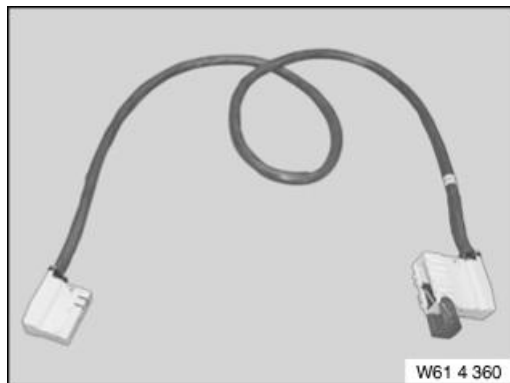
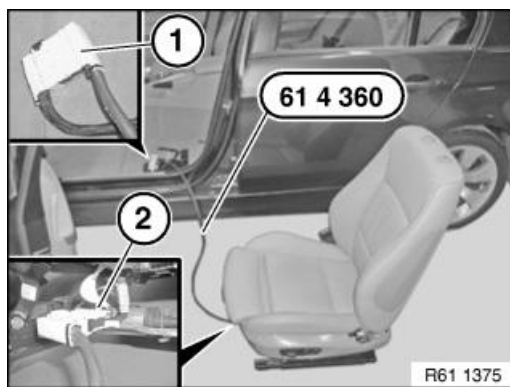


**Special tools required:**

- [61 4 360](#)

**Note:**

The function check on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable [61 4 360](#).

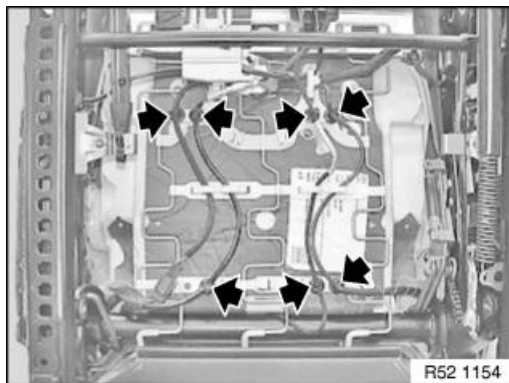
**Use:**

Adapter cable [61 4 360](#) is connected to vehicle wiring harness (1) and removed seat (2).

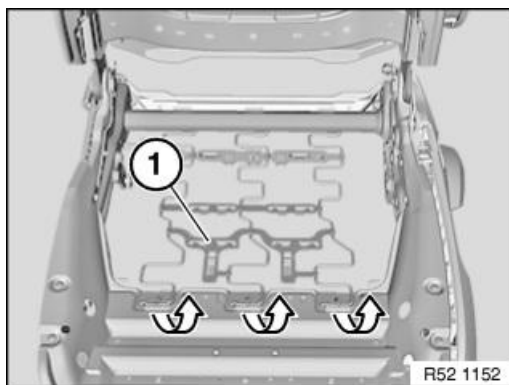


Necessary preliminary tasks:

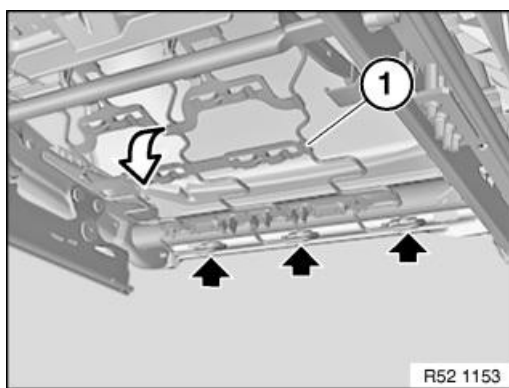
- Remove [padding for front seat](#)



Disconnect all cable straps and detach wiring harnesses from flexmat.



Detach flexmat (1) at front.



Swivel flexmat (1) down and detach from seat frame

**Necessary preliminary work:**

- Disconnect [battery earth lead](#)
- Remove [head restraint](#)
- Only E90/E91 from version 09/08 and F25/F26:
Remove [crash-active headrest](#)

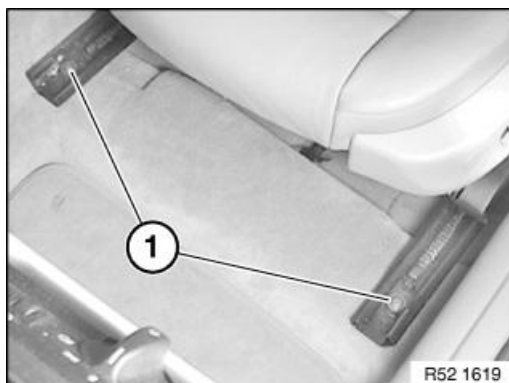
**Important!**

An airbag module and a pyrotechnical seat belt tensioner are installed in the front seat.

Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.

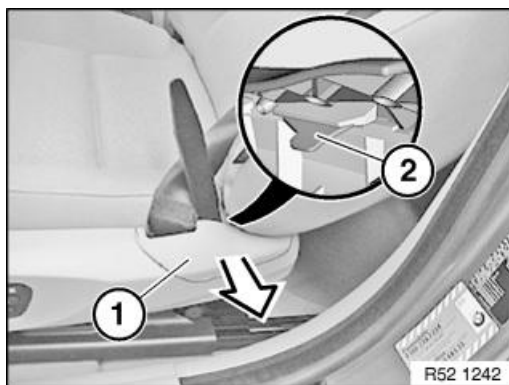
*Installation note:*

- Powerlok screws must be replaced and must not be reused
- Powerlok screws are mechanical screw locks with trilobular threads



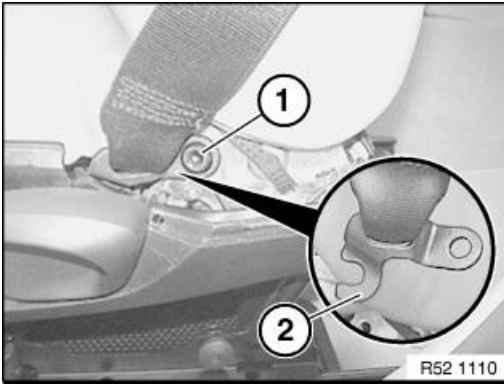
Move seat to upper back position.

Release and dispose of screws (1).



Move seat forwards and position flush with seat rails.

Unclip release tab (2) for belt end fitting trim (1) with plastic wedge.



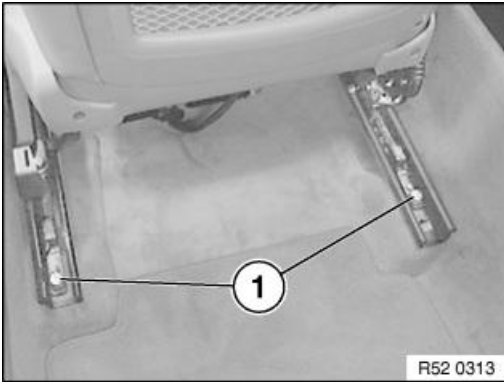
Release screw (1).

Tightening torque [72 11 2AZ](#).

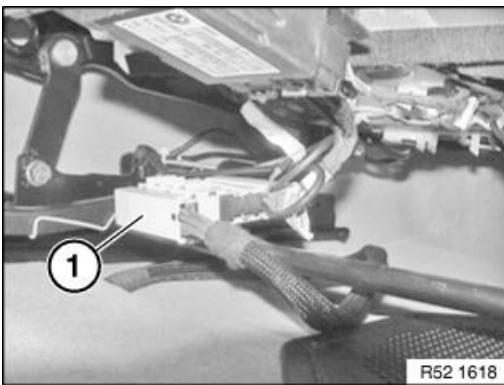
Disconnect end fitting (2).

Installation note:

Make sure end fitting (2) is correctly seated on seat mechanism pin.



Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

Cover door sill with protective covers (risk of damage).

Lift out front seat.



Installation note:

- Carpet must not get between seat rails and floor panel in area of attachment points (groaning noises)
- Replace microencapsulated screws
- Insert all screws loose to avoid twisting
- Tighten down all screws to specified torque

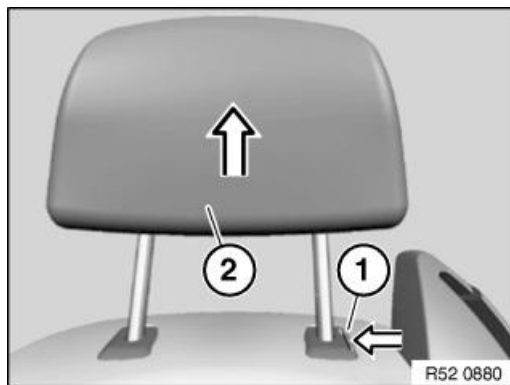
Tightening torque [52 10 1AZ](#).



Warning!

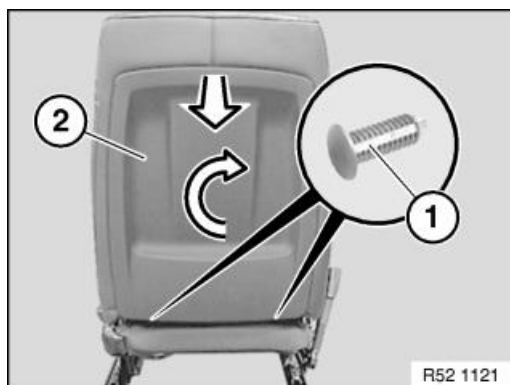
When carrying out further work on the front seat, it is absolutely imperative to observe the [safety regulations](#) on handling airbag modules and pyrotechnical seat belt tensioners

Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.



Press catch (1) and lift out head restraint (2).

52 13 198 Removing and installing or replacing rear panel on left or right front seat backrest

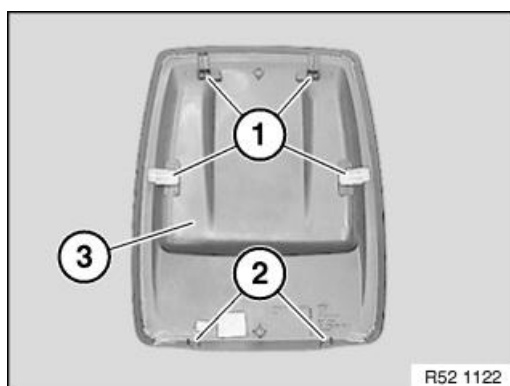


Release clips (1) with diagonal cutting pliers.

Remove rear panel (2) downwards with a rotational movement.

Note:

Remove remnants of clips.



Installation note:

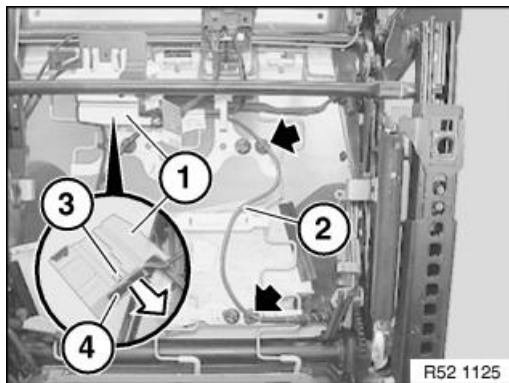
Retaining hooks (1) and bore holes (2) on rear panel (3) must not be damaged.

Replace faulty clips.



Necessary preliminary tasks:

- Remove [front seat](#)
- Remove [rear panel](#) on front seat backrest

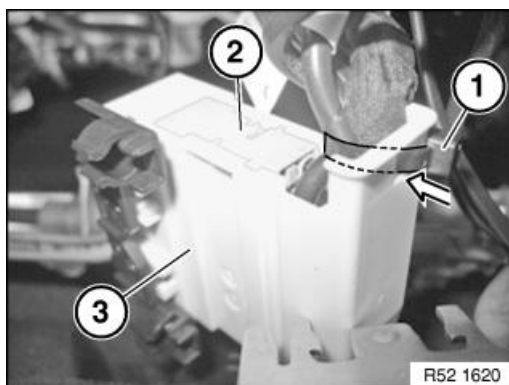


Unclip cable (2).

Release airbag wiring harness (2) from cable holders on seat mechanism.

Cut through cable ties.

Raise release clip (3) and pull plug (4) out of plug housing (1).



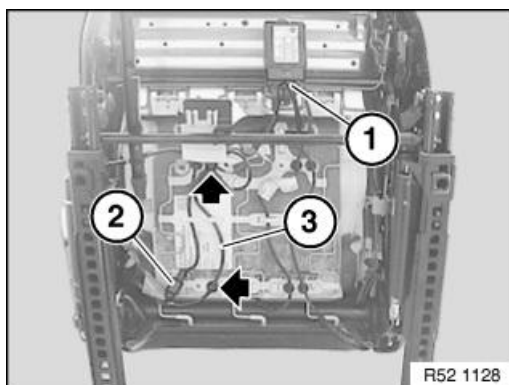
Installation:

Always feed in cable tie (1) at narrow end of plug housing in direction of arrow.

Cables must be secured with insulation under cable tie.

Firmly tighten cable tie (1) to relieve strain. It must not be possible to move the cable.

Make sure plug (2) is correctly locked in plug housing (3).



Unfasten plug connection (1) and disconnect.

Unclip cable.

Release wiring harness (3) from cable holders on seat mechanism.

Unfasten plug connection (2) and disconnect.

Important!

Feed all wiring harnesses carefully through the seat and backrest mechanism as the edges of the frame can be sharp.



E81, E82, E88, E92 only:

Unhook seat covers on left and right.

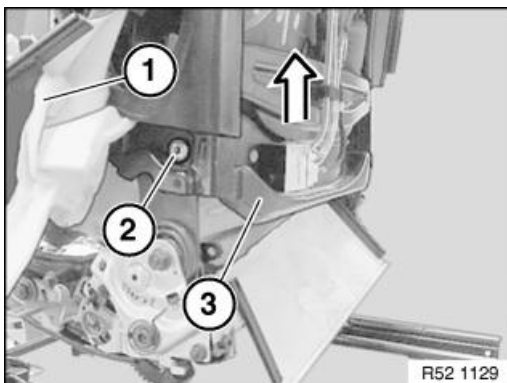
Unclip ball socket (1) from ball head on left and right.

Installation:

Ball socket (1) must snap audibly into place.

Ball socket (1) must be able to move freely on ball head.

Actuate rear catch and remove guide for Bowden cable (2) towards rear with a turning motion.



Unhook backrest cover (1) on left and right.

Release screws (2) on left and right.

Tightening torque [52 10 02AZ](#).

Remove backrest frame (3) completely towards top.



Replacement:

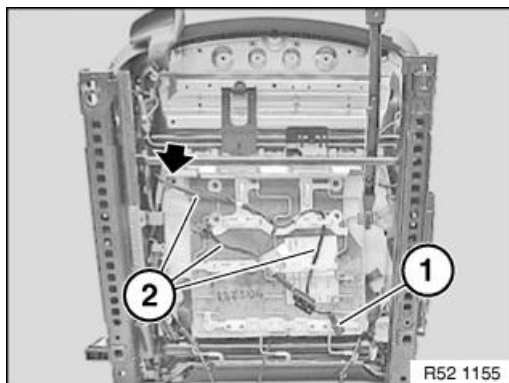
- Remove [backrest cover](#) with padding.

52 13 025 Removing and installing/replacing left or right seat mechanism (normal/manual)



Necessary preliminary tasks:

- Remove [seat cover](#) for front seat
- Remove [backrest frame](#) on front seat
- Remove [seat belt tensioner](#)
- Remove [control unit for seat heating](#)



Disconnect all cable straps.

Unlock and remove connector housing (1) from flexmat.

Release seat wiring harness (2) from cable clips on seat mechanism.



Replacement only:

The seat mechanism is supplied completely with corresponding drive units.

52 13 040 Removing and installing/replacing outer cover on left or right front seat backrest (normal / manual)



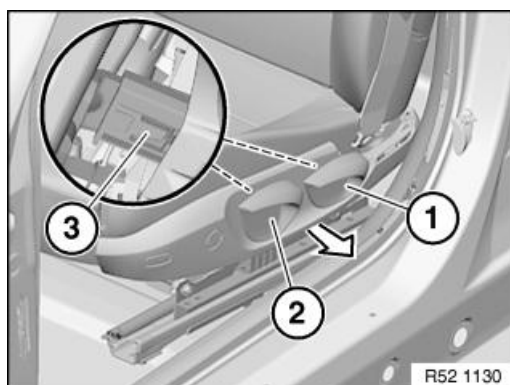
Special tools required:

- [00 9 317](#)



Necessary preliminary tasks:

- Remove [front seat](#)



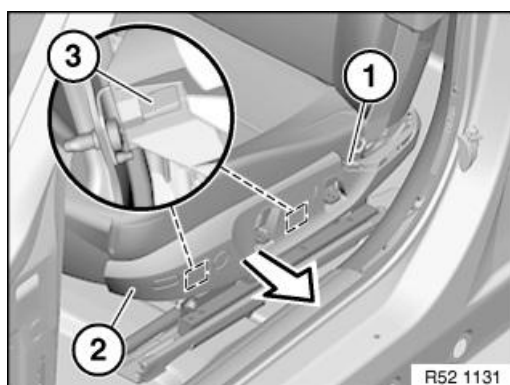
Note:

Picture shows installed seat by way of example.

Raise lock (3) and lever out handle

1. for backrest angle adjustment and
2. for seat height adjustment

with special tool [00 9 317](#).



Release screw (1).

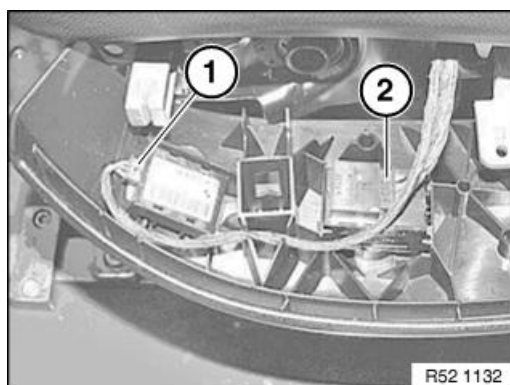
Tightening torque [52 10 06AZ](#).

Note:

Trim (2) is engaged in marked area.

Press lock (3) and pull trim (2) off seat mechanism.

If necessary, lever out carefully with special tool [00 9 317](#).



If necessary, unlock plug connection (1) for backrest width adjustment and disconnect.

If necessary, unlock plug connection (2) for lumbar support and disconnect.



Replacement:

If necessary, remove backrest width adjustment switch and lumbar support switch.

Installation:

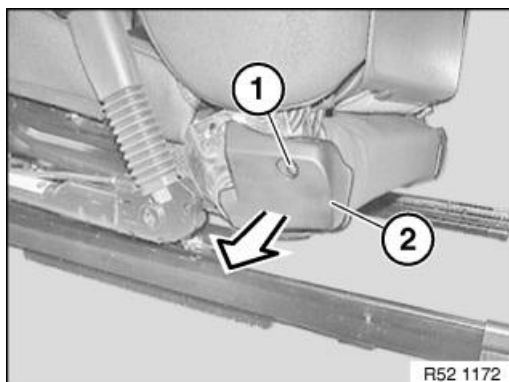
Make sure backrest width adjustment and lumbar support switches are correctly engaged.

52 13 041 Removing and installing/replacing the inner cover on the left or right front seat (normal/manual)



Necessary preliminary tasks:

- Remove [front seat](#)



Release screw (1).

Remove cover (2) from inside of seat.



Necessary preliminary tasks:

- Remove [seat cover](#)

Note:

Heating element is bonded to the foam section and cannot be separated from each other without incurring damage.

Foam section and heating mat must be replaced.

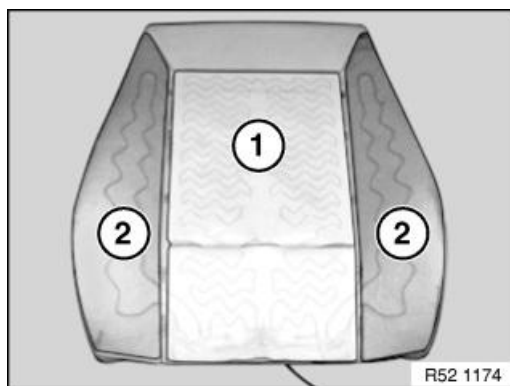


Check new foam part:

- No obvious damage or material defects
- All trim wires present in foam
- No bubbles in foam part
- No dirt contamination on foam or residual foam
- Pay attention to foam part on left and right

Check new heating mat:

- No obvious damage or material defects
- All tear-off film pieces present
- Note variant by examining label on cable



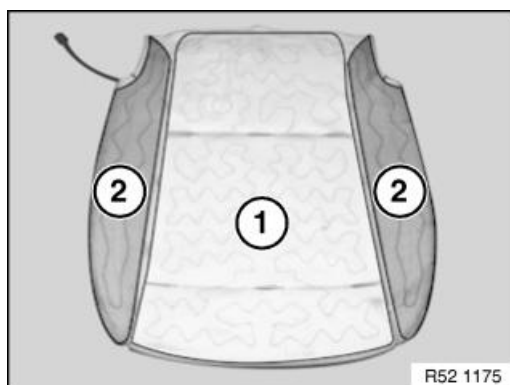
Guide cable for backrest heating through foam hole.

Stick on main section (1):

- Pull adhesive film pieces off main section (1) and stick to upper edge of main section foam until flush

Stick on bead section (2):

- Pull adhesive film pieces off bead section (2) and stick on heating mat along bead section edge.
- Press down evenly in outwards direction



Guide cable for seat heating through foam hole.

Stick on main section (1):

- Pull adhesive film pieces off main section (1) and stick to upper edge of main section foam until flush

Stick on bead section (2):

- Pull adhesive film pieces off bead section (2) and stick on heating mat along bead section edge.
- Press down evenly in outwards direction



Check laying of heating mats:

- Heating mats laid without folds
- Heating mats correctly positioned
- All bonding surfaces stuck on

Note:

Carry out [function check](#).



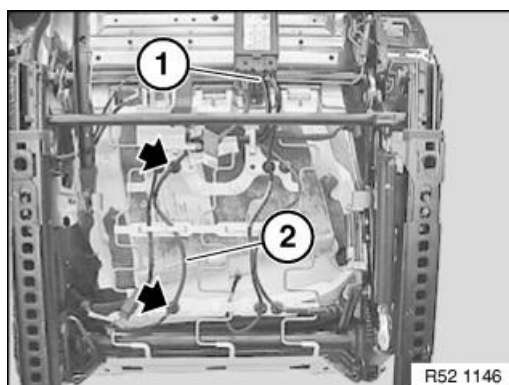
Special tools required:

- [52 0 050](#)



Necessary preliminary tasks:

- Remove [front seat](#)
- Remove [side airbag](#) in front seat
- Remove [guide sleeves](#)



Version with seat heating only:

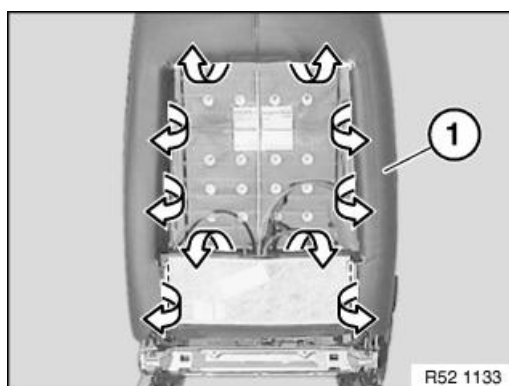
Unfasten plug connection (1) and disconnect.

Disconnect cable straps.

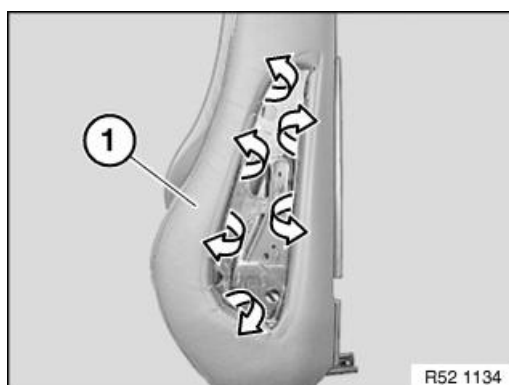
Release wiring harness (2) from cable clips on seat mechanism.

Attention!

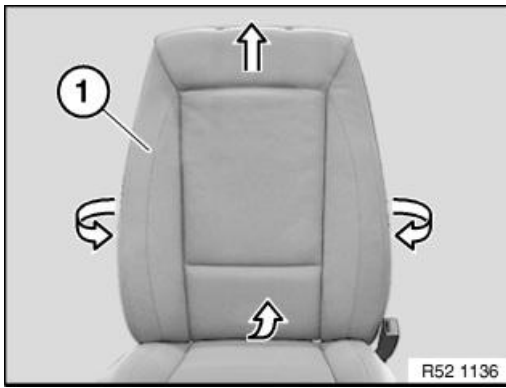
Feed the wiring harness carefully through the seat and backrest mechanism as the edges of the frame can be sharp.



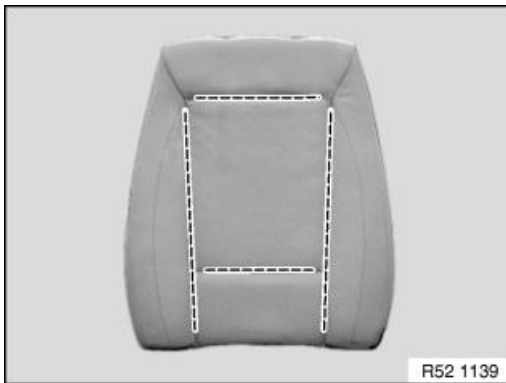
Detach backrest cover (1) from backrest frame.



Pull backrest cover (1) off hook and loop fastener on the backrest frame.



Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.

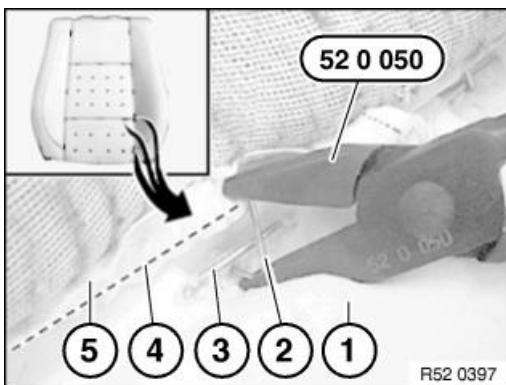


Release all clamps in marked area.

Remove backrest cover from padding.

Note:

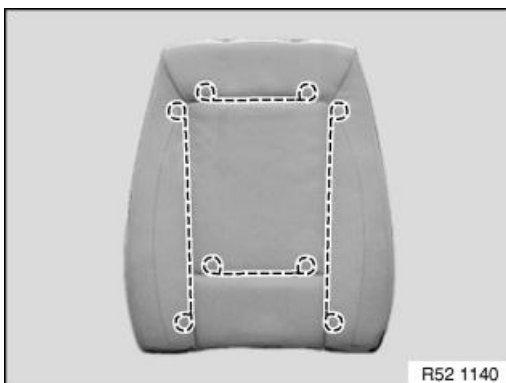
Remove all remnants of clamps from backrest cover and upholstery.



Installation note:

Bend new clamp (2) with special tool [52 0 050](#).

1. Upholstery
2. Clamp
3. Trim wire in upholstery
4. Trim wire in backrest cover
5. Backrest cover



Replacement of backrest cover:

Pull trim wires out of backrest cover.

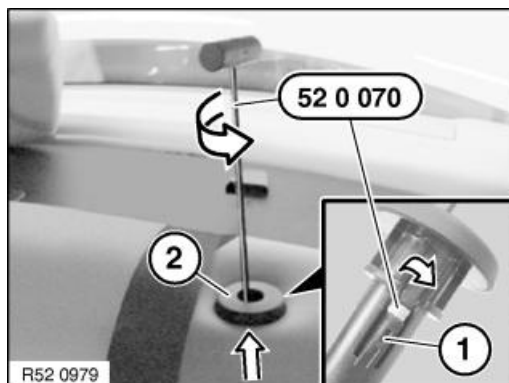
Cut new backrest cover to size and insert trim wires.

**Special tools required:**

- [52 0 070](#)

**Necessary preliminary work:**

- Remove [front head restraint](#)

**Note:**

Guide sleeves cannot be removed without being damaged.

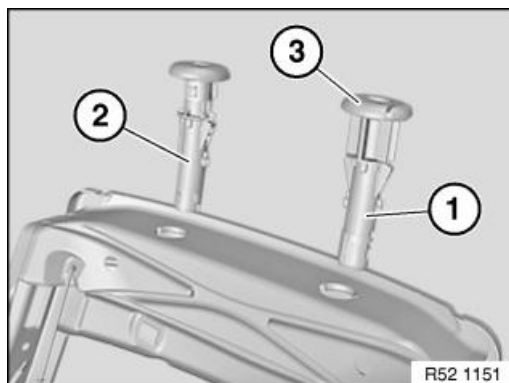
Guide sleeves with pushbuttons have two retaining lugs.

Insert special tool [52 0 070](#) into guide hole of sleeve (2) up to upper area of retaining lug.

Feed release tongue of special tool into gap on retaining lug (1).

Turn special tool to release sleeve (2) and pull out towards top.

If necessary, on guide sleeves with pushbuttons, unlock the second retaining lug with a screwdriver.

**Installation note:**

Replace guide sleeves and install as follows:

1. Guide sleeve with pushbutton (3) and two retaining lugs, left
2. Guide sleeve without pushbutton and one retaining lug, right



Operation is described in:

Replacing [backrest cover for left or right front seat](#).



Operation is described in:

- Replacing [seat cover on left or right front seat](#).



Warning!

US/CDN front passenger seat (with CIS mat) only:

If CIS mat or padding is defective, both parts must be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

Seat heating is integrated in the CIS mat and is stuck to the padding over the full surface.



Important!

The CIS mat must be enabled after each installation work.

Enabling seat occupancy detector (CIS mat):

- Connect [BMW programming system](#)
- Encode airbag control unit
- Delete fault memory if necessary

**Special tools required:**

- [52 0 050](#)

**Necessary preliminary tasks:**

- Remove [front seat](#)
- Remove [outer cover](#) on front seat

**Warning!**

US/CDN front passenger seat (with CIS mat) only:

If CIS mat or padding is defective, both parts must be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

**Warning!**

US/CDN front passenger seat (with CIS mat) only:

To avoid damaging the CIS mat, it is essential to carry out the following operations with extra care.

**Important!**

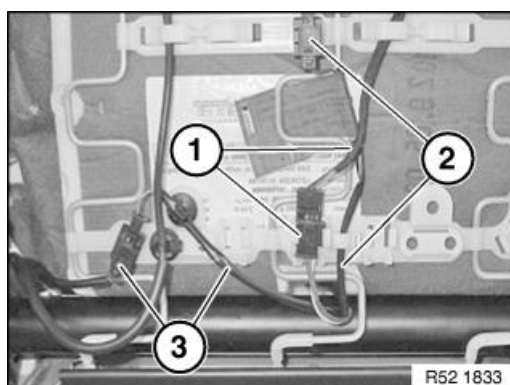
Risk of damage on sharp-edged seat mechanism.

Guide all cables carefully through seat and backrest mechanism.

Make sure cable is routed without kinks and tension.

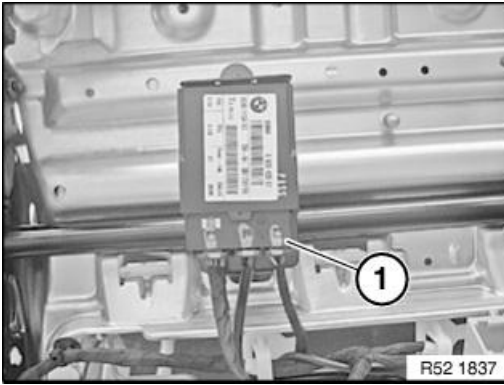
Make sure plug connections are correctly locked.

Make sure connectors are correctly seated in latch mechanisms.

**Version with seat occupancy detection (CIS mat) only:**

1. Data line CIS
2. Earth cable, seat pan
3. Earth cable, backrest frame

Unlock all plug connections and disconnect.

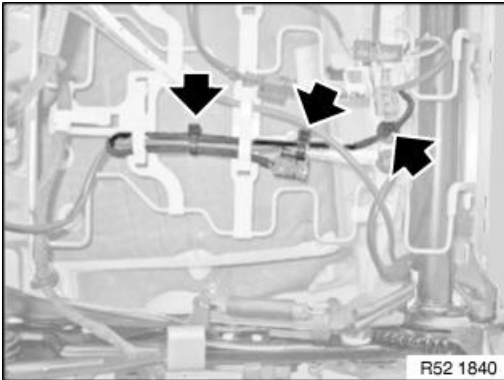


Version with seat heating only:

Unlock plug connection (1) for seat heating and disconnect.

Unfasten cable strap.

Disengage wiring harness from cable clips (flexmat).

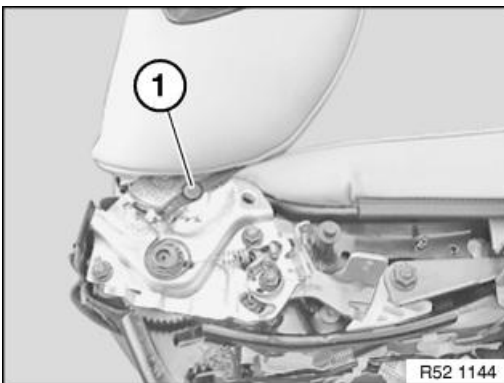


Version with seat occupancy detector without seat heating (CIS mat) only:

Seat heating is integrated in the CIS mat and is stuck to the upholstery over the full surface.

Lay cable for seat heating as shown to flexmat and secure with cable strap.

Secure connector with cable strap to cable.

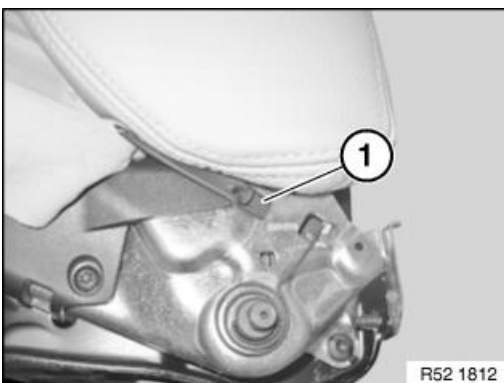


Vehicle exterior:

Lever clamp (1) out of seat cover.

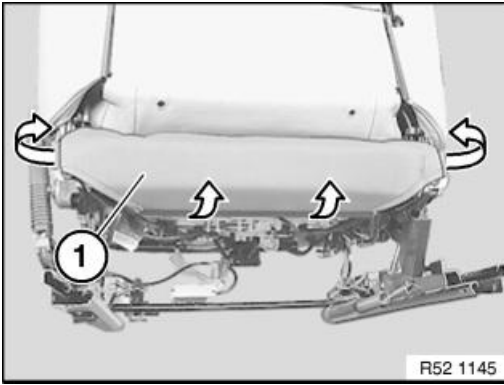
Installation note:

If necessary, replace faulty clip.

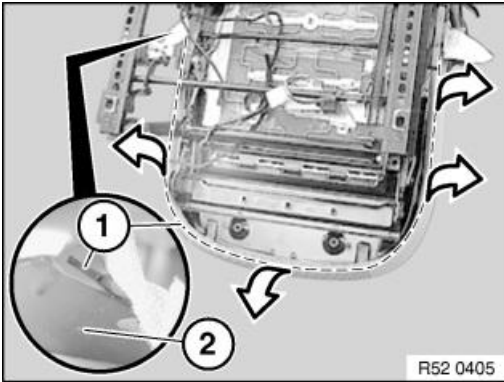


Tunnel side:

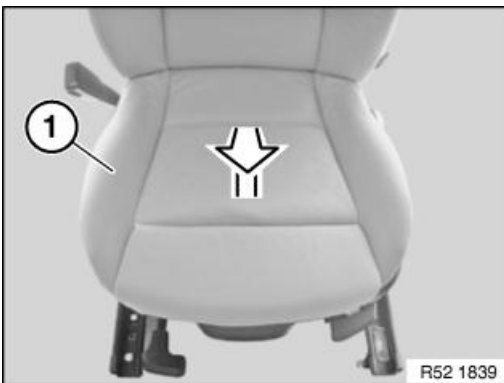
Disengage cover fastener (1) from belt deflector trim.



