



Repair manual

Maintenance manual

6860/885



ISRI 6860/885

Content	page
1 General	4
1.1 Important hints	4
1.2 Serial number	6
2 Preventive maintenance	7
2.1 Operating test	7
2.2 Checking of function, completeness and air-tightness	7
2.3 Checking air system	7
2.4 Checking air hoses and electrical cables for chafe marks	8
2.5 Control of screw connection (seat fixation)	8
2.6 Cleaning	8
2.7 Changing backrest and seat cushion	8
2.8 Changing air valves	8
2.9 Changing air-spring & Integrated pneumatic System (IPS)	8
2.10 Changing bowden-wires	8
2.11 Changing seat	8
3 System components	9
(Before each repair, read chapter 1 as well)	
3.1 Complete seat	9
3.2 Horizontal adjustment	9
3.3 Seat cushion	9
3.4 Mounting seat cushion, sliders	9
3.5 Covers seat frame, switch for IPS	10
3.6 Backrest	10
3.7 Lever for backrest / shoulder adjustment	11
3.8 Lever for height adjustment	11
3.9 Lever for shock absorber	11
3.10 Tilt adjustment	12
3.11 Lever for tilt adjustment	12
3.12 Switch for quick lowering	12
3.13 Toothed segment backrest adjustment	13
3.14 Armrests	13
3.15 Cover for backrest	14
3.16 Cover for seat cushion	14
3.17 Air-chambers for lumbar support (IPS)	15
3.18 Bellow	15
3.19 Air-spring	15
3.20 Shock absorber for vertical suspension	16
3.21 Valve for height adjustment	16
3.22 Seat height limiter	16
3.23 Adjustment seat height limiter	17
3.24 Locking device shoulder adjustment	17
3.25 Hinged adapter with adapter plate	18
3.26 Air connection at hinged adapter	18
4 Pneumatic plan	19
4.1 Pneumatic plan hoses and schematic diagram	19
5 Troubleshooting Pneumatic	20
5.1 General sources of error	20
5.2 general sources of defects	21
5.3 Source of error, seat doesn't reach adjusted height	22
5.4 Source of error, seat swings up and down	23
6 Special tools	24



General

1.1 Important hints



If you don't consider the following instruction, the liability, warranty and possibly the general operating permit will be lost.

Breaking these rules could cause serious or fatal injury to yourself and others.

- The seat has to be installed or repaired only by workshop specialists. When the seat will be mounted and connected in the vehicle, the guidelines of the vehicle manufacturer have to be considered.

Instructions for use

- Don't use a damaged or faulty seat, which will impair you while driving.
- Seat anchorages and locking mechanisms have to be checked frequently.
- All adjustment mechanisms must engage audibly. Move levers over the complete operation stroke to avoid wear of the mechanism. The levers must return to their original position after actuation. If not, there might be a damage.
- Don't operate several control elements at the same time.
- While using length adjustment, do not grab into the slides. Risk of injury.
- While using backrest adjustment do not grab into the mechanism. Risk of injury.
- **Never grab into adjustment mechanism and the scissor system while using – Crushing hazard for hands and fingers**
- The seat and the backrest shall not be used as ascent help.

Care instructions

- Good and regularly care is necessary for a long service life, since dirt can cause malfunctions in the seat.
- Clean the seat regularly. Also clean the upholstery with a vacuum cleaner.
- To clean the seat, only a slightly damp cloth with no harsh detergents should be used. Cleaning agents must be checked for compatibility in a spot that is not visible. The cover fabric must not be soaked.
- In general, no liquids should get on the seat or inside the seat, as the seat can be damaged by water and other liquids. Do not use a water jet to clean the upholstery and covers!

ISRI 6860/885

Instruction for repair and maintenance

- Before repair or maintenance, read accessorially the operation instruction of the seat, to become familiar with its technical features.
- Defective parts have to be repaired or exchanged immediately.
- All adjustments at the seat have to be checked according to the maintenance schedules. Slides, backrest-, tilt-, and seat cushion adjustment, as well as the hinged adapter have to be checked for complete locking in all positions.
- Incorrect repairs and maintenance can create the risk of seat damage, malfunction and injury.
- Changings on the seat are inadmissible.
- After each repair a functional test and, if pneumatic parts are involved, a leak test has to be effected.
- 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. The torques are written in the repair manual.
- It is not allowed to weld broken steel parts.
- Not all fastening parts for hoses and cables (e.g. cable ties) are 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.
- The descriptions explain the removal of sundry components. The installation of these seat components generally happens in reverse sequence.

The surfaces of the rollers in the suspension system are maintenance-free and are not allowed to be oiled or greased.

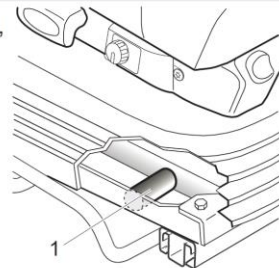


Danger of bruising



Due to risk of injury, in several repairs in the inside of the seat, the seat must be secured against lowering. Therefore adjust the seat in the topmost position. Loosen bellows in the lower area and positioning a distance sleeve (1) with a length of 75mm between lower frame and scissor.

It will be indicated to this note in the relevant repair descriptions.

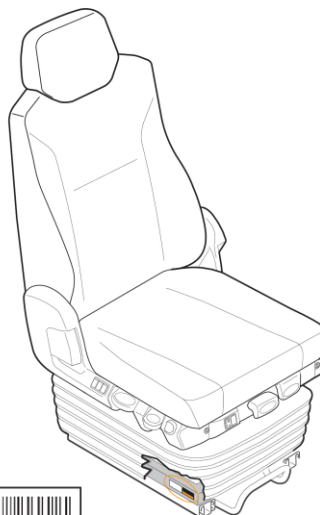


Subject to technical changes due to further development

ISRI 6860/885

1.2 Serial number

The serial number is located at lever side on the lower frame of the suspension unit and is visible when lifting up the bellows.



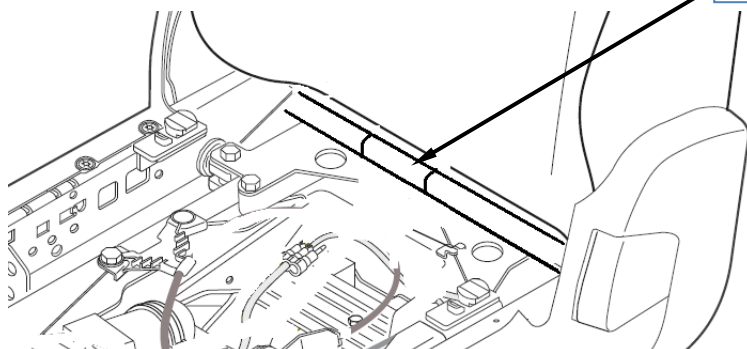
Serial No. ISRI



Additional there is a project-related SKA label at the cross tube of the seat frame.

This is a clear indication of the produced seat from SKA, that identifies the seat with the customized options.

P00003313	1	18.01.2013
Auftrag	Pos	
ZZ238033109		Customer No.
SNR		
Customer part No.	Customer name	
SKA Sitze Am Oberwald 7 76744 Wörth http://www.ska.de		



You can also find the label when you adjust the seat cushion in the foremost position.

Please also use this number for spare part orders to identify the seat.

ISRI 6860/885

2 Preventive maintenance

2.1 Operating test:

- All functions of the seat shall be tested at least once a year.
(see manual)
- The correct detent of the horizontal slides, backrest-, tilt- and shoulder adjustment, additional the seat cushion depth adjustment, have to be checked in all positions.
- All 8 steps of the height adjustment have to be checked.
(8 x 12,5mm = 100mm height adjustment)
If the height adjustment cannot adjust at all steps there is a failure.
- Check lumbar support and side trays (IPS).
- Check shock absorber and quick lowering.
- Check armrests.
- Check hinged adapter for complete locking.

2.2 Checking of function, completeness and air-tightness

The completeness and air tightness shall be tested at least once a year.
The hoses and cables shall be checked at least once a year.

All handles, buttons or levers have to be complete at the seat.

Missing or defective parts have to be replaced.

Broken and torn Gebrochene und gerissene Verkleidungsteile & Abdeckungen ersetzen. (see 3.5)

Broken or bended parts have to be changed.

Obvious audible air-leaks have to be checked more closely.

2.3 Checking air system

- The seat and the air system have to be checked for tightness at least once a year.

Demount seat cushion (see 3.3)

Check and test air hoses for damages / holes

Check air hoses for kinks

Check air connector and swivel (see 3.26)

Hear and check about air tightness

2.4 Checking air hoses and electrical cables for chafe marks

- The seat, the electrical cables and the air hoses have to be checked for chafe marks at least once a year.

