# TABLE OF CONTENTS

Preliminary remarks

1 Description
   1.1 Safety instructions
   1.2 Rating plate

2 Repair work
   2.1 Seat and backrest cushion – removal and installation (standard)
   2.2 Seat cushion – removal and installation (with climate control system)
   2.3 Backrest cushion – removal and installation (with climate control system)
   2.4 Fan for the back – removal and installation

2.5 Lumbar support – removal and installation
   2.5.1 Mechanical lumbar support – removal and installation
   2.5.2 Pneumatic lumbar support – removal and installation
   2.5.3 Pneumatic lumbar support – removal and installation (seat with distribution for climate control system) and plate for lumbar support – removal and installation
TABLE OF CONTENTS

2.6 Distribution for climate control system – removal and installation
2.7 Backrest extension – removal and installation *)
2.8 Headrest and headrest guides – removal and installation
2.9 Cable harness – removal and installation (standard)
2.10 Cable harness for seat heater / climate control system – removal and installation (seat with distribution for climate control system)
2.11 Cable harness for heater / climate control system – removal and installation (seat with distribution for climate control system)
2.12 Cable harness for height adjustment / seat occupancy detection system – removal and installation (seat with distribution for climate control system)
2.13 Entire cable harness – removal and installation (seat with distribution for climate control system)
2.14 Seat heater cables and switch – removal and installation *)
2.14.1 Seat heater cables and switch – removal and installation (seat with pneumatic lumbar support)
2.14.2 Seat heater cables and switch – removal and installation (seat with mechanical lumbar support)

*) depending on delivery scope
TABLE OF CONTENTS

2.15 Seat switch – removal and installation
2.15.1 Seat switch – removal and installation (seat without seat angle and seat depth adjustment)
2.15.2 Seat switch – removal and installation (seat with seat angle and seat depth adjustment)
2.15.3 Seat switch with connector – removal and installation (seat with seat angle and seat depth adjustment)

2.16 Voltage transformer – removal and installation

2.17 Storage box – removal and installation *)

2.18 Armrests – removal and installation *)

2.19 Covers on the right and left side – removal and installation *)

2.20 Lap belt – removal and installation *)

2.20.1 Lap belt – removal and installation

2.20.2 Lap belt with belt retractor – removal and installation

2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation

2.20.4 Lap belt with belt retractor fitted inside – removal and installation

*) depending on delivery scope
TABLE OF CONTENTS

2.21 Backrest adjustment – removal and installation *)
2.21.1 Backrest adjustment – removal and installation (Backrest adjustment with lever on the side)
2.21.2 Backrest adjustment and handle for backrest adjustment – removal and installation (backrest adjustment with front lever)
2.21.3 Backrest adjustment with locking left/ right – removal and installation (backrest adjustment with front lever)

2.22 Backrest and backrest bearing – removal and installation *)
2.22.1 Backrest and backrest bearing – removal and installation (locking lever at the side of mounting)
2.22.2 Backrest and backrest bearing – removal and installation (locking lever at front of mounting)
2.22.3 Backrest and backrest bearing with locking left/right – removal and installation (locking lever at front of mounting)

2.23 Bearing of the supporting structure at the rear – removal and installation *)
2.24 Supporting structure at the rear – removal and installation
2.25 Supporting structure at the front – removal and installation

*) depending on delivery scope / delivery option
TABLE OF CONTENTS

2.26 Seat angle and seat depth adjustment – removal and installation *)
   • Flexible support plate for seat occupancy detection system – removal and installation
   • Holder for seat depth and seat angle adjustment – removal and installation
   • Spring steel plate at the seat angle adjustment – removal and installation
   • Spring steel plate at the seat depth adjustment – removal and installation
   • Locking mechanism for seat depth and seat angle adjustment – removal and installation

2.27 Covers (for seat depth adjustment) – removal and installation

2.28 Seat plate – removal and installation (seat with distribution for climate control system)
   and end stop for backrest – removal and installation

2.29 Slider for seat depth adjustment and protective profile – removal and installation

2.30 Swivel *) and seat plate - removal and installation
   2.30.1 Swivel and seat plate – removal and installation (seat with integrated swivel)
       and lever for swivel – removal and installation
   2.30.2 Swivel and seat plate – removal and installation (seat with external swivel)

*) depending on delivery scope/ delivery option
TABLE OF CONTENTS

2.31   Fore/aft adjustment – removal and installation
2.31.1 Fore/aft adjustment – removal and installation (seat without swivel)
2.31.2 Fore/aft adjustment – removal and installation (seat with swivel)
2.31.3 Upper fore/aft adjustment (for upper seat part) – removal and installation (seat with supporting structures) *)
2.31.4 Lower fore/aft adjustment (for upper seat part and supporting structure for control) – removal and installation (seat with supporting structures) *)

2.32   Multi-function armrest – removal and installation *)

2.33   Entire upper seat part – removal and installation
2.33.1 Entire upper seat part – removal and installation
2.33.2 Entire upper seat part – removal and installation (with connector between cable harness for seat suspension and upper seat part)

2.34   Bowden pull wire for locking left/right – removal and installation (locking lever at front of mounting)

*) depending on delivery scope/ delivery option
Notes on these instructions

This repair manual includes information and instructions on how to perform repair work on the GRAMMER upper seat part of the following seat models (see rating plate on the seat):
- Upper seat part S721; S731; S741 (short back)
- Upper seat part S722; S732; S742 (long back)

The repair of the lower seat part is described in the corresponding repair manual of the seat suspension (e.g. MSG95EL, A, AL) to which a reference is made, if required (see repair manual for seat suspension).

Example:
Remove the cable for seat height adjustment at the seat suspension (see repair manual for seat suspension).

The upper seat parts S721 – S742 form the basis for illustrations in this repair manual.
In the case of technical deviations in work procedures (due to different seat models), refer to the current text or individual chapters of the manual.

Each chapter starts with a list of all preparatory work to be completed before starting repair. These preparations are described in separate chapters and shall be carried out without the preparatory steps described there.

At the beginning of each description for repair you will find an overview diagram. All parts included in the overview diagrams within one chapter are consecutively numbered starting with "1". Each component is referred to by the same number throughout the document.
With the help of these overview diagrams, an experienced technician will gain a quick overview.
Preliminary remarks

For spare part orders, please use the numbers stated in the latest issue of the relevant spare parts catalogue.

The description of the work steps refers to the disassembled upper seat part. Depending on the individual installation situation, the repair work may also be performed with the upper seat part being installed. For this reason, check the environment of the installed upper seat part for this possibility before starting work. The safety instructions of the specific vehicle manufacturer and those stated in Chapter 1 of this repair manual must be strictly observed.

This repair manual also includes some information on delivery options, if these require further explanation. Since the scope of delivery depends on the specific customer order, the actual upper seat part design may deviate from the descriptions and illustrations in this manual.

The illustrated repair steps refer to the upper seat part (left-hand drive). Different work steps are to be performed laterally reversed when repairing vehicle models with right-hand drive.

If not stated otherwise, the directional indications "front, back" and "right, left" refer to the installed upper seat part regarded in the driving direction of the vehicle.

The document layout is suitable for later use of this repair manual via CD-ROM / INTERNET / INTRANET. A navigation line was entered below the heading for this. This navigation line includes the Chapter titles and it allows the user to jump directly to these Chapters after the corresponding hyperlinks have been set.
Basic information on the upper seat part

The upper seat part is provided with a long-lasting lubrication (approx. 10 years). The lubricating points must be re-greased only after repair work, using an acid-free multi-purpose lubricant.

In the description of the present repair manual, not all fastening parts might be mentioned. After repair, it might be necessary to check fastening parts regarding their factory-made laying, support and securing and to correct them respectively, if required.

For proper functioning of the seat, it is important to carry out repair work of the pneumatic system by means of GRAMMER's special tool kit Praticco. The individual work steps are described in the operating instructions which are enclosed with the kit.

Bowden pull wires, cables and hoses must be tightened only on the defined spots by hand (loose) with cable ties. Make sure that the Bowden pull wires, cables and hoses cannot be squeezed or distorted when the seat is adjusted or moved.

Replace all removed old parts with enclosed new ones. If there is no new part included, the old one is to be cleaned and checked for its suitability for re-use. Defective parts and worn parts must be replaced by new ones.

GRAMMER AG rejects any warranty claims if damaged or worn parts and assemblies are not replaced by spare parts released by GRAMMER AG.
Qualified personnel

These instructions offer basic information on proper technical seat repair. The contents of the work procedures described are intended for professionally educated technicians with profound product knowledge. This level of knowledge is an imperative requirement when performing the work and procedures described in this document.

In order to avoid bodily injury, reduced operational safety or damage to the upper seat part resulting from improperly performed work, all information and instructions, in particular the safety instructions stated in Chapter 1, must be read carefully and strictly observed.

As an inevitable matter of fact, GRAMMER AG cannot evaluate all situations and consequences that may bear a risk of injury for the persons involved in the described work procedures. For this reason, it is absolutely necessary that every person who carries out repair work at the upper seat part uses his/her professional knowledge to make sure that his/her own safety will not be put at risk and that the selected type of repair will not cause any negative effects, in particular with regard to technical safety.

For this reason, GRAMMER AG disclaims liability for any possible damage of this kind.

We point out explicitly that all work steps and procedures described are to be performed with consideration to the applicable directives and regulations stipulated by the relevant local authorities and in compliance with the provisions on health protection, prevention of accidents and environmental protection.
Preliminary remarks

Change notification and copyright

The upper seat parts are subject to continuous development. Please understand that we must reserve the right to make changes in shape, equipment and technical design. For this reason, the contents of this repair manual cannot be used to substantiate any possible claims.

Reprint, translation and copies of this manual or parts thereof are admissible only after written approval.

GRAMMER AG · Postfach 14 54 · D-92204 Amberg
Phone +49 (0) 96 21 / 66-6822
www.grammer.com

Delivery and factory address:
GRAMMER AG
Köferinger Str. 9-13 · D-92245 Kümmersbruck
TABLE OF CONTENTS

1.1 Safety instructions
1.2 Rating plate

Note:
Please refer to the applicable seat operating instructions for further details.
1.1 Safety instructions

1 All inspection, test and repair work must be performed exclusively by adequately trained personnel.

2 All work steps and procedures described are to be performed with consideration to the applicable directives and regulations stipulated by the relevant local authorities and in compliance with the provisions on health protection, prevention of accidents and environmental protection.

3 Special notes in this repair manual are highlighted as follows:

⚠️ WARNING … indicates possible risks for persons and their prevention.

⚠️ ATTENTION … indicates possible damage or destruction of material and their prevention.

Note: … introduces an additional explanation for better understanding the work to be carried out.

Installation note: … introduces an additional explanation for better understanding the installation work to be carried out.

4 Before starting repair work, the following work has to be carried out:
   • Disconnect the upper seat part from the power supply.
   • If a seat switch is installed, disconnect the connection between the electric supply network and the seat switch.

5 When using oil, grease and other chemical substances, the relevant safety regulations for the handling and use of these products must be observed.
1.2 Rating plate

The rating plate is located on the back of the seat suspension in the top left corner.