Detach seat cover (1) from seat frame.



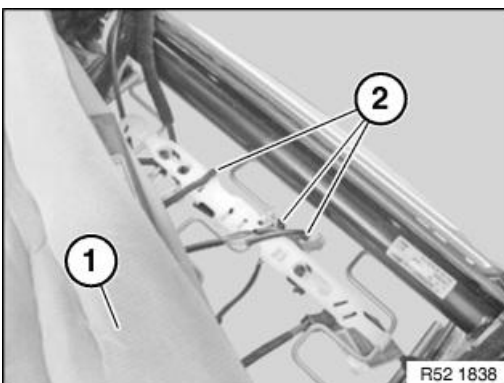
Pull out cover welt (1) completely from seat frame (2).



Remove seat cover (1) with padding towards front/top. **Important!**
Carefully slide bracing cloth with foam through backrest gap and seat structure.

Installation note:

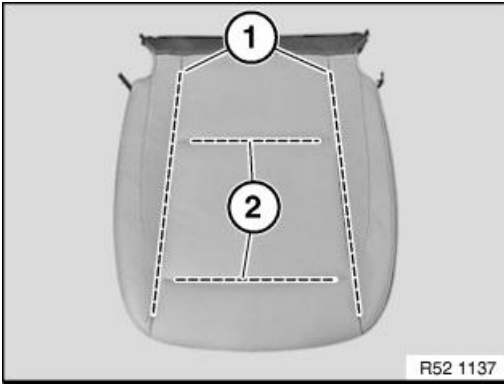
Slide foam completely through backrest gap and seat structure. Make sure foam and bracing cloth are correctly fitted.



Version with seat heating and/or with seat occupancy detector (CIS mat):

Pull seat cover (1) with padding forward a little and feed wiring harnesses (2) out.

Remove seat cover (1) with padding towards front/top.



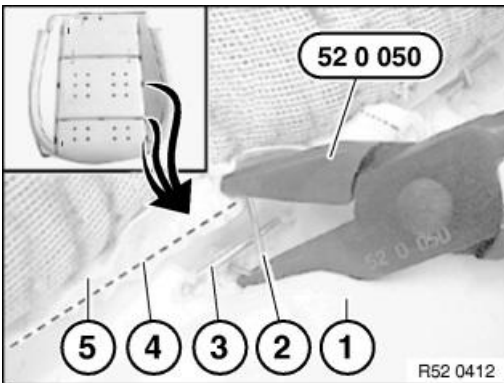
Carefully detach all retainers in side area from OKE strips (1).

Carefully turn seat cover over and release clamps from OKE strips (2).

Remove seat cover from upholstery.

Important!

Remove all remnants of clips from seat cover and upholstery (CIS mat).



Installation note:

Bend new clamps (2) with special tool [52 0 050](#) .

1. Upholstery
2. Clamp
3. Trim wire in upholstery
4. OKE strip in cover
5. Seat cover

65 77 604 Replacing sensor mat (CIS mat) for front passenger seat occupancy detector



Warning!

Note [airbag safety regulations](#)!

Incorrect handling can activate airbag and cause injury.



Warning!

Only US and Canadian version of front passenger seat (with CIS mat):

The CIS mat can only be removed in conjunction with the padding from the seat cover.

If CIS mat or padding is defective, both parts may only be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

After fitting the seat cover, the CIS mat must be enabled with the [BMW programming system](#).

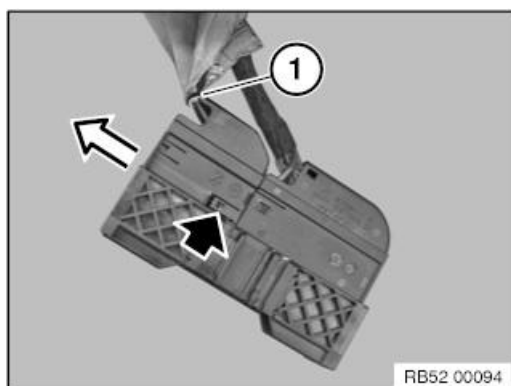


Procedure for replacing the CIS mat together with the upholstery is described in:

- Remove [padding for front seat](#)



The work scope with CIS mat is different for the following work steps:



Cut open cable strap (1).

Lift locking tab and pull the connector out of the side of the connector housing.

Installation note:

Replace cable tie (1).

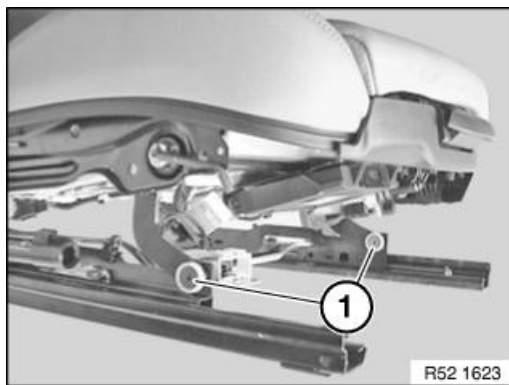
Connector is encoded against incorrect assembly.



Enabling seat occupancy detector (CIS mat):

- Connect [BMW programming system](#)
- Encode airbag control unit
- Delete fault memory if necessary

52 14 ... Additional work in event of faulty drive/gearing for longitudinal adjustment

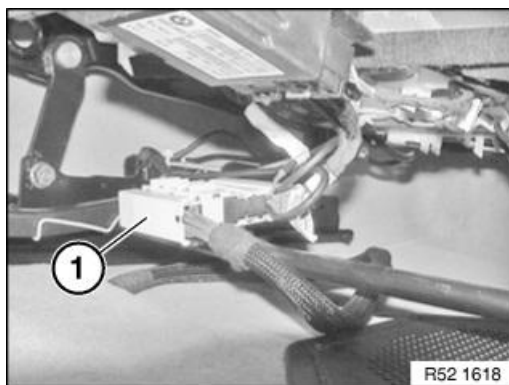


Release screws (1) of swinging arms for seat height adjustment.

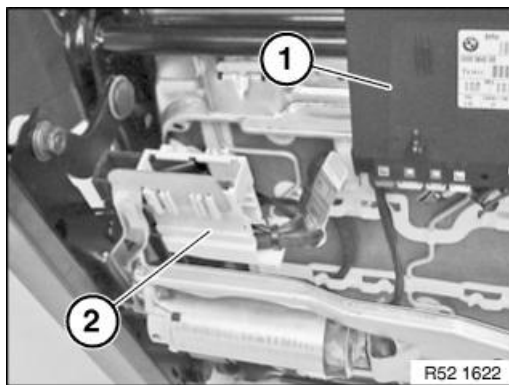
Installation note:

Carefully bend side section back and feed swinging arm out of top rail.

Tilt front seat back.

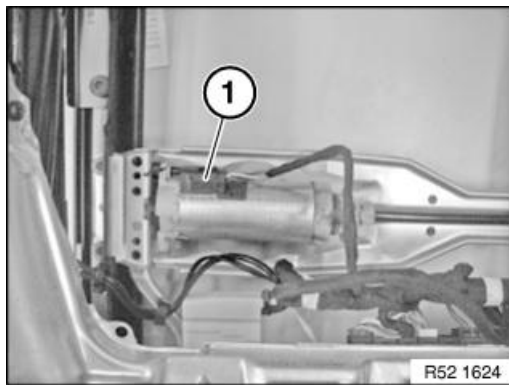


Unfasten plug connection (1) and disconnect.

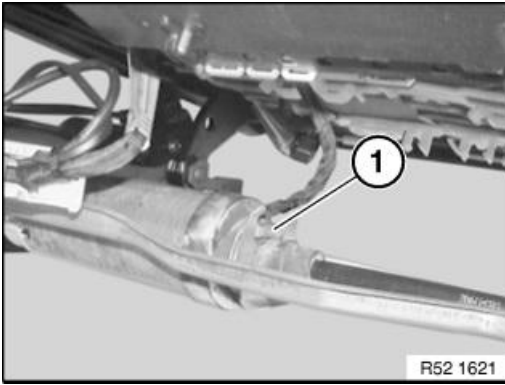


Unclamp central connector (2) from seat mechanism.

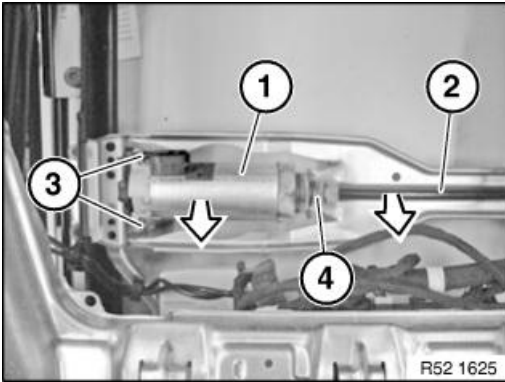
Unclip [control units](#) (1).



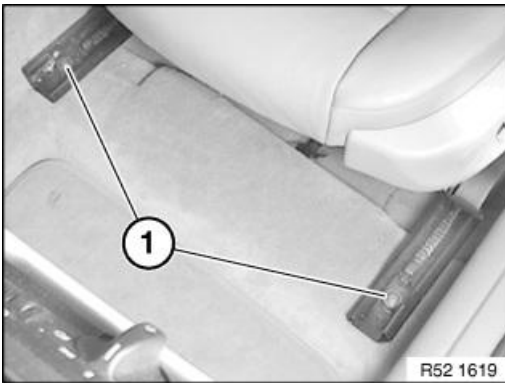
Unfasten plug connection (1) and disconnect.



Bend metal tab (1) open.



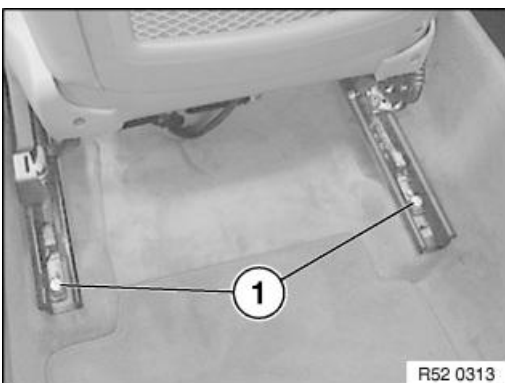
Lift powertrain (1) and flex shaft (2) out of guide (4) in direction of arrow.
Detach drive (1) from rubber mounts (3).
Detach flex shaft (3) from powertrain (1).



Release screws (1) at front.



Installation note:
Install new drive for longitudinal seat adjustment.
Move front seat forwards.



Release screws (1) at rear.

Attention!
Cover door sill with protective covers (risk of damage).

Lift out front seat and assemble.

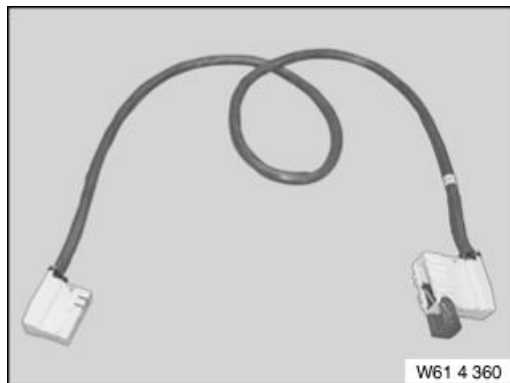


Installation note:

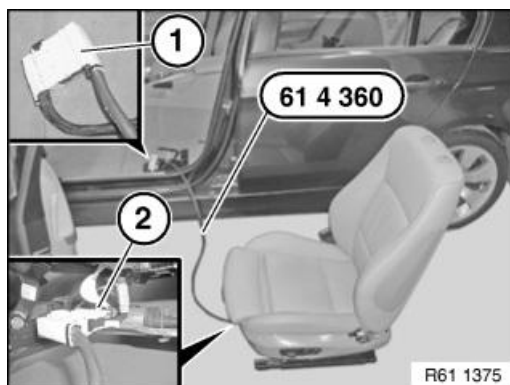
- Make sure flex shaft is correctly fitted on drive
 - Carpet must not get between seat rails and floor panel in area of attachment points (squeaking noises)
 - Powerlok screws must be replaced and must not be reused
 - Powerlok screws are mechanical screw locks with trilobular threads
 - Insert all screws loose to avoid twisting
 - Tighten down all screws to specified torque
- Tightening torque [52 10 1AZ](#).

**Special tools required:**

- [61 4 360](#)

**Note:**

The function check on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable [61 4 360](#).

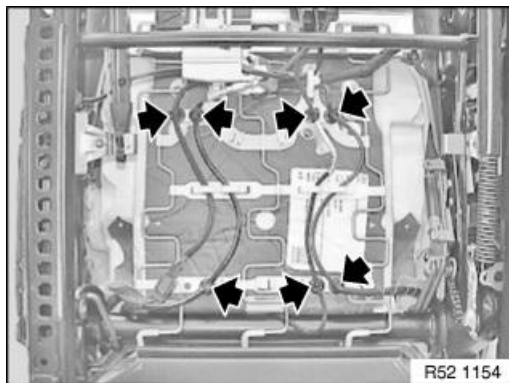
**Use:**

Adapter cable [61 4 360](#) is connected to vehicle wiring harness (1) and removed seat (2).

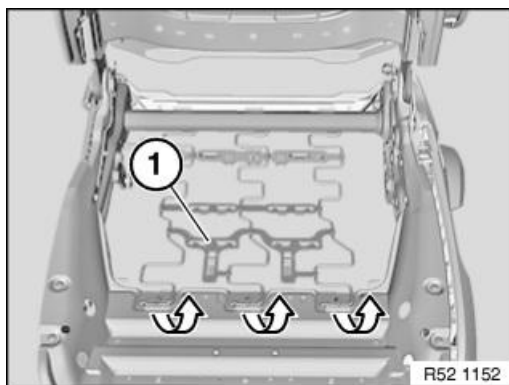


Necessary preliminary tasks:

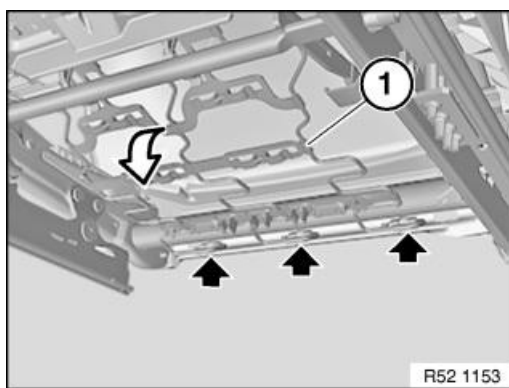
- Remove [padding for front seat](#)



Disconnect all cable straps and detach wiring harnesses from flexmat.



Detach flexmat (1) at front.



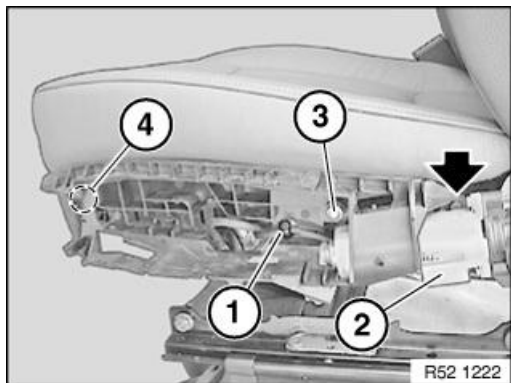
Swivel flexmat (1) down and detach from seat frame

52 14 ... Removing and installing carrier for outer cover on left or right front seat (electric)



Necessary preliminary tasks:

- Remove [outer cover](#)



Detach cable strap (1).

Unlock and disconnect plug connections (2) on servodrive.

Unscrew bolt (3).

Tightening torque [52 10 04AZ](#).

Unclip carrier in marked area and remove.

Installation:

Replace cable strap.

Make sure carrier is correctly seated on seat mechanism.

**Necessary preliminary work:**

- Disconnect [battery earth lead](#)
- Remove [head restraint](#)
- Only E90/E91 from version 09/08 and F25/F26:
Remove [crash-active headrest](#)

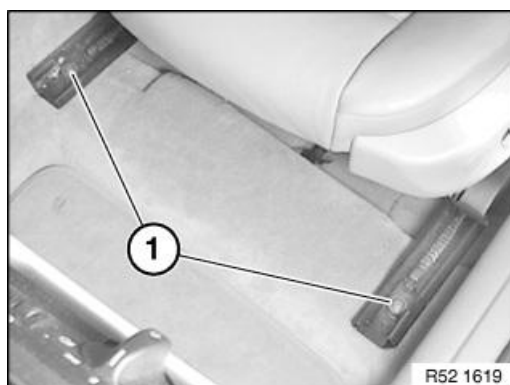
**Important!**

An airbag module and a pyrotechnical seat belt tensioner are installed in the front seat.

Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.

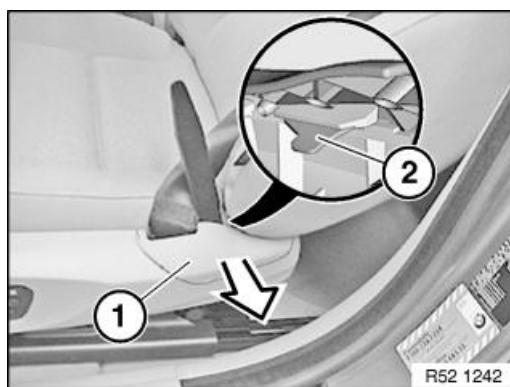
*Installation note:*

- Powerlok screws must be replaced and must not be reused
- Powerlok screws are mechanical screw locks with trilobular threads



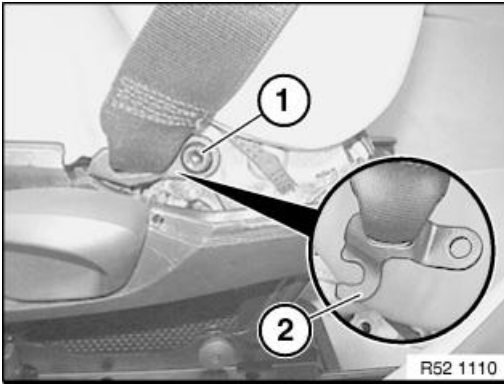
Move seat to upper back position.

Release and dispose of screws (1).



Move seat forwards and position flush with seat rails.

Unclick release tab (2) for belt end fitting trim (1) with plastic wedge.



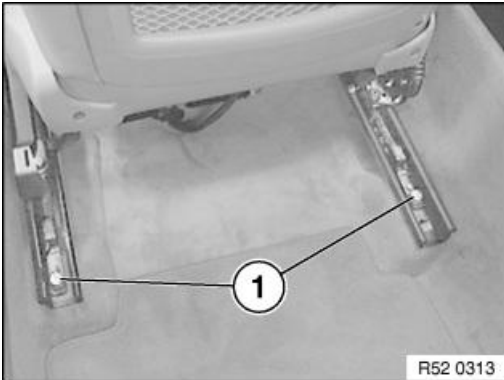
Release screw (1).

Tightening torque [72 11 2AZ](#).

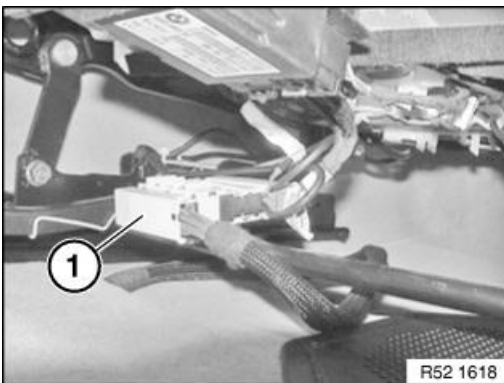
Disconnect end fitting (2).

Installation note:

Make sure end fitting (2) is correctly seated on seat mechanism pin.



Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

Cover door sill with protective covers (risk of damage).

Lift out front seat.



Installation note:

- Carpet must not get between seat rails and floor panel in area of attachment points (groaning noises)
- Replace microencapsulated screws
- Insert all screws loose to avoid twisting
- Tighten down all screws to specified torque

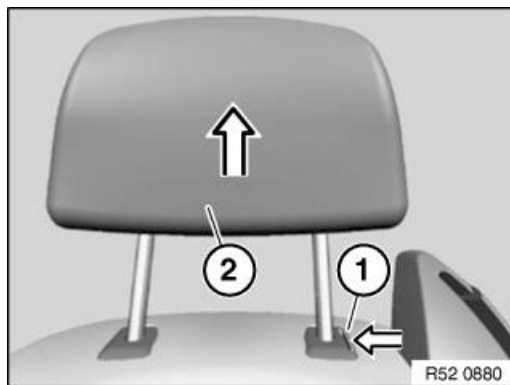
Tightening torque [52 10 1AZ](#).



Warning!

When carrying out further work on the front seat, it is absolutely imperative to observe the [safety regulations](#) on handling airbag modules and pyrotechnical seat belt tensioners

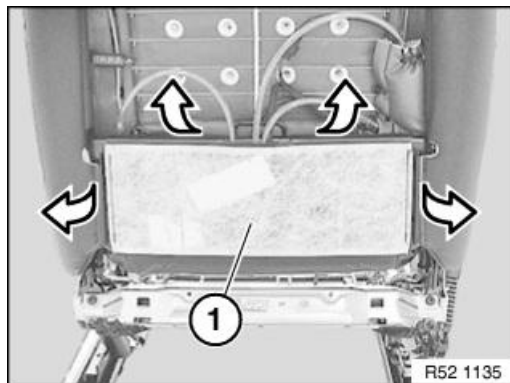
Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.



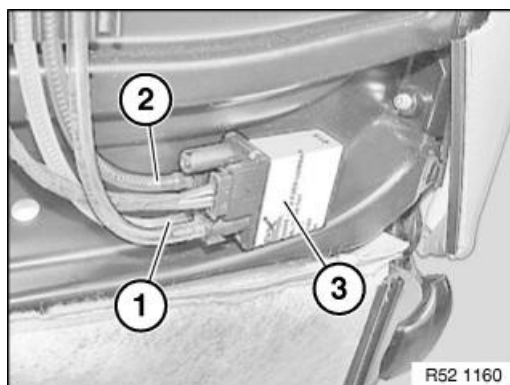
Press catch (1) and lift out head restraint (2).

**Necessary preliminary tasks:**

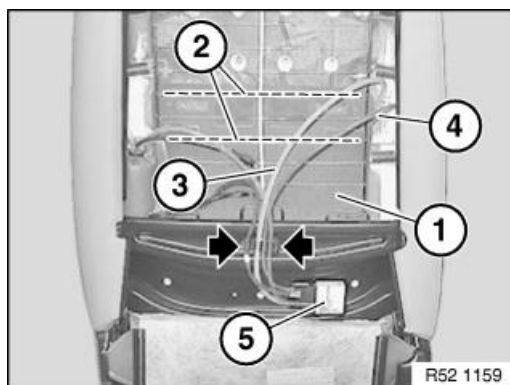
- Remove [rear panel on front seat](#)



Detach backrest cover (1) from backrest frame.



Unlock quick connectors and detach air hoses (1 and 2) from valve body (3). *Note:*
Connections are coded against incorrect assembly.

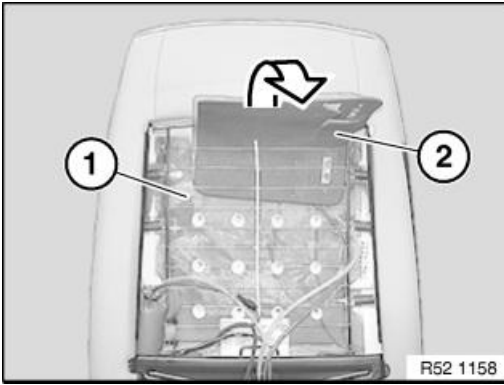


Detach lumbar support (1) from spring wire (2).

Installation note:

Attach lumbar support (1) at third and fifth wire from below.

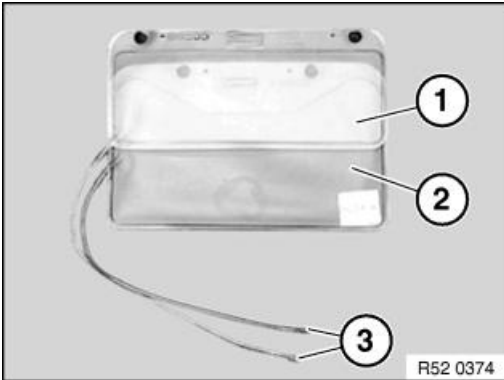
Unclip air hoses (3) and (4) from holder.



Press back padding (1) a little.

Pull out lumbar cushion (2) towards top.

Feed air hoses out of backrest frame and spring wire.



Installation note:

Check lumbar support at top (1) and bottom (2) for damage.

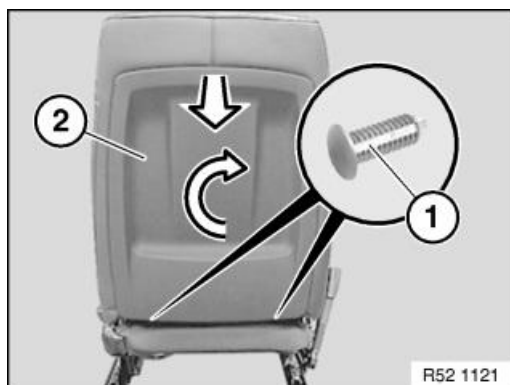
Air hoses (3) must not be kinked.



Installation note:

Carry out [function check](#).

52 13 198 Removing and installing or replacing rear panel on left or right front seat backrest

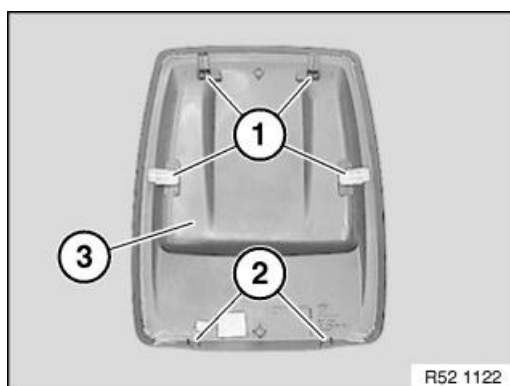


Release clips (1) with diagonal cutting pliers.

Remove rear panel (2) downwards with a rotational movement.

Note:

Remove remnants of clips.



Installation note:

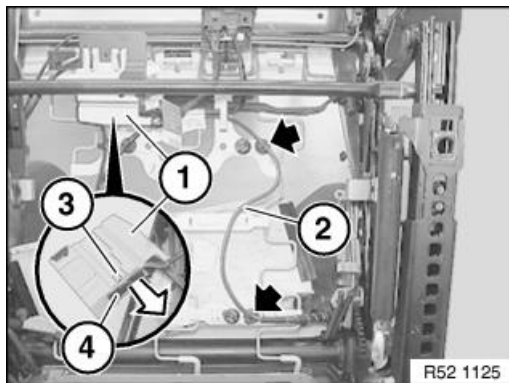
Retaining hooks (1) and bore holes (2) on rear panel (3) must not be damaged.

Replace faulty clips.



Necessary preliminary tasks:

- Remove [front seat](#)
- Remove [rear panel](#) on front seat backrest

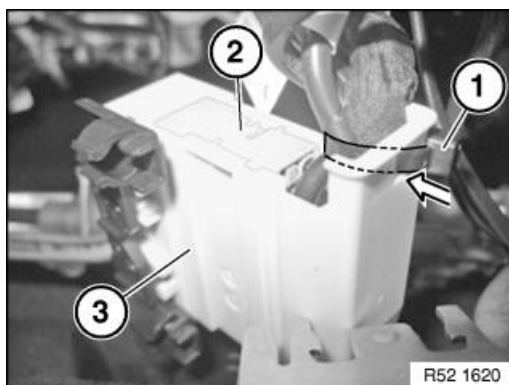


Unclip cable (2).

Release airbag wiring harness (2) from cable holders on seat mechanism.

Cut through cable ties.

Raise release clip (3) and pull plug (4) out of plug housing (1).



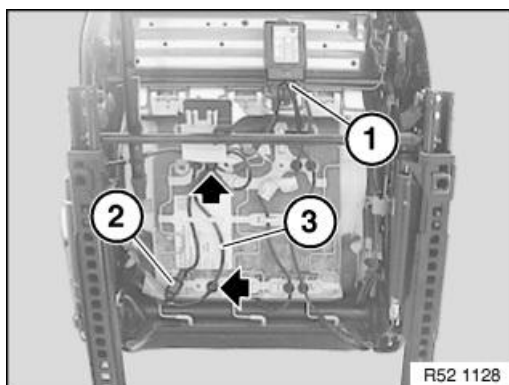
Installation:

Always feed in cable tie (1) at narrow end of plug housing in direction of arrow.

Cables must be secured with insulation under cable tie.

Firmly tighten cable tie (1) to relieve strain. It must not be possible to move the cable.

Make sure plug (2) is correctly locked in plug housing (3).



Unfasten plug connection (1) and disconnect.

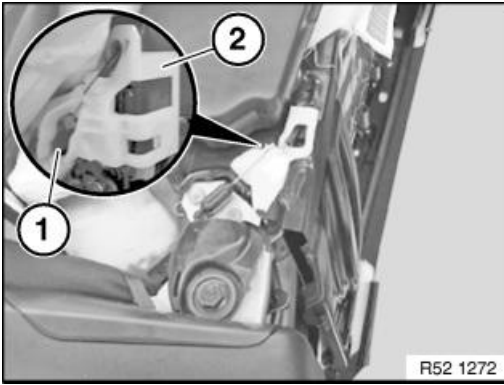
Unclip cable.

Release wiring harness (3) from cable holders on seat mechanism.

Unfasten plug connection (2) and disconnect.

Important!

Feed all wiring harnesses carefully through the seat and backrest mechanism as the edges of the frame can be sharp.



E81, E82, E88, E92 only:

Unhook seat covers on left and right.

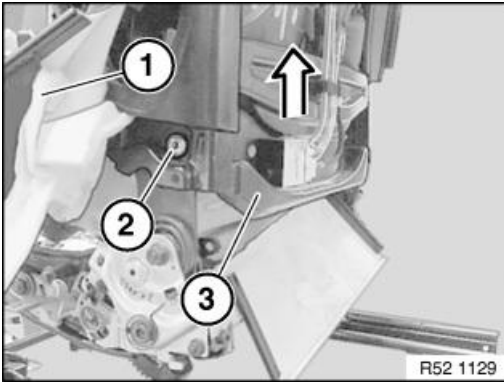
Unclip ball socket (1) from ball head on left and right.

Installation:

Ball socket (1) must snap audibly into place.

Ball socket (1) must be able to move freely on ball head.

Actuate rear catch and remove guide for Bowden cable (2) towards rear with a turning motion.



Unhook backrest cover (1) on left and right.

Release screws (2) on left and right.

Tightening torque [52 10 02AZ](#).

Remove backrest frame (3) completely towards top.



Replacement:

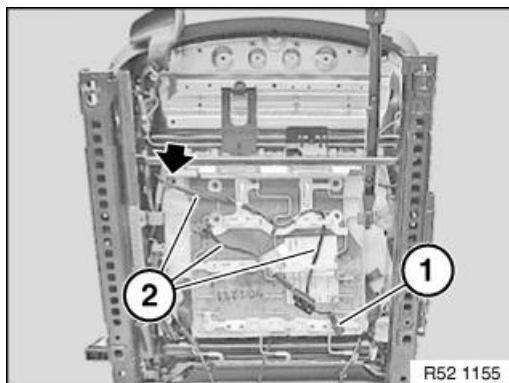
- Remove [backrest cover](#) with padding.

52 13 025 Removing and installing/replacing left or right seat mechanism (normal/manual)



Necessary preliminary tasks:

- Remove [seat cover](#) for front seat
- Remove [backrest frame](#) on front seat
- Remove [seat belt tensioner](#)
- Remove [control unit for seat heating](#)



Disconnect all cable straps.

Unlock and remove connector housing (1) from flexmat.

Release seat wiring harness (2) from cable clips on seat mechanism.



Replacement only:

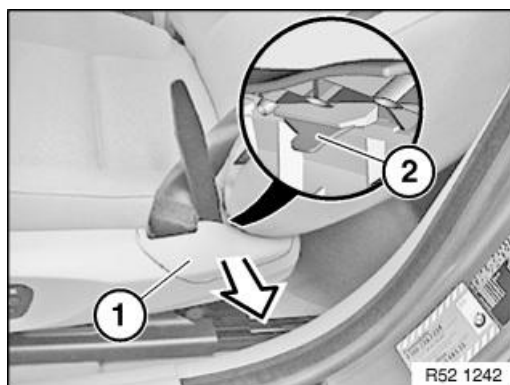
The seat mechanism is supplied completely with corresponding drive units.

52 14 040 Removing and installing/replacing outer cover on left or right front seat (normal/electric)



Necessary preliminary tasks:

Remove [front seat](#).

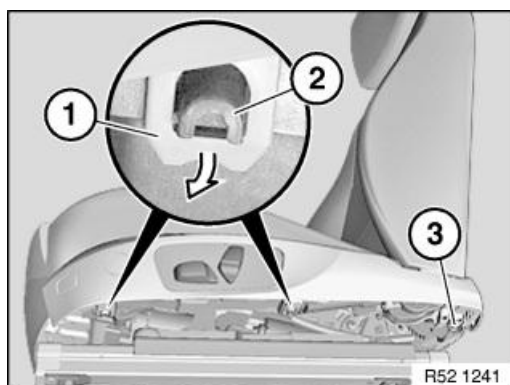


Note:

Image shows on installed seat by way of example.

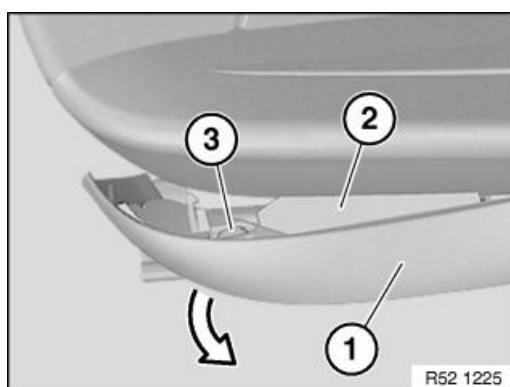
Move backrest to full rearward position.

Unclip release tab (2) for belt end fitting trim (1) with plastic wedge.



Release screw or latch mechanism (3).

Lever tabs (1) out of holders (2).

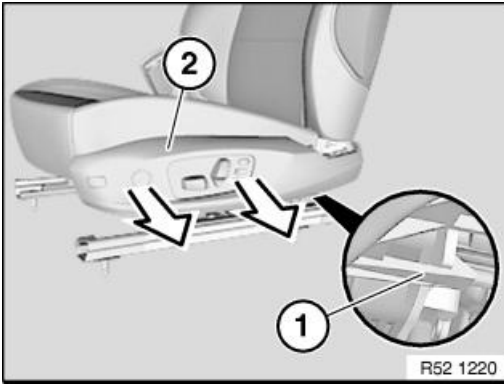


Important!

Cover (1) with support section (2) could come free of the seat mechanism in the front area.

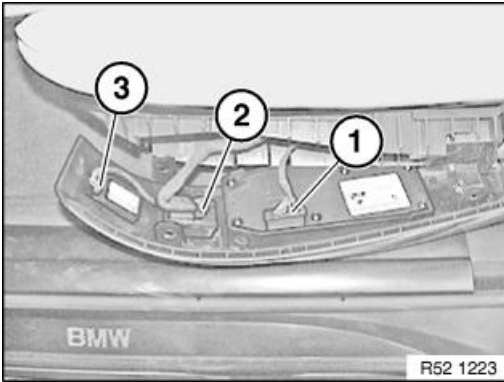
Carefully pull cover (1) with support section (2) off the seat mechanism in the front area.

