62 11 280 Removing and installing instrument cluster

RISK OF DAMAGE

Careless handling of tools and sharp-edged components.

Scratch, surface damage.

- Protect working area.
- Handle tools and components carefully.

RISK OF DAMAGE



Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)

PRELIMINARY WORK

1 – Deactivating the 48 V electrical system

Prerequisite

Ignition is switched off.

WARNING

Deactivation of the 12 V vehicle electrical system.

Risk of short circuits! Risk of fire!

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

WARNING

Deactivation of the 48 V electrical system.

Risk of short circuits! Risk of fire!

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

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RISK OF DAMAGE

Damage to 48-V battery

If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

TECHNICAL INFORMATION

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.



- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.



Check

TECHNICAL INFORMATION

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

desired state

- The Check Control message "48V electrical system switched off." (1) is displayed.

Result

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

Measure

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

If the absence of voltage is not indicated clearly, contact Technical Support.

Result

» The Check Control message signals that the 48V electrical system has been switched off.

Measure

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.



- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).



- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.



WARNING

Unprotected battery terminals.

Risk of short circuits! Risk of fire!

- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

2 – Adjust the steering column position



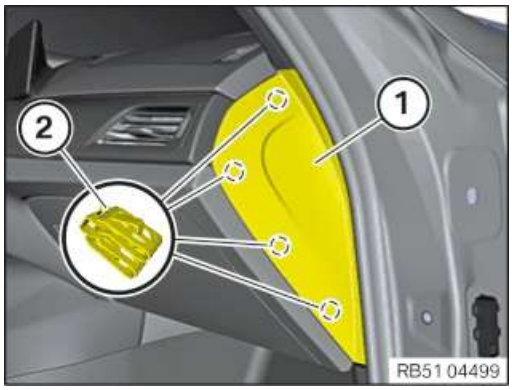
- Adjust the length of the steering column to the maximum length in the direction of arrow (1).
- Move the steering column to the lowest steering column position in the direction of arrow (2).

3 – Disconnecting all battery earth leads



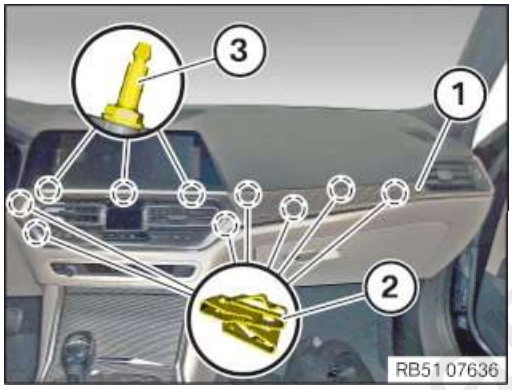
- See additional information.

4 – Remove the side panel on the right instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).
- If necessary, unlock associated plug connection and disconnect.

5 – Remove the finisher on the right instrument panel



- Unclip the decorative strip (1) towards rear at the clamps (2) and the pins (3).
- Unlock associated plug connection and disconnect.
- Remove the decorative strip (1).

6 – Remove Central Information Display (CID)

RISK OF DAMAGE

Electrostatic discharge.

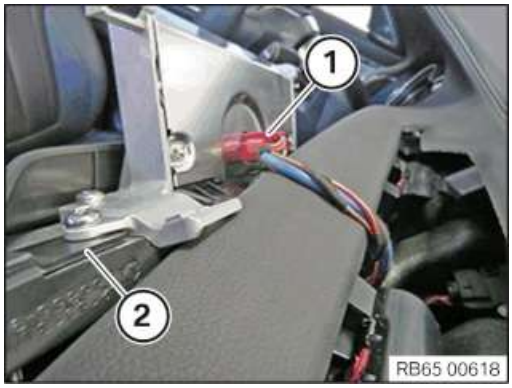
Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)

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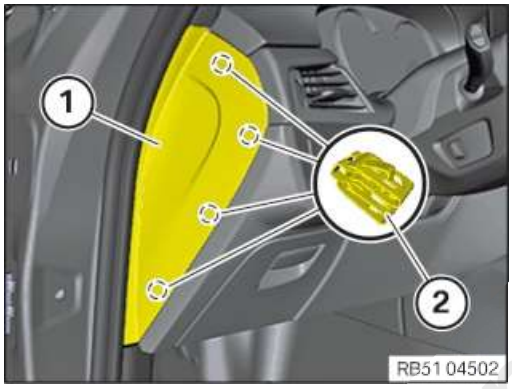


- Loosen screws (1).
- Pull out central information display (CID) (2) slightly off the instrument panel.



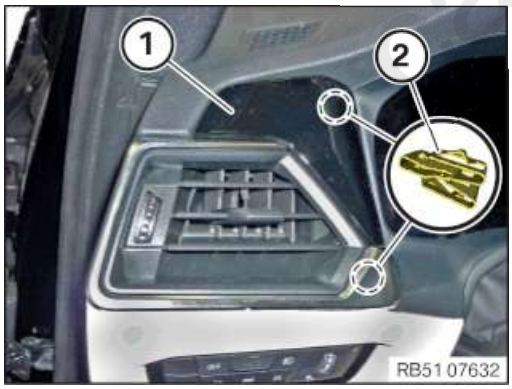
- Unlock plug connection (1) and disconnect.
- Remove the central information display (CID) (2).

7 – Remove the side panel on the left instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).

8 – Remove the finisher on the instrument panel on the left

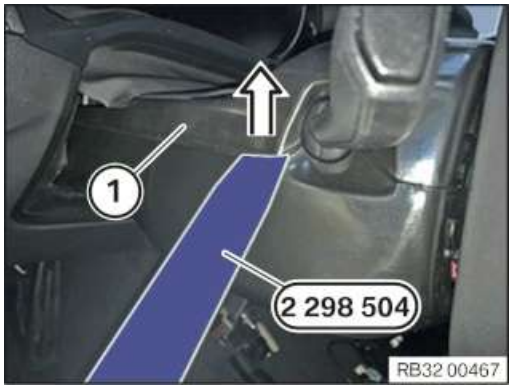


- Unclip decorative strip (1) to the rear out of the clamps (2).
- Unlock associated plug connection and disconnect.

  Remove the decorative strip (1).

9 – Removing steering column shroud upper section

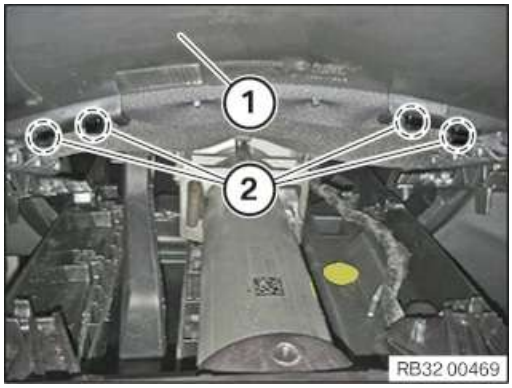
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NOTICE

Perform the operations on the left and right side.

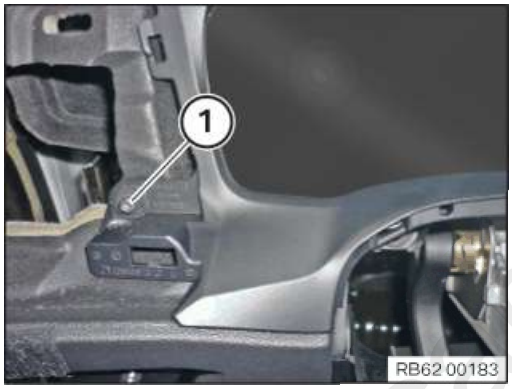
- Unlock the steering column shroud upper section (1) with the special tool 2 298 504 and fold up.



- Unclip the steering column shroud upper section (1) from the brackets (2).
- Remove the steering column shroud upper section (1).

MAIN WORK

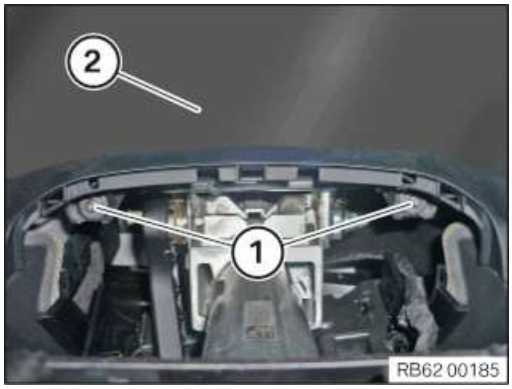
10 – Removing the instrument cluster (KOMBI)



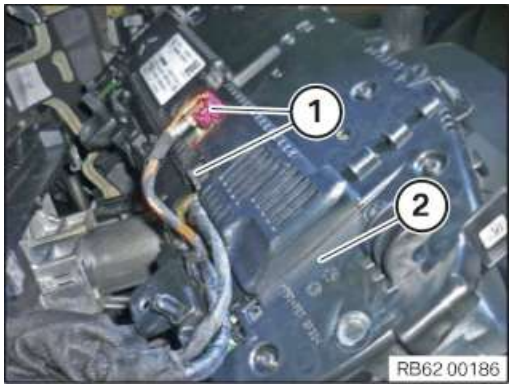
- Loosen screw (1).



- Loosen screw (1).

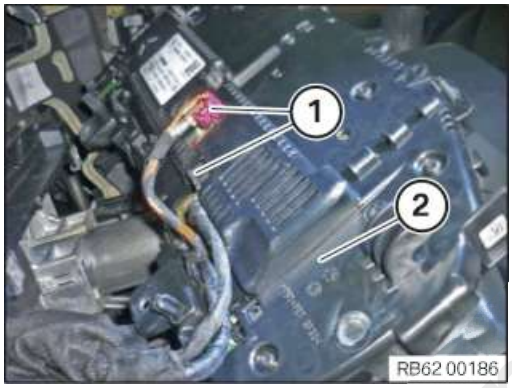


- Loosen screws (1).
- Feed out instrument cluster (KOMBI) (2).

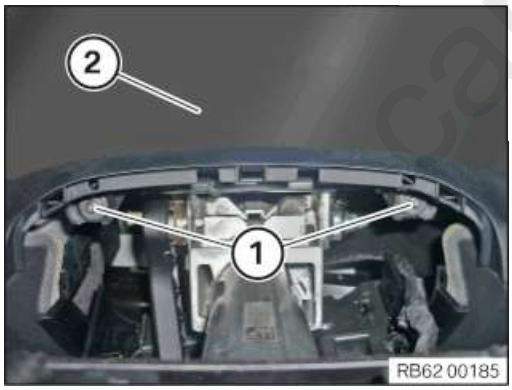


- Unlock and disconnect plug connections (1) from instrument cluster (KOMBI) (2).
- Remove the instrument cluster (KOMBI) (2).

11 – Installing the instrument cluster (KOMBI)



- Connect and lock connector (1) to the instrument cluster (KOMBI) (2).



- Feed in and position the instrument cluster (KOMBI) (2).
- Tighten the screws (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm



- Tighten down screw (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm

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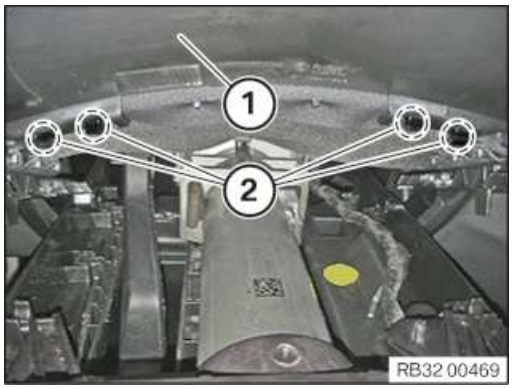
- Tighten down screw (1).

Instrument cluster (KOMBI) to support

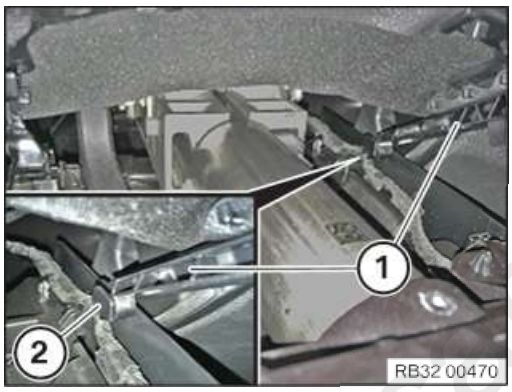
Screw		Tightening torque	1,8 Nm

POSTPROCESSES

12 – Fit steering column shroud upper section



- Clip in the steering column shroud upper section (1) at the brackets (2).



NOTICE

Perform the operations on the left and right side.

- Clip in the steering column shroud upper section (1)into the guide (2).



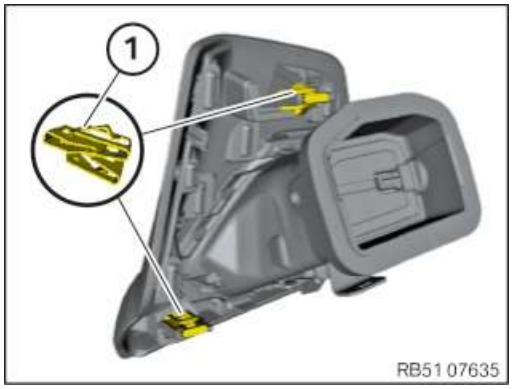
NOTICE

Perform the operations on the left and right side.

- Press the upper section of the steering column shroud (1) downwards in direction of arrow.

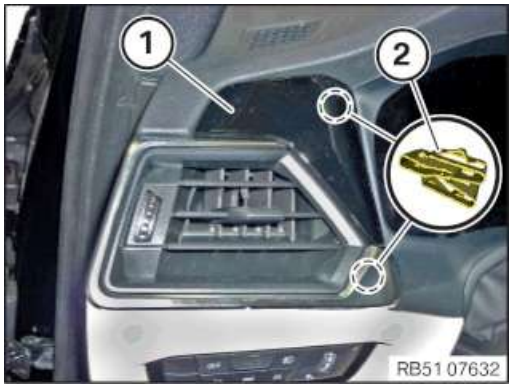
  The upper section of the steering column shroud must engage audibly and perceptibly.

13 – Install the finisher on the instrument panel on the left



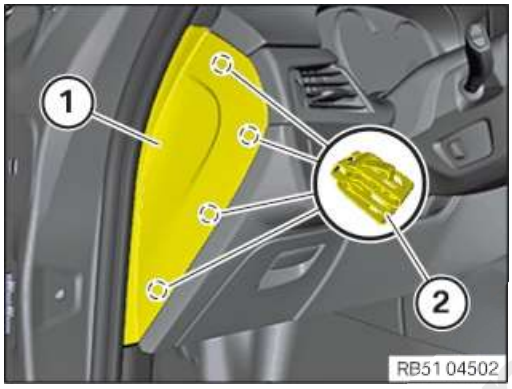
- Check the clamps (1) for damage and that they are present.

  Damaged or missing clamps (1) must be renewed.



- Install the decorative strip (1).
- Connect and lock the associated connectors.
- Clip decorative strip (1) into clamps (2).

14 – Install the side panel on left instrument panel



- Feed in the side panel (1) and clip it in at the clamps (2).

15 – Install the central information display (CID)

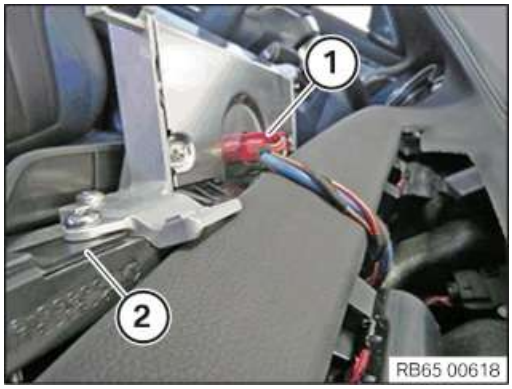
RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)

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- Position Central Information Display (CID) (2).
- Connect plug connection (1) and lock.

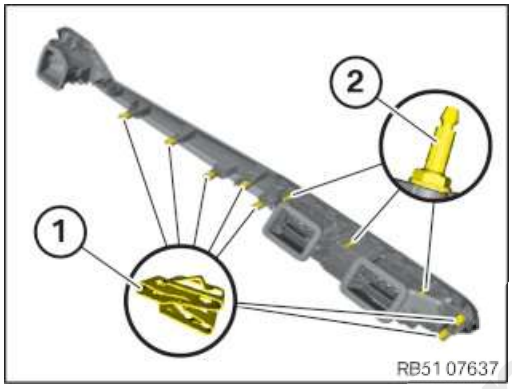


- Insert the central information display (CID) (2) in the instrument panel and position correctly.
- Tighten the screws (1).

Central information display to instrument panel

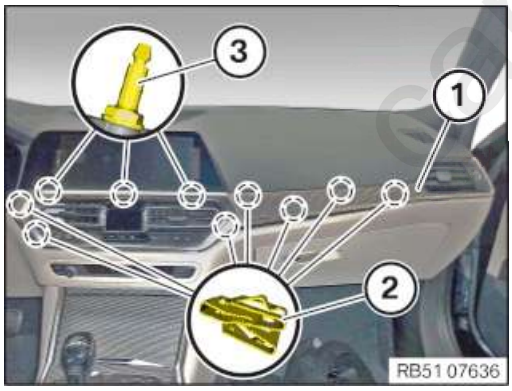
Screw		Tightening torque	2,4 Nm

16 – Install the finisher on the right instrument panel



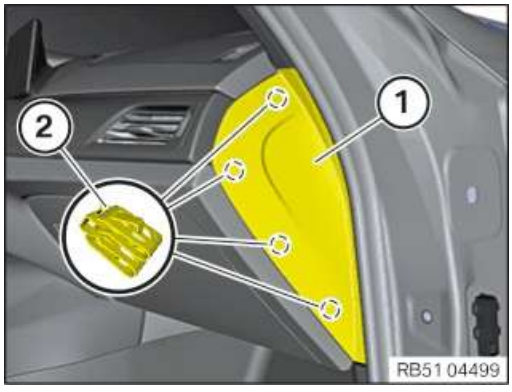
- Checks clamps (1) for damage.

  Defective or missing clamps (1) need to be renewed.
- Check the pins (2) and the accompanying clamps at the instrument panel trim for damage, renew if necessary.



- Install the decorative strip (1).
- Connect and lock corresponding connectors.
- Correctly position the decorative strip (1) and at the clamps (2) and clip in the pins (3).

17 – Install the side panel on instrument panel on the right



- If required, connect the associated connector.
- Feed in the side panel (1) and clip it in at the clamps (2).

carsdiagn.com

18 – Connecting all battery earth leads



- See additional information.

19 – Activating the 48 V electrical system

Prerequisite

Ignition is switched off.

RISK OF DAMAGE

Damage to 48-V battery

If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.



- Lift battery earth lead (1).
- Remove special tool .



- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

Negative battery cable to 48-V battery

Nut M8		Tightening torque	19 Nm



- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).



- Activate the 48V electrical system by closing the bonnet.
  The activation takes place automatically.