The rating plate shows the following information (example):

(A) BENENNUNG
    DESIGNATION = MSG 95EL/722

(B) SACH-NR.
    INVENTORY NO. = 1050365

(C) Year/ CW / Assembly
    = 0703 031
    • Year of manufacture = 07 (2007)
    • Built in week = 03 (January)
    • Assembly = 031

(D) AUFTRAGS NR.
    ORDER NO. = DE 42844300080

Note:
When orders are placed, the correct inventory no. (B) on the rating plate is always to be quoted.
TABLE OF CONTENTS

2.1 Seat and backrest cushion – removal and installation (standard)
2.2 Seat cushion – removal and installation (with climate control system)
2.3 Backrest cushion – removal and installation (with climate control system)
2.4 Fan for the back – removal and installation

2.5 Lumbar support – removal and installation
2.5.1 Mechanical lumbar support – removal and installation
2.5.2 Pneumatic lumbar support – removal and installation
2.5.3 Pneumatic lumbar support – removal and installation (seat with distribution for climate control system) and plate for lumbar support – removal and installation
### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6</td>
<td>Distribution for climate control system – removal and installation</td>
</tr>
<tr>
<td>2.7</td>
<td>Backrest extension – removal and installation *)</td>
</tr>
<tr>
<td>2.8</td>
<td>Headrest and headrest guides – removal and installation</td>
</tr>
<tr>
<td>2.9</td>
<td>Cable harness – removal and installation (standard)</td>
</tr>
<tr>
<td>3.10</td>
<td>Cable harness for seat heater / climate control system – removal and installation (seat with distribution for climate control system)</td>
</tr>
<tr>
<td>2.11</td>
<td>Cable harness for heater / climate control system – removal and installation (seat with distribution for climate control system)</td>
</tr>
<tr>
<td>2.12</td>
<td>Cable harness for height adjustment / seat occupancy detection system – removal and installation (seat with distribution for climate control system)</td>
</tr>
<tr>
<td>2.13</td>
<td>Entire cable harness – removal and installation (seat with distribution for climate control system)</td>
</tr>
<tr>
<td>2.14</td>
<td>Seat heater cables and switch – removal and installation *)</td>
</tr>
<tr>
<td>2.14.1</td>
<td>Seat heater cables and switch – removal and installation (seat with pneumatic lumbar support)</td>
</tr>
<tr>
<td>2.14.2</td>
<td>Seat heater cables and switch – removal and installation (seat with mechanical lumbar support)</td>
</tr>
</tbody>
</table>

*) depending on delivery scope / delivery option
TABLE OF CONTENTS

2.15 Seat switch – removal and installation
2.15.1 Seat switch – removal and installation (seat without seat angle and seat depth adjustment)
2.15.2 Seat switch – removal and installation (seat with seat angle and seat depth adjustment)
2.15.3 Seat switch with connector – removal and installation (seat with seat angle and seat depth adjustment)

2.16 Voltage transformer – removal and installation

2.17 Storage box – removal and installation *)

2.18 Armrests – removal and installation *)

2.19 Covers on the right and left side – removal and installation *)

2.20 Lap belt – removal and installation *)
2.20.1 Lap belt – removal and installation
2.20.2 Lap belt with belt retractor – removal and installation
2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation
2.20.4 Lap belt with belt retractor fitted inside – removal and installation

*) depending on delivery scope / delivery option
## TABLE OF CONTENTS

2.21 Backrest adjustment – removal and installation *)
2.21.1 Backrest adjustment – removal and installation (Backrest adjustment with lever on the side)
2.21.2 Backrest adjustment and handle for backrest adjustment – removal and installation (backrest adjustment with front lever)
2.21.3 Backrest adjustment with locking left/ right – removal and installation (backrest adjustment with front lever)

2.22 Backrest and backrest bearing – removal and installation *)
2.22.1 Backrest and backrest bearing – removal and installation (locking lever at the side of mounting)
2.22.2 Backrest and backrest bearing – removal and installation (locking lever at front of mounting)
2.22.3 Backrest and backrest bearing with locking left/right – removal and installation (locking lever at front of mounting)

2.23 Bearing of the supporting structure at the rear – removal and installation *)
2.24 Supporting structure at the rear – removal and installation
2.25 Supporting structure at the front – removal and installation

*) depending on delivery scope / delivery option
TABLE OF CONTENTS

2.26 Seat angle and seat depth adjustment – removal and installation *)
   • Flexible support plate for seat occupancy detection system – removal and installation
   • Holder for seat depth and seat angle adjustment – removal and installation
   • Spring steel plate at the seat angle adjustment – removal and installation
   • Spring steel plate at the seat depth adjustment – removal and installation
   • Locking mechanism for seat depth and seat angle adjustment – removal and installation

2.27 Covers (for seat depth adjustment) – removal and installation

2.28 Seat plate – removal and installation (seat with distribution for climate control system)
   and end stop for backrest – removal and installation

2.29 Slider for seat depth adjustment and protective profile – removal and installation

2.30 Swivel *) and seat plate - removal and installation
2.30.1 Swivel and seat plate – removal and installation (seat with integrated swivel)
   and lever for swivel – removal and installation
2.30.2 Swivel and seat plate – removal and installation (seat with external swivel)

*) depending on delivery option / delivery model
## TABLE OF CONTENTS

2.31  Fore/aft adjustment – removal and installation
2.31.1 Fore/aft adjustment – removal and installation (seat without swivel)
2.31.2 Fore/aft adjustment – removal and installation (seat with swivel)
2.31.3 Upper fore/aft adjustment (for upper seat part) – removal and installation (seat with supporting structures) *
2.31.4 Lower fore/aft adjustment (for upper seat part and supporting structure for control) – removal and installation (seat with supporting structures) *

2.32  Multi-function armrest – removal and installation *

2.33  Entire upper seat part – removal and installation
2.33.1 Entire upper seat part – removal and installation
2.33.2 Entire upper seat part – removal and installation (with connector between cable harness for seat suspension and upper seat part)

2.34  Bowden pull wire for locking left/right – removal and installation (locking lever at front of mounting)

*) depending on delivery option / delivery model
2.1 Seat and backrest cushion – removal and installation

REMOVAL/INSTALLATION

(1) Screws
(2) Backrest cushion
(3) Connector at the backrest cushion
(4) Screws
(5) Seat cushion
(6) Connector at the seat cushion
### 2.1 Seat and backrest cushion – removal and installation

**Removal and installation**

1. Undo the screws (1).

2. **Seat with seat heater**:  
   Pull the backrest cushion (2) slightly forwards and disconnect the connector (3) for the seat heater.

3. Remove the backrest cushion (2).

4. **Seat without seat angle and seat depth adjuster**:  
   Undo the three screws (4) at the front.

5. **Seat with angle and seat depth adjuster**:  
   Undo the four screws (4) on the side.
6 Seat with seat heater:
   Pull the seat cushion (5) slightly forward and disconnect the connector (6) for the seat heater.

7 Remove the seat cushion (5).

8 Re-install the components in the reverse order of their removal.
2.2 Seat cushion – removal and installation (with climate control system)

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Seat cushion
(2) Round head screw (inner race) ...................... 3.5 Nm
(3) Cable for seat fan
(4) Connector (seat fan)
(5) Cable for seat heater
(6) Connector (seat heater)
(7) Cable for seat heater / -seat ventilation
(8) Socket (seat heater)
(9) Socket (seat fan)
(10) Hook
(11) Round head screw (inner race)
(12) Clamping plate
Removal and installation

1 Push the seat cushion (1) as far forward as possible.

2 Unscrew four round head screws (2).
   **Installation note:**
   Round head screw (2), 3.5 Nm.

3 Pull out the seat cushion (1) from the two hooks (10) in forward direction.

4 Lift the seat cushion (1) at the front and pull out the seat heater cable (5) and the seat fan cable (3) from the depression (arrow) in the bottom part of the seat cushion (1).
5 Disconnect the electrical connections between the plug (6) and the socket (8) of the seat heater and between the plug (4) and the socket (9) of the seat fan.

6 Unscrew two round head screw (11) and remove the clamping plate (12).

**Installation note:**
When tightening the clamping plate (12), clamp the seat heater cable (5), the seat fan cable (3) and the cable for the seat heater / -seat ventilation (7) between the clamping plate (12) and the seat cushion (1).

7 Take off the seat cushion (1).

8 Re-install the components in the reverse order of their removal.
2.3 Backrest cushion – removal and installation
(with climate control system)

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Backrest cushion
(2) Plug (fan for the back)
(3) Plug (heater for the back)
(4) Seat cushion
(5) Socket (fan for the back)
(6) Socket (heater for the back)
(7) Backrest
(8) Round head screw (inner race) ...................... 3 Nm
(9) Headrest
(10) Handle for backrest adjustment
2.3 Backrest cushion – removal and installation
(with climate control system)

Removal and installation

1. Push the seat cushion (4) as far forward as possible.

2. Pull the headrest (9) upwards.

3. Unscrew six round head screws (8).

   **Installation notes:**
   - Round head screw (8), 3 Nm.
   - When tightening the screws of the backrest cushion (1), use a highlighter to mark the location of drill holes in the backrest cushion (1) for easier screw placement.
4 **WARNING** Take care with the backrest frame (7) – it might jerk forward and cause injury! When the backrest cushion (1) has been removed, the backrest (7) must be supported, before the handle for backrest adjustment (10) is operated.

Pull the upper part of the backrest cushion (1) forwards and disconnect the electrical connections between plug (3) and socket (6) of the heater for the back and between plug (2) and socket (5) of the fan for the back.

5 Take off the backrest cushion (1).

6 Re-install the components in the reverse order of their removal.
2.4 Fan for the back – removal and installation

REMOVAL / INSTALLATION

(1) Backrest cushion
(2) Fan for the back
(3) Round head screw (inner race) .......................... 0.5 Nm
(4) Cover

1 Remove the backrest cushion (Chapter 2.3).
2.4 Fan for the back – removal and installation

Removal and installation

2 If the cover (4) is defective:
   Carefully pull off the cover (4) from the fan for the back (2) at the glued point.
   **Installation note:**
   Remove the decal foil from the self-adhesive area of the cover (4) and adhere the cover (4) to the fan for the back (2).

3 Unscrew two round head screws (3).
   **Installation note:**
   Round head screw (3), 0.5 Nm.

4 Remove the fan for the back (2) at the backrest cushion (1).

5 Re-install the components in the reverse order of their removal.
TABLE OF CONTENTS

2.5.1 Mechanical lumbar support – removal and installation
2.5.2 Pneumatic lumbar support – removal and installation
2.5.3 Pneumatic lumbar support – removal and installation (seat with distribution for climate control system) and plate for lumbar support – removal and installation
2.5.1 Mechanical lumbar support – removal and installation

REMOVAL/INSTALLATION

Table of Contents

1. Remove the backrest cushion (see Chapter 2.1).

2. Seat with storage box:
   Detach the storage box (Chapter 2.17).
2.5.1 Mechanical lumbar support – removal and installation

Removal and installation

3 Drill off the rivets (1), loosen the spring steel sheets (2) from the L-bar (3) and remove them.

4 Unhook the L-bars (3) from the catch element (4).

5 Undo the hexagon socket screw (5) and remove the adjusting knob (6) with the toothed wheel (7).

6 Drill off the rivet (8), remove the wrap spring brake element (9) and the catch element (4).

7 Re-install the components in the reverse order of their removal.
2.5.2 Pneumatic lumbar support – removal and installation

REMOVAL/INSTALLATION

(1) Hose leading to valve connection A
(2) Hose leading to valve connection B
(3) Hose leading to valve connection C
(4) Connector
(5) Connecting cable
(6) Terminal contacts
(7) Compressor
(8) Switch
(9) Switch enclosure
(10) Rivet
(11) Plate
(12) Lumbar support
(13) Plastic clips
(14) Rubber buffer
(15) Cable tie
2.5.2 Pneumatic lumbar support – removal and installation

REMOVAL/INSTALLATION

1. Remove the backrest cushion (see Chapter 2.1).

2. Seat with storage box:
   Detach the storage box (Chapter 2.17).

Removal and installation

3. Pull off the hose (1) from valve connection (A).

4. Pull off the hose (2) from valve connection (B).

5. Pull off the hose (3) from valve connection (C).

6. Disconnect the connector (4) from the connecting cable (5).
2.5.2 Pneumatic lumbar support – removal and installation

**REMOVAL/INSTALLATION**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Disconnect the electrical contacts (6) from the compressor (7). <strong>Installation note:</strong> Black cable: thin terminal contact, Red cable: broad terminal contact.</td>
</tr>
<tr>
<td>8</td>
<td>Dismount the switch (8).</td>
</tr>
<tr>
<td>9</td>
<td>Dismount the switch enclosure (9).</td>
</tr>
<tr>
<td>10</td>
<td>Drill off the rivet (10).</td>
</tr>
<tr>
<td>11</td>
<td>Remove the plate (11) with the lumbar support (12).</td>
</tr>
<tr>
<td>12</td>
<td>Remove the plastic rivet (13) and remove the lumbar support (12).</td>
</tr>
</tbody>
</table>
2.5.2 Pneumatic lumbar support – removal and installation

REMOVAL/INSTALLATION

13 Un-clip the compressor (7) from the plate (11).

14 Remove the rubber buffers (14).

15 Open the cable tie (15) and remove the connecting cable (5) from the plate (11).

16 Re-install the components in the reverse order of their removal.
2.5.3 Pneumatic lumbar support – removal and installation
(seat with distribution for climate control system)

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Bellows for lumbar support
(2) Plate for lumbar support
(3) Hose (for valve connection A)
(4) Hose (for valve connection B)
(5) Hose (for valve connection C)
(6) Expanding rivet ............... to replace
(7) Blind rivet
(8) Distribution for climate control system
(9) Socket (valve cable)
(10) Cable tie
(11) Compression spring
(12) Foam plastic part
(13) Compressor
(14) Backrest
(15) Blind rivet
2.5.3 Pneumatic lumbar support – removal and installation
(seat with distribution for climate control system)

REMOVAL / INSTALLATION

(16) Valve housing
(17) Bell-shaped valve
(18) Valve cable
(19) Narrow plug-in contact
(20) Broad plug-in contact
(21) Plug (entire cable harness)

Valve connections:
(A) Valve connection on upper part of the bellows
(B) Valve connection on lower part of the bellows
(C) Valve connection of compressor
2.5.3 Pneumatic lumbar support – removal and installation  
(seat with distribution for climate control system)

REMOVAL / INSTALLATION

1 Remove the backrest cushion (Chapter 2.3).

2 Seat with storage box:  
Remove the storage box (Chapter 2.17).

Removal and installation

3 Pull off four compression springs (11) at the three valve connections (A, B, C) and at the connection of the compressor (13) and push them backwards at the hoses (3, 4, 5).  
**Note:**  
The compression springs (11) serve as antikinking protection for the hoses (3, 4, 5).

