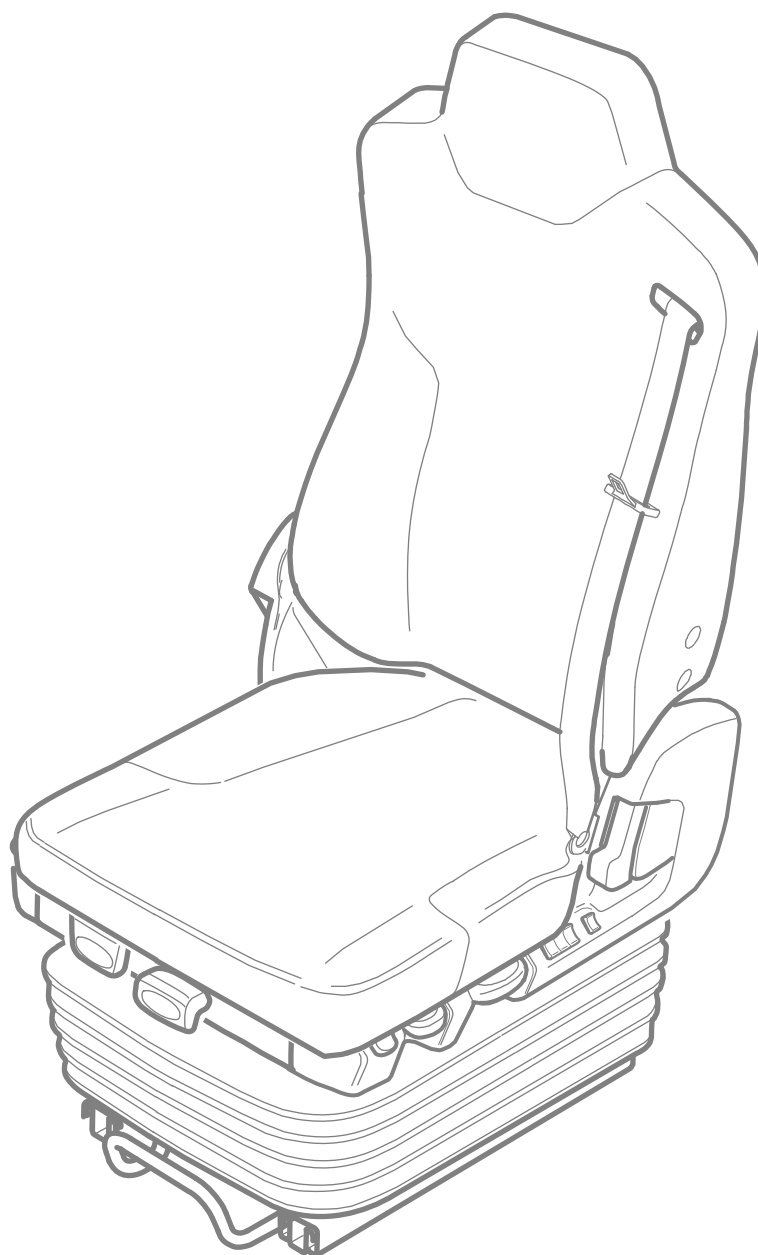


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NTS BUS / TRUCK

ISRI 6860 / 875 (885)

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Subject to technical changes for reasons of further development.

State: 05.2004

Version: 3

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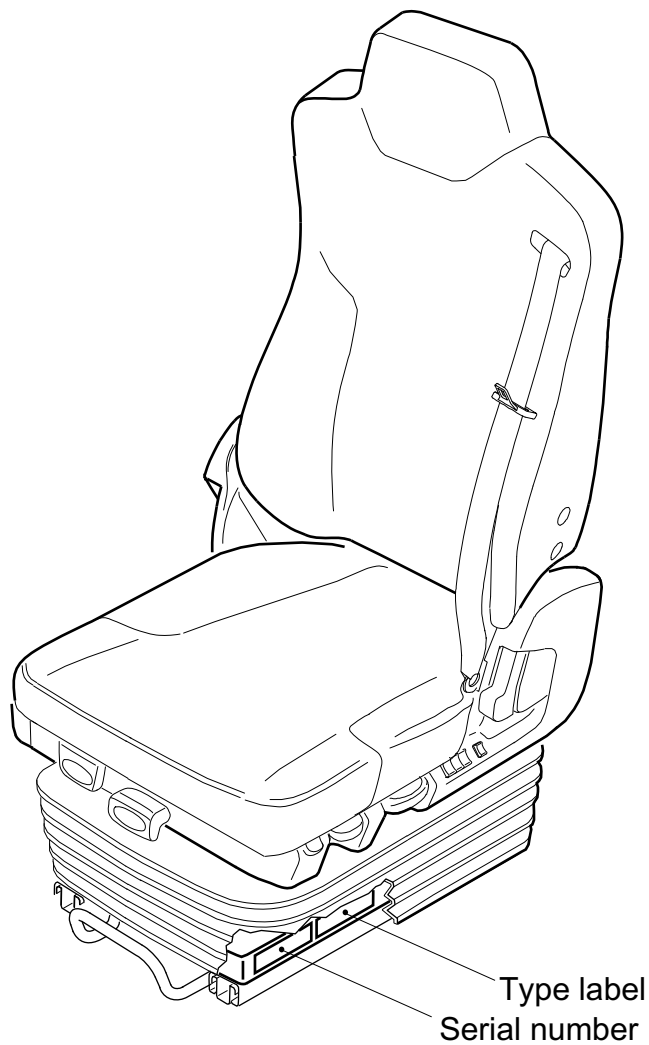
- Seat repairs have to be carried out by competent staff only.
  
- The presentation in this booklet shows the left seat, resp. the left seat side.  
On the right seat, resp. the right seat side, the repair will be carried out accordingly.
  
- The description in chapter 2 explains the removal of sundry seat components.  
The installation of these seat components generally happens in reverse sequence.
  
- Not all fastening parts for hoses and cables (e.g. cable binder) won't be mentioned in detail.  
After repairs it is necessary to put the laying of hoses and cables, as well as the fastening and securing, into original condition.
  
- Hoses, electrical lines and bowden cables must not be creased.
  
- Due to safety reasons pay attention to the correct positioning and to the observance of the tightening torques of the fixing screws when exchanging component parts, which lie within the flux line of the belt anchorage points.
  
- After each repair a functional test and, if pneumatic parts are involved, a leak test has to be effected.

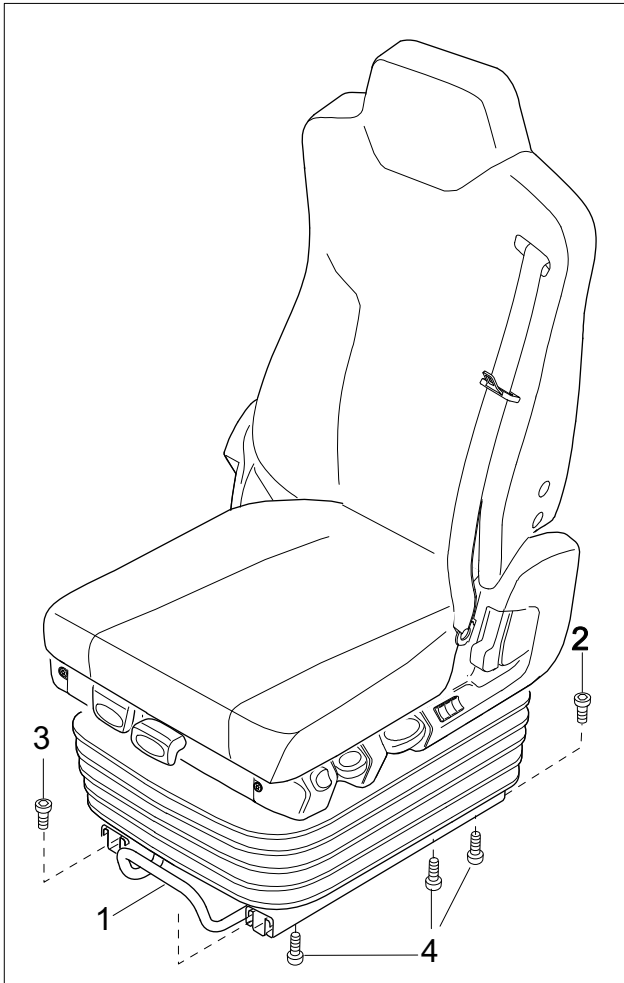
Thightening torques:	M8	=20 Nm +5Nm
	M 10	=22 Nm +/-2Nm
	7/16"UNF-2B	=35 Nm +5Nm

- When unwinding the safety belt from retractor, take care for a retractor position corresponding to the mounting position at the seat.
  
- Backrest in forward folded position must not be used as ascent help.

Serial number and type label are located at lever side on the lower frame of the suspension unit and are visible when lifting the bellow.

Please specify for spare part orders always.



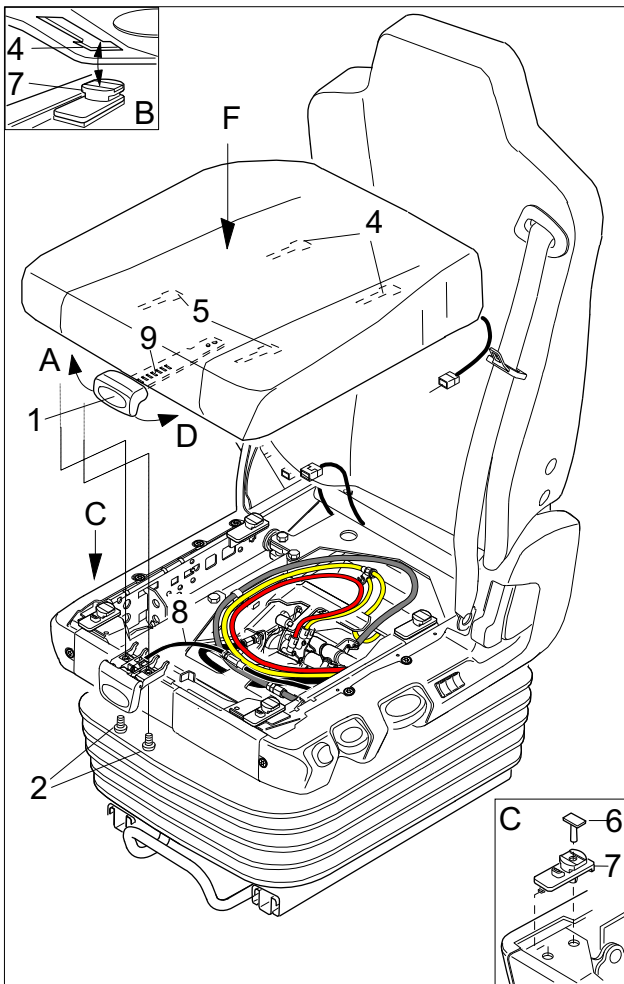


**Complete seat**

- Disconnect air supply lines and electrical feeders.
- Pull lever (1) upwards, move seat to the frontmost position and undo screws (2).
- Pull lever (1) upwards, move seat to the rearmost position and undo screws (3).

**Horizontal adjustment**

- Remove seat from vehicle (see complete seat).
- Pull lever (1) upwards and move seat in that way, that six screws (4) are reachable through openings in inner slides.
- Undo six screws (4).



**Seat cushion**

- Lift up lever (1) and push seat cushion to foremost position.
- Undo two screws (2) and remove handle from seat cushion.
- Hold lever (1) in upper position and push it sideways (see arrow (A)).
- Move seat cushion forwards again and lift it up.
- Disconnect electrical feeders for seat cushion heater and ventilation , if necessary.

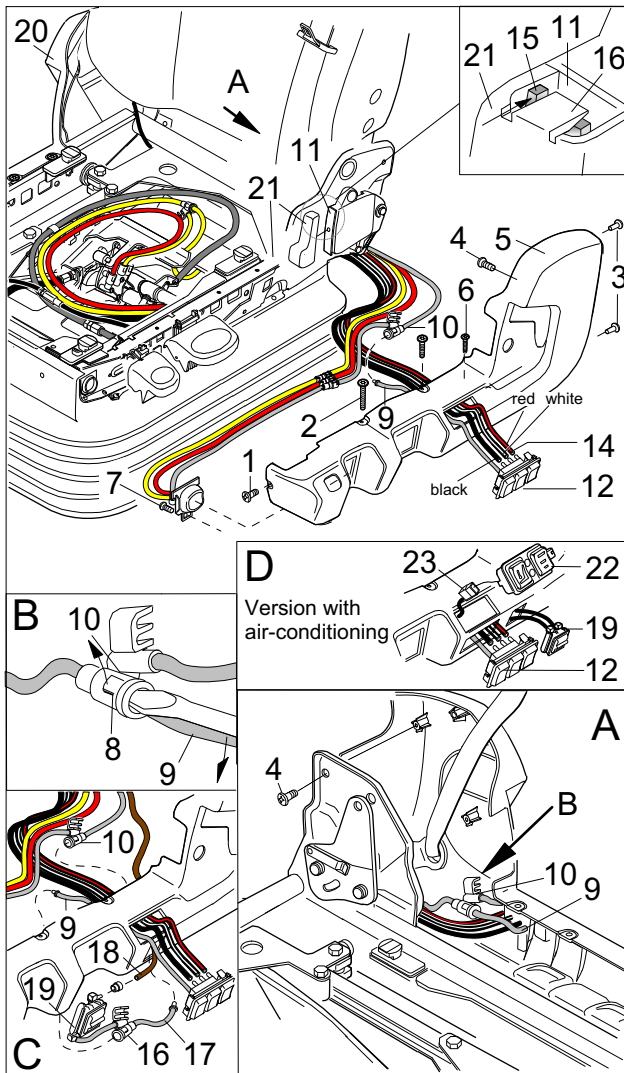
**Seat cushion mounting:**

- Bowdencable (8) must be positioned between lever (9) and seat cushion ground plate.
- Lay the keyholes (4) of the seat cushion (on the cushion's bottom side - pict. B) onto the sliders (7) at the rear.
- Push lever (1) upwards (don't move cushion) and push it in direction of arrow A sideways.
- Press down the seat cushion's front keyholes (5) onto the sliders at the front and press down cushion in direction of arrow (F).
- Push the cushion in direction of backrest (till stop) while still pressing down the complete seat cushion.
- Check now if all four sliders are locked in the keyholes (no vertical movement allowed).
- Push lever (1) in direction of arrow (D) and push cushion further in direction of backrest, till lever (1) engages. Take care, that the cushion is now locked in horizontal and vertical direction.

**Sliders for seat cushion (picture C)**

- Dismantle seat cushion (s.a.).
- Pull out plastic pin (6) and squeeze out slider (7).

- Sliders mounting:**
- Mount slider (7) at the seat frame.
  - Push in pin (6) (level of pin head flat must fit to the flat of the slider head).



**Side covers seat frame, IPS - Valve, switches for heating, swivel and air-conditioning**

**Cover , lever side :**

- Remove seat cushion (2.1.0).
- Move seat to the highest position and secure it against lowering (2.6.0, shock absorber). Press nose (15) of backrest lever (11) till nose (16) of handle (21) disengages.
- Pull off handle (21) downwards (undo screw if existing)
- Unscrew screw (1), front screw (2)(4,2x25) and back screw (3)(4,2x18).
- Undo two pins (22).
- Fold backrest completely forwards and undo one screw (4).
- Remove cover (5) from seat frame.

**Switch for seat lowering (see 2.7.0, too)**

- Undo one screw (6) and one screw (7) (old version: 2x(7)).

**IPS valve**

- Lift up fixing hook (8) safely and demount air pipe (9) from Y - connector (10)(see details A, B).
- Disconnect three hoses (14) from valve unit (12)
- Unhook two hooks of valve (12) and push out valve from cover (5).

**Switch for swivel (see detail C)**

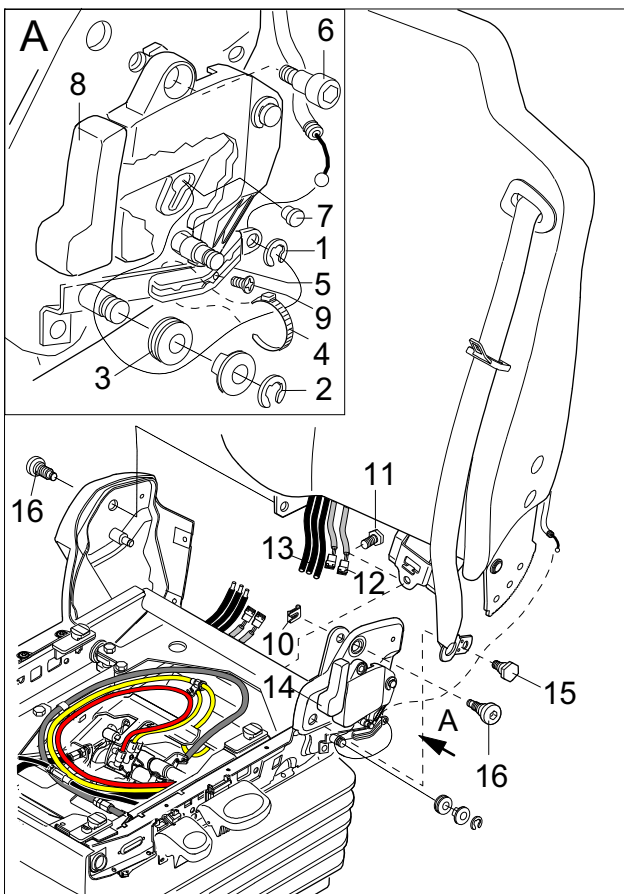
- Lift up fixing hook (8) safely, separate air pipes (9)(17) from Y - connectors (10) (16) and loosen air pipe (18) from switch (19) (see B, C).
- Unhook the two upper hooks of switch (19) and pull off switch from cover (5).