Additional Information

Overview of Tightening Torques

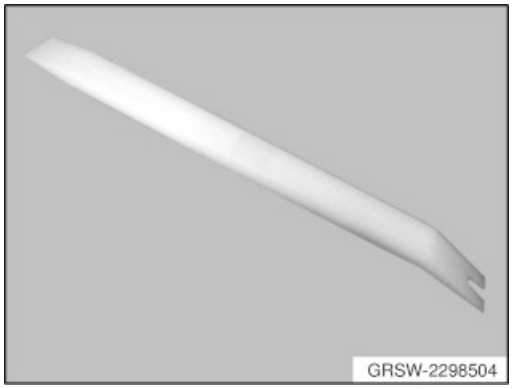
Instrument cluster (KOMBI) to support			Used in step 11
Screw		Tightening torque	1,8 Nm

Central information display to instrument panel			Used in step 15
Screw		Tightening torque	2,4 Nm

Negative battery cable to 48-V battery			Used in step 19
Nut M8		Tightening torque	19 Nm

Overview of Special Tools

2 298 504 Wedge



Common		Used in step 9
Usage	Wedge with angled lug	
Included in the tool or work		
Storage location	C34	
Replaced by		
In connection with		
SI-Number	01 03 12 (792)	

Links

Repair instructions (PRE)	Used in step
Notes on 48-V battery	119

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Repair instructions	Used in step
61 35 ... Notes on ESD protection (Electro Static Discharge)	615
61 35 ... Notes on ESD protection (Electro Static Discharge)	615
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	318
61 20 900 Disconnecting and connecting battery earth lead	318
61 20 900 Disconnecting and connecting battery earth lead	318
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	318
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	318
61 20 900 Disconnecting and connecting battery earth lead	318
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	318
61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle)	318
61 20 900 Disconnecting and connecting battery earth lead	318
61 20 900 Disconnecting and connecting battery earth lead	318
61 20 900 Disconnecting and connecting battery earth lead	318
61 20 900 Disconnecting and connecting battery earth lead	318
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61 20 900 Disconnecting and connecting battery earth lead	318

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61 20 900 Disconnecting and connecting battery earth lead	318
61 20 900 Disconnecting and connecting battery earth lead	318
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	318
61 20 900 Disconnecting and connecting battery earth lead	318
61 20 900 Disconnecting and connecting battery earth lead	318
61 20 900 Disconnecting and connecting battery earth lead	318

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62 11 786 Replace KOMBI

RISK OF DAMAGE

Careless handling of tools and sharp-edged components.

Scratch, surface damage.

- Protect working area.
- Handle tools and components carefully.

RISK OF DAMAGE



Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)

PRELIMINARY WORK

1 – Deactivating the 48 V electrical system

Prerequisite

Ignition is switched off.

WARNING

Deactivation of the 12 V vehicle electrical system.

Risk of short circuits! Risk of fire!

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

WARNING

Deactivation of the 48 V electrical system.

Risk of short circuits! Risk of fire!

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

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RISK OF DAMAGE

Damage to 48-V battery

If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

TECHNICAL INFORMATION

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.



- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.



Check

TECHNICAL INFORMATION

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

desired state

- The Check Control message "48V electrical system switched off." (1) is displayed.

Result

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

Measure

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

If the absence of voltage is not indicated clearly, contact Technical Support.

Result

» The Check Control message signals that the 48V electrical system has been switched off.

Measure

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.



- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).



- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.



WARNING

Unprotected battery terminals.

Risk of short circuits! Risk of fire!

- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

2 – Adjust the steering column position



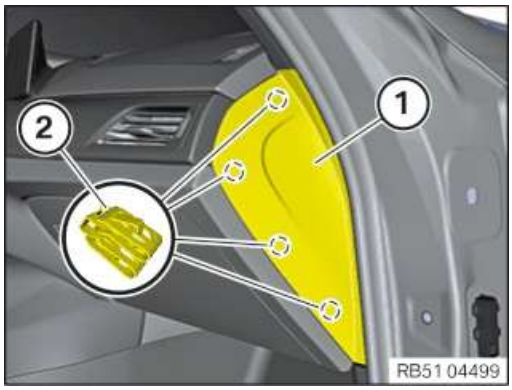
- Adjust the length of the steering column to the maximum length in the direction of arrow (1).
- Move the steering column to the lowest steering column position in the direction of arrow (2).

3 – Disconnecting all battery earth leads



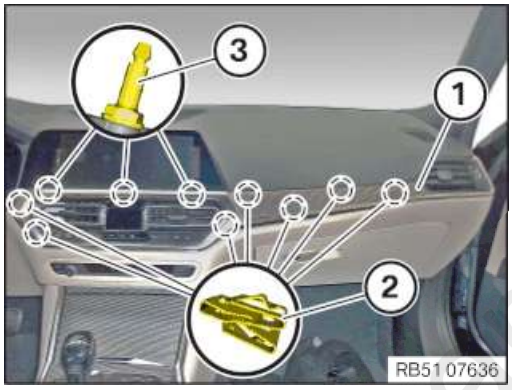
- See additional information.

4 – Remove the side panel on the right instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).
- If necessary, unlock associated plug connection and disconnect.

5 – Remove the finisher on the right instrument panel



- Unclip the decorative strip (1) towards rear at the clamps (2) and the pins (3).
- Unlock associated plug connection and disconnect.
- Remove the decorative strip (1).

6 – Remove Central Information Display (CID)

RISK OF DAMAGE

Electrostatic discharge.

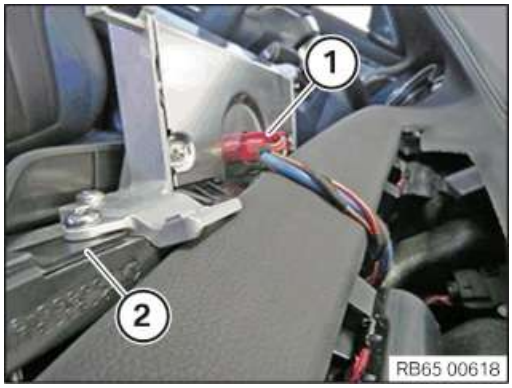
Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)

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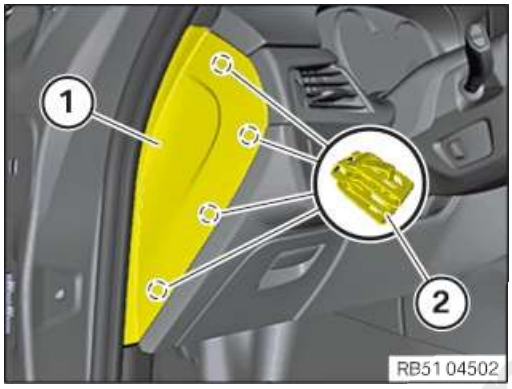


- Loosen screws (1).
- Pull out central information display (CID) (2) slightly off the instrument panel.



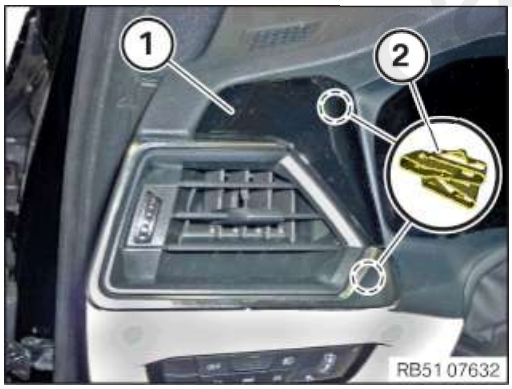
- Unlock plug connection (1) and disconnect.
- Remove the central information display (CID) (2).

7 – Remove the side panel on the left instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).

8 – Remove the finisher on the instrument panel on the left

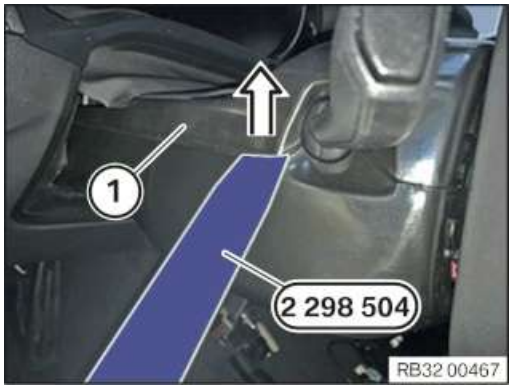


- Unclip decorative strip (1) to the rear out of the clamps (2).
- Unlock associated plug connection and disconnect.

  Remove the decorative strip (1).

9 – Removing steering column shroud upper section

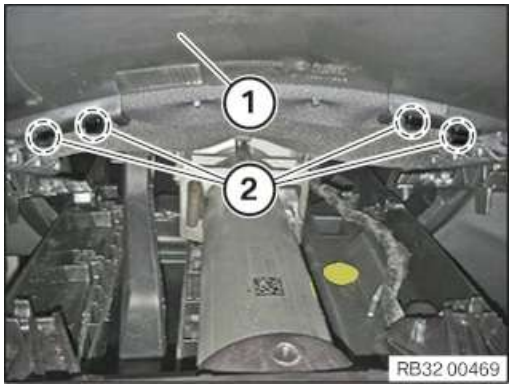
ardiagn.com



NOTICE

Perform the operations on the left and right side.

- Unlock the steering column shroud upper section (1) with the special tool 2 298 504 and fold up.



- Unclip the steering column shroud upper section (1) from the brackets (2).
- Remove the steering column shroud upper section (1).

10 – Activating the 48 V electrical system

Prerequisite

Ignition is switched off.

RISK OF DAMAGE

Damage to 48-V battery

If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.



- Lift battery earth lead (1).
- Remove special tool .



- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

Negative battery cable to 48-V battery

Nut M8		Tightening torque	19 Nm

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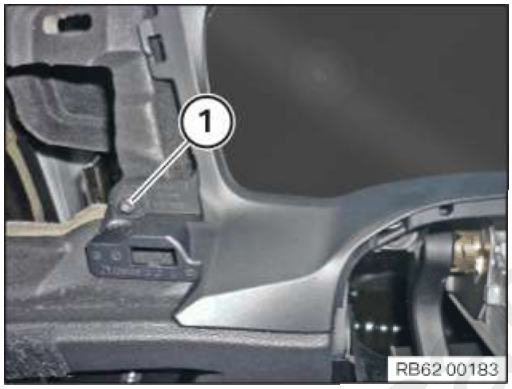
- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).



- Activate the 48V electrical system by closing the bonnet.
  The activation takes place automatically.

MAIN WORK

11 – Removing the instrument cluster (KOMBI)

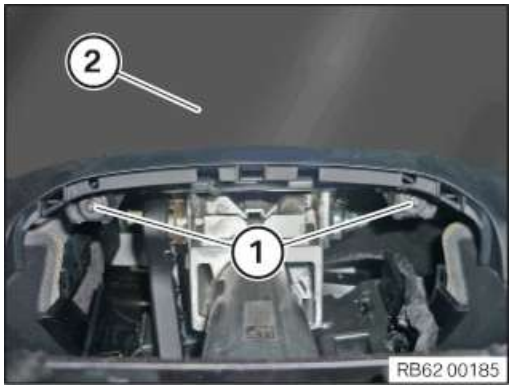


- Loosen screw (1).

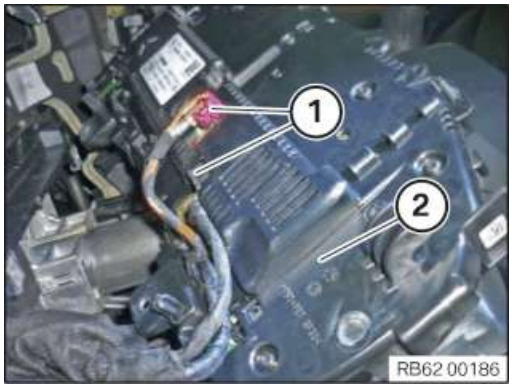


- Loosen screw (1).

bmwdiagn.com



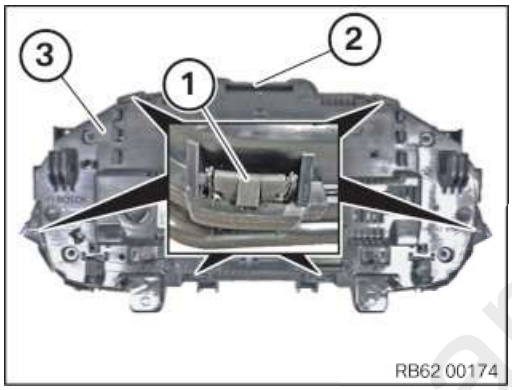
- Loosen screws (1).
- Feed out instrument cluster (KOMBI) (2).



- Unlock and disconnect plug connections (1) from instrument cluster (KOMBI) (2).
- Remove the instrument cluster (KOMBI) (2).

12 – Remounting the adapter for the trim of the instrument cluster

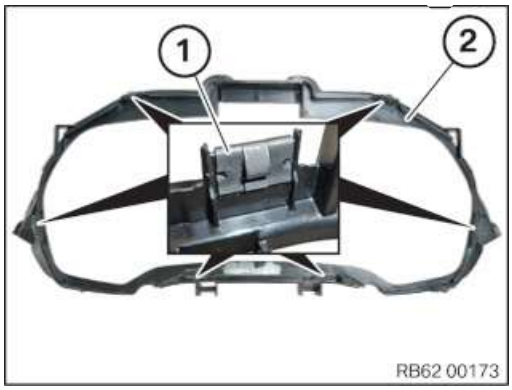
▸ **Removing the adapter for the trim of the instrument cluster**



- Loosen the clasps (1).
- Remove the adapter (2) for the trim of the instrument cluster (3).

▸ **Installing the adapter for the trim of the instrument cluster**

Check



- Check the trim (1) and guides on the adapter (2) for the trim for damage.

Result

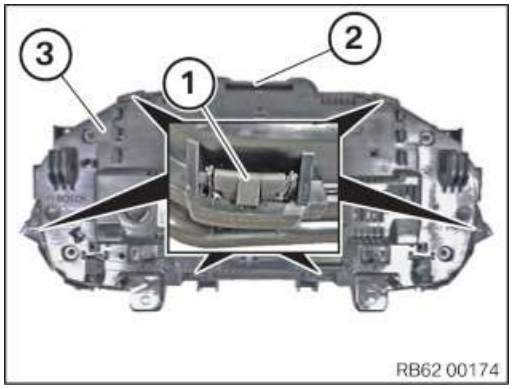
» Clasps (1) or guides are damaged.

Measure

- Renew the adapter (2) for the trim.

  Parts: Adapter

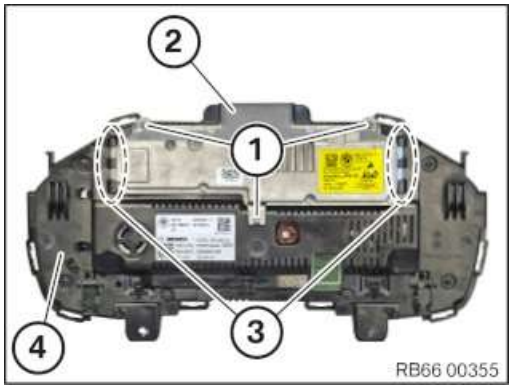
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- Position the adapter (2) for the trim on the instrument cluster (3) and clip into place.

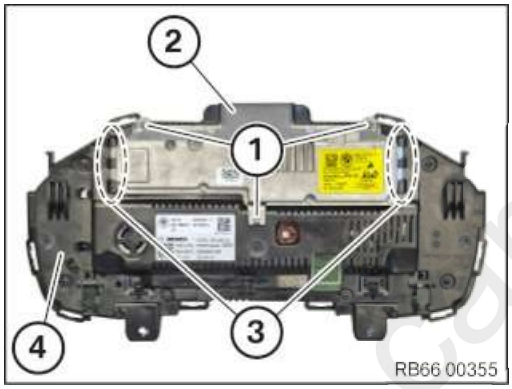
  The clasps (1) must engage audibly.

13 – If installed: Remounting the Driver Camera System (DCS)



▸ **Remove the Driver Camera System (DCS)**

- Release screws (1) on Driver Camera System (DCS) (2).
- Feed out the Driver Camera System (DCS) (2) upwards on the guides (3) of the instrument cluster (4) and remove it.

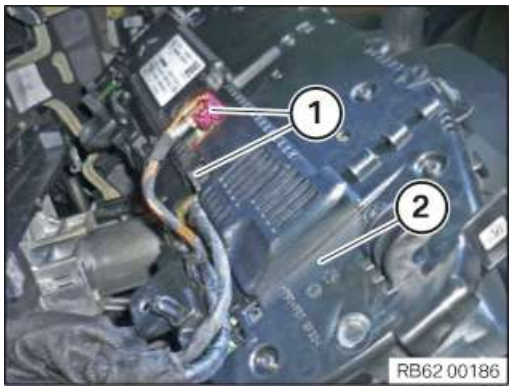


▸ **Installing the Driver Camera System (DCS)**

- Feed the Driver Camera System (DCS) (2) into the guides (3) of the instrument cluster (4) from the top.
- Tighten the screws (1) on the Driver Camera System (DCS) (2).

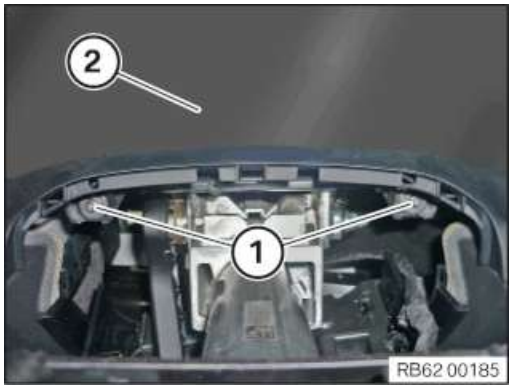
Driver Camera System (DCS) to instrument cluster			
Screw		Tightening torque	1.05 Nm

14 – Installing the instrument cluster (KOMBI)



- Connect and lock connector (1) to the instrument cluster (KOMBI) (2).

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- Feed in and position the instrument cluster (KOMBI) (2).
- Tighten the screws (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm



- Tighten down screw (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm



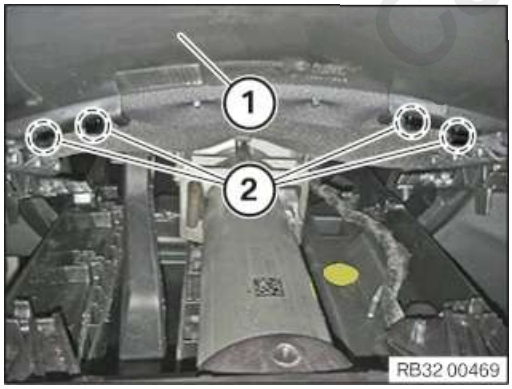
- Tighten down screw (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm

POSTPROCESSES

15 – Fit steering column shroud upper section



- Clip in the steering column shroud upper section (1) at the brackets (2).

