65 77 602 Replacing sensor mat for front passenger seat occupancy detector

Necessary preliminary tasks:

- Remove front passenger seat

Important!

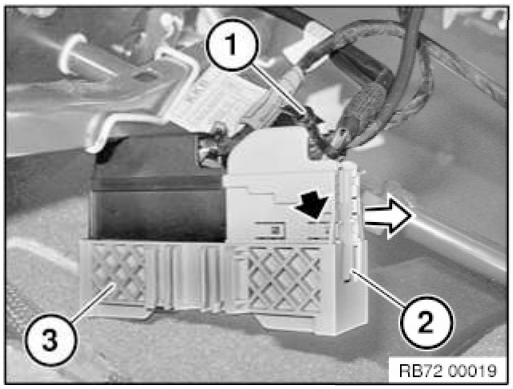
Risk of damage on sharp-edged seat mechanism.

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.

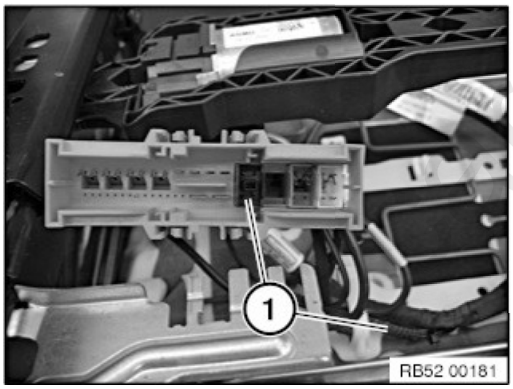


Remove the central plug from the mounting.

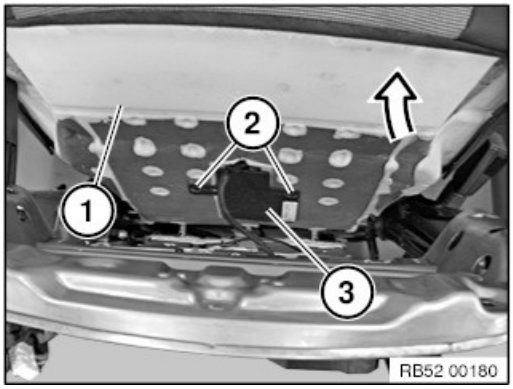
Cut open cable strap (1).

Installation note:
Replace cable tie (1) at central plug.

Raise the tab and pull connector (2) out through the side of the connector housing (3).



Detach cable for seat occupancy detection (1) from cable clip.



Lift the front seat cover with upholstery (1) and unclip the mounting (2) for the seat occupancy detection (3).

Remove the seat occupancy detection (3) from upholstery front passenger seat (1) and feed out connector with cable.

Installation note:
Plug connections are coded against incorrect assembly.

- To avoid malfunctions, make sure seat occupancy mat (3) is cleanly laid:
  - Insert the seat occupancy detection (3) in the provided recess and clip in mounting.
  - Install the cables and connectors for the seat occupancy detection clean and without kinks.
  - Slide and lock connector in central connector housing.

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52 13 001 Removing and installing front seat, driver's side (normal / manual)

Necessary preliminary tasks:

- Disconnect battery earth lead
- Remove head restraint

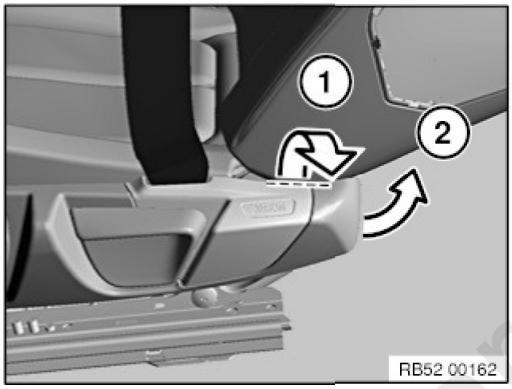
Important!

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

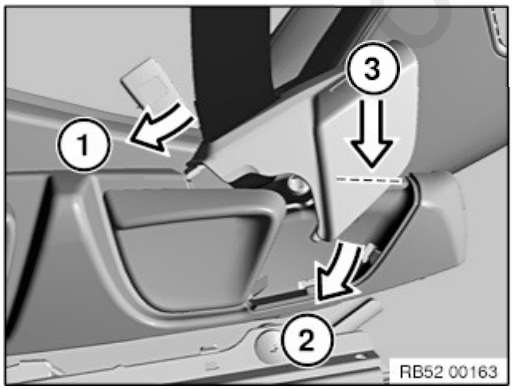


Move backrest to full rearward position.

Grip end fitting cover in marked area between cushion and cover.

Unclip end fitting cover in direction of arrow (1).

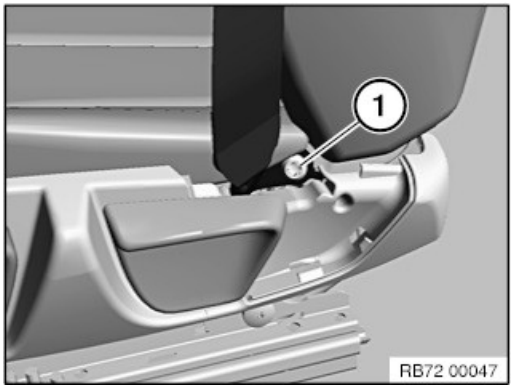
Feed out end fitting cover (2) in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with front guide in cover
2. Insert cover in direction of arrow downwards in covering
3. Engage top cover in marked area in covering.

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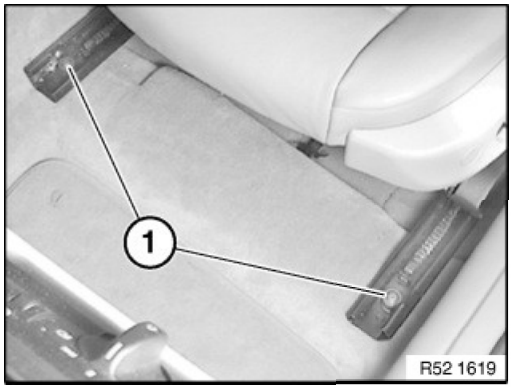


Release screw (1).

Tightening torque: 72 11 02AZ.

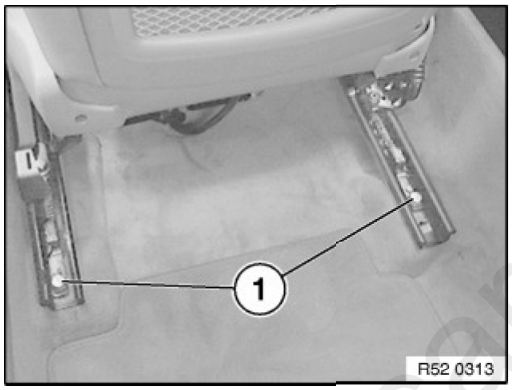
Remove end fitting.

Installation note:
End fitting is coded against incorrect assembly.



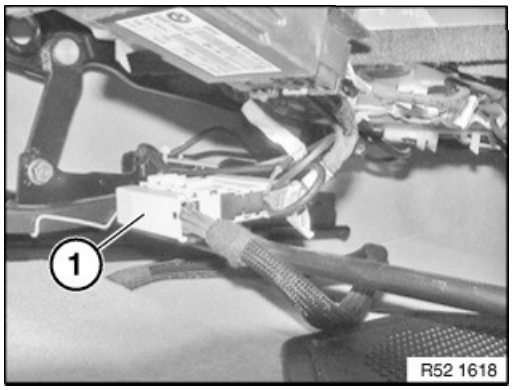
Move seat to upper back position.

Release and dispose of screws (1).



Adjust the seat to the front top.

Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

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

Lift out front seat.

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Installation note:

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

  Tightening torque 52 10 01AZ.



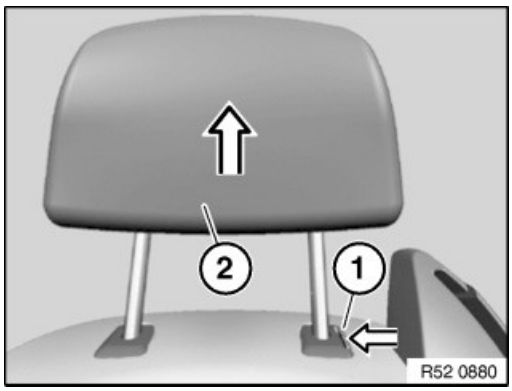
Warning!

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.

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52 13 390 Removing and installing or replacing front left or right head restraint



Press latch mechanism (1) and lift out head restraint (2).

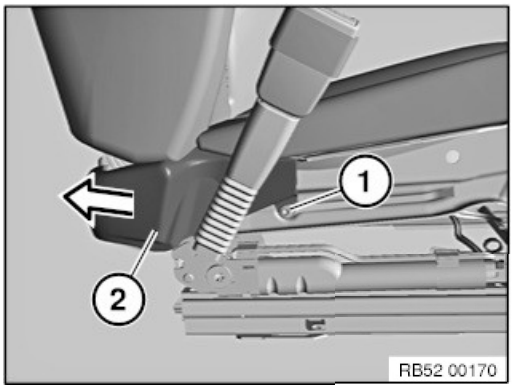
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52 13 041 Removing and installing or replacing inner cover on left or right front seat

Necessary preliminary tasks:

- Remove front seat

Note: Completely move the electric front seat to the top prior to removal.



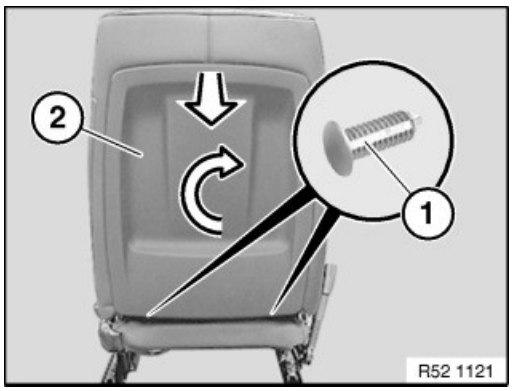
Release screw (1).

Tightening torque 51 10 3AZ.

Remove cover (2) in direction of arrow.

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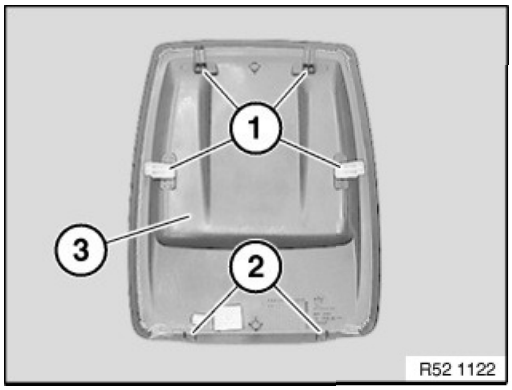
52 13 198 Removing and installing or replacing rear panel on left or right front seat backrest



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.

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52 13 002 Removing and installing the front seat on the passenger's side (normal/manual)

Necessary preliminary tasks:

- Disconnect battery earth lead
- Remove head restraint

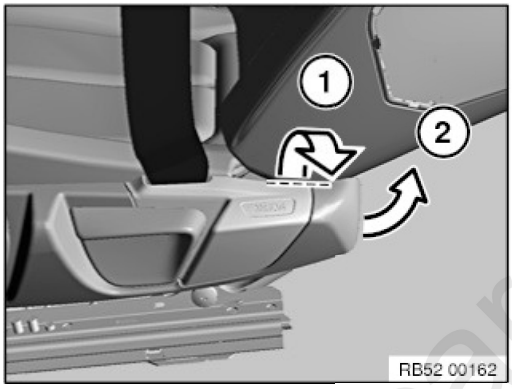
Important!

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

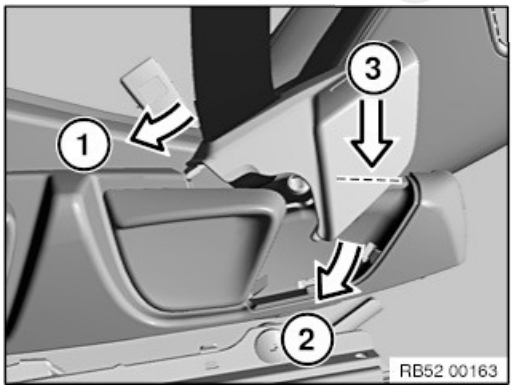


Move backrest to full rearward position.

Grip end fitting cover in marked area between cushion and cover.

Unclip end fitting cover in direction of arrow (1).

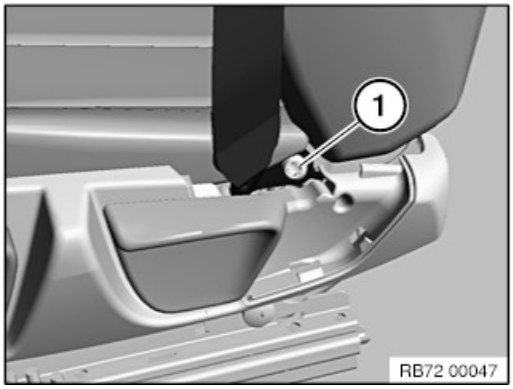
Feed out end fitting cover (2) in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with front guide in cover
2. Insert cover in direction of arrow downwards in covering
3. Engage top cover in marked area in covering.

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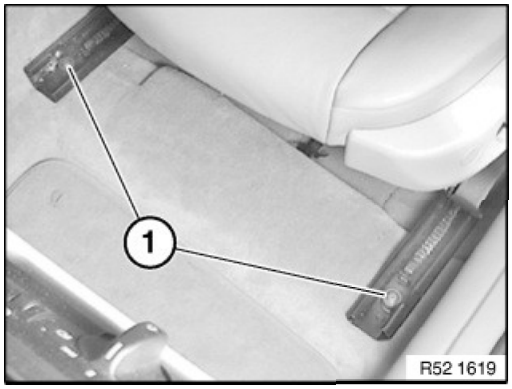


Release screw (1).

Tightening torque: 72 11 02AZ.

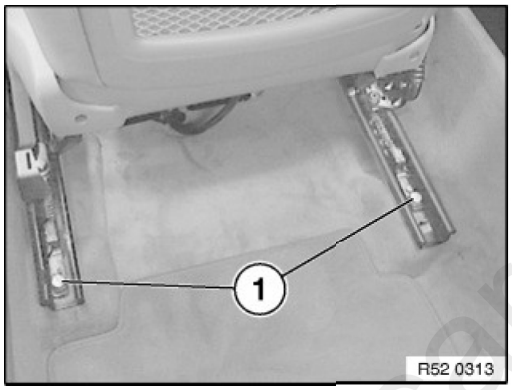
Remove end fitting.

Installation note:
End fitting is coded against incorrect assembly.



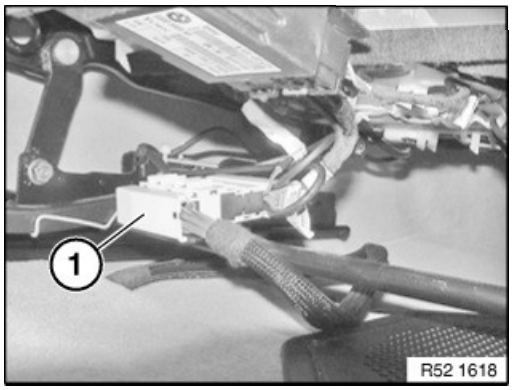
Move seat to upper back position.

Release and dispose of screws (1).



Adjust the seat to the front top.

Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

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

Lift out front seat.

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Installation note:

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

  Tightening torque 52 10 01AZ.



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.

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52 13 030 Removing and installing/replacing backrest frame on left or right front seat (normal/manual)

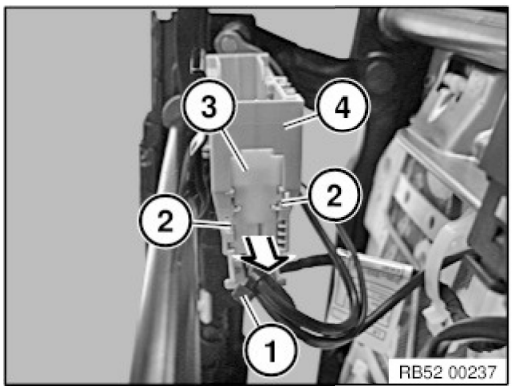
Important!

When working on the front seat it is absolutely essential to observe the safety regulations on handling airbag modules.

Improper handling may trigger the side airbag and as a result cause injuries.

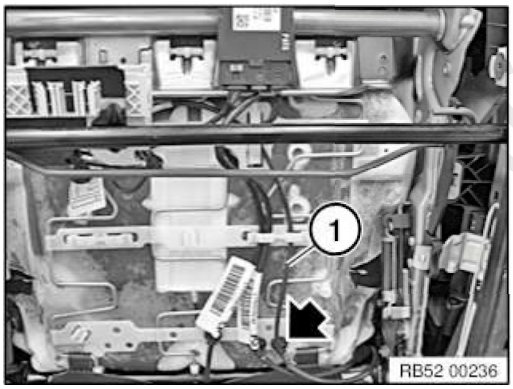
Necessary preliminary work:

- Remove front seat
- Remove rear panel on front seat backrest



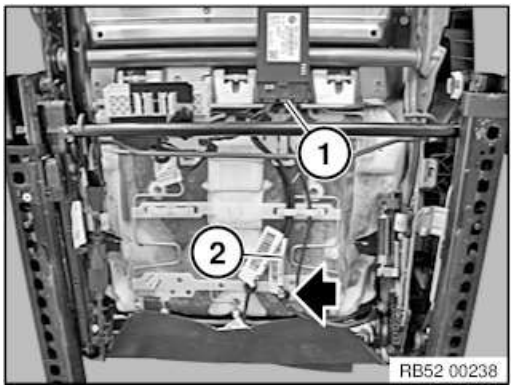
Cut open cable strap (1).

Press locks (2) outwards and at the same time remove connector (3) in direction of arrow from connector housing (4).



Unclip airbag wiring harness (1) in marked area.

Release airbag wiring harness (1) from cable clips on seat mechanism.



<u>Version with seat heating only:</u>

Unlock plug connection (1) and disconnect.

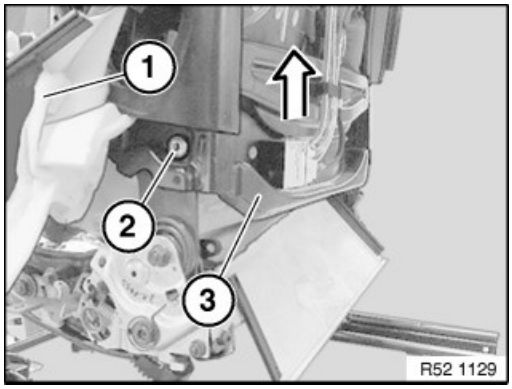
Unclip wiring harness (2) in marked area.

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

Important!

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

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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 upholstery

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52 13 526 Removing and installing/replacing left or right seat mechanism

Necessary preliminary tasks:

- Removing backrest frame
- Remove seat cover with upholstery

When replacing, remount the following parts depending on the version:

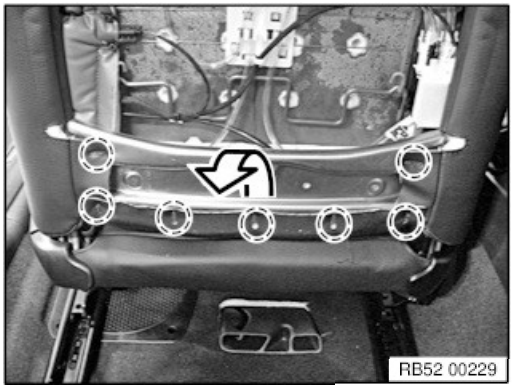
- Module for seat heating
- Control unit/module for seat adjustment
- Lower strap
- Backrest adjustment motor
- Seat height adjustment drive unit
- Forward/back seat adjustment drive unit
- Drive unit for seat cushion tilt adjustment
- Wiring harness to seat mechanism
- Position sensor for front seat
- Front seat sensor
- Seat occupancy mat for SBE

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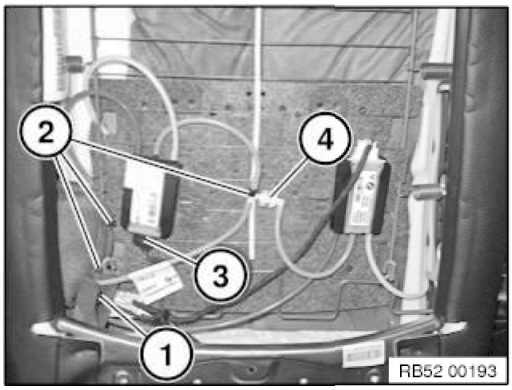
52 15 055 Removing and installing/replacing lumbar support on front seat

Necessary preliminary work:

- Remove rear panel on front seat



Detach backrest cover from backrest frame in marked area.



Unlock and disconnect plug connection (1) on lumbar support pump.

Unlock and disconnect plug connection (3) on valve body.

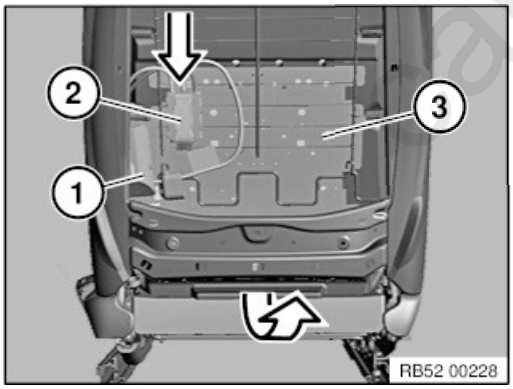
Release cable strap (2).

Installation note:
Completely remove remnants of cable ties.

Replace faulty cable straps.

Version with backrest width adjustment only.

Unlock and disconnect additional quick connector (4).



Detach valve body (2) from spring wire.

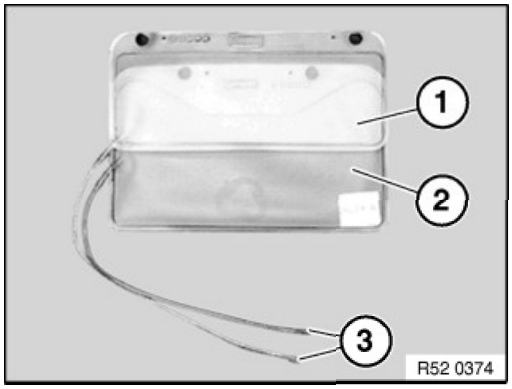
Detach lumbar support (3) from spring wire.

Press padding forward a little.

Carefully pull out lumbar support pump (1) downward with lumbar support (3) and valve body (2).



Installation note:
Attach lumbar support on second and fifth wire from the bottom.



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

Air hoses (3) must not be kinked.

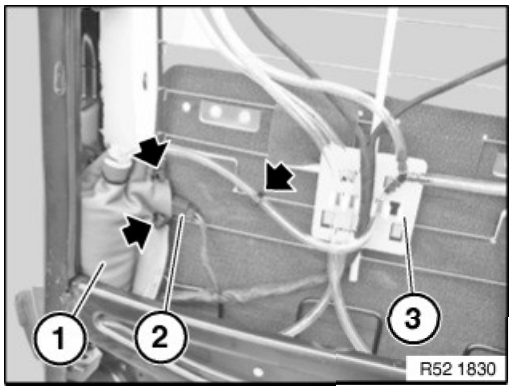
Installation note:
Run a function check.

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52 15 059 Removing and installing/replacing lumbar support pump with valve body for lumbar support/backrest width adjustment

Necessary preliminary tasks:

- Remove rear panel



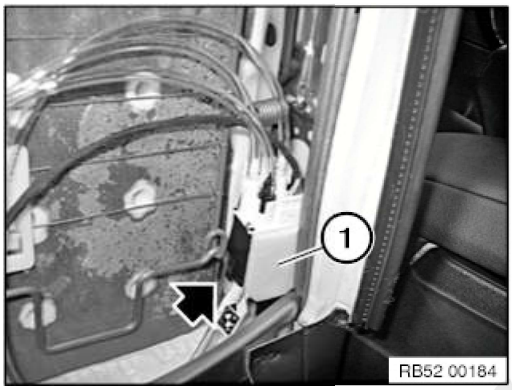
Cut open cable straps (arrows).

Installation note:
Replace defective cable straps.

Remove lumbar support pump (1) from backrest frame.

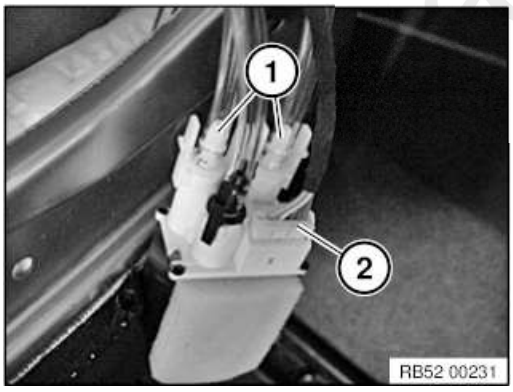
Unfasten plug connection (2) and disconnect.

Unclip air hose from holder (3).



Unclip valve body (1) from seat mechanism and feed out from backrest frame.*Installation note:*
Check the valve body (1) for correct fit in the backrest frame and spring wire.

Air hoses must not be kinked.



Unfasten plug connection (2) and disconnect.

Unlock quick connectors and detach air hoses (1).

Valve body for backrest width adjustment:

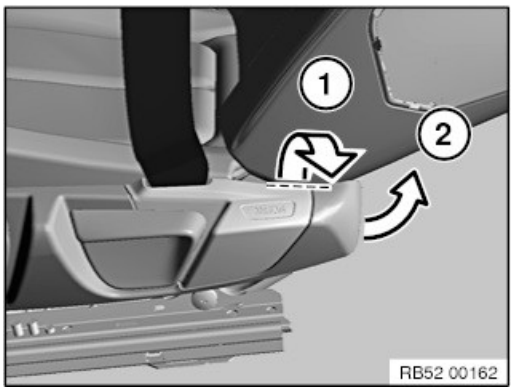
1. Lumbar support left/right = hose clear, quick-connector white

Installation note:
Connections are coded against incorrect assembly.

Note:
Run a function check.

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52 13 040 Removing and installing/replacing outer cover on left or right front seat

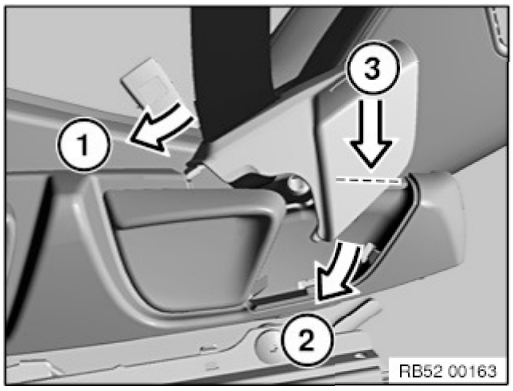


Move backrest to full rearward position.

Grip end fitting cover in marked area between cushion and cover.

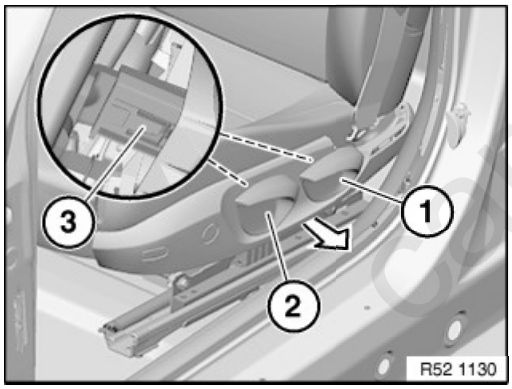
Unclip end fitting cover in direction of arrow (1).

Feed out end fitting cover (2) in direction of arrow.



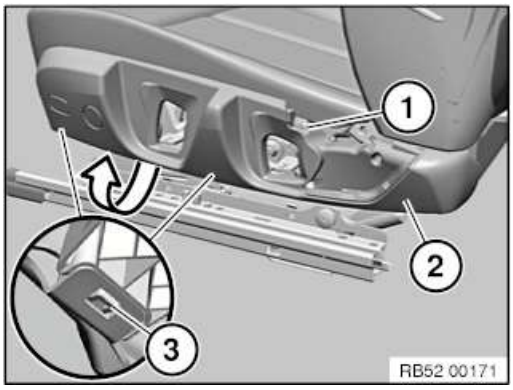
Installation note:
Install end fitting cover as follows:

1. Insert cover with front guide in cover
2. Insert cover in direction of arrow downwards in covering
3. Engage top cover in marked area in covering.



Pull the handle up and lift up lock (3).

Pull off the handle for the backrest angle adjustment (1) and handle for seat height adjustment (2).

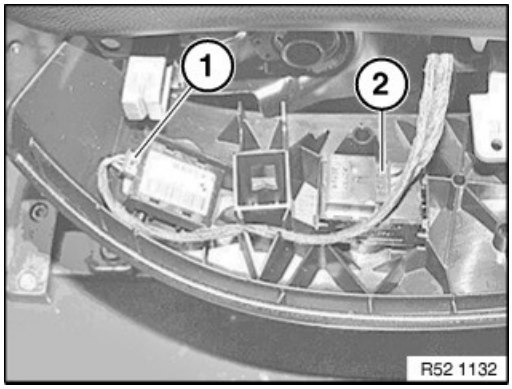


Release screw (1).

Lever latch mechanism (3) of the cover (2) out of seat mechanism.

Remove cover (2) in direction of arrow from seat mechanism.

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

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

Replacement only:

Depending on version, cut-outs for buttons in cover may need to be reworked.

Replacement:

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

Installation note:
Please ensure correct latching of the switch backrest width adjustment and switch lumbar support.

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52 13 407 Replace backrest cover for driver's seat (normal/manual)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front seat on the driver's side
- Remove rear panel
- Remove guide sleeves for head restraint

Important!

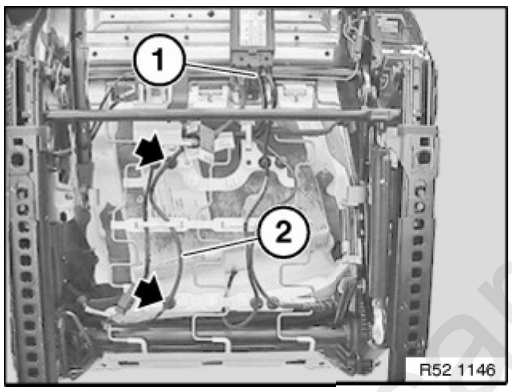
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

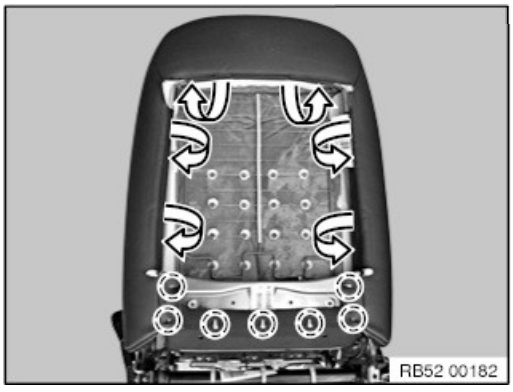
Unlock plug connection (1) for seat heating and disconnect.

Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

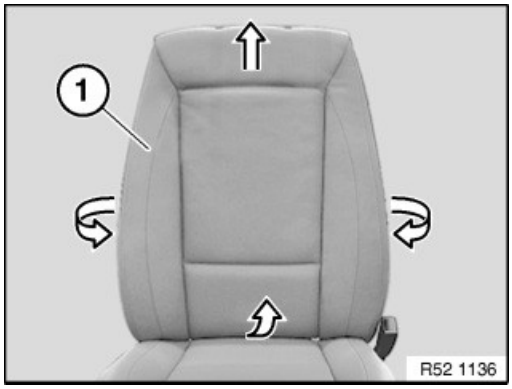
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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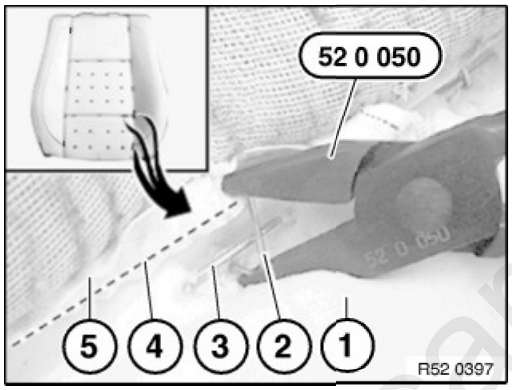
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 13 417 Replace upholstery for driver's seat (normal/manual)



Operation is described in:

- Replacing seat cover for driver's seat

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52 13 418 Replace upholstery for front passenger seat (normal/manual)



Operation is described in:

- Replacing seat cover for front passenger seat

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52 13 408 Replacing backrest cover for front passenger seat (normal/manual)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front passenger side seat
- Remove rear panel
- Remove guide sleeves for head restraint

Important!

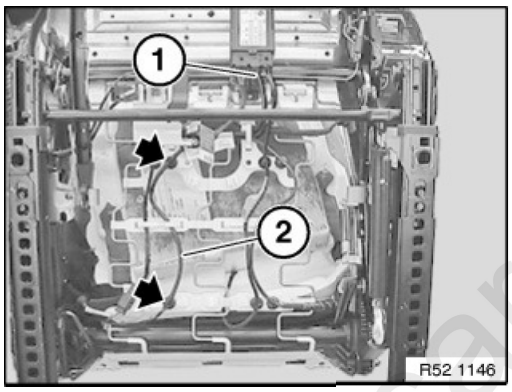
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

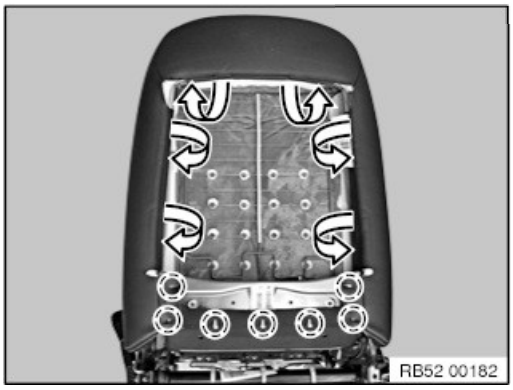
Unlock and disconnect plug connection seat heating backrest (1).

Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connections are coded against incorrect assembly.

Replace cable strap.



Lift welt out of backrest frame.

Detach the lower backrest cover from metal tabs.

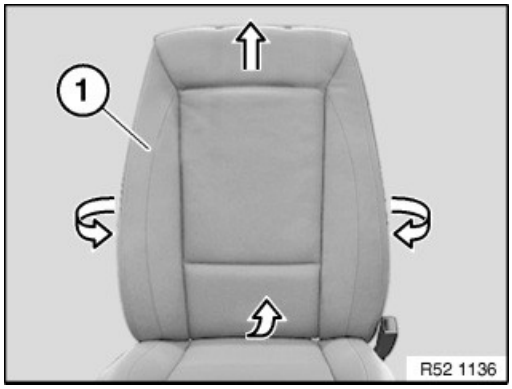
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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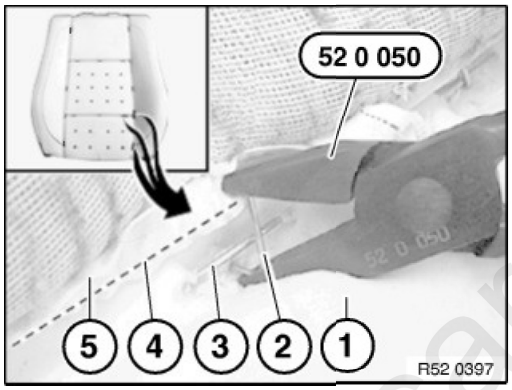
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 13 405 Replacing backrest cover for left or right front seat (normal / manual)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front seat
- Remove rear panel
- Remove guide sleeves for head restraint

Important!

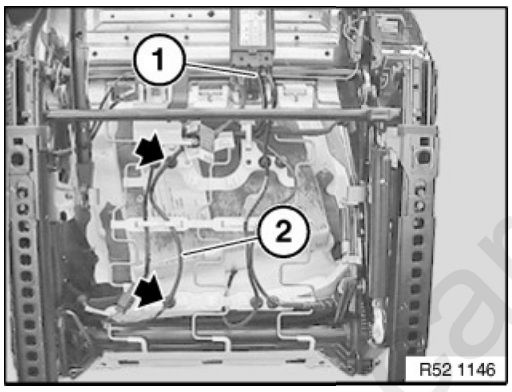
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

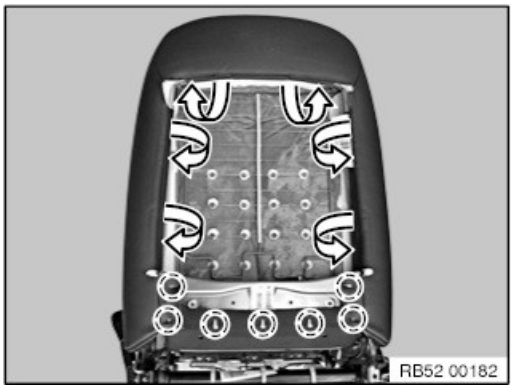
Unlock plug connection (1) for seat heating and disconnect.

Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

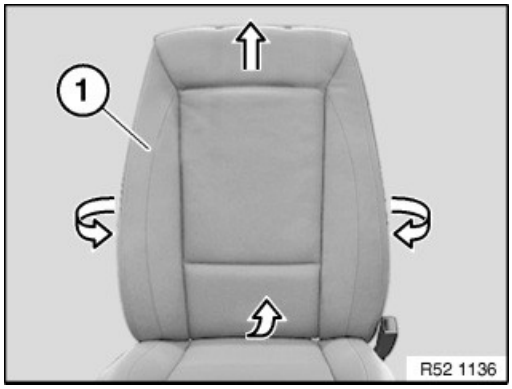
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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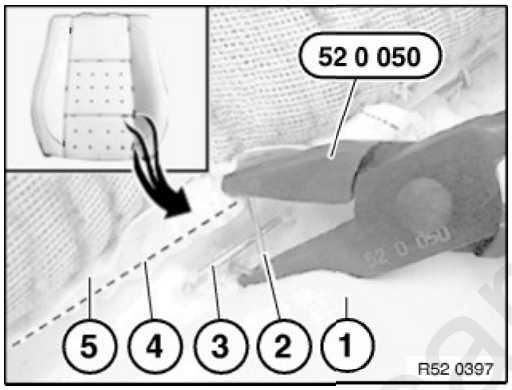
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

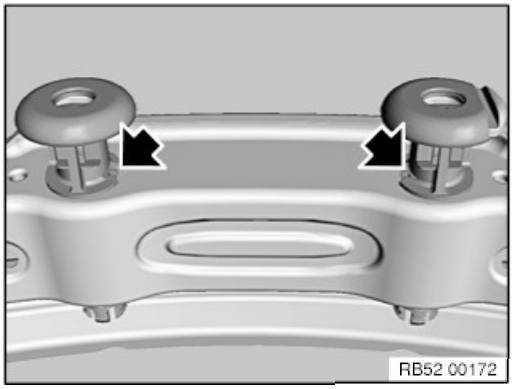
Cut new backrest cover to size and insert trim wires.

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52 13 ... Replacing guide sleeves for front left or right head restraint

Necessary preliminary tasks:

- Remove front head restraint

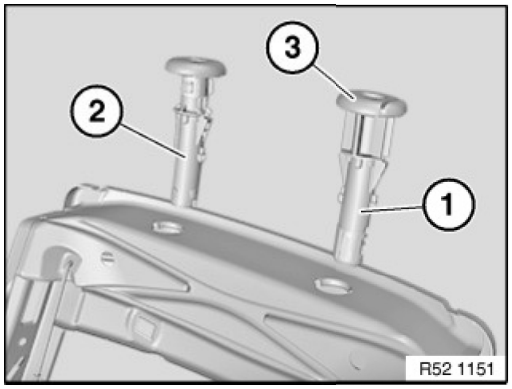


Note:
Shown here without backrest cover for a better overview.

Push the backrest cover with upholstery down next to the guide sleeve.

Carefully insert screwdriver between the backrest cover and guide sleeve.

Unlock the retaining lug with a screwdriver and remove the guide sleeves through the top.



Installation note:
Install guide sleeves as follows:

1. Guide sleeve with pushbuttonÂ (3) in direction of travel left
2. Guide sleeve without pushbutton in direction of travel right

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52 13 455 Replacing left or right heating elements for front seat (normal/manual)

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.

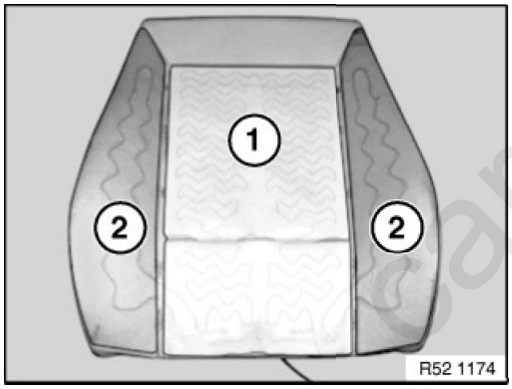
Foam section and heating mat must be replaced.

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



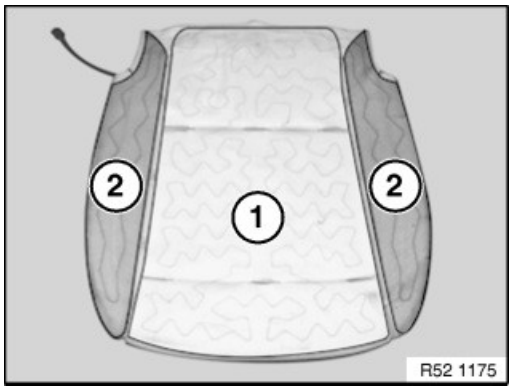
Guide cable for backrest heating through foam hole.

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

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Check laying of heating mats:

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

Note:
Carry out function check.

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52 13 415 Replacing left or right upholstery for front seat (normal / manual)



Operation is described in:

Replacing seat cover on left or right front seat.

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52 13 420 Replacing left or right upholstery for front seat backrest (normal / manual)



Operation is described in:

Replace backrest cover for left or right front seat.

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52 13 412 Replacing seat and backrest cover for driver's seat (normal/manual)



Operations are described in:

- Replacing seat cover for driver's seat
- Replacing backrest cover for driver's seat

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52 13 413 Replacing seat and backrest cover for front passenger seat (normal/manual)



Operations are described in:

- Replacing seat cover for front passenger seat
- Replacing backrest cover for front passenger seat

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52 13 410 Replacing seat and backrest cover for left or right front seat (normal/manual)



Operations are described in:

- Replacing seat cover for front seat
- Replacing backrest cover for front seat

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52 13 410 Replacing seat and backrest cover for left or right front seat (normal/manual)



Operations are described in:

- Replacing seat cover for front seat
- Replacing backrest cover for front seat

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52 13 402 Replacing seat cover for driver's seat (normal/manual)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front seat on the driver's side
- Remove outer cover on front seat
- Remove inner cover on front seat

Warning!

Note airbag safety regulations!

Incorrect handling can activate airbag and cause injury.

Important!

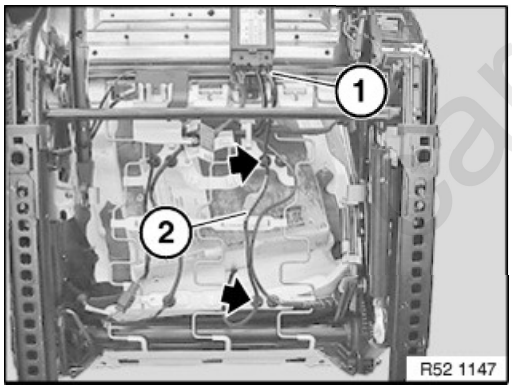
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

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

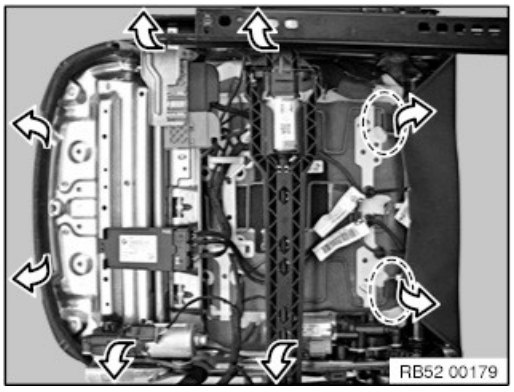
Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:

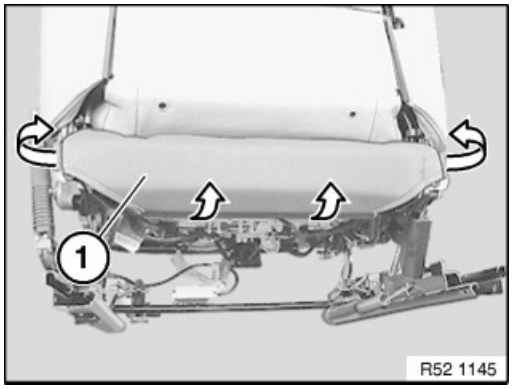
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.



Fully lift welt of seat cover out of seat frame.

Disengage seat cover at rear.

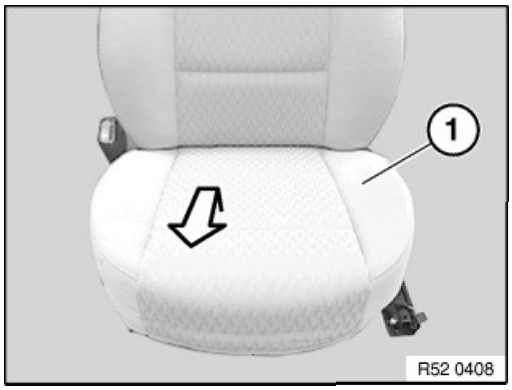


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

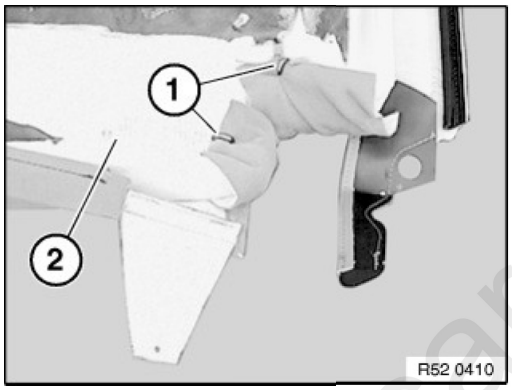
If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

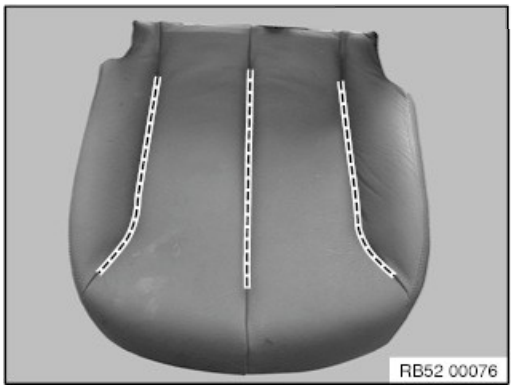
Make sure foam and bracing cloth are correctly fitted.



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



Release all clamps (1) from seat cover (2).



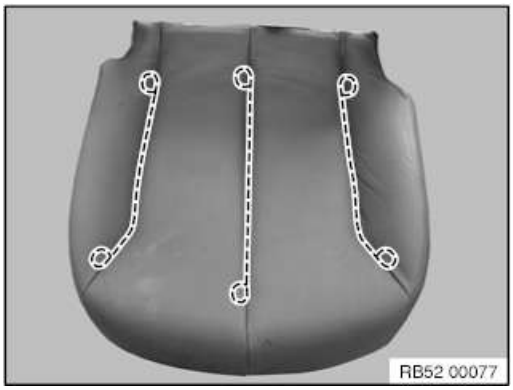
Release all clamps in marked area of trim wires.

Remove seat cover from upholstery.

Important!

Remove all remnants of clamps from seat cover and upholstery.

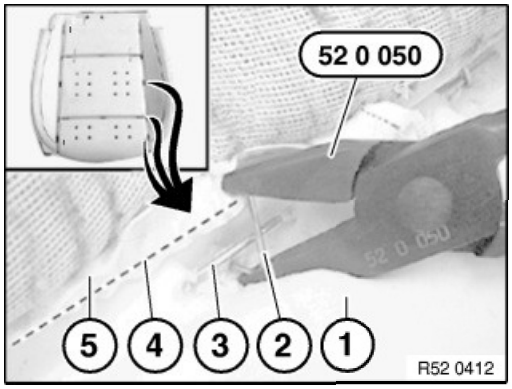
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Replacement only:

If applicable, pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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

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52 13 403 Replacing seat cover for front passenger seat (normal/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front passenger side seat
- Remove outer cover on front seat
- Remove inner cover on front seat

Warning!

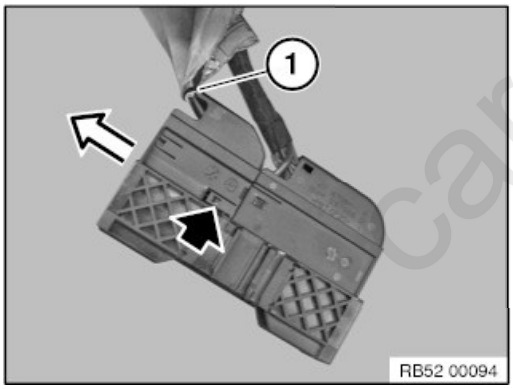
US and Canadian version of the front passenger seat (with CIS mat):

The CIS mat is bonded to the entire surface of the facing and 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 installation, the CIS mat must be enabled with the BMW programming system.



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.

Important!

Risk of damage on sharp-edged seat mechanism.

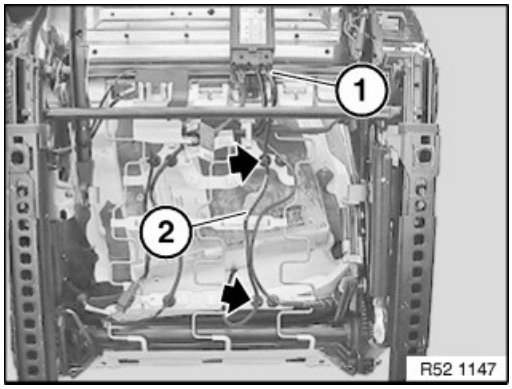
Guide all cables carefully through seat and backrest mechanism.

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.

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Version with seat heating only:

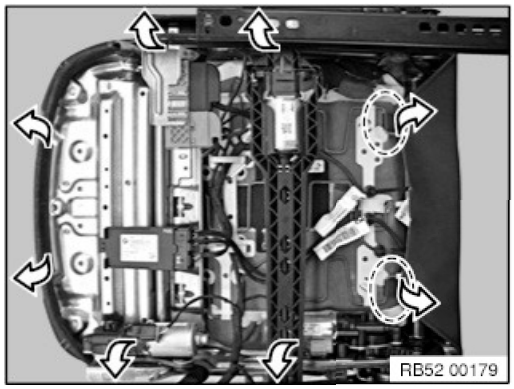
Unlock plug connection (1) for seat heating and disconnect.

Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

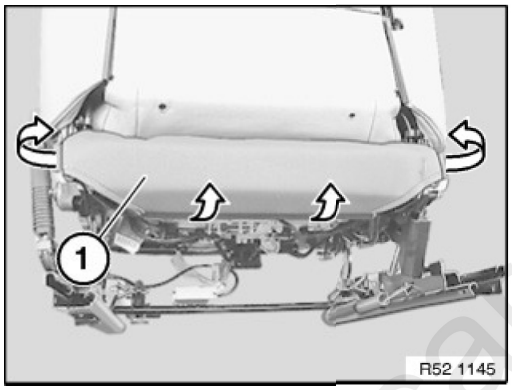
Installation note:
Plug connections are coded against incorrect assembly.

Replace cable strap.



Fully lift welt of seat cover out of seat frame.

Disengage seat cover at rear.

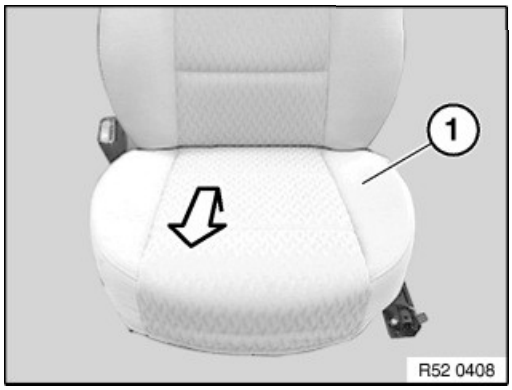


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

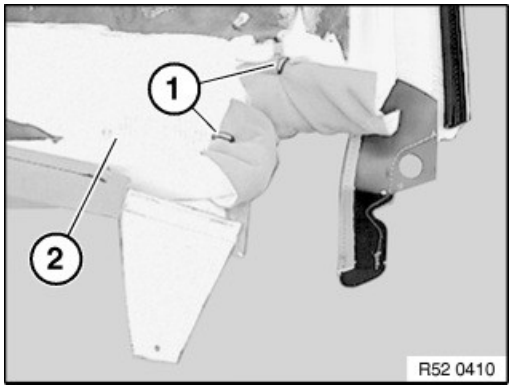
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

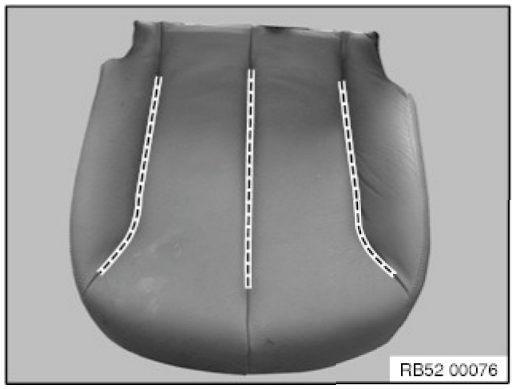


Remove seat cover (1) with padding towards front/top.