Press release tab (3) with a screwdriver and disconnect the cover from the support section.



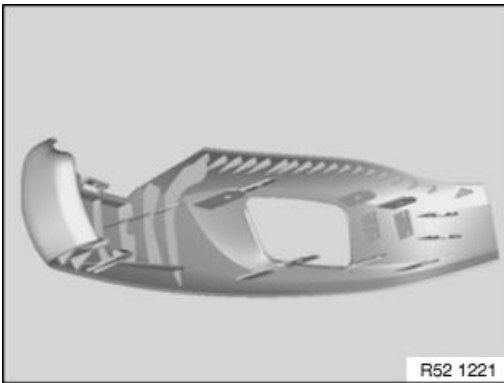
Lift and unlock tab (1).

Reach between seat cushion and cover (2) and pull cover off the support section.



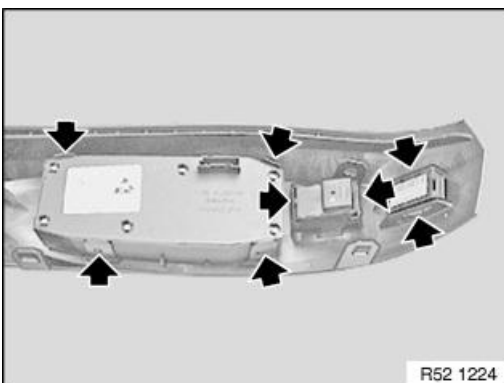
Unlock and disconnect plug connections:

1. Operating unit
2. Lumbar support
3. Seat backrest width adjustment



Installation note:

Retaining clips and tabs of the cover must not be damaged.



Replacement only:

Unlock latch mechanisms of the switch housings and remove switch from cover.

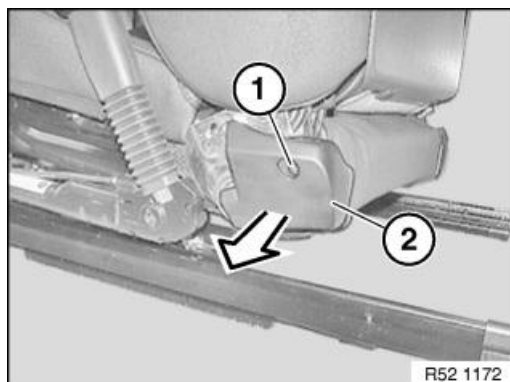
If necessary, cut out missing apertures for lumbar support using a suitable tool.

52 13 041 Removing and installing/replacing the inner cover on the left or right front seat (normal/manual)



Necessary preliminary tasks:

- Remove [front seat](#)



Release screw (1).

Remove cover (2) from inside of seat.



Necessary preliminary tasks:

- Remove [seat cover](#)

Note:

Heating element is bonded to the foam section and cannot be separated from each other without incurring damage.

Foam section and heating mat must be replaced.

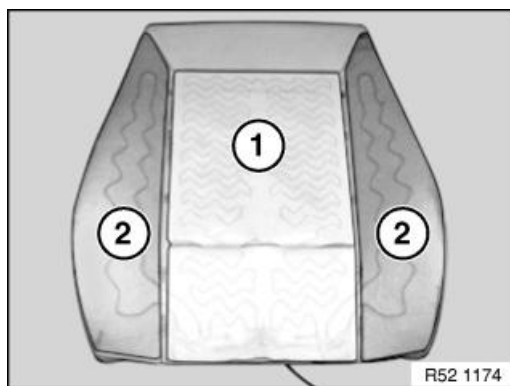


Check new foam part:

- No obvious damage or material defects
- All trim wires present in foam
- No bubbles in foam part
- No dirt contamination on foam or residual foam
- Pay attention to foam part on left and right

Check new heating mat:

- No obvious damage or material defects
- All tear-off film pieces present
- Note variant by examining label on cable



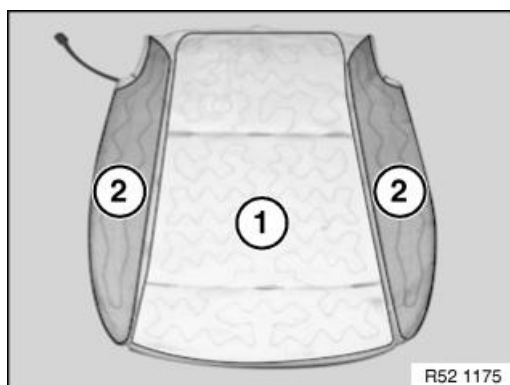
Guide cable for backrest heating through foam hole.

Stick on main section (1):

- Pull adhesive film pieces off main section (1) and stick to upper edge of main section foam until flush

Stick on bead section (2):

- Pull adhesive film pieces off bead section (2) and stick on heating mat along bead section edge.
- Press down evenly in outwards direction



Guide cable for seat heating through foam hole.

Stick on main section (1):

- Pull adhesive film pieces off main section (1) and stick to upper edge of main section foam until flush

Stick on bead section (2):

- Pull adhesive film pieces off bead section (2) and stick on heating mat along bead section edge.
- Press down evenly in outwards direction



Check laying of heating mats:

- Heating mats laid without folds
- Heating mats correctly positioned
- All bonding surfaces stuck on

Note:

Carry out [function check](#).



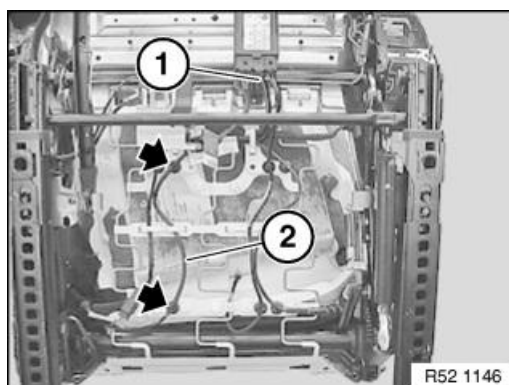
Special tools required:

- [52 0 050](#)



Necessary preliminary tasks:

- Remove [front seat](#)
- Remove [side airbag](#) in front seat
- Remove [guide sleeves](#)



Version with seat heating only:

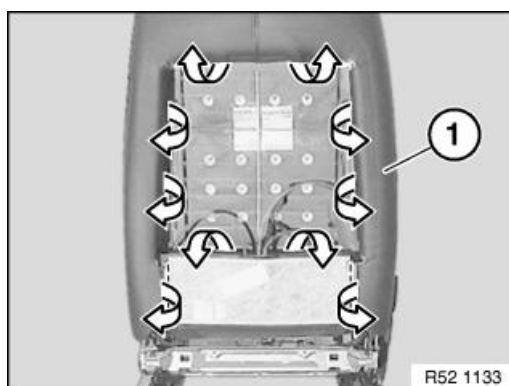
Unfasten plug connection (1) and disconnect.

Disconnect cable straps.

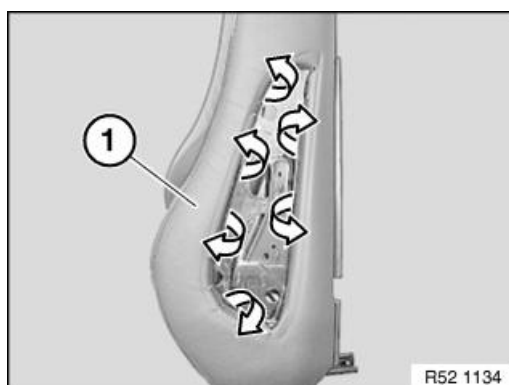
Release wiring harness (2) from cable clips on seat mechanism.

Attention!

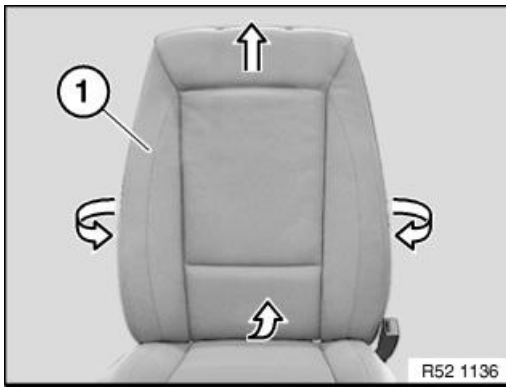
Feed the wiring harness carefully through the seat and backrest mechanism as the edges of the frame can be sharp.



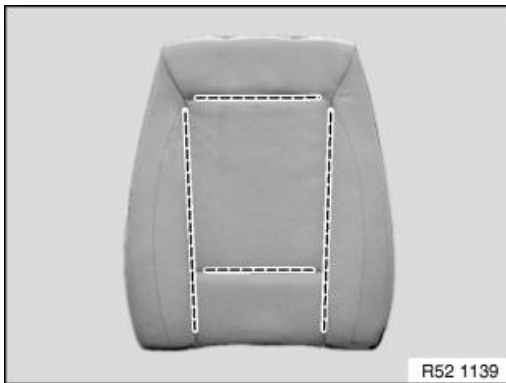
Detach backrest cover (1) from backrest frame.



Pull backrest cover (1) off hook and loop fastener on the backrest frame.



Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.

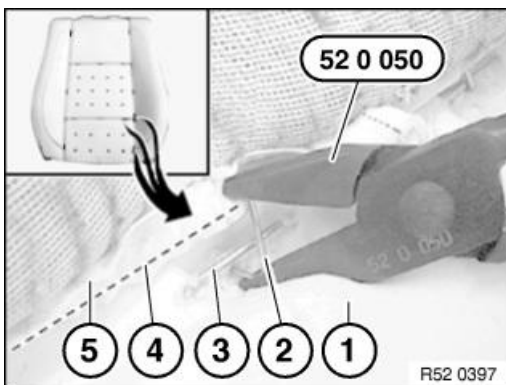


Release all clamps in marked area.

Remove backrest cover from padding.

Note:

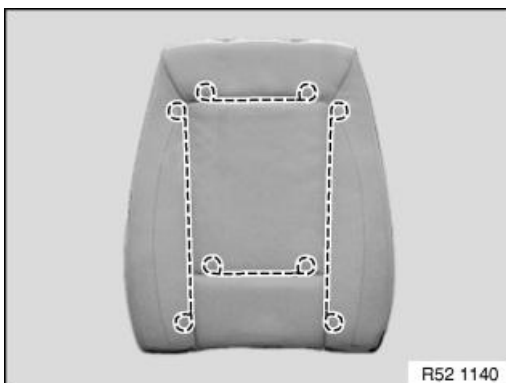
Remove all remnants of clamps from backrest cover and upholstery.



Installation note:

Bend new clamp (2) with special tool [52 0 050](#).

1. Upholstery
2. Clamp
3. Trim wire in upholstery
4. Trim wire in backrest cover
5. Backrest cover



Replacement of backrest cover:

Pull trim wires out of backrest cover.

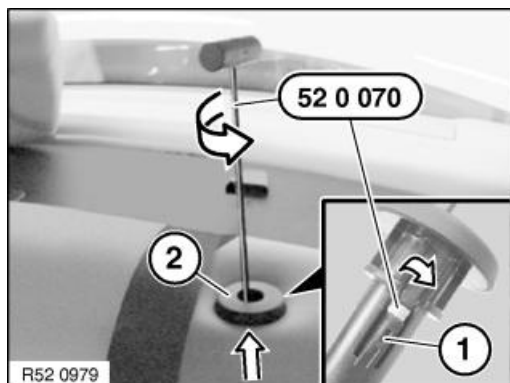
Cut new backrest cover to size and insert trim wires.

**Special tools required:**

- [52 0 070](#)

**Necessary preliminary work:**

- Remove [front head restraint](#)

*Note:*

Guide sleeves cannot be removed without being damaged.

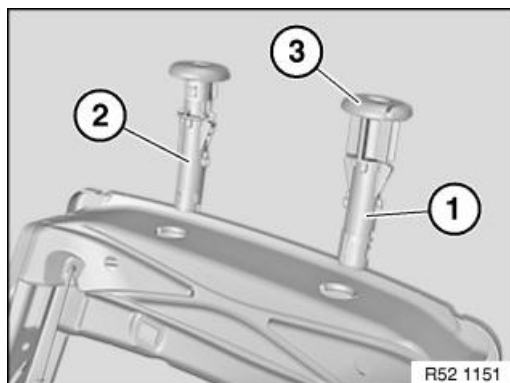
Guide sleeves with pushbuttons have two retaining lugs.

Insert special tool [52 0 070](#) into guide hole of sleeve (2) up to upper area of retaining lug.

Feed release tongue of special tool into gap on retaining lug (1).

Turn special tool to release sleeve (2) and pull out towards top.

If necessary, on guide sleeves with pushbuttons, unlock the second retaining lug with a screwdriver.

*Installation note:*

Replace guide sleeves and install as follows:

1. Guide sleeve with pushbutton (3) and two retaining lugs, left
2. Guide sleeve without pushbutton and one retaining lug, right



Operation is described in:

Replacing [backrest cover for left or right front seat](#).



Operation is described in:

- Replacing [seat cover on left or right front seat](#).



Warning!

US/CDN front passenger seat (with CIS mat) only:

If CIS mat or padding is defective, both parts must be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

Seat heating is integrated in the CIS mat and is stuck to the padding over the full surface.



Important!

The CIS mat must be enabled after each installation work.

Enabling seat occupancy detector (CIS mat):

- Connect [BMW programming system](#)
- Encode airbag control unit
- Delete fault memory if necessary

**Special tools required:**

- [52 0 050](#)

**Necessary preliminary tasks:**

- Remove [front seat](#)
- Remove [outer cover](#) on front seat

**Warning!**

US/CDN front passenger seat (with CIS mat) only:

If CIS mat or padding is defective, both parts must be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

**Warning!**

US/CDN front passenger seat (with CIS mat) only:

To avoid damaging the CIS mat, it is essential to carry out the following operations with extra care.

**Important!**

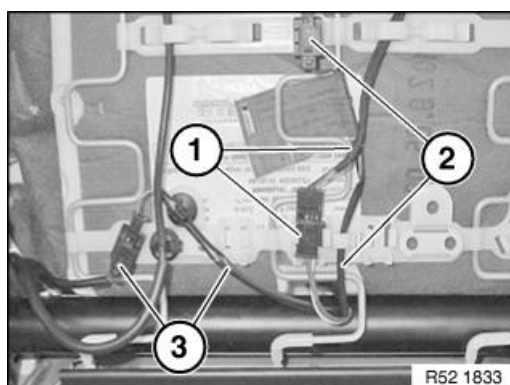
Risk of damage on sharp-edged seat mechanism.

Guide all cables carefully through seat and backrest mechanism.

Make sure cable is routed without kinks and tension.

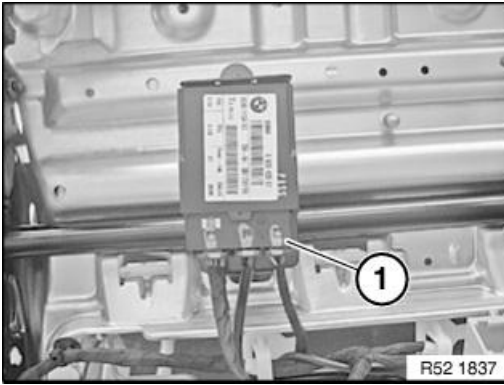
Make sure plug connections are correctly locked.

Make sure connectors are correctly seated in latch mechanisms.

**Version with seat occupancy detection (CIS mat) only:**

1. Data line CIS
2. Earth cable, seat pan
3. Earth cable, backrest frame

Unlock all plug connections and disconnect.

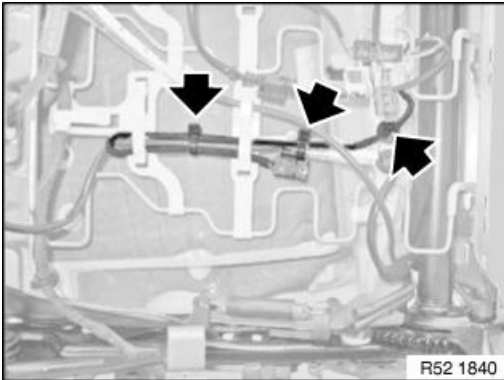


Version with seat heating only:

Unlock plug connection (1) for seat heating and disconnect.

Unfasten cable strap.

Disengage wiring harness from cable clips (flexmat).

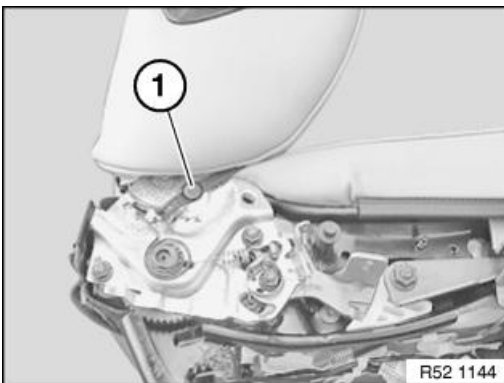


Version with seat occupancy detector without seat heating (CIS mat) only:

Seat heating is integrated in the CIS mat and is stuck to the upholstery over the full surface.

Lay cable for seat heating as shown to flexmat and secure with cable strap.

Secure connector with cable strap to cable.

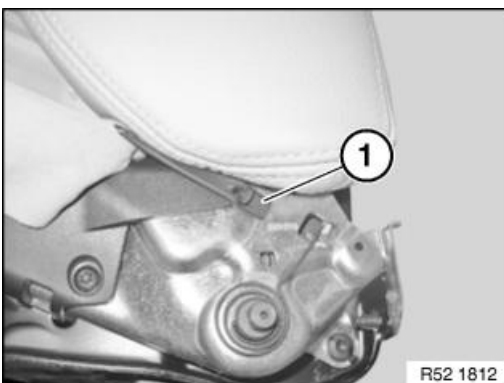


Vehicle exterior:

Lever clamp (1) out of seat cover.

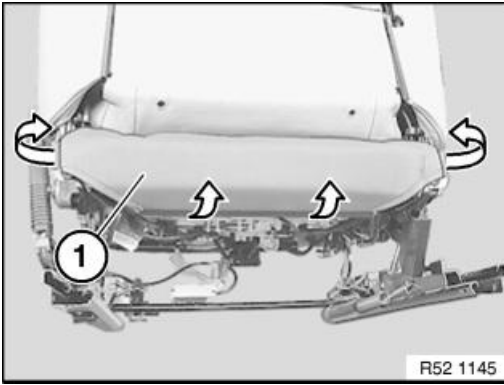
Installation note:

If necessary, replace faulty clip.

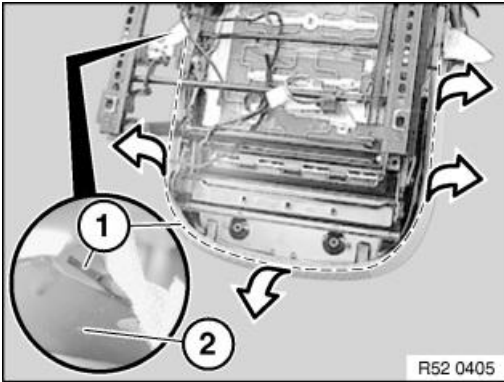


Tunnel side:

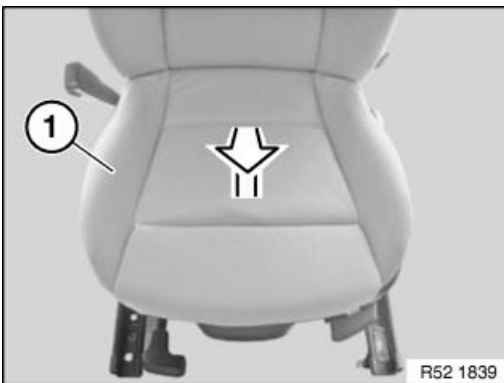
Disengage cover fastener (1) from belt deflector trim.



Detach seat cover (1) from seat frame.



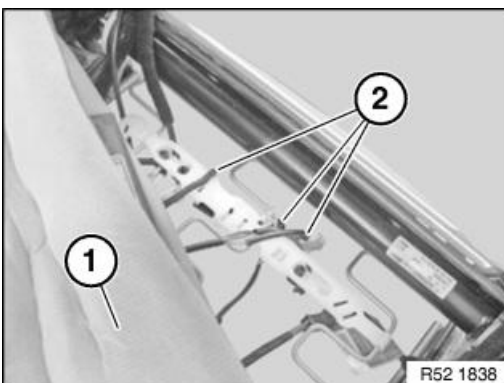
Pull out cover welt (1) completely from seat frame (2).



Remove seat cover (1) with padding towards front/top. **Important!**
Carefully slide bracing cloth with foam through backrest gap and seat structure.

Installation note:

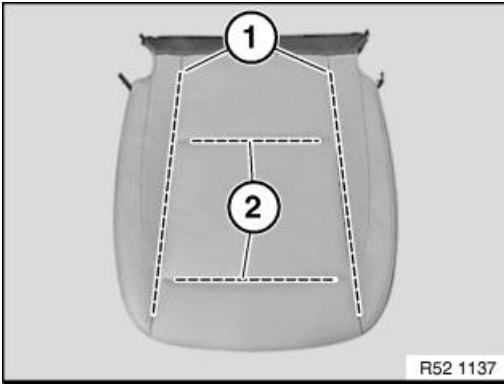
Slide foam completely through backrest gap and seat structure. Make sure foam and bracing cloth are correctly fitted.



Version with seat heating and/or with seat occupancy detector (CIS mat):

Pull seat cover (1) with padding forward a little and feed wiring harnesses (2) out.

Remove seat cover (1) with padding towards front/top.



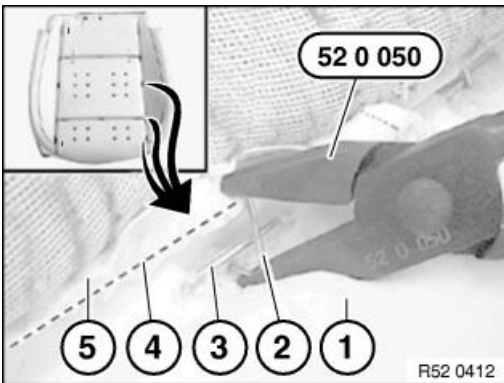
Carefully detach all retainers in side area from OKE strips (1).

Carefully turn seat cover over and release clamps from OKE strips (2).

Remove seat cover from upholstery.

Important!

Remove all remnants of clips from seat cover and upholstery (CIS mat).



Installation note:

Bend new clamps (2) with special tool [52 0 050](#) .

1. Upholstery
2. Clamp
3. Trim wire in upholstery
4. OKE strip in cover
5. Seat cover

65 77 604 Replacing sensor mat (CIS mat) for front passenger seat occupancy detector



Warning!

Note [airbag safety regulations](#)!

Incorrect handling can activate airbag and cause injury.



Warning!

Only US and Canadian version of front passenger seat (with CIS mat):

The CIS mat can only be removed in conjunction with the padding from the seat cover.

If CIS mat or padding is defective, both parts may only be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

After fitting the seat cover, the CIS mat must be enabled with the [BMW programming system](#).

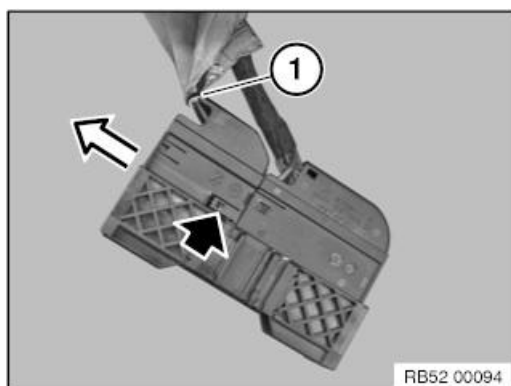


Procedure for replacing the CIS mat together with the upholstery is described in:

- Remove [padding for front seat](#)



The work scope with CIS mat is different for the following work steps:



Cut open cable strap (1).

Lift locking tab and pull the connector out of the side of the connector housing.

Installation note:

Replace cable tie (1).

Connector is encoded against incorrect assembly.

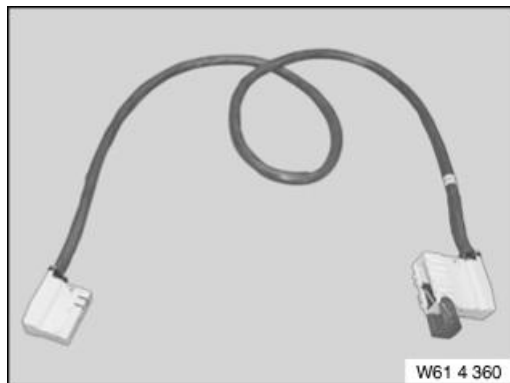


Enabling seat occupancy detector (CIS mat):

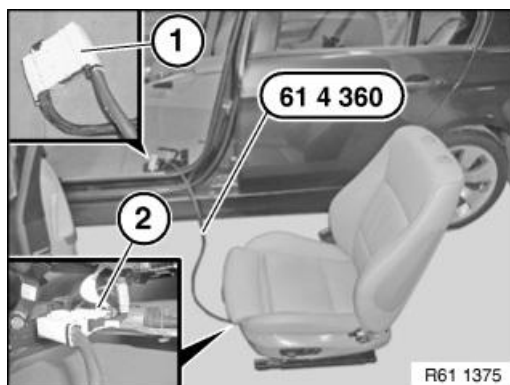
- Connect [BMW programming system](#)
- Encode airbag control unit
- Delete fault memory if necessary

**Special tools required:**

- [61 4 360](#)

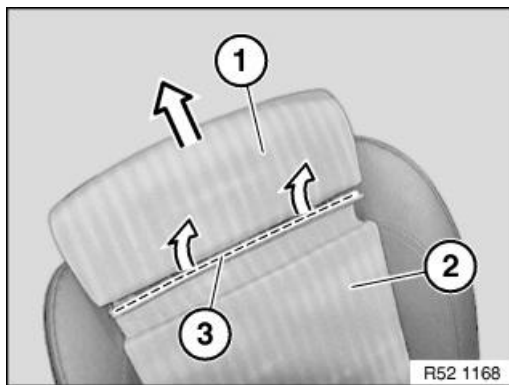
**Note:**

The function check on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable [61 4 360](#).

**Use:**

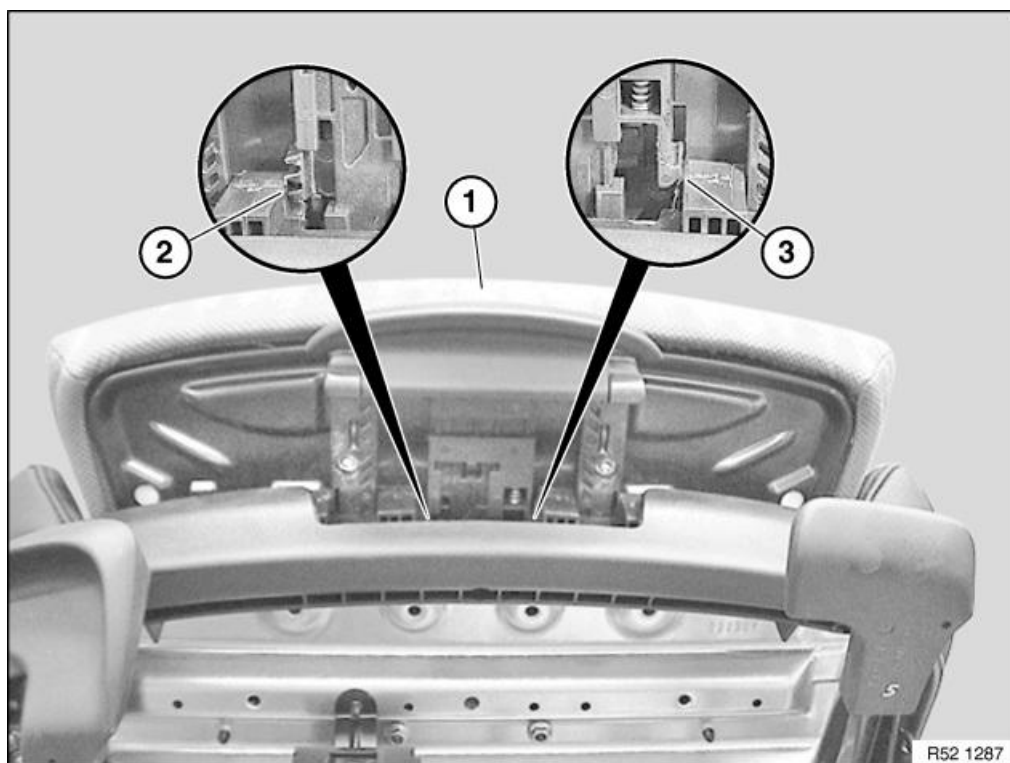
Adapter cable [61 4 360](#) is connected to vehicle wiring harness (1) and removed seat (2).

52 15 050 Remove or install left or right thigh support from/on the front seat (sport/manual)



Unlock and move thigh support (1) as far forward as possible.

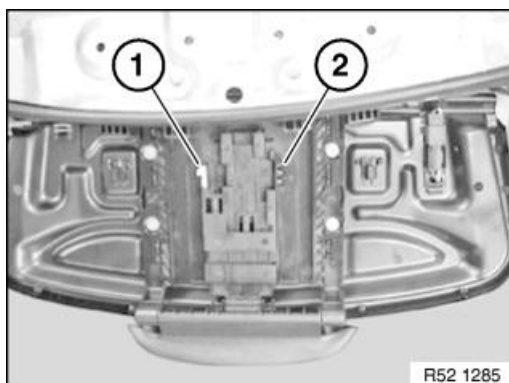
Lever out the welt (3) from the seat cover (2) from the thigh support (1).



Do not completely extend the thigh support to the end stop.

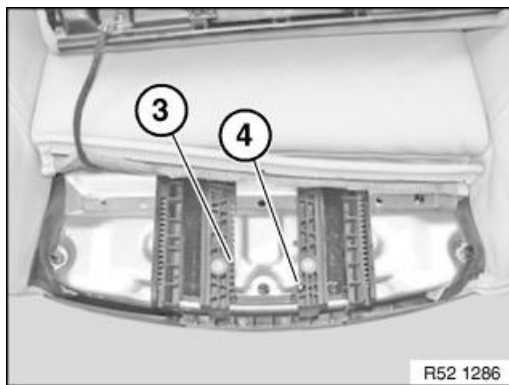
Keep Actuation (1) pressed to unlock the centering (2).

Carefully raise the end stop (3) for the thigh support with a screwdriver and pull the thigh support toward the front out of the guide rails at the same time.



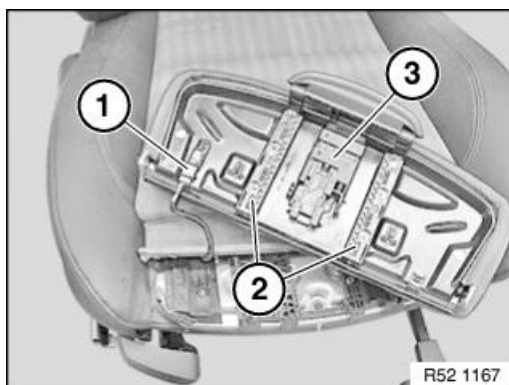
View of thigh support mechanism:

1. End stop for thigh support
2. Locking mechanism for the thigh support



View of seat frame mechanism:

- 3. Guide rail on seat with depth retainer
- 4. Guide rail on seat with end stop

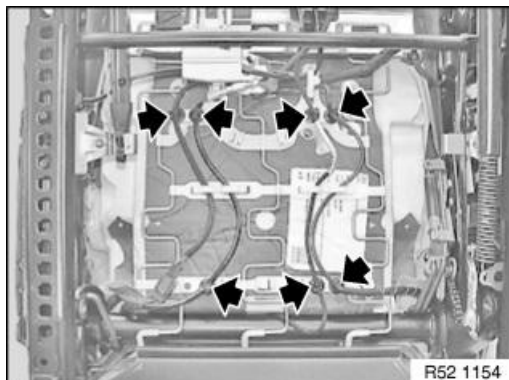


Unfasten plug connection (1) and disconnect. *Note:*
Check guide rails (2) and adjusting mechanism (3) for damage.

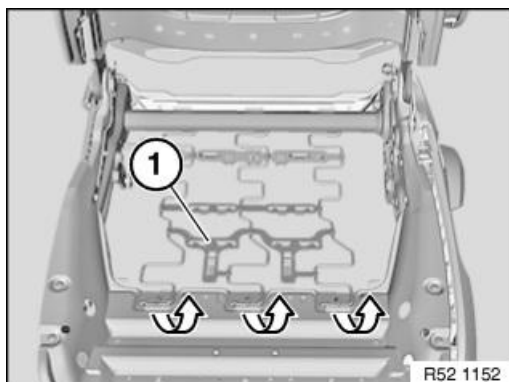


Necessary preliminary tasks:

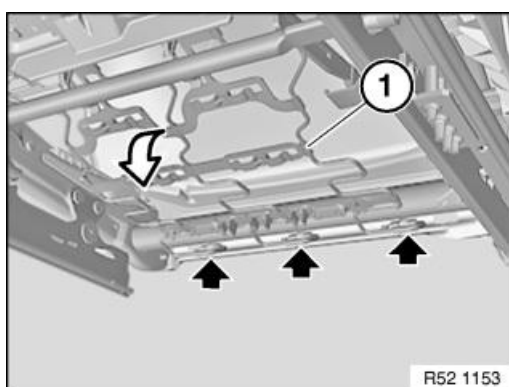
- Remove [padding for front seat](#)



Disconnect all cable straps and detach wiring harnesses from flexmat.



Detach flexmat (1) at front.



Swivel flexmat (1) down and detach from seat frame

**Necessary preliminary work:**

- Disconnect [battery earth lead](#)
- Remove [head restraint](#)
- Only E90/E91 from version 09/08 and F25/F26:
Remove [crash-active headrest](#)

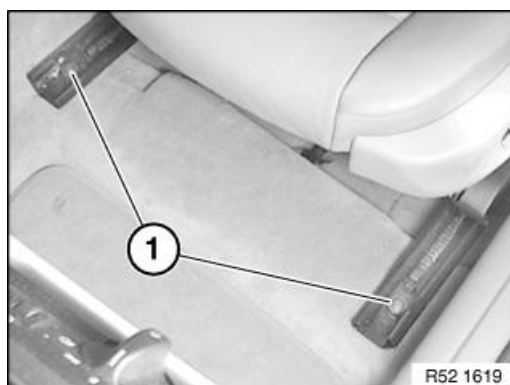
**Important!**

An airbag module and a pyrotechnical seat belt tensioner are installed in the front seat.

Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.

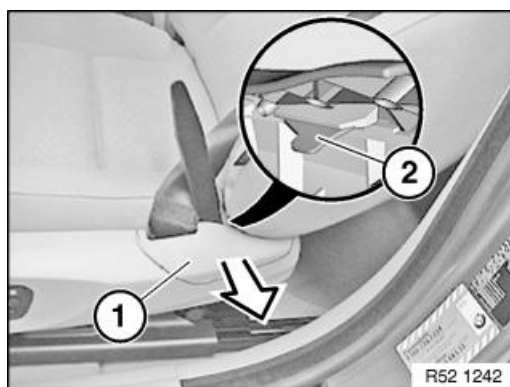
*Installation note:*

- Powerlok screws must be replaced and must not be reused
- Powerlok screws are mechanical screw locks with trilobular threads



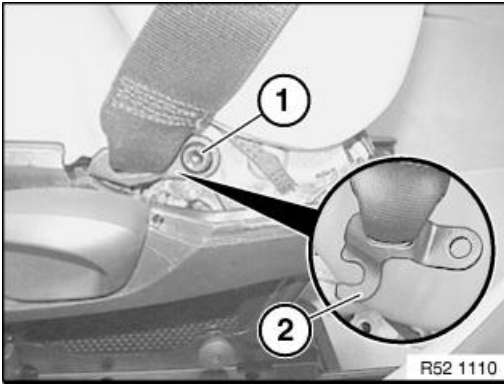
Move seat to upper back position.