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NOTICE

Perform the operations on the left and right side.

- Clip in the steering column shroud upper section (1)into the guide (2).



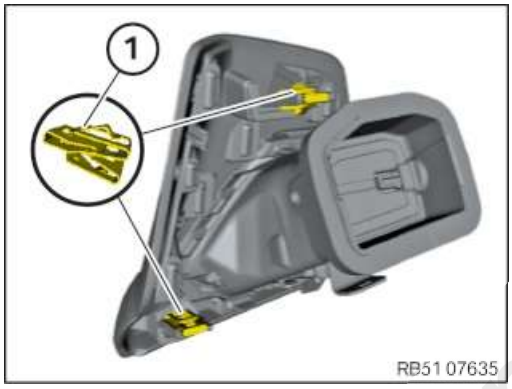
NOTICE

Perform the operations on the left and right side.

- Press the upper section of the steering column shroud (1) downwards in direction of arrow.

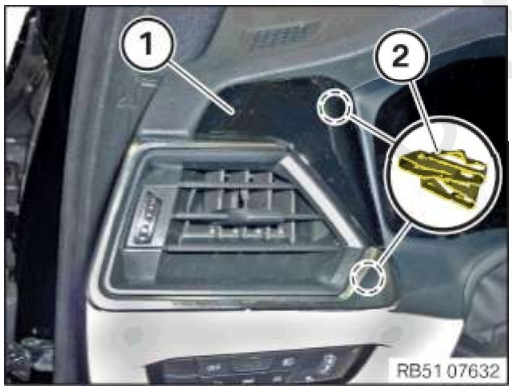
  The upper section of the steering column shroud must engage audibly and perceptibly.

16 – Install the finisher on the instrument panel on the left



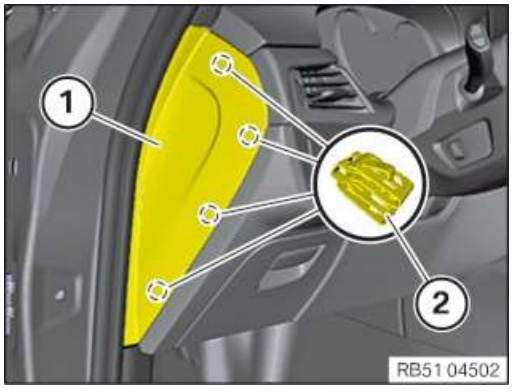
- Check the clamps (1) for damage and that they are present.

  Damaged or missing clamps (1) must be renewed.



- Install the decorative strip (1).
- Connect and lock the associated connectors.
- Clip decorative strip (1) into clamps (2).

17 – Install the side panel on left instrument panel



- Feed in the side panel (1) and clip it in at the clamps (2).

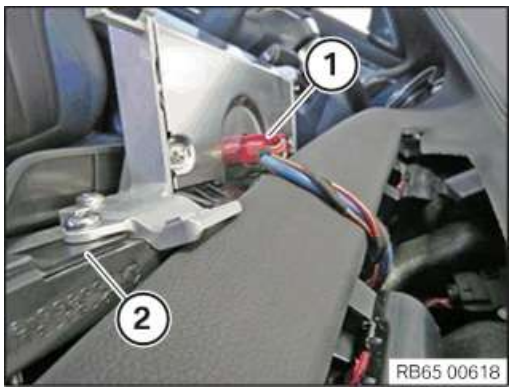
18 – Install the central information display (CID)

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)



- Position Central Information Display (CID) (2).
- Connect plug connection (1) and lock.

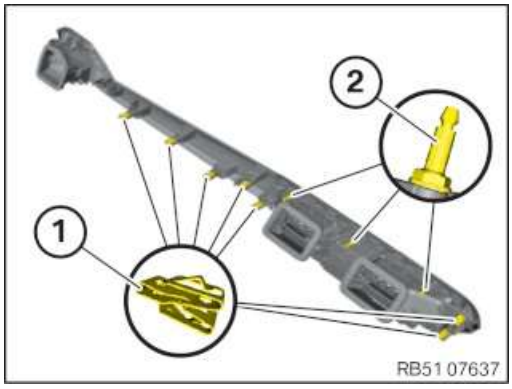


- Insert the central information display (CID) (2) in the instrument panel and position correctly.
- Tighten the screws (1).

Central information display to instrument panel

Screw		Tightening torque	2,4 Nm

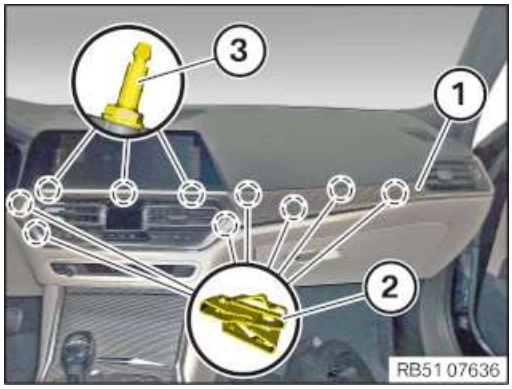
19 – Install the finisher on the right instrument panel



- Checks clamps (1) for damage.

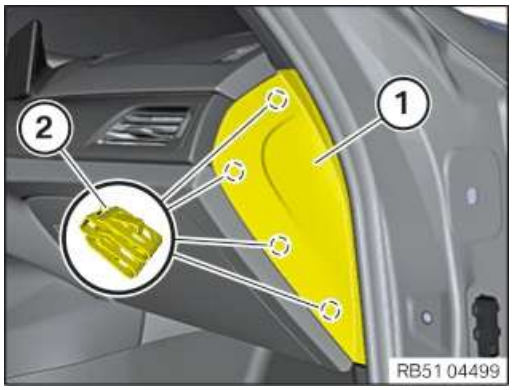
  Defective or missing clamps (1) need to be renewed.
- Check the pins (2) and the accompanying clamps at the instrument panel trim for damage, renew if necessary.

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- Install the decorative strip (1).
- Connect and lock corresponding connectors.
- Correctly position the decorative strip (1) and at the clamps (2) and clip in the pins (3).

20 – Install the side panel on instrument panel on the right



- If required, connect the associated connector.
- Feed in the side panel (1) and clip it in at the clamps (2).

21 – Connecting all battery earth leads



- See additional information.

22 – Encode/program control unit(s)

Prerequisite

Component has been replaced.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

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- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

Additional Information

Overview of Tightening Torques

Negative battery cable to 48-V battery			Used in step 10
Nut M8		Tightening torque	19 Nm

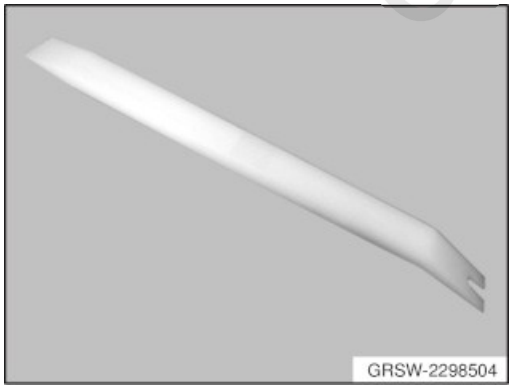
Driver Camera System (DCS) to instrument cluster			Used in step 13
Screw		Tightening torque	1.05 Nm

Instrument cluster (KOMBI) to support			Used in step 14
Screw		Tightening torque	1,8 Nm

Central information display to instrument panel			Used in step 18
Screw		Tightening torque	2,4 Nm

Overview of Special Tools

2 298 504 Wedge



Common	Used in step 9
Usage	Wedge with angled lug
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

Links

Repair instructions (PRE)	**Used in step**
Notes on 48-V battery	110

Repair instructions	**Used in step**

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61 35 ... Notes on ESD protection (Electro Static Discharge)	618
61 35 ... Notes on ESD protection (Electro Static Discharge)	618
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	321
61 20 900 Disconnecting and connecting battery earth lead	321
61 20 900 Disconnecting and connecting battery earth lead	321
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	321
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	321
61 20 900 Disconnecting and connecting battery earth lead	321
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	321
61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle)	321
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61 20 900 Disconnecting and connecting battery earth lead	321
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	321
61 20 900 Disconnecting and connecting battery earth lead	321
61 20 900 Disconnecting and connecting battery earth lead	321
61 20 900 Disconnecting and connecting battery earth lead	321

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62 30 ... Notes on head-up display

Note:
A special windscreen must be fitted to ensure that the Head-Up Display image can be projected correctly.

This windscreen comprises three sections. An outer and an inner glass pane are connected by a wedge-shaped plastic film.

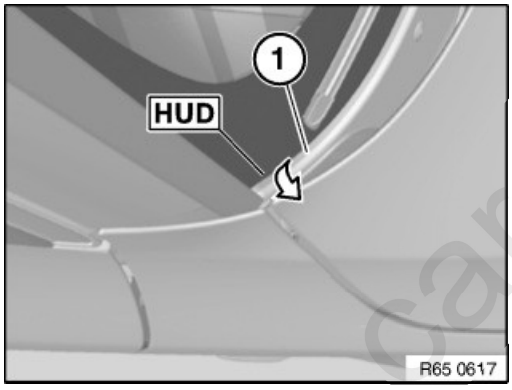
The wedge shape prevents double projection of the Head-Up Display.

When the windscreen is replaced, the vehicle identification number and Electronic Parts Catalogue must be checked to ascertain whether the windscreen in question is suitable for HUD.



Example of the display with a conventional windscreen:

With a conventional windscreen, the projected image is reflected on the inner and outer glass pane, producing a double image.



Note:
Windscreens for Head-Up Display, for vehicles with model year up to 2012, are marked with the letters "HUD" on the outside at the bottom right below the seal (1).

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62 30 010 Removing and installing head-up display

PRELIMINARY WORK

1 – Adjust the steering column position

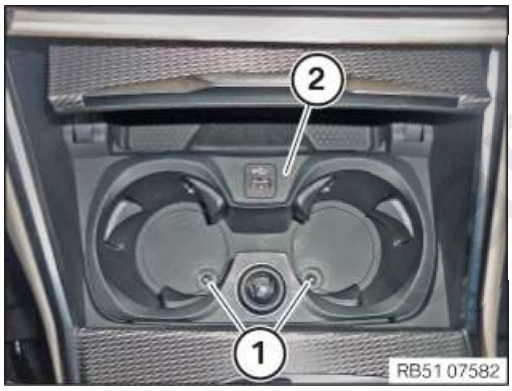


- Adjust the length of the steering column to the maximum length in the direction of arrow (1).
- Move the steering column to the lowest steering column position in the direction of arrow (2).

2 – Remove cupholder

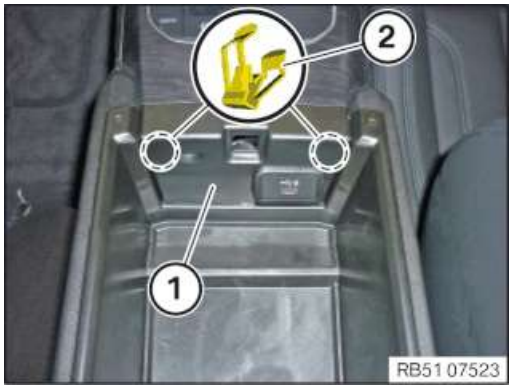


- Remove the insert (1).

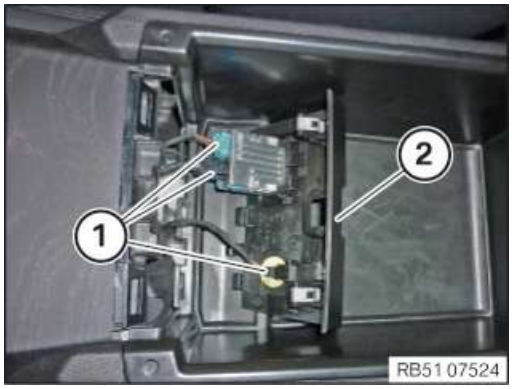


- Loosen screws (1).
- Feed the cup holder (2) out to the top.
- Unlock associated plug connections and disconnect.

3 – Removing the trim in the storage compartment on the centre armrest



- Lever out the trim (1) with the special tool (2) toward the rear from the clamps 2 298 505.



- Unlock and disconnect the plug connections (1) and remove the trim (2) .

4 – Remove the centre console trim

RISK OF DAMAGE

Careless handling of tools and sharp-edged components.

Scratch, surface damage.

- Protect working area.
- Handle tools and components carefully.



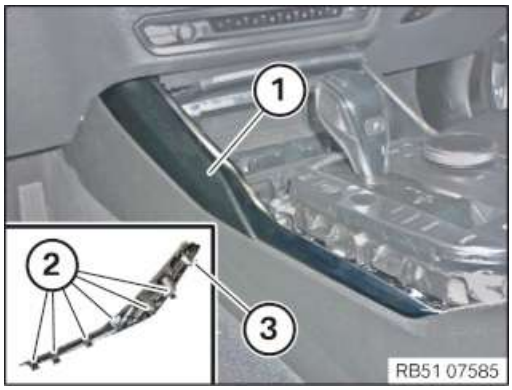
- Release and remove the centre console trim upwards (1) as shown using the special tool 2 298 505 from the latch mechanisms.

5 – Removing the decorative trim on the centre console on the left and right

▸ **Remove the decorative trim from the centre console**

NOTICE

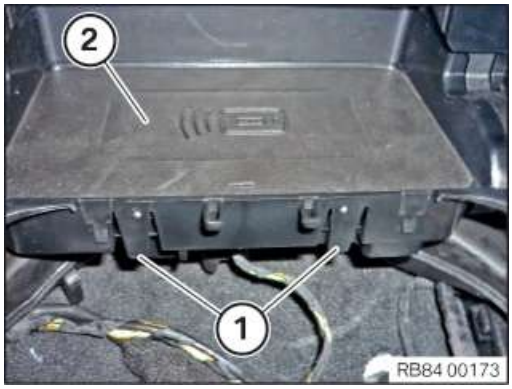
Description is for left component only. Procedure on the right side is identical.



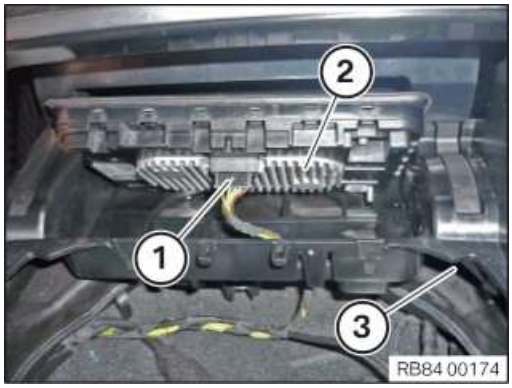
- Lever out the rear decorative trim (1) from the latch mechanisms (2) starting from the top.
- Feed out the decorative trim (1) backwards out of the guide (3) and remove.

6 – Removing the wireless charging station

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- Loosen the latch mechanisms (1) and push out the wireless charging station (2) upwards.



- Unlock and disconnect the plug connection (1) and remove the wireless charging tray (2) from the centre console (3).

7 – Remove the operating facility in the centre console

▸ **Deactivating the 48 V electrical system**

Prerequisite

Ignition is switched off.

WARNING

Deactivation of the 12 V vehicle electrical system.

Risk of short circuits! Risk of fire!

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

WARNING

Deactivation of the 48 V electrical system.

Risk of short circuits! Risk of fire!

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

RISK OF DAMAGE

Damage to 48-V battery

If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

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TECHNICAL INFORMATION

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.



- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.

Check



TECHNICAL INFORMATION

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

desired state

- The Check Control message "48V electrical system switched off." (1) is displayed.

Result

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

Measure

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

  Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

  If the absence of voltage is not indicated clearly, contact Technical Support.

Result

» The Check Control message signals that the 48V electrical system has been switched off.

Measure

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.

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- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).



- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.



WARNING

Unprotected battery terminals.

Risk of short circuits! Risk of fire!

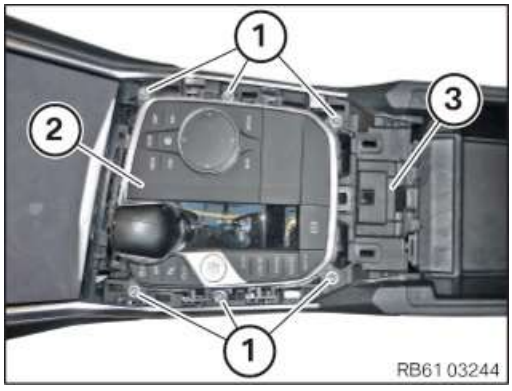
- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

▸ **Disconnecting all battery earth leads**

- See additional information.

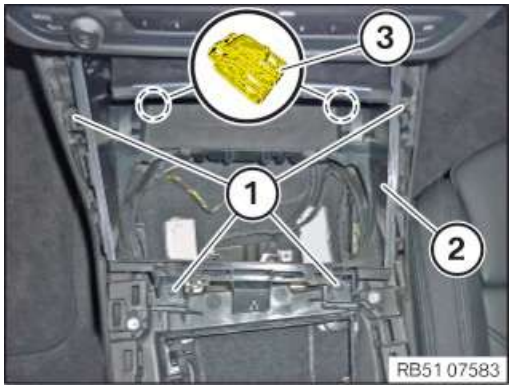




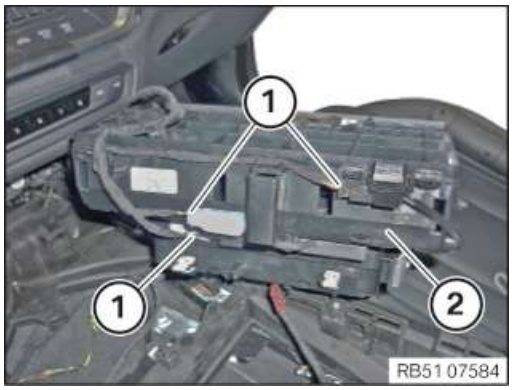
- Loosen screws (1).
- Remove the operating facility in the centre console (2) from the centre console (3).

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8 – Removing the storage compartment in the front centre console



- Loosen screws (1).
- Pull the storage compartment in front centre console (2) backwards from the clamps (3).



- Unlock and disconnect the plug connections (1) and remove the storage compartment in centre console (2).

9 – Removing the rear centre console trim

RISK OF DAMAGE

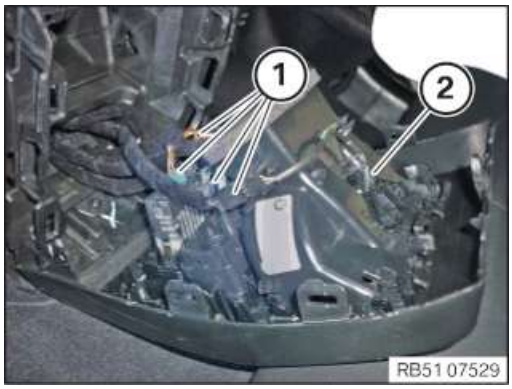
Careless handling of tools and sharp-edged components.