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Release all clamps (1) from seat cover (2).

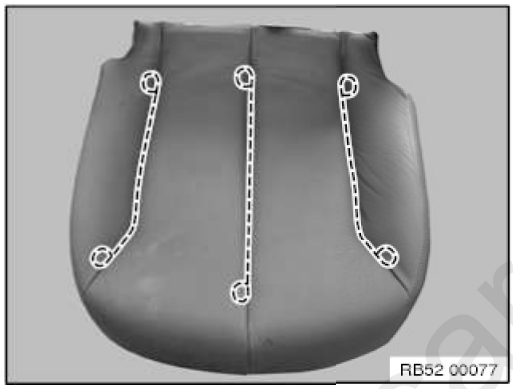


Release all clamps in marked area of trim wires.

Remove seat cover from upholstery.

Important!

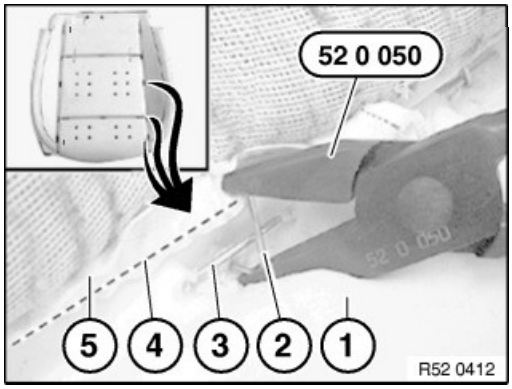
Remove all remnants of clamps from seat cover and upholstery.



<u>Replacement only:</u>

If applicable, pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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

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Installation note:
Enabling seat occupancy detector (CIS mat):

- Connect BMW programming system
- Encode airbag control unit
- Delete fault memory if necessary

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52 13 400 Replacing seat cover on left or right front seat (normal/manual)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front seat
- Remove outer cover on front seat
- Remove inner cover on front seat

Warning!

Note airbag safety regulations!

Incorrect handling can activate airbag and cause injury.

Important!

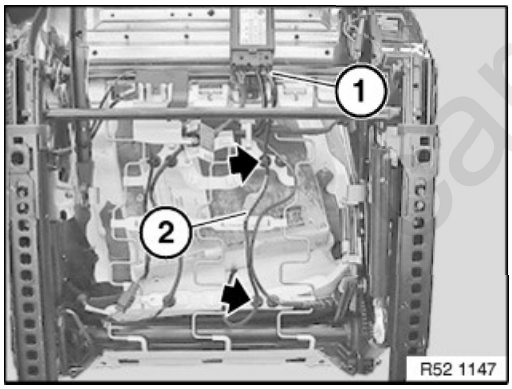
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

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

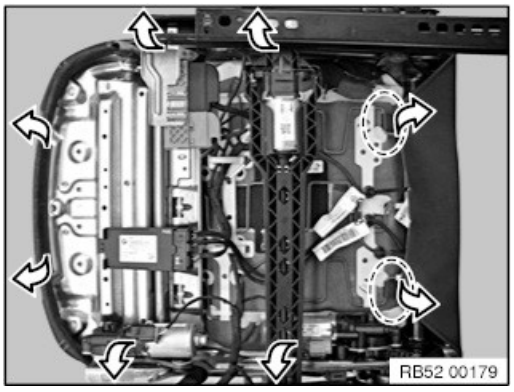
Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:

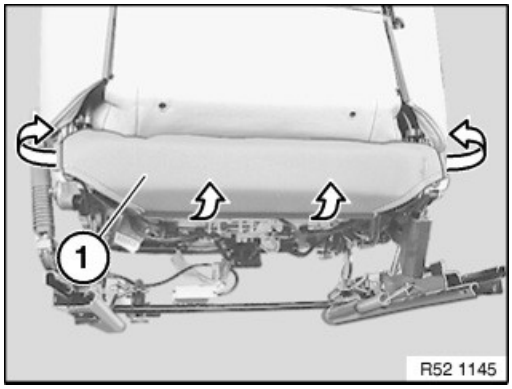
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.



Fully lift welt of seat cover out of seat frame.

Disengage seat cover at rear.

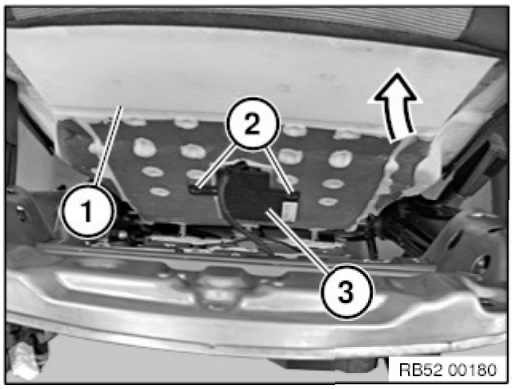


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

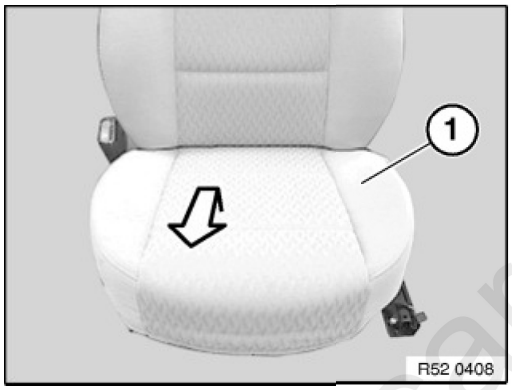
Make sure foam and bracing cloth are correctly fitted.



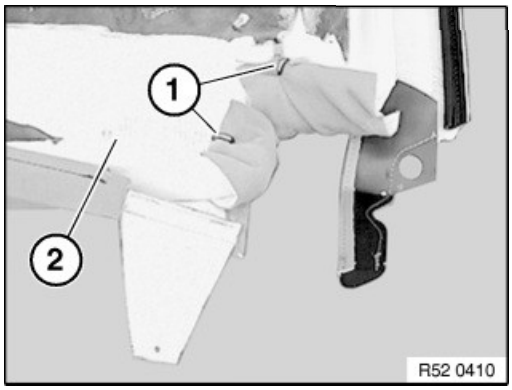
<u>Front passenger seat only:</u>

Lift seat cover with upholstery (1) at front and unclip mounting (2) for seat occupancy detection (SBE) (3).

Remove SBE (3) from upholstery (1) and place on flexmat.

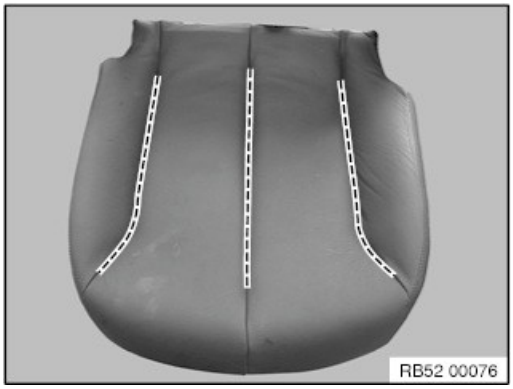


Remove seat cover (1) with padding towards front/top.



Release all clamps (1) from seat cover (2).

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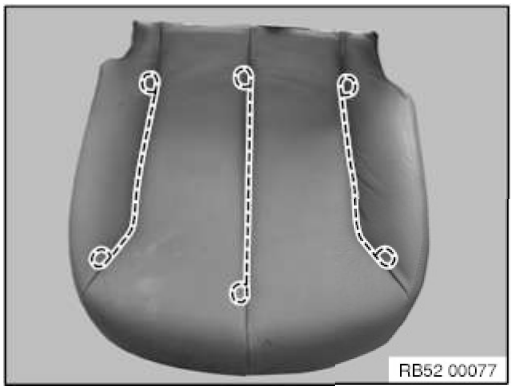


Release all clamps in marked area of trim wires.

Remove seat cover from upholstery.

Important!

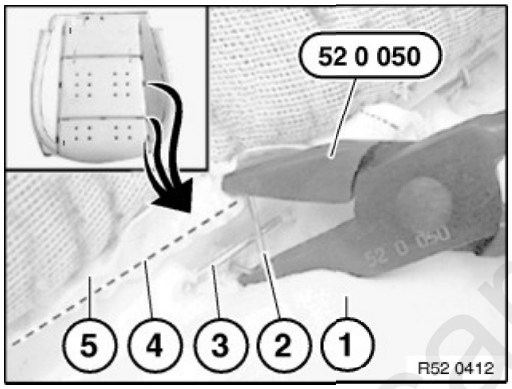
Remove all remnants of clamps from seat cover and upholstery.



<u>Replacement only:</u>

If applicable, pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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

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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!

<u>Only US and Canadian version of front passenger seat (with CIS mat):</u>

The CIS mat is bonded to the entire surface of the facing and 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.

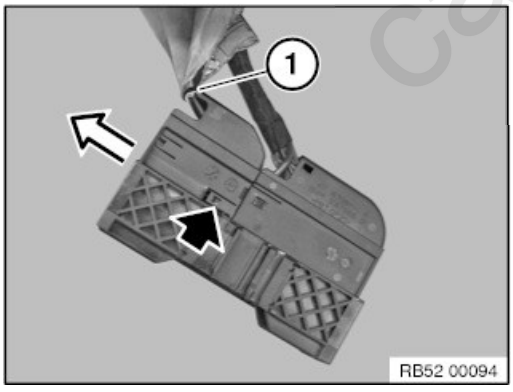
Full functional capability can only be guaranteed with original BMW spare parts.

After installation, the CIS mat must be enabled with the BMW programming system.

<u>Procedure for replacing the CIS mat together with the upholstery is described in:</u>

- Replacing upholstery 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 tieÂ (1).

Connector is encoded against incorrect assembly.

Installation note:
<u>Enabling seat occupancy detector (CIS mat):</u>

- Connect BMW programming system
- Encode airbag control unit
- Delete fault memory if necessary

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52 13 422 Replacing upholstery for driver's seat backrest (normal/manual)



Operation is described in:

- Replace backrest cover for driver's seat.

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52 13 423 Replacing upholstery for front passenger seat backrest (normal/manual)

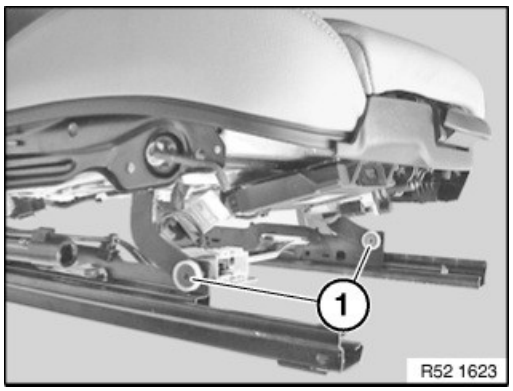


Operation is described in:

- Replacing backrest cover for front passenger seat

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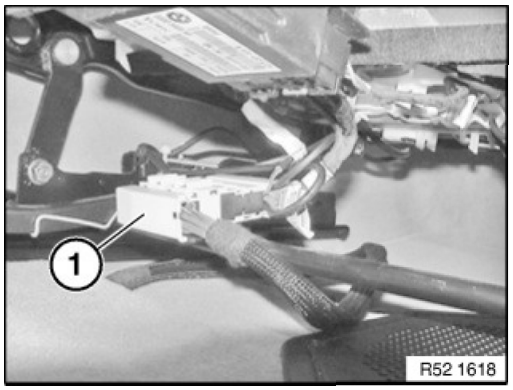
52 14 ... Additional work in event of faulty drive/gearing for longitudinal adjustment



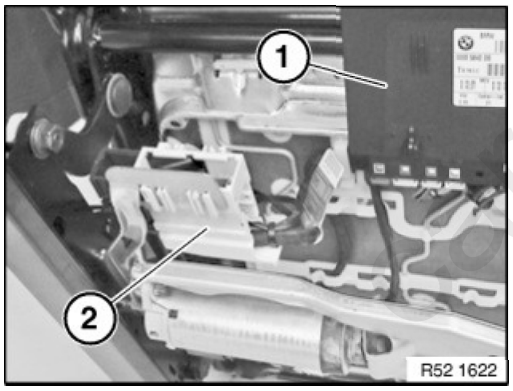
Release screws (1) of swinging arms for seat height adjustment.

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

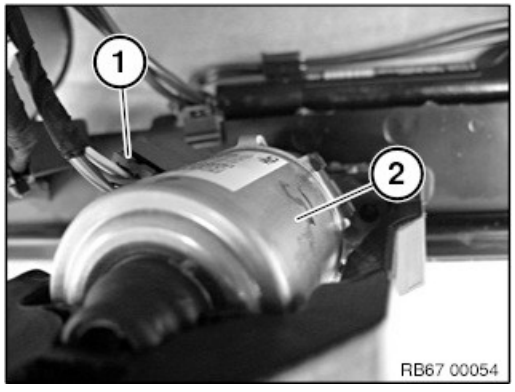
Tilt front seat back.



Unfasten plug connection (1) and disconnect.

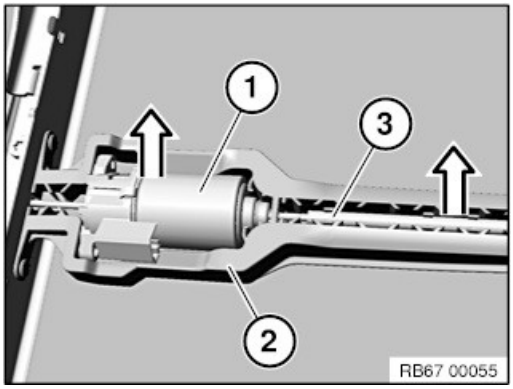


Unclamp central connector (2) from seat mechanism.
Unclip control units (1).



Removal of electric motor for forward/back seat adjustment:

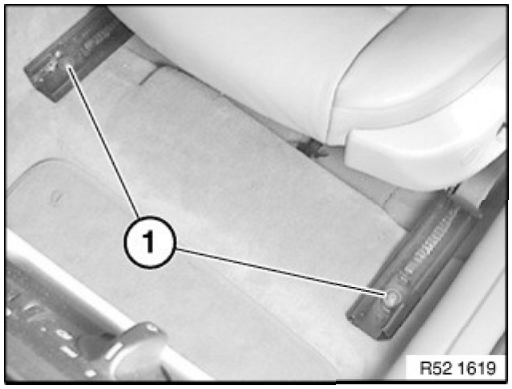
Unfasten plug connection (1) and disconnect.



Lift long flex shaft (3) out of guide in direction of arrow.

Pull out flex shaft (3) from electric motor for forward/back seat adjustment (1).

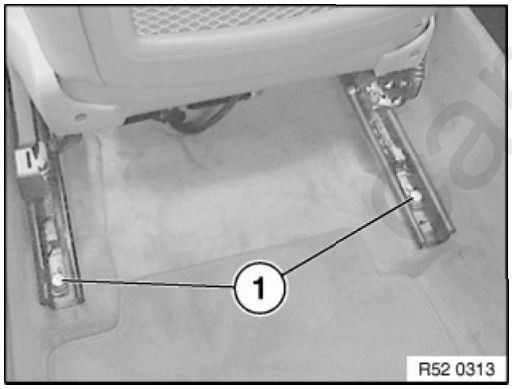
Remove electric motor for forward/back seat adjustment (1) in direction of arrow from holder (2).



Release screws (1) at front.

Installation note:
Install new drive for longitudinal seat adjustment.

Move front seat forwards.



Release screws (1) at rear.

Important!

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

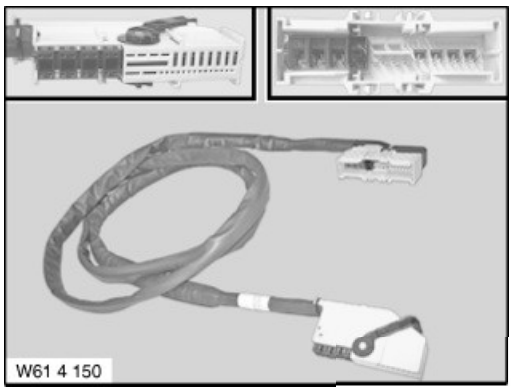
  Tightening torque 52 10 1AZ.

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52 14 ... Performing function check with adapter cable (for seat repairs)

Special tools required:

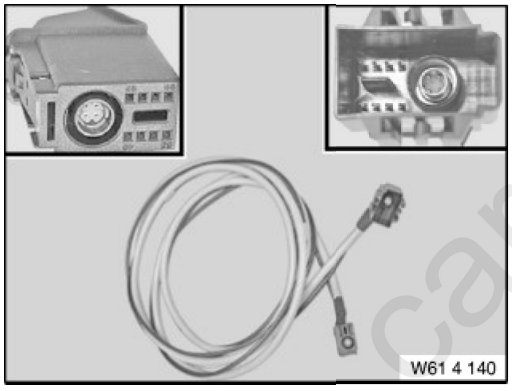
- 61 4 140
- 61 4 150



Seat function check: *Note:*
The function check on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable 61 4 150 .

Application:

Adapter cable is connected to vehicle wiring harness and removed seat 61 4 150 .



RSE (rear passenger compartment monitor) function check *Note:*
The function check of the RSE (rear passenger compartment monitor) on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable 61 4 140 .

Application:

Adapter cable is connected to vehicle wiring harness and removed seat 61 4 140 .

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52 14 002 Removing and installing front seat (normal/electric) on the passenger's side from left or right

Necessary preliminary tasks:

- Disconnect battery earth lead
- Remove head restraint

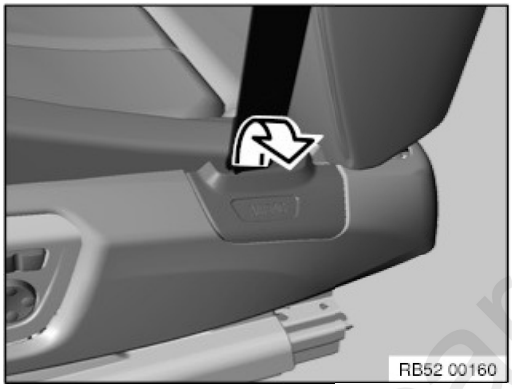
Important!

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

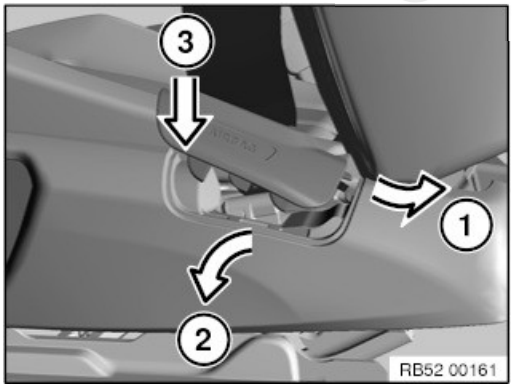


For electrical front seat version:

Move backrest to full rearward position.

Grip end fitting cover centrally between seat belt strap and cover.

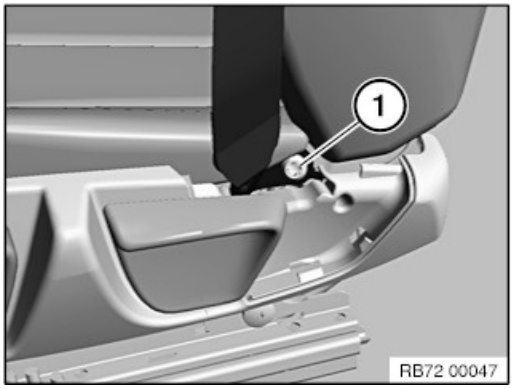
Unclip end fitting cover in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with rear guide in covering.
2. Insert cover in direction of arrow downwards in covering
3. Engage top left of cover in covering.

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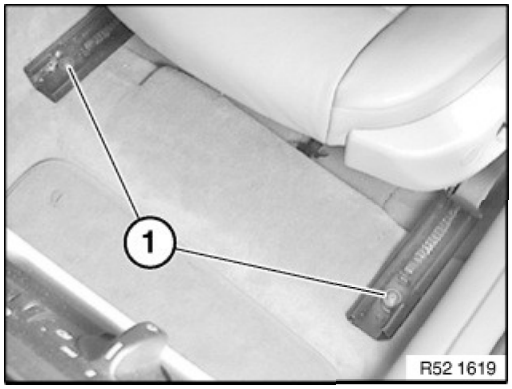


Release screw (1).

Tightening torque 72 11 02AZ.

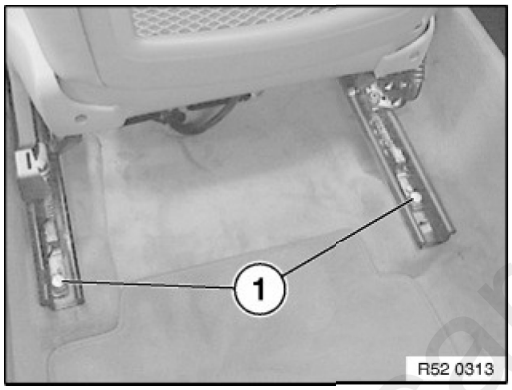
Remove end fitting.

Installation note:
End fitting is coded against incorrect assembly.



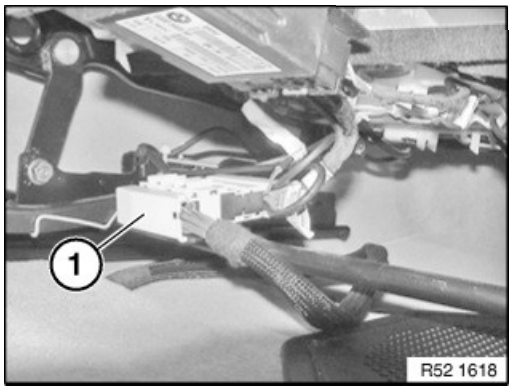
Move seat to upper back position.

Release and dispose of screws (1).



Adjust the seat to the front top.

Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

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

Lift out front seat.

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Installation note:

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

  Tightening torque 52 10 01AZ.



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

Incorrect handling may activate the pyrotechnical belt tensioner or side airbag and thereby cause injuries.

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52 14 001 Removing and installing left or right front seat, driver's side, (normal/electric)

Necessary preliminary tasks:

- Disconnect battery earth lead
- Remove head restraint

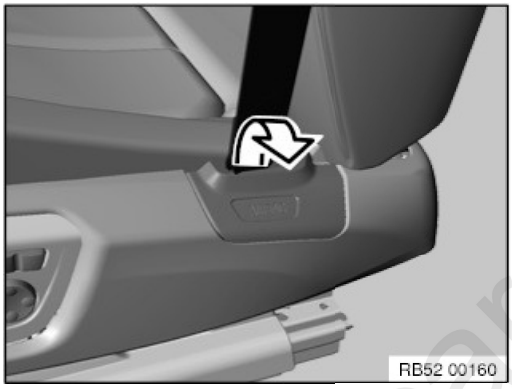
Important!

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

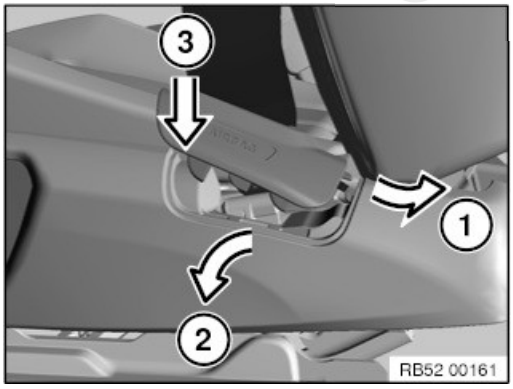


For electrical front seat version:

Move backrest to full rearward position.

Grip end fitting cover centrally between seat belt strap and cover.

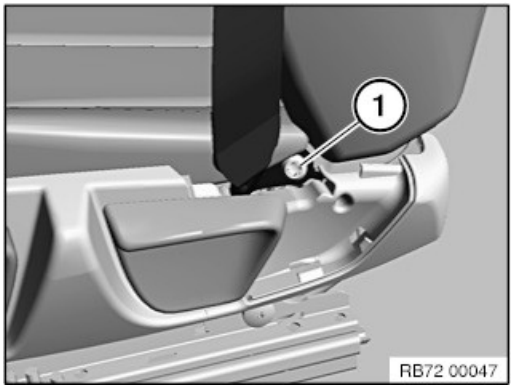
Unclip end fitting cover in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with rear guide in covering.
2. Insert cover in direction of arrow downwards in covering
3. Engage top left of cover in covering.

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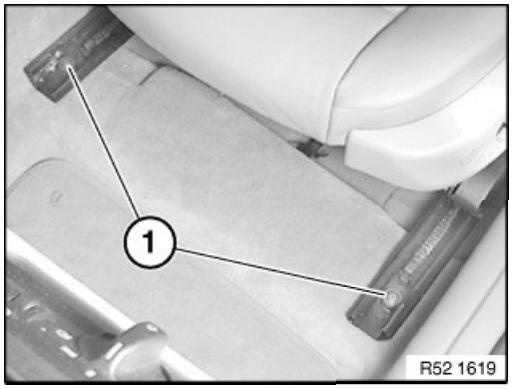


Release screw (1).

Tightening torque 72 11 02AZ.

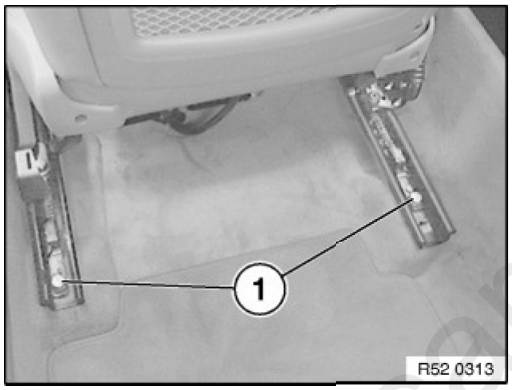
Remove end fitting.

Installation note:
End fitting is coded against incorrect assembly.



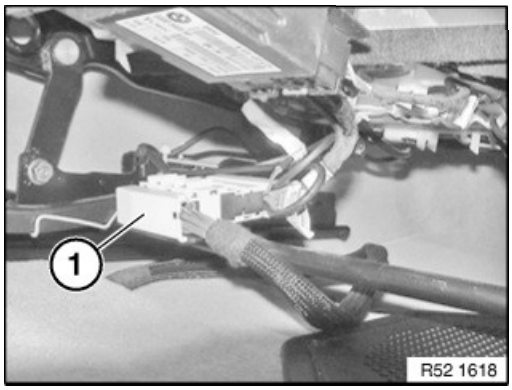
Move seat to upper back position.

Release and dispose of screws (1).



Adjust the seat to the front top.

Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

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

Lift out front seat.

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Installation note:

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

  Tightening torque 52 10 01AZ.



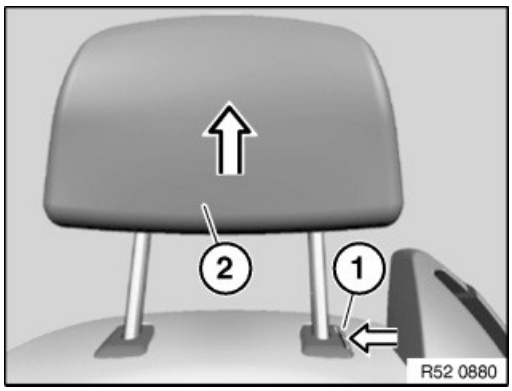
Warning!

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

Incorrect handling may activate the pyrotechnical belt tensioner or side airbag and thereby cause injuries.

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52 13 390 Removing and installing or replacing front left or right head restraint



Press latch mechanism (1) and lift out head restraint (2).

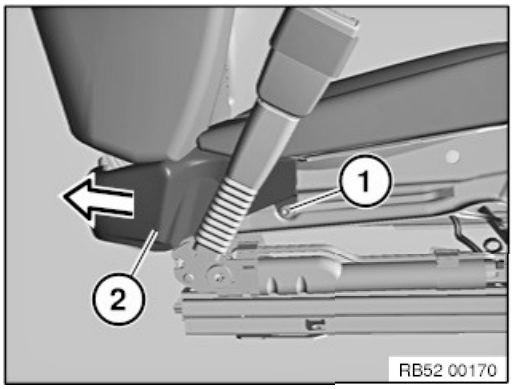
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52 13 041 Removing and installing or replacing inner cover on left or right front seat

Necessary preliminary tasks:

- Remove front seat

Note: Completely move the electric front seat to the top prior to removal.



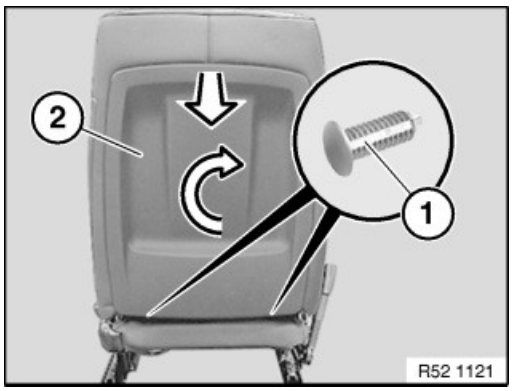
Release screw (1).

Tightening torque 51 10 3AZ.

Remove cover (2) in direction of arrow.

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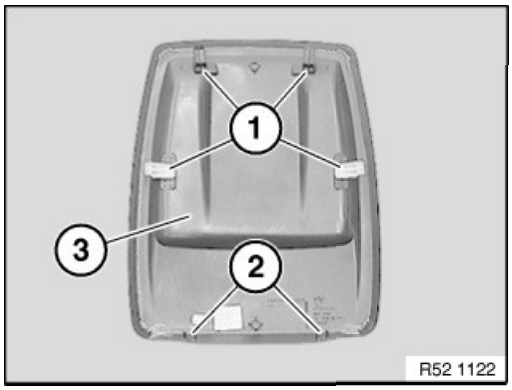
52 13 198 Removing and installing or replacing rear panel on left or right front seat backrest



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.

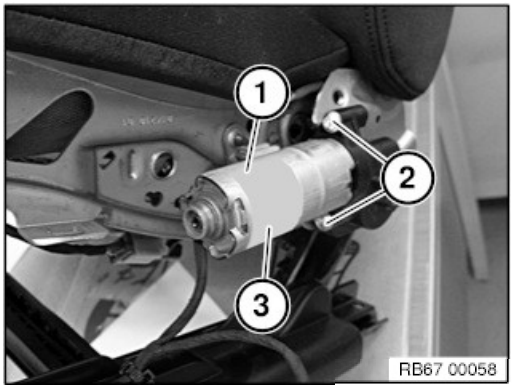
Replace faulty clips.

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67 31 530 Removing and installing/replacing backrest adjustment motor

Necessary preliminary tasks:

- Remove covers on front seat



Unfasten plug connection (1) and disconnect.
Unfasten screws (2).
Remove electric motor (3).

Note:
Carry out a function check.
Replacement:
Initialise backrest adjustment motor.

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52 13 030 Removing and installing/replacing backrest frame on left or right front seat (normal/manual)

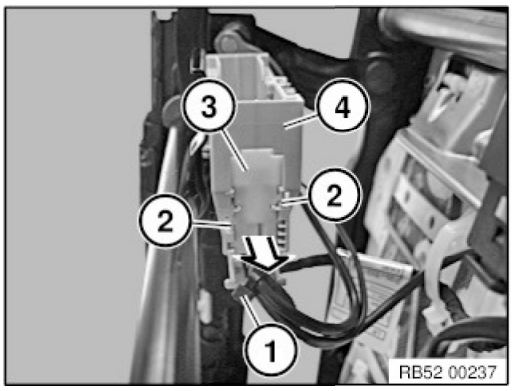
Important!

When working on the front seat it is absolutely essential to observe the safety regulations on handling airbag modules.

Improper handling may trigger the side airbag and as a result cause injuries.

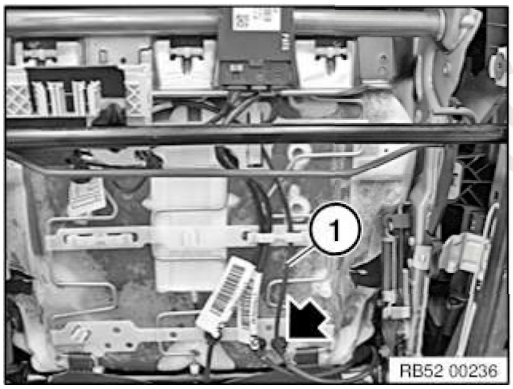
Necessary preliminary work:

- Remove front seat
- Remove rear panel on front seat backrest



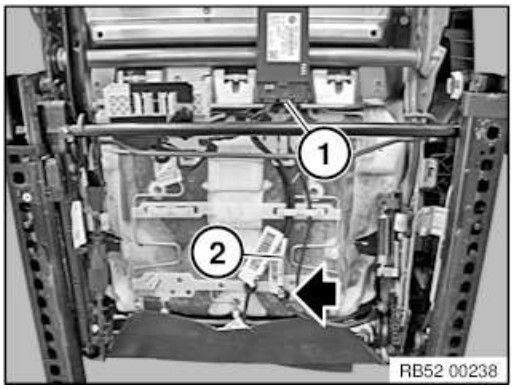
Cut open cable strap (1).

Press locks (2) outwards and at the same time remove connector (3) in direction of arrow from connector housing (4).



Unclip airbag wiring harness (1) in marked area.

Release airbag wiring harness (1) from cable clips on seat mechanism.



<u>Version with seat heating only:</u>

Unlock plug connection (1) and disconnect.

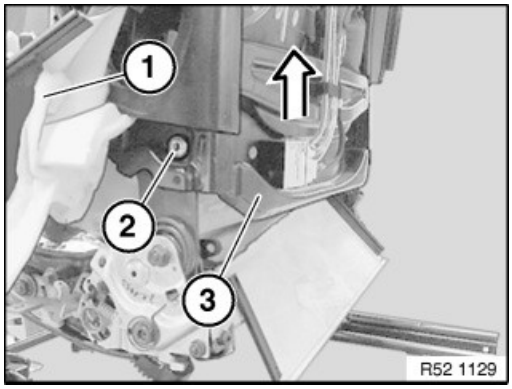
Unclip wiring harness (2) in marked area.

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

Important!

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

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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:

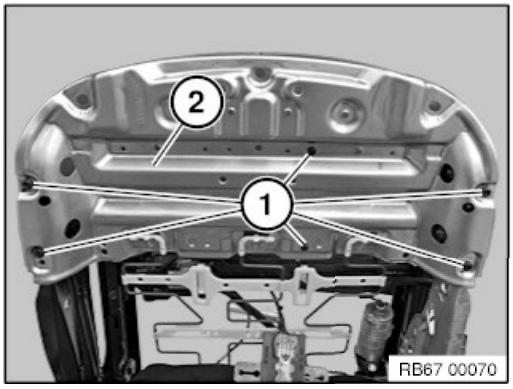
- Remove backrest cover with upholstery

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67 31 510 Removing and installing/replacing drive unit for seat cushion tilt adjustment

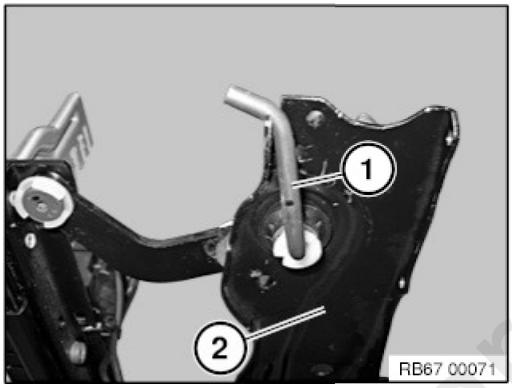
Necessary preliminary tasks:

- Remove driver's or front passenger seat
- Remove front seat cover

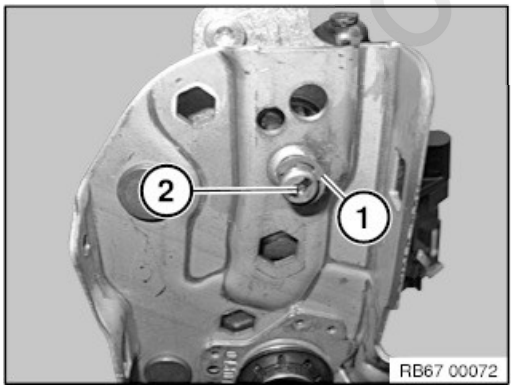


Release screws (1).

Remove cushion shell (2).

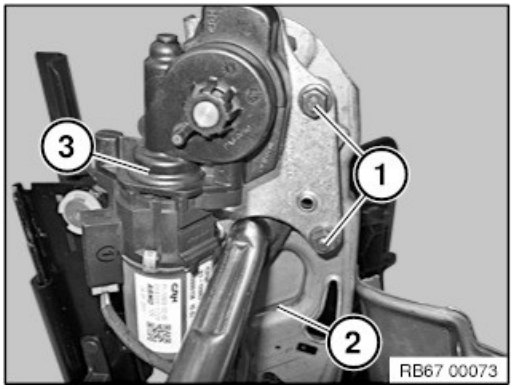


Detach spring (1) at seat frame (2).



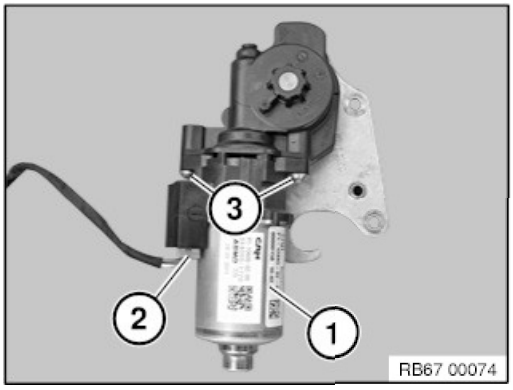
Remove fuse (1) from shaft (2).

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Unscrew nuts (1).

Pull drive with transmission (3) out of seat frame (2) and remove.



Unfasten plug connection (2) and disconnect.

Release screws (3).

Tightening torque 67 31 1AZ.

Remove drive unit for seat cushion tilt adjustment (1).

Note:

Carry out a function check.

Replacement:

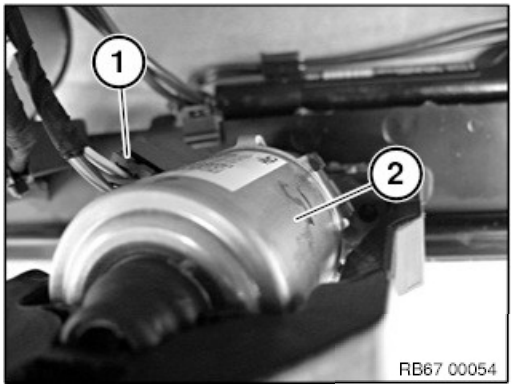
Initialise seat height adjustment drive unit.

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67 31 500 Removing and installing/replacing forward/back seat adjustment drive unit

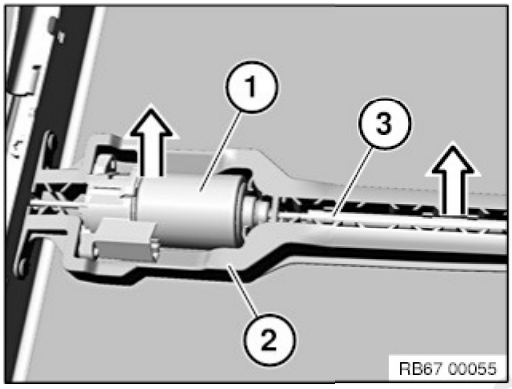
Necessary preliminary work:

- Raise front seat as far up as possible



Removal of electric motor for forward/back seat adjustment:

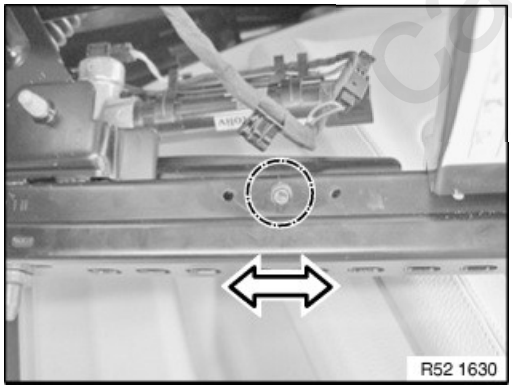
Unfasten plug connection (1) and disconnect.



Lift long flex shaft (3) out of guide in direction of arrow.

Pull out flex shaft (3) from electric motor for forward/back seat adjustment (1).

Remove electric motor for forward/back seat adjustment (1) in direction of arrow from holder (2).

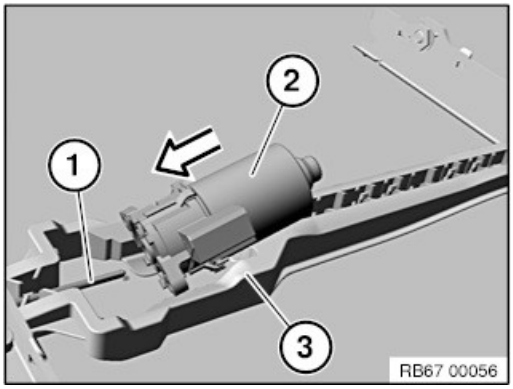


Installation of electric motor for forward/back seat adjustment:

Slide seat rail with opening forwards or back until bushing for flex shaft mounting of worm gear is flush.

Insert short flex shaft.

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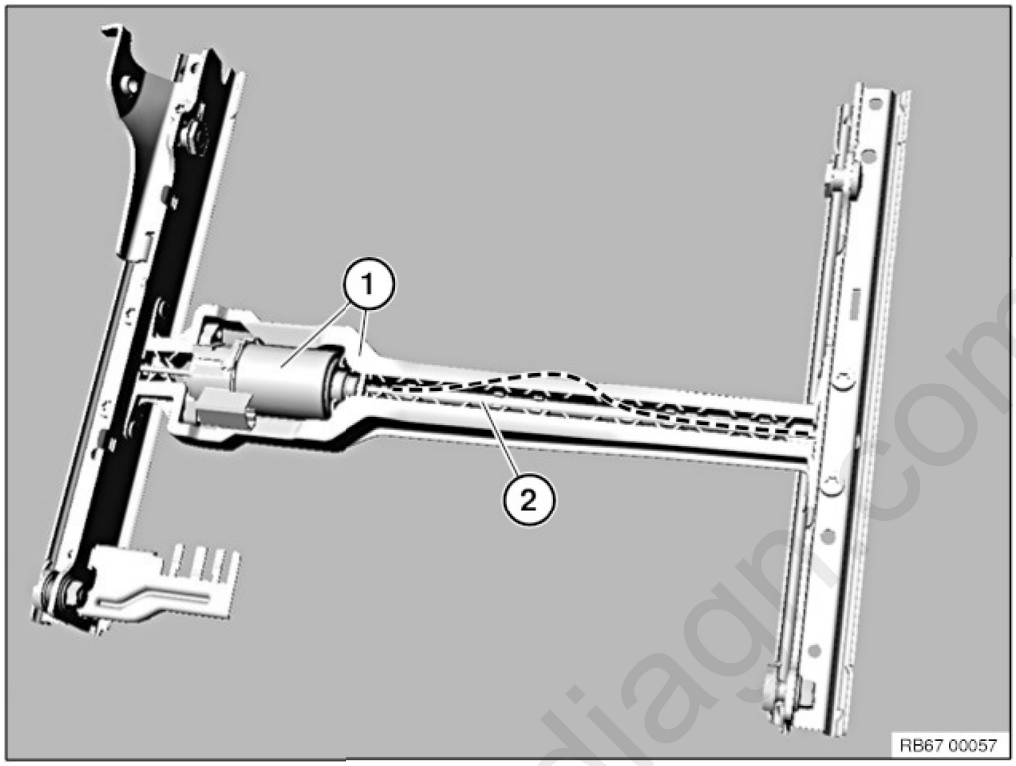


Connect electric motor for forward/back seat adjustment (2) to short flex shaft (1).

Installation note:
Make sure flex shaft (1) is correctly seated in electric motor (2) and seat rail mounting.

Clip in electric motor for forward/back seat adjustment (2) into holder (3).

Installation note:
Electric motor for forward/back seat adjustment (2) must audibly engage in holder (3).

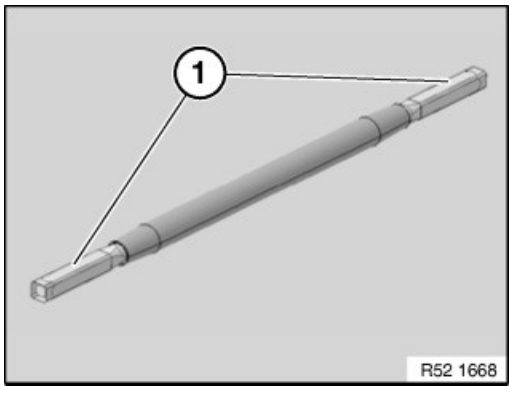


Insert long flex shaft (2) in worm gear on seat rail.

Bend long flex shaft (2) upwards and slide into electric motor for forward/back seat adjustment (1).

Clip in flex shaft into carrier plate.

Installation note:
Make sure flex shaft (2) is correctly seated in electric motor (1) and seat rail mounting.



Installation note:
PTFE hoses are shrink-fitted onto end pieces.

Check that hoses are free from damage.

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Note:
Carry out a function check.
Replacement:
Initialize drive unit for forward/back seat adjustment.

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52 13 526 Removing and installing/replacing left or right seat mechanism

Necessary preliminary tasks:

- Removing backrest frame
- Remove seat cover with upholstery

When replacing, remount the following parts depending on the version:

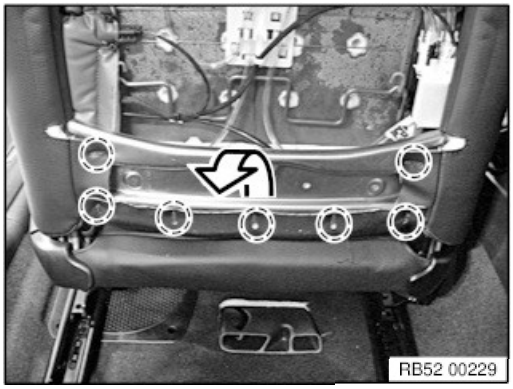
- Module for seat heating
- Control unit/module for seat adjustment
- Lower strap
- Backrest adjustment motor
- Seat height adjustment drive unit
- Forward/back seat adjustment drive unit
- Drive unit for seat cushion tilt adjustment
- Wiring harness to seat mechanism
- Position sensor for front seat
- Front seat sensor
- Seat occupancy mat for SBE

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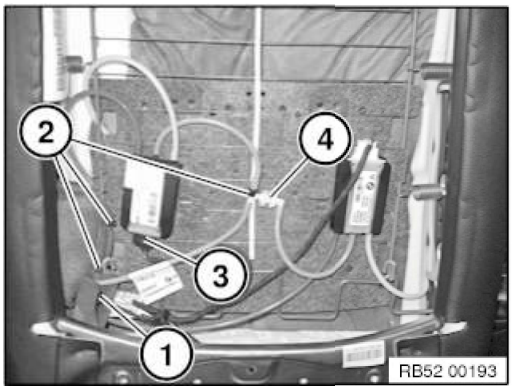
52 15 055 Removing and installing/replacing lumbar support on front seat

Necessary preliminary work:

- Remove rear panel on front seat



Detach backrest cover from backrest frame in marked area.



Unlock and disconnect plug connection (1) on lumbar support pump.

Unlock and disconnect plug connection (3) on valve body.

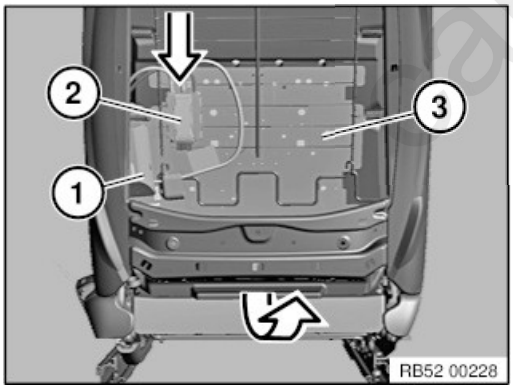
Release cable strap (2).

Installation note:
Completely remove remnants of cable ties.

Replace faulty cable straps.

Version with backrest width adjustment only.

Unlock and disconnect additional quick connector (4).



Detach valve body (2) from spring wire.

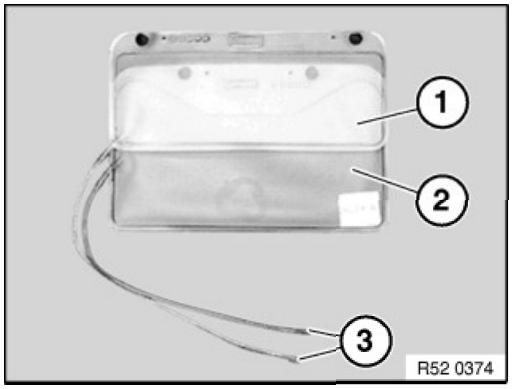
Detach lumbar support (3) from spring wire.

Press padding forward a little.

Carefully pull out lumbar support pump (1) downward with lumbar support (3) and valve body (2).



Installation note:
Attach lumbar support on second and fifth wire from the bottom.



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

Air hoses (3) must not be kinked.

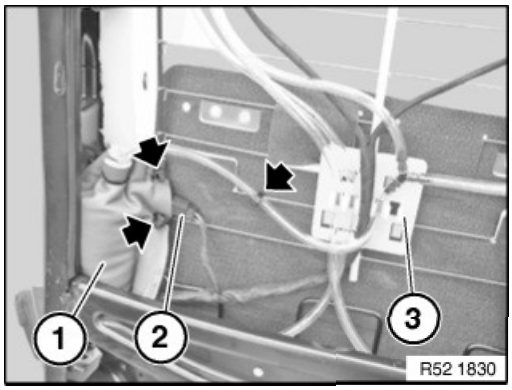
Installation note:
Run a function check.

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52 15 059 Removing and installing/replacing lumbar support pump with valve body for lumbar support/backrest width adjustment

Necessary preliminary tasks:

- Remove rear panel



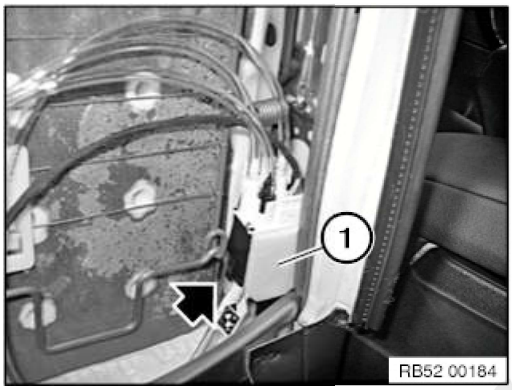
Cut open cable straps (arrows).

Installation note:
Replace defective cable straps.

Remove lumbar support pump (1) from backrest frame.

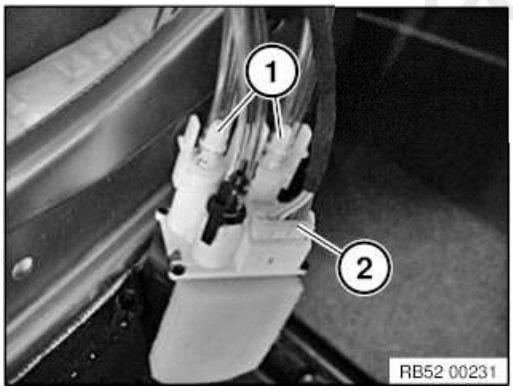
Unfasten plug connection (2) and disconnect.

Unclip air hose from holder (3).



Unclip valve body (1) from seat mechanism and feed out from backrest frame.*Installation note:*
Check the valve body (1) for correct fit in the backrest frame and spring wire.

Air hoses must not be kinked.



Unfasten plug connection (2) and disconnect.

Unlock quick connectors and detach air hoses (1).

Valve body for backrest width adjustment:

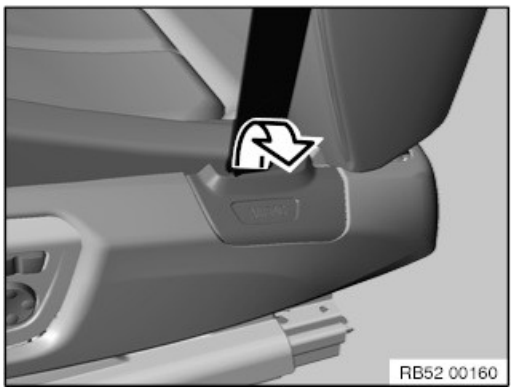
1. Lumbar support left/right = hose clear, quick-connector white

Installation note:
Connections are coded against incorrect assembly.