Demount seat cushion (see 3.3)

Check air hoses for chafe marks

Check air supply for swivel

Sound control of air loss in the system

2.5 Control of screw connection (seat fixation)

- Control all screws from the fixation of the seat at least once a year.

Control of 4 screws for the plate of the swivel.

Control of 6 screws of the fixing of the seat at the plate.

ISRI 6860/885

2.6 Cleaning of the seat, especially detents and slides of the length adjustment

- Cleaning seat, detents, toothed segments and slides for length adjustment at least once a year.

Clean seat cushion and backrest with a vacuum cleaner

Clean the slides of the length adjustment from dust and dirt with a brush.

Check the pair of rails for longitudinal adjustment and bracket after 5 years at the latest and replace if necessary. (see 3.2)

Use a brush to remove dirt from the teeth and notches inside the seating system

Therefore, demount seat cushion (see 3.3)

2.7 Changing foam, of backrest and seat cushion (on demand, when necessary)

- After 4 years, the foam of the seat cushion shall be changed, relative to loss of comfort.
- After 6 years, the foam of the backrest shall be changed, relative to loss of comfort.

Demount seat cushion (see 3.3). Demount seat cover and backrest cover (see 3.15 and 3.16). When the fabric is worn, it shall be changed as well.

2.8 Changing air valves (on demand, when necessary)

- After 4 years, the air valves shall be checked and changed when necessary.
- Replace valve (switch) for quick lowering (see 3.5, side cover, lever side and 3.12)
Replace valve of the integrated pneumatic system (IPS) for quick lowering (see 3.5)
Replace the height adjustment valve (see 3.21)
Here, too, check the height stop that is traveling with you, but no later than after 6 years, and replace it if necessary (see 3.22)

2.9 Changing air spring and IPS (on demand, when necessary)

- After 6 years, the air spring and the IPS air chambers must be replaced after approx. 4 years in the event of leaks

Check the air spring after 6 years and replace if necessary (see 3.19)

Check IPS air chambers after 4 years and replace if necessary (see 3.17)

2.10 Changing bowden-wires (on demand, when necessary)

- After 4-6 years, the bowden-wires shall be checked and changed on demand, when necessary.

Bowden wire with handle from the tilt adjustment, after 4 years, check and change on demand, when necessary. (see 3.11)

Bowden wire with handle from the height adjustment, after 4 years, check and change on demand, when necessary. (see 3.8 and 3.23 adjusting bowden wire)

Check Bowden-wire backrest adjustment after 6 years and locking device shoulder adjustment after 5 years and replace if necessary (see 3.7 and 3.24)

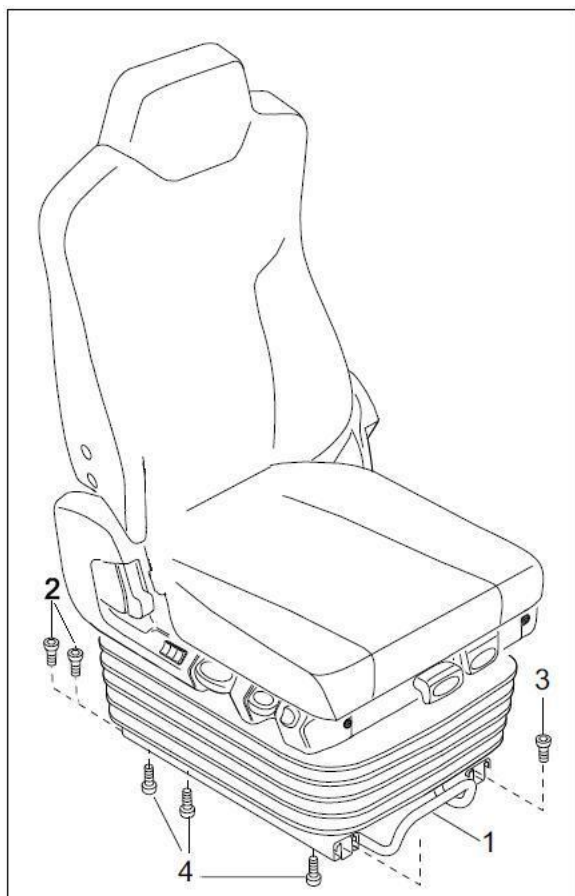
Check Bowden cable / lever shock absorber after 4 years and replace if necessary (see 3.9), adjustment unit damper

Check the associated shock absorber after 6 years and replace if necessary (see 3.9)

2.11 Changing seat (on demand, when necessary)

- After 6 years, the seat shall be changed (see 3.1)

3 System components



3.1 Complete seat

- Disconnect air supply between seat and the vehicle with the quick coupling at the hinged adapter. (see 3.26)
- Pull lever (1) upwards, move seat to foremost position and undo screws (2).
- Pull lever (1) upwards, move seat to rearmost position and undo screws (3).

3.2 Horizontal adjustment

- Demount seat from vehicle (see above)
- Pull lever (1) upwards and move inner slides till six screws (4) are reachable through boreholes of inner slides.
- Undo six screws (4).

Lever for horizontal adjustment

- Adjust seat in foremost position. First loosen lever at one side (with a screw driver or similar), then at the opposite side.



Tightening torques

Pos.2,3,4 24 Nm +/-2Nm

3.3 Seat cushion

- Lift up lever (1) and push seat cushion in foremost position. Undo two screws (2).
- Hold on lever (1) in topmost position and push it sideways (see arrow A).
- Move seat cushion completely forwards and lift it up.

3.4 Installation seat cushion

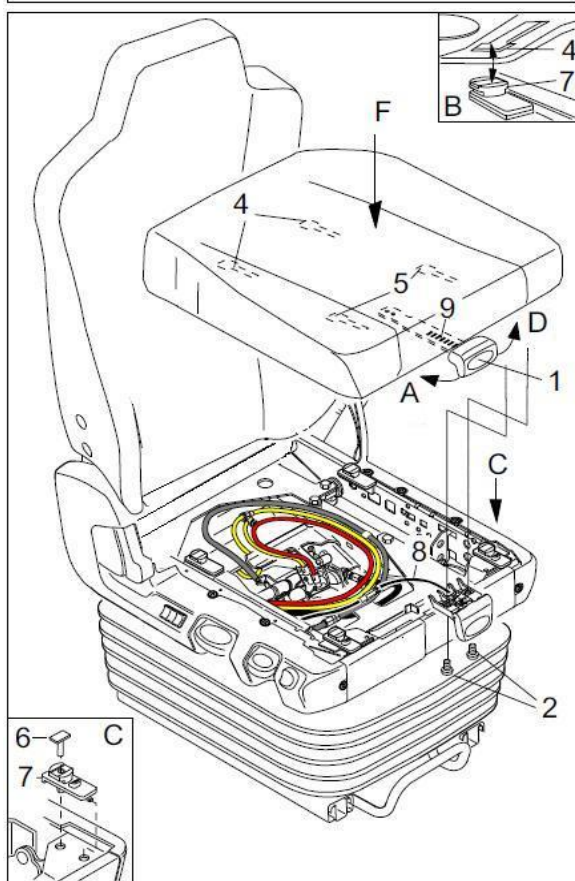
- Bowden-wire (8) must be positioned between lever (9) and seat cushion.
- Push the rear keyholes (4) onto the rear sliders (7), press down seat cushion's front keyholes (5) onto the front slider (7) and push the cushion in direction of backrest.
- Push lever (1) in direction of arrow (D) and push cushion further in direction of backrest.
- Check now, if all four sliders are locked in the keyholes.