**Cover, opposite lever side :**

- Demount belt buckle.
- Remove cover (20) in general sense of cover (5).
- Loosen cable connector of heater switch and push switch out of cover (if switch is existing).

**Operating unit air- conditioning (see detail D)**

- Unhook switch unit (22) from side cover and unplug connector (23).

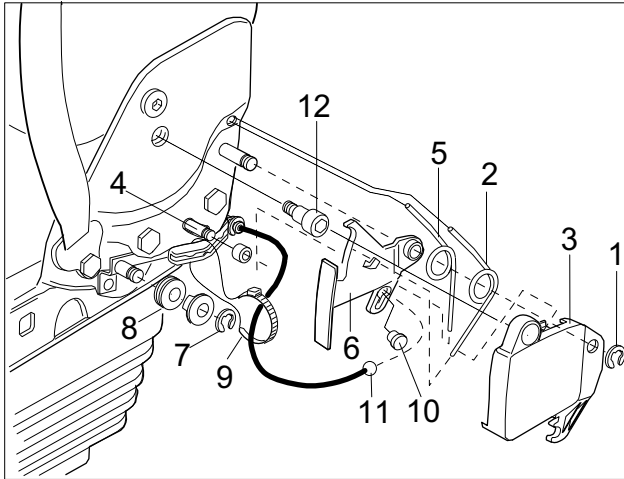


**Backrest**

- Adjust tilting to the utmost position.
- Demount side covers (s.a).
- Remove safety washers (1) (2) and roller (3)(see detail A).
- Cut cable binder (4)( as far as existing) and take cable out of cable guide (5).
- Unscrew screw (6), pull out securing pin (7) and remove cable from lever (8).
- Unscrew screw (9).
- Undo safety clamp (10).
- Unscrew screw (11).
- Disconnect electr. connection (12)(one or two plugs) and three air pipes (13),
- Lift up handle (14) and unscrew screw (15).
- Unscrew screws (16).
- Lever backrest out of the seat frame brackets.

**Hint:**

Please order the screws (11)(15)(16) additionally, when ordering a new backrest (screws are findable in spare part list as a kit).



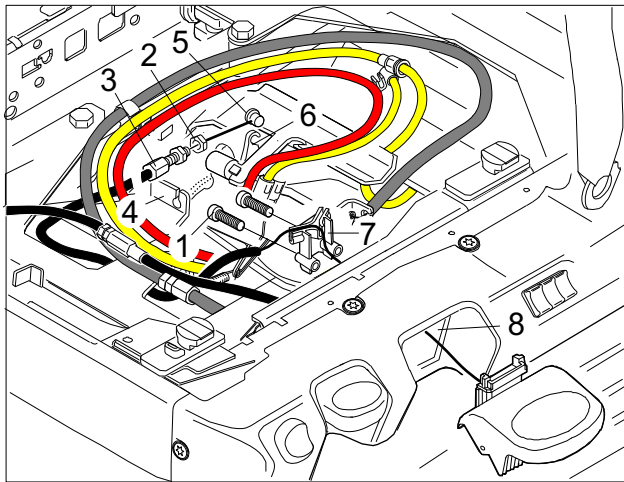
**Lever / lever springs for backrest**

**Lever for backrest adjustment and lever springs**

- Demount side cover for seat frame (2.2.0, lever side without loosen hoses).
- Remove safety washer (1), demount spring (2) at lever (3) and lever (6). Pull off lever (3).
- Demount spring (5) at pin (4)

**Lever for shoulder adjustment**

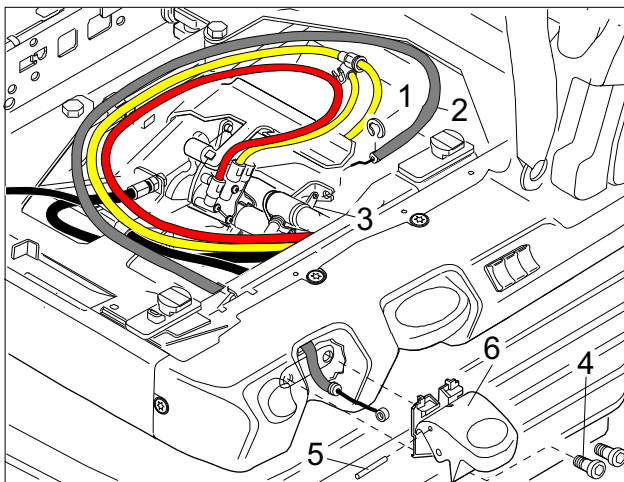
- Remove safety washer (7) and roller (8).
- Cut cable binder (9)(as far as existing).
- Pull out securing plug (10) and remove cable ball (11) from lever (6) (pull cable out of cable guide, if necessary).
- Unscrew screw (12) and pull off lever (6).



**Height adjustment**

- Demount seat cushion (2.1.0).
- Adjust tilting to the upmost position.
- Unscrew two screws (1).
- Undo nut (2), remove bowden cable (3) from fastening (4) and pull cable nipple (5) out of valve lever (6).
- Push bowden cable out of bearing (7) and pull it through opening (8).

After mounting: Adjust valve for height adjustment (2.9.0).



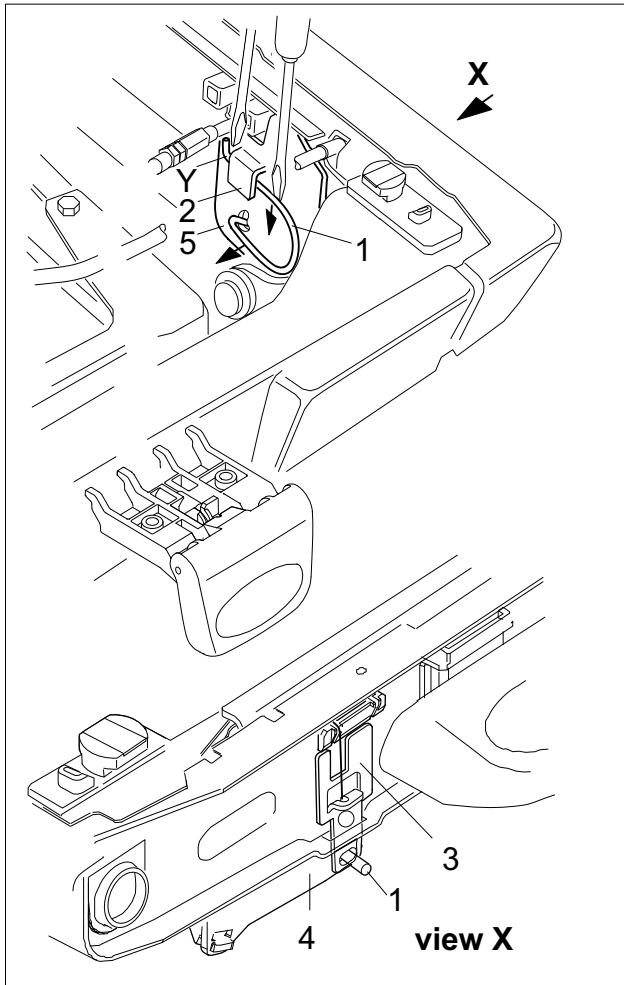
**Shock absorber adjustment**

- Demount seat cushion (2.1.0).
- Remove retaining washer (1) and lever bowden cable (2) out of fastening (3).
- Unscrew two screws (4).
- Knock pin (5) out of lever (6) and pull bowden cable out of seat frame.

**Adjustment of shock absorber (only possible with old bowden cable):**

- Before mounting seat cushion, loosen locking nut from bowden cable.
- Adjust bowden cable (2) that way, that in downmost position of adjusting lever, the hardest vertical damping will be achieved.
- Tighten locking nut again.

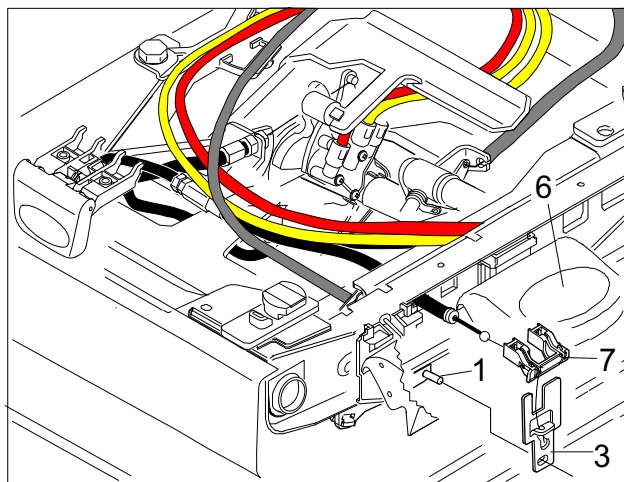




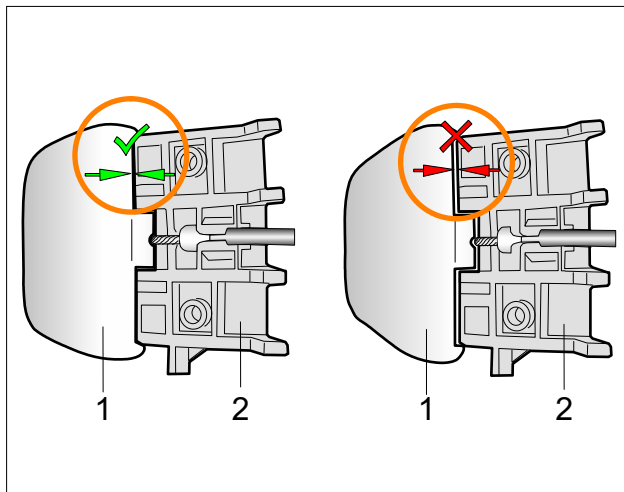
**Lever for tilt adjustment**

**When exchanging the lever of tilt adjustment, all parts of the kit must be exchanged !**

- Demount seat cushion (2.1.0).
- Demount side cover without disconnecting hoses (2.2.0).
- Adjust tilt adjustment in upper position.
- Press down spring (1) (see drawing), unhook from fixation (2) and pull spring out from levers (3) (4) (5).
- When mounting, hook spring (1) at first in lever (4) (5) and (3).
- Press down spring (1) with a screwdriver in area Y and hook spring behind fixation (2)

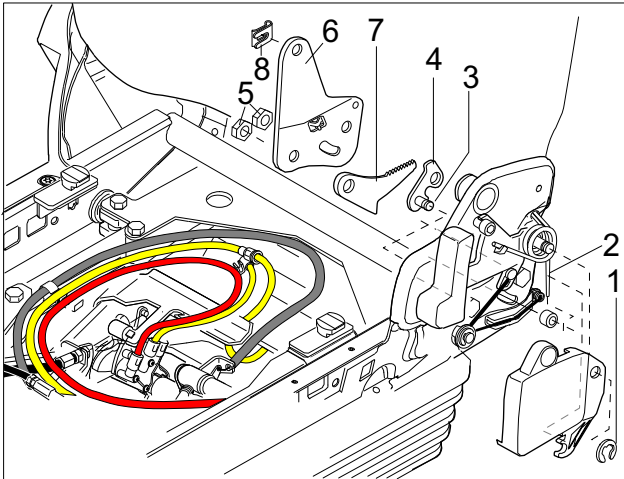


- Remove lever for height adjustment (6) (s.o.).
- Lever bearing (7) out of seat frame and remove bowden cable from lever (3).



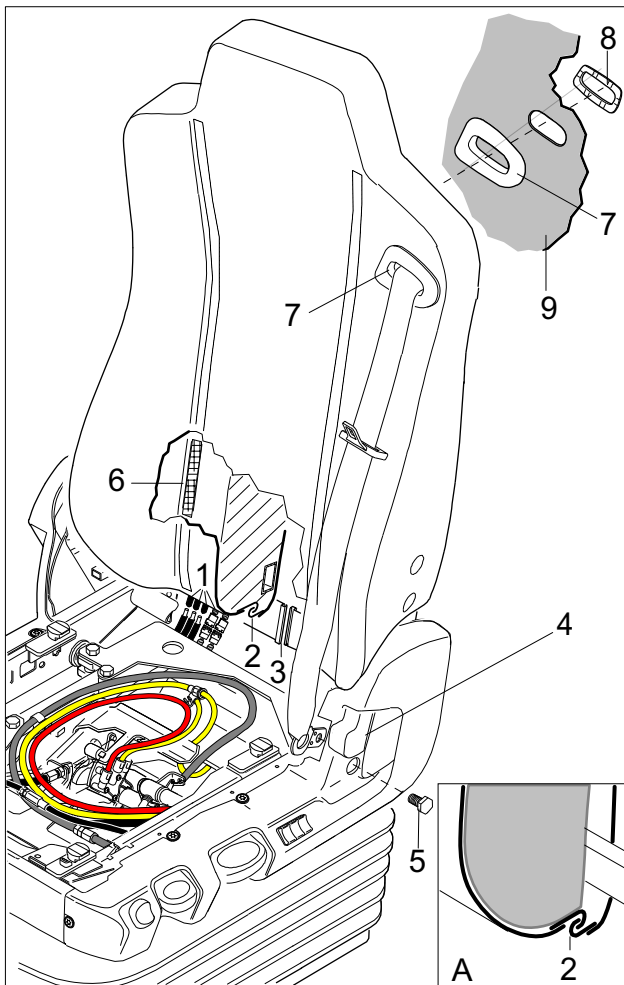
**Adjustment instruction for bowden cable of tilt adjustment**

- Pull lever for tilt adjustment.
- Adjust bowden cable in that way, that between lever (1) and plate (2) no opening is existing.
- The inclination adjustment must release completely and must move noiselessly when pulling the lever (no clattering of tooth segments) .



**Tooth segment for backrest adjustment**

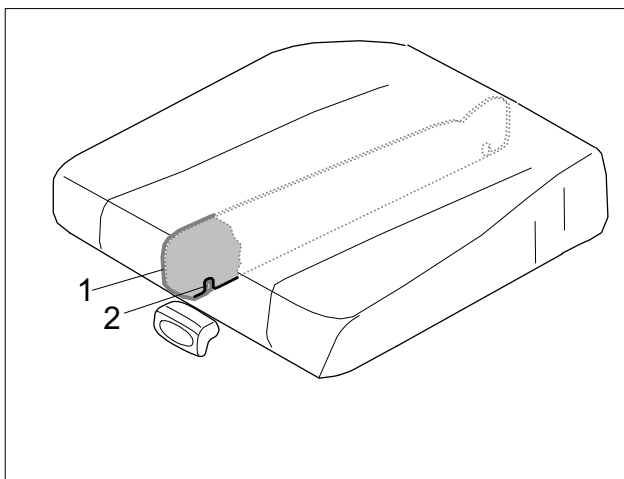
- Demount seat cushion (2.1.0).
- Demount side cover for seat frame without disconnecting hoses or electr. feeder (2.2.0).
- Remove safety washer (1) and loosen springs (2) at pin (3) of lever (4).
- Remove safety clamp (8).
- Unscrew nuts (5) and take out plate (6), tooth segment (7) and lever (4).



**Cover for backrest cushion**

- Disconnect three hoses and one electr. connector (1), versions with air- conditioner: two electr. connectors.
- Unhook C- profiles (2)(detail A) and (3).
- Lift up lever (4) and undo screw (5) of belt fixation.
- Pull cover upwards and loosen fixing tapes (6).
- Remove cardboard.
- Pull belt through opening (7).
- Remove clamp (8) from belt guide (7) and cover (9).

Hint:  
When ordering a new backrest cover, please order belt guide (7) additionally.