Note:
Run a function check.

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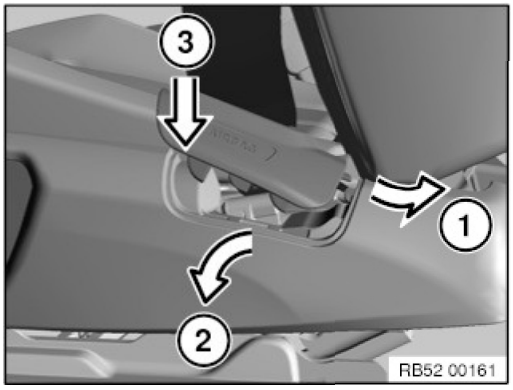
52 14 040 Removing and installing/replacing outer cover on left or right front seat (normal/electric)



Move backrest to full rearward position.

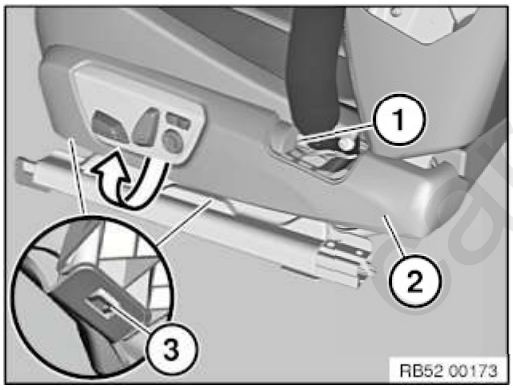
Grip end fitting cover centrally between seat belt strap and cover.

Unclip end fitting cover in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with rear guide in covering.
2. Insert cover in direction of arrow downwards in covering
3. Engage top left of cover in covering.



Release screw (1).

Lever latch mechanism (3) of the cover (2) out of seat mechanism.

Remove cover (2) in direction of arrow from seat mechanism.

Unlock and disconnect plug connections behind from operating unit.

Installation note:
Cover must not be damaged.

Replace cover if necessary.

<u>Replacement only:</u>

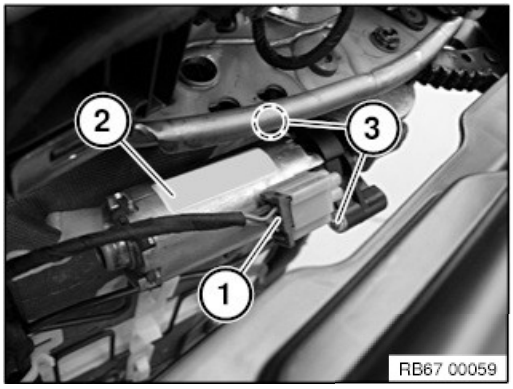
Remove operating unit for seat adjustment from cover.

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67 31 520 Removing and installing/replacing seat height adjustment drive unit

Necessary preliminary tasks:

- Remove driver's or front passenger seat



Set down front seat sideways on a suitable surface.
Unfasten plug connection (1) and disconnect.
Release screws (3).
Tightening torque 67 31 1AZ.
Feed out seat height adjustment drive unit (2) and remove.

Note:
Carry out a function check.
Replacement:
Initialise seat height adjustment drive unit.

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52 14 400 Replace seat cover for left or right front seat (normal/electric)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front seat
- Remove outer cover on front seat
- Remove inner cover on front seat

Important!

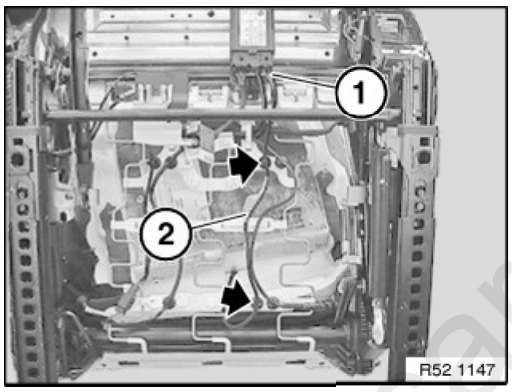
Risk of damage on sharp-edged seat mechanism.

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 heating only:

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

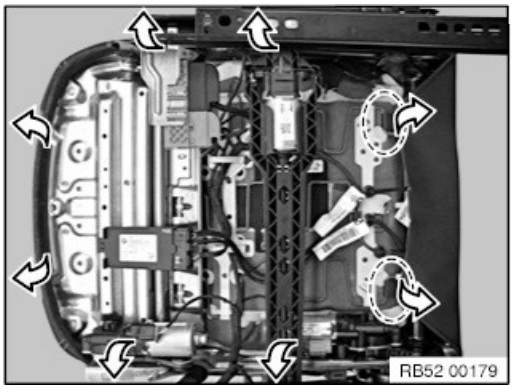
Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:

Plug connection is encoded to prevent incorrect connection.

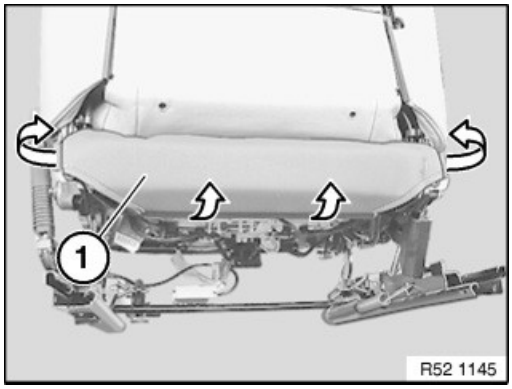
Replace cable strap.



Fully lift welt of seat cover out of seat frame.

Disengage seat cover at rear.

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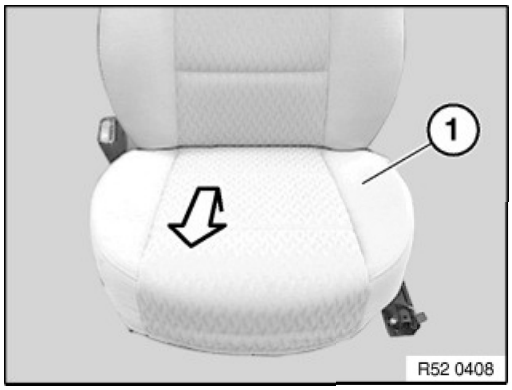


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

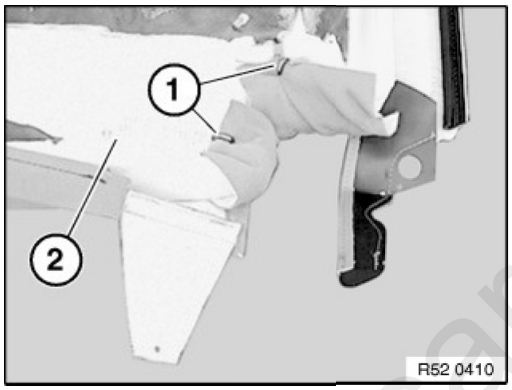
If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

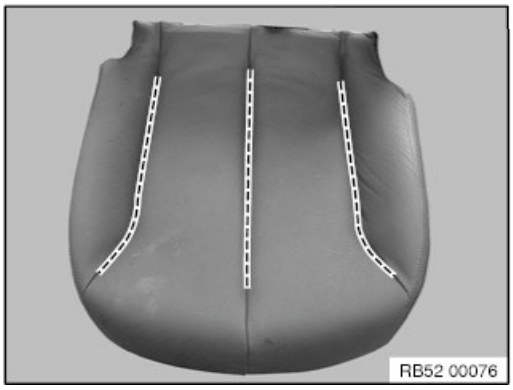
Make sure foam and bracing cloth are correctly fitted.



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



Release all clamps (1) from seat cover (2).



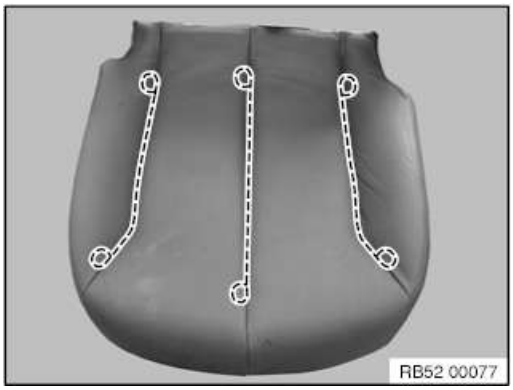
Release all clamps in marked area of trim wires.

Remove seat cover from upholstery.

Important!

Remove all remnants of clamps from seat cover and upholstery.

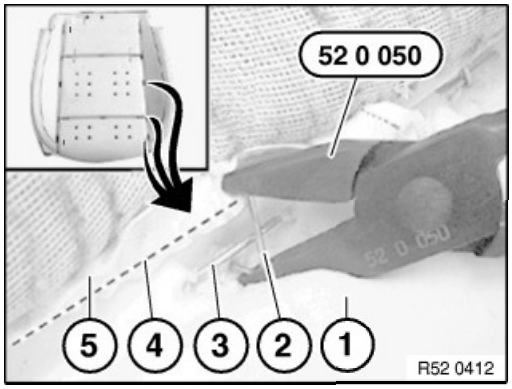
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Replacement only:

If applicable, pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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

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52 14 415 Replace upholstery for left or right front seat (normal/electric)



Operation is described in:

- Replacing seat cover for front seat

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52 14 420 Replace upholstery for left or right front seat backrest (normal/electric)



Operation is described in:

- Replace backrest cover for front seat

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52 14 407 Replacing backrest cover for driver's seat (normal/electric)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front seat on the driver's side
- Remove rear panel
- Remove guide sleeves for head restraint

Important!

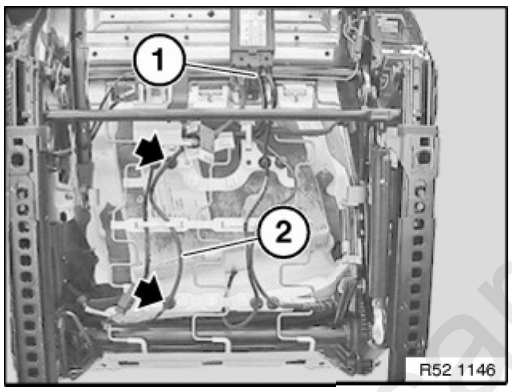
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

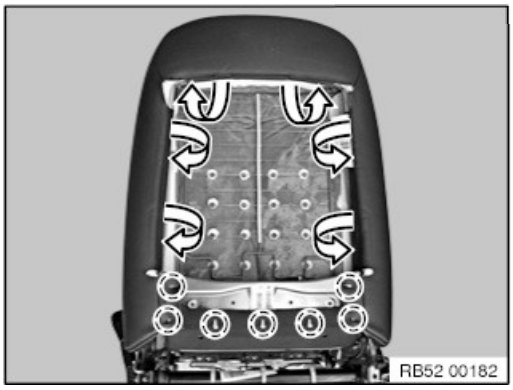
Unlock plug connection (1) for seat heating and disconnect.

Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

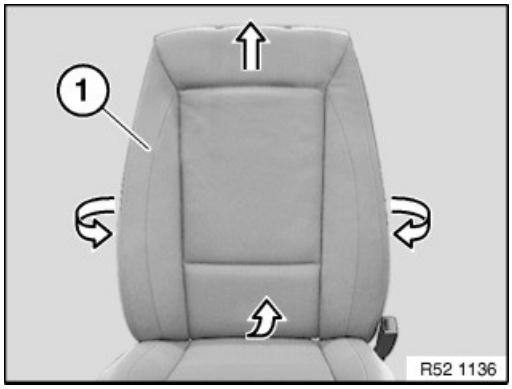
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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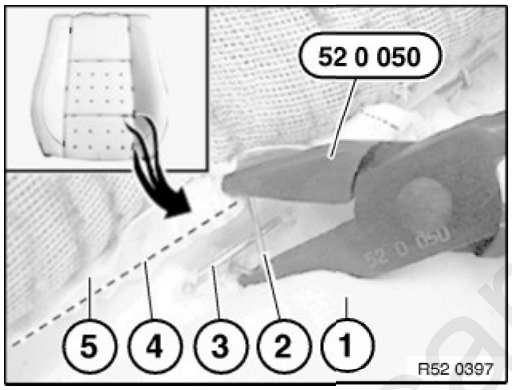
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 14 408 Replacing backrest cover for front passenger seat (normal/electrical)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front passenger side seat
- Remove rear panel
- Remove guide sleeves for head restraint

Important!

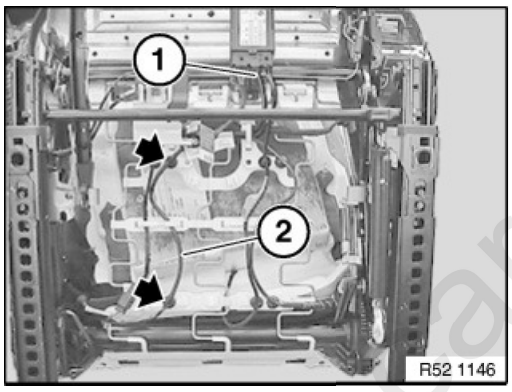
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

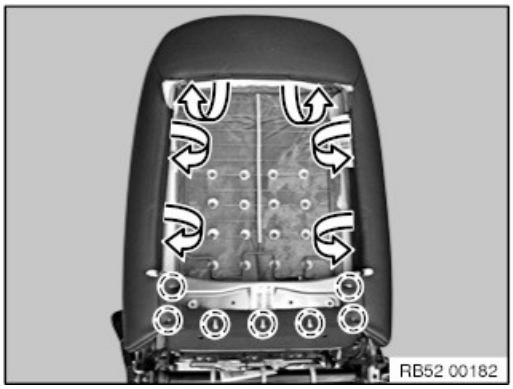
Unlock and disconnect plug connection seat heating backrest (1).

Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connections are coded against incorrect assembly.

Replace cable strap.



Lift welt out of backrest frame.

Detach the lower backrest cover from metal tabs.

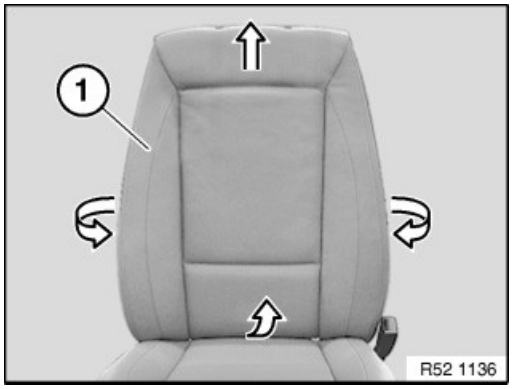
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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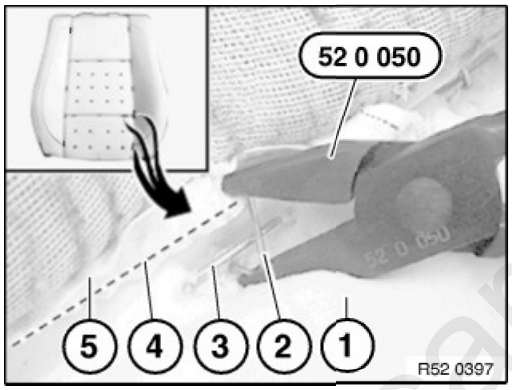
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 14 405 Replacing backrest cover for left or right front seat (normal/electrical)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front seat
- Remove rear panel
- Remove guide sleeves for head restraint

Important!

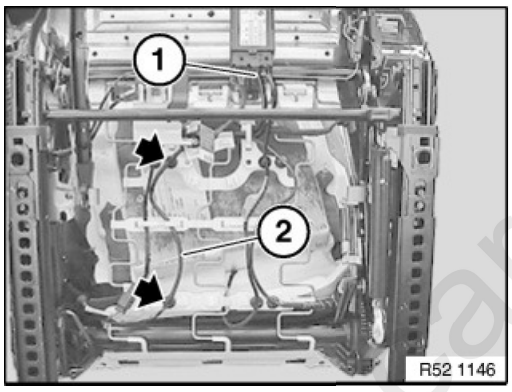
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

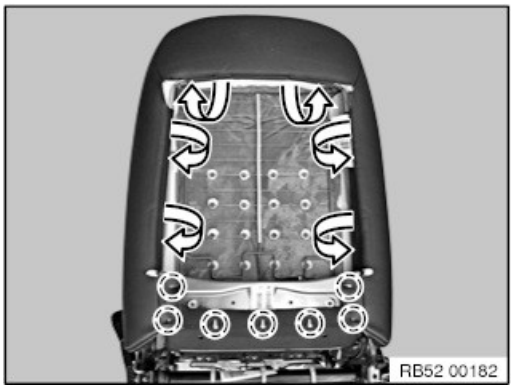
Unlock plug connection (1) for seat heating and disconnect.

Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

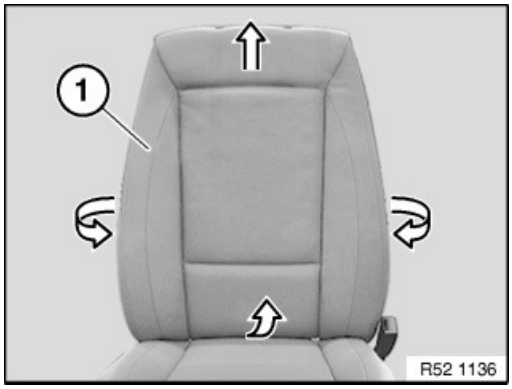
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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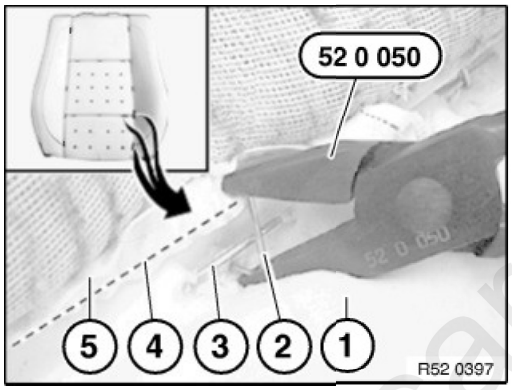
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

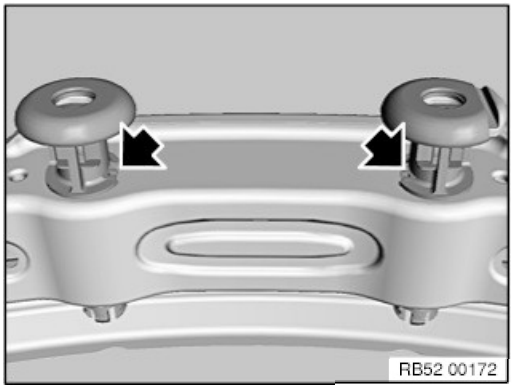
Cut new backrest cover to size and insert trim wires.

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52 13 ... Replacing guide sleeves for front left or right head restraint

Necessary preliminary tasks:

- Remove front head restraint

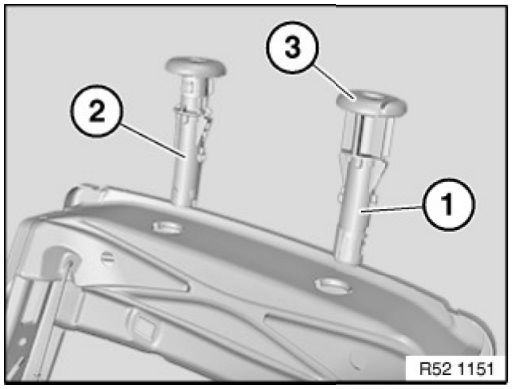


Note:
Shown here without backrest cover for a better overview.

Push the backrest cover with upholstery down next to the guide sleeve.

Carefully insert screwdriver between the backrest cover and guide sleeve.

Unlock the retaining lug with a screwdriver and remove the guide sleeves through the top.



Installation note:
Install guide sleeves as follows:

1. Guide sleeve with pushbuttonÂ (3) in direction of travel left
2. Guide sleeve without pushbutton in direction of travel right

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52 13 455 Replacing left or right heating elements for front seat (normal/manual)

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.

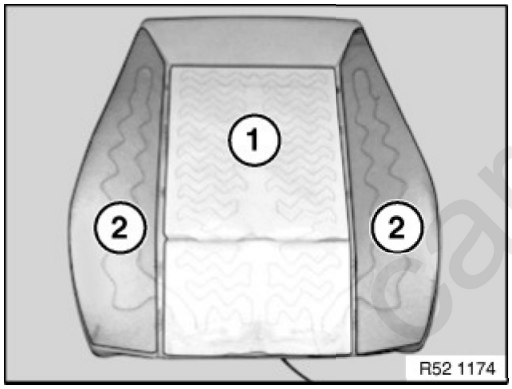
Foam section and heating mat must be replaced.

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



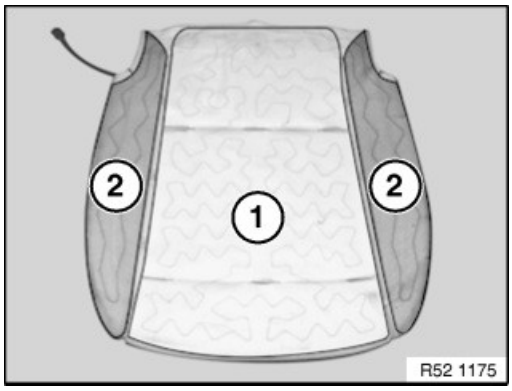
Guide cable for backrest heating through foam hole.

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

carmanualsdiagram.com



Check laying of heating mats:

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

Note:
Carry out function check.

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52 13 415 Replacing left or right upholstery for front seat (normal / manual)



Operation is described in:

Replacing seat cover on left or right front seat.

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52 14 412 Replacing seat and backrest cover for driver's seat (normal/manual)



Operations are described in:

- Replacing seat cover for driver's seat
- Replacing backrest cover for driver's seat

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52 15 412 Replacing seat and backrest cover for driver's seat (sport/manual)



Operations are described in:

- Replacing seat cover for driver's seat
- Replacing backrest cover for driver's seat

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52 14 413 Replacing seat and backrest cover for front passenger seat (normal/manual)



Operations are described in:

- Replacing seat cover for front passenger seat
- Replacing backrest cover for front passenger seat

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52 15 413 Replacing seat and backrest cover for front passenger seat (sport/manual)



Operations are described in:

- Replacing seat cover for front passenger seat
- Replacing backrest cover for front passenger seat

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52 14 410 Replacing seat and backrest cover for left or right front seat (normal/manual)



Operations are described in:

- Replacing seat cover for front seat
- Replacing backrest cover for front seat

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52 14 402 Replacing seat cover for driver's seat (normal/electric)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front seat on the driver's side
- Remove outer cover on front seat
- Remove inner cover on front seat

Important!

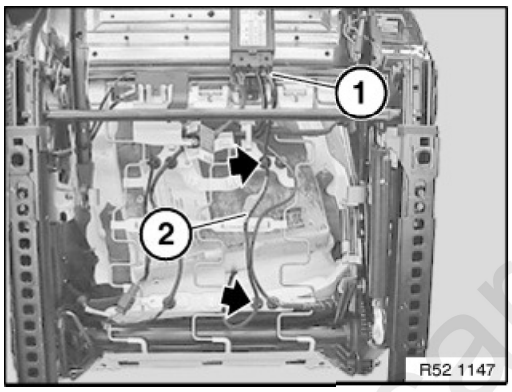
Risk of damage on sharp-edged seat mechanism.

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 heating only:

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

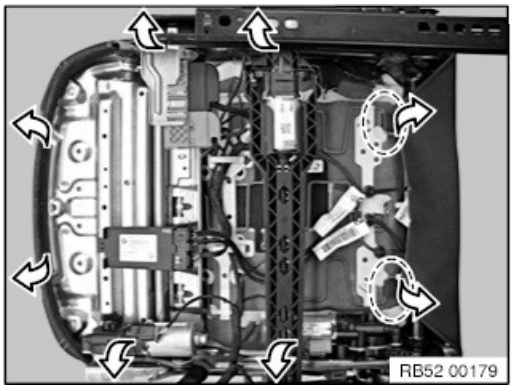
Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

Installation note:

Plug connection is encoded to prevent incorrect connection.

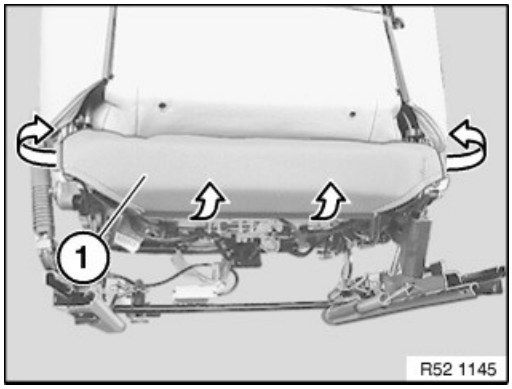
Replace cable strap.



Fully lift welt of seat cover out of seat frame.

Disengage seat cover at rear.

carbigh.com

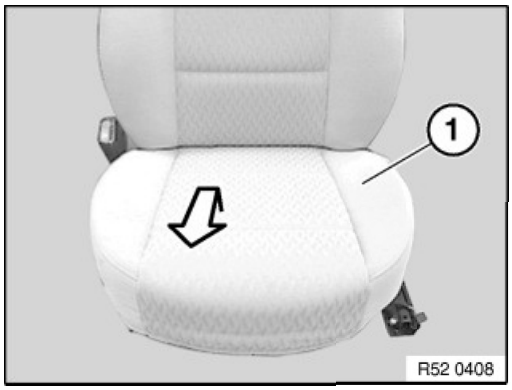


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

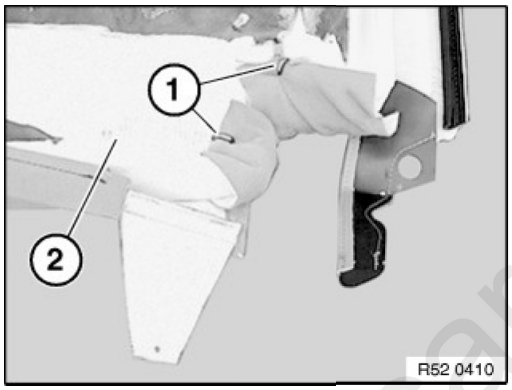
If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

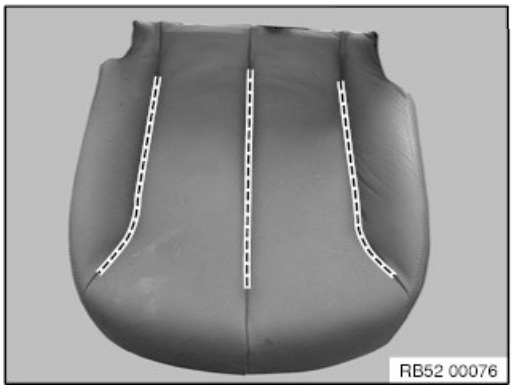
Make sure foam and bracing cloth are correctly fitted.



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



Release all clamps (1) from seat cover (2).



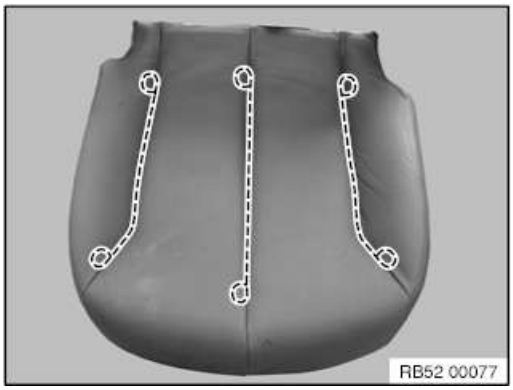
Release all clamps in marked area of trim wires.

Remove seat cover from upholstery.

Important!

Remove all remnants of clamps from seat cover and upholstery.

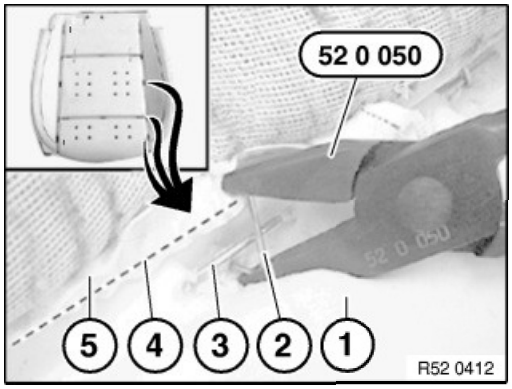
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Replacement only:

If applicable, pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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

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52 14 403 Replacing seat cover for front passenger seat (normal/electrical)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front passenger side seat
- Remove outer cover on front seat
- Remove inner cover on front seat

Warning!

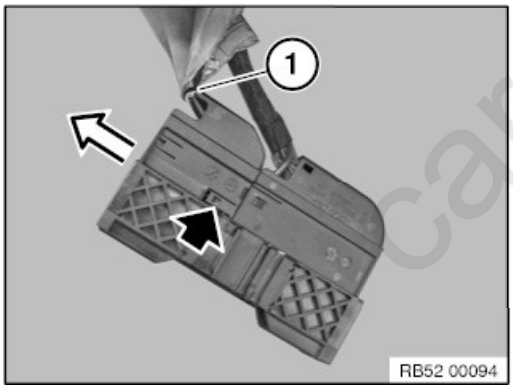
US and Canadian version of the front passenger seat (with CIS mat):

The CIS mat is bonded to the entire surface of the facing and 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 installation, the CIS mat must be enabled with the BMW programming system.



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.

Important!

Risk of damage on sharp-edged seat mechanism.

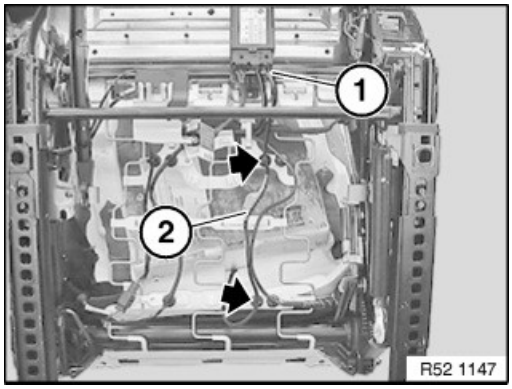
Guide all cables carefully through seat and backrest mechanism.

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.

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Version with seat heating only:

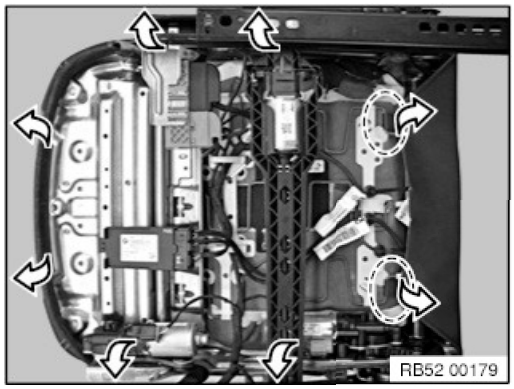
Unlock plug connection (1) for seat heating and disconnect.

Detach cable strap.

Detach seat heater cable (2) from cable clips on seat mechanism.

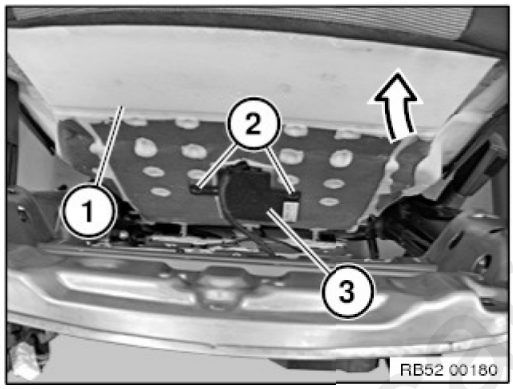
Installation note:
Plug connections are coded against incorrect assembly.

Replace cable strap.



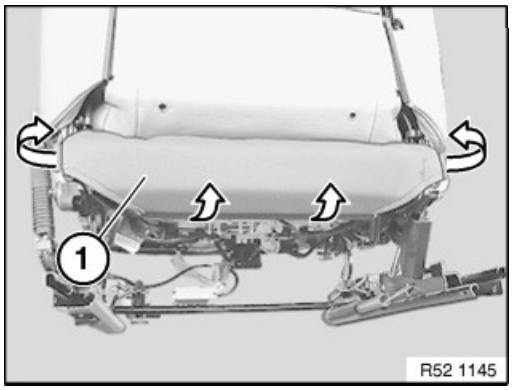
Fully lift welt of seat cover out of seat frame.

Disengage seat cover at rear.



Lift seat cover with upholstery (1) at front and unclip mounting (2) for seat occupancy detection (SBE) (3).

Remove SBE (3) from upholstery (1) and place on flexmat.



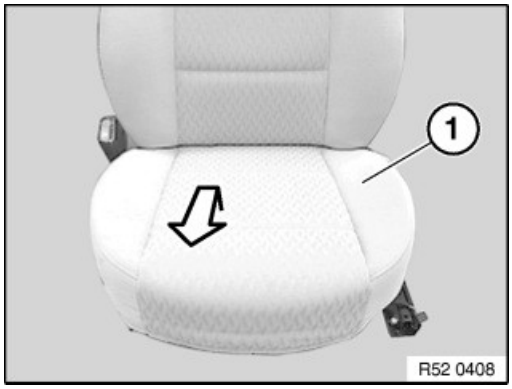
Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

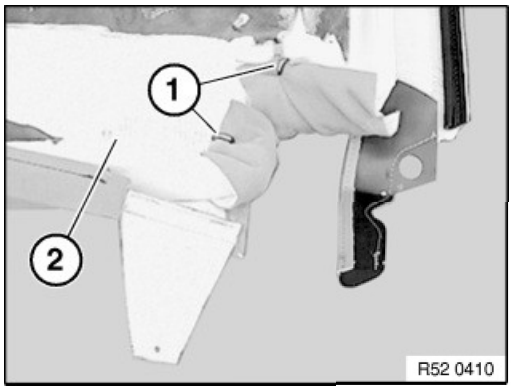
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

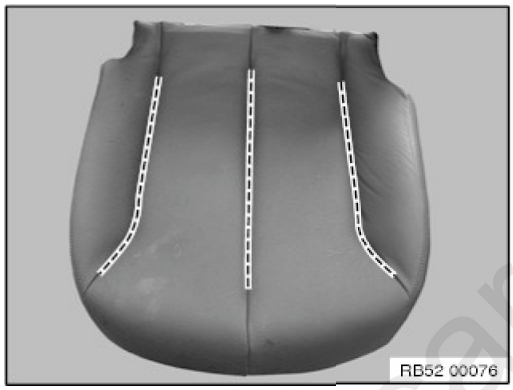
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Remove seat cover (1) with padding towards front/top.



Release all clamps (1) from seat cover (2).

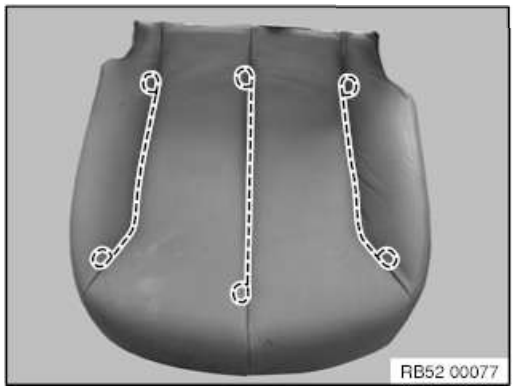


Release all clamps in marked area of trim wires.

Remove seat cover from upholstery.

Important!

Remove all remnants of clamps from seat cover and upholstery.

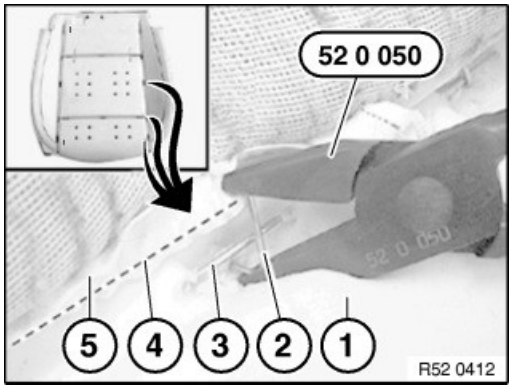


<u>Replacement only:</u>

If applicable, pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.

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Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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



Installation note:
<u>Enabling seat occupancy detector (CIS mat):</u>

- Connect BMW programming system
- Encode airbag control unit
- Delete fault memory if necessary

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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!

<u>Only US and Canadian version of front passenger seat (with CIS mat):</u>

The CIS mat is bonded to the entire surface of the facing and 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.

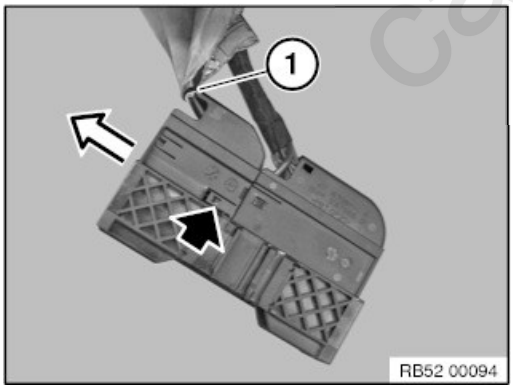
Full functional capability can only be guaranteed with original BMW spare parts.

After installation, the CIS mat must be enabled with the BMW programming system.

<u>Procedure for replacing the CIS mat together with the upholstery is described in:</u>

- Replacing upholstery 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 tieÂ (1).

Connector is encoded against incorrect assembly.

Installation note:
<u>Enabling seat occupancy detector (CIS mat):</u>

- Connect BMW programming system
- Encode airbag control unit
- Delete fault memory if necessary

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52 14 417 Replacing upholstery for driver's seat (normal/electric)



Operation is described in:

- Replacing seat cover for driver's seat

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52 14 422 Replacing upholstery for driver's seat backrest (normal/electric)



Operation is described in:

- Replace backrest cover for driver's seat.

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52 14 418 Replacing upholstery for front passenger seat (normal/electrical)



Operation is described in:

- Replacing seat cover for front passenger seat

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52 14 423 Replacing upholstery for front passenger seat backrest (normal/electrical)

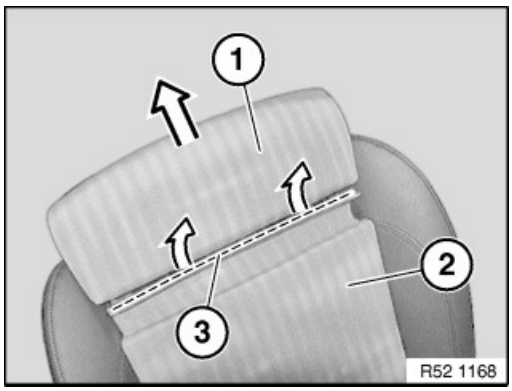


Operation is described in:

- Replacing backrest cover for front passenger seat

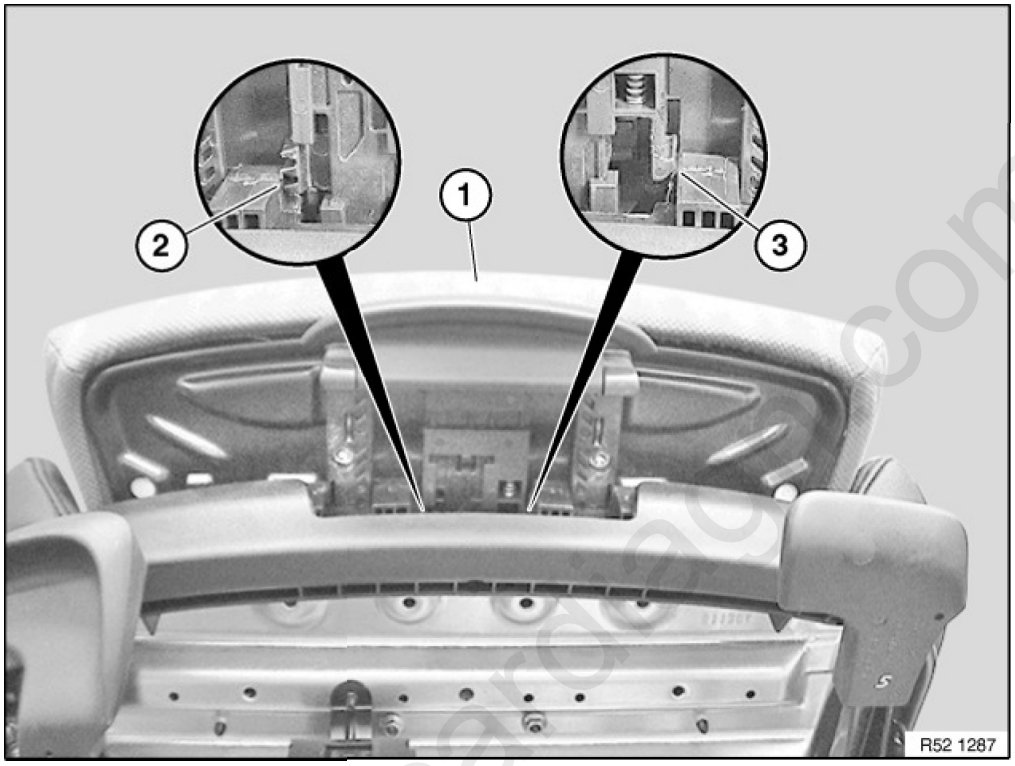
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52 15 050 Remove or install left or right thigh support from/on the front seat (sport/manual)



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

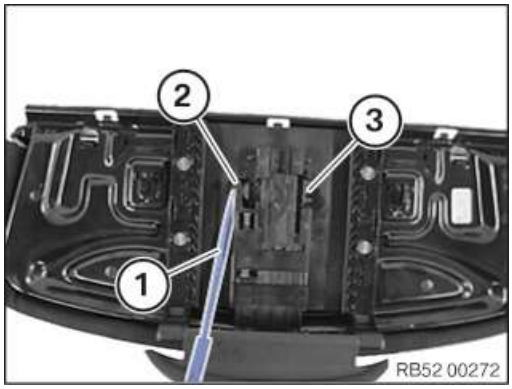
Lever out the welt (3) from the seat cover (2) from the thigh support (1).



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

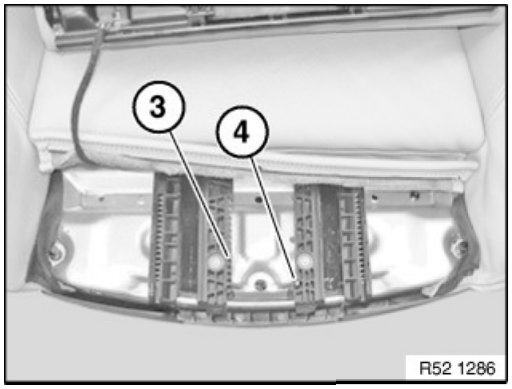
Keep Actuation (1) pressed to unlock the centering (2).

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.



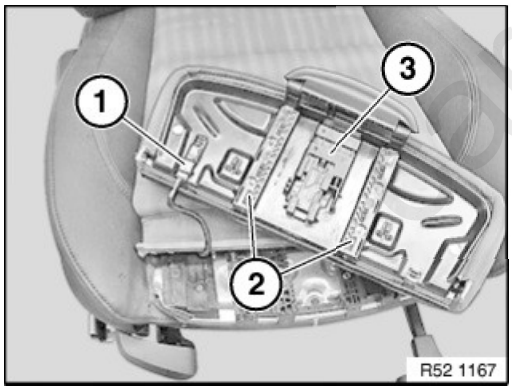
View of thigh support mechanism when removed:

1. Screwdriver for unlocking the end stop
2. End stop for thigh support
3. Locking mechanism for the thigh support



View of seat frame mechanism:

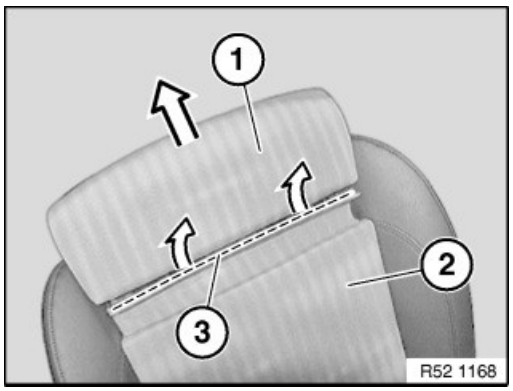
3. Guide rail on seat with depth retainer
4. Guide rail on seat with end stop



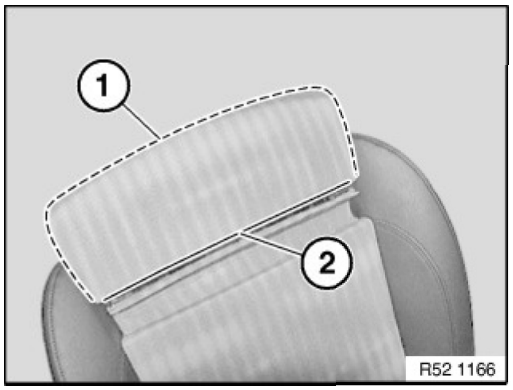
Unfasten plug connection (1) and disconnect.*Note:*
Check guide rails (2) and adjusting mechanism (3) for damage.

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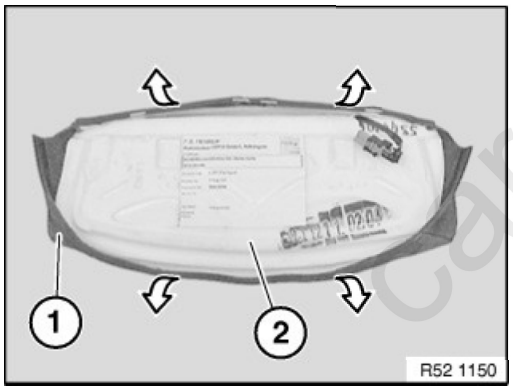
52 15 403 Remove or install/replace cover left or right thigh support from/on the front seat (sport/manual)



Unlock and move thigh support (1) as far forward as possible.
Lift out welt of seat cover (2) from thigh support.



Lever out cover welt in marked area (1).
Detach trim wire in marked area (2) from thigh support.
Remove cover with upholstery.



Pull cover (1) off upholstery (2).

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52 13 001 Removing and installing front seat, driver's side (normal / manual)

Necessary preliminary tasks:

- Disconnect battery earth lead
- Remove head restraint

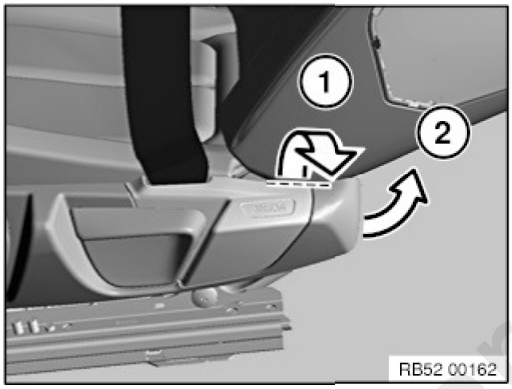
Important!

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

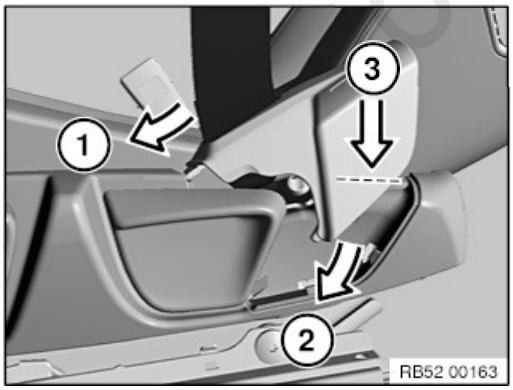


Move backrest to full rearward position.

Grip end fitting cover in marked area between cushion and cover.

Unclip end fitting cover in direction of arrow (1).

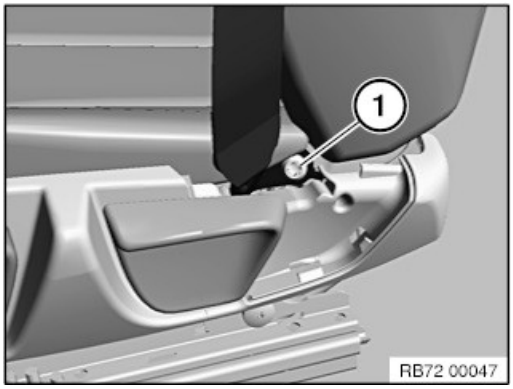
Feed out end fitting cover (2) in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with front guide in cover
2. Insert cover in direction of arrow downwards in covering
3. Engage top cover in marked area in covering.

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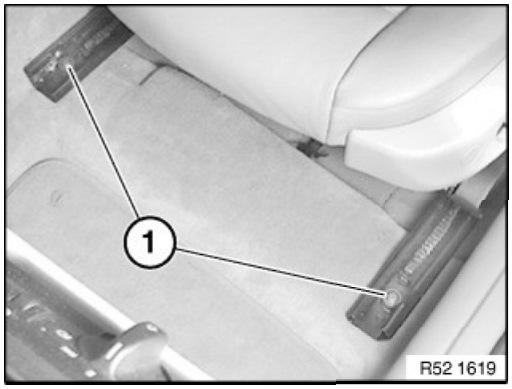


Release screw (1).

Tightening torque: 72 11 02AZ.

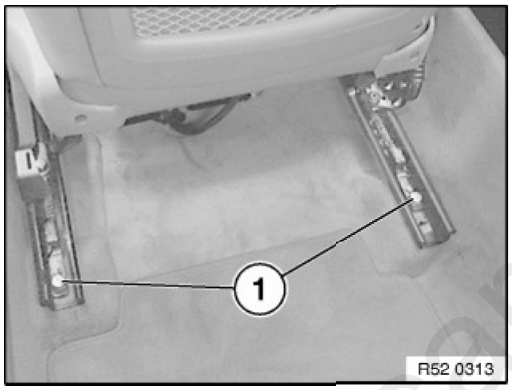
Remove end fitting.

Installation note:
End fitting is coded against incorrect assembly.



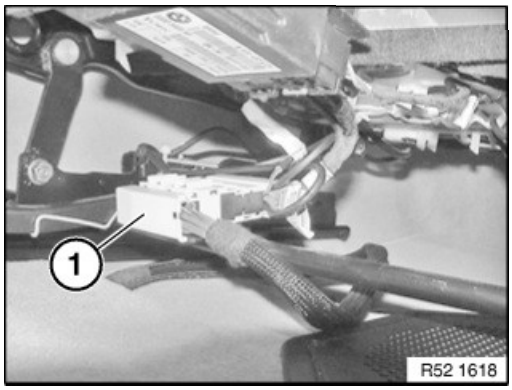
Move seat to upper back position.

Release and dispose of screws (1).



Adjust the seat to the front top.

Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

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

Lift out front seat.

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Installation note:

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

  Tightening torque 52 10 01AZ.



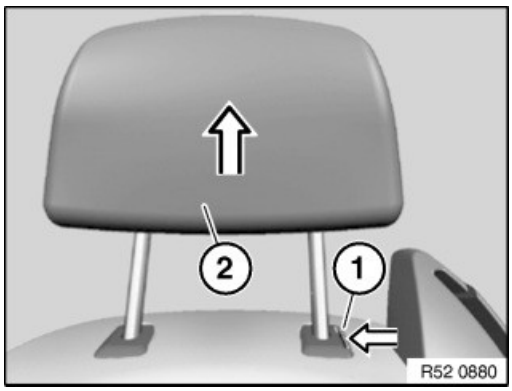
Warning!

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.

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52 13 390 Removing and installing or replacing front left or right head restraint



Press latch mechanism (1) and lift out head restraint (2).

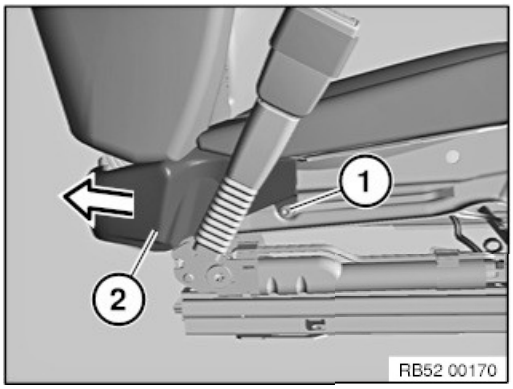
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52 13 041 Removing and installing or replacing inner cover on left or right front seat

Necessary preliminary tasks:

- Remove front seat

Note: Completely move the electric front seat to the top prior to removal.



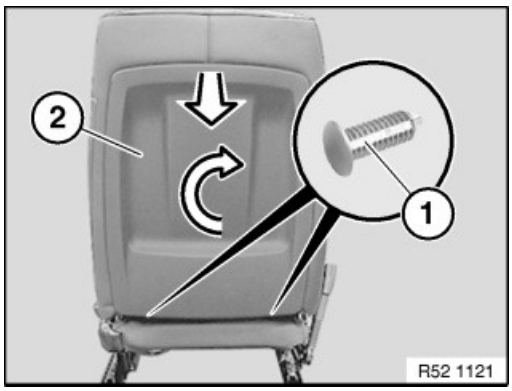
Release screw (1).

Tightening torque 51 10 3AZ.

Remove cover (2) in direction of arrow.