Sliders for seat cushion

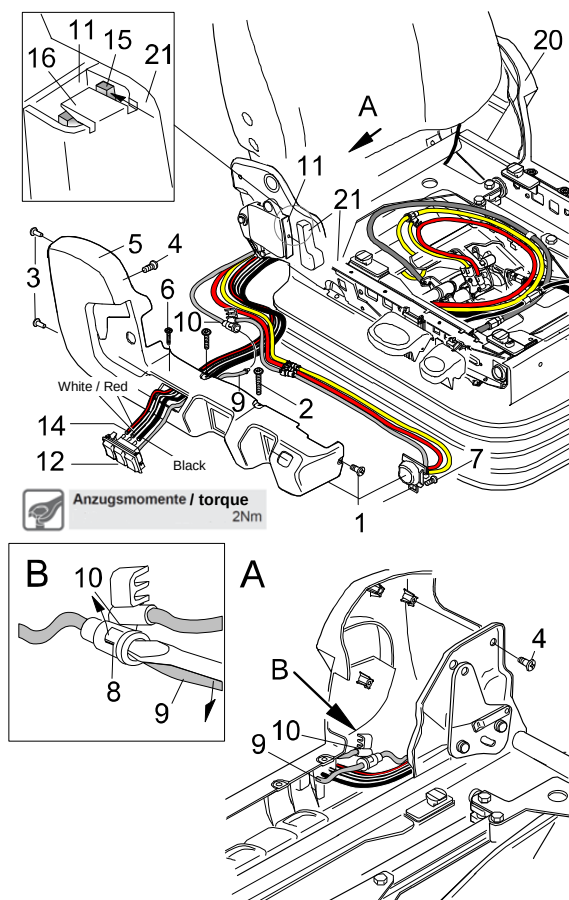
- Demount seat cushion (see above)
- Pull out plastic pin (6) and take off slider (7)

Installation sliders

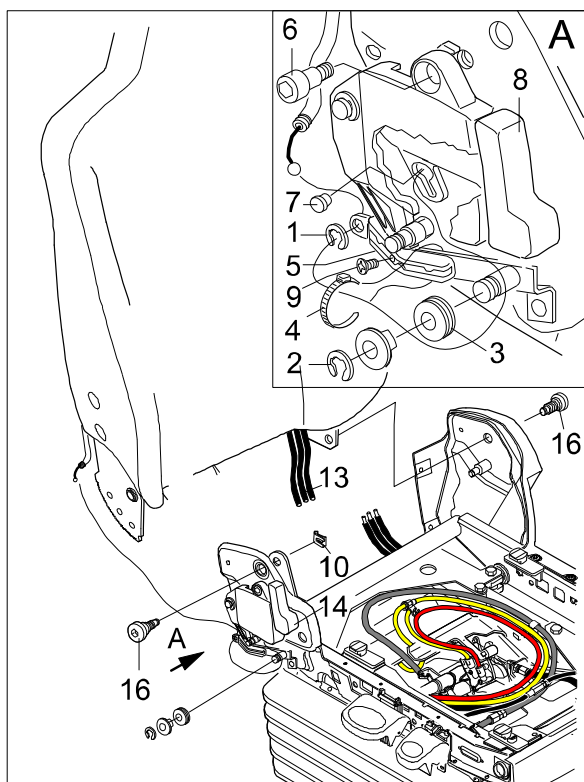
- Push slider (7) at the seat frame.
- Push in pin (6). Level of pin head flat must fit to the flat on the slider head.



ISRI 6860/885



To lift up fixing hooks, you can use a little screwdriver (see detail B)



3.5 Covers seat frame and IPS valve

Side cover, lever side

- Demount seat cushion (3.3)
- Move seat in topmost position and secure against lowering (3.19 shock absorber).
- Remove the handle attachment (21): Press in the nose (15) from the backrest handle (11) until the nose (16) from the handle attachment (21) is disengaged. Pull the handle (21) downwards.
- Remove expanding rivets (1) and (3) and undo long screw (2).
- Fold down backrest completely and undo screw (4).
- Remove cover (5).

Side cover, opposite side

- Remove cover (20) in general sense of side cover lever side (5).

Front cover

- Remove expanding rivets (1) on right and left side.

Rear cover

- Undo four expanding rivets (3).

Switch for quick lowering (see also 3.12)

- Undo screws (6 and 7).

IPS valve

- Lift up fixing hook (8) carefully and separate air hoses (9) from Y-connector (10) (see A,B).
- Remove three hoses (14) from valve (12).
- Lift up two hooks from the valve (12) and press valve out from the side cover.

3.6 Backrest

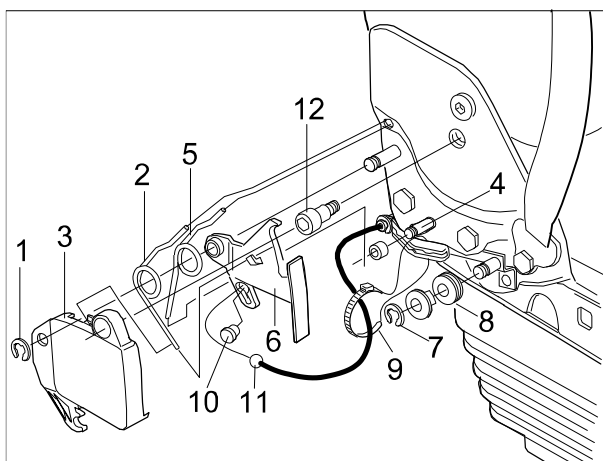
- Adjust tilting to the upmost position.
- Remove side cover (see above).
- Remove retaining washer (1, 2) and deflection roller.
- Detach the Bowden cable from the guide piece.
- Unscrew screw (6), remove safety pin (7) and unhook bowden cable from lever (8).
- Unscrew screw (9).
- Remove securing clip (10).
- Loosen hoses (13).
- Unscrew screws (16).
- Lever backrest out of the side arms.



Anzugsmomente / torque
Pos. 35Nm +/- 5Nm

After mounting, fold down the backrest completely and check IPS hoses for sufficient play.

ISRI 6860/885



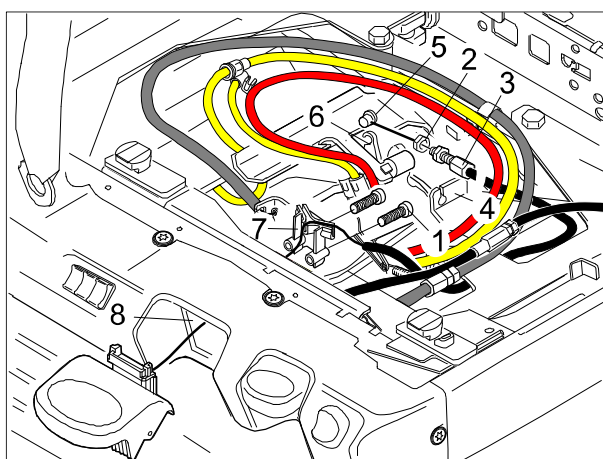
3.7 Lever / springs for backrest and shoulder adjustment

Lever backrest adjustment and springs

- Remove side cover of lever side (see 3.5 but without disconnecting hoses).
- Remove retaining washer (1).
- Demount spring (2) from levers (3,6).
- Pull off lever (3).
- Remove spring (5) from cone (4).

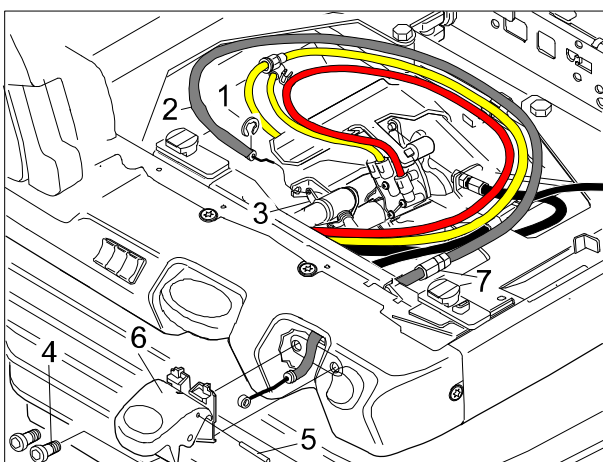
Lever for shoulder adjustment

- Remove retaining washer (7) and deflection roller (8).
- Pull out safety plug (10).
- Unhook bowden cable (11) from lever (6).
- Unscrew screw (12) and pull off lever (6).



3.8 Lever with bowden cable height adjustment

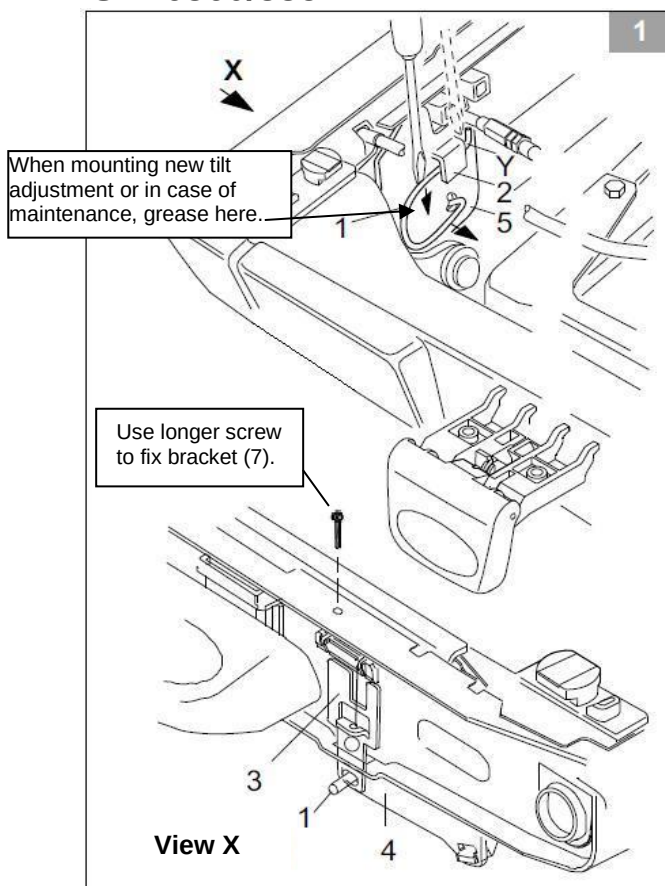
- Remove seat cushion (see 3.3).
- Adjust tilting to the upmost position.
- Unscrew screws (1).
- Undo nut (2), remove bowden cable (3) from fastening (4) and pull cable nipple (5) out of valve lever (6).
- Push bowden cable out of bearing (7) and pull it out through opening (8).
- After mounting: Adjust valve for height adjustment (see 3.23)



3.9 Lever and bowden cable for shock absorber adjustment

- Remove seat cushion (see 3.3).
- 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.

