

Technical Manual

*Boxster*

Technical Information

Repair

Contents:

Group 7

Body equipment, interior

WKD 483 521 31

## Supplement Overview

Supple- ment	Edition	Topic	Article number
	05/1996	Basic edition	WKD483521
2	08/1996	Disassembling and assembling the dashboard	WKD 483521.02
10	04/1997	General supplement on the seat	WKD 483521.10
14	08/1997	Removing and installing covering for front back-rest	WKD 483521.14
16	16/1997	Removing and installing cowl panel cover	WKD 483521.16
26	04/1999	Disassembling and assembling door trim panel (new bowden cable)	WKD 483521.26
31	08/1999	Folder separation Groups 6 and 7	WKD 483521.31
36	12/1999	General remarks on the dashboard	WKD 483521.36
37	05/2000	General supplement	WKD 483521.37

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### 0 Foreword

#### Foreword

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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.



#### **Danger!**

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



#### **Warning!**

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



#### **Caution!**

***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.

<b>Group 0:</b>	<b>Entire vehicle – General</b>	<b>0</b>
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<b>Group 0:</b>	<b>Diagnosis</b>	<b>0</b>
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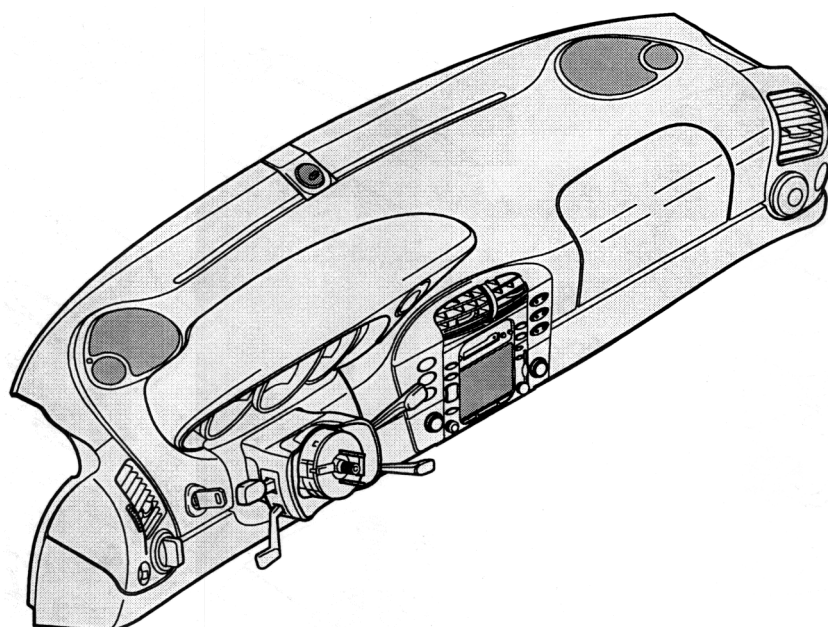
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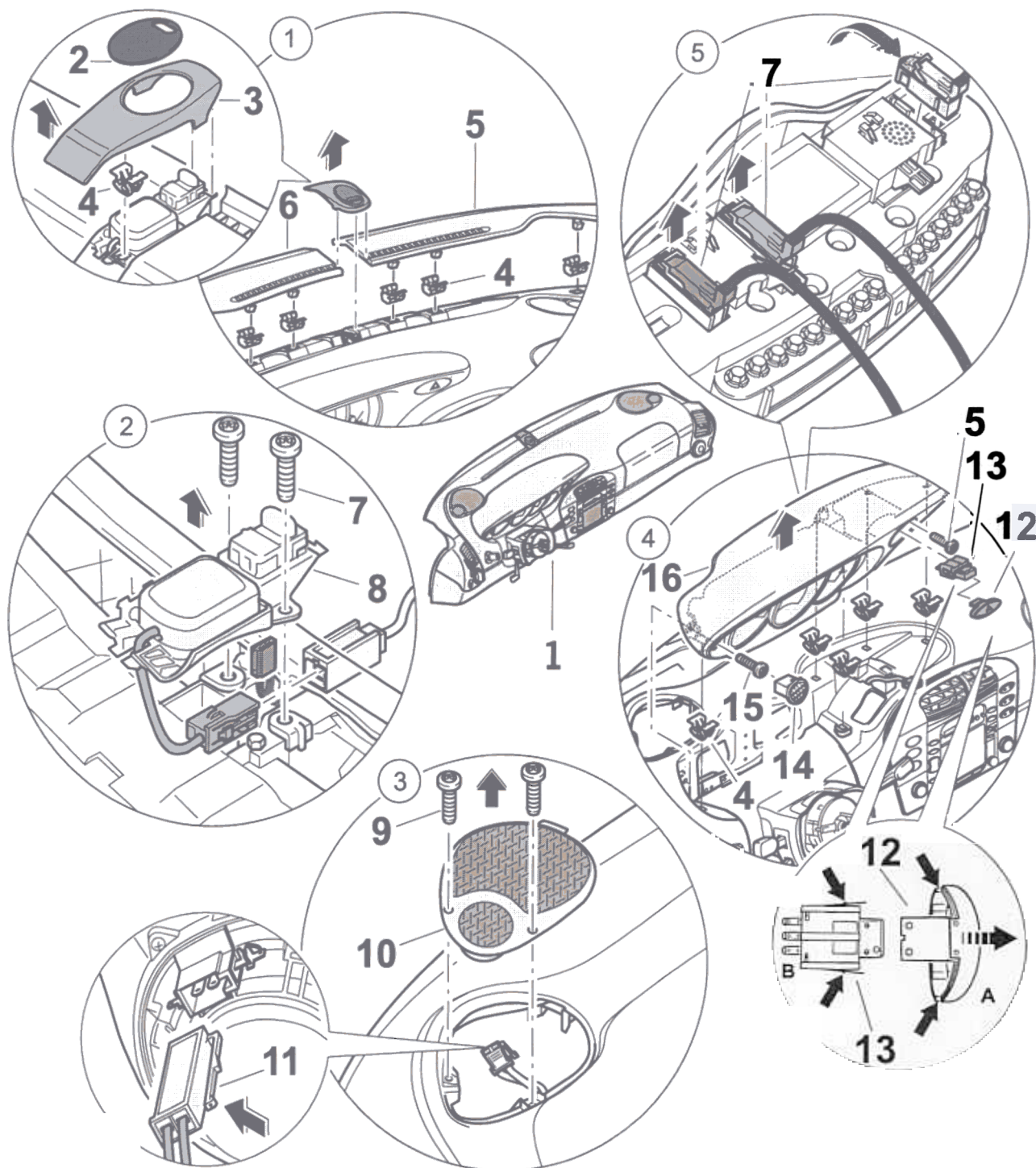
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## Disassembling and assembling the dashboard





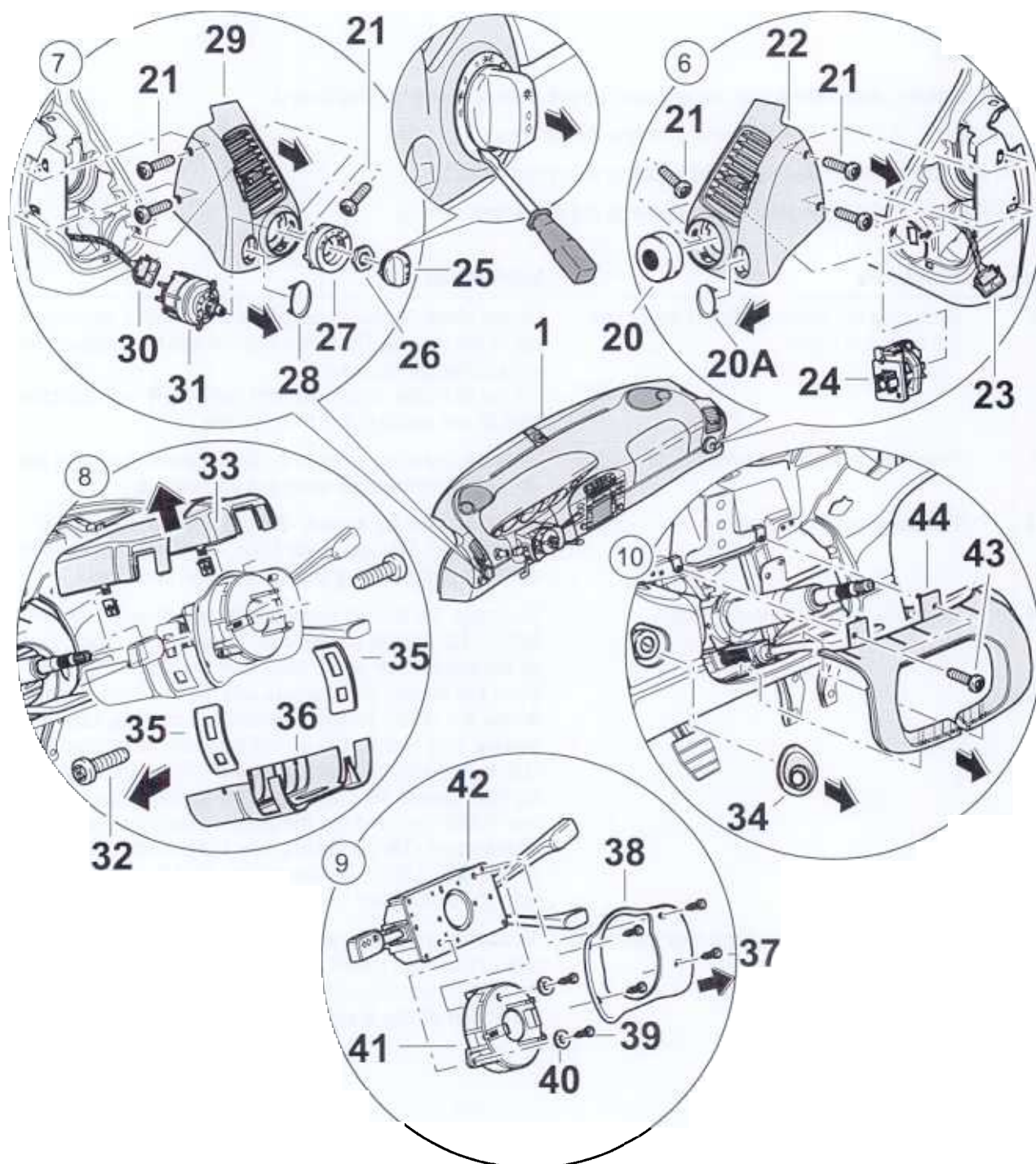
# Disassembling the dashboard



**Note!**

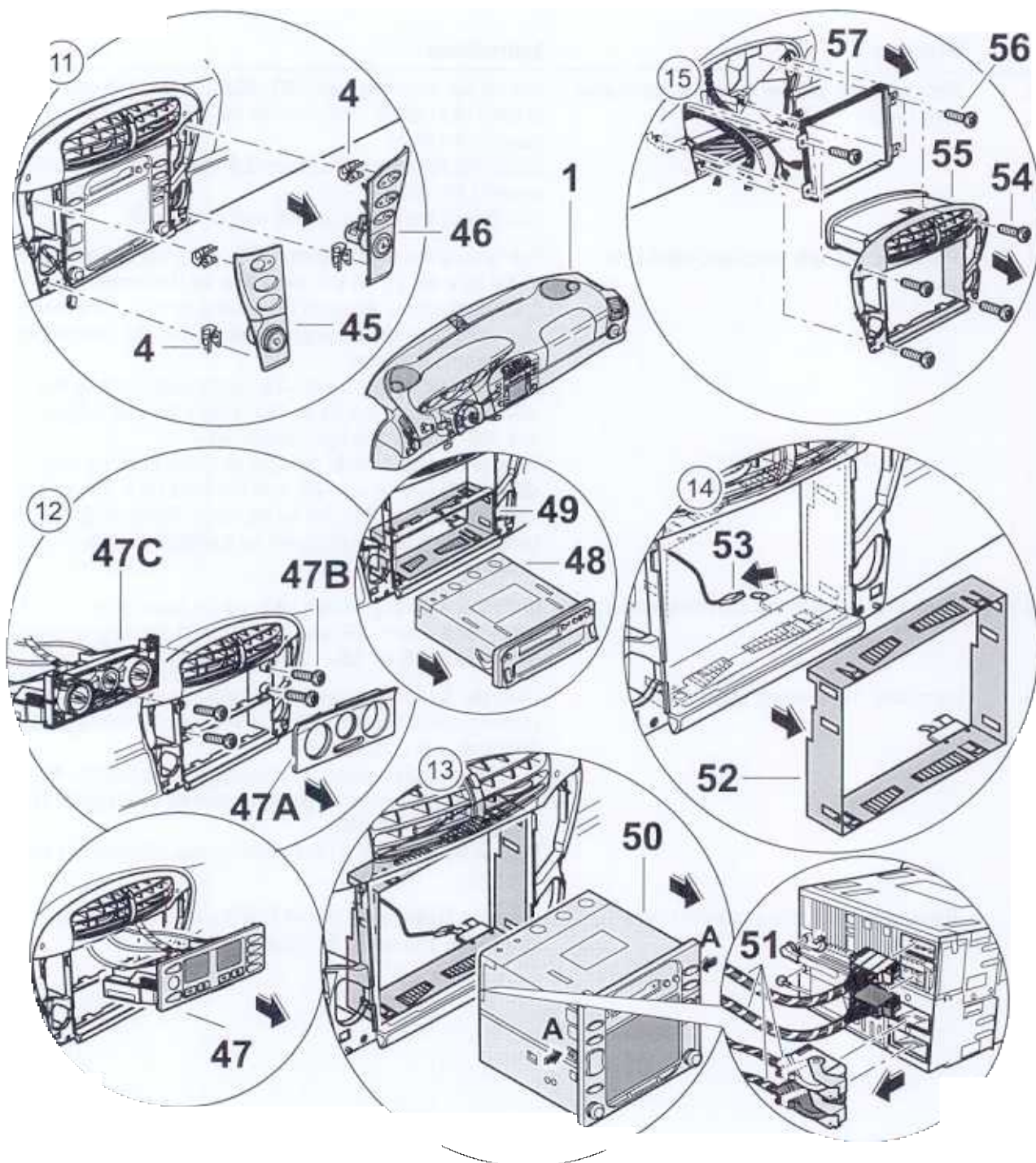
- ♦ The following components must be removed before disassembling the dashboard.
- ♦ ⇒ Rep. Gr. 705719; Removing and installing A-pillar trim.
- ♦ ⇒ Rep. Gr. 695819; Removing and installing the driver's airbag
- ♦ ⇒ Rep. Gr. 695919; Removing and installing the passenger's airbag

No.	Procedure	Instructions
	Removing the alarm readiness cover and the defroster cover	Lift the alarm readiness cover <b>-2-</b> and unclip it upwards out of the clip <b>-4-</b> . The lens cover <b>-3-</b> can be unclipped for replacement purposes. Lift the defroster covers left and right <b>-5, 6-</b> with a plastic spatula and unclip out of the clips <b>-4-</b> .
2	Removing the alarm readiness unit	Undo the fastening screws <b>-7-</b> , lift the alarm readiness unit <b>-8-</b> and disconnect the electrical connection.
3	Removing the loudspeaker	Undo the fastening screws <b>-9-</b> , raise the outside of the loudspeaker <b>-10-</b> and guide it out. At the plug connection <b>-11-</b> , press the locking tab <b>-arrow-</b> and disconnect.
4	Removing the instrument mount	To remove the hazard warning light switch: switch on the switch <b>-12-</b> (button comes out). There are small openings on the sides which now project over the instrument cowl. Insert two narrow screwdrivers into the openings <b>-arrow A-</b> and pull off the button towards the front. The hazard warning light switch <b>-13-</b> is held in the instrument bridge <b>-16-</b> by two locking hooks <b>-arrow B-</b> . Press the right locking hook toward the switch, grip the button holder with a pair of pliers and pull out the switch toward the front. Pull off the cover <b>-14-</b> on the left side and undo the fastening screws <b>-15-</b> . Lift the instrument mount <b>-16-</b> on the left and right and unclip from the clips <b>-4-</b> .
5	Disconnecting the electrical plug connection	Disconnect the electrical connection <b>-17-</b> on the rear side of the instrument mount. To do so, press the locking tab of the plug connection and unlock the locking lever in the <b>-direction of the arrow-</b> .



No.	Procedure	Instructions
	Removing the side vents and the temperature sensor	<p>Pull off the covering caps <b>-20, 20A-</b>. Undo the fastening screws <b>-21-</b> at the side, remove the side vent <b>-22-</b> towards the front.</p> <p>Unclip the temperature sensor <b>-24-</b> out of the dashboard towards the rear.</p> <p>Disconnect the electrical plug connection <b>-23-</b>.</p>
7	Removing left side vents and main light switch	<p>Pull forward the control button <b>-25-</b> of the light switch <b>-31-</b> as far as it will go <b>-in the direction of the arrow-</b> towards the front. Press in the locking device at the lower side using a small screwdriver and remove the control button towards the front.</p> <p>Undo the fastening screws <b>-21-</b> at the side, remove the side vent towards the front. Disconnect the plug connection <b>-30-</b> of the main light switch <b>-31-</b>.</p> <p>In order to disassemble the side vent, the covering cap <b>-28-</b>, the fastening nut <b>-26-</b> and the inner race <b>-27-</b> of the main light switch <b>-31-</b> can be removed. Remove light switch <b>-31-</b> from the side vent by turning it slightly in clockwise direction.</p>
8	Removing the steering column switch cover	<p>Undo the fastening screws <b>-32-</b> on the lower steering column switch cover <b>-36-</b> and remove both steering column covers <b>-33, 36 or 35-</b>.</p>
9	Removing the steering column switch	<p>Undo the fastening screw <b>-37-</b> in the cover <b>-38-</b> and the steering column switch <b>-42-</b> and remove. Disconnect the electrical plug connection.</p> <p>In order to disassemble the steering column switch <b>-42-</b>, the slip ring <b>-41-</b> can be disconnected by undoing the fastening screws <b>-39, 40-</b>.</p> <p>See: ⇒ Rep. Gr. 695419; Removing and installing the contact unit.</p>
10	Removing the steering column cover	<p>Undo the fastening screw <b>-43-</b> in the steering column cover <b>-44-</b> and unclip the cover upwards.</p>

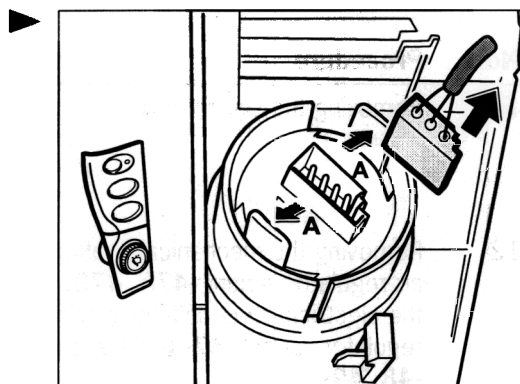




No.	Procedure	Instructions
	Removing the switch cover	Unclip the switch cover on the left and right <b>-45, 46-</b> towards the front. Disconnect the electrical plug connections of the tip switches.
12	Removing the mechanical heating and fresh air regulator variant <b>-47A, 47B, 47C-</b> , the electrical air-conditioning and heating regulator variant <b>-47-</b> and the car radio <b>-48, 49-</b>	See: ⇒ Rep. Gr. 851019; Removing and installing mechanical heating and fresh-air control. See: ⇒ Rep. Gr. 870219; Removing and installing the heating/air-conditioning control. See: ⇒ Rep. Gr. 912019; Removing and installing the car radio.
13	Removing display and operator control unit (PCM)	Press in and hold both spring clips <b>-arrow A-</b> . Pull out the display and operator control unit <b>-50-</b> . Disconnect the electrical plug connections <b>-51-</b> on the rear side of the display and operator control unit. See: ⇒ Rep. Gr. 911019; Removing and installing display and operator control unit (PCM).
14	Removing the PCM retaining bracket	Raise the retaining clip <b>-arrow B-</b> of the retaining bracket <b>-52-</b> and guide it out of the cut-out of the central vents <b>-55-</b> . Pull off the ground cable <b>-53-</b> .
15	Removing the central vent	Undo the fastening screws <b>-54-</b> and guide the central vent <b>-55-</b> out of the dashboard <b>-1-</b> . Undo the fastening screws <b>-56-</b> from the inside of the retaining bracket <b>-57-</b> .