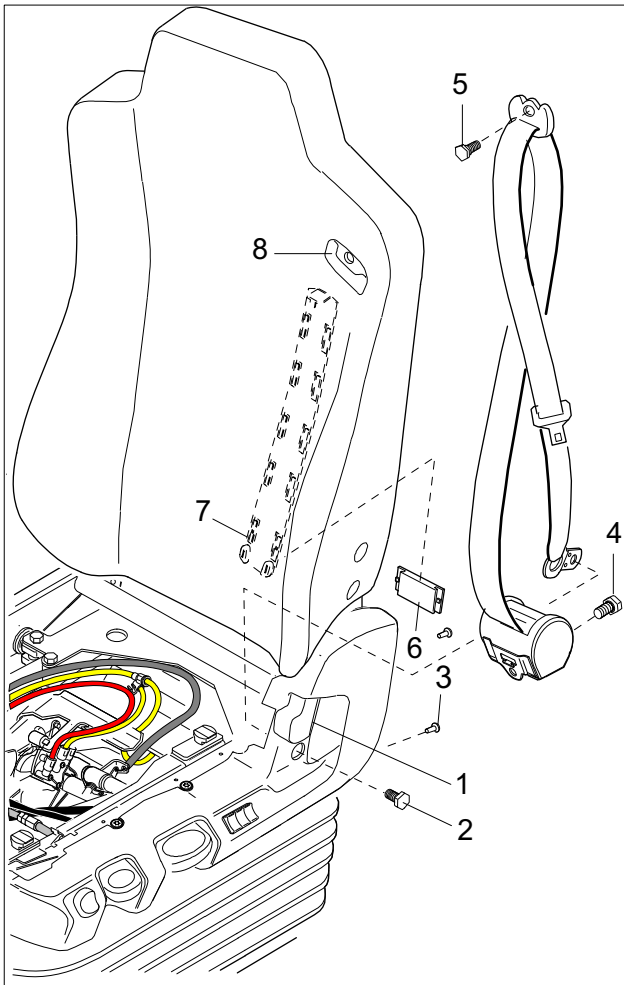


**Cover for seat cushion**

- Dismantle seat cushion (2.1.0).
- Lever seat cushion cover (1) out of groove (2), running around seat ground plate.

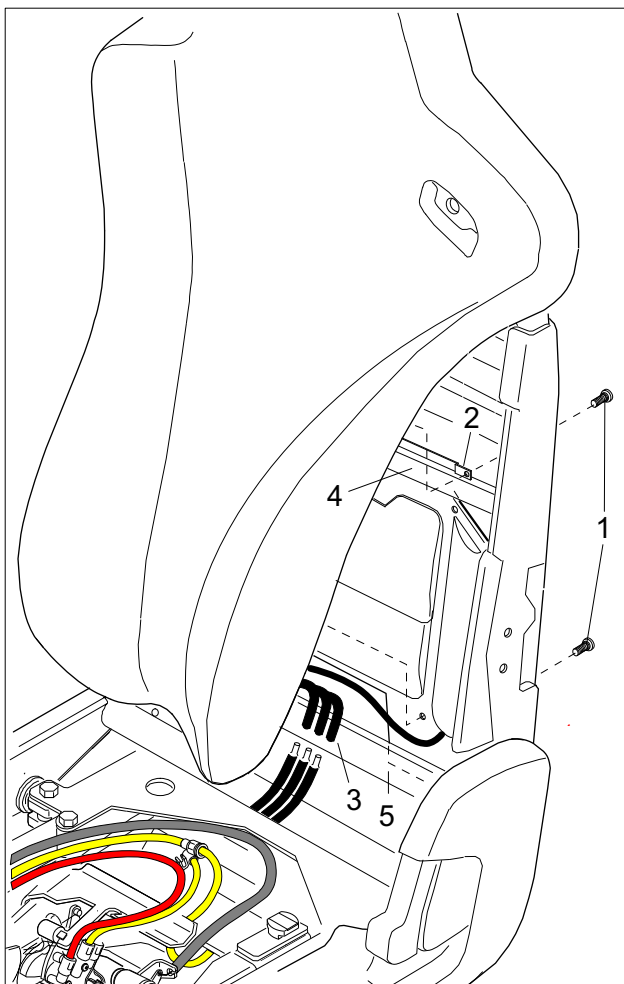
Notice:

Before mounting the cover, rebend hooks in the groove(2) from the ground plate, if necessary.



**Safety belt**

- Demount seat cushion (2.1.0).
- Demount backrest cover (2.5.0).
- Lift up lever (1) and undo screw (2).
- Remove four caps (3) and demount rear cover.
- Undo screws (4) and (5).
- Unhook plate (6) at belt bearing (7).
- Pull belt through opening (8).



**Air chamber for lumbar support**

- Remove backrest cover partially (s.a.).
- Unscrew four screws (1) and loosen foam part from frame.

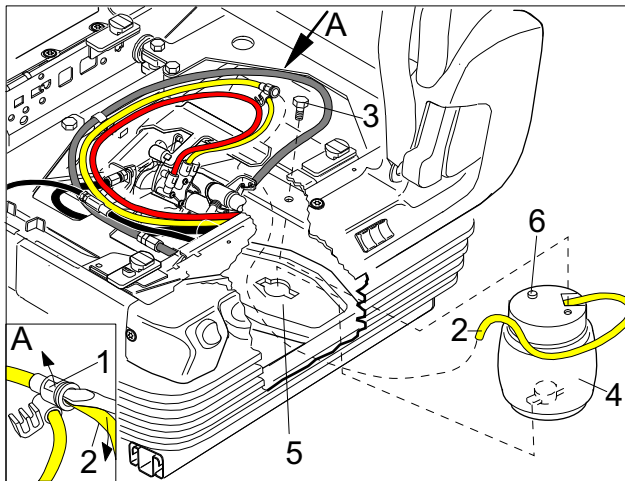
**Hint:**

Don't tighten screws (1), when mounting the foam part. The distance between screw head and shackle (2) should come to 1 mm.

- Disconnect three hoses (3).
- Pull out air chamber from behind cross-braces (4) (5).

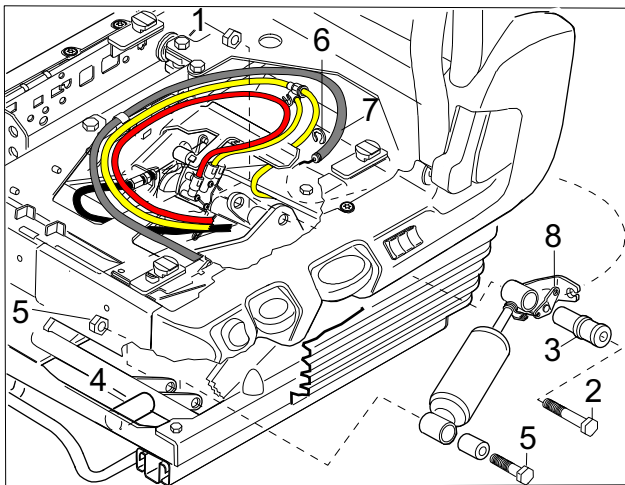
**Hint:**

When mounting the air chamber unit, take care, that chamber carrier plate has to be mounted behind cross-braces (4) (5).



**Air spring**

- Demount seat cushion (2.1.0).
- Pull out bellow fixation in front and side area.
- Secure suspension unit at the highest position by a distance sleeve (length: 75mm)(see shock abs., pos 4).
- Remove lower shock absorber fixation (given below), lift up shock absorber move out air spring frontwards.
- Lift up fixing hook (1) safely and demount air pipe (2) (see Detail A).
- Undo screw (3).
- Turn round air spring (4) for 90 degrees and take it out from lower holder (5).
- After mounting the new air spring, nose (6) must fit to the hole at the upper air spring holder.



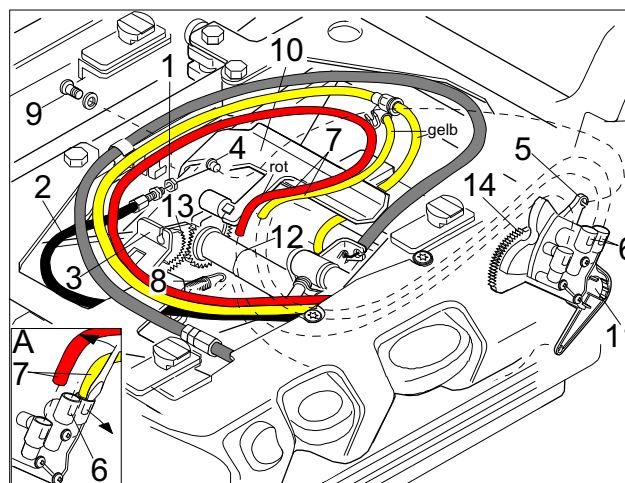
**Shock absorber**

**When exchanging the shock absorber, all parts of the kit must be exchanged !**

- Demount seat cushion (2.1.0) and pull out lower bellow fixation.
- Secure suspension unit at the highest position by a distance sleeve (4)(length: 75mm).
- Undo nut (1), loosen screw (2) and remove socket (3).
- Unscrew lower shock absorber fixation (5).
- Remove retaining washer (6) and lever bowden cable (7) out of fastening (8).

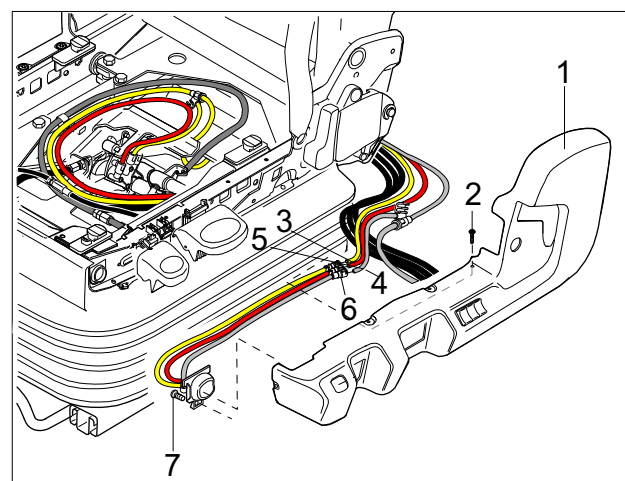
**Adjustment of shock absorber (only possible with old bowden cable):**

Before mounting seat cushion, loosen locking nut from bowden cable. Adjust bowden cable (7) that way, that in downmost position of adjusting lever, the hardest vertical damping will be achieved. Tighten locking nut again.



**Valve for height adjustment**

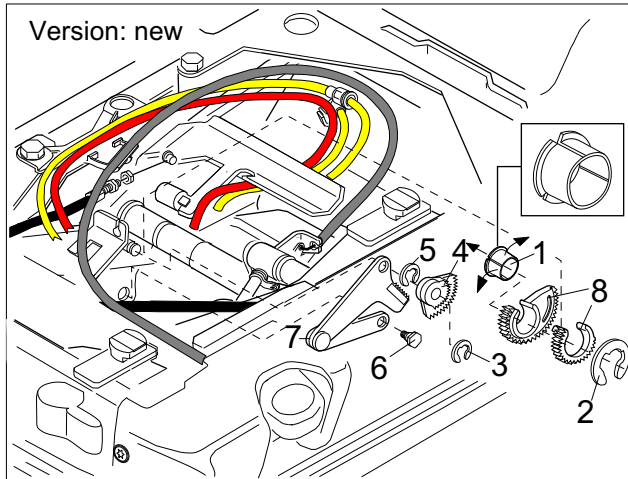
- Demount seat cushion (2.1.0).
  - Undo nut (1), remove bowden cable (2) from fastening (3) and pull cable nipple (4) out of valve lever (5).
  - Lift up fixing hooks (6) safely and demount air pipes (7) (see detail A).
  - Unhook spring (8).
  - Pull out lower bellow fixation, undo screw (9) and swivel up bracket (10).
  - Turn around valve (11) on its bearing tube and pull it over the bearing tube edge (12).
- After mounting: Adjust valve for height adjustment (2.9.0).



**Switch for quick lowering**

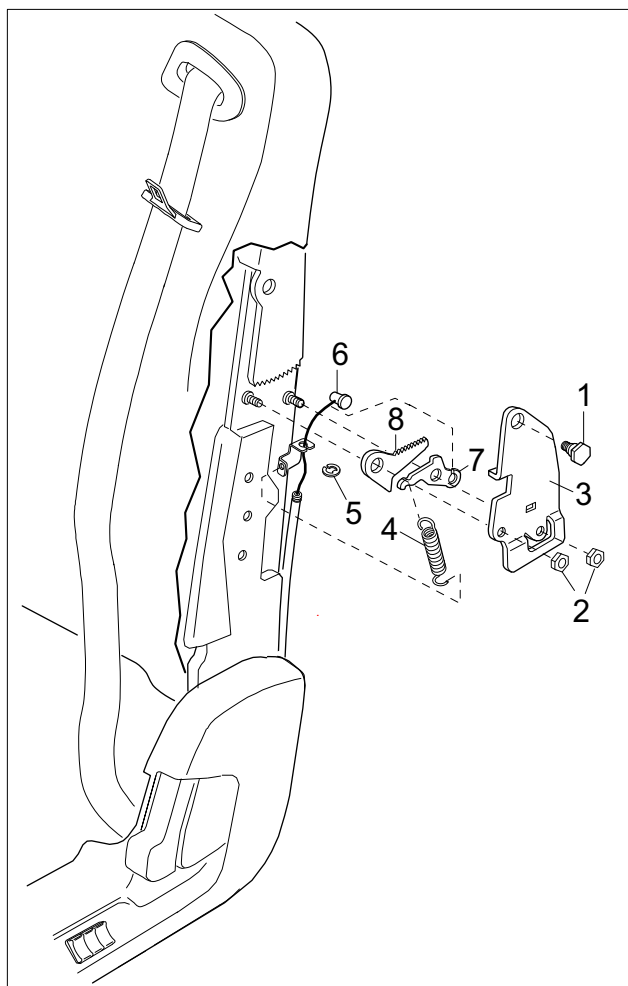
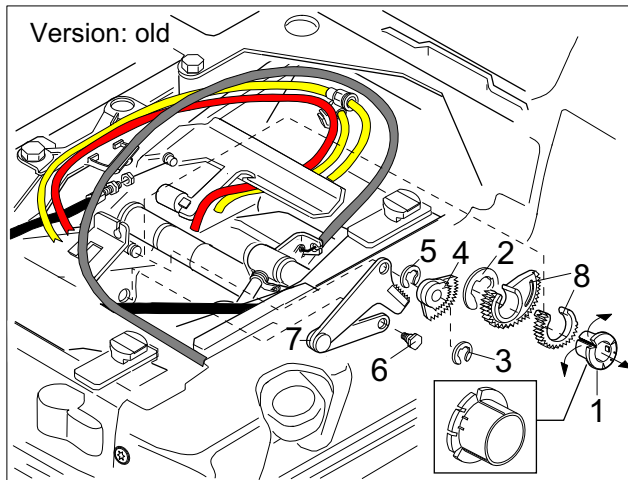
- Remove seat cushion (2.1.0).
- Demount plastic cover (1) (2.2.0).
- Unscrew screw (2).
- Disconnect hoses (3) (4) (5) from connector (6),
- Unscrew screw (7) (old version: 2 x (7)) and unhook switch in the upper area out of cover (1).





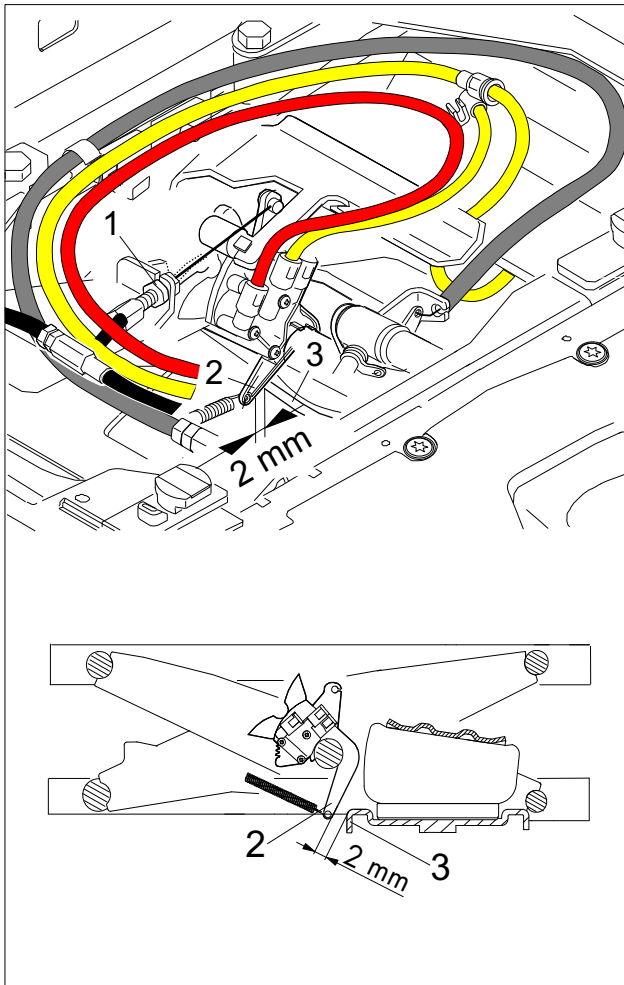
**Height blocking system**

- Demount seat cushion (2.1.0).
- Remove valve for height adjustment (2.7.0).
- Remove retaining washer (2).
- Push tooth segment (8) sideways from bushing (1). (old version: push bushing (1) sideways out from tooth segment (8)).
- remove segments (8) and bend up bushing (1).
- Remove retaining washer (3) and take off segment (4).
- Undo retaining washer (5), unscrew screw (6) and take out lever (7).
- After mounting: Adjust height blocking system (2.9.0).