Scratch, surface damage.

- Protect working area.
- Handle tools and components carefully.



- Release centre console trim (1) backwards from the latch mechanisms at the side and remove it slightly at the back.



- Unlock and disconnect plug connections (1).
- Remove the centre console trim (2).

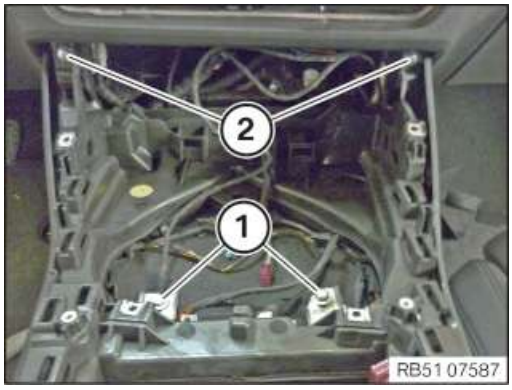
10 – Removing the centre console

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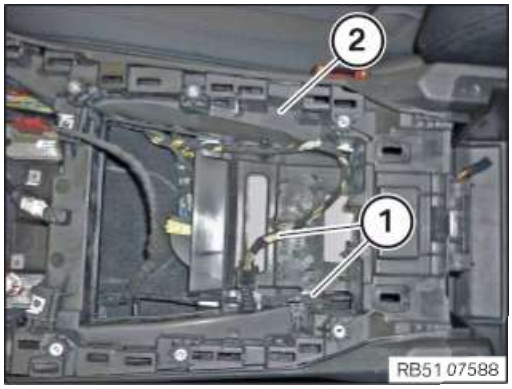
10 – Removing the centre console



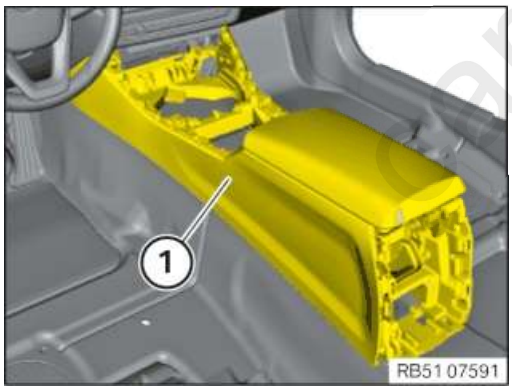
- Loosen screws (1).



- Loosen screws (1) and (2).



- Release the wiring harness (1) from the centre console (2).

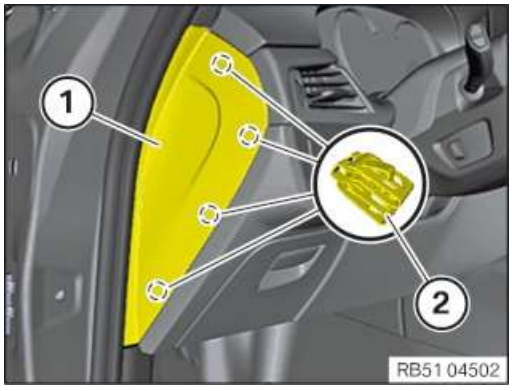


NOTICE

To provide a better overview: Schematic diagram with partially hidden components.

- Carefully raise rear centre console (1).
- Feed out wiring harness from the centre console (1) and unlock and disconnect existing plug connections, if required.
- Feed out and remove the centre console (1) on the instrument panel .

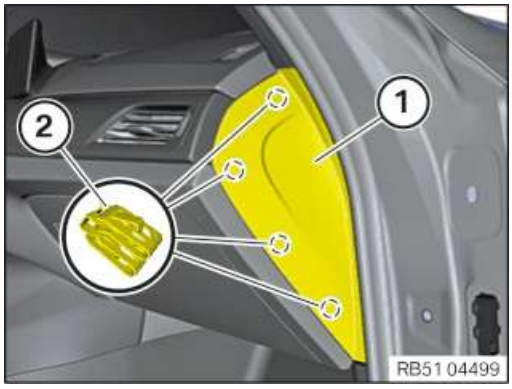
11 – Remove the side panel on the left instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).

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12 – Remove the side panel on the right instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).
- If necessary, unlock associated plug connection and disconnect.

13 – Remove left and right A-pillar trim panel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the A-pillar trim panel**

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

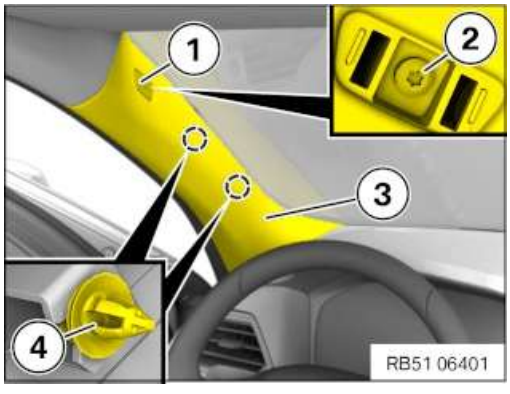
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

RISK OF DAMAGE

Damage to the head airbag.

Improper use of a tool when removing the trim panel may damage the head airbag.

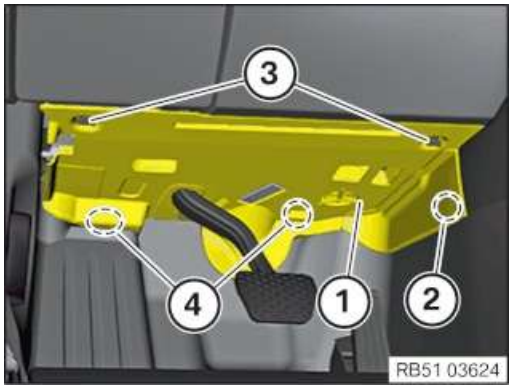
- Do not use sharp-edged tools when removing the trim panel.



- Unclip cover (1) with a suitable special tool from the special tool kit 0 493 752 (00 9 329).
- Loosen screw (2).
- Unclip A-pillar trim panel (3) with clips (4) and feed it out to the top.

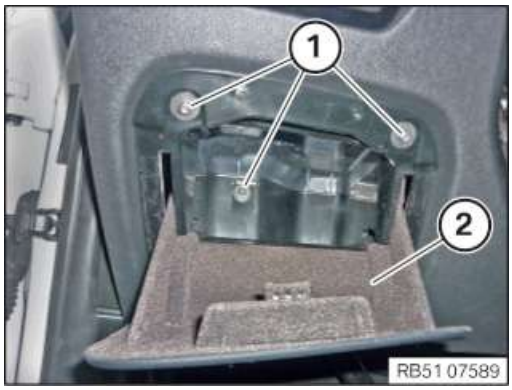
14 – Removing the trim panel for pedal mechanism

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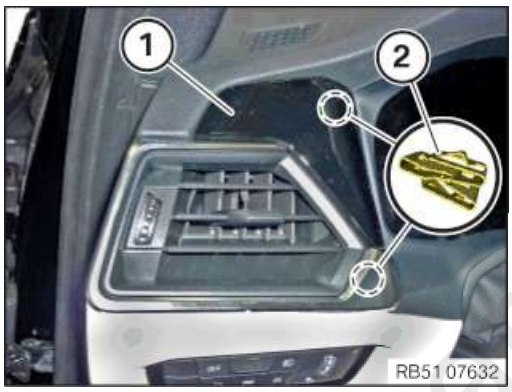
- Unclip the trim panel for the pedal mechanism (1) towards the inside in this area (2).
- Turn the locks (3) by 90°.
- Detach the trim panel for the pedal mechanism (1) inwards out of the guides (4).
- Unlock associated plug connection and disconnect.

15 – Removing the left fold-down compartment



- Loosen screws (1).
- Remove the fold-down compartment (2) toward the bottom.

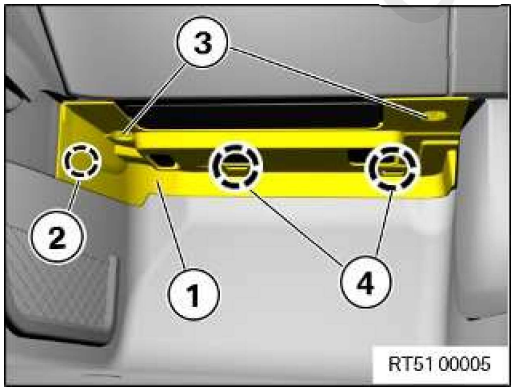
16 – Remove the finisher on the instrument panel on the left



- Unclip decorative strip (1) to the rear out of the clamps (2).
- Unlock associated plug connection and disconnect.

  Remove the decorative strip (1).

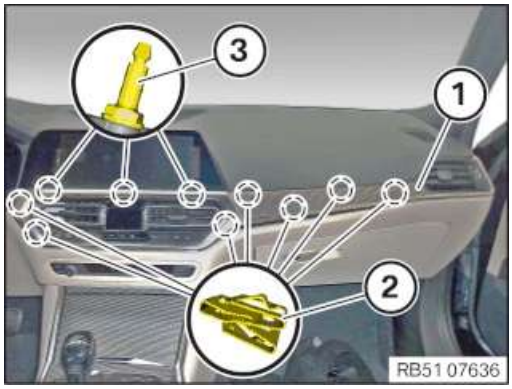
17 – Remove the right footwell trim



- Turn the locks (3) by 90°.
- Feed the footwell trim (1) out of the guide (2).
- Detach the footwell trim (1) inward out of the guides (4).
- Unlock associated plug connection and disconnect.

18 – Remove the finisher on the right instrument panel

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- Unclip the decorative strip (1) towards rear at the clamps (2) and the pins (3).
- Unlock associated plug connection and disconnect.
- Remove the decorative strip (1).

19 – Remove Central Information Display (CID)

RISK OF DAMAGE

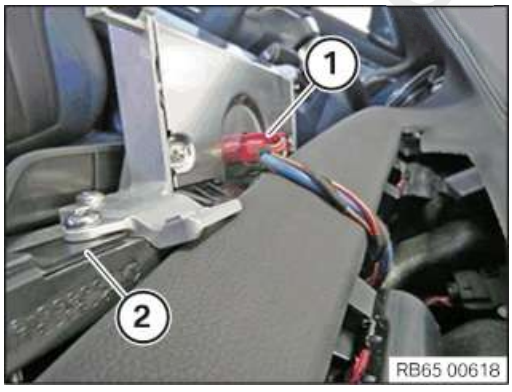
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)



- Loosen screws (1).
- Pull out central information display (CID) (2) slightly off the instrument panel.



- Unlock plug connection (1) and disconnect.
- Remove the central information display (CID) (2).

20 – Removing the airbag unit

WARNING

Airbag unit.

Danger! Life-threatening injuries!

- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

RISK OF DAMAGE

Damage to the steering wheel.

Incorrect handling of the tool may damage the steering wheel.

- Ensure the tool is positioned correctly (angle and inclination).
- When unlocking, do not use "levering" action. Instead, press in the Torx screwdriver toward the centre of steering wheel only.

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

▸ **Removing the airbag unit for sports steering wheel**



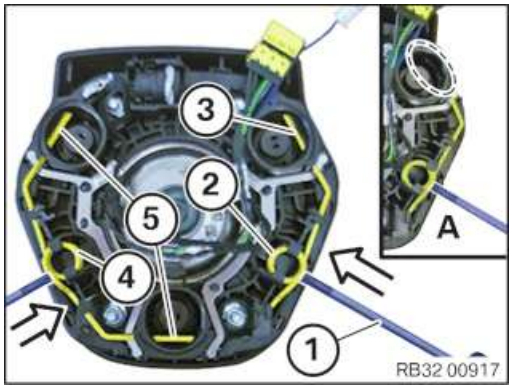
- Insert Torx screwdriver T25 (1) diagonally upwards in the hidden opening (2) on the rear side of the steering wheel until a spring resistance is felt.



NOTICE

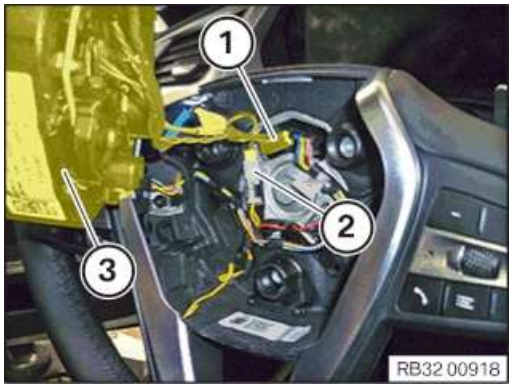
To provide a better overview: Diagram with airbag unit removed.

- To unlock the airbag unit, press Torx screwdriver T25 (1) diagonally upwards in the direction of the arrow to the centre of the steering wheel.



- Press the airbag unit over a large area of the steering wheel.
- Use Torx screwdriver T25 (1) to press wire spring clip (2) in the direction of the arrow towards the centre of the steering wheel and release lock (3).

  (A): Wire spring clip (2) is unlocked.
- Press wire spring clip (4) with Torx screwdriver T25 (1) in the direction of the arrow towards the centre of the steering wheel and release locks (5).
- Carefully raise the airbag unit.



- Unlock and disconnect the plug connections (1) and (2).
- Remove airbag unit (3).

▸ Removing the airbag unit for M Sport steering wheel



NOTICE

Perform the operations on the left and right side.

- Locate the mark (1) for unlocking the airbag unit on the steering wheel by touching it.



NOTICE

Perform the operations on the left and right side.

- Cut the mark (1) carefully with a knife (2) to an approx. length of 4 mm .

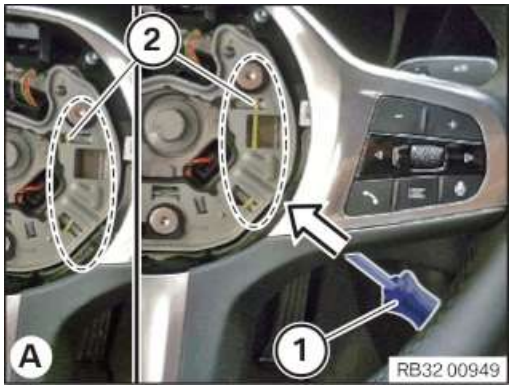


TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

- In case of vehicles with shift paddles (2) made of carbon-fibre-reinforced plastic, use a Torx socket T15 (1) for unlocking the airbag unit.

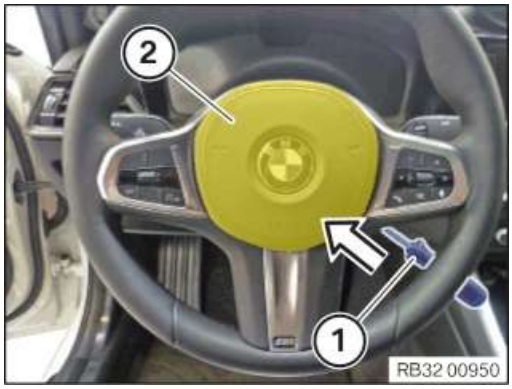
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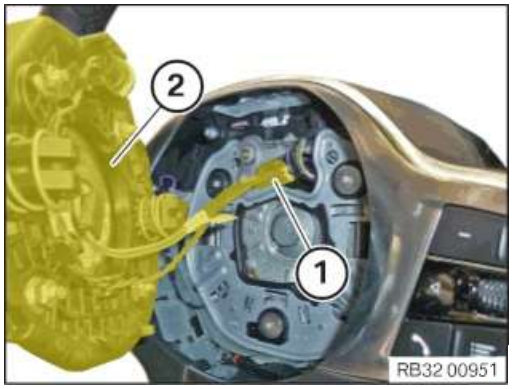
NOTICE

To provide a better overview: Diagram with airbag unit removed.

- Insert the Torx socket T15 (1) diagonally upwards until a resilient resistance is felt.
- Press in Torx socket T15(1) straight in the direction of arrow towards the centre of the steering wheel in order to unlock the wire spring clip (2) or to unlock the airbag unit (A).

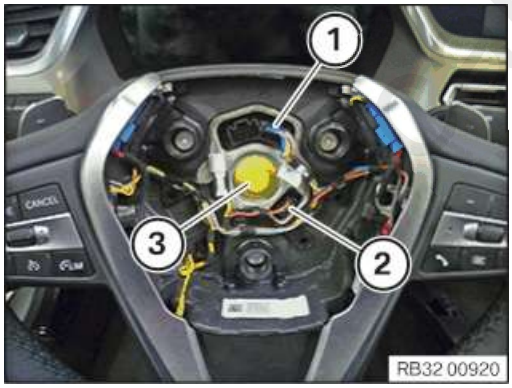


- Press in Torx screwdriver T15 (1) straight in direction of arrow towards the centre of the steering wheel and lift the airbag unit (2) on the unlocked side.
- Repeat procedure on left side and carefully release airbag unit (2) from the steering wheel.



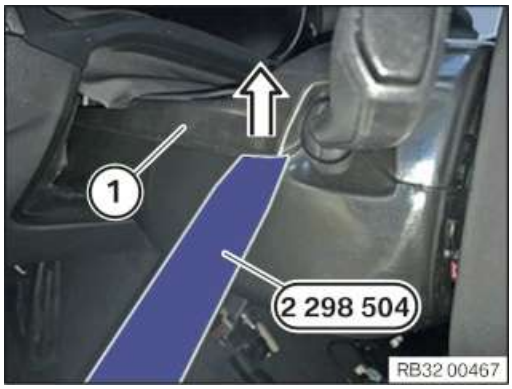
- Unlock and disconnect the plug connection (1) and remove the airbag unit (2).

21 – Remove sports steering wheel



- Move the steering wheel and wheels to the straight-ahead position.
- Unlock plug connection (1) and disconnect.
- If installed: Unlock plug connection (2) and disconnect.
- Release the screw (3) and pull off and remove the steering wheel.

22 – Removing steering column shroud upper section

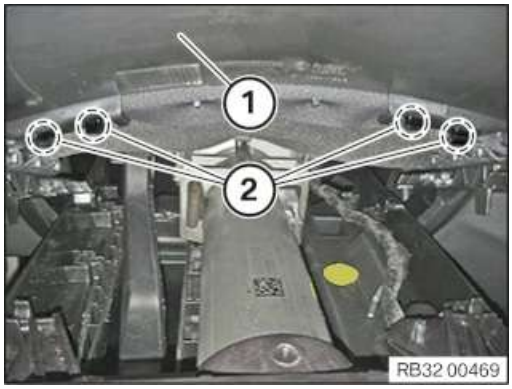


NOTICE

Perform the operations on the left and right side.

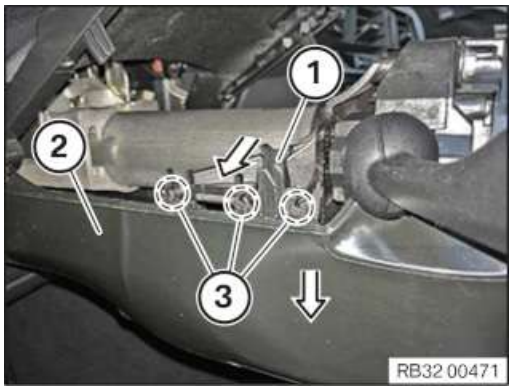
- Unlock the steering column shroud upper section (1) with the special tool 2 298 504 and fold up.