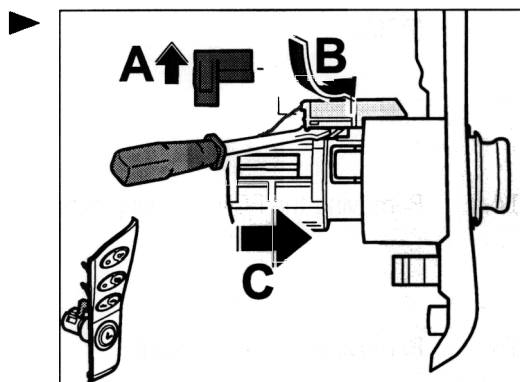
### Removing the regulator for wiping interval

- 1 - Disconnect the electrical plug connection.
- 2 - Press the locking tabs of the regulator for the wiping interval -arrows A- outwards and guide the regulator out of the front cover towards the front.



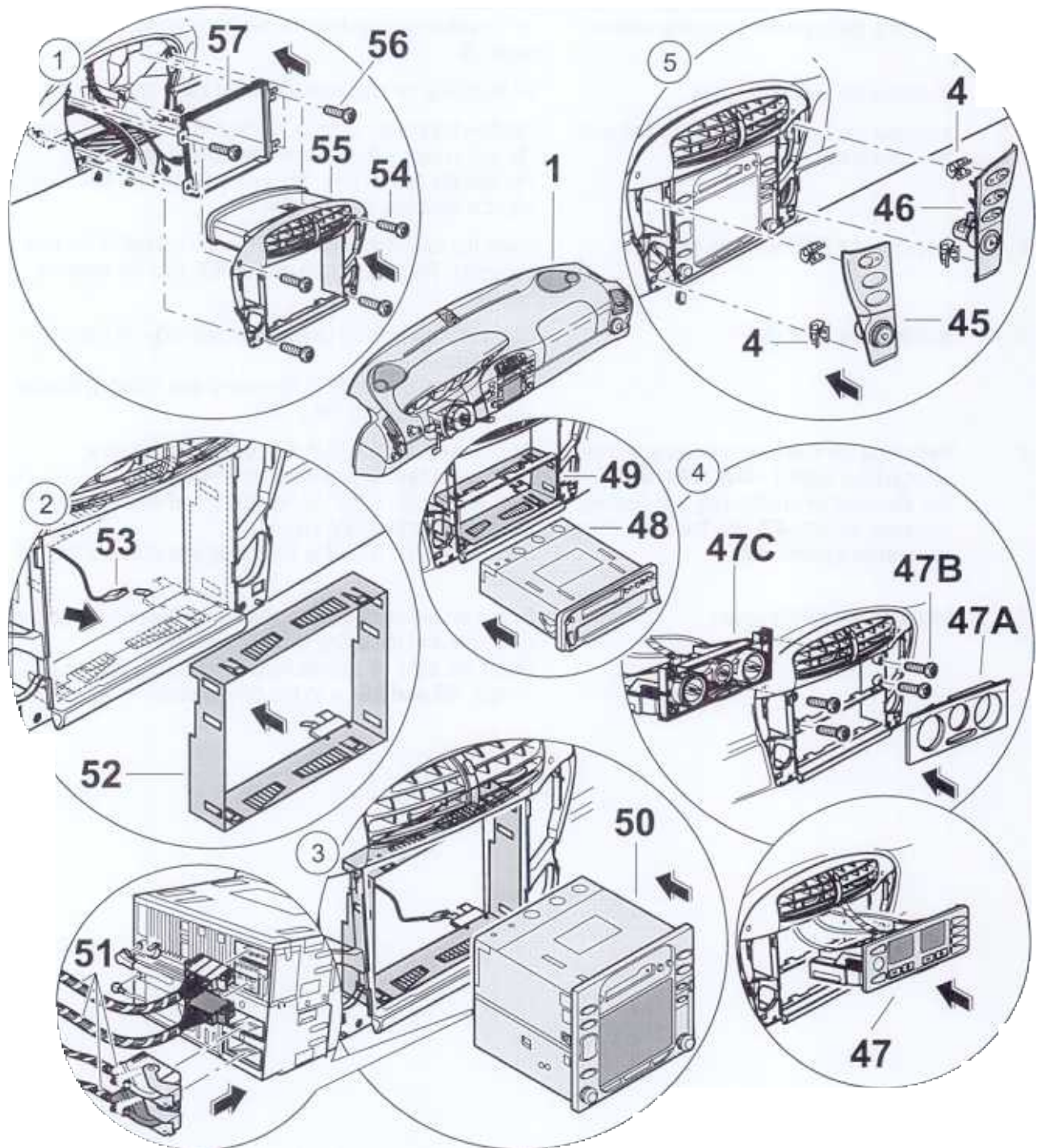
### Removing the cigarette lighter

- 1 - Disengage the cover -arrow A- upwards.
- 2 - Press the lights bracket -arrow B- out to the side with a narrow screwdriver.
- 3 - Disengage the cigarette lighter in the direction of -arrow C- out of the front cover.





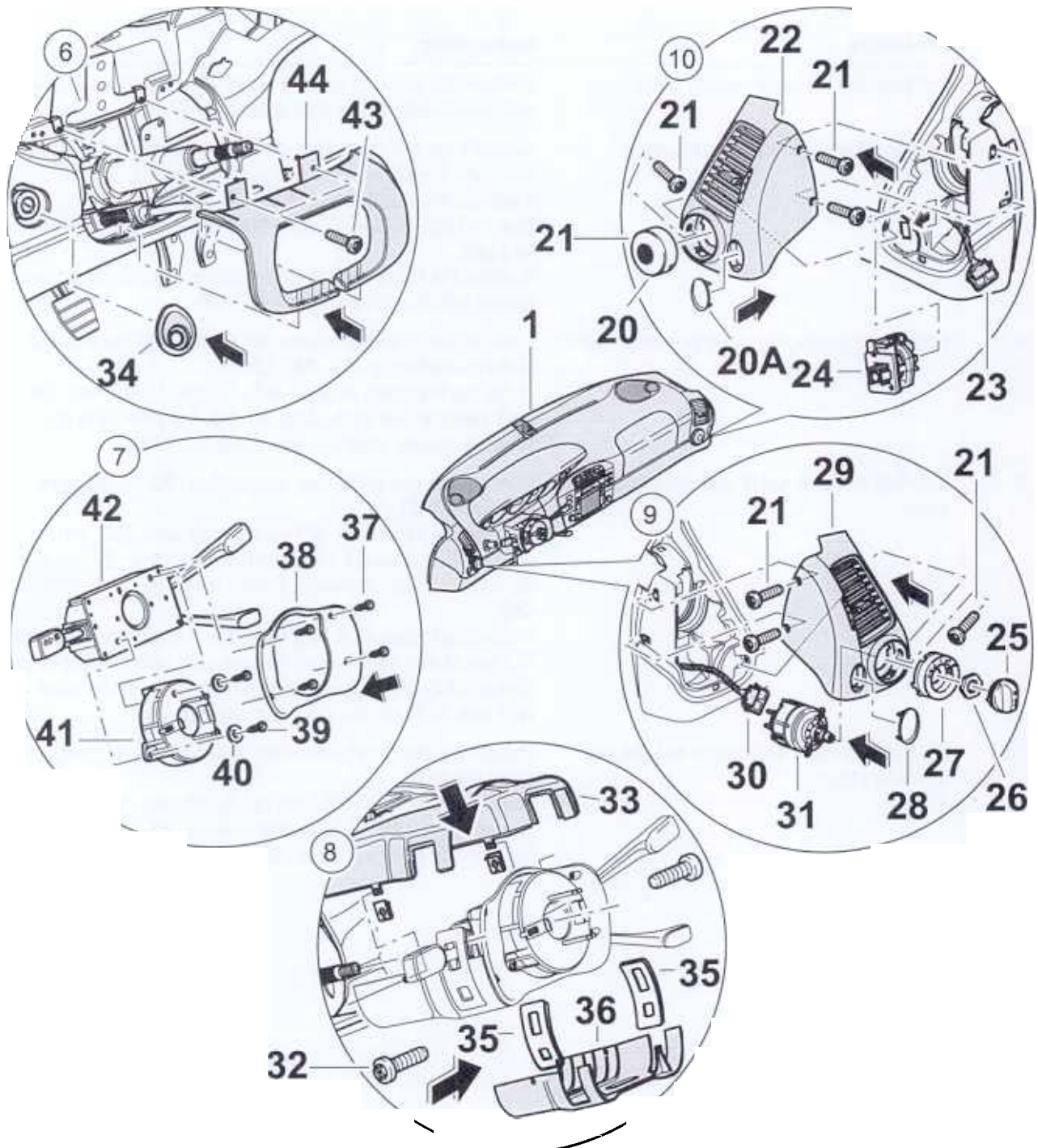
## Assembling the dashboard





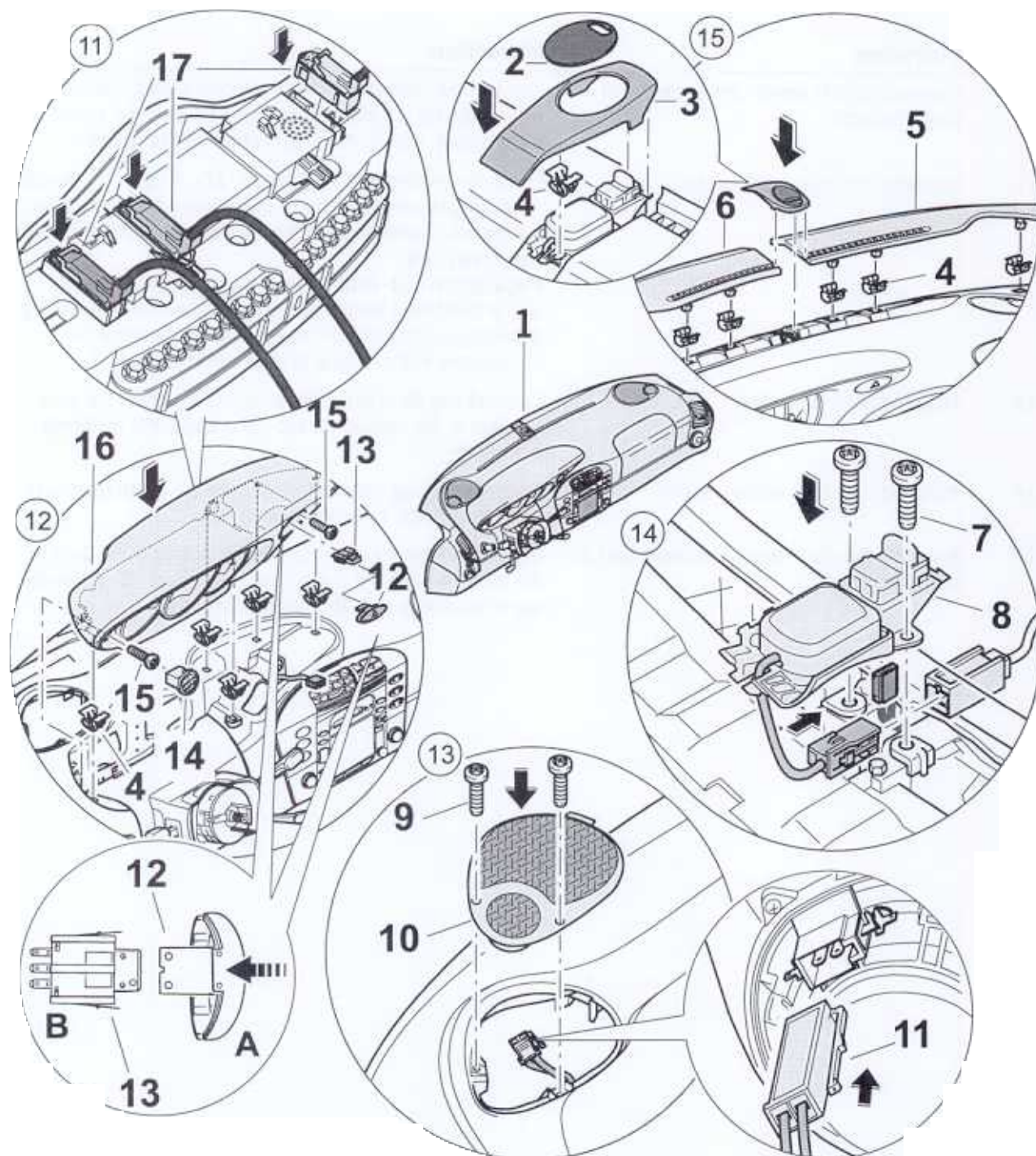
No.	Procedure	Instructions
	Installing the regulator for wiping interval	⇒ "Installing the regulator for wiping interval" in <b>70-1</b> page 15
	Installing the cigarette lighter	⇒ "Installing the cigarette lighter" in <b>70-1</b> page 15
	Installing the inside retaining bracket and the central vent	Position the inside retaining bracket <b>-57-</b> in the dashboard <b>-1-</b> and secure with the fastening screws <b>-56-</b> . Position the central vent <b>-55-</b> in the dashboard and secure with the fastening screws <b>-54-</b> .
2	Installing the PCM retaining bracket	Insert the retaining bracket <b>-52-</b> in the cut-out of the central vents. Plug the ground cable <b>-53-</b> into the retaining bracket.
3	Installing the PCM <b>-50-</b>	Connect the electrical plug connection <b>-51-</b> on the rear side of the PCM. See: ⇒ Rep. Gr. 911019; Removing and installing display and operator control unit (PCM).
4	Removing the mechanical heating and fresh air regulator variant <b>-47A, 47B, 47C-</b> , the electrical air-conditioning and heating regulator variant <b>-47-</b> and the audio, communication system <b>-48-</b>	See: ⇒ Rep. Gr. 851019; Removing and installing mechanical heating and fresh-air control See: ⇒ Rep. Gr. 870219; Removing and installing the heating/air-conditioning control. See: ⇒ Rep. Gr. 912019; Removing and installing the car radio.
5	Installing the switch covers	Plug in the electrical plug connections. (Observe the colour designation of the wiring harness switches). Check the clips <b>-4-</b> and replace if necessary. Clip switch covers <b>-45 and 46-</b> in to the central vent.





No.	Procedure	Instructions
	Installing the steering column cover	Position the steering column cover <b>-44-</b> on the dashboard and secure with the fastening screws <b>-43-</b> .
7	Installing the steering column switch	<p>Connect the electrical plug connection of the steering column switch <b>-42-</b> and position on the steering column. If necessary, install the contact unit <b>-41-</b>. See: ⇒ Rep. Gr. 695419; Removing and installing the contact unit.</p> <p>Position the cover <b>-38-</b> on the steering column switch and secure with the fastening screws <b>-37-</b>.</p>
8	Installing the steering column switch cover	<p>Position the steering column switch cover at the top and bottom or laterally <b>-33, 36, 35-</b>. Using the fastening screws <b>-32-</b>, screw the steering column switch cover at the bottom <b>-36-</b> together with the steering column switch cover at the top <b>-33-</b>.</p>
9	Installing left side vents and main light switch	<p>Connect the electrical plug connection <b>-30-</b> of the main light switch <b>-31-</b>. Position the inner race <b>-27-</b> in the side vent <b>-29-</b> and engage the main light switch in the inner race <b>-27-</b> by turning it slightly anti-clockwise. Fasten it with the fastening nut <b>-26-</b>. Tightening torque: <b>-3.5 Nm (2.5 ftlb.)-</b> Insert the side vent into the dashboard. Secure the side vent with the fastening screws <b>-21-</b>. Place the control button <b>-25-</b> on the main light switch. Press the covering cap <b>-28-</b> in.</p>
10	Installing the right side vents and the temperature sensor	<p>Engage the temperature sensor <b>-24-</b> from the rear into the dashboard <b>-1-</b>. Insert the side vent <b>-22-</b> into the dashboard <b>-1-</b>. Secure the side vent with the fastening screws <b>-21-</b>. Press in the covering caps <b>-20, 20A-</b>.</p>

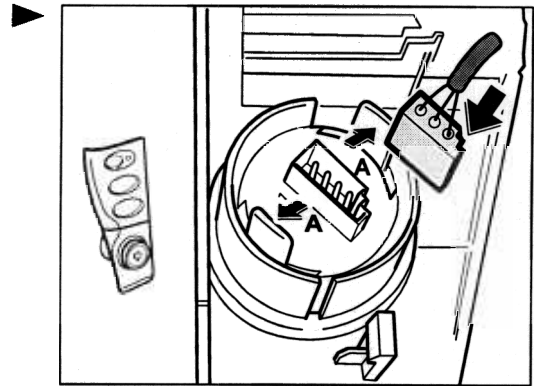




No.	Procedure	Instructions
	Connecting instrument cluster electrical plug connection	Connect the instrument cluster electrical plug connection. After inserting the plug connection <b>-17-</b> into the instrument mount, lock it in the <b>-direction of the arrow-</b> .
12	Installing the instrument cluster	Fit the hazard warning light switch <b>-13-</b> . Plug in the hazard warning light switch electrical plug connection. Insert the instrument cluster into the clip <b>-4-</b> . Secure with the fastening screws <b>-15-</b> . Place button <b>-12-</b> in position. If the vehicle is equipped with a "handsfree telephone", connect the microphone plug connection instead of the cover <b>-14-</b> and engage the microphone in the cut-out of the instrument mount.
13	Installing the loudspeaker	Connect electrical plug connection <b>-11-</b> . Insert the loudspeaker in the dashboard and secure with the fastening screws <b>-9-</b> .
14	Installing the alarm readiness unit	Connect the plug connection. Secure the alarm readiness unit <b>-8-</b> with the fastening screws <b>-7-</b> .
15	Installing the alarm readiness cover and the defroster cover	Clip the defroster covers on the left and right <b>-5, 6-</b> in to the clips <b>-4-</b> . Clip the alarm readiness cover <b>-3-</b> above the alarm readiness unit <b>-8-</b> into the clips <b>-4-</b> .