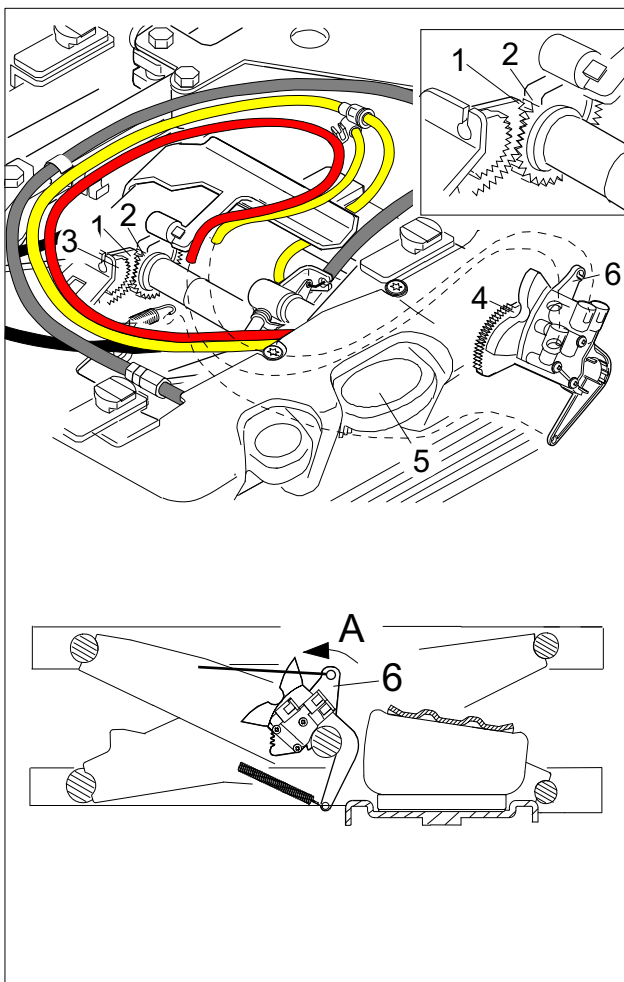
**Tooth segment for shoulder adjustment**

- Remove backrest cover and pull it upwards to the shoulder area (2.5.0).
- Unscrew bolt (1), nuts (2) and take off plate (3).
- Unhook spring (4).
- Undo retaining washer (5) and remove bowden cable (6) from lever (7).
- Take out lever (7) and tooth segment (8).



**Valve adjustment  
(seats without height blocking system)**

- Lower seat and adjust height adjustment in upper position.
- Adjust bowden cable (1) in that way, that the distance between lever (2) and air spring holder (3) comes to 2 mm.



**Valve adjustment  
(seats with height blocking system)**

**Adjust tooth segments (1) and (2) once again, if they don't fit after removal.**

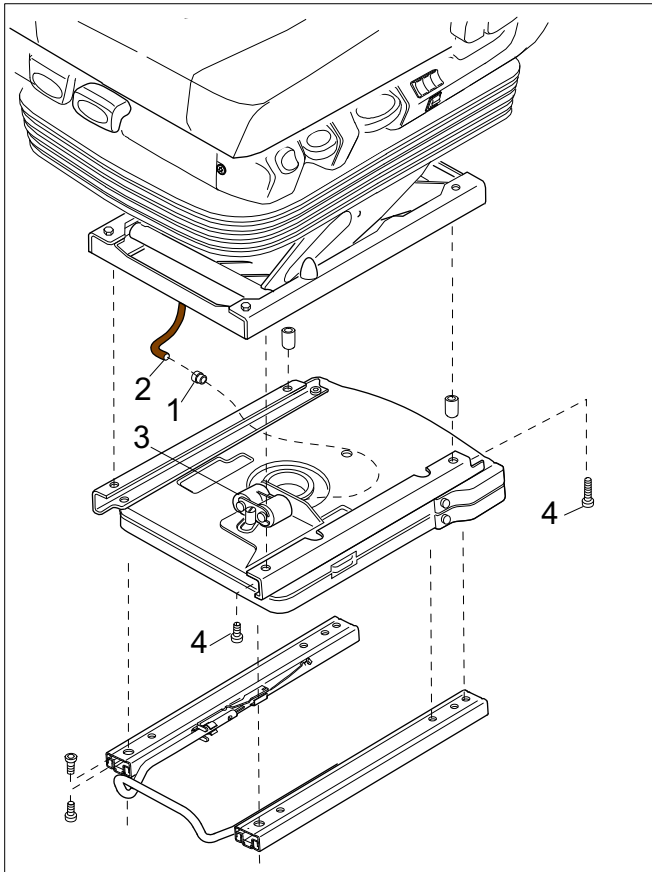
- The topmost tooth of segment (1) must fit in the topmost space width of segment (2).  
Check tooth segments (see below, valve adjustment)

**Valve adjustment:**

- The topmost tooth of segment (3) must fit in the topmost space width of segment (4).
- After adjusting the tooth segments, look for the segments correct moving over the whole distance.  
If segments are blocking, the upper tooth don't fit and the segments must be adjusted once again.

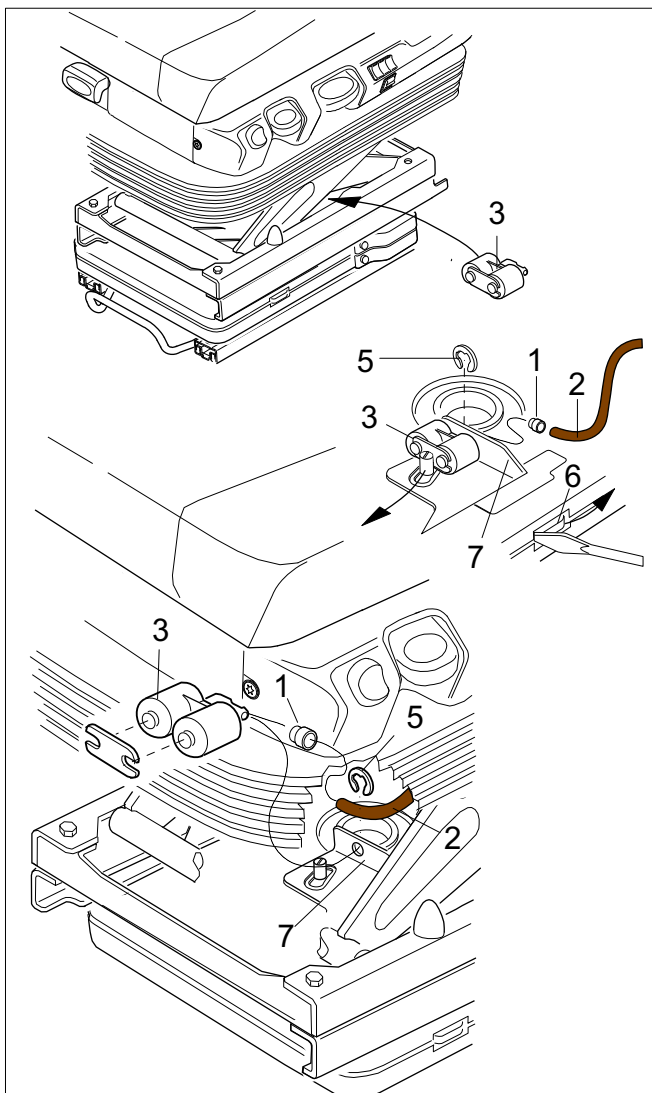
**bowden cable adjustment:**

- Pull handle (5) to the upmost position and adjust bowden cable of valve for height adjustment in that way, that lever arm (6) has still a little clearance.



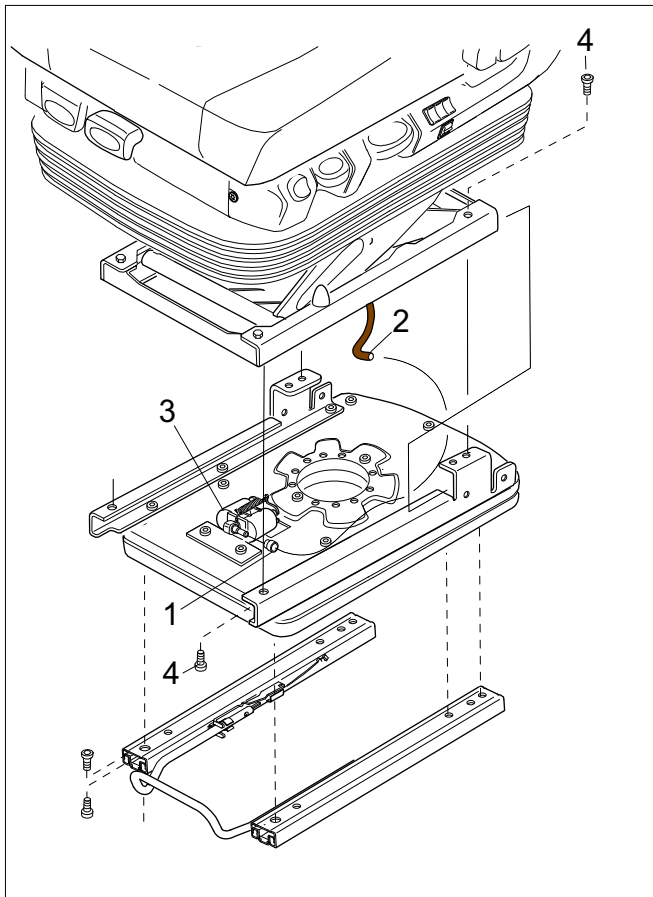
**Swivel** (incl. cylinder unit)  
OLD VERSION

- Remove pneum. and electr. lines.
- Remove seat from vehicle.
- Screw heads inside the slides are reachable by moving inner slides.
- Demount slides.
- Remove bellow from ground frame.
- Secure seat against lowering by a distance piece.
- Dismantle hose clamp (1) and pull off hose (2) from cylinder unit (3).
- Unscrew screws (4).



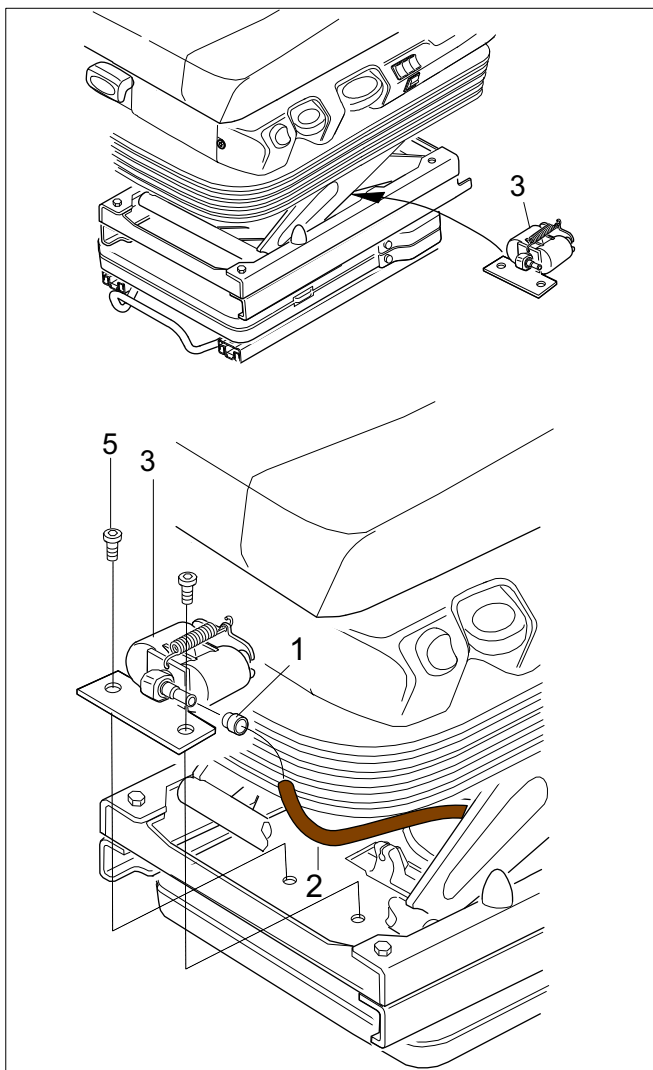
**Cylinder unit (3)**  
OLD VERSION

- Remove bellow from ground frame.
- Move seat to the highest position and secure it against lowering.
- The cylinder unit (3) is reachable sideways through the scissor of the suspension unit (see arrow).
- Remove hose clamp (1) and pull off hose (2) from cylinder unit (3).
- Remove safety washer (5).
- Push lever (6) in direction of arrow (possibly by screw driver) and pull cylinder unit out of holder (7).



**Swivel** (incl. cylinder unit)  
NEW VERSION

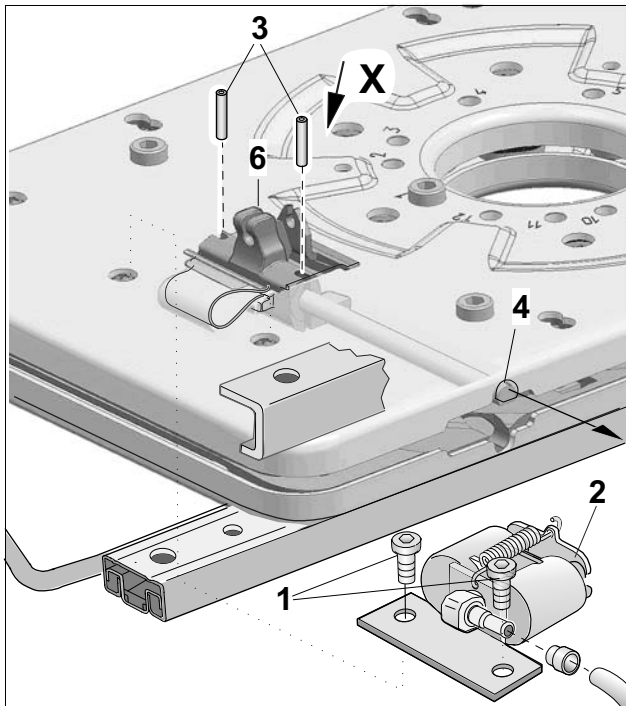
- Remove pneum. and electr. lines.
- Remove seat from vehicle.
- Screw heads inside the slides are reachable by moving inner slides.
- Remove bellow from ground frame.
- Secure seat against lowering by a distance piece.
- Dismantle hose clamp (1) and pull off hose (2) from cylinder unit (3).
- Unscrew screws (4).
- Move seat carefully forward and lift it up.
- Demount slides.



**Cylinder unit (3)**  
NEW VERSION

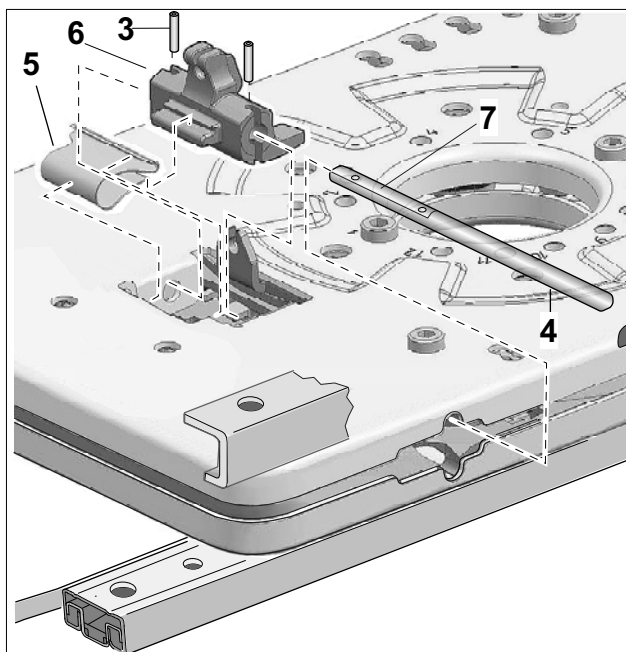
- Remove bellow from ground frame.
- Move seat to the highest position and secure it against lowering.
- The cylinder unit (3) is reachable sideways through the scissor of the suspension unit (see arrow).
- Remove hose clamp (1) and pull off hose (2) from cylinder unit (3).
- Undo two screws (5).