ISRI 6860/885



3.10 Tilt adjustment

- Remove seat cushion (see 3.3).
- Adjust tilting to the upmost position.
- Remove side cover, lever side without disconnecting hoses.
- Press down spring (1) (see drawing), unhook from fixation (2) and pull out from levers (3), (4) and (5).

Mounting tilt adjustment

- Hook spring (1) at first in lever (4) and (5) then (3).
- Press down spring (1) with a screwdriver in area Y and hook spring behind fixation (2).

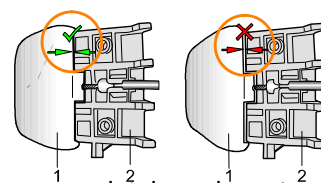
Note: Use longer screw at side cover to fix the bracket (7).

3.11 Lever for tilt adjustment and bowden cable

- Remove lever for height adjustment (6) (see above)
- Lever bracket (7) out of seat frame and remove bowden cable from lever (3).

Adjustment bowden cable

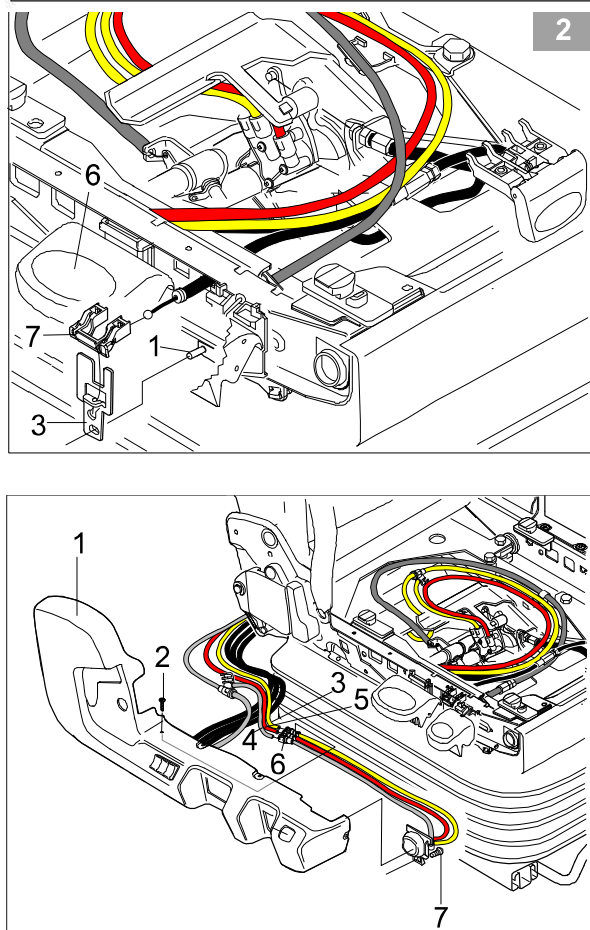
Pull lever for tilt adjustment (1). Adjust bowden cable in that way, that between lever (1) and plate (2) no opening is existing.



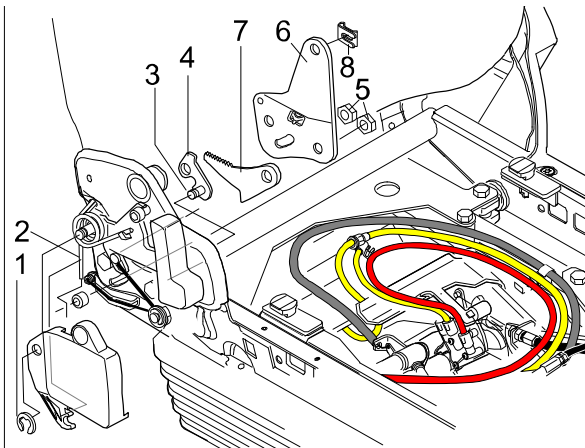
The tilt adjustment must release completely and must move noiselessly when pulling the lever (no clattering of tooth segments).

3.12 Switch for quick lowering

- Remove seat cushion (3.3).
- Remove cover (1).
- Unscrew screw (2).
- Disconnect hoses (3)(4)(5) from connector (6).
- Unscrew screw (7) and unhook switch in the upper area out of cover (1).



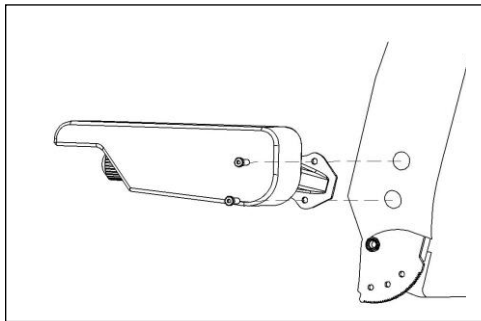
ISRI 6860/885



3.13 Toothed segment backrest adjustment

- Remove seat cushion (3.3).
- Remove side cover (1) without disconnection hoses (see 3.5).
- and release the spring (2) from the pin (3) of the lever (4).
- Remove securing clip (8).
- Loosen the undo nuts (5) and remove the plate (6), toothed segment (7) and lever (4).

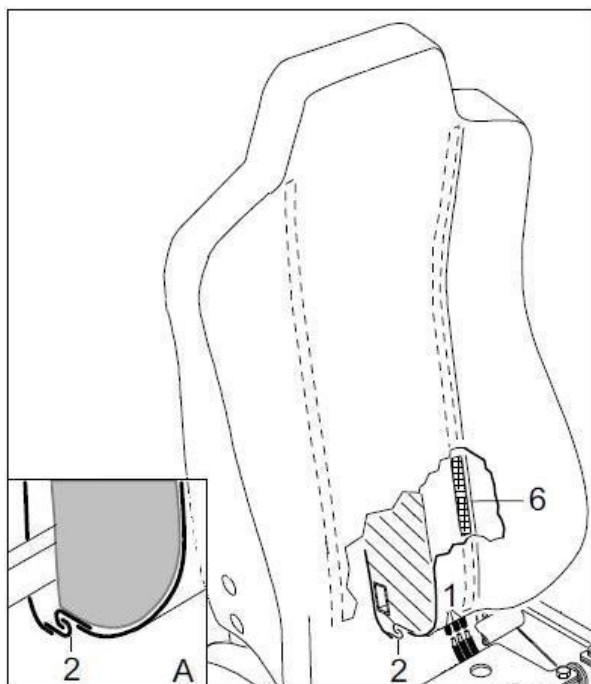
Toothed segment assembly: Tighten nuts (5) sufficiently



3.14 Armrests

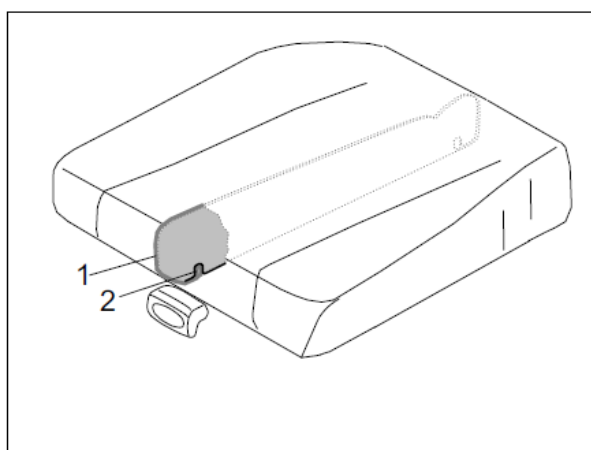
- Undo two screws.
- Remove armrests.

ISRI 6860/885



3.15 Backrest cover

- Loosen the armrest and armrest adapter (see above)
- Disconnect three hoses (1).
- Unhook C-welt (2) (see detail A).
- Pull cover upwards slowly and loosen fixing tapes (6).
- Remove cardboard.