4 Pull off the hose (3) from valve connection (A).

5 Pull off the hose (4) from valve connection (B).
2.5.3 Pneumatic lumbar support – removal and installation  
(seat with distribution for climate control system)

REMOVAL / INSTALLATION

6 Pull off the hose (5) from valve connection (C).

7 Pull off four compression springs (11) at the three hoses (3, 4, 5).

8 Mark the points where the foam plastic part (12) and the compressor (13) are attached to the bar of the backrest (14) by means of two cable ties (10) and remove the cable ties (10).

9 Disconnect the electrical connection between the plug (21) and the socket (9).

10 Disconnect the narrow plug-in contact (19) and the broad plug-in contact (20) between the compressor (13) and the valve cable (18).

**Installation note:**
Black cable: narrow plug-in contact (19).
Red cable: broad plug-in contact (20).
11 Remove the compressor (13) and the foam plastic part (12).

**Installation note:**
Lay the excess length of the valve cable (18) in loops between the foam plastic part (12) and the compressor (13).

12 Press the springs (arrows) on the bell-shaped valve (17) and pull the bell-shaped valve (17) out of the valve housing (16).

13 Unclip the valve housing (16) on the backrest (14).

14 Bore out two rivet heads on the distribution for the climate control system (8) and drive out the blind rivets (7).
2.5.3 Pneumatic lumbar support – removal and installation
(seat with distribution for climate control system)

15 Lay the distribution for the climate control system (8) down.

16 Bore out three rivet heads on the backrest (14) and drive out the blind rivets (15).

17 Remove the plate for lumbar support (2) together with the bellows for lumbar support (1).

18 Drive out two expanding rivets (6) and remove the bellows for lumbar support (1).

**Installation note:**
Replace the expanding rivet (6).

19 Re-install the components in the reverse order of their removal.
2.6 Distribution for climate control system – removal and installation

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Distribution for climate control system
(2) Blind rivet
(3) Plate for lumbar support
(4) Socket for the cable harness for seat heater / -seat ventilation
(5) Socket for the cable harness for the heater / climate control system
(6) Socket for entire cable harness

1 Remove the backrest cushion (Chapter 2.3).
2.6 Distribution for climate control system – removal and installation

Removal and installation

2 Disconnect the electrical connection between the distribution for the climate control system (1) and the socket for the cable harness for seat heater / -ventilation (4).

3 Disconnect the electrical connection between the distribution for the climate control system (1) and the socket for the cable harness for heater / climate control system (5).

4 Disconnect the electrical connection between the distribution for the climate control system (1) and the socket for the entire cable harness (6).
5 Bore out two rivet heads on the plate for lumbar support (3) and drive out the blind rivets (2).

6 Remove the distribution for the climate control system (1).

7 Re-install the components in the reverse order of their removal.
### 2.7 Backrest extension – removal and installation

**REMOVAL/INSTALLATION**

1. Remove the backrest cushion (see Chapter 2.1).

2. **Seat with storage box:**
   Detach the storage box (Chapter 2.17).

**TABLE OF CONTENTS**

(1) Rivets
(2) Holder
(3) Backrest extension
2.7  Backrest extension – removal and installation

Removal and installation

3 Pull out the backrest extension (3), whereby the limit stop resistance should be overcome with one jerk.

4 Drill off the rivets (1).

5 Take off the holder (2).

6 Re-install the components in the reverse order of their removal.
2.8 Headrest and headrest guides – removal and installation

REMOVAL / INSTALLATION

TABLE OF CONTENTS

1. Headrest
2. Headrest guide
3. Holder
2.8 Headrest and headrest guides – removal and installation

Removal and installation

1. Pull out the headrest (1) by pulling it over the end stop in one go.

2. Unscrew six round head screws on the backrest and pull the backrest forwards at the upper part (see Chapter 2.3).
   **Note:**
   Electrical connections do not have to be disconnected.

3. Press together two headrest guides (2) at the bottom of the slotted end and pull them out of the holder (3) in upward direction.
   **Note:**
   The longitudinal nose at the headrest guides (2) must be pushed into the groove (arrow) of the holder (3).

4. Re-install the components in the reverse order of their removal.
2.9 Cable harness – removal and installation (standard)

(1) Connector for the compressor
(2) Compressor
(3) Cable connection
(4) Cable tie
(5) Cable tie
(6) Plate
(7) White cable marking
(8) Seat plate

1 Remove the seat and backrest cushion (Chapter 2.1).

2 Seat with seat angle and seat depth adjuster:
Remove the parts for seat angle and seat depth adjustment (see Chapter 2.26).
Removal and installation

3 Disconnect the connector (1) from the compressor (2).
   **Installation note:**
   Use plug-in connection with red/black cable.

4 Disconnect the connector (3) from the connecting cable.
   **Installation note:**
   Use plug-in connection with red/black cable.

5 Cut open all cable ties (4).

6 Cut open all cable ties (5).
   **Installation note:**
   Fix all cable lines not required at the moment to the plate hole (6) with a cable tie.
2.9 Cable harness – removal and installation (standard)

REMOVAL/INSTALLATION

7 Remove the cable.

**Installation note:**
The white cable marking (7) must be located in an elbow in the corner of the seat plate (8).

8 Re-install the components in the reverse order of their removal.
2.10 Cable harness for seat heater / climate control system – removal and installation (seat with distribution for climate control system)

1. Remove the seat cushion (Chapter 2.2).

2. Remove the backrest cushion (Chapter 2.3).
Removal and installation

3 Mark the point where the cable harness for the seat heater / seat ventilation (1) and the entire cable harness (8) are attached to the seat plate (2) by means of a cable tie (3) and remove the cable tie (3).

Note:
Lay the cable harnesses (1, 8) in a narrow curve (slackness loop) to the inside between the two cable ties (3, 4).

4 Mark the points where the cable harness for the seat heater / seat ventilation (1), the entire cable harness (8) and the cable harness for the heater / climate control system (9) are attached to the backrest (7) by means of a cable tie (4) and remove the cable tie (4).
5 Disconnect the electrical connection between the distribution for the climate control system (6) and the socket (5).

6 Remove the cable harness for the seat heater / -seat ventilation (1).

7 Re-install the components in the reverse order of their removal.
2.11 Cable harness for heater / climate control system – removal and installation (seat with distribution for climate control system)

REMOVAL / INSTALLATION

(1) Cable harness for the heater / climate control system
(2) Seat plate
(3) Cable tie
(4) Backrest
(5) Distribution for climate control system
(6) Socket for the cable harness for the heater / climate control system
(7) Supporting structure
(8) Cable tie
(9) Entire cable harness
(10) Cable harness for seat heater / seat ventilation

Note:
To remove the cable harness for the heater / climate control system (1) at the vehicle or at the supporting structure, ask the vehicle manufacturer for the necessary work to be carried out.
2.11 Cable harness for heater / climate control system – removal and installation (seat with distribution for climate control system)

REMOVAL / INSTALLATION

1. Pull the handle for seat depth adjustment upwards and push the seat cushion forwards as far as possible (see Chapter 2.2).

2. Remove the backrest cushion (Chapter 2.3).

Removal and installation

3. Mark the point where the cable harness for the heater / climate control system (1), the entire cable harness (9) and the cable harness for the seat heater / -seat ventilation (10) are attached to the backrest (4) by means of a cable tie (3) and remove the cable tie (3).

4. Disconnect the electrical connection between the distribution for the climate control system (5) and the socket (6).
5 Mark the points where the cable harness for the heater / climate control system (1) is attached to the seat plate (2) and to the supporting structure (7) by means of two cable ties (8) and remove the cable ties (8).

**Note:**
Lay the cable harness for the heater / climate control system (1) in slackness loops (arrows) to the outside between the cable ties (3, 8).

6 Pull out the cable harness for the heater / climate control system (1) between the seat plate (2) and the backrest (4) in backward direction.

7 Re-install the components in the reverse order of their removal.
2.12 Cable harness for height adjustment / seat occupancy detection system – removal and installation (seat with distribution for climate control system)

(1) Cable for seat occupancy detection system
(2) Cable for height adjustment
(3) Cable harness of height adjustment / seat occupancy detection system
   = (1) + (2)
(4) Socket (cable for seat occupancy detection system)
(5) Seat depth adjustment
(6) Seat plate
(7) Cable tie
(8) Entire cable harness
(9) Cable tie
(10) Cable tie
2.12 Cable harness for height adjustment / seat occupancy detection system – removal and installation (seat with distribution for climate control system)

Removal and installation

1 Cable harness without electrical connection (13):

1.1 Remove the cable for height adjustment at the seat suspension (see repair manual for seat suspension).

1.2 Remove seat cushion (Chap. 2.2).

*) depending on delivery scope / delivery option
2.12 Cable harness for height adjustment / seat occupancy detection system – removal and installation (seat with distribution for climate control system)

REMOVAL / INSTALLATION

1.3 Mark the points where the cable for the seat occupancy detection system (1) is fastened to the seat depth adjustment (5) with two cable ties (10) and remove the cable ties (10).

1.4 Disconnect the electrical connection between the plug (11) and the socket (4).

1.5 Remove the end stop (12) at the seat depth adjustment (5).

1.6 Remove seat angle adjustment (see Chapter 2.26).

**Note:**
The flexible support plate may remain installed at the seat angle adjustment.
1.7 Remove the seat depth adjustment (see Chapter 2.26).

1.8 Mark the point where the cable for the seat occupancy detection system (1) and the entire cable harness (8) are fastened to the seat plate (6) by means of a cable tie (7) and remove the cable tie (7).

**Note:**
The cable tie (9) does not have to be removed for that.

1.9 Pull the cable for the seat occupancy detection system (1) out of the seat plate (6) in downward direction and remove the cable harness for height adjustment / seat occupancy detection system (3).

1.10 Re-install the components in the reverse order of their removal.
2.12 Cable harness for height adjustment / seat occupancy detection system – removal and installation (seat with distribution for climate control system)

2 Cable harness with electrical connection (13):

2.1 Remove the seat suspension (see repair manual for the seat suspension).

**Note:**
Electrical connection of the cable harness needs not be disconnected.

2.2 Disconnect electrical connection (13).

2.3 Remove the cable for height adjustment (2) at the seat suspension (see repair manual for seat suspension).

**Note:**
Not required if only the cable of the seat occupancy detection system (1) is to be removed.
2.12 Cable harness for height adjustment / seat occupancy detection system – removal and installation (seat with distribution for climate control system)

Remove the cable of the seat occupancy detection system (1) (steps 2.4 to 2.12):
Not required if only the cable of the height adjustment (2) is to be removed.

2.4 Remove seat cushion (Chap. 2.2).

2.5 Mark the points where the cable for the seat occupancy detection system (1) is fastened to the seat depth adjustment (5) with two cable ties (10) and remove the cable ties (10).

2.6 Disconnect the electrical connection between the plug (11) and the socket (4).

2.7 Remove the end stop (12) at the seat depth adjustment (5).
2.8 Remove seat angle adjustment (see Chapter 2.26).

*Note:*
The flexible support plate may remain installed at the seat angle adjustment.

2.9 Remove the seat depth adjustment (see Chapter 2.26).

2.10 Mark the point where the cable for the seat occupancy detection system (1) and the entire cable harness (8) are fastened to the seat plate (6) by means of a cable tie (7) and remove the cable tie (7).

*Note:*
The cable tie (9) does not have to be removed for that.
2.11 Pull the cable for the seat occupancy detection system (1) out of the seat plate (6) in downward direction and remove the cable harness for the seat occupancy detection system (1).