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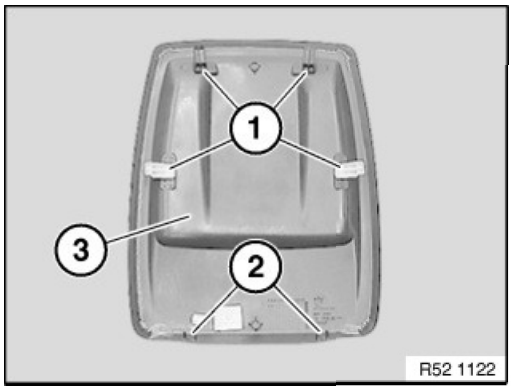
52 13 198 Removing and installing or replacing rear panel on left or right front seat backrest



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.

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52 13 002 Removing and installing the front seat on the passenger's side (normal/manual)

Necessary preliminary tasks:

- Disconnect battery earth lead
- Remove head restraint

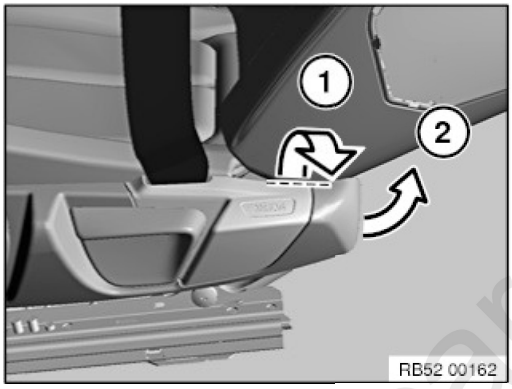
Important!

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

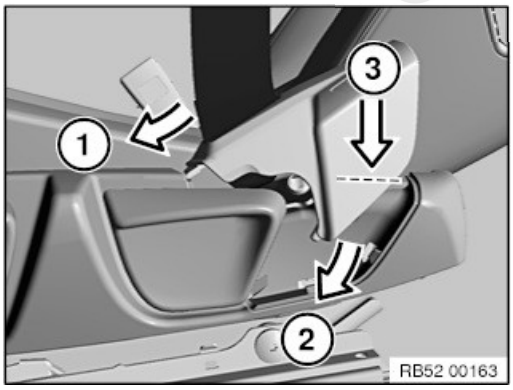


Move backrest to full rearward position.

Grip end fitting cover in marked area between cushion and cover.

Unclip end fitting cover in direction of arrow (1).

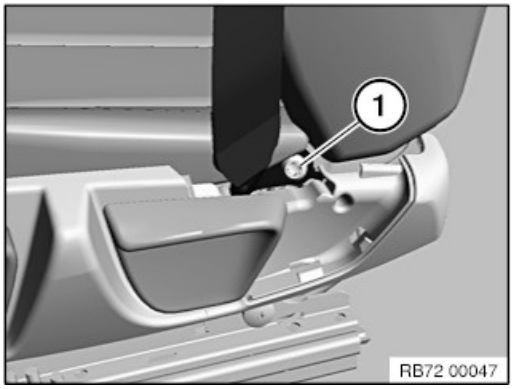
Feed out end fitting cover (2) in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with front guide in cover
2. Insert cover in direction of arrow downwards in covering
3. Engage top cover in marked area in covering.

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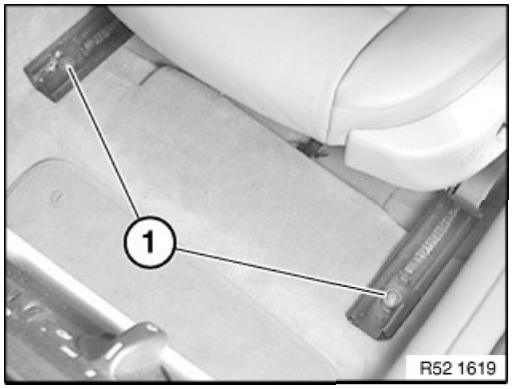


Release screw (1).

Tightening torque: 72 11 02AZ.

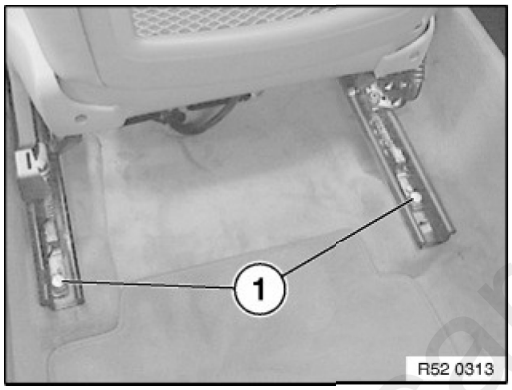
Remove end fitting.

Installation note:
End fitting is coded against incorrect assembly.



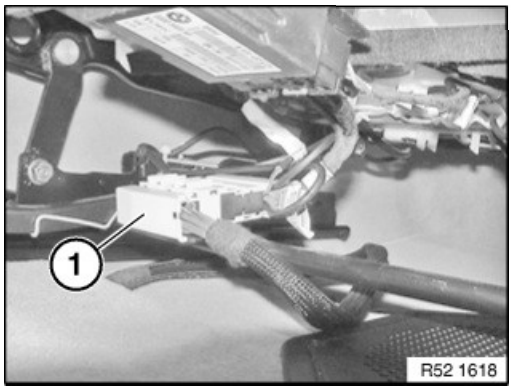
Move seat to upper back position.

Release and dispose of screws (1).



Adjust the seat to the front top.

Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

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

Lift out front seat.

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Installation note:

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

  Tightening torque 52 10 01AZ.



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.

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52 13 030 Removing and installing/replacing backrest frame on left or right front seat (normal/manual)

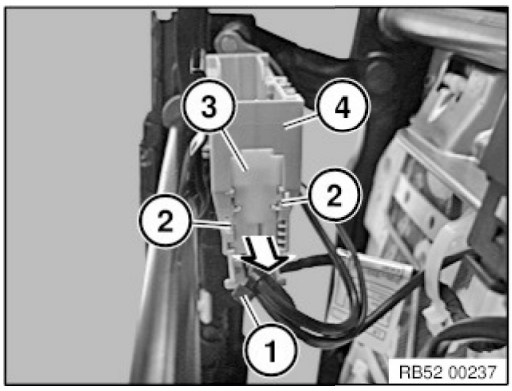
Important!

When working on the front seat it is absolutely essential to observe the safety regulations on handling airbag modules.

Improper handling may trigger the side airbag and as a result cause injuries.

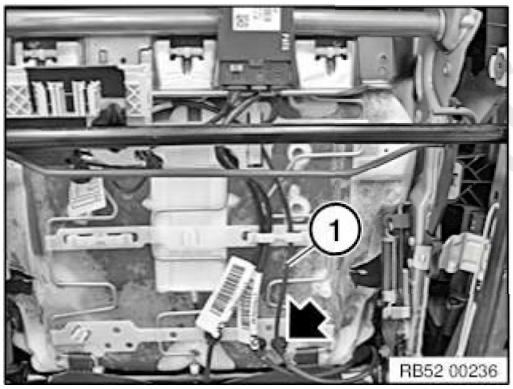
Necessary preliminary work:

- Remove front seat
- Remove rear panel on front seat backrest



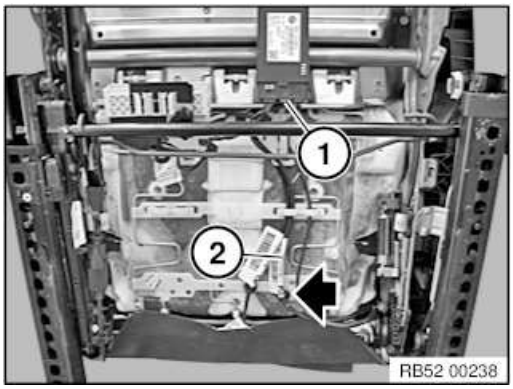
Cut open cable strap (1).

Press locks (2) outwards and at the same time remove connector (3) in direction of arrow from connector housing (4).



Unclip airbag wiring harness (1) in marked area.

Release airbag wiring harness (1) from cable clips on seat mechanism.



<u>Version with seat heating only:</u>

Unlock plug connection (1) and disconnect.

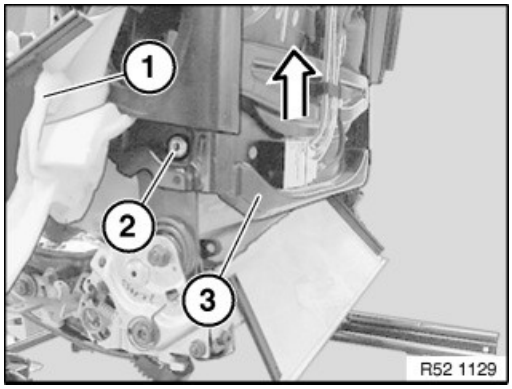
Unclip wiring harness (2) in marked area.

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

Important!

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

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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 upholstery

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52 13 526 Removing and installing/replacing left or right seat mechanism

Necessary preliminary tasks:

- Removing backrest frame
- Remove seat cover with upholstery

When replacing, remount the following parts depending on the version:

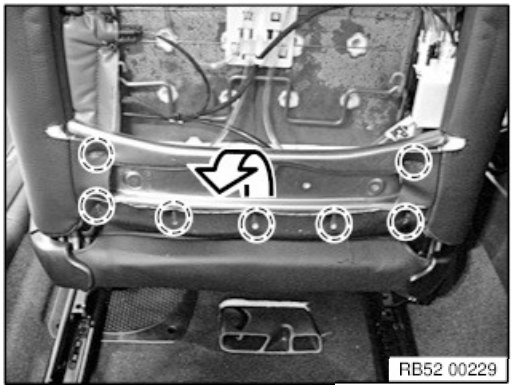
- Module for seat heating
- Control unit/module for seat adjustment
- Lower strap
- Backrest adjustment motor
- Seat height adjustment drive unit
- Forward/back seat adjustment drive unit
- Drive unit for seat cushion tilt adjustment
- Wiring harness to seat mechanism
- Position sensor for front seat
- Front seat sensor
- Seat occupancy mat for SBE

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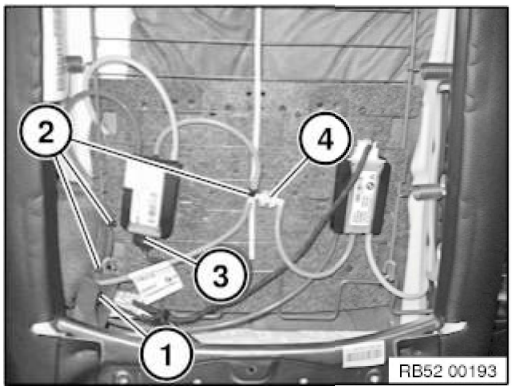
52 15 055 Removing and installing/replacing lumbar support on front seat

Necessary preliminary work:

- Remove rear panel on front seat



Detach backrest cover from backrest frame in marked area.



Unlock and disconnect plug connection (1) on lumbar support pump.

Unlock and disconnect plug connection (3) on valve body.

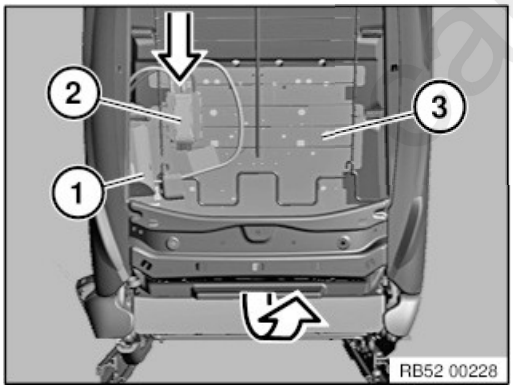
Release cable strap (2).

Installation note:
Completely remove remnants of cable ties.

Replace faulty cable straps.

Version with backrest width adjustment only.

Unlock and disconnect additional quick connector (4).



Detach valve body (2) from spring wire.

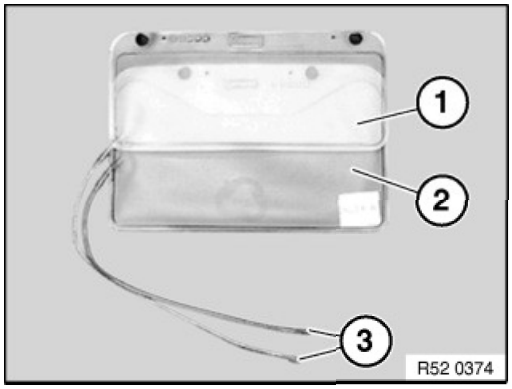
Detach lumbar support (3) from spring wire.

Press padding forward a little.

Carefully pull out lumbar support pump (1) downward with lumbar support (3) and valve body (2).



Installation note:
Attach lumbar support on second and fifth wire from the bottom.



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

Air hoses (3) must not be kinked.

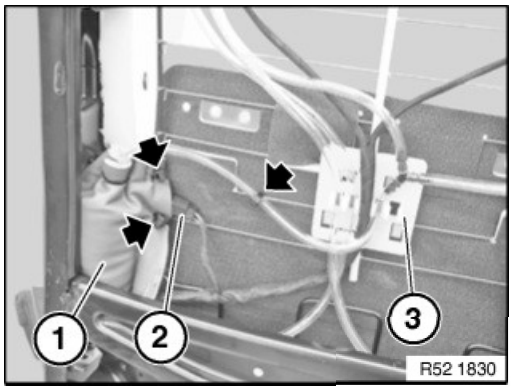
Installation note:
Run a function check.

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52 15 059 Removing and installing/replacing lumbar support pump with valve body for lumbar support/backrest width adjustment

Necessary preliminary tasks:

- Remove rear panel



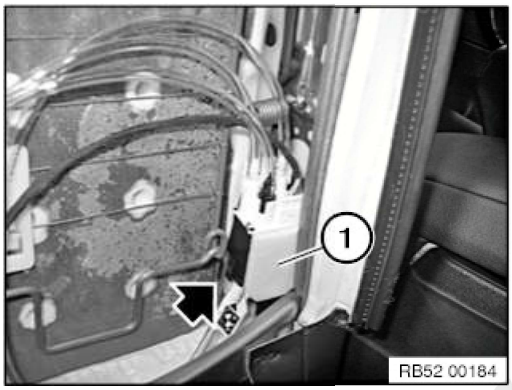
Cut open cable straps (arrows).

Installation note:
Replace defective cable straps.

Remove lumbar support pump (1) from backrest frame.

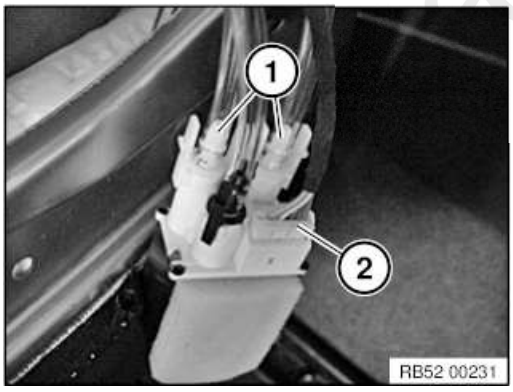
Unfasten plug connection (2) and disconnect.

Unclip air hose from holder (3).



Unclip valve body (1) from seat mechanism and feed out from backrest frame.*Installation note:*
Check the valve body (1) for correct fit in the backrest frame and spring wire.

Air hoses must not be kinked.



Unfasten plug connection (2) and disconnect.

Unlock quick connectors and detach air hoses (1).

Valve body for backrest width adjustment:

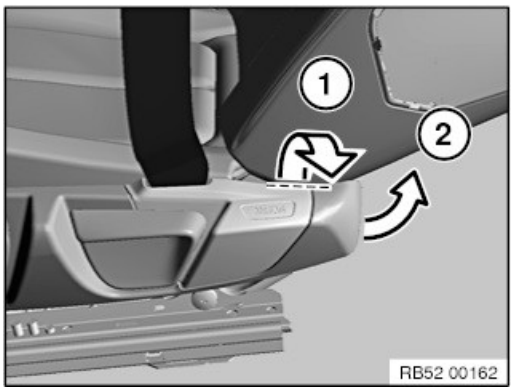
1. Lumbar support left/right = hose clear, quick-connector white

Installation note:
Connections are coded against incorrect assembly.

Note:
Run a function check.

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52 13 040 Removing and installing/replacing outer cover on left or right front seat

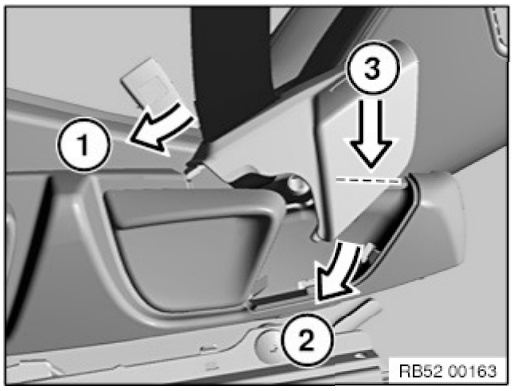


Move backrest to full rearward position.

Grip end fitting cover in marked area between cushion and cover.

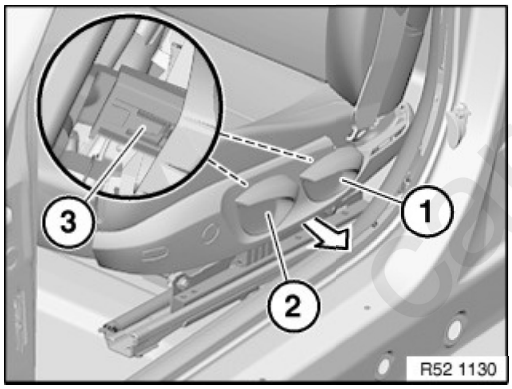
Unclip end fitting cover in direction of arrow (1).

Feed out end fitting cover (2) in direction of arrow.



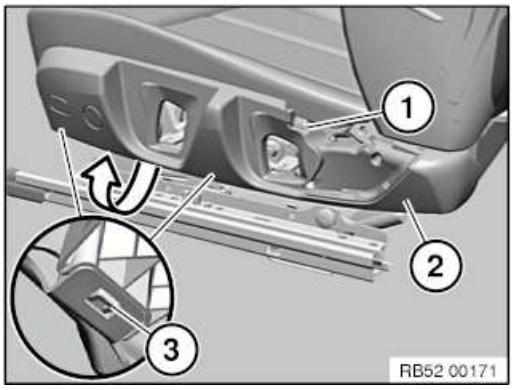
Installation note:
Install end fitting cover as follows:

1. Insert cover with front guide in cover
2. Insert cover in direction of arrow downwards in covering
3. Engage top cover in marked area in covering.



Pull the handle up and lift up lock (3).

Pull off the handle for the backrest angle adjustment (1) and handle for seat height adjustment (2).

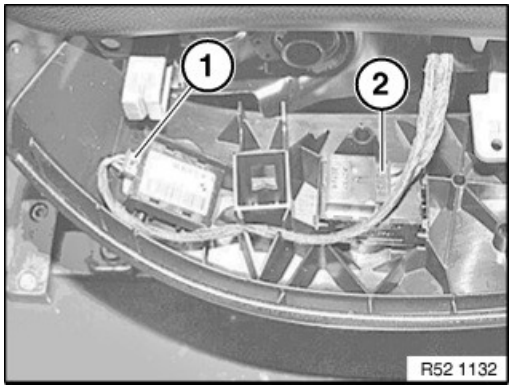


Release screw (1).

Lever latch mechanism (3) of the cover (2) out of seat mechanism.

Remove cover (2) in direction of arrow from seat mechanism.

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

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

Replacement only:

Depending on version, cut-outs for buttons in cover may need to be reworked.

Replacement:

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

Installation note:
Please ensure correct latching of the switch backrest width adjustment and switch lumbar support.

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52 15 455 Replace heating elements for front seat (sport/manual) left or right

Necessary preliminary tasks:

- Remove seat cover
- Remove backrest cover
- Remove thigh support cover

Note:
Heating elements are bonded with the foam part and cannot be separated from each other without causing damage.

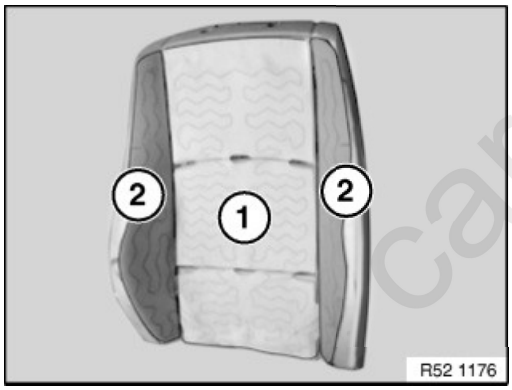
Foam part and heating elements must be replaced.

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



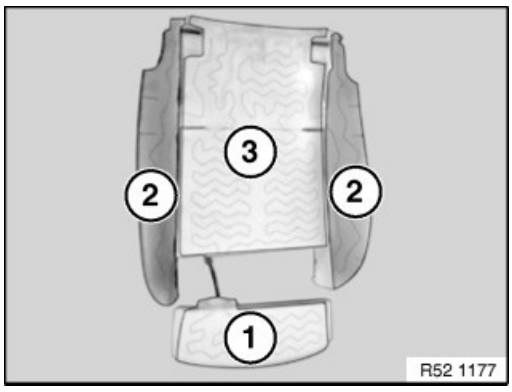
Guide cable for backrest heating through foam hole.

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.

Bond the STV heating mat (1):

- Pull off the adhesive film and bond flush with the rear foam edge

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

Stick on main section (3):

- Pull adhesive film pieces off main section (3) and stick to upper edge of main section foam until flush

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Check laying of heating mats:

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

Note:
Carry out function check

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52 15 407 Replacing backrest cover for driver's seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove driver's seat.
- Remove rear panel on front seat backrest
- Remove guide sleeves

Important!

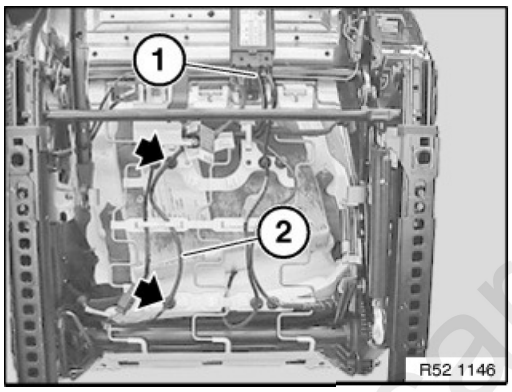
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

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

Detach cable strap.

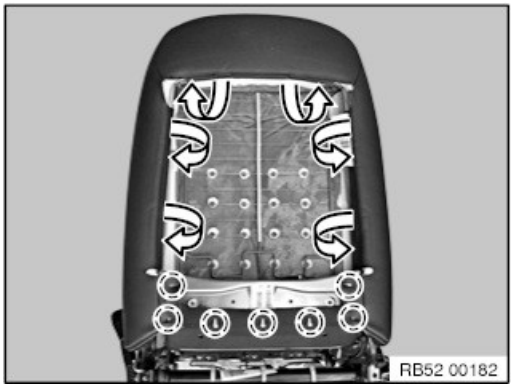
Release seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.

Important!

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



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

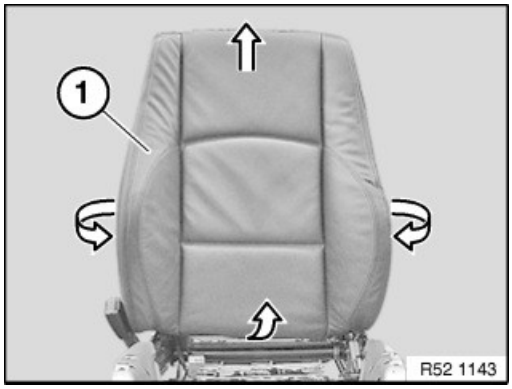
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

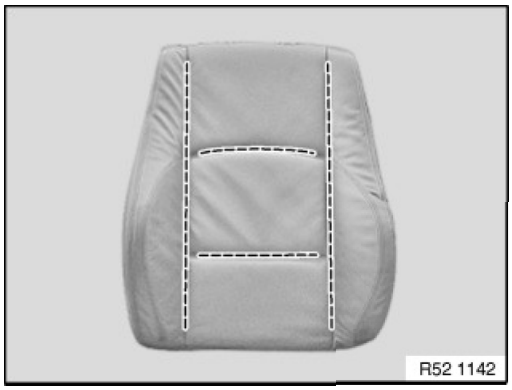
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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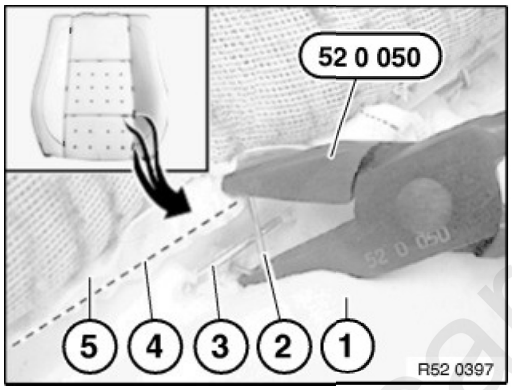
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



Release all clamps in marked area.

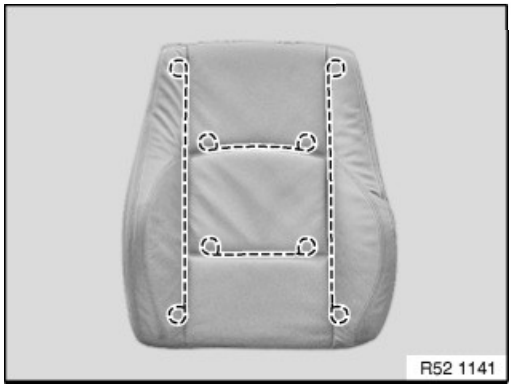
Remove backrest cover from padding.

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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 15 408 Replacing backrest cover for front passenger seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front passenger seat
- Remove rear panel on front seat backrest
- Remove guide sleeves

Important!

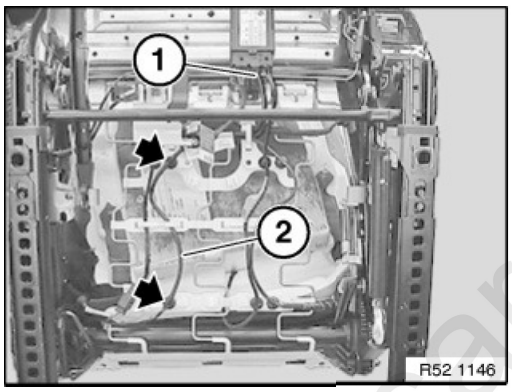
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

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

Detach cable strap.

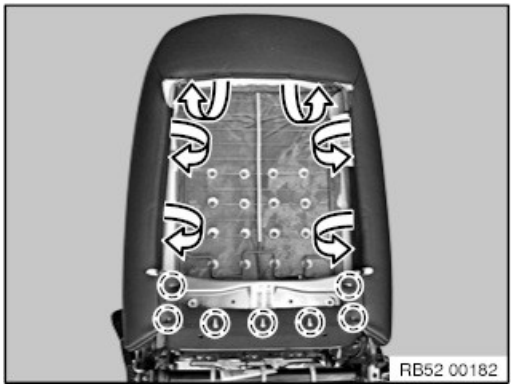
Release seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.

Important!

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



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

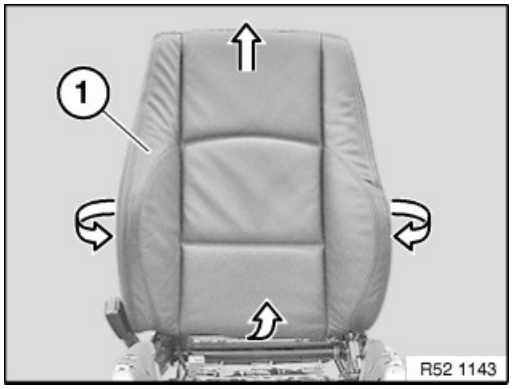
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

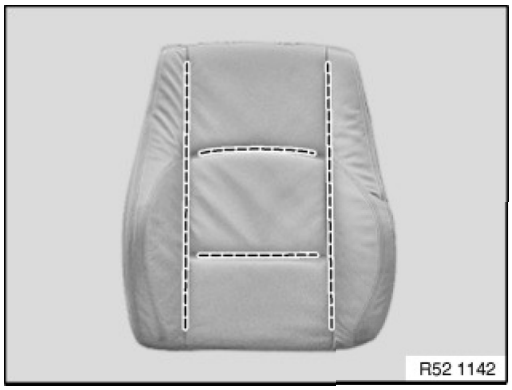
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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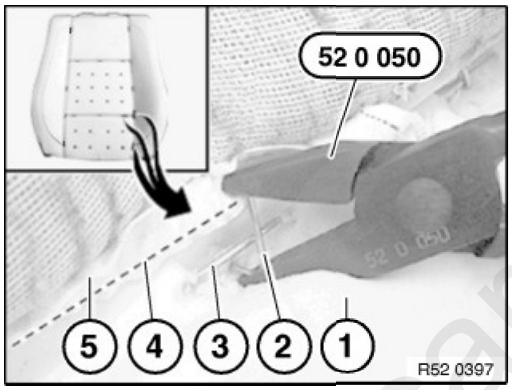
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



Release all clamps in marked area.

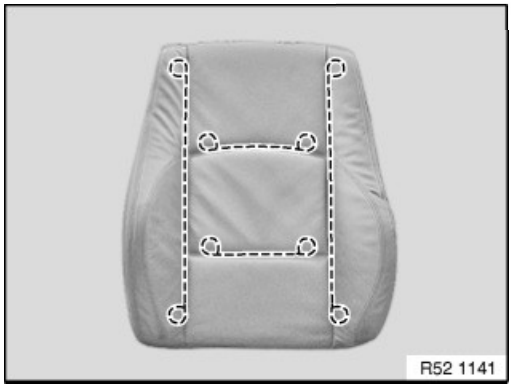
Remove backrest cover from padding.

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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 15 405 Replacing backrest cover for front seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front seat
- Remove rear panel on front seat backrest
- Remove guide sleeves

Important!

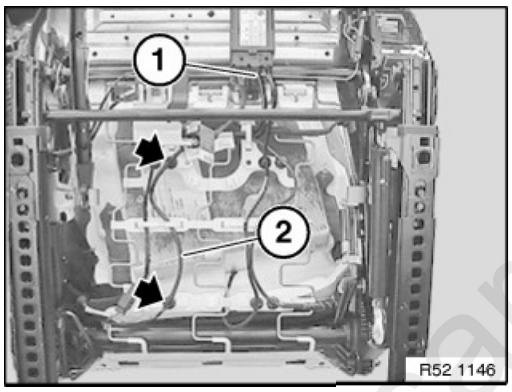
Risk of damage on sharp-edged seat mechanism.

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 heating only:

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

Detach cable strap.

Release seat heater cable (2) from cable clips on seat mechanism.

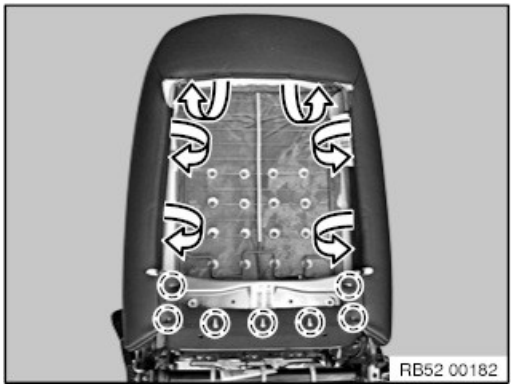
Installation note:

Plug connection is encoded to prevent incorrect connection.

Replace cable strap.

Important!

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



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

Carefully slide bracing cloth with foam through backrest gap and seat structure.

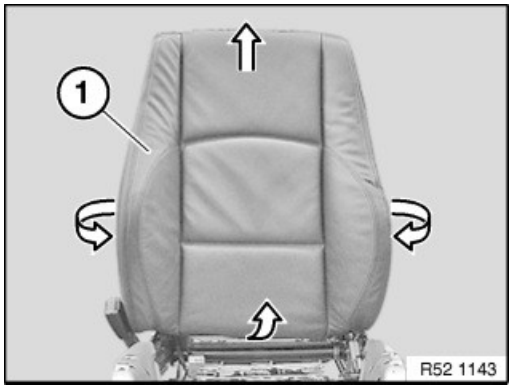
If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:

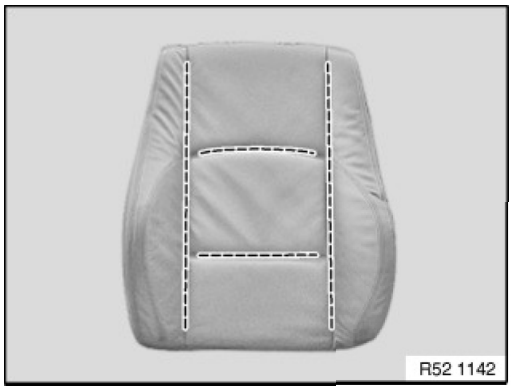
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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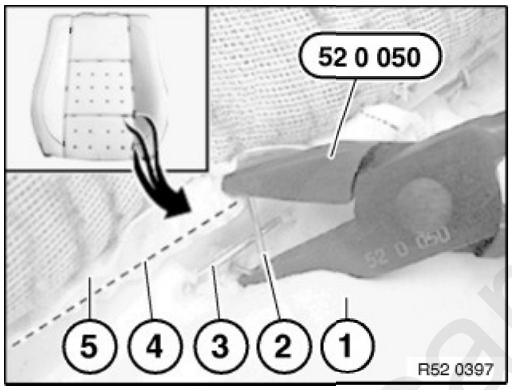
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



Release all clamps in marked area.

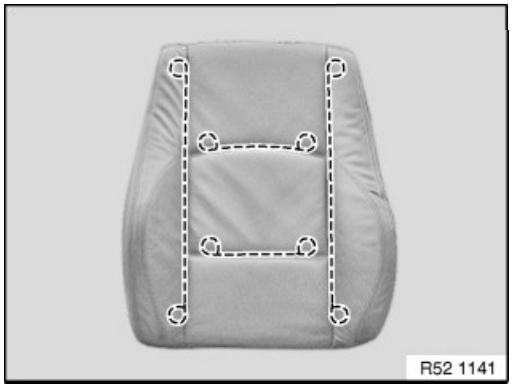
Remove backrest cover from padding.

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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 15 451 Replacing backrest heating element for left or right sports seat



Operation is described in:

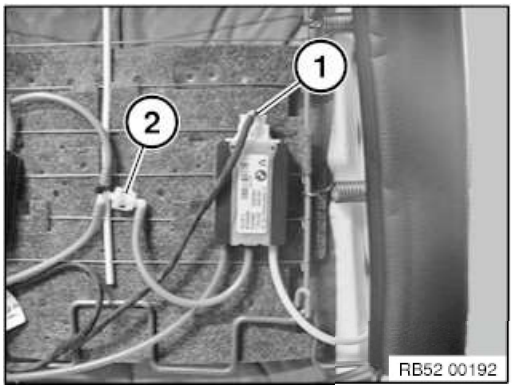
- Replace heating elements for front seat left or right

cardiagn.com

52 15 062 Replacing backrest width adjustment with valve on left or right

Necessary preliminary tasks:

- Remove the rear panel from the front seat
- Fully drain air cushion

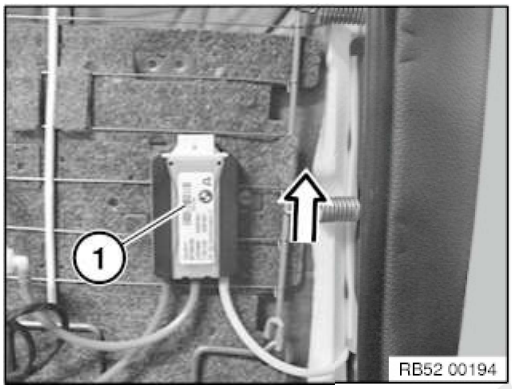


Unfasten plug connection (1) and disconnect.

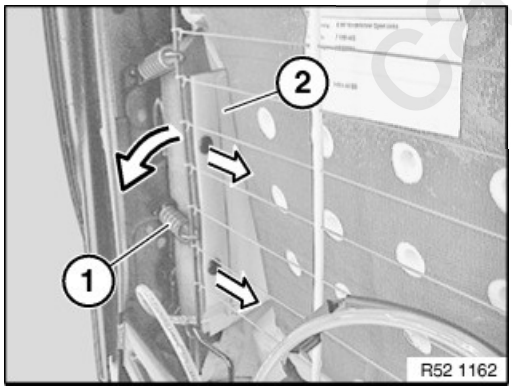
Unlock quick connector (2) and pull off air hose from adapter.

Installation note:
Connections are coded against incorrect assembly.

Air hoses must not be kinked.



Unclip valve (1) towards top from spring wire.



Note:
Removal operation is shown on left side, right analogous to that.

Air cushion (2) must be fully drained.

Detach spring (1) top and bottom.

Lever out clips.

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

Installation note:
Replace faulty clips.

Insert the air cushion without kinks.

Check air cushion for damage.

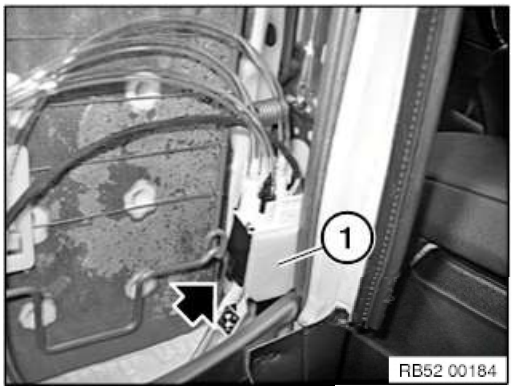
Note:
Run a function check.

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52 15 061 Replacing both cushions for backrest width adjustment on left or right front seat

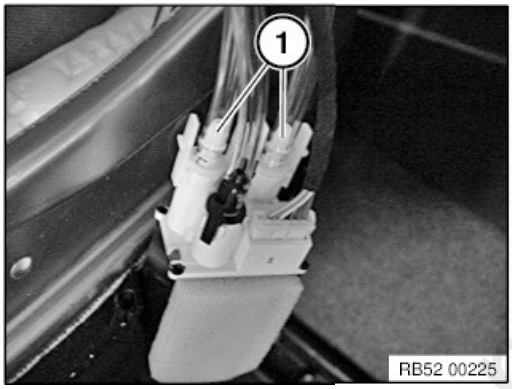
Necessary preliminary tasks:

- Remove the rear panel from the front seat
- Completely drain air cushion for backrest width adjustment



Unclip valve body (1) from seat mechanism and feed out from backrest frame.*Installation note:*
Check the valve body (1) for correct fit in the backrest frame and spring wire.

Air hoses must not be kinked.

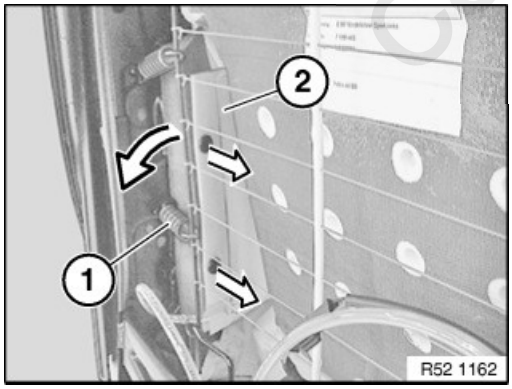


Unlock quick connectors and detach air hoses (1).

Valve body for backrest width adjustment:

1. Lumbar support left/right = hose clear, quick-connector white

Installation note:
Connections are coded against incorrect assembly.



Note:
Removal operation is shown on left side, right analogous to that.

The air cushion must be deflated completely.

Detach spring (1) top and bottom.

Lever out clips.

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

Installation note:
Replace faulty clips.

Check air cushion for damage.

Insert air cushion without kinks.

Note:
Carry out function check

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52 15 450 Replacing cushion heating element for left or right front seat



Operation is described in:

- Replace heating elements for front seat left or right

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52 15 415 Replacing facing for front seat (sport/manual)



This operation is described in section on:

Replacing seat cover for front seat.

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52 15 420 Replacing facing for front seat backrest (sport/manual)



This operation is described in section on:

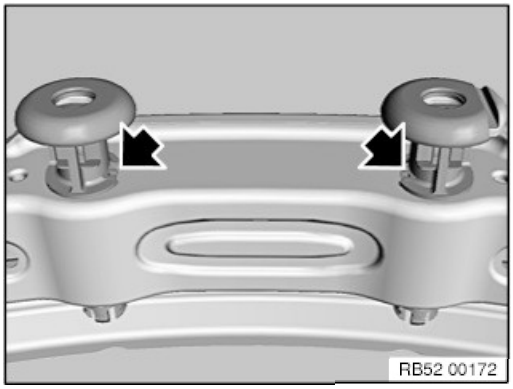
Replacing backrest cover for front seat.

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52 13 ... Replacing guide sleeves for front left or right head restraint

Necessary preliminary tasks:

- Remove front head restraint

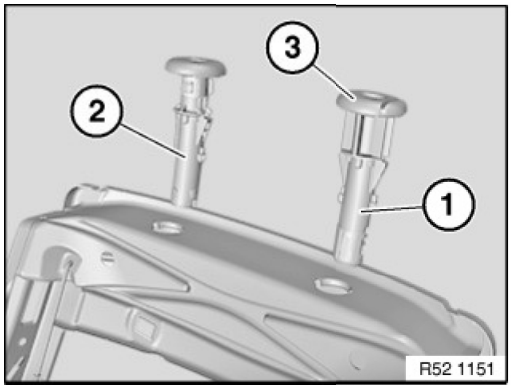


Note:
Shown here without backrest cover for a better overview.

Push the backrest cover with upholstery down next to the guide sleeve.

Carefully insert screwdriver between the backrest cover and guide sleeve.

Unlock the retaining lug with a screwdriver and remove the guide sleeves through the top.



Installation note:
Install guide sleeves as follows:

1. Guide sleeve with pushbuttonÂ (3) in direction of travel left
2. Guide sleeve without pushbutton in direction of travel right

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52 15 452 Replacing heating element for left or right front seat (thigh support)



Operation is described in:

- Replace heating elements for front seat left or right

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52 15 412 Replacing seat and backrest cover for driver's seat (sport/manual)



Operations are described in:

- Replacing seat cover for driver's seat
- Replacing backrest cover for driver's seat

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52 15 413 Replacing seat and backrest cover for front passenger seat (sport/manual)



Operations are described in:

- Replacing seat cover for front passenger seat
- Replacing backrest cover for front passenger seat

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52 15 410 Replacing seat and backrest cover for front seat (sport/manual), left or right



Operations are described in:

- Replacing seat cover for front seat
- Replacing backrest cover for front seat

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52 15 402 Replacing seat cover for driver's seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front seat, driver's side
- Remove thigh support
- Remove inner cover
- Manual version:
  Remove outer cover
- Electric version:
  Remove outer cover

Important!

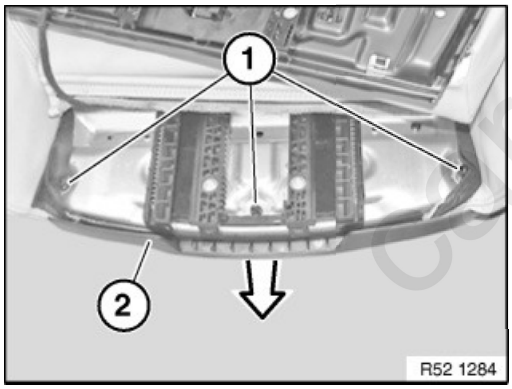
Risk of damage on sharp-edged seat mechanism.

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.

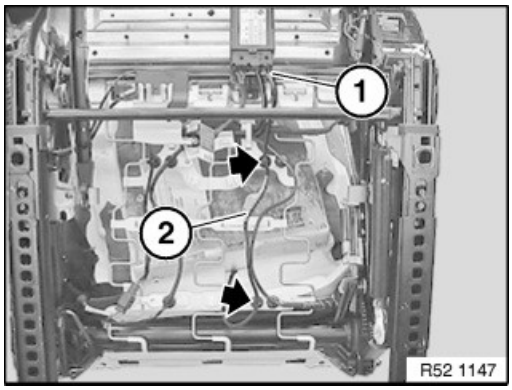
Make sure connectors are correctly seated in latch mechanisms.



Unlock retaining lugs (1).

Remove seat trim (2) downwards.

Installation note:
Seat trim (2) must not be damaged.



Version with seat heating only:

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

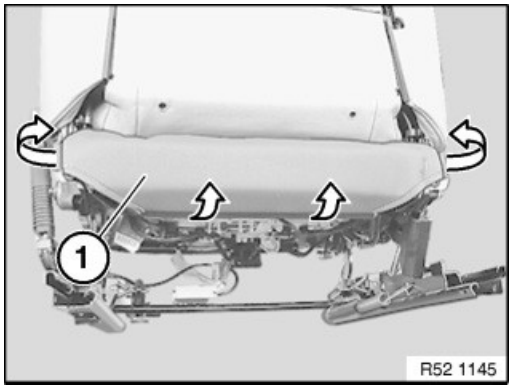
Detach cable strap.

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

Important!

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

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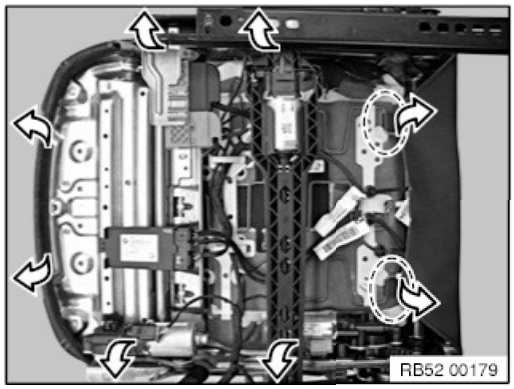


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

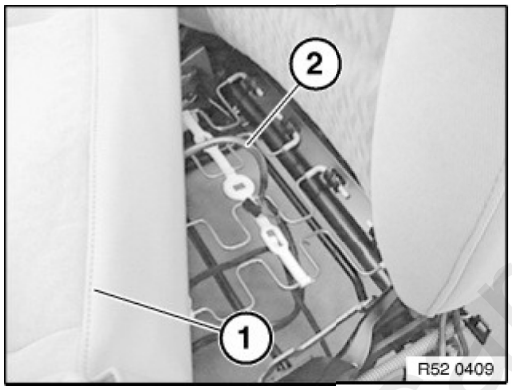
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.



Fully lift welt of seat cover out of seat frame.

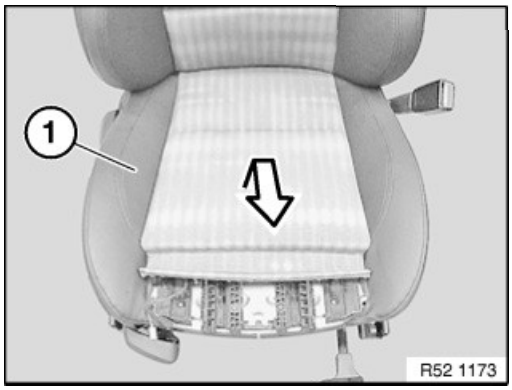
Disengage seat cover at rear.



<u>Version with seat heating:</u>

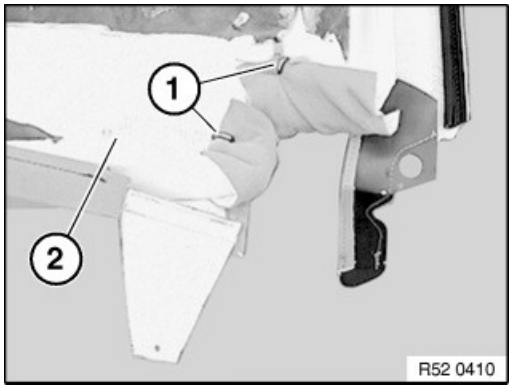
Pull seat cover (1) with upholstery forward a little and feed wiring harness (2) out.

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

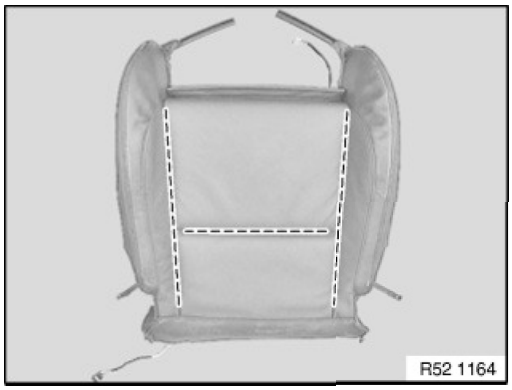


Remove seat cover (1) with padding towards front/top.

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Release all clamps (1) from seat cover (2).



Detach all clamps in side area from longitudinal wires.

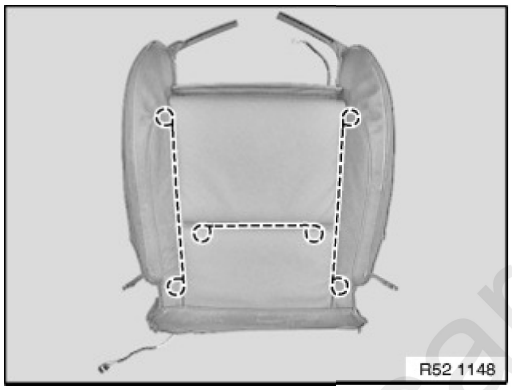
Pull trim wires forward out of seat cover.

Carefully fold back seat cover and release clamps from cross-wires.

Remove seat cover from upholstery.

Important!

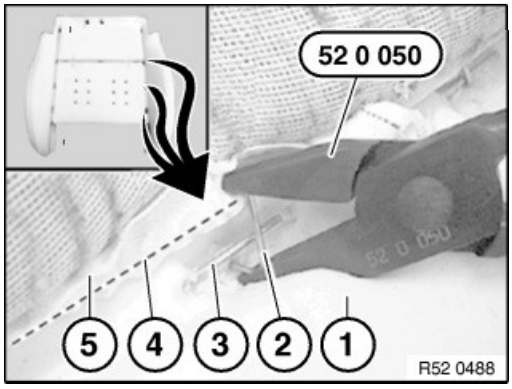
Remove all remnants of clamps from seat cover and upholstery.



<u>Replacement only:</u>

Pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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

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52 15 404 Replacing seat cover for front passenger seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front passenger seat
- Remove thigh support
- Remove inner cover
- Manual version:
  Remove outer cover
- Electric version:
  Remove outer cover

Warning!

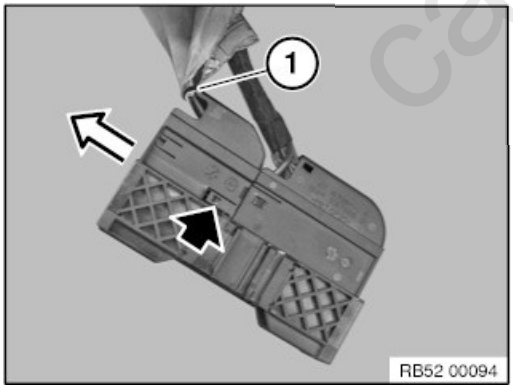
US and Canadian version of the front passenger seat (with CIS mat):

The CIS mat is bonded to the entire surface of the facing and 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 installation, the CIS mat must be enabled with the BMW programming system.



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.

Important!

Risk of damage on sharp-edged seat mechanism.

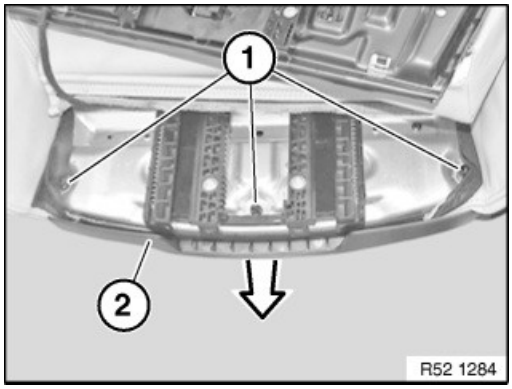
Guide all cables carefully through seat and backrest mechanism.

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.

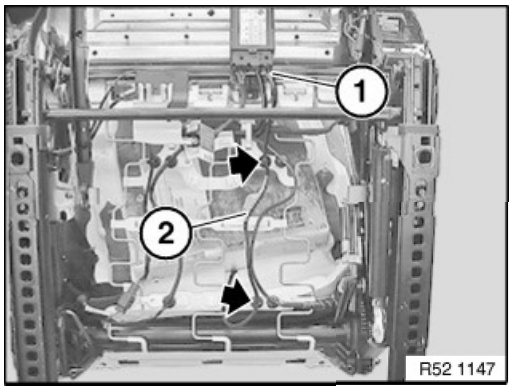
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Unlock retaining lugs (1).

Remove seat trim (2) downwards.

Installation note:
Seat trim (2) must not be damaged.



<u>Version with seat heating only:</u>

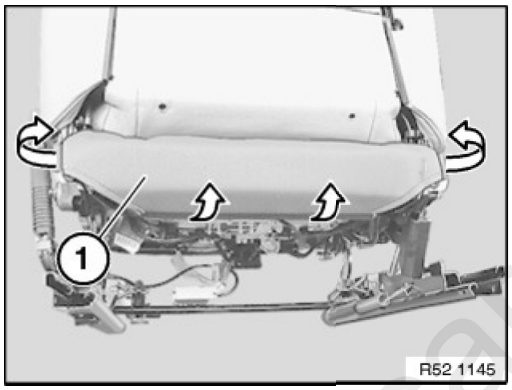
Unlock plug connection (1) for seat heating and disconnect.

