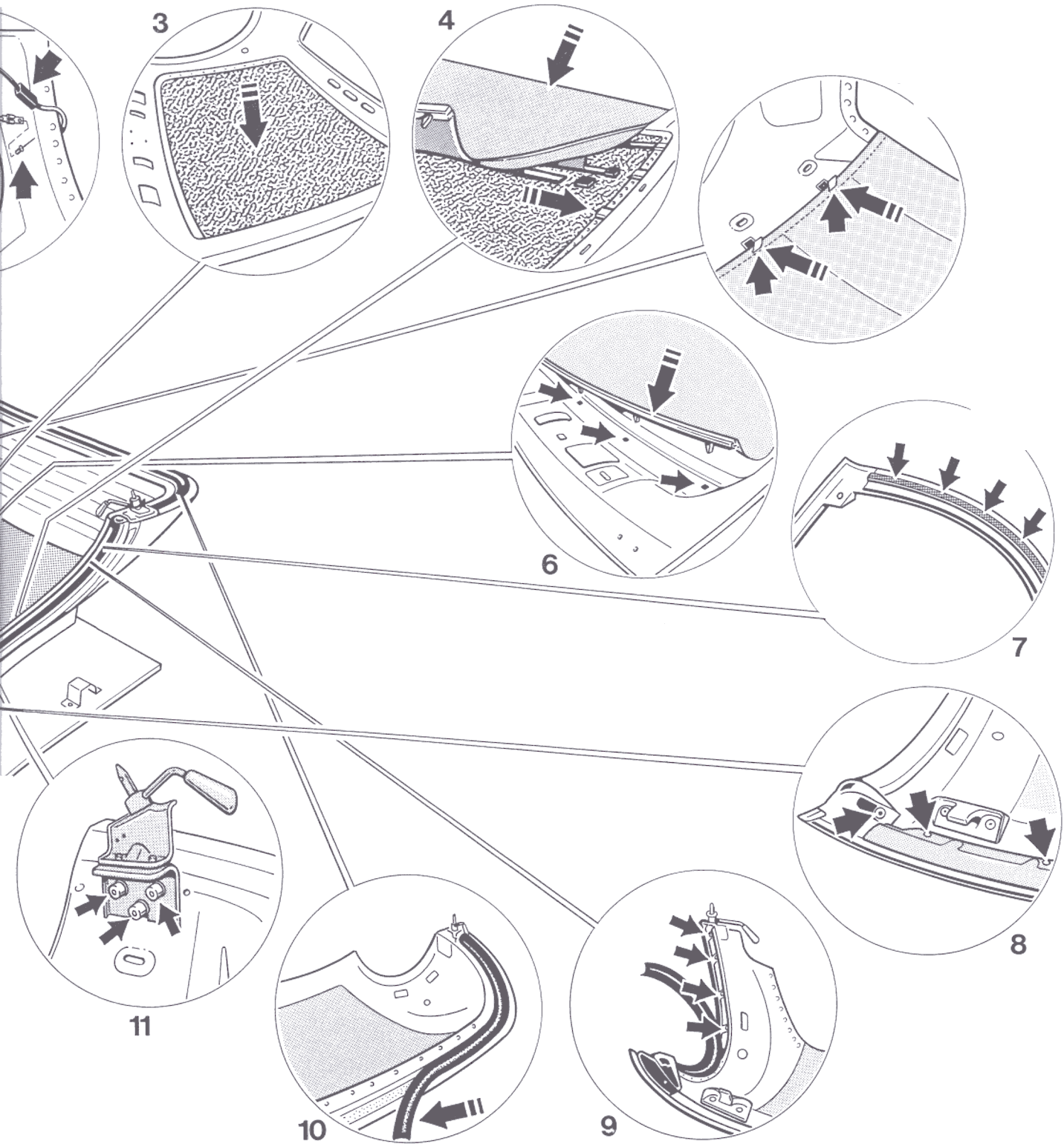
Disassembling and assembling hardtop



658 - 96

Installation overview of hardtop components





Installation overview of hardtop components

- 1 Pressing expanding nuts into the hardtop body
- 2 Fitting wiring harness for the rear window heater
- 3 Adhering insulation in the hardtop body
- 4 Inserting roof liner at rear and the transverse struts
- 5 Engaging roof liner at sides
- 6 Engaging roof liner at front
- 7 Adhering Nito tape on roof frame seal
- 8 Engaging roof frame seal at corners and fitting retaining rail
- 9 Fitting roof frame seal at sides
- 10 Fitting rubber seal
- 11 Fitting latching lever
- 12 Fitting locking lever
- 13 Fitting centring pin
- 14 Clipping in inner linings
- 15 Fitting cover and bracket
- 16 Filling roof ends
- 17 Fitting cover strips and roof strip clips

Assembling hardtop

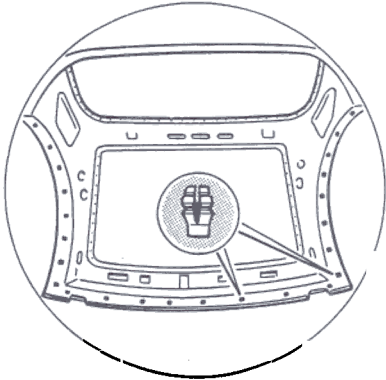
No. Procedure

Instructions

1

Set down hardtop

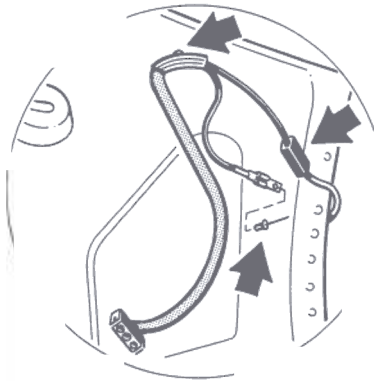
Place outer side of the hardtop on the assembly fixture.
Pressing expanding nuts into the hardtop body



Press the expanding nuts into the roof frame at the sides and front until they engage.

2

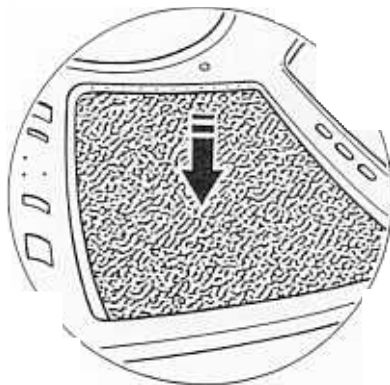
Fitting wiring harness for the rear window heater



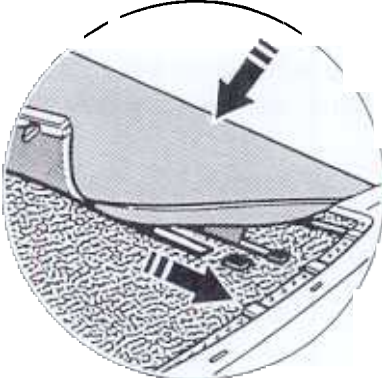
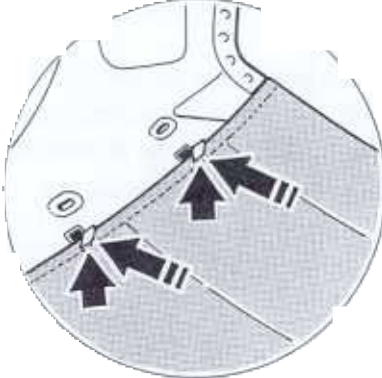
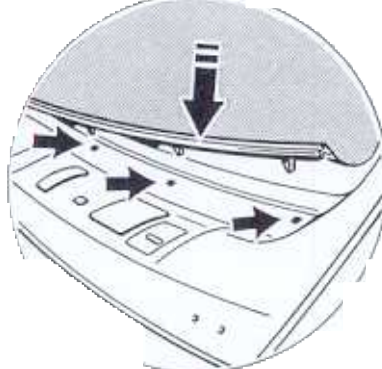
Clip the wiring harness in the hardtop body. Rivet the flat connector to the hardtop body with a \varnothing 3.2 mm tubular rivet and connect the flat connector and the cable lug.

3

Adhering insulation in the hardtop body



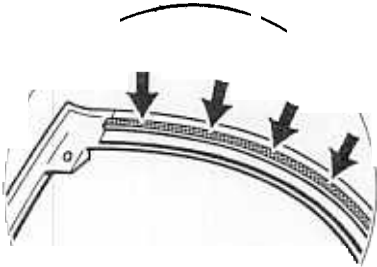
Position the self-adhesive insulation in the hardtop body and firmly press into place.

- | No. | Procedure | Instructions |
|-----|---|---|
| 4 |  | <p><i>Inserting roof liner at rear and the transverse struts</i></p> <p>Insert the transverse struts with the plastic sleeves into the hardtop body, pull back the plastic rail of the roof liner and engage it in the hardtop body.</p> |
| 5 |  | <p><i>Engaging roof liner at sides</i></p> <p>Engage roof liner in the sheetmetal clips at the sides.</p> <p>Note:
If the hardtop body is new, the sheetmetal clips on the left and right must be bent over to the outside using a plastic hammer.</p> |
| 6 |  | <p><i>Fitting roof liner at front</i></p> <p>Position and clip in the front retaining rail of the roof liner.</p> |

No. Procedure

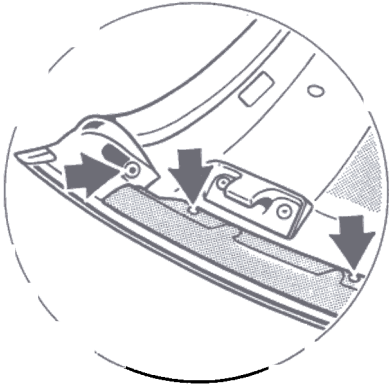
Instructions

7

*Adhering Nito tape on the roof frame seal*

On the roof frame seal at the sides, affix a strip of self-adhesive Nito tape centred over the screw fastening points of the seal.

8

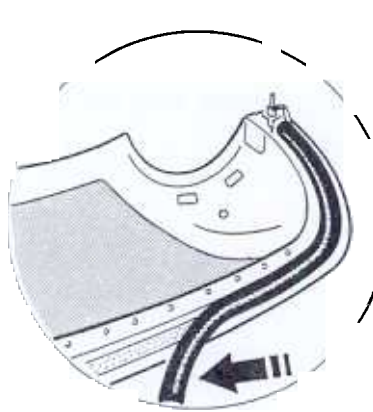
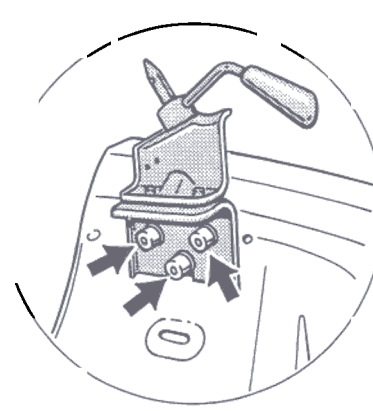

*Engaging roof frame seal at corners and fitting retaining rail*

Engage the roof frame seal at the corners, position it, and screw in in place with the M 6 x 20 pan-head screw. Position the retaining rail on the roof frame at front and screw in place with the B 3.5 x 16 sheetmetal screws.

9

*Fitting roof frame seal at sides*

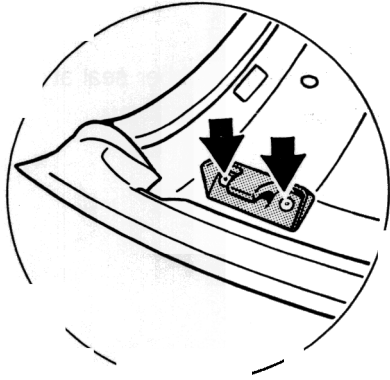
The seal on the roof frame at the sides consists of two parts. Position the upper seal with retaining rail on the hardtop body and fasten the retaining rail with the B 3.5 x 16 fastening screws. Press the lower seal into the profile of the retaining rail.

- | No. | Procedure | Instructions |
|-----|---|--|
| 10 |  | <p><i>Fitting rubber seal</i></p> <p>Position the self-adhesive all-round rubber seal at the rear and firmly press into place.</p> |
| 11 |  | <p><i>Fitting latching lever</i></p> <p>Position the latching lever on the hardtop body and fasten with the M 6 x 20 collar screw.</p> |
| 12 |  | <p><i>Fitting locking lever</i></p> <p>Position the locking lever on the hardtop body and fasten with the M 6 x 20 countersunk screws.</p> |

No. Procedure

Instructions

13

*Fitting centring pin*

Position centring pin on the hardtop body and fasten with the M 6 x 20 pan-head screws.

Turn hardtop

Place hardtop on the assembly fixture and lock with the latching levers at the rear and the locking lever at the front.

Fit rear window

See: Repair Group 64, Page 64 - 9

Turn hardtop

Place outer side of the hardtop on the assembly fixture.

14

*Clipping in inner linings*

Clip the inner linings into the hardtop body at the rear, sides and front.

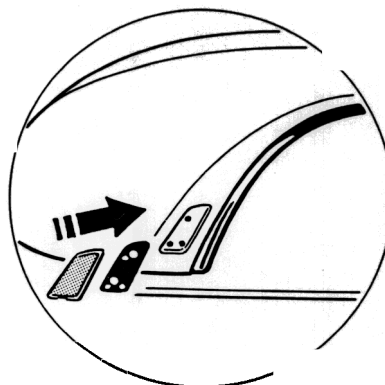
Turn hardtop

Place hardtop on the assembly fixture and lock with the latching levers at the rear and the locking lever at the front.

No. Procedure

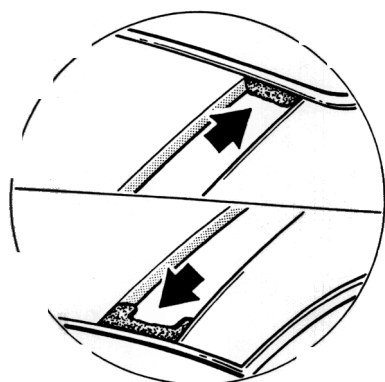
Instructions

15

*Fitting cover and bracket*

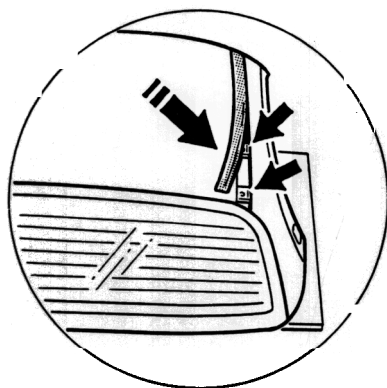
A piece of self-adhesive tape is affixed on the bracket. Pull protective paper off the tape, position bracket on the hardtop body and clip into place. Fit the painted cover on the bracket.

16

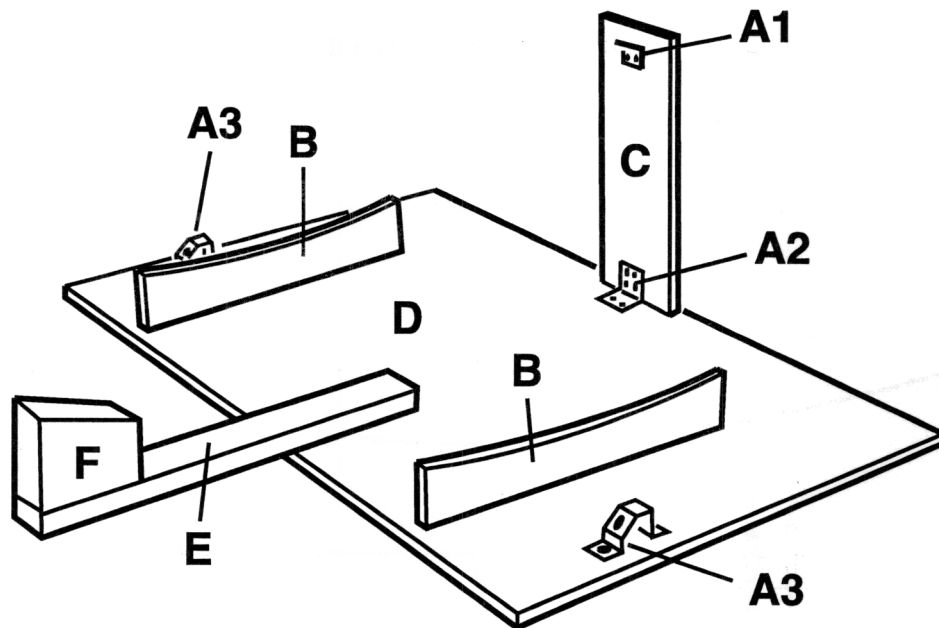
*Filling roof ends*

Fill the roof ends at the front and rear.

17

*Fitting roof strip clips and cover strips*

Fit the roof strip clips and fit cover strip seal on the cover strip. Position cover strip on the hardtop body and clip into place.

61 02 Assembly instructions for hardtop assembly fixture

381_98

The following materials and tools are required to construct the fixture for work in the outer and inner areas:

No.	Designation	Qty.	Size/No.	Supplier
A	Set of fittings	1	Special tool 9620	Refer to Workshop Equipment Manual
B	Support cheek	2	Multiplex plate, 25 mm thick, 600 x 120 mm	Commercially available
C	Swivel arm	1	Multiplex plate, 25 mm thick, 550 x 200 mm	Commercially available
D	Base plate	1	Wood-core plywood, 19 mm thick, 1500 x 900 mm	Commercially available
E	Boom	1	Hardwood, 30 mm thick, 650 x 50 mm	Commercially available
F	Support	1	Hardwood, 50 mm thick, 90 x 140 x 190 mm	Commercially available

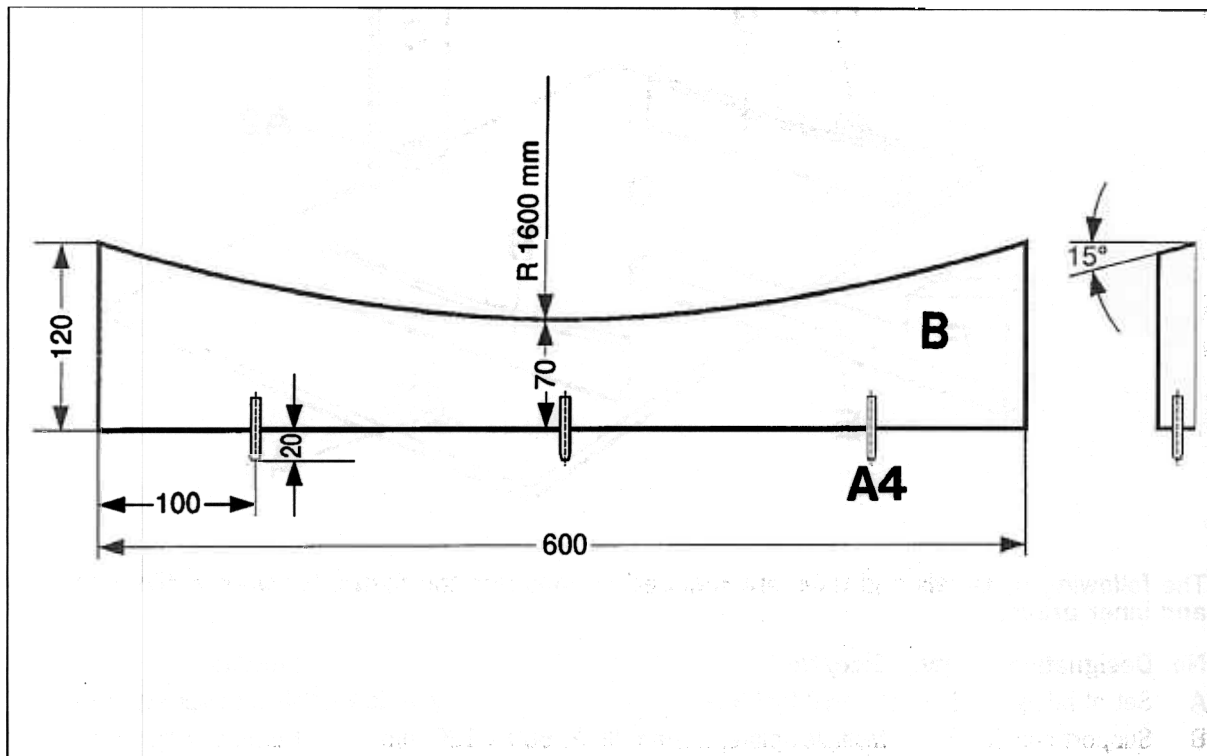
Tools: Drill, drill bit \varnothing 6 mm and drill bit \varnothing 3 mm, sabre saw, tape measure

Set of fittings includes:

A1 = Bracket (1x)	A6 = 6 x 20 countersunk screw (2x)
A2 = Hinge (1x)	A7 = 6 x 20 hexagon head bolt with washer (4x)
A3 = Support (2x)	A8 = 6 x 60 countersunk screw (2x)
A4 = 6 M6 x 40 straight pin (6x)	A9 = 6 x 50 countersunk screw (3x)
A5 = 4.5 x 20 countersunk screw (8x)	

Making support cheeks (B)

Basic material: Multiplex plate 600 x 120 mm, 25 mm thick



A4 = Straight pin 6 M6 x 40 /

B = Support cheek

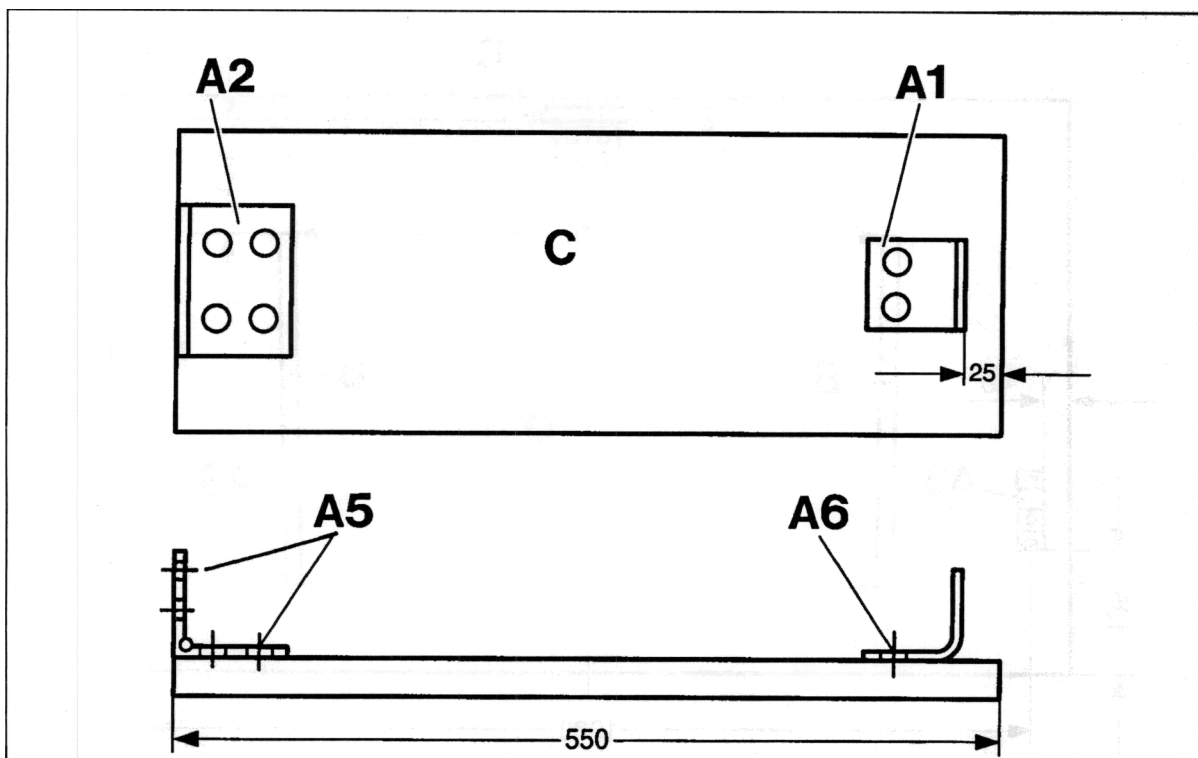
21_97

Procedure:

1. Transfer 160 mm radius to the multiplex plates.
2. Saw multiplex plates along the traced radius. The foot of the sabre saw must be tilted by 15° for this purpose.
3. Drill four \varnothing 6 mm holes in the support radii of each support cheek to provide clearance for the Tucker bolts on the hardtop body. Obtain the dimensions from the hardtop body.
4. Drill three \varnothing 6 mm holes, 20 mm deep, in the support cheeks (B) to accommodate the straight pins (A4) M6 x 40 from the set of fittings (A).

Making swivel arm (C)

Basic material: Multiplex plate 550 x 200 mm, 25 mm thick



A1 = Bracket

A2 = Hinge

A5 = 4.5 x 20 countersunk screw

A6 = 6 x 20 countersunk screw

C = Swivel arm

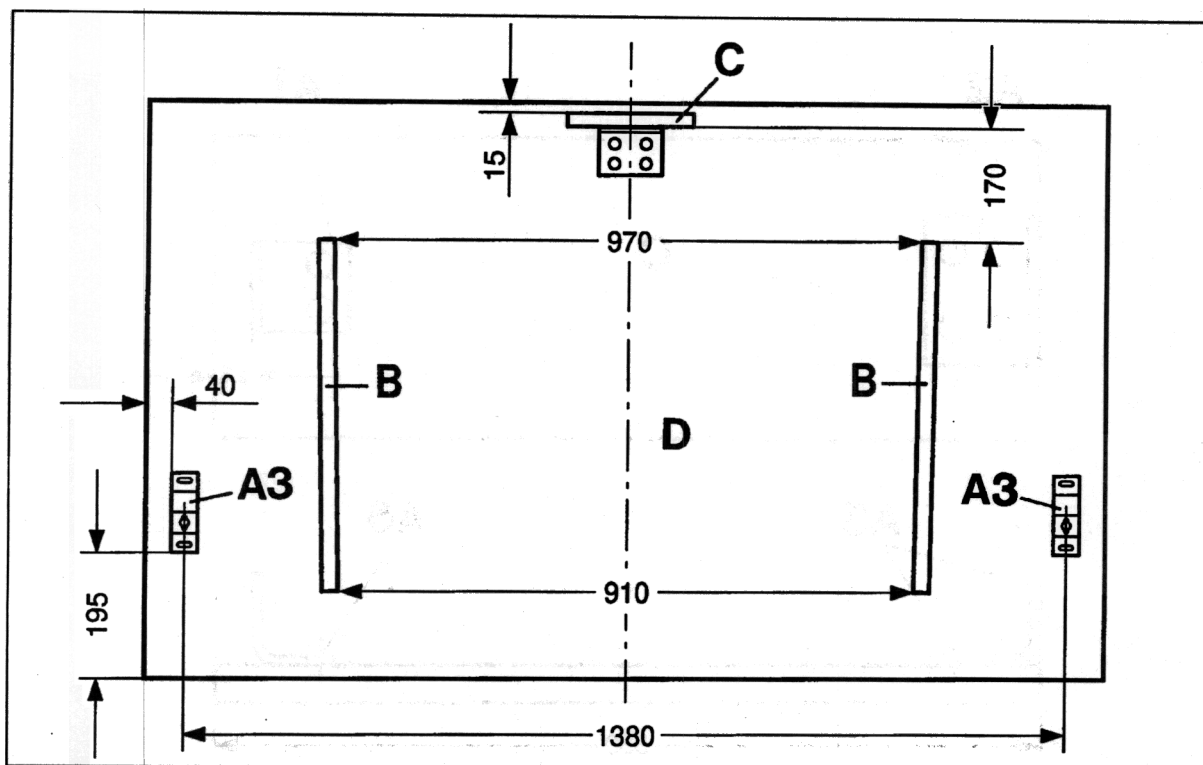
22_97

Procedure:

1. Fit bracket (A1) on swivel arm (C) with two 6 x 20 countersunk screws (A6) in accordance with the specified dimensions.
2. Fit hinge (A2) on swivel arm (C) with four 4.5 x 20 countersunk screws (A5) in accordance with the specified dimensions.

Fitting the swivel arm (C) and support cheeks (B) on the base plate (D)

Basic material: Wood-core plywood 1500 x 900 mm, 19 mm thick



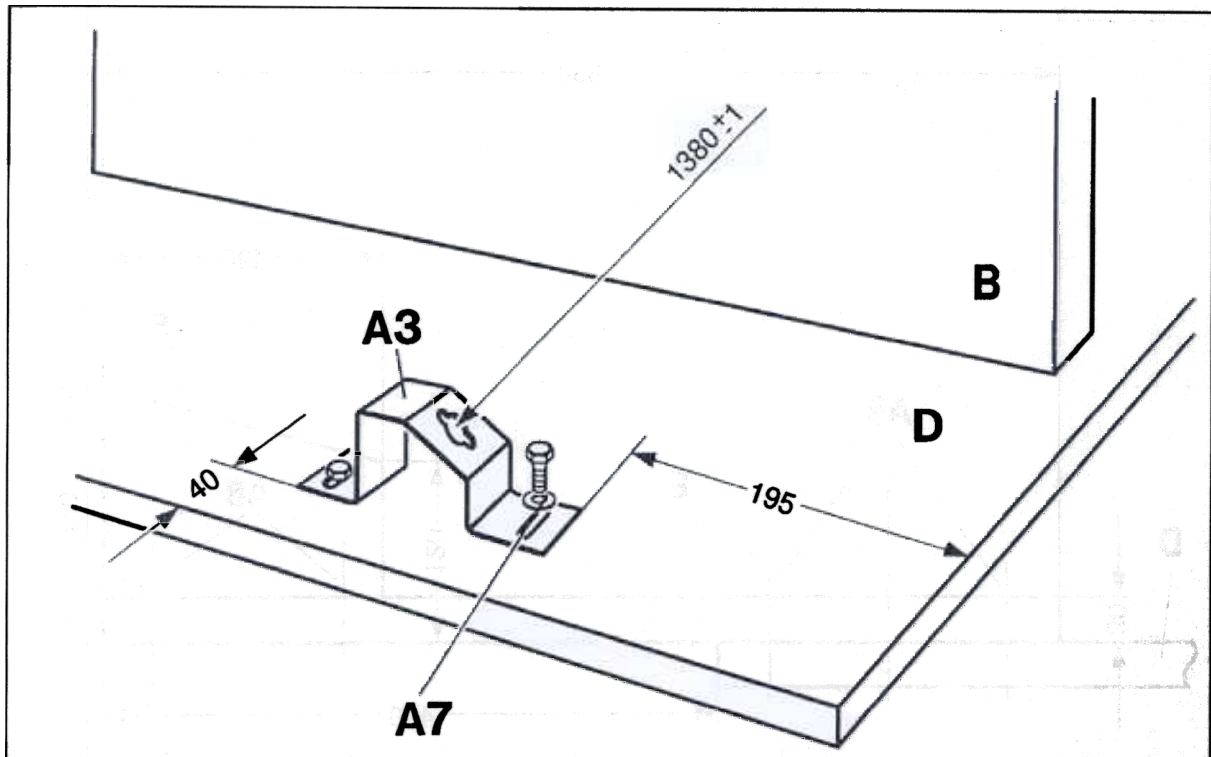
A3 = Support
 B = Support cheek
 C = Swivel arm
 D = Base plate

23_97

Procedure:

During assembly, all parts are positioned from the centre line!

1. Measure and mark centre of the base plate (D).
2. Fasten hinge (A2) of the completed swivel arm (C) on the base plate (D) with four 4.5 x 20 countersunk screws (A5) in accordance with the specified dimensions.
3. Transfer hole pattern of the support cheeks (B) onto the base plate (D) in accordance with the specified dimensions and drill holes using a \varnothing 6 mm drill bit.
4. Fit the support cheeks (B) on the base plate (D) by means of the pre-fitted straight pins (A4) 6 M6 x 40.

Fitting supports (A3) for the hardtop latching levers on the base plate

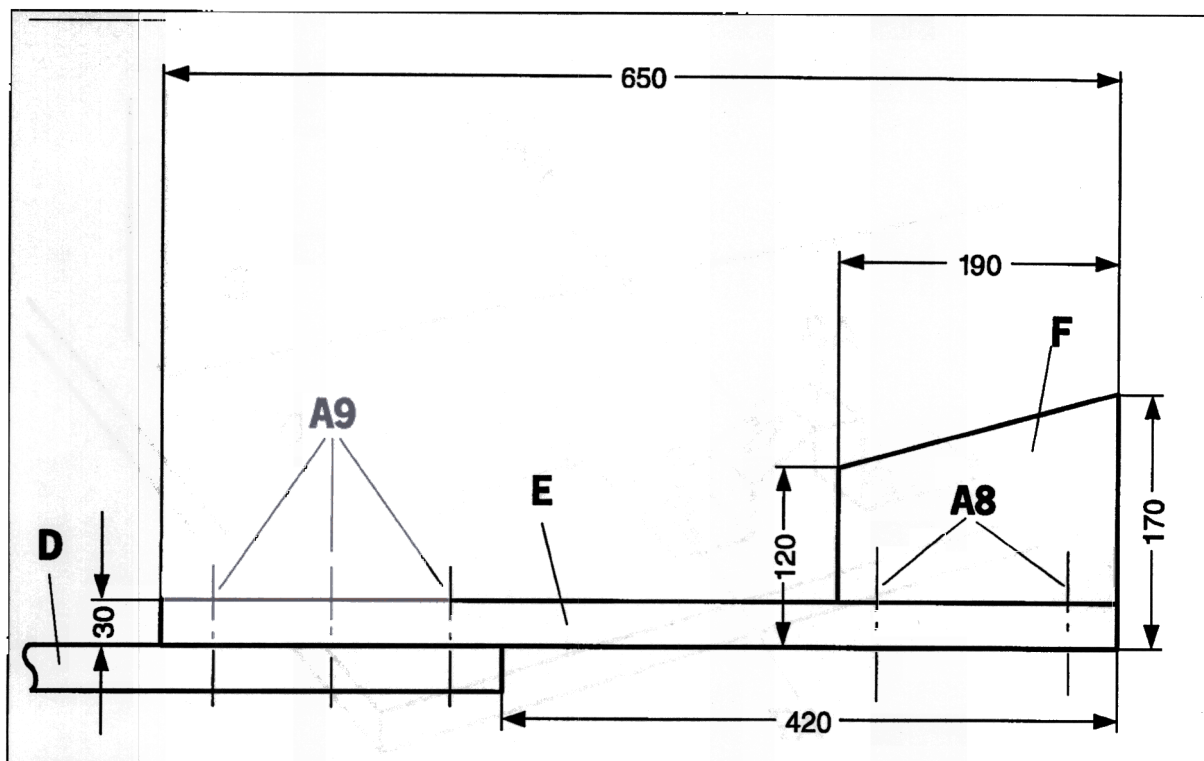
- A3 = Support
A7 = Hexagon head bolt 6 x 20 with washer
B = Support cheek
D = Base plate

24_97

Procedure:

1. Fit the supports (A3) on the base plate (D) with two 6 x 20 hexagon head bolts (A7) each in accordance with the specified dimensions.

Fitting the boom (E) and the support (F) on the base plate (D)



D = Base plate

E = Boom

F = Support

A8 = 6 x 60 countersunk screw (2x)

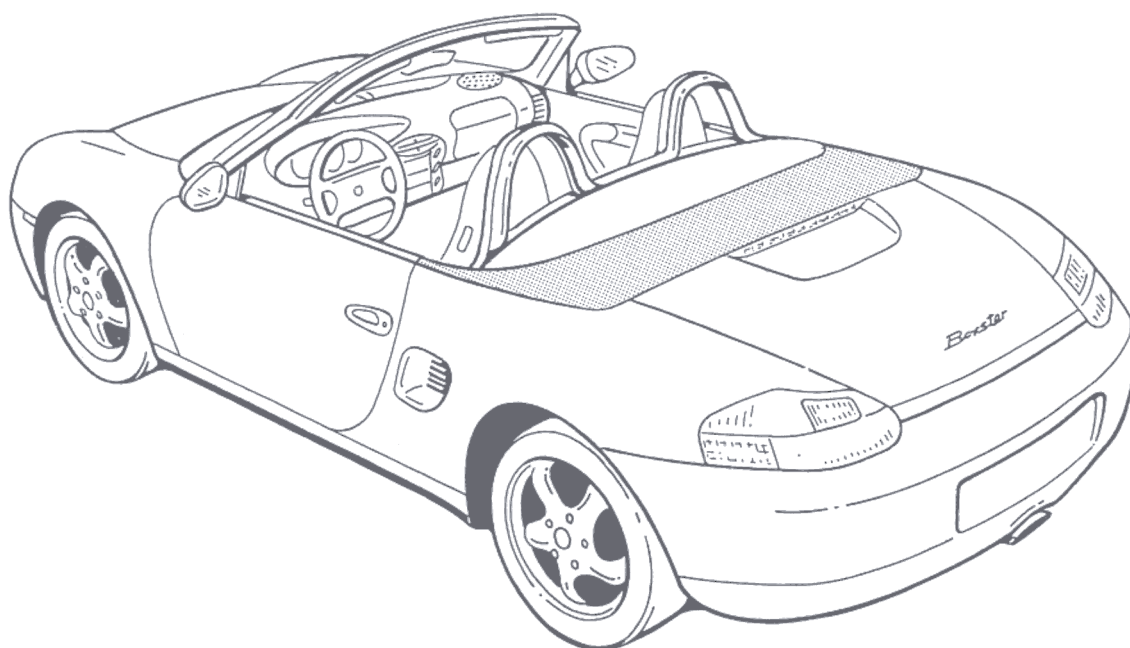
A9 = 6 x 50 countersunk screw (3x)

361_98

Place boom in the centre!

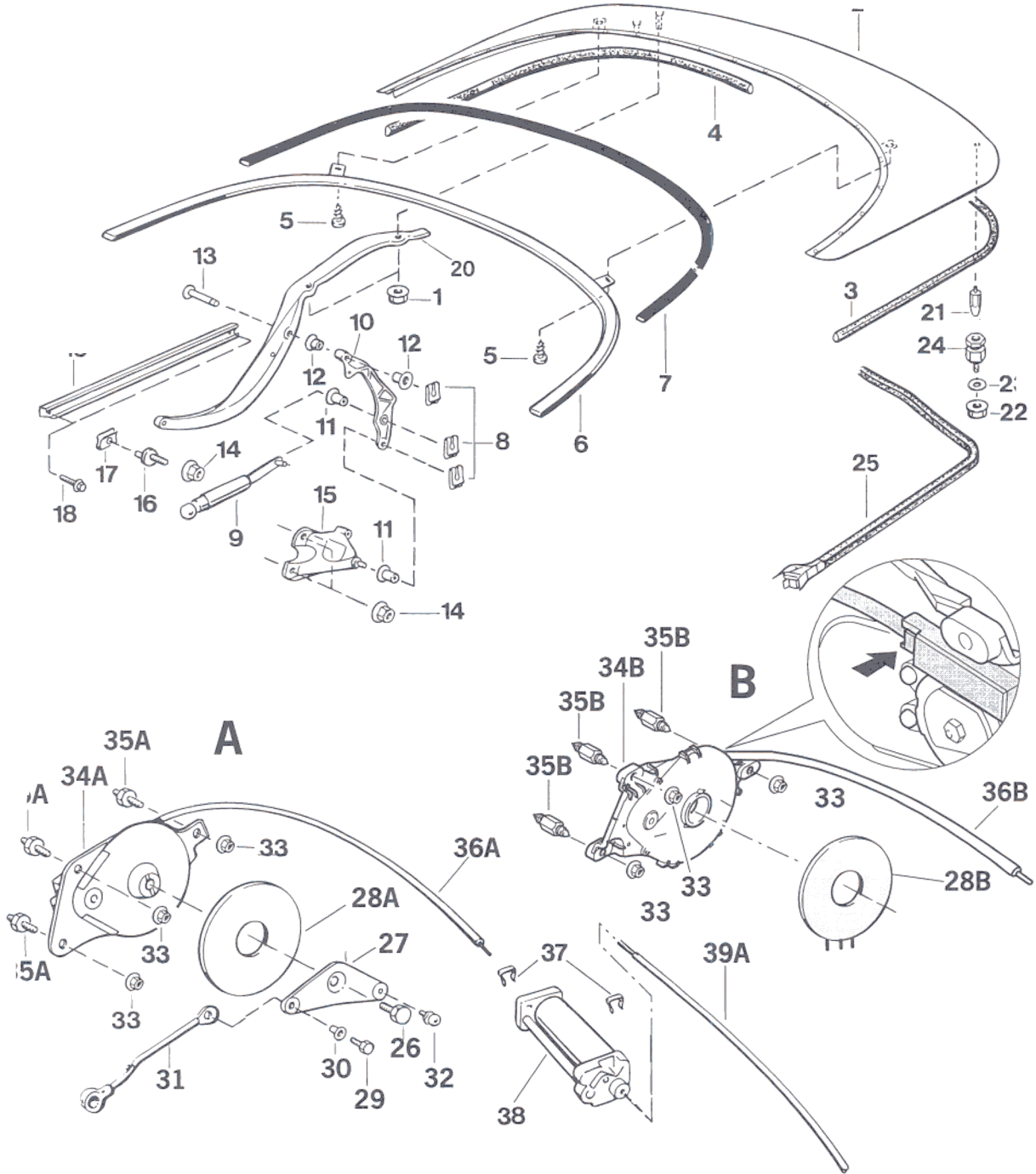
1. Measure and mark centre of the base plate (D).
2. Fit boom (E) on the base plate (D) with the three countersunk screws (A9) in accordance with the specified dimensions.
3. Fit support (F) on the boom (E) with the two countersunk screws (A8) in accordance with the specified dimensions.

61 90 19 Removing and installing convertible top compartment lid



458_96

R **ing and installing convertible top compartment id**



Removing and installing convertible top compartment lid

For removal of the convertible top compartment lid, the convertible top must be unlocked and the convertible top compartment lid must be in its highest position.

No.	Designation	Qty.	Removal	Note: Installation
	Collar nut	4		
2	Convertible top compartment	1	Remove convertible top compartment.	Position convertible top compartment on the guide arm (Item 40) and fasten with the collar nuts (Item 1).
3	Edge guard, left		Pull off	Push on
4	Edge guard, right		Pull off	Push on
5	Sheetmetal screw st 3.5 x 9.5	2		
6	Rail	1	Pull rail off lid.	Position rail on lid and fasten with the st 3.5 x 9.5 sheetmetal screws (Item 5).
7	Rubber seal	1	Pull rubber seal out of the rail (Item 6).	Press rubber seal into the rail (Item 6).
8	Retainer SLB 8	6	Press out retainer	Replace retainer Removal tool see: Workshop Equipment Manual, Chapter 2.4, No. 131
9	Push-bar spring	1	Push ball socket of the push-bar spring out of the ball head of the drive lever (Item 27). Push out the retainer (Item 8). Remove push-bar spring from the hinged lever (Item 10).	Insert push-bar spring in the hinged lever (Item 10) and press in with the retainer (Item 8). Press ball socket of the push-bar spring into the ball head of the drive lever (Item 27).

No.	Designation	Qty.	Removal	Note:
				Installation
10	Hinged lever	1	Remove hinged lever from the pin on the guide arm (Item 40) and pin of the bearing block (Item 15).	Push hinge lever onto the pin on the guide arm (Item 40) and the pin on the bearing block (Item 15) and secure with retainer SLB 8 (Item 8).
11	Bushing	2	Press bushing out of the hinged lever.	Press bushing into the hinged lever
12	Bushing	2	Press bushing out of the hinged lever.	Press bushing into the hinged lever.
13	Pin	1		
14	M 6 collar nut	4		
15	Bearing block	1	Undo the M 6 collar nut (Item 14) and remove bearing block.	Position the bearing block and fasten with the M 6 collar nuts (Item 14).
16	Eccentric pin	1	Undo collar nut (Item 14) and remove eccentric pin from the guide arm.	Adjust with respect to the side sections according to the lid contours. Tighten the collar nuts (Item 14).
17	Sliding piece	1	Unclip sliding piece from the eccentric pin.	Clip sliding piece into the eccentric pin.
18	M 6 x 20 combination screw	2		
19	Rail	1	Unscrew combination screws (Item 18) and remove the rail.	Position the rail and fasten with the combination screws (Item 18).
20	Guide arm			
21	Journal			
22	Nut M8	2		
23	Washer	2		

No.	Designation	Qty.	Removal	Note: Installation
24	Adjusting element	2	Unscrew M8 nut (Item 22) and remove the adjusting element.	Position the adjusting element, screw in with the M8 nut (Item 22) and close lid. Align the lid contours and joining gap to the side sections using the adjusting element.
25	Seal	1	Pull off	Position and push on the seal.
26	Hexagon-head bolt M 12 x 30	1		Replace, tightening torque: 80 Nm (59 ftlb.)
27	Drive lever	1		Position the drive lever and fasten with the M 12 x 30 hexagon-head bolt (Item 26).
28A	Friction plate	2		
28B	Install friction plate only in connection with the new (B) components.	2		Install friction plate only in connection with gear (Item 34B), the spacer pin (Item 35B) and the flexible shaft (Item 36B).
29	M 8 x 25 screw	1		Tightening torque: 13 Nm (10 ftlb.)
30	Spacer sleeve	1		
31	Push bar	1		
32	Ball journal	1		
33	M 8 collar nut	3		Tightening torque: 22 Nm (16 ftlb.)

**Warning:**

Introduction of new convertible top gears on 03.05.1999!

In order to eliminate malfunctioning of the convertible top gear and damage to the convertible top!