Release and dispose of screws (1).



Move seat forwards and position flush with seat rails.

Unclick release tab (2) for belt end fitting trim (1) with plastic wedge.



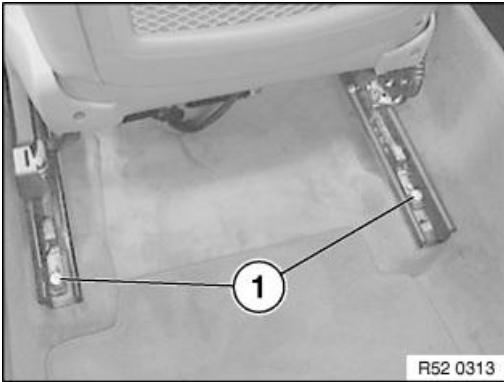
Release screw (1).

Tightening torque [72 11 2AZ](#).

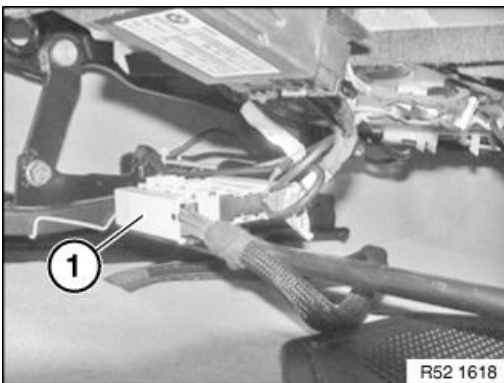
Disconnect end fitting (2).

Installation note:

Make sure end fitting (2) is correctly seated on seat mechanism pin.



Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

Cover door sill with protective covers (risk of damage).

Lift out front seat.



Installation note:

- Carpet must not get between seat rails and floor panel in area of attachment points (groaning noises)
- Replace microencapsulated screws
- Insert all screws loose to avoid twisting
- Tighten down all screws to specified torque

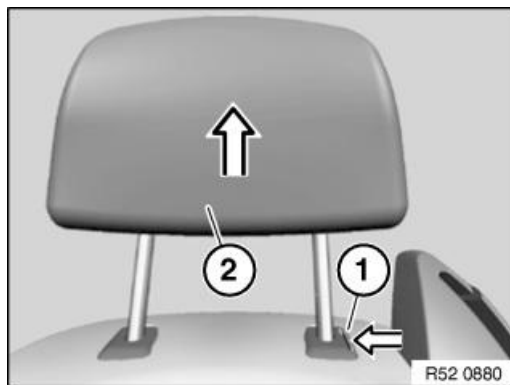
Tightening torque [52 10 1AZ](#).



Warning!

When carrying out further work on the front seat, it is absolutely imperative to observe the [safety regulations](#) on handling airbag modules and pyrotechnical seat belt tensioners

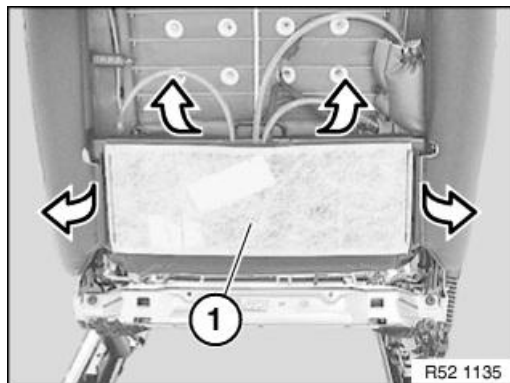
Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.



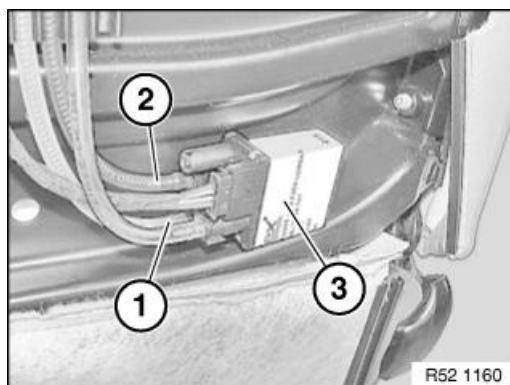
Press catch (1) and lift out head restraint (2).

**Necessary preliminary tasks:**

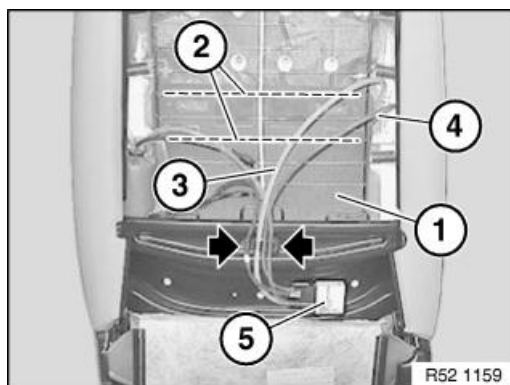
- Remove [rear panel on front seat](#)



Detach backrest cover (1) from backrest frame.



Unlock quick connectors and detach air hoses (1 and 2) from valve body (3). *Note:*
Connections are coded against incorrect assembly.

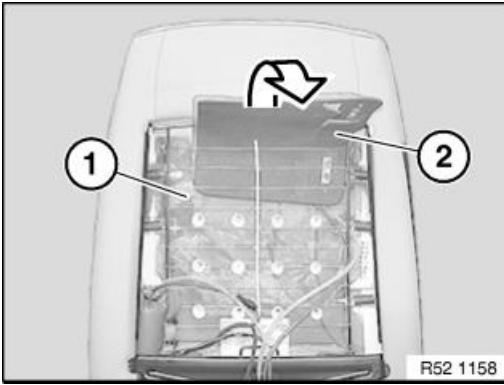


Detach lumbar support (1) from spring wire (2).

Installation note:

Attach lumbar support (1) at third and fifth wire from below.

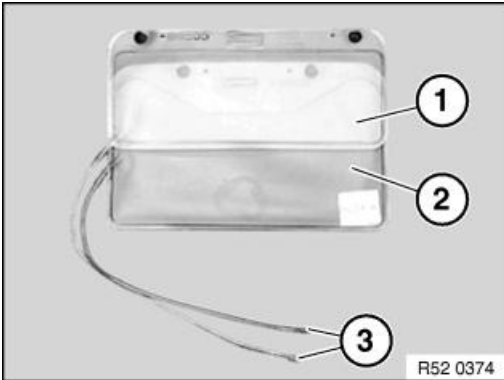
Unclip air hoses (3) and (4) from holder.



Press back padding (1) a little.

Pull out lumbar cushion (2) towards top.

Feed air hoses out of backrest frame and spring wire.



Installation note:

Check lumbar support at top (1) and bottom (2) for damage.

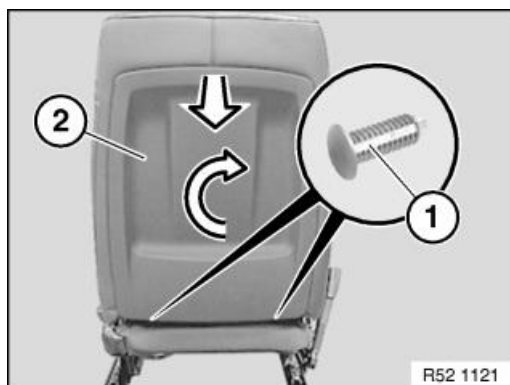
Air hoses (3) must not be kinked.



Installation note:

Carry out [function check](#).

52 13 198 Removing and installing or replacing rear panel on left or right front seat backrest

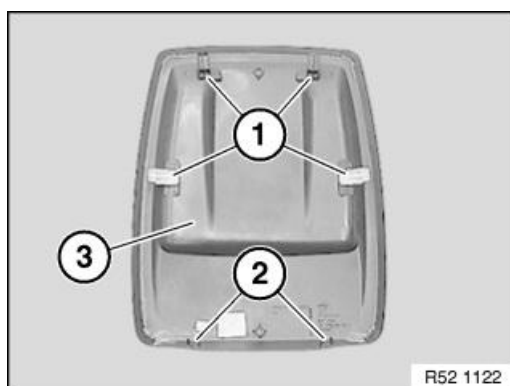


Release clips (1) with diagonal cutting pliers.

Remove rear panel (2) downwards with a rotational movement.

Note:

Remove remnants of clips.



Installation note:

Retaining hooks (1) and bore holes (2) on rear panel (3) must not be damaged.

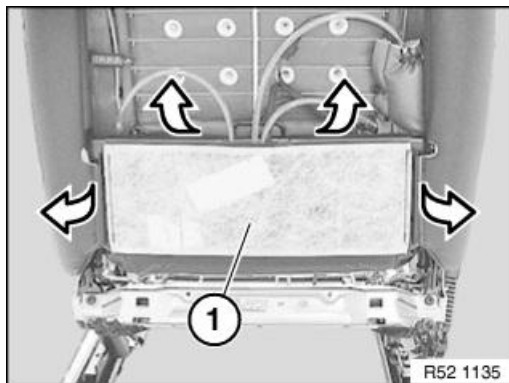
Replace faulty clips.

52 15 057 Removing and installing or replacing valve body for lumbar support/backrest width adjustment

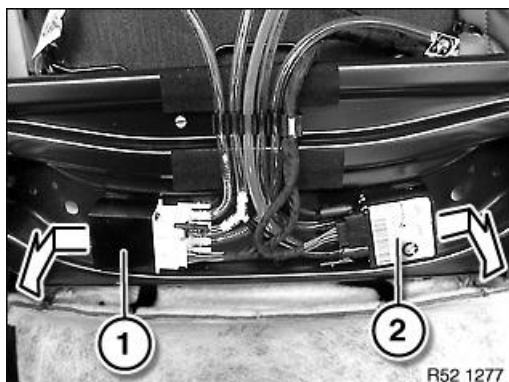


Necessary preliminary tasks:

- Remove the [rear panel from the front seat](#)



Detach backrest cover (1) from backrest frame.

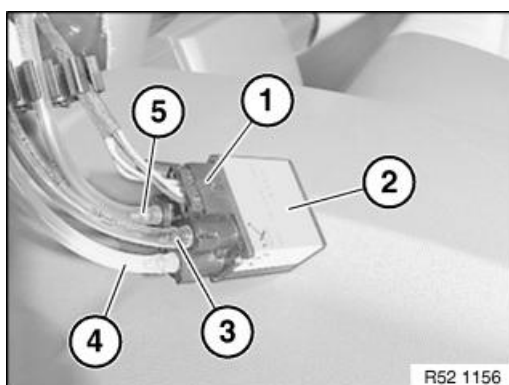


Remove valve body in direction of arrow from backrest frame.

1. Valve body for backrest width adjustment
2. Valve body for lumbar support

Installation note:

Check that the valve body is correctly seated in the backrest frame.



Unfasten plug connection (1) and disconnect.

Unlock quick connectors and detach air hoses (3) and (4 and 5) from valve body (2).

Valve unit for lumbar support:

- (3) Hose (black), lumbar support drive
- (4) Hose (blue) in the upper lumbar support
- (5) Hose (red) in the lower lumbar support

Valve unit for backrest width adjustment:

- (3) Hose (clear), lumbar support drive
- (4) Hose (transparent), lumbar support, left
- (5) Hose (transparent) lumbar support, right

Note:

Connections are coded against incorrect assembly.

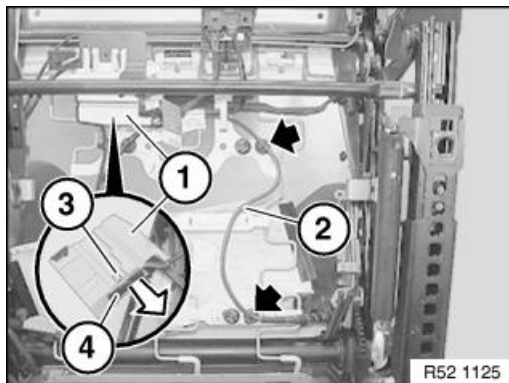


Note:
Carry out [function check](#).



Necessary preliminary tasks:

- Remove [front seat](#)
- Remove [rear panel](#) on front seat backrest

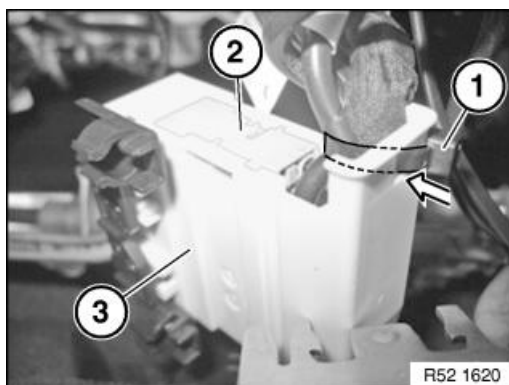


Unclip cable (2).

Release airbag wiring harness (2) from cable holders on seat mechanism.

Cut through cable ties.

Raise release clip (3) and pull plug (4) out of plug housing (1).



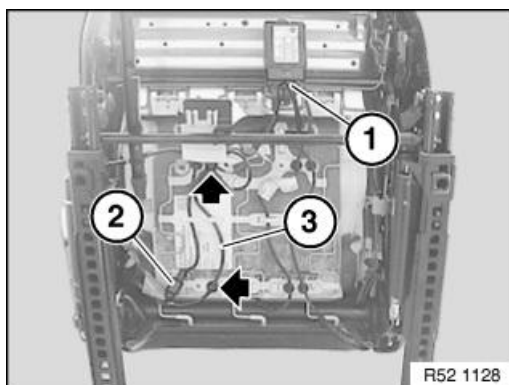
Installation:

Always feed in cable tie (1) at narrow end of plug housing in direction of arrow.

Cables must be secured with insulation under cable tie.

Firmly tighten cable tie (1) to relieve strain. It must not be possible to move the cable.

Make sure plug (2) is correctly locked in plug housing (3).



Unfasten plug connection (1) and disconnect.

Unclip cable.

Release wiring harness (3) from cable holders on seat mechanism.

Unfasten plug connection (2) and disconnect.

Important!

Feed all wiring harnesses carefully through the seat and backrest mechanism as the edges of the frame can be sharp.



E81, E82, E88, E92 only:

Unhook seat covers on left and right.

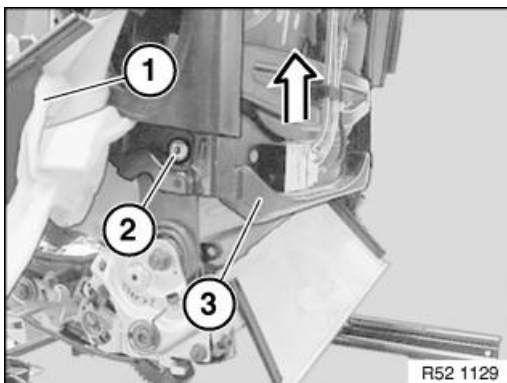
Unclip ball socket (1) from ball head on left and right.

Installation:

Ball socket (1) must snap audibly into place.

Ball socket (1) must be able to move freely on ball head.

Actuate rear catch and remove guide for Bowden cable (2) towards rear with a turning motion.



Unhook backrest cover (1) on left and right.

Release screws (2) on left and right.

Tightening torque [52 10 02AZ](#).

Remove backrest frame (3) completely towards top.



Replacement:

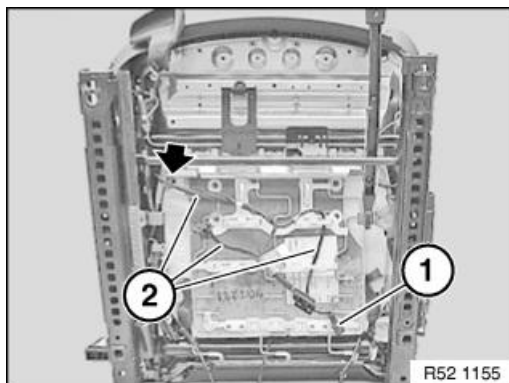
- Remove [backrest cover](#) with padding.

52 13 025 Removing and installing/replacing left or right seat mechanism (normal/manual)



Necessary preliminary tasks:

- Remove [seat cover](#) for front seat
- Remove [backrest frame](#) on front seat
- Remove [seat belt tensioner](#)
- Remove [control unit for seat heating](#)



Disconnect all cable straps.

Unlock and remove connector housing (1) from flexmat.

Release seat wiring harness (2) from cable clips on seat mechanism.



Replacement only:

The seat mechanism is supplied completely with corresponding drive units.

52 13 040 Removing and installing/replacing outer cover on left or right front seat backrest (normal / manual)



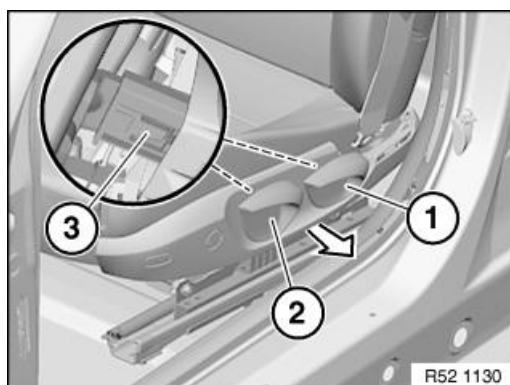
Special tools required:

- [00 9 317](#)



Necessary preliminary tasks:

- Remove [front seat](#)



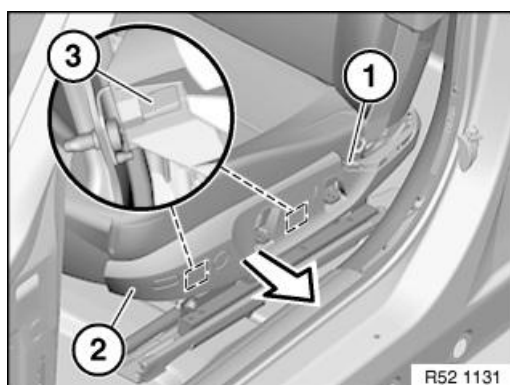
Note:

Picture shows installed seat by way of example.

Raise lock (3) and lever out handle

1. for backrest angle adjustment and
2. for seat height adjustment

with special tool [00 9 317](#).



Release screw (1).

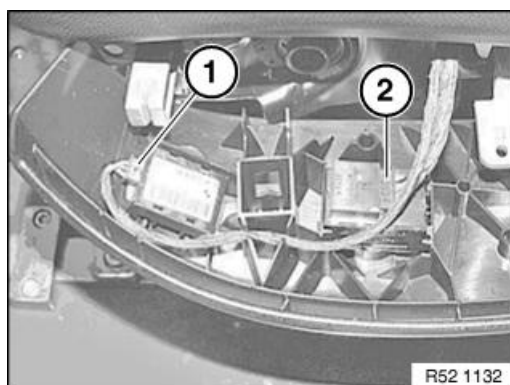
Tightening torque [52 10 06AZ](#).

Note:

Trim (2) is engaged in marked area.

Press lock (3) and pull trim (2) off seat mechanism.

If necessary, lever out carefully with special tool [00 9 317](#).



If necessary, unlock plug connection (1) for backrest width adjustment and disconnect.

If necessary, unlock plug connection (2) for lumbar support and disconnect.



Replacement:

If necessary, remove backrest width adjustment switch and lumbar support switch.

Installation:

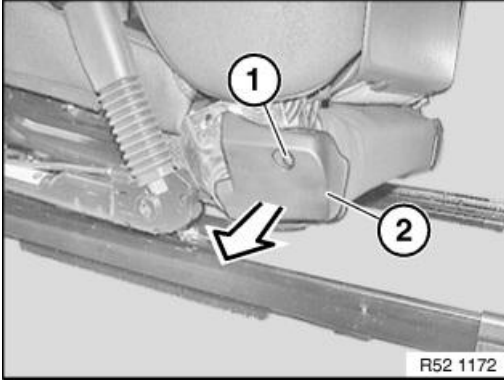
Make sure backrest width adjustment and lumbar support switches are correctly engaged.

52 13 041 Removing and installing/replacing the inner cover on the left or right front seat (normal/manual)



Necessary preliminary tasks:

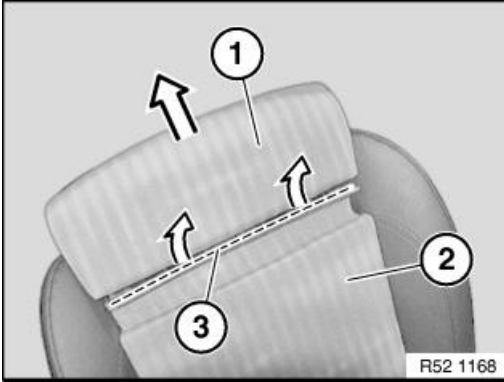
- Remove [front seat](#)



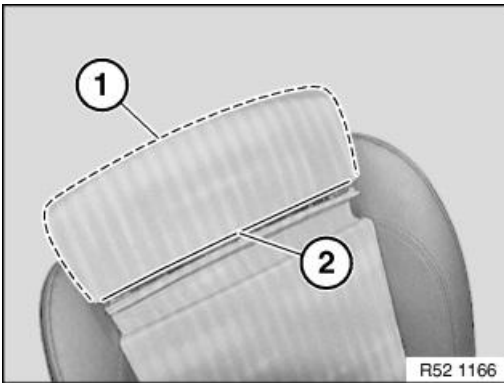
Release screw (1).

Remove cover (2) from inside of seat.

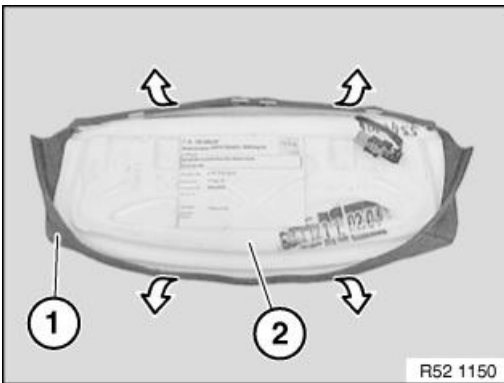
52 15 403 Removing and installing/replacing thigh support cover on front seat (sport/manual)



Release thigh support (1) and move forward.
Lever welt of seat cover (2) out of thigh support.



Lever out cover welt in marked area (1).
Disengage trim thread in marked area (2) from thigh support.
Remove cover with padding.

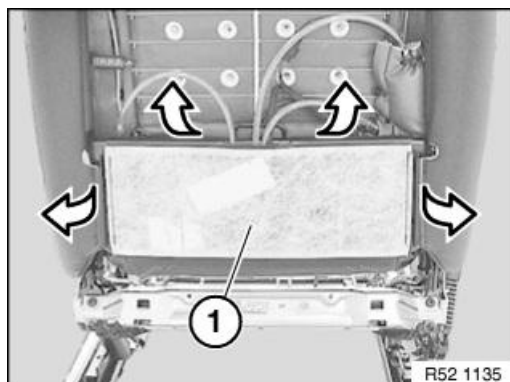


Pull cover (1) off padding (2).

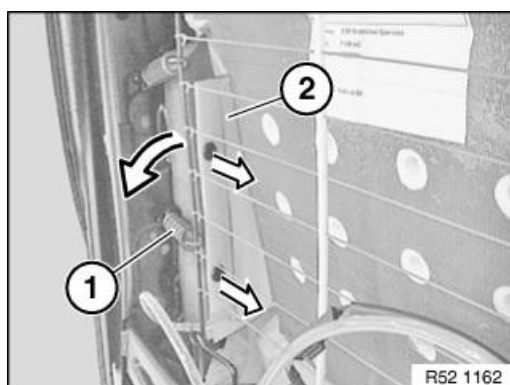


Necessary preliminary tasks:

- Remove the [rear panel from the front seat](#)



Detach backrest cover (1) from backrest frame.



Note:

Removal operation is shown on left side, right analogous to that.
The air cushion must be deflated completely.

Disconnect spring (1).

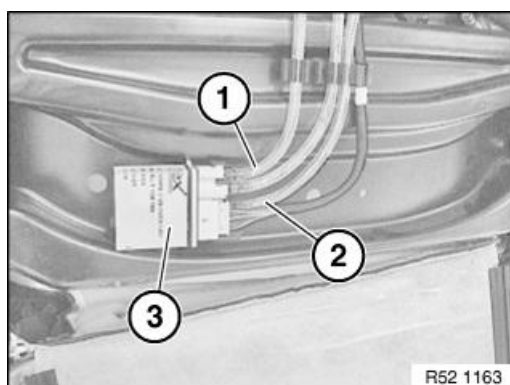
Lift out clips with plastic wedge.

Feed out air cushion (2) between spring wire and backrest frame.

Installation note:

Insert the air cushion without kinks.

Check air cushion for damage.



Unlock quick connectors and detach air hoses (1 and 2) from valve body (3).

If necessary, remove [valve housing](#).

Installation note:

Connections are coded against incorrect assembly.

Air hoses must not be kinked.



Note:

Carry out [function check](#)



Operation is described in:

- Replace [heating elements for front seat](#) left or right



Operation is described in:

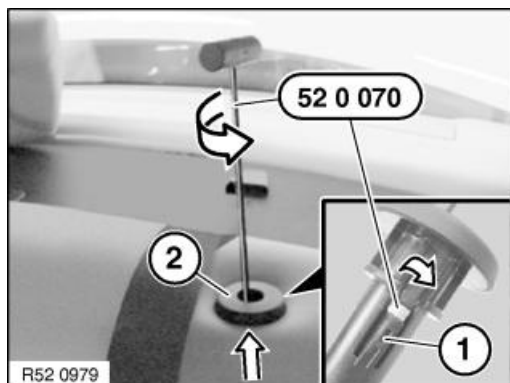
- Replace [heating elements for front seat](#) left or right

**Special tools required:**

- [52 0 070](#)

**Necessary preliminary work:**

- Remove [front head restraint](#)

**Note:**

Guide sleeves cannot be removed without being damaged.

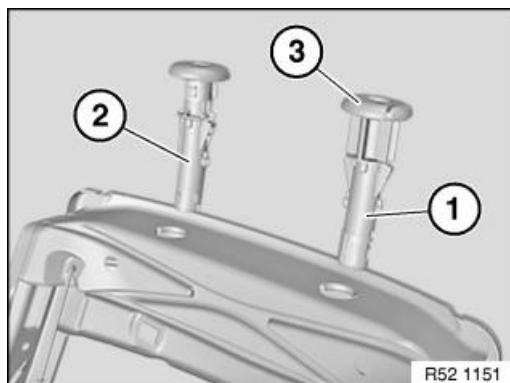
Guide sleeves with pushbuttons have two retaining lugs.

Insert special tool [52 0 070](#) into guide hole of sleeve (2) up to upper area of retaining lug.

Feed release tongue of special tool into gap on retaining lug (1).

Turn special tool to release sleeve (2) and pull out towards top.

If necessary, on guide sleeves with pushbuttons, unlock the second retaining lug with a screwdriver.

**Installation note:**

Replace guide sleeves and install as follows:

1. Guide sleeve with pushbutton (3) and two retaining lugs, left
2. Guide sleeve without pushbutton and one retaining lug, right

52 15 452
support)

Replacing heating element for left or right front seat (thigh



Operation is described in:

- Replace [heating elements for front seat](#) left or right

52 15 415

Replacing padding for left or right front seat (sport/manual)



Operation is described in:

Replacing [seat cover on left or right front seat](#) .

52 15 420 Replacing padding for left or right front seat backrest (sport/manual)



Operation is described in:

Replacing [backrest cover for left or right front seat](#).



This operation is described in section on:

Replacing [thigh support cover on left or right front seat](#) .

**Special tools required:**

- [52 0 050](#)

**Necessary preliminary tasks:**

- Remove [front seat](#)
- Remove [thigh support](#)
- Manual version:
Remove [outer cover](#)
- Electric version:
Remove [support for cover](#)

**Warning!**

US/CDN front passenger seat (with CIS mat) only:

If CIS mat or padding is defective, both parts must be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

**Important!**

The CIS mat must be enabled after each installation work.

Enabling seat occupancy detector (CIS mat):

- Connect [BMW programming system](#)
- Encode airbag control unit
- Delete fault memory if necessary

**Warning!**

US/CDN front passenger seat (with CIS mat) only:

To avoid damaging the CIS mat, it is essential to carry out the following operations with extra care.

**Important!**

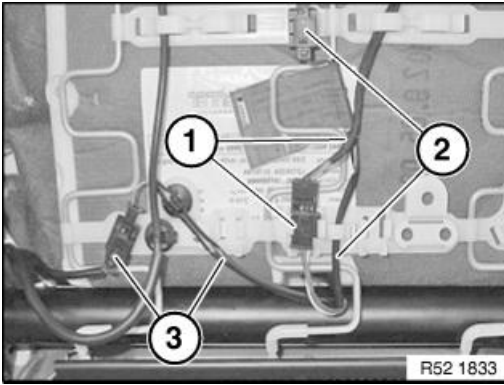
Risk of damage on sharp-edged seat mechanism.

Guide all cables carefully through seat and backrest mechanism.

Make sure cable is routed without kinks and tension.

Make sure plug connections are correctly locked.

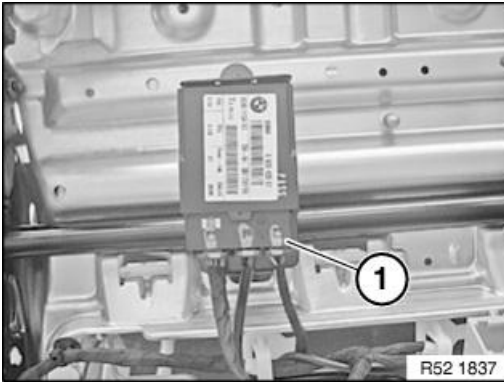
Make sure connectors are correctly seated in latch mechanisms.



Version with seat occupancy detection (CIS mat) only:

1. Data line CIS
2. Earth cable, seat pan
3. Earth cable, backrest frame

Unlock all plug connections and disconnect.

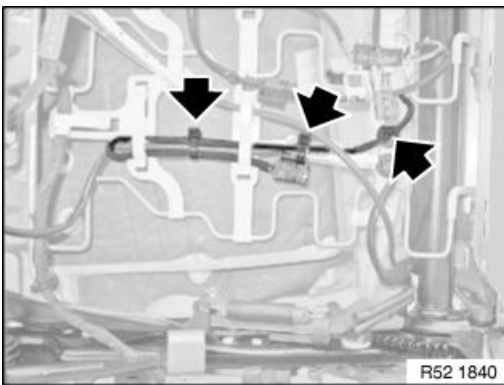


Version with seat heating only:

Unlock plug connection (1) for seat heating and disconnect.

Unfasten cable strap.

Disengage wiring harness from cable clips (flexmat).



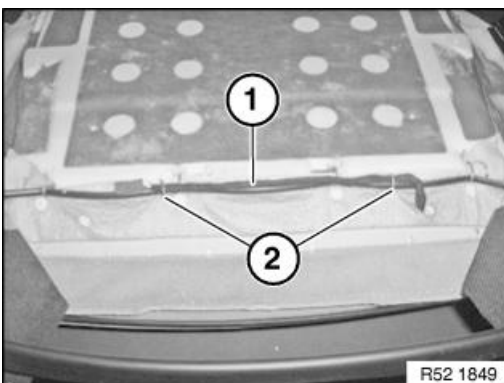
Version with seat occupancy detection (CIS mat) without seat heating only:

Cable for seat heating, seat cushion:

Seat heating is integrated in the CIS mat and is stuck to the upholstery over the full surface.

Lay cable for seat heating as shown to flexmat and secure with cable strap.

Secure connector with cable strap to cable.

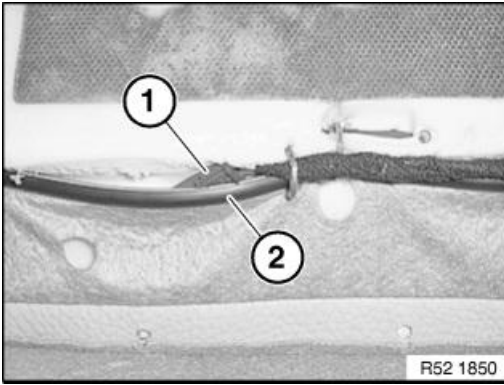


Cable for seat heating, thigh support:

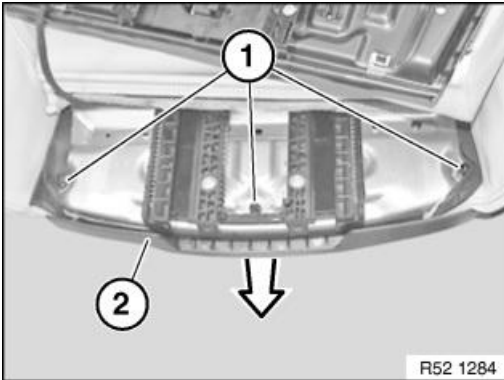
Cramp cable (1) to welt strip with clamps (2).

Installation note:

Bend clamps (2) with special tool [52 0 050](#).



Clamp connector (1) behind welt strip (2).

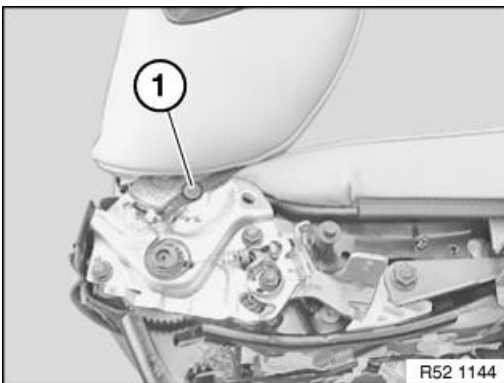


Unlock retaining lugs (1).

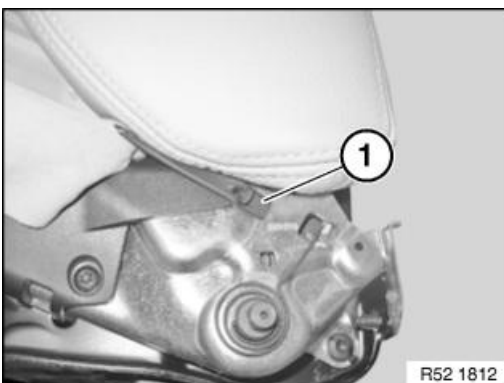
Remove seat trim (2) downwards.

Installation note:

Seat trim (2) must not be damaged.

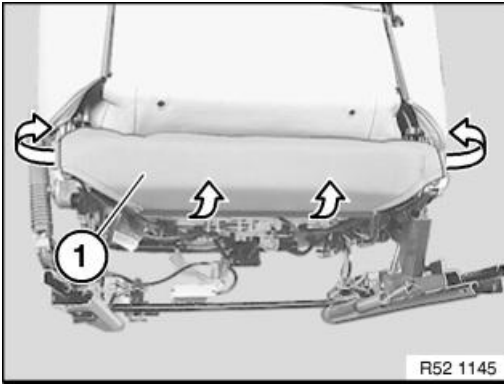


Lever clip (1) out of seat cover on left and right. *Installation note:*
If necessary, replace faulty clip.