Detach cable strap.

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

Important!

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

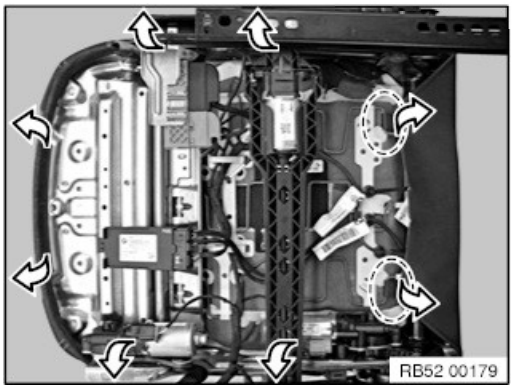


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

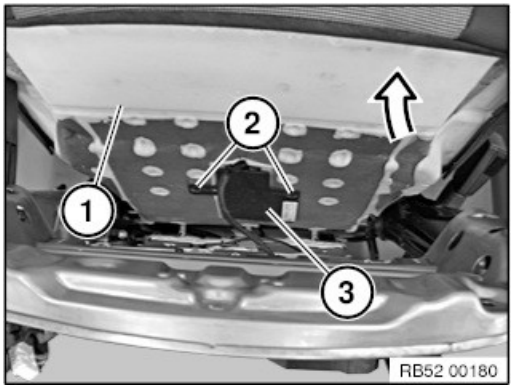
Make sure foam and bracing cloth are correctly fitted.



Fully lift welt of seat cover out of seat frame.

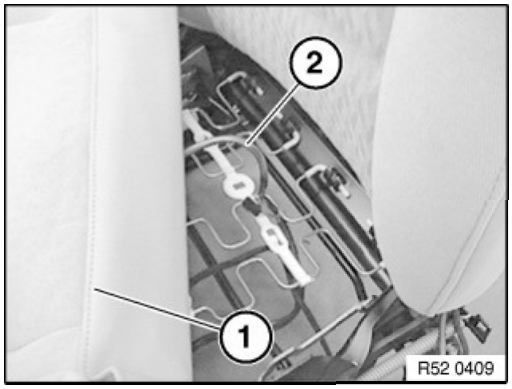
Disengage seat cover at rear.

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Lift seat cover with upholstery (1) at front and unclip mounting (2) for seat occupancy detection (SBE) (3).

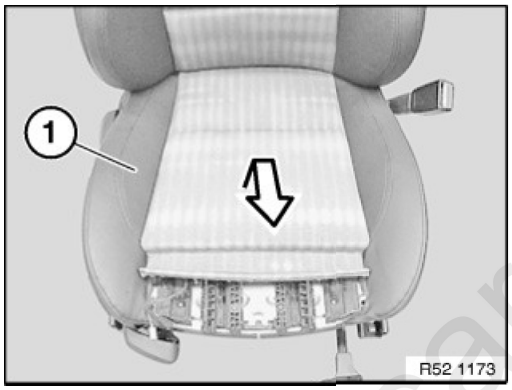
Remove SBE (3) from upholstery (1) and place on flexmat.



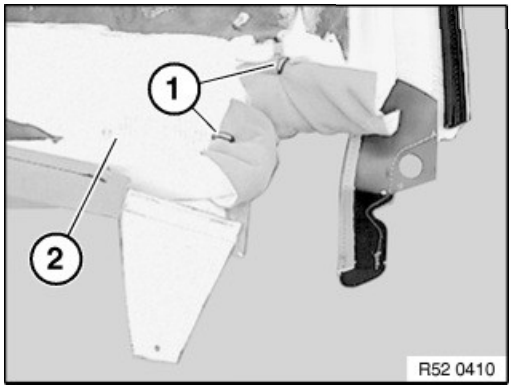
<u>Version with seat heating:</u>

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

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

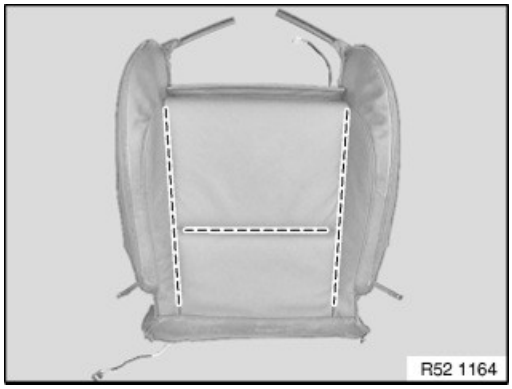


Remove seat cover (1) with padding towards front/top.



Release all clamps (1) from seat cover (2).

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Detach all clamps in side area from longitudinal wires.

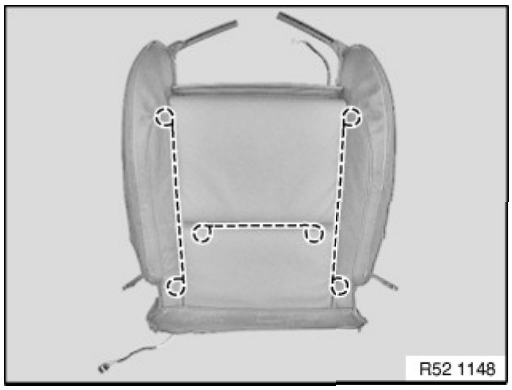
Pull trim wires forward out of seat cover.

Carefully fold back seat cover and release clamps from cross-wires.

Remove seat cover from upholstery.

Important!

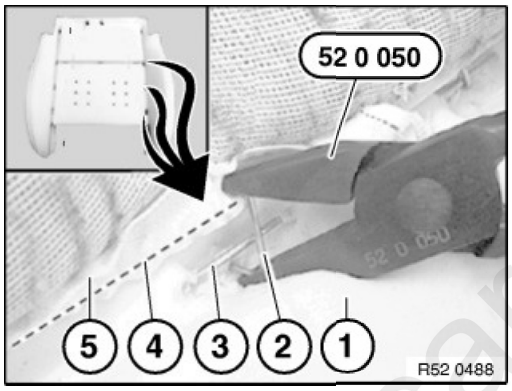
Remove all remnants of clamps from seat cover and upholstery.



<u>Replacement only:</u>

Pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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



<u>Enabling seat occupancy detector (CIS mat):</u>

- Connect BMW programming system
- Encode airbag control unit
- Delete fault memory if necessary

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52 15 400 Replacing seat cover for front seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front seat
- Remove thigh support
- Remove inner cover
- Manual version:
  Remove outer cover
- Electric version:
  Remove outer cover

Important!

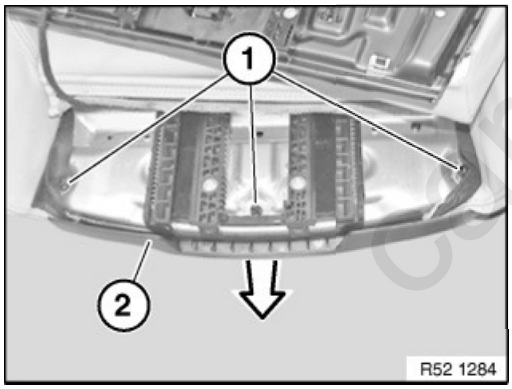
Risk of damage on sharp-edged seat mechanism.

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.

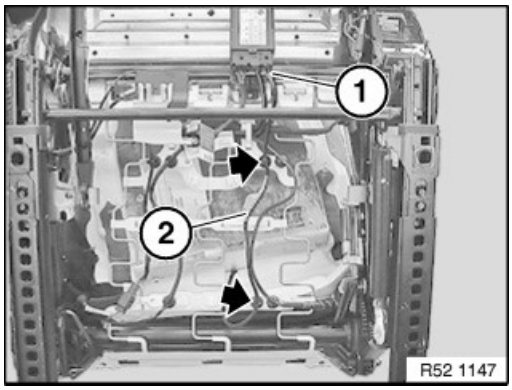
Make sure connectors are correctly seated in latch mechanisms.



Unlock retaining lugs (1).

Remove seat trim (2) downwards.

Installation note:
Seat trim (2) must not be damaged.



Version with seat heating only:

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

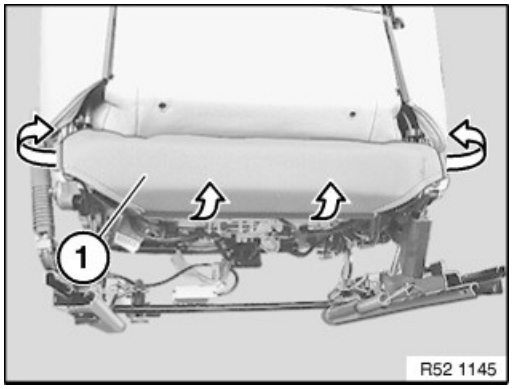
Detach cable strap.

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

Important!

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

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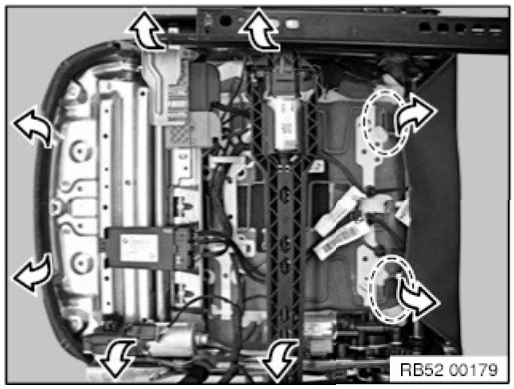


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

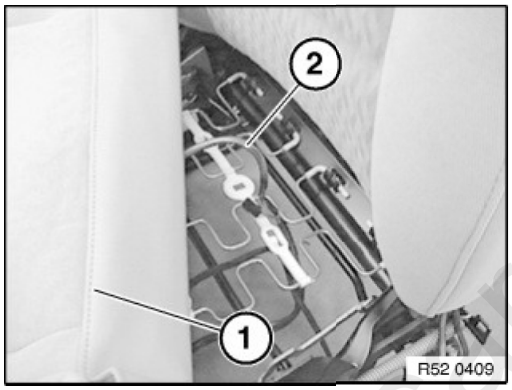
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.



Fully lift welt of seat cover out of seat frame.

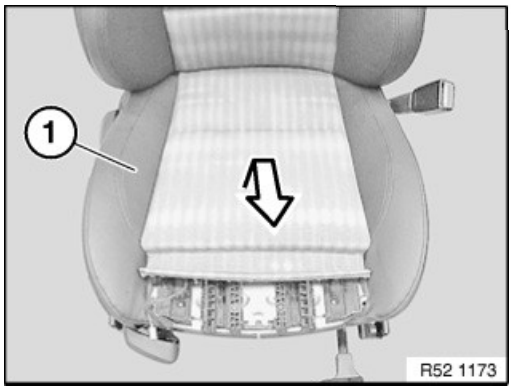
Disengage seat cover at rear.



<u>Version with seat heating:</u>

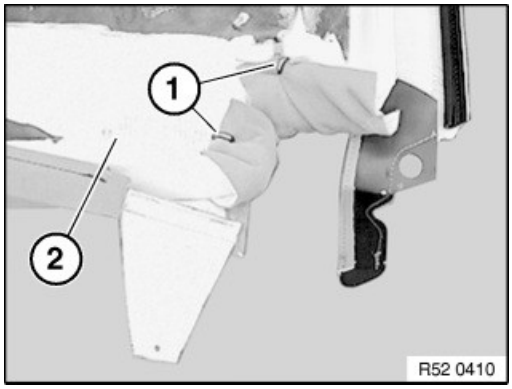
Pull seat cover (1) with upholstery forward a little and feed wiring harness (2) out.

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

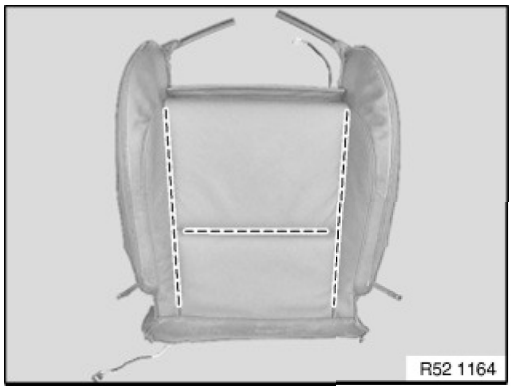


Remove seat cover (1) with padding towards front/top.

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Release all clamps (1) from seat cover (2).



Detach all clamps in side area from longitudinal wires.

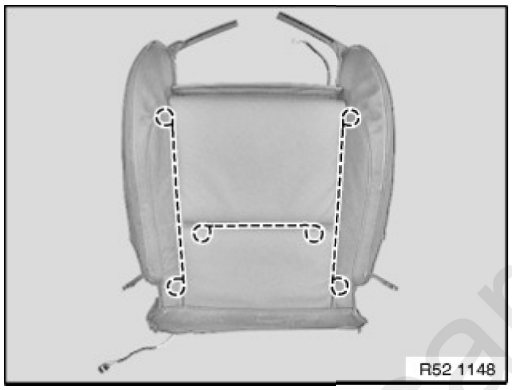
Pull trim wires forward out of seat cover.

Carefully fold back seat cover and release clamps from cross-wires.

Remove seat cover from upholstery.

Important!

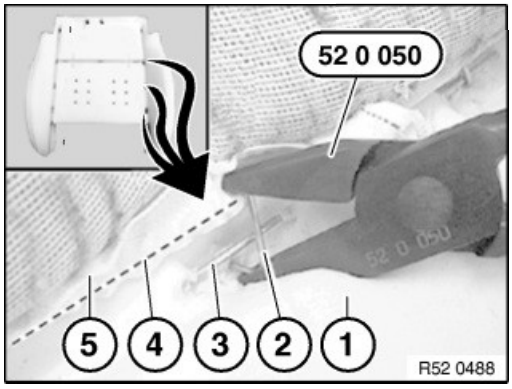
Remove all remnants of clamps from seat cover and upholstery.



<u>Replacement only:</u>

Pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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

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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!

<u>Only US and Canadian version of front passenger seat (with CIS mat):</u>

The CIS mat is bonded to the entire surface of the facing and 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.

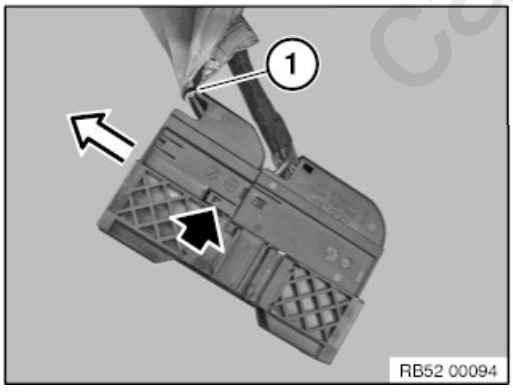
Full functional capability can only be guaranteed with original BMW spare parts.

After installation, the CIS mat must be enabled with the BMW programming system.

<u>Procedure for replacing the CIS mat together with the upholstery is described in:</u>

- Replacing upholstery 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 tieÂ (1).

Connector is encoded against incorrect assembly.

Installation note:
<u>Enabling seat occupancy detector (CIS mat):</u>

- Connect BMW programming system
- Encode airbag control unit
- Delete fault memory if necessary

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52 15 425 Replacing upholstery for driver's seat (sport/manual)



This operation is described in section on:

Replace seat cover for driver's seat

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52 15 422 Replacing upholstery for driver's seat backrest (sport/manual)



This operation is described in section on:

Replace backrest cover for driver's seat.

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52 15 426 Replacing upholstery for front passenger seat (sport/manual)



This operation is described in section on:

Replace seat cover on front passenger seat.

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52 15 423 Replacing upholstery for front passenger seat backrest (sport/manual)



This operation is described in section on:

Replace backrest cover for front passenger seat.

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52 15 417 Replacing upholstery for left or right thigh support (sport/manual)

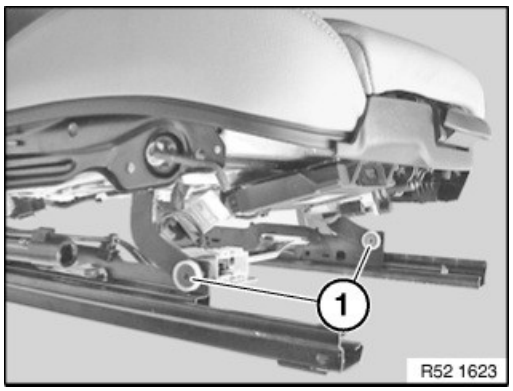


This operation is described in section on:

Replacing thigh support cover on left or right front seat.

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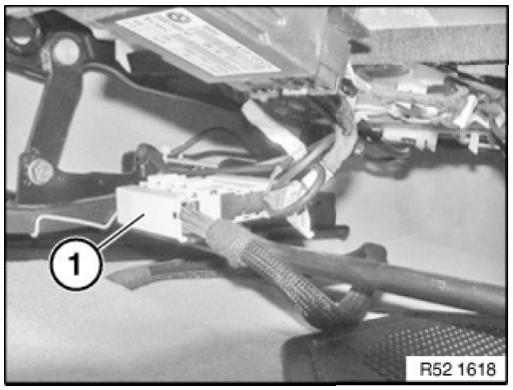
52 14 ... Additional work in event of faulty drive/gearing for longitudinal adjustment



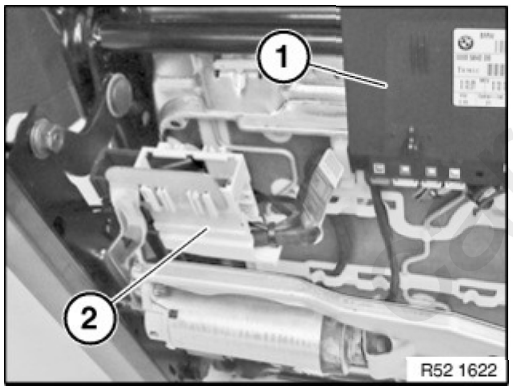
Release screws (1) of swinging arms for seat height adjustment.

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

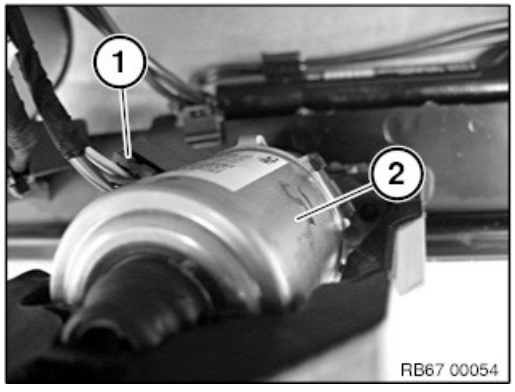
Tilt front seat back.



Unfasten plug connection (1) and disconnect.

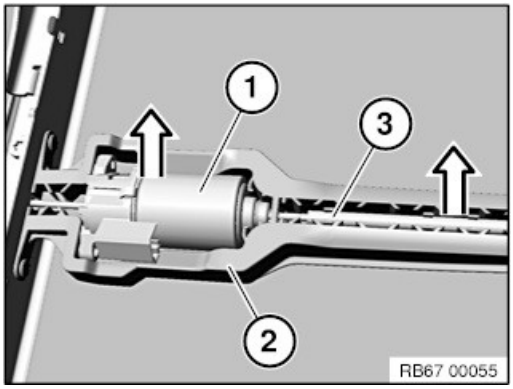


Unclamp central connector (2) from seat mechanism.
Unclip control units (1).



Removal of electric motor for forward/back seat adjustment:

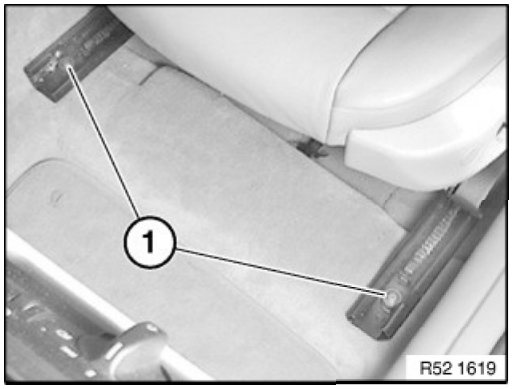
Unfasten plug connection (1) and disconnect.



Lift long flex shaft (3) out of guide in direction of arrow.

Pull out flex shaft (3) from electric motor for forward/back seat adjustment (1).

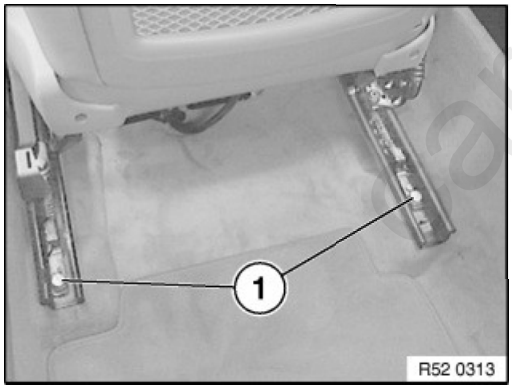
Remove electric motor for forward/back seat adjustment (1) in direction of arrow from holder (2).



Release screws (1) at front.

Installation note:
Install new drive for longitudinal seat adjustment.

Move front seat forwards.



Release screws (1) at rear.

Important!

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

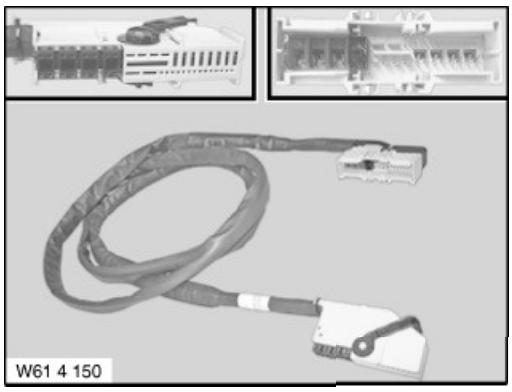
  Tightening torque 52 10 1AZ.

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52 14 ... Performing function check with adapter cable (for seat repairs)

Special tools required:

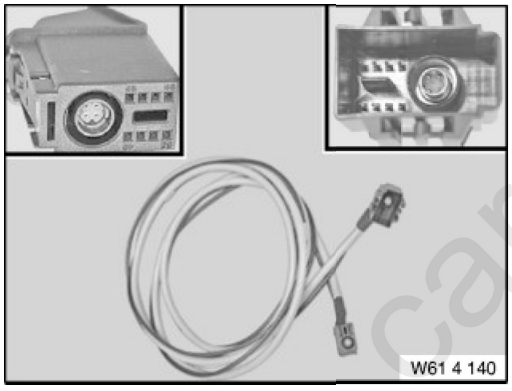
- 61 4 140
- 61 4 150



Seat function check: *Note:*
The function check on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable 61 4 150 .

Application:

Adapter cable is connected to vehicle wiring harness and removed seat 61 4 150 .



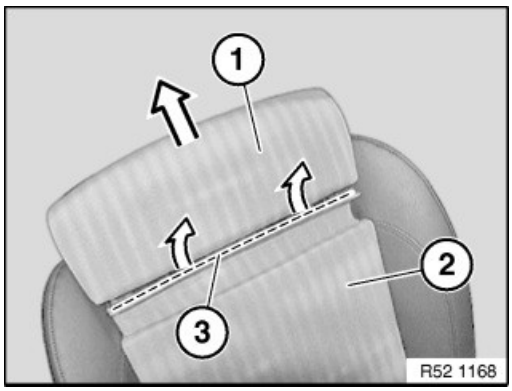
RSE (rear passenger compartment monitor) function check *Note:*
The function check of the RSE (rear passenger compartment monitor) on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable 61 4 140 .

Application:

Adapter cable is connected to vehicle wiring harness and removed seat 61 4 140 .

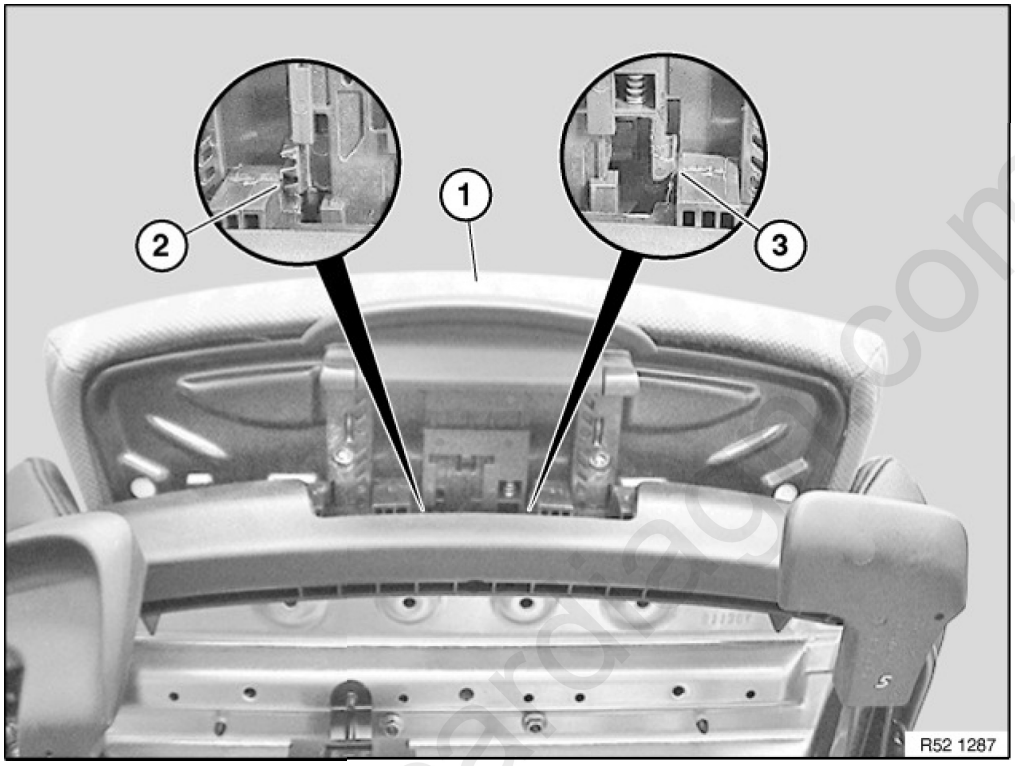
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52 15 050 Remove or install left or right thigh support from/on the front seat (sport/manual)



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

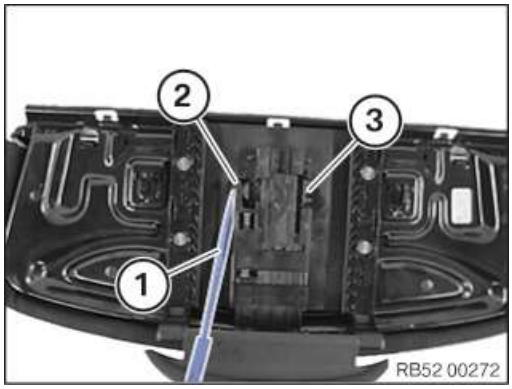
Lever out the welt (3) from the seat cover (2) from the thigh support (1).



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

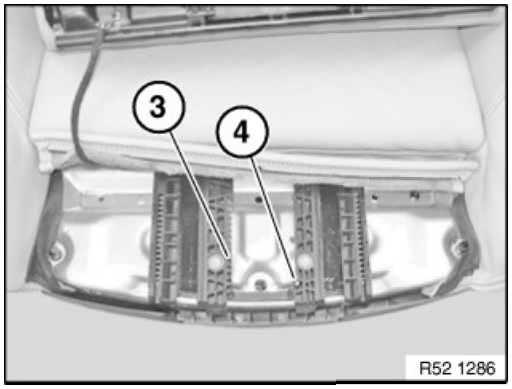
Keep Actuation (1) pressed to unlock the centering (2).

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.



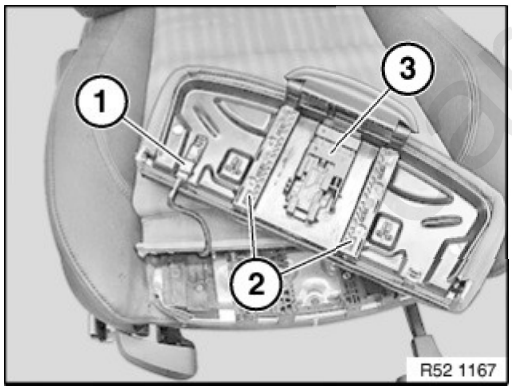
View of thigh support mechanism when removed:

1. Screwdriver for unlocking the end stop
2. End stop for thigh support
3. Locking mechanism for the thigh support



View of seat frame mechanism:

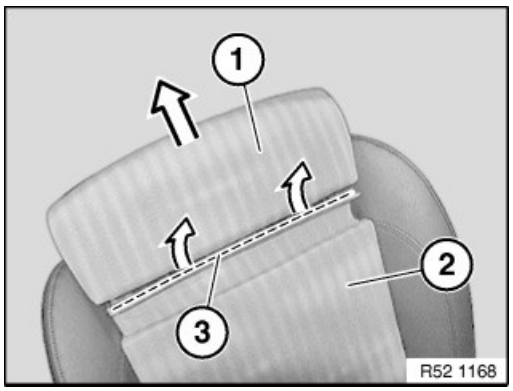
3. Guide rail on seat with depth retainer
4. Guide rail on seat with end stop



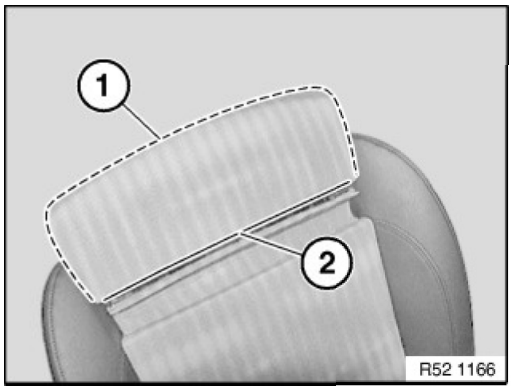
Unfasten plug connection (1) and disconnect.*Note:*
Check guide rails (2) and adjusting mechanism (3) for damage.

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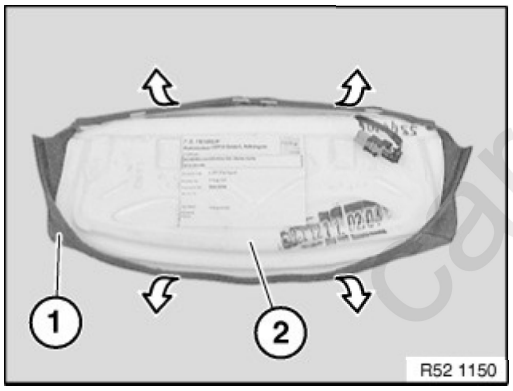
52 15 403 Remove or install/replace cover left or right thigh support from/on the front seat (sport/manual)



Unlock and move thigh support (1) as far forward as possible.
Lift out welt of seat cover (2) from thigh support.



Lever out cover welt in marked area (1).
Detach trim wire in marked area (2) from thigh support.
Remove cover with upholstery.



Pull cover (1) off upholstery (2).

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52 14 002 Removing and installing front seat (normal/electric) on the passenger's side from left or right

Necessary preliminary tasks:

- Disconnect battery earth lead
- Remove head restraint

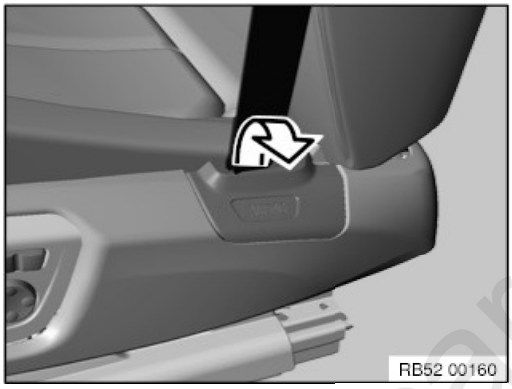
Important!

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

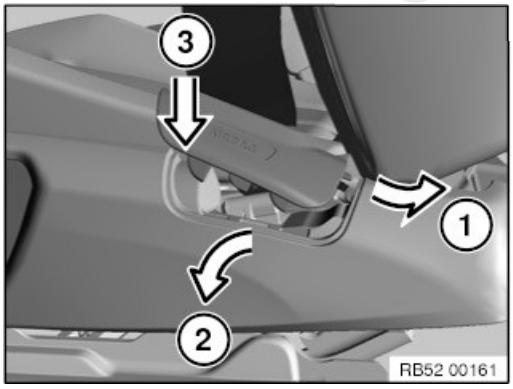


For electrical front seat version:

Move backrest to full rearward position.

Grip end fitting cover centrally between seat belt strap and cover.

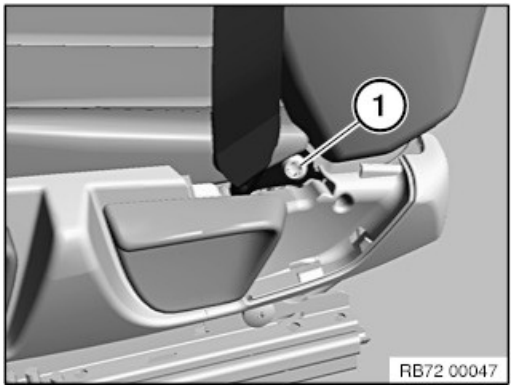
Unclip end fitting cover in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with rear guide in covering.
2. Insert cover in direction of arrow downwards in covering
3. Engage top left of cover in covering.

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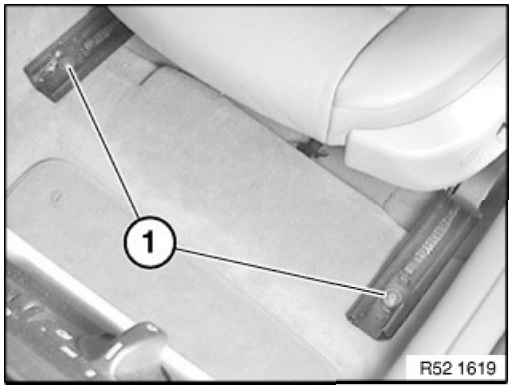


Release screw (1).

Tightening torque 72 11 02AZ.

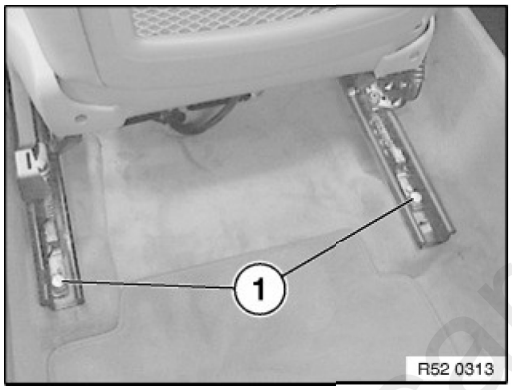
Remove end fitting.

Installation note:
End fitting is coded against incorrect assembly.



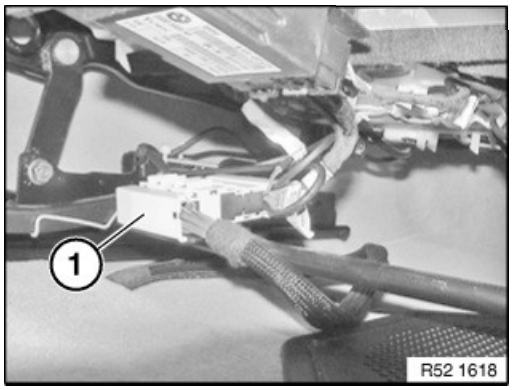
Move seat to upper back position.

Release and dispose of screws (1).



Adjust the seat to the front top.

Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

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

Lift out front seat.

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Installation note:

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

  Tightening torque 52 10 01AZ.



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

Incorrect handling may activate the pyrotechnical belt tensioner or side airbag and thereby cause injuries.

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52 14 001 Removing and installing left or right front seat, driver's side, (normal/electric)

Necessary preliminary tasks:

- Disconnect battery earth lead
- Remove head restraint

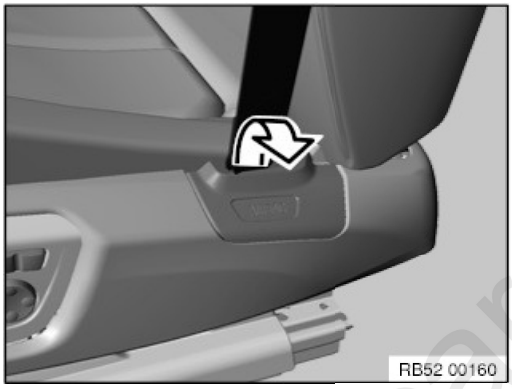
Important!

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

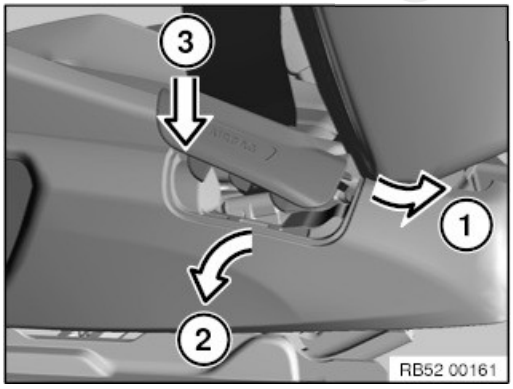


For electrical front seat version:

Move backrest to full rearward position.

Grip end fitting cover centrally between seat belt strap and cover.

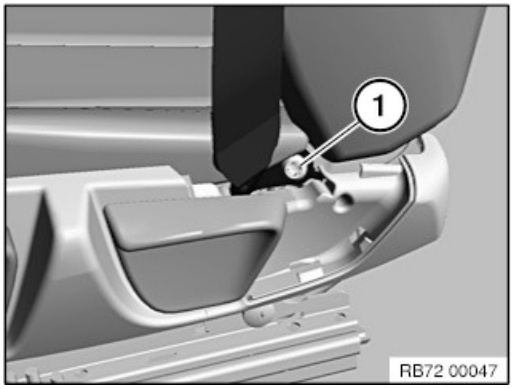
Unclip end fitting cover in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with rear guide in covering.
2. Insert cover in direction of arrow downwards in covering
3. Engage top left of cover in covering.

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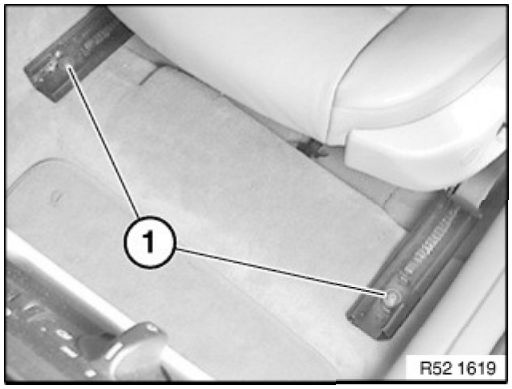


Release screw (1).

Tightening torque 72 11 02AZ.

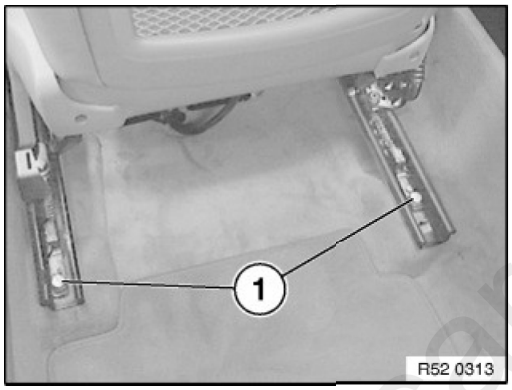
Remove end fitting.

Installation note:
End fitting is coded against incorrect assembly.



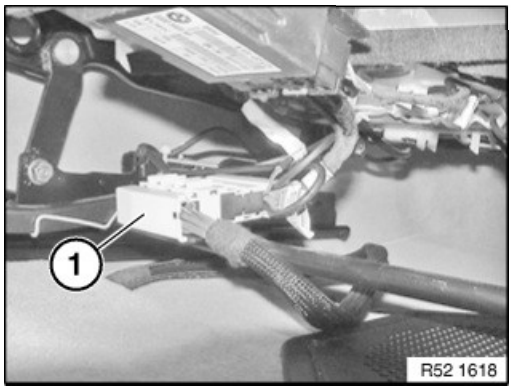
Move seat to upper back position.

Release and dispose of screws (1).



Adjust the seat to the front top.

Release and dispose of screws (1).



Disconnect plug connection (1).

Important!

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

Lift out front seat.

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Installation note:

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

  Tightening torque 52 10 01AZ.



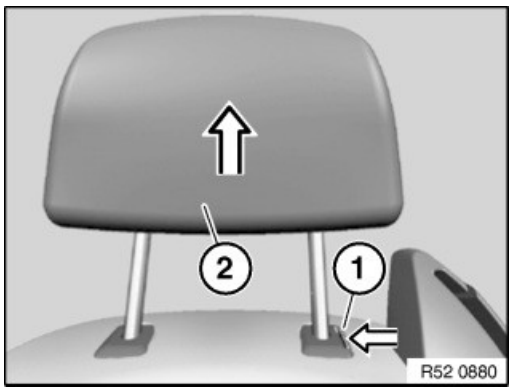
Warning!

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

Incorrect handling may activate the pyrotechnical belt tensioner or side airbag and thereby cause injuries.

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52 13 390 Removing and installing or replacing front left or right head restraint



Press latch mechanism (1) and lift out head restraint (2).

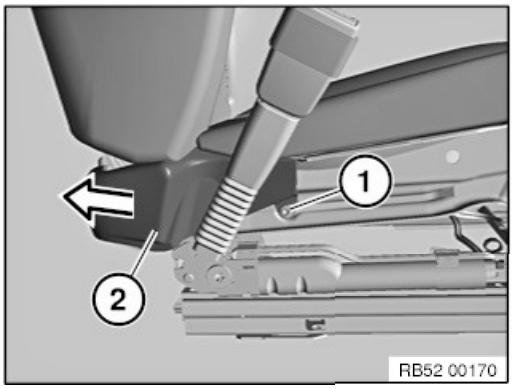
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52 13 041 Removing and installing or replacing inner cover on left or right front seat

Necessary preliminary tasks:

- Remove front seat

Note: Completely move the electric front seat to the top prior to removal.



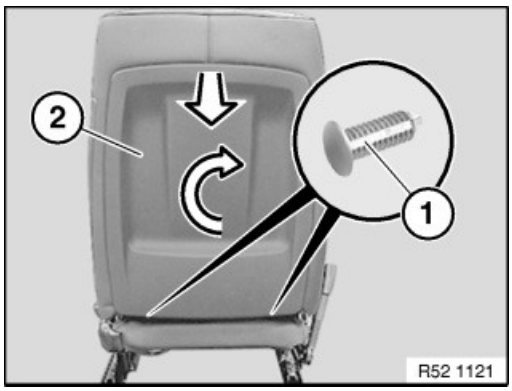
Release screw (1).

Tightening torque 51 10 3AZ.

Remove cover (2) in direction of arrow.

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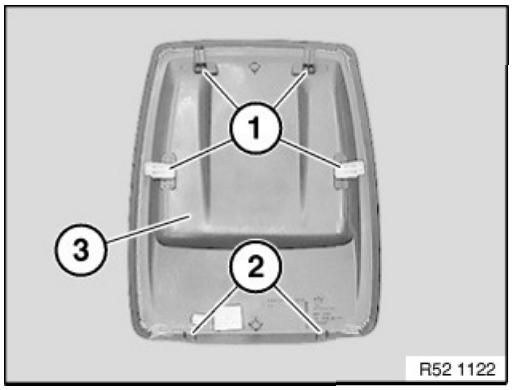
52 13 198 Removing and installing or replacing rear panel on left or right front seat backrest



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.

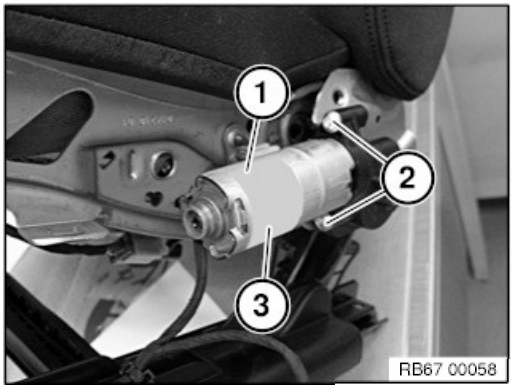
Replace faulty clips.

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67 31 530 Removing and installing/replacing backrest adjustment motor

Necessary preliminary tasks:

- Remove covers on front seat



Unfasten plug connection (1) and disconnect.
Unfasten screws (2).
Remove electric motor (3).

Note:
Carry out a function check.
Replacement:
Initialise backrest adjustment motor.

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52 13 030 Removing and installing/replacing backrest frame on left or right front seat (normal/manual)

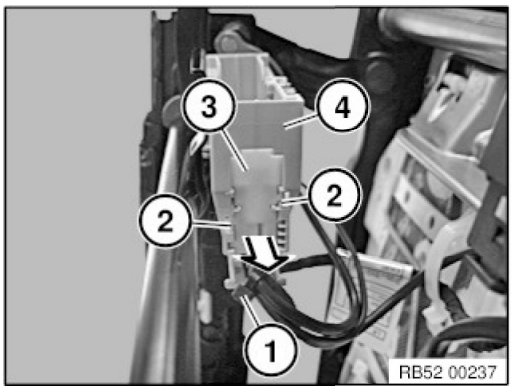
Important!

When working on the front seat it is absolutely essential to observe the safety regulations on handling airbag modules.

Improper handling may trigger the side airbag and as a result cause injuries.

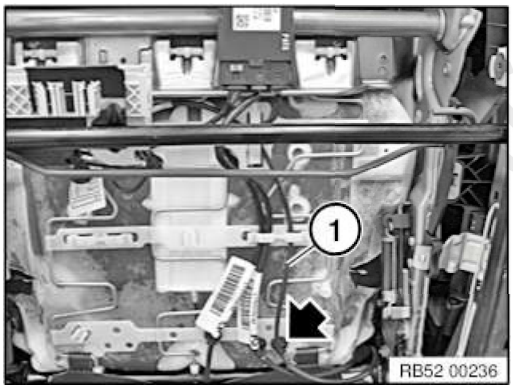
Necessary preliminary work:

- Remove front seat
- Remove rear panel on front seat backrest



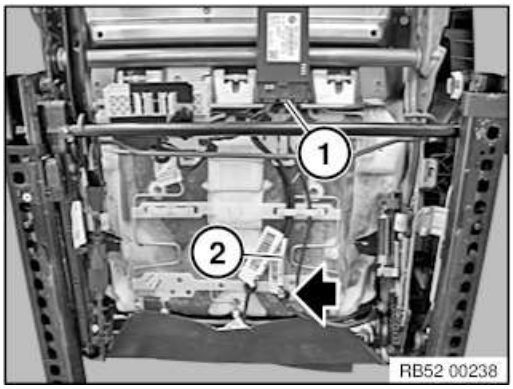
Cut open cable strap (1).

Press locks (2) outwards and at the same time remove connector (3) in direction of arrow from connector housing (4).



Unclip airbag wiring harness (1) in marked area.

Release airbag wiring harness (1) from cable clips on seat mechanism.



<u>Version with seat heating only:</u>

Unlock plug connection (1) and disconnect.

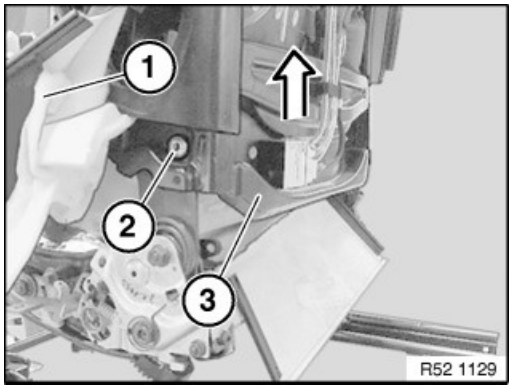
Unclip wiring harness (2) in marked area.

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

Important!

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

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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:

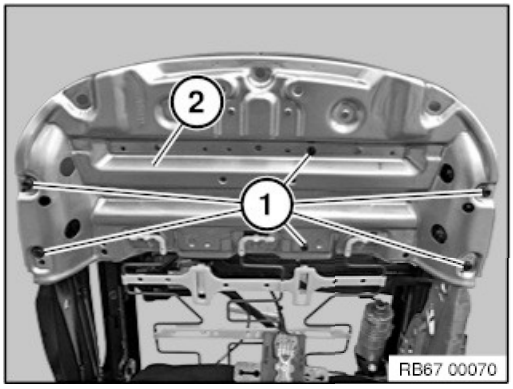
- Remove backrest cover with upholstery

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67 31 510 Removing and installing/replacing drive unit for seat cushion tilt adjustment

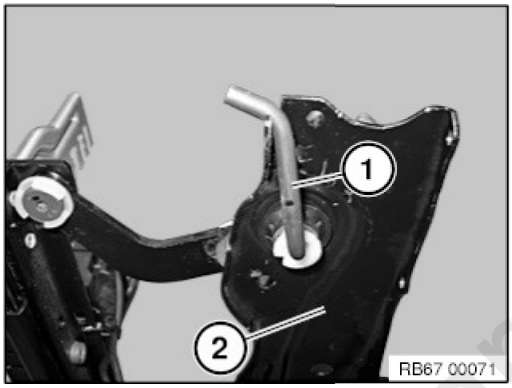
Necessary preliminary tasks:

- Remove driver's or front passenger seat
- Remove front seat cover

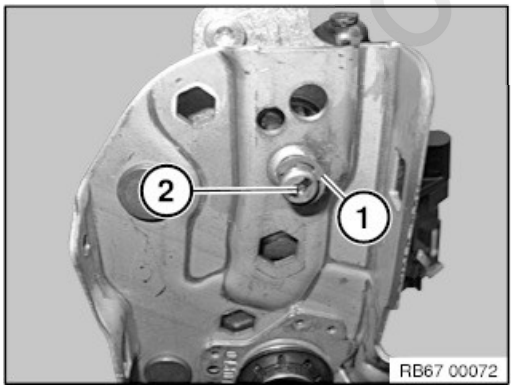


Release screws (1).

Remove cushion shell (2).

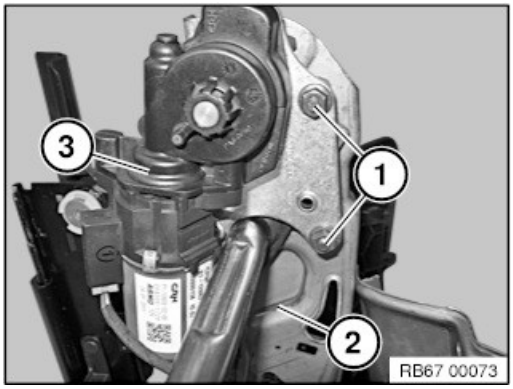


Detach spring (1) at seat frame (2).



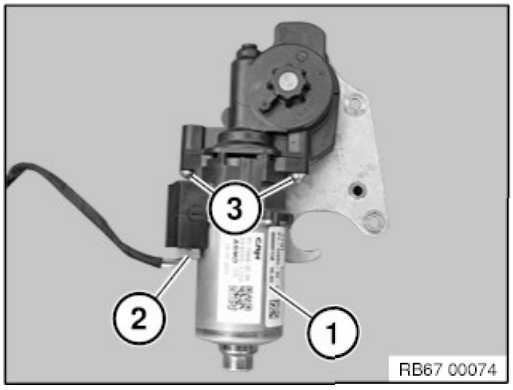
Remove fuse (1) from shaft (2).

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Unscrew nuts (1).

Pull drive with transmission (3) out of seat frame (2) and remove.



Unfasten plug connection (2) and disconnect.

Release screws (3).

Tightening torque 67 31 1AZ.

Remove drive unit for seat cushion tilt adjustment (1).

Note:

Carry out a function check.

Replacement:

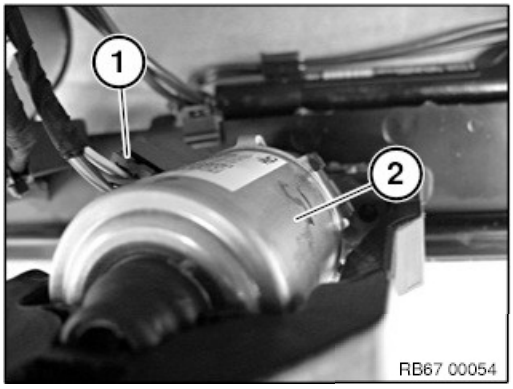
Initialise seat height adjustment drive unit.