2.12 Re-install the components in the reverse order of their removal.
2.13 Entire cable harness – removal and installation
(seat with distribution for climate control system)

(1) Entire cable harness
(2) Seat plate
(3) Backrest
(4) Cable harness for seat heater / seat ventilation
(5) Cable tie
(6) Cable tie
(7) Cable tie
(8) Cable tie
(9) Cable for heater / climate control system
(10) Socket (for entire cable harness)
(11) Distribution for climate control system
(12) Plug (entire cable harness)
(13) Socket (valve cable)
(14) Cable for seat occupancy detection system
2.13 Entire cable harness – removal and installation
(seat with distribution for climate control system)

1. Remove the entire cable harness at the seat suspension (see repair manual for seat suspension).

2. Remove the seat cushion (Chapter 2.2).

3. Remove the cable for the seat occupancy detection system from the seat depth adjustment (see Chapter 2.12).

4. Disconnect the electrical connection between the cable for the seat switch and the cable for the seat occupancy detection system (see Chapter 2.12.).

5. Remove the stopper from the seat depth adjustment (see Chapter 2.12).
2.13 Entire cable harness – removal and installation
(seat with distribution for climate control system)

REMOVAL / INSTALLATION

6 Remove the seat angle adjustment (see Chapter 2.26).
   **Note:**
   The flexible support plate can remain installed at the seat angle adjustment.

7 Remove the seat depth adjustment (see Chapter 2.26).

Removal and installation

8 Mark the points where the entire cable harness (1) is attached to the seat plate (2) by means of three cable ties (5) and remove the cable ties (5).
9 Mark the points where the cable of the seat occupancy detection system (14) and the entire cable harness (1) are attached to the seat plate (2) by means of a cable tie (6) and remove the cable tie (6).

10 Mark the point where the cable harness for the seat heater / seat ventilation (4) and the entire cable harness (1) are attached to the seat plate (2) by means of a cable tie (7) and remove the cable tie (7).

**Note:**
Lay the cable harnesses (1, 4) in a narrow curve (slackness loop, see arrows) to the inside between the two cable ties (7, 8).
11 Mark the point where the cable harness for the seat heater / seat ventilation (4), the cable harness for the heater / climate control system (9) and the entire cable harness (1) are attached to the backrest (3) by means of a cable tie (8) and remove the cable tie (8).

12 Disconnect the electrical connection between the distribution for the climate control system (11) and the socket (10).

13 Disconnect the electrical connection between the plug (12) and the socket (13).

14 Pull the entire cable harness (1) out of the seat plate (2) in downward direction and remove it.

15 Re-install the components in the reverse order of their removal.
2.14 Seat heater cables and switch – removal and installation

TABLE OF CONTENTS

2.14.1 Seat heater cables and switch – removal and installation (seat with pneumatic lumbar support)
2.14.2 Seat heater cables and switch – removal and installation (seat with mechanical lumbar support)
2.14.1 Seat heater cables and switch – removal and installation
(seat with pneumatic lumbar support)

(REMOVAL/INSTALLATION)

(1) Connector
(2) Switch
(3) Plug-in connector
(4) Cable tie
(5) Plug-in connector
(6) Cable tie

1 Remove the seat and backrest cushion (Chapter 2.1).

Removal and installation

2 Disconnect the connector (1) and remove the switch (2).
3 Seat with seat angle and seat depth adjuster:
   Remove the seat angle and seat depth adjuster (Chapter 2.26).

4 Disconnect the electrical connector (3).
   **Installation note:**
   Use plug-in connection with red/black cable.

5 Cut open all cable ties (4).

6 Disconnect the connector (5).
   **Installation note:**
   Use plug-in connection with red/black cable.

7 Pull the cable through the cable tie (6) and remove the cable.

8 Re-install the components in the reverse order of their removal.
2.14.2 Seat heater cables and switch – removal and installation
(seat with mechanical lumbar support)

REMOVAL/INSTALLATION

(1) Connector
(2) Switch
(3) Plug-in connector
(4) Cable tie
(5) Cable harness

1 Remove the seat and backrest cushion (Chapter 2.1).
2.14.2 Seat heater cables and switch – removal and installation
(seat with mechanical lumbar support)

Removal and installation

2  Disconnect the connector (1) and remove the switch (2).

3  Seat with seat angle and seat depth adjuster:
   Remove the seat angle and seat depth adjuster (Chapter 2.26).

4  Disconnect the plug-in connector (3).

5  Cut open the cable ties (4) and withdraw the cable harness (5).

6  Re-install the components in the reverse order of their removal.
## 2.15 Seat switch – removal and installation

### TABLE OF CONTENTS

2.15.1 Seat switch – removal and installation (seat without seat angle and seat depth adjuster)
2.15.2 Seat switch – removal and installation (seat with seat angle and seat depth adjuster)
2.15.3 Seat switch with connector – removal and installation (seat with seat angle and seat depth adjustment)
2.15.1 Seat switch – removal and installation  
(seat without seat angle and seat depth adjuster)

REMOVAL/INSTALLATION

(1) Spring  
(2) Switch-plate  
(3) Rivet  
(4) Cable tie  
(5) Seat switch

1 Remove the seat cushion (see Chapter 2.1).
2.15.1 Seat switch – removal and installation (seat without seat angle and seat depth adjuster)

Removal and installation

2 Remove the spring (1).

3 Tilt the switch-plate (2) forwards and remove it.

4 Drill off the rivet (3).

5 Cut open all cable ties (4) and remove the seat switch (5) and the cable. **Installation note:** Lay the cable so that there is slack in it.

6 Re-install the components in the reverse order of their removal.
2.15.2 Seat switch – removal and installation  
(seat with seat angle and seat depth adjuster)

REMOVAL/INSTALLATION

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remove the seat cushion (see Chapter 2.1).</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Spring</td>
</tr>
<tr>
<td>(2)</td>
<td>Switch-plate</td>
</tr>
<tr>
<td>(3)</td>
<td>Lever for seat angle adjustment</td>
</tr>
<tr>
<td>(4)</td>
<td>Flexible support plate</td>
</tr>
<tr>
<td>(5)</td>
<td>Rivet</td>
</tr>
<tr>
<td>(6)</td>
<td>Cable tie</td>
</tr>
<tr>
<td>(7)</td>
<td>Seat switch</td>
</tr>
</tbody>
</table>
Removal and installation

2 Remove the spring (1).

3 Tilt the switch-plate (2) forwards and remove it.

4 Press the spring plate (arrow) inwards, operate the lever for seat angle adjustment (3), tilt the flexible support plate upwards and remove it.

5 Drill off the rivet (5).

6 Open all cable ties (6) and withdraw the seat switch (7) and the cable.

**Installation note:**
Lay the cable with sufficient slack.

7 Re-install the components in the reverse order of their removal.
2.15.3 Seat switch with connector – removal and installation
(seat with seat angle and seat depth adjustment)

REMOVAL / INSTALLATION

(1) Flexible support plate
(2) Seat angle adjustment
(3) Magnet
(4) Blind rivet
(5) Socket (cable for seat occupancy detection system)
(6) Plug (for cable for seat switch)
(7) Cable tie
(8) Blind rivet
(9) Seat switch
(10) Cable (seat switch)
(11) Lever for seat angle adjustment
(12) Spring steel plate
2.15.3 Seat switch with connector – removal and installation
(seat with seat angle and seat depth adjustment)

REMOVAL / INSTALLATION

1. Remove the seat cushion (Chapter 2.2).

2. Remove the flexible support plate (see Chapter 2.26).

Removal and installation

3. Bore out two rivet heads at the magnet (3) and drive out the blind rivets (4). Then, remove the magnet (3).

   **Installation note:**
   The arrows at the magnet (3) mark the connection end and must point towards the seat switch (9).

4. Disconnect the electrical connection between the plug (6) and the socket (5).
2.15.3 Seat switch with connector – removal and installation  
(seat with seat angle and seat depth adjustment)

5 Bore out two rivet heads at the seat switch (9) and drive out the blind rivets (8).  
**Installation note:**  
The arrows at the seat switch (9) mark the connection end and must point towards the magnet (3).

6 Push the spring steel plate (12) inwards by means of a screwdriver to hang it out, pull the lever for seat angle adjustment (11) upwards and fold the seat angle adjustment (2) up.

7 Mark the point where the cable for the seat switch (10) is attached to the seat angle adjustment (2) by means of a cable tie (7) and remove the cable tie (7).
8 Pull the cable for the seat switch (10) through the drill hole (arrow) of the seat angle adjustment (2) in upward direction and remove the seat switch (9).

9 Re-install the components in the reverse order of their removal.
2.16 Voltage transformer – removal and installation

REMOVAL / INSTALLATION

(1) Voltage transformer
(2) Micro-encapsulated cap screws ........................... to replace, 25 Nm
(3) Plastic clip
(4) Plug (voltage transformer)
(5) Cable tie
(6) Socket (cable harness for vehicle connection)
(7) Support
(8) Supporting structure at the rear
(9) Plastic clip
(10) Cable harness for vehicle connection
(11) Upper fore/aft adjustment
2.16 Voltage transformer – removal and installation

Removal and installation

1. Push the fore/aft adjustment (11) as far forward as possible.

2. Pull out the plastic clip (9) at the supporting structure (8).
   **Note:**
   Do not dismantle the plastic clip (9) at the cable harness for vehicle connection (10).

3. Mark the point where the plug (4) is attached to the support (7) by means of a cable tie (5) and remove the cable tie (5).

4. Disconnect the electrical connection between the plug (4) and the socket (6).
5 Unscrew two micro-encapsulated cap screws (2).
   **Installation note:**
   Replace the micro-encapsulated cap screw (2), 25 Nm.

6 Remove the voltage transformer (1).

7 Pull out the plastic clip (3) at the voltage transformer (1).

8 Re-install the components in the reverse order of their removal.
2.17 Storage box – removal and installation

(1) Storage box
(2) Screw
(3) Hook
2.17 Storage box – removal and installation

Removal and installation

1. Open the storage box (1).

2. Remove the hook (3).

3. Undo the screws (2) and remove the storage box (1).

4. Re-install the components in the reverse order of their removal.
2.18 Armrests – removal and installation

REMOVAL/INSTALLATION

(1) Cover
(2) Hexagon nut ..................... 25 Nm
(3) Washer
(4) Armrest
Removal and installation

1. Remove the cover (1).

2. Unscrew the hexagon nuts (2), if necessary hold the screws (arrow).
   **Installation note:**
   Hexagon nut (2), 25 Nm.

3. Remove the washers (3) and the armrests (4).

4. Re-install the components in the reverse order of their removal.
2.19 Covers on the right and left side – removal and installation

REMOVAL / INSTALLATION

(1) Right cover
(2) Left cover
(3) Lever for backrest adjustment
(4) Seat plate
(5) Catcher
(6) Hook

Removal and installation

1 Unclip four catchers (5) on the right side of the seat plate (4) and hang out the hook (6). Remove the right cover (1).
2.19 Covers on the right and left side – removal and installation

2. Unclip four catchers (5) on the left side of the seat plate (4) and hang out the hook (6).

3. Pull the left cover (2) over the lever for backrest adjustment (3) and remove it.

4. Re-install the components in the reverse order of their removal.

**Installation note:**
For seat models with armrests or with belt retractors * and belt buckle *, the corresponding perforated breaking points (arrows) of new covers (1, 2) have to be broken prior to installation.

*) depending on delivery scope / delivery option
## TABLE OF CONTENTS

2.20.1 Lap belt – removal and installation
2.20.2 Lap belt with belt retractor – removal and installation
2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation
2.20.4 Lap belt with belt retractor fitted inside – removal and installation
2.20.1 Lap belt – removal and installation

REMOVAL/INSTALLATION

(1) Cover
(2) Hexagon nut ....................... 50 Nm
(3) Lap belt
(4) Washer
(5) Hexagon nut ....................... 50 Nm
(6) Seat belt buckle
(7) Washer
2.20.1 Lap belt – removal and installation

Removal and installation

1. Remove the cover (1).

2. Unscrew the hexagon nut (2).
   **Installation note:**
   Hexagon nut (2), 50 Nm.

3. Remove the lap belt (3) and the washer (4).

4. Unscrew the hexagon nut (5).
   **Installation note:**
   Hexagon nut (5), 50 Nm.

5. Remove the seat belt buckle (6) and the washer (7).

6. Re-install the components in the reverse order of their removal.
2.20.2 Lap belt with belt retractor – removal and installation

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Belt retractor
(2) Belt buckle
(3) Cap
(4) Hexagon bolt ....................... 50 Nm
(5) Spacer sleeve
(6) Seat plate
(7) Spacer sleeve
(8) Hexagon bolt ....................... 50 Nm
(9) Cap
2.20.2 Lap belt with belt retractor – removal and installation

Removal and installation

1. Lift off the cap (3) at the hexagon bolt (4).

2. Unscrew the hexagon bolt (4) on the seat plate (6) and remove the belt buckle (2) and the spacer sleeve (5).

**Installation notes:**
- Hexagon bolt (4), 50 Nm.
- Align the belt buckle (2) in an angle of approx. 60° before tightening.