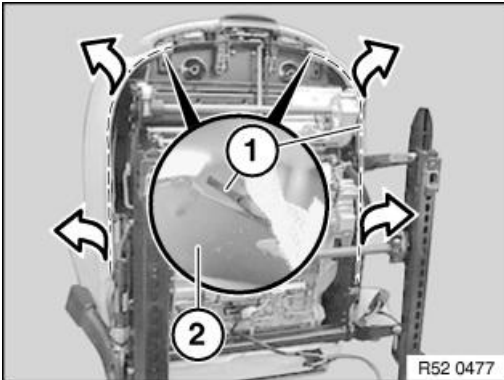


Tunnel side:

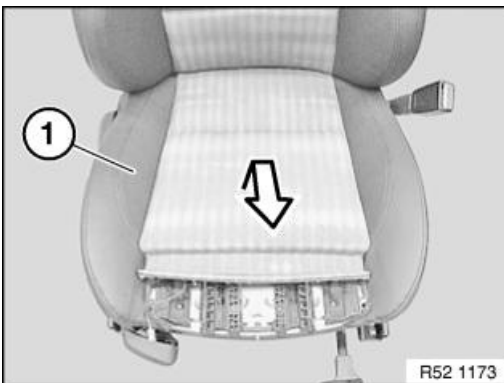
Disengage cover fastener (1) from belt deflector trim.



Detach seat cover (1) from seat frame.



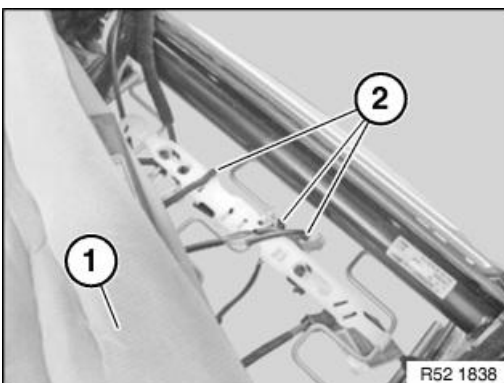
Pull out cover welt (1) completely from seat frame (2).



Remove seat cover (1) with padding towards front/top. **Important!**
Carefully slide bracing cloth with foam through backrest gap and seat structure.

Installation note:

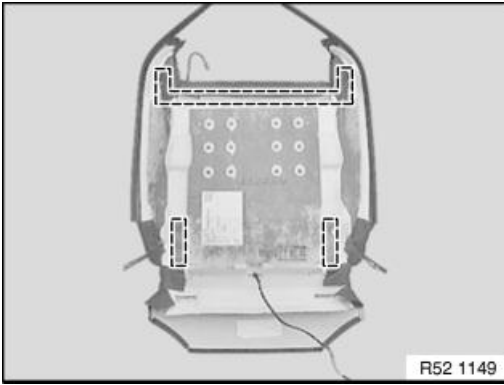
Slide foam completely through backrest gap and seat structure. Make sure foam and bracing cloth are correctly fitted.



Version with seat heating and/or seat occupancy detection (CIS mat):
Release the corresponding plug connections depending on the version and disconnect.

Pull seat cover (1) with upholstery forward a little and feed wiring harness (2) out.

Remove seat cover (1) with padding towards front/top.



Release all clamps in marked area.



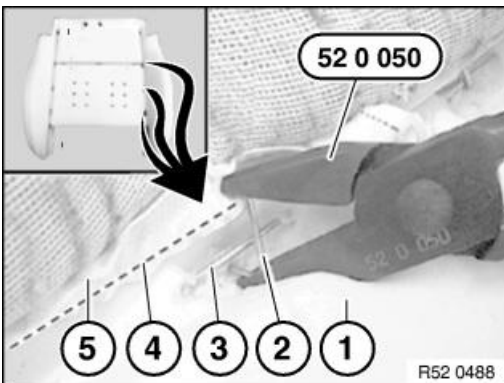
Detach all clamps in side area from OKE strips.

Carefully fold back seat cover and release clamps from OKE strips.

Remove seat cover from upholstery.

Important!

Remove all remnants of clips from seat cover and upholstery (CIS mat).



Installation note:

Bend new clamps (2) with special tool [52 0 050](#) .

1. Upholstery
2. Clamp
3. Trim wire in upholstery
4. OKE strip in cover
5. Seat cover

52 15 405 Replacing the backrest cover for the front seat (Sport/manual) on the left or right



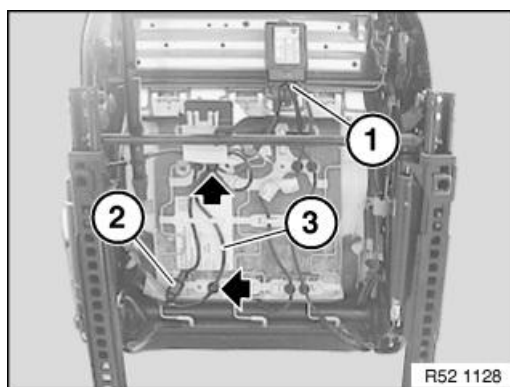
Special tools required:

- [52 0 050](#)



Necessary preliminary tasks:

- Remove [front seat](#)
- Remove the [side airbag](#) in the front seat
- Remove [guide sleeves](#)



Version with seat heating only:

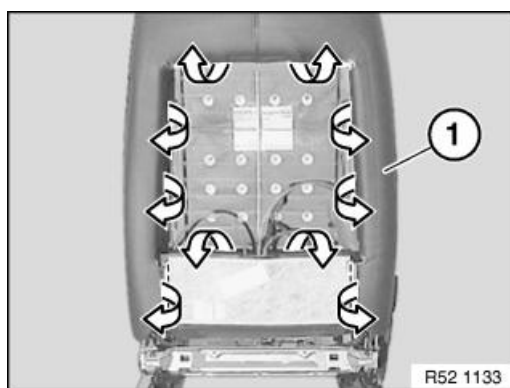
Unfasten plug connection (1) and disconnect.

Disconnect cable straps.

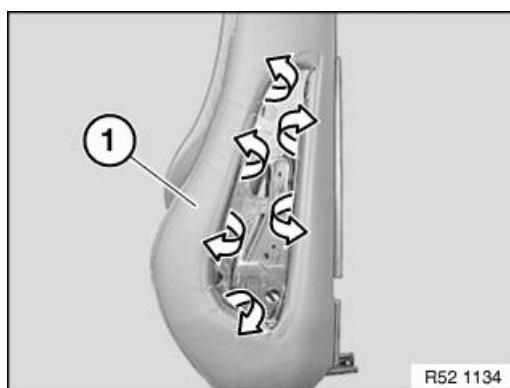
Release wiring harness (3) from cable clips on seat mechanism.

Attention!

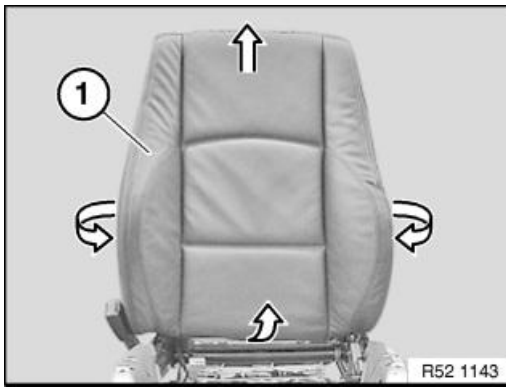
Feed the wiring harness carefully through the seat and backrest mechanism as the edges of the frame can be sharp.



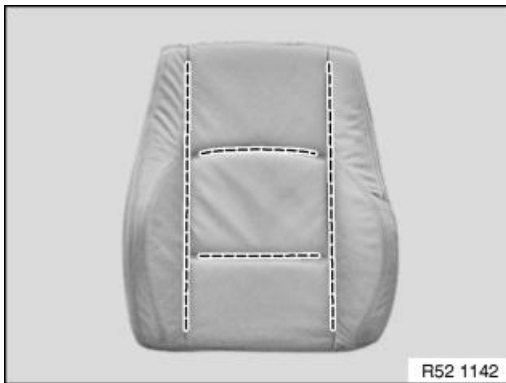
Detach backrest cover (1) from backrest frame.



Pull backrest cover (1) off hook and loop fastener on the backrest frame.



Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.

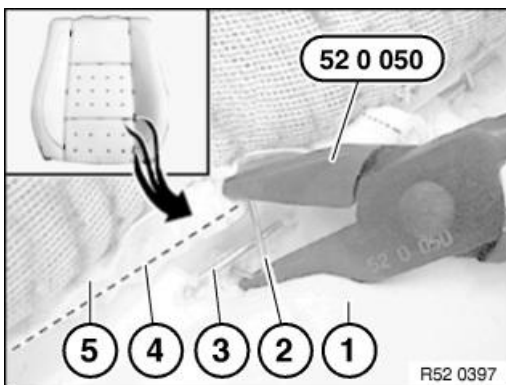


Release all clamps in marked area.

Remove backrest cover from padding.

Note:

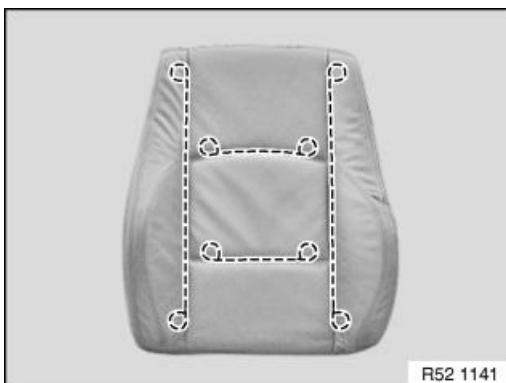
Remove all remnants of clamps from backrest cover and upholstery.



Installation note:

Bend new clamp (2) with special tool [52 0 050](#).

1. Upholstery
2. Clamp
3. Trim wire in upholstery
4. Trim wire in backrest cover
5. Backrest cover

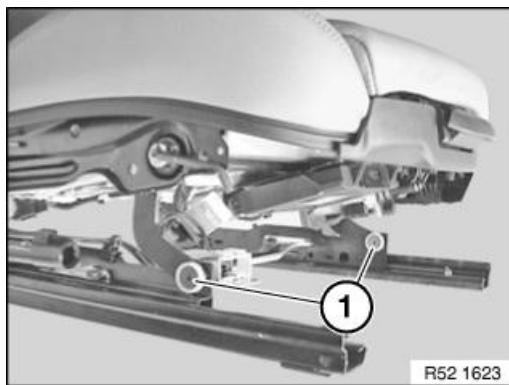


Replacement of backrest cover:

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

52 14 ... Additional work in event of faulty drive/gearing for longitudinal adjustment

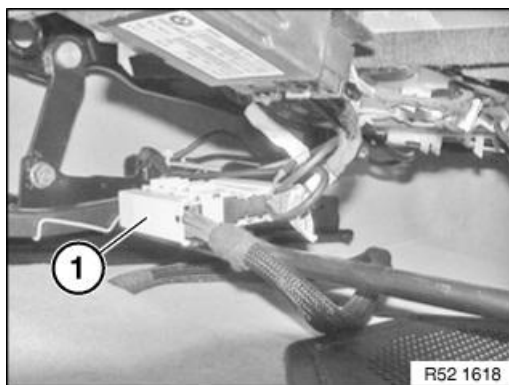


Release screws (1) of swinging arms for seat height adjustment.

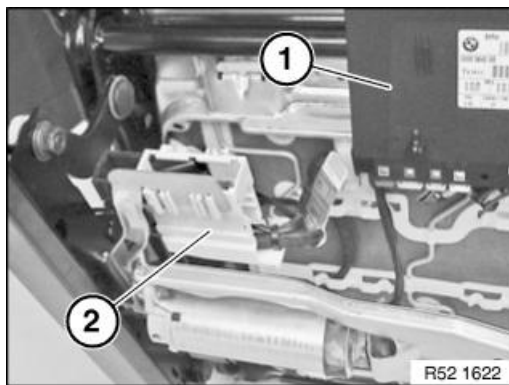
Installation note:

Carefully bend side section back and feed swinging arm out of top rail.

Tilt front seat back.

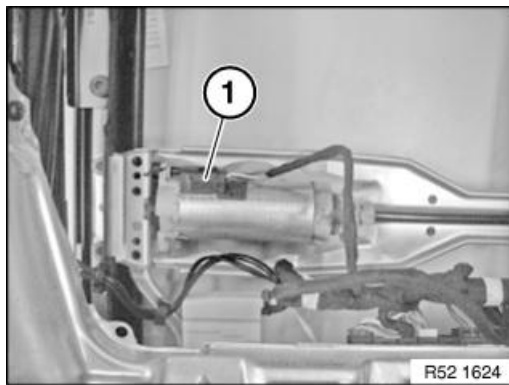


Unfasten plug connection (1) and disconnect.

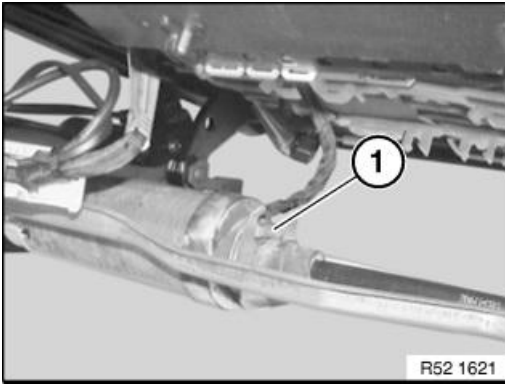


Unclamp central connector (2) from seat mechanism.

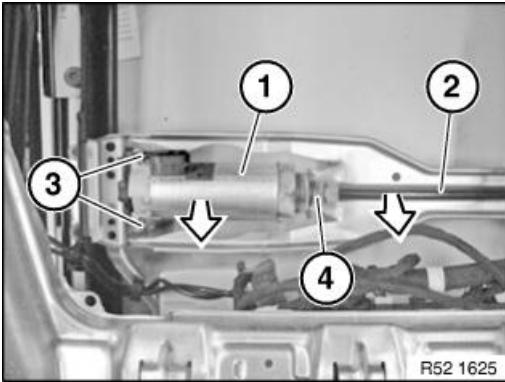
Unclip [control units](#) (1).



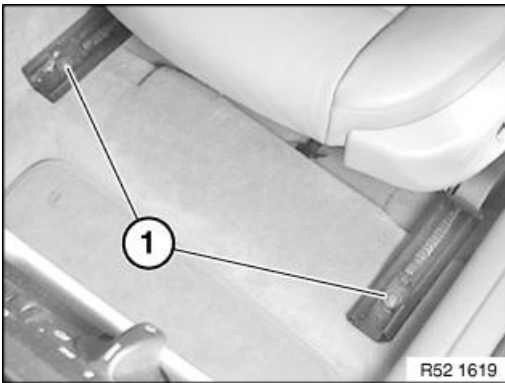
Unfasten plug connection (1) and disconnect.



Bend metal tab (1) open.



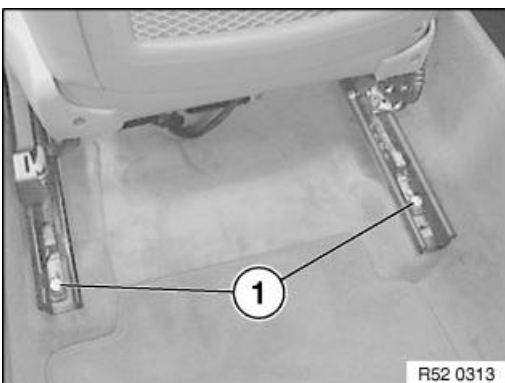
Lift powertrain (1) and flex shaft (2) out of guide (4) in direction of arrow.
Detach drive (1) from rubber mounts (3).
Detach flex shaft (3) from powertrain (1).



Release screws (1) at front.



Installation note:
Install new drive for longitudinal seat adjustment.
Move front seat forwards.



Release screws (1) at rear.

Attention!
Cover door sill with protective covers (risk of damage).

Lift out front seat and assemble.

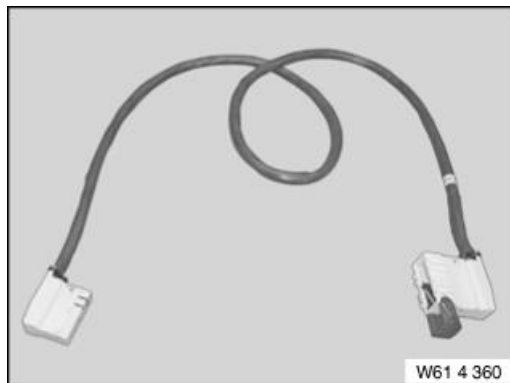


Installation note:

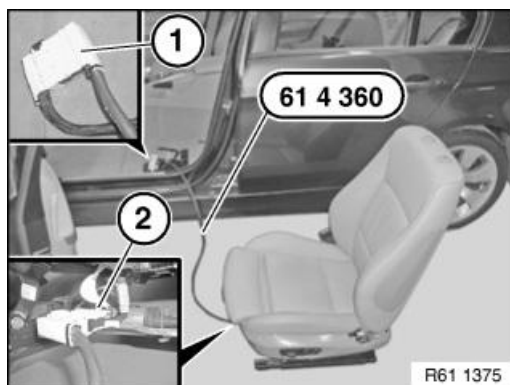
- Make sure flex shaft is correctly fitted on drive
 - Carpet must not get between seat rails and floor panel in area of attachment points (squeaking noises)
 - Powerlok screws must be replaced and must not be reused
 - Powerlok screws are mechanical screw locks with trilobular threads
 - Insert all screws loose to avoid twisting
 - Tighten down all screws to specified torque
- Tightening torque [52 10 1AZ](#).

**Special tools required:**

- [61 4 360](#)

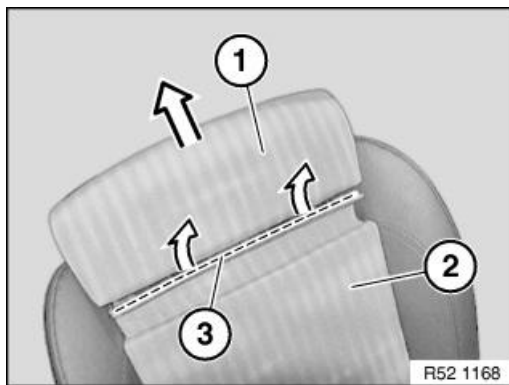
**Note:**

The function check on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable [61 4 360](#).

**Use:**

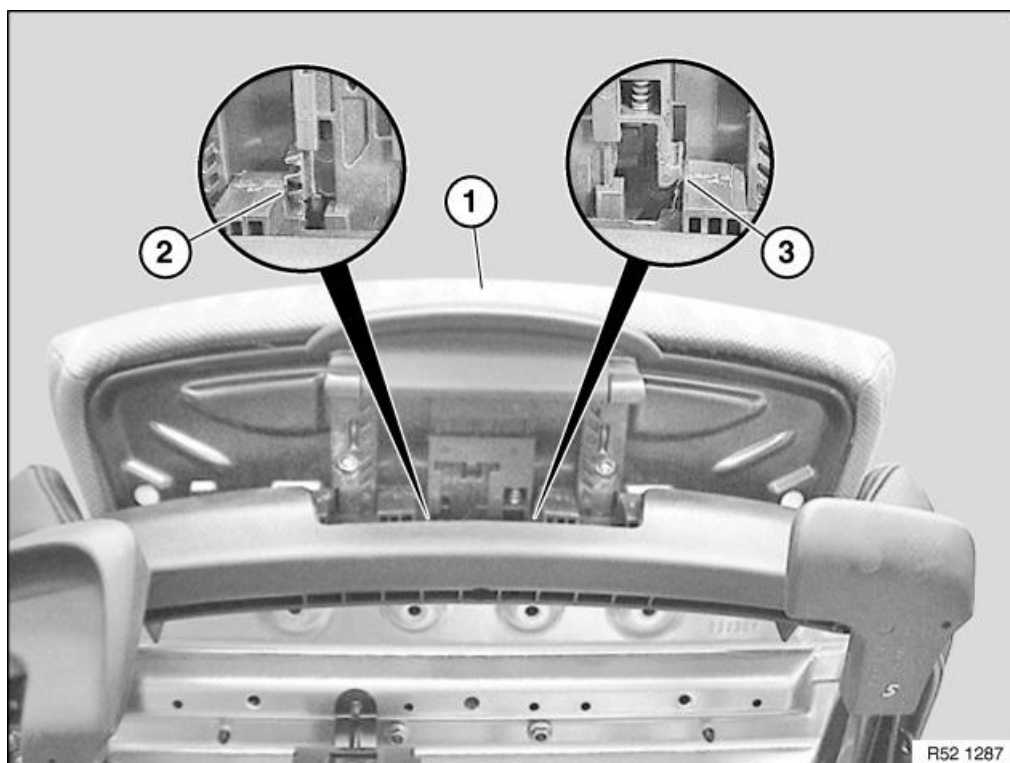
Adapter cable [61 4 360](#) is connected to vehicle wiring harness (1) and removed seat (2).

52 16 048 Remove or install thigh support at the front seat (sport/electric) on the left or right



Unlock and move thigh support (1) as far forward as possible.

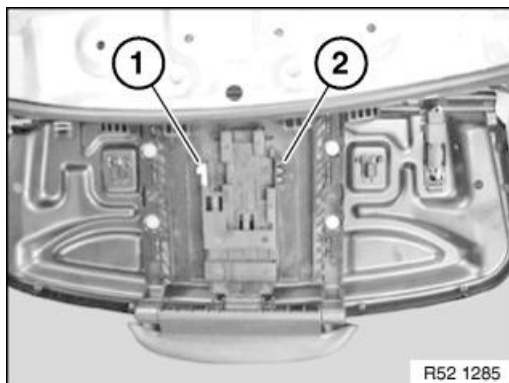
Lever out the welt (3) from the seat cover (2) from the thigh support (1).



Do not completely extend the thigh support to the end stop.

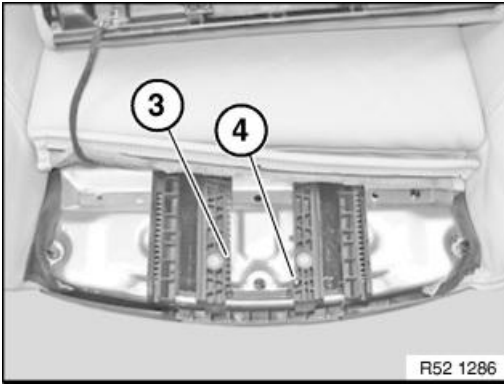
Keep Actuation (1) pressed to unlock the centering (2).

Carefully raise the end stop (3) for the thigh support with a screwdriver and pull the thigh support toward the front out of the guide rails at the same time.



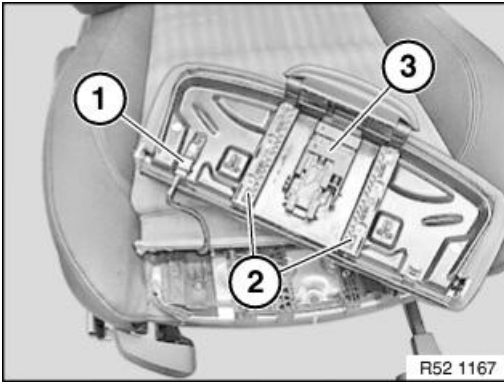
View of thigh support mechanism:

1. End stop for thigh support
2. Locking mechanism for the thigh support



View seat mechanism:

- 3. Guide rail on seat with depth retainer
- 4. Guide rail on seat with end stop

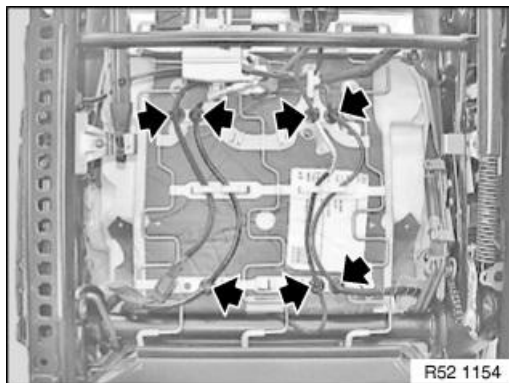


Unfasten plug connection (1) and disconnect. *Note:*
Check guide rails (2) and adjusting mechanism (3) for damage.

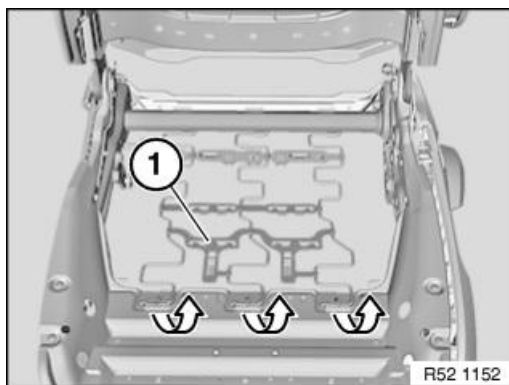


Necessary preliminary tasks:

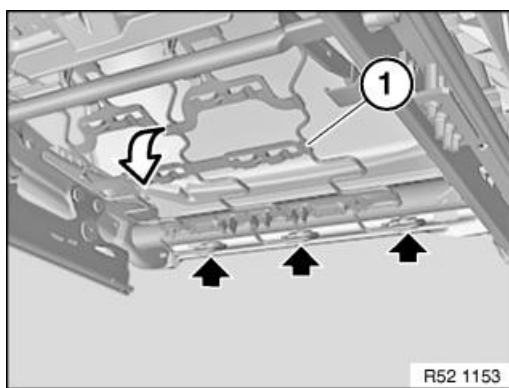
- Remove [padding for front seat](#)



Disconnect all cable straps and detach wiring harnesses from flexmat.



Detach flexmat (1) at front.



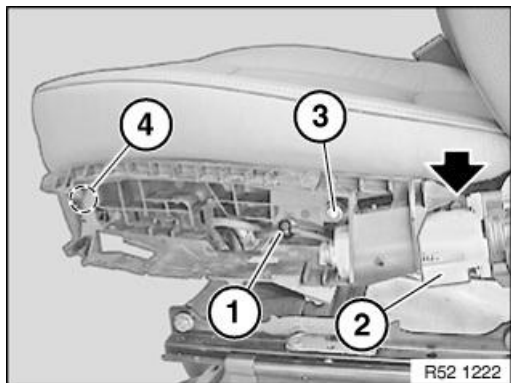
Swivel flexmat (1) down and detach from seat frame

52 14 ... Removing and installing carrier for outer cover on left or right front seat (electric)



Necessary preliminary tasks:

- Remove [outer cover](#)



Detach cable strap (1).

Unlock and disconnect plug connections (2) on servodrive.

Unscrew bolt (3).

Tightening torque [52 10 04AZ](#).

Unclip carrier in marked area and remove.

Installation:

Replace cable strap.

Make sure carrier is correctly seated on seat mechanism.

**Necessary preliminary work:**

- Disconnect [battery earth lead](#)
- Remove [head restraint](#)
- Only E90/E91 from version 09/08 and F25/F26:
Remove [crash-active headrest](#)

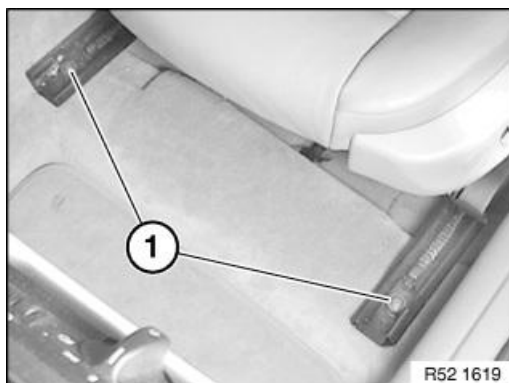
**Important!**

An airbag module and a pyrotechnical seat belt tensioner are installed in the front seat.

Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.

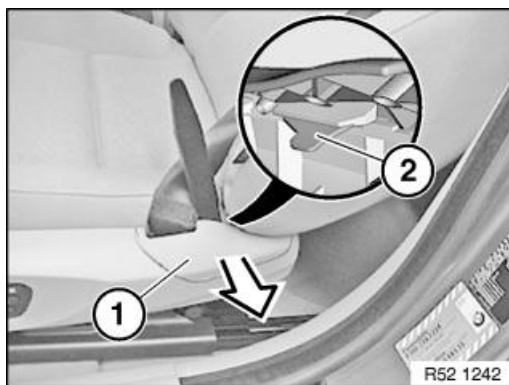
*Installation note:*

- Powerlok screws must be replaced and must not be reused
- Powerlok screws are mechanical screw locks with trilobular threads



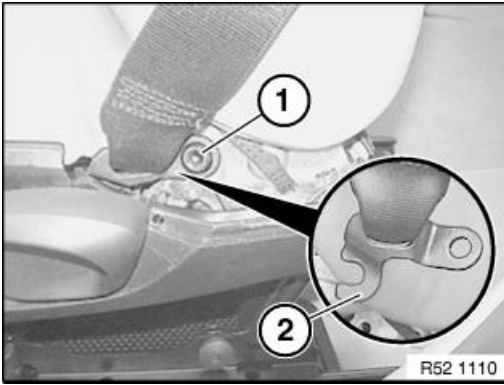
Move seat to upper back position.

Release and dispose of screws (1).



Move seat forwards and position flush with seat rails.

Unclick release tab (2) for belt end fitting trim (1) with plastic wedge.



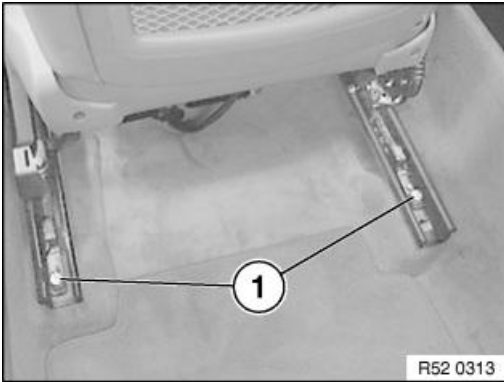
Release screw (1).

Tightening torque [72 11 2AZ](#).

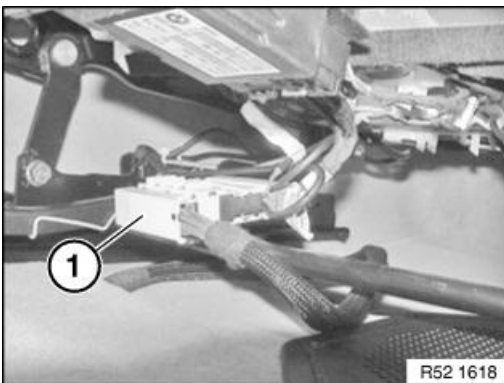
Disconnect end fitting (2).

Installation note:

Make sure end fitting (2) is correctly seated on seat mechanism pin.



Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

Cover door sill with protective covers (risk of damage).

Lift out front seat.



Installation note:

- Carpet must not get between seat rails and floor panel in area of attachment points (groaning noises)
- Replace microencapsulated screws
- Insert all screws loose to avoid twisting
- Tighten down all screws to specified torque

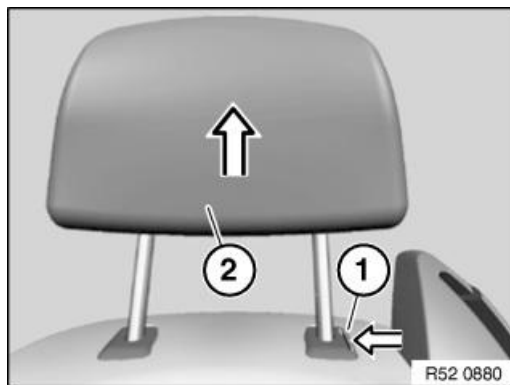
Tightening torque [52 10 1AZ](#).



Warning!

When carrying out further work on the front seat, it is absolutely imperative to observe the [safety regulations](#) on handling airbag modules and pyrotechnical seat belt tensioners

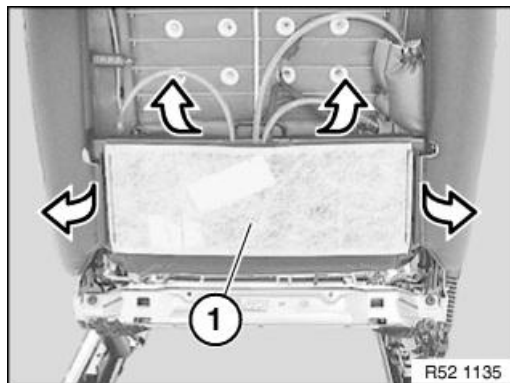
Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.



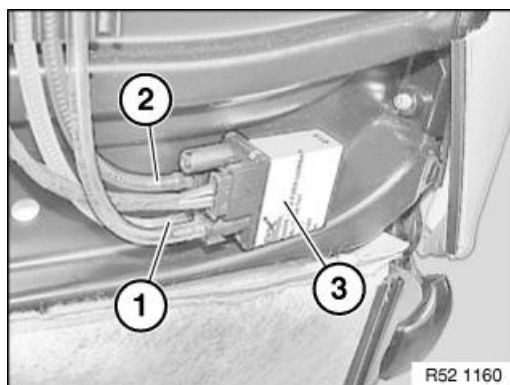
Press catch (1) and lift out head restraint (2).

**Necessary preliminary tasks:**

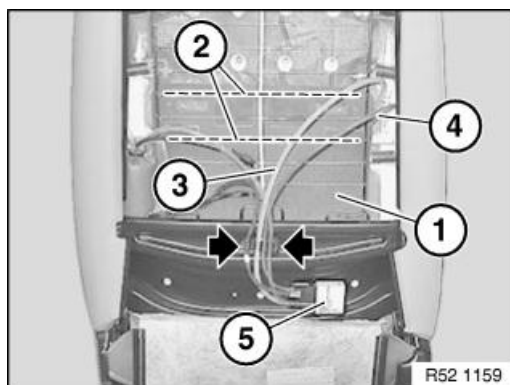
- Remove [rear panel on front seat](#)



Detach backrest cover (1) from backrest frame.



Unlock quick connectors and detach air hoses (1 and 2) from valve body (3). *Note:*
Connections are coded against incorrect assembly.

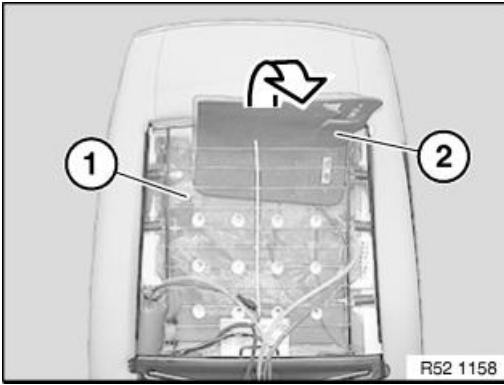


Detach lumbar support (1) from spring wire (2).

Installation note:

Attach lumbar support (1) at third and fifth wire from below.

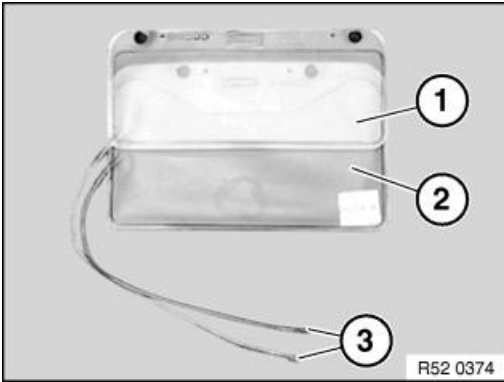
Unclip air hoses (3) and (4) from holder.



Press back padding (1) a little.

Pull out lumbar cushion (2) towards top.

Feed air hoses out of backrest frame and spring wire.



Installation note:

Check lumbar support at top (1) and bottom (2) for damage.

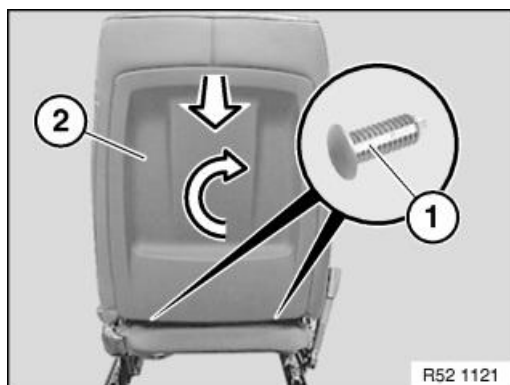
Air hoses (3) must not be kinked.



Installation note:

Carry out [function check](#).