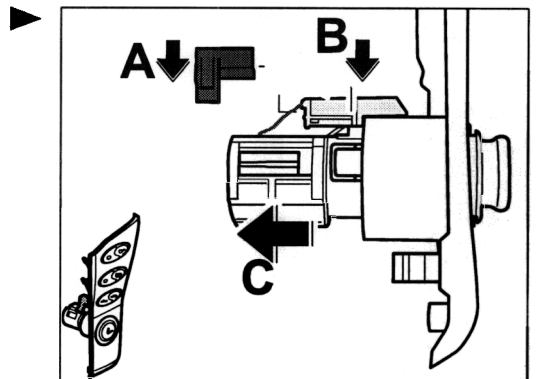
### Installing the regulator for wiping interval

- 1 - Insert the regulator for the wiping interval into the front cover from the front. Ensure that the locking tabs -A- have engaged.
- 2 - Plug in the electrical plug connection.

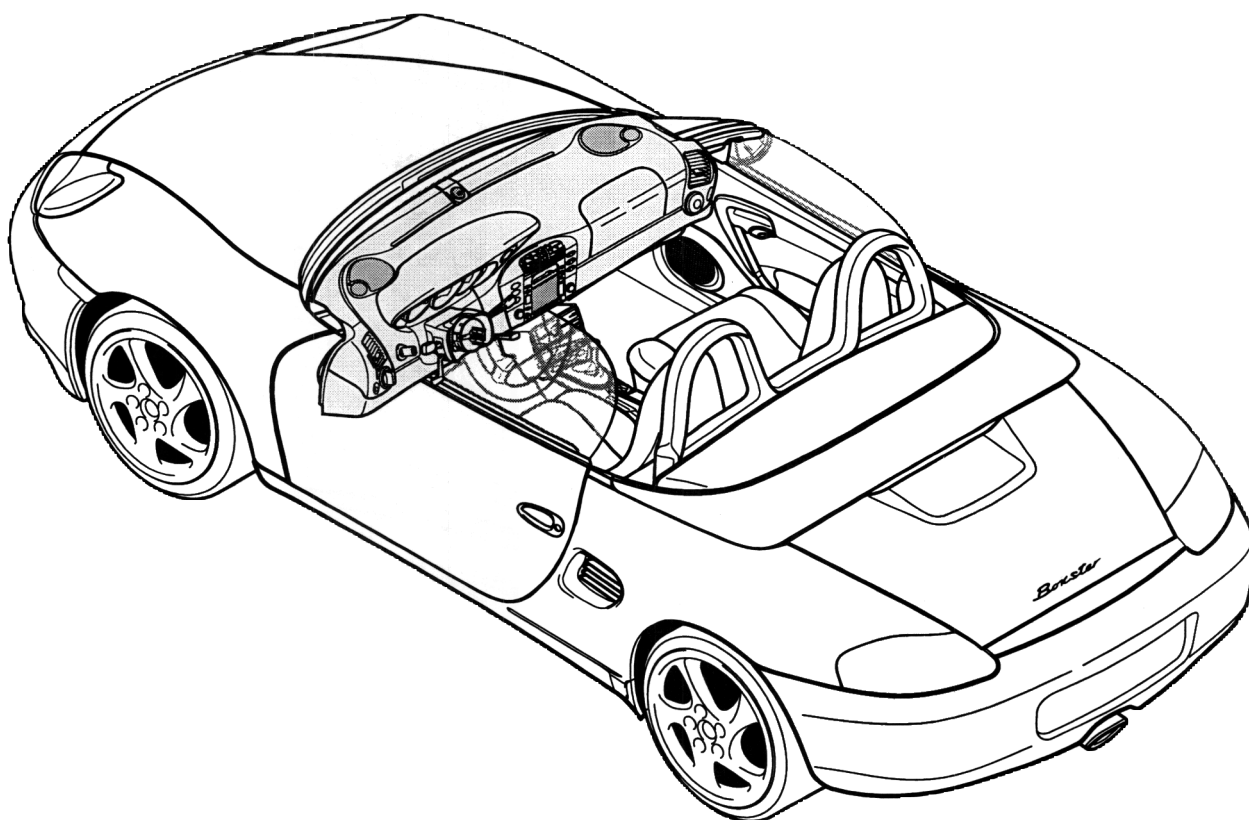


### Installing the cigarette lighter

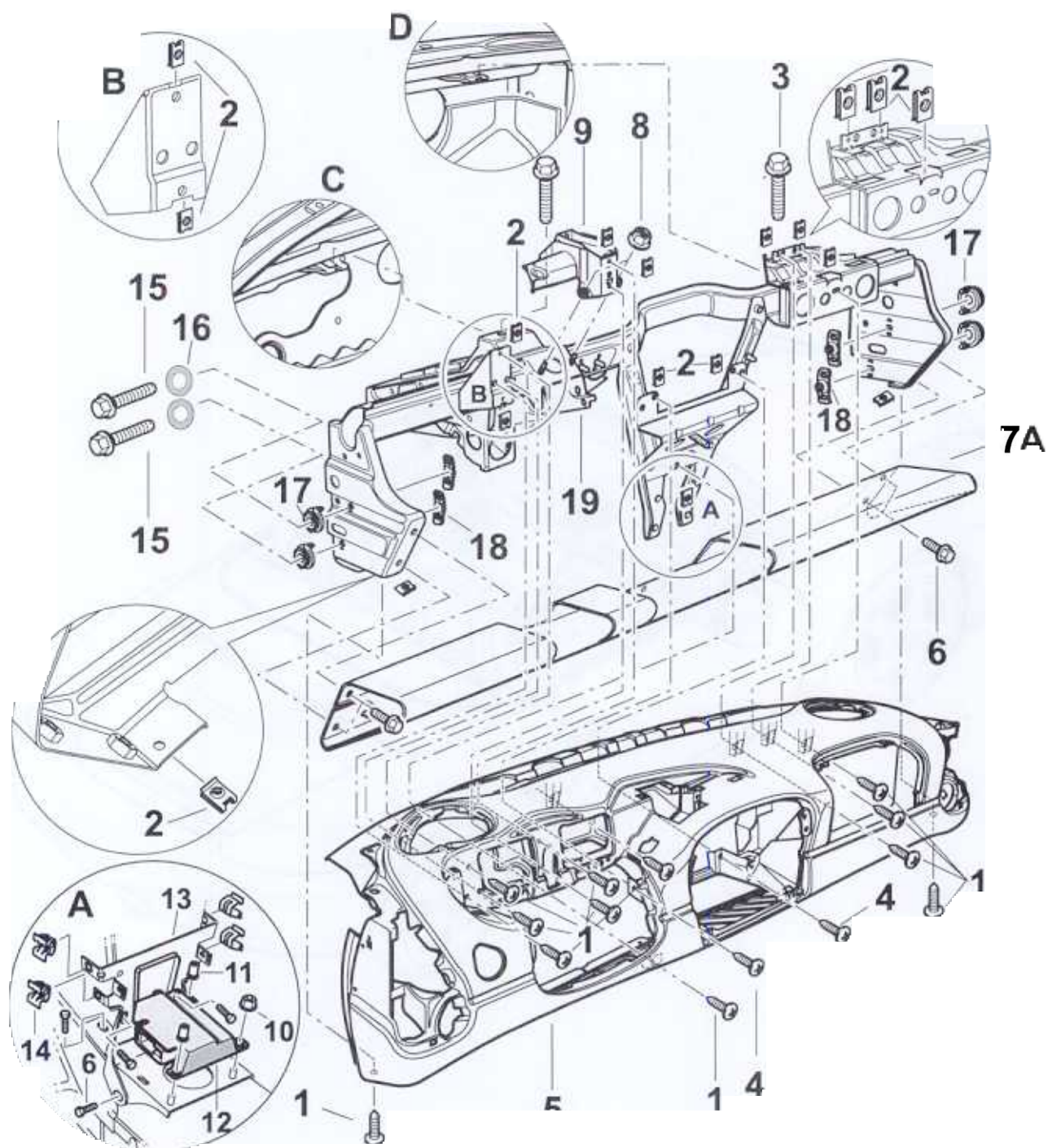
- 1 - Press the illumination ring with the cigarette lighter -C- into the front cover from the front.
- 2 - Clip the lights bracket -B- into place. Ensure that the locking tabs have engaged.
- 3 - Engage cover -A-. Ensure that the locking tabs have engaged.



## Removing and installing the dashboard









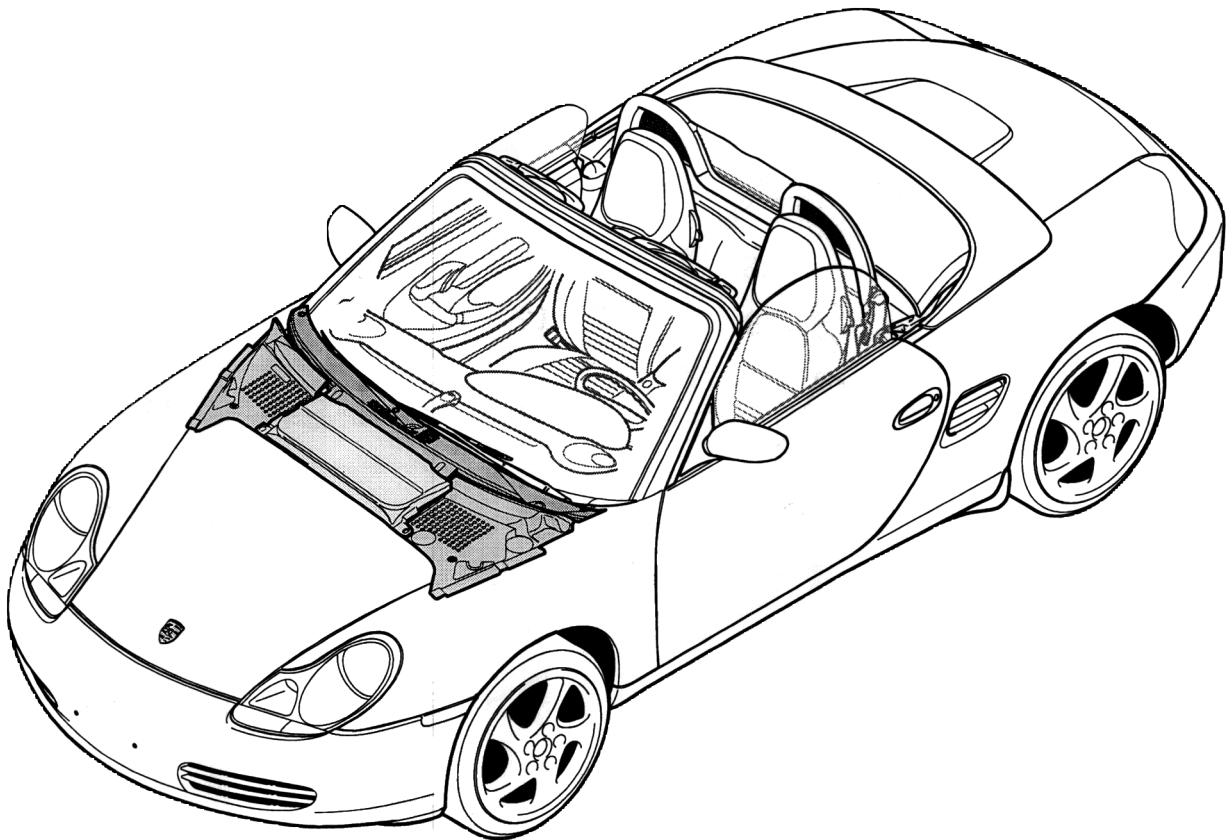
**Note!**

Before the dashboard is removed, it must be disassembled⇒ Rep. Gr. 701837; Disassembling and assembling dashboard.

No.	Designation	Qty.	Removal	Installation
1	Fastening screw	11	Undo fastening screws <b>-1-</b> from the dashboard <b>-5-</b> .	Screw in.
2	Sheetmetal nut	11		Inspect and replace if necessary.
3	Fastening screw	2	Undo fastening screws <b>-3-</b> from the dashboard <b>-5-</b> .	Screw the dashboard <b>-5-</b> to the support frame with the fastening screws <b>-3-</b> .
4	Fastening screw	2	See: Point 5	See: Point 5
5	Dashboard	1	Undo fastening screws <b>-3-</b> from the dashboard <b>-5-</b> .	Position the dashboard <b>-5-</b> on the support frame <b>-19-</b> and tighten the fastening screws <b>-3-</b> .
6	Fastening screw	4	See: Point 7A	See: Point 7A
7A	USA variant, knee protector strip	1	Undo fastening screw <b>-6-</b> from the knee protector strip <b>-7A-</b> . Remove the knee protector strip.	Secure the knee protector strip <b>-7A-</b> on the support frame <b>-19-</b> and tighten the fastening screw <b>-6-</b> .
8	Collar nut M6	2		Tightening torque: <b>-10 Nm (7.5 ftlb.)-</b>
9	Holder	1		Secure the holder <b>-9-</b> and screw down with the collar nuts <b>-8-</b> . Tightening torque: <b>-10 Nm (7.5 ftlb.)-</b>
10	Collar nut M6	1		Tightening torque: <b>-10 Nm (7.5 ftlb.)-</b>
11	Shear-off nut	2	Undo the shear-off nut with special tool 9259	Tightening torque: <b>-10 Nm (7.5 ftlb.)-</b>
12	Airbag control module	1	See: ⇒ Rep. Gr. 695319; Removing and installing the triggering unit for the airbag.	See: ⇒ Rep. Gr. 695319; Removing and installing the triggering unit for the airbag.
13	Cover panel	4	Remove	Fix the cover panel in the body and the support frame <b>-19-</b> and screw down with the fastening screws <b>-6-</b> . Tightening torque: <b>-10 Nm (7.5 ftlb.)-</b>
14	Sheetmetal clip	4		
15	Fastening screw	4		Tightening torque: <b>-23 Nm (17 ftlb.)-</b>

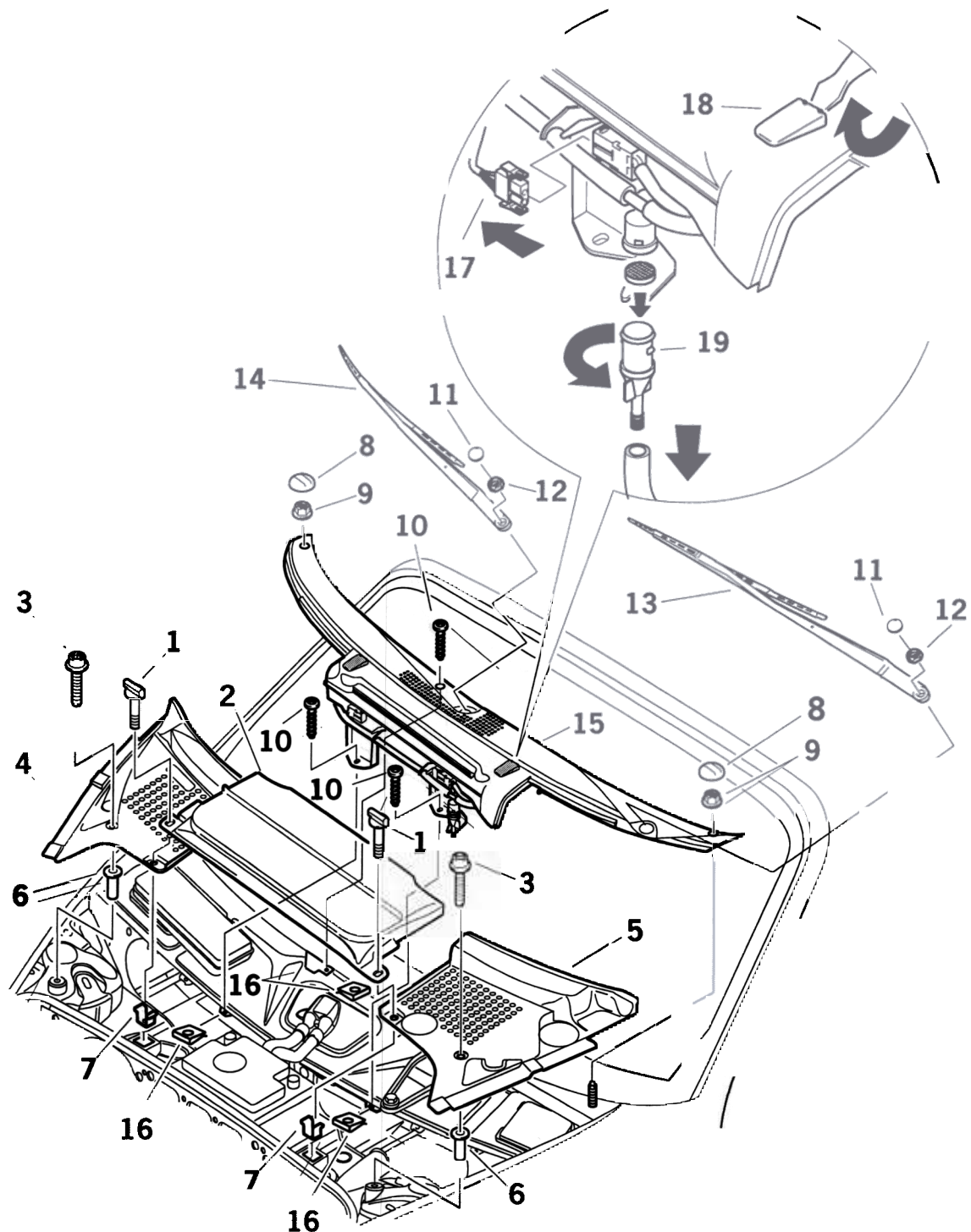
No.	Designation	Qty.	Removal	Installation
16	Washer	4		
17	Compensating element	4	The compensating element <b>-17-</b> is released by undoing the fastening screw <b>-15-</b> .	By screwing in the fastening screws <b>-15, 16-</b> , the compensating element <b>-17-</b> can be fixed and secured.
18	Threaded plate	4		Is screwed into position with the compensating element <b>-17-</b> and the fastening screw <b>-15, 16-</b> .
19	Support frame	1	Undo the fastening screws <b>-15-</b> in the compensating elements <b>-17-</b> and guide the support frame <b>-19-</b> out of the body.	Insert support frame <b>-19-</b> into the body. Fix compensating elements <b>-17-</b> to the support frame and screw down with the fastening screws <b>-15, 16-</b> .