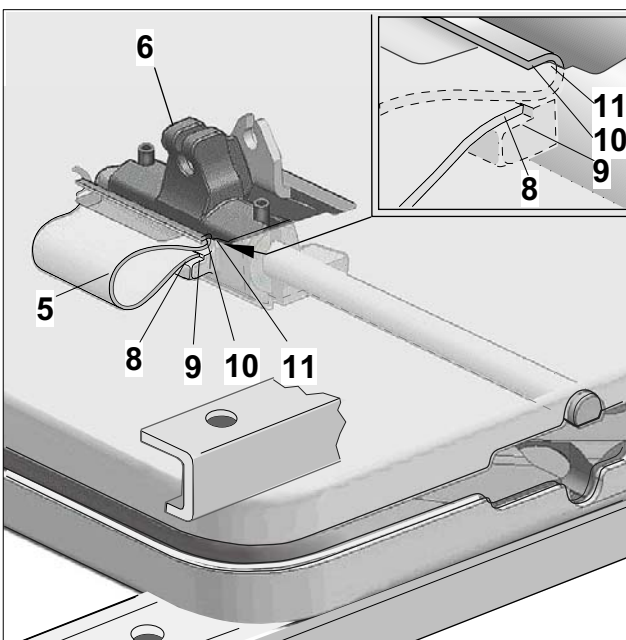
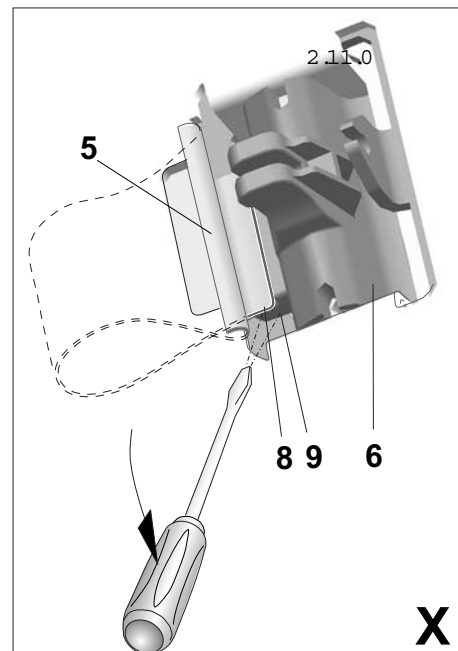


**Blocking catch for swivel**

- Demount swivel (2.11.0), but leave slides in this case at swivel.
- Undo two screws (1) and remove pneumatic cylinder (2) incl. support bracket.
- Pull out two spring pins (3) and shaft (4) with suitable pliers.
- Lever out from swivel by a screw driver firstly spring steel sheet (5) (detail X), then blocking catch (6).
- When assembling, place new blocking catch (6) inside swivel, push shaft (4) with upwards arranged flat (7) into swivel and catch.
- Fix catch (6) by two spring pins (3).



- When mounting, push spring steel sheet (5) hardly together and take care that it's lower leg (8) is placed on cam (9) of catch (6) and that the bended end of the upper leg (10) clasps the edge of the upper swivel plate (11).

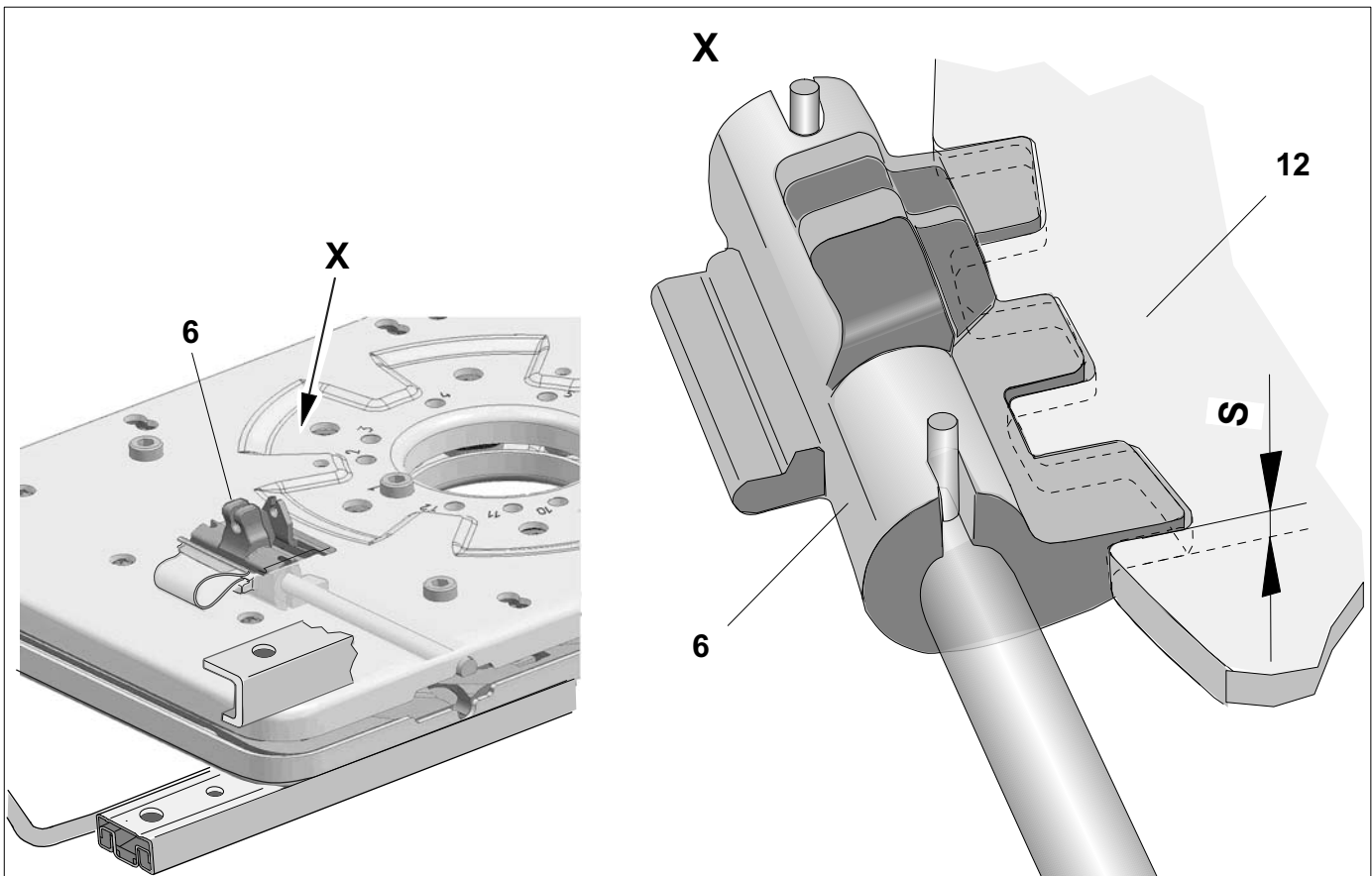


**Important notes to the function check  
see page 2.13.0**

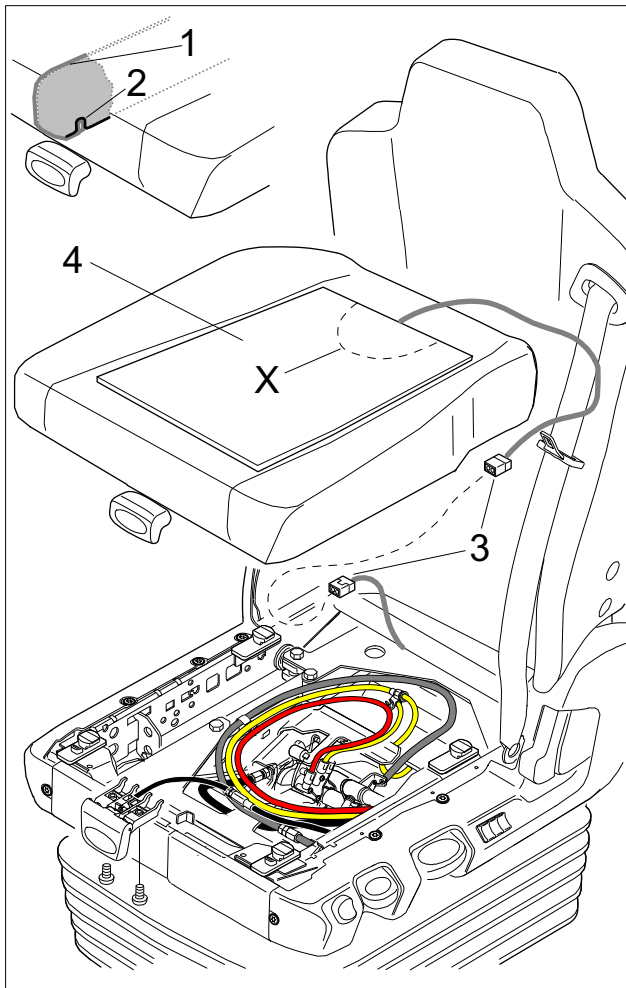
### Blocking catch for swivel

#### Important function check:

- Check blocking: blocking catch (6) must engage safe and hearable in toothed ring (12).
- Visual check: overcutting (S) of blocking catch (6) and toothed ring (12) must amount at least the half material thickness of toothed ring (12).



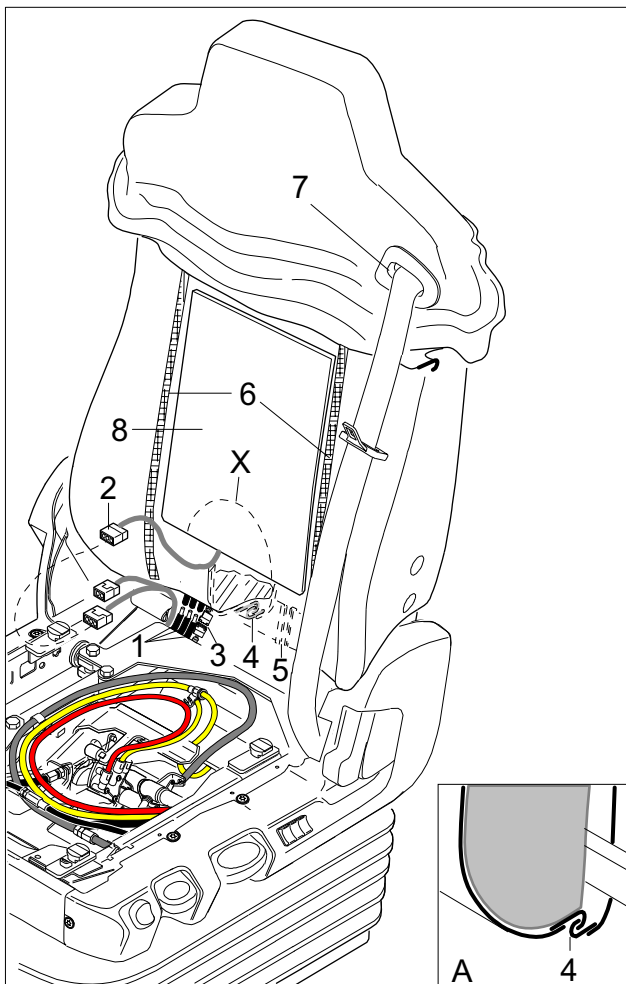
Tightening torques: M8 =20 Nm +5Nm



### Heating seat cushion

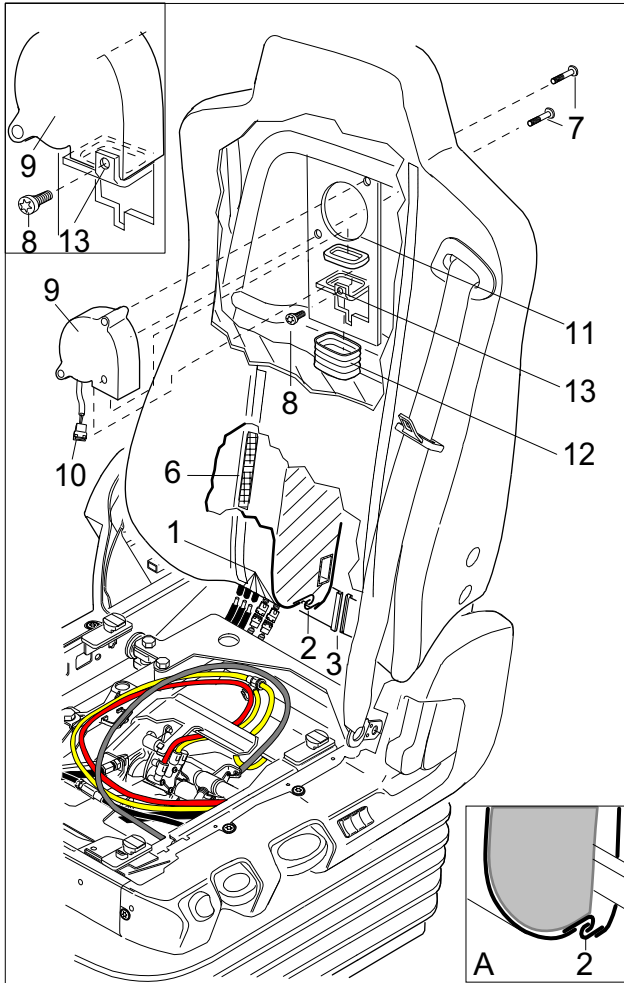
- Demount seat cushion (2.1.0).
- Lever seat cushion cover (1) out of beading (2), running around seat ground plate.
- Disconnect connection (3).
- Pull off heater (4) carefully from the foam.
- If the heater is not removeable without tearing up the foam, cut the heater along the broken line X and fix the new heater on the old one.

Hint: before mounting the cover bend back hooks at the beading (2) of ground plate, if necessary.



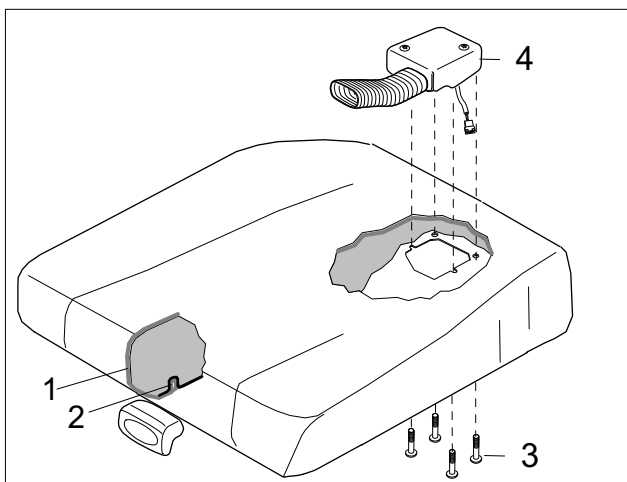
### Heating backrest

- Demount seat cushion (2.1.0).
- Disconnect three hoses (1) , electr. connector (2) and electr. connector (3), if existing.
- Unhook C- profiles (4)(detail A) and (5).
- Remove cover from fixing tapes (6) and pull the cover upwards till the belt opening (7).
- Pull off heater (8) carefully from the foam.
- If the heater is not removeable without tearing up the foam, cut the heater along the broken line X and fix the new heater on the old one.



**Fan for backrest**

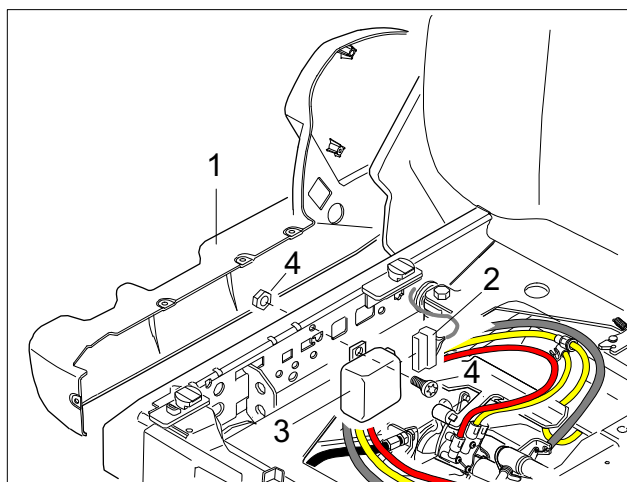
- Disconnect three hoses and one electr. connector (1).
- Unhook C- profiles (2)(detail A) and (3).
- Pull cover upwards while loosening fixing tapes (6).
- Remove cardboard.
- Undo two screws (7) and one screw (8) out of fan (9).
- Disconnect electrical connection (10) and take out fan (9).
- Pull off sealing cup (11) from holder plate.
- Press congruated tube (12) a little, unhook it and pull it out of cushion foam.
- When mounting, lay it so, that it will fit to the tube channel, press in the other tube end a little and lock the first tube groove at fixing plate.
- After fitting in the new fan, fix it at first with two screws (7).  
Drill a hole, diameter 2mm, through hole (13) into the fan housing and turn in screw (8)(detail B).



**Fan for seat cushion**

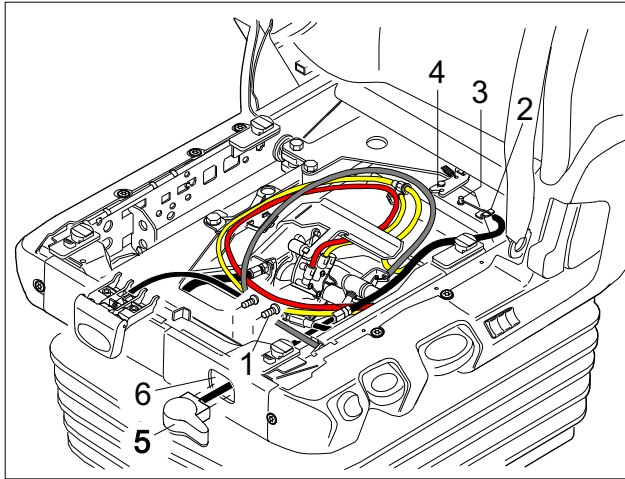
- Demount seat cushion (2.1.0).
- Lever seat cushion cover (1) out of groove (2), running around seat ground plate, in the area of the seat cushions back half.
- Undo four screws (3).
- Pull fan unit (4), inclusive congruated tube, out of cushion foam.

Hint: Before mounting the cover, rebend hooks in the groove(2) from the ground plate, if necessary.