52 13 198 Removing and installing or replacing rear panel on left or right front seat backrest

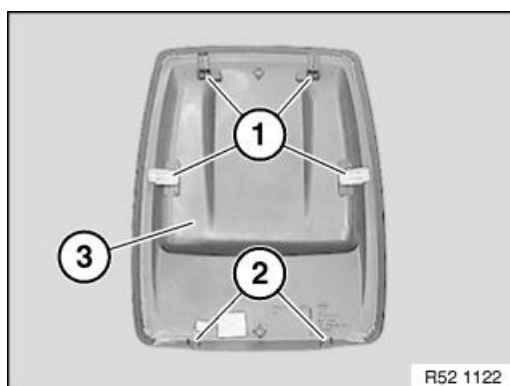


Release clips (1) with diagonal cutting pliers.

Remove rear panel (2) downwards with a rotational movement.

Note:

Remove remnants of clips.



Installation note:

Retaining hooks (1) and bore holes (2) on rear panel (3) must not be damaged.

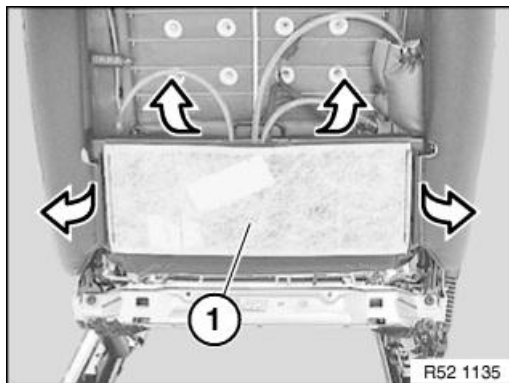
Replace faulty clips.

52 15 057 Removing and installing or replacing valve body for lumbar support/backrest width adjustment

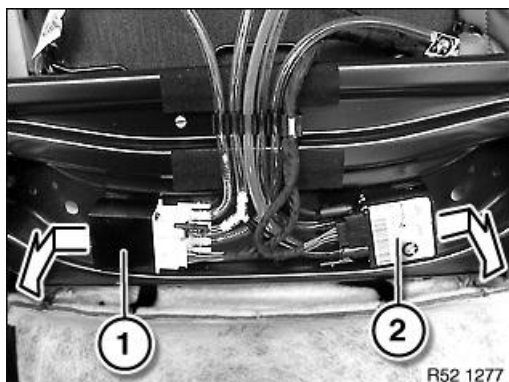


Necessary preliminary tasks:

- Remove the [rear panel from the front seat](#)



Detach backrest cover (1) from backrest frame.

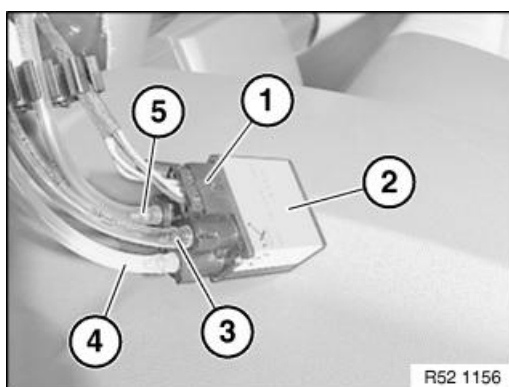


Remove valve body in direction of arrow from backrest frame.

1. Valve body for backrest width adjustment
2. Valve body for lumbar support

Installation note:

Check that the valve body is correctly seated in the backrest frame.



Unfasten plug connection (1) and disconnect.

Unlock quick connectors and detach air hoses (3) and (4 and 5) from valve body (2).

Valve unit for lumbar support:

- (3) Hose (black), lumbar support drive
- (4) Hose (blue) in the upper lumbar support
- (5) Hose (red) in the lower lumbar support

Valve unit for backrest width adjustment:

- (3) Hose (clear), lumbar support drive
- (4) Hose (transparent), lumbar support, left
- (5) Hose (transparent) lumbar support, right

Note:

Connections are coded against incorrect assembly.

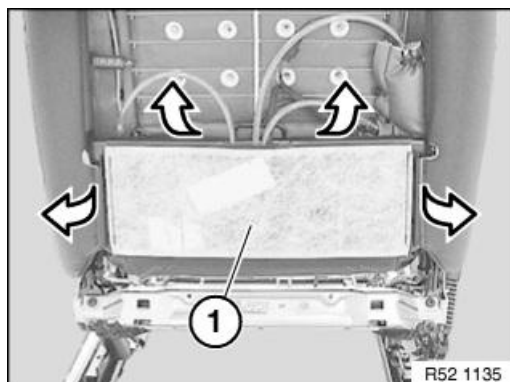


Note:
Carry out [function check](#).

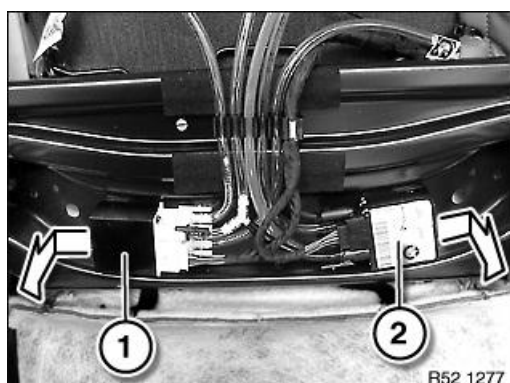


Necessary preliminary tasks:

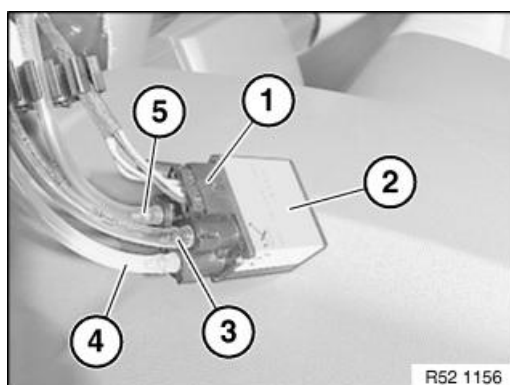
- Remove the [rear panel from the front seat](#)



Detach backrest cover (1) from backrest frame.



Remove valve body (2) for lumbar support from backrest frame in direction of arrow. *Installation note:*
Check that the valve body is correctly seated in the backrest frame.



Unfasten plug connection (1) and disconnect.

Unlock quick connectors and detach air hoses (3) and (4 and 5) from valve body (2).

Valve unit for lumbar support:

- (3) Hose (clear), lumbar support drive
- (4) Hose (blue), upper lumbar support
- (5) Hose (red), lower lumbar support

Note:

Connections are coded against incorrect assembly.



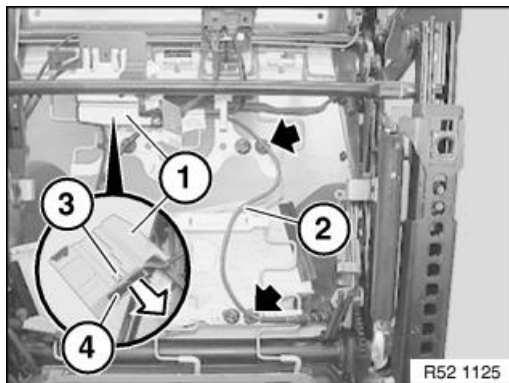
Note:

Carry out [functional check](#)



Necessary preliminary tasks:

- Remove [front seat](#)
- Remove [rear panel](#) on front seat backrest

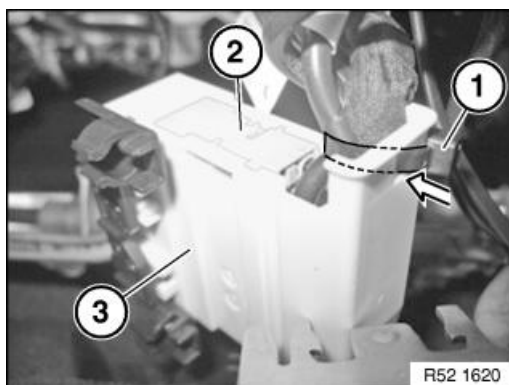


Unclip cable (2).

Release airbag wiring harness (2) from cable holders on seat mechanism.

Cut through cable ties.

Raise release clip (3) and pull plug (4) out of plug housing (1).



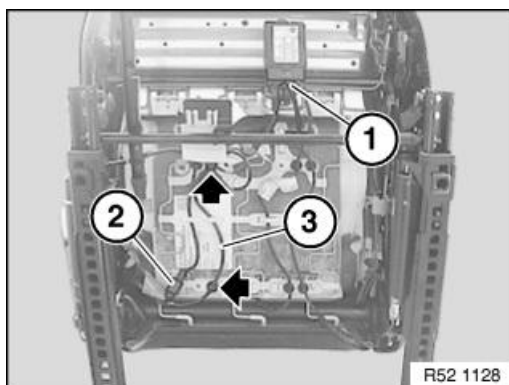
Installation:

Always feed in cable tie (1) at narrow end of plug housing in direction of arrow.

Cables must be secured with insulation under cable tie.

Firmly tighten cable tie (1) to relieve strain. It must not be possible to move the cable.

Make sure plug (2) is correctly locked in plug housing (3).



Unfasten plug connection (1) and disconnect.

Unclip cable.

Release wiring harness (3) from cable holders on seat mechanism.

Unfasten plug connection (2) and disconnect.

Important!

Feed all wiring harnesses carefully through the seat and backrest mechanism as the edges of the frame can be sharp.



E81, E82, E88, E92 only:

Unhook seat covers on left and right.

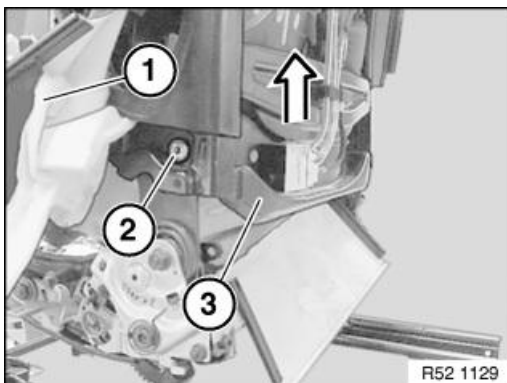
Unclip ball socket (1) from ball head on left and right.

Installation:

Ball socket (1) must snap audibly into place.

Ball socket (1) must be able to move freely on ball head.

Actuate rear catch and remove guide for Bowden cable (2) towards rear with a turning motion.



Unhook backrest cover (1) on left and right.

Release screws (2) on left and right.

Tightening torque [52 10 02AZ](#).

Remove backrest frame (3) completely towards top.



Replacement:

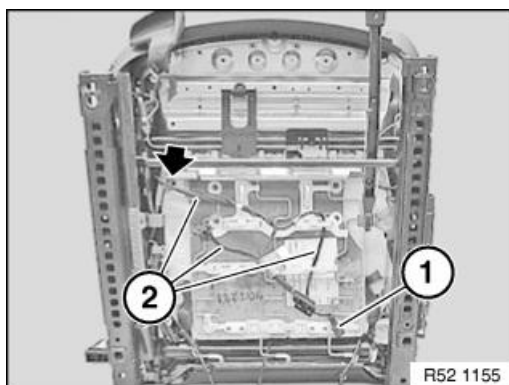
- Remove [backrest cover](#) with padding.

52 13 025 Removing and installing/replacing left or right seat mechanism (normal/manual)



Necessary preliminary tasks:

- Remove [seat cover](#) for front seat
- Remove [backrest frame](#) on front seat
- Remove [seat belt tensioner](#)
- Remove [control unit for seat heating](#)



Disconnect all cable straps.

Unlock and remove connector housing (1) from flexmat.

Release seat wiring harness (2) from cable clips on seat mechanism.



Replacement only:

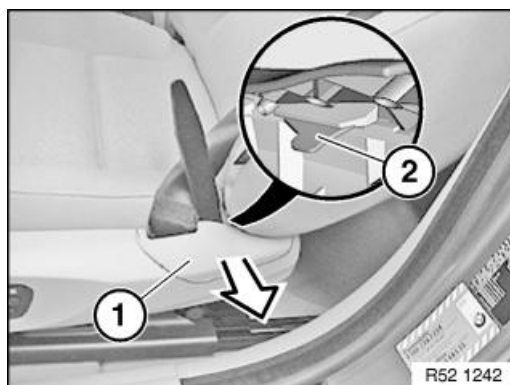
The seat mechanism is supplied completely with corresponding drive units.

52 14 040 Removing and installing/replacing outer cover on left or right front seat (normal/electric)



Necessary preliminary tasks:

Remove [front seat](#).

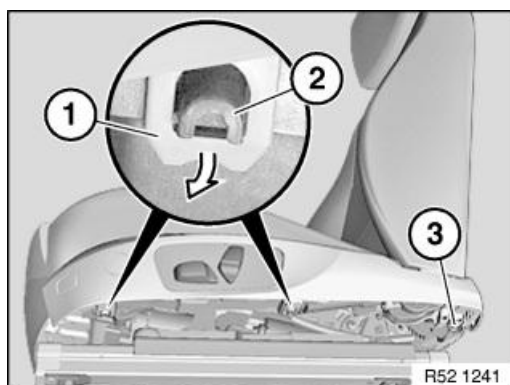


Note:

Image shows on installed seat by way of example.

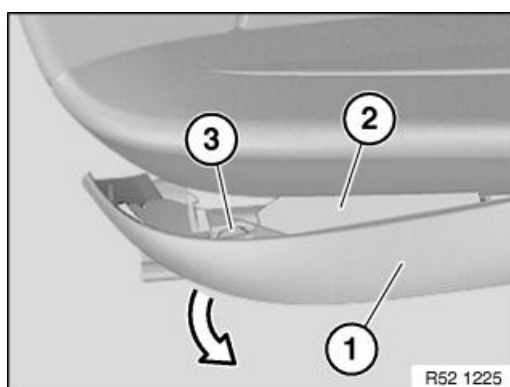
Move backrest to full rearward position.

Unclip release tab (2) for belt end fitting trim (1) with plastic wedge.



Release screw or latch mechanism (3).

Lever tabs (1) out of holders (2).

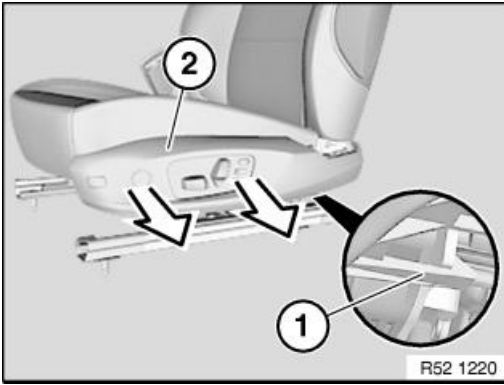


Important!

Cover (1) with support section (2) could come free of the seat mechanism in the front area.

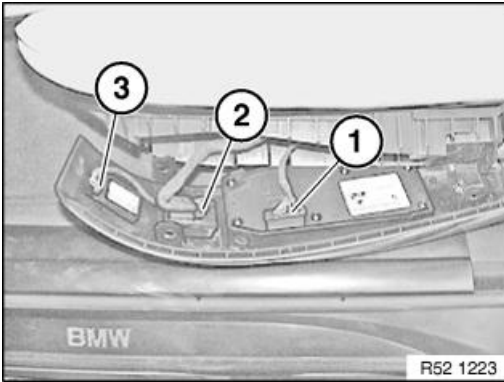
Carefully pull cover (1) with support section (2) off the seat mechanism in the front area.

Press release tab (3) with a screwdriver and disconnect the cover from the support section.



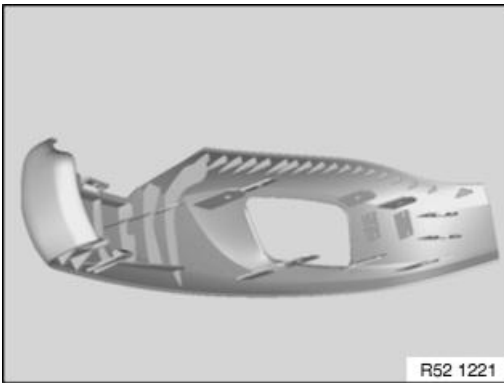
Lift and unlock tab (1).

Reach between seat cushion and cover (2) and pull cover off the support section.



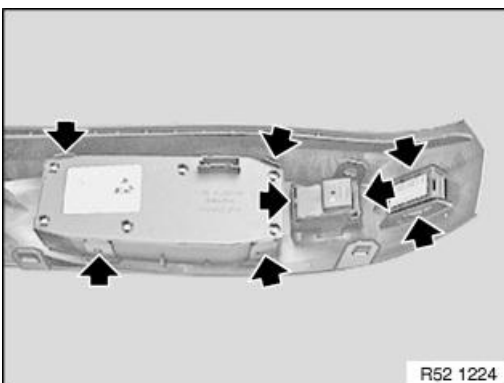
Unlock and disconnect plug connections:

1. Operating unit
2. Lumbar support
3. Seat backrest width adjustment



Installation note:

Retaining clips and tabs of the cover must not be damaged.



Replacement only:

Unlock latch mechanisms of the switch housings and remove switch from cover.

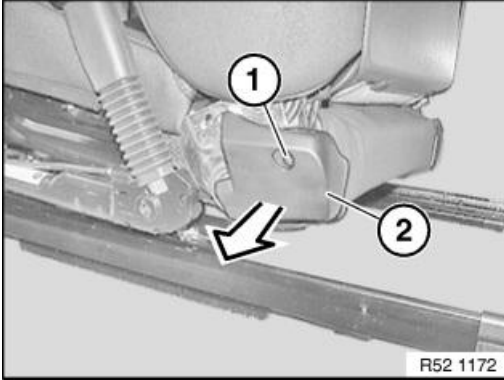
If necessary, cut out missing apertures for lumbar support using a suitable tool.

52 13 041 Removing and installing/replacing the inner cover on the left or right front seat (normal/manual)



Necessary preliminary tasks:

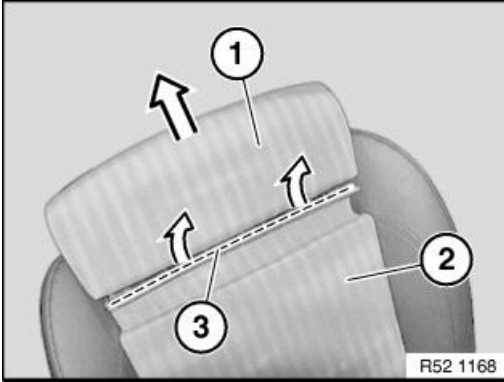
- Remove [front seat](#)



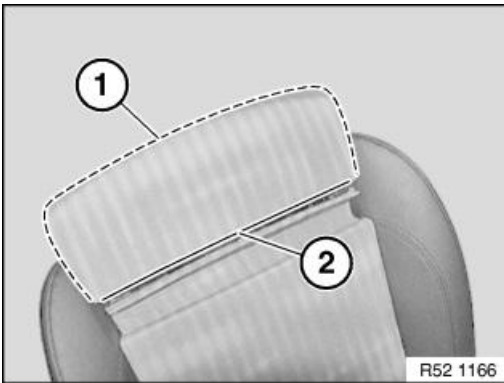
Release screw (1).

Remove cover (2) from inside of seat.

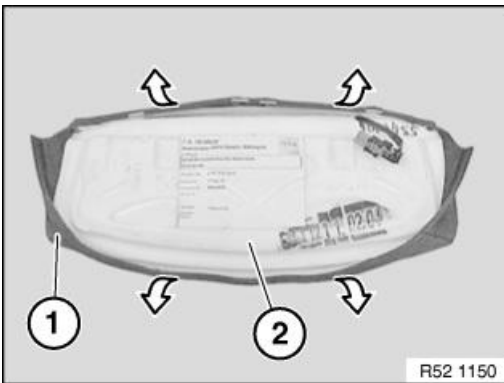
52 15 403 Removing and installing/replacing thigh support cover on front seat (sport/manual)



Release thigh support (1) and move forward.
Lever welt of seat cover (2) out of thigh support.



Lever out cover welt in marked area (1).
Disengage trim thread in marked area (2) from thigh support.
Remove cover with padding.

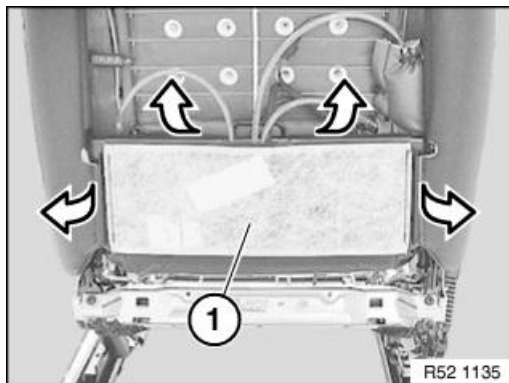


Pull cover (1) off padding (2).

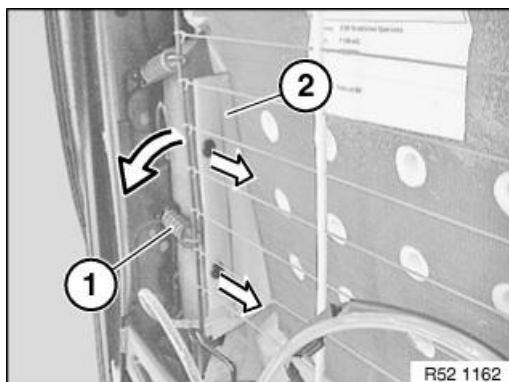


Necessary preliminary tasks:

- Remove the [rear panel from the front seat](#)



Detach backrest cover (1) from backrest frame.



Note:

Removal operation is shown on left side, right analogous to that.
The air cushion must be deflated completely.

Disconnect spring (1).

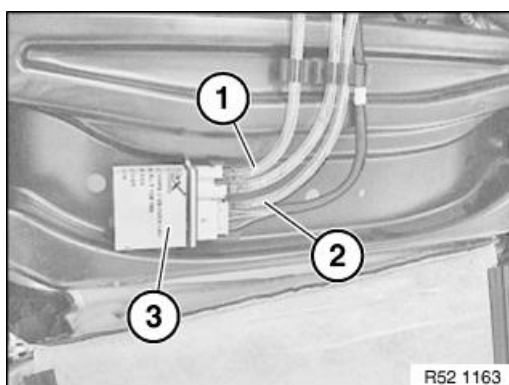
Lift out clips with plastic wedge.

Feed out air cushion (2) between spring wire and backrest frame.

Installation note:

Insert the air cushion without kinks.

Check air cushion for damage.



Unlock quick connectors and detach air hoses (1 and 2) from valve body (3).

If necessary, remove [valve housing](#).

Installation note:

Connections are coded against incorrect assembly.

Air hoses must not be kinked.



Note:

Carry out [function check](#)



Operation is described in:

- Replace [heating elements for front seat](#) left or right



Operation is described in:

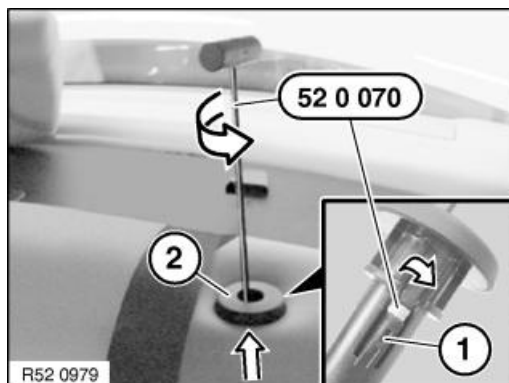
- Replace [heating elements for front seat](#) left or right

**Special tools required:**

- [52 0 070](#)

**Necessary preliminary work:**

- Remove [front head restraint](#)

*Note:*

Guide sleeves cannot be removed without being damaged.

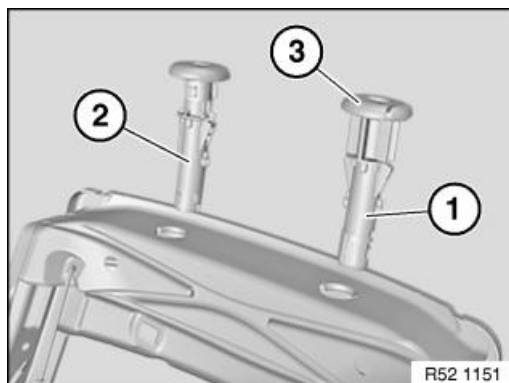
Guide sleeves with pushbuttons have two retaining lugs.

Insert special tool [52 0 070](#) into guide hole of sleeve (2) up to upper area of retaining lug.

Feed release tongue of special tool into gap on retaining lug (1).

Turn special tool to release sleeve (2) and pull out towards top.

If necessary, on guide sleeves with pushbuttons, unlock the second retaining lug with a screwdriver.

*Installation note:*

Replace guide sleeves and install as follows:

1. Guide sleeve with pushbutton (3) and two retaining lugs, left
2. Guide sleeve without pushbutton and one retaining lug, right

52 15 452
support)

Replacing heating element for left or right front seat (thigh



Operation is described in:

- Replace [heating elements for front seat](#) left or right

52 15 415

Replacing padding for left or right front seat (sport/manual)



Operation is described in:

Replacing [seat cover on left or right front seat](#) .

52 15 420 Replacing padding for left or right front seat backrest (sport/manual)



Operation is described in:

Replacing [backrest cover for left or right front seat](#).



This operation is described in section on:

Replacing [thigh support cover on left or right front seat](#) .

**Special tools required:**

- [52 0 050](#)

**Necessary preliminary tasks:**

- Remove [front seat](#)
- Remove [thigh support](#)
- Manual version:
Remove [outer cover](#)
- Electric version:
Remove [support for cover](#)

**Warning!**

US/CDN front passenger seat (with CIS mat) only:

If CIS mat or padding is defective, both parts must be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

**Important!**

The CIS mat must be enabled after each installation work.

Enabling seat occupancy detector (CIS mat):

- Connect [BMW programming system](#)
- Encode airbag control unit
- Delete fault memory if necessary

**Warning!**

US/CDN front passenger seat (with CIS mat) only:

To avoid damaging the CIS mat, it is essential to carry out the following operations with extra care.

**Important!**

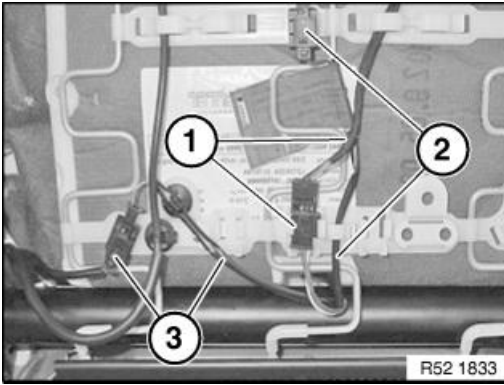
Risk of damage on sharp-edged seat mechanism.

Guide all cables carefully through seat and backrest mechanism.

Make sure cable is routed without kinks and tension.

Make sure plug connections are correctly locked.

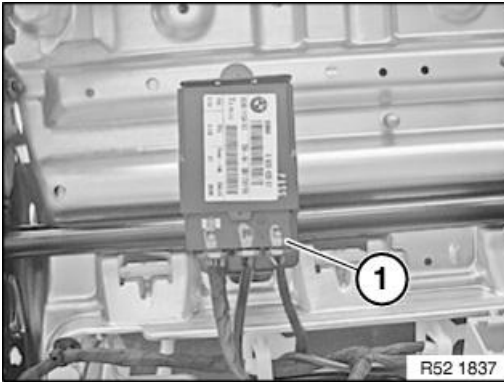
Make sure connectors are correctly seated in latch mechanisms.



Version with seat occupancy detection (CIS mat) only:

1. Data line CIS
2. Earth cable, seat pan
3. Earth cable, backrest frame

Unlock all plug connections and disconnect.

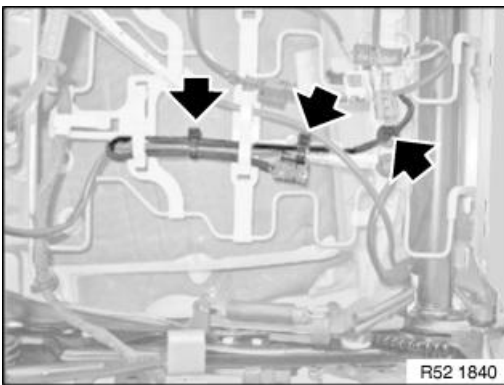


Version with seat heating only:

Unlock plug connection (1) for seat heating and disconnect.

Unfasten cable strap.

Disengage wiring harness from cable clips (flexmat).



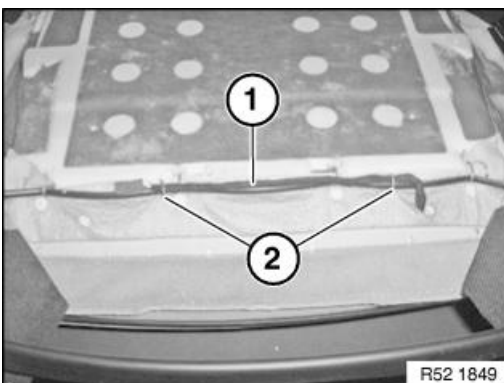
Version with seat occupancy detection (CIS mat) without seat heating only:

Cable for seat heating, seat cushion:

Seat heating is integrated in the CIS mat and is stuck to the upholstery over the full surface.

Lay cable for seat heating as shown to flexmat and secure with cable strap.

Secure connector with cable strap to cable.

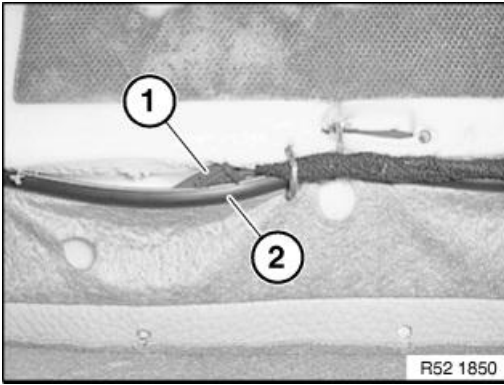


Cable for seat heating, thigh support:

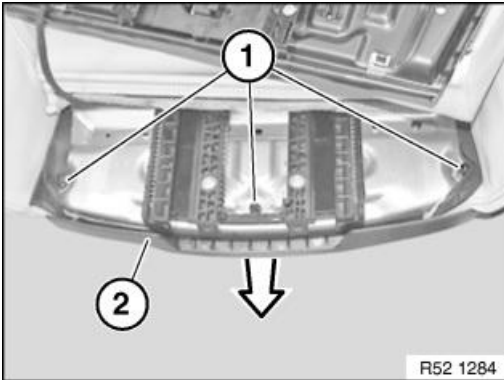
Cramp cable (1) to welt strip with clamps (2).

Installation note:

Bend clamps (2) with special tool [52 0 050](#).



Clamp connector (1) behind welt strip (2).

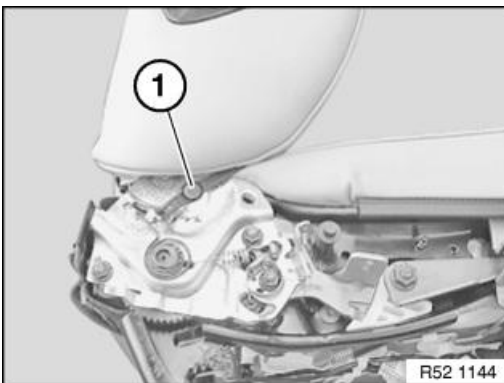


Unlock retaining lugs (1).

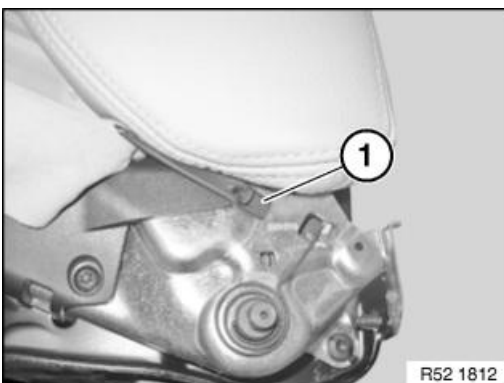
Remove seat trim (2) downwards.

Installation note:

Seat trim (2) must not be damaged.

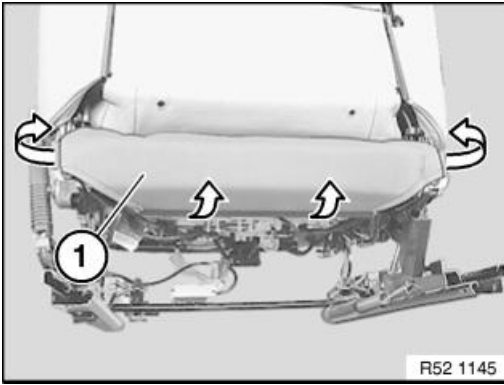


Lever clip (1) out of seat cover on left and right. *Installation note:*
If necessary, replace faulty clip.

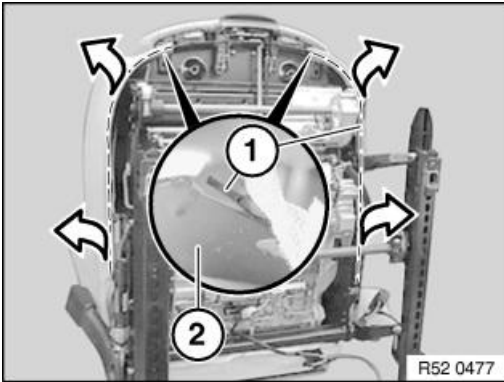


Tunnel side:

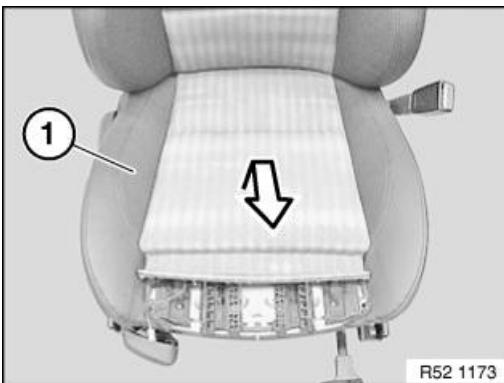
Disengage cover fastener (1) from belt deflector trim.



Detach seat cover (1) from seat frame.



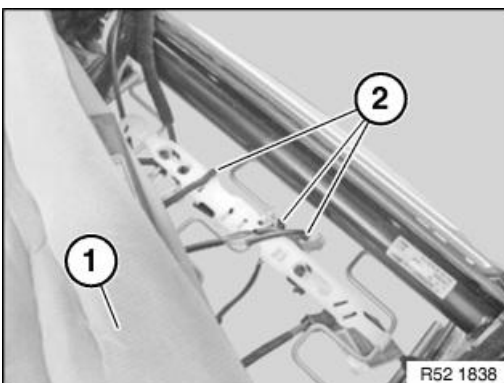
Pull out cover welt (1) completely from seat frame (2).



Remove seat cover (1) with padding towards front/top. **Important!**
Carefully slide bracing cloth with foam through backrest gap and seat structure.

Installation note:

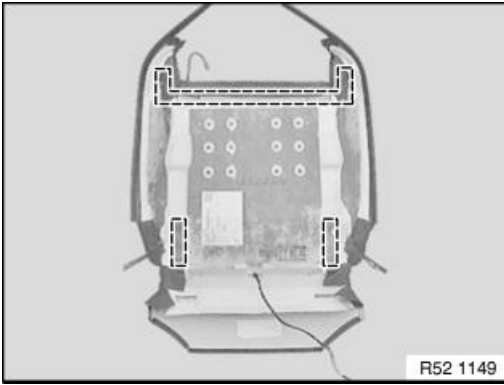
Slide foam completely through backrest gap and seat structure. Make sure foam and bracing cloth are correctly fitted.



Version with seat heating and/or seat occupancy detection (CIS mat):
Release the corresponding plug connections depending on the version and disconnect.

Pull seat cover (1) with upholstery forward a little and feed wiring harness (2) out.