**70 22 19 Removing and installing cowl panel cover**



684\_97

# Removing and installing cowl panel cover



683\_97

**Removing and installing cowl panel cover**

No.	Designation	Qty.	Removal	Note:	
				Installation	
1	Twist lock				
2	Battery cover	1			
3	Torx screw T25 M5 x 30	2			
4	Radiator tank cover, right	1			
5	Radiator tank cover, left	1			
6	Dummy press-in nut	2			Check for secure seating, replace if necessary.
7	Cam	2	Unclip		Clip in
8	Cap	2	Position and press in		Insert a narrow screw- driver and press out.
9	T5 plastic nut	2			Check, replace if necessary
10	Torx screw T20 x 20	3			
11	Cover	2			
12	Nut	2	Undo		Tightening torque: <b>17 Nm (13 ftlb.)</b>
13	Left wiper arm	1			
14	Right wiper arm	1			
15	Cowl panel cover	1			
16	Sheetmetal nut B4.8	3			Adjust to center of hole.
17	Electrical plug connection	2	Press locking tabs together and separate electrical plug connection.		Connect electrical plug connection.

No.	Designation	Qty.	Removal	Note:
				Installation
18	Spray nozzle	2	Use a screwdriver to lift the spray nozzle at the front edge. Pull off water hose.	Push on water hose and press spray nozzle into the cowl panel cover.
19	T-piece (filter element)	1	Twist and pull off. Remove filter element.	Clean filter insert if necessary.

**Disassembling and assembling door trim panel****Warning:**

Airbag could inflate. Danger of injury or damage during fitting!

- > 1. Remove the ignition key
- 2. Disconnect and cover the negative terminal of the battery
- 3. After disconnecting the battery, assembly work or other work must be started only after a waiting time of 1 minute.

**Warning:**

Damage by bending the bowden cable at the hook.

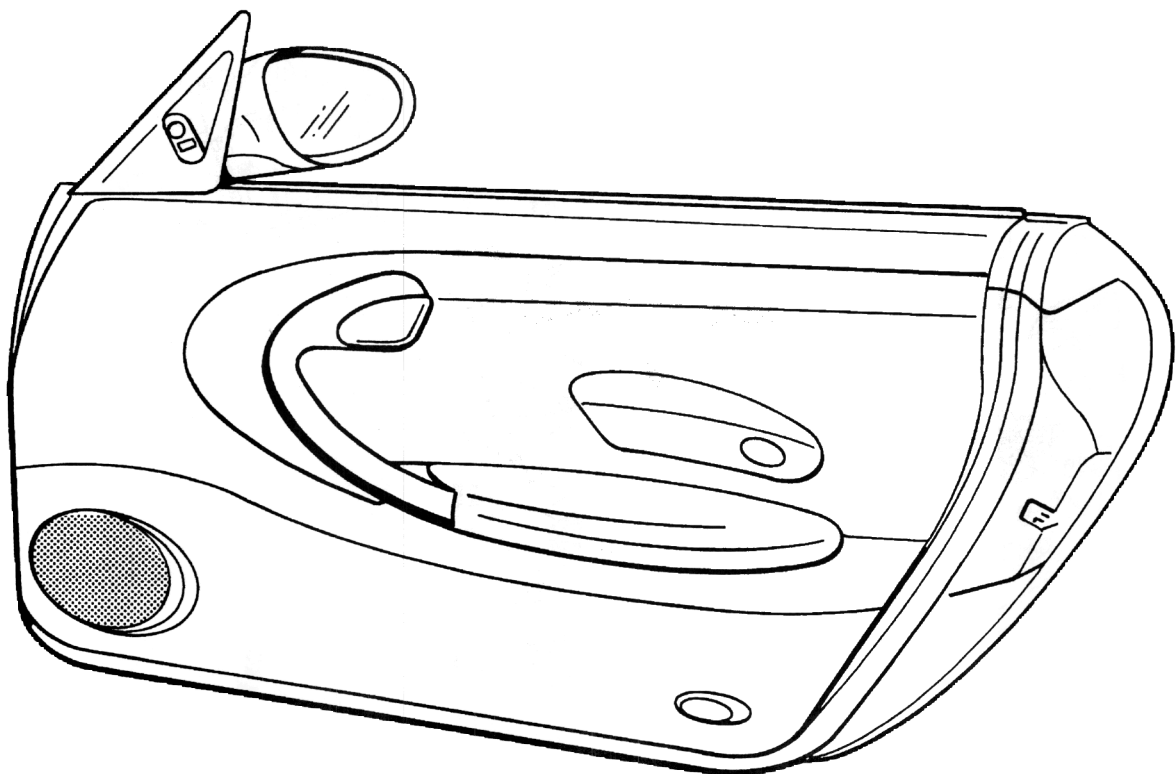
- > The hook of the bowden cable is pressed into the end piece of the cover for protection during transport and assembly. Pull the hook out of the end piece only after installation in the inner door release.

No.	Designation	Qty.	Removal	Note:
				Installation
	Mirror triangle cover	1		
2	Plug connection	1	Disconnect electrical plug connection.	Connect electrical plug connection.
3	Switch	1	Press out from the inside	Press in
4	Cover for inner door release	1	Push upper clip ( <b>arrow B</b> ) downwards and simultaneously insert the lower clip ( <b>arrow A</b> ) with a plastic spatula and press it out. Pull out the cover to the rear at an angle.	Push on until the cover is heard to engage.
5	Cover ring	1	Pull off	Push on
6	Torx screw T30 M6 x 80	1		
7	Torx screw T30 M6 x 50	1		
8	Handle strip	1	Undo Torx screws (Item 3, 4) and pull out handle strip to the front.	Insert handle strip and fasten with the Torx screws (Item 3, 4)
9	Torx screw T20 x 20	1		

No.	Designation	Qty.	Removal	Note:	
				Installation	
10	Plastic screw	1			
	Expanding nut	1			
12	Plastic cover (airbag)	1			Make sure the logo can be read in the correct direction.
13	Pan-head screw M5 x 10	1			Tightening torque: <b>5.9 Nm (4 ftlb.)</b>
14	Door panel	1	Unclip door panel.		Clip in door panel.
15	Clip 8.0 x 0.9	9			
16	Lamp	1			Disconnect electrical connection and push out lamp from behind.
7	Loudspeaker grille	1	Press out of the inner door panel.		Press in
18	Bowden cable, <b>version B, as of Veh. Ident. Nos.</b> 98 ZXS 60 0820 RoW 98 OXS 62 0196 USA 98 8XU 62 2718 USA	1	Press locking tabs of the plastic clip ( <b>arrow A</b> ) and pull out to the rear. Push bowden cable back into the end piece of the sleeve ( <b>arrow B</b> )		Engage bowden cable into the inner door release. <b>Pull the hook out of the end piece of the sleeve only after installation in the inner door release.</b> Plastic clip into the inner door release.
19	Tie wrap only on <b>version A</b>	1	Cut open		Ensure that the tie wrap is seated firmly
20	Bowden cable, <b>version A</b>	1	Press out the bowden cable		Press bowden cable into the inner door release without play.
21	Oval-head screw 4.2 x 13	4			
22	Return spring	1	Disengage from the inner actuating mechanism and door panel		Engage in the inner actuating mechanism and door panel

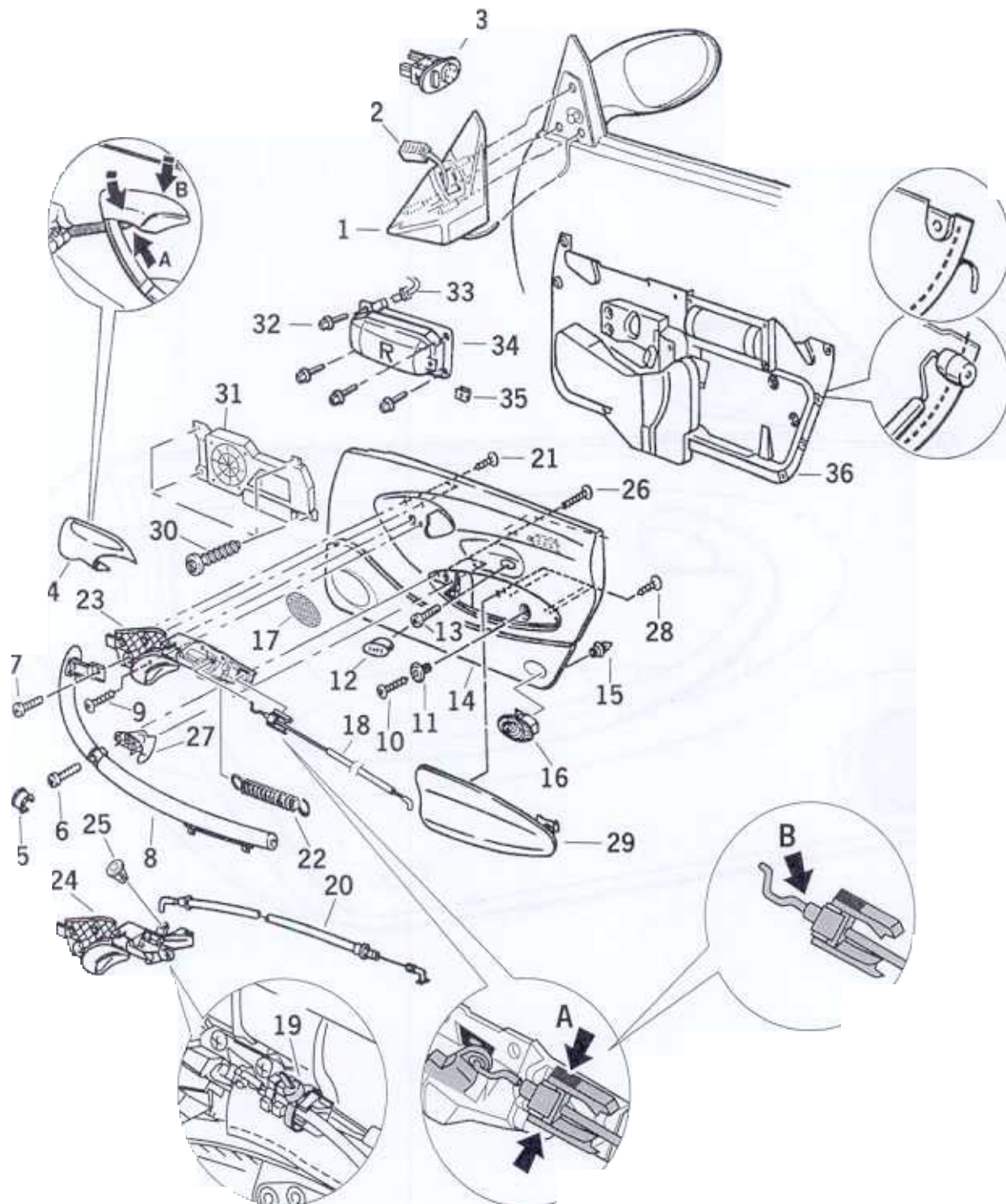


**70 59 37 Disassembling and assembling door trim panel**



235\_97

## Disassembling and assembling door trim panel



46\_99

No.	Designation	Qty.	Removal	Note:
				Installation
23	Inner door release, <b>version B, as of Veh. Ident. Nos.</b> 98 ZXS 60 0820 RoW 98 OXS 62 0196 USA 98 8XU 62 2718 USA	1	Disconnect electrical connection from micro-switch of the door lifter. Undo Torx screws 4.2 x 13 (Item 21) and pull the inner actuating mechanism out of the door panel.	Insert the inner actuating mechanism into the door panel from behind, position it and tighten the Torx screws 4.2 x 13 (Item 21). Connect electrical plug connection.
24	Inner door release, <b>version A</b>	1	Disconnect electrical connection from micro-switch of the door lifter. Undo Torx screws 4.2 x 13 (Item 21) and pull the inner actuating mechanism out of the door panel.	Insert the inner actuating mechanism into the door panel from behind, position it and tighten the Torx screws 4.2 x 13 (Item 21). Connect electrical plug connection.
25	Clip	1	Press out	Press in
26	Oval-head screw 4.3 x 20	2		
27	Mounting			
28	Oval-head screw 4.2 x 14	2	Undo oval-head screw 4.2 x 14 and remove the cover (Item 29).	Position cover (Item 29) on the door panel (Item 14) and fasten with the oval-head screw 4.2 x 14.
29	Lid	1	For instructions on removing the lid, see: (Item 28)	
30	Torx screw T20 x 20	4		
31	Loudspeaker unit	1	Unscrew Torx screw T20 x 22 (Item 30) and remove the loudspeaker unit from the door carcass.	Position loudspeaker unit in the door carcass and fasten with the Torx screws T20 x 22 (Item 30).
32	Hexagon-head bolt M6 x 16	4		Tightening torque: <b>10 Nm (7.5 ftlb.)</b>
33	Plug connection	1	Disconnect electrical plug connection.	Connect electrical plug connection.

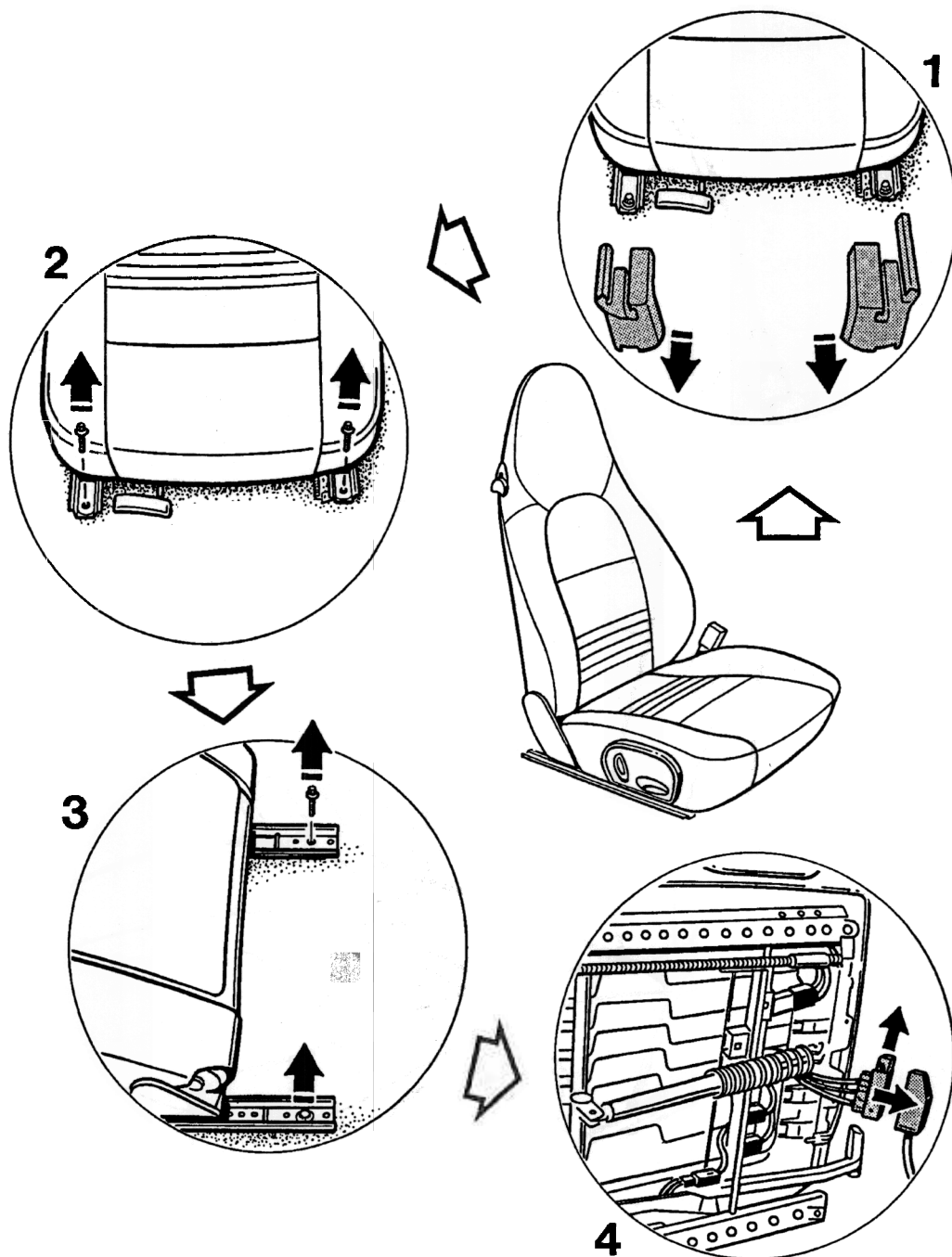
No.	Designation	Qty.	Removal	Note:
				Installation
34	Airbag unit	1	Removal instructions and safety regulations for handling vehicles fitted with airbags appear on Page: 69 - 17	
35	Sheetmetal nut M5	1		
36	Moulded foam	1	Pull off carefully	Replace if cracked. Peel off protective film and immediately press into place on all sides with a roller.