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67 31 500 Removing and installing/replacing forward/back seat adjustment drive unit

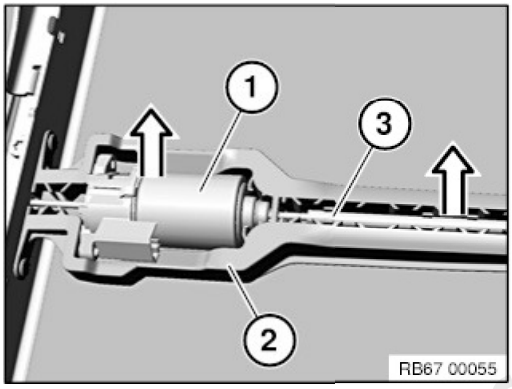
Necessary preliminary work:

- Raise front seat as far up as possible



Removal of electric motor for forward/back seat adjustment:

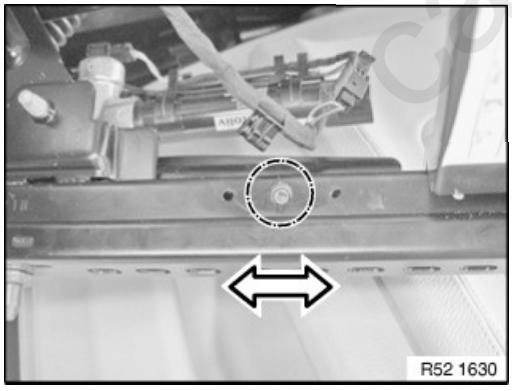
Unfasten plug connection (1) and disconnect.



Lift long flex shaft (3) out of guide in direction of arrow.

Pull out flex shaft (3) from electric motor for forward/back seat adjustment (1).

Remove electric motor for forward/back seat adjustment (1) in direction of arrow from holder (2).

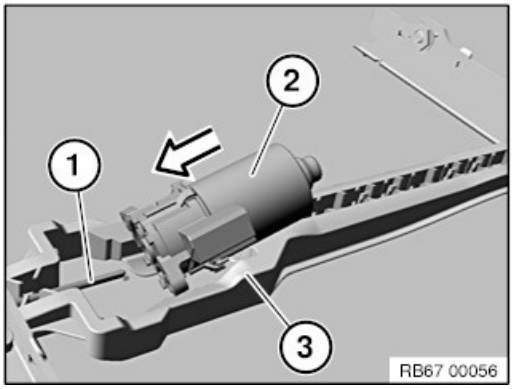


Installation of electric motor for forward/back seat adjustment:

Slide seat rail with opening forwards or back until bushing for flex shaft mounting of worm gear is flush.

Insert short flex shaft.

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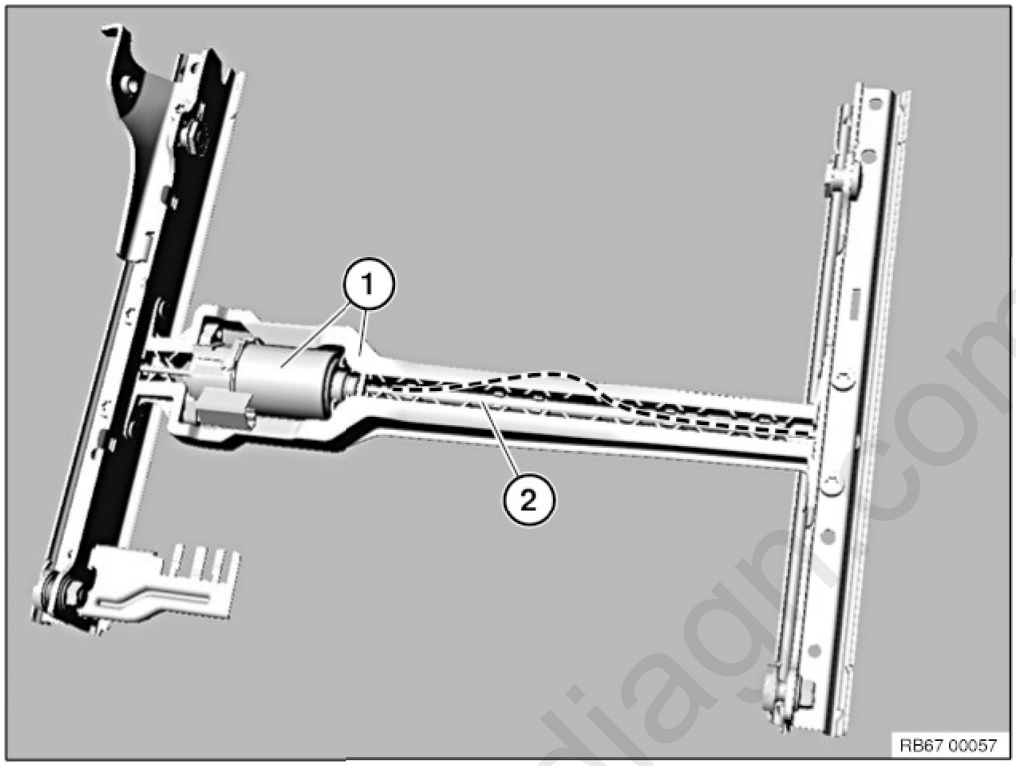


Connect electric motor for forward/back seat adjustment (2) to short flex shaft (1).

Installation note:
Make sure flex shaft (1) is correctly seated in electric motor (2) and seat rail mounting.

Clip in electric motor for forward/back seat adjustment (2) into holder (3).

Installation note:
Electric motor for forward/back seat adjustment (2) must audibly engage in holder (3).

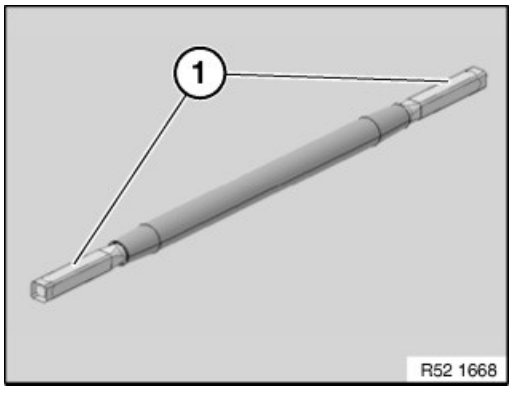


Insert long flex shaft (2) in worm gear on seat rail.

Bend long flex shaft (2) upwards and slide into electric motor for forward/back seat adjustment (1).

Clip in flex shaft into carrier plate.

Installation note:
Make sure flex shaft (2) is correctly seated in electric motor (1) and seat rail mounting.



Installation note:
PTFE hoses are shrink-fitted onto end pieces.

Check that hoses are free from damage.

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Note:
Carry out a function check.
Replacement:
Initialize drive unit for forward/back seat adjustment.

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52 13 526 Removing and installing/replacing left or right seat mechanism

Necessary preliminary tasks:

- Removing backrest frame
- Remove seat cover with upholstery

When replacing, remount the following parts depending on the version:

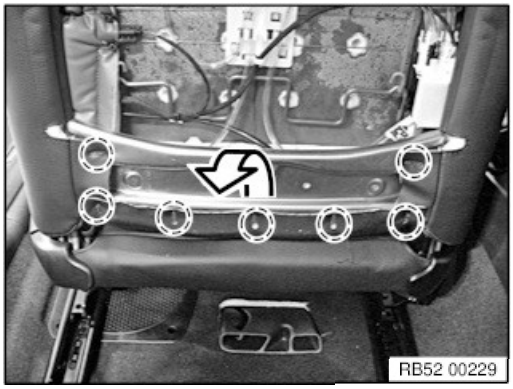
- Module for seat heating
- Control unit/module for seat adjustment
- Lower strap
- Backrest adjustment motor
- Seat height adjustment drive unit
- Forward/back seat adjustment drive unit
- Drive unit for seat cushion tilt adjustment
- Wiring harness to seat mechanism
- Position sensor for front seat
- Front seat sensor
- Seat occupancy mat for SBE

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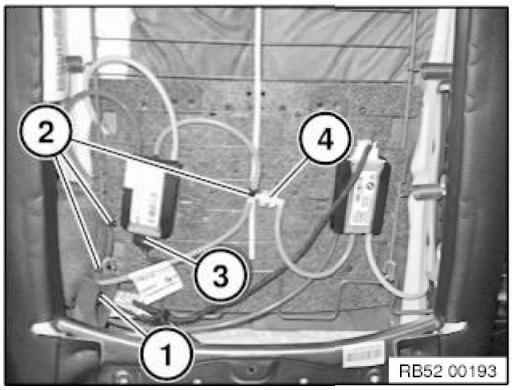
52 16 065 Removing and installing/replacing lumbar support on front seat

Necessary preliminary work:

- Remove rear panel on front seat



Detach backrest cover from backrest frame in marked area.



Unlock and disconnect plug connection (1) on lumbar support pump.

Unlock and disconnect plug connection (3) on valve body.

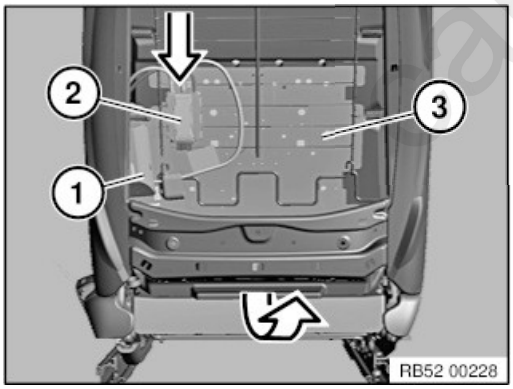
Release cable strap (2).

Installation note:
Completely remove remnants of cable ties.

Replace faulty cable straps.

Version with backrest width adjustment only.

Unlock and disconnect additional quick connector (4).



Detach valve body (2) from spring wire.

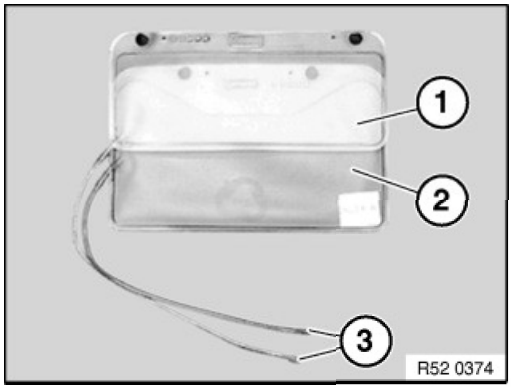
Detach lumbar support (3) from spring wire.

Press padding forward a little.

Carefully pull out lumbar support pump (1) downward with lumbar support (3) and valve body (2).



Installation note:
Attach lumbar support on second and fifth wire from the bottom.



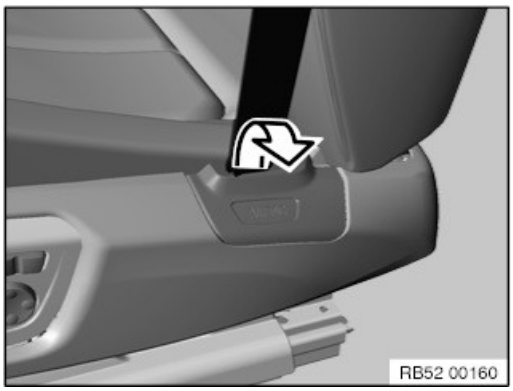
Installation note:
Check lumbar support at top (1) and bottom (2) for damage.

Air hoses (3) must not be kinked.

Installation note:
Run a function check.

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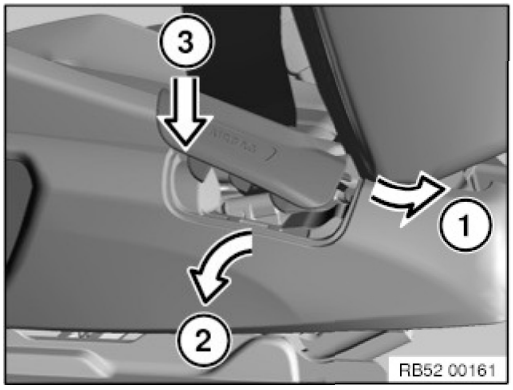
52 14 040 Removing and installing/replacing outer cover on left or right front seat (normal/electric)



Move backrest to full rearward position.

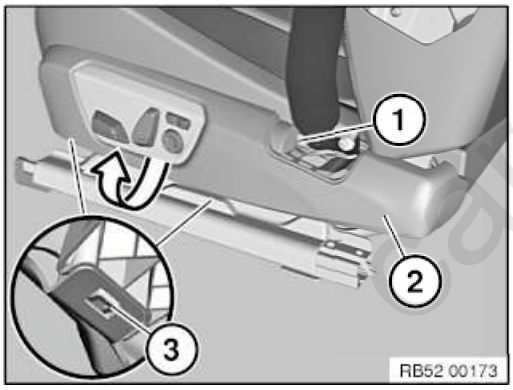
Grip end fitting cover centrally between seat belt strap and cover.

Unclip end fitting cover in direction of arrow.



Installation note:
Install end fitting cover as follows:

1. Insert cover with rear guide in covering.
2. Insert cover in direction of arrow downwards in covering
3. Engage top left of cover in covering.



Release screw (1).

Lever latch mechanism (3) of the cover (2) out of seat mechanism.

Remove cover (2) in direction of arrow from seat mechanism.

Unlock and disconnect plug connections behind from operating unit.

Installation note:
Cover must not be damaged.

Replace cover if necessary.

<u>Replacement only:</u>

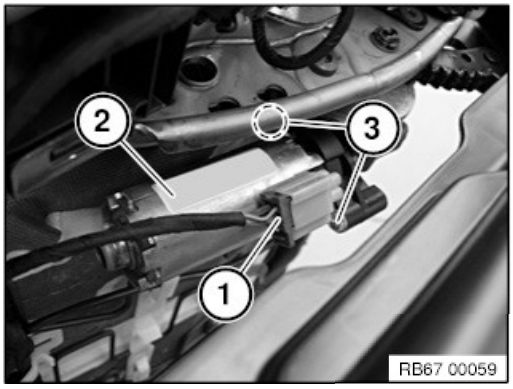
Remove operating unit for seat adjustment from cover.

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67 31 520 Removing and installing/replacing seat height adjustment drive unit

Necessary preliminary tasks:

- Remove driver's or front passenger seat



Set down front seat sideways on a suitable surface.
Unfasten plug connection (1) and disconnect.
Release screws (3).
Tightening torque 67 31 1AZ.
Feed out seat height adjustment drive unit (2) and remove.

Note:
Carry out a function check.
Replacement:
Initialise seat height adjustment drive unit.

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52 15 455 Replace heating elements for front seat (sport/manual) left or right

Necessary preliminary tasks:

- Remove seat cover
- Remove backrest cover
- Remove thigh support cover

Note:
Heating elements are bonded with the foam part and cannot be separated from each other without causing damage.

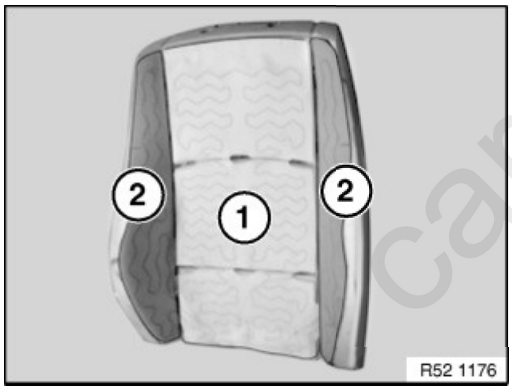
Foam part and heating elements must be replaced.

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



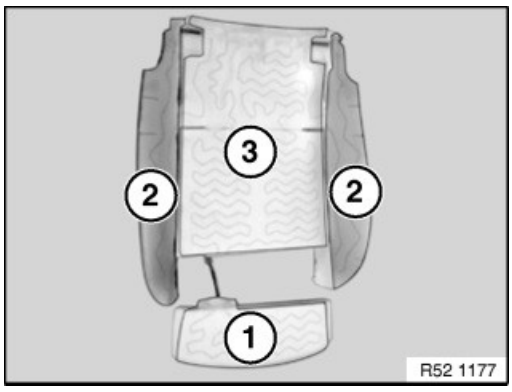
Guide cable for backrest heating through foam hole.

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.

Bond the STV heating mat (1):

- Pull off the adhesive film and bond flush with the rear foam edge

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

Stick on main section (3):

- Pull adhesive film pieces off main section (3) and stick to upper edge of main section foam until flush

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Check laying of heating mats:

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

Note:
Carry out function check

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52 15 407 Replacing backrest cover for driver's seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove driver's seat.
- Remove rear panel on front seat backrest
- Remove guide sleeves

Important!

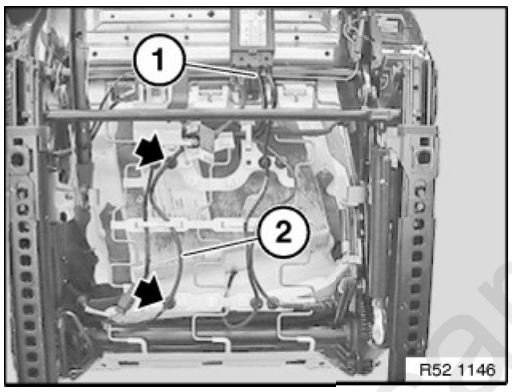
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

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

Detach cable strap.

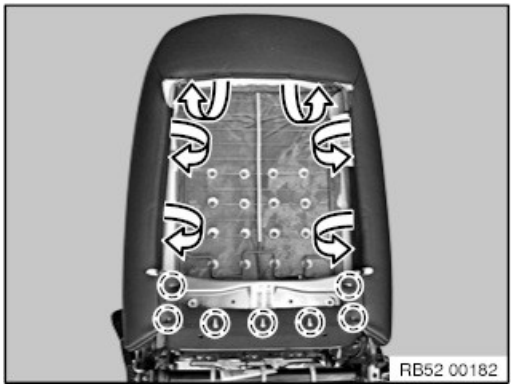
Release seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.

Important!

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



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

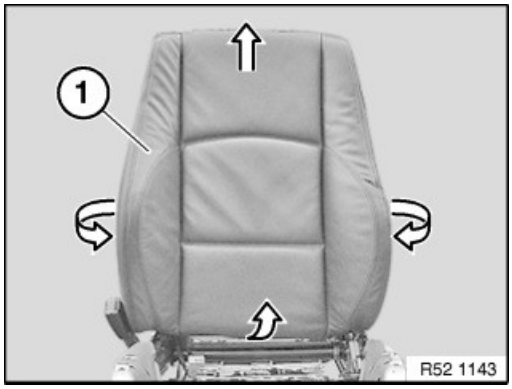
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

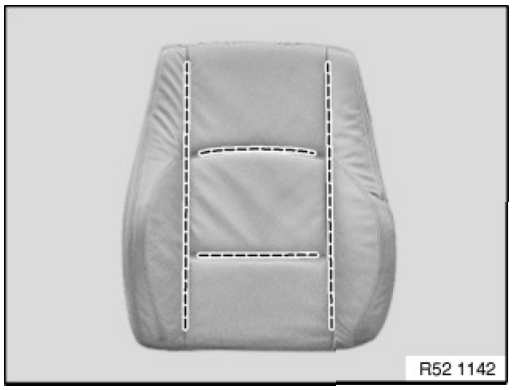
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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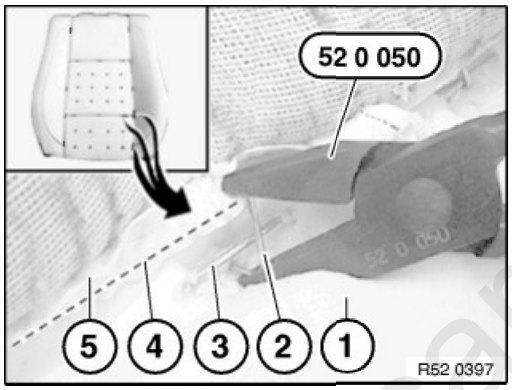
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



Release all clamps in marked area.

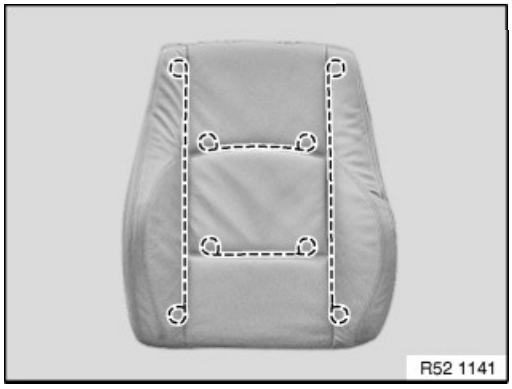
Remove backrest cover from padding.

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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 15 408 Replacing backrest cover for front passenger seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary work:

- Remove front passenger seat
- Remove rear panel on front seat backrest
- Remove guide sleeves

Important!

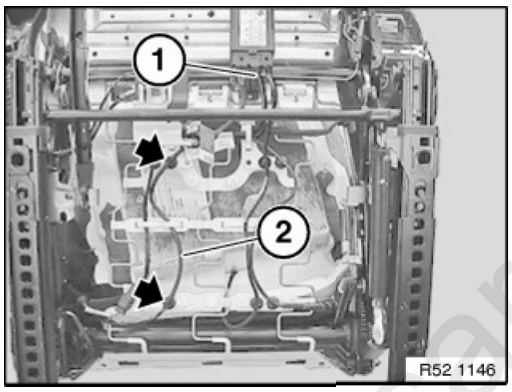
Risk of damage on sharp-edged seat mechanism.

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.



<u>Version with seat heating only:</u>

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

Detach cable strap.

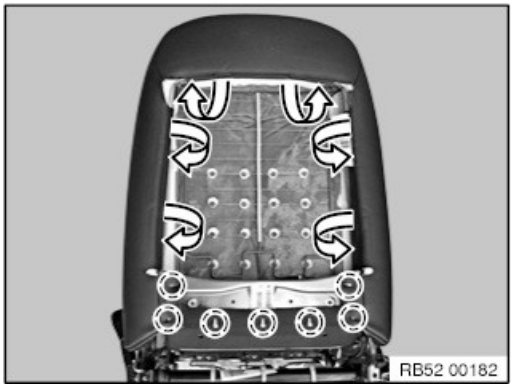
Release seat heater cable (2) from cable clips on seat mechanism.

Installation note:
Plug connection is encoded to prevent incorrect connection.

Replace cable strap.

Important!

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



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

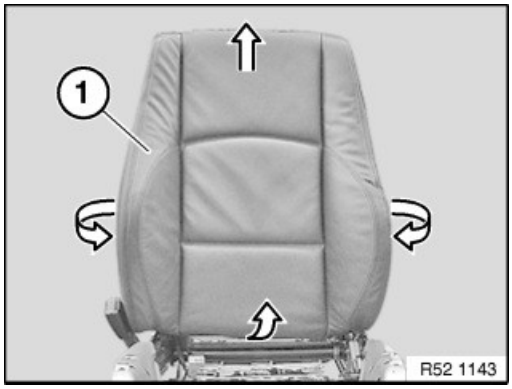
Carefully slide bracing cloth with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

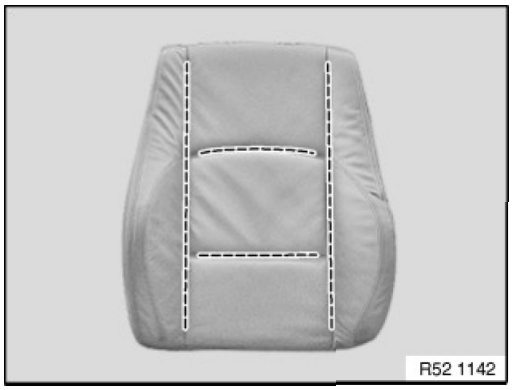
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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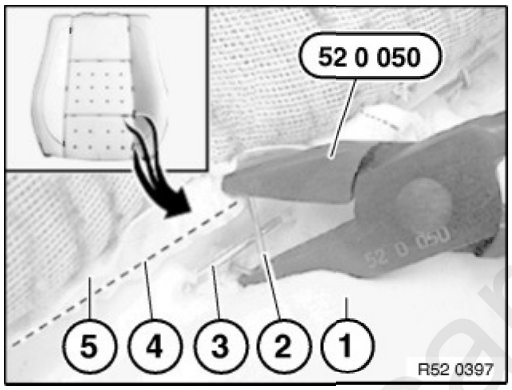
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



Release all clamps in marked area.

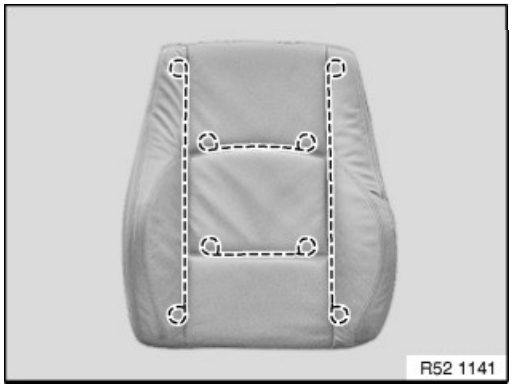
Remove backrest cover from padding.

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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 15 405 Replacing backrest cover for front seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front seat
- Remove rear panel on front seat backrest
- Remove guide sleeves

Important!

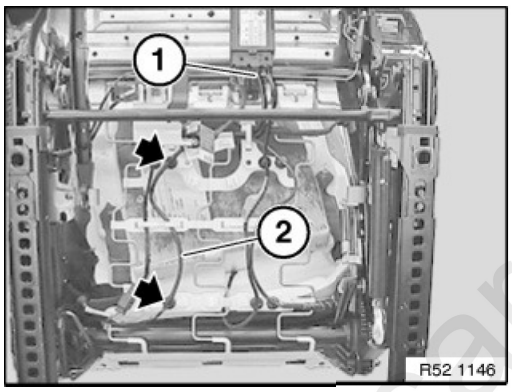
Risk of damage on sharp-edged seat mechanism.

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 heating only:

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

Detach cable strap.

Release seat heater cable (2) from cable clips on seat mechanism.

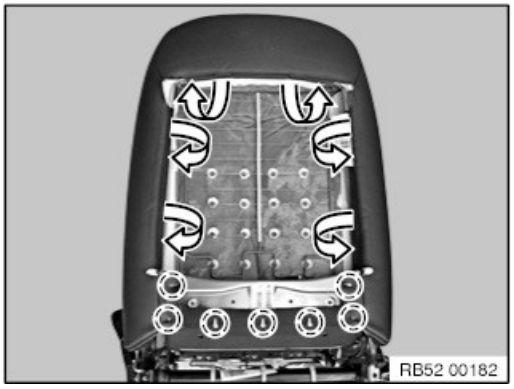
Installation note:

Plug connection is encoded to prevent incorrect connection.

Replace cable strap.

Important!

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



Lift welt out of backrest frame.

Detach backrest cover at bottom from the metal tabs in the marked area.

Carefully slide bracing cloth with foam through backrest gap and seat structure.

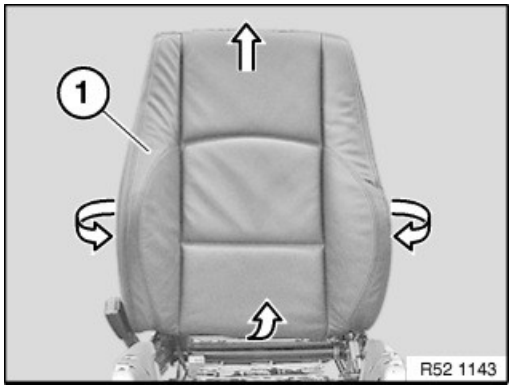
If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:

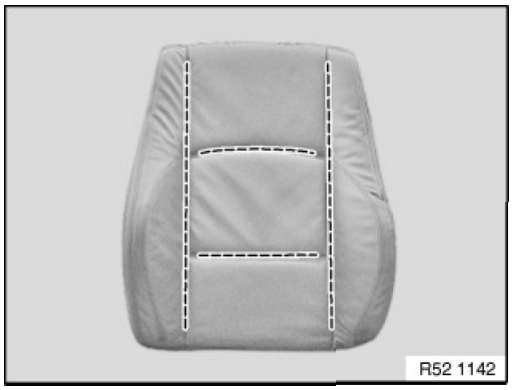
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.

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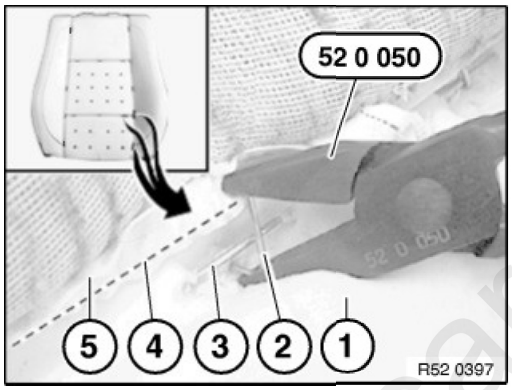
Pull off backrest cover (1) with upholstery sideways and towards top from backrest frame.



Release all clamps in marked area.

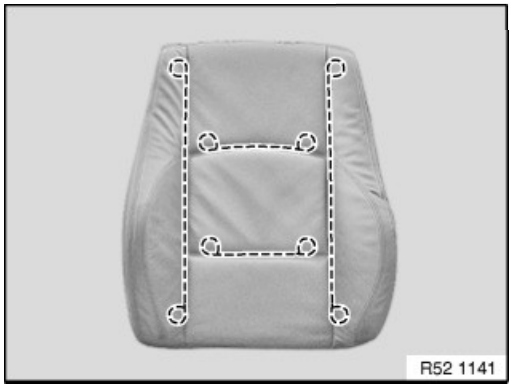
Remove backrest cover from padding.

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



<u>Replacement only:</u>

Pull trim wires out of backrest cover.

Cut new backrest cover to size and insert trim wires.

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52 15 451 Replacing backrest heating element for left or right sports seat



Operation is described in:

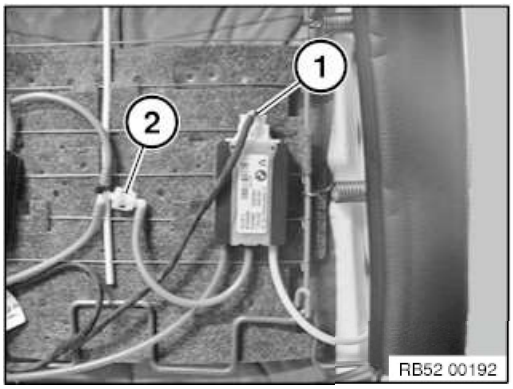
- Replace heating elements for front seat left or right

cardiagn.com

52 15 062 Replacing backrest width adjustment with valve on left or right

Necessary preliminary tasks:

- Remove the rear panel from the front seat
- Fully drain air cushion

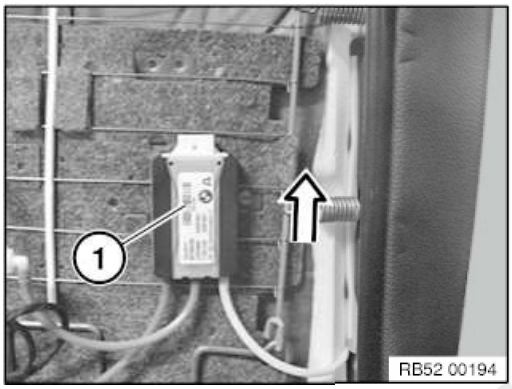


Unfasten plug connection (1) and disconnect.

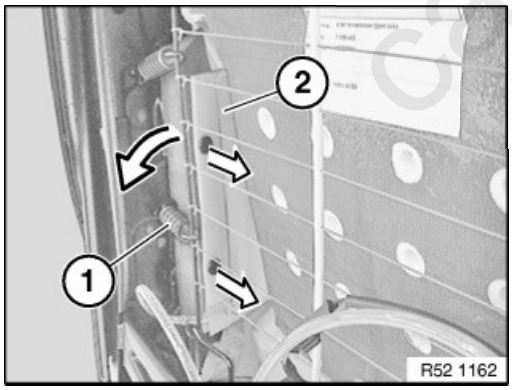
Unlock quick connector (2) and pull off air hose from adapter.

Installation note:
Connections are coded against incorrect assembly.

Air hoses must not be kinked.



Unclip valve (1) towards top from spring wire.



Note:
Removal operation is shown on left side, right analogous to that.

Air cushion (2) must be fully drained.

Detach spring (1) top and bottom.

Lever out clips.

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

Installation note:
Replace faulty clips.

Insert the air cushion without kinks.

Check air cushion for damage.

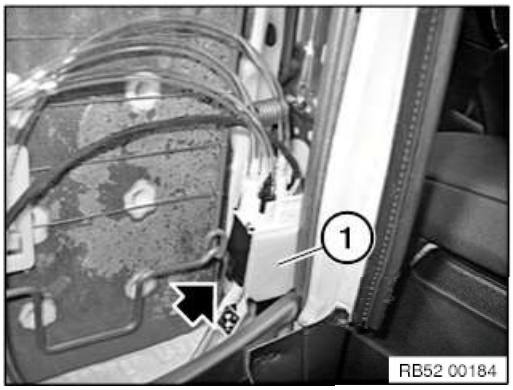
Note:
Run a function check.

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52 16 056 Replacing both cushions for backrest width adjustment on left or right front seat

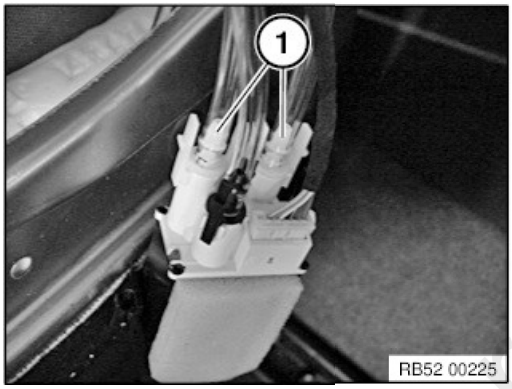
Necessary preliminary work:

- Remove the rear panel from the front seat
- Completely drain air cushion for backrest width adjustment



Unclip valve body (1) from seat mechanism and feed out from backrest frame.*Installation note:*
Check the valve body (1) for correct fit in the backrest frame and spring wire.

Air hoses must not be kinked.

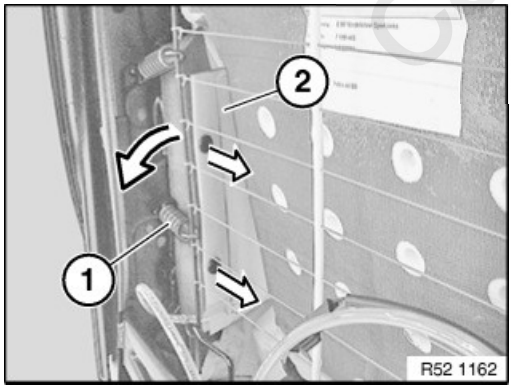


Unlock quick connectors and detach air hoses (1).

Valve body for backrest width adjustment:

1. Lumbar support left/right = hose clear, quick-connector white

Installation note:
Connections are coded against incorrect assembly.



Note:
Removal operation is shown on left side, right analogous to that.

The air cushion must be deflated completely.

Detach spring (1) top and bottom.

Lever out clips.

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

Installation note:
Replace faulty clips.

Check air cushion for damage.

Insert air cushion without kinks.

Note:
Carry out function check

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52 15 450 Replacing cushion heating element for left or right front seat



Operation is described in:

- Replace heating elements for front seat left or right

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52 15 415 Replacing facing for front seat (sport/manual)



This operation is described in section on:

Replacing seat cover for front seat.

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52 15 420 Replacing facing for front seat backrest (sport/manual)



This operation is described in section on:

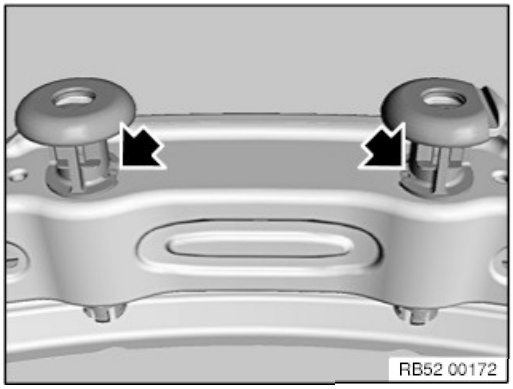
Replacing backrest cover for front seat.

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52 13 ... Replacing guide sleeves for front left or right head restraint

Necessary preliminary tasks:

- Remove front head restraint

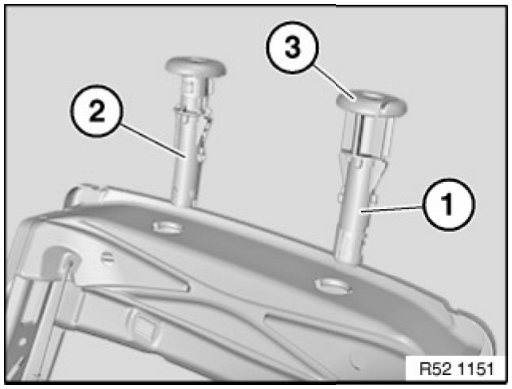


Note:
Shown here without backrest cover for a better overview.

Push the backrest cover with upholstery down next to the guide sleeve.

Carefully insert screwdriver between the backrest cover and guide sleeve.

Unlock the retaining lug with a screwdriver and remove the guide sleeves through the top.



Installation note:
Install guide sleeves as follows:

1. Guide sleeve with pushbuttonÂ (3) in direction of travel left
2. Guide sleeve without pushbutton in direction of travel right

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52 15 452 Replacing heating element for left or right front seat (thigh support)



Operation is described in:

- Replace heating elements for front seat left or right

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52 15 410 Replacing seat and backrest cover for front seat (sport/manual), left or right



Operations are described in:

- Replacing seat cover for front seat
- Replacing backrest cover for front seat

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52 15 402 Replacing seat cover for driver's seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front seat, driver's side
- Remove thigh support
- Remove inner cover
- Manual version:
  Remove outer cover
- Electric version:
  Remove outer cover

Important!

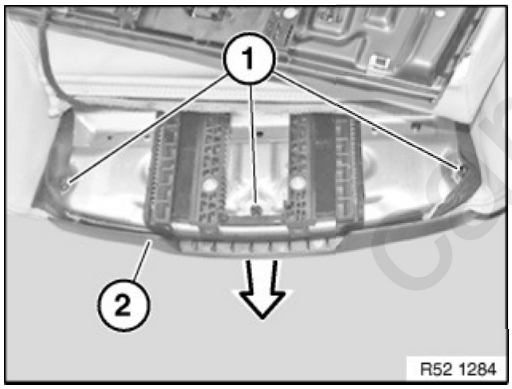
Risk of damage on sharp-edged seat mechanism.

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.

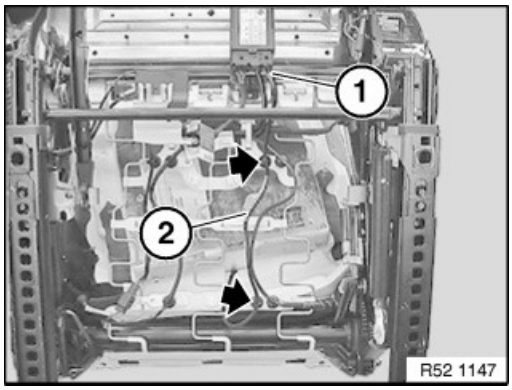
Make sure connectors are correctly seated in latch mechanisms.



Unlock retaining lugs (1).

Remove seat trim (2) downwards.

Installation note:
Seat trim (2) must not be damaged.



Version with seat heating only:

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

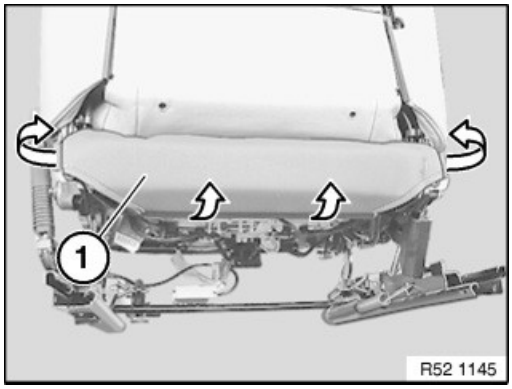
Detach cable strap.

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

Important!

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

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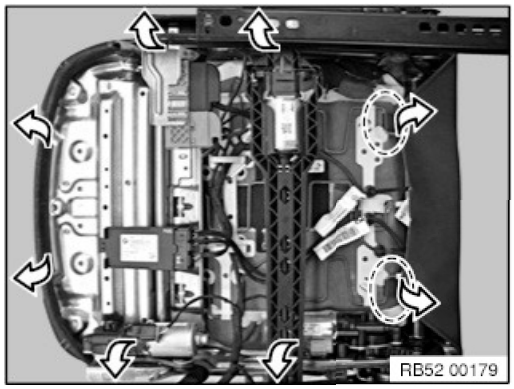


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

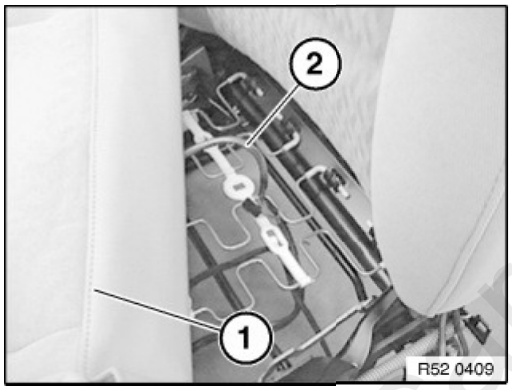
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.



Fully lift welt of seat cover out of seat frame.

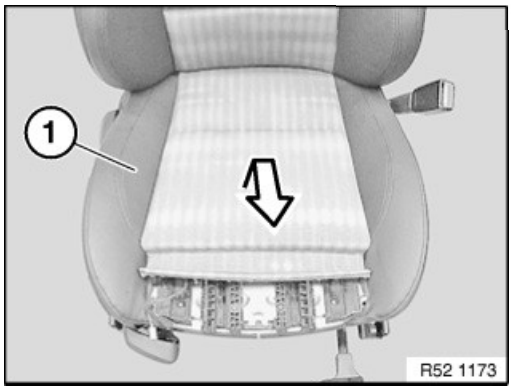
Disengage seat cover at rear.



<u>Version with seat heating:</u>

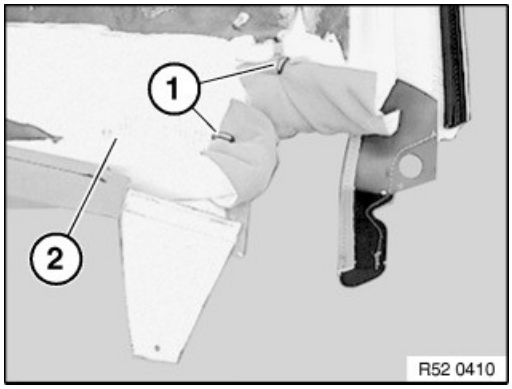
Pull seat cover (1) with upholstery forward a little and feed wiring harness (2) out.

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

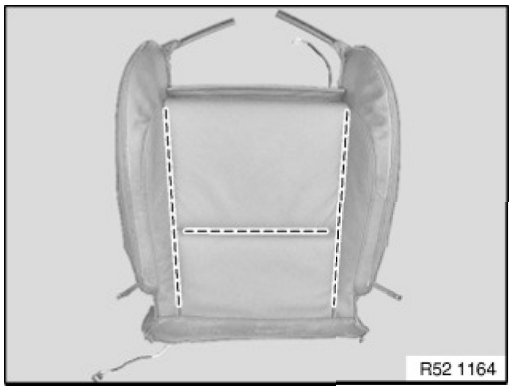


Remove seat cover (1) with padding towards front/top.

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Release all clamps (1) from seat cover (2).



Detach all clamps in side area from longitudinal wires.

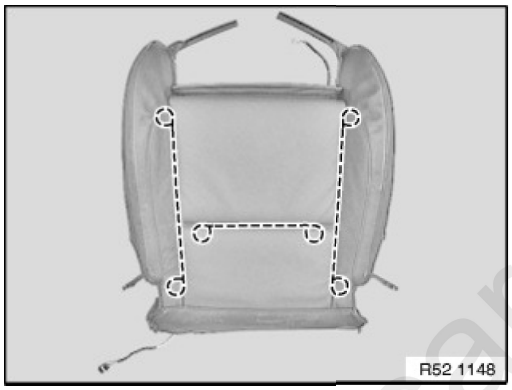
Pull trim wires forward out of seat cover.

Carefully fold back seat cover and release clamps from cross-wires.

Remove seat cover from upholstery.

Important!

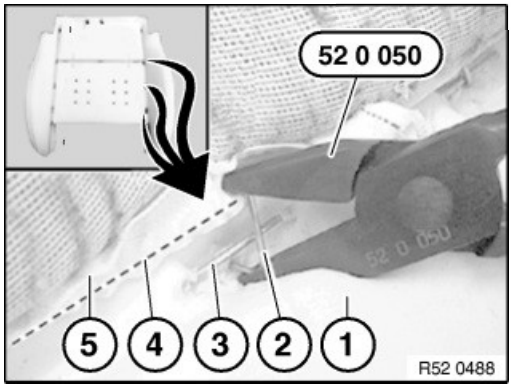
Remove all remnants of clamps from seat cover and upholstery.



<u>Replacement only:</u>

Pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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

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52 15 404 Replacing seat cover for front passenger seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front passenger seat
- Remove thigh support
- Remove inner cover
- Manual version:
  Remove outer cover
- Electric version:
  Remove outer cover

Warning!

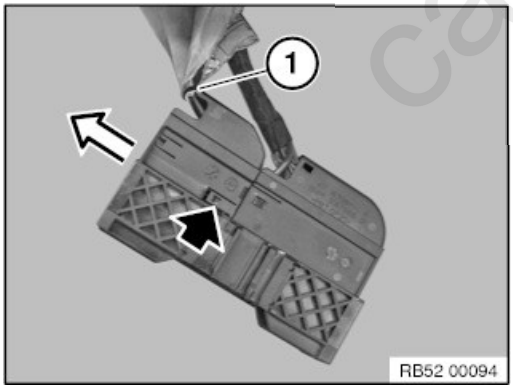
US and Canadian version of the front passenger seat (with CIS mat):

The CIS mat is bonded to the entire surface of the facing and 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 installation, the CIS mat must be enabled with the BMW programming system.



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.

Important!

Risk of damage on sharp-edged seat mechanism.

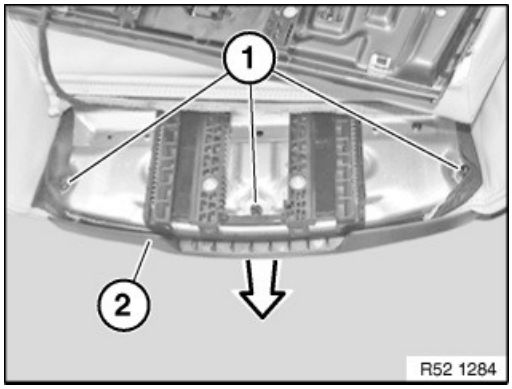
Guide all cables carefully through seat and backrest mechanism.

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.

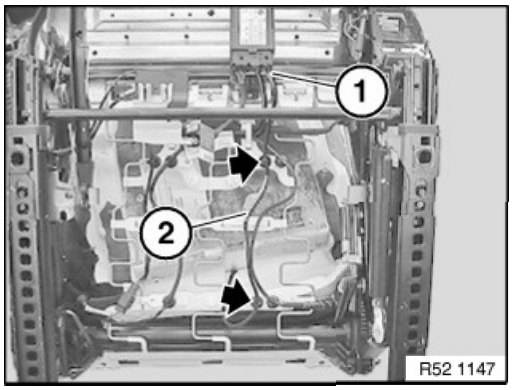
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Unlock retaining lugs (1).

Remove seat trim (2) downwards.

Installation note:
Seat trim (2) must not be damaged.



<u>Version with seat heating only:</u>

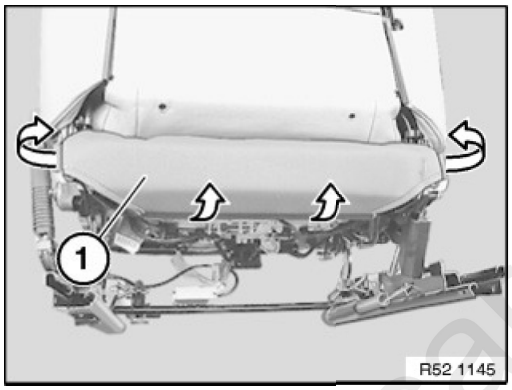
Unlock plug connection (1) for seat heating and disconnect.

Detach cable strap.

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

Important!

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

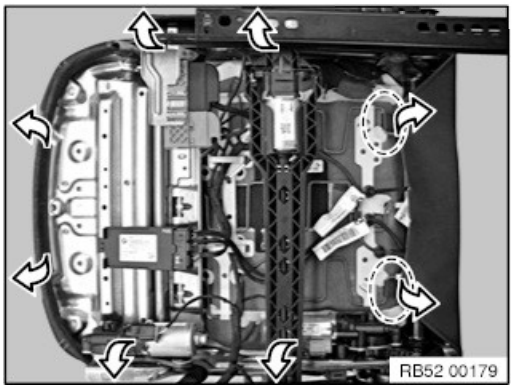


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

Installation note:
Slide foam completely through backrest gap and seat structure.

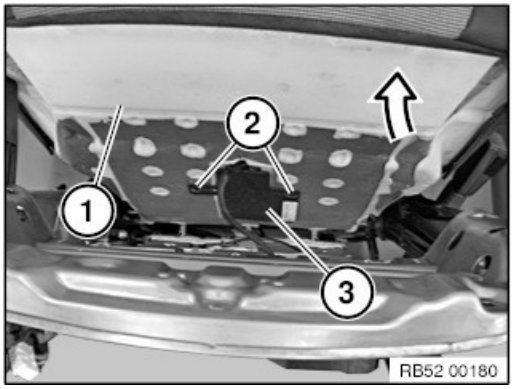
Make sure foam and bracing cloth are correctly fitted.



Fully lift welt of seat cover out of seat frame.

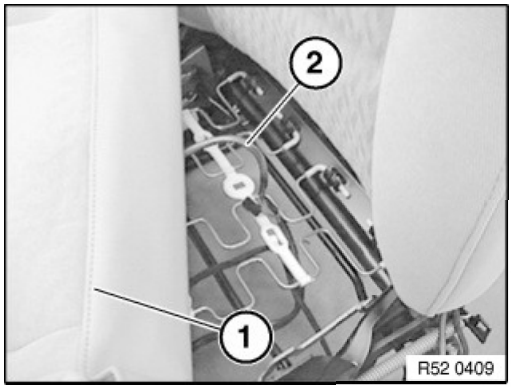
Disengage seat cover at rear.

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Lift seat cover with upholstery (1) at front and unclip mounting (2) for seat occupancy detection (SBE) (3).

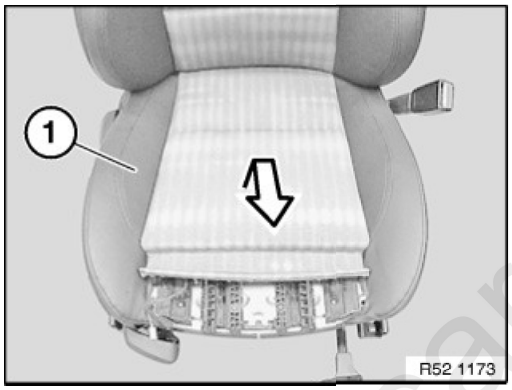
Remove SBE (3) from upholstery (1) and place on flexmat.



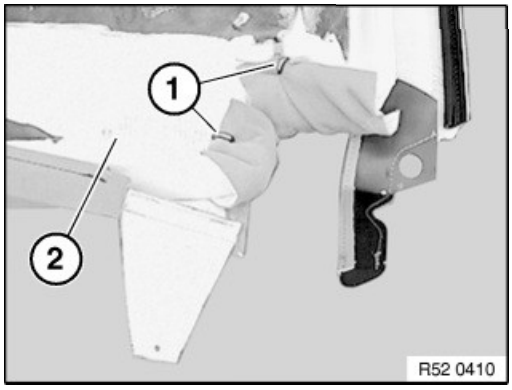
<u>Version with seat heating:</u>

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

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

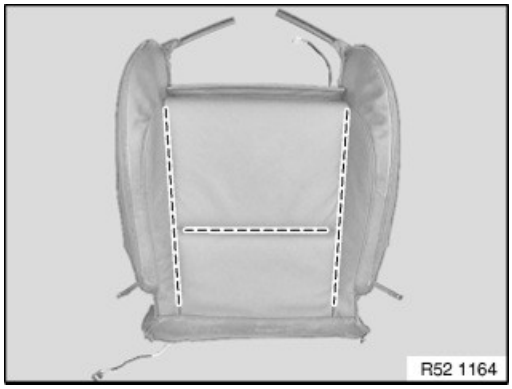


Remove seat cover (1) with padding towards front/top.



Release all clamps (1) from seat cover (2).

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Detach all clamps in side area from longitudinal wires.

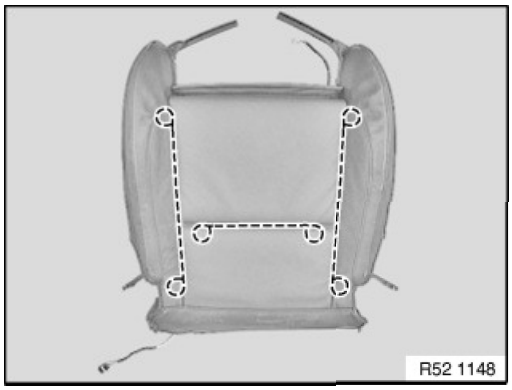
Pull trim wires forward out of seat cover.