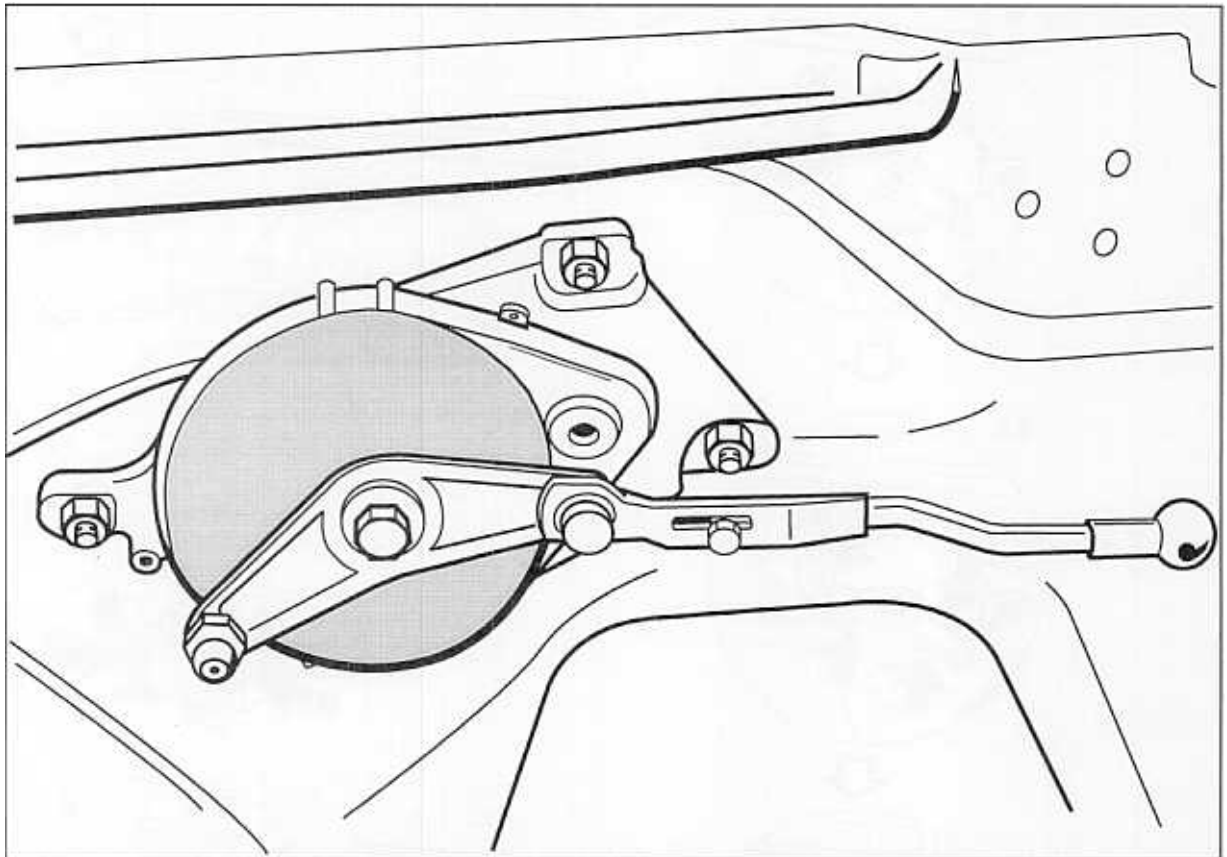
- > The new convertible top gear can be installed together with an old convertible top gear. Ensure that the associated **component allocation old (A) /new (B)** is always maintained.

– **old (A)** components: gear 34A, spacer pin 35A, shaft - right 36A - left 39A, friction plate 28A

– **new (B)** components: gear 34B, spacer pin 35B, friction plate 28B, shaft 36B

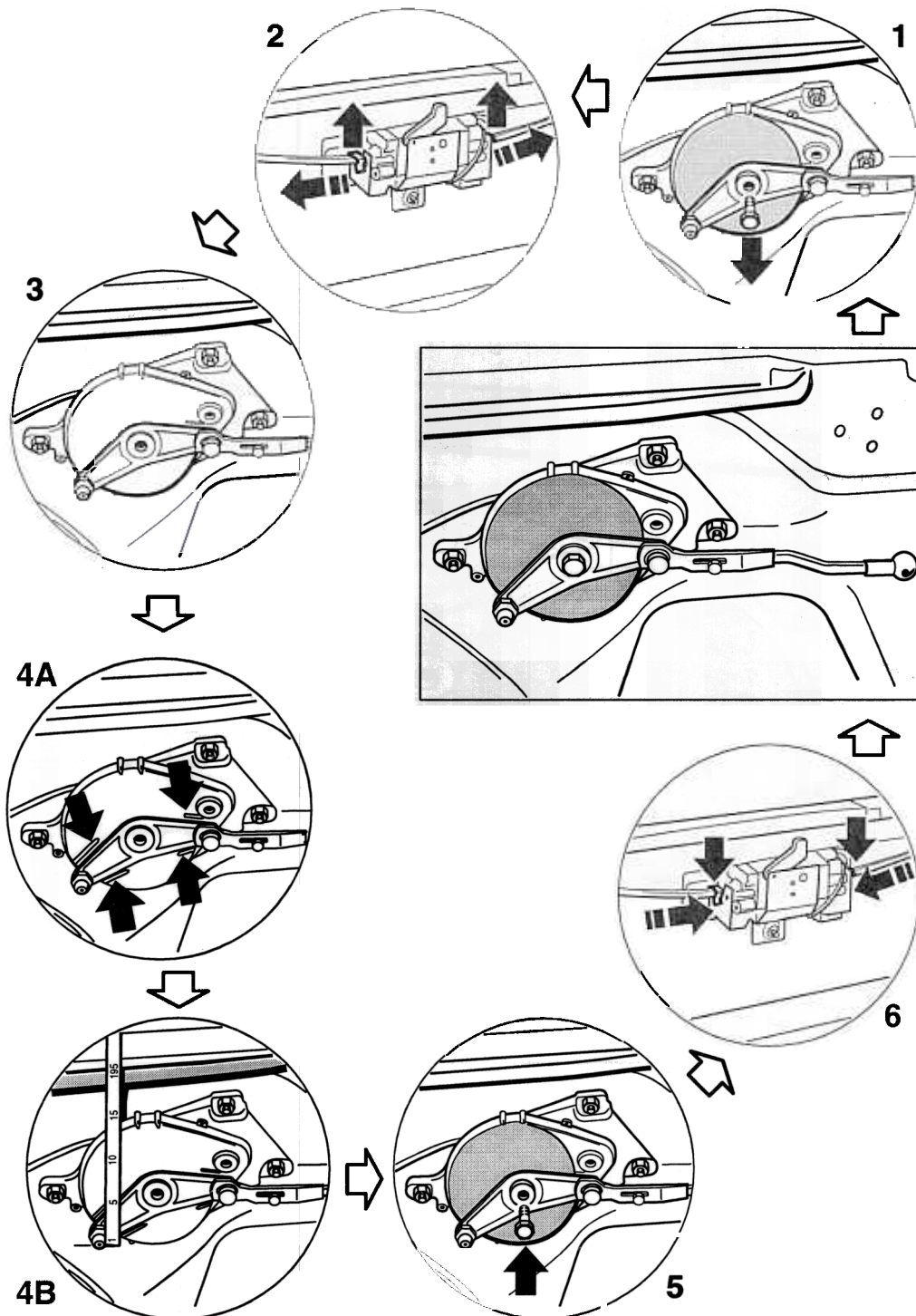
No.	Designation	Qty.	Removal	Note: Installation
34A	Gear Adjust gear refer to: Serv. No. 61 77	2	Undo collar nuts (Item 32)	Position gear on the spacer pin (Item 35A) and fasten with the M 8 collar nuts (Item 32).
34B	Install gear only in connection with the new (B) components. Adjust gear refer to: Serv. No. 61 77	2	Undo collar nuts (Item 32)	Position gear on the spacer pin (Item 35B) and fasten with the M 8 collar nuts (Item 32).
35A	Spacer pin	6		Tightening torque: 17 Nm (13 ftlb.)
35B	Install spacer pin only in connection with the new (B) components.			Screw in the shorter thread length into the body. Tightening torque: 17 Nm (13 ftlb.)
36B	Left and right flexible shaft, identical parts. Install only in connection with the new (B) components.	2	Press locking tab and pull off the shaft.	Push in shaft until it engages.
36A	Flexible shaft, right	1		
37	Clip	2		
38	Engine	1		
39A	Flexible shaft, left	1		

61 77 05 Adjusting convertible top gear



402_97

Adjusting convertible top gear



403_97

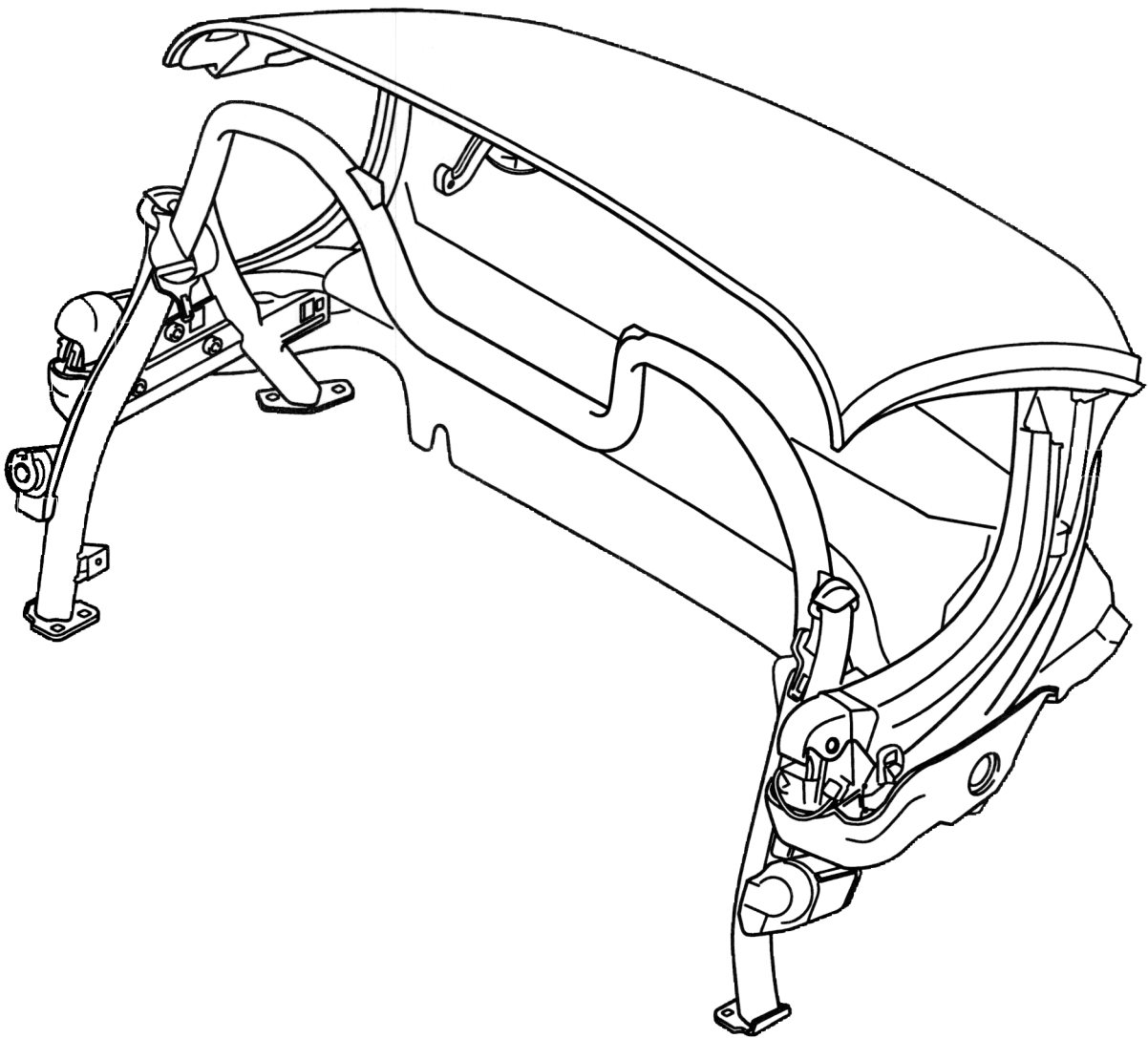
Adjusting convertible top gear

Basic adjustment of the convertible top gear

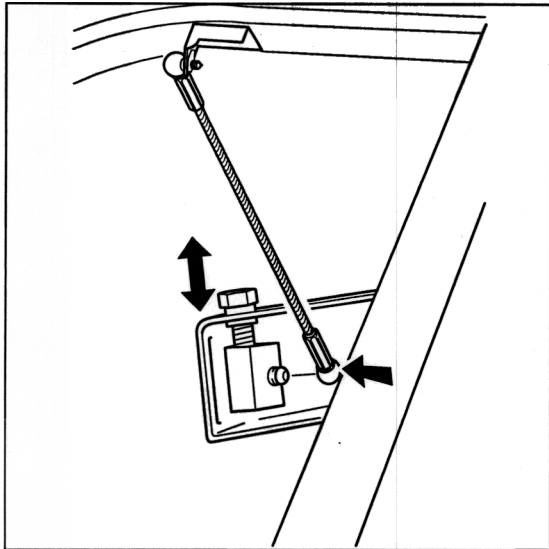
For adjustment of the convertible top drive, unlock the convertible top and press out the left and right ball sockets of the push rod out of the ball head of the drive lever.

No.	Procedure	Instructions
1	Unscrewing hexagon-head bolts (micro-encapsulated)	Unscrew the M12 x 30 hexagon-head bolts from the drive lever and remove cover from the convertible top drive.
2	Disengaging flexible shaft	Unclip clip from the flexible shaft and remove shaft from the drive motor.
3	Fitting drive lever	Fit drive lever on the convertible top gear.
4	Version: A Positioning drive lever on marking	Insert the flexible shaft of the convertible top gear to be adjusted into the drive motor and set the drive lever to the centre of the marking notches with the rocker switch (adjust convertible top gear on left and right synchronously).
4	Version: B Measuring drive lever	Insert the flexible shaft of the convertible top gear to be adjusted into the drive motor and use the rocker switch to adjust the centre of the drive lever ball head with respect to the side section sealing channel (upper edge). Dimension: 195 ±0,5 mm . (Adjust convertible top gear on left and right synchronously.)
5	Fitting drive lever, cover	Position the cover and drive lever on the convertible top gear and fasten with the M12 x 30 hexagon-head bolt (micro-encapsulated). Tightening torque: 80 Nm
6	Inserting flexible shaft	Insert the flexible shaft into the drive motor and secure with the clip.

61 01 15 Adjusting convertible top



520_97

Adjusting the tension cables on the adjusting part

523_97

The tension put on the tensioning bow by the left and right tension cables braces the convertible top covering and presses the tension bow seal against the convertible top compartment lid. If the pressure is too great, the tension bow seal will project with respect to the lid and the side section.

Adjustment procedure: Raise the convertible top compartment lid to top position. Adjust tension of the tension bow at the hexagon-head bolt in the adjusting part on the roll-over bar (**adjusting range approx. 15 mm**) according to the lid and side-section contours and the contact pressure on the convertible top compartment lid.

61 01 01 Troubleshooting in convertible top operation

Note

Except for manual unlocking and locking of the convertible top, the opening and closing processes must take place automatically. Pressing a button in the centre console causes the drive elements to execute the preselected motion. Various micro-switches ensure that these processes take place smoothly.

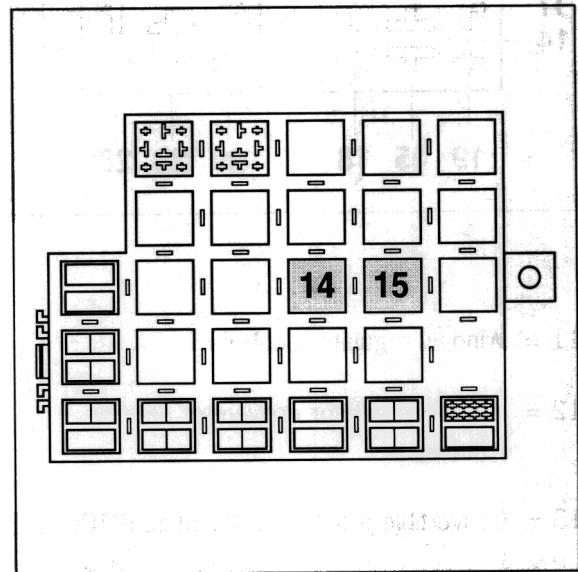
The motor is activated only if the following conditions are met:

- no speedometer signals greater than 5 km/h,
- electric motor plug connection is plugged in,
- terminal 15 connected via ignition lock,
- fuse B 6 (row B, number 6) and fuse D 3 (row D, number 3) are OK,
- parking brake is engaged.

The vehicle must be on a horizontal surface and there must not be any defect in the convertible top actuating mechanism.

Troubleshooting:

The control relay (double relay) is located at sockets 14 and 15 on relay carrier 1 in the footwell.



595_97

Troubleshooting on the relay carrier

Note

Control relay pulled off. Terminal designation on the relay carrier (Figure 596_97) is from the bottom side of the control relay.

1. Connect measuring instrument (voltmeter) to terminal 22 (ground) and terminal 23 (positive 30) on the carrier plate.

Display = battery voltage

2. Connect measuring instrument to terminal 22 (ground) and terminal 26. Switch on ignition.

Display = battery voltage

3. Connect measuring instrument to terminal 23 (positive) and terminal 15 (parking brake engaged).

Display = battery voltage

4. Connect measuring instrument to terminal 23 and terminal 16 ("close convertible top" button). Press "close" button.

Display = battery voltage

5. Connect measuring instrument to terminal 23 and terminal 17 ("open convertible top" button). Press "open" button.

Display = battery voltage

6. **Convertible top locked.** Connect measuring instrument to terminal 23 and terminal 14 (cowl panel frame micro-switch).

Display = battery voltage

7. **Convertible top locked.** Connect measuring instrument to terminal 23 and terminal 29 (B-pillar micro-switch).

Display = battery voltage

8. **Convertible top unlocked.** Connect measuring instrument to terminal 23 and terminal 13 (micro-switch closed, convertible top compartment lid CTCL open).

Display = battery voltage

9. **Convertible top unlocked.** Connect measuring instrument to terminal 23 and terminal 19 (cowl panel frame micro-switch).

Display = battery voltage

Plug control relay onto relay carrier. Open convertible top compartment lid and pull off electrical plug connection on the convertible top drive motor.

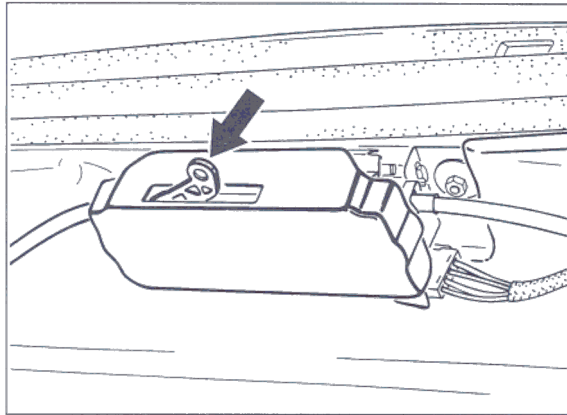
10. Connect positive lead of measuring instrument to terminal 1 (black wire) and negative lead of measuring instrument to terminal 4 (green wire). Use an auxiliary lead to jumper terminal 2 and terminal 3 at the plug connection. Switch on ignition and press "Open" button.

Display = battery voltage

11. Connect positive lead of measuring instrument to terminal 4 (green wire) and negative lead of measuring instrument to terminal 1 (black wire). Use an auxiliary lead to jumper terminal 2 and terminal 3. Switch on ignition and press "Close" button.

Display = battery voltage

Convertible top compartment lid micro-switch



621_97

The micro-switch is riveted onto the drive-motor bracket. The drive motor with bracket can be removed by unscrewing the three M6 fastening nuts.

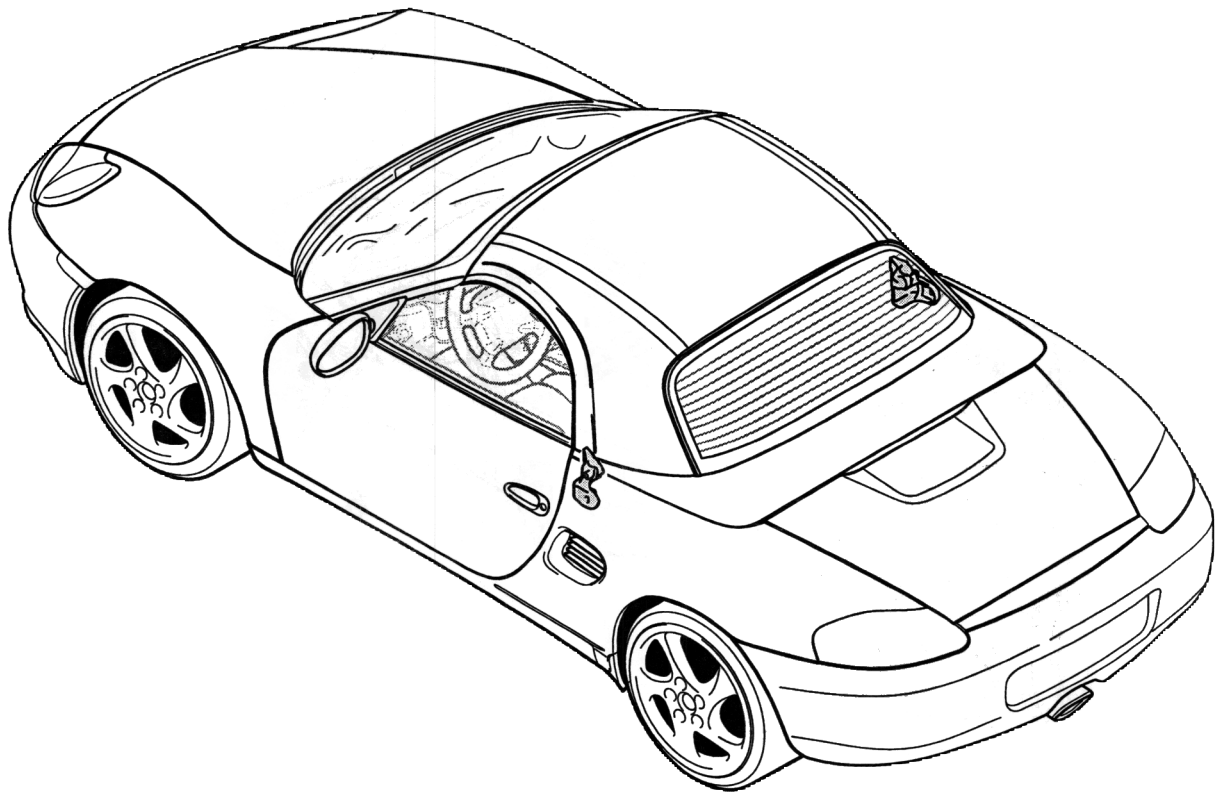
Note

If it is not possible to open the convertible top compartment lid electrically (convertible top open), carefully press the ball socket of the push-bar springs (left and right) out of the ball head of the drive lever.

Manually open the convertible top compartment lid and remove the drive motor.

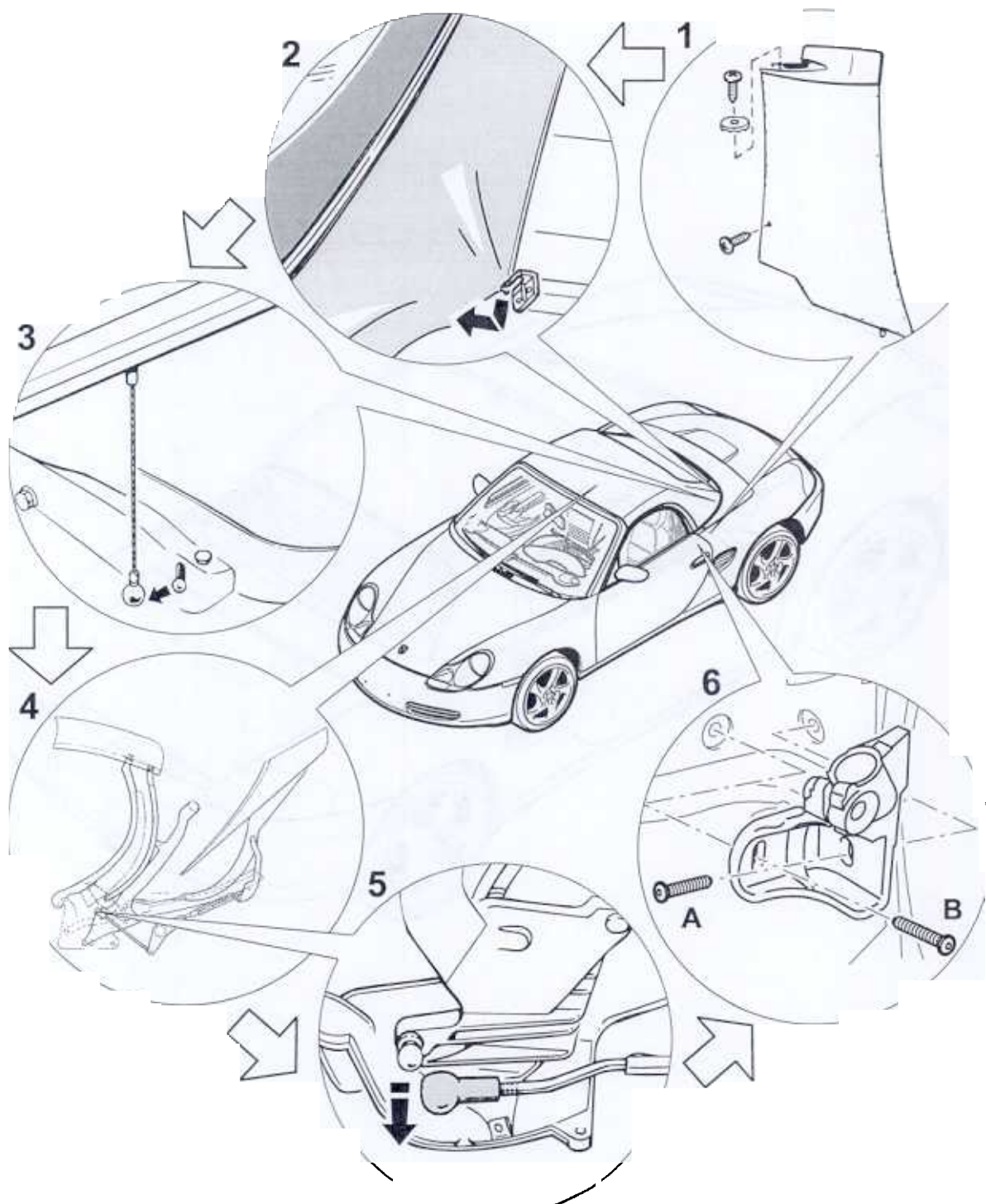
If the convertible top is closed, the drive motor can be removed from the inside by taking out the cover for the convertible top rest.

61 17 19 Removing and installing hardtop fastening



61170001

Removing hardtop fastening

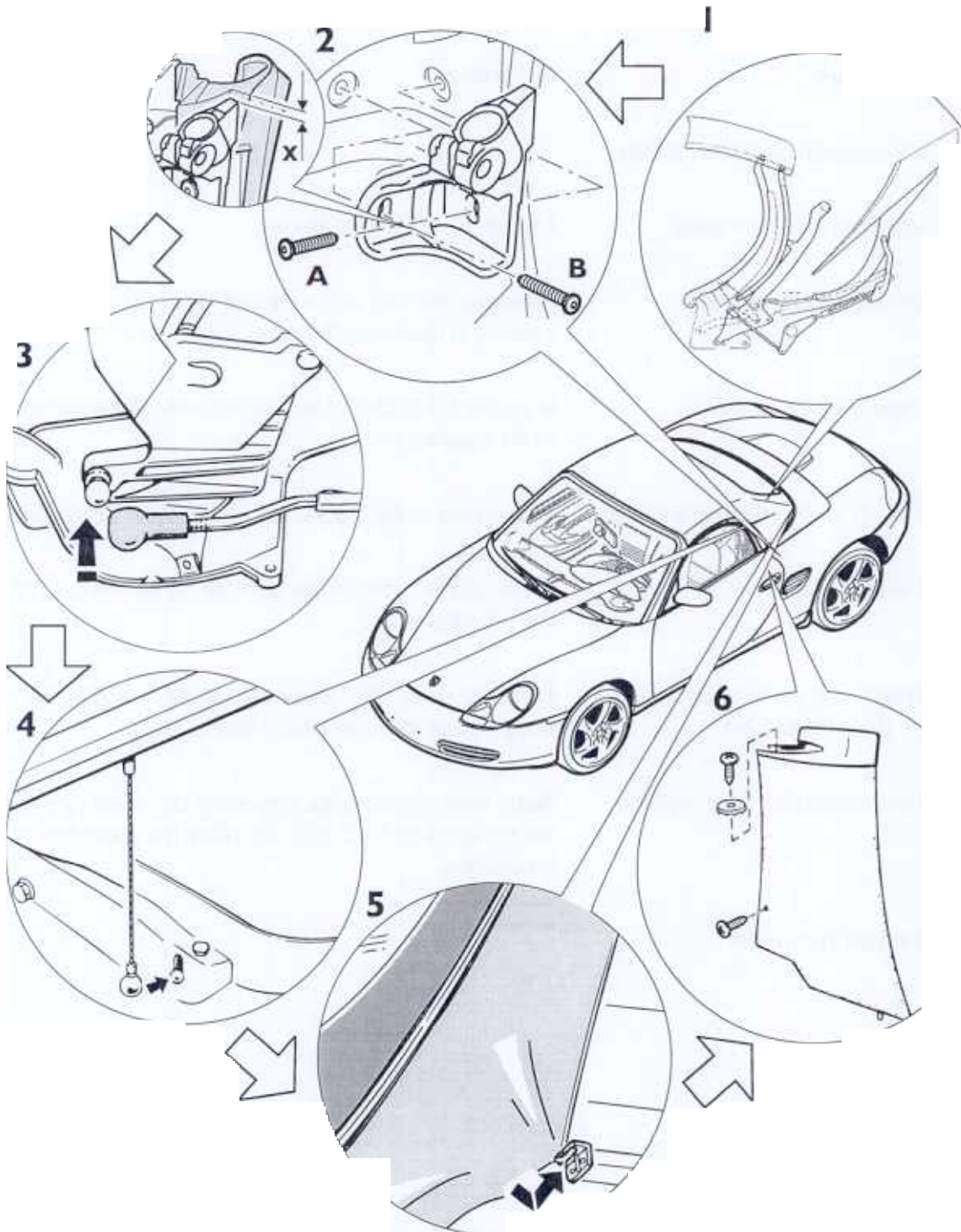


318_99

Removing hardtop fastening

No.	Procedure	Instructions
	Open convertible top completely	
1	Removing side-panel lining	Lift side panel lining up and off.
2	Detaching cloth covering	Disengage the strip on the left and right sides of the cloth covering in downward direction.
3	Detaching tension cable	Press the ball socket of the tension cable off the ball head of the adjusting piece.
4	Partially closing the convertible top	Both screws of the bracket are accessible in this position.
5	Detaching push bar	Press the ball socket of the push bar off the ball head of the adjusting piece.
6	Unscrewing the fastening screws (A, B) on the bracket	Fastening screw "A" is accessible via the convertible top compartment when the tension bow is raised.
	Open convertible top completely	Note: When operating the convertible top, make sure that the unclipped push bar does not jam in the convertible top mechanism.
	Remove the bracket	

Installing hardtop fastening

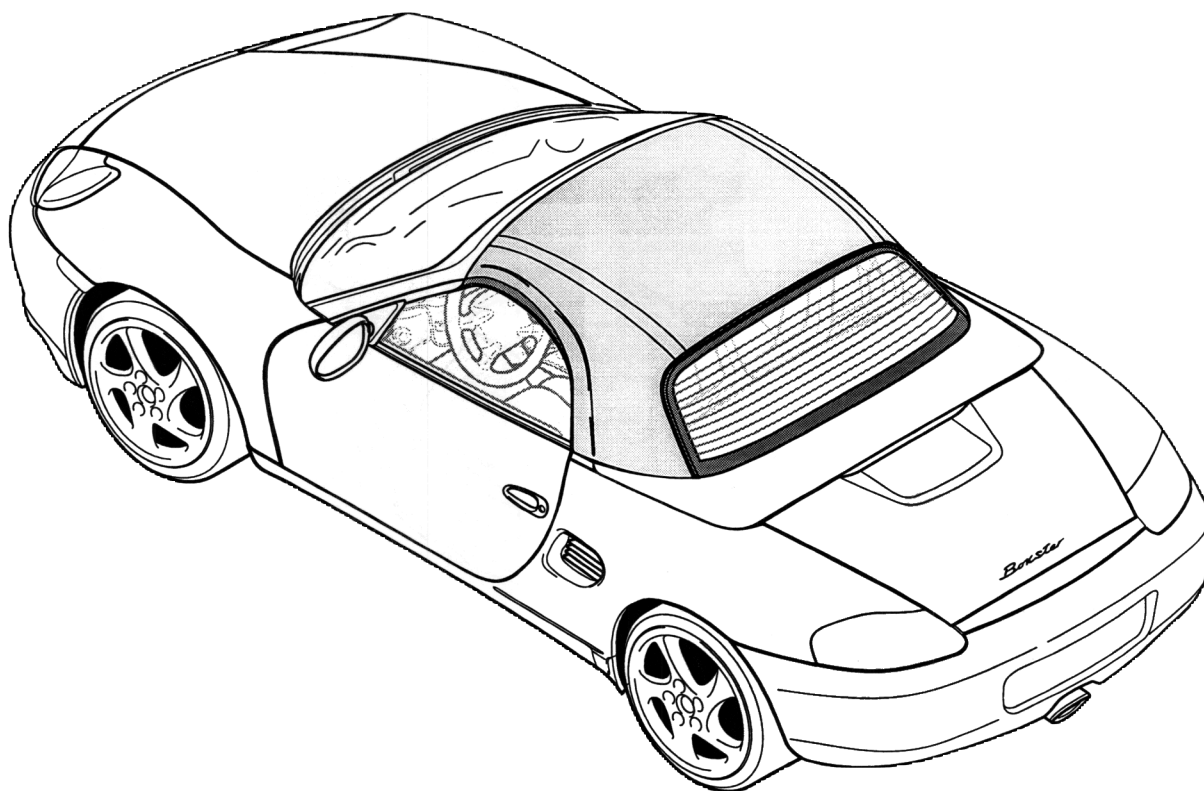


319_99

Installing hardtop fastening

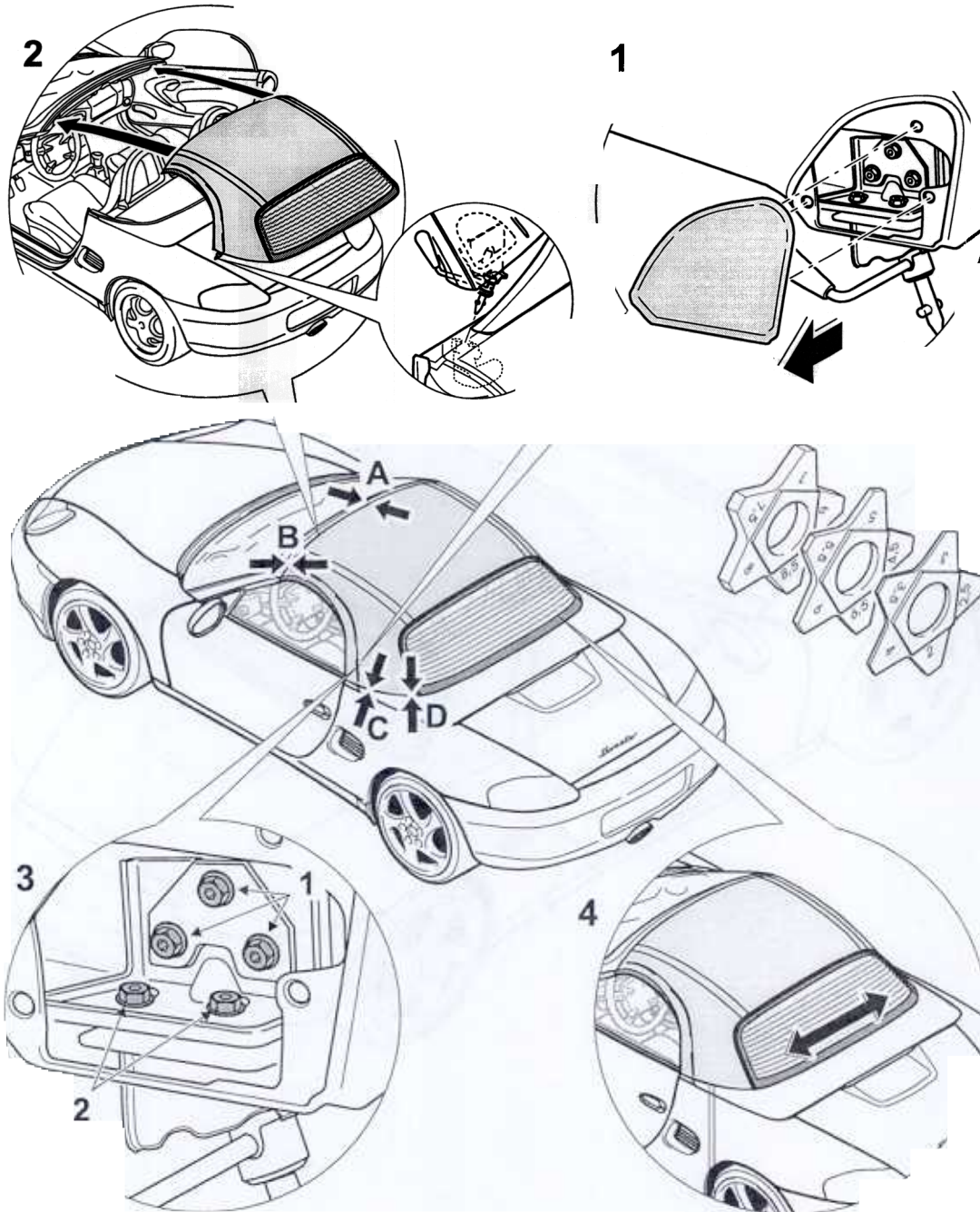
No.	Procedure	Instructions
	Open convertible top completely	
	Insert bracket	
1	Partially closing the convertible top	Note: When operating the convertible top, make sure that the unclipped push bar does not jam in the convertible top mechanism. Both screws of the bracket are accessible in this position.
2	Screwing on the bracket	Note: Replace self-locking screws. Tightening torque: $23 \pm 2 \text{ Nm}$ ($17 \pm 1.5 \text{ ftlb.}$). Install bracket at a distance of "x" = 8 mm from the top edge of the door seal.
3	Engaging push bar	Press the ball socket of the push bar onto the ball head of the main bow.
4	Engaging tension cable	Press the ball socket of the tension cable onto the ball head of the adjusting piece.
5	Attaching cloth covering	Engage the strips on the left and right sides of the cloth covering from below.
	Open convertible top completely	
6	Installing side-panel lining	Insert side-panel lining from above.
	Set gaps on hardtop	Refer to Serv. No. 61 02 15.

61 02 15 Adjusting the hardtop



61020003

Adjusting the hardtop



6102003

A = 5.5 ± 1.0 mm

B = 0 ± 1.0 mm (offset)

C = 5.5 ± 3.5 mm

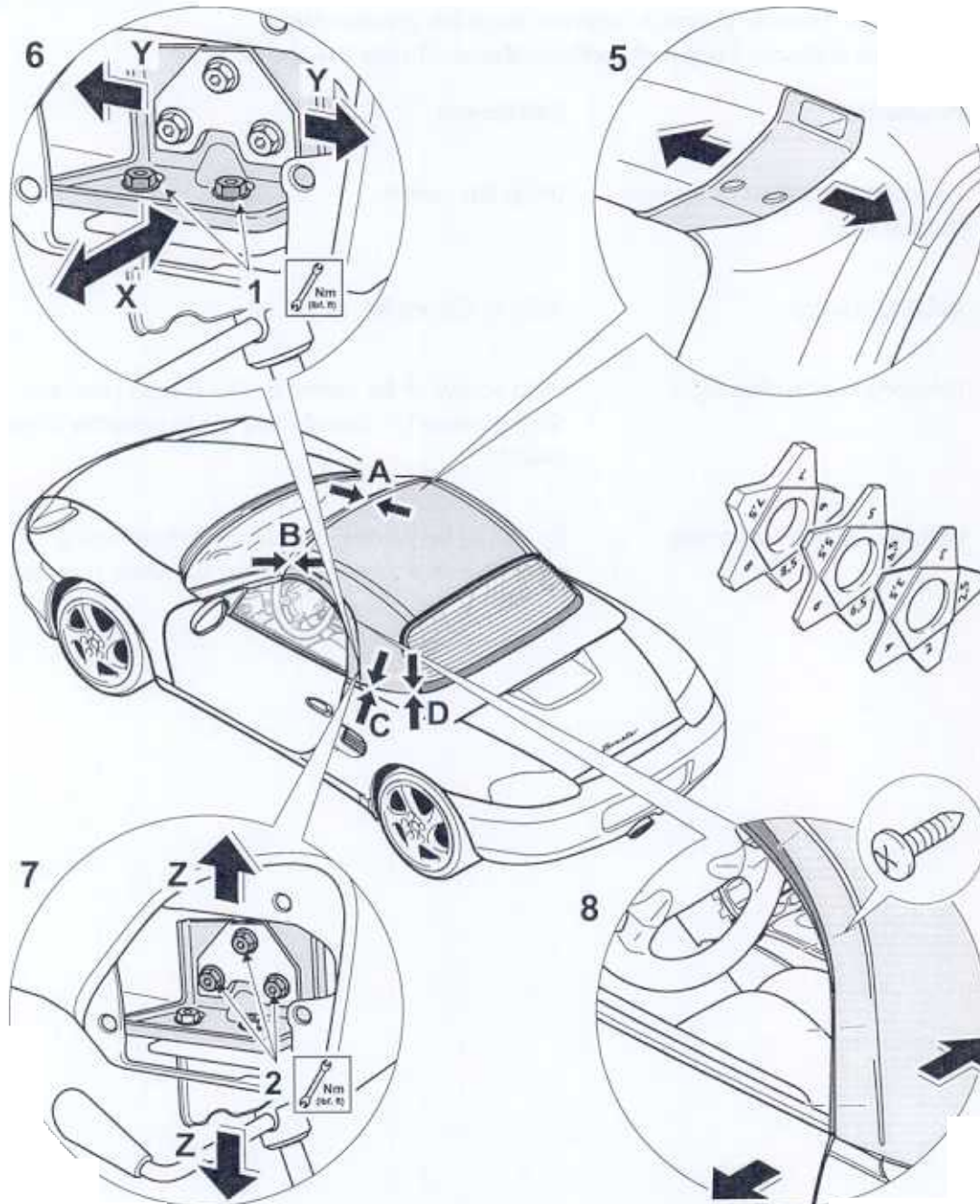
D = 5.5 ± 3.5 mm

Adjusting the hardtop

- > Note: Use star gauges to adjust or check the gap dimensions,
see Workshop Equipment Technical Manual, Chapter 2.4 No. 127 - 1

No.	Procedure	Instructions
1	Removing trim panels of the rear hardtop locks	Unclip trim panels.
2	Installing hardtop	<i>Refer to Service No. 61 02 19</i>
3	Releasing rear hardtop locks	Undo screws of the fastening plate (1) and screws of the latch plate (2). Move locking pin to assembly position (unlock).
4	Laterally aligning the hardtop	By shifting the hardtop laterally at the rear locking elements, set a parallel gap "A" at the windscreen frame.