**72 01 19 Removing and installing front seat**



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## Removing front seat



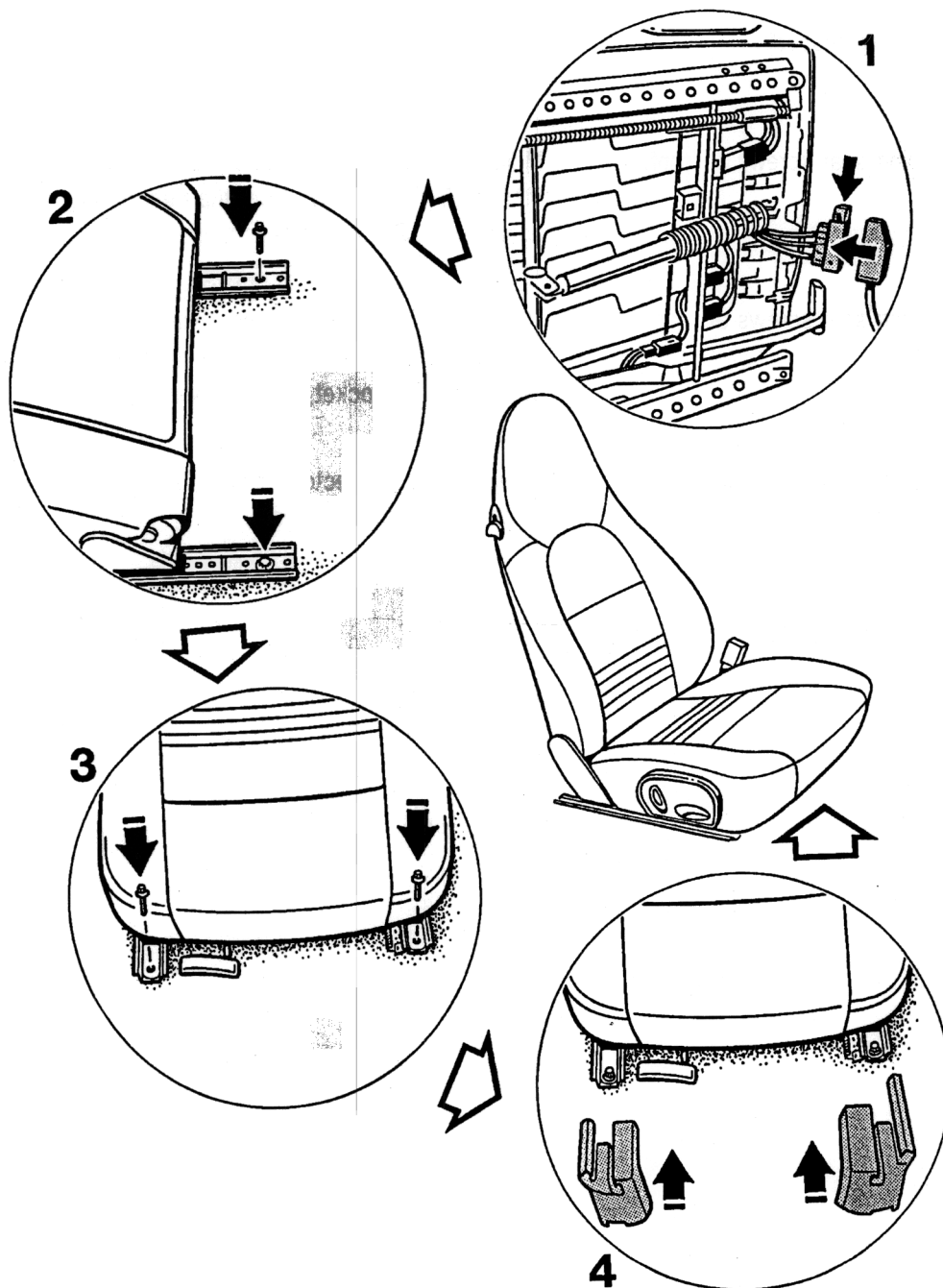
31 - 97

**Removing front seat**

<b>No.</b>	<b>Procedure</b>	<b>Instructions</b>
1	Removing seat rail cover.	Pull seat rail cover on front end of the right and left seat rails off in forward direction.
2	Undoing seat screws at front.	Move seat to its rear limit position and undo the front M10 x 28 Torx screws from the right and left seat rails using an E 12 socket wrench insert.
3	Undoing seat screws at rear.	Move seat to its forward limit position and undo the rear M10 x 28 Torx screws from the right and left seat rails using an E 12 socket wrench insert.
4	Disconnecting electrical plug connection.	Release plug connector locking device on the side and separate the plug connection.



## Installing front seat



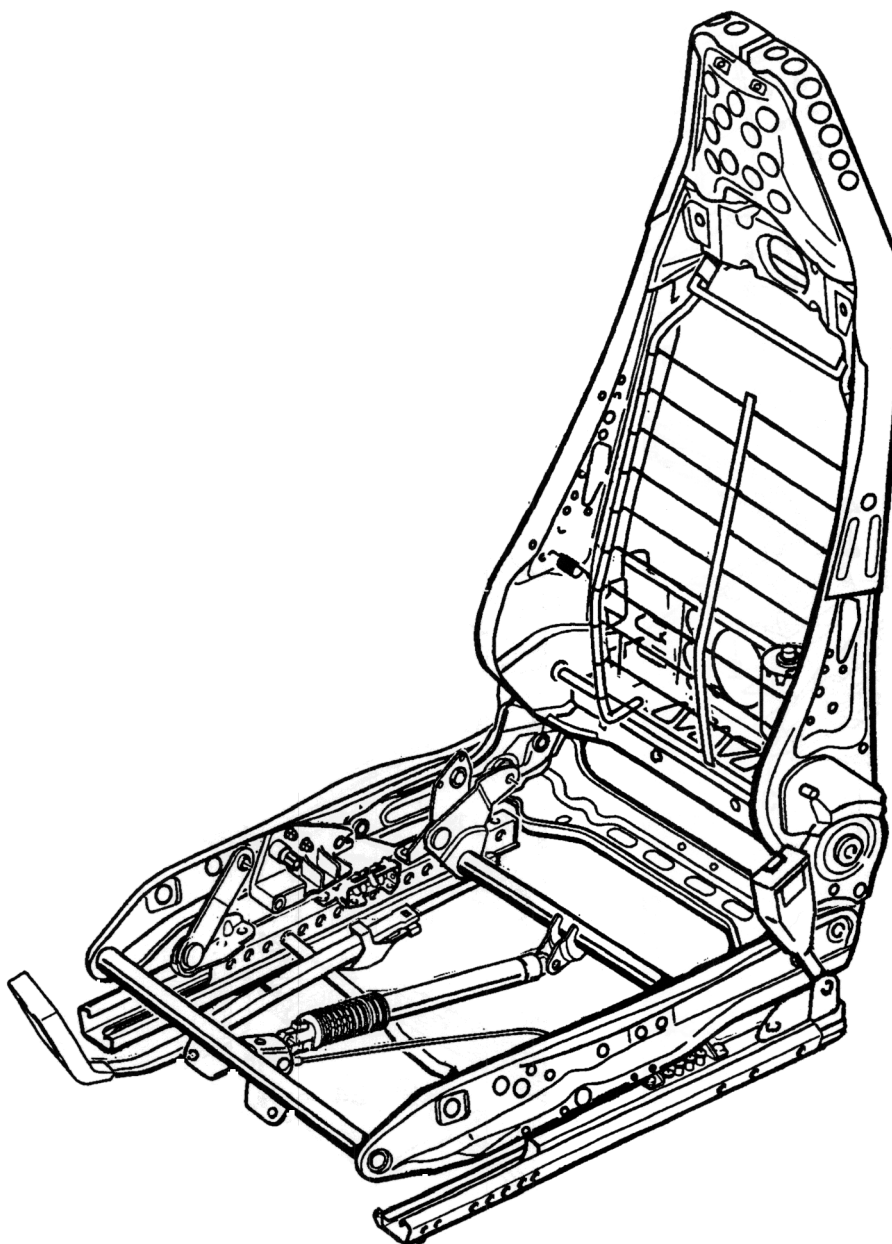
32 - 97



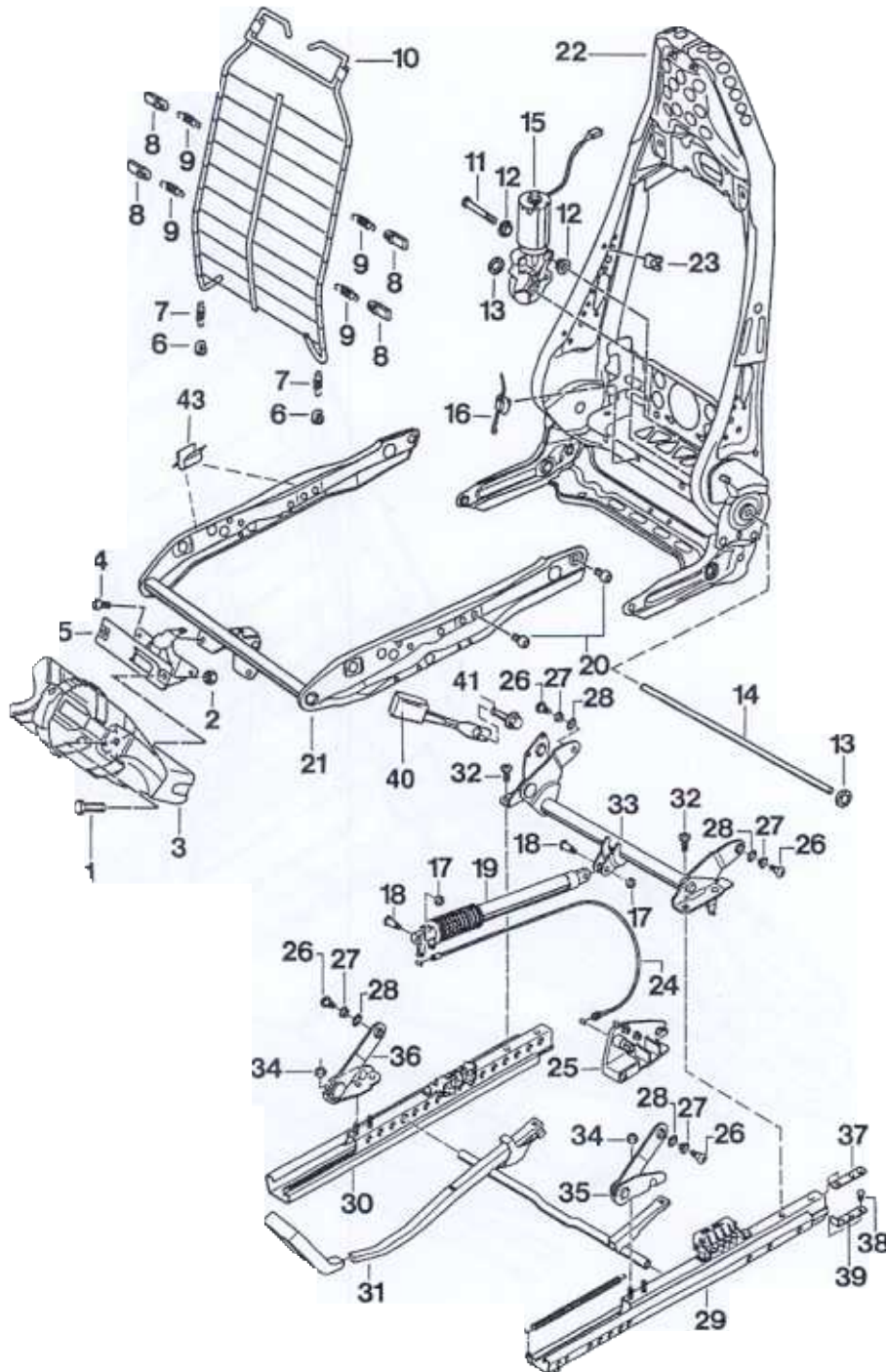
## Installing front seat

No.	Procedure	Instructions
	Connecting electrical plug connection.	Join the plug connection; press in plug connector locking device on the side.
2	Fitting seat screws at rear.	Position seat rails on the seat baseframe, screw the rear M10 x 28 Torx screws into the seat baseframe on the left and right using the E 12 socket wrench insert and tighten; <b>tightening torque: 65 Nm (48 ftlb.)</b> .
3	Fitting seat screws at front.	Move seat to its rear limit position, screw the front M10 x 28 Torx screws into the seat baseframe on the left and right using the E 12 socket wrench insert and tighten; <b>tightening torque: 65 Nm (48 ftlb.)</b> .
4	Fitting seat rail cover.	Push seat rail cover into front end of the left and right seat rails until the seat rail cover engages.

72 09 17 Disassembling and assembling seat frame



## Disassembling and assembling seat frame



18 - 97

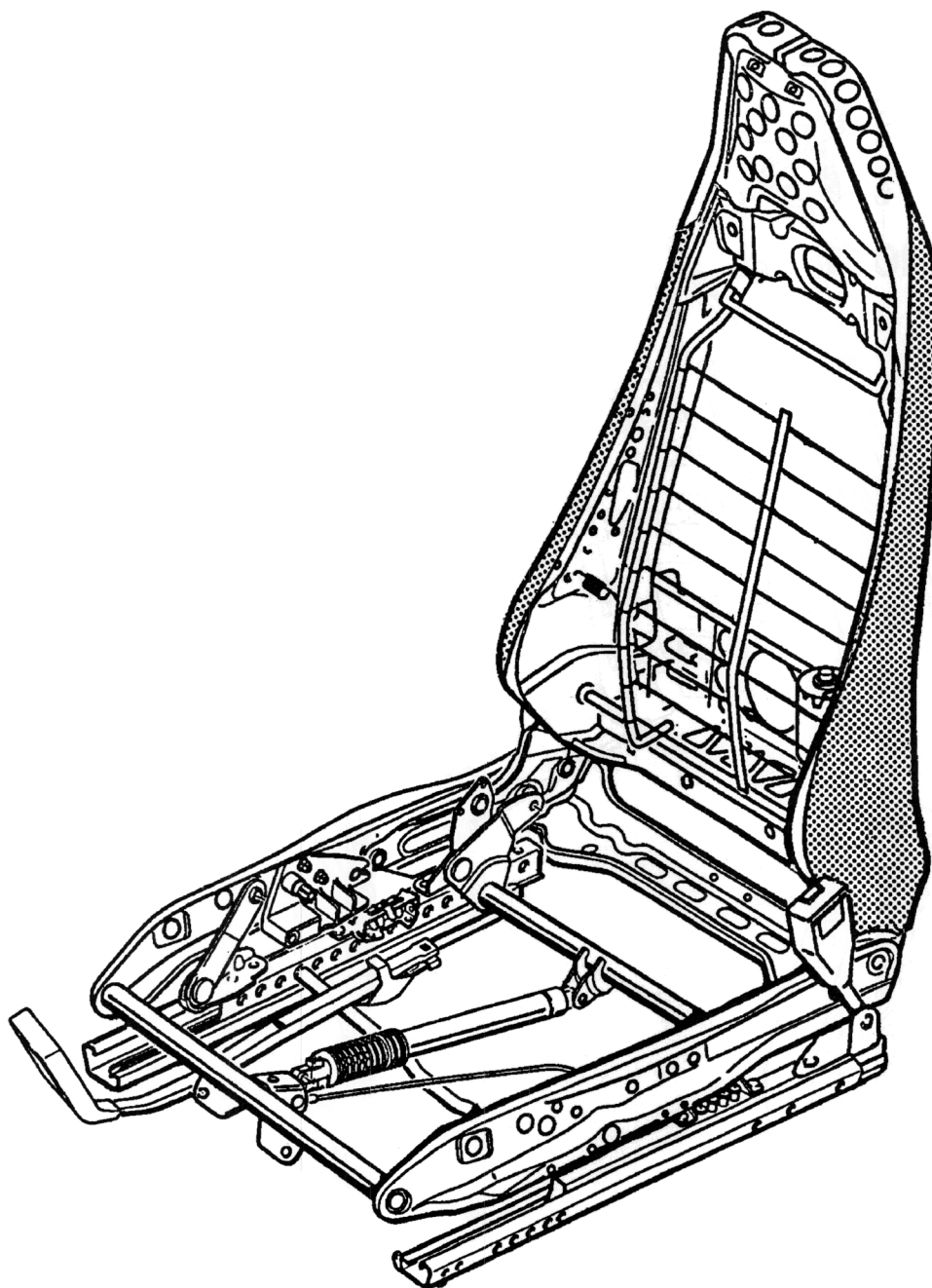
No.	Designation	Qty.	Removal	Note:	
				Installation	
1	Hexagon-head bolt M6 x 16	2	Undo		
2	Hexagon nut	2	Undo		
3	Holder for fire extinguisher	1			
4	Pan-head screw	2	Undo		
5	Bracket	1			Position bracket on seat frame (Item 21) and fasten with the pan-head screws (Item 4).
6	Bracket	2			
7	Spring	2	Disengage from the bracket (Item 6) and the cushion frame (Item 10).		Engage in the cushion frame (Item 10) and the bracket (Item 6).
8	Bracket	4			
9	Spring	4	Disengage from the bracket (Item 8) and the cushion frame (Item 10).		Engage in the cushion frame (Item 10) and the bracket (Item 8).
10	Cushion frame	1			
11	Oval-head screw M6 x 42.5	1	Undo		
12	Bushing 6 x 12 x 4.5	1			
13	Clamping washer 10.0	2	Detach from drive shaft.		Replace
14	Drive shaft		Pull out of the backrest frame and the gear motor (Item 15).		Insert in the backrest frame; position gear motor (Item 15). Push on clamping washers (Item 13).
15	Gear motor	1			

No.	Designation	Qty.	Removal	Note:	Installation
16	Wire retainer 12.0 - 35	1	Unclip		Clip in
17	Hexagon nut	2	Undo		
18	Square-head bolt M5 x 23.6	2			
19	Gas spring	1	<b>Careful</b> <b>Danger of injury!</b> <b>Gas spring is under load.</b>		
20	Oval-head screw M8 x 10	4	Undo and remove seat frame (Item 21) from the backrest frame (Item 22).		
21	Seat frame	1			
22	Backrest frame	1			Position backrest frame (Item 22) on the seat frame (Item 21) and fasten with the M8 x 10 oval-head screws (Item 20).
23	Sheetmetal nut M5	4	Pull off		Push on
24	Bowden cable	1	Press clamping piece of the bowden cable out of the adjusting mechanism and disengage cable.		Engage cable in adjusting mechanism and press in the clamping piece. Ad- just cable at the adjusting screw until there is no play in the cable.
25	Adjusting mechanism	1			
26	Screw	4	Undo from the transverse tube (Item 33).		Position transverse tube on the backrest frame and screw down.
27	Bushing	4			
28	Washer 12 x 19.5 x 0.5	4			

No.	Designation	Qty.	Removal	Note:	
				Installation	
29	Seat rail, left	1			
30	Seat rail, right				
31	Lever	1	Pull out left and right seat rails.	Position and insert left and right seat rails.	
32	Torx screw	4	Undo from the transverse tube.		
33	Transverse tube				
34	Hexagon nut M6	4			
35	Adapter, left				
36	Adapter, right				
37	Threaded plate	2			
38	Clip	2			
39	Stop	2			
40	Buckle				
41	Hexagon-head bolt (fit bolt)	1		Tightening torque 50 Nm (37 ftlb.)	
42	Boost spring				
43	Clip	2	Pull off	Push on	