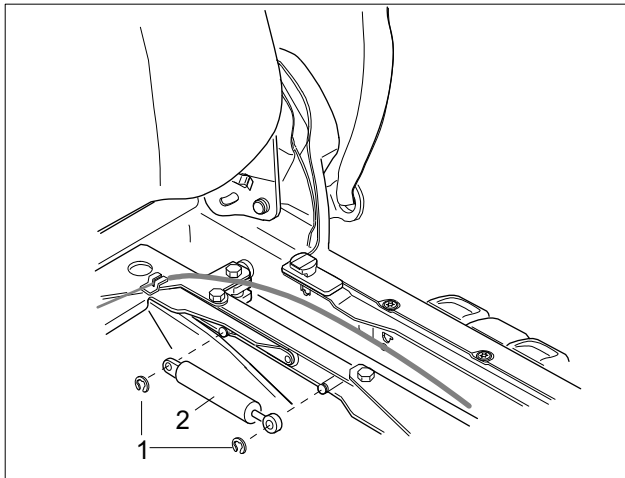


**Elektronic unit**

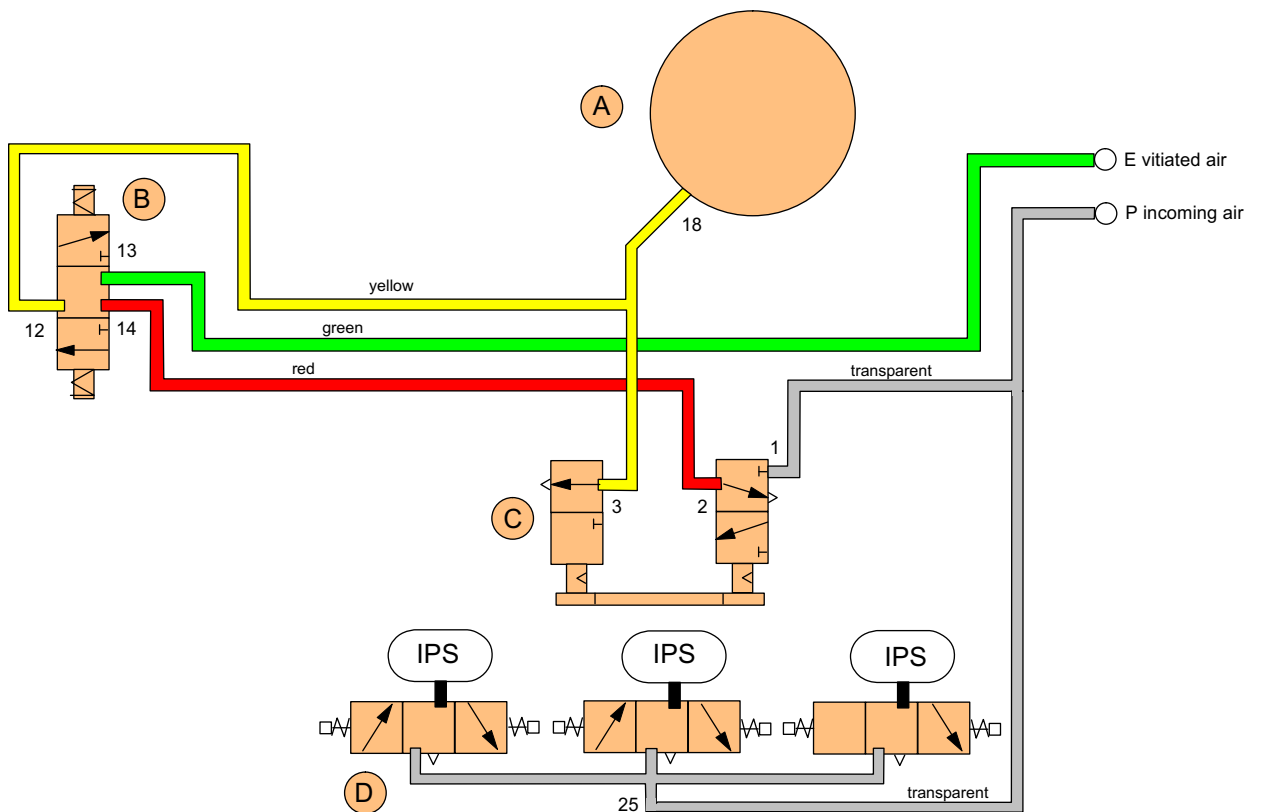
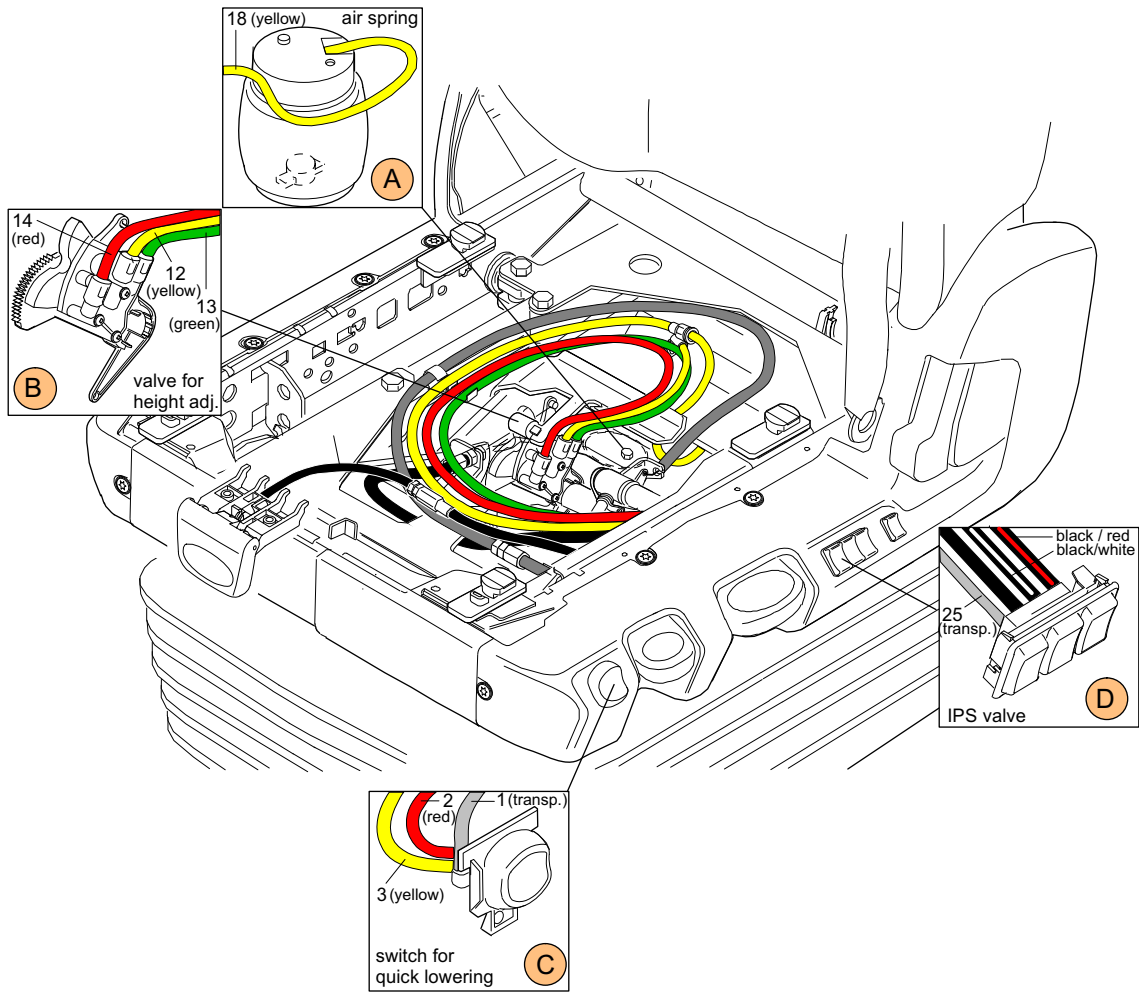
- Demount seat cushion (2.1.0).
- Remove sidecover (1) (2.2.0).
- Pull off connector (2) from elektronic unit (3).
- Undo screwing (4).

**Lever / bowden cable horizontal suspension**  
(only Truck)

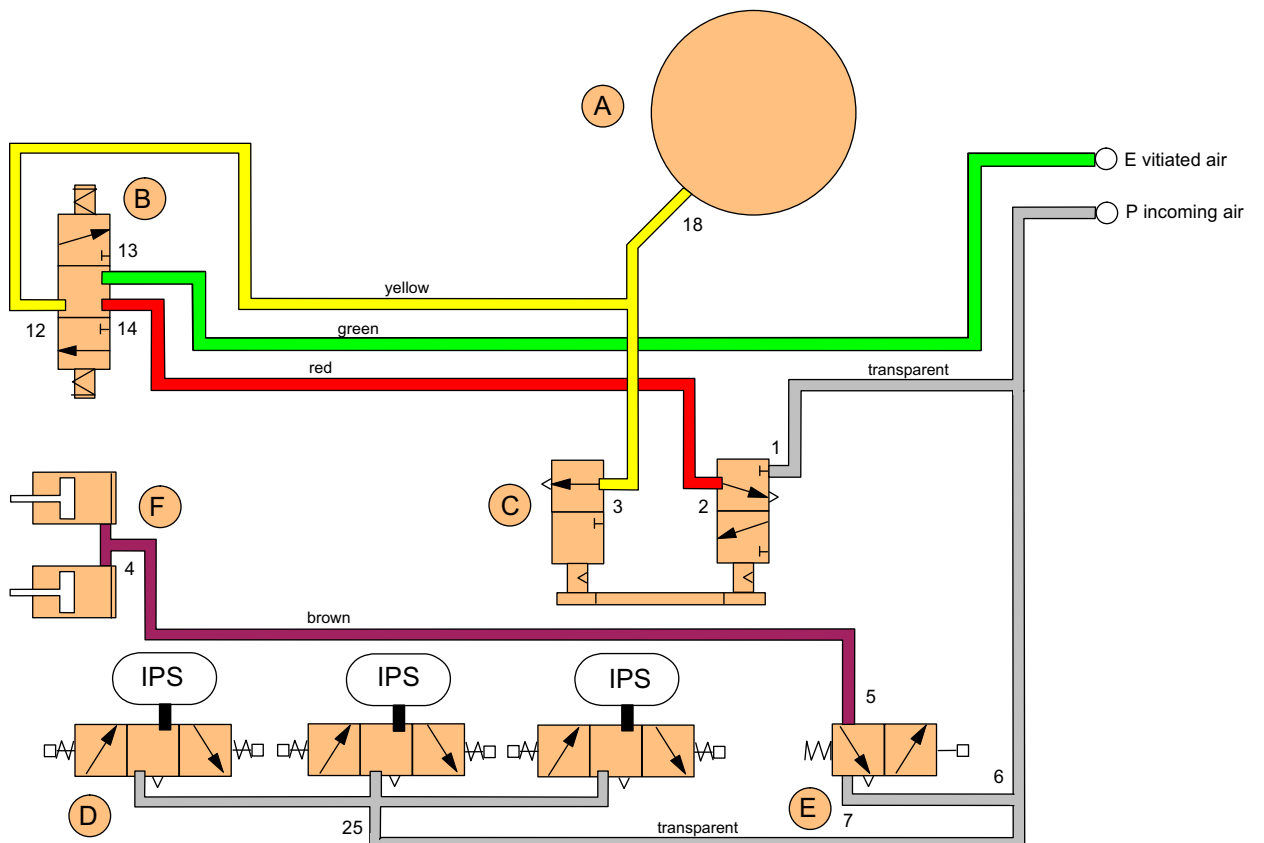
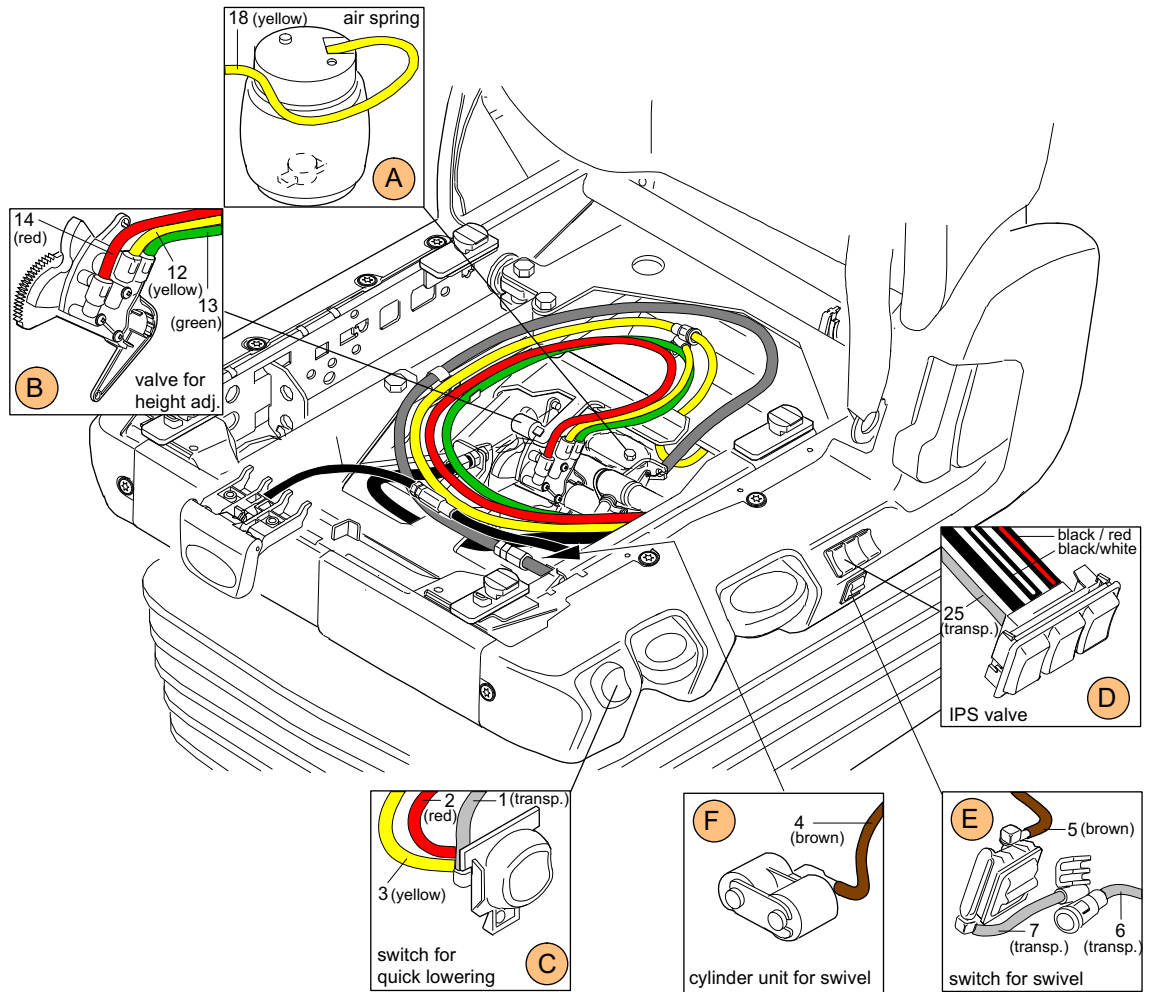
- Remove seat cushion (2.1.0).
- Unscrew two screws (1).
- Bend open thrust bearing (2).
- Unhook cable (3) from lever (4).
- Pull lever / bowden cable (5) out of opening (6).
- Bend thrust bearing (2) to the original condition.

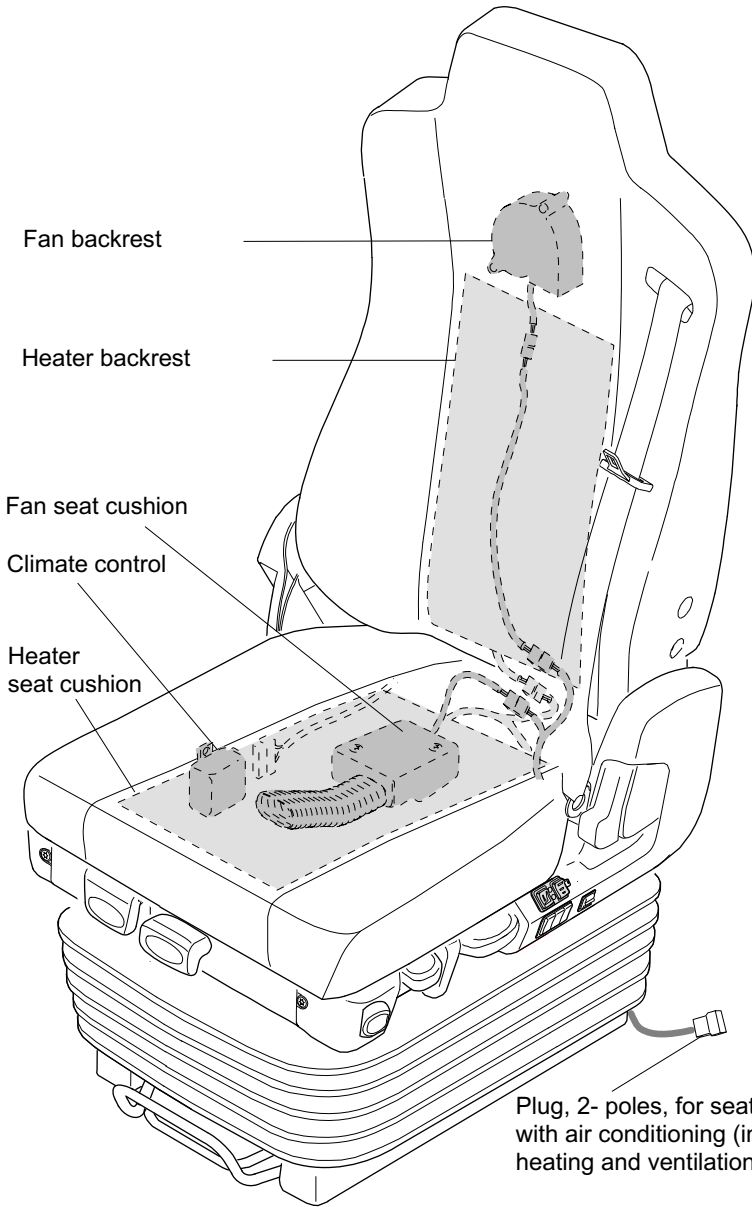
**Shock absorber for horizontal suspension**  
(only Truck)

- Demount seat cushion (2.1.0).
- Secure suspension unit at the highest position by a distance sleeve (4)(length: 75mm).
- Remove securing washers (1) and pull off shock absorber from pins.