3. Lift off the cap (9) at the hexagon bolt (8).
4. Unscrew the hexagon bolt (8) on the seat plate (6) and remove the belt retractor (1) and the spacer sleeve (7).

**Installation notes:**
- Hexagon bolt (8), 50 Nm.
- Tighten the belt retractor (1) at an angle of 45 to 60° by means of screws so that the safety belt can be fastened without any distortions in a comfortable seat position over the thighs.

5. Re-install the components in the reverse order of their removal.
2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation

REMOVAL / INSTALLATION

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shoulder belt</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Cap</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Hexagon bolt</td>
<td>50 Nm</td>
</tr>
<tr>
<td>4</td>
<td>Socket</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Right belt deflection</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Left belt deflection</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Backrest cushion</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Backrest frame</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Belt retractor</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Micro-encapsulated hexagon bolt</td>
<td>to replace, 25 Nm</td>
</tr>
<tr>
<td>11</td>
<td>Washer</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Washer</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Cover</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Mounting plate (adapter angle)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Flange nut</td>
<td></td>
</tr>
</tbody>
</table>

TABLE OF CONTENTS
2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(16) Countersunk screw
  (hexagon socket screw) ........ 3.5 Nm
(17) Fore/aft adjustment
(18) Lug (at the shoulder belt)
(19) Seat plate
(20) Upper seat part
(21) Round head screw
  (inner race) ....................... 3.5 Nm
(22) Blind rivet
2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation

REMOVAL / INSTALLATION

1. Remove seat cushion (see Chapter 2.1).

2. If mounting plate (14) is removed:
   Remove seat depth adjustment (see Chapter 2.26).

Notes:
- Seat depth adjustment only has to be removed if the mounting plate (14) is removed.
- The seat depth adjustment is dismounted together with the attached flexible support plate for seat occupancy detection (if any) and the attached seat angle adjustment.
2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation

Removal and installation

3 Pull off the three caps (2) from the hexagon bolts (3).

4 Remove three hexagon bolts (3) and three sockets (4).
   **Installation note:**
   Hexagon bolt (3), 50Nm.

5 Remove shoulder belt (1) left and right from the belt deflection (5, 6).
   **Note:**
   If the belt is to be installed for the first time you have to break out the perforated predetermined breaking points (arrow) at the covers (13).
Installation notes:

- **NOTE** Do not distort shoulder belt (1)!
  Before fixing the shoulder belt (1) with the hexagon bolts (3) make sure that the belt strap has not been distorted.
- Tighten lugs (18) at the shoulder belt (1) at an angle of about 60 degrees ± 15 degrees, so that the safety belt can be fastened without any distortions in a comfortable seat position.
- Test correct function of the belt retractor (9).
2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation

REMOVAL / INSTALLATION

6 Undo the two round head screws (21).

**Installation notes:**
- Round head screw (21), 3.5 Nm.
- Tighten loosely left and right belt deflection (5, 6) to the seat cushion (7) with the round head screws (21). Afterwards fix blind rivet (22) and tighten round head screws (21).

7 Bore off two rivet heads and drive the blind rivets (22) out of the backrest frame (8).

8 Remove left and right belt deflection (5, 6).

9 Push the upper seat part (20) backwards over the fore/aft adjustment (17) as far as possible.
2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation

REMOVAL / INSTALLATION

10 Mark the screw positioning diagram and unscrew two micro-encapsulated hexagon bolts (10) at the back. Remove two flange nuts (15).

**Installation notes:**
- Replace micro-encapsulated hexagon bolt (10), 25 Nm.
- Check the fore/aft adjustment (17) for correct locking in any position.

11 Push the upper seat part (20) forwards over the fore/aft adjustment (17) as far as possible.
2.20.3 Shoulder belt with belt guide and mounting plate – removal and installation

**REMOVAL / INSTALLATION**

12 Mark the screw positioning diagram and unscrew two micro-encapsulated hexagon bolts (10) at the front. Remove two flange nuts (15) and two washers (11).

**Installation notes:**
- Replace micro-encapsulated hexagon bolt (10), 25 Nm.
- Install upper seat part (20) according to the marking.

13 Take off upper seat part (20) and remove two washers (12).

14 Unscrew two countersunk screws (16) from the seat plate (19) and remove the mounting plate (14).

**Installation note:**
Countersunk screw (16), 3.5 Nm.

15 Re-install the components in the reverse order of their removal.
2.20.4 Lap belt with belt retractor fitted inside – removal and installation

AUSBAUEN/EINBAUEN

(1) Belt retractor
(2) Left cover
(3) Belt buckle
(4) Cap
(5) Hexagon bolt .................. 50 Nm
(6) Seat plate
(7) Hexagon nut
(8) Hexagon nut
(9) Spacer sleeve
(10) Hexagon bolt .................. 50 Nm

1 Remove the cover on the right side (see Chapter 2.19).
Removal and installation

2 Screw out the hexagon bolt (10), remove hexagon nut (8), belt roller (1) and spacer sleeve (9).

**Installation notes:**
- Hexagon bolt (10), 50 Nm.
- Tighten the belt retractor (1) at an angle of 45 to 60 degrees by means of screws so that the safety belt can be fastened without any distortions in a comfortable seat position over the thighs.

3 Lift off the cap (4).
4. Screw out the hexagon bolt (5) and remove hexagon bolt (7) and belt buckle (3).

**Installation notes:**
- Hexagon bolt (5), 50 Nm.
- Align the belt buckle (3) at an angle of approx. 60 degrees before fastening the screws.

5. Re-install the components in the reverse order of their removal.
2.21 Backrest adjustment – removal and installation

TABLE OF CONTENTS

2.21.1 Backrest adjustment – removal and installation (Backrest adjustment with lever on the side)
2.21.2 Backrest adjustment and handle for backrest adjustment – removal and installation (backrest adjustment with front lever)
2.21.3 Backrest adjustment with locking left/ right – removal and installation (backrest adjustment with front lever)
2.21.1 Backrest adjustment – removal and installation  
(Backrest adjustment with lever on the side)

REMOVAL/INSTALLATION

(1) Cover
(2) Blind rivet
(3) Spring
(4) Lever
(5) Gear segment

1. Remove the seat and backrest cushion (Chapter 2.1).
2.21.1 Backrest adjustment – removal and installation
(Backrest adjustment with lever on the side)

Removal and installation

2 Remove the cover (1).

3 Knock off the blind rivet (2), remove the spring (3) and the gear segment (5).

4 Turn the lever (4) and withdraw it.

5 The installation is performed in reverse order.
2.21.2 Backrest adjustment and handle for backrest adjustment – removal and installation (Backrest adjustment with front lever)

REMOVAL/INSTALLATION

1 Remove the backrest cushion (see Chapter 2.1).

2 **Seat with armrests:**
   Remove the left armrest (see Chapter 2.18).

TABLE OF CONTENTS

(1) Backrest
(2) Countersunk screw ............ 12 Nm
(3) Adaptor plate
(4) Head screw
(4.1) Countersunk screw
(5) Lever
(6) Handle ........... replace, if necessary
2.21.2 Backrest adjustment and handle for backrest adjustment – removal and installation (Backrest adjustment with front lever)

Removal and installation

3 Fold the backrest (2) forwards.

4 Unscrew three countersunk screw (2), remove the adaptor plate (3) and the head screw (4).

Note: At older versions remove the countersunk screw (4.1) with cam

5 Remove the lever (5) for the backrest adjustment.

6 Replace the handle (6) or the lever (5):
Dismount the handle (6) from the lever (5).

7 The installation is performed in reverse order.
2.21.3 Backrest adjustment with locking left/right - removal and installation
(backrest adjustment with front lever)

REMOVAL / INSTALLATION

(1) Backrest
(2) Seat plate
(3) Adapter plate
(4) Micro-encapsulated countersunk screw .................. to replace, 12 Nm
(5) Cap screw
(6) Lever (for backrest adjustment) ........................................ to grease
(7) Handle for height adjustment .............................. to replace, if necessary
(8) Holder (for Bowden pull wire)
(9) Cap screw.............................. 6 Nm
(10) Seat cushion
2.21.3 Backrest adjustment with locking left/right - removal and installation
(backrest adjustment with front lever)

REMOVAL / INSTALLATION

1 Remove backrest cushion (see Chapter 2.1).

2 Seat with armrests:
   Remove the left armrest (see Chapter 2.18).

3 Remove the left cover (see Chapter 2.19).

Removal and installation

4 WARNING Danger of injury by shoot out of backrest (1)!
   During operation of the handle for backrest adjustment (7) with removed backrest cushion, the backrest (1) has to be supported manually.

   Fold backrest (1) forwards onto the seat cushion (10).
5 Remove Bowden pull wire for locking left/right from holder and lever on the left side (see Chapter 2.34).

6 Unscrew cap screw (9) and remove holder (8).

**Installation notes:**
- Cap screw (9), 6 Nm.
- Beak (arrow) at the holder (8) serves as anti rotation anchor and has to mesh into the designated bore (arrow) of the seat plate (2).

7 Unscrew three micro-encapsulated countersunk screws (4).

**Installation note:**
Replace micro-encapsulated countersunk screw (4), 12 Nm.

8 Remove the adapter plate (3) and countersunk screw (5).
9 Leverage carefully lever (6) at seat plate (2) and backrest (1) and remove it.

**Note:**
To avoid release of the backrest (1) at the seat plate (2), fix backrest (1) at the seat plate (2), i.e. with a clamp.

**Installation note:**
Grease both sides of the lever (6) at the contact surface (F) of the adapter plate (3) with acid-free multi-purpose grease.

10 If handle for backrest adjustment (7) is defect:
Remove handle for backrest adjustment (7) at the lever (6).

11 Re-install the components in the reverse order of their removal.
2.22 Backrest and backrest bearing – removal and installation

TABLE OF CONTENTS

2.22.1 Backrest and backrest bearing – removal and installation (locking lever at the side of mounting)
2.22.2 Backrest and backrest bearing – removal and installation (locking lever at front of mounting)
2.22.3 Backrest and backrest bearing with locking left/right – removal and installation (locking lever at front of mounting)
2.22.1 Backrest and backrest bearing – removal and installation
(locking lever at the side of mounting)

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Cover
(2) Backrest
(3) Hexagon nut
(4) Washer
(5) Armrest
(6) Hexagon nut .......... 25 Nm
(7) Washer
(8) Hexagon bolt
(9) Washer
(10) Spacer sleeve
(11) Blind rivet
(12) Reinforcing tube
(13) Washer
(14) Washer
(15) Torsion spring
2.22.1 Backrest and backrest bearing – removal and installation  
(locking lever at the side of mounting)

REMOVAL / INSTALLATION

1 Removal of the backrest cushion (see Chapter 2.1).

2 Seat with seat heater:  
Remove cable and switch for seat heater (see Chapter 2.14).

3 Seat with backrest extension:  
Remove backrest extension (Chapter 2.7).

4 Seat with backrest adjustment with front lever:  
Remove backrest adjustment (Chapter 2.21).

Removal and installation

5 Remove two covers (1).

6 Fold the backrest (2) forwards.
2.22.1 Backrest and backrest bearing – removal and installation  
(locking lever at the side of mounting)

REMOVAL / INSTALLATION

7 Unscrew the two hexagon nuts (3) and take off the two washers (4) and the two armrests (5).

8 Unscrew two hexagon nuts (6), take off the two washers (7). 
**Installation note:**
Hexagon nut (6), 25 Nm.

9 Unscrew two hexagon bolts (8) and remove the two washers (9) and the two spacer sleeves (10).

10 Bore out four rivet heads, drive out the blind rivet (11) and remove the reinforcing tube (12).
## 2.22.1 Backrest and backrest bearing – removal and installation
(locking lever at the side of mounting)

### REMOVAL / INSTALLATION

11 Remove the backrest (2), the washers (13, 14) and the torsion spring (15).

**Installation note:**
Position the torsion spring (15) in the plate's groove (arrow).

12 Re-install the components in the reverse order of their removal.
### 2.22.2 Backrest and backrest bearing – removal and installation

(locking lever at front of mounting)

#### REMOVAL / INSTALLATION

<table>
<thead>
<tr>
<th>Part Description</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Backrest</td>
<td></td>
</tr>
<tr>
<td>(2) Backrest adjustment</td>
<td></td>
</tr>
<tr>
<td>(3) Left backrest support (seat plate)</td>
<td></td>
</tr>
<tr>
<td>(4) Right backrest support (seat plate)</td>
<td></td>
</tr>
<tr>
<td>(5) Hexagon nut</td>
<td>25 Nm</td>
</tr>
<tr>
<td>(6) Washer</td>
<td></td>
</tr>
<tr>
<td>(7) Washer</td>
<td></td>
</tr>
<tr>
<td>(8) Bearing</td>
<td></td>
</tr>
<tr>
<td>(9) Torsion spring</td>
<td></td>
</tr>
<tr>
<td>(10) Washer</td>
<td></td>
</tr>
<tr>
<td>(11) Hexagon bolt</td>
<td></td>
</tr>
</tbody>
</table>
2.22.2 Backrest and backrest bearing – removal and installation  
(locking lever at front of mounting)

1. Remove the backrest cushion (Chapter 2.3).

2. Remove the lumbar support at the backrest (see Chapter 2.5).

3. Remove the headrest and the headrest guides (Chapter 2.8).

4. **Seat with seat heater:**
   Remove cable and switch for seat heater (see Chapter 2.14).