Adjusting the hardtop



61020004

A = 5.5 ± 1.0 mm

B = 0 ± 1.0 mm (offset)

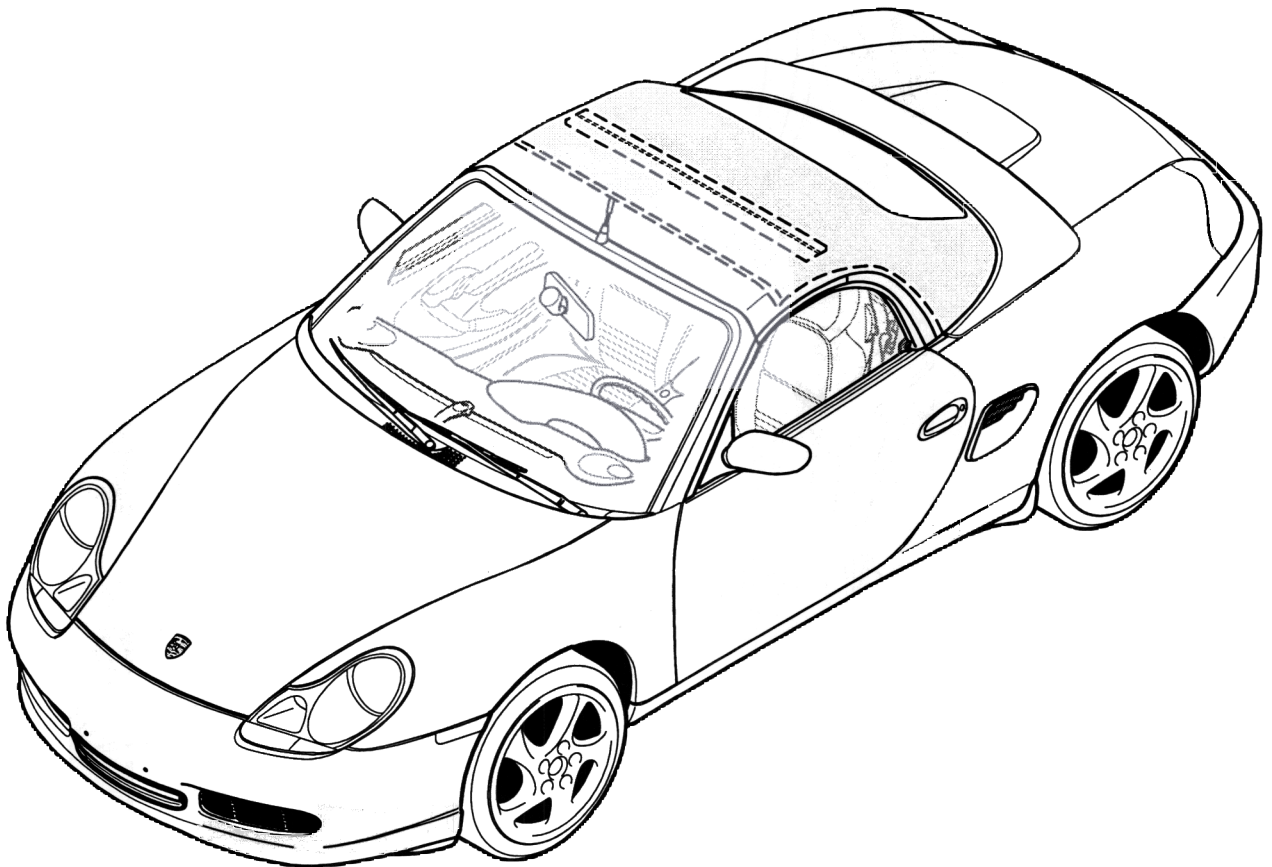
C = 5.5 ± 3.5 mm

D = 5.5 ± 3.5 mm

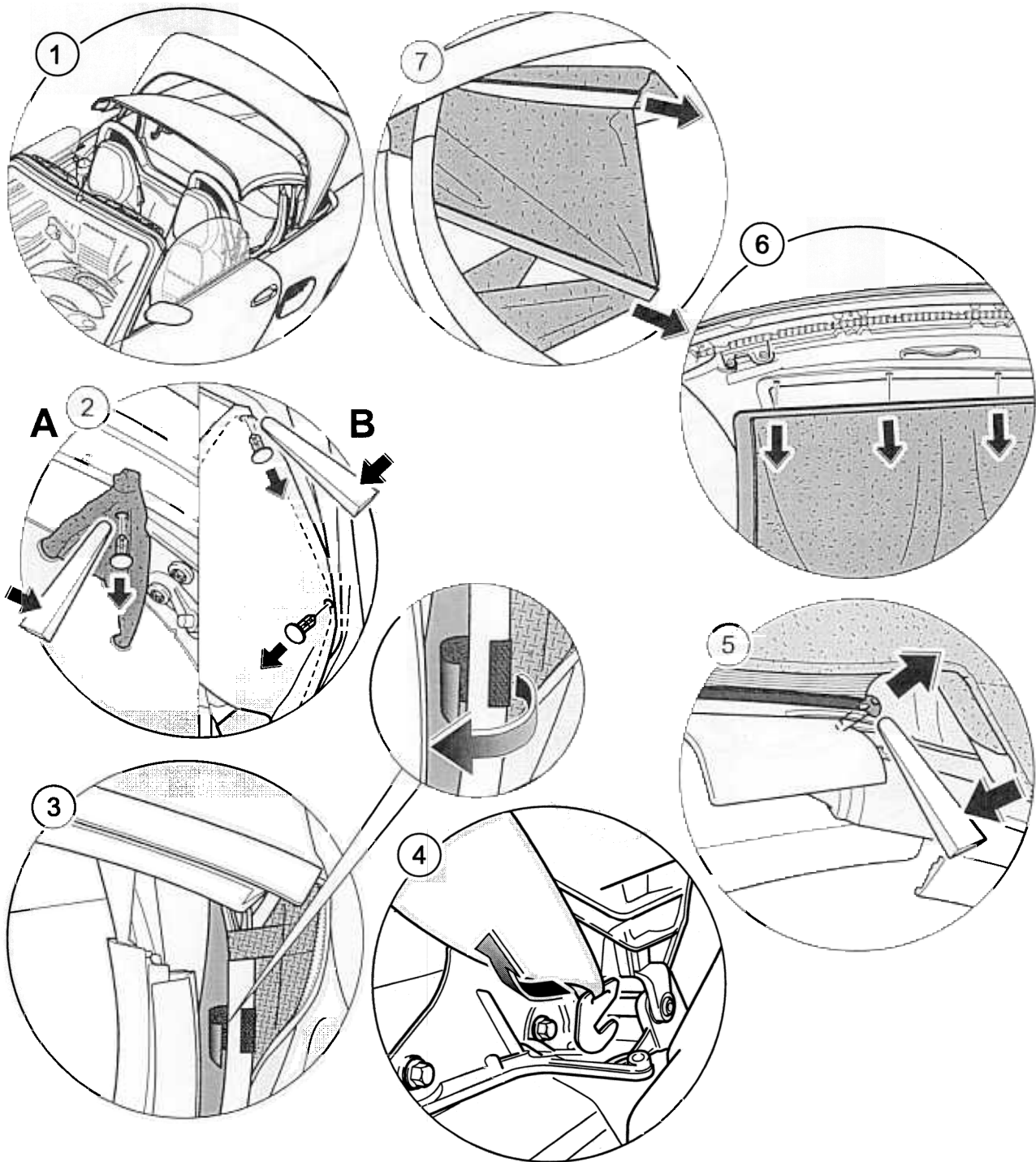
Adjusting the hardtop

No.	Procedure	Instructions
5	Setting the lateral offset of the hardtop at the front	<p>The offset between the hardtop cowl panel at the front (dimension "B") can be corrected by adjusting the convertible top housing.</p> <p>Note: Change setting on the convertible top pin housing only after checking the adjusting dimensions with the convertible top closed. Also see Serv. No. 61 01 15 "Adjusting the convertible top "</p>
6	Tightening fastening screws of latch plate (2)	Tighten screws to 10 Nm (7.5 ftlb.)
7	Setting gap between hardtop and convertible top compartment lid	Set gap "D" at both sides of the vehicle. Tighten fastening screws of the fastening plate (1) to 10 Nm (7.5 ftlb.) .
8	Closing all side windows	<p>Check for smooth operation and freedom from leaks; readjust the channel strips on the hardtop if necessary.</p> <p>Note: Readjust the side windows if necessary. Before adjustment, check position of the side windows in relation to the convertible top (see Service No. 57 51 37). It might be possible to avoid adjusting the side windows by varying the gap at the hardtop at the rear. If the windows are in contact with the hardtop at their end position, correct the gap at the hardtop at rear toward the max. value. If the side windows leak, correct the gap at the hardtop at rear toward the min. value.</p>
9	Installing trim panels of the rear hardtop locks	Clip in the trim panels.

Removing and installing roof liner



Removal overview of roof liner

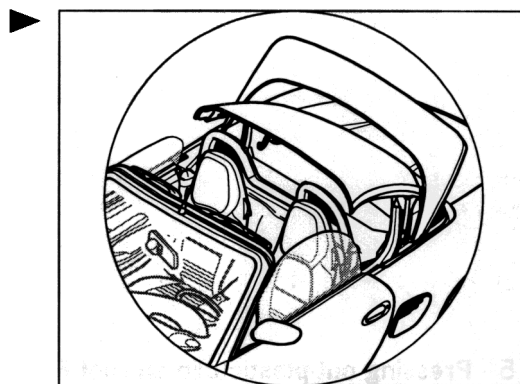


- 1 - Convertible top in service position
- 2 - Detaching roof liner connection to tension bow
- 3 - Opening the Velcro fastening on the push bar
- 4 - Disengaging tension hook on main bow
- 5 - Pressing out plastic clip on roof frame
- 6 - Detaching roof frame front connection
- 7 - Pull tightening strip out of the main bow and centre cover moulding

Removing roof liner

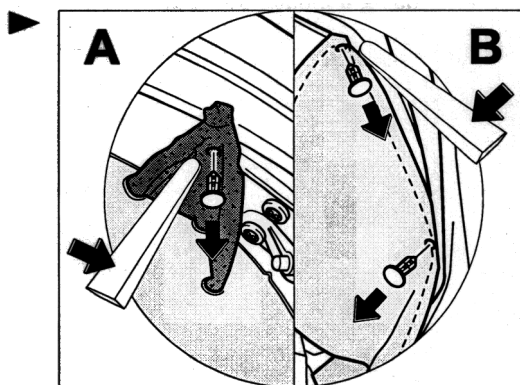
1 - Convertible top in service position

- Unlock convertible top and raise convertible-top compartment lid to its top position. Disengage the strip on the cloth covering in downward direction. Press the ball socket of the left and right tension cables out of the ball head of the adjusting piece. Fold tension cable upwards at the main bow until it engages.



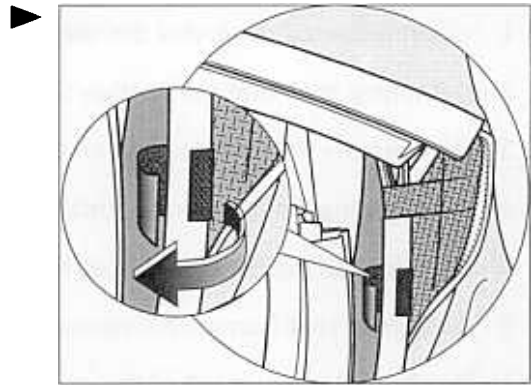
2 - Detaching roof liner connection to tension bow

- Use a plastic spatula to press the plastic clips for roof liner connection out of the tension bow on the left and right.

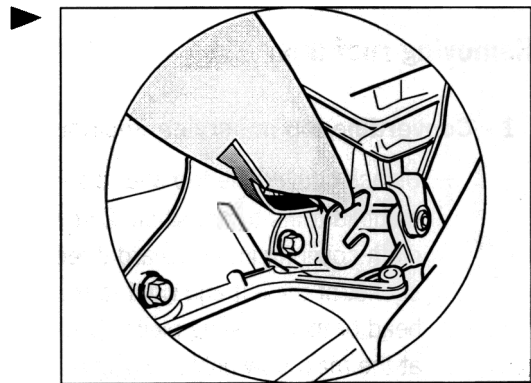


3 - Opening the Velcro fastening on the push bar

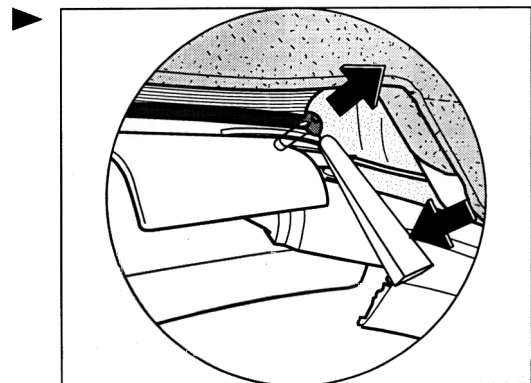
- Open the Velcro fastening on the push bar.

**4 - Disengaging tension hook on main bow**

- Disengage the tension hook from the pin of the convertible-top support/main bow.

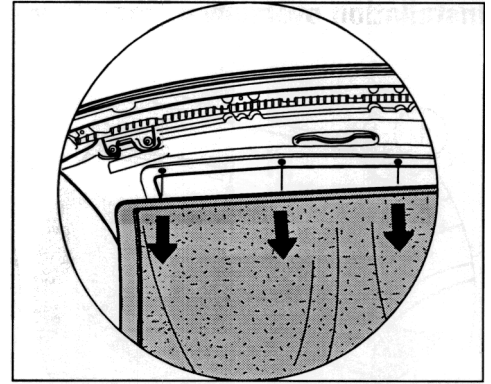
**5 - Pressing out plastic clip on roof frame**

- Carefully press out plastic clip on roof frame at the sides using a plastic spatula.



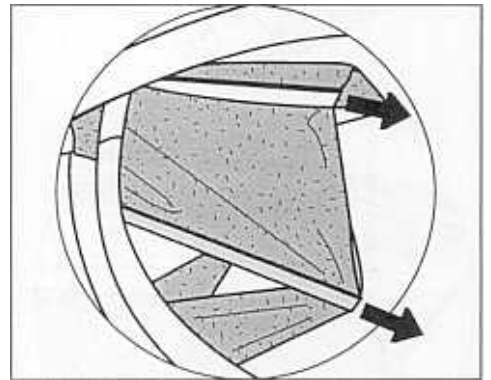
6 - Detaching roof frame front connection

- Pull the roof liner connection (plastic U-rail) at the front of the roof frame to the rear.

**7 - Pulling out tightening strips of main bow and centre cover moulding****Note!**

Push convertible-top button in closed direction until the convertible-top compartment lid is in half-closed position.

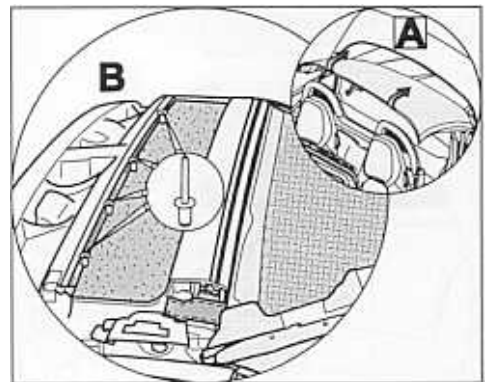
- Pull out tightening strips of main bow and centre cover moulding simultaneously.

**8 - Vehicles with riveted roof liner clamping strips on the roof frame****Note!**

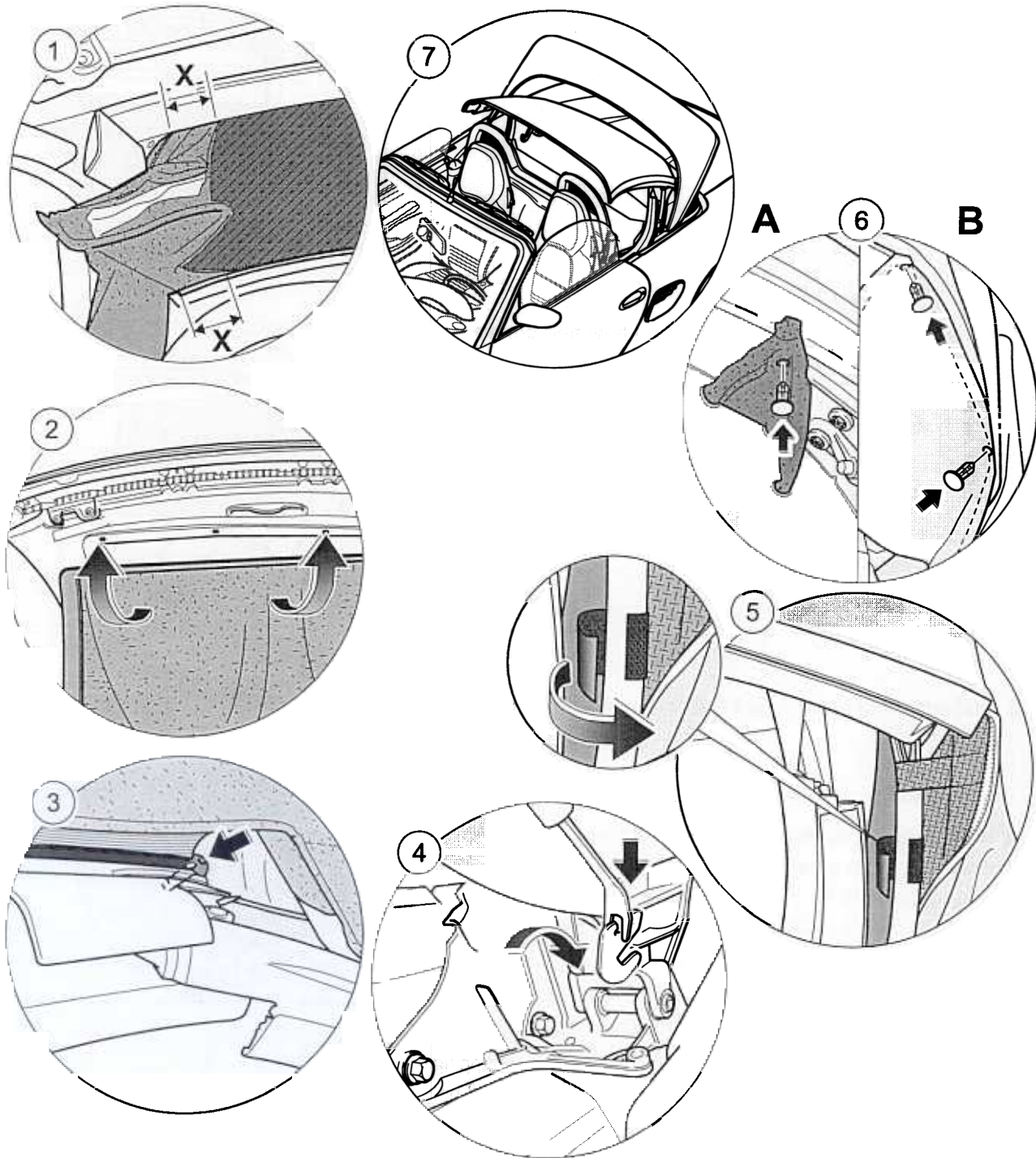
In 20 vehicles, the headliner clamping strip was riveted to the roof frame. These vehicles are identified by the Vehicle Identification Numbers 98 ZY S 64 0086 to 98 ZY S 64 109.

Observe the following roof liner removal procedure:

1. Detach the convertible top covering **-inset A-** at the front and sides of the roof frame and fold to the rear
⇒ Rep. Gr. 612855; Replacing convertible-top covering
2. Drill out the four rivets connecting the roof liner clamping strip to the roof frame **-inset B-** using a Ø 4 mm drill bit.
3. Pull the roof liner clamping strip rearward out of the roof frame.
4. Fit convertible-top covering on the roof frame
⇒ Rep. Gr. 612855; Replacing convertible-top covering
5. Install new roof liner ⇒ Rep. Gr. 610919; Removing and installing roof liner



Installation overview of roof liner



- 1 - Pulling in tightening strips on main bow and on centre cover moulding
- 2 - Fitting roof frame connection at front
- 3 - Pressing in the plastic clip on the roof frame
- 4 - Engaging tension hook on main bow
- 5 - Closing the Velcro fastening of the push bar
- 6 - Fitting roof liner connection on tension bow
- 7 - Ending service position

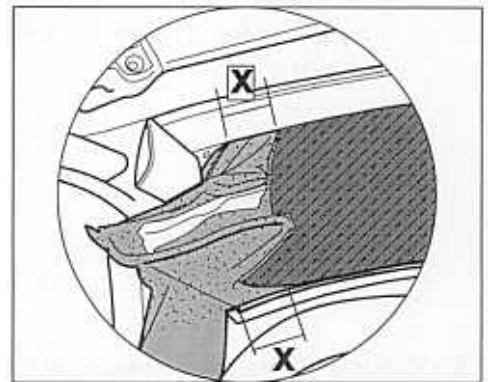
Installing roof liner

- 1 - Pulling in tightening strips on main bow and on centre cover moulding

i Note!

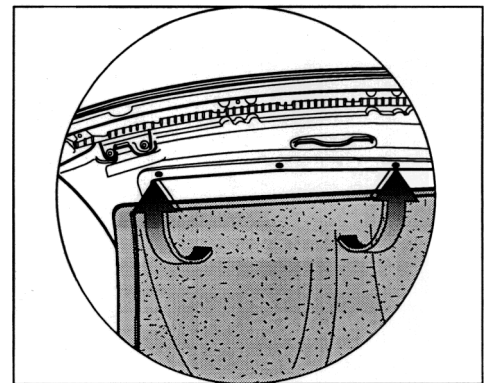
Push convertible-top button in closed direction until the convertible-top compartment lid is in half-closed position.

- Pull both tightening strips of the roof liner into the groove on the main bow and centre cover moulding by approx. 30 mm. Pull in both tightening strips simultaneously.



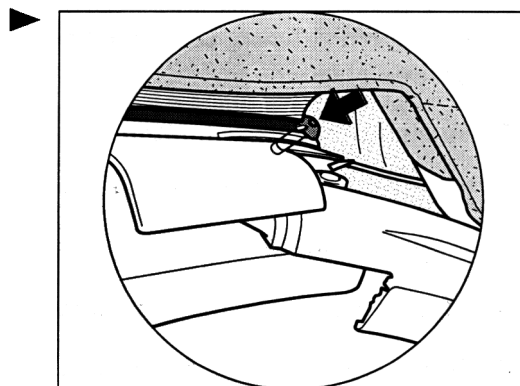
- 2 - Fitting roof frame connection at front

- Press the roof liner connection (plastic U-rail) into the front of the roof frame.

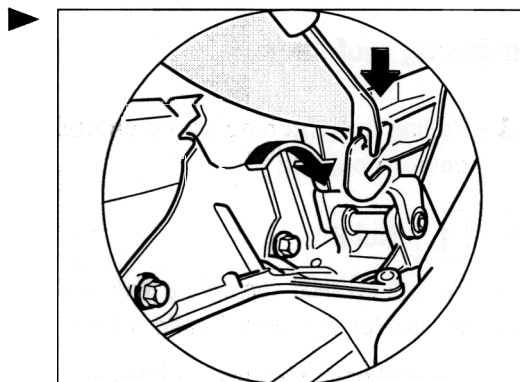


3 - Pressing in the plastic clip at sides of roof frame

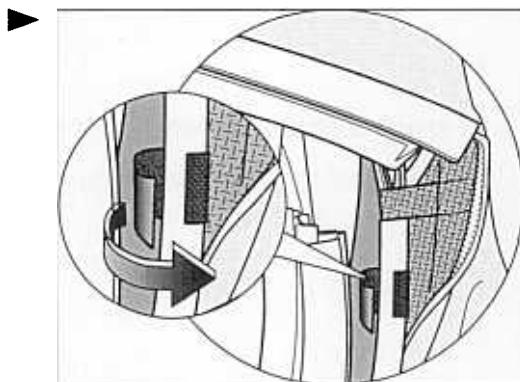
- Press in the plastic clip at the sides of the roof frame.

**4 - Engaging tension hook on main bow**

- Use the assembly tool to engage the tension hook into the pin of the convertible-top support/main bow. Assembly tool ⇒ No. 21; Rep. Gr. 2.4.; Workshop Equipment Manual

**5 - Closing the Velcro fastening of the push bar**

- Close the Velcro fastening of the push bar.



6 - Fitting roof liner connection on tension bow

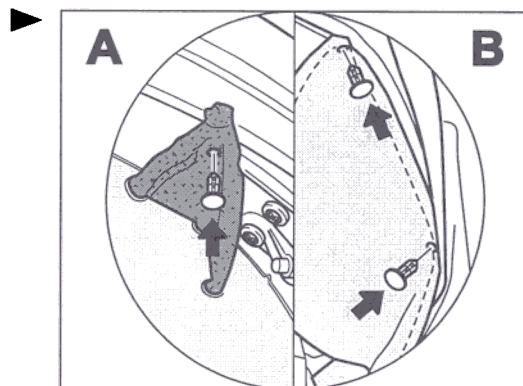
Note!

In vehicles with a roof liner produced before 12.04.2000, a new roof liner with a new cut must be installed when the convertible-top covering with a small rear window is replaced ⇒ Rep. Gr. 613055; Conversion measure on the tension bow for the roof liner

- Position the roof liner connection and cloth covering on the tension bow. Secure the connection by pressing in the plastic clips into the tension bow on the left and right.

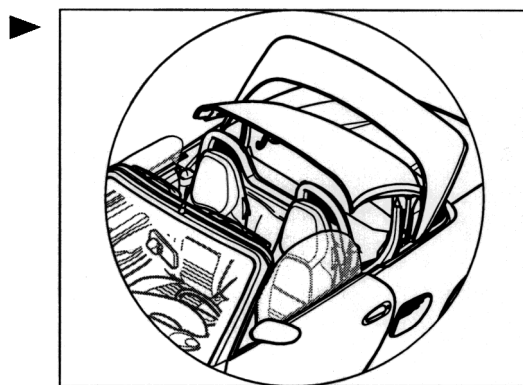
A = up to production date 12.04.2000

B = as from production date 13.04.2000



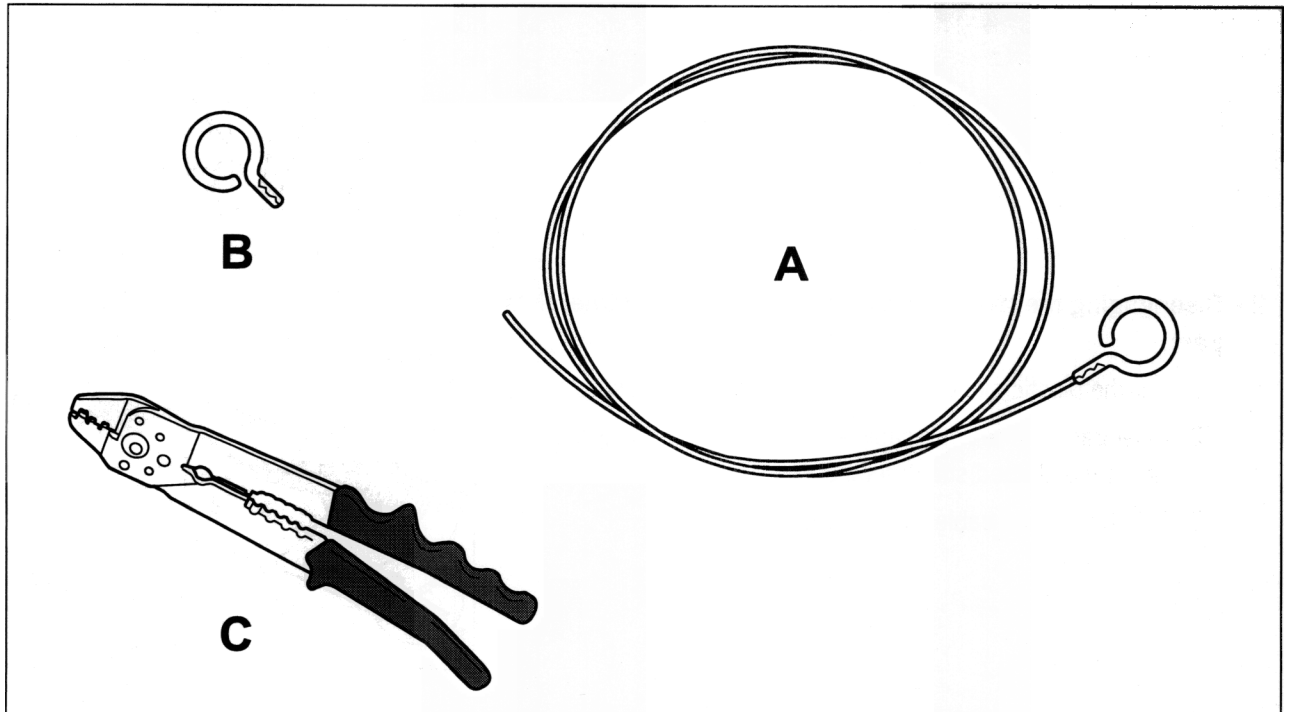
7 - Ending service position

- End service position and press the ball socket of the tension cable into the ball head of the adjusting element on the left and right. Engage the strip on the cloth covering in the rear wall of the convertible-top compartment lid.



Replacing the tension cable

The following spare parts and tools are required for the repair
"Replacing the tension cable":



- A - Tension cable
- B - Eyelet
- C - Crimping pliers

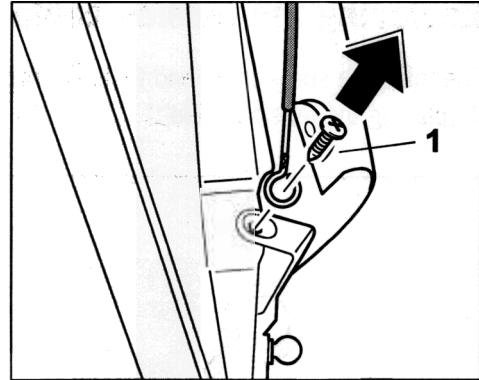
Removing the tension cable

 **Note!**

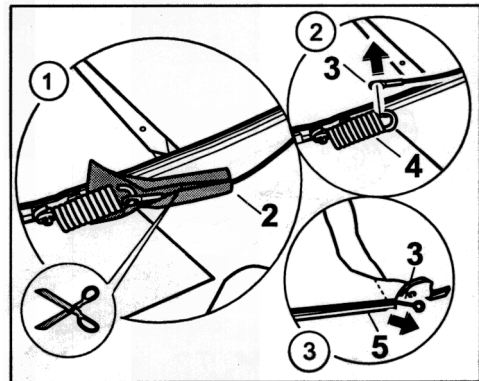
- ◆ *In order to replace the tension cable, the convertible-top covering must be detached to a certain extent on the relevant side!*
- ◆ *To do so, undo the convertible-top covering at the front and the side of the roof frame ⇒ Rep. Gr. 612855; Replacing convertible-top covering.*

1 - Disconnecting the tension cable from the main bow

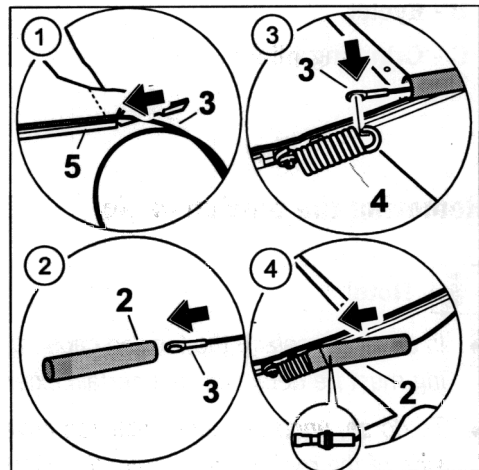
- At the front B-pillar (main bow), undo the fastening screw -1- from the tension cable eye and clamping rail.

**2 - Disengaging the tension cable at the shaped sheetmetal part**

1. Cut the plastic sleeve -2- open with a pair of scissors.
2. Disengage the tension cable -3- from the tension spring -4- at the shaped sheetmetal part.
3. Pull the tension cable -3- out of the seal -5-.

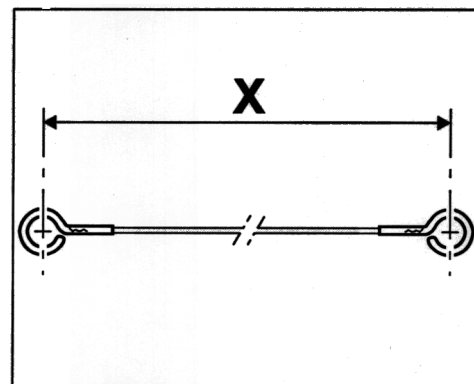
**Installing the tension cable****1 - Fitting the tension cable at the shaped sheetmetal part**

1. Pull the tension cable -3- in to the seal -5-.
2. Push the heat-shrinking tube -2- over the tension cable -3-.
3. Engage the tension cable -3- in the tension spring -4- at the shaped sheetmetal part.
4. Pull the heat-shrinking tube -2- over the tension spring. Shrink the heat-shrinking tube to the diameter of the tension spring by heating it with a hot-air gun.



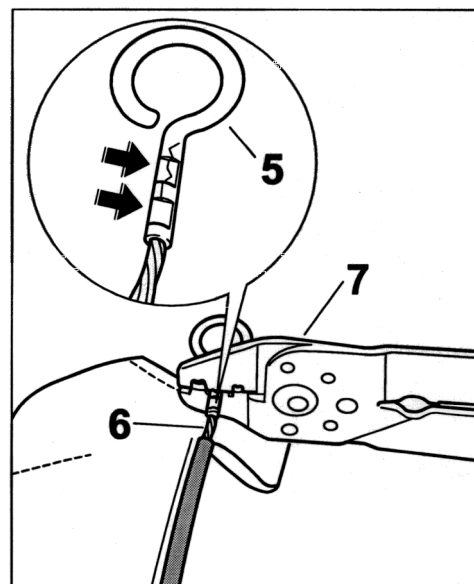
2 - Placing the eyelet on the tension cable and measuring the total length

1. Push the eyelet fully on to the end of the tension cable.
2. Measure the total length of the tension cable from eyelet to eyelet with a tape measure -**dimension X = 655 mm**-.



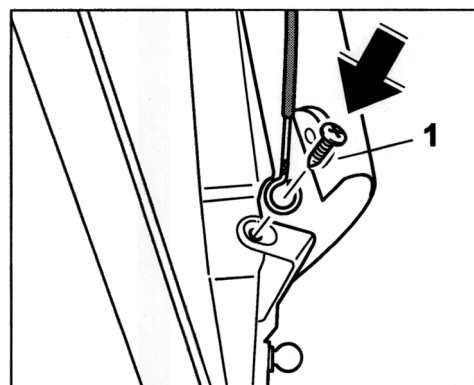
3 - Pressing the tension cable and the eyelet together

- Using commercially available crimping pliers -**7**-, press the eyelet -**5**- together with the tension cable -**6**- in two places -**inset**-.



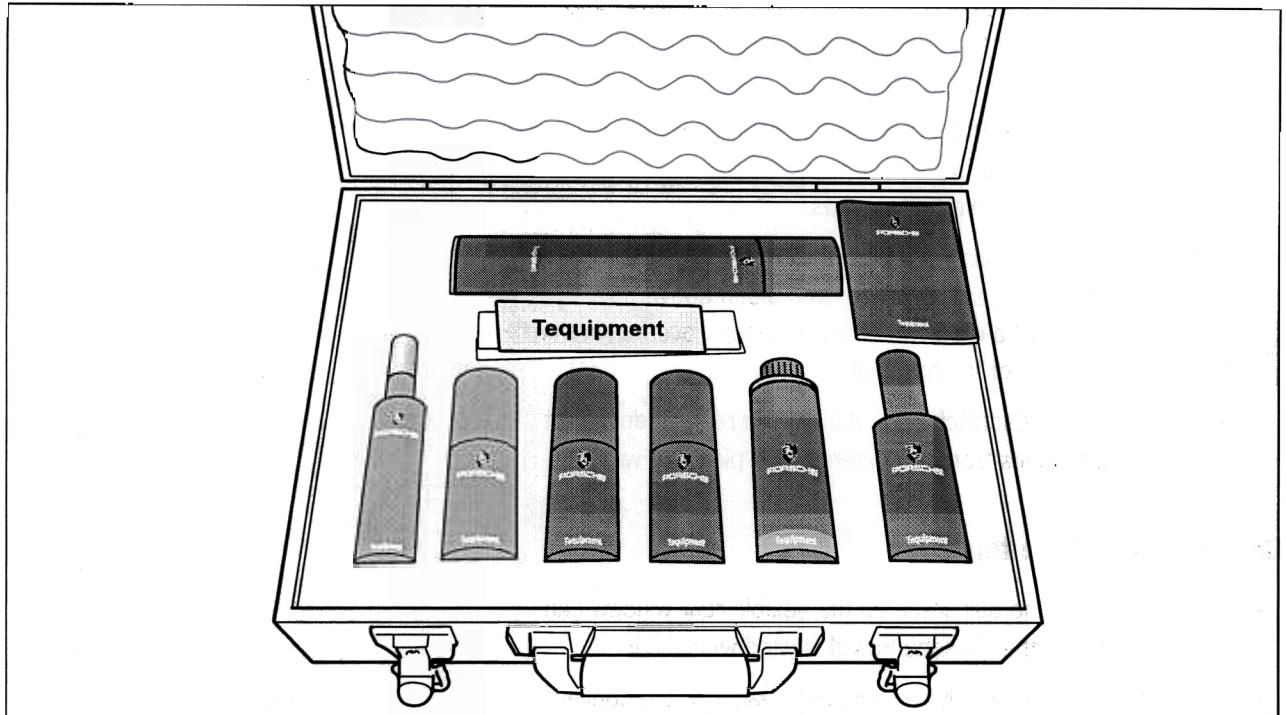
4 - Fitting the tension cable to the main bow

1. Position the tension cable with the clamping rail at the B-pillar (main bow) and screw in place with the fastening screw -**1**-.
2. Fit the convertible-top cover at the front and side of the roof frame ⇒ Rep. Gr. 612855; Replacing convertible-top covering.



Care and cleaning of the convertible top

For the care and cleaning of the convertible top, use the Tequipment care case.



Warning!

The convertible top and the flexible rear window may be damaged or discoloured by improper care or handling.

- ◆ **Never remove snow and ice with sharp-edged objects.**
- ◆ **Never affix adhesive strips, stickers, etc. to the flexible rear window or cover it with plastic film.**
- The service life and the appearance of the convertible top are largely dependent on proper care and operation.
- The car should be parked in the shade whenever possible, as the fabric, rubber material and colour can be harmed by long exposure to sunlight.

Cleaning the convertible top

- Do not wash the convertible top every time the car is washed. It is normally sufficient to wash or rinse the convertible top with clear water. Only in the case of heavy soiling, moisten the convertible top with luke-warm water and Porsche "Wash-Shampo &" convertible-top cleaner and rub gently with a sponge or soft

brush. Then rinse off the convertible top with pure water until no traces of the Porsche "Wash-Shampo &" convertible-top cleaner remain.

- Remove bird droppings immediately, because the acids they contain will cause the rubber material to swell and will make the convertible top leak.
- Only open the convertible top when it is completely dry, because otherwise damp stains and abrasions may occur which can not be removed afterwards.
- In the case of light soiling/always before washing, brush the convertible top with a soft brush or with a stiff convertible-top covering (cut out of a replaced convertible-top covering) in the direction of the cut of the material.
- In order to prevent scratches on the flexible rear window, first remove all impurities from the exterior with plenty of water.

Care of convertible top

- Light scratches and dull areas on the flexible rear window can be removed with the Porsche Polyglas window cleaner.
- Do not apply Porsche Polyglas window cleaner to the convertible-top material.
- In the case of leaks in the convertible-top covering or seams or in the folded sections, use Porsche convertible-top care product.
- Do not bring Porsche convertible-top care product into contact with painted surfaces, glass or the flexible rear window; if there is contact, remove the product immediately.
- Do not remove stains on the convertible top and on the flexible rear window with petrol, stain remover, benzene, paint thinner or other solvents; they attack the rubber layer between the fabrics and diminish the water-tightness and the service life of the convertible top.
- Recommendation: treat the convertible top with Porsche convertible-top care product twice a year or before installing the hardtop (winter driving).

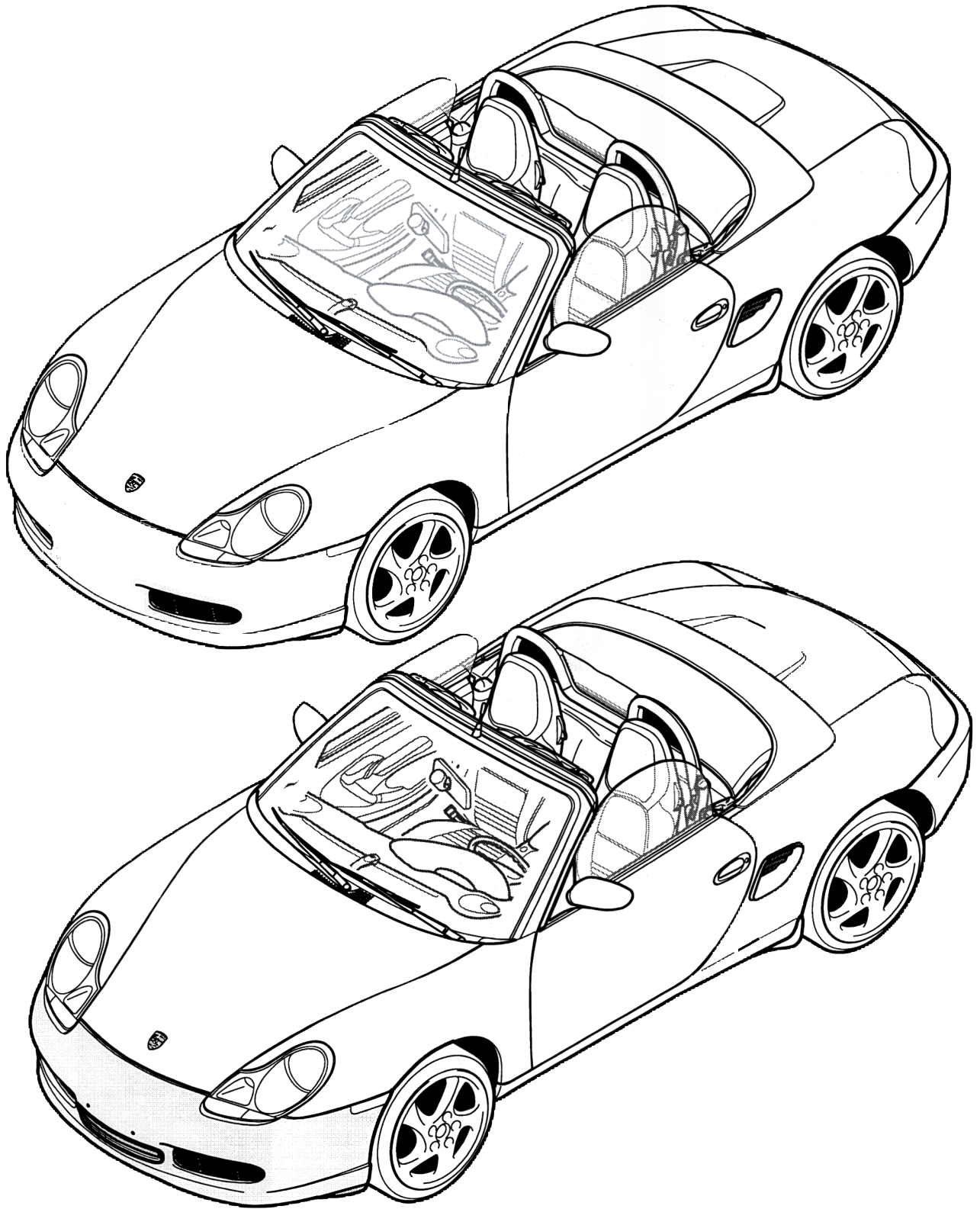
Care of convertible-top seals



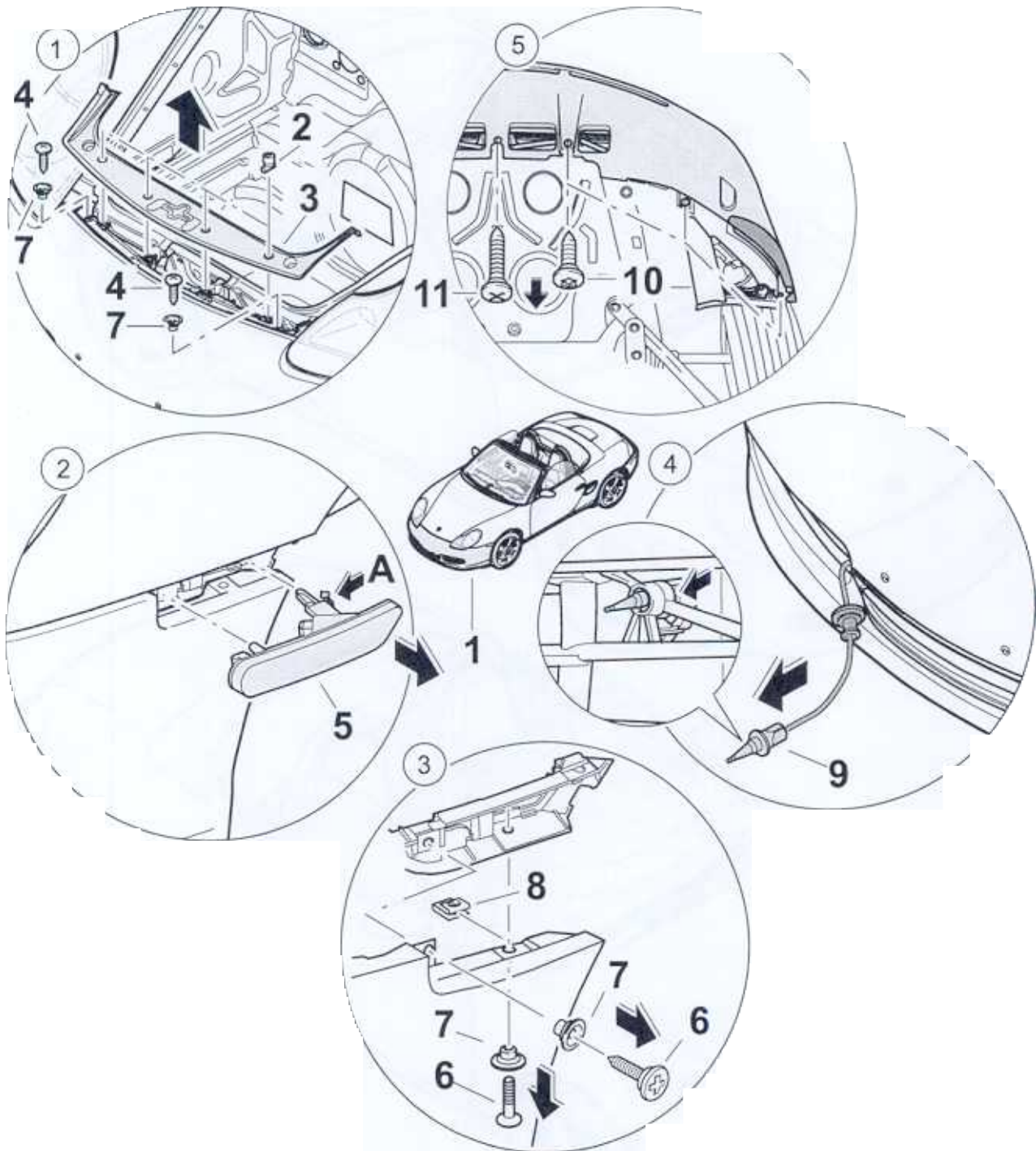
Note!

- ◆ *The convertible-top seals have an anti-friction coating or are flocked and do not require any special care.*
- ◆ *Never grease or lubricate or spray on seals that are flocked or have an anti-friction coating.*
 - Clean soiled seals with clear water.
 - It is only possible to rinse the convertible top or to use an automatic car wash after the flocked seals have dried.