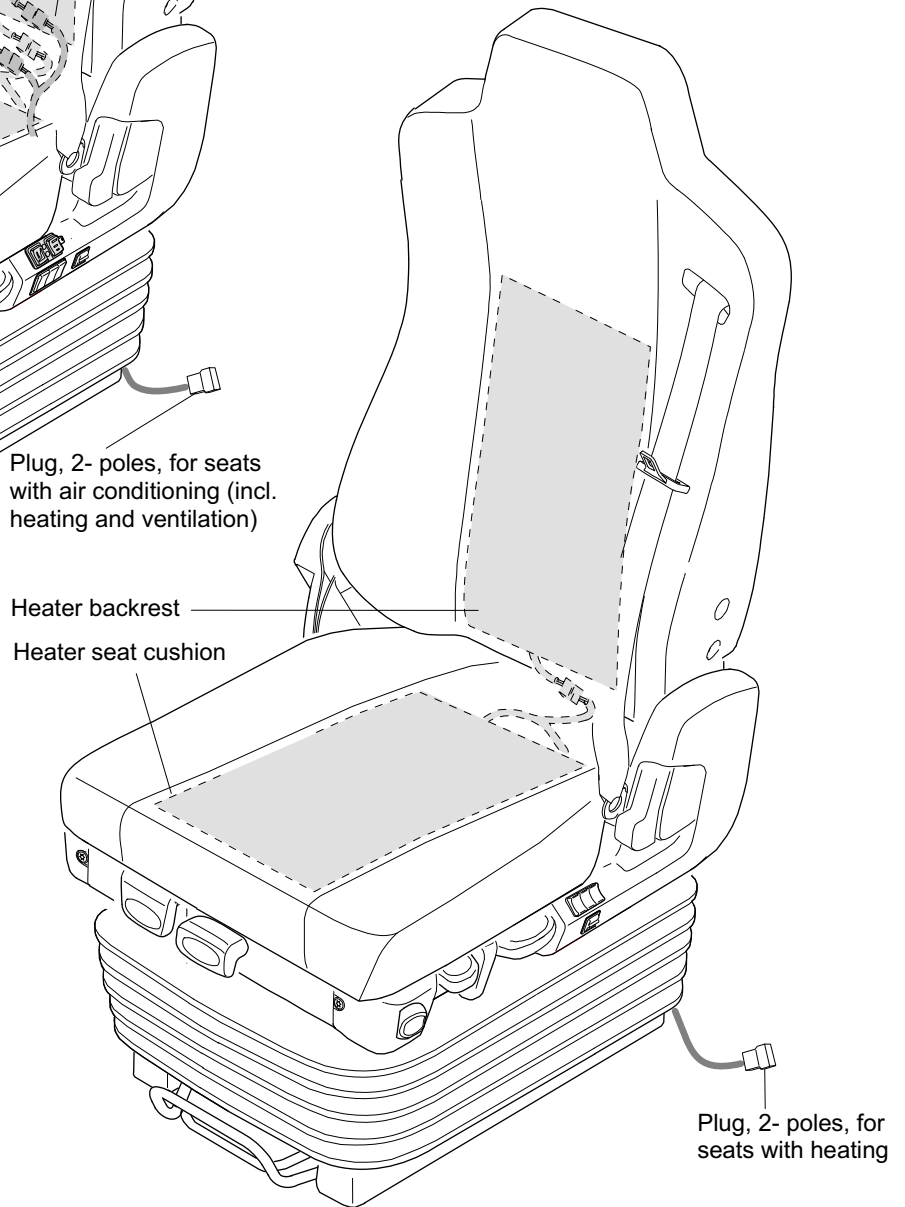






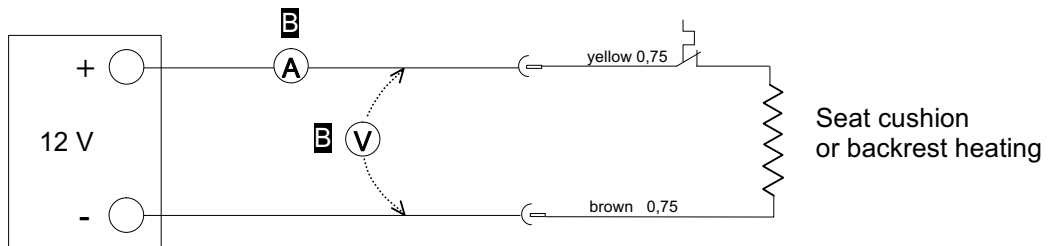
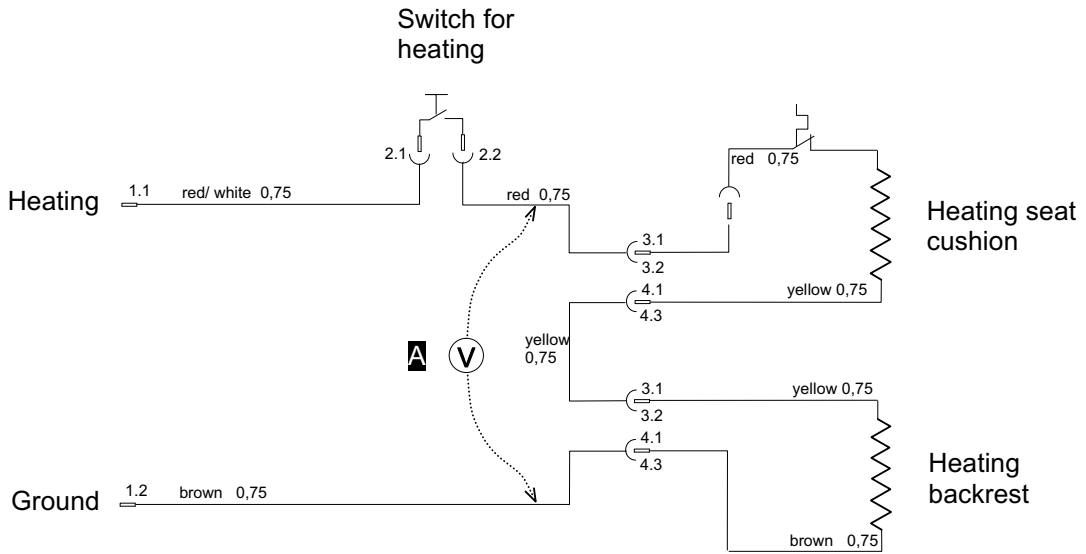


**Seats with ventilation and heating**



**Seats with heating**





**Plug-in connectors:**

- 1.x 2 pol. Seat / truck heating
- 2.x 2 pol. Switch at seat
- 3.x 2 pol. Seat cushion heating
- 4.x 3 pol. Backrest heating

**Check A**  
Switch for heating:

Heating "On":  $U = \text{Betriebsspannung}$

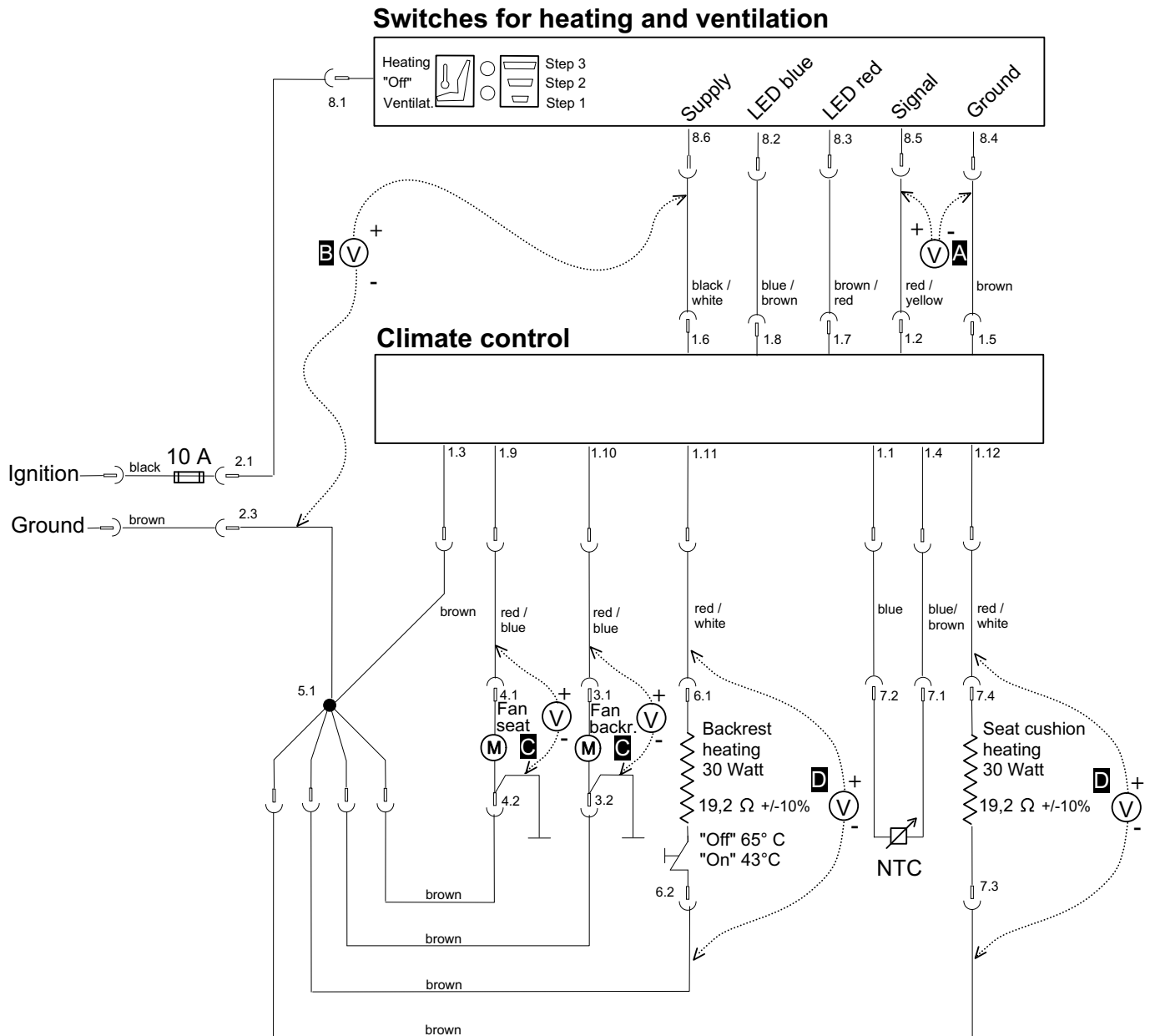
Heating "Off":  $U = 0 \text{ V}$

**Check B**  
Calculate internal resistance of heating:  
Measure current =  $I$   
Measure voltage =  $U$

$$U = R \cdot I \quad \text{or} \quad \frac{U}{I} = R$$

Heating "On": max.  $15,5 \Omega$   
min.  $11,1 \Omega$

Heating "Off":  $R = \infty$   
(Thermostatic switch in the seat cushion opened)



**Plug-in connectors:**

- |                                  |  |
|----------------------------------|--|
| 1.xx 12 pol. Climate control     | 5.xx Hub for ground                        |
| 2.xx 2 pol. Seat connector       | 6.xx 2 pol. Backrest heating               |
| 3.xx 2 pol. Fan for backrest     | 7.xx 4 pol. Seat cushion heating           |
| 4.xx 2 pol. Fan for seat cushion | 8.xx 6 pol. Switches heating + ventilation |

**Check A:**  
Signal  
operat. switches:  
each +/- 0,2 V

"Off" 1,2 V  
H3 2,0 V  
H2 3,0 V  
H1 3,9 V  
L1 5,0 V  
L2 6,1 V  
L3 7,4 V

**Check B:**  
Supply voltage:

heating or  
ventilation  
"On" = 16-32V DC  
"Off" = 0 V

**Check C:**  
Supply fans

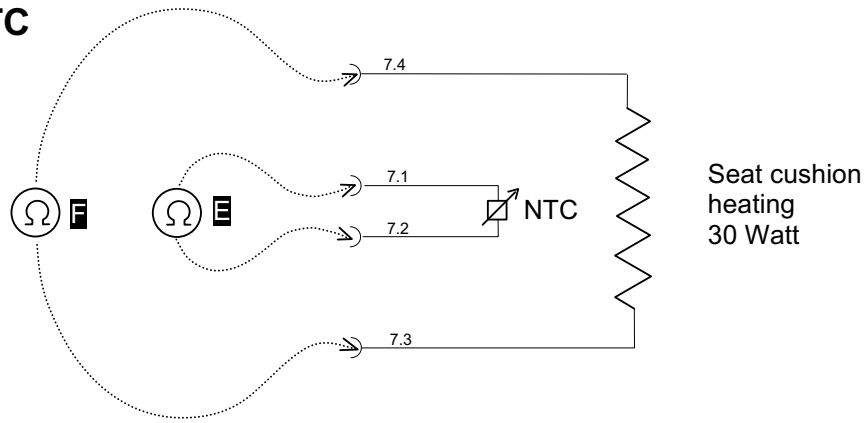
( $U_B > 26V$ )  
"Off" 0 V  
H3 0 V  
H2 0 V  
H1 0 V  
L1 10,5 V  
L2 16 V  
L3 24 V

**Check D:**  
Supply heating

Heating "On" :  
supply voltage  
Heating "Off": 0 V

**Remark:**  
When ventilation is  
running, the heating is  
occasionally switched on.

**NTC**

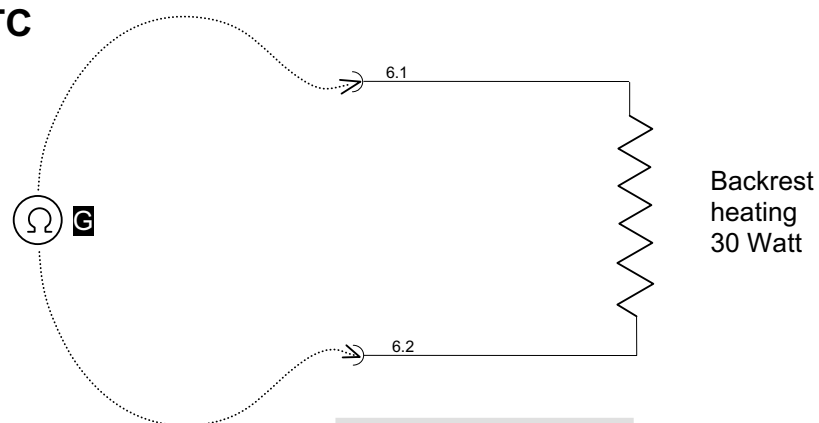


Seat cushion heating  
30 Watt

**Check E:**  
NTC  
T = 25°C R<sub>NTC</sub> = 8k  
T > 25°C R<sub>NTC</sub> decrease  
T < 25°C R<sub>NTC</sub> increase

**Check I:**  
Seat cushion heating  
19,2 Ω +/-10%

**NTC**



Backrest heating  
30 Watt

**Check G:**  
Backrest heating  
19,2 Ω +/-10%

**Indicator light (switching unit)**

**Flashing code interval :** LED "On" 0,5 sec.  
LED "Off" 0,5 sec.

After a short break (approx. 1-6 seconds) the flashing code repeats itself.