5. **Seat with armrests:**
   Remove the armrests (Chapter 2.18).

6. Remove the covers on the left and right side (Chapter 2.19).
7 Seat with backrest adjustment with front lever:
Remove backrest adjustment (Chapter 2.21).

8 Remove cable harness heater / climate control system, cable harness seat heater / seat climate control system and entire cable harness from the backrest (see Chapter 2.13).

Removal and installation

9 Unscrew the hexagon nut (5) and take off the washers (6, 7).
**Installation note:**
hexagon nut (5), 25 Nm.
2.22.2 Backrest and backrest bearing – removal and installation  
(locking lever at front of mounting)

10 Knock out the hexagon bolt (11) and remove washer (10).

11 Push backrest (1) to the left and lift it off.

Installation note:
- The large cylindric pattern (illustration C/arrow) at the backrest adjustment (illustration C/2) has to mesh into the position bore at the backrest holder on the left (illustration C/3).
- The mounting (illustration A/arrow) welded on the backrest (illustration A/1) has to be hitched into the torsion spring (illustration A/9).
2.22.2 Backrest and backrest bearing – removal and installation
(locking lever at front of mounting)

12 Remove bearing (8) and torsion spring (9) from the backrest holder right (4).

**Installation notes:**
- Grease point of support (arrow) for the bearing (8) at the backrest (1) with acid-free multi-purpose grease.
- Put hook (illustration B/arrow) at the bearing (illustration B/8) into the upper bore of the backrest holder right (illustration B/4).

13 Re-install the components in the reverse order of their removal.
2.22.3 Backrest and backrest bearing with locking left/right – removal and installation (locking lever at front of mounting)

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Backrest
(2) Torsion spring
(3) Seat plate
(4) Seat cushion
(5) Pin (at seat plate)
(6) Lever (for backrest adjustment)
(7) Cap screw
(8) Adapter plate ..................  to grease
(9) Micro-encapsulated countersunk screw ..................  to replace, 12 Nm
(10) Flange nut ......................  25 Nm
(11) Blind rivet
(12) Holder (for Bowden pull wire)
(13) Handle for backrest adjustment
2.22.3 Backrest and backrest bearing with locking left/right – removal and installation (locking lever at front of mounting)

REMOVAL / INSTALLATION

1. Remove the backrest cushion (Chapter 2.3).

2. Remove the lumbar support at the backrest (see Chapter 2.5).

3. Remove the headrest and the headrest guides (Chapter 2.8).

4. Seat with distributor for climate control system:
   remove complete cable harness, cable harness seat heater / seat climate control system and cable heater / climate control system at the backrest frame (see Chapter 2.13).

5. Seat with seat heater:
   Remove cable and switch for seat heater from the backrest frame (see Chapter 2.14).

6. Seat with armrests:
   Remove the armrests (Chapter 2.18).
7 Remove the covers on the left and right side (Chapter 2.19).

8 **Seat with shoulder belt:**
   Remove left and right belt deflection from the backrest frame (see Chapter 2.20).

---

**Removal and installation**

9 **WARNING** Danger of injury by shoot out of backrest (1)!
During operation of the handle for backrest adjustment (13) with removed backrest cushion, the backrest (1) has to be supported manually.

For relieving torsion spring (2) tension fold backrest (1) onto the seat cushion (4).
10 Unscrew flange nut (10) at the head screw (7).
   **Installation note:**
   Flange nut (10), 25 Nm.

11 Remove torsion spring (2) from the adapter plate (8).
   **Installation note:**
   Put torsion spring (2) onto the adapter plate (8) that, when upending the backrest (1), the leg of the torsion spring (2) hooks into the pin (5) of the backrest (1).

12 For further removal turn backrest (1) rearwards.

13 Remove the backrest adjuster (Chapter 2.21).

14 Remove the Bowden pull wire for locking left/ right (Chapter 2.34).
2.22.3 Backrest and backrest bearing with locking left/right –
removal and installation (locking lever at front of mounting)

REMOVAL / INSTALLATION

15 Unscrew three micro-encapsulated
countersunk screws (9).
**Installation note:**
Replace the micro-encapsulated
countersunk screw (9), 12 Nm.

16 Remove the adapter plate (8) and
cap screw (7).

17 Leverage carefully lever (6) from the
backrest (1) and the seat plate (3)
and remove it by using a screw
driver.
**Installation note:**
Grease lever (6) in the contact area
(F) of the adapter plate (8) on both
sides with acid-free multi-purpose
grease.
2.22.3 Backrest and backrest bearing with locking left/right – removal and installation (locking lever at front of mounting)

18 Mark bores for screws on the backrest (1), push backrest (1) against the left side of the seat plate (3) and lift it off.

**Installation note:**
The large cylindric pattern (arrow) at the backrest (1) has to mesh into the large position bore at the seat plate (3).

19 Drill off the rivet head and drive the blind rivet (11) out of the backrest (1).

20 Remove the holder (12).

21 Re-install the components in the reverse order of their removal.
2.23 Bearing of the supporting structure at the back – removal and installation

REMOVAL / INSTALLATION

(1) Supporting structure (back)
(2) Washer
(3) Socket
(4) Bearing
(5) Axis clamping cap
2.23 Bearing of the supporting structure at the back – removal and installation

REMOVAL / INSTALLATION

Removal and installation

1. Lift off the axis clamping cap (5) at the round bar of the supporting structure (1).

2. Pull off two sockets (3), the bearing (4) and the washer (2) at the round bar of the supporting structure (1).

   **Installation note:**
   Apply acid-free multi-purpose lubricant to the entire external surface (F) of the round bar of the supporting structure (1).

3. Re-install the components in the reverse order of their removal.
2.24 Supporting structure at the back – removal and installation

REMOVAL / INSTALLATION

(1) Supporting structure at the back
(2) Micro-encapsulated countersunk screw .................. to replace, 25 Nm
(3) Lower fore/aft adjustment
(4) Upper seat part

1 Remove the cable harness for the heater / climate control system at the rear (see Chapter 2.11).

2 Remove the voltage transformer (Chapter 2.16).

3 Remove and re-install the bearing at the rear of the supporting structure (Chapter 2.23).

4 Remove the upper fore/aft adjustment at the rear and at the front of the supporting structure (see Chapter 2.31).
2.24 Supporting structure at the back – removal and installation

Removal and installation

5. Lift off the upper seat part (4) and fold it backwards.

**Note:**
Do not overstretch the entire cable harness and the cable for the seat occupancy detection system and lay them in a slackness loop during installation (see Chapter 2.33).

6. Unscrew four micro-encapsulated countersunk screws (2).

**Installation note:**
Replace the micro-encapsulated countersunk screw (2), 25 Nm.

7. Remove the back supporting structure (1) at the lower fore/aft adjustment (3).

8. Re-install the components in the reverse order of their removal.
2.25 Supporting structure at the front – removal and installation

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Front supporting structure
(2) Lower fore/aft adjustment
(3) Upper seat part

1 Remove the upper fore/aft adjustment at the rear and at the front of the supporting structure (see Chapter 2.31).
Removal and installation

2 Lift off the upper seat part (3) and fold it backwards.

Note:
Do not overstretched the entire cable harness and the cable for the seat occupancy detection system and lay them in a slackness loop during installation (see Chapter 2.33).

3 Remove the front supporting structure (1) at the lower fore/aft adjustment (2).

Note:
The pin (arrow) at the bottom of the front supporting structure (1) must engage in the hole of the lower fore/aft adjustment (2).

4 Re-install the components in the reverse order of their removal.
### 2.26 Seat angle and seat depth adjustment – removal and installation

<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.26 Seat angle and seat depth adjustment – removal and installation</td>
</tr>
<tr>
<td>• Flexible support plate for seat occupancy detection system – removal and installation</td>
</tr>
<tr>
<td>• Holder for seat depth and seat angle adjustment – removal and installation</td>
</tr>
<tr>
<td>• Spring steel plate at the seat angle adjustment – removal and installation</td>
</tr>
<tr>
<td>• Spring steel plate at the seat depth adjustment – removal and installation</td>
</tr>
<tr>
<td>• Locking mechanism for seat depth and seat angle adjustment – removal and installation</td>
</tr>
</tbody>
</table>
2.26 Seat angle and seat depth adjustment – removal and installation

REMOVAL/INSTALLATION

TABLE OF CONTENTS

1. Spring
2. Switch-plate
3. Rivet
4. Seat switch
5. Spring steel sheet
6. Lever for seat angle adjustment
7. Flexible support plate
8. Hexagon socket screw
9. Cover
10. Lever for seat depth adjustment
11. Linking rod for seat depth adjustment
12. Locking lever
13. Spring
14. Lever
15. Plate
2.26 Seat angle and seat depth adjustment – removal and installation

REMOVAL/INSTALLATION

(16) Nut
(17) Screw
(18) Rivet
(19) Spring steel sheet
(20) Rivet
(21) Locating element
(22) Rivet

1 Remove the seat cushion
   (see Chapter 2.1).
2.26 Seat angle and seat depth adjustment – removal and installation

**Removal and installation**

**2 Seat with seat switch:**

2.1 Disconnect the spring (1).

2.2 Tilt the switch-plate (2) forwards and remove it.

2.3 Drill off the rivet (3) and remove the seat switch (4).

3 Press the spring plate (5) inwards (arrow), operate the lever for seat angle adjustment (6), swivel the flexible support plate upwards and remove it.

**Installation note:**
Fit in the linking rod (11) for seat depth adjustment.
2.26 Seat angle and seat depth adjustment – removal and installation

4. Drill off the rivet (22) and remove the spring steel sheet (5).

5. Unscrew the hexagon socket screws (8), remove the cover (9), the levers for seat angle and seat depth adjustment (6, 10), the linkage rod (11) and the locking lever (12).

6. Remove the spring (13).

7. Turn the lever (14) clockwise until it snaps-in, pull the plate (15) to the very front and remove it.

8. Remove the covers on the right and left side (Chapter 2.27).

9. Unscrew the nut (16), remove the lever (14) and the screw (17).
10 Drill off the rivet (18) and remove the spring steel sheets (19).

11 Drill off the rivet (20) and remove the locating element (21).

12 Re-install the components in the reverse order of their removal.
2.27 Covers (for seat depth adjustment) – removal and installation

(1) Spring
(2) Switch-plate
(3) Lever for seat angle adjustment
(4) Flexible support plate
(5) Spring
(6) Lever
(7) Plate
(8) Rivet
(9) Washer
(10) Cover

1 Remove the seat cushion (see Chapter 2.1).
Removal and installation

2 **Seat with seat switch:**

2.1 Remove the spring (1).

2.2 Tilt the switch-plate (2) forwards and remove it.

3 Press the spring plate (arrow) inwards, operate the lever for seat angle adjustment (3), swivel the flexible support plate (4) upwards and remove it.