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- Unclip the steering column shroud upper section (1) from the brackets (2).
- Remove the steering column shroud upper section (1).

23 – Removing steering column shroud lower section



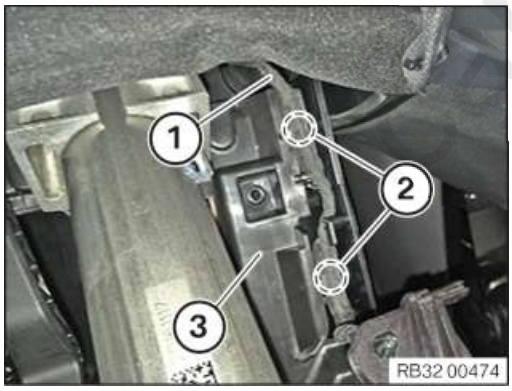
NOTICE

Perform the operations on the left and right side.

- Push the retaining lug (1) to the outside in the direction of the arrow and unclip the steering column shroud lower section (2) from the holders (3) in the direction of the arrow to the bottom at the same time.

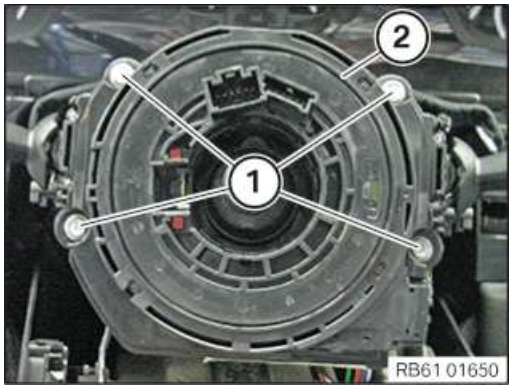


- Fold the steering column shroud lower section down.
- Unlock and disconnect connector (1).

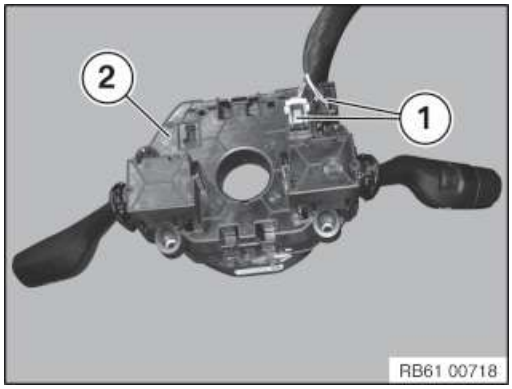


- Detach the cable (1) from the brackets (2).
- Remove the steering column shroud lower section (3).

24 – Removing the steering column switch cluster (SZL)



- Loosen screws (1).
- Remove the steering column switch cluster (SZL) (2).



- Unlock and disconnect plug connections (1) on the SZL (2).

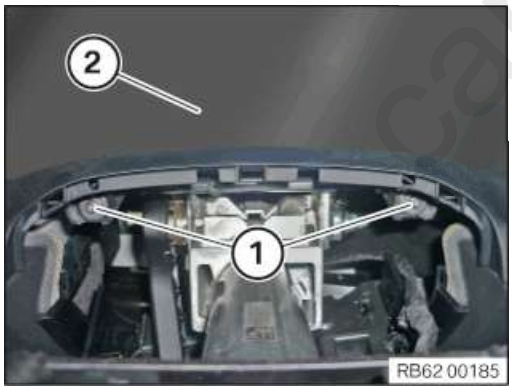
25 – Removing the instrument cluster (KOMBI)



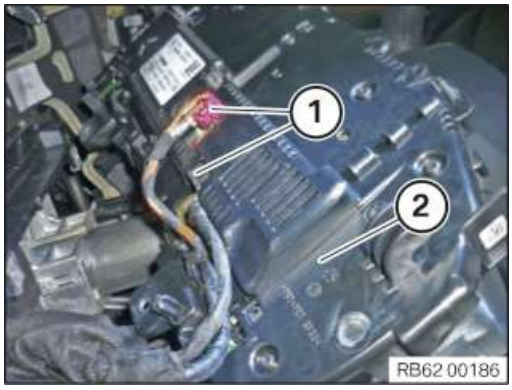
- Loosen screw (1).



- Loosen screw (1).



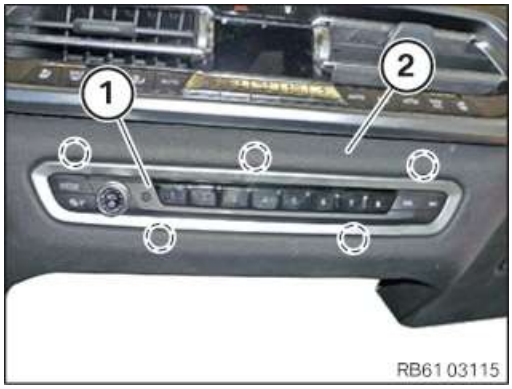
- Loosen screws (1).
- Feed out instrument cluster (KOMBI) (2).



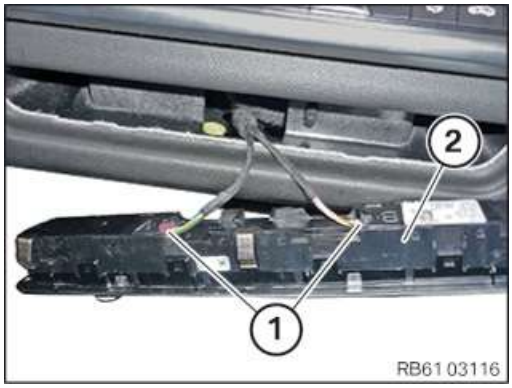
- Unlock and disconnect plug connections (1) from instrument cluster (KOMBI) (2).
- Remove the instrument cluster (KOMBI) (2).

26 – Remove the audio operating unit

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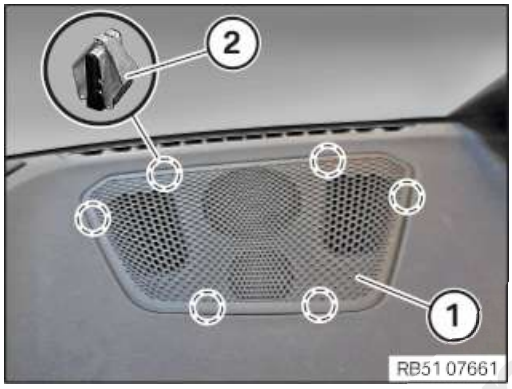


- Unclip the audio operating unit (1) from the instrument panel (2) at the points marked using special tool 0 496 571 (00 9 327).



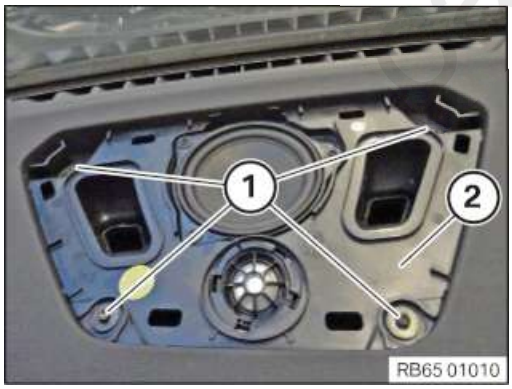
- Disconnect plug connections (1) and remove the audio operating unit (2).

27 – Remove the speaker trim at the instrument panel

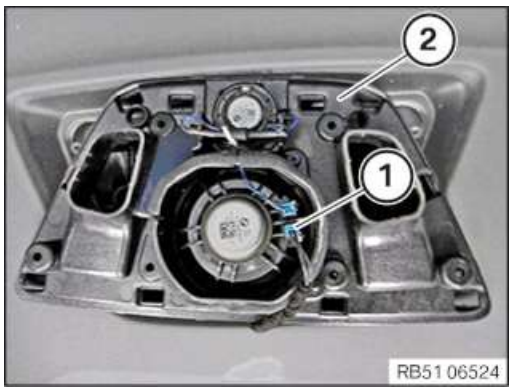


- Lever out the speaker trim (1) with the special tool 0 496 569 (00 9 325) from the clamps (2) toward the top and remove.

28 – Remove the speaker holder at the instrument panel



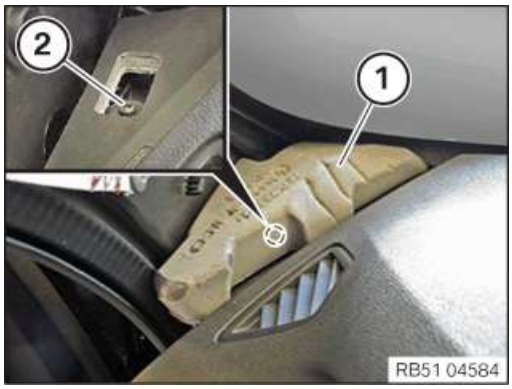
- Loosen screws (1).
- Pull out speaker holder (2) slightly with the loudspeakers and tilt it to the side.



- Unlock plug connection (1) and disconnect.
- Remove the speaker holder (2).

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29 – Remove the instrument panel trim panel



NOTICE

Perform the operations on the left and right side.

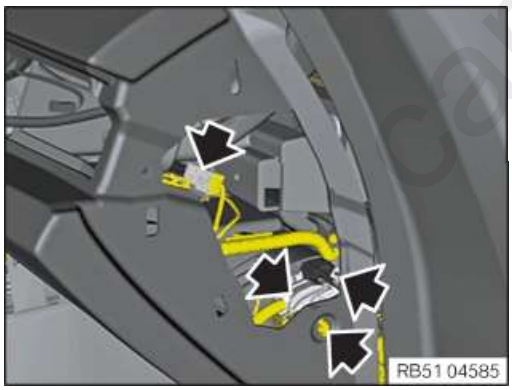
- Remove the sound insulation (1).
- Loosen screw (2).



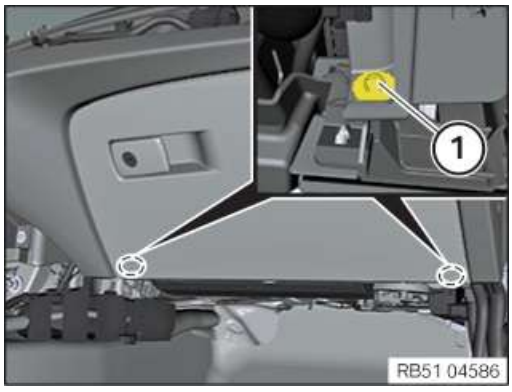
- Loosen screws (1).



- Loosen screws (1).

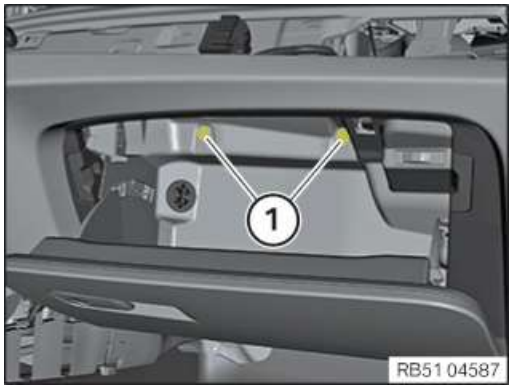


- Release all plug connections and cable clips (arrows) behind the glove box.

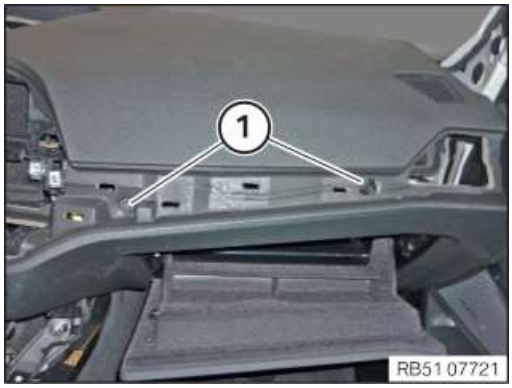


- Release the screws (1) on the lower side of the glove box.

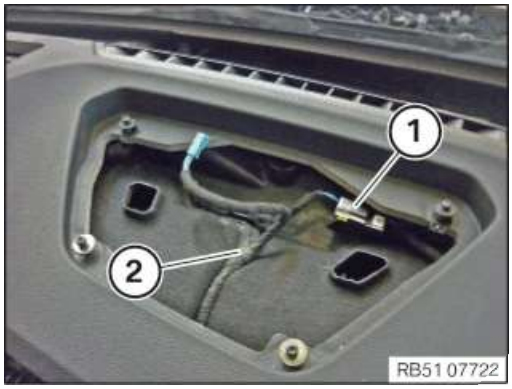
cardiagn.com



- Open glovebox.
- Loosen screws (1).



- Loosen screws (1).



- Unlock plug connection (1) and disconnect.
- Release the wiring harness (2) on the holders.



- Unlock the plug connection (1) on the light operating unit and disconnect it.



- Loosen screws (1).

TECHNICAL INFORMATION

Conduct the following operation with the assistance of a second person.

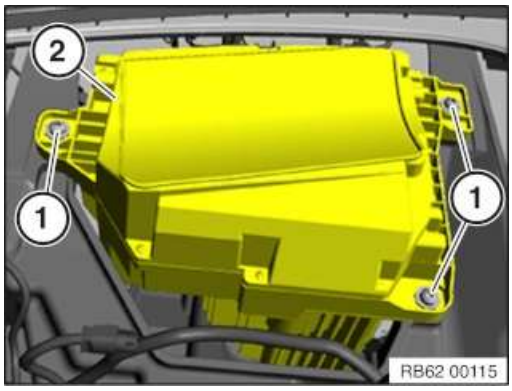
- Pull the instrument panel trim back slightly.

  If necessary, unlock and disconnect additional plug connections.
- Remove the instrument panel trim from the vehicle.

rdiagn.com

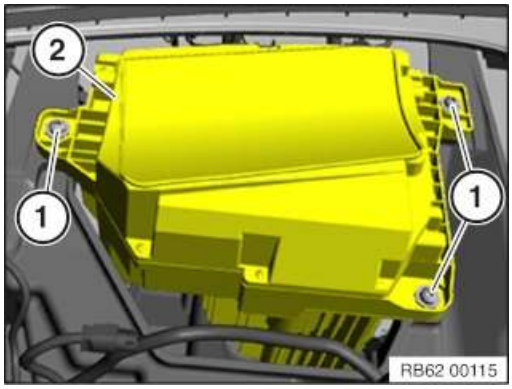
MAIN WORK

30 – Removing the Head-Up Display



- Loosen screws (1).
- Remove head-up display (2) from support.
- Unlock associated cable and disconnect.

31 – Installing the head-up display



- Connect the associated connector to the Head-Up Display.
- Guide the Head-Up Display (2) into the support.
- Tighten the screws (1).

Head-Up Display to support

M6x25 screw		Tightening torque	13 Nm

POSTPROCESSES

32 – Install the trim panel for the instrument panel



TECHNICAL INFORMATION

Conduct the following operation with the assistance of a second person.

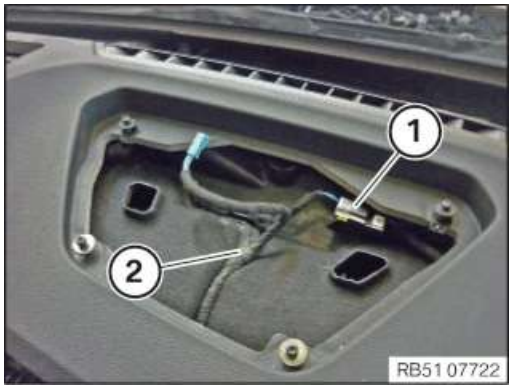
- Insert the instrument panel trim in the vehicle and position it at the support.
- Insert the associated wiring harnesses and connect the connectors.
- Tighten the screws (1).

Dashboard to support

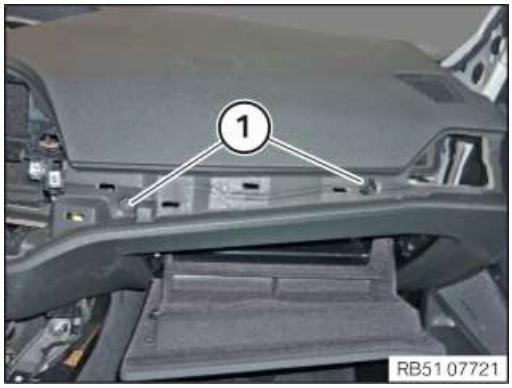
Screw		Tightening torque	2,4 Nm



- Connect connector (1) to the light operating unit and lock.



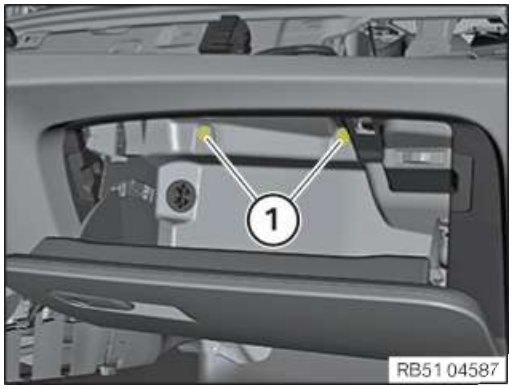
- Secure the wiring harness (2) on the holders.
- Connect connectors (1) and lock.



- Tighten the screws (1).

Dashboard to support

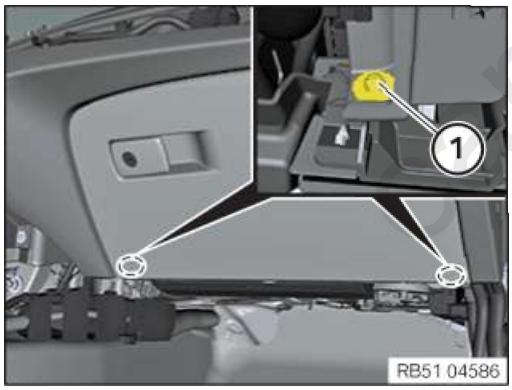
Screw		Tightening torque	2,4 Nm



- Open glovebox.
- Tighten the screws (1).

Dashboard to support

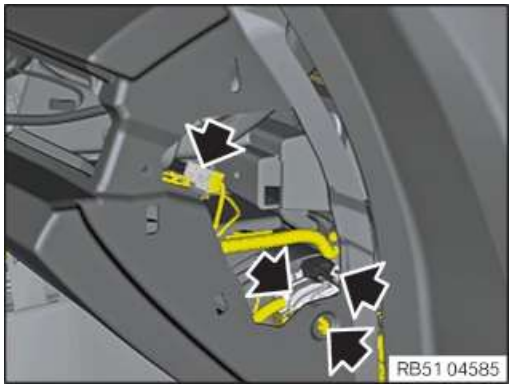
Screw		Tightening torque	2,4 Nm



- Tighten the screws (1) on the lower side of the glove box button.