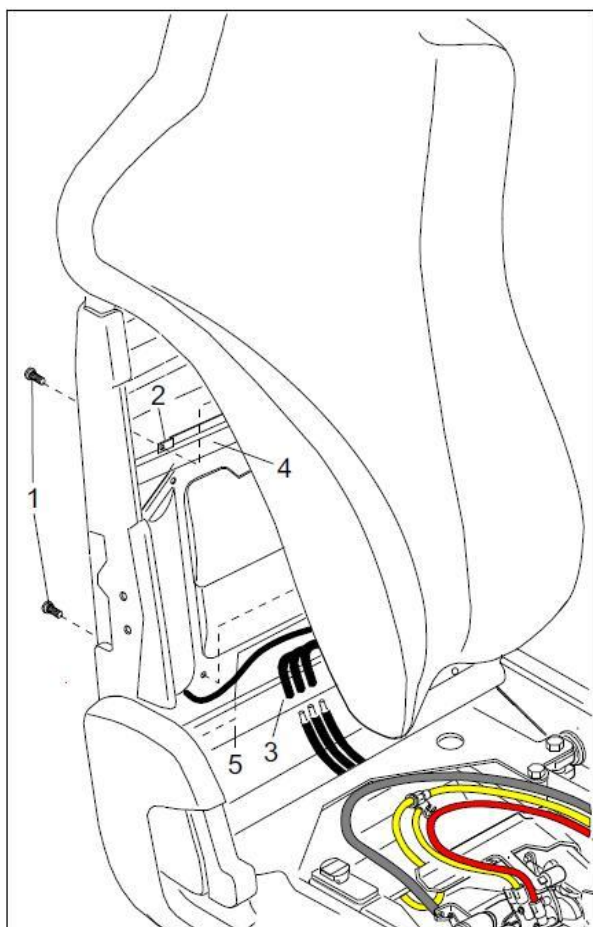


3.16 Seat cushion cover

- Remove seat cushion (3.3).
- Lever seat cushion cover (1) out of groove (2) running around seat ground plate.

Note: Before mounting the new cover, bend hooks (3) back in the groove (2).

ISRI 6860/885



3.17 Air-chambers for lumbar support (IPS)

- Uncover backrest partly (see above).
- Unscrew four screws (1) and loosen backrest foam from backrest frame.

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

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

Note: When mounting the new air chamber unit, take care that the chamber is placed behind cross-braces (4 and 5) again.

3.18 Bellow

- Remove seat cushion (3.3).
- Demount all covers (3.5)
- Remove rivets from the upper and lower seat frame.
- Remove brackets from cross tube.

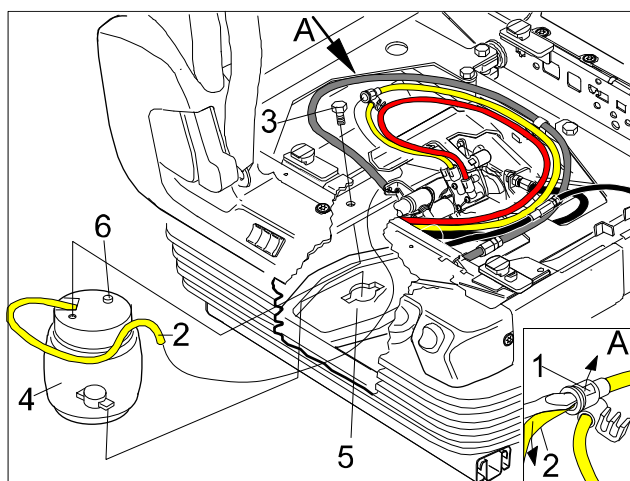


Adjust seat in highest position and secure against lowering with the spacer.

3.19 Air spring

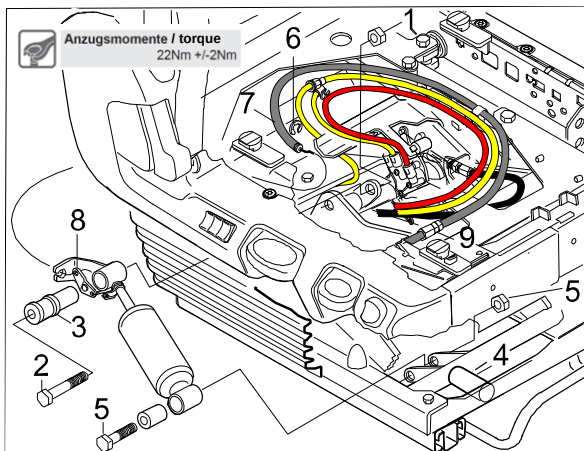
- Remove seat cushion (3.3).
- Remove bellow rivets at lower and front area.
- Secure seat in highest position against lowering with the spacer.
- Lift up fixing hook (1) carefully and demount air hose (2). (See Detail A).
- Remove lower shock absorber fixation (see below). Lift up shock absorber and take out air spring towards the front.
- Undo screw (3).
- Turn air spring (4) for 90 degrees and take it out from lower holder (5).

Note: After mounting the new air spring, nose (6) must fit to the hole at the upper air spring holder.



Adjust seat in highest position and secure against lowering with the spacer

ISRI 6860/885

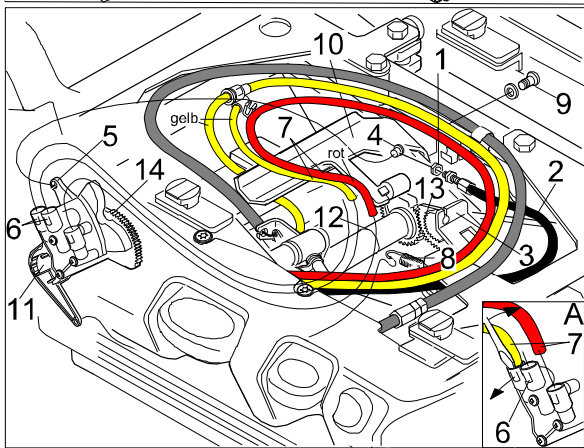


3.20 Shock absorber

- Remove seat cushion (3.3).
- Remove lower rivets at bellow.
- Secure seat in highest position against lowering with the spacer.
- Undo nut (1). Remove screw (2) and socket (3).
- Unscrew lower shock absorber fixation (5).
- Remove retaining washer (6) and lever out bowden cable (7) from fastening (8).

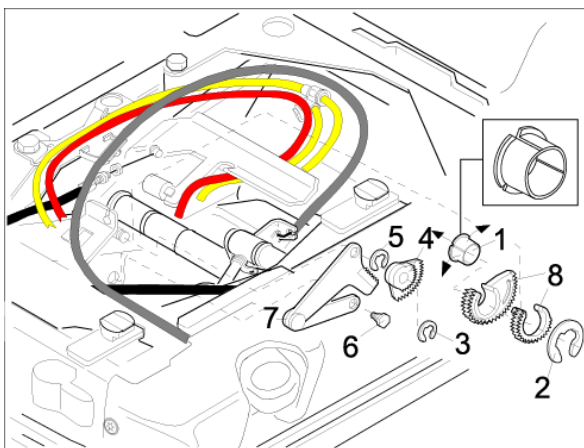


When exchanging shock absorber, all parts of the kit must be exchanged.



3.21 Valve for height adjustment

- Remove seat cushion (3.3).
- 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) carefully and demount air hoses (7). (See detail A).
- Unhook spring (8).
- Pull out lower bellow fixation, Undo screw (9) and swivel up handle (10).
- Turn around valve (11) on the bearing tube and pull it over the bearing tube edge (12).
- After mounting: Adjust valve for height adjustment (see 3.23)

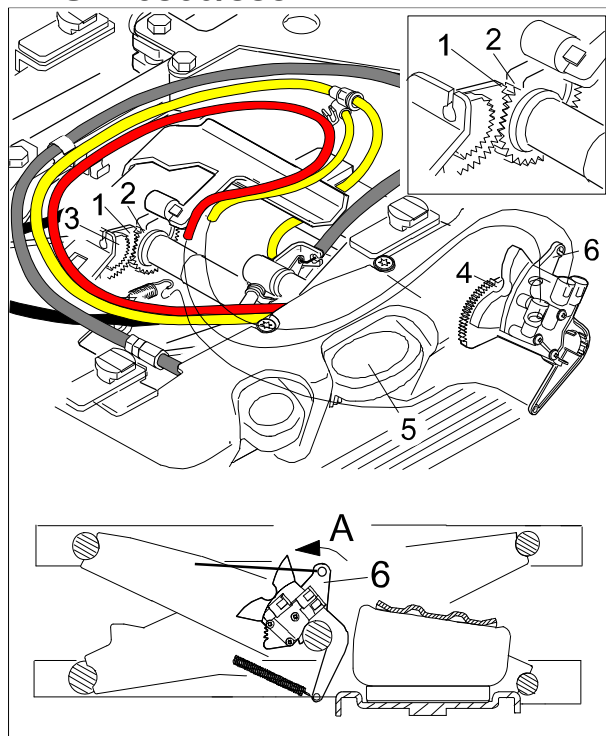


3.22 Seat height limiter

- Remove seat cushion (3.3).
- Remove valve for height adjustment (see above)
- Pull bushing (1) out of the tooth segment (8) sideways.
- Remove segment (8) and bend up bushing (1).
- Remove retaining washer (3) and take off segment.
- Remove retaining washer (5), unscrew screw (6) and take out lever (7)

After mounting: Adjust height blocking system (see 3.23).