Removing and installing front spoiler



Removing front spoiler

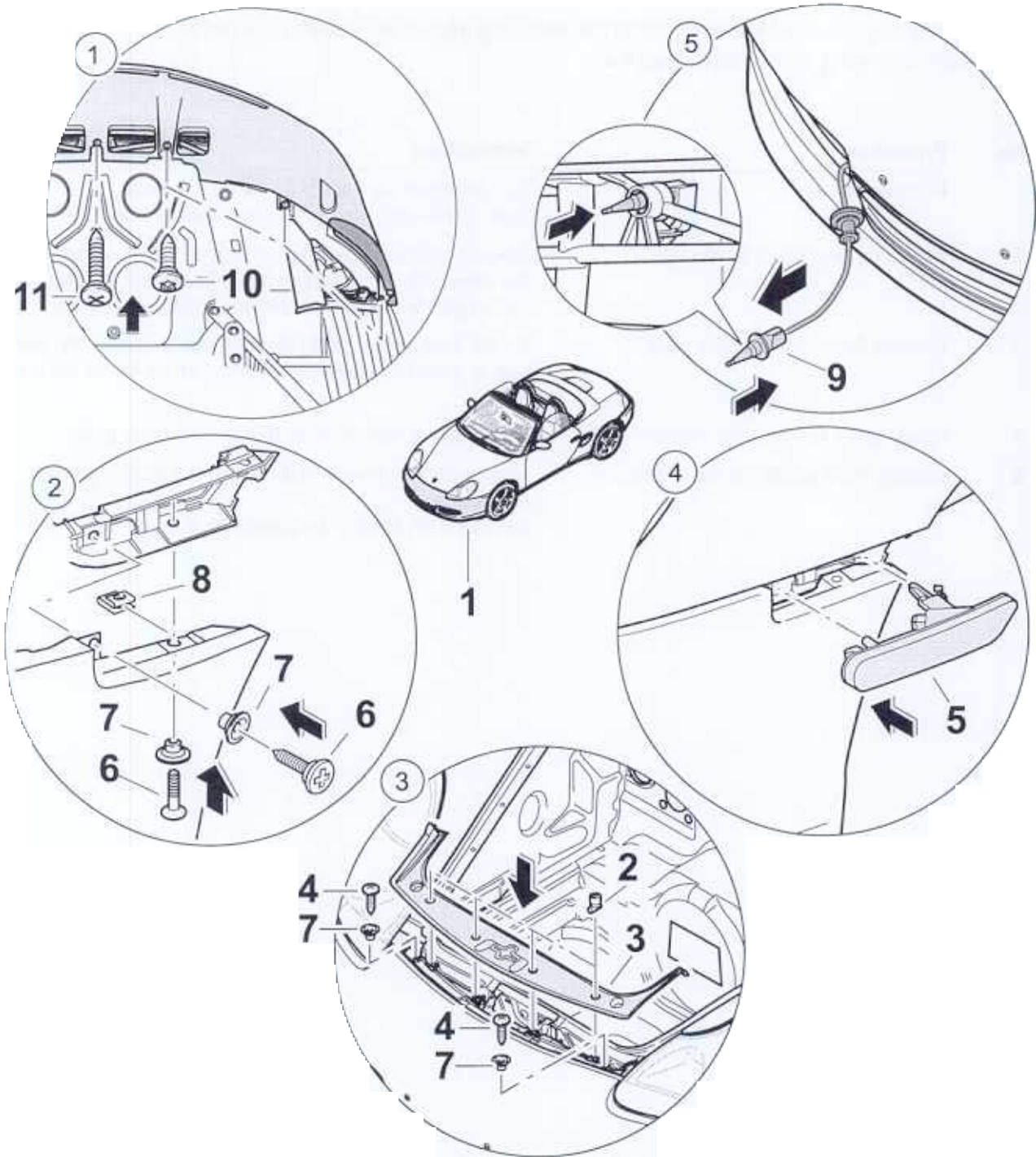


**Note!**

The wheel housing liner must be partially detached before the front spoiler can be removed! ⇒ Rep. Gr. 505619;
Removing and installing front wheel housing liner.

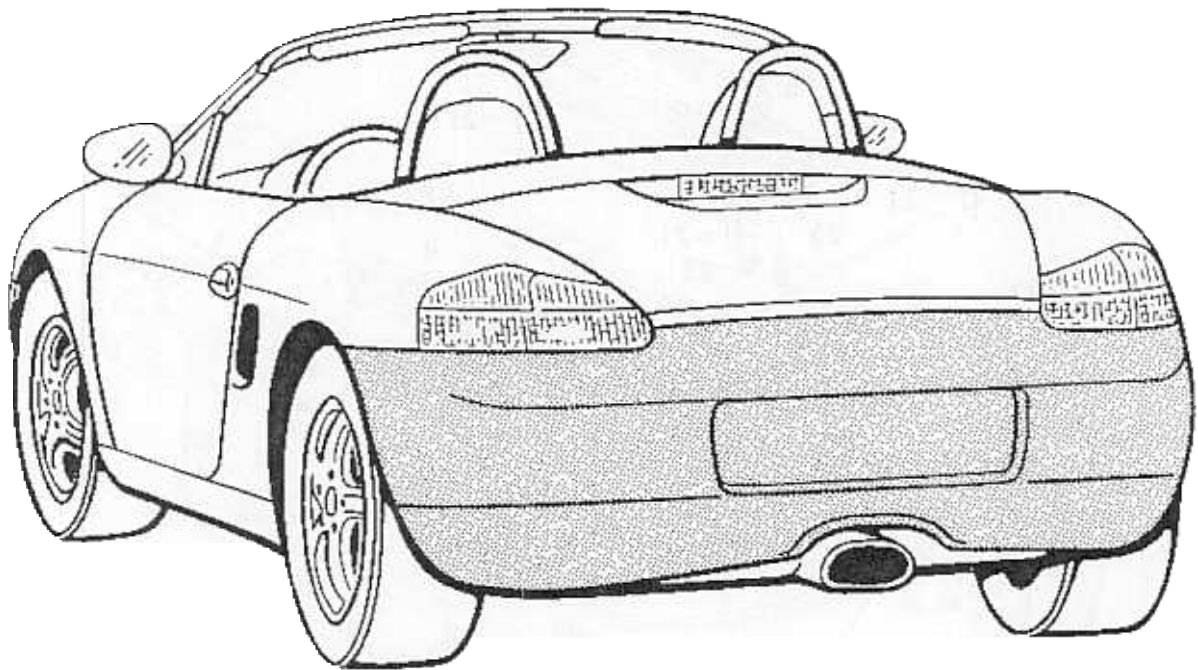
No.	Procedure	Instructions
		Turn hexagon cap nut -2- by 45° and remove. Undo sheetmetal screws -4- from the front part -1- .
2	Removing direction indicator light	Press in spring clip of direction indicator light -arrow A- at the sides with a screwdriver and take out the direction indicator light -5- , disconnect electrical plug connection.
3	Undoing front spoiler at the sides	On the front spoiler, undo the sheetmetal screws -6- and spacer sleeve -7- from the retaining strips on the left and right.
4	Pressing out temperature sensor Undoing front spoiler on the underbody	Press temperature sensor -9- out of the inlet grille. Undo fastening screws -10- of the front spoiler on the underbody. Remove front spoiler -1- toward the front.

Installing front spoiler



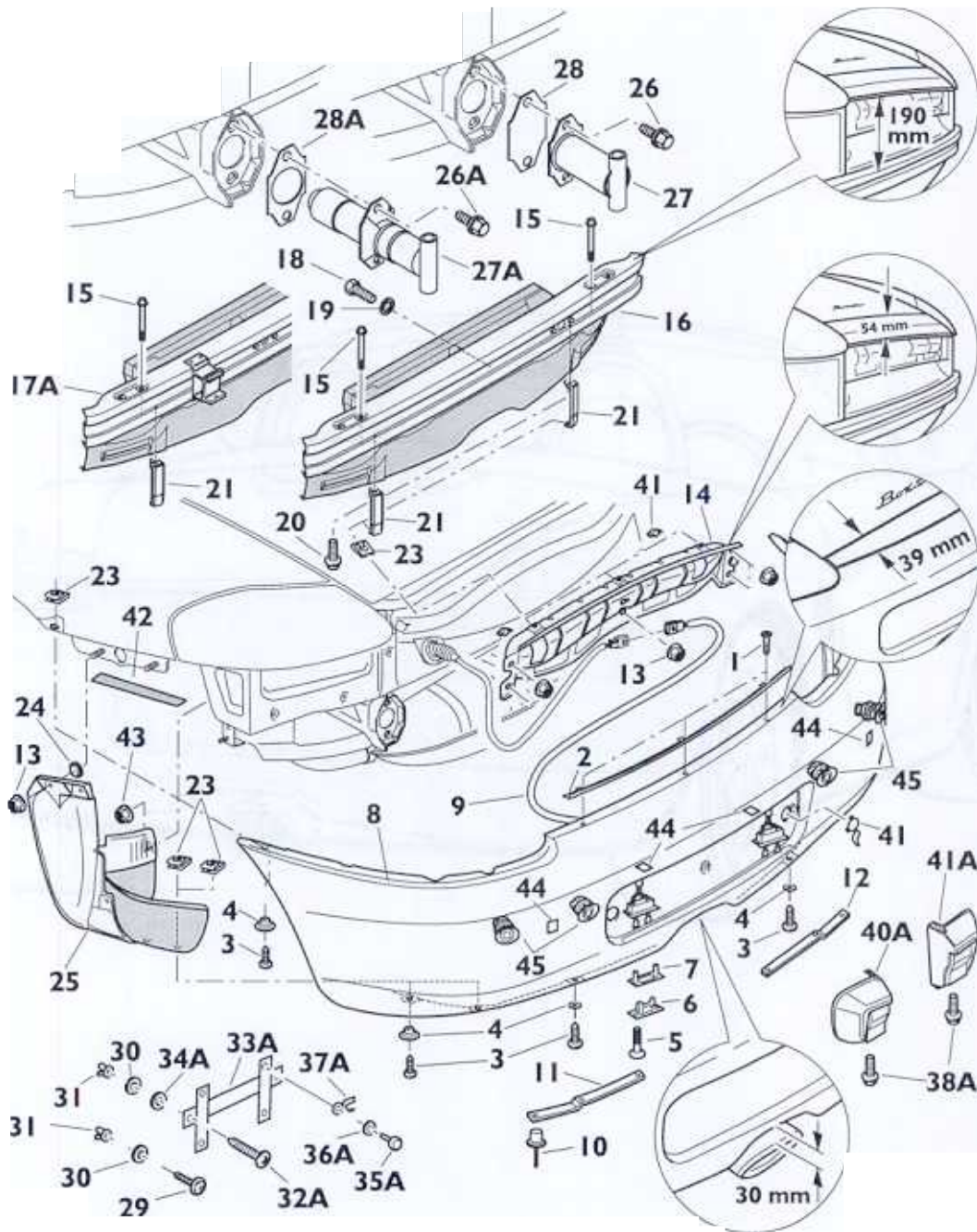
No.	Procedure	Instructions
	Fitting front spoiler on the underbody	Position front spoiler over the bumper mount on the vehicle. Screw in the fastening screws onto the underbody -10- .
2	Fitting front spoiler at the sides	Affix front spoiler to the retaining strip and fasten it with the sheetmetal screw -6- and spacer sleeve -7- .
3	Fitting cover	Fasten the front end -1- with the sheetmetal screws -4- and the spacer sleeves -7- . Affix cover -3- , turn hexagon cap nuts -2- by 45°.
4	Fitting direction indicator light	Insert electrical plug connection of the direction indicator light -5- . Insert locking tab -arrow- of the direction indicator light into the front end -1- and clip in the sheetmetal clip .
5	Pressing in temperature sensor	Press temperature sensor -9- into the inlet grille.

63 55 19 Removing and installing rear spoiler



204_g_96

Removing and installing rear spoiler



362_99

Removing and installing rear spoiler



Caution!

Damage will result if deformed heat shields are fitted !

> Damaged or distorted heat shields must be straightened or replaced.

The gurney flap must be removed before the rear spoiler can be removed.

No.	Designation	Qty.	Removal	Note:	
					Installation
1	Countersunk screw 4.8 x 15	3	Remove, and take retaining strip off		Fix the retaining strip and tighten the countersunk screws
2	Retaining strip	1			Fix retaining strip with rear end on the holder (Item 14) and fasten with 4.8 x 15 countersunk screw (Item 1)
3	Oval-head screw 4.8 x 15	8	Remove from rear spoiler		Fix sheetmetal nut (Item 23) with rear spoiler and tighten sheetmetal screw
4	Spacer sleeve 5.2 x 14	6			
5	Sheetmetal screw St 4.2 x 16	4			
6	Number plate light	2	Pull down and off, and disconnect the electrical plug connection		Plug in the electrical plug connection, press in the number plate light and fasten with sheetmetal screws 4.8 x 15
7	Base	2	Unclip		Clip in

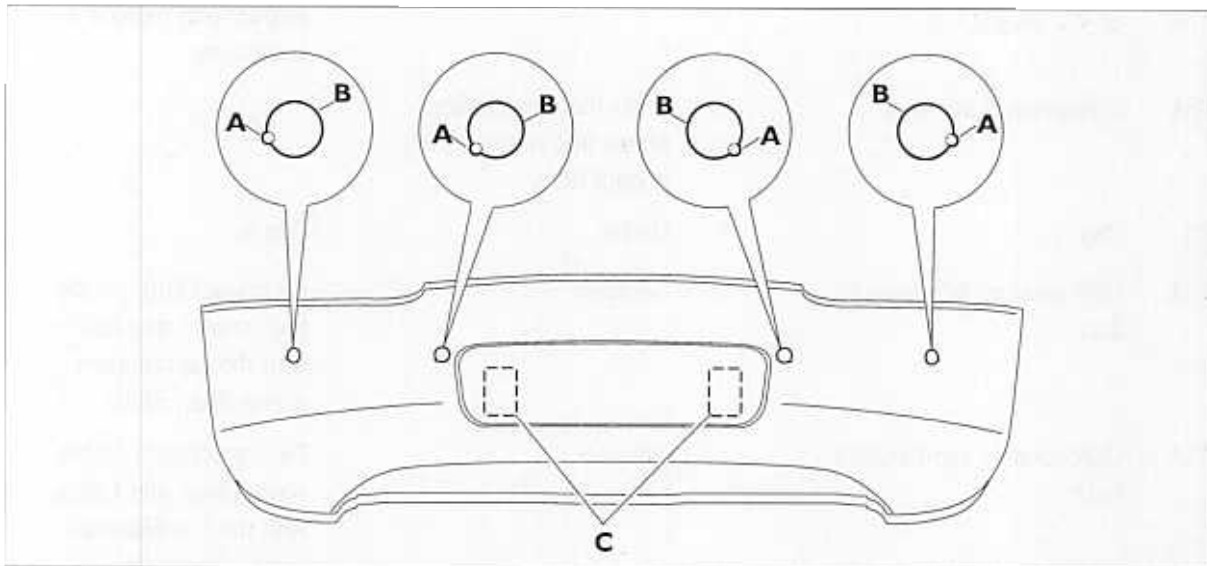
No.	Designation	Qty.	Removal	Note:	
				Installation	
8	Rear end	1	Remove		Push on. Set an adjusting dimension of 39 mm between lower edge of the lid and the top edge of the rear end. There must be at least 30 mm clearance between the rear end cut-out and the exhaust pipe cover.
9	Wiring harness	1	Disconnect electrical plug connection		Connect electrical plug connection
10	Pop rivet A3.2 x 7.9	4	Separate riveted joint between the retaining strips (Items 11, 12) and front end (drill \varnothing 3 mm)		
11	Retaining strip, left	1	Remove		Fix retaining strip on rear end and rivet with pop rivet A3.2 x 7.9
12	Retaining strip, right	1	Remove.		Fix retainer on rear end and rivet with pop rivet A3.2 x 7.9
13	Collar nut M6	11	Undo collar nut of holder (Item 14)		
14	Holder	1	Remove		Fix holder with collar nuts (Item 13). Set a vertical adjusting distance of 54 mm between the top edge of the holder and lower edge of the lid. Tighten collar nuts
15	Hexagon-head bolt M12 x 15 x 100	2	Undo hexagon-head bolt from bumper mount		

No.	Designation	Qty.	Removal	Note:	
				Installation	
16	Bumper mount	1	Remove		Attach to the impact pipes (Item 27). Set a vertical adjusting distance of 190 mm between the top edge of the bumper and top edge of the holder (Item 14) Fasten with the hexagon-head bolt M12 x 1.5 x 100
17A	USA version, bumper mount	1			
18	Hexagon-head bolt M5 x 12	1	Remove hexagon-head bolts from heat shield and bumper mount		
19	Washer 5 x 26 x 1	1			
20	Combination screw M6 x 22	2	Remove combination screw from rear support, heat shield and bumper mount		
21	Rear support	2	Remove		Fix rear support and heat shield on bumper mount and tighten combination screw M6 x 22
22	Heat shield	1			Straighten or replace the centre heat shield if damaged
23	Sheetmetal nut St 4.8	11	Pull off		Inspect and replace if necessary. Adjust the sheetmetal nut, centre hole
24	Spacer sleeve	6			

No.	Designation	Qty.	Removal	Note: Installation
25	Left wheel housing trim	1		Lift wheel housing trim up as far as it will go against the wing, fix it in place and fasten with M6 collar nut (Item 13) Straighten or replace the wheel housing trim heat shield if damaged
26	Combination screw M8 x 30	4	Undo and remove impact pipe (Item 27)	
27	Impact pipe	2	Remove the impact pipe and seal	Fix the impact pipe to the body with the seal and fasten with the combination screw M8 x 30
27A	USA version, impact absorber	2		
28	Seal, impact pipe	2		Inspect and replace if necessary
28A	USA version, impact absorber seal	2		Inspect and replace if necessary
29	Combination screw 4.2 x 16	2		
30	Rubber washer	2		
31	Expanding nut 4.22		Press out	Inspect and replace if necessary
32A	Sheetmetal screw B4.2 x 22	2		
33A	Holder	1		
34A	Rubber washer	2		
35A	B4.2 sheetmetal screw	2		
36A	Washer	2		

No.	Designation	Qty.	Removal	Note: Installation
37A	St 4.2 plug-in nut	2		Inspect and replace if necessary
38A	Combination screw	2	Undo the combination screw and remove the impact horn	
39	Cap	1	Unclip	Clip in
40A	USA version, left impact horn	1	Remove	Fix impact horn on the rear spoiler and fasten with the combination screw (Item 38A)
41A	USA version, right impact horn	1	Remove	Fix impact horn on the rear spoiler and fasten with the combination screw (Item 38A)
42	Adhesive tape	2		Inspect and replace if necessary
43	Plastic nut	2		
44	Wiring harness holder	4		Clean marked areas in the rear spoiler. Replace holder
45	ParkAssistent sensor	4	Refer to Serv. No. 91 75 19	Refer to Serv. No. 91 75 19

Additional instructions for replacing the rear spoiler



361_99

Vehicles with ParkAssistent

Note: Additional holes must be drilled for the ParkAssistent sensors in the rear spoiler before this component is painted.

Drill holed in accordance with the markings inside the rear spoiler.

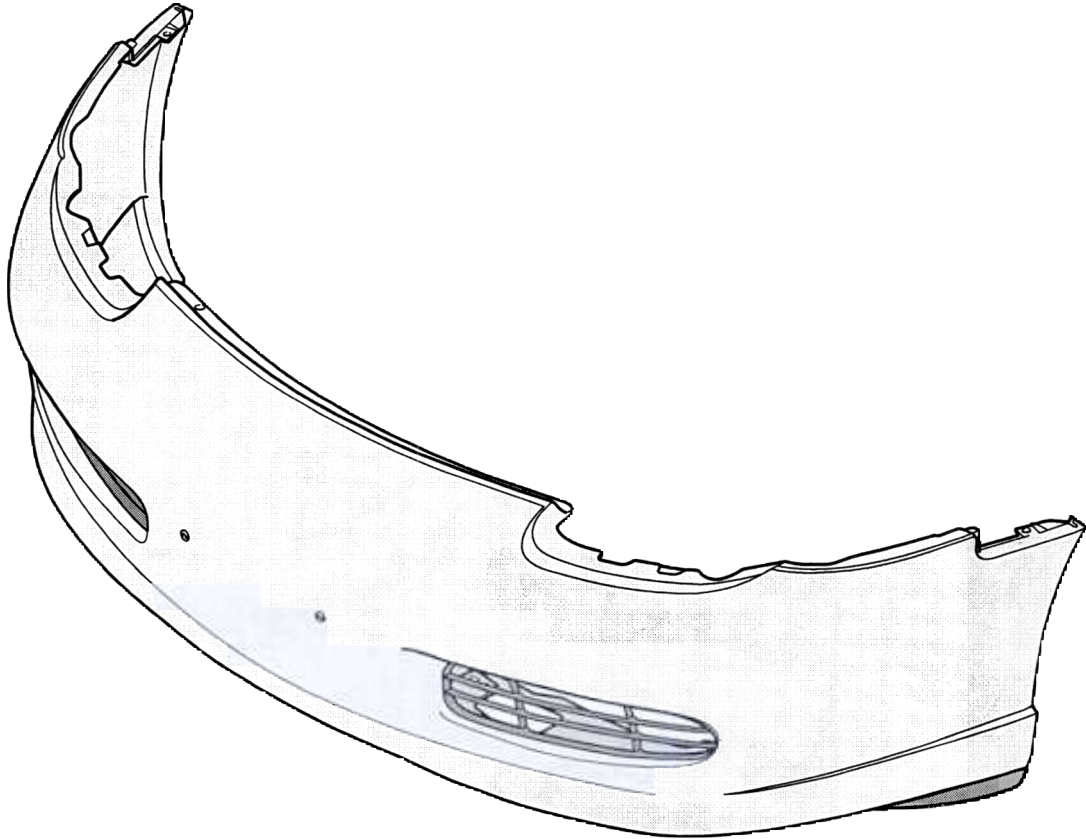
1. Drill holes "A" with \varnothing 6 mm.
2. Enlarge holes "B" to \varnothing 35 mm using a stepped drill or a centre bit.
3. Check bores by putting on a disc of the ParkAssistent sensor or by inserting the sensor.
4. Rework the holes if necessary.

USA vehicle model

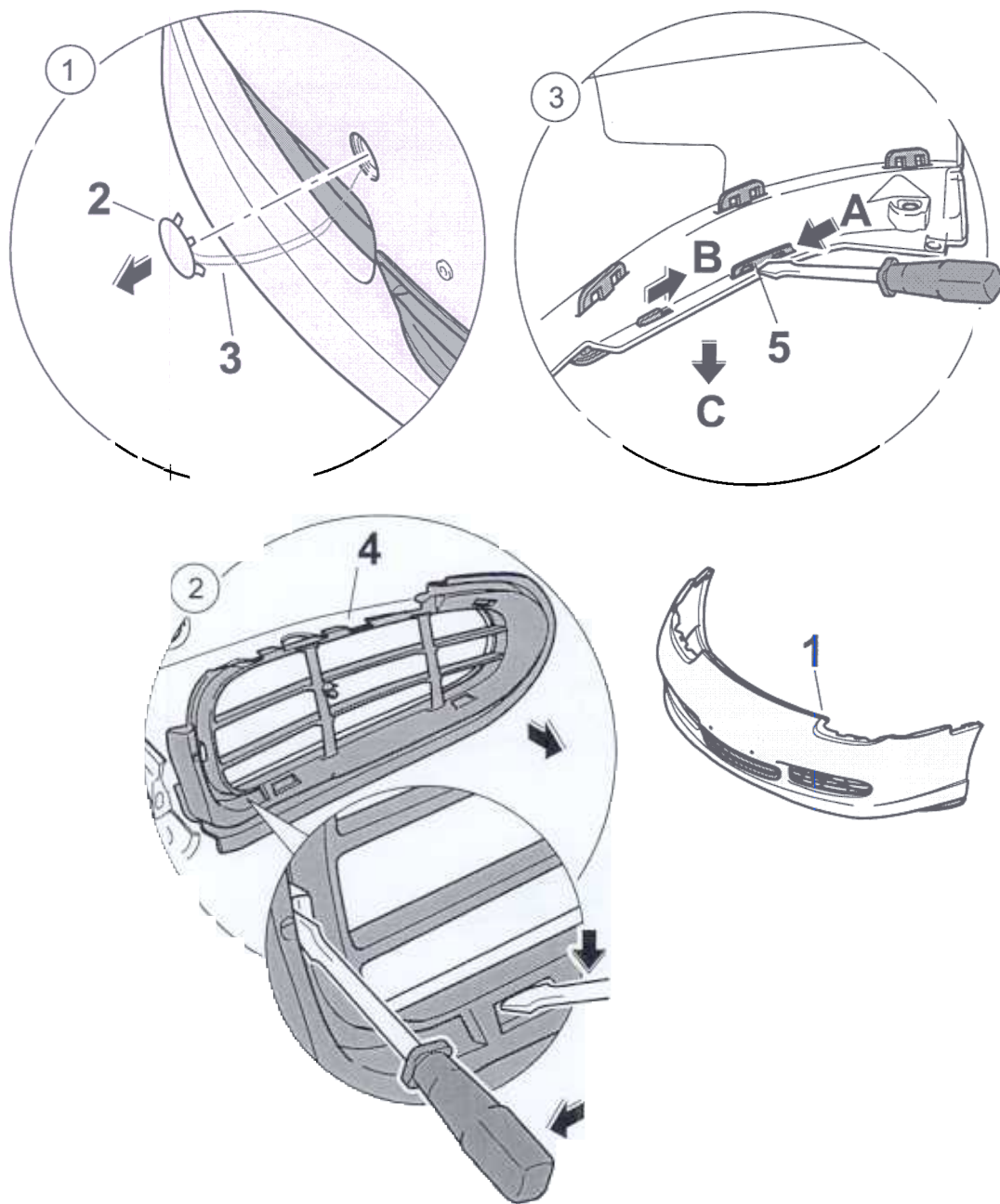
Note: Additional cut-outs must be made for the impact horns in the rear spoiler before this component is painted.

1. Saw out cut-outs "C" in accordance with the markings inside the rear spoiler.

Disassembling and assembling front spoiler

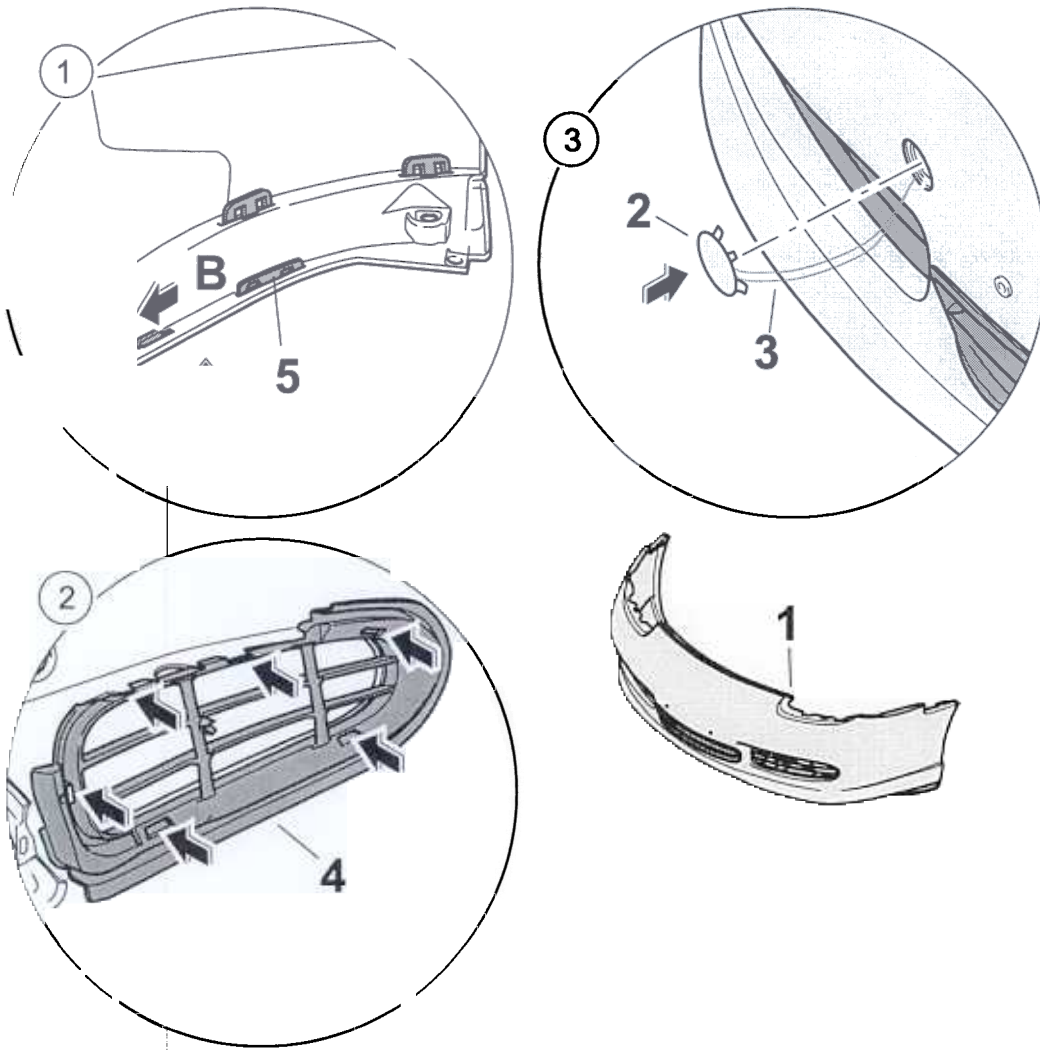


Disassembling front spoiler



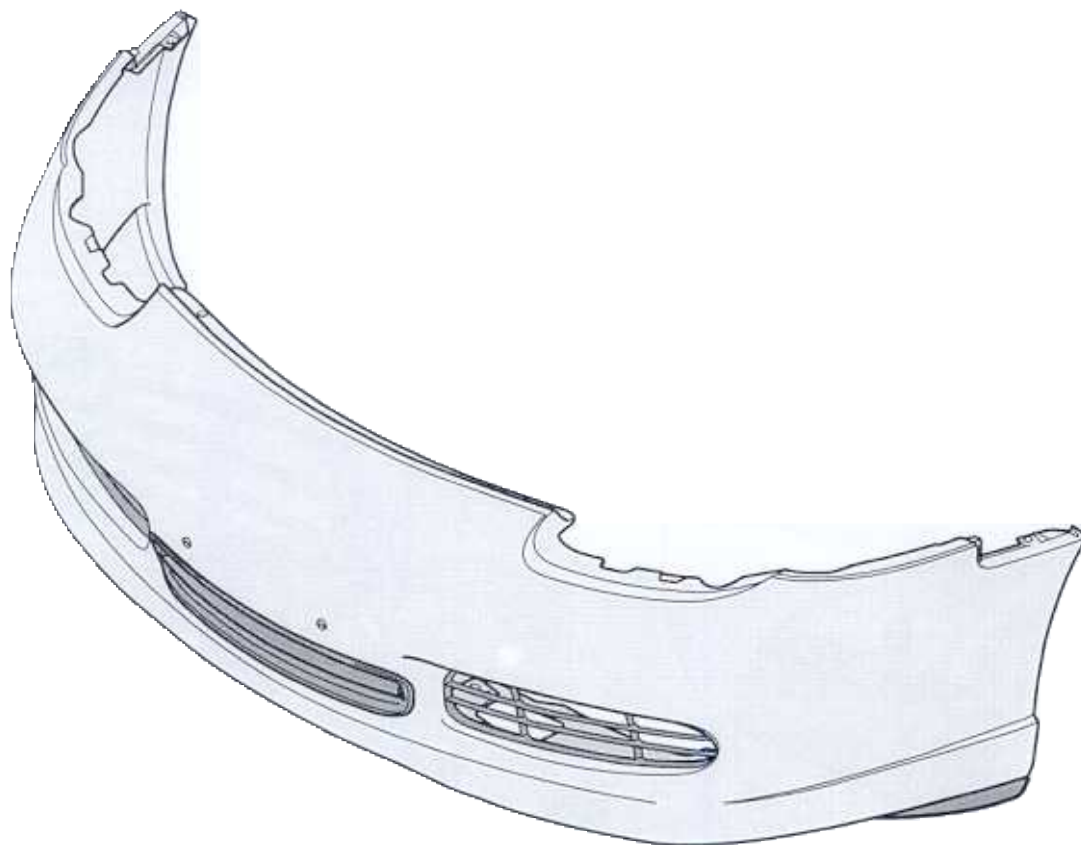
No.	Procedure	Instructions
	Removing covering cap -2-	Carefully press out covering cap -2- with a screwdriver. Cut through the securing cord -3- of the covering cap -2- and the front end -1- .
2	Installing grille frame -4-	Carefully disengage the lugs of the grille frame -4- on all sides using a screwdriver.
3	Removing covering frame -5- at the side	Carefully press in the lugs of the covering frame at the side -5- with a screwdriver -A- . Firstly remove the covering frame -5- downwards -direction of arrow C- . Afterwards pull rearward -direction of arrow B- out of the front end -1- .

Assembling front spoiler

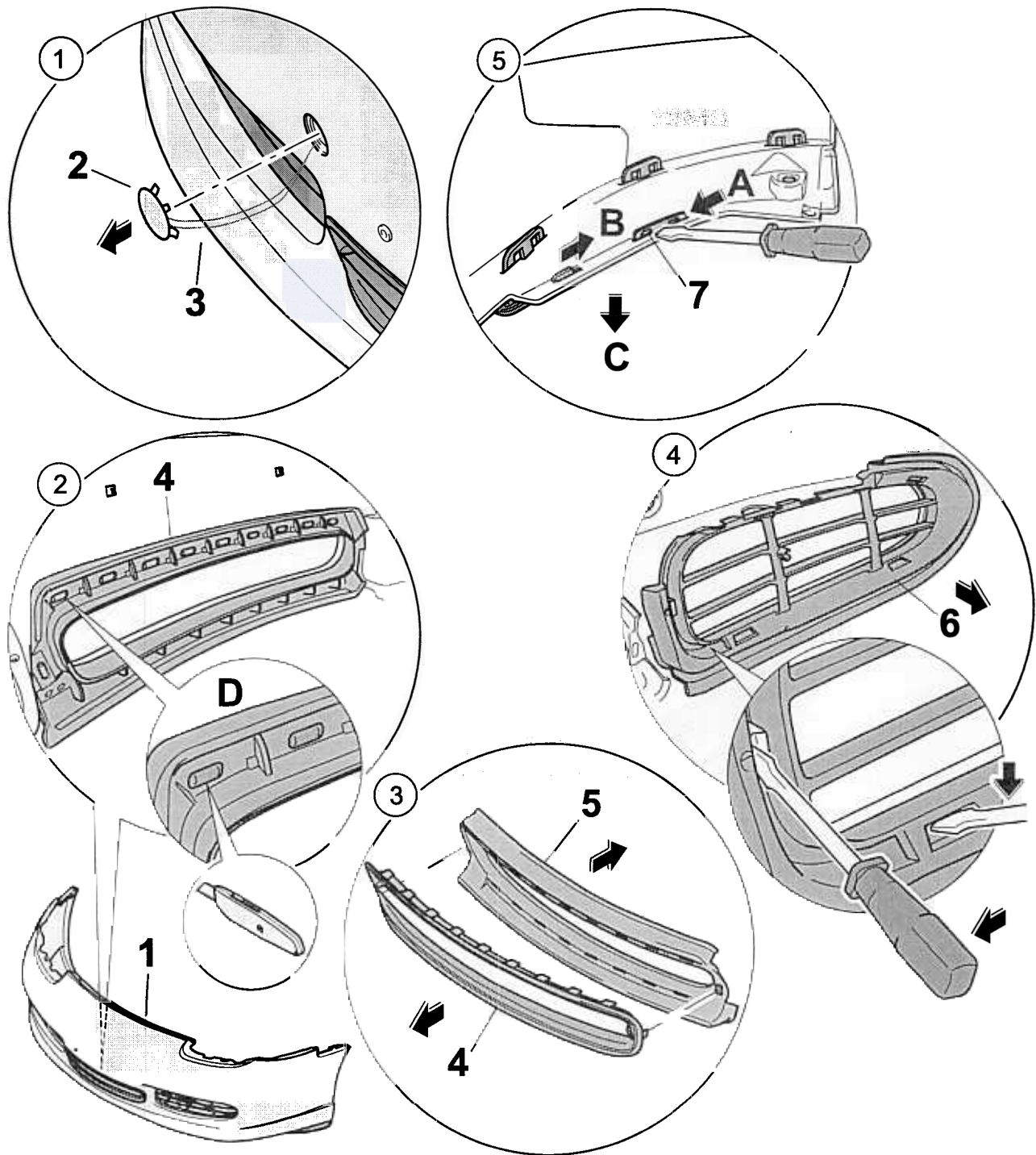


No.	Procedure	Instructions
	Installing covering frame -5-	Insert covering frame -5- at the side -direction of arrow B- . Afterwards lock the covering frame -5- upwards -direction of arrow C- into the front end -1- .
2	Installing grille frame -4-	Lock grille frame -4- on all sides into the front end -1- .
3	Installing covering cap	Pull the securing cord -3- into the eyelet of the covering cap -2- and front end -1- . Clip covering cap -2- into front end -1- .

Disassembling and assembling front spoiler - Boxster S

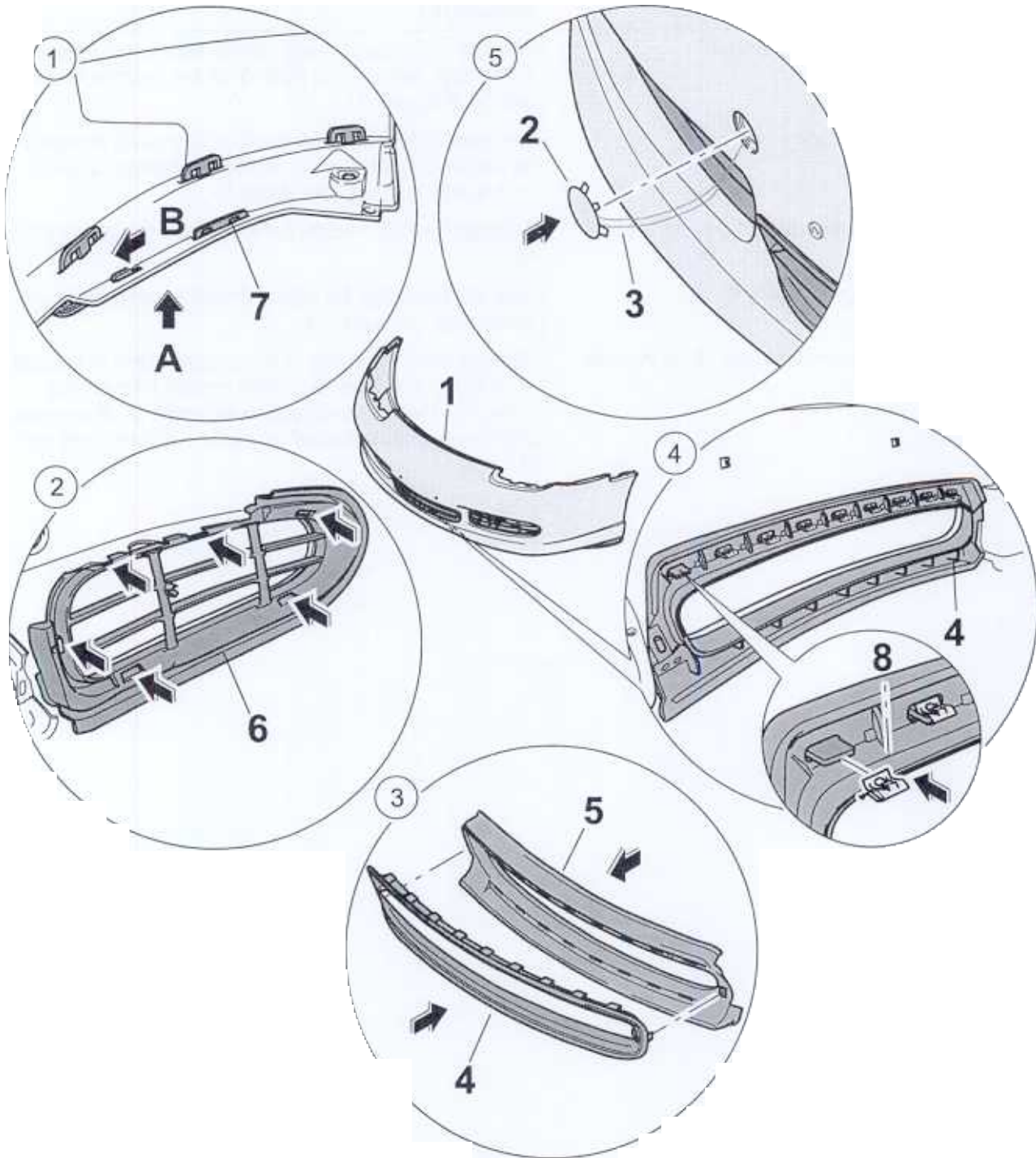


Disassembling front spoiler



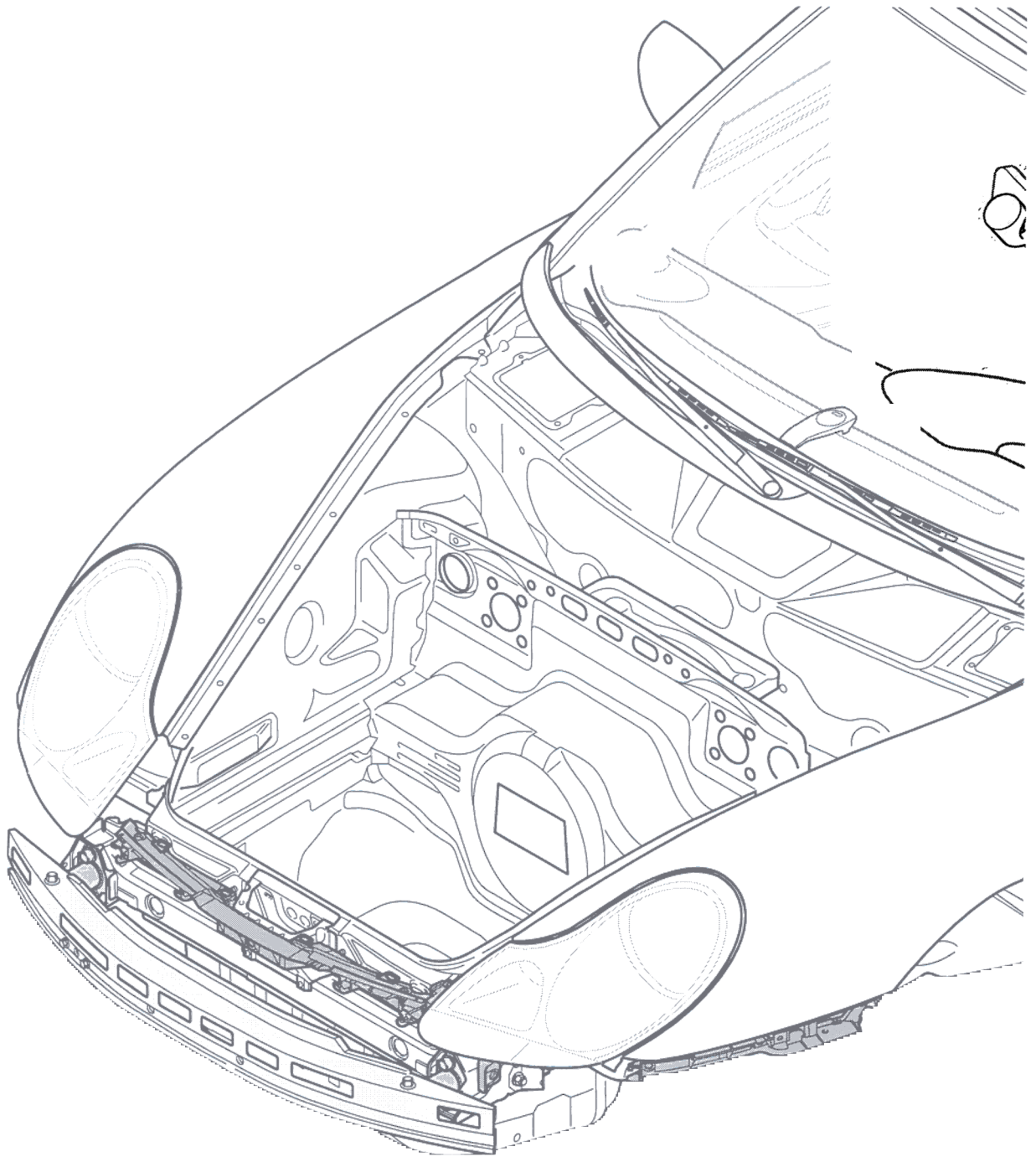
No.	Procedure	Instructions
	Removing covering cap -2-	Carefully press out covering cap -2- with a screwdriver. Cut through the securing cord -3- of the covering cap -2- and the front end -1- .
2	Outer middle frame -4-	The outer middle frame -4- must be destroyed, in order to be removed. In addition cut off the fused pegs (hot-melt fusion) with a cutting knife -Inset D- .
3	Separating the frames from one another	Separate the outer middle frame -4- from the inner frame -5- .
4	Removing grille frame -6-	Carefully disengage the lugs of the grille frame -6- on all sides using a screwdriver.
5	Removing covering frame -7- at the side	Carefully press in the lugs of the covering frame at the side -7- with a screwdriver -A- . Firstly remove the covering frame -7- downwards -direction of arrow C- . Afterwards pull rearward -direction of arrow B- out of the front end -1- .