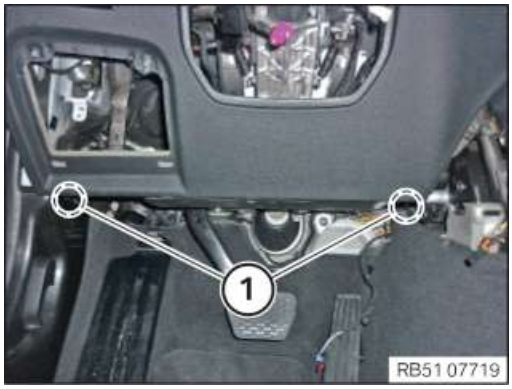
Dashboard to support

Screw		Tightening torque	2,4 Nm



- Connect all plug connections and cable clips (arrows) behind the glove box.

autodiagn.com



- Tighten the screws (1).

Dashboard to support

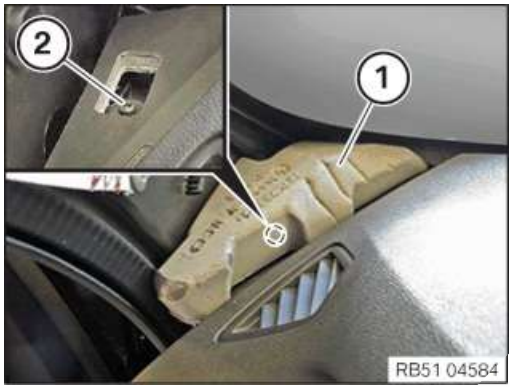
Screw		Tightening torque	2,4 Nm



- Tighten the screws (1).

Dashboard to support

Screw		Tightening torque	2,4 Nm



NOTICE

Perform the operations on the left and right side.

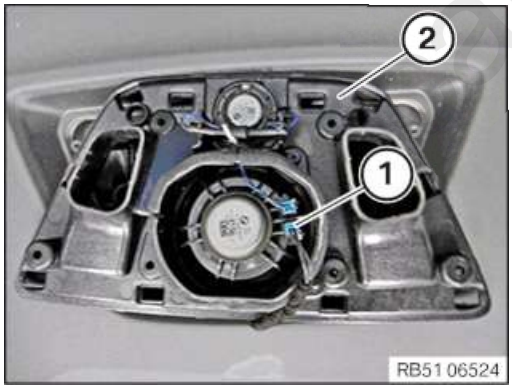
- Tighten down screw (2).

Dashboard to support

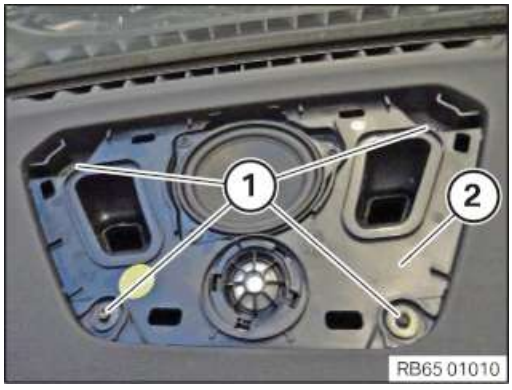
Screw		Tightening torque	2,4 Nm

- Use sound insulation (1).

33 – Install the speaker holder at the instrument panel



- Position the speaker holder (2).
- Connect connector (1).



- Install the speaker holder (2).
- Tighten the screws (1).

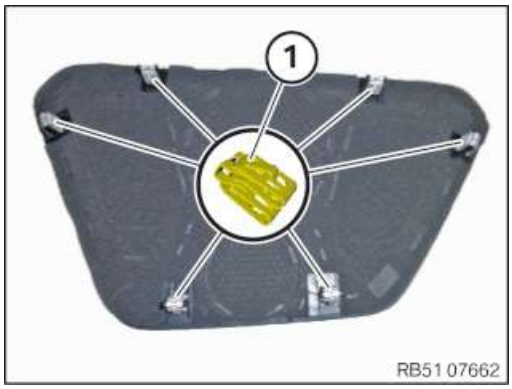
Speaker to support / support to instrument panel / support to body

Screw		Tightening torque	1,8 Nm

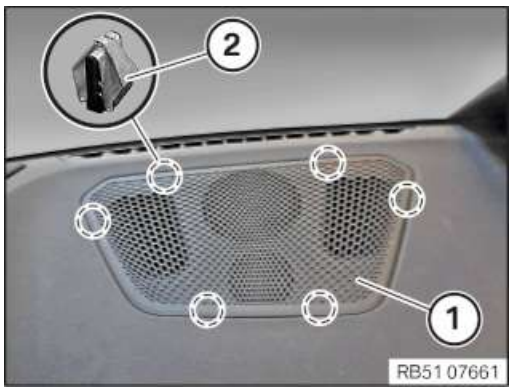
34 – Install the speaker trim at the instrument panel

erdiag.com

34 – Install the speaker trim at the instrument pan_.

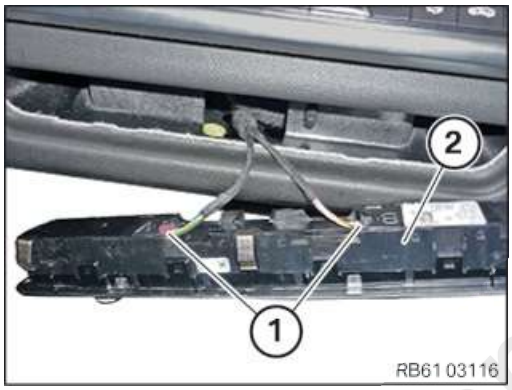


- Check clamps (1) for damage.
- Replace broken or missing clamps (1).

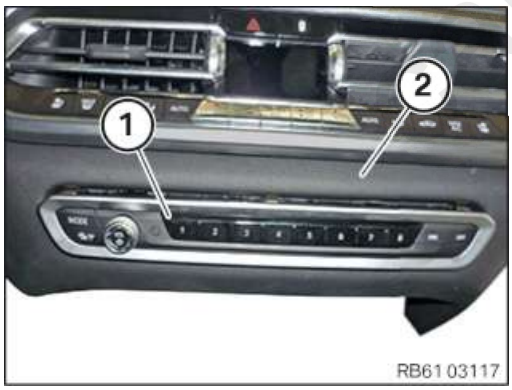


- Position the speaker trim (1) correctly and engage it at the clamps (2).

35 – Install the audio operating unit



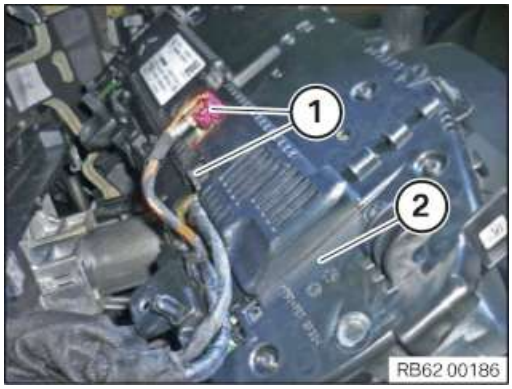
- Connect the connector (1) to the audio operating unit (2).



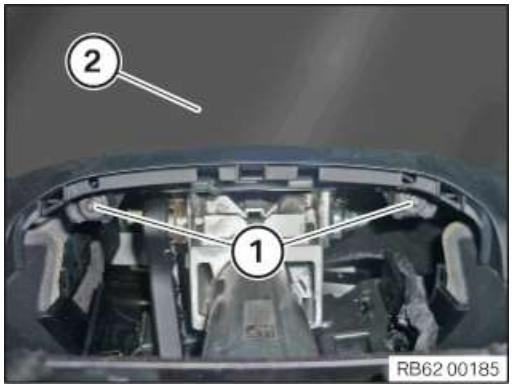
- Correctly position the audio operating unit (1) and install in the instrument panel(2).

36 – Installing the instrument cluster (KOMBI)

rdiagn.com



- Connect and lock connector (1) to the instrument cluster (KOMBI) (2).



- Feed in and position the instrument cluster (KOMBI) (2).
- Tighten the screws (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm



- Tighten down screw (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm

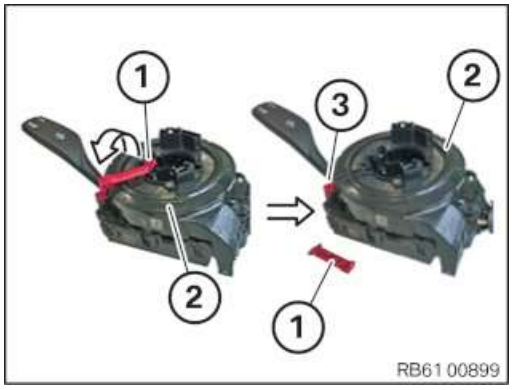


- Tighten down screw (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm

37 – Installing the steering column switch cluster (SZL)

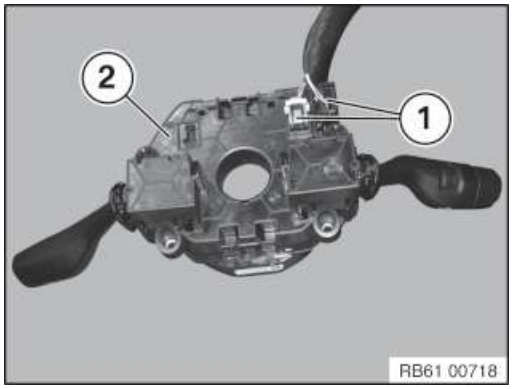


- **Replacement:**

  Break off the transportation retainer (1) on the steering column switch cluster (SZL) (2) in direction of arrow.

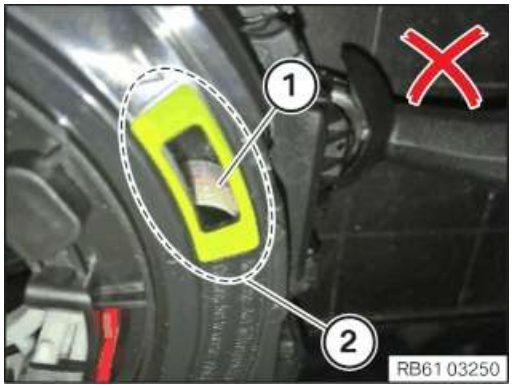
  The broken off piece (3) of the transportation retainer (1) remains in the steering column switch cluster (SZL) (2).

carjiagn.com



- Connect the connector (1) with the steering column switch cluster (SZL) (2).

Check



- **Version A:**

  Check whether the correct marking (1) is seen in inspection glass (2).

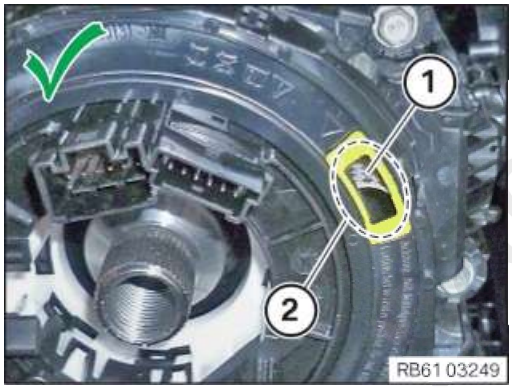
Result

» Ensure that no incorrect marking (1) is seen in inspection glass (2).

Measure

- Turn the coil spring cassette until the right mark (1) becomes visible in the inspection glass (2).

Check



- **Version A:**

  Check whether the correct marking (1) is seen in inspection glass (2).

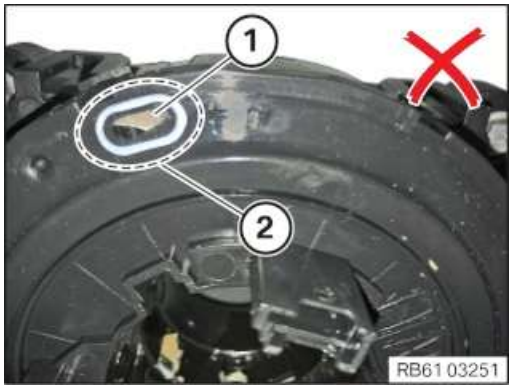
Result

» Correct marking (1) is seen in inspection glass (2).

Measure

- Continue with the next step.

Check



- **Version B:**

  Check whether the correct marking (1) is seen in inspection glass (2).

Result

» Ensure that no incorrect marking (1) is seen in inspection glass (2).

Measure

- Turn the coil spring cassette until the right mark (1) becomes visible in the inspection glass (2).

Check



- **Version B:**

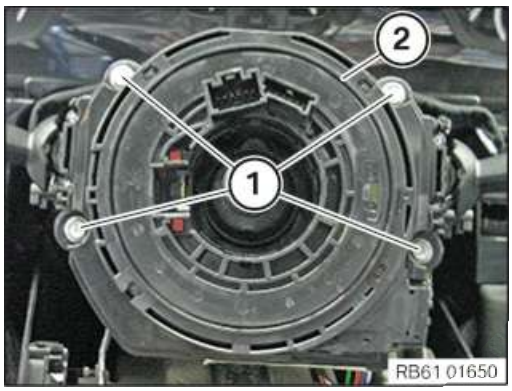
  Check if the correct mark (1) can be seen in the inspection glass (2).

Result

» Correct marking (1) is seen in inspection glass (2).

Measure

- Continue with the next work step.

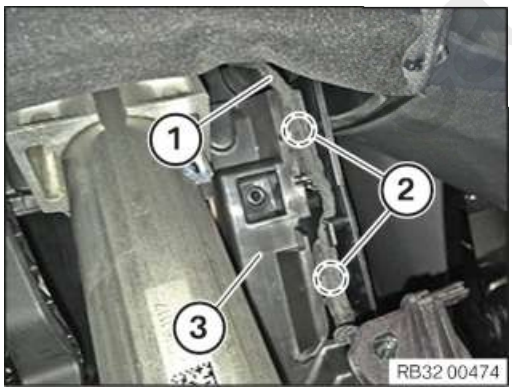


- Position the steering column switch cluster (SZL) (2).
- Tighten the screws (1).

Steering column switch cluster (SZL) on the steering column

Screw TS5x20		Tightening torque	3 Nm

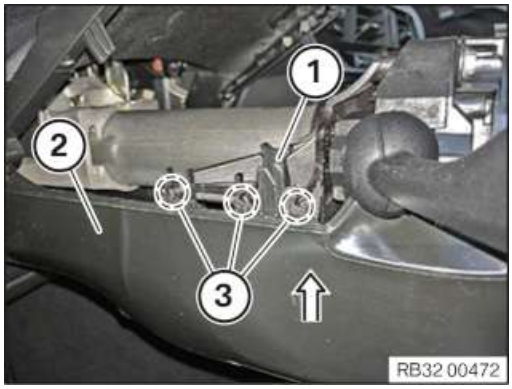
38 – Install steering column shroud lower section



- Position the steering column shroud lower section (3).
- Secure the line (1) on the brackets (2).



- Connect the connector (1).

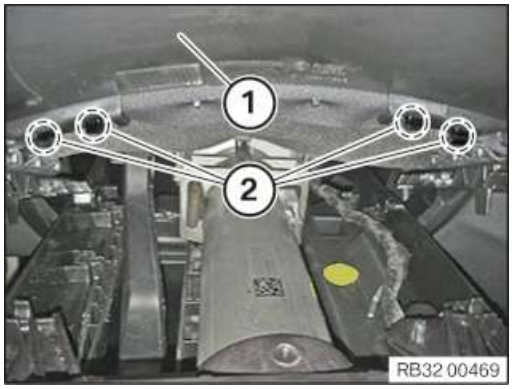


NOTICE

Perform the operations on the left and right side.

- Align the steering column shroud lower section (2) to the steering column using the retaining lug (1).
- Push the steering column shroud lower section (2) up in the direction of the arrow until the brackets (3) engage.

39 – Fit steering column shroud upper section



- Clip in the steering column shroud upper section (1) at the brackets (2).



NOTICE

Perform the operations on the left and right side.

- Clip in the steering column shroud upper section (1)into the guide (2).



NOTICE

Perform the operations on the left and right side.

- Press the upper section of the steering column shroud (1) downwards in direction of arrow.

  The upper section of the steering column shroud must engage audibly and perceptibly.

40 – Installing the sports steering wheel

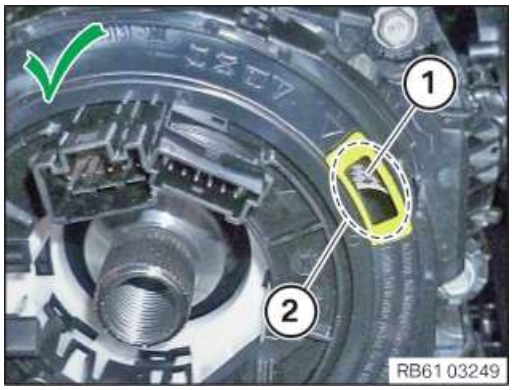
▸ **Check the neutral position of the clock spring**

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

▹ **Version A: Checking the visibility of the marking on the coil spring**

vwdiagn.com



Check

- Check the visibility of the marking (1) on the coil spring in the inspection glass (2) .

Result

» The mark (1) on the coil spring is not visible.

Measure

- Turn the coil spring cassette until the mark (1) on the coil spring becomes visible in the inspection glass (2).

◁

▷ **Version B: Checking the visibility of the marking on the coil spring**



Check

- Check the visibility of the marking (1) on the coil spring in the inspection glass (2) .

Result

» The mark (1) on the coil spring is not visible.

Measure

- Turn the coil spring cassette until the mark (1) on the coil spring becomes visible in the inspection glass (2).

◁



Check

- Check if a microencapsulated screw (3) is installed.

Result

» Screw (3) is micro-encapsulated.

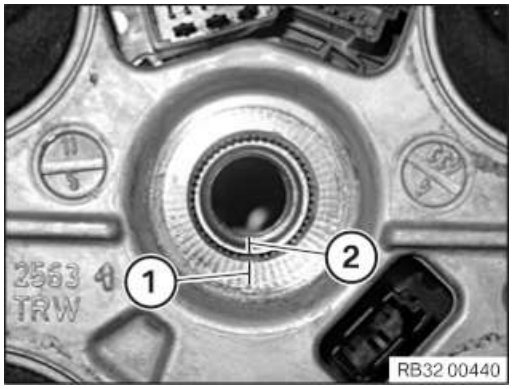
cardiagn.com

Measure

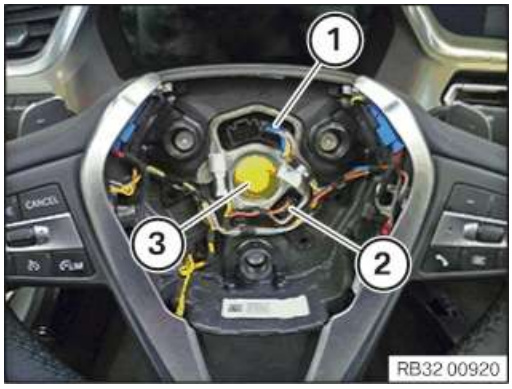
- Clean thread in the steering column.