ISRI 6860/885



3.23 Adjustment seat height limiter

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

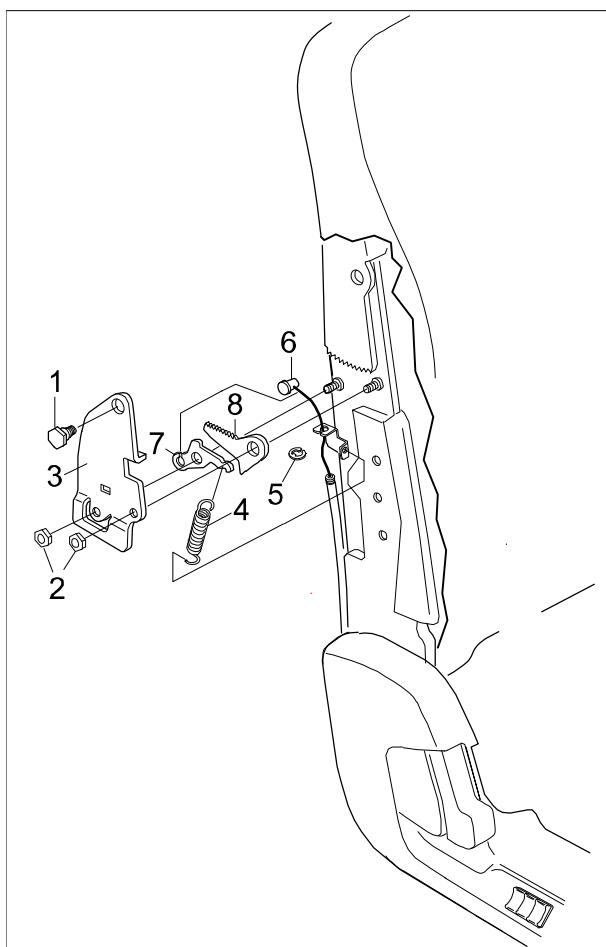
- The topmost tooth of segment (1) must fit in the topmost space width of segment (2).
- The topmost tooth segment (3) must fit in the topmost space width of segment (4)
- After adjusting the tooth segments, look for the segment correct moving over the hole distance.
- If segments are blocking, the upper tooth doesn'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.

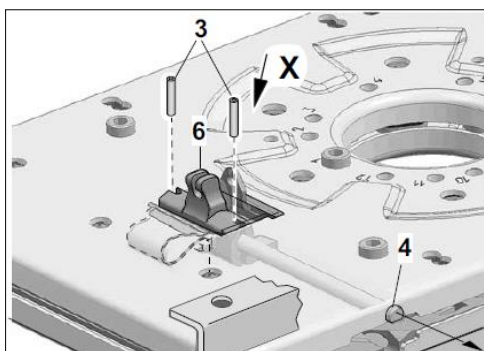
Locking device shoulder adjustment

- Remove armrests (3.14)
- Loosen the backrest cover and pull it up to the shoulder area.
- Unscrew screw (1), loosen nuts (2) and remove plate (3).
- Unhook the spring (4).
- Remove the lock washer (5) and loosen the Bowden cable (6) from the lever (7).
- Pull the lever (7) off the toothed segment (8).

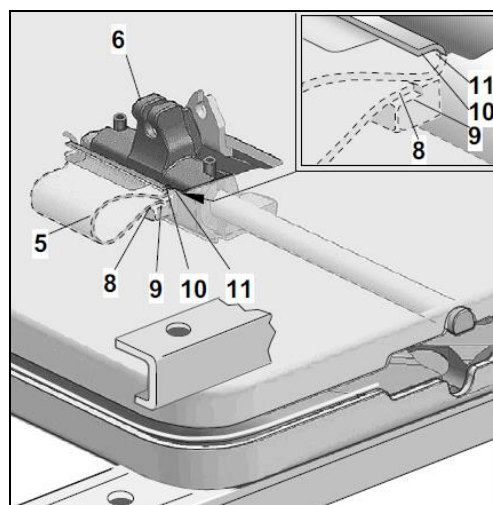
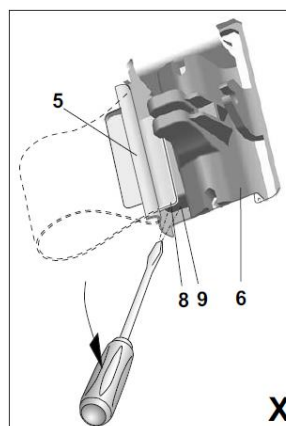
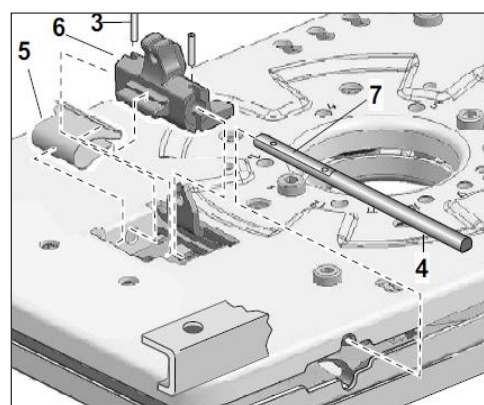


3.25 Locking device swivel

ISRI 6860/885

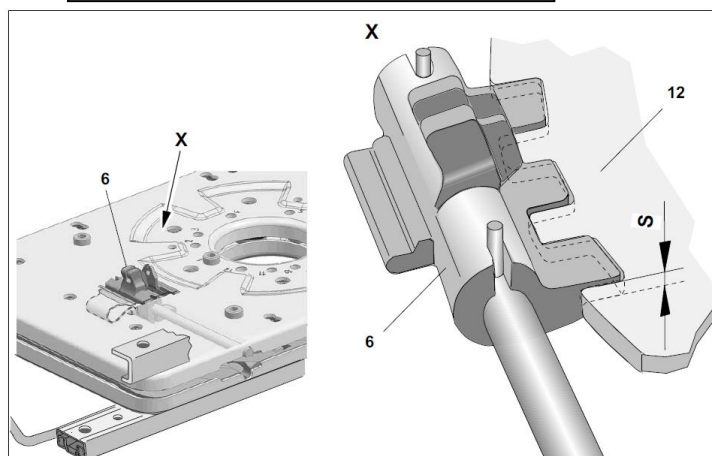


- Lever out two spring pins (3) and shaft (4) with suitable pliers.
- Lever out firstly spring steel sheet (5) (Detail X), then blocking catch (6) with a screwdriver.



Mounting locking device

- 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) together and take care that it's lower leg (10) clasps the edge of the upper swivel plate (11).