4 Remove the spring (5).

5 Turn the lever (6) clockwise until it snaps-in, pull the plate (7) to the very front and remove it.
2.27 Covers (for seat depth adjustment) – removal and installation

REMOVAL/INSTALLATION

6 Drill off the rivet (8) and remove the washers (9).

7 Unhook the covers (10) by pulling them forwards and remove them in an upward direction.

8 Re-install the components in the reverse order of their removal.
2.28 Seat plate – removal and installation (seat with distribution for climate control system)

REMOVAL / INSTALLATION

(1) Seat plate
(2) Hexagon bolt...................... 25 Nm
(3) Hexagon nut
(4) Protective cap
(5) Adapter plate
(6) Lever
(7) Cable for seat occupancy detection system
(8) Entire cable harness

1 Remove the seat cushion (Chapter 2.2).

2 Remove the backrest cushion (Chapter 2.3).

3 Remove the cable harness for the seat heater / -seat ventilation at the seat plate (see Chapter 2.10).
2.28 Seat plate – removal and installation (seat with distribution for climate control system)

REMOVAL / INSTALLATION

4 Remove the cable harness for the heater / climate control system at the seat plate (see Chapter 2.11).

5 Remove the cable for the seat occupancy detection system at the seat depth adjustment (see Chapter 2.12).

6 Disconnect the electrical connection between the cable for the seat switch and the cable for the seat occupancy detection system (see Chapter 2.12.).

7 Remove the stopper from the seat depth adjustment (see Chapter 2.12).

8 Remove the seat angle adjustment (see Chapter 2.26).

Note: The flexible support plate can remain installed at the seat angle adjustment.
2.28 Seat plate – removal and installation (seat with distribution for climate control system)

9 Remove the seat depth adjustment (see Chapter 2.26).

10 Remove the entire cable harness at the seat plate, at the backrest, at the distribution for the climate control system and at the compressor (see Chapter 2.13).

11 Remove the entire cable harness at the cable for the seat occupancy detection system (see Chapter 2.13).

12 Seat with armrests:
   Remove the armrests (Chapter 2.18).

13 Remove the covers on the left and right side (Chapter 2.19).

14 Remove the lap belt (Chapter 2.20).
15 Remove the backrest adjustment (Chapter 2.21).

**Installation note:**
The adapter plate (5) and the lever (6) are pre-assembled on the seat plate (1).

16 Remove the backrest and the backrest bearing at the seat plate (see Chapter 2.22).

**Note:**
The components attached to the backrest do not have to be removed.

17 Remove the upper fore/aft adjustment at the seat plate (see Chapter 2.31).
2.28 Seat plate – removal and installation (seat with distribution for climate control system)

Removal and installation

18 Pull the entire cable harness (8) and the cable for the seat occupancy detection system (7) out of the seat plate (1) in downward direction and remove the seat plate (1).

19 If the stopper is defective:
19.1 Pull off the protective cap (4) at the hexagon bolt (2).

19.2 Unscrew the hexagon bolt (2) and remove the hexagon nut (3).

**Installation note:**
Hexagon bolt (2), 25 Nm.

**Notes:**
- The hexagon bolt (2) serves as stopper for the backrest.
- The stopper is pre-assembled at the seat plate (1).

20 Re-install the components in the reverse order of their removal.
2.29 Slider for seat depth adjustment and protective profile – removal and installation

REMOVAL / INSTALLATION

(1) Slider (guide)
(2) Blind rivet
(3) Protective profile
(4) Seat plate

1 Remove the seat cushion (Chapter 2.2).

2 Remove the cable for the seat occupancy detection system from the seat depth adjustment (see Chapter 2.12).

3 Disconnect the electrical connection between the cable for the seat switch and the cable for the seat occupancy detection system (see Chapter 2.12.).

4 Remove the stopper from the seat depth adjustment (see Chapter 2.12).
5 Remove the seat depth adjustment together with the seat angle adjustment (see work step 7 in Chapter 2.26).

Notes:
- The flexible support plate can remain installed at the seat angle adjustment.
- The components can remain installed.

Removal and installation

6 Bore out four rivet heads at the sliders (1) and drive out the blind rivets (2).

7 Remove four sliders (1).

8 Pull off two protective profiles (3) at the seat plate (4).

9 Re-install the components in the reverse order of their removal.
2.30 Swivel and seat plate – removal and installation

TABLE OF CONTENTS

2.30.1 Swivel and seat plate – removal and installation (seat with integrated swivel)
   and lever for swivel – removal and installation
2.30.2 Swivel and seat plate – removal and installation (seat with external swivel)
2.30.1 Swivel and seat plate – removal and installation
(seat with integrated swivel)

REMOVAL/INSTALLATION

(1) Integrated swivel
(2) Screw
(3) Seat plate
(4) Cable tie
(5) Seat heater cable
(6) Hexagon nut
(7) Washer
(8) Hexagon nut
(9) Washer
(10) Hexagon socket screw ............ to be replaced, 25 Nm
(11) Bushing
(12) Washer
(13) Slide washer
(14) Spring
(15) Nut
2.30.1 Swivel and seat plate – removal and installation
(seat with integrated swivel)

(16) Flat-headed screw
(17) Lever
(18) Linkage rod
(19) Handle

1 Remove the seat and backrest cushion (Chapter 2.1).

2 Seat with seat switch:
   Remove the seat switch (see Chapter 2.15).

3 When replacing the seat plate:
   Remove the backrest (see Chapter 2.22).

4 Seat with seat angle and seat depth adjuster:
   Remove the seat angle and seat depth adjuster (see Chapter 2.26).
2.30.1 Swivel and seat plate – removal and installation  
(seat with integrated swivel)

Removal and installation

5 Turn the integrated swivel (1) and the seat plate (3) to the side.

6 Push the seat forwards or backwards and undo the screws (2).

7 Remove the seat plate (3) and the integrated swivel (1).

8 Seat with seat heater:
Cut open the cable ties (4) and pull out the seat heater cable (5) in a downward direction.

9 Remove the hexagon nuts (6) and the washers (7).
2.30.1 Swivel and seat plate – removal and installation
(seat with integrated swivel)

10 Unscrew the hexagon nuts (8), remove the washers (9) and the hexagon socket screws (10).

**Installation notes:**
- Replace the hexagon socket screws (10) with new ones, 25 Nm.
- The swivel must be turnable with a torque of max. 30 Nm.

11 Remove the seat plate (3) and the washers (12).

12 Remove the bushing (11) and the slide washers (13).

13 Remove the spring (14).
2.30.1 Swivel and seat plate – removal and installation
(seat with integrated swivel)

14 Unscrew the nut (15) and remove the flat-headed screw (16).

15 Unhook the lever (17) from the linkage rod (18) and remove it.

16 Remove the linkage rod (18) and the handle (19).

17 Re-install the components in the reverse order of their removal.
2.30.2 Swivel and seat pan plate – removal and installation
(seat with external swivel)

(1) External swivel
(2) Hexagon nut
(3) Washer
(4) Hexagon socket screw
................. to be replaced, 25 Nm
(5) Seat plate
(6) Hexagon socket screw
................. to be replaced, 25 Nm
(7) Hexagon nut
(8) Washer
(9) Washer
2.30.2 Swivel and seat pan plate – removal and installation  
(seat with external swivel)

REMOVAL/INSTALLATION

1. Remove the seat and backrest cushion (Chapter 2.1).

2. **Seat with seat switch:** Remove the seat switch (see Chapter 2.15).

3. **When replacing the seat plate:** Remove the backrest (see Chapter 2.22).

4. **Seat with seat angle and seat depth adjuster:** Remove the seat angle and seat depth adjuster (see Chapter 2.26).

Removal and installation

5. Turn the external swivel (1) and the seat plate (5) to the side.
6 Unscrew the hexagon nuts (2), remove the washers (3) and the hexagon socket screws (4).

**Installation note:**
Replace the hexagon socket screws (4) with new ones, 25 Nm.

7 Remove the seat plate (5).

8 Unscrew the hexagon socket screws (6) and remove the hexagon nuts (7) and the washers (8).

**Installation note:**
Replace the hexagon socket screws (6) with new ones, 25 Nm.

9 Remove the external swivel (1) and the washers (9).

10 Re-install the components in the reverse order of their removal.
TABLE OF CONTENTS

2.31.1 Fore/aft adjustment – removal and installation (seat without swivel)
2.31.2 Fore/aft adjustment – removal and installation (seat with swivel)
2.31.3 Upper fore/aft adjustment (for upper seat part) – removal and installation (seat with supporting structures)
2.31.4 Lower fore/aft adjustment (for upper seat part and supporting structure for control) – removal and installation (seat with supporting structures)
## 2.31.1 Fore/aft adjustment – removal and installation (seat without swivel)

### REMOVAL/INSTALLATION

<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
<th>Description</th>
<th>Torque (Nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Seat top assembly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Hexagon socket screw</td>
<td></td>
<td>to be replaced, 25 Nm</td>
</tr>
<tr>
<td>3</td>
<td>Nut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Hexagon socket screw</td>
<td></td>
<td>to be replaced, 25 Nm</td>
</tr>
<tr>
<td>5</td>
<td>Washer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Nut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Washer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Hexagon socket screw</td>
<td></td>
<td>to be replaced, 25 Nm</td>
</tr>
<tr>
<td>9</td>
<td>Nut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Fore/aft adjustment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Remove the seat cushion (see Chapter 2.1).
2.31.1 Fore/aft adjustment – removal and installation (seat without swivel)

Removal and installation

2. Push the seat top assembly (1) as far back as possible.

3. Unscrew the hexagon socket screws (2) and remove the nuts (3).
   **Installation note:**
   Replace the hexagon socket screws (2) with new ones, 25 Nm.

4. Push the seat top assembly (1) as far forward as possible.

5. Unscrew the hexagon socket screws (4), remove the washers (5) and nuts (6).
   **Installation note:**
   Replace the hexagon socket screws (4) with new ones, 25 Nm.
6. Remove the seat top assembly (1) and remove the washers (7).

7. Disconnect the bellows from the upper part of the suspension system and lay it down.

8. Unscrew the hexagon socket screws (8) and remove the nuts (9).

   **Installation note:**
   Replace the hexagon socket screws (8) with new ones, 25 Nm.

9. Remove the fore/aft adjustment (10).

10. Re-install the components in the reverse order of their removal.
2.31.2 Fore/aft adjustment – removal and installation (seat with swivel)

REMOVAL/INSTALLATION

(1) Seat top assembly
(2) Hexagon socket screw  
.......................... to be replaced, 25 Nm
(3) Hexagon screw  
.......................... to be replaced, 25 Nm
(4) Nut
(5) Washer
(6) Washer
(7) Hexagon socket screw  
.......................... to be replaced, 25 Nm
(8) Nut
(9) Fore/aft adjustment
2.31.2 Fore/aft adjustment – removal and installation (seat with swivel)

Removal and installation

1. Turn the seat top assembly (1) to the side.

2. **Seat with external swivel:**
   Unscrew the hexagon socket screws (2), remove the nuts (4) and the washers (5).
   **Installation note:**
   Replace the hexagon socket screws (2) with new ones, 25 Nm.

3. **Seat with integrated swivel:**
   Undo the hexagon socket screws (3), remove the nuts (4) and the washers (5).
   **Installation note:**
   Replace the hexagon socket screws (3) with new ones, 25 Nm.

4. Remove the seat top assembly (1) and the washers (6).
2.31.2 Fore/aft adjustment – removal and installation (seat with swivel)

REMOVAL/INSTALLATION

5 Disconnect the bellows from the upper part of the suspension system and lay it down.

6 Unscrew the hexagon socket screws (7) and remove the nuts (8).

**Installation note:**
Replace the hexagon socket screws (7) with new ones, 25 Nm.

7 Remove the fore/aft adjustment (9).

8 Re-install the components in the reverse order of their removal.
2.31.3 Upper fore/aft adjustment (for upper seat part) – removal and installation (seat with supporting structures)

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Upper fore/aft adjustment
(2) Hexagon nut
(3) Hexagon nut
(4) Micro-encapsulated cap screw................. to replace, 25 Nm
(5) Spacer
(6) Spacer
(7) Micro-encapsulated cap screw................. to replace, 25 Nm
(8) Stopper
(9) Micro-encapsulated cap screw................. to replace, 25 Nm
(10) Washer
(11) Upper seat part
(12) Lower fore/aft adjustment
(13) Supporting structure (back)
(14) Supporting structure (front)
2.31.3 Upper fore/aft adjustment (for upper seat part) – removal and installation (seat with supporting structures)

1. Remove the seat cushion (Chapter 2.2).

2. Remove the cable for the seat occupancy detection system from the seat depth adjustment (see Chapter 2.12).

3. Disconnect the electrical connection between the cable for the seat switch and the cable for the seat occupancy detection system (see Chapter 2.12.).