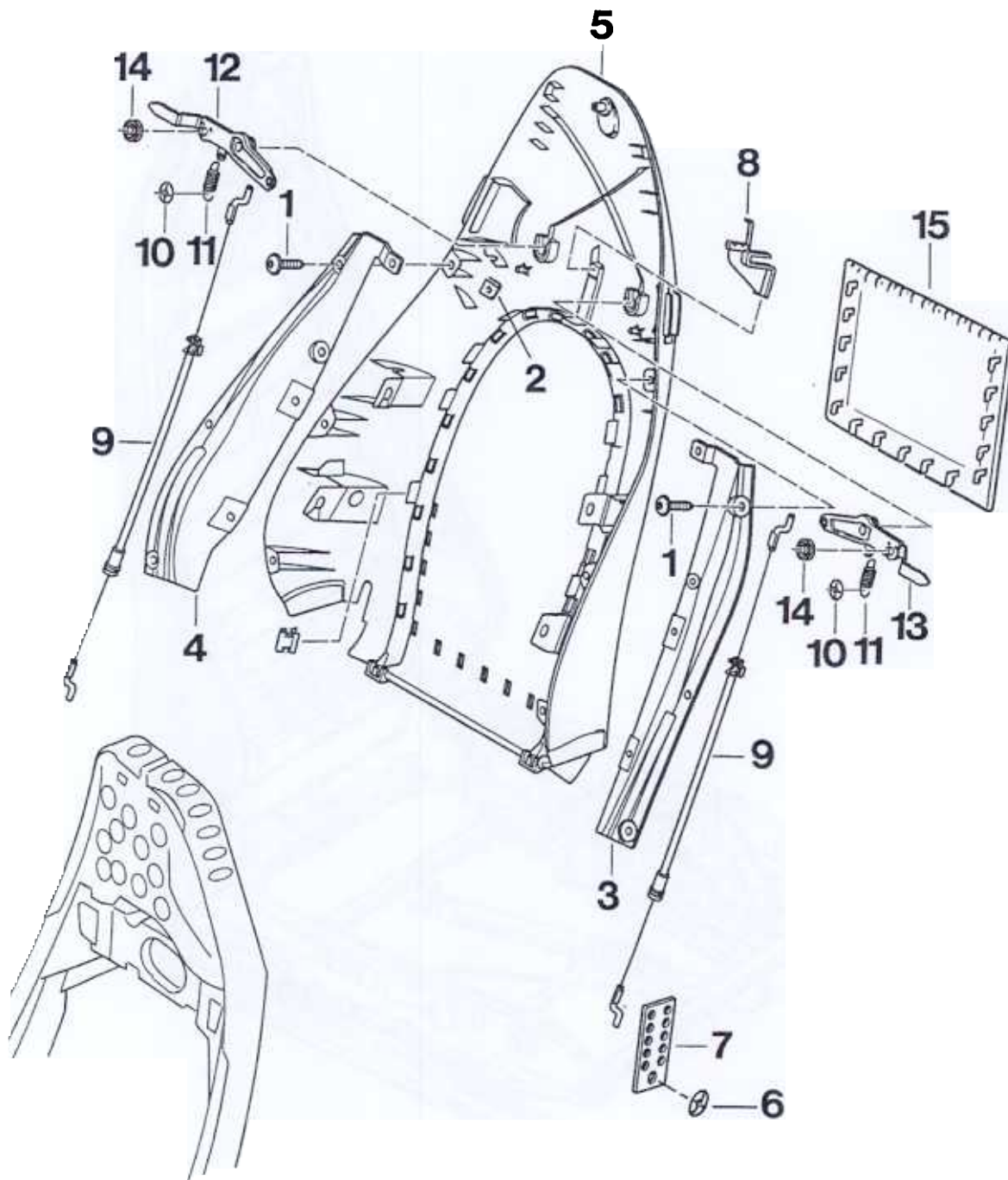


**72 19 37 Disassembling and assembling backrest frame**



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# Disassembling and assembling backrest frame

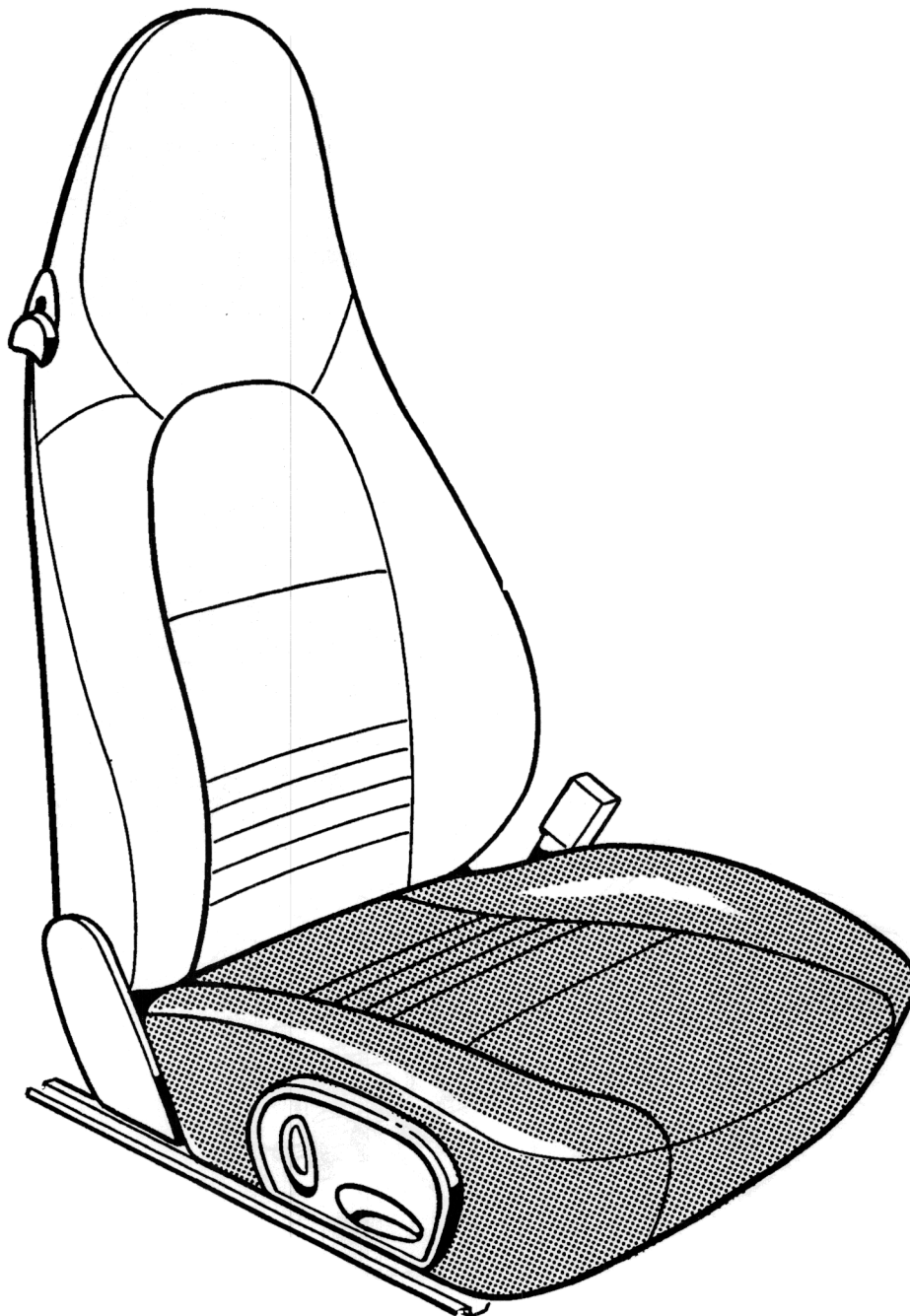


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No.	Designation	Qty.	Removal	Note:	
				Installation	
1	Collar screw M5 x 16	6			
2	Sheetmetal nut M5	6			
3	Support cover, left	1	Undo collar screw (Item 1) and remove support cover.	Position support cover (Item 3) on the backrest shell (Item 5) and fasten with the collar screw (Item 1).	
4	Support cover, right	1	Undo collar screw (Item 1) and remove support cover.	Position support cover (Item 4) on the backrest shell (Item 5) and fasten with the collar screw (Item 1).	
5	Backrest shell	1	Press backrest shell out of backrest frame to the rear.	Position backrest shell (Item 5) on the backrest frame and press in the backrest shell.	
6	Clamping washer	2	Undo	Replace	
7	Hole plate	2	Pull hole plate out of the backrest frame and disengage the cable.	Engage cable in the hole plate, position it on the backrest frame and secure with clamping washer (Item 6). (Engage cable so that it is free of play).	
8	Deflection bracket	1	Open tab of deflection bracket and pull off from backrest frame (Item 5).	Position deflection bracket on the backrest shell (Item 5) and push on. Position cable and close tab of deflection bracket.	
9	Cable	2	Unclip from backrest shell and disengage from swivel arm.	Clip into the backrest frame and engage in the swivel arm.	
10	Clamping washer	2		Replace	

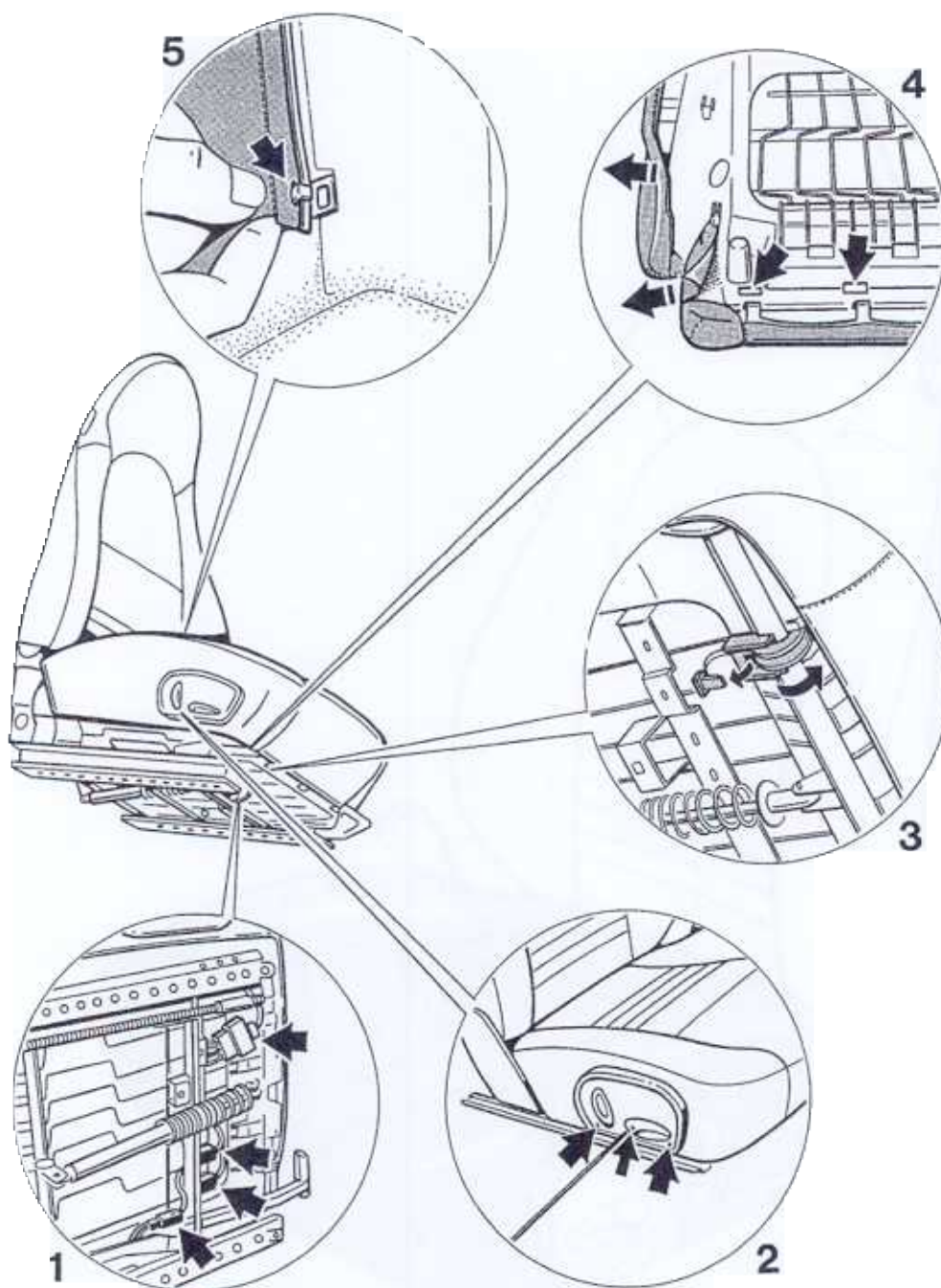
No.	Designation	Qty.	Removal	Note:	
				Installation	
	Tension spring 0.7 x 7.5 x 15	2	Disengage from the swivel arm (Item 12) and from the backrest shell (Item 5).	Engage in the swivel arm (Item 12) and in the back- rest shell (Item 5).	
12	Swivel arm, right	1			
13	Swivel arm, left	1			
14	Deflection roller	2			

**74 1 19** Removing and installing covering for front seat





# Removal overview of seat covering components



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## Removal overview of seat covering components

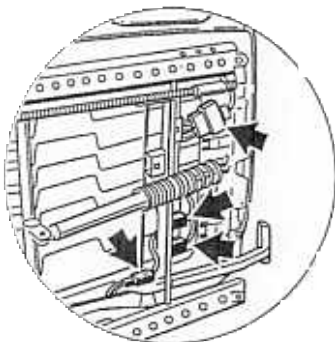
- 1 Disconnecting electrical plug connection
- 2 Removing cover of seat adjuster
- 3 Removing seat cushion from seat frame
- 4 Removing seat covering from cushion carrier
- 5 Removing seat covering from foam part (seat cushion)

## Removing covering for front seat

### No. Procedure

### Instructions

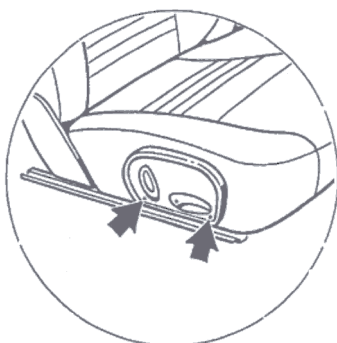
1



Disconnecting electrical plug connection.

Disconnect electrical plug connections for seat heating, backrest heating and backrest adjuster at the cushion carrier.

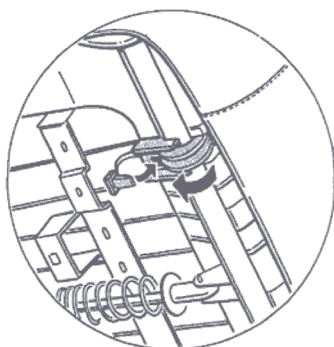
2



Removing cover of seat adjuster.

Undo 3.0 x 18 countersunk screws from the seat adjuster cover.

3



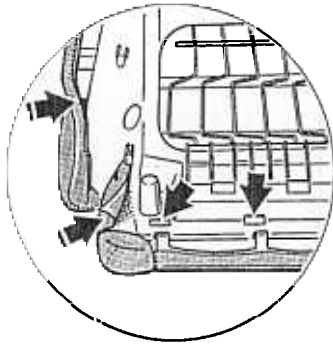
Removing seat cushion from seat frame.

Using a screwdriver, press in the locking element of the plastic clip at the side, press out and unclip the plastic clip from the seat frame. Remove seat cushion from seat frame.

**No. Procedure**

**Instructions**

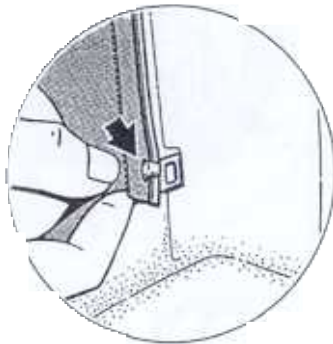
4



Removing seat covering from cushion carrier.

Disengage rail at rear on the seat covering from the cushion carrier. Detach bonded joints on right and left sides. Pull edging off the cushion carrier.

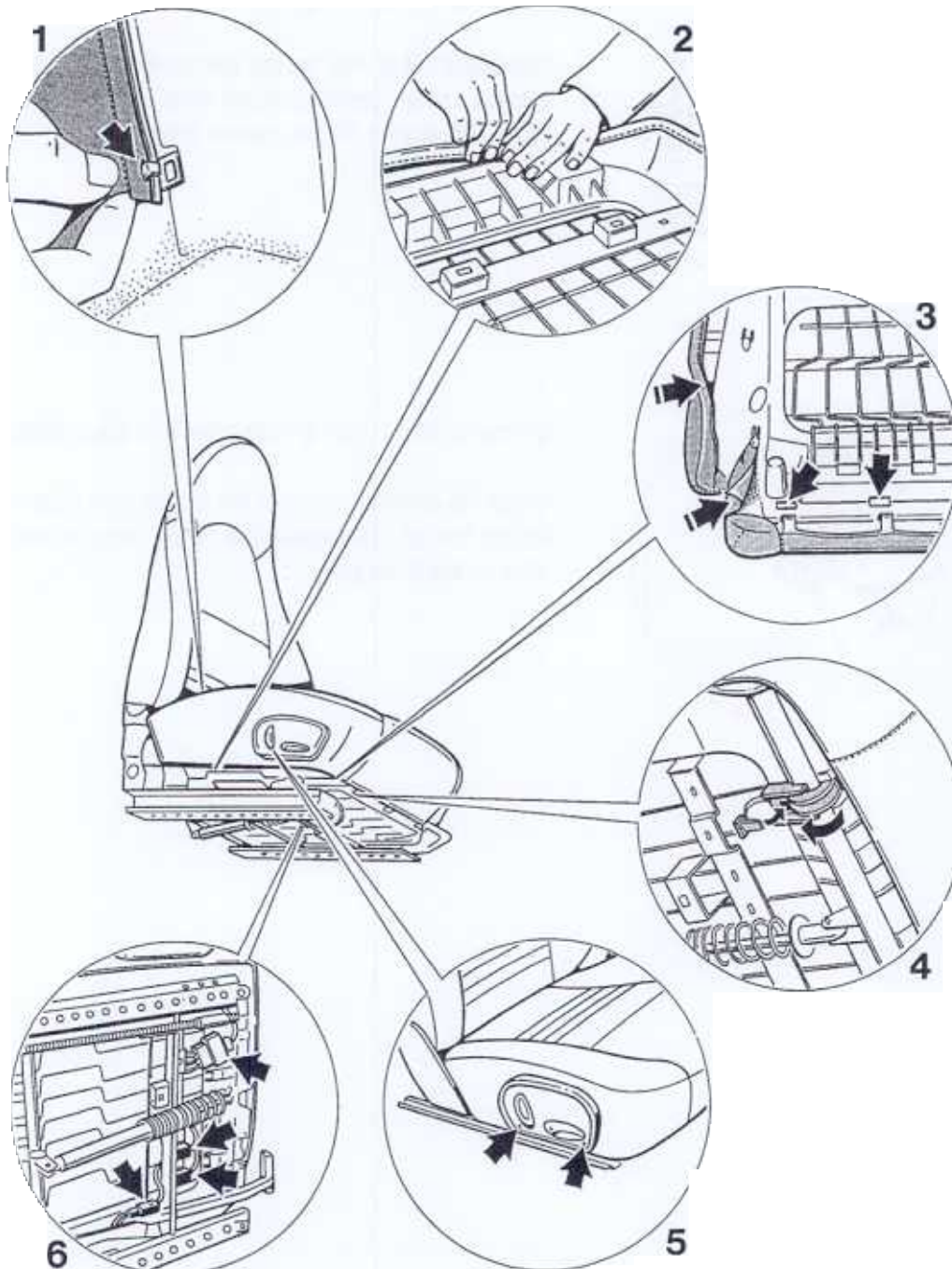
5



Removing seat covering from foam part (seat cushion).