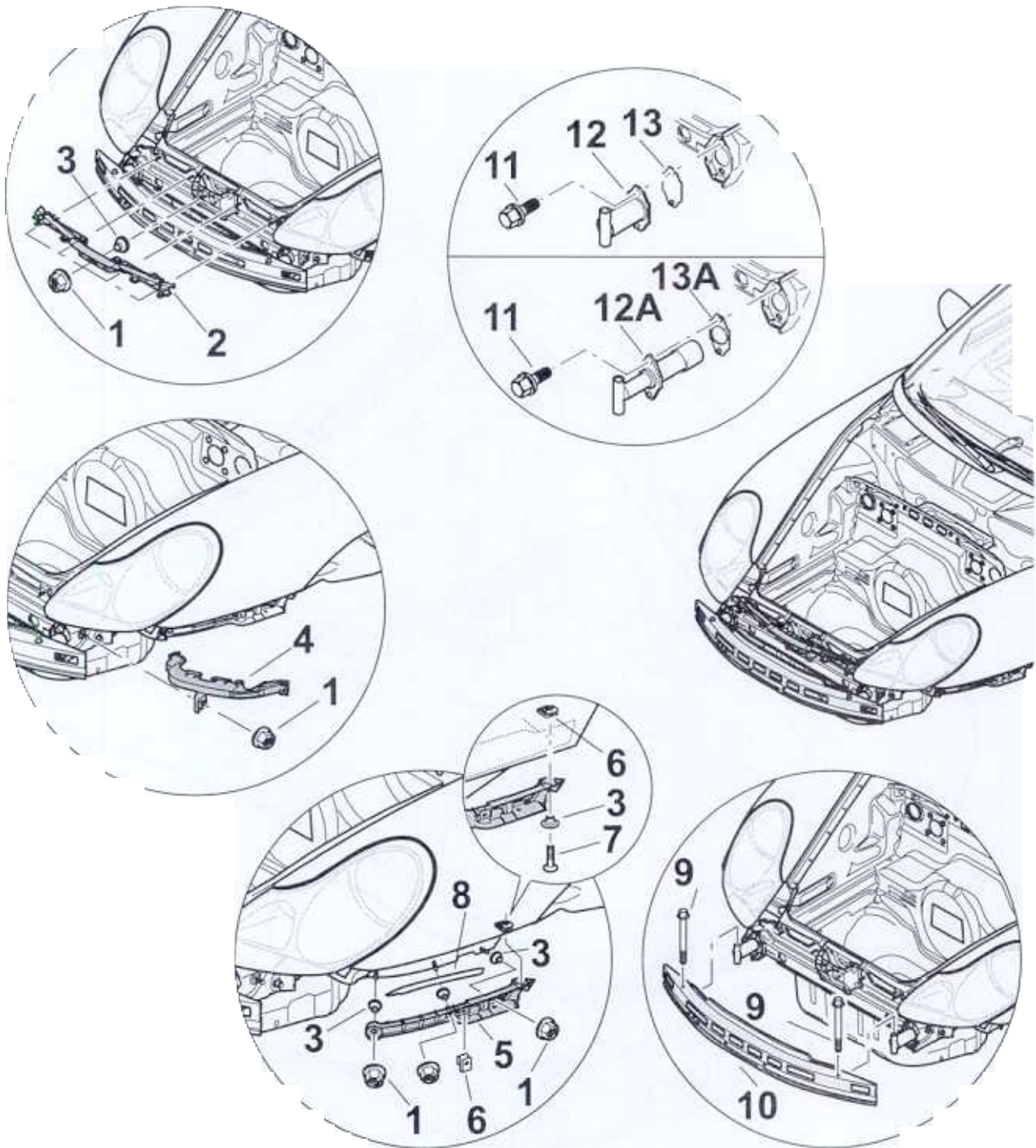
Assembling front spoiler



No.	Procedure	Instructions
	Installing covering frame -7-	Insert covering frame -7- at the side -direction of arrow B- . Afterwards lock the covering frame -7- upwards -direction of arrow B- into the front end -direction of arrow A- .
2	Installing grille frame -6-	Lock grille frame -6- on all sides into the front end -1- .
3	Installing outer middle frame/inner frame -4, 5-	Position the outer middle frame -4- and inner frame -5- on the front end.
4	Fitting fastening clips -8-	Push on the fastening clips -8- above and at the side on the pegs of the outer middle frame -4- .
5	Installing covering cap -2-	Pull the securing cord -3- into the eyelet of the covering cap -2- and front end -1- . Clip covering cap -2- into the front end -1- .

Removing and installing bumper and accessories





No.	Designation	Qty.	Removal	Installation
1	Collar nut	9		Tightening torque: -10 Nm (7.5 ftlb.)- .
2	Retaining strip, centre	1	Undo collar nut -1- and remove centre retaining strip.	Fix retaining strip onto the transverse lock panel and fasten with the collar nuts -1- . Tightening torque: -10 Nm (7.5 ftlb.)- .
3	Spacer sleeve 5.2 x 14	2		
4	Support, left or right.	1	Unscrew the collar nut -1- of the support -4- and unclip from the retaining strip.	Clip onto the retaining strip and tightly screw onto the side member with the collar nut -1- .
5	Left and right retaining strip		Unscrew the collar nut -1- and sheetmetal screw -7- out of the retaining strip.	Position retaining strip on the wing upward so that the clearance rib rests against the side section without gaps, and then tighten with the collar nuts -1- and the sheetmetal screw -7- . Tightening torque: -10 Nm (7.5 ftlb.)- .
6	Sheetmetal nut ST 4.8	4		Inspect and replace if necessary.
7	Sheetmetal screw St 4.8 x 19	2		Tightening torque: -3 Nm (2 ftlb.)- .
8	Protective foil left, transparent foil on right	2		Inspect and replace if necessary.
9	Hexagon-head bolt M12 x 1.5 x 100	2		Tightening torque: -85 Nm (63 ftlb.)- .
10	Bumper mount -10-	1	Unscrew hexagon-head bolt -9- from the bumper mount -10- and remove.	Attach the bumper mount -10- to the impact pipes -12, 12A- and fix it into position. Fasten it with the hexagon-head bolt -11- .
11	Combination screw M8 x 30	4	Unscrew.	Tightening torque: -23 Nm (17 ftlb.)- .
12	Impact pipe	2	Undo combination screw -11- and remove impact pipe and seal.	Fix the impact pipe to the body with the seal -13- and fasten with combination screw -11- .
12A	USA version, impact absorber	2	Undo combination screw -11- and remove impact absorber and seal.	Fix the impact absorber to the body with the seal -13A- and fasten with combination screw -11- .

No.	Designation	Qty.	Removal	Installation
13	Seal	2		Inspect and replace if necessary.
13A	USA version, impact absorber seal	2		Inspect and replace if necessary.

Removing and installing front spoiler

The wheel housing liners Serv. No. 50 56 must be partially detached at the front before the front spoiler can be removed.

No.	Designation	Qty.	Removal	Note:	
					Installation
1	Hexagon cap nut	4	Turn and remove		
2	Cover	1			Fix the cover and turn the hexagon cap nuts
3	Spacer sleeve 5.2 x 14	2			
4	Countersunk screw 4.8 x 19	2	Detach from front spoiler		Screw down in the centre of the retaining strip
5	Direction indicator light	1	Press in spring clip at the side and pull out direction indicator light; disconnect electrical connection		Connect electrical plug connection, insert lugs and clip in the direction indicator light
6	Ventilation holder (for headlight ventilation)	1			Position front spoiler and ventilation holder on the body and fasten with the sheetmetal screw St 4.8 x 19
7	Sheetmetal screw St 4.8 x 19	15			
8	Spacer sleeve 5.2 x 14	15			
9	Front spoiler	1	On the front spoiler, undo the sheetmetal screws St 4.8 x 19 (Items 7, 8) from the retaining strips on the left and right. Remove front end		Attach the front spoiler to the retaining strip and fasten it with the sheetmetal screw St 4.8 x 19
10	Sheetmetal nut St 4.8	16			Adjust the sheetmetal nut, centre hole
11	Frame, centre	1	Unclip		Clip in
12	Frame, centre	1	Unclip		Clip in
13	Cover	1			

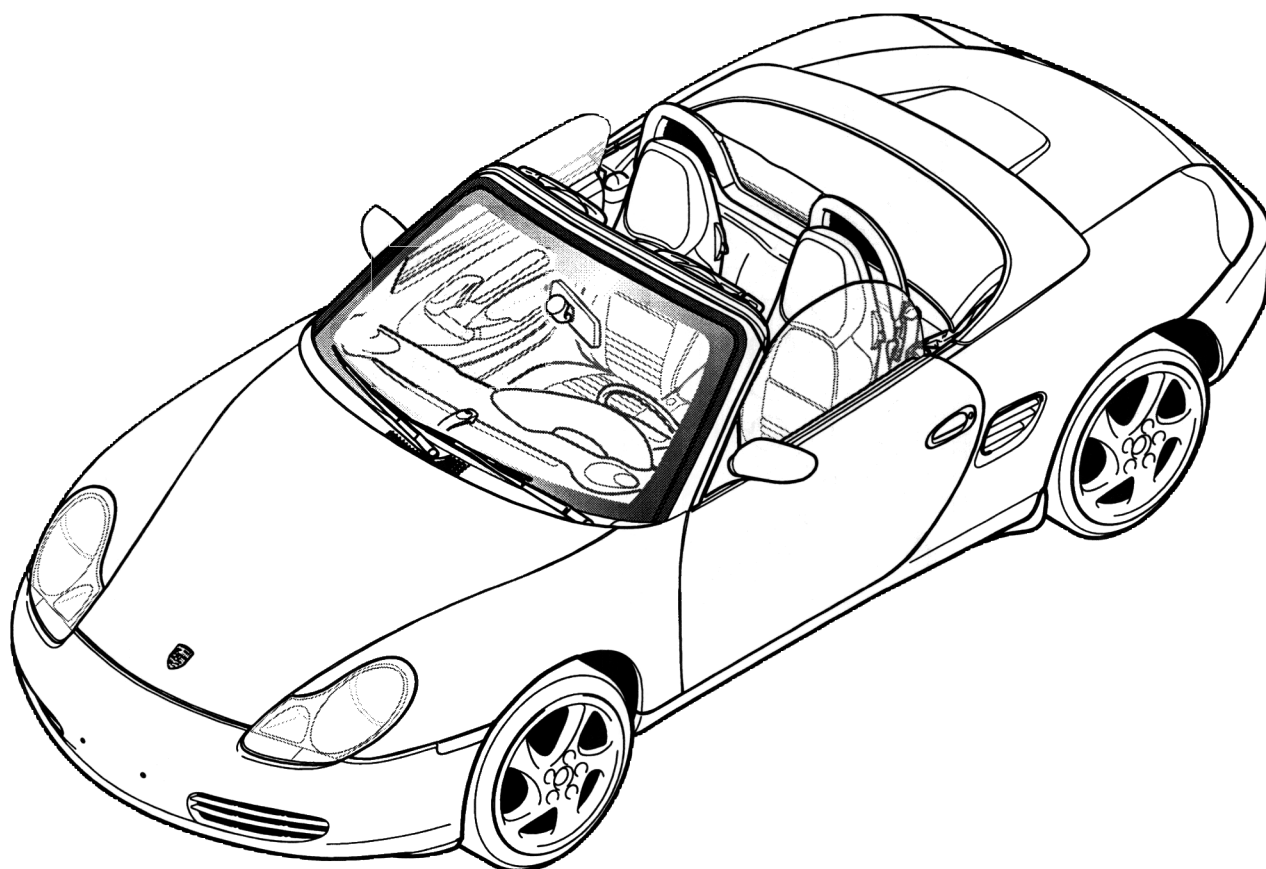
No.	Designation	Qty.	Removal	Note: Installation
14	Sheetmetal screw 4.2 x 9.5	6		
15	Washer	6		
16	Expanding nut	10		
17A	USA version, sheetmetal screw B4.2 x 30	2		
18A	USA version, holder	1		
19A	USA version, holder	1		
20	USA version, rubber holder	2		
21	Combination screw 4.2 x 16	2		
22	Holder, RoW	1		
23	Grille frame	1	Unclip from the front spoiler	Clip into the front spoiler
24	Panel	1	Cut off pegs on the inside	Replace, press into the front spoiler
25	Temperature sensor	1		Insert
26	Collar nut	11		
27	Retaining strip, left	1		Fix the centre retaining strip to the transverse lock panel and fasten with the collar nuts M6 (Item 26)
28	Left support	1	Undo collar nut M6 (Item 26) and unclip support from left retaining clip	Clip support into retaining strip on the left and tighten collar nut M6 (Item 26) on the side member

No.	Designation	Qty.	Removal	Note:
				Installation
29	Retaining strip, centre	1	Undo the collar nut M6 (Item 26) and remove the centre retaining strip. Undo the collar nut M6 (Item 26) and the sheetmetal screw St 4.8 x 19 (Item 7) from the retaining strip	Fix retaining strip on the wing upward to the stop and fasten with the collar nut M6 (Item 26) and the sheetmetal screw St 4.8 x 19 (Item 7)
30	Spacer sleeve	9		
31	Adhesive film	2		
32	Hexagon-head bolt M12 x 1.5 x 100	2		
33A	USA version, foam part	1	Is destroyed upon separation	(Replace) and attach
34	Bumper mount	1	Undo hexagon-head bolt M12 x 1.5 x 100 (Item 32) from the bumper mount and remove	Attach the bumper mount to the impact pipes (Item 36, 38A) and fix it in position. Fasten it with the hexagon-head bolt M12 x 1.5 x 100 (Item 32)
35	Combination screw M8 x 30	4		Undo and remove impact pipe (Item 36, 38A)
36	Impact pipe	2	Undo combination screw M8 x 30 (Item 35) and remove impact pipe and seal	Fix the impact pipe to the body with the seal and fasten with the combination screw M8 x 30 (Item 35)
37	Seal, impact pipe	2		Inspect and replace if necessary

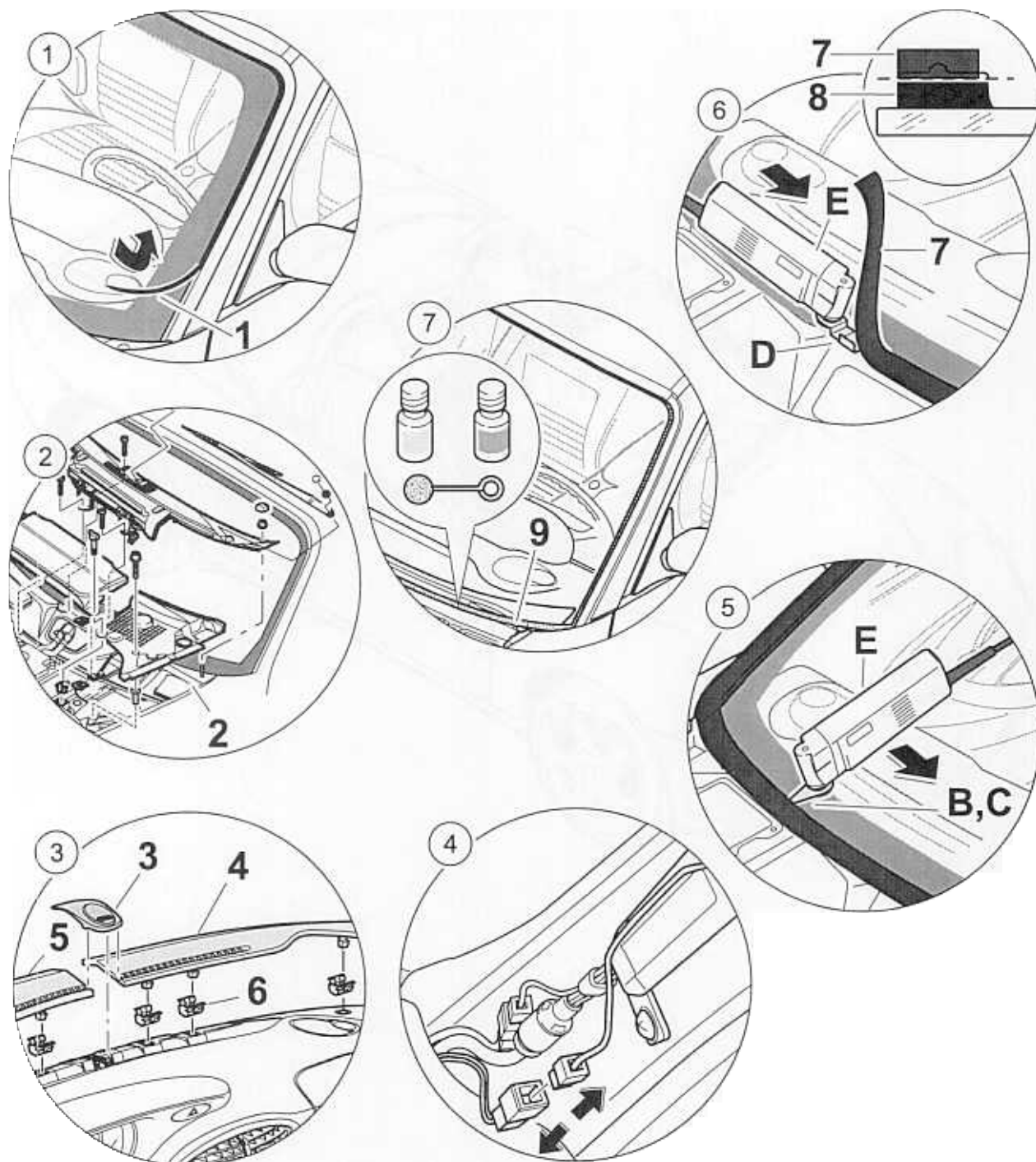
No.	Designation	Qty.	Removal	Note:	
				Installation	
38A	USA version, impact absorber	2	Undo combination screw M8 x 30 (Item 35) and remove impact absorber and seal	Fix the impact absorber to the body with the seal and fasten with the combination screw M8 x 30 (Item 35)	
39A	USA version, impact absorber seal	2		Inspect and replace if necessary	



Removing and installing the windscreen



Removing the windscreen



**Caution!**

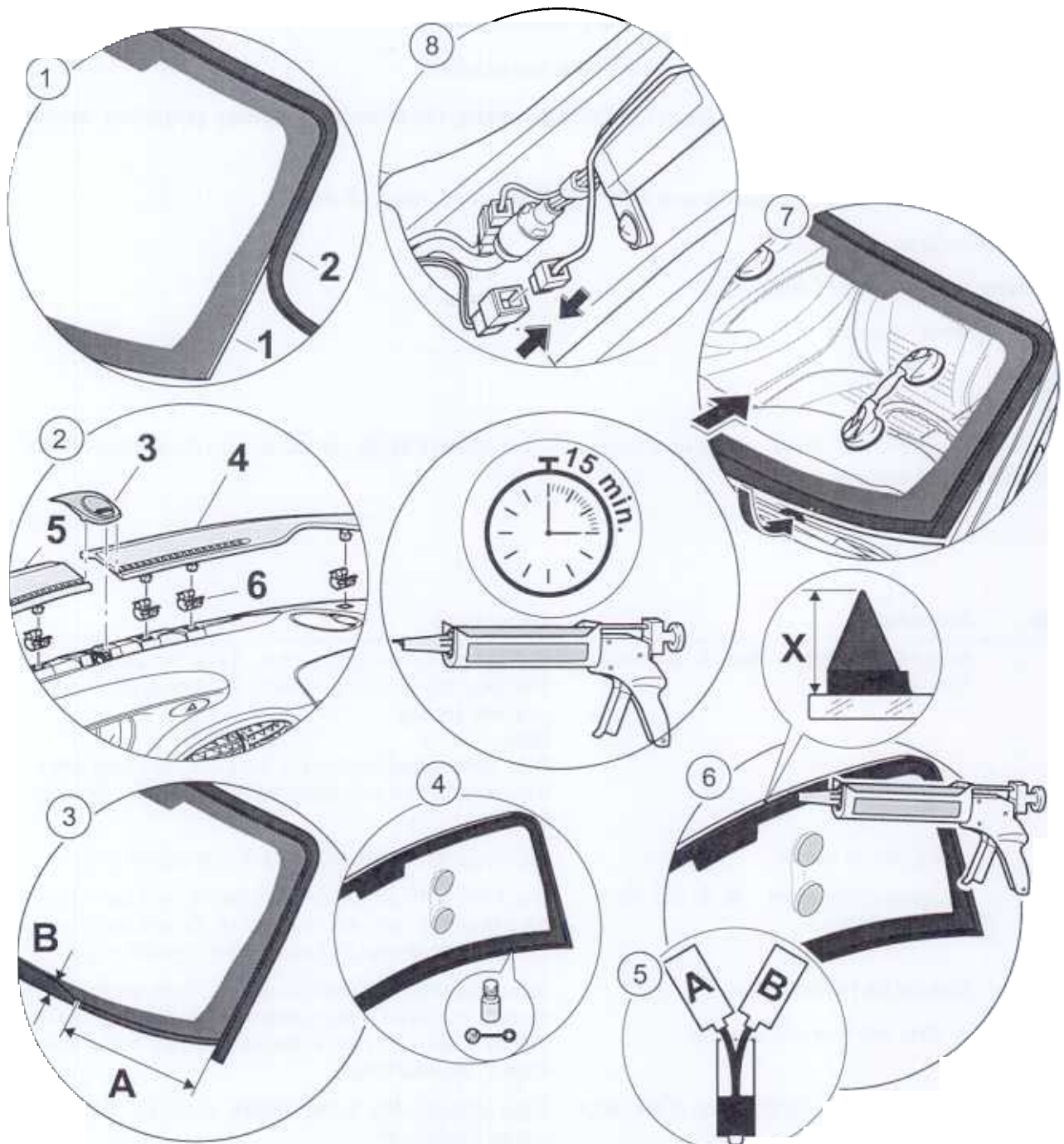
Danger of injury caused by loose glass splinters and sharp window edges.

During removal and installation, wear protective glasses and leather gloves.

No.	Procedure	Instructions
		Wind down the door windows. Note: the door windows must not be closed until after the curing time has elapsed.
	Masking the wing corners	Mask the wing corners with adhesive tape in the area of the cowl panel in order to protect the paintwork.
1	Pulling off cover trim -1-	Undo and remove the cover trim -1- .
2	Removing cowl panel cover -2-	⇒ Rep. Gr. 702219; Removing and installing cowl panel cover
	Removing inner A-pillar trim	⇒ Rep. Gr. 705719; Removing and installing trim of A, B and C-pillars
	Removing the interior rearview mirror	⇒ Rep. Gr. 682719; Removing and installing the interior rearview mirror
3	Removing defroster covers -4, 5-	Lift the alarm readiness light -3- and unclip it to the rear. Lift the defroster covers on the left and right -4, 5- and unclip them. Check fastening clips -6- , replace if necessary.
4	Disconnecting the windscreen antenna plug connection	
5	Cutting out the windscreen	Fit a U-type cutting knife to the cutter -E- . Set the vibration frequency controller to 5. Cut through the bond between the body and the windscreen at the top and sides. Fit a U-type cutting knife -B- to the cutter -E- . Cut through the bond between the body and the windscreen at the bottom. Remove the windscreen. Note: when cutting out the windscreen, ensure that the label with the vehicle identification number and the surrounding section is not damaged.
	Removing the windscreen	
	Pulling off surrounding section	Carefully detach the surrounding section from the windscreen. If the surrounding section is removed from the windscreen undamaged, it can be re-used.

No.	Procedure	Instructions
	Removing adhesive from the body	Remove adhesive residues -7- from the body with the cutter -E- and flashing knife -D- , ensuring that a residual covering of adhesive remains -8- . Note: the residual covering of adhesive acts as an adhesive foundation for new bonding material. Keep cut surfaces clean and free of grease and do not clean with cleaning solution.
	Removing adhesive from the windscreen • Only if the windscreen is re-installed	Equip the cutter -E- with the flashing knife -D- and remove the adhesive remains on the pre-coated bonding section of the windscreen so that as much as possible of the bonding section of the pre-coating is preserved. Note: the bonding section of the pre-coating acts as an adhesive foundation for new bonding material. Keep cut surfaces clean and free of grease and do not clean with cleaning solution.
7	Cleaning and priming paint damage or newly built-up paint areas in the window aperture of the body	Clean new paint surfaces and damage to the roof paint in the non-visible area of the window aperture of the body with cleaning solution -H1- and improve with primer -H2- . Note: observe the drying time of 10 minutes minimum after cleaning! No cleaning solution residues may remain on the body.

Fitting the windscreen





Caution!

The bonded joint does not have its final strength immediately.

The vehicle must not be used until the curing time has elapsed.

In order to ensure that the bonded joint is sufficiently strong, the following boundary conditions must be adhered to:

- *Time between applying adhesive and inserting windscreen: max. 10 min*
- *Temperature: at least 10 °C*
- *Fixing time: approx. 1 hour*
- *Curing time: 3 hours*



Note!

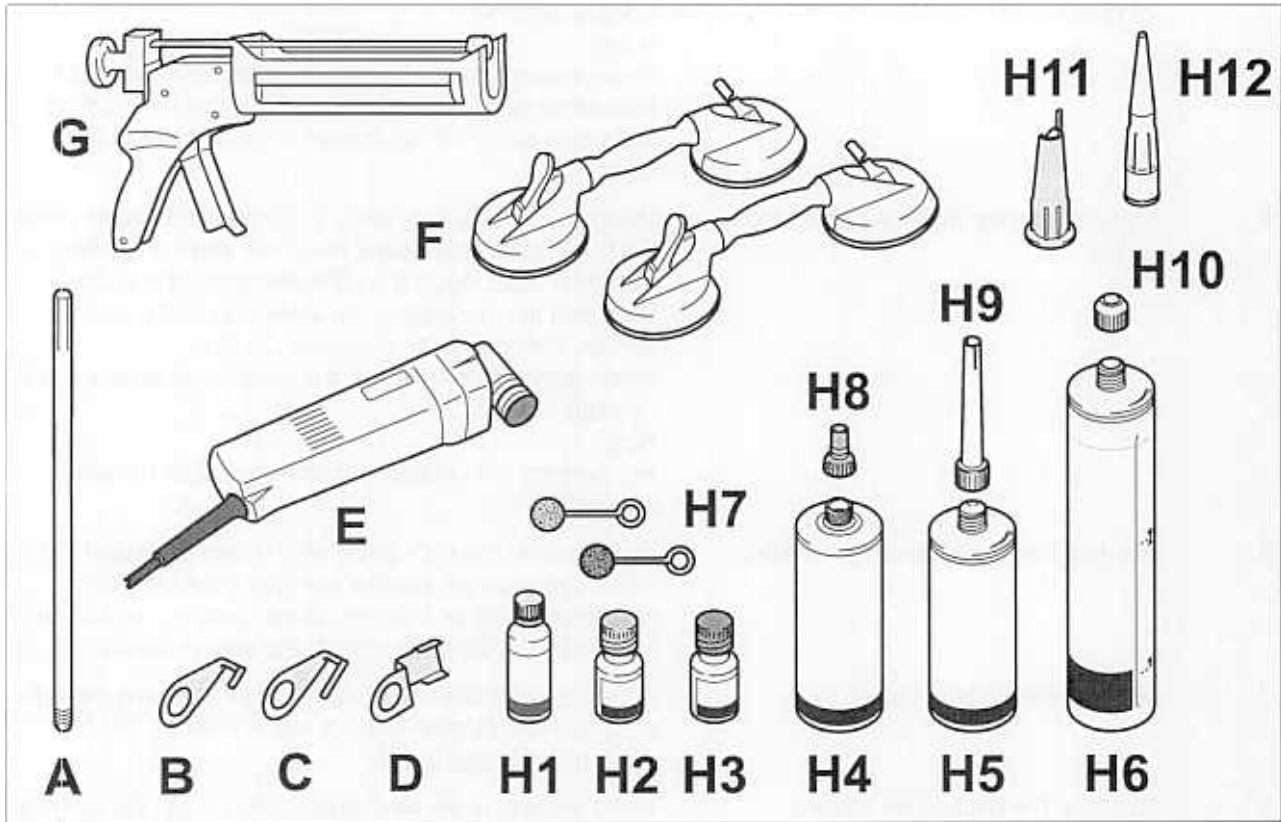
The removed windscreen can be reinstalled if there is no prior damage to the windscreen and the windscreen was removed without damage.

No.	Procedure	Instructions
	Fitting surrounding section -1- and cover trim -2-	Position the surrounding section -1- on the windscreen and press the cover trim -2- into the groove of the surrounding section. Note: if the surrounding section and the cover trim have been removed from the windscreen without damage, they can be re-used.
	Fitting spacer blocks	Clip in spacer blocks and press in body-bound rivets.
2	Fitting defroster covers -4, 5- and alarm readiness light -3-	Check the fastening clips -6- , replace if necessary. Insert the defroster covers left and right -4, 5- and clip in under the alarm readiness lug. Engage alarm readiness light -3- .
3	Marking the bonding area <ul style="list-style-type: none"> • Only with new windscreens 	Before applying the adhesive material, mark the course of the adhesive bead in accordance with the dimensions -A- 160 mm, -B- = 30 mm on the left and right on the lower edge of the windscreen.
4	Activating the bonding section of the windscreen <ul style="list-style-type: none"> • Only with new windscreens 	Apply activator -H3- to the bonding section of the pre-coated windscreen. Note: pre-coated windows must not be treated with cleaning solutions. Do not apply activator to painted surfaces. Allow a drying time of at least 10 minutes!

No.	Procedure	Instructions
	Preparing 2-component bonding material for processing	⇒ 6-5 "Processing of Porsche 2-component window bonding agents" Note: observe open time of 15 minutes! The open time is the time within which the bonding material must be applied and within which the windscreen must be put into the body.
6	Applying bonding material to the windscreen	Using the bonding gun, apply 2-component bonding material to the windscreen along the cover trim in the form of a triangular bead. Apply the adhesive material in accordance with the markings in the lower part of the windscreen. Dimension -X- = approx. 15 mm. When applying the adhesive, it is essential to ensure that it overlaps. Note: two persons are needed to insert and adjust the windscreen!
7	Inserting the windscreen into the body	Apply suction cups -F- to the windscreen and insert the windscreen into the window aperture. Press the windscreen up as far as it will go. When doing so, press the lower edge of the glass against the spacer blocks.
	Cleaning the fields of vision	Adhesive which has oozed out must be removed immediately and the affected fields of vision must be cleaned using cleaning agent -H1- .
8	Attaching the windscreen antenna	Insert the plug of the windscreen antenna into the antenna amplifier.
	Installing the A-pillar trim	⇒ Rep. Gr. 705719; Removing and installing trim of A, B and C-pillars
	Installing cowl panel cover	⇒ Rep. Gr. 702219; Removing and installing cowl panel cover
	Removing masking of wing corners	Pull adhesive tape off wing corners.
	Bonding on the interior rearview mirror	⇒ Rep. Gr. 682719; Removing and installing the interior rearview mirror
	• Only if the windscreen is replaced	
	Installing the interior rearview mirror	⇒ 68-1 "Removing and installing the interior rearview mirror" Note: the interior rearview mirror may only be installed after a curing time of 3 hours!
	Closing the door window	

Overview of tools and materials

The following tools and materials are required for removing and installing the windscreen with 2-component adhesive:



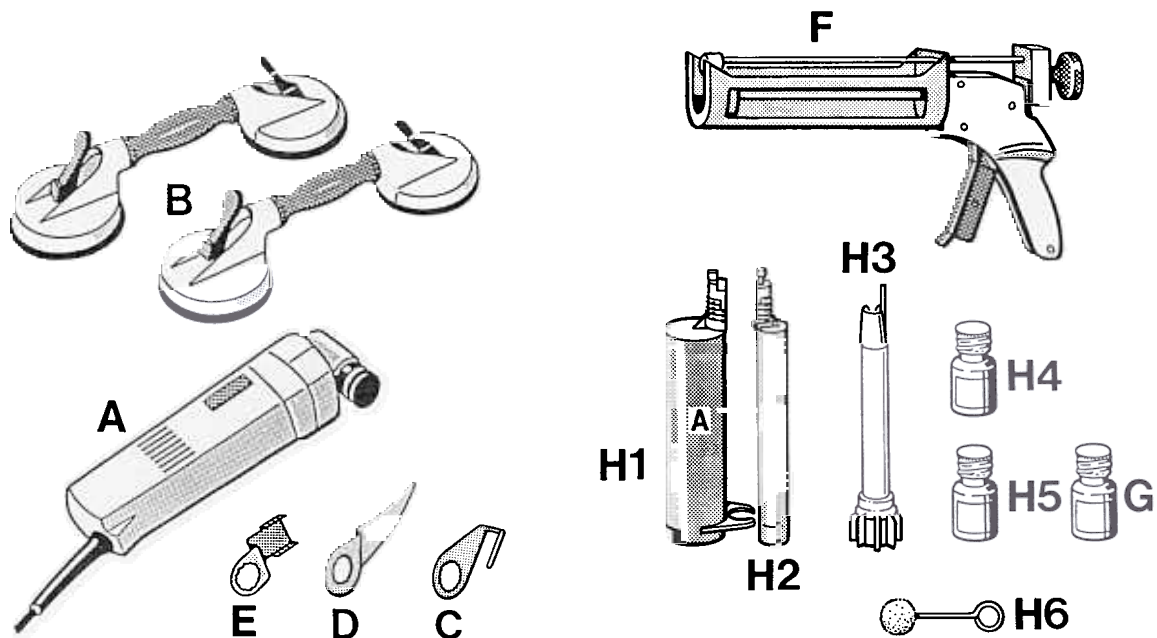
Item	Designation of the special tool	Explanation
	Mixing rod 9528	⇒ Rep. Gr. 2.2; Workshop Equipment Manual
-B-	Cutting knife, U-type 639.030.760.16	
-C-	Cutting knife, U-type 639.031.540.10	
-E-	Flashing knife, U-type 639.031.130.22	
-E-	Cutter VAG 1561	
-F-	Twin-cup suction lifter VAG 1344	
-G-	Bonding gun 9586	⇒ Rep. Gr. 2.2; Workshop Equipment Manual
-H-	Adhesive set 000.043.203.42	Contains set components H1-H12

Item	Designation	Item	Designation
	Cleaning solution		Swab
	Primer		Filler nozzle
	Activator		Injector nozzle

Item	Designation	Item	Designation
	Cartridge, component A	L0-	Screw cap
	Cartridge, component B	L1-	Processing nozzle
	Mixing cartridge	L2-	Universal nozzle

64 86 19 Removing and installing rear window

The following tools and materials are required for removal and installation of the rear window with two-component adhesive:



A	Cutter	VAG 1561
B	Twin-cup suction lifter	VAG 1344
C	U-type cutting knife	639.030.790.12
D	Angled cutting knife	639.030.720.17
E	Flashing knife	639.031.130.22
F	Bonding gun 9586	000.721.958.60
H	Adhesive set	000.043.203.42
G	Glass primer	000.043.158.00

Volkswagen AG
Postfach
38436 Wolfsburg

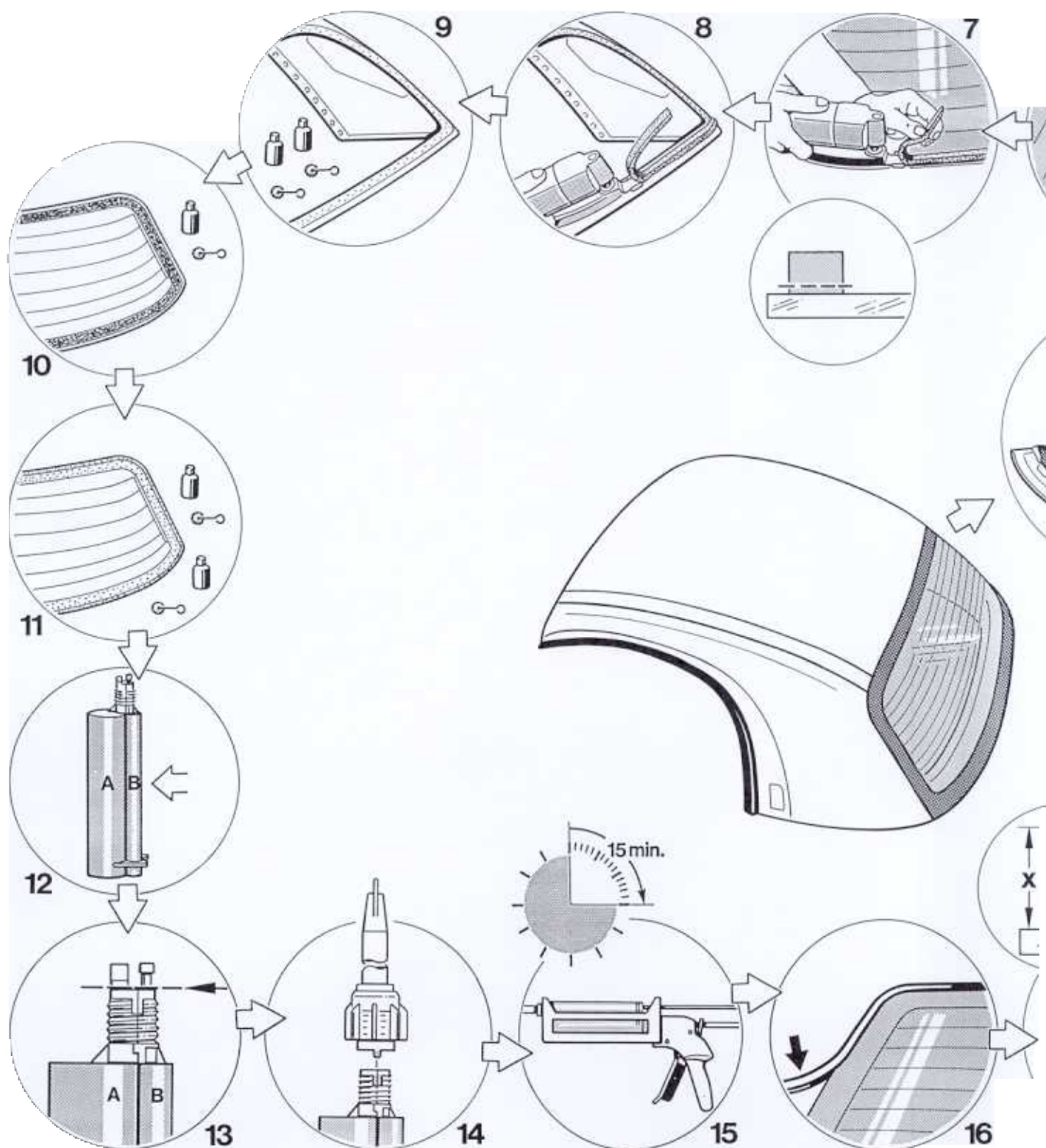
C. & E. Fein GmbH & Co.
Postfach 10 14 44
70013 Stuttgart

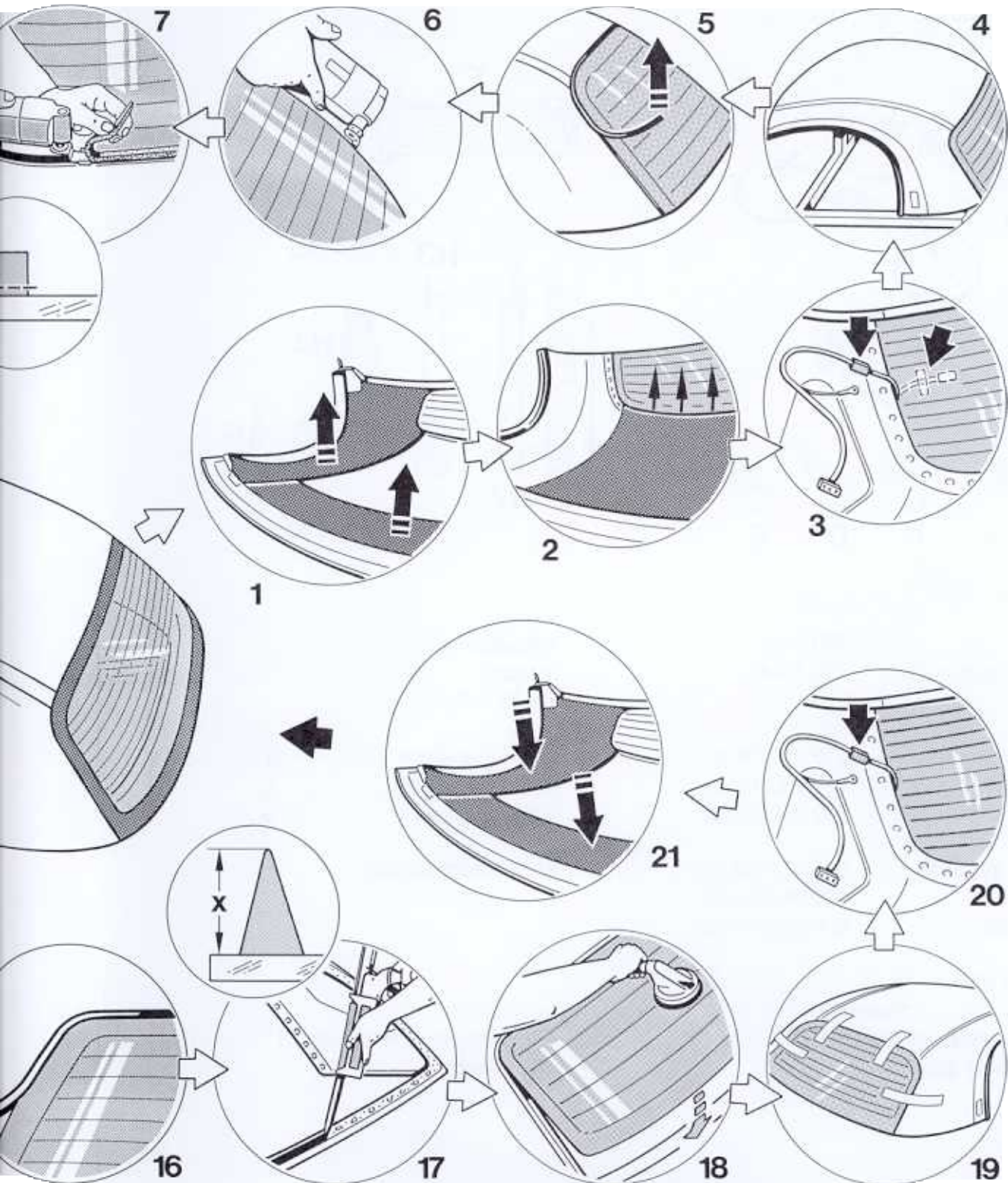
Porsche Parts Service

Contents of the adhesive set:

H1	=	Cartridge, component A	H4	=	Primer
H2	=	Cartridge, component B	H5	=	Activator (solvent cleaner)
H3	=	Mixing tube	H6	=	Swab

Removing and installing rear window





Removing rear window

Note

The removed window can be re-installed if

no prior damage is can be recognised on the rear window

the rear window was removed without being damaged.

No.	Procedure	Instructions
	Remove the hardtop	Unlock the hardtop and remove it from the vehicle.
	Set down the hardtop	Set the hardtop down on the assembly fixture on the outer side.
	Unclip interior trim parts	Unclip interior trim parts at the front, sides and rear of the hardtop body.
2	Disengage the headliner	Disengage headliner at the rear window to the rear.
3	Disconnect the rear-window heater	Disconnect the electrical plug connection on the left and right of the rear window heater. Affix wire to the rear window with adhesive tape. (The wire would otherwise be severed when the rear window is cut out.)
4	Turn the hardtop	Set down pivot locks and locking levers of the hardtop on the assembly fixture and lock.
5	Pull off cover profile	Detach and pull off the cover profile.
6	Cut out the rear window	Equip cutter (A) with the U-type cutting knife (C). Set the oscillation-speed control to Stage 5. Cut through the adhesive joint between the body and rear window at the top and sides. Important: Observe note on the next page!

No.	Procedure	Instructions
		<p data-bbox="683 387 743 421">Note</p> <p data-bbox="683 461 1334 566">Take care to cut close to the rear window. The hardtop body components are riveted together; the riveted joints will be destroyed if the rear window is cut out improperly.</p>
7	<p data-bbox="240 622 568 689">Only if the rear window is re-installed:</p> <p data-bbox="240 696 523 763">Remove adhesive on the rear window</p>	<p data-bbox="683 622 1342 763">Equip the cutter (A) with the flashing knife (E) and use it to remove the adhesive residues on the rear window. However, stop when a layer of approx. 2 to 3 mm remains so that the screen-printed border is not destroyed.</p>
8	<p data-bbox="240 860 619 927">Remove adhesive on the hardtop body</p>	<p data-bbox="683 860 1347 965">Use the cutter (A) and the flashing knife (E) to remove adhesive residues on the hardtop body, leaving a layer of adhesive all around.</p> <p data-bbox="683 1010 743 1043">Note</p> <p data-bbox="683 1084 1347 1151">Remove adhesive residues between the riveted joints as thoroughly as possible without damaging the riveted joints.</p> <p data-bbox="683 1196 1305 1229">Paint damage in the window aperture must be repaired</p>
9	<p data-bbox="240 1283 568 1386">Clean and prime the window aperture of the hardtop body</p>	<p data-bbox="683 1283 1334 1424">Clean window aperture of the hardtop body with cleaning solvent (H5). Prime repaired areas of the paintwork in the concealed part of the window aperture with primer (H4). Use the swabs (H6) intended for this purpose.</p> <p data-bbox="683 1469 743 1503">Note</p> <p data-bbox="683 1543 1334 1682">Always allow a drying time of at least 10 minutes after cleaning! Cleaning solvent residues must not remain on the hardtop body.</p>

Installing the rear window

No.	Procedure	Instructions
10	Only if the rear window is re-installed: Activate adhesive profile of the rear window	Apply activator (H5) to the adhesive profile of the rear window using the swab (H6).
11	Only when installing a new rear window: Clean and prime the screen print	Apply activator in the area of the screen print, let dry and prime the screen print of the rear window with glass primer (G).
		Note Always allow a drying time of at least 10 minutes!
12	Clip together cartridges of the A and B components	Clip cartridge with component B to the cartridge with component A.
13	Open the completed cartridge	Evenly cut off the outlets of the completed cartridge with a knife.
14	Attach the mixing tube	Slide the mixing tube (H3) into the groove over the completed cartridge and fasten with the union nut.
15	Insert the cartridge in the bonding gun	Insert the completed cartridge, including mixing tube, into the bonding gun (F).

Note

Observe open time of 15 minutes!

The open time is the time within which the adhesive must be applied and the rear window inserted in the hardtop body.

No.	Procedure	Instructions
16	Fit the cover profile	Push the cover profile onto the rear window.
17	Apply adhesive on the hardtop body in the area of the window aperture	Use the bonding gun to apply a triangular bead of 2-component adhesive on the window aperture of the hardtop body – along the riveted joint. Dimension "X" = approx. 12 mm Take care when applying the adhesive to ensure that the adhesive bead overlaps. Note Two persons are necessary to install and adjust the rear window!
18	Insert the rear window in the hardtop body	Insert the rear window at the top of the window aperture and carefully lay it down.
19	Fix the rear window	Push the rear window all of the way up and press the lower window edge into place. Secure the rear window against sliding out of place with adhesive tape at the sides and top.
	Clean the visible areas	Any emerging adhesive must be removed immediately, and the affected visible areas must be cleaned with the cleaning solution (H5).
20	Plug in the rear window heater	Plug in electrical plug connections on the left and right-hand sides of the rear window.
21	Fit the interior	Position interior trim parts at the rear, sides and front and clip into place.

Important

The adhesive joint does not attain its final strength immediately. The following conditions must be observed in order to ensure adequate strength of the glued joint:

Curing time	3 hours
Temperature	at least 10 °C
Fixing time	approx. 1 hour

The hardtop must not be used on the vehicle before the curing time has elapsed!