4. Remove the stopper from the seat depth adjustment (see Chapter 2.12).

5. Remove the seat angle adjustment (see Chapter 2.26).  
   **Note:**  
   The flexible support plate can remain installed at the seat angle adjustment.

6. Remove the seat depth adjustment (see Chapter 2.26).
2.31.3 Upper fore/aft adjustment (for upper seat part) – removal and installation (seat with supporting structures)

Removal and installation

7 Push the upper fore/aft adjustment (1) and the lower fore/aft adjustment (12) forwards as far as possible.

8 Mark the screw positioning diagram and unscrew four micro-encapsulated cap screws (9). Then, remove four washers (10), two hexagon nuts (3) and four spacers (5, 6).

Installation notes:
- Replace the micro-encapsulated cap screw (9), 25 Nm.
- Tighten the micro-encapsulated cap screws (9) according to the marking.
- Check the upper fore/aft adjustment (1) for correct locking in any position.
2.31.3 Upper fore/aft adjustment (for upper seat part) – removal and installation (seat with supporting structures)

9 Lift off the upper seat part (11) at the upper fore/aft adjustment (1) and put it aside.

**Note:**
Do not overstretch the entire cable harness and the cable for the seat occupancy detection system and lay them in a slackness loop during installation (see Chapter 2.33).

10 Push the upper fore/aft adjustment (1) forwards as far as possible.

11 Mark the screw positioning diagram and unscrew two micro-encapsulated cap screws (7).

**Installation notes:**
- Replace the micro-encapsulated cap screw (7), 25 Nm.
- Tighten the micro-encapsulated cap screws (7) according to the marking.
2.31.3 Upper fore/aft adjustment (for upper seat part) – removal and installation (seat with supporting structures)

REMOVAL / INSTALLATION

12 Remove the stopper (8) at the upper fore/aft adjustment (1).
   **Installation note:**
   The stopper (8) must point forwards.

13 Push the upper fore/aft adjustment (1) backwards as far as possible and push the lower fore/aft adjustment (12) forwards as far as possible.

14 Mark the screw positioning diagram and unscrew two micro-encapsulated cap screws (4). Remove two hexagon nuts (2).
   **Installation notes:**
   • Replace the micro-encapsulated cap screw (4), 25 Nm.
   • Tighten the micro-encapsulated cap screws (4) according to the marking.
15 **WARNING** Risk of injury! After the removal of the upper fore/aft adjustment (1), the front supporting structure (14) is loose.

Remove the upper fore/aft adjustment (1) at the supporting structures (13, 14).

16 Re-install the components in the reverse order of their removal.
2.31.4 Lower fore/aft adjustment (for upper seat part and supporting structure for control) – removal and installation (seat with supporting structures)

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Lower fore/aft adjustment
(2) Micro-encapsulated hexagon bolt .......................... to replace, 25 Nm
(3) Stopper
(4) Micro-encapsulated hexagon bolt .......................... to replace, 25 Nm
(5) Seat suspension
(6) Upper seat part
2.31.4 Lower fore/aft adjustment (for upper seat part and supporting structure for control) – removal and installation (seat with supporting structures)

1. Remove the upper fore/aft adjustment at the rear and at the front of the supporting structure (see Chapter 2.31).

2. Lift off the upper seat part at the supporting structures and fold it backwards.
   **Note:**
   Do not overstretch the entire cable harness and the cable for the seat occupancy detection system and lay them in a slackness loop during installation (see Chapter 2.33).

3. Remove the front supporting structure at the lower fore/aft adjustment (see Chapter 2.25).

4. Remove the back supporting structure at the lower fore/aft adjustment (see Chapter 2.24).
   **Note:**
   The voltage transformer and the bearing can remain installed at the back supporting structure.
2.31.4 Lower fore/aft adjustment (for upper seat part and supporting structure for control) – removal and installation (seat with supporting structures)

Removal and installation

5 Push the lower fore/aft adjustment (1) backwards as far as possible.

6 Mark the screw positioning diagram and unscrew two micro-encapsulated cap screws (2, 4) at the front.

**Installation notes:**
- Replace the micro-encapsulated cap screws (2, 4) by new ones, 25 Nm.
- Tighten the micro-encapsulated cap screws (2, 4) according to the marking.
- Check the lower fore/aft adjuster (1) for correct locking in any position.

7 Remove the stopper (3) at the lower fore/aft adjustment (1).

**Note:**
The stopper (3) must point backwards.
8 Push the lower fore/aft adjustment (1) forwards as far as possible.

9 Mark the screw positioning diagram and unscrew two micro-encapsulated cap screws (4) at the rear. **Installation notes:**
- Replace the micro-encapsulated cap screw (4), 25 Nm.
- Tighten the micro-encapsulated cap screws (4) according to the marking.

10 Remove the lower fore/aft adjustment (1) from the seat suspension (5).

11 Re-install the components in the reverse order of their removal.
2.32 Multi-function armrest – removal and installation

REMOVAL/INSTALLATION

(1) Circlip
(2) Multifunctional armrest
(3) Locking knob
(4) Washer
(5) Screw
(6) Tension spring
(7) Latching bolt
(8) Oval-head screw  
......................... to be replaced, 6 Nm
(9) Washer
(10) Armrest pad
(11) Hexagon nut  
......................... to be replaced, 10 Nm
(12) Plate
(13) Hexagon nut ....................... 50 Nm
(14) Hexagon screw
2.32 Multi-function armrest – removal and installation

REMOVAL/INSTALLATION

(15) Spacer
(16) Washer
(17) Hexagon nut .................. 25 Nm
(18) Washer
(19) Screw
(20) Hexagon nut .................. 25 Nm
(21) Washer
(22) Screw
(23) Support
(24) Spacer

1. Remove the seat and backrest cushion (Chapter 2.1).
2.32 Multi-function armrest – removal and installation

Removal and installation

2 Bring the seat depth adjustment to the most forward position.

3 **Seat with seat switch:**
   Loosen the fixation of the seat switch cable and pull the cable through the seat plate.

4 Operate the locking lever (arrow) manually until it engages; move the seat angle and seat depth adjuster to the front as far as possible and remove it from the seat plate.

**Installation notes:**
- Avoid kinking or abrasion of the cable on sharp edges.
- Make sure that the cable isn't pulled tight.
5 Remove the circlips (1), pull the multi-function armrest (2) from the bearing bolts of the support (23).

6 Unscrew the locking knob (3), remove the washer (4) and pull out the screw (5).

7 Fold the armrests backwards (arrow), unhook the tension spring (6), slide the latching bolt (7) backwards and remove it to the side.

8 Turn out the oval-head screws (8) and remove the washers (9).

**Installation note:**
Replace the oval-head screws (8) with new ones, 6 Nm tightening torque.

9 Remove the armrest pads (10).
10 Unscrew the hexagon nuts (11) and remove the plate (12).
**Installation note:**
Replace the hexagon nuts (11) with new ones, 10 Nm.

11 Unscrew the hexagon nut (13). Withdraw the hexagon nut (14), the spacer tube (15) and the washer (16).
**Installation note:**
Hexagon nut (13), 50 Nm.

12 **ATTENTION!**
Do not pull out the screw (19)!

Unscrew the hexagon nut (17) and remove the washer (18); if necessary hold up with the screw (19).
**Installation note:**
Hexagon nut (17), 25 Nm.
13 Unscrew the hexagon nut (20) and remove the washers (21) and the screws (22).

**Installation note:**
Hexagon nut (20), 25 Nm.

14 Remove the support (23).

15 Remove the sleeve tube (24).

16 Re-install the components in the reverse order of their removal.
2.33 Entire upper seat part – removal and installation

TABLE OF CONTENTS

2.33.1 Entire upper seat part – removal and installation

2.33.2 Entire upper seat part – removal and installation (with connector between cable harness for seat suspension and upper seat part)
2.33.1 Entire upper seat part – removal and installation

REMOVAL/INSTALLATION

(1) Bellows
(2) Cable tie
(3) Cable
(4) Upper seat part
(5) Hexagon socket screw  
.................  to be replaced, 25 Nm
(6) Hexagon nut
(7) Hexagon socket screw  
.................  to be replaced, 25 Nm
(8) Hexagon nut
2.33.1 Entire upper seat part – removal and installation

Removal and installation

1. Loosen the bellows (1) from the suspension system and lay it down.

2. **Seat with seat heater:**
   2.1 Remove the seat cushion (see Chapter 2.1).
   2.2 Open the cable tie holding the electric cable in the seat plate.
   2.3 Pull out the seat heater cable from the seat plate in downward direction.

3. **Seat with seat switch:**
   Cut open the cable ties (2) and withdraw the cable (3) from the spring system.
   **Installation note:**
   Lay the cable so that there is slack in it.

4. Push the upper seat part (4) backwards.
5. Undo the hexagon socket screws (5) at the front and remove the hexagon nuts.
**Installation note:**
Replace the hexagon nuts (5) with new ones, 25 Nm.

6. Push the upper seat part (4) forwards.

7. Undo the hexagon socket screws (7) at the rear and remove the hexagon nuts (8).
**Installation note:**
Replace the hexagon socket screws (7) with new ones, 25 Nm.

8. Remove the upper seat part (4).

9. Re-install the components in the reverse order of their removal.
2.33.2 Entire upper seat part – removal and installation (with connector between cable harness for seat suspension and upper seat part)

REMOVAL / INSTALLATION

(1) Upper seat part
(2) Seat suspension
(3) Entire cable harness
(4) Cable harness of height adjustment / seat occupancy detection system

1 Remove the seat suspension (see repair manual for the seat suspension).

2 If the cable harnesses are removed additionally:
2.1 Remove the seat cushion (Chapter 2.2).

2.2 Remove the cable for height adjustment / seat occupancy detection system (Chapter 2.12).
2.33.2 Entire upper seat part – removal and installation (with connector between cable harness for seat suspension and upper seat part)

REMOVAL / INSTALLATION

2.3 Remove the entire cable harness (Chapter 2.13).

3 Re-install the components in the reverse order of their removal.
2.34 Bowden pull wire for locking left/right – removal and installation
(locking lever at front of mounting)

REMOVAL / INSTALLATION

TABLE OF CONTENTS

(1) Bowden pull wire for locking left/right
(2) Backrest frame
(3) Seat plate
(4) Torsion spring
(5) Seat cushion
(6) Lever right (for backrest adjustment)
(7) Lock washer
(8) Holder right (for Bowden pull wire)
(9) Plastic clip
(10) Plastic hook
(11) Push mount tie with wings
(12) Lever left (for backrest adjustment)
(13) Lock washer
(14) Holder left (for Bowden pull wire)
**2.34 Bowden pull wire for locking left/right – removal and installation**

(locking lever at front of mounting)

**REMOVAL / INSTALLATION**

---

1. Remove the backrest cushion (Chapter 2.3).

2. Remove the left cover (see Chapter 2.19).

**Removal and installation**

3. Push the seat cushion (5) to the front as far as possible.

4. Mark installation position of the Bowden pull wire for locking left/right (1).

5. Loosen the lock washer (13) at the Bowden pull wire (1).

6. Remove the Bowden pull wire (1) from the holder left (14).

7. Remove the Bowden pull wire (1) from the holder left (12).
2.34 Bowden pull wire for locking left/right – removal and installation (locking lever at front of mounting)

8 Loosen the lock washer (7) at the Bowden pull wire (1).

9 Detach the Bowden pull wire (1) from the holder right (8).

10 Remove the Bowden pull wire (1) from the lever right (6).
   **Note:**
   For easier removal of the Bowden pull wire (1), press the torsion spring (4) at the lever right (6) a little bit sideways by using a screw driver.

11 Pull two plastic clips (9) out of the backrest frame (2).
12 Pull plastic clip (10) out of the backrest frame (2).

13 Pull push mount tie with wings (11) out of the seat plate (3).

14 Pull Bowden pull wire (1) inwards through the hole (arrow) of the seat plate (3) and remove it.

**Installation notes:**
- Install the Bowden pull wire (1) according to the marking.
- Lay Bowden pull wire (1) in a slackness loop (round arrow) inside on the left of backrest frame (2) and seat plate (3).

15 Re-install the components in the reverse order of their removal.