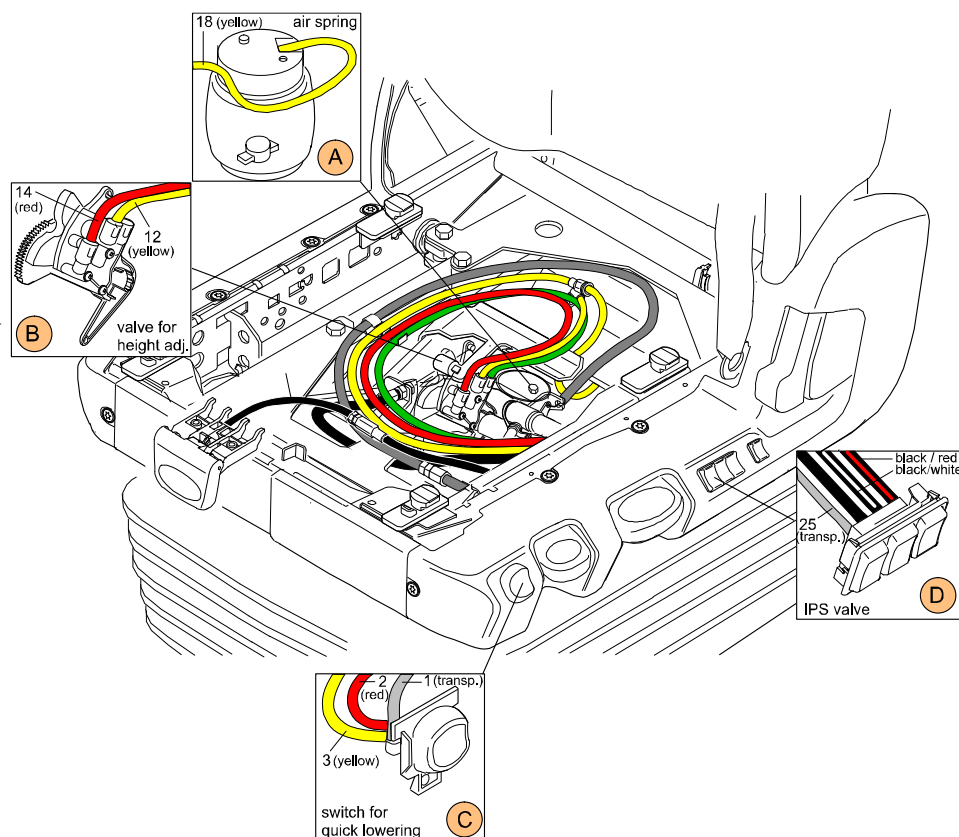
Important check

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

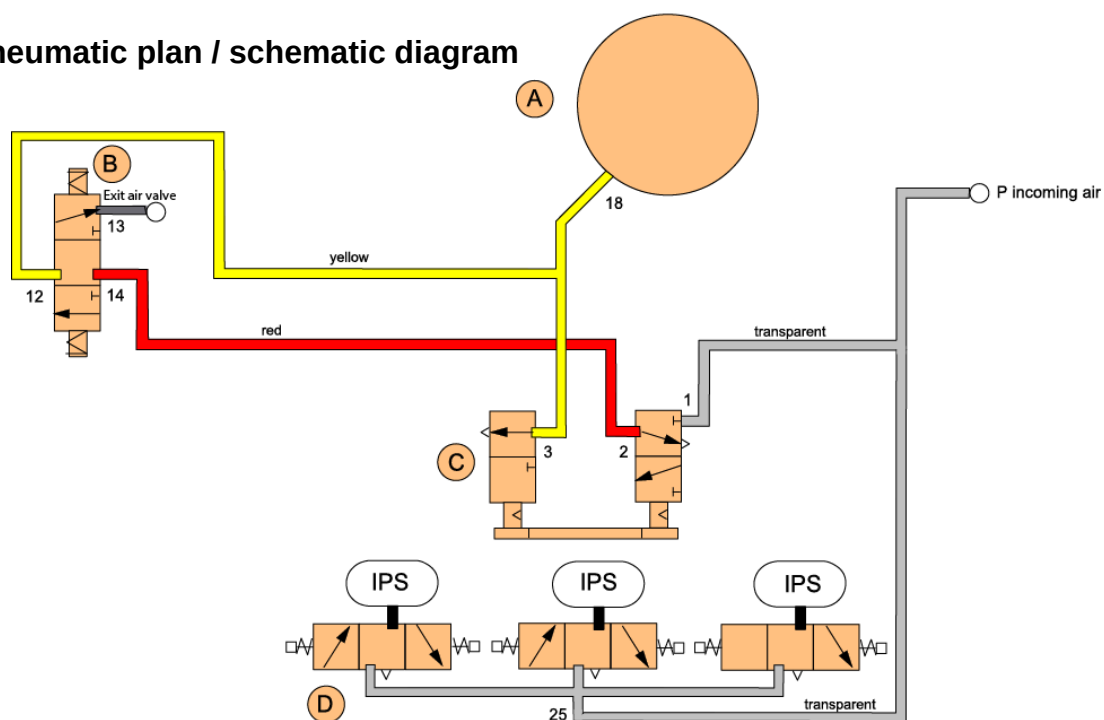
ISRI 6860/885

4 Pneumatic plan

4.1 Pneumatic plan hoses and schematic



4.1 Pneumatic plan / schematic diagram



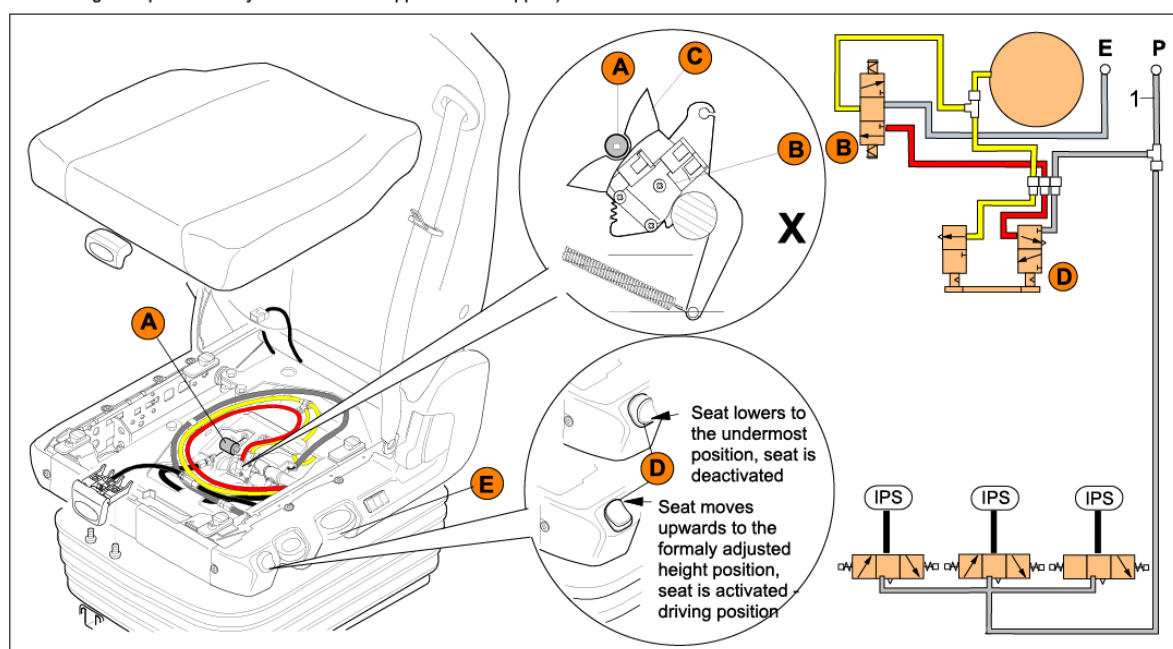
ISRI 6860/885

5 Troubleshooting pneumatic

5.1 Troubleshooting: General source of error

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

IPS = integrated pneumatic system = lumbar support + side support)

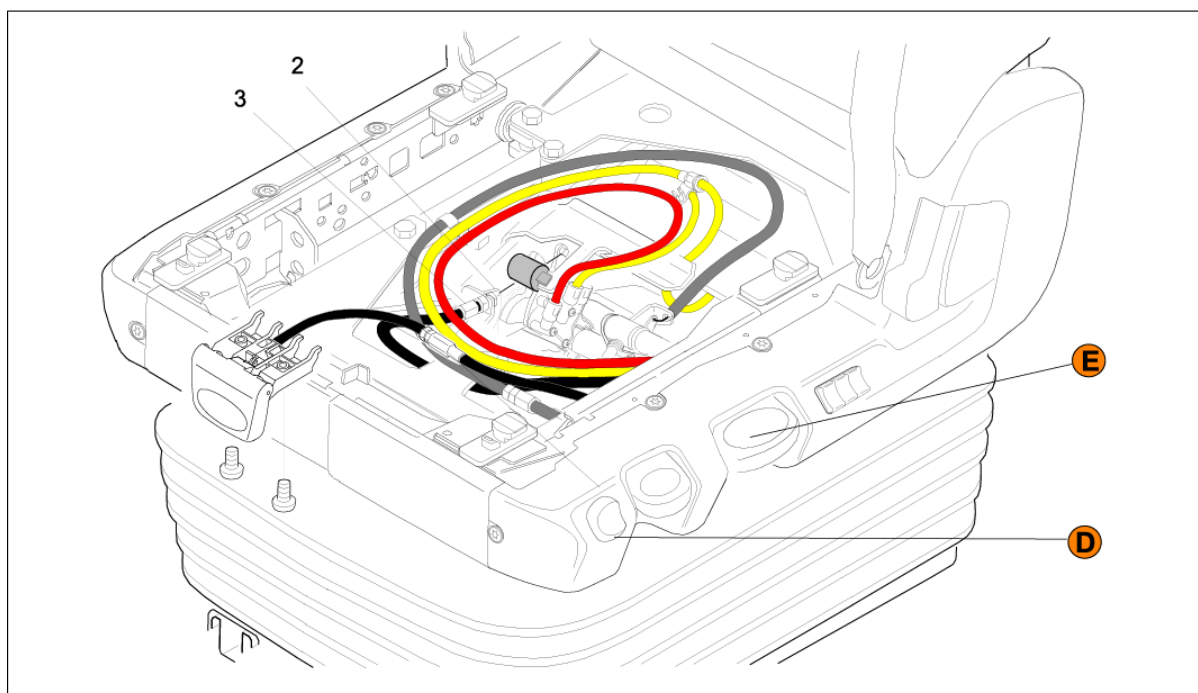


5.2 Troubleshooting: General source of error

ISRI 6860/885

Checks for general problems	Results of checks	Remedy
6. Seats with height limiter: adjust the highest position by handle E	→ 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)
7. Seats without height limiter: adjust highest and lowest position by handle E	→ 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