  Renew the screw (3).

  Parts: Screw



- Align mark (1) on steering wheel to mark (2) on steering column.
- Connect steering wheel.



- Connect connectors (1) and lock.
- If installed: Connect connectors (2) and lock.
- Tighten screw (3) .

Steering wheel to steering column

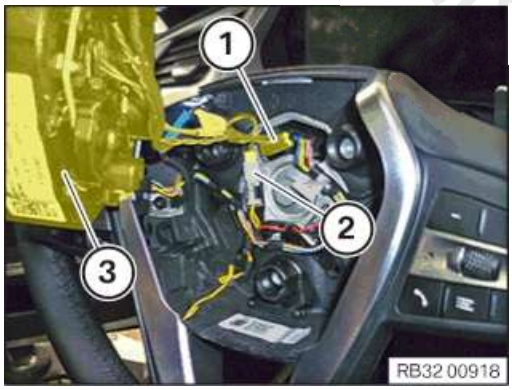
M14	Only for a micro-encapsulated screw: Renew screw.	Tightening torque	62,5 Nm

41 – Installing the airbag unit

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

▸ **Installing the airbag unit for the sports steering wheel**



- Position airbag unit (3).
- Connect connectors (1) and (2) lock.



- Press the airbag unit (1) with even pressure in the direction of the arrow into the steering wheel.

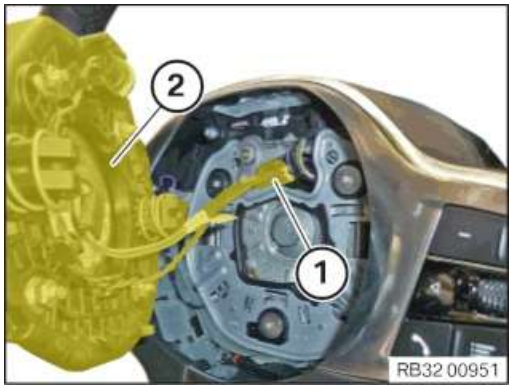
  The airbag unit (1) must engage audibly and perceptibly.

ardiagn.com

▸ **Installing the airbag unit for M Sport steering wheel**

TECHNICAL INFORMATION

After replacing the airbag unit (M sport steering wheel) or after a possible conversion of standard steering wheel and airbag unit to M-sports steering wheel, a software update or a programming/encoding via ISTA must be performed!



- Connect and lock the connector (1) of the airbag unit (2).



- Press the airbag unit further (1) with even pressure in the direction of the arrow into the steering wheel.

  The airbag unit (1) must engage audibly and perceptibly.

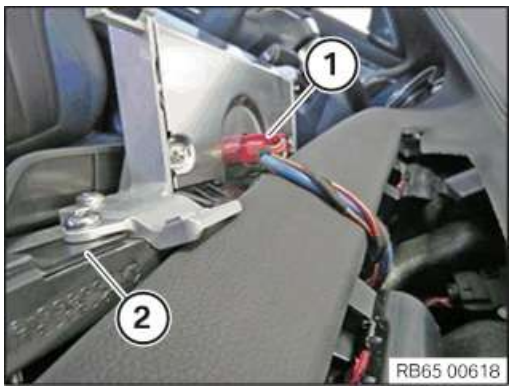
42 – Install the central information display (CID)

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)



- Position Central Information Display (CID) (2).
- Connect plug connection (1) and lock.

cardiagn.com

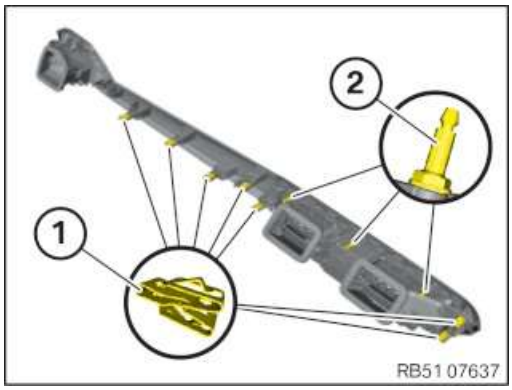


- Insert the central information display (CID) (2) in the instrument panel and position correctly.
- Tighten the screws (1).

Central information display to instrument panel

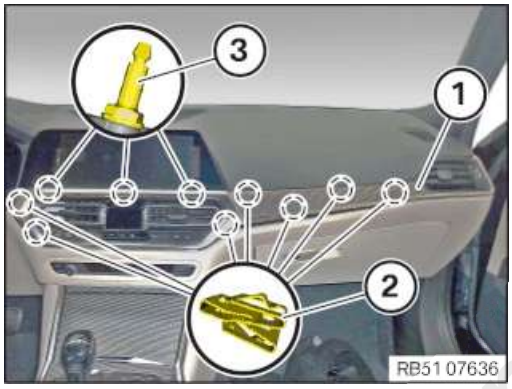
Screw		Tightening torque	2,4 Nm

43 – Install the finisher on the right instrument panel



- Checks clamps (1) for damage.

  Defective or missing clamps (1) need to be renewed.
- Check the pins (2) and the accompanying clamps at the instrument panel trim for damage, renew if necessary.



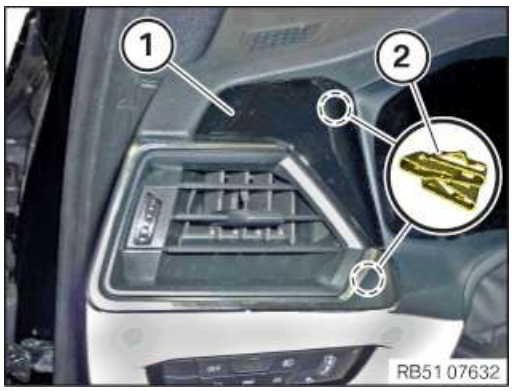
- Install the decorative strip (1).
- Connect and lock corresponding connectors.
- Correctly position the decorative strip (1) and at the clamps (2) and clip in the pins (3).

44 – Install the finisher on the instrument panel on the left



- Check the clamps (1) for damage and that they are present.

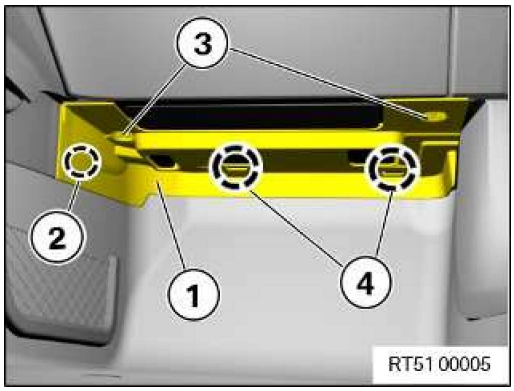
  Damaged or missing clamps (1) must be renewed.



- Install the decorative strip (1).
- Connect and lock the associated connectors.
- Clip decorative strip (1) into clamps (2).

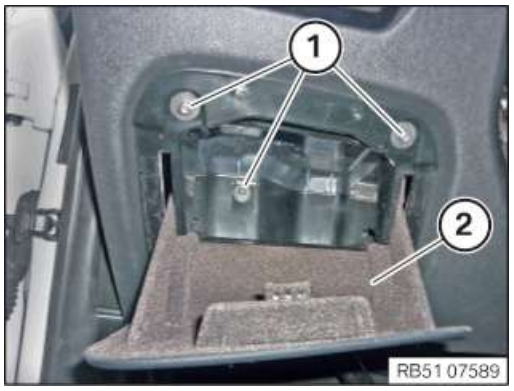
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45 – Install the right footwell trim panel



- Connect associated connector.
- Attach the footwell trim (1) to the guides (4) and fold up.
- Guide the footwell trim (1) into the guide (2) of the centre console.
- Position the locks (3) correctly and turn by 90°.

46 – Installing the left fold-down compartment

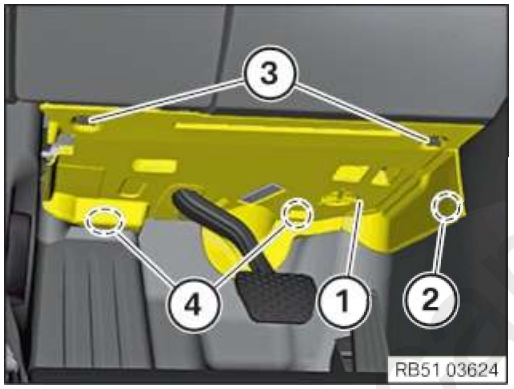


- Install the fold-down compartment (2).
- Tighten the screws (1).

Fold-down compartment to instrument panel

Oval-head screw		Tightening torque	1,8 Nm

47 – Installing the trim panel for the pedal mechanism



- Connect associated connector.
- Attach the trim panel for the pedal mechanism (1) in the guides (4) and fold it up.
- Clip the trim panel for the pedal mechanism (1) into the centre console in this area (2).

TECHNICAL INFORMATION

It is **imperative** that the screws caps of the trim panel be correctly locked. This is the only way to ensure that the trim panel does not come loose and potentially tilt into the pedal area.

- Insert screw caps (3) correctly and turn by 90° to lock.

48 – Install the A-pillar trim panel on the left and right

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Installing the A-pillar trim panel**

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

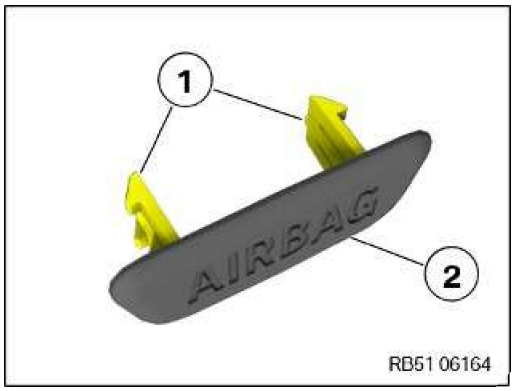
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

RISK OF DAMAGE

Damage to the head airbag.

Improper use of a tool when removing the trim panel may damage the head airbag.

- Do not use sharp-edged tools when removing the trim panel.



Check

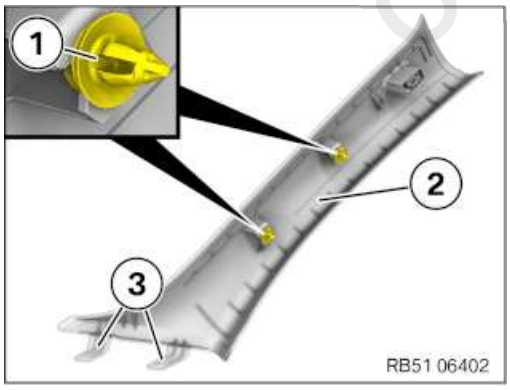
- Check retaining lugs (1) of cover (2) for damage.

Result

» Retaining lug is damaged.

Measure

- Renew the cover.



Check

- Check the clips (1) for damage and renew if necessary.
- Check the guides (3) for damage.

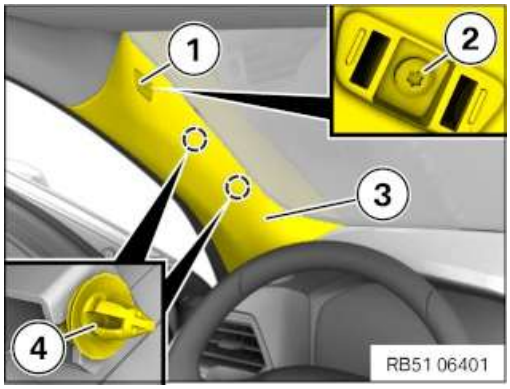
Result

» Guide is damaged.

Measure

- Renew the A-pillar trim panel.

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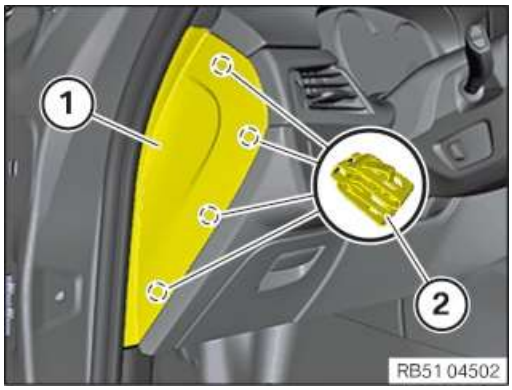
- Guide in A-pillar trim panel (3) downwards and clip it in with clips (4).
- Tighten down screw (2).

A-pillar trim panel to body

Sheet metal screw 4,8x38		Tightening torque	2,6 Nm

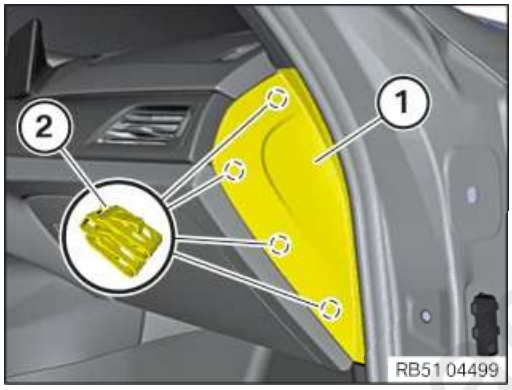
- Clip in the cover (1).

49 – Install the side panel on left instrument panel



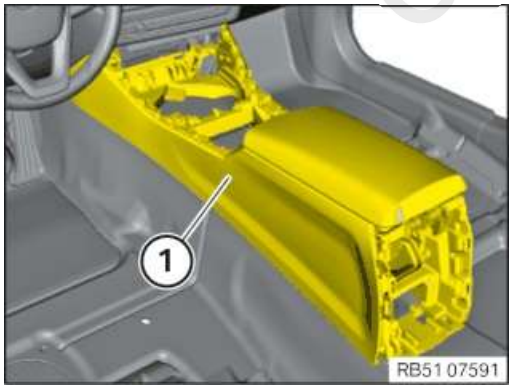
- Feed in the side panel (1) and clip it in at the clamps (2).

50 – Install the side panel on instrument panel on the right



- If required, connect the associated connector.
- Feed in the side panel (1) and clip it in at the clamps (2).

51 – Installing the centre console

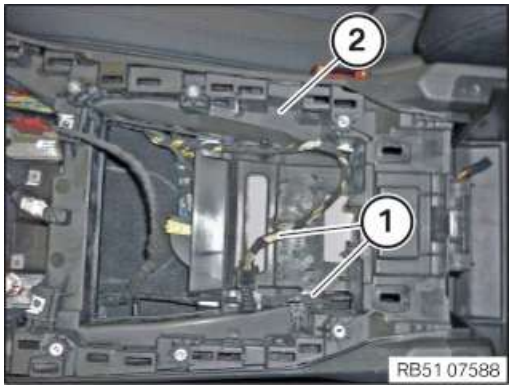


NOTICE

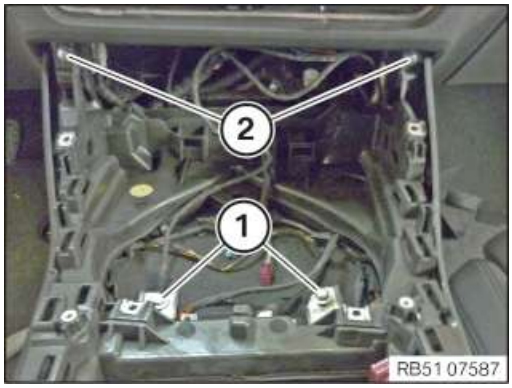
To provide a better overview: Schematic diagram with partially hidden components.

- Install centre console (1) and thereby feed in the wiring harness.
- Feed in the centre console (1) to the instrument panel and position correctly.

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- Secure the wiring harness to the centre console (1) and connect and lock the existing plug connections.



- Tighten the screws (1).

Centre console on tunnel

M6x18 Hexagon screw		Tightening torque	4,6 Nm

- Tighten the screws (2).

Centre console to instrument panel

Oval-head screw		Tightening torque	1,8 Nm

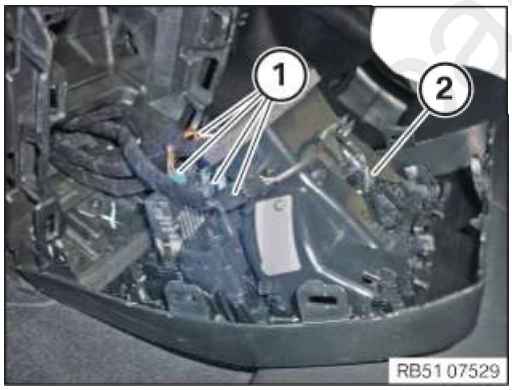


- Tighten the screws (1).

Centre console on tunnel

M6x18 Hexagon screw		Tightening torque	4,6 Nm

52 – Installing the rear centre console trim



- Install the centre console trim (2).
- Connect connectors (1) and lock.

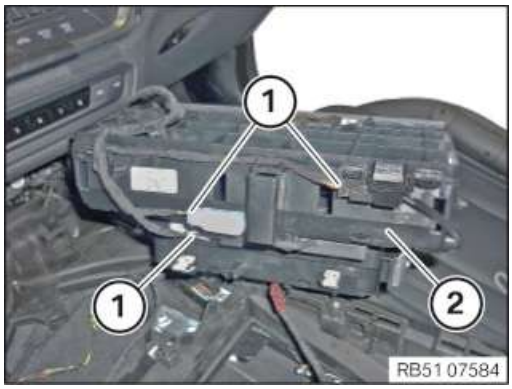


- Position centre console trim (1) and engage at the latch mechanisms at the side.

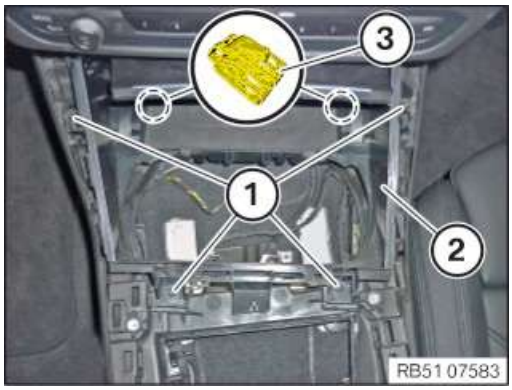
53 – Installing the storage compartment in the centre console in the front

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53 – Installing the storage compartment in the centre console in the front



- Mount the storage compartment in the centre console in the front (2) and connect and lock connectors (1).