Remove seat cover (1) with padding towards front/top.



Release all clamps in marked area.



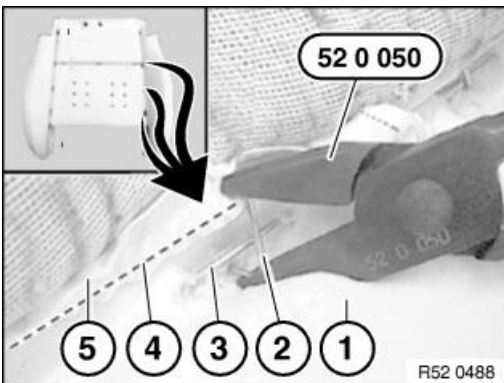
Detach all clamps in side area from OKE strips.

Carefully fold back seat cover and release clamps from OKE strips.

Remove seat cover from upholstery.

Important!

Remove all remnants of clips from seat cover and upholstery (CIS mat).



Installation note:

Bend new clamps (2) with special tool [52 0 050](#) .

1. Upholstery
2. Clamp
3. Trim wire in upholstery
4. OKE strip in cover
5. Seat cover

65 77 604 Replacing sensor mat (CIS mat) for front passenger seat occupancy detector



Warning!

Note [airbag safety regulations](#)!

Incorrect handling can activate airbag and cause injury.



Warning!

Only US and Canadian version of front passenger seat (with CIS mat):

The CIS mat can only be removed in conjunction with the padding from the seat cover.

If CIS mat or padding is defective, both parts may only be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

After fitting the seat cover, the CIS mat must be enabled with the [BMW programming system](#).

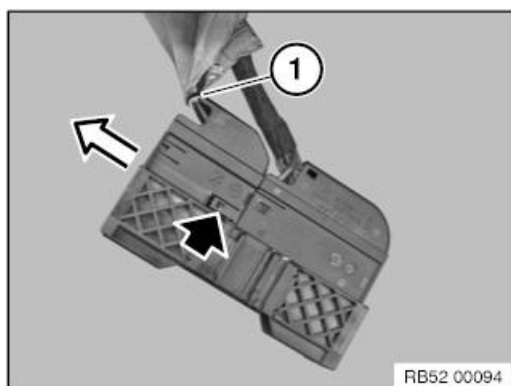


Procedure for replacing the CIS mat together with the upholstery is described in:

- Remove [padding for front seat](#)



The work scope with CIS mat is different for the following work steps:



Cut open cable strap (1).

Lift locking tab and pull the connector out of the side of the connector housing.

Installation note:

Replace cable tie (1).

Connector is encoded against incorrect assembly.



Enabling seat occupancy detector (CIS mat):

- Connect [BMW programming system](#)
- Encode airbag control unit
- Delete fault memory if necessary

52 15 405 Replacing the backrest cover for the front seat (Sport/manual) on the left or right



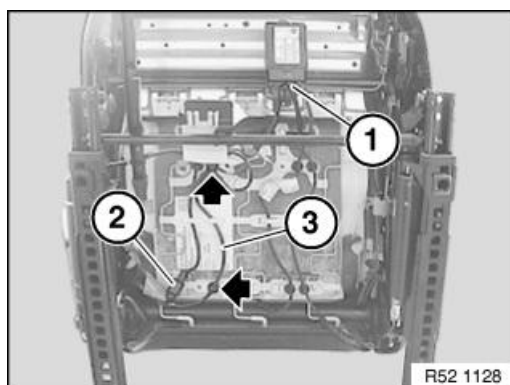
Special tools required:

- [52 0 050](#)



Necessary preliminary tasks:

- Remove [front seat](#)
- Remove the [side airbag](#) in the front seat
- Remove [guide sleeves](#)



Version with seat heating only:

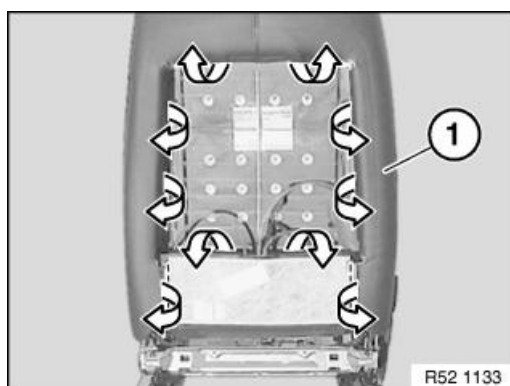
Unfasten plug connection (1) and disconnect.

Disconnect cable straps.

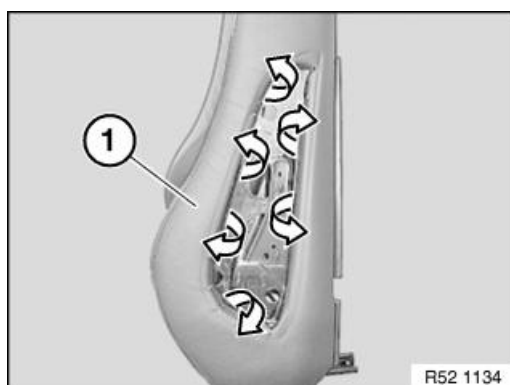
Release wiring harness (3) from cable clips on seat mechanism.

Attention!

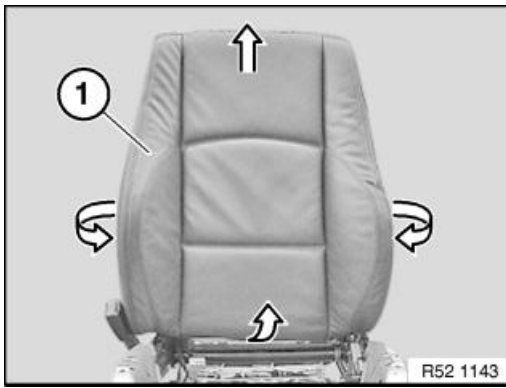
Feed the wiring harness carefully through the seat and backrest mechanism as the edges of the frame can be sharp.



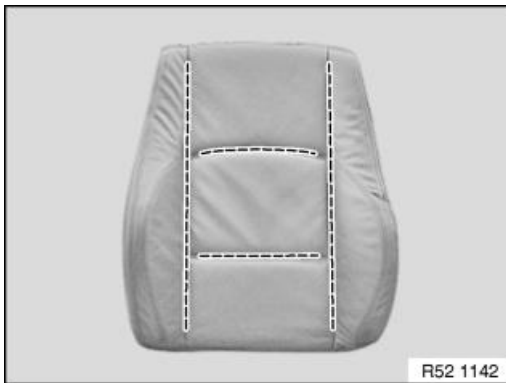
Detach backrest cover (1) from backrest frame.



Pull backrest cover (1) off hook and loop fastener on the backrest frame.



Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.

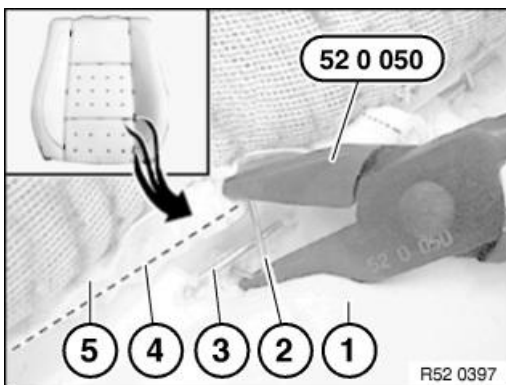


Release all clamps in marked area.

Remove backrest cover from padding.

Note:

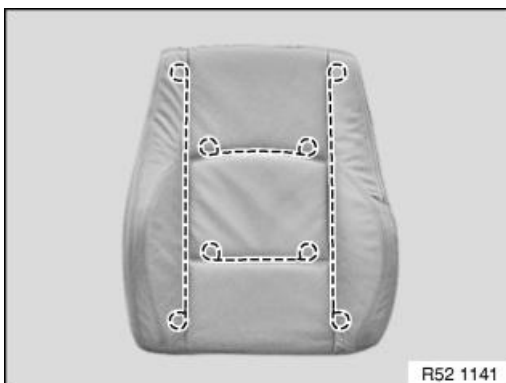
Remove all remnants of clamps from backrest cover and upholstery.



Installation note:

Bend new clamp (2) with special tool [52 0 050](#).

1. Upholstery
2. Clamp
3. Trim wire in upholstery
4. Trim wire in backrest cover
5. Backrest cover

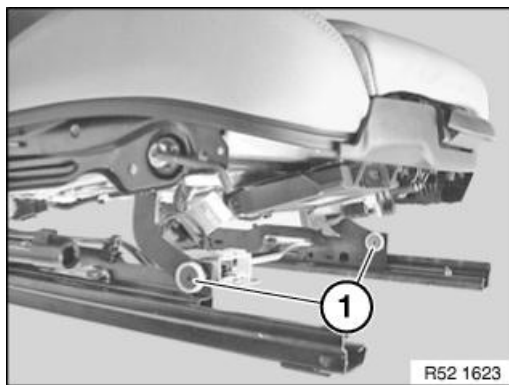


Replacement of backrest cover:

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

52 14 ... Additional work in event of faulty drive/gearing for longitudinal adjustment

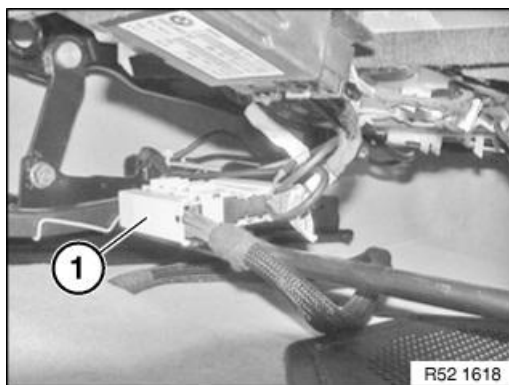


Release screws (1) of swinging arms for seat height adjustment.

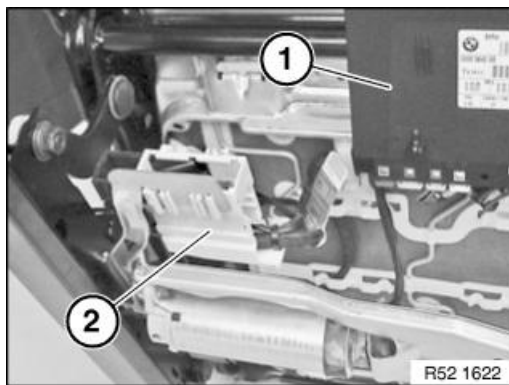
Installation note:

Carefully bend side section back and feed swinging arm out of top rail.

Tilt front seat back.

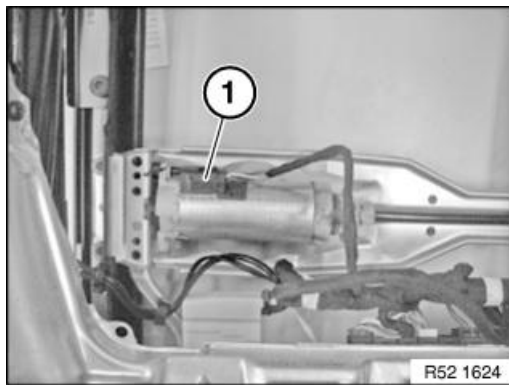


Unfasten plug connection (1) and disconnect.

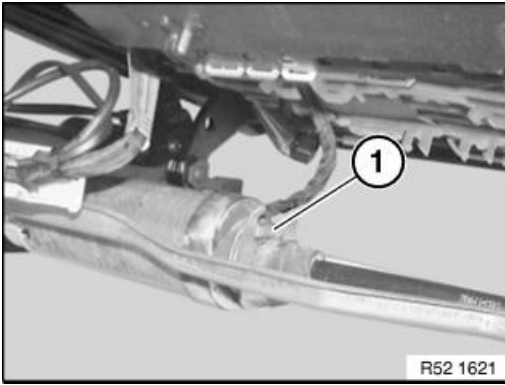


Unclamp central connector (2) from seat mechanism.

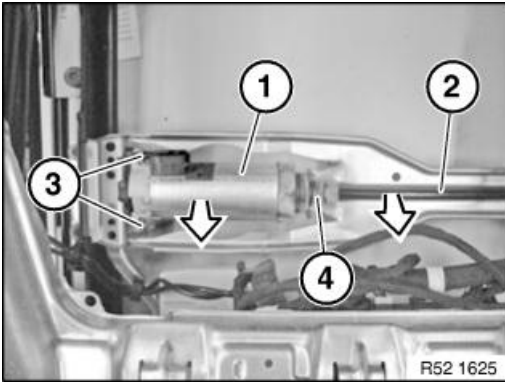
Unclip [control units](#) (1).



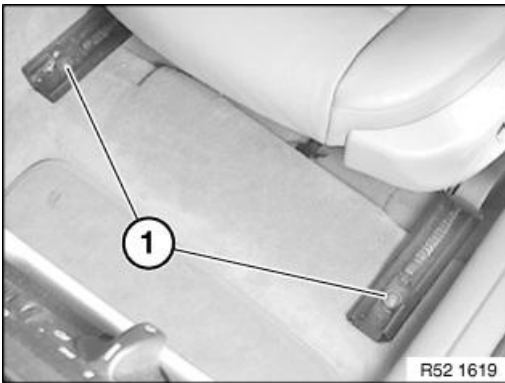
Unfasten plug connection (1) and disconnect.



Bend metal tab (1) open.



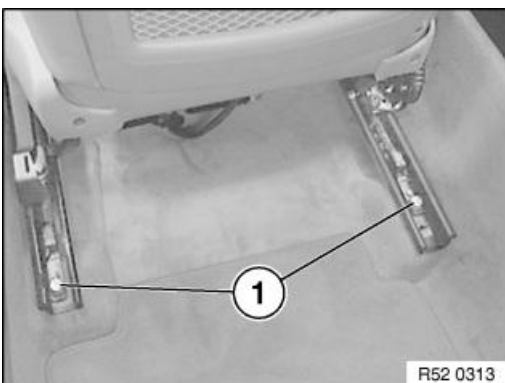
Lift powertrain (1) and flex shaft (2) out of guide (4) in direction of arrow.
Detach drive (1) from rubber mounts (3).
Detach flex shaft (3) from powertrain (1).



Release screws (1) at front.



Installation note:
Install new drive for longitudinal seat adjustment.
Move front seat forwards.



Release screws (1) at rear.

Attention!

Cover door sill with protective covers (risk of damage).

Lift out front seat and assemble.



Installation note:

- Make sure flex shaft is correctly fitted on drive
 - Carpet must not get between seat rails and floor panel in area of attachment points (squeaking noises)
 - Powerlok screws must be replaced and must not be reused
 - Powerlok screws are mechanical screw locks with trilobular threads
 - Insert all screws loose to avoid twisting
 - Tighten down all screws to specified torque
- Tightening torque [52 10 1AZ](#).

65 77 604 Replacing sensor mat (CIS mat) for front passenger seat occupancy detector



Warning!

Note [airbag safety regulations](#)!

Incorrect handling can activate airbag and cause injury.



Warning!

Only US and Canadian version of front passenger seat (with CIS mat):

The CIS mat can only be removed in conjunction with the padding from the seat cover.

If CIS mat or padding is defective, both parts may only be replaced together.

Full functional capability can only be guaranteed with original BMW spare parts.

After fitting the seat cover, the CIS mat must be enabled with the [BMW programming system](#).

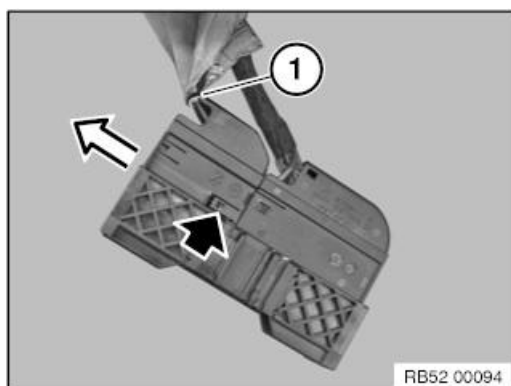


Procedure for replacing the CIS mat together with the upholstery is described in:

- Remove [padding for front seat](#)



The work scope with CIS mat is different for the following work steps:



Cut open cable strap (1).

Lift locking tab and pull the connector out of the side of the connector housing.

Installation note:

Replace cable tie (1).

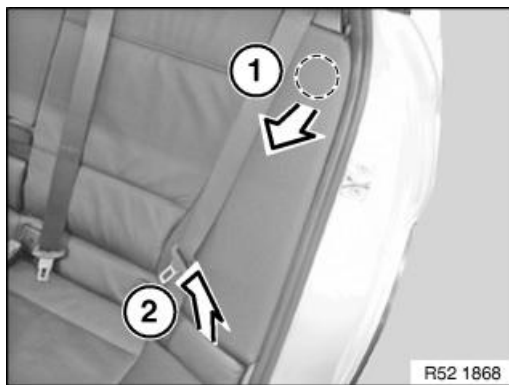
Connector is encoded against incorrect assembly.



Enabling seat occupancy detector (CIS mat):

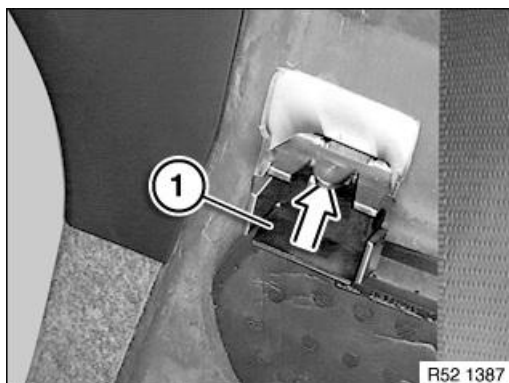
- Connect [BMW programming system](#)
- Encode airbag control unit
- Delete fault memory if necessary

52 26 008 Removing and installing/replacing backrest side section on left or right rear seat backrest



Removing backrest side section:

1. Unclip upper part
2. Lift out backrest side section

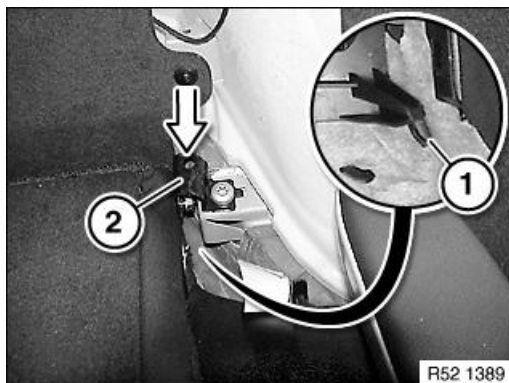


Installation:

Unlock clip (1) and pull out of body.

Engage clip (1) in backrest side section.

If necessary, replace faulty clip (1).



Installation:

Insert lower backrest side section into rear seat.

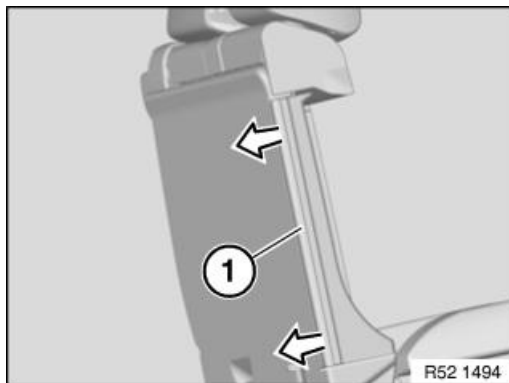
Insert plastic tab (1) of backrest side section in backrest mount (2).

Plastic tab (1) must not be damaged.

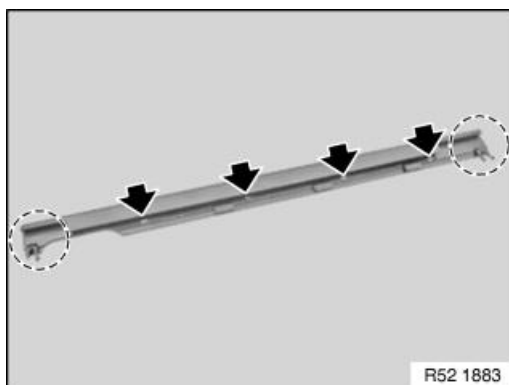
If necessary, replace backrest side section.

**Necessary preliminary tasks:**

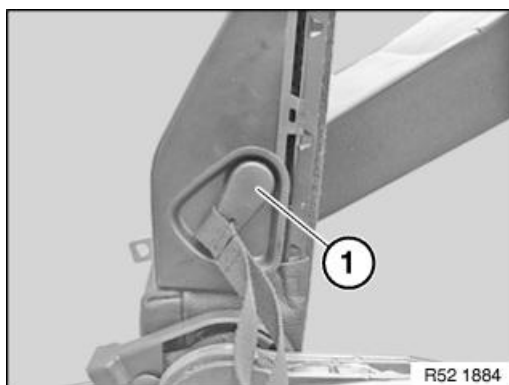
- Remove [armrest for rear seat backrest](#)



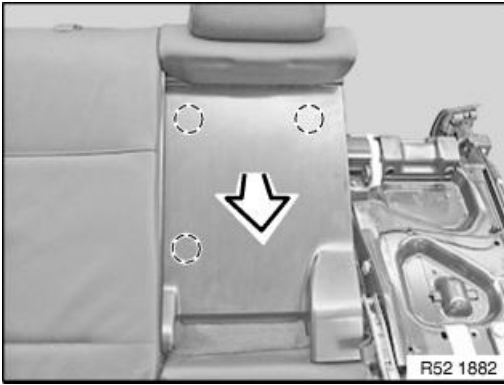
Carefully unclip strips of duct cover (1) on left and right. *Installation:*
Risk of damage! Plastic eyelets of trim for armrest can break.
If necessary, replace faulty trim.



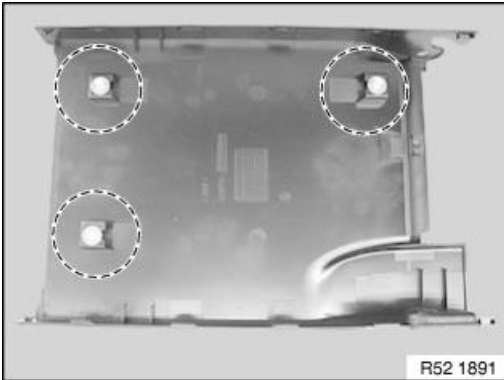
Installation:
Risk of damage! Ensure all retaining lugs are undamaged.
If necessary, replace faulty strip.



Lever out protective cap (1) and release screw underneath.



Unclip trim for armrest.

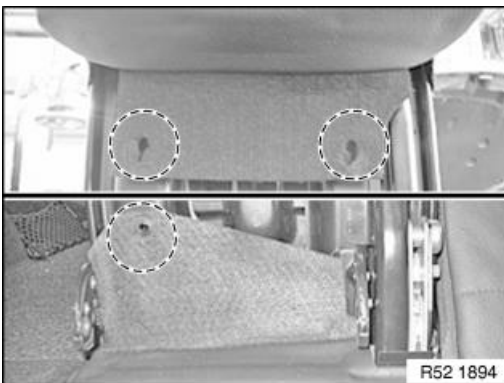


Installation:

Pre-install clips.

If necessary, replace faulty clips.

If clip mountings are defective, replace trim.



Installation:

Install reference tab between trim panel and rear wall.

Clips must be threaded through eyelet of reference tab.

**Necessary preliminary tasks:**

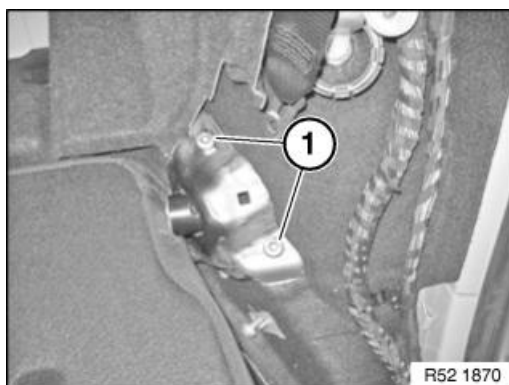
- Remove [backrest side section](#)
- Remove [rear seat](#)

**Installation:**

- Microencapsulated screws (Loctite) must be replaced and may not be reused
- Screw connection must be completed within 20 minutes (start of curing)
- Microencapsulated screws must not be retightened
- Clean thread of nut beforehand in event of repeated use



Remove cover (1) left and right from side trim panel .



Release screws (1) left and right

Installation:

Replace microencapsulated screws.

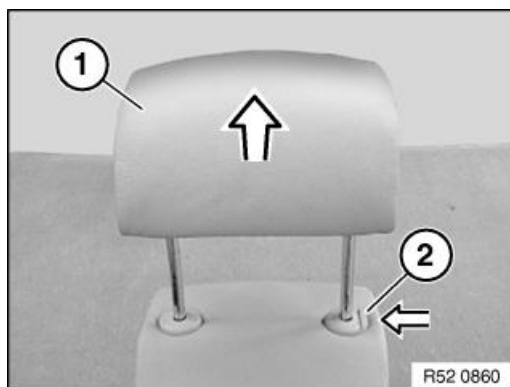
Tightening torque [52 26 01AZ](#) .

Important!

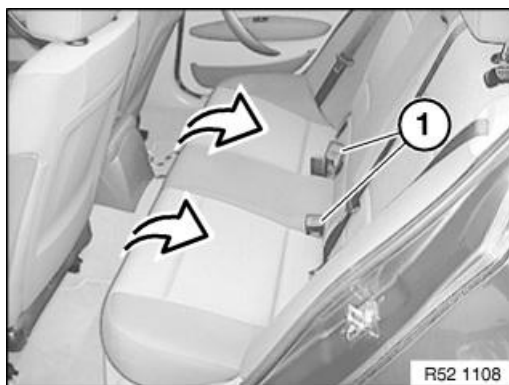
Risk of damage! Cover entrance with protective cover.

Using an aid, remove the backrest carrier with backrest from the vehicle.

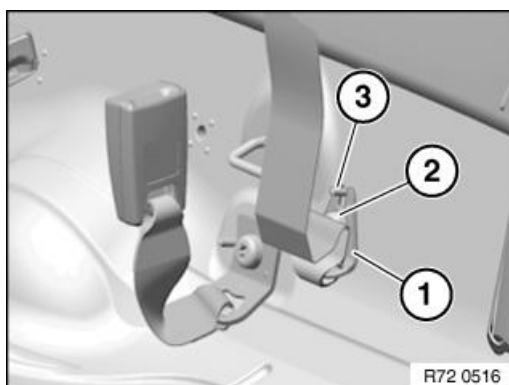
52 26 210 Removing and installing or replacing headrest for left or right rear seat backrest.



Press lock (2) and pull out headrest (1).



Unclip rear seat on left and right towards top. *Installation:*
Feed seat belt buckles (1) into openings in rear seat.



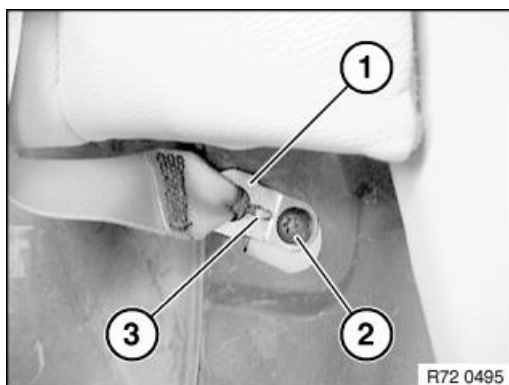
Release screw (2) on middle seat belt anchor fitting.

Tightening torque [72 11 22AZ](#).

Installation:

Pin (3) determines the installation position and prevents the anchor fitting (1) from turning.

Lift out rear seat.



Release screws (2) on left and right.

Tightening torque [72 11 22AZ](#).

Installation:

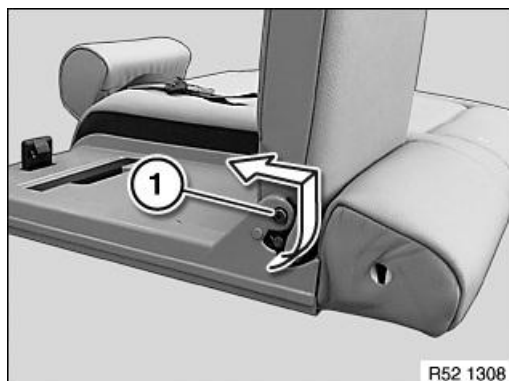
Pin (3) determines the installation position and prevents the anchor fitting (1) from turning.



Feed out end fittings from rear seat.

52 26 030

Removing and installing/replacing armrest for rear seat backrest



Release screw (1).

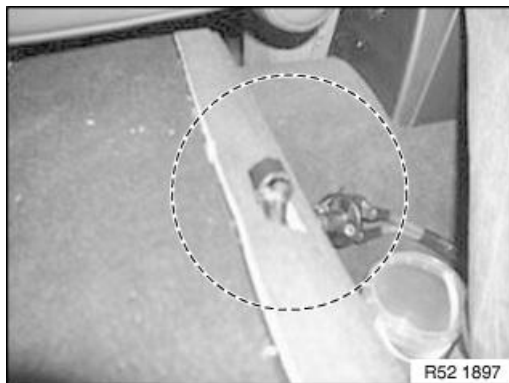
Tightening torque [52 26 03AZ](#) .

Twist out armrest in direction of arrow from backrest frame.



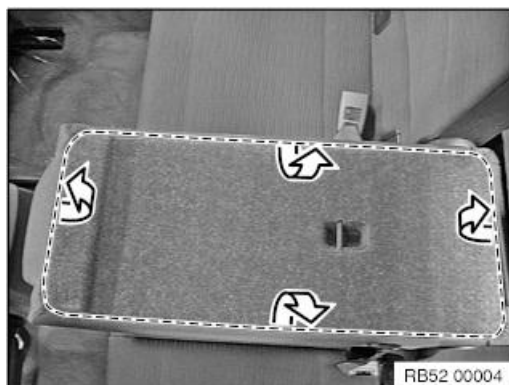
Necessary preliminary tasks:

- Remove [rear seat](#)

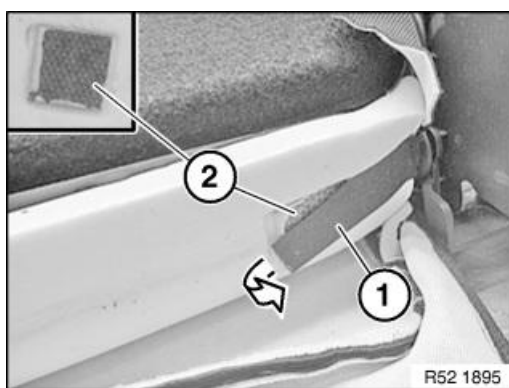


Important!

Risk of damage to backrest cover during cushion work.
Cover fixture for seat bench.



Lever out welt in marked area.
Remove cover with upholstery.
Remove cover from upholstery.



Important!

Risk of damage! Fastener surface (2) tears off of upholstery.

Hold down fastener surface (2) and carefully pull off Velcro fastener (1) from upholstery. *Note:*
Fastener surface (2) on the upholstery must not be damaged or pulled off.

If necessary, renew upholstery.

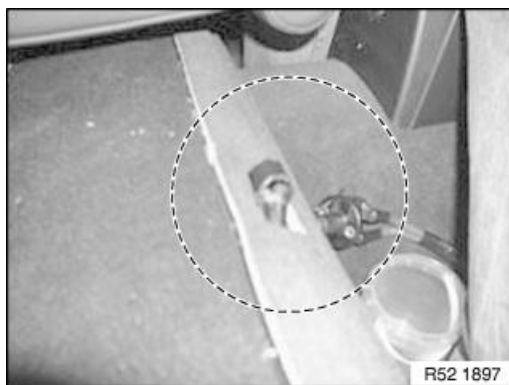
Make sure the cover has no wrinkles.

**Special tools required:**

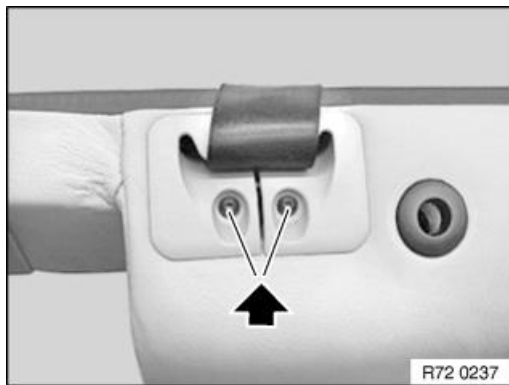
- [52 0 050](#)

**Necessary preliminary tasks:**

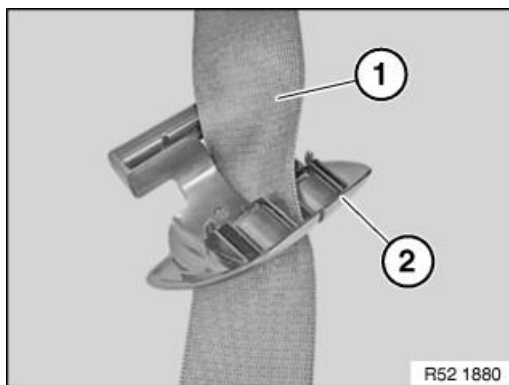
- Remove [rear seat](#)
- Removing [actuating mechanism for rear seat backrest](#)
- Remove [head restraint locators](#)

**Important!**

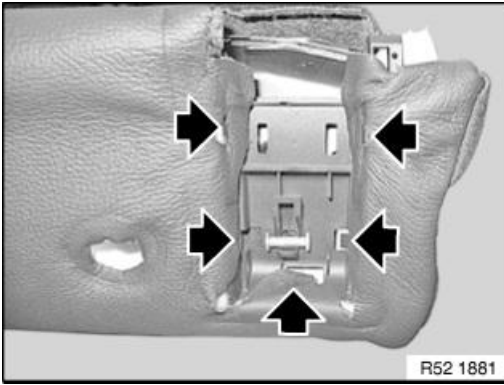
Risk of damage to backrest cover during cushion work.
Cover fixture for seat bench.



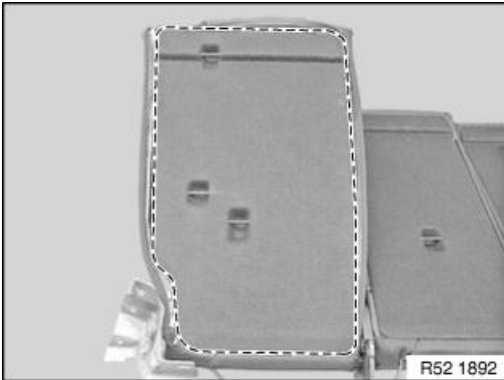
Release screws and pull out cover.



Feed out seat belt strap (1) from cover (2).

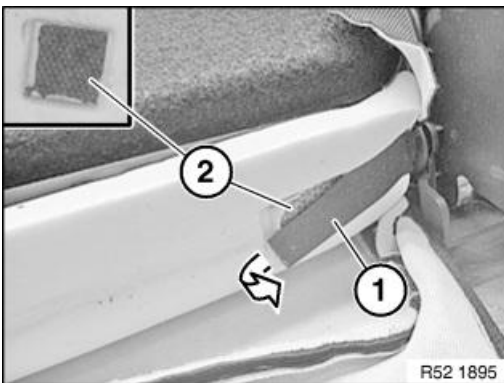


Detach cover lugs.



Lever out welt in marked area.

Remove backrest cover with upholstery from backrest frame.



Important!

Risk of damage! Fastener surface (2) tears off of upholstery.

Hold down fastener surface (2) and carefully pull off Velcro fastener (1) from upholstery. *Note:* Fastener surface (2) on the upholstery must not be damaged or pulled off.