Unclip the covering strips of the centre seat covering section on the left, right and in the centre from the plastic clips on the foam part.

# Installation overview of seat covering components

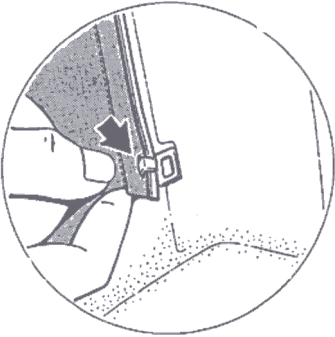

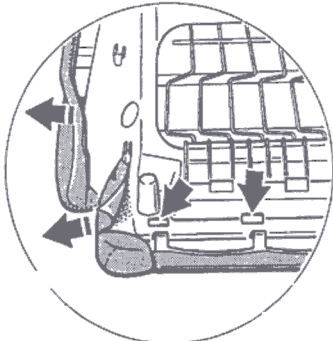


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## Installation overview of seat covering components

- 1 Fitting seat covering on the foam part (seat cushion)
- 2 Fitting seat covering on the cushion carrier
- 3 Adhering seat covering on the cushion carrier
- 4 Fitting seat cushion on the seat frame
- 5 Fitting cover of seat adjuster
- 6 Connecting electrical plug connection

## Installing covering for front seat

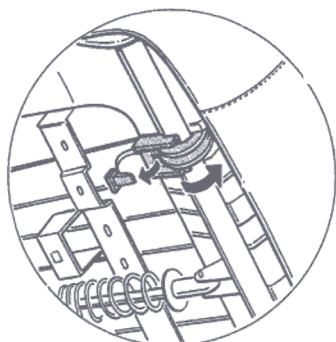
No.	Procedure	Instructions
1		<p>Fitting seat covering on the foam part (seat cushion).</p> <p>Position covering strips of the centre seat covering section in the centre, left and right at the recesses of the foam part. Clip the plastic clips into the fastening strips.</p>
2		<p>Fitting seat covering on the cushion carrier.</p> <p>Pull seat covering over the foam part, smooth out any wrinkles and position covering on the cushion carrier. Fold over the edging on the seat covering and push it onto the cushion carrier.</p>
3		<p>Adhering seat covering on the cushion carrier.</p> <p>Adhere seat covering on cushion carrier at the right and left. Engage rail in the cushion carrier at the rear.</p>



**No. Procedure**

**Instructions**

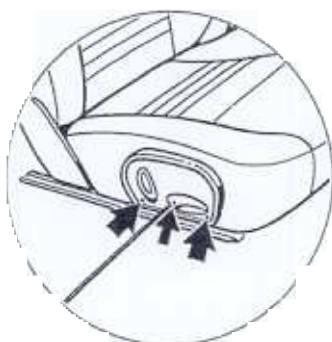
4



Fitting seat cushion on the seat frame.

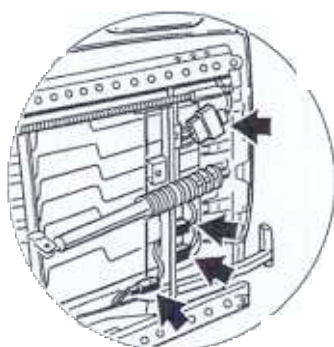
Position seat cushion on the seat frame and clip plastic clips into the seat frame. Press locking element into the plastic clip.

5



Fit cover of seat adjuster.

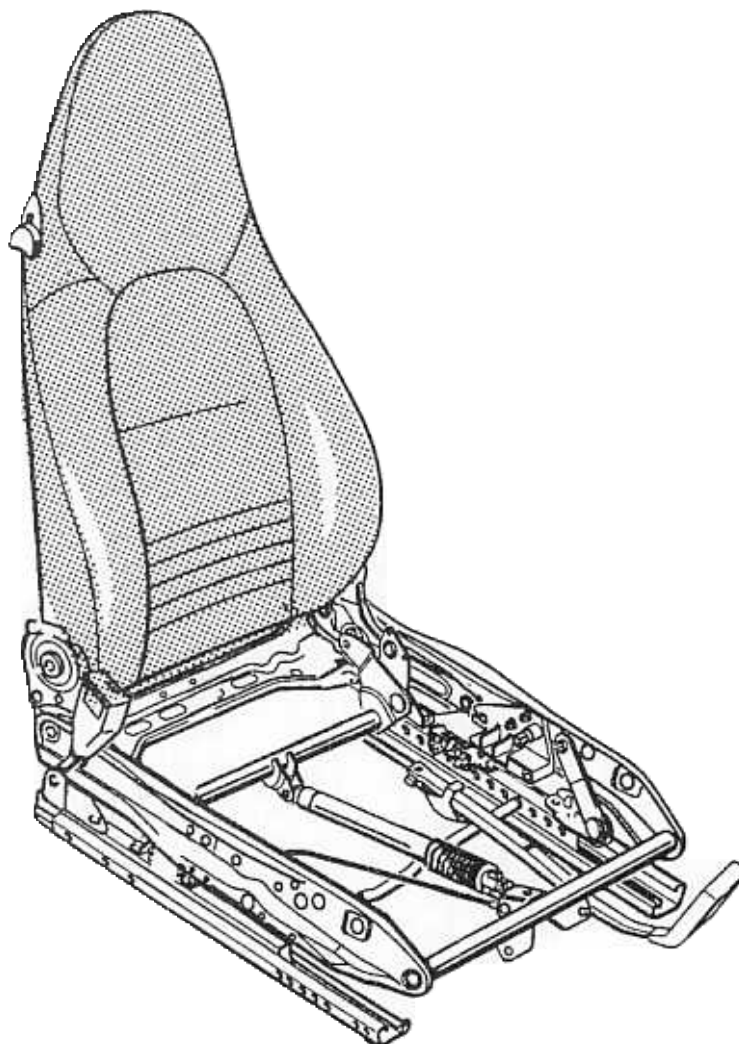
6



Connecting electrical plug connection.

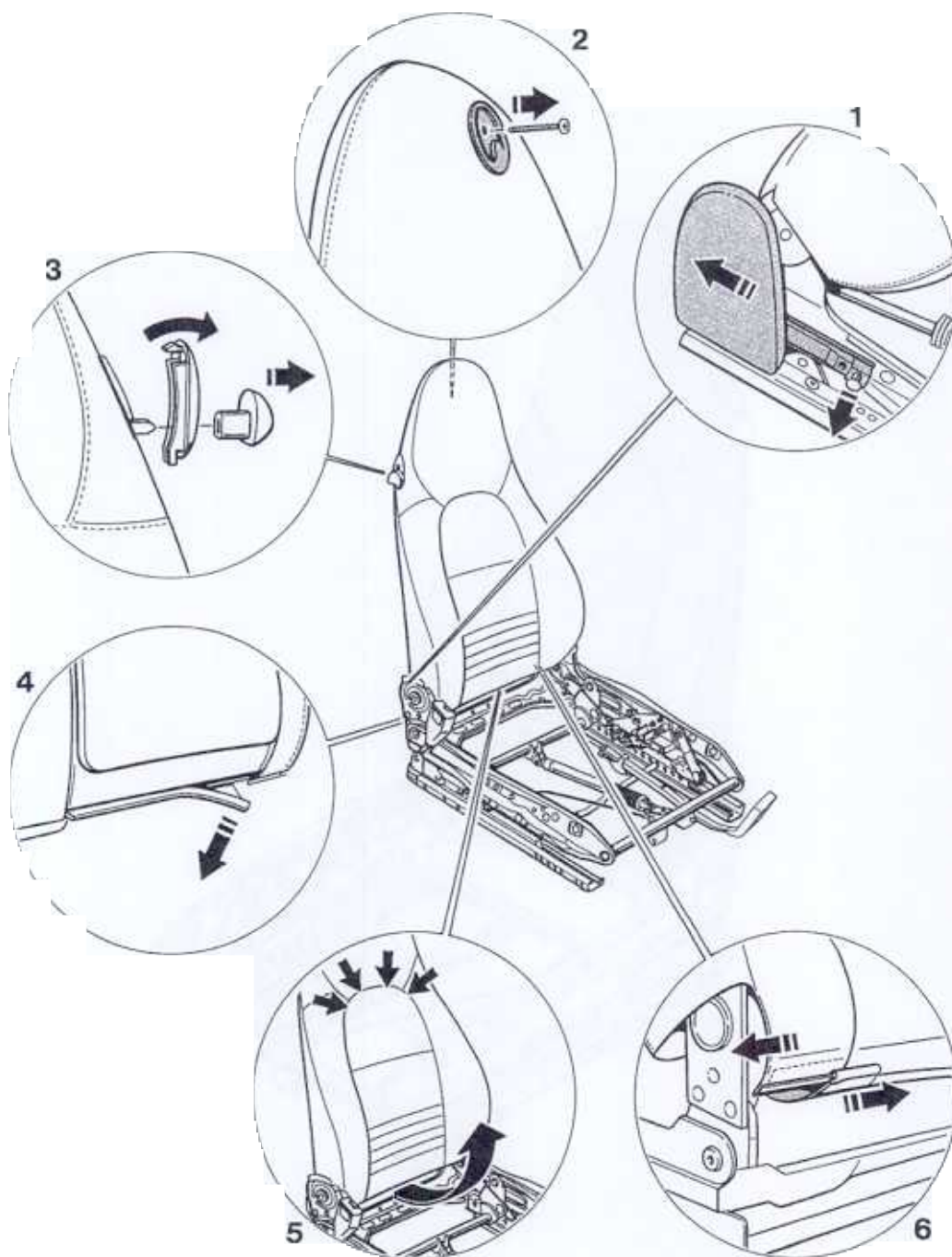
Connect electrical plug connections of backrest adjuster, backrest heating and seat heating.

**74 19 19 Removing and installing covering for front backrest**



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## Removal overview of the backrest covering components

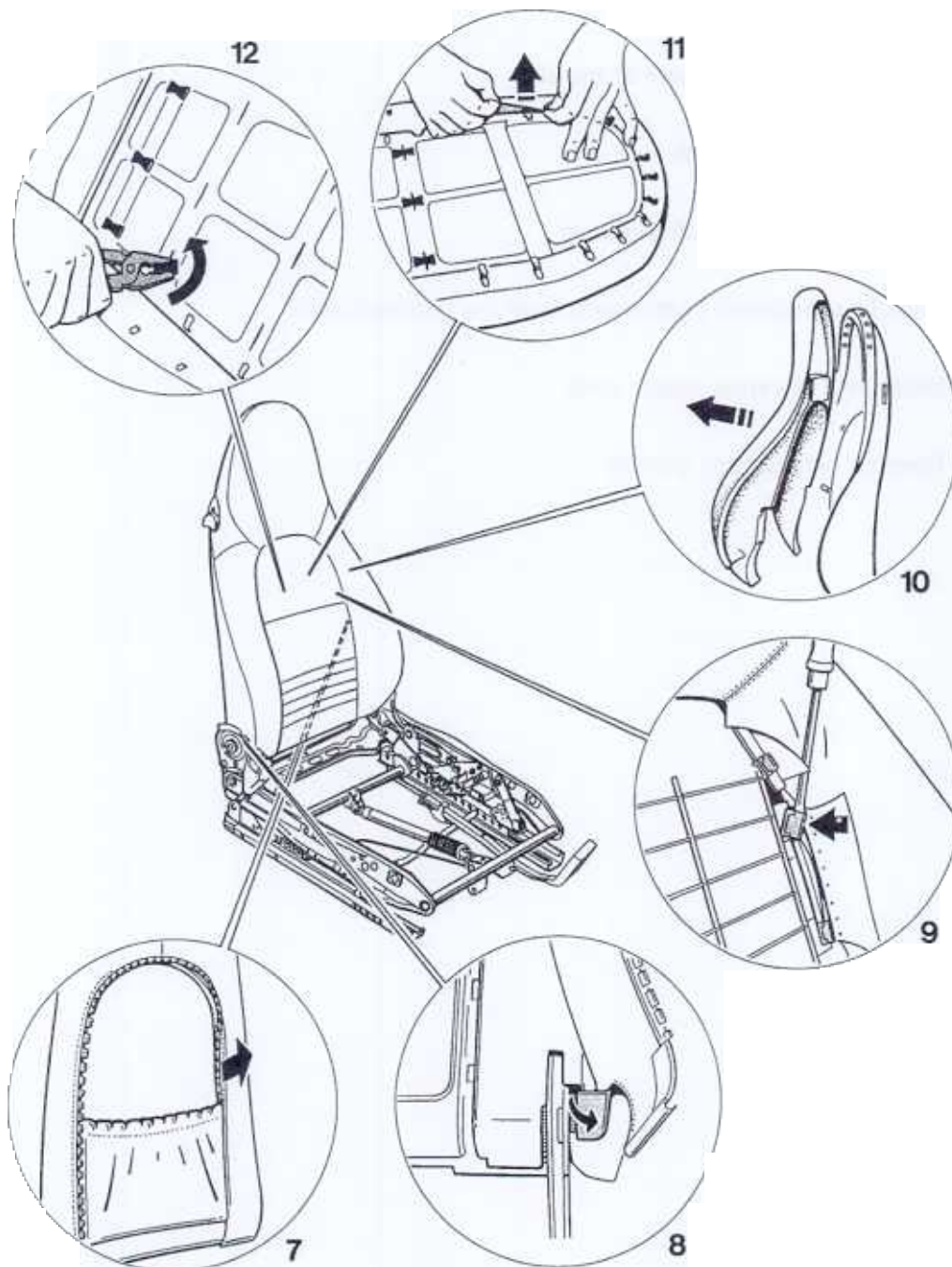


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## Removal overview of the backrest covering components

- 1 Removing backrest cover at the side
- 2 Removing clothes hook
- 3 Removing backrest release lever
- 4 Detaching backrest centre strip from the backrest shell
- 5 Unclipping backrest centre strip
- 6 Opening side bolster closure

## Removal overview of the backrest covering components



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## Removal overview of the backrest covering components

- 7 Detaching backrest covering at rear
- 8 Opening fold of the side bolsters
- 9 Detaching covering strip from the backrest shell
- 10 Detaching foam part of backrest frame
- 11 Disengaging centre strip covering
- 12 Detaching covering strip from the fastening frame

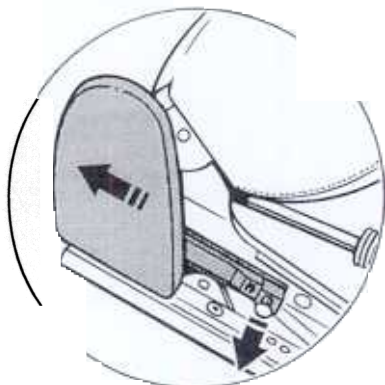


The seat cushion, service No 74 13, must be removed before removal of the backrest covering!

No. Procedure

Instructions

1

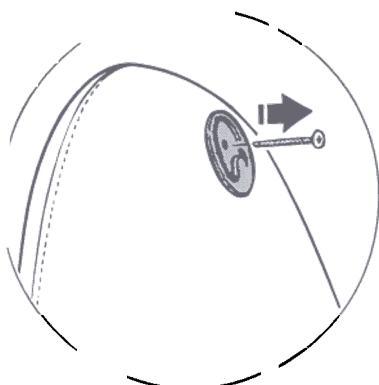


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Removing backrest cover at the sides

Detach the expanding rivet St 10, and pull off the backrest cover to the rear at the sides.

2

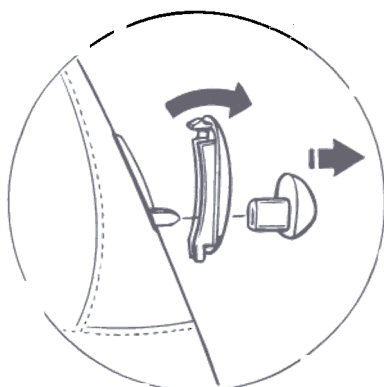


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Removing clothes hook

Unscrew the M5 x 18 countersunk screw and remove the clothes hook from the backrest shell.

3



29\_c\_97

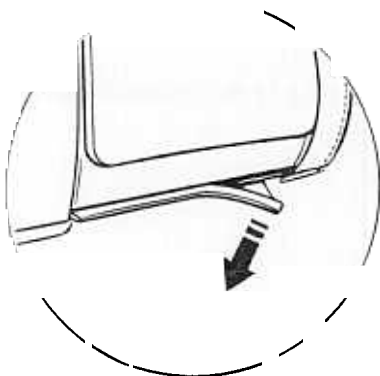
Removing backrest release lever

Insert a screwdriver into the backrest release lever and carefully press it out. Unclip the rosette at the top and remove.

No. Procedure

Instructions

4



29\_d\_97

Detaching backrest centre section from the backrest shell

Pull the bead sewn on the backrest centre strip out of the backrest shell.

5

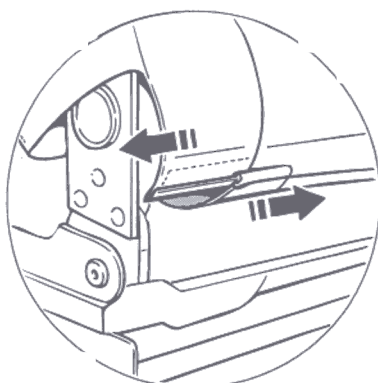


29\_e\_97

Unclipping the backrest centre strip.

Pull out the backrest centre strip at the bottom and pull it out of the plastic clips at the top.

6



29\_f\_97

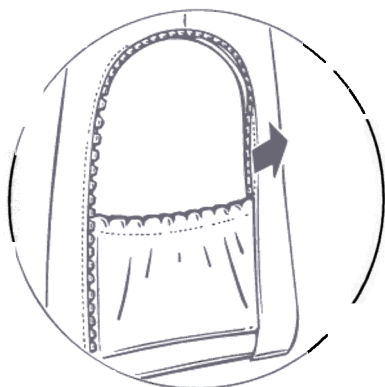
Opening side bolster closure.

The side bolsters of the backrest covering are joined together at the bottom of the backrest shell. The closures must be pushed apart to open the covering.

No. Procedure

Instructions

7

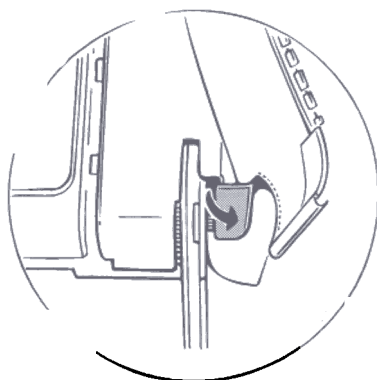


29\_g\_97

Detaching backrest covering at rear

Pull the backrest covering out of the backrest shell at the rear.