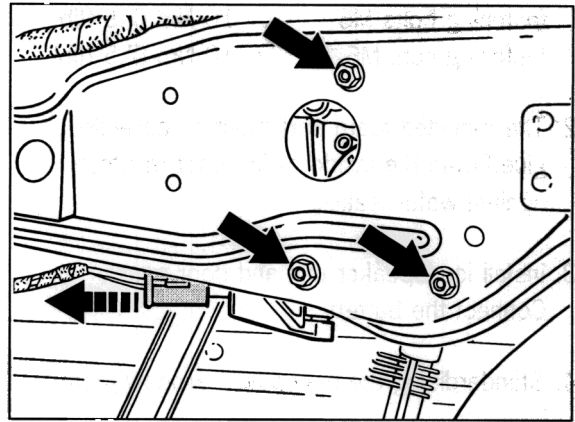
64 54 19 Removing and installing power window motor**Removal**

Close door window.



Warning:
Airbag could inflate. Danger of injury or damage during fitting

- > 1. Remove ignition key.
 - > 2. Disconnect and cover the negative terminal of the battery.
 - > 3. After the battery is disconnected, assembly work or work on the vehicle may be started after a waiting period of 1 minute.
2. Remove door panel and loudspeaker unit. Carefully remove (do not crack) the front moulded foam part from the inside of the door near the power window motor and the loudspeaker cut-out. Disassembling and assembling door trim panel, see Serv. No. 57 51 37.
 3. Remove fastening nuts (3 M6 nuts) from the power window motor.
 4. Press the power window unit out of the inner door panel until the fastening pins are free.
 5. Unlock and remove the electrical plug connection on both sides.
 6. Unscrew fastening pins of power window motor. Remove power window unit from the tothing and take out through the loudspeaker cut-out.



056_99

Installation

1. Install power window motor and engage electrical plug connection.

Tightening torque of the

fastening bolts M6 10 Nm (7.5 ftlb)

fastening nuts M6 10 Nm (7.5 ftlb)

2. The moulded foam part must be carefully glued onto the inside of the door (protects against water leaking in).
3. Install loudspeaker unit and door panel. Connect the battery.
4. Standardising the new power window motor

Switch ignition on.

Open door window completely by continuously actuating the power window operating button, and then close window. Press button until the window is closed and is switched off by the blockage detection function of the power window motor. This completes standardisation.

Perform a function test.

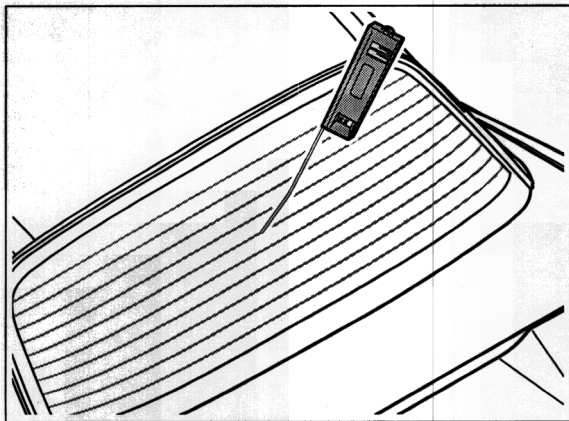
64 86 01 Checking function of heating for rear window

Note

The function of the heating for the rear window (**hardtop**) can be checked with a temperature probe with digital display (see Workshop Equipment Manual). The indicator light in the rocker switch also lights up if a fault is present and the heating wires in the rear window do not warm up.

Check with the temperature probe

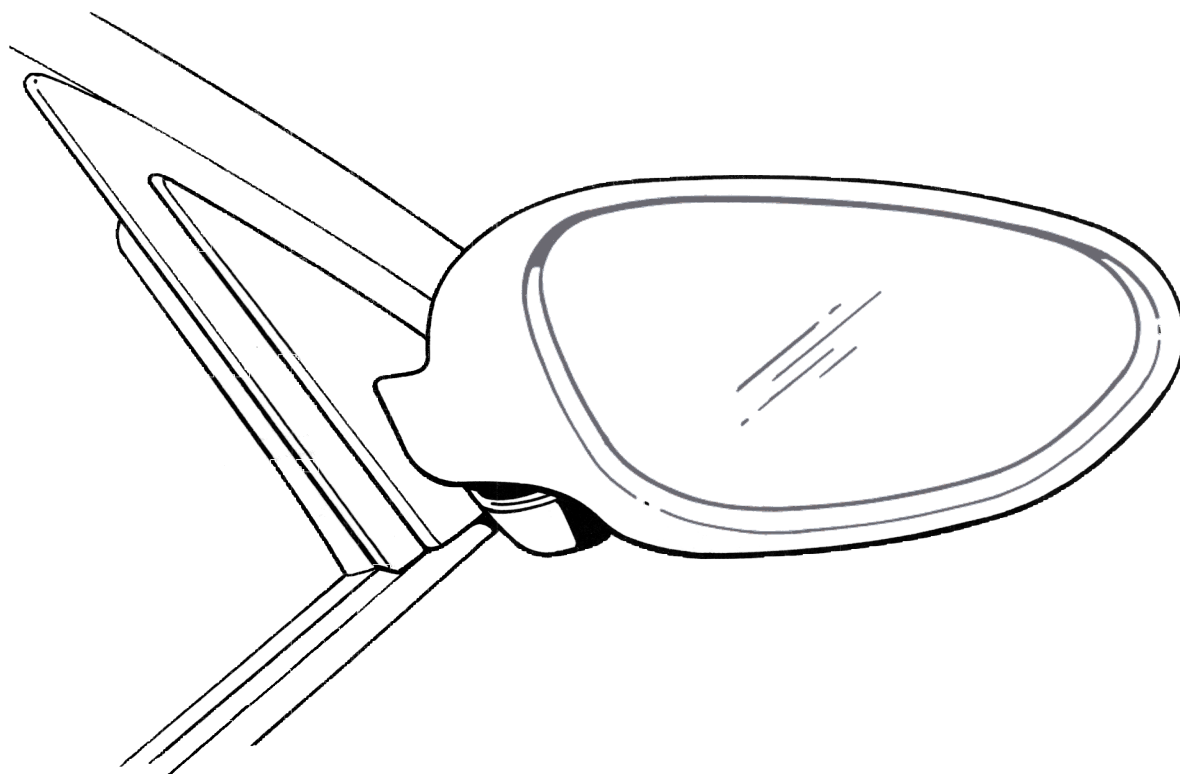
1. The tip of the sensor is used to measure from the outside on the centre of the rear window.
2. One of the heating wires on the rear window must run exactly under the tip of the sensor for this procedure.



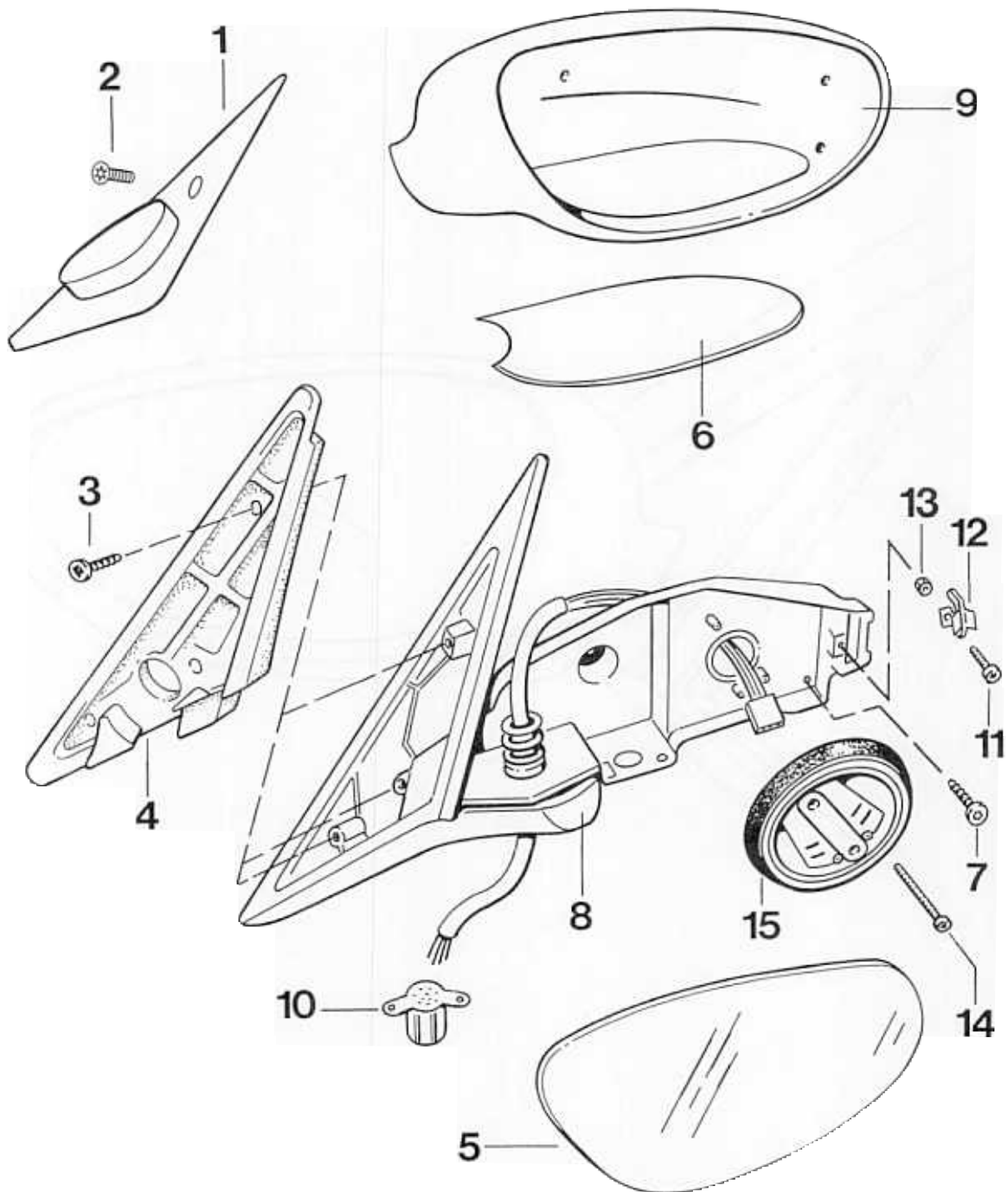
149_99

3. After switching on at room temperature and a period of **2 minutes**, the temperature must increase by approx. **3 degrees**.
4. If no temperature increase is shown, the fault must be detected on the basis of the wiring diagram.

66 89 37 Disassembling and assembling the rearview mirror



Disassembling and assembling the rearview mirror

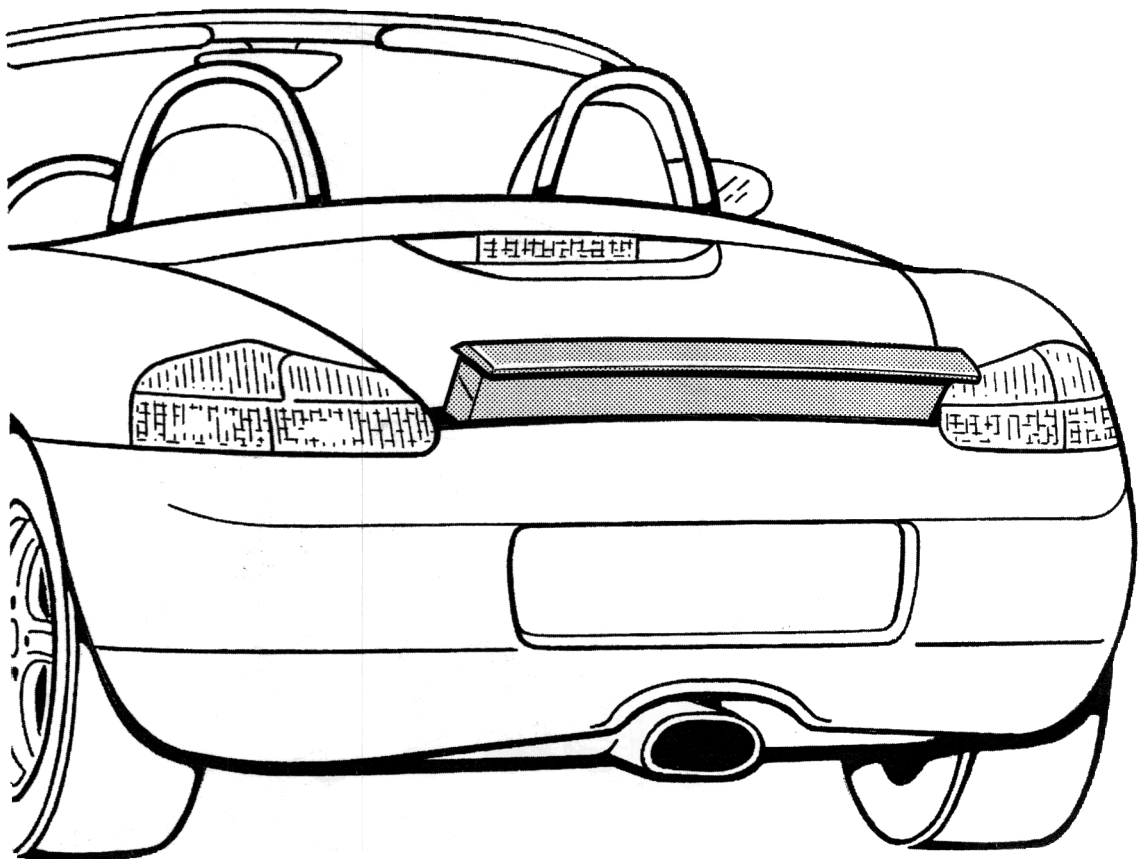


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Disassembling and assembling the rearview mirror

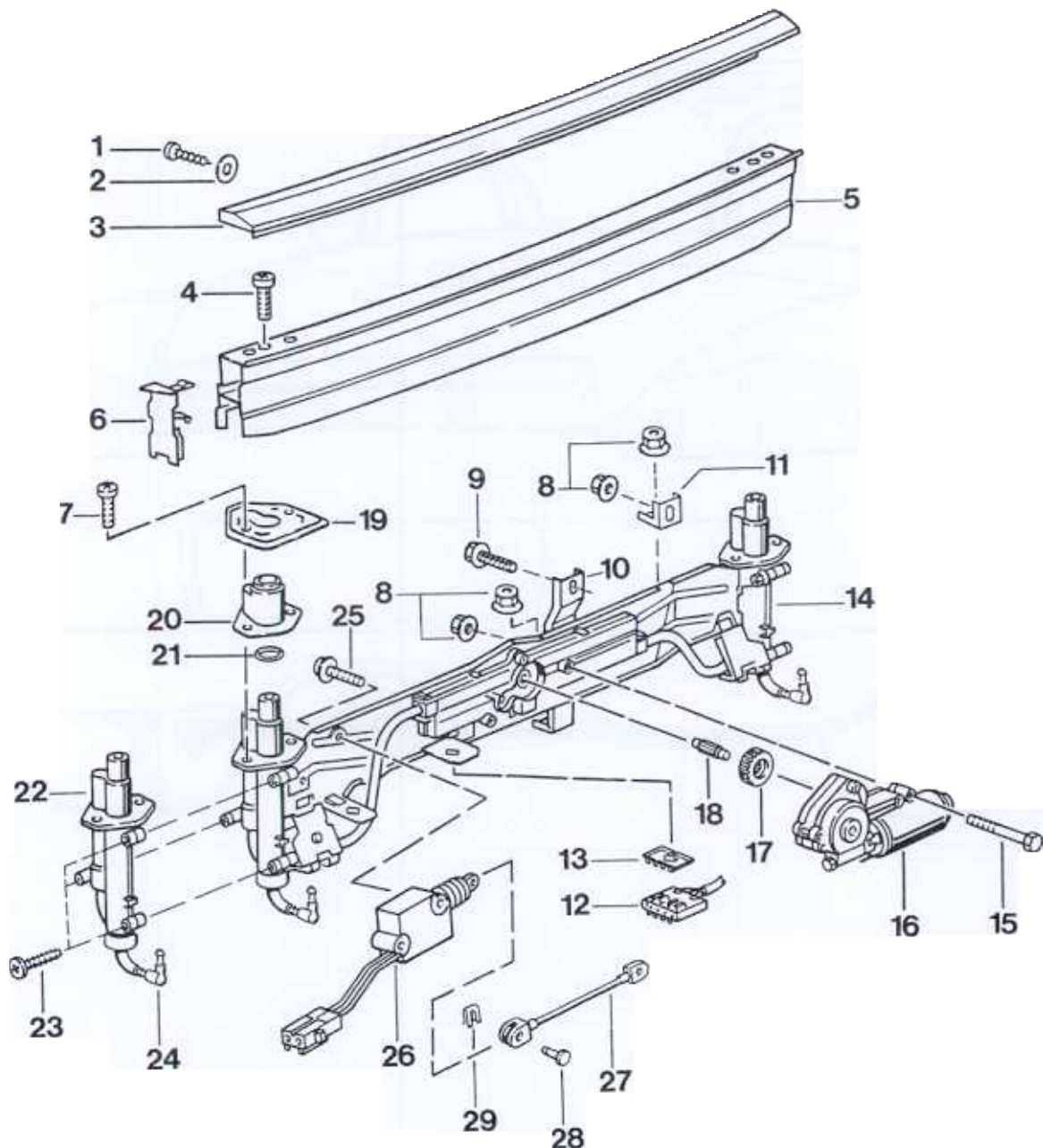
No.	Designation	Qty.	Removal	Note:	
					Installation
1	Cover	1	Unclip.		Clip in.
2	Oval head screw B3.5	1			
3	M5 x 30 screw T10	3	Oval head		
4	Filler piece	1			
5	Mirror glass		Unclip, pull off plug contacts.		Insert and clip in plug contacts.
6	Mirror shell bottom section	1			
7	Countersunk screw	3			
8	Mirror base	1	Undo countersunk screws		Securely tighten countersunk screws
9	Mirror shell	1			
10	Plug	1	Detach plug connection.		Replace, make plug connection.
11	Oval head screw M5 x 14	1			
12	Spring clamp	1	Undo hexagon nut		Screw hexagon nut tight
13	Hexagon nut M5	1			
14	Oval head screw M3 x 30	3	Detach positioning motor		Securely screw positioning motor
15	Positioning motor	1			

66 58 19 Removing and installing rear spoiler



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Removing and installing rear spoiler



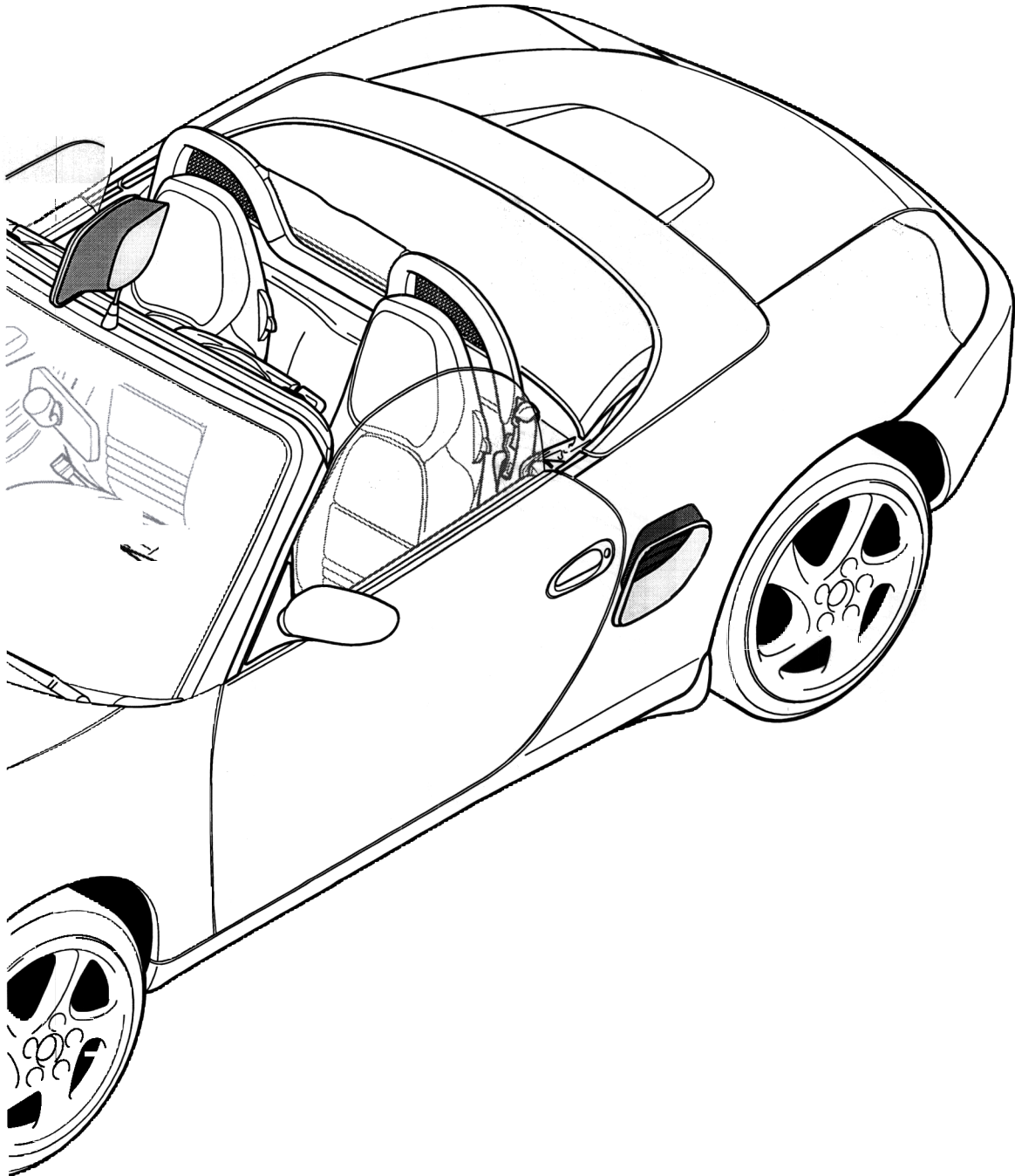
Removing and installing rear spoiler

No.	Designation	Qty.	Removal	Note:	
				Installation	
1	Oval-head screw B 3.5 x 10	3	Loosen oval-head screw from the upper part of the spoiler.		Screw oval-head screw with washer (Item 2) into the upper part of the spoiler.
2	Washer	3			
3	Upper part of spoiler	1	Remove upper part of spoiler.		Position upper part of spoiler and screw tight with the oval-head screw (Item 1).
4	Hexagon socket head bolt M6 x 15	2	Loosen hexagon socket head bolt from the bottom part of the spoiler.		Screw the bottom part of the spoiler tight with the hexagon socket head bolt.
5	Bottom part of spoiler	1	Remove the bottom part of the spoiler from the extending components.		Position the bottom part of the spoiler on the extending components, align with rear side panel on the left and right and screw tight with the hexagon socket head bolt (Item 4).
6	Left side cover	1	Unclip		Clip in
7	M6 x 20 hexagon socket head bolt	4			
8	Collar nut	6			
9	M6 x 20 hexagon-head bolt	1	Unscrew.		Screw the hexagon-head bolt with holder (Item 10) onto the body.

No.	Designation	Qty.	Note:	
			Removal	Installation
10	Holder	1	Undo the collar nut (Item 8) on the holder.	Position holder on the spoiler element and fasten the holder with collar nuts (Item 8) and hexagon-head bolt (Item 9).
11	Angle piece	2	Undo collar nuts (Item 8) from the angle pieces.	Position angle piece on the spoiler element and fasten with the collar nuts (Item 8).
12	Plug connection	1	Disconnect	Connect
13	Sliding piece	1	Twist and pull out.	Insert and twist.
14	Spoiler element	1	Move spoiler element inwards.	Retract and position. Screw in hexagon socket head bolt (Item 7), align spoiler element to the left and right with the rear side part, and tighten the hexagon socket head bolt (Item 7).
15	M5 x 55 hexagon-head bolt	3		
16	Motor	1	Undo hexagon-head bolts (Item 15) and remove the motor.	Position motor on the spoiler element and fasten with the hexagon-head bolts (Item 15).
17	Spur gear	1		
18	Grooved axle			
19	Plate	2		
20	Cover	1	Unclip	Clip in
21	O-ring			

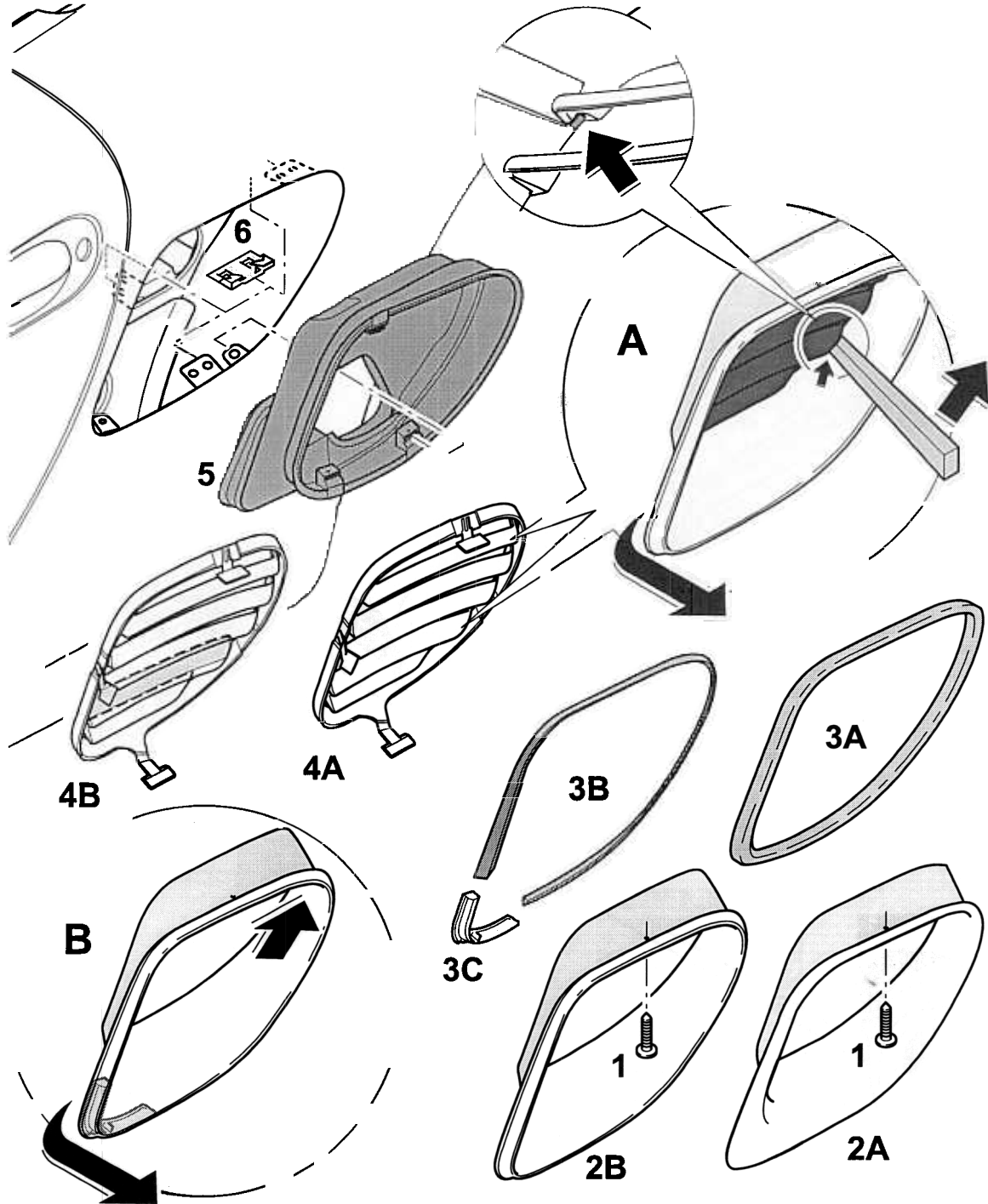
No.	Designation	Qty.	Note:	
			Removal	Installation
22	Lifting element	1	Undo oval-head screw (Item 23) and remove lifting element.	Position lifting element on the spoiler element and fasten with the oval-head screws (Item 23).
23	Oval-head screw	3		
24	Corner piece	2	Pull off water drain hose.	Push on water drain hose.
25	Hexagon-head bolt	2		
26	Actuator	1	Disconnect electrical plug connection.	Connect electrical plug connection.
27	Guide	1		
28	Pin	1		
29	Retainer	1		

66 56 19 Removing and installing the engine compartment vent



6656001

Removing and installing the engine compartment vent



6656002

Removing and installing the engine compartment vent

No.	Designation	Qty.	Removal	Note: Installation
1	Oval-head screw	1	Remove the B 4.2 x 14 oval-head screw from the air guide (Item 2)	Screw the B 4.2 x 14 oval-head screw into the air guide (Item 2)
2 A,B	Air guide 2A air guide until model year 1999 2B air guide (installed on left only) as of model year 2000	1	Insert a narrow plastic wedge into the locking tabs of the air inlet grille (Item 4) – at the 1st and 4th ribs from the top, on the left and right sides. Carefully press the plastic wedge outward toward the air guide (Figure A) . Press air guide diagonally upward from the locking web. Pull locking web (Figure B) from the side section. Simultaneously pull off the air guide outward at the locking tab to be pressed out	Note: The air guide and air inlet grille can be installed only in assembled state. Press the air inlet grille (Item 4) into the 3 spring clips (Item 6). Press air guide diagonally upward from the locking web. (Figure B) Insert locking web of the air guide (Item 2) into the side section. Screw the B 4.2 x 14 oval-head screw into the air guide (Item 2)
3 A	Foam strip	1	Pull off	Inspect and replace if necessary. Note: Affix the seal under slight tension, without any space with respect to the locking web. The distance from the seal to the outer edge of the air guide must be 1.5 mm

No.	Designation	Qty.	Removal	Note: Installation
3 B	Moulded rubber part (installed on left only) as of model year 2000	1	Pull off	Inspect and replace if necessary. Note: Coat the corner points of the moulded rubber part with <i>Loctite</i> 454 and glue into the rim of the air guide from the rear
3 C	Moulded rubber corner piece (installed on left only) as of model year 2000	1	Pull off	Inspect and replace if necessary. Note: Coat the surface of the moulded rubber part with <i>Loctite</i> 454 and glue into the rim of the air guide from the rear
4A	Air inlet grille until model year 1999	1	Press the air inlet grille off the spring clips (Item 6).	Clip air inlet grille (Item 4) together with the air guide (Item 2)
4B	Air inlet grille (installed on left only) as of model year 2000	1	Press the air inlet grille off the spring clips (Item 6).	Clip air inlet grille (Item 4) together with the air guide (Item 2)
5	Flow duct	1	Press rubber tabs out of the sheetmetal lugs of the side section and remove flow duct.	Position flow duct and press the rubber tabs into the sheetmetal lugs of the side section
6	Spring clips	3	Unclip	Inspect and replace if necessary

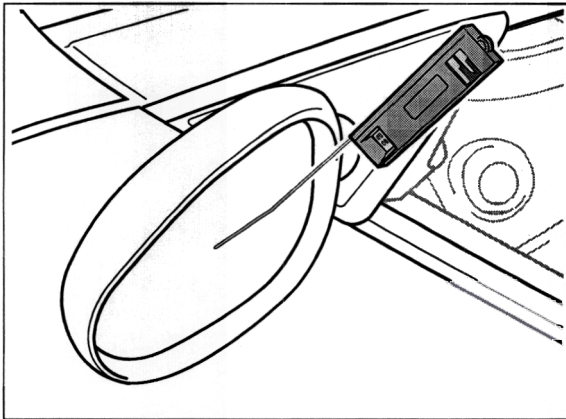
66 78 01 Checking function of heating for mirror glass

Note

The function of the heating for the mirror glass can be checked with a temperature probe with digital display (see Workshop Equipment Manual). The indicator light in the rocker switch also lights up if a fault is present and the heating wires in the mirror glass do not warm up.

Check with the temperature probe

1. The tip of the sensor is used to measure from the outside on the centre of the mirror glass.

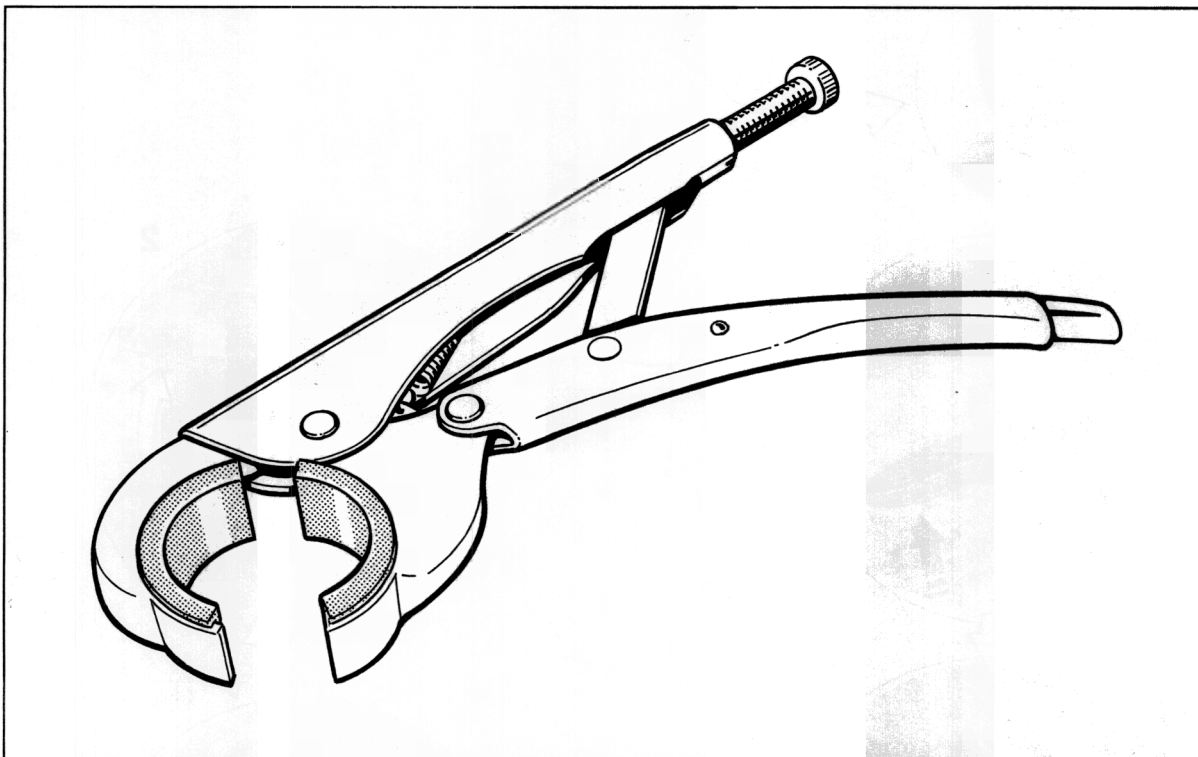


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2. After switching on at room temperature and a period of **1 minute**, the temperature must increase by approx. **2 degrees**.
3. If no temperature increase is shown, the fault must be detected on the basis of the wiring diagram.

68 27 19 Removing and installing the interior rearview mirror

The following special tools are required to remove and install the interior rearview mirror:



A = Pliers, special tool 9578

Removing and installing the interior rearview mirror



Removing and installing the interior rearview mirror

Removing the interior rearview mirror

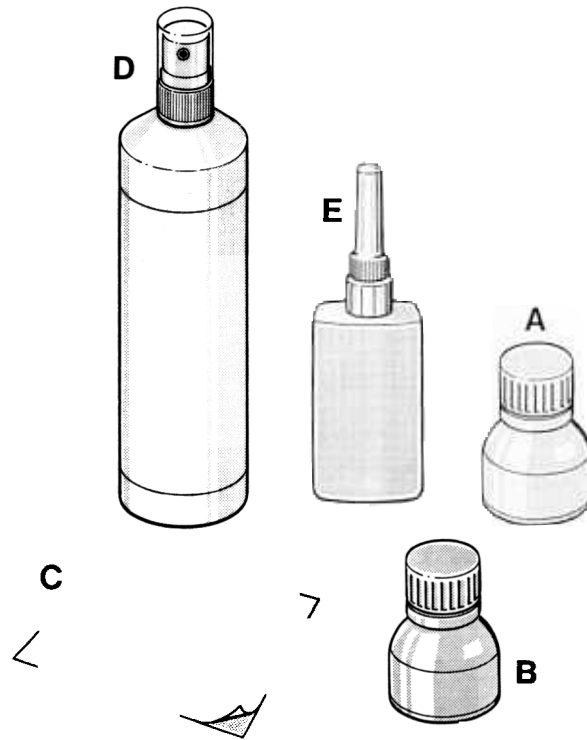
No.	Procedure	Instruction
1	Secure the pliers	Set the pliers with the projecting plastic parts to the windscreen to the diameter of the mirror base and secure to the mirror base.
2	Detach the mirror	Turn the interior rearview mirror by the mirror base using the pliers special tool 9578 through 90°. Release the pliers from the mirror base.
3	Remove the mirror	Unclip the base of the interior rearview mirror from the retainer plate on the windscreen. After removing the interior mirror from its base, remove the small aluminium chip in the locking area. Otherwise, secure seating cannot be ensured when the mirror is fitted. If a mirror is being fitted for the second or third time, check the locking area for the mirror base for signs of wear and replace the mirror if necessary.

Installing the interior rearview mirror

No.	Procedure	Instruction
4	Insert the mirror	Clip the base of the interior rearview mirror, rotated through 90°, into the retainer plate on the windscreen.
5	Fasten the mirror	Fasten the pliers (special tool 9578) on the mirror base with the projecting plastic parts facing the windscreen. Press the mirror base against the retaining plate and simultaneously turn by 90° with the pliers. The mirror must not be turned past the locking point. Detach pliers from the mirror base.

68 27 13 Bonding on the interior rearview mirror

The following materials are required to bond on the complete interior mirror:



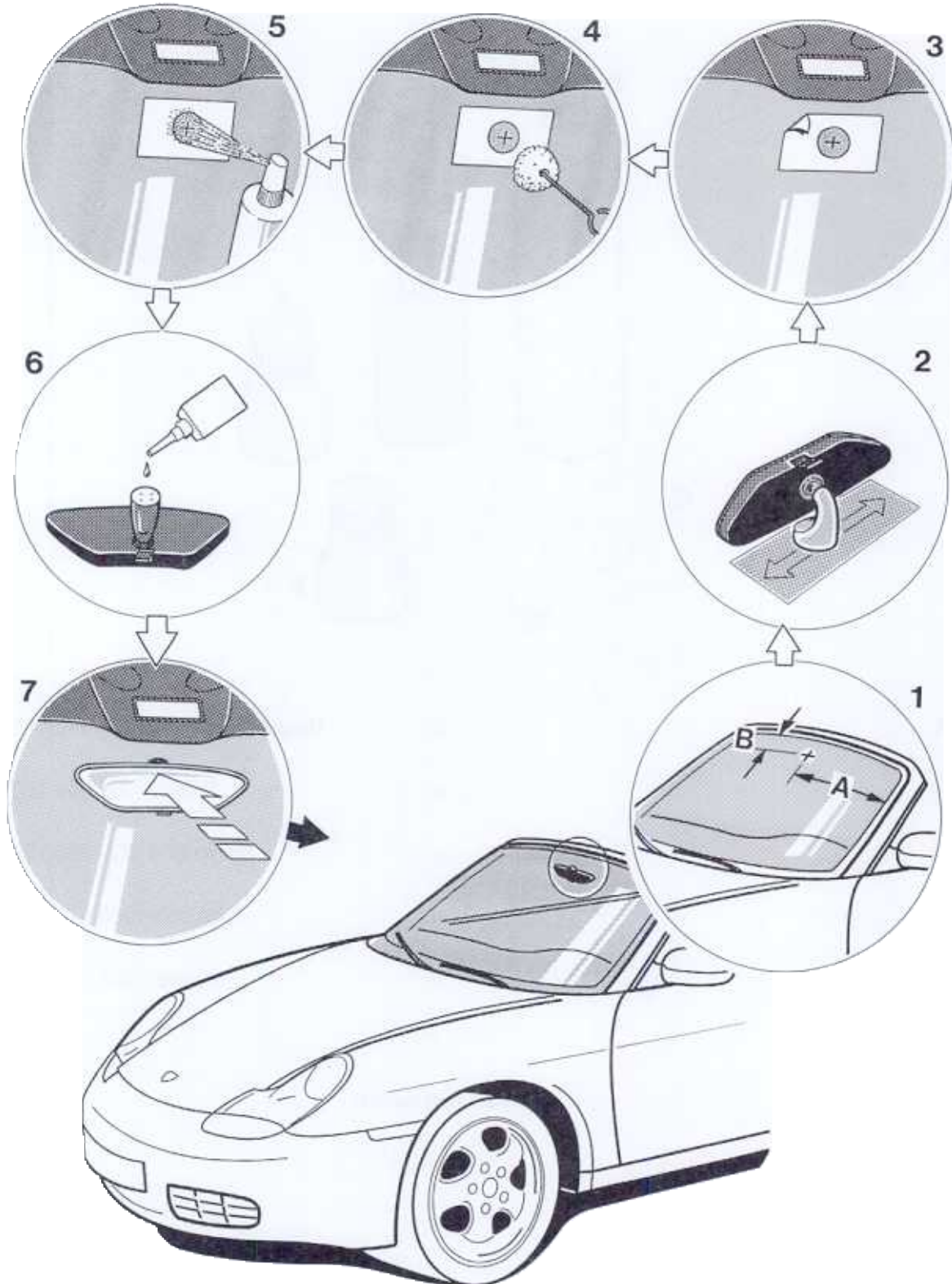
1981 - 68

A	=	Cleaning solution (000.043.157.00)*
B	=	Primer (000.043.158.00)*
C	=	Cover film (000.043.177.01)*
D	=	Activator (000.043.052.00)*
E	=	Bonder (000.043.051.00)*

Porsche part number

Bonding on the interior rearview mirror

Bonding the assembled rearview mirror onto the windscreen



Bonding on the interior rearview mirror

Bonding the assembled interior mirror onto the windscreen

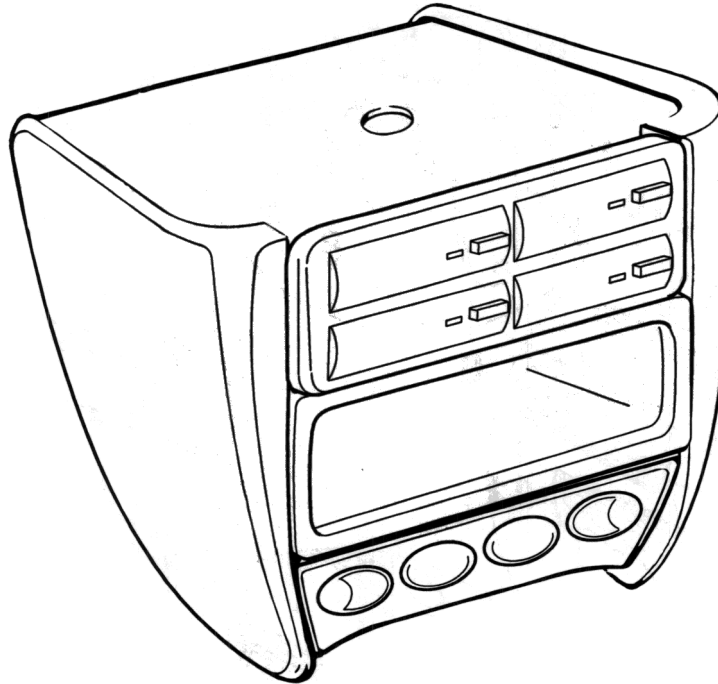
No.	Procedure	Instruction
	Mark the position of the interior mirror	Mark the position of the bonding plate on the outside of the windscreen. Dimension A = 633 mm Dimension B = 100 mm
	Remove adhesive residues	Remove adhesive residues from the windscreen mechanically using a scraper. Remove adhesive residues on the bonding plate of the interior mirror mechanically using a scraper.
2	Sand the bonding plate of the interior mirror flat	Sand the bonding plate of the interior mirror flat mechanically using 100 grain sandpaper.
	Clean the bonding plate of the interior mirror	Clean the bonding plate of the interior mirror with cleaning solution (A) .
	Clean the bonding area on the windscreen	Clean the bonding area on the windscreen with cleaning solution (A) .
3	Mask the bonding area on the windscreen	Mask the bonding area on the windscreen with primer template (cover film C). The marking for the position of the interior mirror must be visible in the center of the primer template.
4	Prime the bonding area on the windscreen	Prime the masked bonding area on the windscreen thinly and evenly using primer (B) .