Carefully fold back seat cover and release clamps from cross-wires.

Remove seat cover from upholstery.

Important!

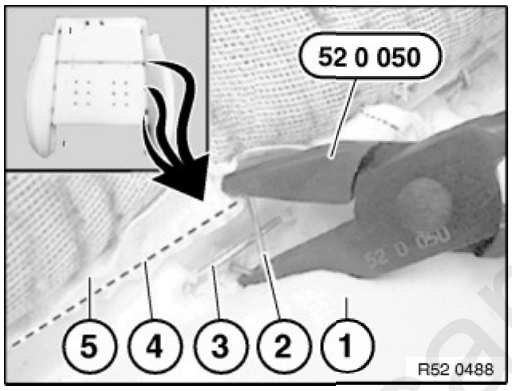
Remove all remnants of clamps from seat cover and upholstery.



<u>Replacement only:</u>

Pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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



<u>Enabling seat occupancy detector (CIS mat):</u>

- Connect BMW programming system
- Encode airbag control unit
- Delete fault memory if necessary

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52 15 400 Replacing seat cover for front seat (sport/manual)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove front seat
- Remove thigh support
- Remove inner cover
- Manual version:
  Remove outer cover
- Electric version:
  Remove outer cover

Important!

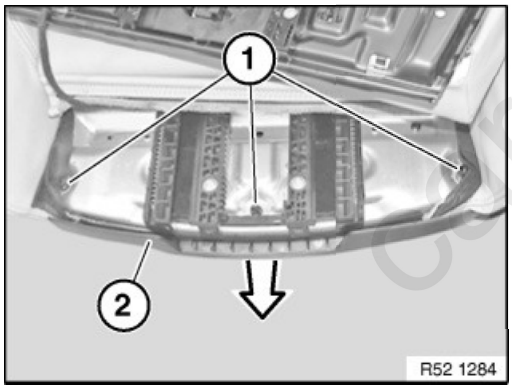
Risk of damage on sharp-edged seat mechanism.

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.

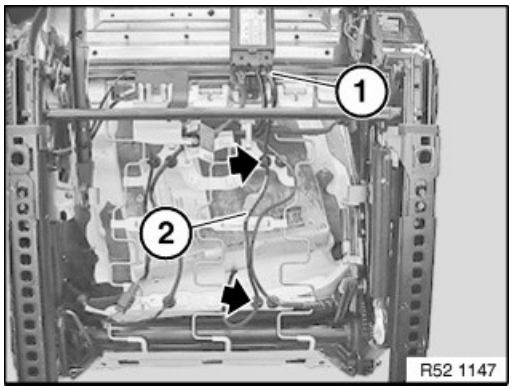
Make sure connectors are correctly seated in latch mechanisms.



Unlock retaining lugs (1).

Remove seat trim (2) downwards.

Installation note:
Seat trim (2) must not be damaged.



Version with seat heating only:

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

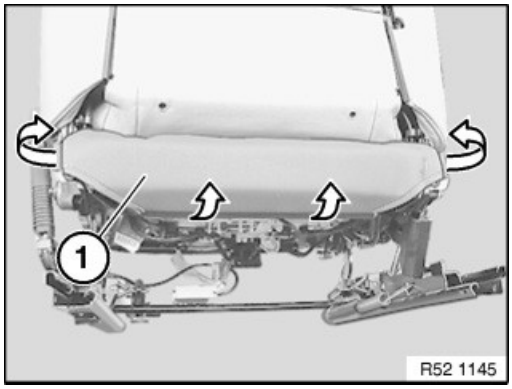
Detach cable strap.

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

Important!

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

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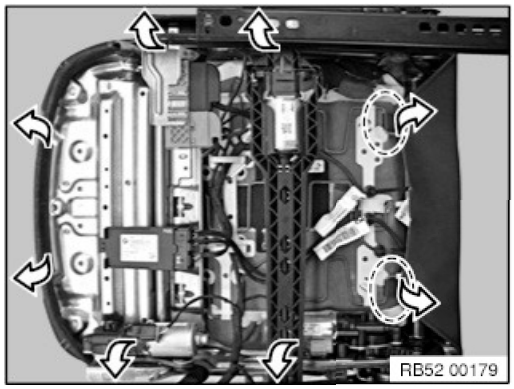


Carefully slide bracing cloth (1) with foam through backrest gap and seat structure.

If applicable, route cable carefully through seat and backrest mechanics as the edges of the frame may be sharp.

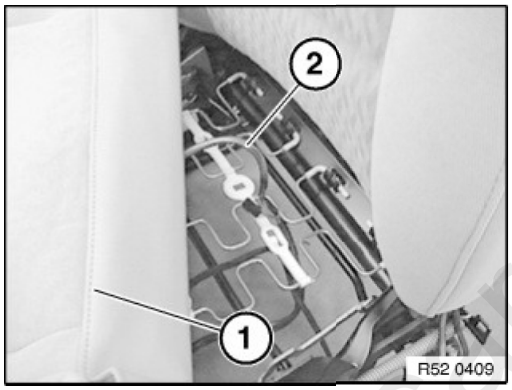
Installation note:
Slide foam completely through backrest gap and seat structure.

Make sure foam and bracing cloth are correctly fitted.



Fully lift welt of seat cover out of seat frame.

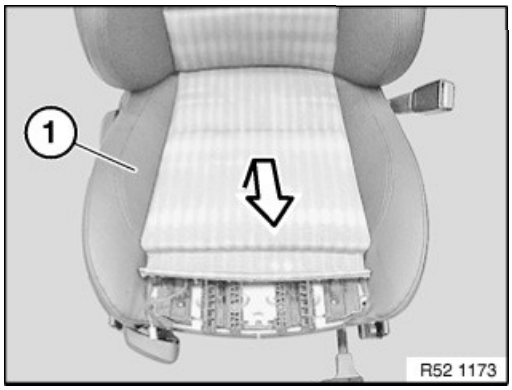
Disengage seat cover at rear.



<u>Version with seat heating:</u>

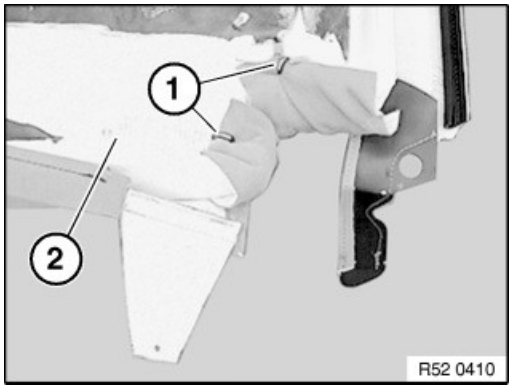
Pull seat cover (1) with upholstery forward a little and feed wiring harness (2) out.

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

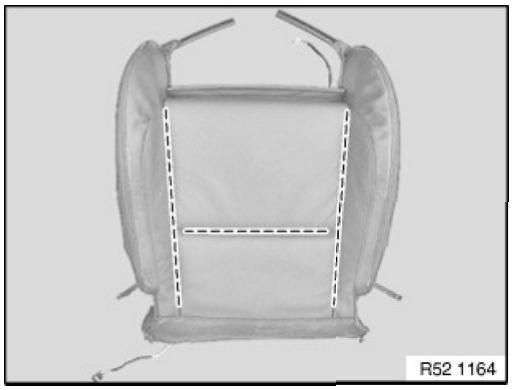


Remove seat cover (1) with padding towards front/top.

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Release all clamps (1) from seat cover (2).



Detach all clamps in side area from longitudinal wires.

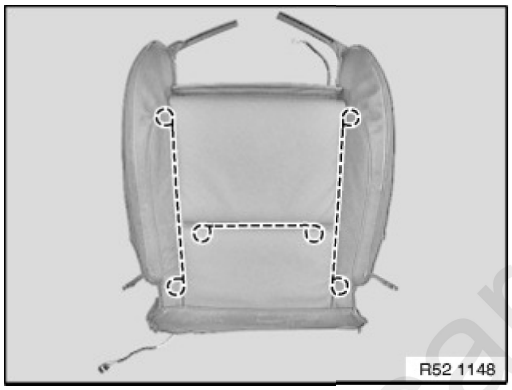
Pull trim wires forward out of seat cover.

Carefully fold back seat cover and release clamps from cross-wires.

Remove seat cover from upholstery.

Important!

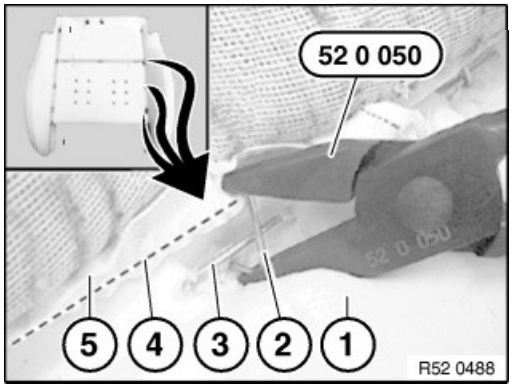
Remove all remnants of clamps from seat cover and upholstery.



<u>Replacement only:</u>

Pull trim wires out of seat cover.

Cut new seat cover to size and insert trim wires.



Installation note:
Bend new clamps (2) with special tool 52 0 050 .

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

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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!

<u>Only US and Canadian version of front passenger seat (with CIS mat):</u>

The CIS mat is bonded to the entire surface of the facing and 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.

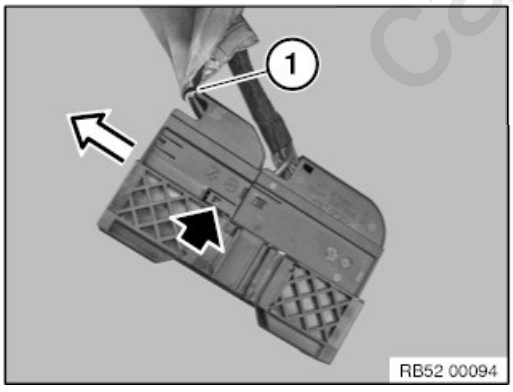
Full functional capability can only be guaranteed with original BMW spare parts.

After installation, the CIS mat must be enabled with the BMW programming system.

<u>Procedure for replacing the CIS mat together with the upholstery is described in:</u>

- Replacing upholstery 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 tieÂ (1).

Connector is encoded against incorrect assembly.

Installation note:
<u>Enabling seat occupancy detector (CIS mat):</u>

- Connect BMW programming system
- Encode airbag control unit
- Delete fault memory if necessary

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52 15 425 Replacing upholstery for driver's seat (sport/manual)



This operation is described in section on:

Replace seat cover for driver's seat

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52 15 422 Replacing upholstery for driver's seat backrest (sport/manual)



This operation is described in section on:

Replace backrest cover for driver's seat.

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52 15 426 Replacing upholstery for front passenger seat (sport/manual)



This operation is described in section on:

Replace seat cover on front passenger seat.

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52 15 423 Replacing upholstery for front passenger seat backrest (sport/manual)



This operation is described in section on:

Replace backrest cover for front passenger seat.

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52 15 417 Replacing upholstery for left or right thigh support (sport/manual)

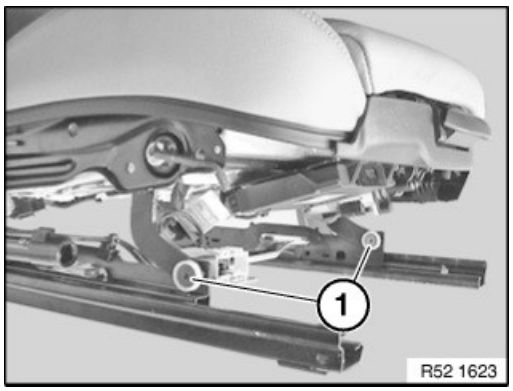


This operation is described in section on:

Replacing thigh support cover on left or right front seat.

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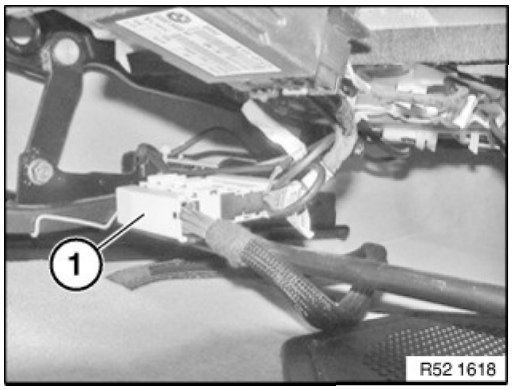
52 14 ... Additional work in event of faulty drive/gearing for longitudinal adjustment



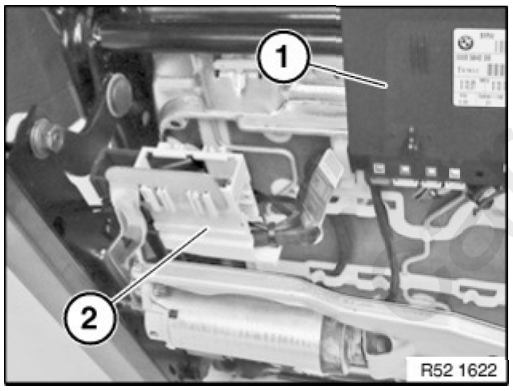
Release screws (1) of swinging arms for seat height adjustment.

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

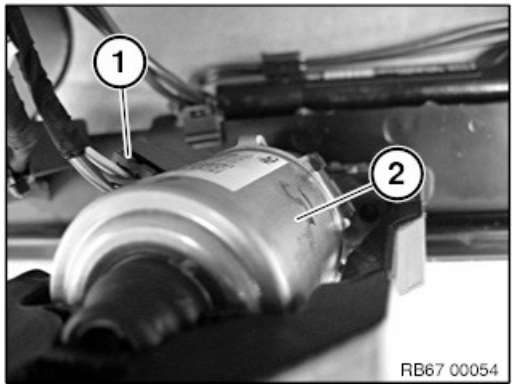
Tilt front seat back.



Unfasten plug connection (1) and disconnect.

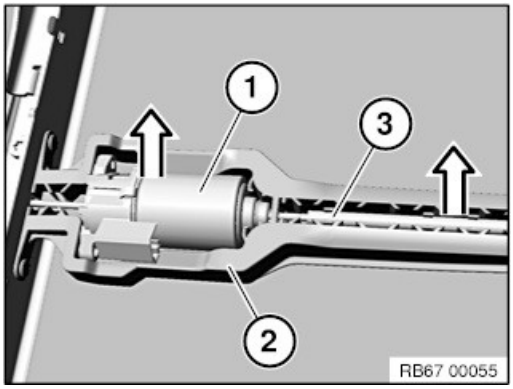


Unclamp central connector (2) from seat mechanism.
Unclip control units (1).



Removal of electric motor for forward/back seat adjustment:

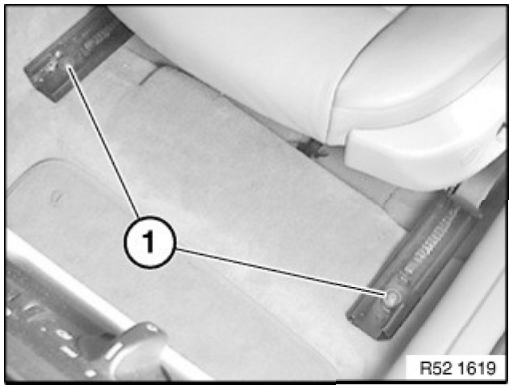
Unfasten plug connection (1) and disconnect.



Lift long flex shaft (3) out of guide in direction of arrow.

Pull out flex shaft (3) from electric motor for forward/back seat adjustment (1).

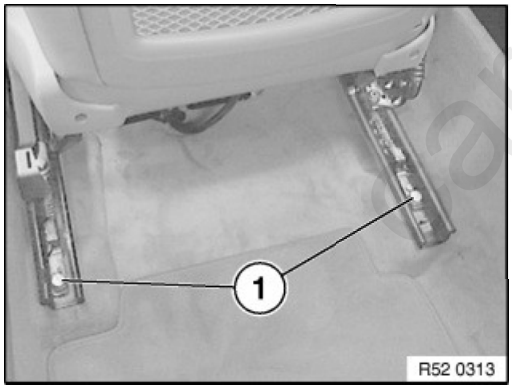
Remove electric motor for forward/back seat adjustment (1) in direction of arrow from holder (2).



Release screws (1) at front.

Installation note:
Install new drive for longitudinal seat adjustment.

Move front seat forwards.



Release screws (1) at rear.

Important!

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

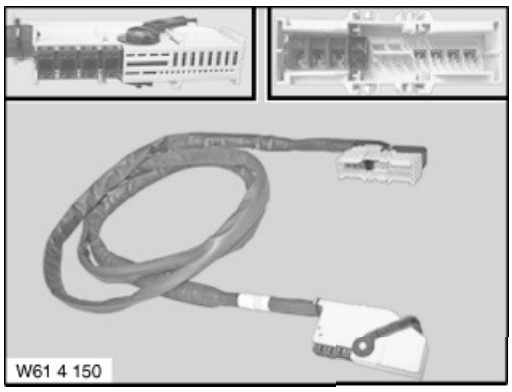
  Tightening torque 52 10 1AZ.

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52 14 ... Performing function check with adapter cable (for seat repairs)

Special tools required:

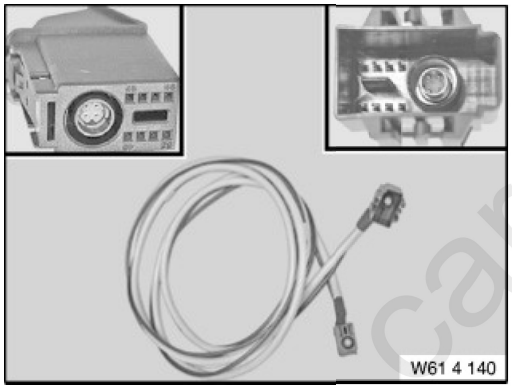
- 61 4 140
- 61 4 150



Seat function check: *Note:*
The function check on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable 61 4 150 .

Application:

Adapter cable is connected to vehicle wiring harness and removed seat 61 4 150 .



RSE (rear passenger compartment monitor) function check *Note:*
The function check of the RSE (rear passenger compartment monitor) on a repaired driver's or front passenger seat can be performed outside the vehicle by using adapter cable 61 4 140 .

Application:

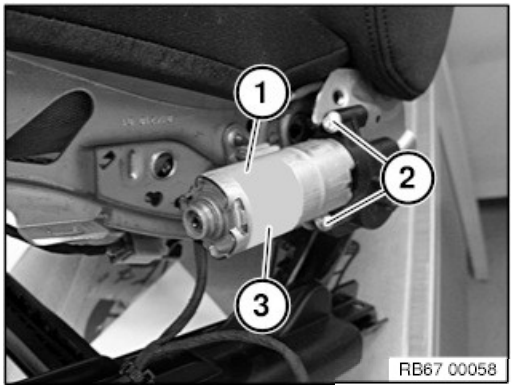
Adapter cable is connected to vehicle wiring harness and removed seat 61 4 140 .

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67 31 530 Removing and installing/replacing backrest adjustment motor

Necessary preliminary tasks:

- Remove covers on front seat



Unfasten plug connection (1) and disconnect.
Unfasten screws (2).
Remove electric motor (3).

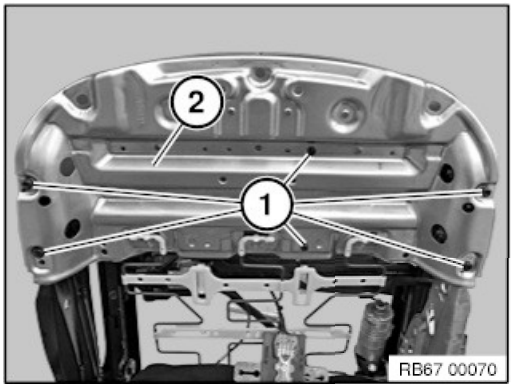
Note:
Carry out a function check.
Replacement:
Initialise backrest adjustment motor.

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67 31 510 Removing and installing/replacing drive unit for seat cushion tilt adjustment

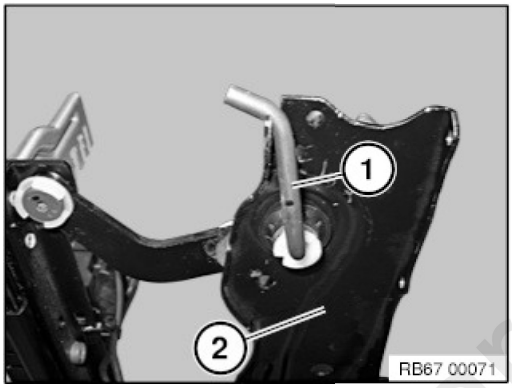
Necessary preliminary tasks:

- Remove driver's or front passenger seat
- Remove front seat cover

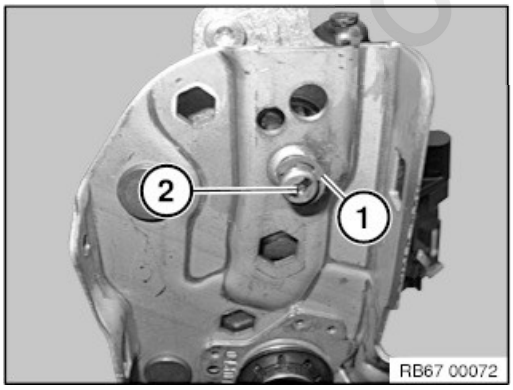


Release screws (1).

Remove cushion shell (2).

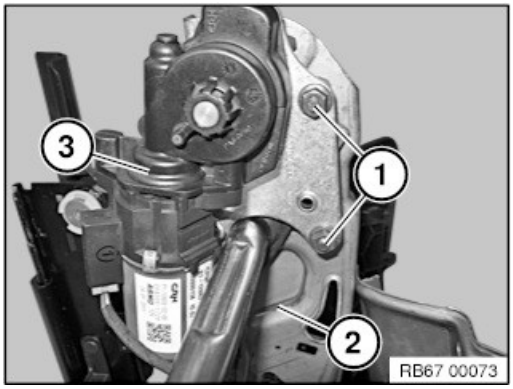


Detach spring (1) at seat frame (2).



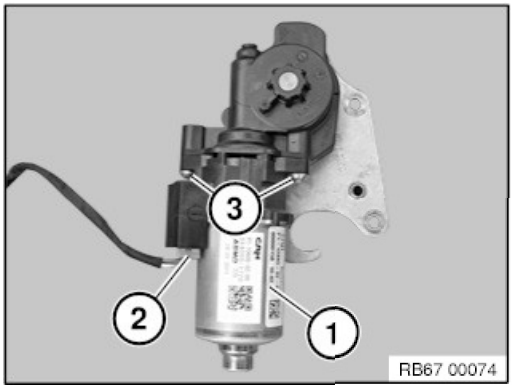
Remove fuse (1) from shaft (2).

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Unscrew nuts (1).

Pull drive with transmission (3) out of seat frame (2) and remove.



Unfasten plug connection (2) and disconnect.

Release screws (3).

Tightening torque 67 31 1AZ.

Remove drive unit for seat cushion tilt adjustment (1).

Note:

Carry out a function check.

Replacement:

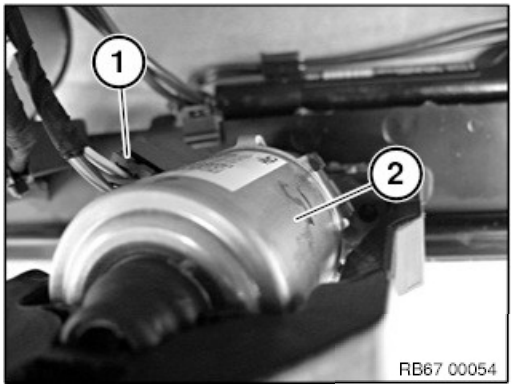
Initialise seat height adjustment drive unit.

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67 31 500 Removing and installing/replacing forward/back seat adjustment drive unit

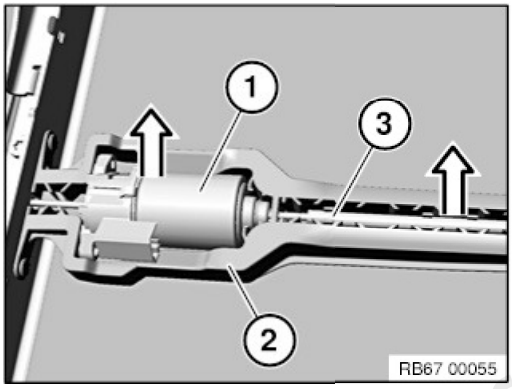
Necessary preliminary work:

- Raise front seat as far up as possible



Removal of electric motor for forward/back seat adjustment:

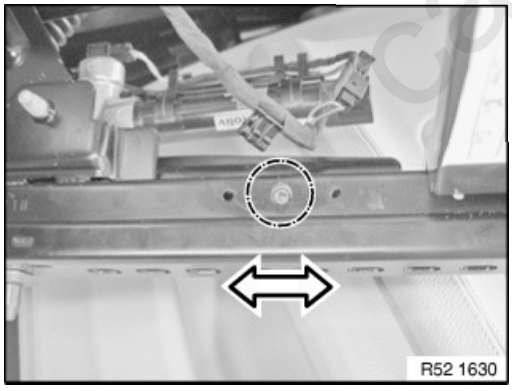
Unfasten plug connection (1) and disconnect.



Lift long flex shaft (3) out of guide in direction of arrow.

Pull out flex shaft (3) from electric motor for forward/back seat adjustment (1).

Remove electric motor for forward/back seat adjustment (1) in direction of arrow from holder (2).

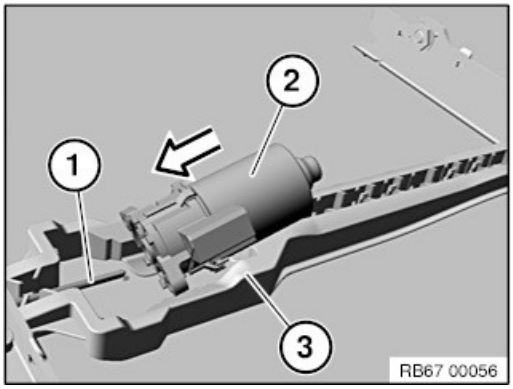


Installation of electric motor for forward/back seat adjustment:

Slide seat rail with opening forwards or back until bushing for flex shaft mounting of worm gear is flush.

Insert short flex shaft.

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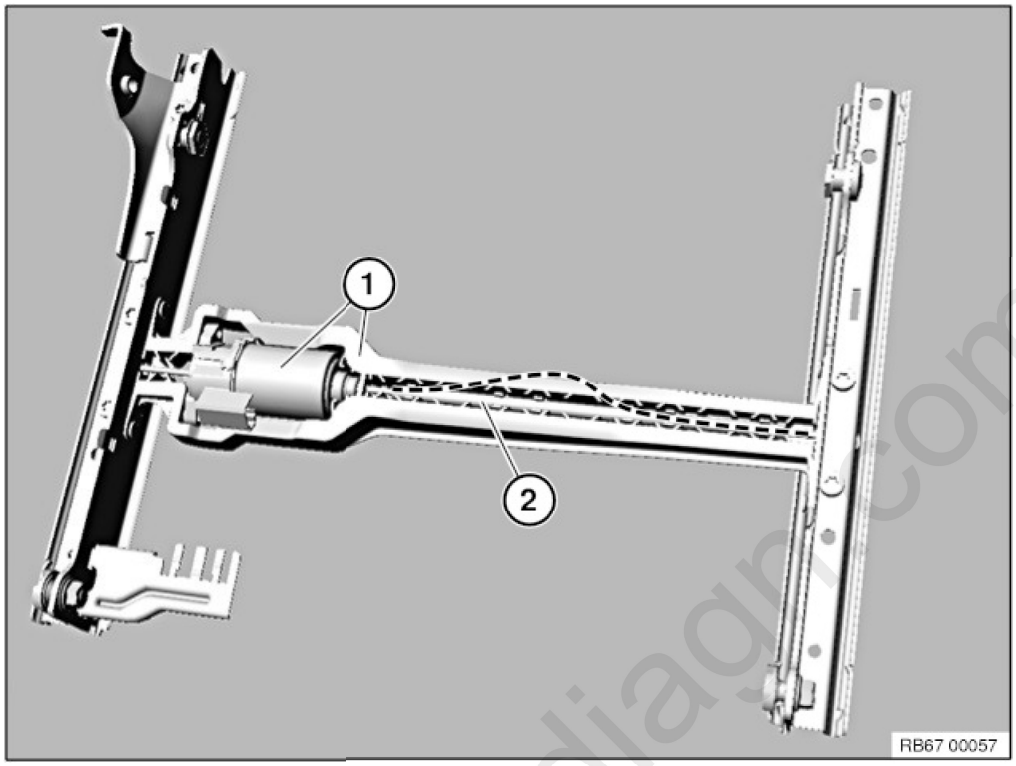


Connect electric motor for forward/back seat adjustment (2) to short flex shaft (1).

Installation note:
Make sure flex shaft (1) is correctly seated in electric motor (2) and seat rail mounting.

Clip in electric motor for forward/back seat adjustment (2) into holder (3).

Installation note:
Electric motor for forward/back seat adjustment (2) must audibly engage in holder (3).

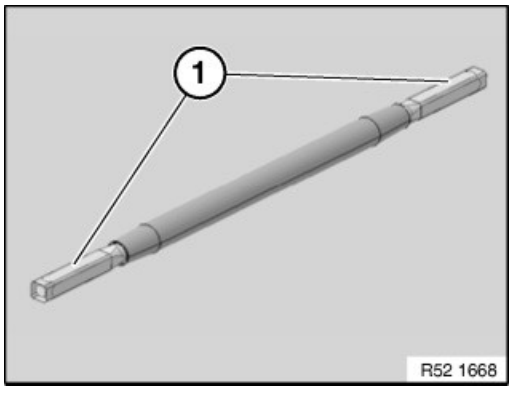


Insert long flex shaft (2) in worm gear on seat rail.

Bend long flex shaft (2) upwards and slide into electric motor for forward/back seat adjustment (1).

Clip in flex shaft into carrier plate.

Installation note:
Make sure flex shaft (2) is correctly seated in electric motor (1) and seat rail mounting.



Installation note:
PTFE hoses are shrink-fitted onto end pieces.

Check that hoses are free from damage.

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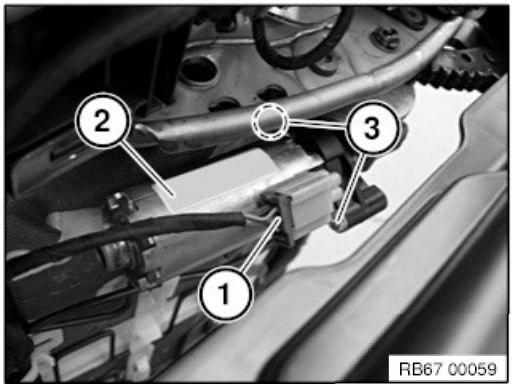
Note:
Carry out a function check.
Replacement:
Initialize drive unit for forward/back seat adjustment.

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67 31 520 Removing and installing/replacing seat height adjustment drive unit

Necessary preliminary tasks:

- Remove driver's or front passenger seat



Set down front seat sideways on a suitable surface.
Unfasten plug connection (1) and disconnect.
Release screws (3).
Tightening torque 67 31 1AZ.
Feed out seat height adjustment drive unit (2) and remove.

Note:
Carry out a function check.
Replacement:
Initialise seat height adjustment drive unit.

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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!

<u>Only US and Canadian version of front passenger seat (with CIS mat):</u>

The CIS mat is bonded to the entire surface of the facing and 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.

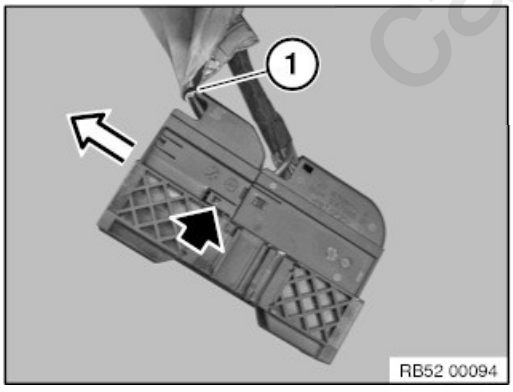
Full functional capability can only be guaranteed with original BMW spare parts.

After installation, the CIS mat must be enabled with the BMW programming system.

<u>Procedure for replacing the CIS mat together with the upholstery is described in:</u>

- Replacing upholstery 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 tieÂ (1).

Connector is encoded against incorrect assembly.

Installation note:
<u>Enabling seat occupancy detector (CIS mat):</u>

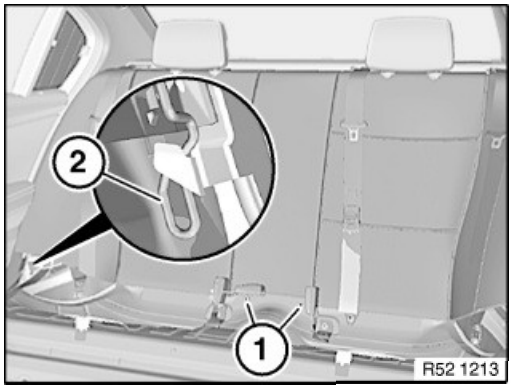
- Connect BMW programming system
- Encode airbag control unit
- Delete fault memory if necessary

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52 24 010 Removing and installing / replacing backrest

Necessary preliminary tasks:

- Remove rear seat

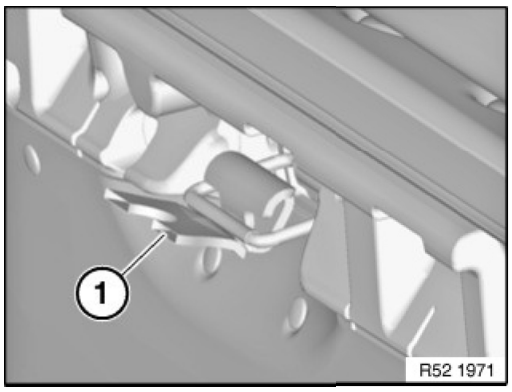


Release screws (1).

Tightening torque 52 24 01AZ.

Remove backrest from backrest suspension by firmly lifting upwards.

Installation note:
Make sure guide (2) is correctly seated on left and right in partition wall.



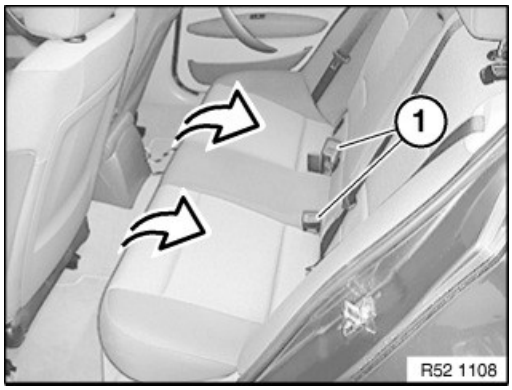
Installation note:
Make sure backrest is correctly seated in backrest suspension (1).

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

Lift out backrest and feed out of seat belts.

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52 24 005 Removing and installing / replacing rear seat



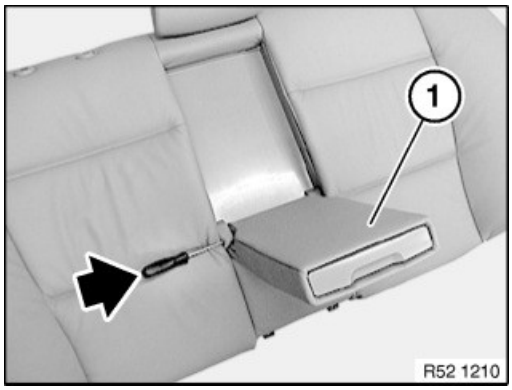
Unclip rear seat on left and right towards top.

Installation note:
Feed seat belt buckles Â (1) into recesses in rear seat.

Lift out rear seat.

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52 24 030 Removing and installing centre armrest for rear seat backrest



Open centre armrest (1).

Note:
Protect backrest cover against dirt contamination.

Release screw.

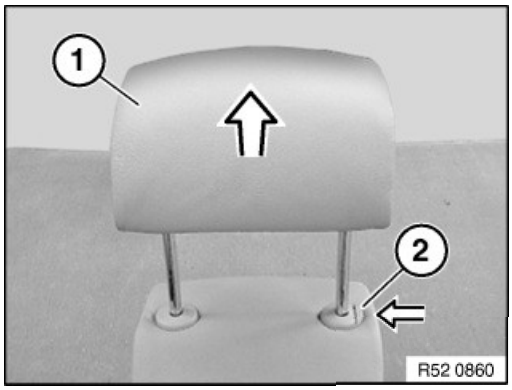
Remove centre armrest (1).

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52 24 390 Removing and installing or replacing left or right rear head restraint

Necessary preliminary tasks:

- Remove backrest



Move head restraint (1) upwards to maximum extent.
Press lock (2) and pull out head restraint towards top.

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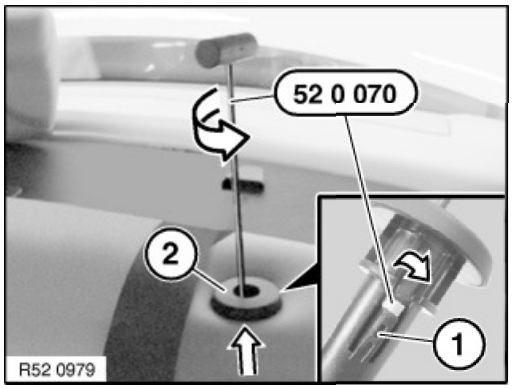
52 24 ... Removing and installing/replacing all guide sleeves for rear head restraints

Special tools required:

- 52 0 070

Necessary preliminary tasks:

- Remove head restraint from rear seat



Note:
Guide sleeves cannot be removed without being damaged.

Guide sleeves with locks have two retaining lugs.

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

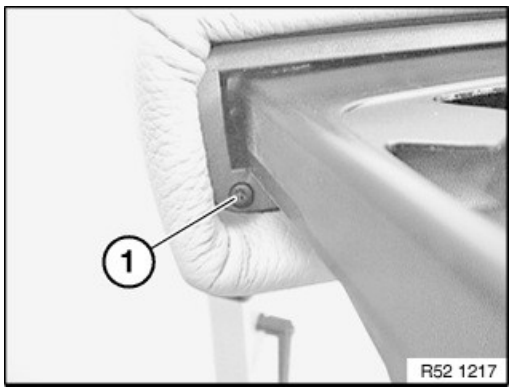
Feed release tongue of special tool into rear gap on retaining lug (1).

Turn tool to release sleeve (2) and pull out by lifting upwards.

On guide sleeves with locks, unlock the second retaining lug with a screwdriver.

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52 24 ... Removing and installing/replacing cupholder in armrest for rear seat backrest



Open armrest.

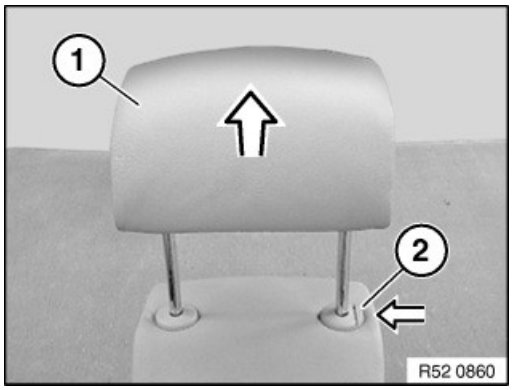
Open cupholder.

Release screwsÂ (1) on left and right.

Remove complete cupholder towards front.

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52 24 388 Removing and installing/replacing rear middle head restraint



Fold back head restraint (1) and move upwards to max. extent.

Press lock (2) and pull head restraint upwards and out.

Note:
Middle head restraint is often very stiff.

Cover cushion and guides with Teflon spray.

Gradually pull head restraints out by moving them to the left and right

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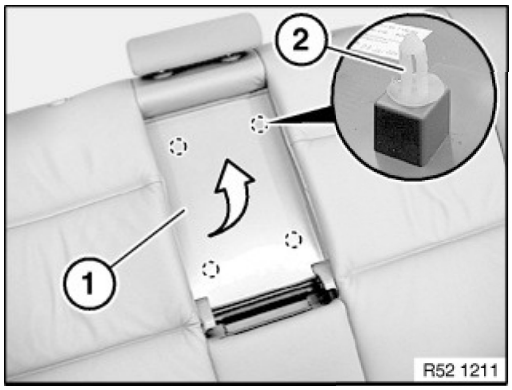
52 24 408 Replacing backrest cover for rear seat

Special tools required:

- 52 0 050

Necessary preliminary tasks:

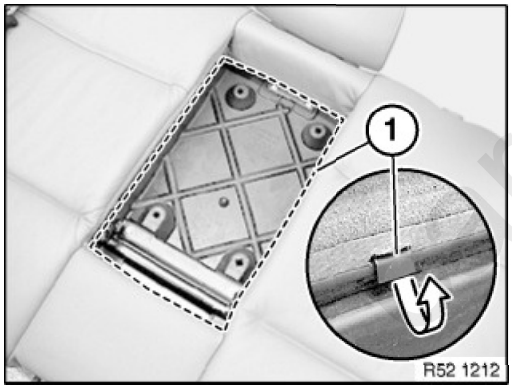
- Remove rear seat backrest
- If necessary, remove centre armrest
- Remove all guide sleeves



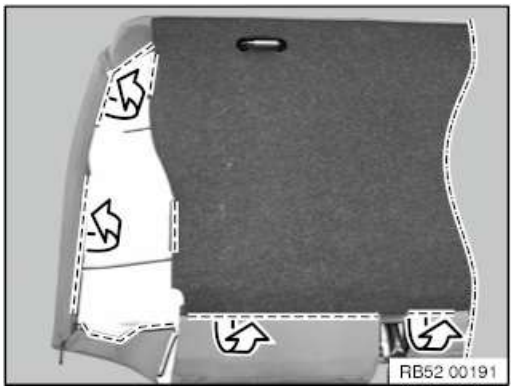
Version with centre armrest:

Unclip cover (1) towards front.

Installation note:
If necessary, replace faulty clips (2).



Detach backrest cover (1) in marked area from backrest frame.



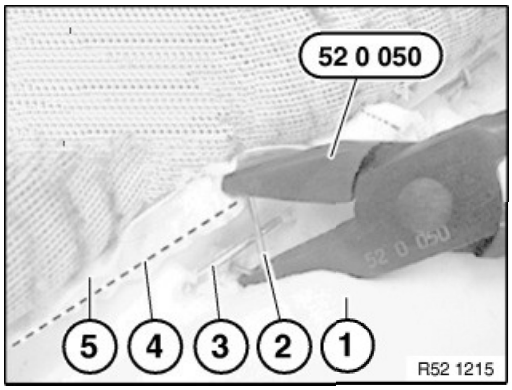
Detach welt from backrest cover in marked area.

Remove backrest cover with padding from backrest frame.



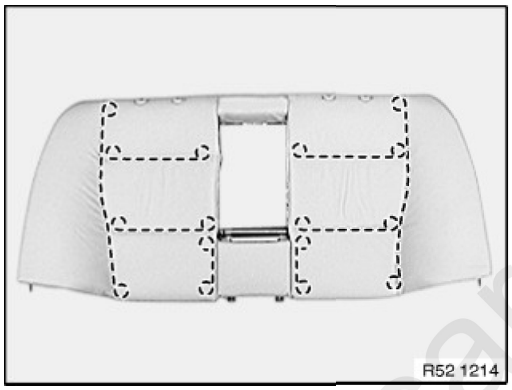
Detaching cover from upholstery:

- Release all clamps in marked area.
- Remove cover from upholstery
- Remove remaining retainers from cover and padding.



Installation note:
Insert new clamp (2) with special tool 52 0 050 and bend closed.

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



Replacing cover:

- Remove all trim wires from cover
- If necessary, cut pockets in new cover for trim wires
- Push trim wires into pockets

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52 24 450 Replacing padding for rear seat



This operation is described in section on:

Replacing the seat cover for rear seat.

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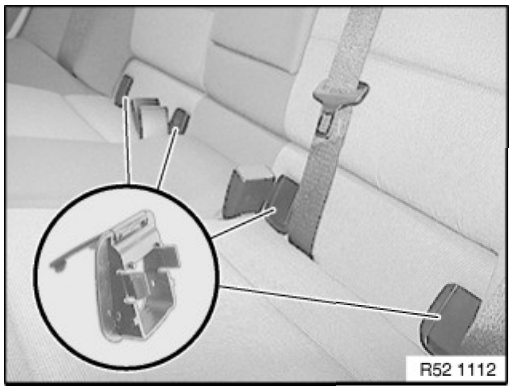
52 24 400 Replacing seat cover for rear seat

Special tools required:

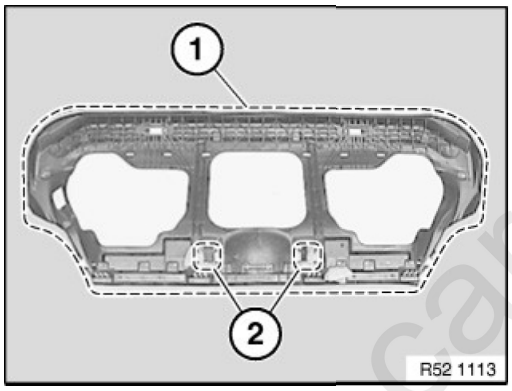
- 52 0 050

Necessary preliminary tasks:

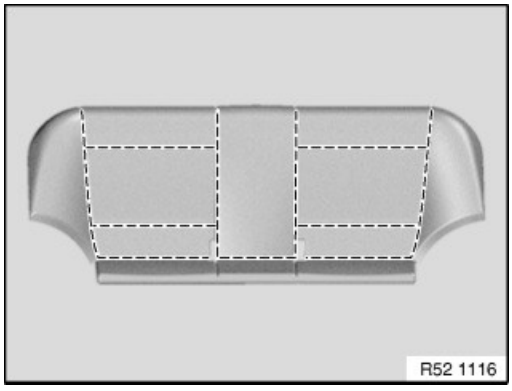
- Remove rear seat



Unclip ISOFIX cover cap.*Installation note:*
Make sure ISOFIX cover cap are correctly latched.



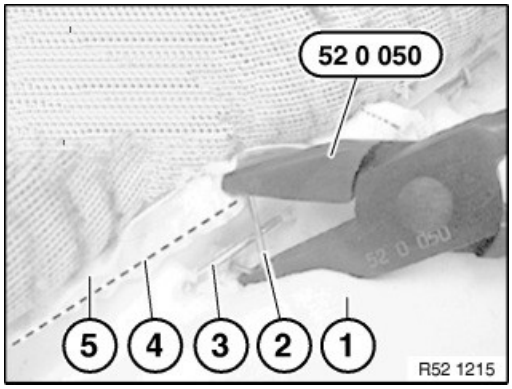
Lever out welt in area (1) with plastic wedge.
Unhook seat cover in area (2).



<u>Detaching cover and upholstery:</u>

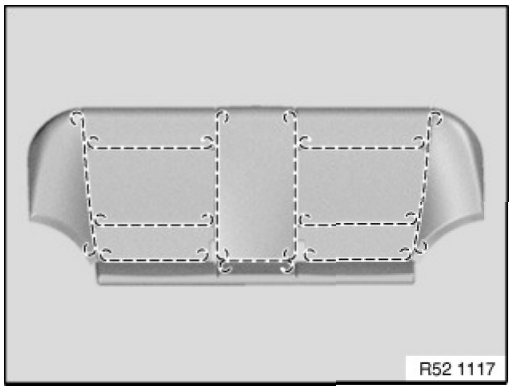
- Release all clamps in marked area.
- Remove seat cover from padding
- Remove remaining clamps from cover and upholstery

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Installation note:
Insert new clamp (2) with special tool 52 0 050 and bend closed.

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

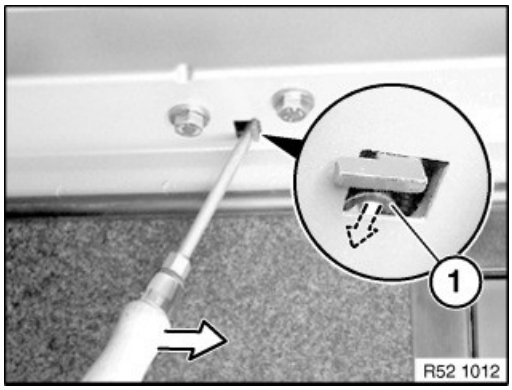


Replacing cover:

- Pull all trim wires out of seat cover
- If necessary, cut in take-up for trim wires of new cover
- Push trim wires into new seat cover

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52 26 ... Emergency actuator for rear seat backrest



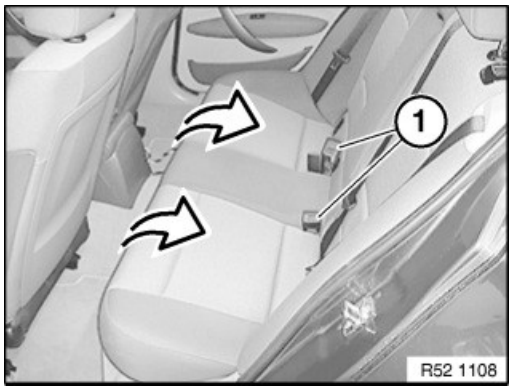
Open luggage compartment.

Insert screwdriver for levering in snap-in hole of rear seat lock.

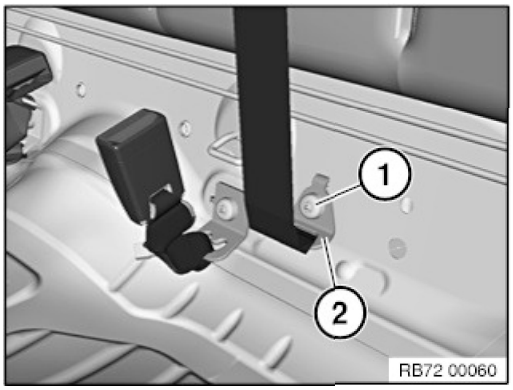
Press screwdriver to centre of car and in so doing press supporting pointÂ (1) of Bowden cable outwards.

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52 26 005 Removing and installing / replacing rear seat



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



F30 only:

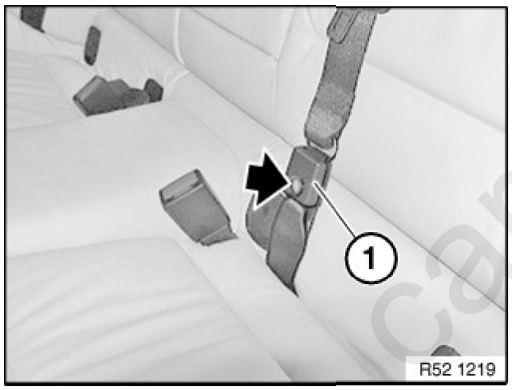
Release screw (1) from seat belt end fitting (2), centre.

Tightening torque 72 11 22AZ.

Feed out the end fitting from the rear seat.

Lift out rear seat.

Installation note:
End fitting is coded against incorrect assembly.



F35 only:

Unlock the belt lock (1).

Feed the rear centre lower strap and belt lock out of the rear seat.

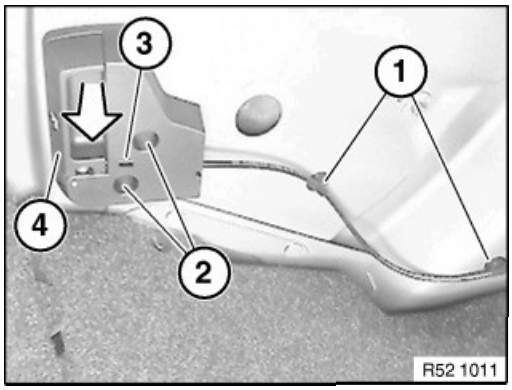
Lift out rear seat.

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52 26 303 Removing and installing/replacing actuator for left or right rear seat backrest (through-loading facility)

Special tools required:

- 00 9 317

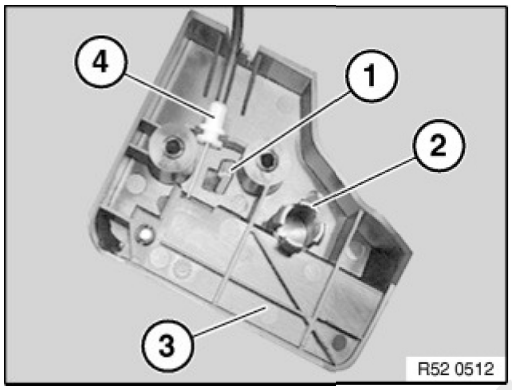


Unclip Bowden cable (1).

Unfasten screws (2).

Unlock latch mechanism (3) to centre of vehicle and at the same time unclip actuator (4).

If necessary, unclip actuator (4) with special tool 00 9 317 .



Installation note:
Catches (1) and (2) of actuator (3) must not be damaged.

Bowden cable (4) must be correctly locked in actuator (3).