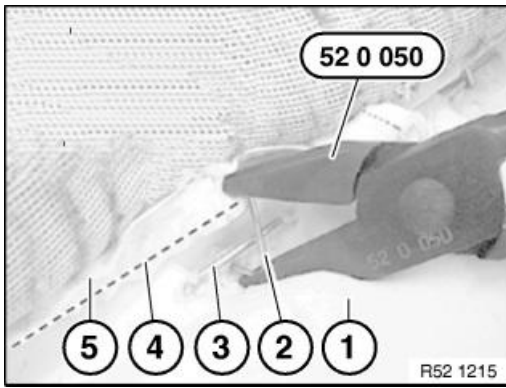
If necessary, renew upholstery.

Make sure the cover has no wrinkles.



Release all retainers in marked area. *Note:*

Remove remaining clamps from cover and upholstery.



Installation:

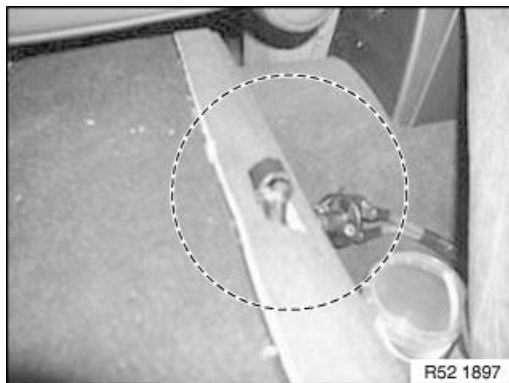
Insert new clamp (2) with special tool [52 0 050](#) and bend closed.

1. Padding
2. Retainer
3. Trim wire in padding
4. OKE-strip in seat cover
5. Seat cover



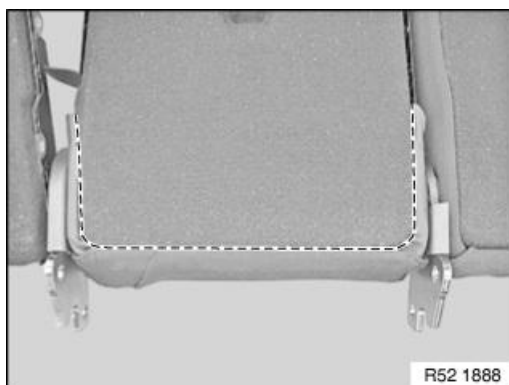
Necessary preliminary work:

- Remove [rear seat](#)
- Remove [cover for armrest](#)

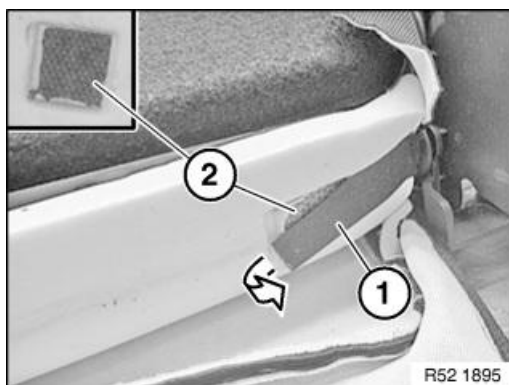


Important!

Risk of damage to backrest cover during cushion work.
Cover fixture for seat bench.



Lever out welt in marked area.



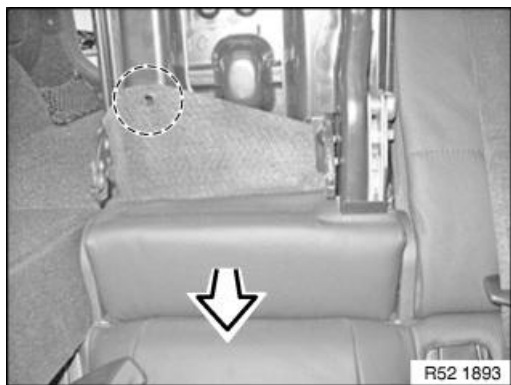
Important!

Risk of damage! Fastener surface (2) tears off of upholstery.

Hold down fastener surface (2) and carefully pull off Velcro fastener (1) from upholstery. *Note:* Fastener surface (2) on the upholstery must not be damaged or pulled off.

If necessary, renew upholstery.

Make sure the cover has no wrinkles.



Remove cover with upholstery.

Remove cover from upholstery.

Installation note:

Install reference tab between trim panel and rear panel.

Clip of trim must be threaded through eyelet of reference tab.



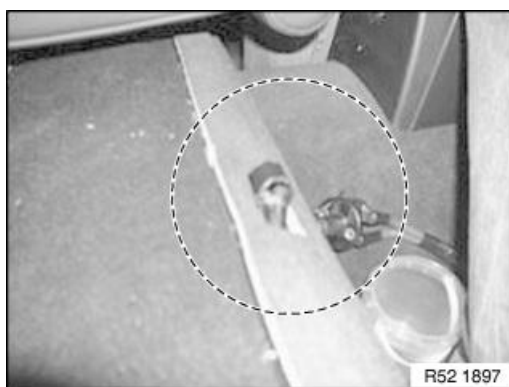
Special tools required:

- [52 0 050](#)



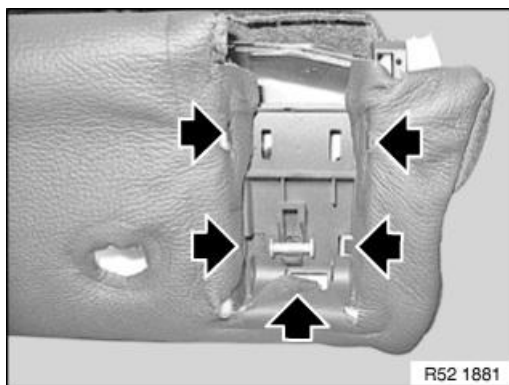
Necessary preliminary tasks:

- Remove [rear seat](#)
- Removing [actuating mechanism for rear seat backrest](#)
- Remove [head restraint locators](#)

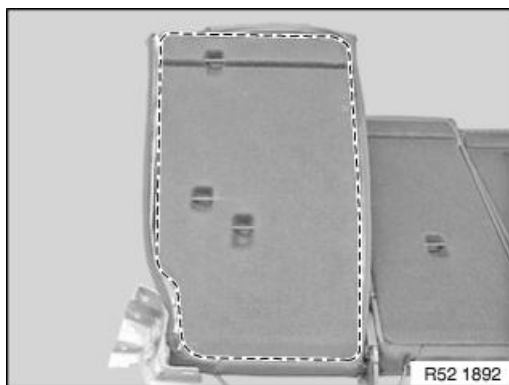


Important!

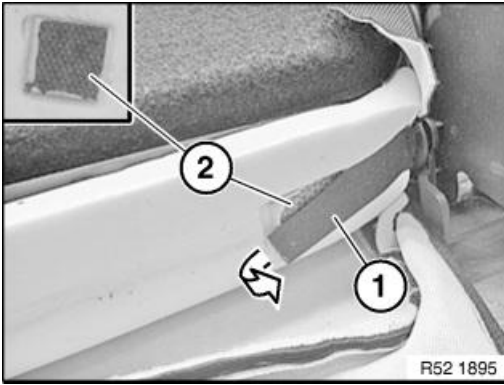
Risk of damage to backrest cover during cushion work.
Cover fixture for seat bench.



Detach cover lugs.



Lever out welt in marked area.



Important!

Risk of damage! Fastener surface (2) tears off of upholstery.

Hold down fastener surface (2) and carefully pull off Velcro fastener (1) from upholstery. *Note:*

Fastener surface (2) on the upholstery must not be damaged or pulled off.

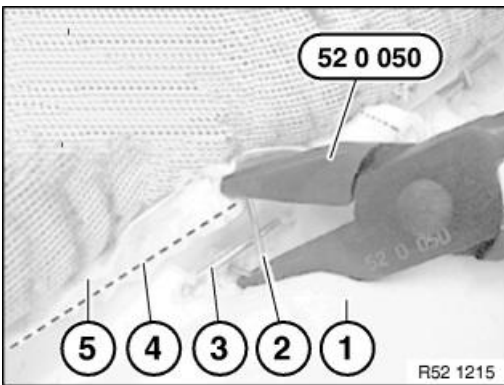
If necessary, renew upholstery.

Make sure the cover has no wrinkles.



Release all retainers in marked area. *Note:*

Remove remaining clamps from cover and upholstery.



Installation:

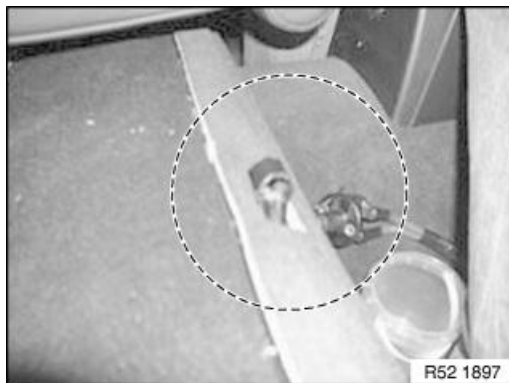
Insert new clamp (2) with special tool [52 0 050](#) and bend closed.

1. Padding
2. Retainer
3. Trim wire in padding
4. OKE-strip in seat cover
5. Seat cover



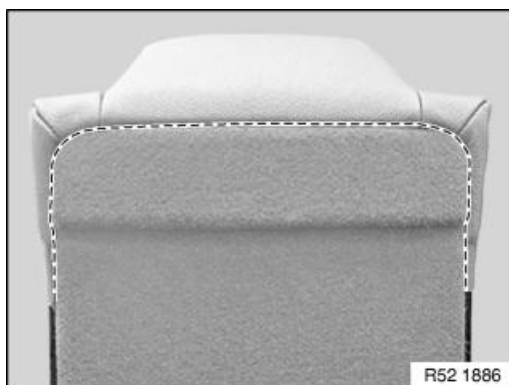
Necessary preliminary work:

- Remove [rear seat](#)
- Remove [cover for armrest](#)

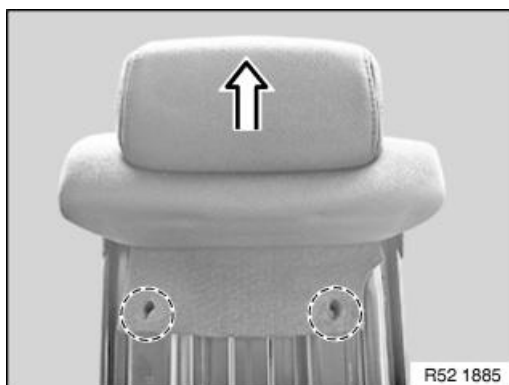


Important!

Risk of damage to backrest cover during cushion work.
Cover fixture for seat bench.



Lever out welt in marked area.



Remove cover with upholstery.
Remove cover from upholstery.

Installation note:

Install reference tab between trim panel and rear panel.

Clip of trim must be threaded through eyelet of reference tab.



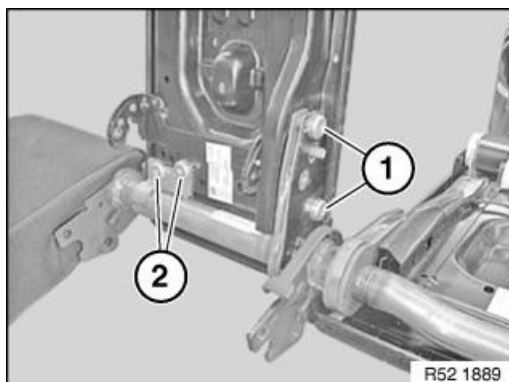
Necessary preliminary work:

- Remove [lower backrest cover](#)
- Remove [backrest support with backrest](#)
- Remove [Bowden cable](#)



Installation note:

- Microencapsulated screws (Loctite) must be replaced and may not be reused
- Screw connection must be completed within 20 minutes (start of curing)
- Microencapsulated screws must not be retightened
- Clean thread of nut beforehand in event of repeated use



Release screws (1).

Unfasten screws (2).

Installation note:

Replace screws and insert with Loctite.

Tightening torque [52 26 11AZ](#).



Replacement only:

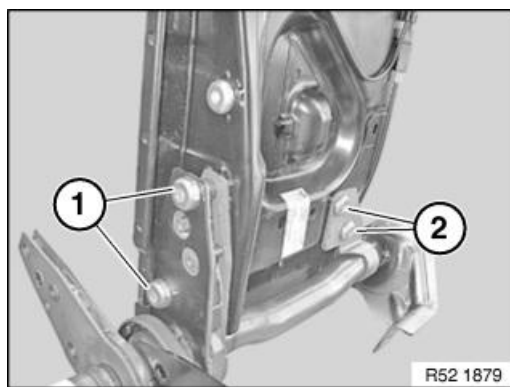
- Remove [rear panel](#)
- Remove [upper backrest cover](#)

**Necessary preliminary tasks:**

- Remove [backrest cover](#)
- Remove [backrest support with backrest](#)
- Remove [Bowden cable](#)

**Installation:**

- Microencapsulated screws (Loctite) must be replaced and may not be reused
- Screw connection must be completed within 20 minutes (start of curing)
- Microencapsulated screws must not be retightened
- Clean thread of nut beforehand in event of repeated use



Release screws (1).

Unfasten screws (2).

Installation:

Replace screws and insert with Loctite.

Tightening torque [52 26 11AZ](#).

Remove lock for centre armrest.

**Replacement only:**

- Remove [rear panel](#)
- Remove [retractor mechanism](#)



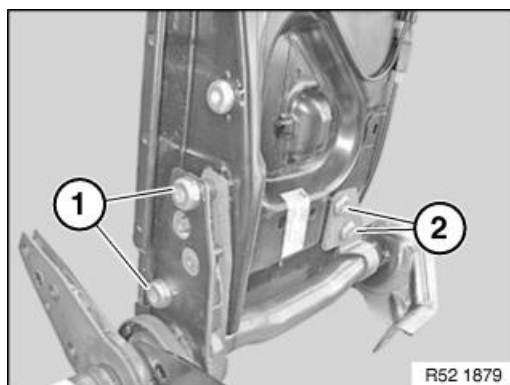
Necessary preliminary tasks:

- Remove [backrest cover](#)
- Remove [backrest support with backrest](#)



Installation:

- Microencapsulated screws (Loctite) must be replaced and may not be reused
- Screw connection must be completed within 20 minutes (start of curing)
- Microencapsulated screws must not be retightened
- Clean thread of nut beforehand in event of repeated use



Release screws (1).

Unfasten screws (2).

Installation:

Replace screws and insert with Loctite.

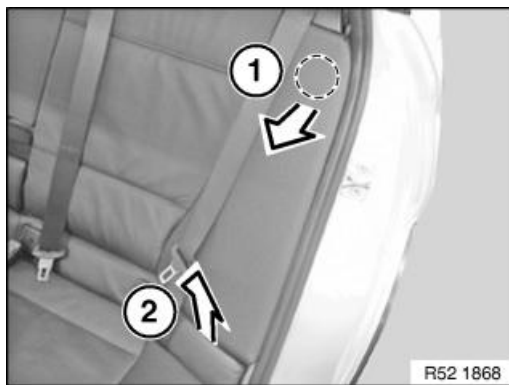
Tightening torque [52 26 11AZ](#).



Replacement only:

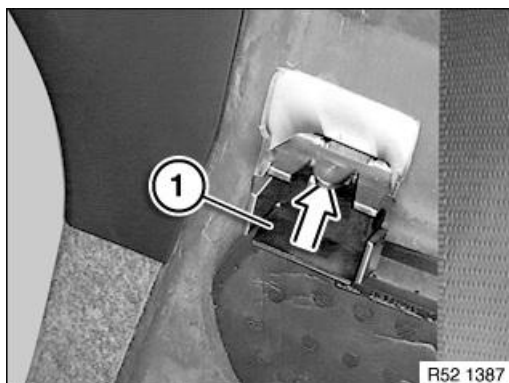
- Remove [rear panel](#)
- Remove [Bowden cable](#)

52 26 008 Removing and installing/replacing backrest side section on left or right rear seat backrest



Removing backrest side section:

1. Unclip upper part
2. Lift out backrest side section

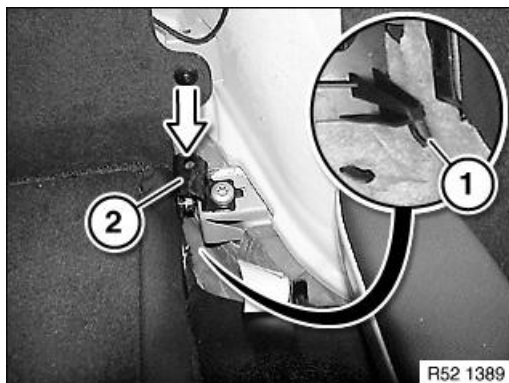


Installation:

Unlock clip (1) and pull out of body.

Engage clip (1) in backrest side section.

If necessary, replace faulty clip (1).



Installation:

Insert lower backrest side section into rear seat.

Insert plastic tab (1) of backrest side section in backrest mount (2).

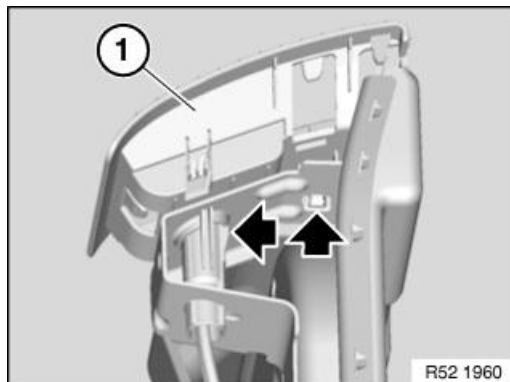
Plastic tab (1) must not be damaged.

If necessary, replace backrest side section.



Necessary preliminary work:

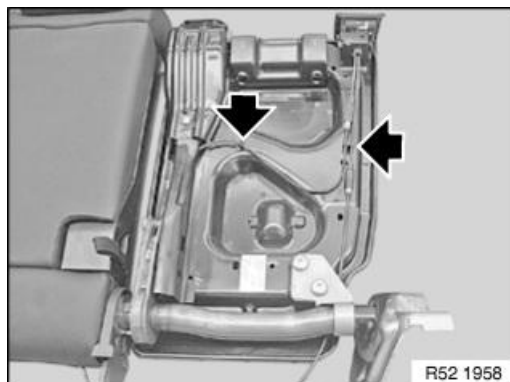
- Remove [left backrest cover](#)
With ski bag optional equipment:
- Remove [lower middle backrest cover](#)
Without ski bag optional equipment:
- Remove [middle backrest cover](#)



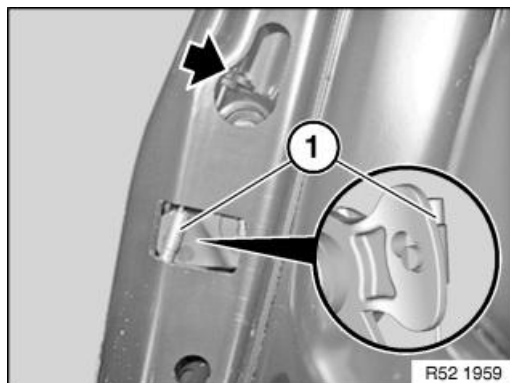
Bowden cable for rear seat backrest, left:

Unlock Bowden cable sleeve.

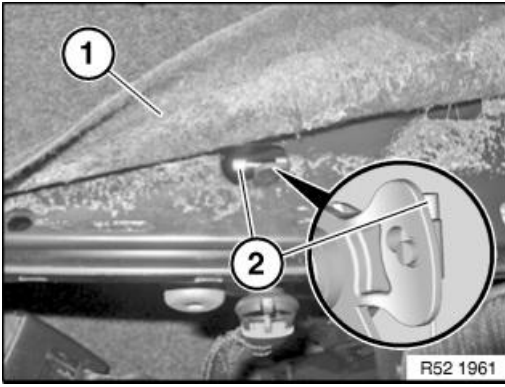
Unlock handle housing (1) and remove upwards.



Unclip Bowden cable of rear seat backrest.



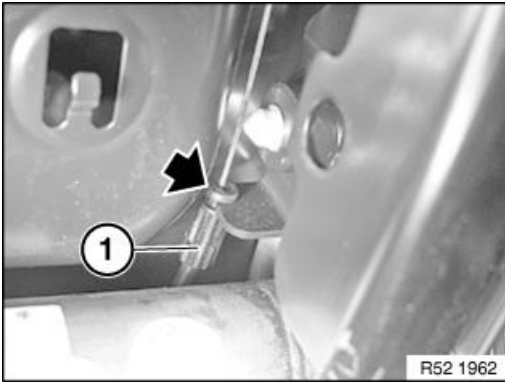
Use flat pointed pliers to detach the Bowden cable nipple (1) through mounting holes of the left-hand rear seat backrest.



Bowden cable for rear seat backrest, middle:

Partially loosen [rear trim panel](#).

Detach Bowden nipple (2).



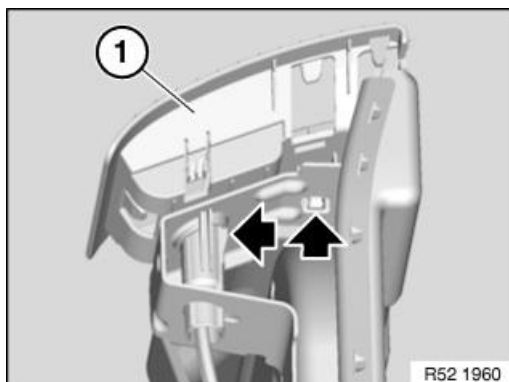
Unclip Bowden cable sleeve (1).

52 26 117 Removing and installing/replacing Bowden cable for right rear seat backrest



Necessary preliminary work:

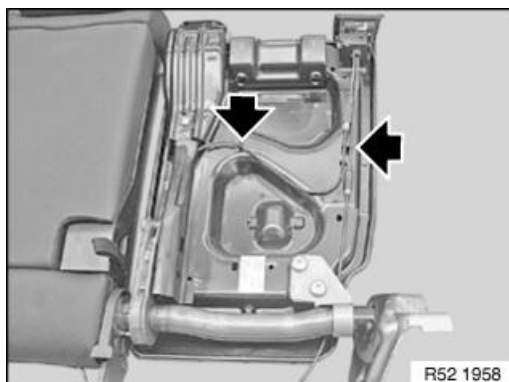
- Remove [backrest cover](#) on right



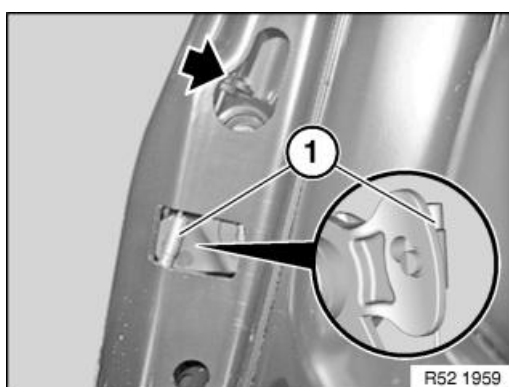
Bowden cable for rear seat backrest, left:

Unlock Bowden cable sleeve.

Unlock handle housing (1) and remove upwards.

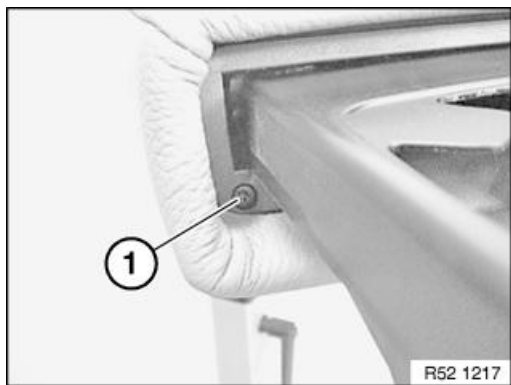


Unclip Bowden cable of rear seat backrest.



Use flat pointed pliers to detach the Bowden cable nipple (1) through mounting holes of the left-hand rear seat backrest.

52 26 032 Removing and installing/replacing cup holder in armrest for rear seat backrest



Open armrest.

Open cup holder.

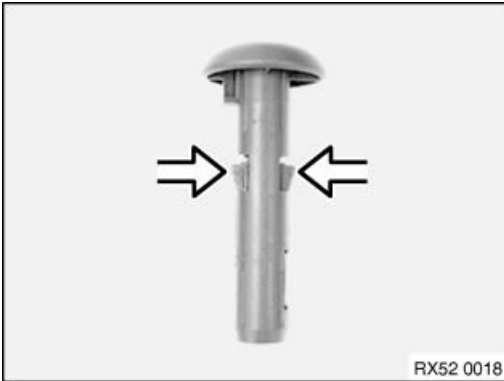
Release screws (1) on left and right.

Remove complete cup holder towards front.



Necessary preliminary tasks:

- Remove [head restraint](#)



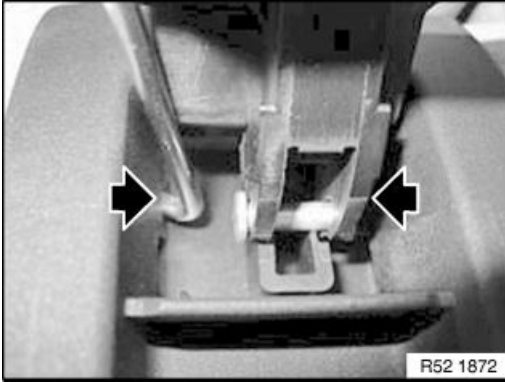
Press backrest cover with padding next to guide downwards to expose detent lugs.

Unlock detent lugs on left and right with screwdriver and remove guide towards top.

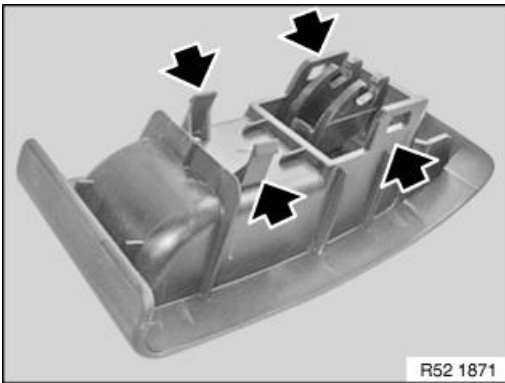
Important!

Do not damage backrest cover.

52 26 303 Removing and installing/replacing operating mechanism for rear seat backrest, left or right



Pull operating lever and unlock the latch mechanisms under it, left and right, with suitable tool and at the same time clip out the operating mechanism downward.



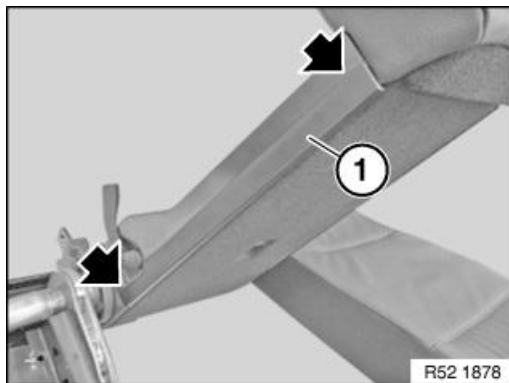
Installation:

Latch mechanisms of the operating mechanism must not be damaged.

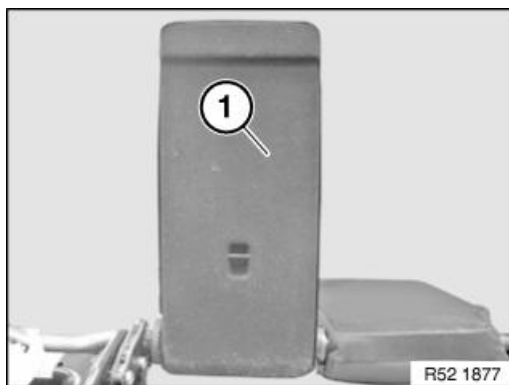


Necessary preliminary work:

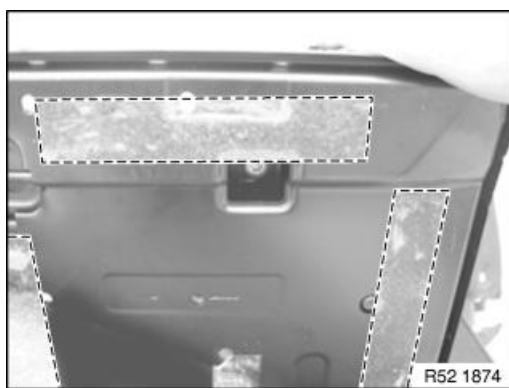
- [Pull out welt of](#) centre backrest cover



Unclip left and right cover strip (1). *Installation:*
Replace defective cover strip.



Pull off rear panel (1), avoiding any kinks. *Installation:*
Replace any kinked or defective rear panel (1).



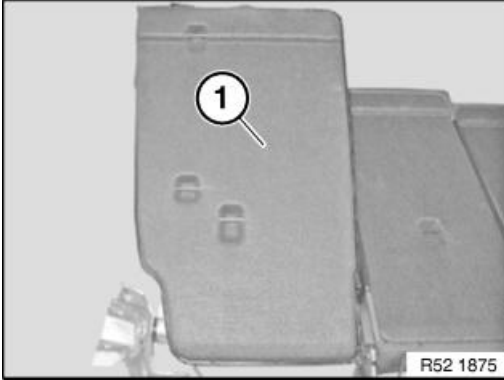
Installation:
Replace double-sided adhesive tape.

52 26 201 Removing and installing/replacing rear panel on left or right rear seat backrest

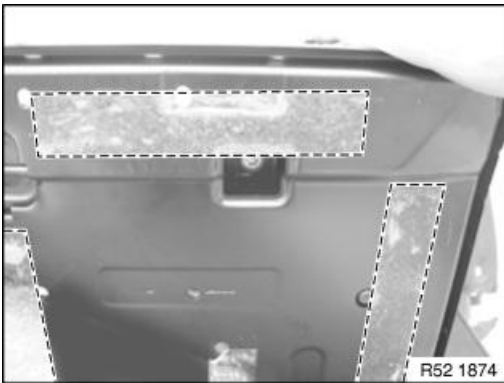


Necessary preliminary tasks:

- [Remove](#) backrest cover



Pull off the rear panel (1), avoiding any kinks. *Installation:*
Replace any kincked or or defective rear panel (1).



Installation:
Replace double-sided adhesive tape.



Operation is described in:

- Removing [seat cover with padding](#) .

51 23 ... Removing/installing ball sockets with clip



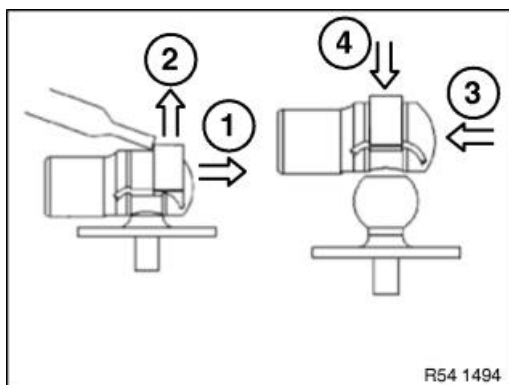
Warning!

Danger of injury! When installed, the gas pressurised shock absorber is under preload. Minimise preload as far as possible before removing.



Important!

Never lift off ball socket with engaged clamp.



Disassembly/assembly:

1. Push on clamp in direction of groove with screwdriver
2. Lift off ball socket from ball pin
3. Slide clamp back
4. Fit ball socket on ball stud and snap into place with force

Installation note:

Pack grease into two opposite positions in socket. The grease spreads after installation on the ball pin all round in the ball socket.

**Necessary preliminary tasks:**

- Remove [backrest frame for left rear seat](#)
- Remove [backrest frame for right rear seat](#)
- Remove [backrest frame for centre rear seat](#)
- Remove [all rear lower straps](#)



Operation is described in:

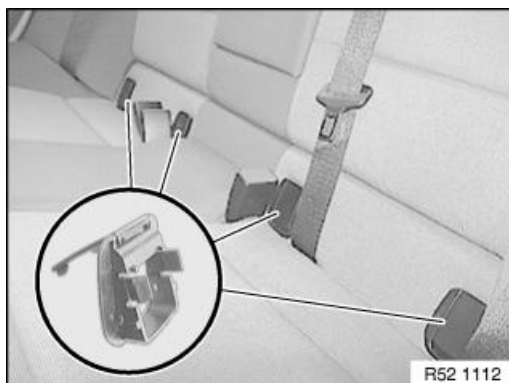
Replacing [seat cover](#) for rear seat.

**Special tools required:**

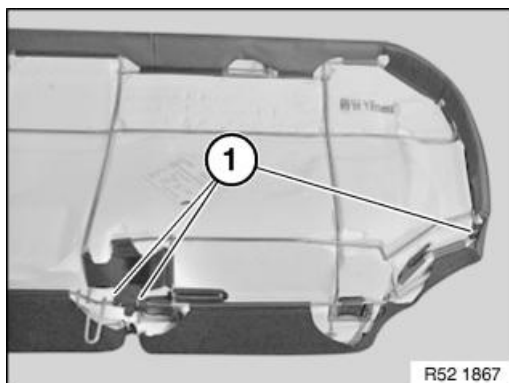
- [52 0 050](#)

**Necessary preliminary tasks:**

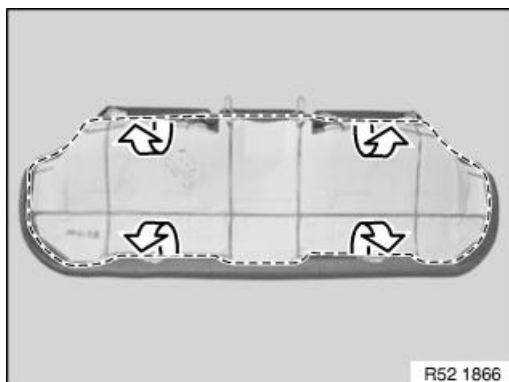
- Remove [rear seat](#)



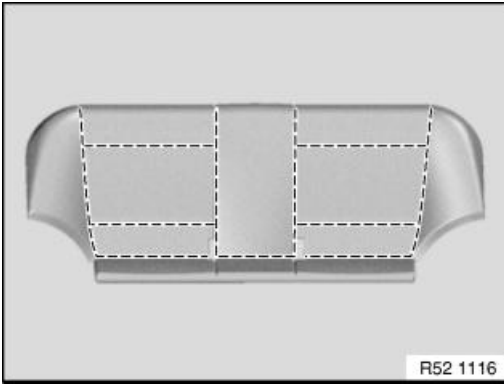
Unclip Isofix protective caps. *Installation:*
Make sure Isofix protective caps are correctly engaged.



Loosen retainers (1). *Note:*
Remove remaining clamps from cover and upholstery.

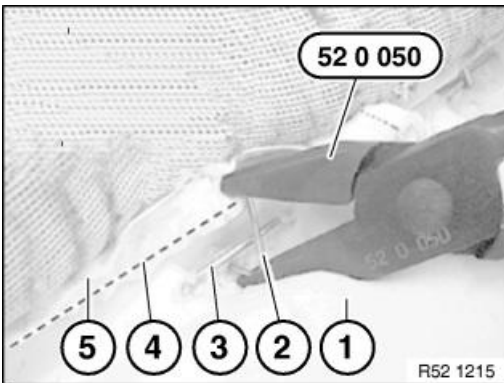


Lever out welt all around in marked area of wire frame.



Detaching cover and upholstery:

- Release all retainers in marked area
- Remove seat cover from padding
- Remove remaining retainers from cover and padding



Installation:

Insert new clamp (2) with special tool [52 0 050](#) and bend closed.

1. Padding
2. Retainer
3. Trim wire in padding
4. OKE-strip in seat cover
5. Seat cover



Screw securing adhesive is a means of preventing a screwed connection from being loosened by external influences.

Once the screw has been coated with adhesive, the adhesive remains inactive until such time that it is activated by the encapsulation breaking when the screw is inserted and then cures (hardens) at room temperature.



Installation note:

- Screw connection must be completed within 20 mins. (start of curing)
- Microencapsulated screws must not be retightened
- Thread of nut must be cleaned beforehand in event of repeated use