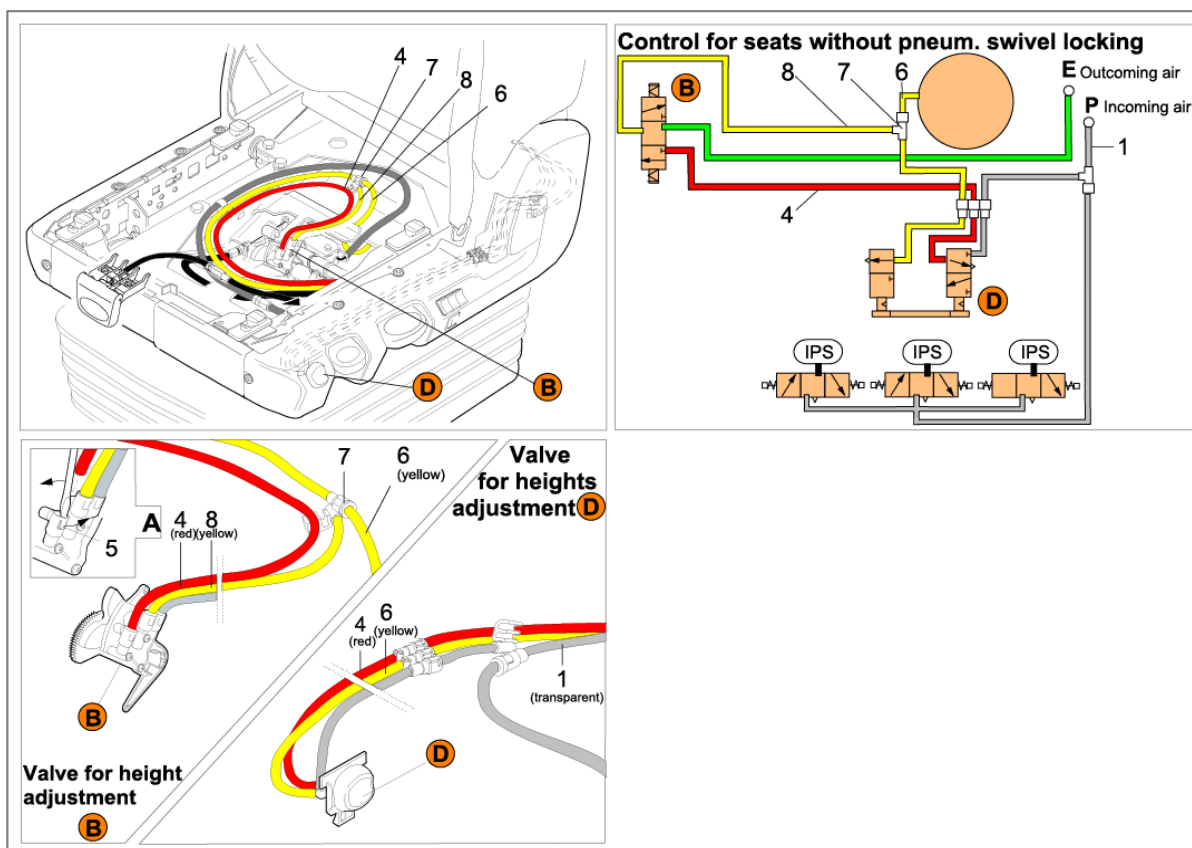
For easier handling: Whenever in one of the following checks a hose has to be demounted, push button **D** to position "downwards" before removing a hose. After removing, push button **D** to position "upwards" to realise the check. Before mounting the hose, lower the seat again and after that move seat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



5.3 Seat doesn't reach adjusted height (air spring not filled)

ISRI 6860/885

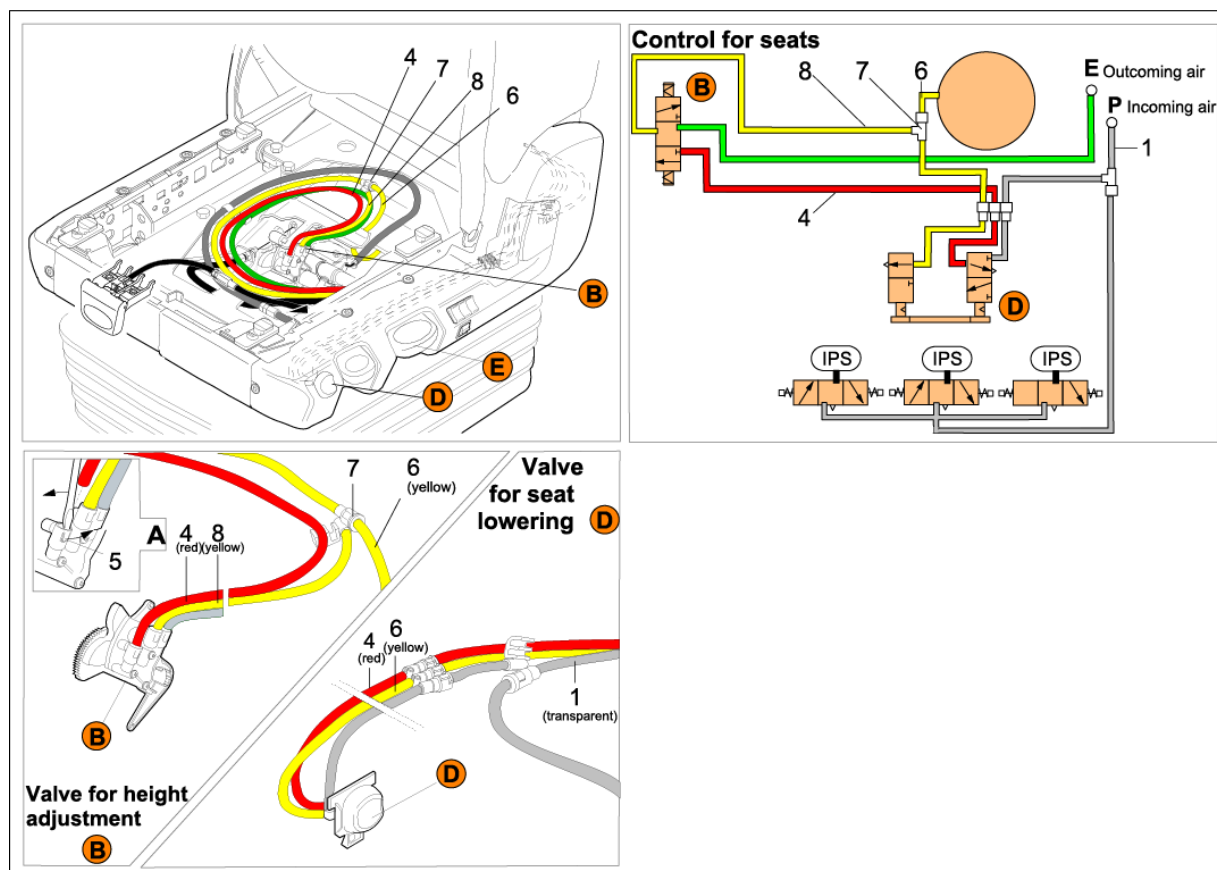
Checks	Results of checks	Remedy
1. Check red hose (4) from valve for seat lowering / uprising D to the heights control valve B regarding correct laying (without squeezed areas) Unfix hose (4) from height control valve B (Lift up fixing hooks (5) a little with a very small screw driver and demount air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



5.4 Troubleshooting: Seat moves up and down (air spring uncontrolled filled or exhausted)

ISRI 6860/885

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



6. Special tools

ISRI 6860/885

Tabellarische Auflistung der Spezialwerkzeuge:

Spacer: SKA Part-No. BM019003593

Chapter:		Page:
1.1	Important hints	5
3.19	Air spring	15
3.20	Shock absorber	16
3.21	Valve height adjustment	16
3.22	Seat height limiter	16

Demontagehilfe Schläuche: SKA Artikel-Nr. BM019003594

Chapter:		Page:
3.5	IPS valve	10
3.12	Switch quick lowering	12
3.19	Air spring	15
3.21	Valve height adjustment	16

Alternativ zur Demontagehilfe Schläuche kann auch ein handelsüblicher kleiner Schraubendreher verwendet werden.