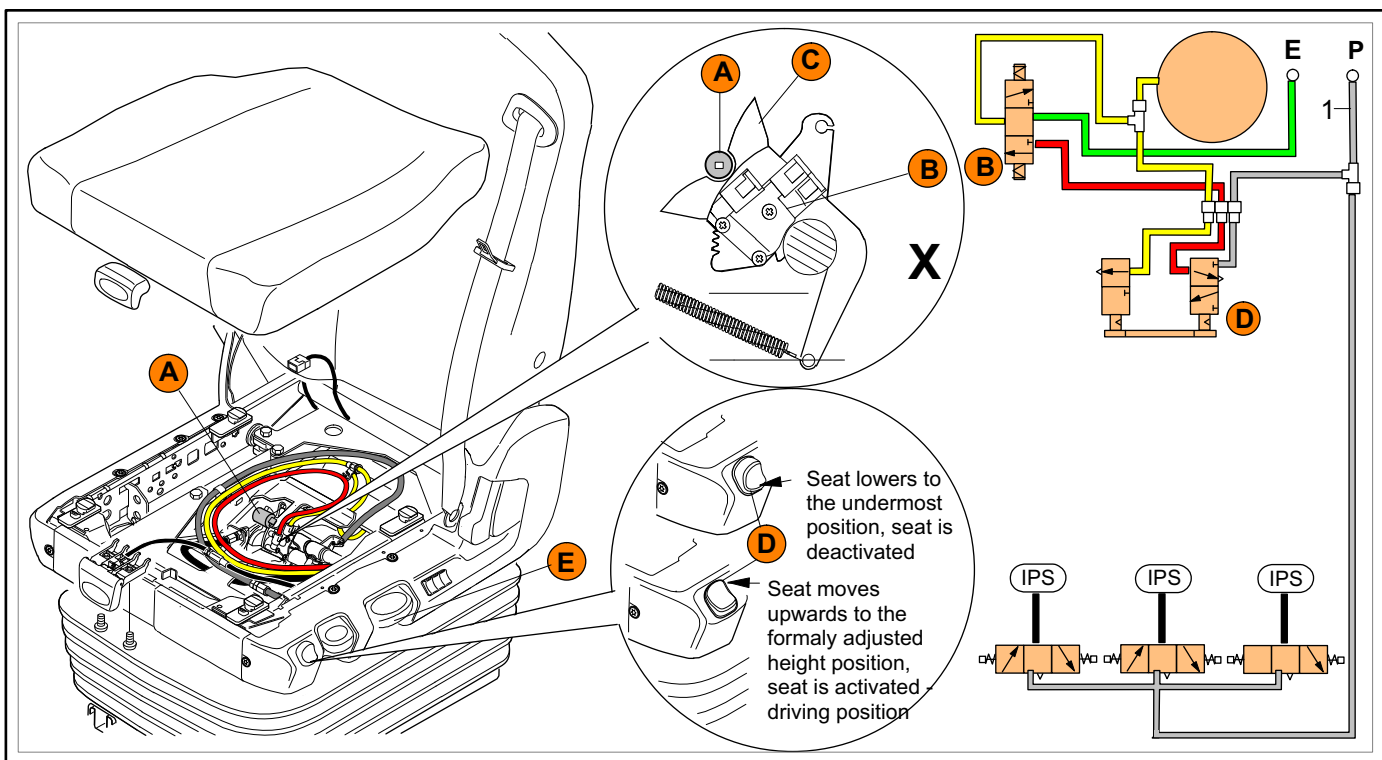
Flashing code      Meaning

<b>1</b>	<b>reserved</b>
<b>2</b>	<b>Fault control unit</b>
<b>3 *</b>	<b>Fault fans</b>
<b>4</b>	<b>Fault heating backrest</b>
<b>5</b>	<b>Fault heating seat cushion</b>
<b>6</b>	<b>Fault sensor for temperature</b>
<b>7</b>	<b>Fault operating switches</b>

\* = Only short-circuit or interruption to both exhausts is indicated by the flashing code.

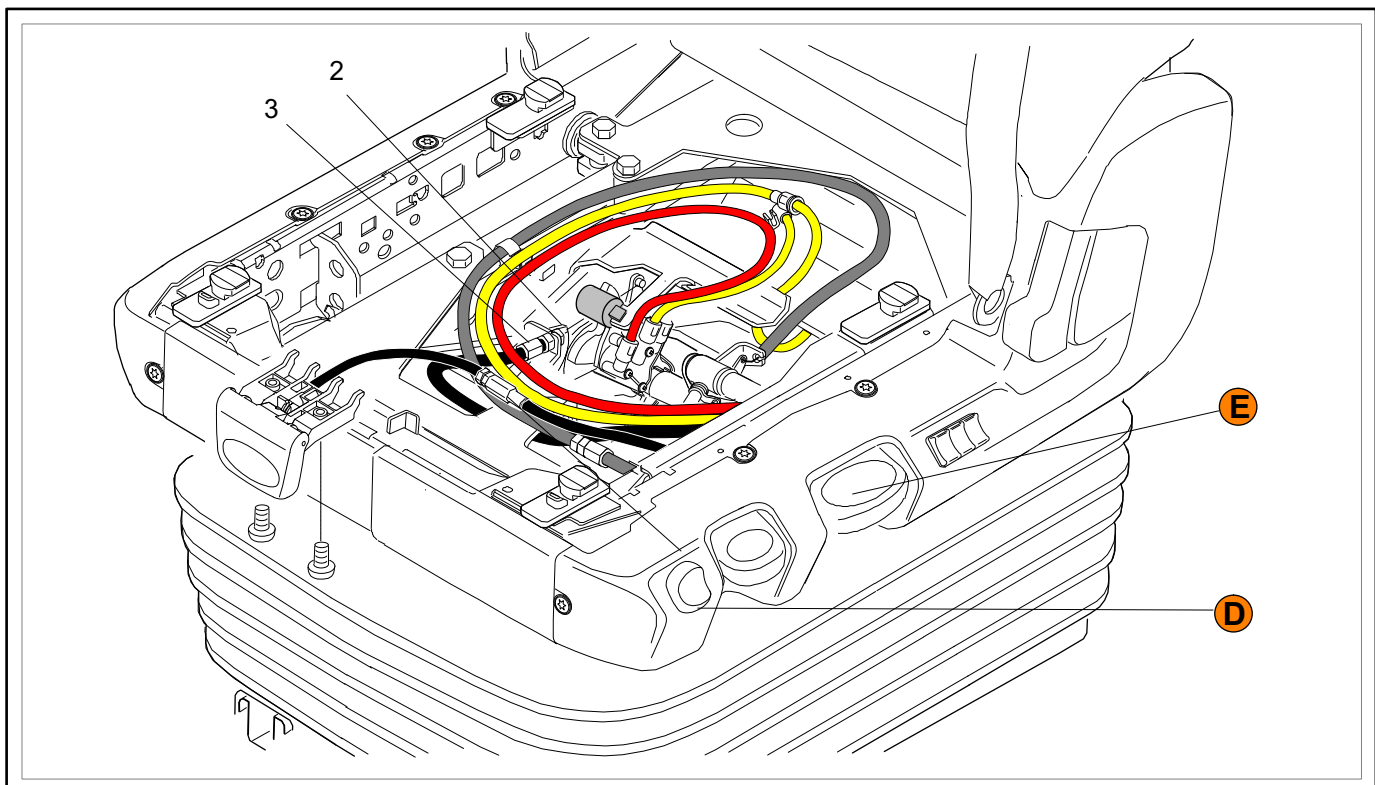
Checks for general problems	Results of checks	Remedy
<p><b>1.</b> Check if vehicle's compressed-air supply is ensured. Switch for seat lowering <b>D</b> must be pushed to position "upwards" and IPS *, resp. LS *, has to be exhausted.</p>		Repairs only in accordance with the repair manual.
<p><b>2.</b> Check air supply inside the seat, especially hose (1), by pushing seat lowering to the position "upwards".</p>	<p>Seat moves upwards. →</p> <p>Seat doesn't move upwards. →</p>	<p>Funktion of seat lowering / uprising is correct.</p> <p>Continue with check <b>3.</b></p>
<p><b>3.</b> Raise up the seat by hand (hold the seat under the backrest) and check again by actuating IPS / LS while holding.</p>	<p>Air is floating (IPS / LS filled). →</p> <p>No air floating, IPS / LS - function is disturbed. →</p>	<p>Transparent hose (1) could be squeezed, when the seat is in undermost position. → Repair</p> <p>Check IPS / LS -valve, -hoses, -air chambers with leak detecting spray, look for squeezed hoses.</p>
<p><b>4.</b> Check if the seat reacts promptly, when adjusting the seat height.</p>	<p>Seat reacts promptly. →</p> <p>Seat doesn't react promptly. →</p>	<p>Bushing <b>A</b> o.k.</p> <p>Continue with check <b>5.</b></p>
<p><b>5.</b> Lower seat by seat lowering <b>D</b> and adjust undermost height by handle <b>E</b>. Remove seat cushion and check if plastic bushing <b>A</b> (steers valve for height control <b>B</b>) is missing, resp. possibly in a wrong position.</p>	<p>Bushing <b>A</b> is missing. →</p> <p>Bushing <b>A</b> exists. →</p>	<p>Mount new part, look for correct adjustment - see drawing X.</p> <p>Demount height control valve <b>B</b> and mount it back (see manual). Correct Position of bushing <b>A</b> to rocker switch <b>C</b> see drawing X.</p>

\* LS = lumbar support, IPS = integrated pneumatic system = lumbar support + side support)

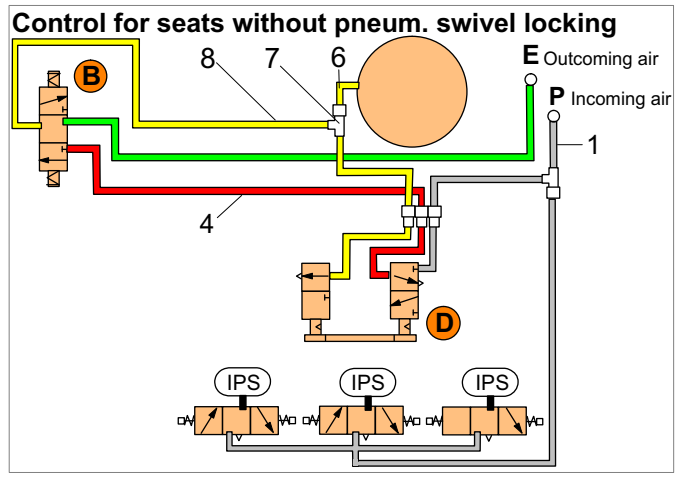
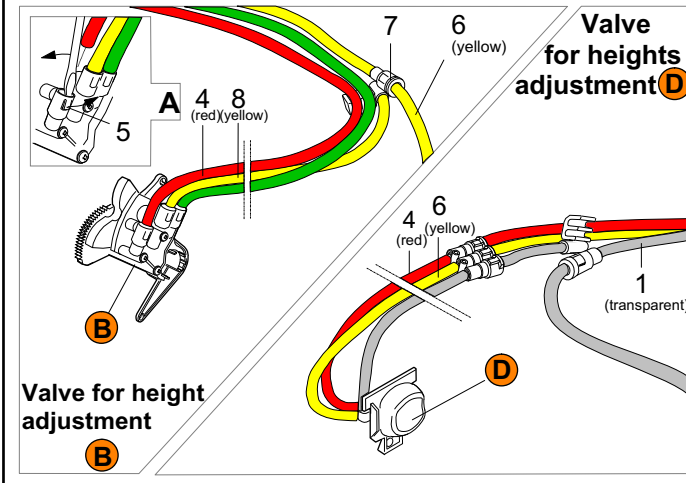
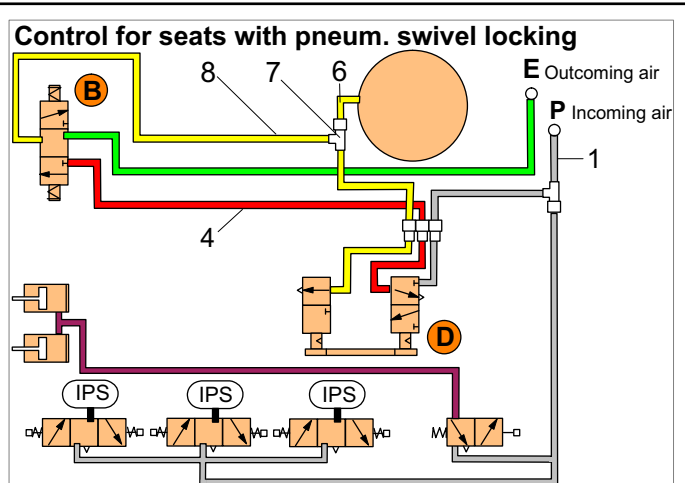
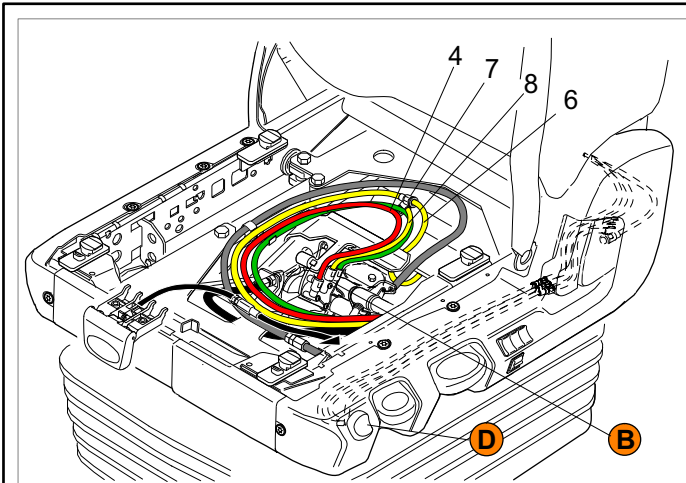


Checks for general problems	Results of checks	Remedy
<b>6.</b> Seats <b>with</b> height limiter: adjust the highest position by handle <b>E</b>	Seat reaches highest position	Function o.k.
	Seat reaches only the half of the possible height	Toothing of height limiter (2) does not engage correct (adjustm. see 2.8.0)
	Seat doesn't reach the first step of the height adjustment	Bowden cable (3) for height adjustment ist adjusted too loose.
	Seat doesn't reach the highest step of the height adjustment (8 steps)	Bowden cable (3) for height adjustment ist adjusted too tautly. (adjustm. bowden cable see 2.8.0)
<b>7.</b> Seats <b>without</b> height limiter: adjust highest and lowest position by handle <b>E</b>	Seat reaches both positions	Function o.k.
	Seat doesn't reach both positions	Adjust bowden cable (3) in accordance with the hints on page 2.8.0

For easier handling: Whenever in one of the following checks a hose has to be demounted, push button for seat lowering **D** to position "downwards" before removing a hose. After removing, push button **D** to position "upwards" to realise the check. Before mounting the hose, lower the seat again and after that move seat upwards for the further checks.



Checks	Results of checks	Remedy
<p><b>1.</b> Check red hose (4) from valve for seat lowering / uprising <b>D</b> to the heights control valve <b>B</b> regarding correct laying (without squeezed areas)</p> <p>Unfix hose (4) from height control valve <b>B</b> (Lift up fixing hooks (5) a little with a very small screw driver and demount air pipe (4), see detail drawing A).</p> <p>Push switch for seat lowering / uprising <b>D</b> to position upwards.</p>	<p>Compressed air leaves red hose (4).</p> <p>Compressed air doesn't leave red hose (4).</p>	<p>Continue with check <b>2.</b></p> <p>Mount hose (4) back to valve <b>B</b> and exchange valve for lowering / uprising <b>D</b> incl. hose unit.</p>
<p><b>2.</b> Mount hose (4) back to valve <b>B</b> and refit now yellow hose (6) from connector (7).</p> <p>Push button for seat lowering / uprising <b>D</b> to the position "upwards".</p>	<p>Air flows out from connector (7).</p> <p>Air doesn't flow out from connector (7).</p>	<p>Air spring has probably a leakage, exchange air spring (repair man.)</p> <p>Continue with check <b>3.</b></p>
<p><b>3.</b> Mount hose (6) back to connector (7) and demount hose (8) from height control valve <b>B</b></p>	<p>Air flows out from valve <b>B</b>.</p> <p>Air doesn't flow out from valve <b>B</b>.</p>	<p>Check / repair hose (8) and connector (7)</p> <p>Exchange valve <b>B</b> and mount hose (7).</p>



Checks	Results of checks	Remedy
<p><b>1.</b> Push button for seat lowering <b>D</b> to the position "upwards".</p> <p>Adjust the seat height to the middle height (handle <b>E</b>) and wait a moment till seat has moved to that position.</p> <p>Lay down weight pieces of approx. 40 kg in all onto the seat cushion.</p> <p>The seat will move down a distance of approx. 10 mm and regulate upwards again automatically to its origin position.</p>	<p>Seat moves again downwards. →</p> <p>Seat moves further on upwards. →</p>	<p>Leaks in following areas possible:            ++ all yellow hoses ++ air spring            ++ valve for height adjustment <b>B</b>            ++ valve for lowering / uprising <b>D</b>.</p> <p>Check the mentioned valves regarding leaking air by the use of leak detecting spray and repair realised leaks.</p>
<p><b>2.</b> Adjust the lowest position of the height adjustment <b>E</b> and push button for seat lowering to reach the undermost position.</p> <p>Demount yellow hose (6) from valve for height adjustment.</p>	<p>Air flows out from hose (6). →</p> <p>Air doesn't flow out from hose (6). →</p>	<p>Valve for lowering / uprising <b>D</b> is defective and must be exchanged.</p> <p>Valve for height adjustment <b>B</b> has to be exchanged.</p>