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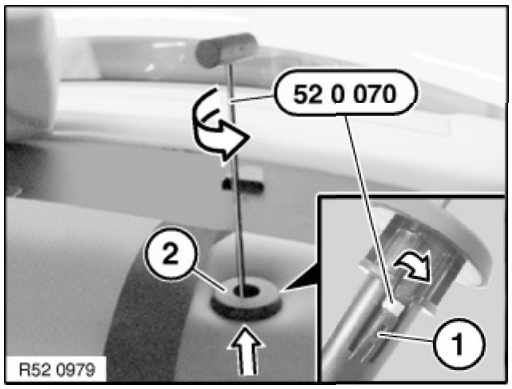
52 26 ... Removing and installing/replacing all guide sleeves for rear head restraints

Special tools required:

- 52 0 070

Necessary preliminary tasks:

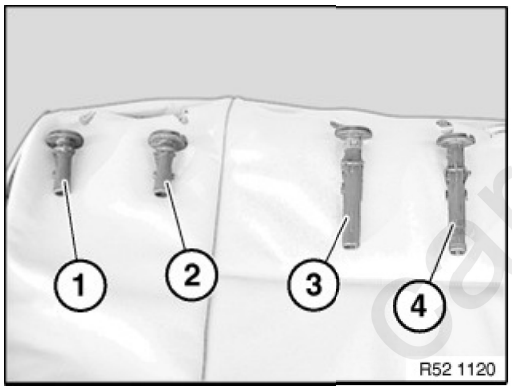
- Remove head restraint from rear seat



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 rear gap on retaining lug (1).

Turn tool to release sleeve (2) and pull out by lifting upwards.

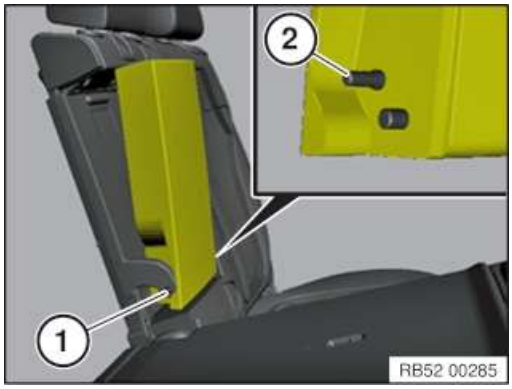


Installation note:
Replace guide sleeves and install as follows:

1. Short guide sleeves centre right
2. short guide sleeve with centre left lock
3. long guide sleeve, outer right
4. long guide sleeve with outer left lock

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52 26 030 Removing and installing/replacing armrest for rear seat backrest (through-loading facility)



Unlock right backrest and tilt forwards.

Release screw (1).

Tightening torque 52 26 02AZ.

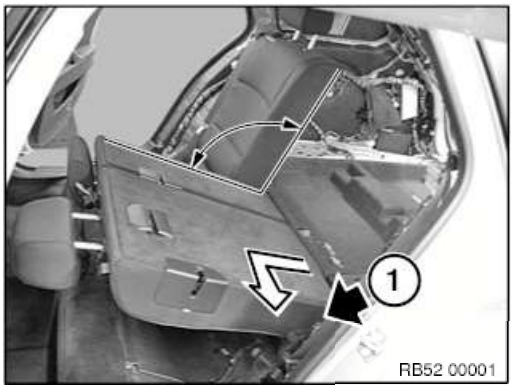
Feed out centre armrest from left and right guides (2).

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52 26 011 Removing and installing/replacing backrest for left rear seat

Necessary preliminary tasks:

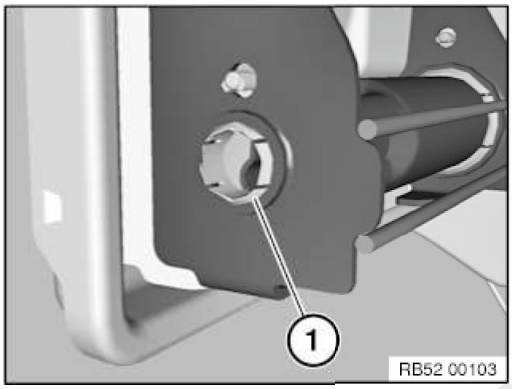
- Remove armrest side section
- Unclip rear seat and lay down towards front



Release screw (1).*Installation note:*
Replace screw (1).

Tightening torque 52 26 01AZ.

- Tilt backrest slightly forwards.
- Pull backrest forwards and outwards out of centre mount



Installation note:
The plastic bush (1) in the right backrest frame may slide during removal of the left backrest.

Make sure plastic bush (1) is fitted correctly in the right backrest frame.

The plastic bush (1) must be retained in the backrest frame.

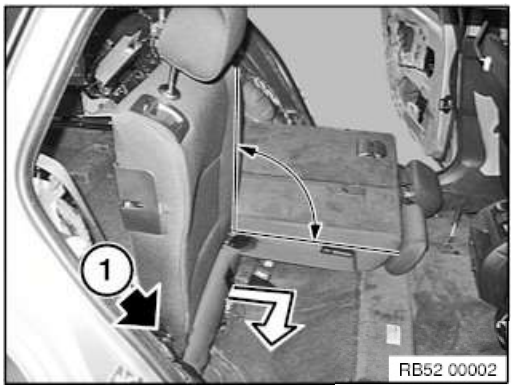
If applicable, clip the plastic bush (1) in from the outside in.

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52 26 012 Removing and installing/replacing backrest for right rear seat

Necessary preliminary tasks:

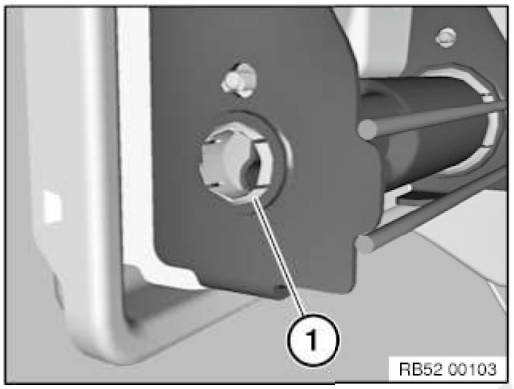
- Remove armrest side section
- Unclip rear seat and lay down towards front



Release screw (1).*Installation note:*
Replace screw (1).

Tightening torque 52 26 01AZ.

- Tilt backrest slightly forwards.
- Pull backrest forwards and outwards out of centre mount



Installation note:
The plastic bush (1) may slide during removal of the right backrest.

Make sure plastic bush (1) is fitted correctly in the right backrest frame.

The plastic bush (1) must be retained in the backrest frame.

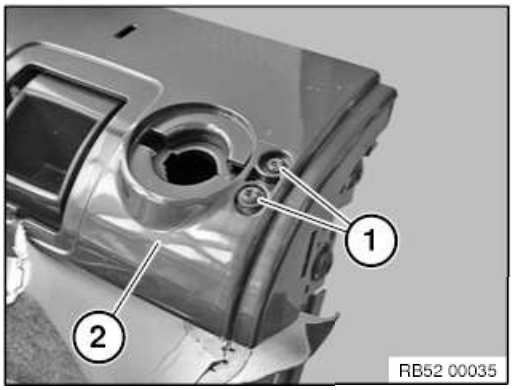
If applicable, clip the plastic bush (1) in from the outside in.

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52 26 081 Removing and installing/replacing backrest frame for centre rear seat

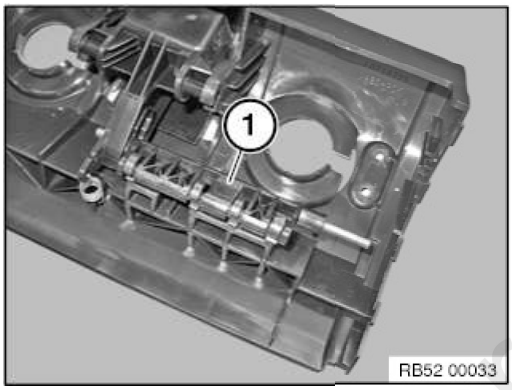
Necessary preliminary tasks:

- Remove the centre backrest cover
- Remove middle rear seat backrest seat belt buckle



Release screws (1).

Remove the actuating unit (2).



Installation note:
Make sure unlocking rod (1) is correctly seated in the operating unit.

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52 26 087 Removing and installing/replacing backrest frame for left rear seat (through-loading facility)

Necessary preliminary tasks:

- Remove backrest cover for rear seat with left through-loading system

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52 26 085 Removing and installing/replacing backrest frame for right rear seat

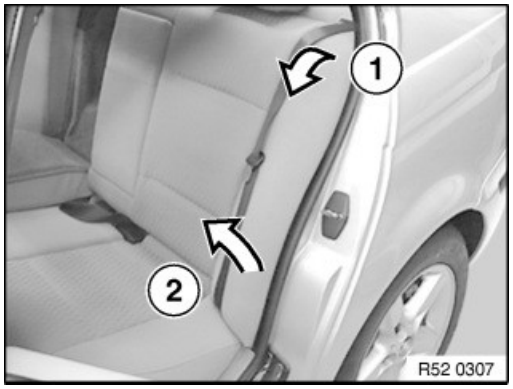


Operation is described in:

Remove backrest cover on right.

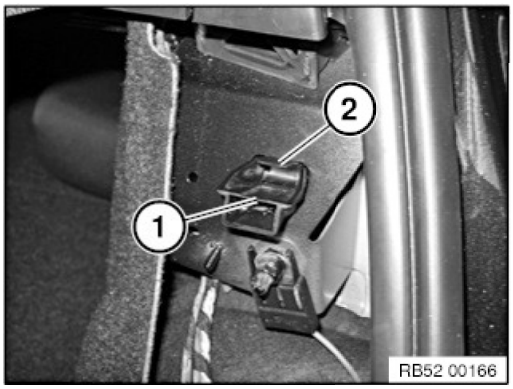
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52 26 008 Removing and installing/replacing backrest side section on left or right rear seat backrest



Pull seat belt to middle and place over head restraint.

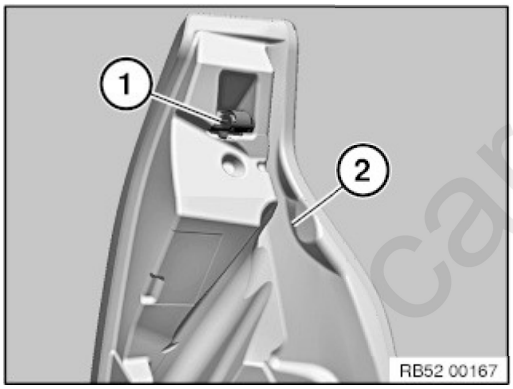
Pull top backrest side section (1) forwards and pull out upwards (2).



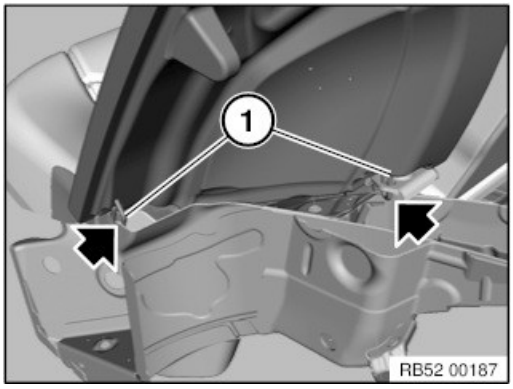
Press latch mechanism (2) to unlock the clip (1).

Pull clip (1) towards front out of the body.

If necessary, replace faulty clip (1).



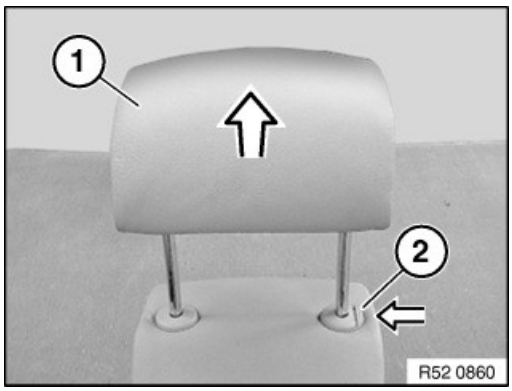
Insert the clip (1) in the backrest side section (2).



Installation note:
Insert guides (1) from backrest side section into mountings.

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

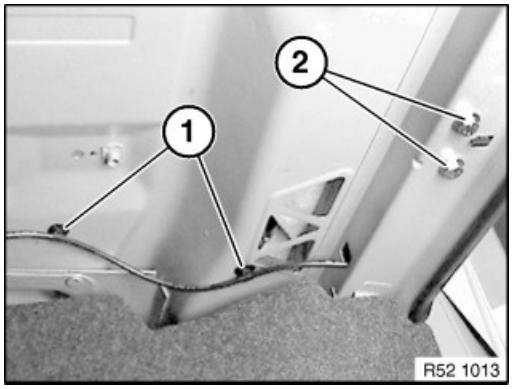


Fold the rear seat backrest forward and adjust the headrest (1) to the maximum top position.

Press lockÂ (2) and pull upwards and out head restraint (1).

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52 26 311 Removing and installing/replacing lock for left or right rear seat backrest (through-loading facility)



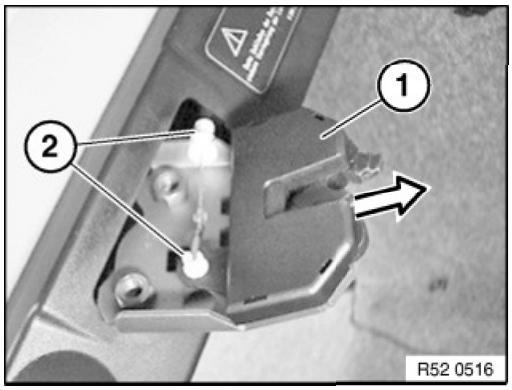
Unlock and fold back rear seat backrest.

Note:
If unlocking mechanism is faulty effect an emergency opening.

Unclip Bowden cable from holders (1).

Unfasten screws (2).

Tightening torque 52 26 08AZ.

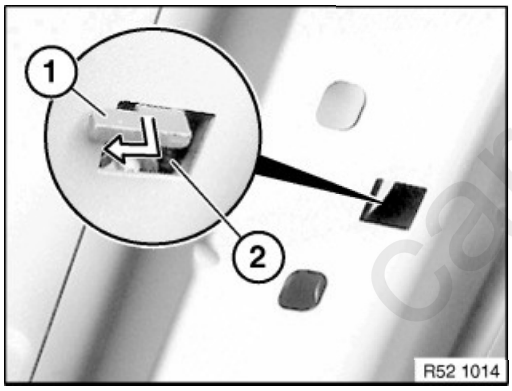


Pull lock (1) out of installation opening slightly and unclip Bowden cable (2).

Remove lock completely from installation opening.

Installation note:
Catches (2) on lock must not be damaged.

Bowden cable must be correctly anchored in catches (2).



Installation note:
Slide guide lug (1) of lock into recess (2).

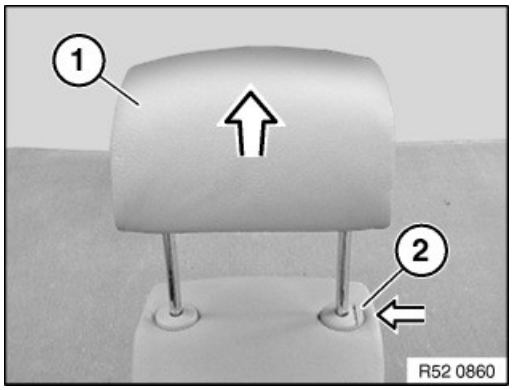


<u>Adjusting lock:</u>

- Slacken screws
- Firmly push engaged backrest back
- Tighten down screws

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52 26 388 Removing and installing/replacing rear middle head restraint



If applicable, fold back head restraint (1) and move upwards to max. extent.

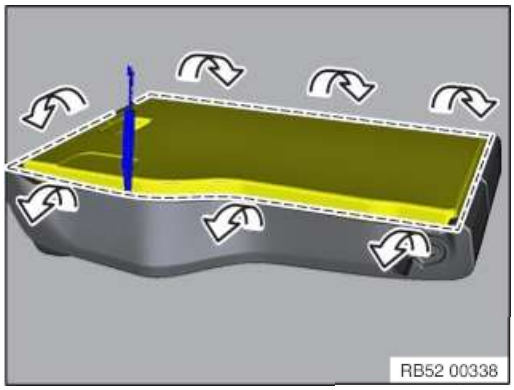
Press lock (2) and pull upwards and out head restraint (1).

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52 26 206 Removing and installing/replacing rear panel on left rear seat backrest (through-loading facility)

Necessary preliminary tasks:

- Fold left backrest forwards



Lever welt surrounding from backrest frame.

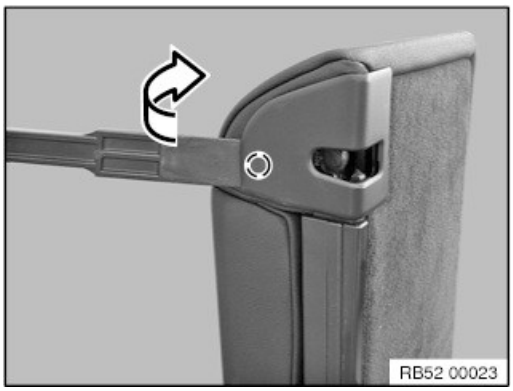
Remove rear panel from backrest frame.

Installation note:
Insert the rear panel in the backrest frame first.

Press the welt from the backrest cover into the frame.

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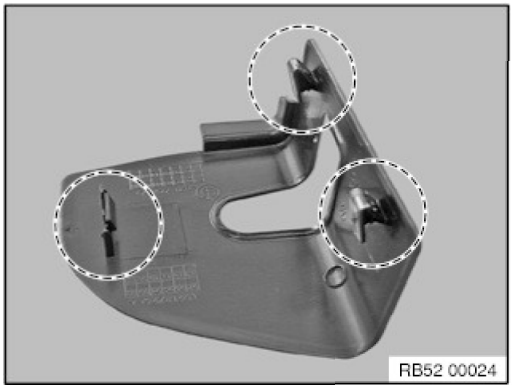
52 26 202 Removing and installing/replacing rear panel on rear centre seat backrest



Unclip trim coverÂ for lock with a plastic wedge.

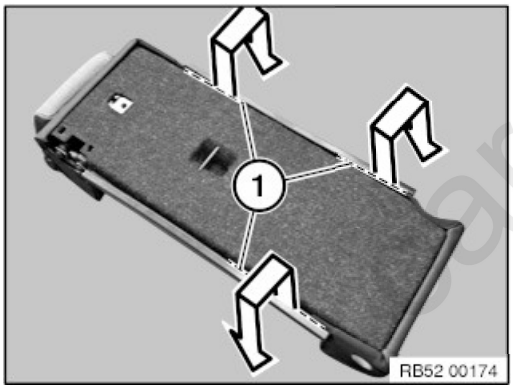
Move trim cover for lock a little towards the middle.

Detach trim cover for lock by pulling towards rear.



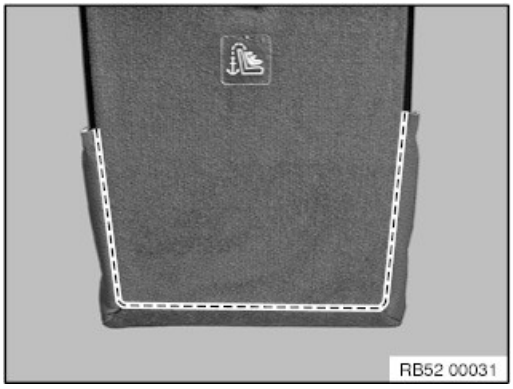
Installation note:
Retaining lugs on the trim cover for the lock must not be damaged.

Replace defective trim cover for lock.



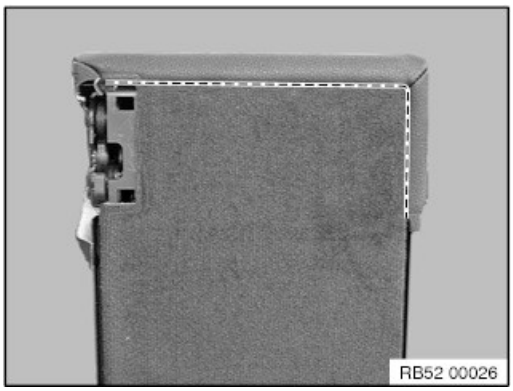
Note:
Welt of backrest cover is partially positioned below the centre armrest cover.

Carefully lift out the centre armrest cover in the marked area (1).



Lever out welt in marked area.

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Lever out welt in marked area.

Detach rear panel.

Installation note:
Insert the rear panel in the backrest frame first.

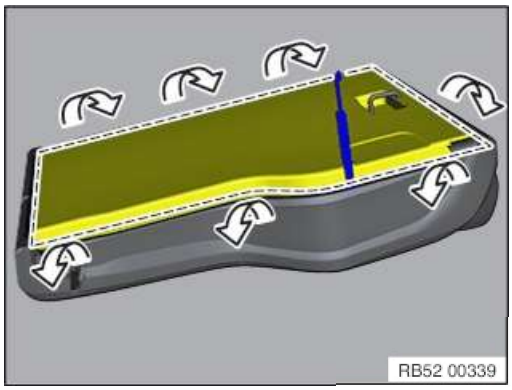
Insert welt of backrest cover in frame.

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52 26 200 Removing and installing/replacing rear panel on right rear seat backrest

Necessary preliminary tasks:

- Fold down the right backrest forwards



Lever welt surrounding from backrest frame.

Remove rear panel from backrest frame.

Installation note:
Insert the rear panel in the backrest frame first.

Press the welt from the backrest cover into the frame.

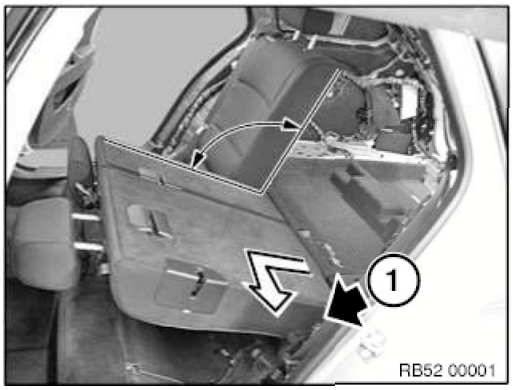
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52 26 020 Removing and refitting/replacing both rear seat backrests

Necessary preliminary tasks:

- Remove armrest side section
- Remove rear seat

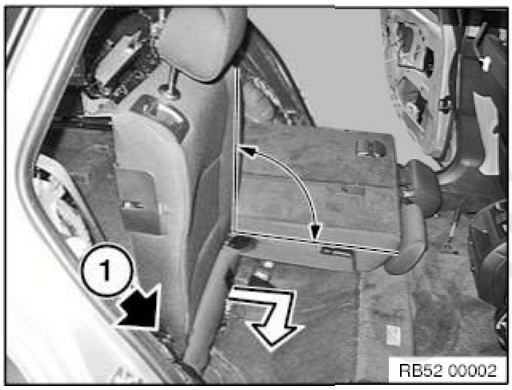
Note:
A helper is required for the removal and installation of the backrest.



Left backrest:

- Undo screw (1)
  Tightening torque 52 26 01AZ.
- Fold backrest forward slightly
- Pull backrest forwards and outwards out of centre mount

Installation note:
Replace screw (1).



Right backrest:

- Undo screw (1)
  Tightening torque 52 26 01AZ.
- Fold backrest forward slightly
- Pull backrest forwards and outwards out of centre mount

Installation note:
Replace screw (1).

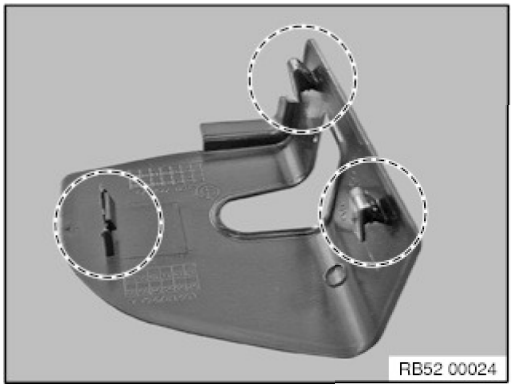
52 26 315 Removing and refitting/replacing lock for centre rear seat backrest



Unclip trim cover for lock with a plastic wedge.

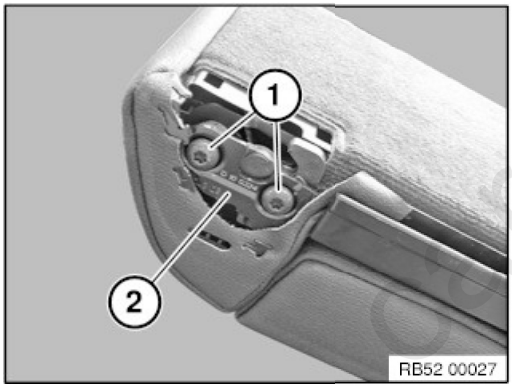
Move trim cover for lock a little towards the middle.

Detach trim cover for lock by pulling towards rear.



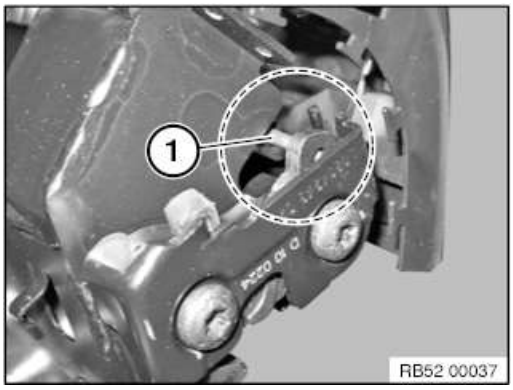
Installation note:
Retaining lugs on the trim cover for the lock must not be damaged.

Replace defective trim cover for lock.



Release screws (1) and feed lock (2) out of rear seat backrest.

Tightening torque 52 26 06AZ.



Installation note:
Make sure operating rod (1) is correctly seated in the lock.

Run a function check.

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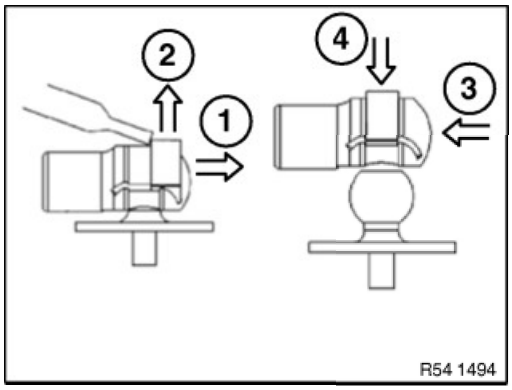
51 23 ... Removing/installing ball sockets with clip

Warning!

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

Important!

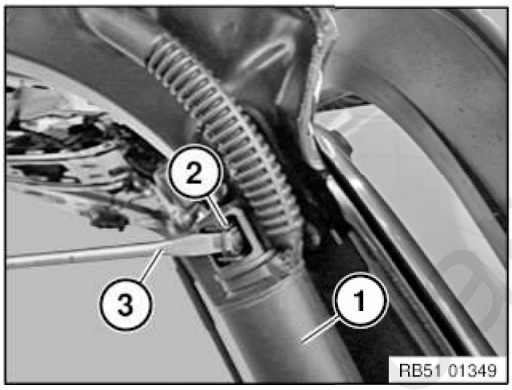
Never lift off ball socket with engaged clamp.



Version A:

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.



Version B:

Important!

Risk of damage!

If you are not careful, retaining spring (2) may be bent to such an extent that the entire drive spindle will have to be replaced.

Press drive spindle (1) against ball pin in order to relieve strain on retaining spring (2) at ball pin.

Pull out retaining spring (2) approx. 2-3 mm with screwdriver (3).

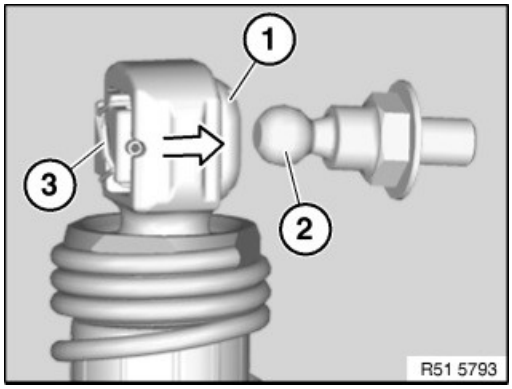
Pull off spindle foot.

Warning!

Observe warning notices on the damper.

Electrical spindle drive for tailgate is under mechanical spring load!

The component must be secured against falling down.

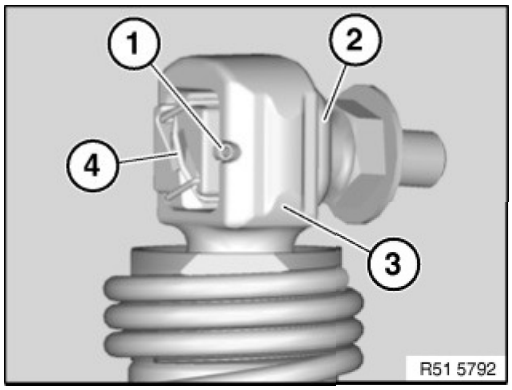


Attention!

Risk of damage!

Do not press on spindle drive at an angle or twisted.

Installation note:
Press ball socket (1) onto ball pin (2) until retaining spring (3) engages correctly (clicking sound).



Important!

If retaining spring (4) is damaged!

Release pin (1).

Remove spindle drive (3).

Remove ball socket (2).

Remove retaining spring (4) and replace if necessary.

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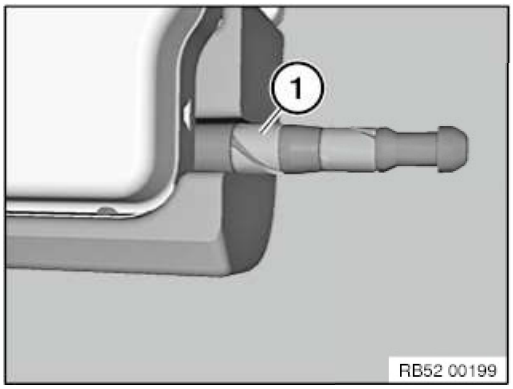
52 26 420 Replacing backrest cover for left rear seat (through-loading facility)

Special tools required:

- 52 0 050

Necessary preliminary tasks:

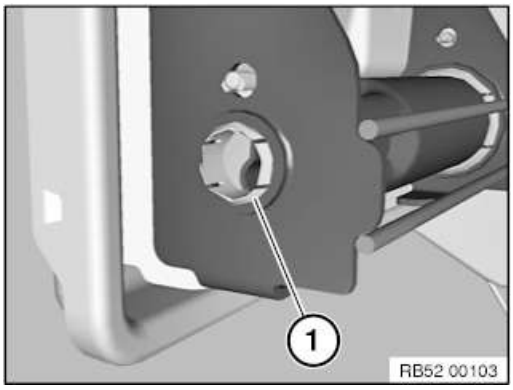
- Remove rear seat backrest, left
- Remove guide sleeves



Remove sleeve (1) from shaft.



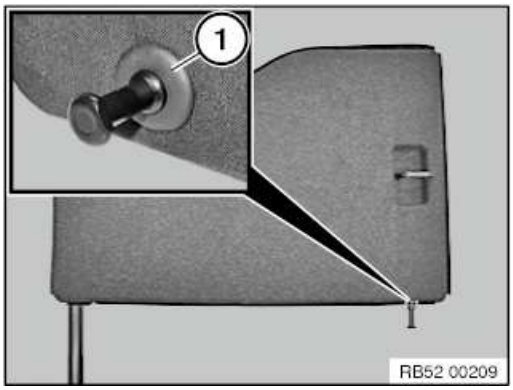
Remove centre rear seat backrest from support of left-hand backrest in direction of arrow.



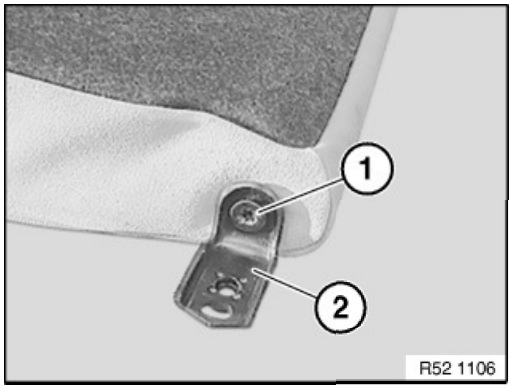
Installation note:
Plastic bush (1) may slide when removing the centre backrest.

Make sure plastic bush (1) is fitted correctly in the backrest frame.

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Remove sleeve (1).

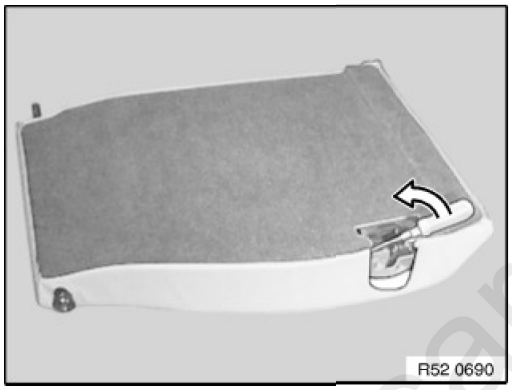


Release screw (1).

Tightening torque 52 26 03AZ.

Remove outer mount (2).

Installation note:
Replace screw (1).



Lever out welt in marked area from backrest frame.

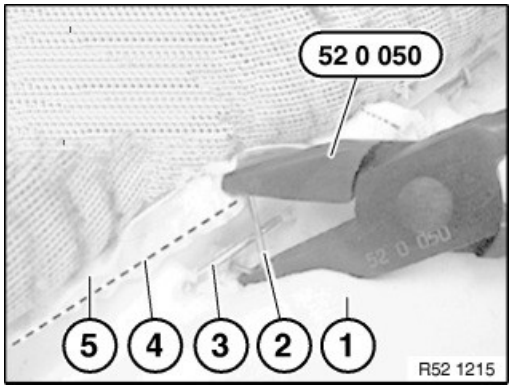
Remove backrest cover with padding from backrest frame.



<u>Detaching cover and upholstery:</u>

- Release all clamps on trim wires.
- Remove cover from upholstery
- Remove remaining clamps from cover and upholstery

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Installation note:
Insert new clamp (2) with special tool 52 0 050 and bend closed.

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



<u>Replacing cover:</u>

- Remove all trim wires from cover
- If necessary, cut pockets in new cover for trim wires
- Push trim wires into cover pockets

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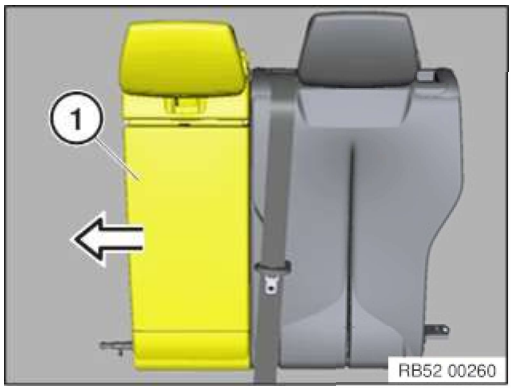
52 26 414 Replacing backrest cover for rear seat, centre

Special tools required:

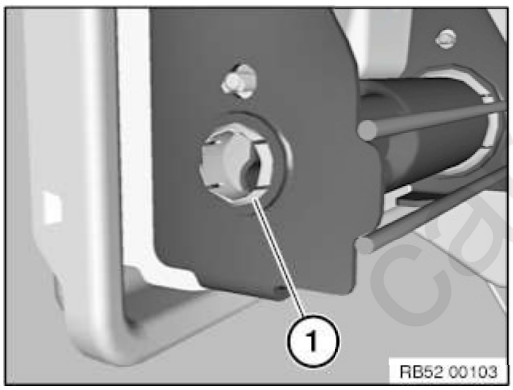
- 52 0 070

Necessary preliminary tasks:

- Remove left backrest for rear seat
- Remove centre armrest
- Removing rear middle head restraint



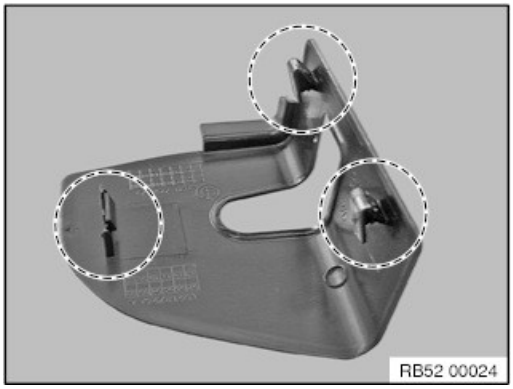
Remove backrest for centre rear seat (1) from support of left backrest in direction of arrow.



Installation note:
Plastic bush (1) may slide when removing the centre backrest.
Make sure plastic bush (1) is fitted correctly in the backrest frame.
The plastic bush (1) must be retained in the backrest frame.
If applicable, clip the plastic bush (1) in from the inside out.

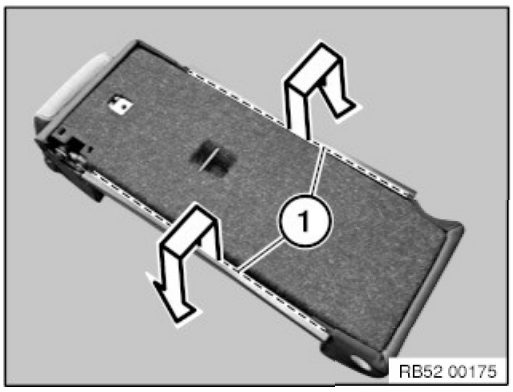


Unclip trim cover for lock with a plastic wedge.
Move trim cover for lock a little towards the middle.
Detach trim cover for lock by pulling towards rear.

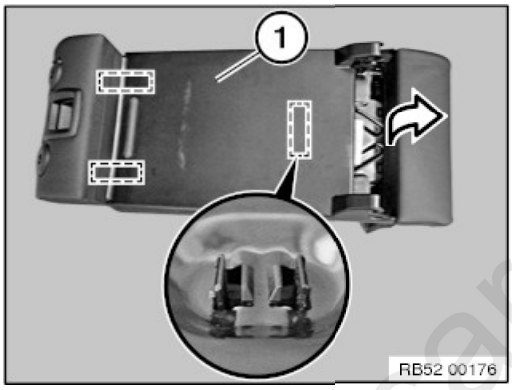


Installation note:
Retaining lugs on the trim cover for the lock must not be damaged.

Replace defective trim cover for lock.



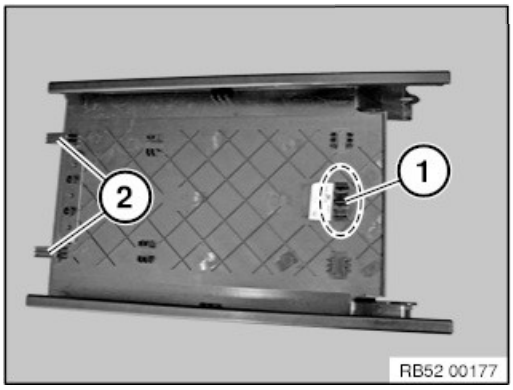
Carefully lift the centre armrest in the marked area (1) out of the backrest frame.



Unlock the back of the centre armrest cover (1).

Remove centre armrest cover (1) in direction of arrow from backrest frame.

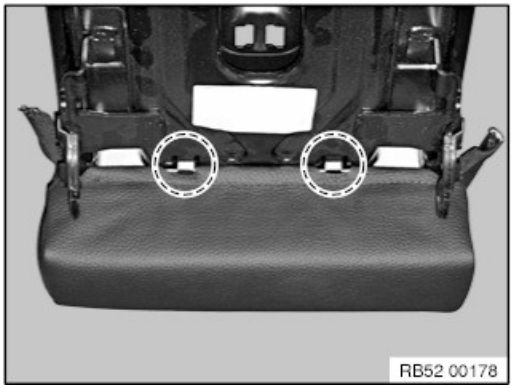
Installation note:
Make sure guide pin is correctly seated in backrest frame.



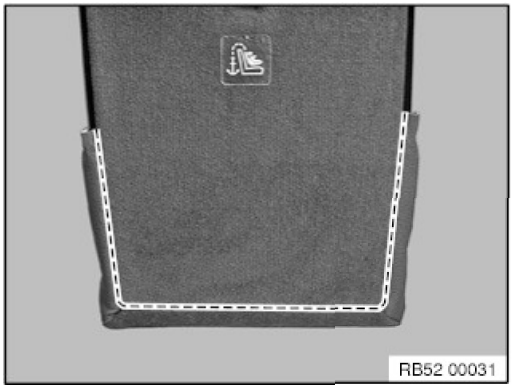
Guide pins (2) and latch mechanism (1) must not be damaged.

Replace defective centre armrest cover.

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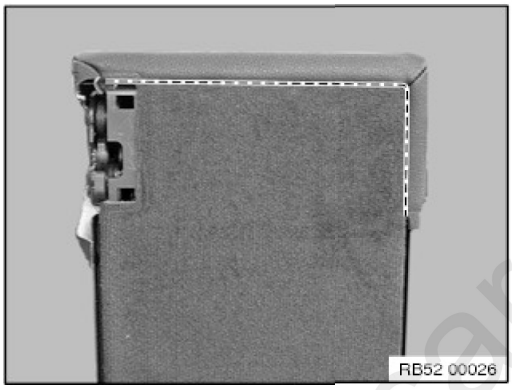


Detach bottom trim wire from claw studs.

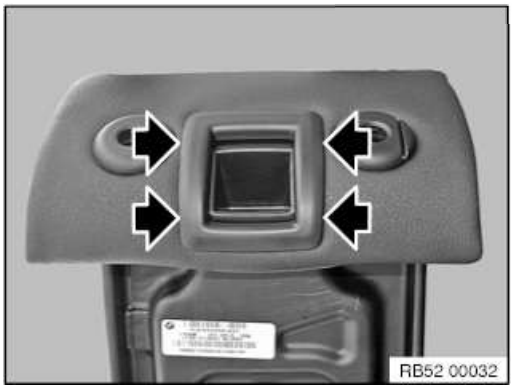


Lever out welt in lower marked area.

Remove lower seat cover.



Lever out welt in top marked area.



Important!

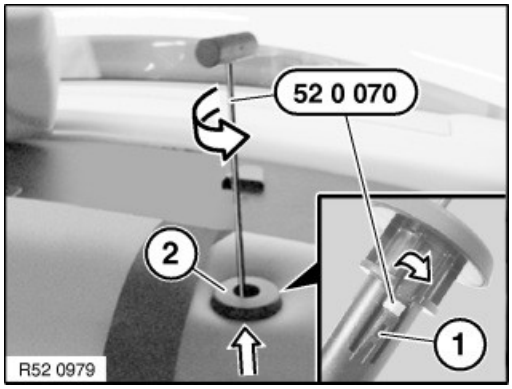
Risk of damage!

Insert plastic wedge from outside between trim (1) and lock.

Carefully lever out cover (1) from latch mechanism with plastic wedge in upward direction.

Remove trim upwards.

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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 rear gap on retaining lug (1).

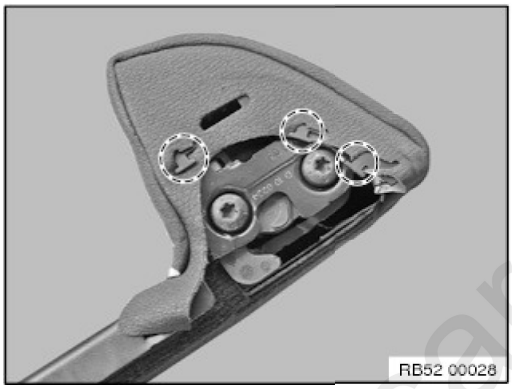
Turn tool to release sleeve (2) and pull out by lifting upwards.

Installation note:
Replace guide sleeves and install as follows:

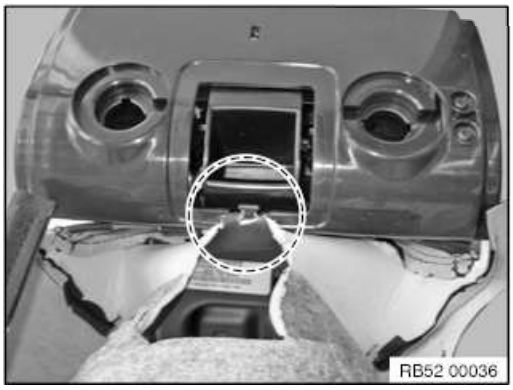
1. Short guide sleeves centre right
2. Short guide sleeve with centre left lock



Detach trim wire from claw studs.



Detach cover from plastic tabs.



Pull cover forward to remove from operating unit.

Detach cover from plastic tabs.

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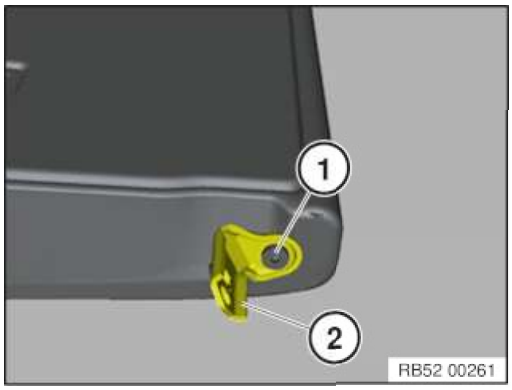
52 26 412 Replacing backrest cover for right rear seat

Special tools required:

- 52 0 050

Necessary preliminary tasks:

- Remove right backrest
- Remove guide sleeves right

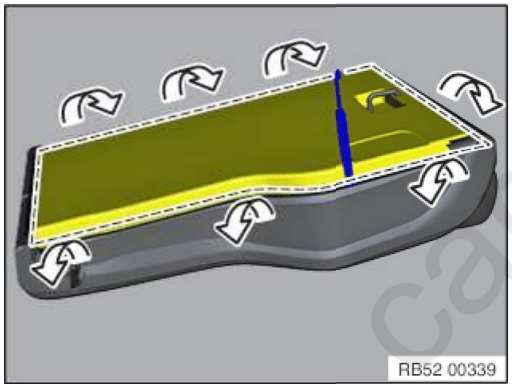


Release screw (1).

Tightening torque 52 26 03AZ.

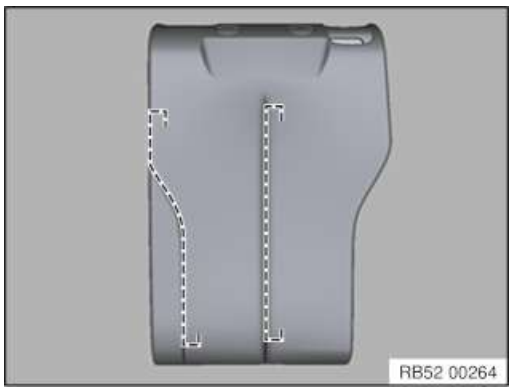
Remove outer mount (2).

Installation note:
Replace screw (1).



Lever out welt in marked area from backrest frame.

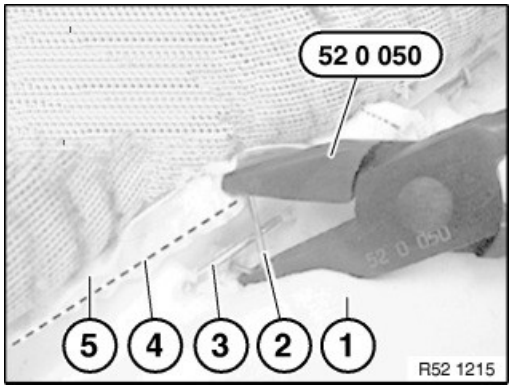
Remove backrest cover with padding from backrest frame.



<u>Detaching cover and upholstery:</u>

- Release all clamps on trim wires.
- Remove cover from upholstery
- Remove remaining clamps from cover and upholstery

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Installation note:
Insert new clamp (2) with special tool 52 0 050 and bend closed.

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



<u>Replacing cover:</u>

- Remove all trim wires from cover
- If necessary, cut pockets in new cover for trim wires
- Push trim wires into cover pockets

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52 26 450 Replacing padding for rear seat



This repair work is described in:
Replacing the seat cover for rear seat.

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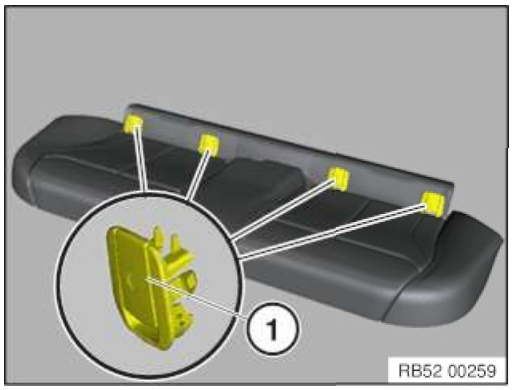
52 26 400 Replacing seat cover for rear seat

Special tools required:

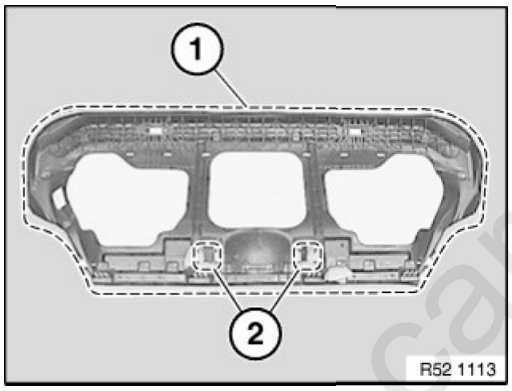
- 52 0 050

Necessary preliminary tasks:

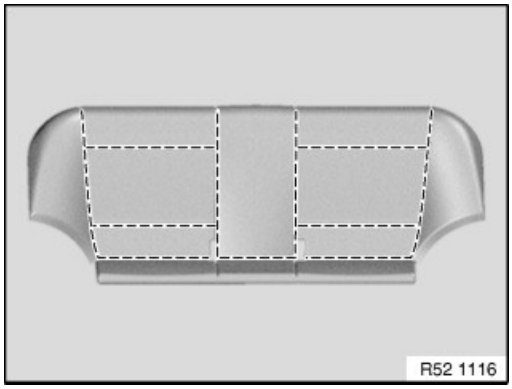
- Remove rear seat



Unclip ISOFIX cover cap.*Installation note:*
Pull cover straps through foam part into Isofix openings.
Make sure Isofix protective caps are correctly engaged.



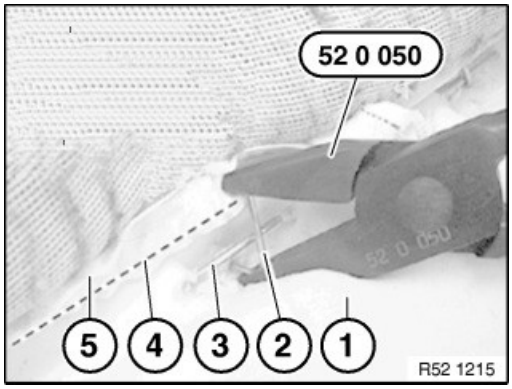
Lever out welt in area (1) with plastic wedge.
Unhook seat cover in area (2).



<u>Detaching cover and upholstery:</u>

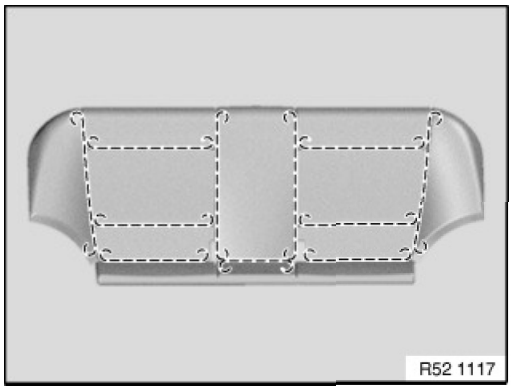
- Release all clamps on trim wires.
- Remove seat cover from upholstery
- Remove remaining clamps from cover and upholstery

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Installation note:
Insert new clamps with special tool 52 0 050 .

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



Replacement only:

- Push trim wires into new seat cover
- If necessary, cut in mounting for trim wires of new cover

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72 11 ... Checklist for front seat

Event		Check	Action
Has at least one belt tensioner and/or one side airbag been activated?	**Yes**	**Check 1 (when installed):** Check all seat adjustment options of both front seats. There must be no stiff movement, sticking or other functional problems or noises across the entire adjustment range of all the seat adjustment options. Check head restraints for damage. Check crash-active headrest for activation. **Only 2-door model:** Check backrest lock. Backrest must unlock and lock easily without any great physical effort.	If components are OK with regard to checks 1 and 2, only replace activated belt tensioner or side airbag. Otherwise, replace faulty parts on the seat/body. Replace belt tensioner, seat belt and, if necessary, side airbag.
		Check 2 (when dismounted): Check for deformation/damage on the following components: 1. All seat cross members on the body 2. Threaded support sleeves in the seat cross members 3. End fittings on the seat mechanism. Check for visible damage or deformation.	
	No	Check all adjustment options of the head restraints. Check crash-active headrest for activation.	Replace faulty parts.
Only seat with integrated seat belt:			
Does the backrest indicator light turn on when the backrest is locked and also when the backrest is shaken?	**Yes**	Check microswitch of backrest lock and renew if necessary. Check electrical lines and repair if necessary.	If there is still a fault, replace the entire seat
	No	No further action necessary.	

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00 00 ... Microencapsulated screws



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

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