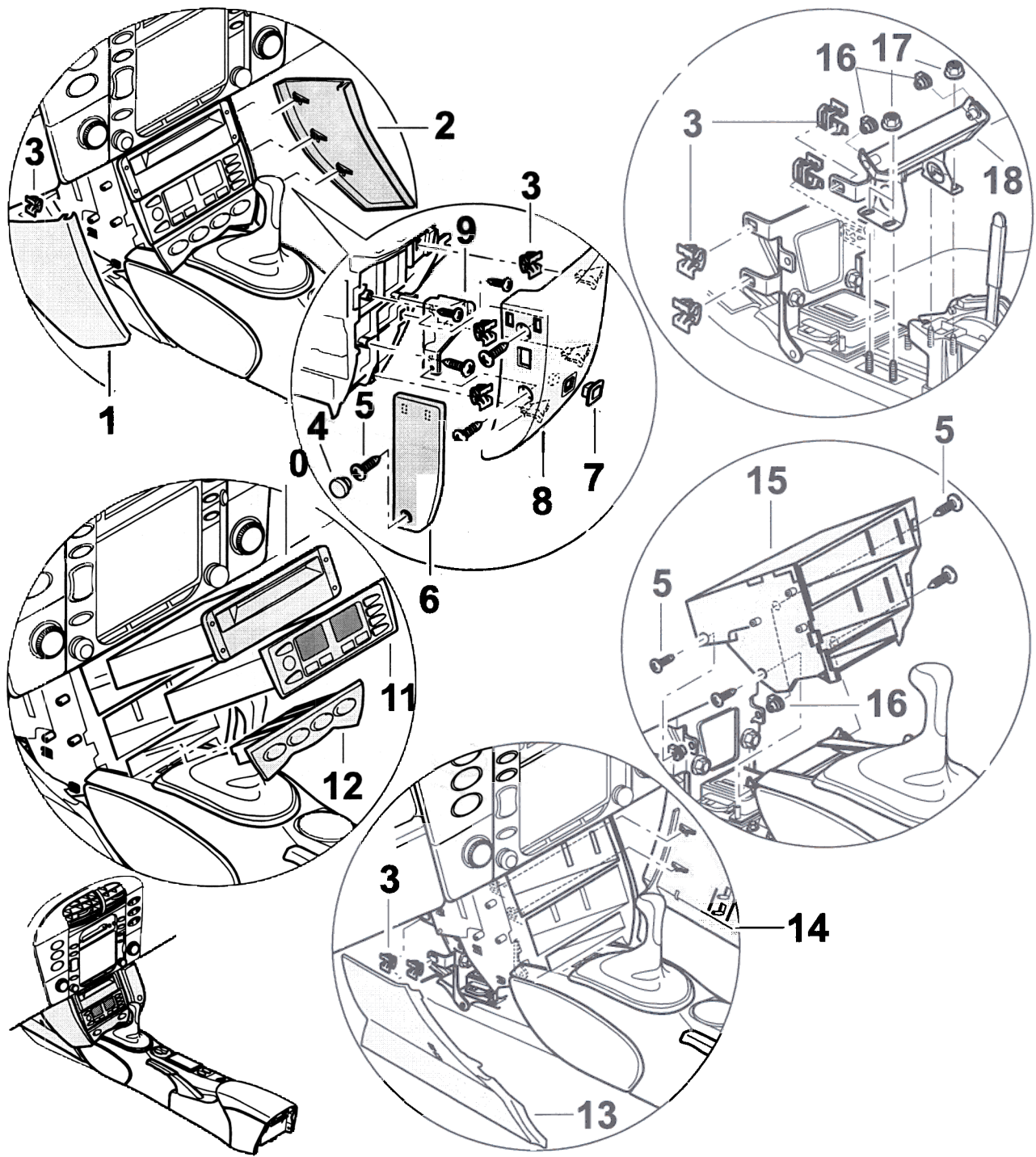
Note

Observe a drying period of 15 - 20 minutes.

No.	Procedure	Instruction
5	Activate the bonding area on the windscreen	Spray activator (D) onto the bonding area of the windscreen. Note Observe a drying time of 2 minutes.
	Remove the primer template	
6	Apply adhesive to the bonding plate	Apply a drop of adhesive (E) to the bonding plate of the interior mirror.
7	Stick on the interior mirror	Press the interior mirror with the bonding plate onto the primed and activated area of the windscreen. Note Press-on duration approx. 40 - 50 seconds.
		Note Bonding strength 60 % after 1 hour 100 % after 24 hours

Removing and installing center console (front section)

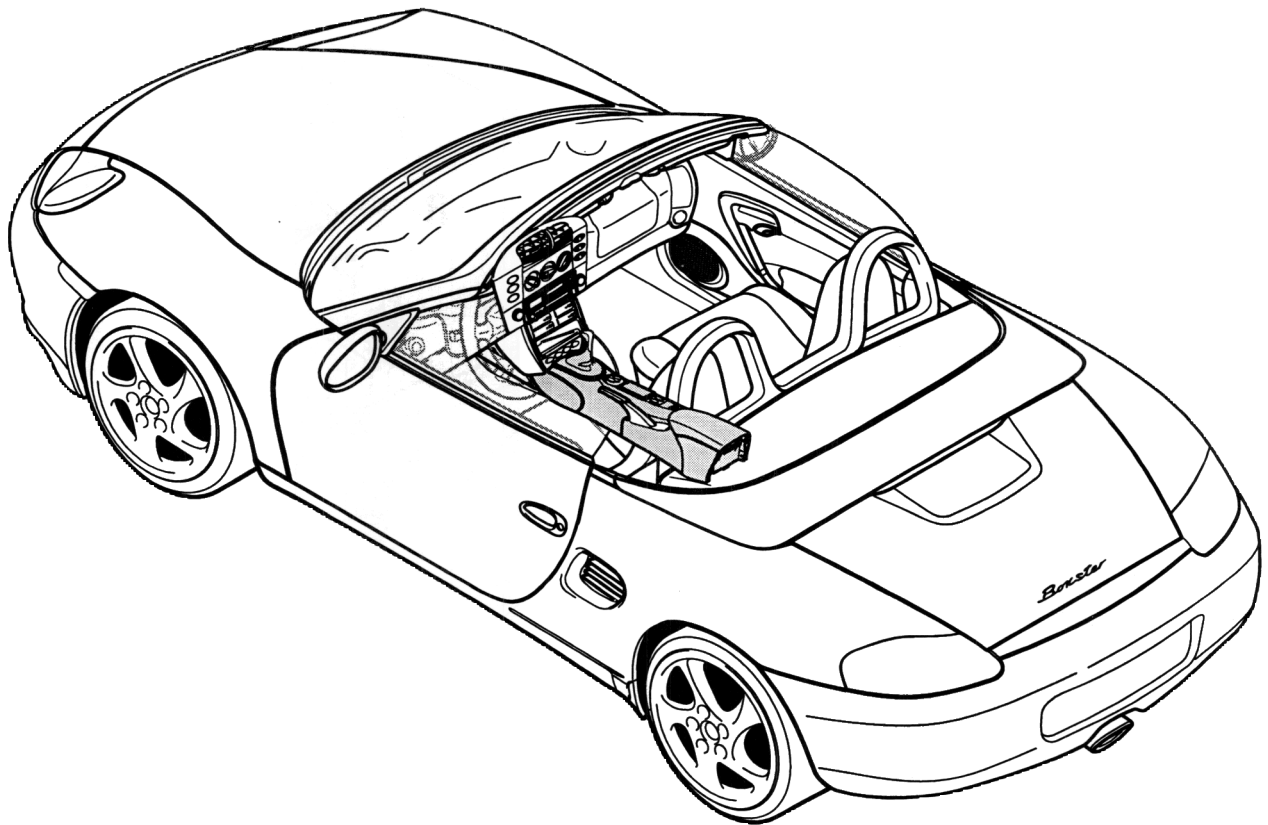


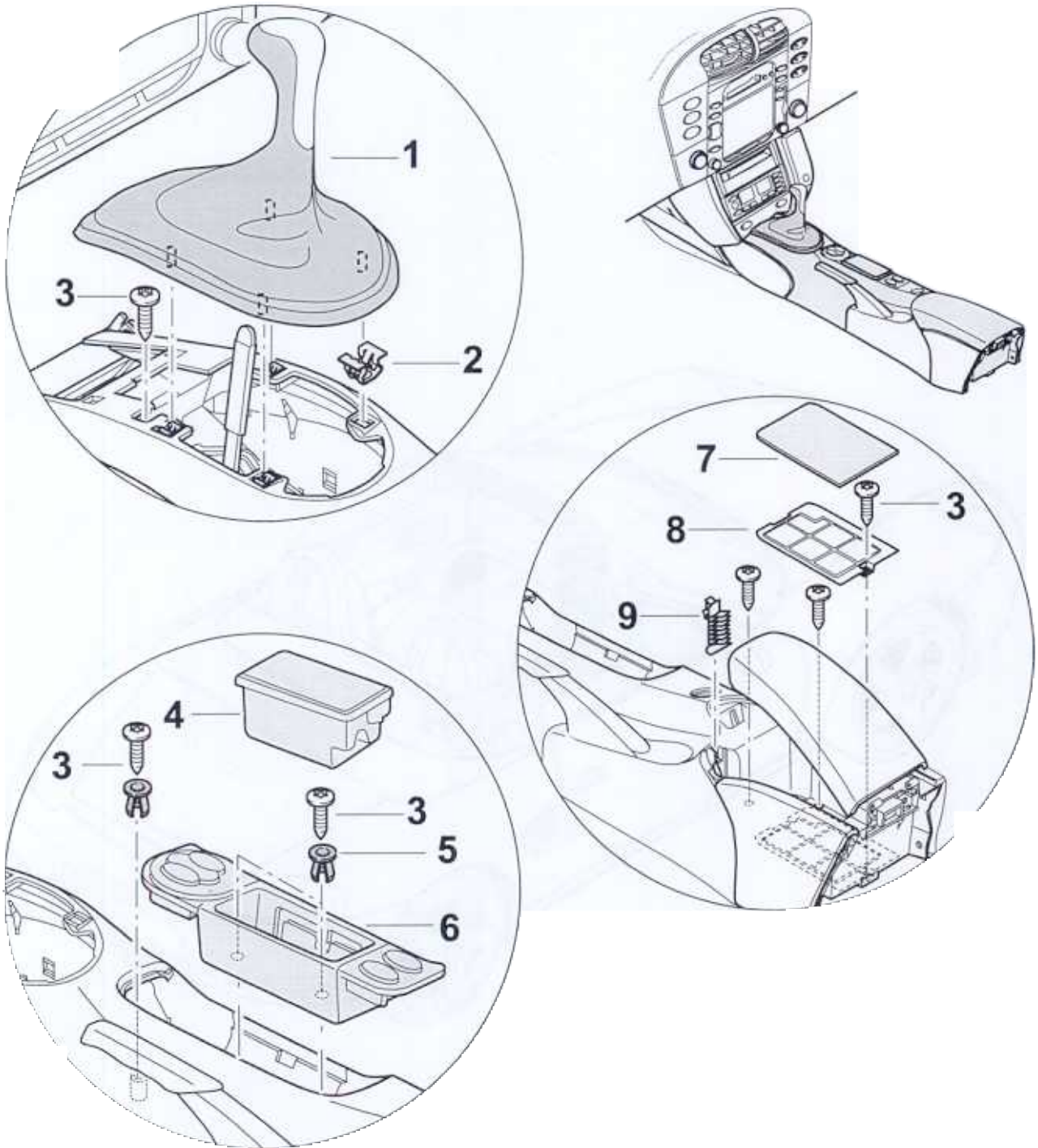


No.	Designation	Qty.	Removal	Installation
	Cover, front left		Unclip the front left cover -1- at the sides.	Position the front cover -1- on the front centre console -15- and clip it laterally into the clips -3- .
2	Cover, front right	1	Unclip the front right cover -2- at the sides.	Position the front cover -2- on the front centre console -15- and clip it laterally into the clips -3- .
3	Clip	10		Inspect clip -3- and replace if necessary.
4	Cover cap (telephone trim panel)	1		
	Fastening screw	9		
6	Telephone trim panel	1	Insert a wire into the hole of the cover cap -4- and pull off the cover cap to the rear. Undo the fastening screws -5- and lift the telephone trim panel off the front cover -8- .	Insert the locking tabs of the telephone trim panel into the front cover -8- and screw it in place with the fastening screws -5- . Tightening torque: -2.3 Nm (1.5 ftlb.)- Press in cover cap -4- .
7	Installation frame for (telephone handset)	1		
8	Cover, front left (telephone carrier)	1	Unscrew fastening screws -5- , unclip the cover from the centre console at the side and remove to the rear.	Position cover at the centre console at the front, clip in at the side and fasten with the fastening screws -5- . Tightening torque: -2.3 Nm (1.5 ftlb.)-
9	Adapter	1	Unscrew fastening screws -5- and remove the adapter from the centre console at front.	Position the adapter at the centre console at the front -9- and fasten with the fastening screws -5- . Tightening torque: -2.3 Nm (1.5 ftlb.)-
10	Combi-single CD drive for navigation	1	See: ⇒ Rep. Gr. 911219; Removing and installing navigation unit CD drive	
11	Heating/air-conditioning control	1	See: ⇒ Rep. Gr. 870219; Removing and installing the heating/air-conditioning control	
12	Front trim	1	Unclip the front trim -12- towards the front and disconnect the plug connection of the rocker switch for the seat heating.	Connect the electrical connection, position the front trim -12- on the centre console -15- and press into place.

No.	Designation	Qty.	Removal	Installation
			Unclip the right cover -14- at the side and pull out to the rear.	Position the right cover -14- on the centre console or on the cover panel of the support frame at the front and clip the cover into the clips -3- at the side.
15	Centre console (front section)	1	Undo fastening screws -5- and lift the front of the centre console -15- off.	Position the front of the centre console -15- on the holder -18- or on the dashboard frame and secure with the fastening screws -5- .
16	Plug-in nut	4		Inspect and replace if necessary.
17	Collar nut	4		Tightening torque: -10 Nm (7.5 ftlb.)-
18	Holder	1		

Removing and installing centre console



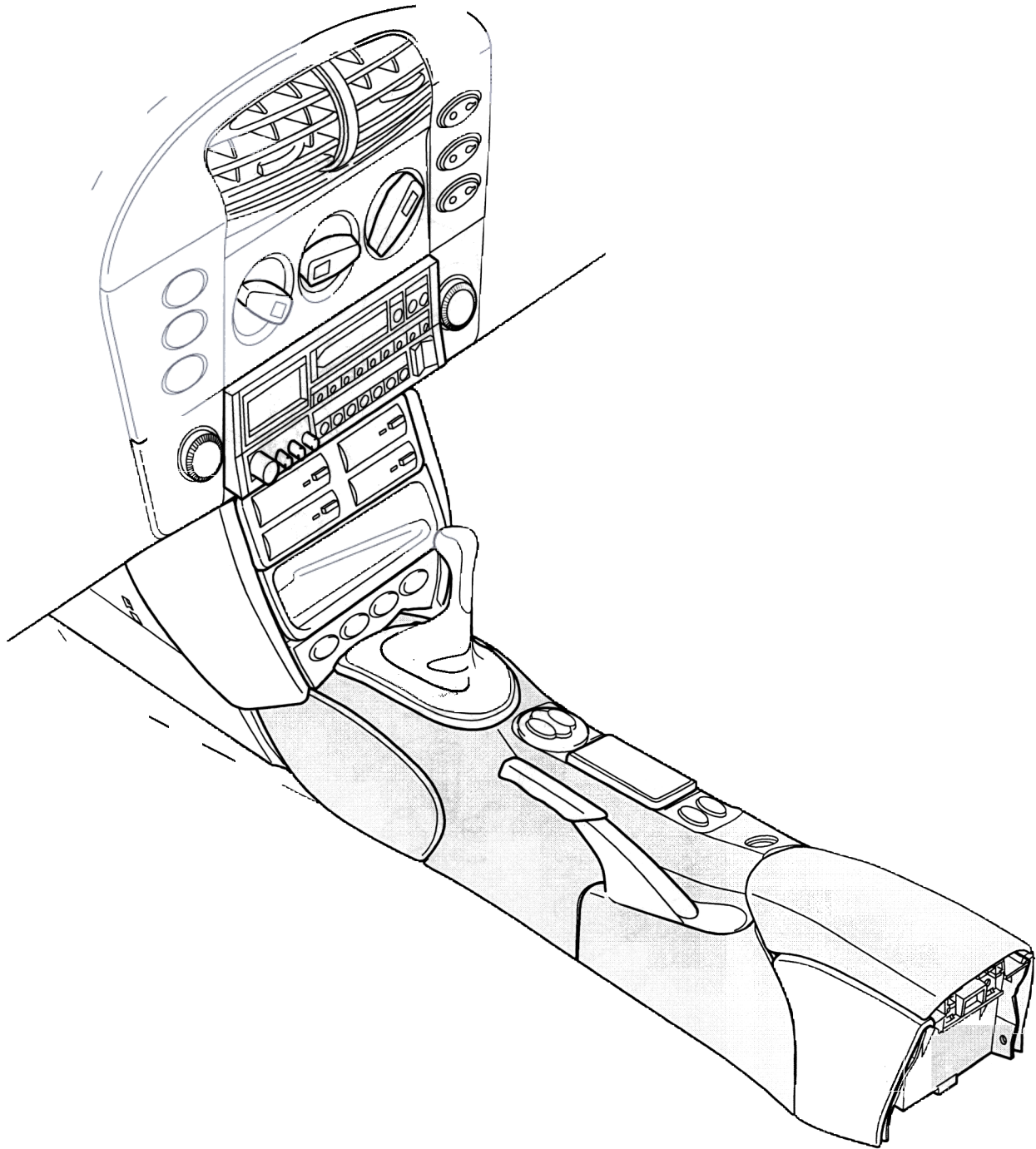


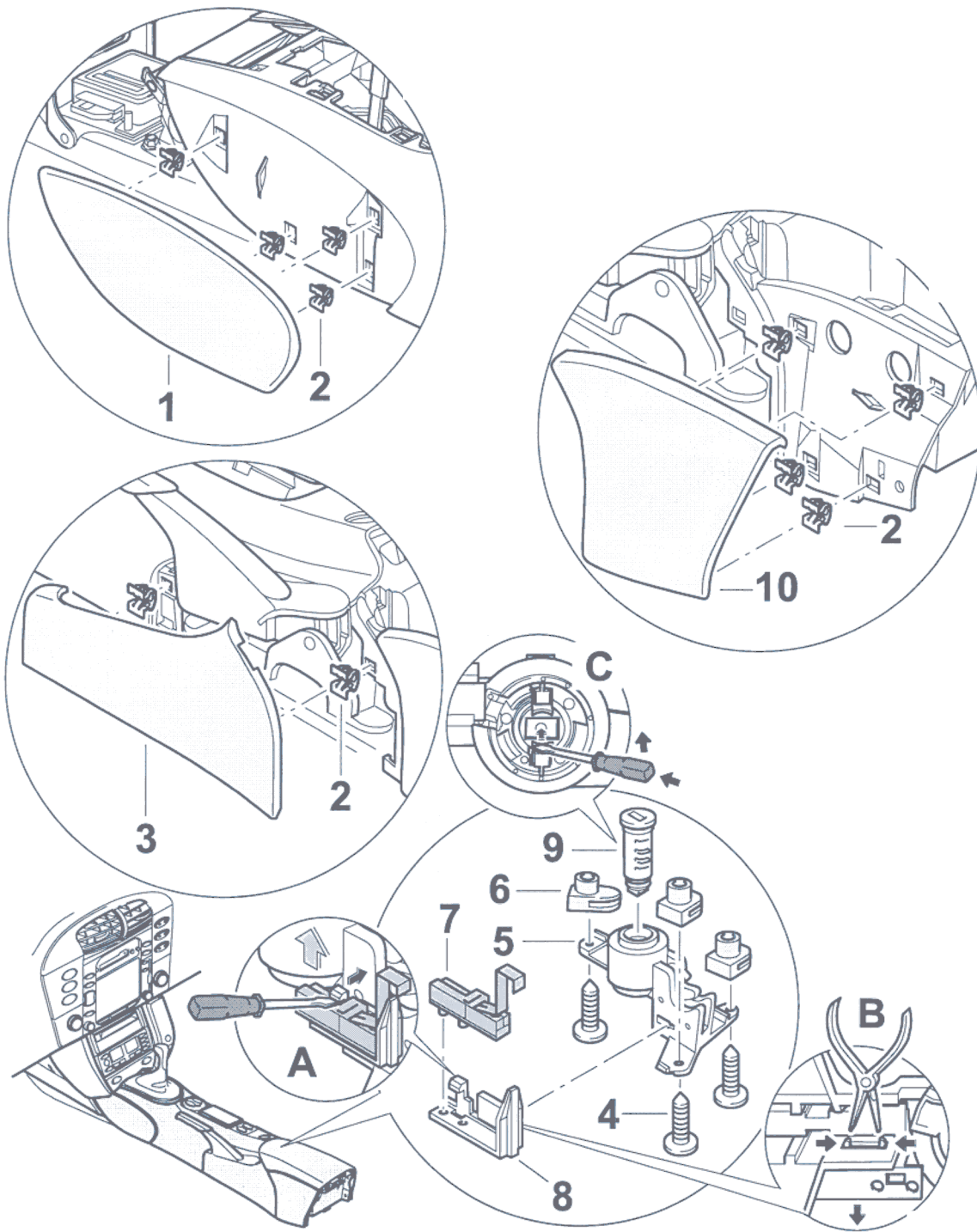
**Note!**

Before removal of the centre console, the centre console (front) must be partly disassembled. For this purpose, remove both the front covers and the front trim. ⇒ **68-9** "Removing and installing center console (front section)"

No.	Designation	Qty.	Removal	Installation
	Shift lever knob		Disengage from the clips -2- all the way round. Pull the shift lever knob -1- upwards and out.	
2	Clip	4		Inspect and replace if necessary.
3	Fastening screws	3	Undo.	Screw in.
4	Ashtray insert	1	Lift out.	Press in.
5	Expanding nut	2	Press out.	Press in.
6	Ashtray retaining bracket	1	Unclip the ashtray retaining bracket -6- upwards from the centre console and disconnect the electrical plug connections.	Connect the electrical plug connections, secure the ashtray retaining bracket -6- in the centre console and fasten with the fastening screws -3- .
7	Rubber insert	1		
8	Floor oddments tray	1	Undo fastening screw -3- from the floor oddments tray -8- .	Position the floor oddments tray -8- in the centre console and fasten with the fastening screw -3- .
9	Coin box	1	Unclip the coin box -9- and undo the fastening screw -3- underneath.	Tighten the fastening screw -3- and clip the coin box -9- into place.

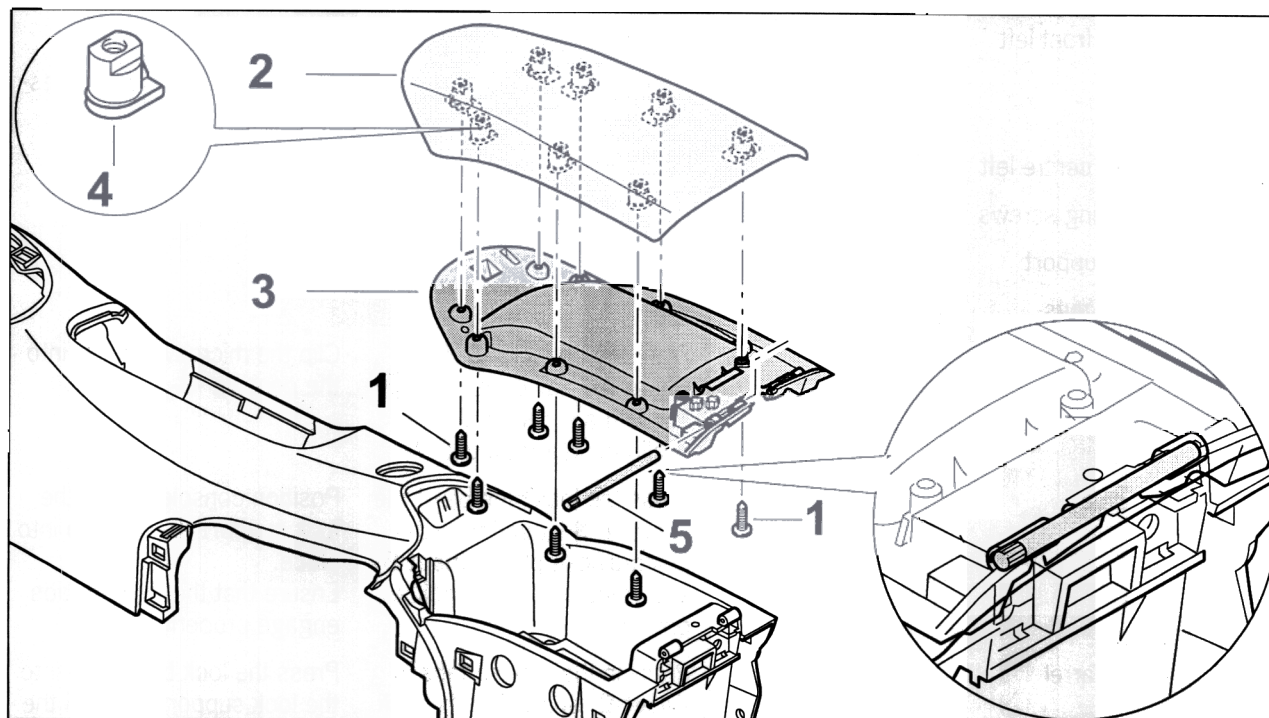
Disassembling and assembling centre console





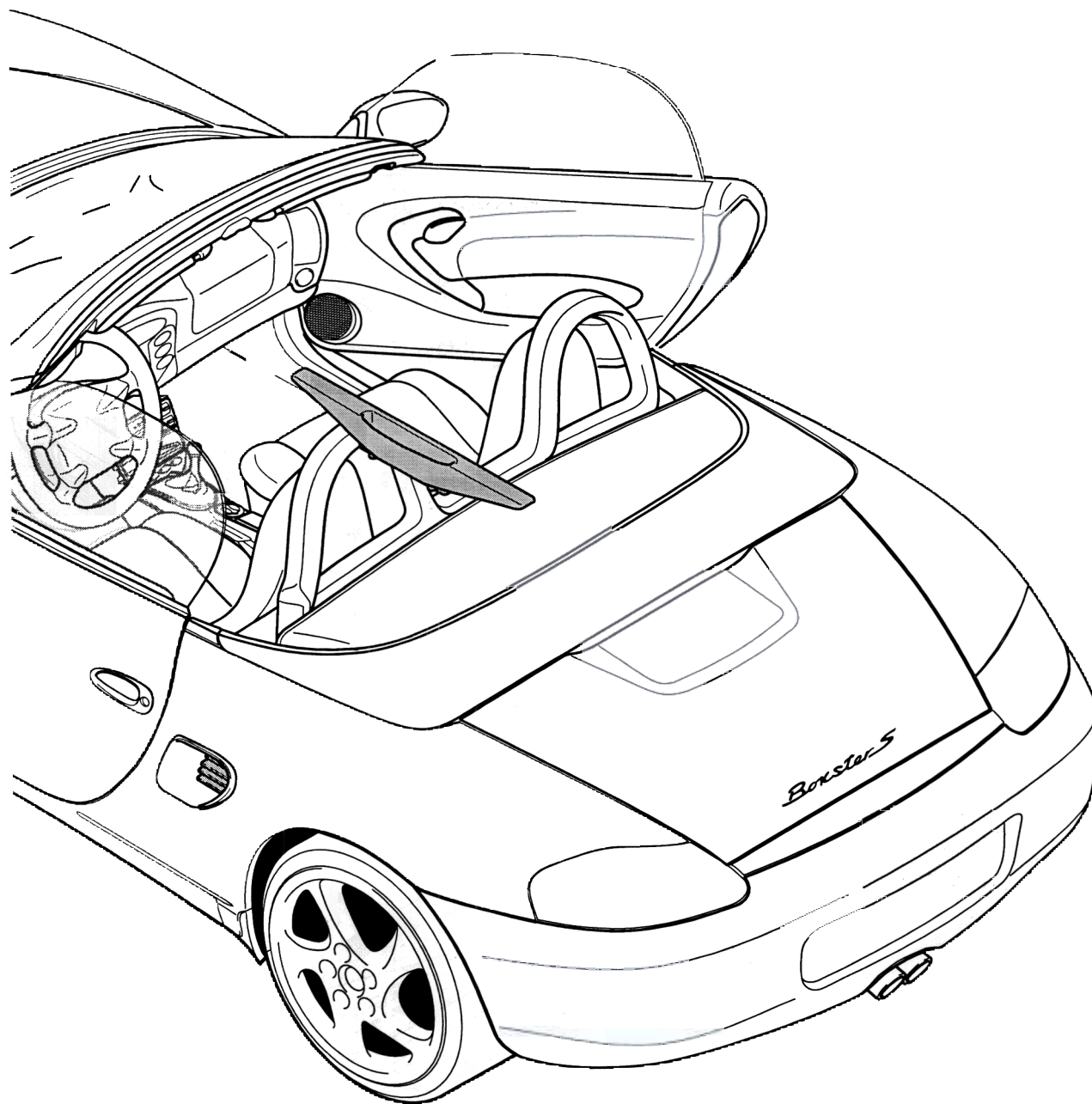
No.	Designation	Qty.	Removal	Installation
	Cover, front left			Clip in.
	Clip			Inspect and replace if necessary
3	Cover, centre left	1	Unclip.	Clip in.
4	Fastening screws	3		
5	Lock support			
6	Plastic nuts	7		
	Microswitch	1	From the console -8- (see: -inset A-), raise the locking tab with a screwdriver and unclip the microswitch -7- .	Clip the microswitch -7- into the console -8- .
8	Console	1	Press the locking tabs of the console -8- together with pointed-nose pliers -inset B- and guide out of the lock support -5- .	Position console -8- on the lock support -5- and clip into place. Ensure that the locking tabs engage properly.
9	Lock barrel	1	Press in the locking tabs in -inset C- and guide the lock barrel -9- upwards out of the lock support -5- .	Press the lock barrel -9- into the lock support -5- until the latter engages into the locking tabs.
10	Cover, rear left	1	Unclip.	Clip in.

Disassembling and assembling cover for the oddments tray

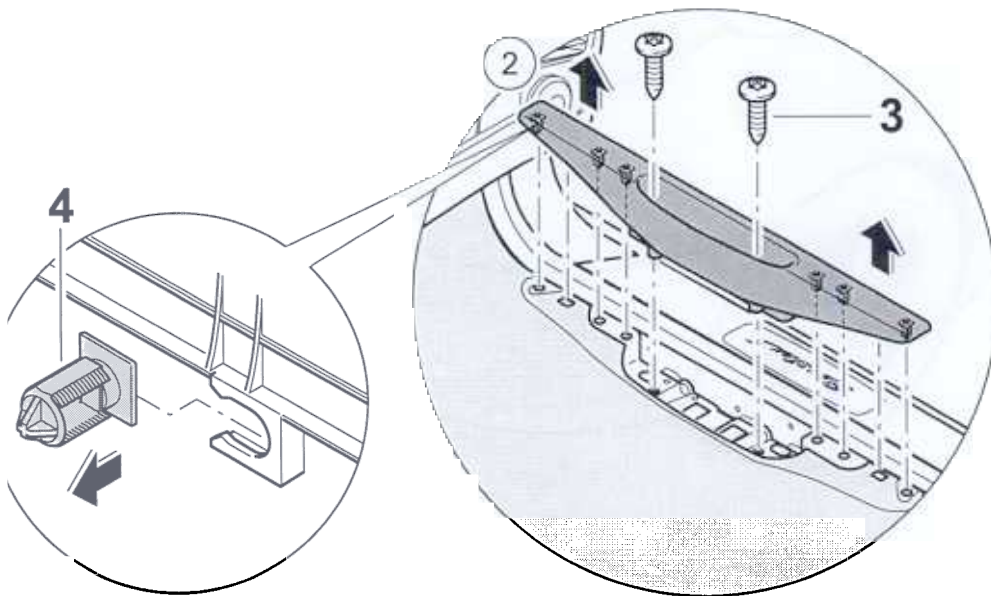
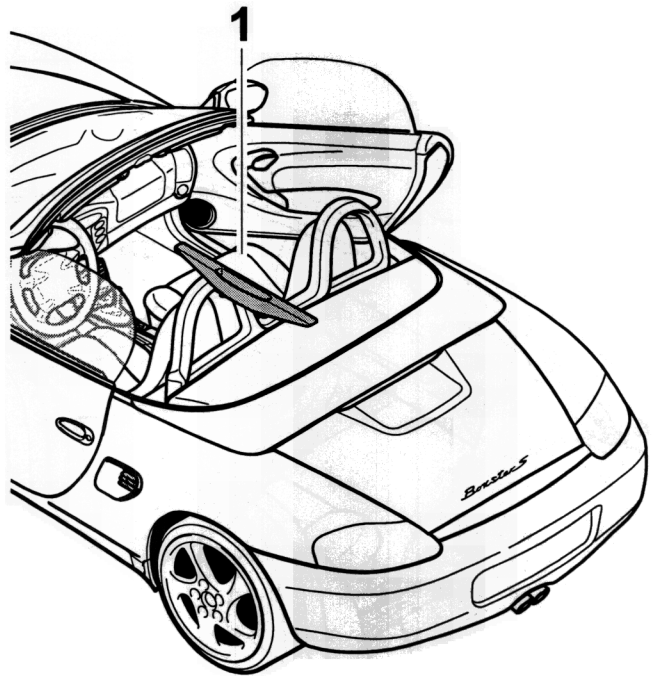
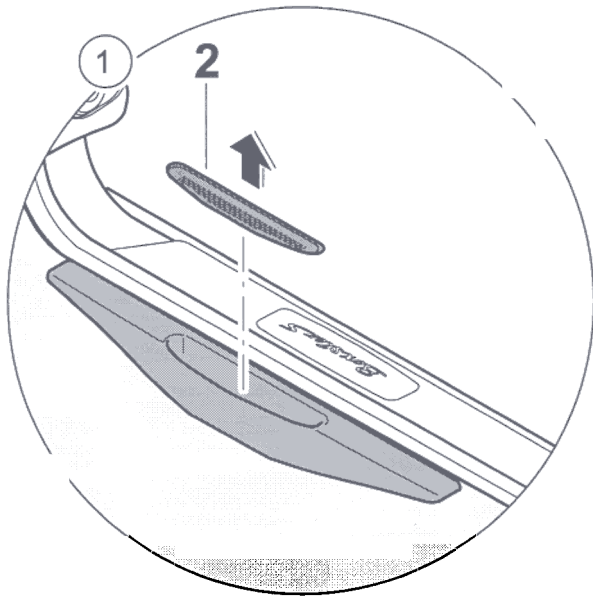


No.	Designation	Qty.	Removal	Installation
1		8		
2	Cover, oddments tray	1		
3	Lower section of oddments tray cover	1		
4	Plug-in nut	8		Inspect and replace if necessary.
5	Hinge pin	1	Press the hinge pin out -5- and remove lower section of oddments tray cover -3- .	Position lower section of oddments tray cover -3- on the middle bracket. Press hinge pin in -5- .

Removing and installing inner sill (passenger's side)

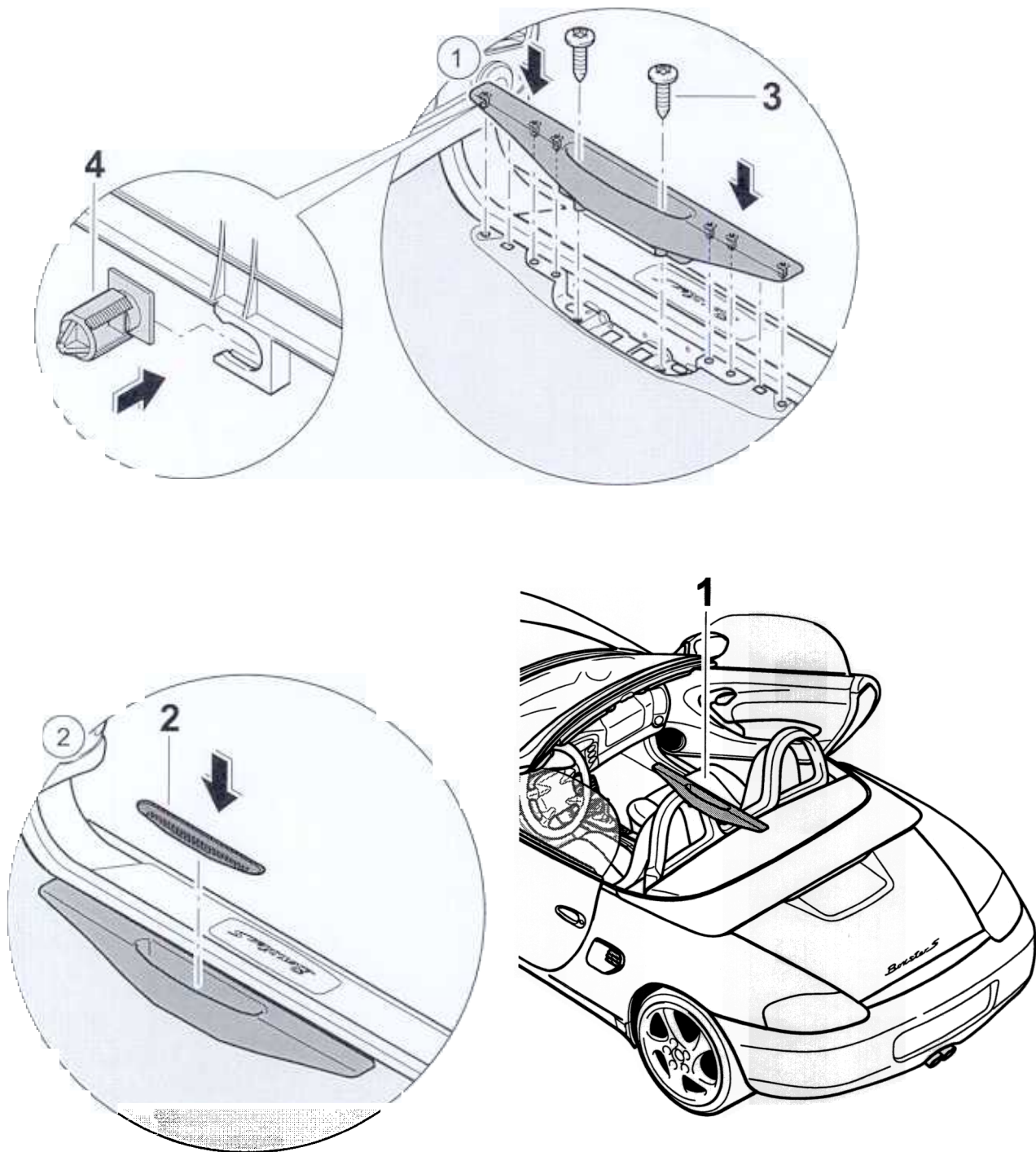


Removing inner sill



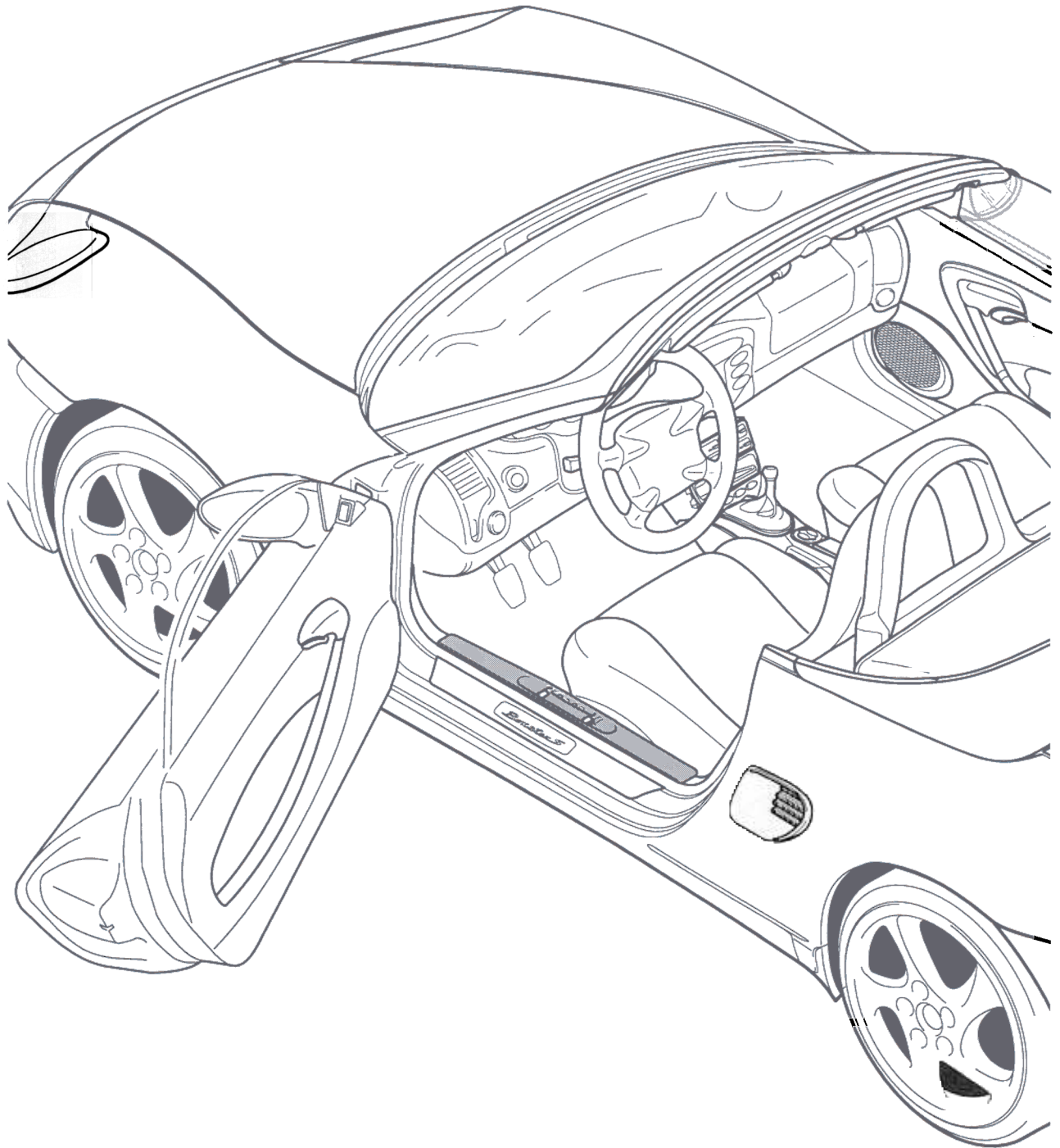
No.	Procedure	Instructions
	Undoing fastening screws -2-	Lift rubber mat -2- upward out of the oddments tray and unscrew the fastening screws -3- from the sill.
2	Removing sill -1-	Lift sill -1- upwards out of the bottom support with a plastic spatula and press out. Check fastening clips -4- , replace if necessary.

Installing inner sill

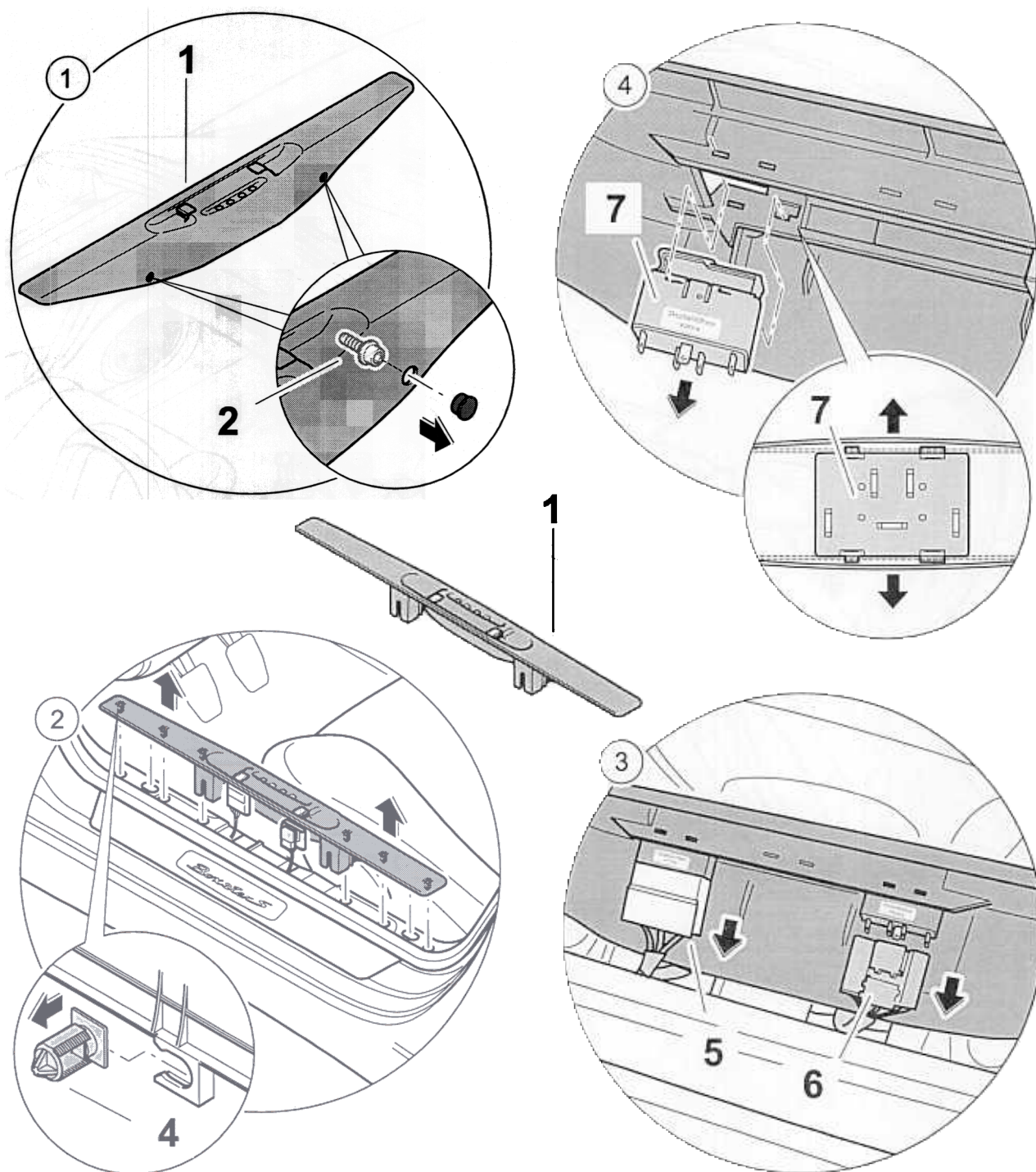


No.	Procedure	Instructions
2	Fastening sill -1-	Clip in new fastening clips -4- if necessary. Insert sill -1- downward into the lower support and engage. Screw in fastening screws -3- and lay rubber mat -2- into the oddments tray.