8

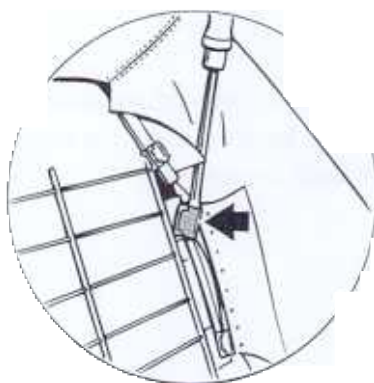


29\_h\_97

Opening fold of the side bolsters

The fold of the side bolster covering is clamped under the backrest shell and is pulled off in downward direction.

9



29\_i\_97

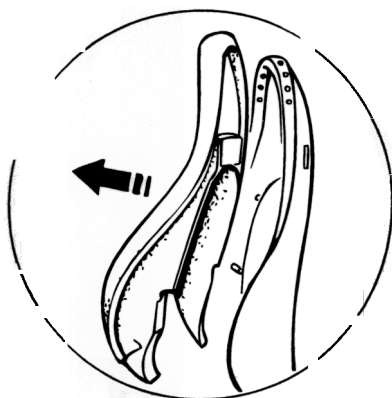
Detaching covering strip from the backrest shell.

Using a screwdriver, press the clips with the covering strip out of the backrest shell and remove the backrest covering.

No. Procedure

Instructions

10

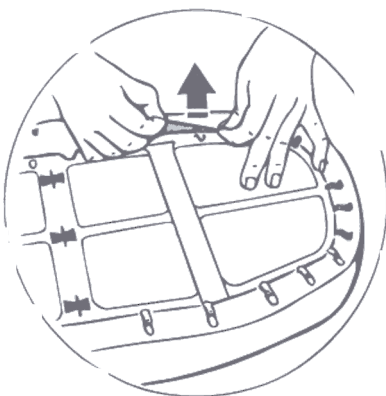


29\_k\_97

Detaching foam part of backrest frame.

Carefully pull off the foam part of the backrest frame.

11

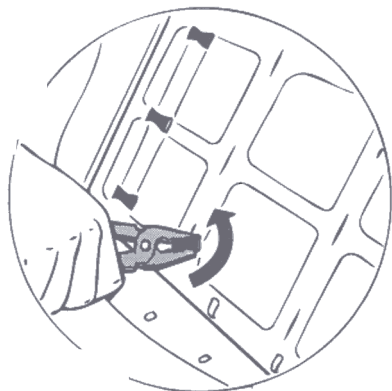


29\_l\_97

Disengaging centre strip covering.

Disengage the centre strip covering from the hooks of the fastening frame.

12

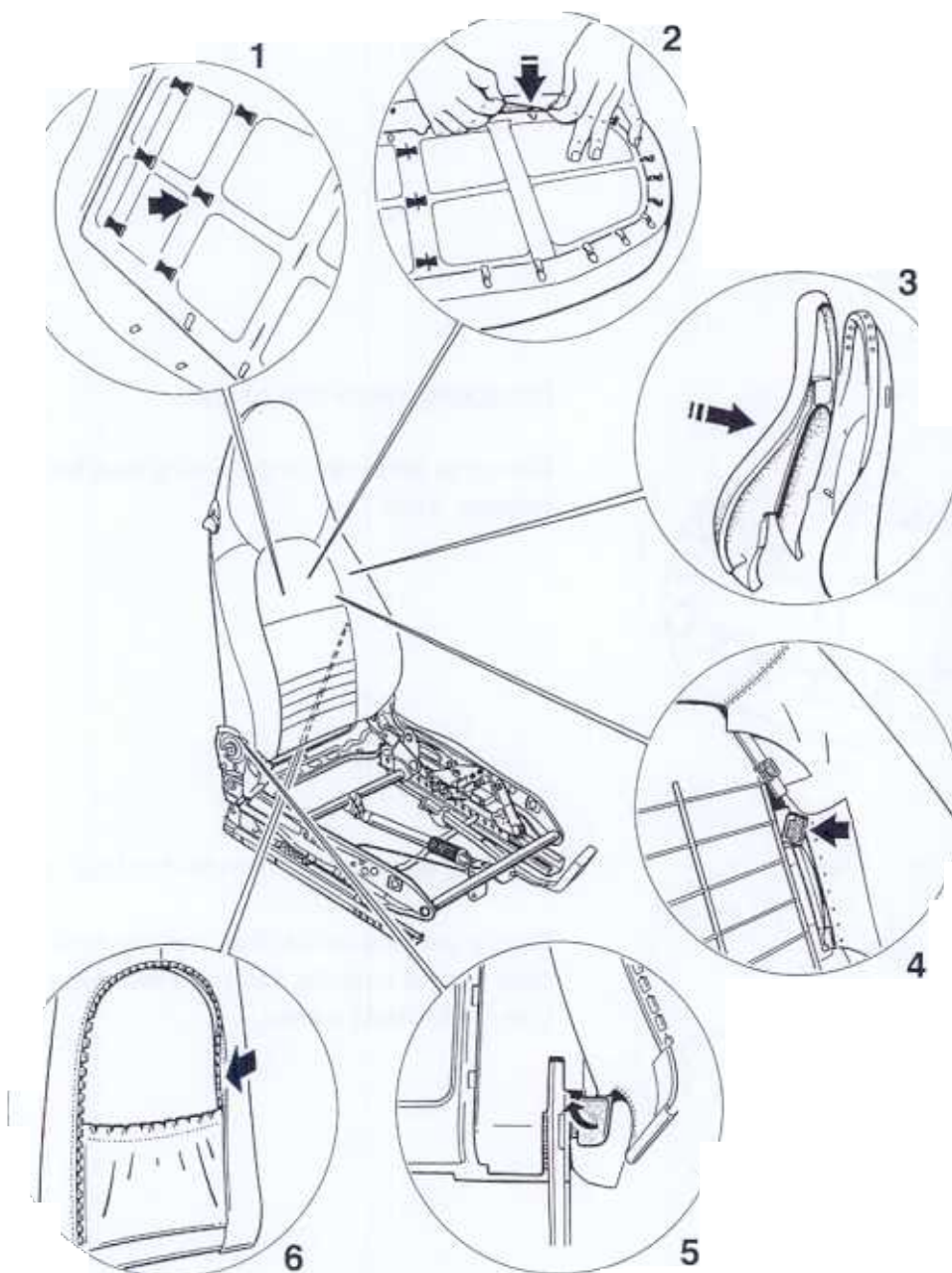


29\_m\_97

Detaching covering strip from the fastening frame.

Using a pair of universal pliers, twist and pull off the plastic clips; remove fastening frame and the centre strip covering from the backrest cushion.

## Installation overview of the backrest covering components



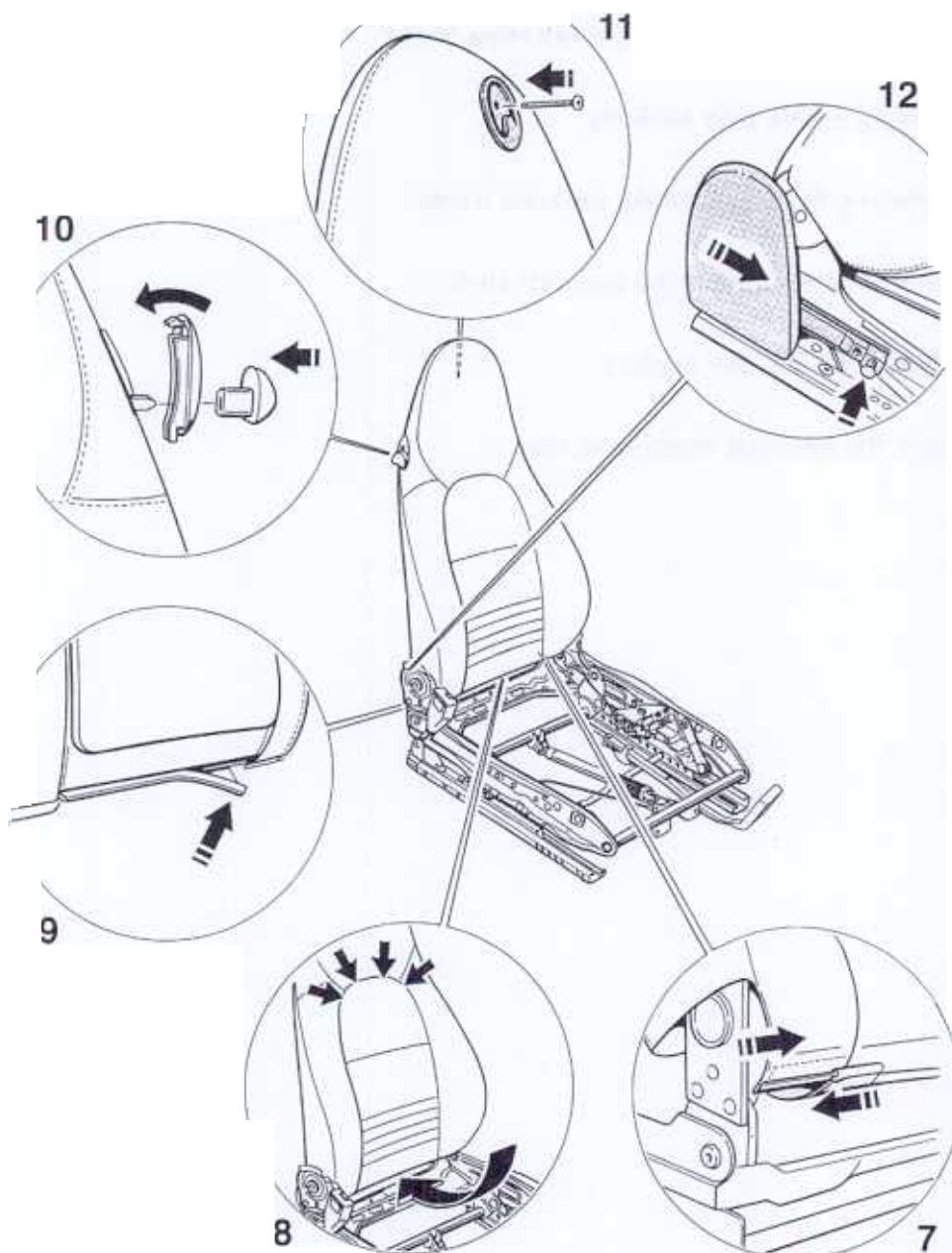
439\_a\_97

## **Installation overview of the backrest covering components**

- 1        Clipping covering strip into the fastening frame**
- 2        Engaging centre strip covering**
- 3        Positioning foam part on the backrest frame**
- 4        Fitting covering strip in the backrest shell**
- 5        Folding over the side bolsters**
- 6        Fitting the backrest covering at rear**



## Installation overview of the backrest covering components



439\_b\_97

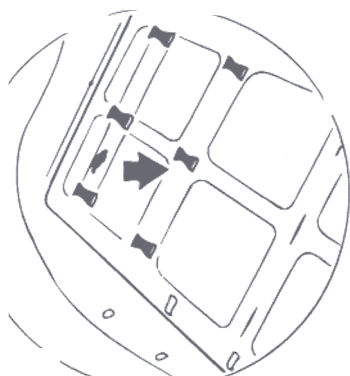
## Installation overview of the backrest covering components

- 7 Fitting backrest covering at rear
- 8 Fitting backrest centre strip in the backrest shell
- 9 Engaging backrest centre strip
- 10 Fitting backrest release lever
- 11 Fitting clothes hook
- 12 Fitting backrest cover at the side

No. Procedure

Instructions

1

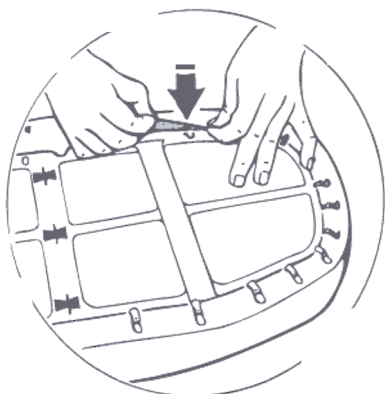


439\_c\_97

Clipping covering strip into the fastening frame.

Position covering strip of the centre strip covering on the backrest cushion with fastening frame and press the plastic clips into the covering strip.

2

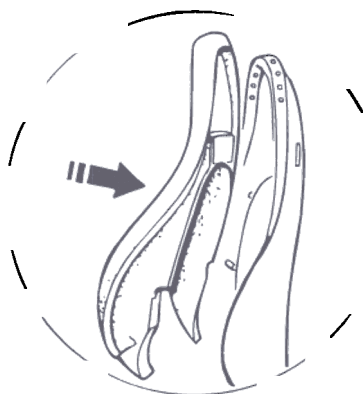


439\_d\_97

Engaging centre strip covering

Engage the centre strip covering in the hooks of the fastening frame.

3



439\_e\_97

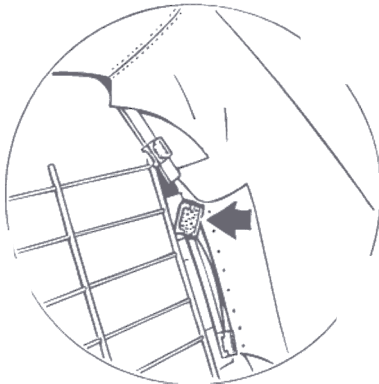
Positioning foam part on the backrest frame.

Coat bottom side of the foam part with adhesive, position with the backrest frame and press on firmly.

**No. Procedure**

**Instructions**

4

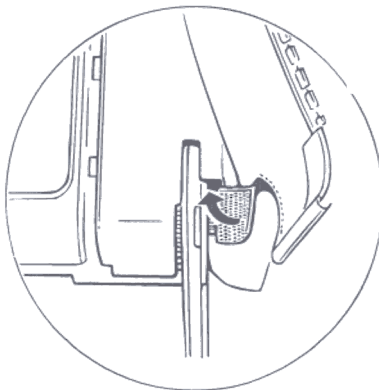


439\_f\_97

Fitting covering strip in the backrest shell

Pull the backrest covering over the foam part and the backrest frame without wrinkles. Position covering strip of the backrest covering on the backrest shell and press the clips over the covering strip and the backrest.

5

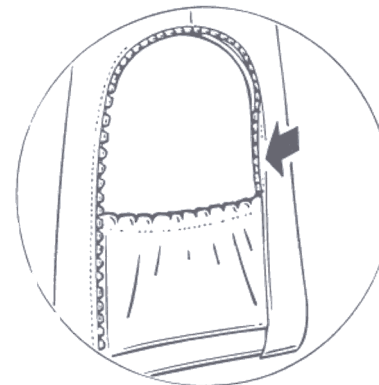


439\_g\_97

Folding over the side bolsters.

Fold over the cardboard insert of the side bolsters below the backrest shells.

6



439\_h\_97

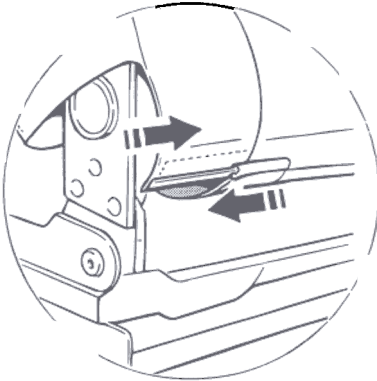
Fitting backrest covering at the rear.

Starting in the centre, press the backrest covering into the backrest shell at the rear.

**No. Procedure**

**Instructions**

7

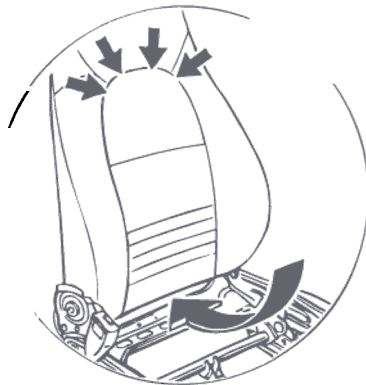


439\_i\_97

Closing the side bolster closure.

The side bolsters of the backrest covering must be joined together at the bottom of the backrest shell. The closures must be pushed into each other to close the covering.

8

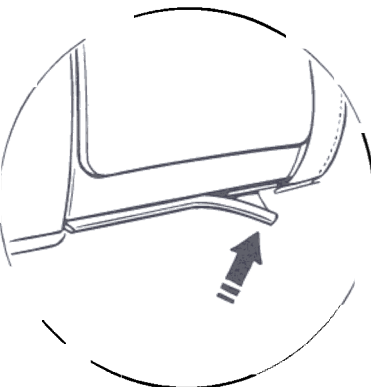


439\_k\_97

Fitting the backrest centre strip in the backrest shell.

Engage the bead sewn on the centre backrest strip in the backrest shell.

9



439\_l\_97

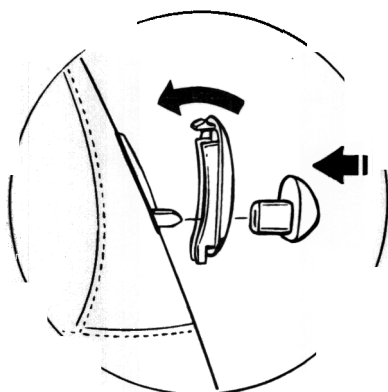
Clipping in the backrest centre strip.

Press the backrest centre strip into the plastic clips at the top and insert it at the bottom.

No. Procedure

Instructions

10

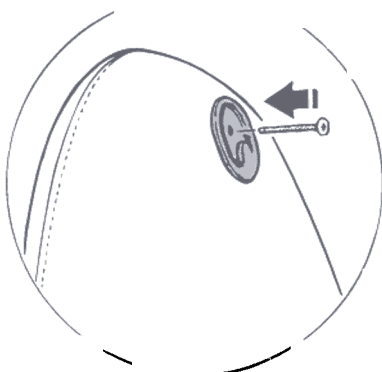


439\_m\_97

Fitting backrest release lever.

Insert rosette at the bottom and press in at the top until it engages. Push on the release lever.

11

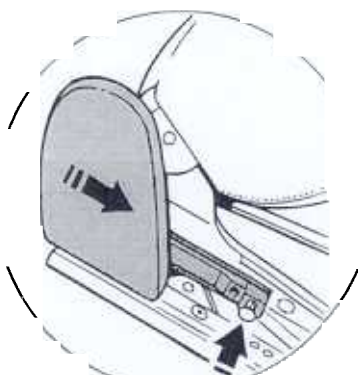


439\_n\_97

Fitting clothes hook.

Position clothes hook on the rear of the backrest shell and fasten with the M5 x 18 countersunk screw.

12



439\_o\_97

Fitting backrest cover at the side.

Insert backrest cover from behind and position; fit expanding rivet St 10.