● **Removing and installing inner sill (driver's side)**

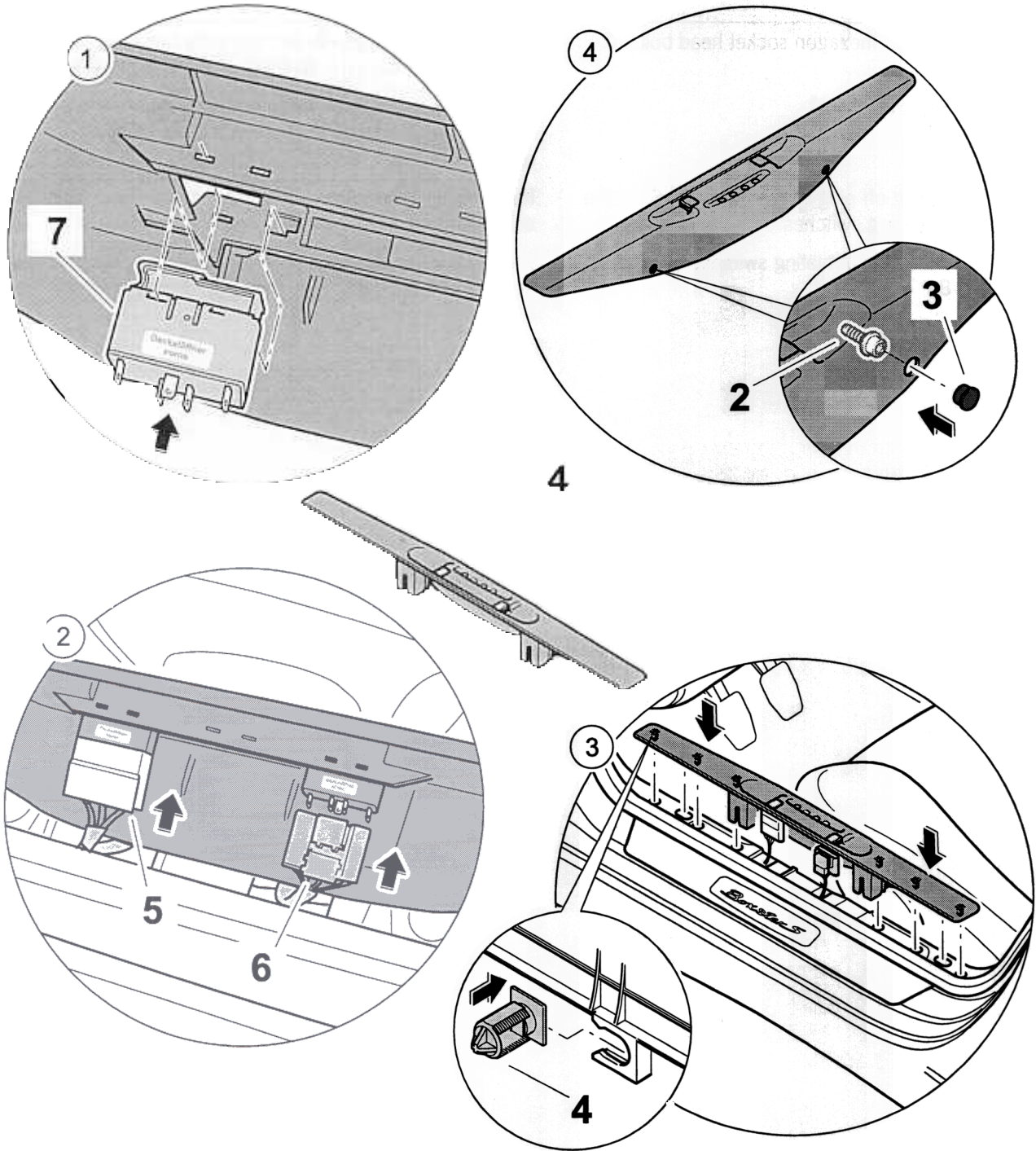


Disassembling release for front lid



No.	Procedure	Instructions
	Undoing hexagon socket head bolts -2-	Remove plastic plugs -3- and undo the hexagon socket head bolts -2- from the sill by approx. 4 - 5 threads.
2	Removing sill -1-	Lift sill -1- upwards out of the bottom support with a plastic spatula and press out. Check fastening clips -4-, replace if necessary.
3	Pulling off plug connections -5, 6- of the actuating switches	Pull off plug connections -5, 6- on the actuating switches of the lids.
4	Removing actuating switches of front lid -7, 8-	Press the fastening ribs of the sill -arrows- outward with a screwdriver and unclip the actuating switches of the front lid -7-.

Assembling release for front id



No.	Procedure	Instructions
	Installing actuating switches of front lid -7-	Clip the actuating switches of the front lid -7- with locking tabs into the fastening ribs of the sill.
2	Joining plug connections -5, 6- of the actuating switches	Push plug connections -5, 6- onto the actuating switches of the lids.
3	Putting on sill -1-	Clip in new fastening clips -4- if necessary. Insert sill -1- downward into the lower support and engage.
4	Tightening hexagon socket head bolts -2-	Screw in hexagon socket head bolts -2- of the sill by approx. 4 - 5 threads. Seal holes of the sill with plastic plugs -3- .

69 Safety regulations for airbag vehicles

The airbag units are pyrotechnical items in hazard class T 1. Handling, transport and storage of these units must conform to the explosives legislation.

The listed statutory requirements refer to the Federal Republic of Germany. The relevant valid regulations must be observed in all other countries.

The commencement of work with pyrotechnical items must be reported 14 days in advance to the Trade Supervisory Office (responsible authority).

Dispatch

Airbag units may only be dispatched in transport packaging officially approved for that purpose. Airbag units may not be transported with other hazardous goods.

Internally, they must always be transported in the luggage compartment or cargo hold of a vehicle using the above-mentioned transport packaging. They must not be transported in the passenger's compartment.

Storage

Airbag units must be stored in accordance with the second ordinance of the explosives legislation. This ordinance stipulates that small quantities of materials and objects may be stored at certain locations without special storage approval.

According to the Explosives Storage Directive of August 1997, these quantities are max. 10 kg (net) in a work room and max. 100 kg (net) in a storage room in the case of Class T 1 pyrotechnical objects. Airbag units must be kept in a locked place.

When storing airbag units, ensure that the airbag opening faces upwards (risk of injury due to airbag units being flung upward in the event of accidental ignition).

Airbag units must be stored in a dry place and must not be stored together with other hazardous goods (varnishes etc.).

Sale

Loose airbag units — referred to as airbag modules below — or airbag modules installed in a loose steering wheel must never become the actual (physical) property of the customer. The possession of loose airbag modules not installed in the vehicle is not permissible in the private sector.

Airbag modules may become the property of the customer only when installed in the vehicle.

Assembly and adjustment work

Inspection and assembly work may only be carried out by specialist staff.

Before working on the airbag system and also when working on neighboring parts where there is a risk because live parts are close to the airbag system, always implement the following safety measures:

1. Remove ignition key.
2. Disconnect and cover the negative terminal of the battery.

After the battery is disconnected, assembly work or work on the vehicle with a hammer or similar tools may not be started until after a waiting period of **1 minute**. This is necessary in order to interrupt the power supply to the airbag system and to ensure it is not triggered accidentally.

Airbag units must be fitted immediately after being removed from their storage location. On no account may they be left lying around unsupervised. If work is interrupted, airbag units must immediately be locked away again.

Airbag units must not come into contact with grease, oil, cleaning agents or similar substances.

Airbag units may not be exposed to temperatures above 90 °C – even for a short time.

Airbag units and control units which have fallen from a height of more than 0.5 m may no longer be installed.

No additional linings, stickers or similar may be attached to the steering wheel and in the vicinity of the passenger's airbag.

No changes may be made to the wiring and to the components of the airbag system.

The battery must always be disconnected before starting straightening and welding work with an electrical welding unit.

The battery must be removed in advance if you have to perform welding in the immediate vicinity of the control module.

Airbag components may not be repaired. They must always be replaced.

Note

Wash your hands after touching ignited airbag units.

General information

The airbag system is constantly monitored by a diagnosis unit in the triggering unit. Any fault is signalled by a warning light.

The warning light for the airbag system lights up in the event of a fault.

The airbag warning light lights for approx. 3 seconds after the ignition is switched on and goes out if no fault has been entered in the fault memory.

If it lights up again, this indicates a fault in the system. The fault can be read out with the Porsche System Tester 2.

Note

A period of 10 seconds is required to enable the triggering unit to identify all faults in the system. In order to guarantee that every possible fault source is checked during the vehicle test, the ignition must be switched on for at least 10 seconds.

The fault memory must be cleared following a fault in the airbag system and after it has been remedied.

The replacement of a component must be noted in the Guarantee and Maintenance booklet. To do this, attach the documentation number in a free panel intended for that purpose. The documentation number is attached to the replacement part as a tear-off sticker.

Exchanged airbag units or airbag modules must be taken into possession by the Porsche Centre or by dealers authorised by Porsche and must not be handed over to the customer (customer has no right to possess them). They must be destroyed, disposed of or returned to the manufacturer in accordance with the explosives ordinance and the hazardous materials ordinance.

When the steering wheel is exchanged, e.g. to install a steering wheel from the Tequipment product range, the airbag unit of the replaced steering wheel must be removed and destroyed, disposed of or returned to the manufacturer before the steering wheel is handed over to the customer.

Component exchange after airbag triggering

The following components must be removed and replaced after the airbag system is triggered:

After triggering of the airbag unit on the driver's side

- Contact unit

Airbag unit, driver's side

After triggering of the airbag unit on the passenger's side

- Airbag unit, passenger's side

Triggering unit after the **third** time the airbag is triggered

After triggering of the side airbag unit

Side airbag unit

Sensor for the side airbag unit after
the **third** time the side airbag is
triggered

69 68 Disposal of airbag units

Airbag units are pyrotechnical items and can pose an environmental hazard.

For this reason, non-ignited airbag units or entire vehicles must not be disposed of as normal scrap, refuse or in other final storage facilities.

The airbag units must first be rendered harmless by electrical ignition and while observing all precautionary measures, thereby preventing them being used incorrectly.

If the vehicle had suffered fire damage which caused the passenger's airbag to be ignited, additional ignition with the special tool 9257 must be carried out in order to ensure that only parts without pyrotechnical contents are scrapped.

In the case of airbag units which cannot be ignited or if the conditions for safe ignition are insufficient, always return the airbag units to Porsche or the respective importer in their original packaging.

Note

Country-specific statutory regulations and legislation based on them which go beyond these instructions must always be observed and take precedence over these instructions.

Safety measures when igniting airbag units

Ignition and preparations may only be carried out by skilled staff, supervised by a second responsible person.

Other normal accident prevention regulations must also be observed.

Fire airbag units only in their securely installed, original condition.

Carry out ignition only in suitable, free areas.

Use only the ignition tool intended for that purpose.

All loose objects must first be removed from the expansion area of the air bag.

Persons possibly affected must be informed of the resulting noise beforehand. Use ear protectors.

Maintain a safety distance by utilizing the entire cable length of the ignition tool.

Do not connect the voltage source until all other preparations are complete.

Choose a place in front of the vehicle. This also applies to persons not involved.

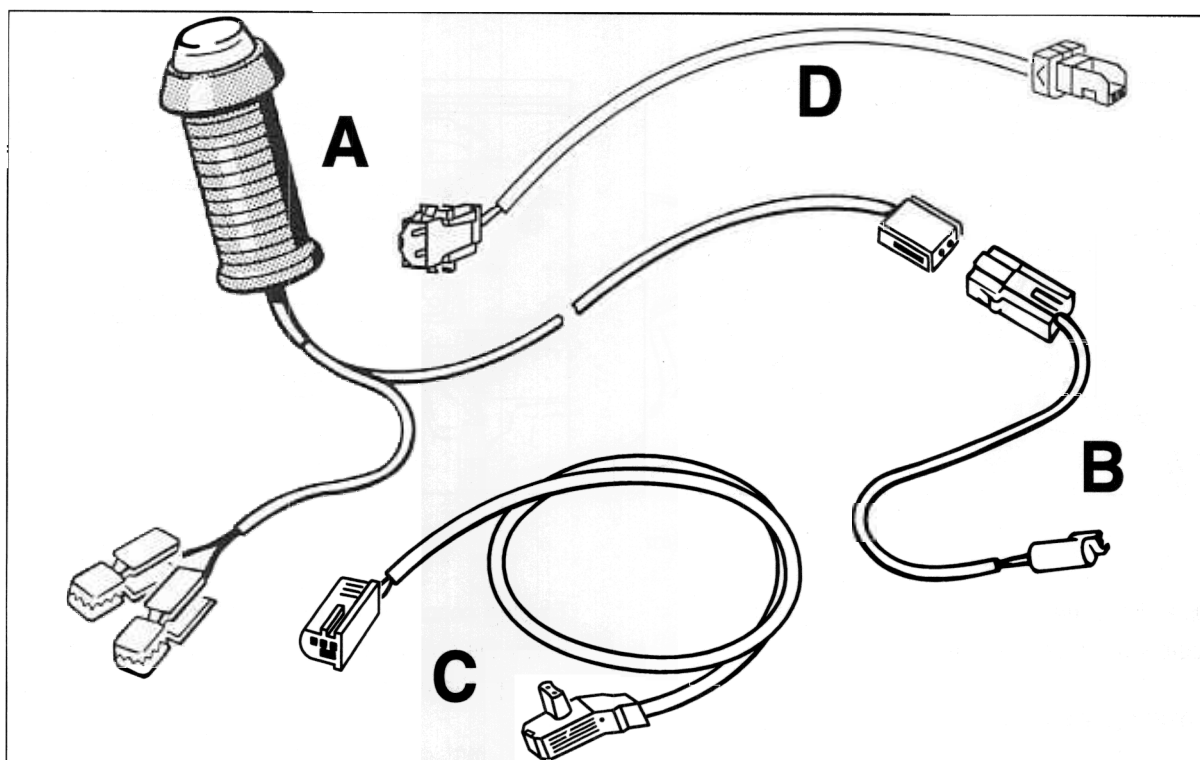
Perform ignition with the doors closed and the side windows open.

Do not approach the vehicle until after a waiting period (approx. 3 minutes) if ignition fails.

Allow airbag units to cool down under observation following ignition.

Avoid skin contact with ignited airbag units.

Tools



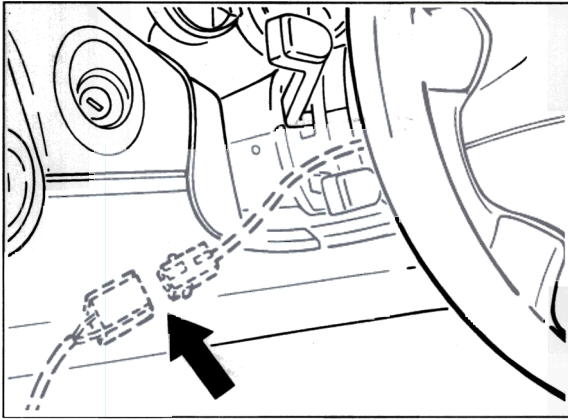
45_97

No.	Designation	Special tool	Explanation
A	Ignition device	9257*	
B	Ignition cable	9567	
C	Ignition cable	9566	
D	Ignition cable	9257/2	

Order if required

Connecting ignition tool

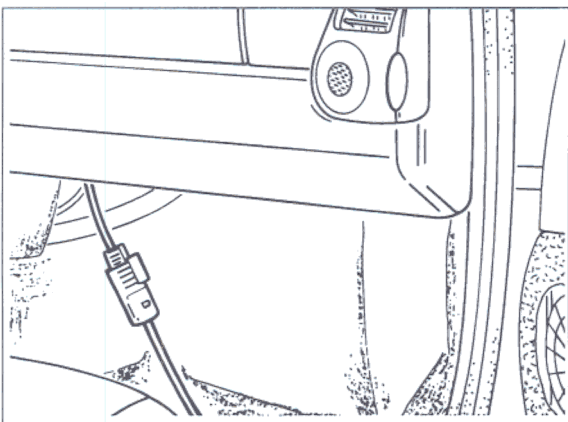
Driver's side



96-032

Directly to the 2-pole plug of the contact unit (below the steering column).

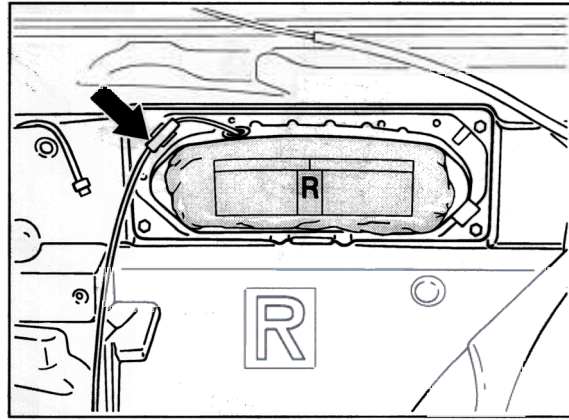
Passenger's side



96-098

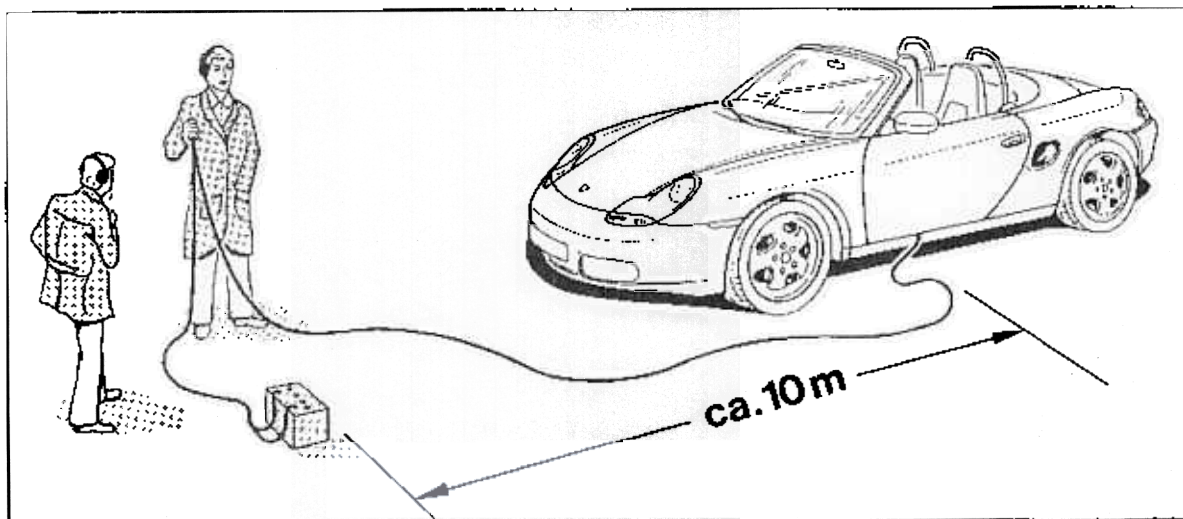
To plug connection with special tools 9567 and 9566.
Place the ignition device in front of the vehicle through the door gap.

Side airbag



97-163

To plug connection with special tool 9257/2.
Place the ignition device in front of the vehicle through the door gap.

Ignition

1096g

Attach the ignition device to a vehicle battery and press the button.

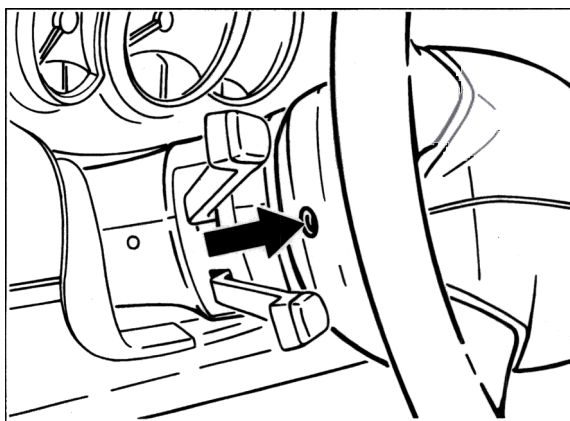
Note

The driver's and passenger's airbags and side airbags must be ignited separately.

69 58 19 Removing and installing the driver's airbag unit

Removal

1. Remove ignition key.
2. Disconnect the battery and cover terminal or battery.
3. Undo the fastening screws (2 ea.) with a socket wrench insert for inside Torx T 30 (at least 50 mm long).

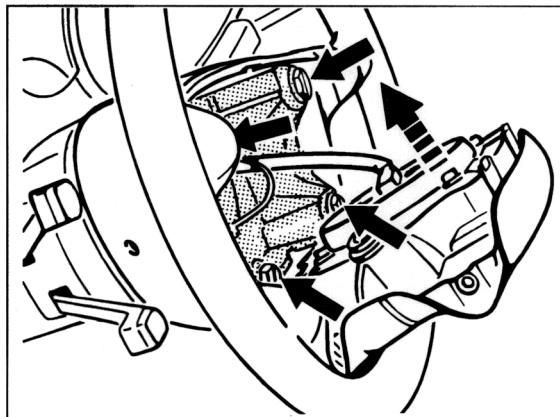


96-028

Note

The self-locking screws must be replaced every time they are undone. To do this, undo the retaining bracket of the airbag unit (4 screws) in the steering wheel.

4. Disconnect the electrical plug connection.



96-029

Note

The airbag unit must always be deposited so that the airbag opening faces upwards.

If removed for an extended period, the airbag unit must be kept in a locked place. Observe the safety regulations.

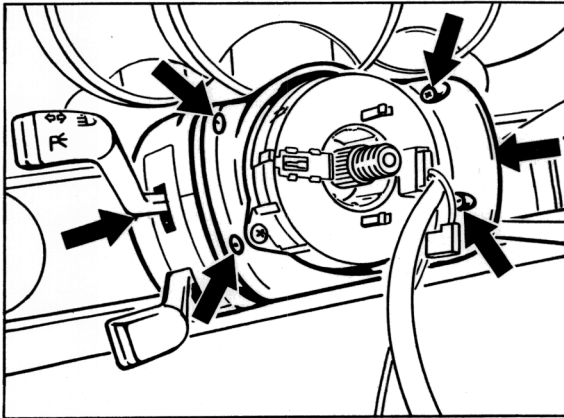
Installation

1. **Tightening torque** for fastening screws (2 screws M6 x 16): **10 Nm (7.5 ftlb.)**.
2. **Tightening torque** for retaining bracket (4 screws M5 x 20): **5 Nm (3.5 ftlb.)**.

69 66 19 Removing and installing the contact unit

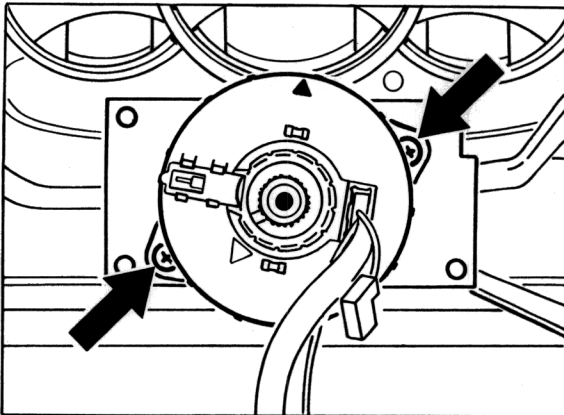
Removal

1. Remove the airbag steering wheel (see repair group 48).
2. Undo and remove the panel.



30-96

3. Undo the fastening screws of the contact unit.



31-96

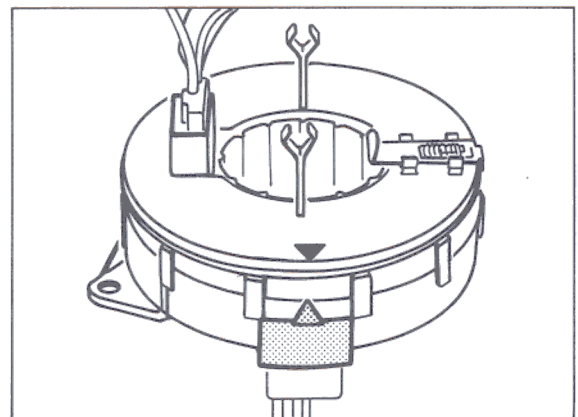
4. Pull forward and disconnect the electrical plug connections.
Remove the contact unit.

Note

To prevent unintentional turning of the contact unit (CU) with the steering wheel removed, the CU locks itself when the steering wheel is pulled back. Automatic unlocking of the CU also occurs when the steering wheel is placed in position.

Installation

1. With the front wheels still in straight-ahead position, remove the airbag steering wheel as described in point 1.
2. Ensure that the exact center position (arrows) of the contact unit is maintained.



1718-68

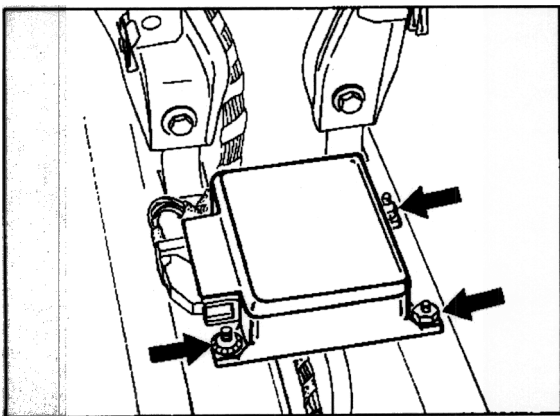
69 63 19 Removing and installing the ignition unit for the airbag

Removal

Note

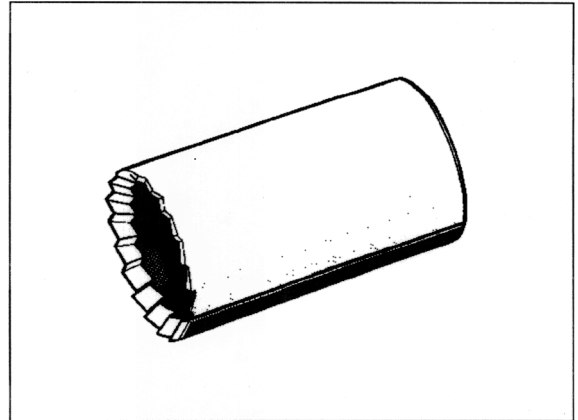
The airbag ignition unit **must not be removed with the plug plugged in. Waiting time** following ignition off (battery disconnection) and detachment of the plug connection during work on the airbag system at least **1 minute**. The ignition unit is located above the center console.

1. Remove the ignition key.
2. Disconnect the battery and cover the terminal or battery.
3. Remove the front cover of the center console. Fold up the safety bracket from the driver's side. Disconnect the plug connection from the ignition unit.



75-96

4. Undo the shear-off nut with the special tool 9259.



281-68

5. From the passenger's side, undo the shear-off nuts and M6 hexagon nut and remove the ignition unit.

Installation

Note

The fastening points on the body must be metallically bright.

Use a 1/4 inch Allen key to tighten the shear-off nuts.

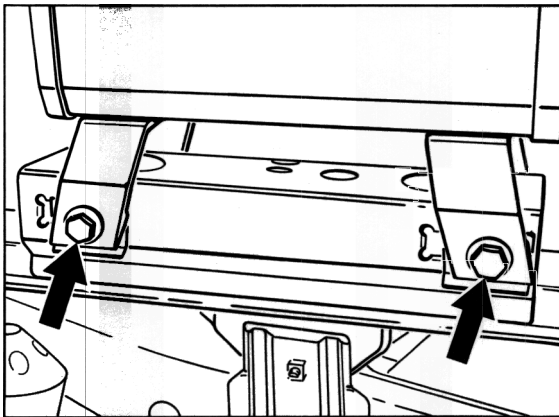
Tightening torque of the M6 hexagon nut:
10 Nm (7.5 ftlb.).

After installation of a new ignition unit, the ignition unit must be locked.

Please refer to Technical Manual Boxster, Volume 0 - Diagnosis, 69 01 Airbag diagnosis.

69 68 19 Removing and installing the passenger's airbag**Removal**

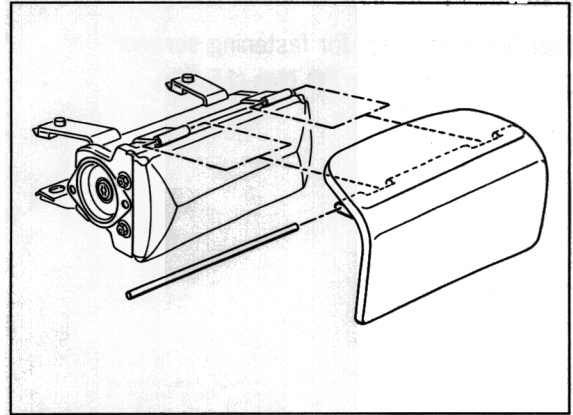
1. Remove the ignition key.
2. Disconnect the battery and cover the terminal or battery.
3. Remove the air guide at the bottom right.
4. Undo the airbag unit from below and remove it at the back to the passenger's seat.



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5. Disconnect the electrical plug connection.

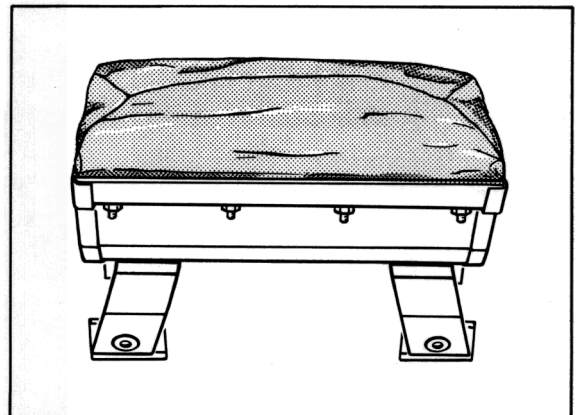
6. Pull out the hinge axis on the airbag unit and remove the panel.



73-96

Note

The airbag unit must always be deposited so that the airbag opening faces upwards.



74-96

If removed for an extended period, the airbag unit must be kept in a locked place. Observe the safety regulations.

Installation

Tightening torque for fastening screws
(2 screws M8 x 95): **20 Nm** (15 ftlb).

69 63 19 Removing and installing the side airbag unit

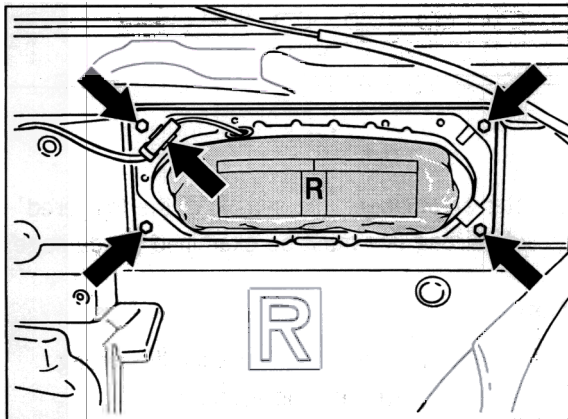
Removal

1. Remove ignition key.
2. Disconnect the battery and cover terminal or battery.
3. Remove door panel
(refer to Serv. No. 57 51 37).

Note

Behind the "Airbag" inscription lies a screw M5 x 10 that is fastened on the fastening clip of the side airbag unit.
Remove cover with "Airbag" inscription and unscrew the screw.

4. Disconnect electrical plug connection and undo fastening screws. Carefully remove side airbag unit from the door.

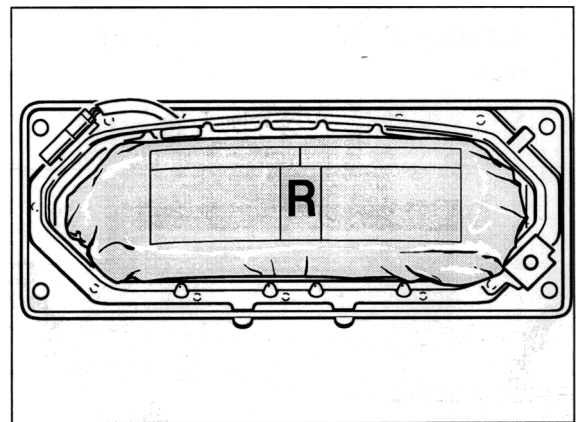


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Note

Since 03.11.1999, the fastening screws are micro-encapsulated. The fastening screws must always be replaced after removal.

The airbag unit must always be deposited so that the airbag opening faces upwards.



049_97

The airbag unit should be placed in a package or packed in film and, if removed for an extended period, stored under dry conditions in a locked room. Observe the safety regulations.

Installation

Left/right identification of the side airbag unit

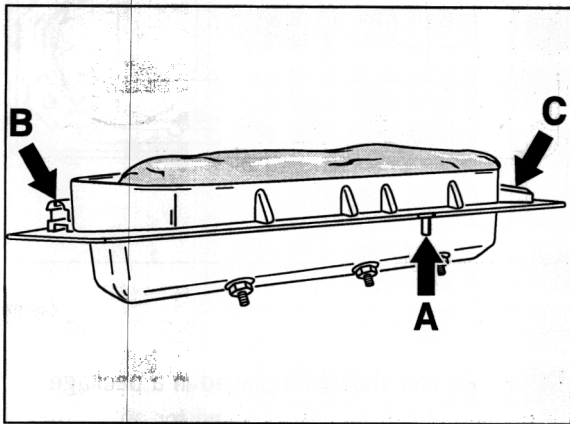
Inscription **R** = Right door

Inscription **L** = Left door

Locking pin (Figure A) must always point to the rear!

The wire connection point (Figure B) must always face the front!

Fastening clip M5 (Figure C) always to the rear!



050_97

1. The cover film behind the side airbag unit must not be damaged (protects against water leaking in).
2. Install airbag unit with the inscription "R" in the right-hand door and fasten. Engage electrical plug connection.
3. **Tightening torque** for fastening screws
(4 screws M6 x 16): **10 Nm (7.5 ftlb.)**
(1 screw M5 x 10): **6 Nm (4.5 ftlb.)**
Reinstall door trim panel.

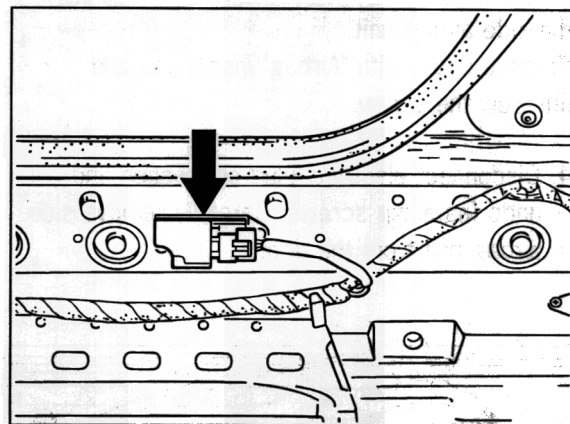
Sensor for side airbag unit

Note

Sensors for triggering the side airbag unit are fastened on the inner lower side member on the left and right-hand sides in the vehicle.

Removal

1. The cover strip and the support on the lower side member must be removed first.



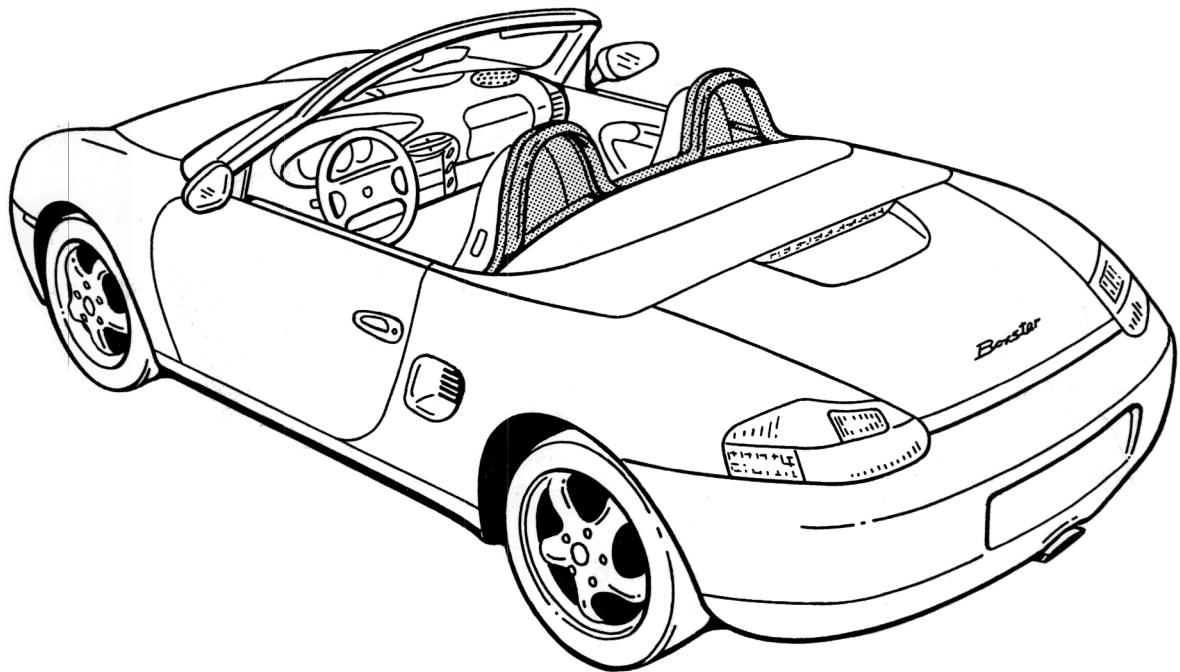
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2. After an accident, the sensor of the triggered side airbag unit must be examined for damage.

Note

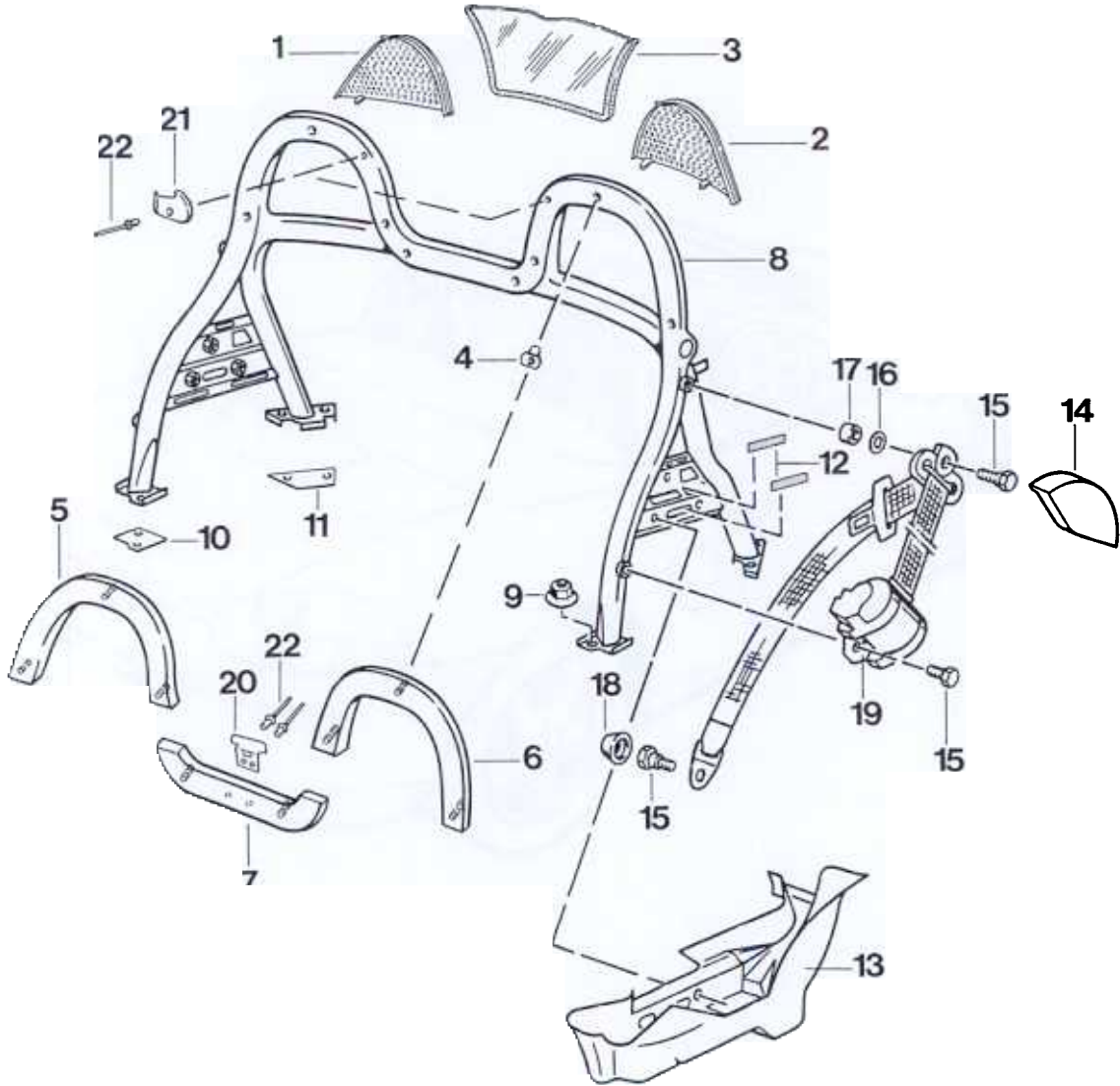
The sensor must be replaced after the airbag has been triggered for the third time.

69 72 19 Removing and installing roll-over bar



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Removing and installing roll-over bar



Removing and installing roll-over bar

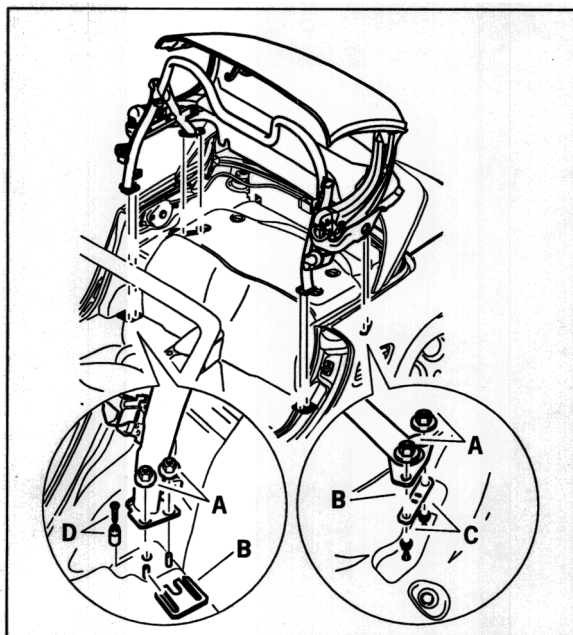
When installing the roll-over bar, comply with the special instructions and adjustment dimensions on Page 69 - 55.

No.	Designation	Qty.	Removal	Note:	
					Installation
1	Windstop, right	1	Unclip from the roll-over bar to the rear		Push in from the rear until the plastic tongues on the roll-over bar engage
2	Windstop, left	1	Unclip from the roll-over bar to the rear		Push in from the rear until the plastic tongues on the roll-over bar engage
3	Window	1	Open both locking levers on the roll-over bar and remove the window to the rear		Insert the window into the guides and push it forward into the locking devices until the window engages
4	Plastic nut	8	Press out		Check and replace if necessary.
5	Cover, right	1	Remove		Position the cover at the plastic nuts and press in.
6	Cover, left	1	Pull off cover		Position the cover at the plastic nuts and press in.
7	Cover, centre	1	Pull off cover		Position the cover at the plastic nuts and press in.
8	Roll-over bar	1	Undo collar nut (item 9)		Insert roll-over bar with shim plates (item 10), calibrate and screw tight with collar nut (item 9). Use correct adjustment dimensions.
9	Collar nut	8	Unscrew		Tightening torque: 23 Nm (17 ftlb.)

No.	Designation	Qty.	Removal	Note:	Installation
10	Shim plates, front	0-7	When removing, note the number of shim plates.		Use correct adjustment dimensions, Page 69 - 55
11	Shim plates, rear	0-7	When removing, note the number of shim plates.		Use correct adjustment dimensions, Page 69 - 55
12	Double-sided adhesive tape approximately 5x150mm	4			Replace
13	Water tray	1	Carefully pull off from roll-over bar.		Position the predefined screwing points on the water tray with double-sided adhesive tape at the roll-over bar and press on.
14	Cover cap	1	Remove		Attach
15	Hexagon-head bolt	3	Undo		Tightening torque: 50 Nm (37 ftlb.)
16	Plastic washer	1			
17	Sleeve	1			
18	Cover cap	1			
19	Belt	1			Screw tight with the hexagon-head bolt (item 15).
20	Retainer	1			Position it on the centre cover (Item 7) and secure it with 3.2 mm tubular rivets.
21	Right-hand locking device	1			Position locking device at the hole provided and secure it with 3.2 mm tubular rivets.
22	Tubular rivets	6			

Additional Notes on Adjustment of the Roll-over Bar

Adjusting the roll-over bar in the vehicle

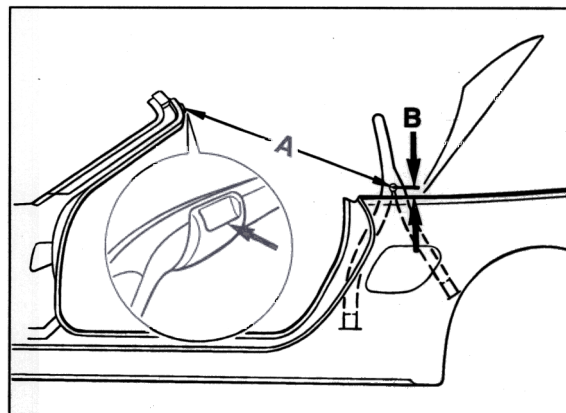


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The roll-over bar was measured for the vehicle and fixed with locating pins at the factory.

Adjustment procedure: Unscrew the collar nuts (**Item A**) at the front and rear screw mounting points. Lift the roll-over bar and add or remove lining plates (**Item B**) according to the required adjustment. The sleeves (**Item C**) must not be removed. The oval-head screw and the fitting pin (**Item D**) may be removed only if the roll-over bar is replaced.

After fitting the roll-over bar into the vehicle, it is necessary to adjust the roll-over bar. This is achieved by inserting shim plates at the front and rear screwed points until dimensions A and B are achieved.



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Dimension A = 799 ± 1 mm

Dimension A (slant measure) is measured from the centre of the threaded bore for the belt deflector fastening point to the centre of the convertible top pin housing (see figure).

Dimension B = 39 ± 1 mm

Dimension B is measured from the centre of the threaded bore for the belt deflector fastening point to the upper edge of the rear side panel (see figure).

Tighten the collar nuts (**Item A**).

Tightening torque: 23 Nm