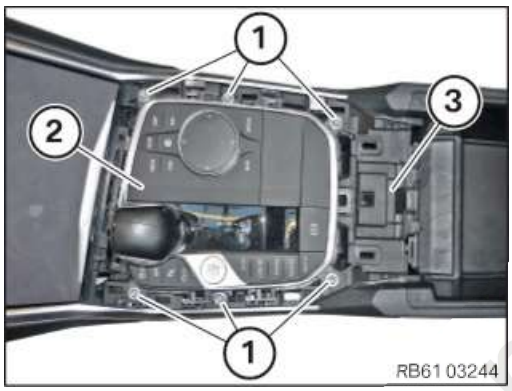


- Engage the storage compartment in the centre console in the front (2) into clamps (3) in the rear.
- Tighten the screws (1).

Storage compartment in centre console

Oval-head screw		Tightening torque	1,8 Nm

54 – Install the operating facility in the centre console



- Position the operating facility (2) in the centre console (3).
- Tighten the screws (1).

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

▸ **Connecting all battery earth leads**



- See additional information.

▸ **Activating the 48 V electrical system**

Prerequisite

Ignition is switched off.

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RISK OF DAMAGE

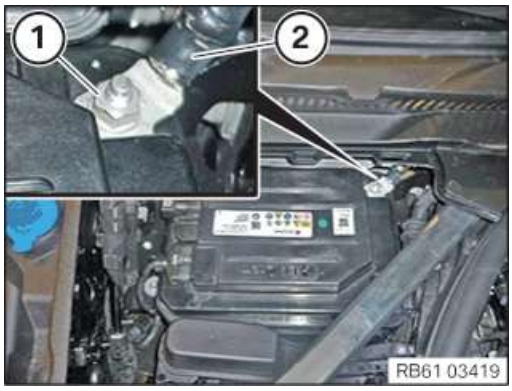
Damage to 48-V battery

If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.



- Lift battery earth lead (1).
- Remove special tool .



- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

Negative battery cable to 48-V battery

Nut M8		Tightening torque	19 Nm



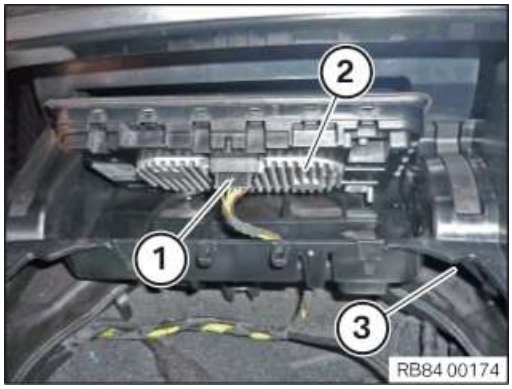
- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).



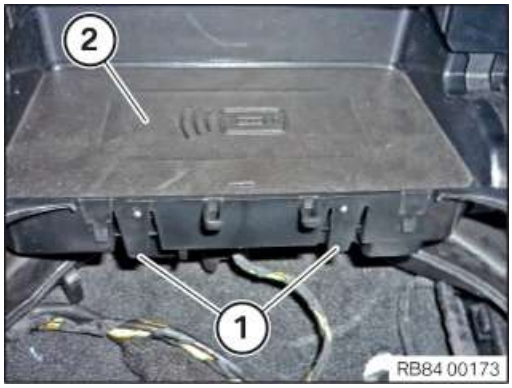
- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

55 – Installing the wireless charging station



- Connect connectors (1) and lock.
- Position the wireless charging station (2) in the centre console (3).



- Push the wireless charging tray (2) down.

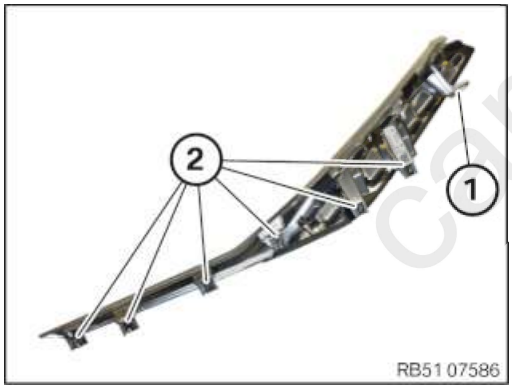
  The latch mechanisms (1) must engage correctly.

56 – Installing the decorative trim on the centre console on the left and right

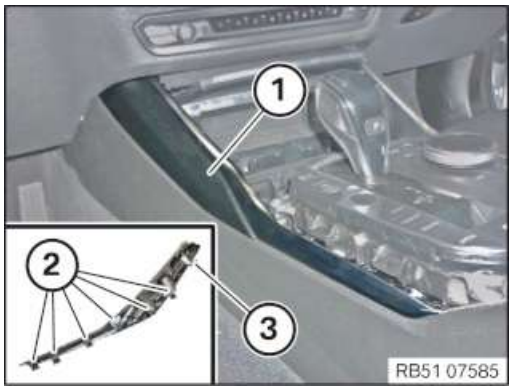
▸ **Installing the decorative trim on the centre console**

NOTICE

Description is for left component only. Procedure on the right side is identical.



- Check the guide (1) and the latch mechanisms (2) for damage, renew the decorative trim if necessary.



- Feed in the decorative trim (1) forward in the guide (3).
- Engage decorative trim (1) in latch mechanisms (2).

57 – Installing the centre console trim

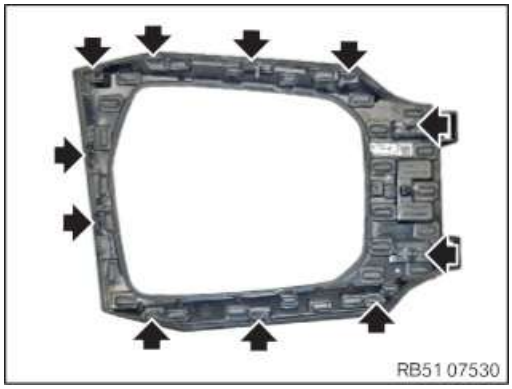
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RISK OF DAMAGE

Careless handling of tools and sharp-edged components.

Scratch, surface damage.

- Protect working area.
- Handle tools and components carefully.

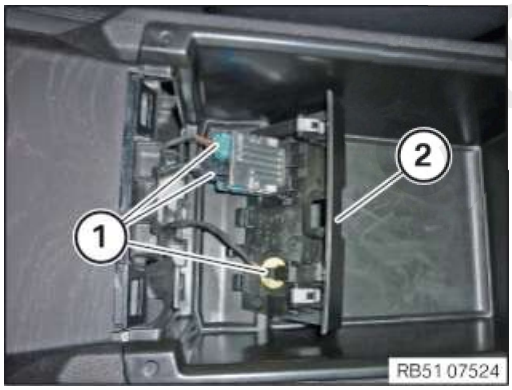


- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .

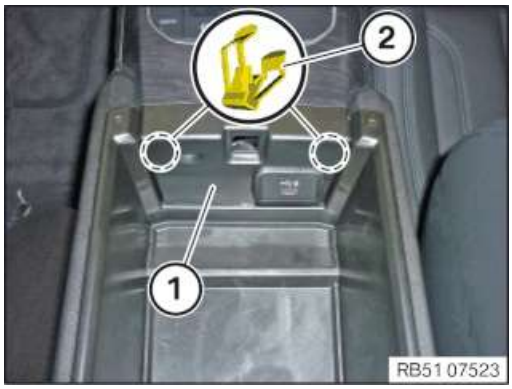


- Correctly position the centre console trim (1) and engage at the latch mechanisms.

58 – Installing the trim in the storage compartment of the centre armrest



- Mount the trim (2) and connect connector (1) and lock.



- Correctly position trim (1) and snap into the clamps (2).

59 – Install the cup holder



- Fix the cup holder (2) and the belonging connectors.
- Correctly position the cup holder (2).
- Tighten the screws (1).

Cup holder to centre console

Oval-head screw		Tightening torque	1,8 Nm



- Insert the insert (1).

Additional Information

Overview of Tightening Torques

Head-Up Display to support — Used in step 31

M6x25 screw		Tightening torque	13 Nm

Dashboard to support — Used in step 32

Screw		Tightening torque	2,4 Nm

Speaker to support / support to instrument panel / support to body — Used in step 33

Screw		Tightening torque	1,8 Nm

Instrument cluster (KOMBI) to support — Used in step 36

Screw		Tightening torque	1,8 Nm

Steering column switch cluster (SZL) on the steering column — Used in step 37

Screw TS5x20		Tightening torque	3 Nm

Steering wheel to steering column — Used in step 40

M14	Only for a micro-encapsulated screw: Renew screw.	Tightening torque	62,5 Nm

Central information display to instrument panel — Used in step 42

Screw		Tightening torque	2,4 Nm

Fold-down compartment to instrument panel — Used in step 46

Oval-head screw		Tightening torque	1,8 Nm

A-pillar trim panel to body — Used in step 48

Sheet metal screw 4,8x38		Tightening torque	2,6 Nm

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Centre console on tunnel			Used in step 51
M6x18 Hexagon screw		Tightening torque	4,6 Nm

Centre console to instrument panel			Used in step 51
Oval-head screw		Tightening torque	1,8 Nm

Storage compartment in centre console			Used in step 53
Oval-head screw		Tightening torque	1,8 Nm

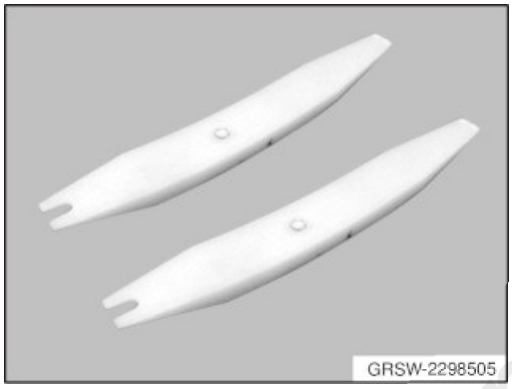
Gear selector switch to centre console trim			Used in step 54
Screw		Tightening torque	1,8 Nm

Negative battery cable to 48-V battery			Used in step 54
Nut M8		Tightening torque	19 Nm

Cup holder to centre console			Used in step 59
Oval-head screw		Tightening torque	1,8 Nm

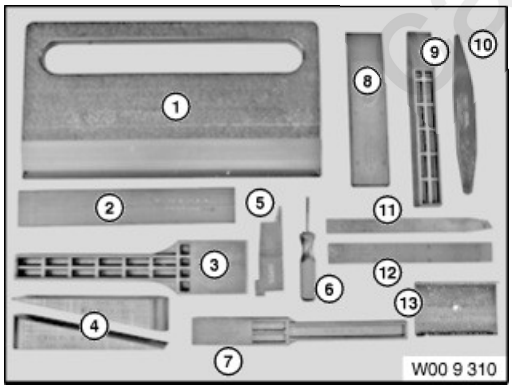
Overview of Special Tools

2 298 505 Wedge



Common	Used in step 34
Usage	Set (delivery of 2 pieces)
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

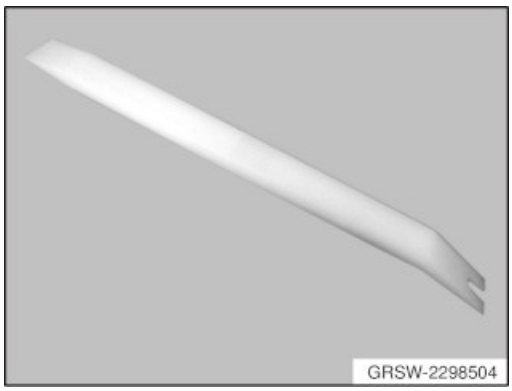
0 493 752 (00 9 329) Case



Common	Used in step 13
Usage	(Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019.
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

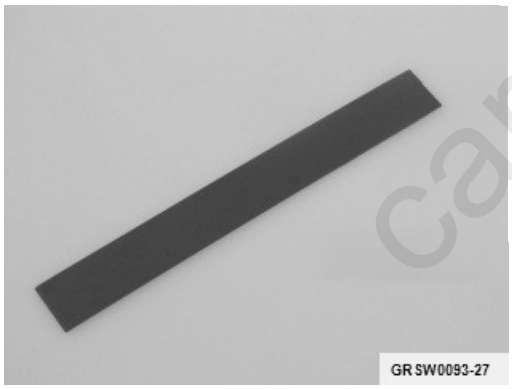
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2 298 504 Wedge



Common	Used in step 22
Usage	Wedge with angled lug
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

0 496 571 (00 9 327) Wedge



Common	Used in step 26
Usage	(Cleaning wedge) From 11/2008 this special tool replaces panel wedge 00 9 323 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

0 496 569 (00 9 325) Wedge



Common	Used in step 27
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

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Links

Repair instructions (PRE)	Used in step
Notes on 48-V battery	754

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	1320
72 00 ... Safety regulations for handling components with gas generators	13

Repair instructions	Used in step
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
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61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
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61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle)	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
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61 20 900 Disconnecting and connecting battery earth lead	754
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61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 35 ... Notes on ESD protection (Electro Static Discharge)	1942
61 35 ... Notes on ESD protection (Electro Static Discharge)	1942

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62 30 005 Removing and installing/replacing trim for Head-Up Display

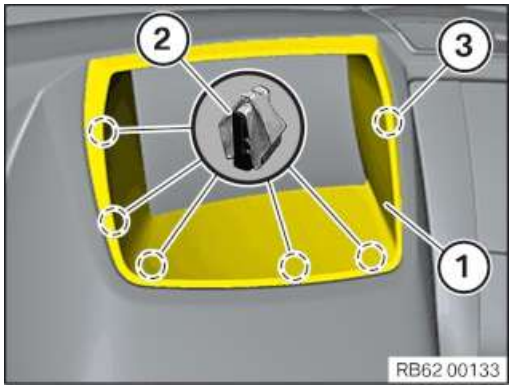
RISK OF DAMAGE

Careless handling of tools and sharp-edged components.

Scratch, surface damage.

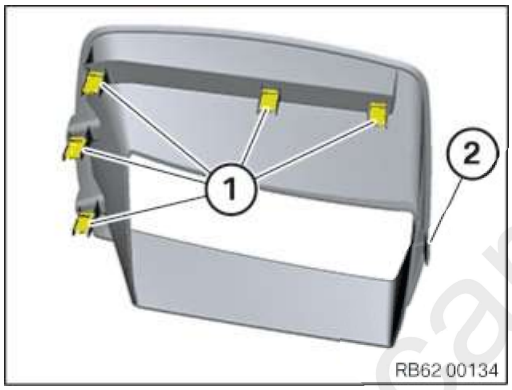
- Protect working area.
- Handle tools and components carefully.

1 – Removing trim for the Head-Up Display

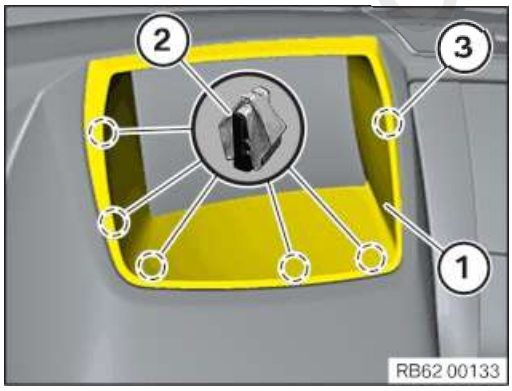


- Unclip trim (1) for the Head-Up Display upwards from clamps (2) and latch mechanism (3).

2 – Installing the trim for the Head-Up Display



- Check clamps (1) and the latch mechanism (2) for damage, renew if necessary.



- Correctly position the trim (1) for the BMW Head-Up Display and engage it on the clamps (2) and the retaining lug (3).

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62 30 515 Replacing head-up display

PRELIMINARY WORK

1 – Adjust the steering column position

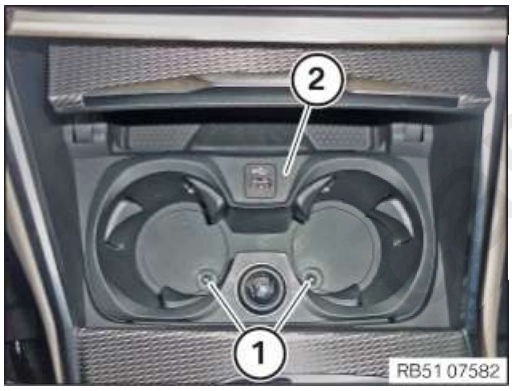


- Adjust the length of the steering column to the maximum length in the direction of arrow (1).
- Move the steering column to the lowest steering column position in the direction of arrow (2).

2 – Remove cupholder

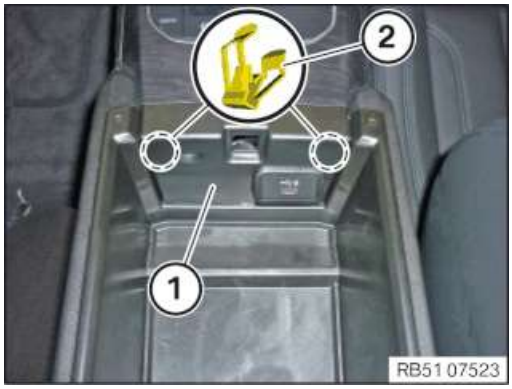


- Remove the insert (1).

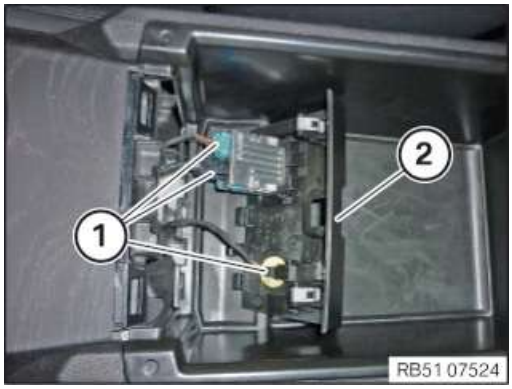


- Loosen screws (1).
- Feed the cup holder (2) out to the top.
- Unlock associated plug connections and disconnect.

3 – Removing the trim in the storage compartment on the centre armrest



- Lever out the trim (1) with the special tool (2) toward the rear from the clamps 2 298 505.



- Unlock and disconnect the plug connections (1) and remove the trim (2) .

4 – Remove the centre console trim

RISK OF DAMAGE

Careless handling of tools and sharp-edged components.

Scratch, surface damage.

- Protect working area.
- Handle tools and components carefully.



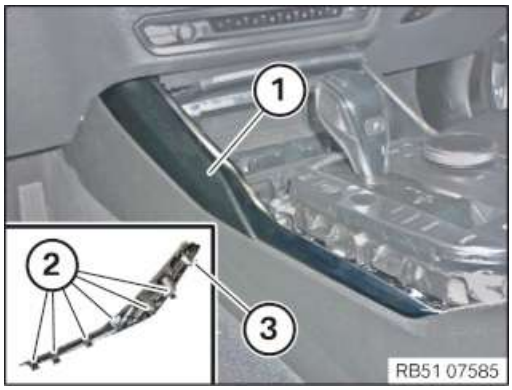
- Release and remove the centre console trim upwards (1) as shown using the special tool 2 298 505 from the latch mechanisms.

5 – Removing the decorative trim on the centre console on the left and right

▸ **Remove the decorative trim from the centre console**

NOTICE

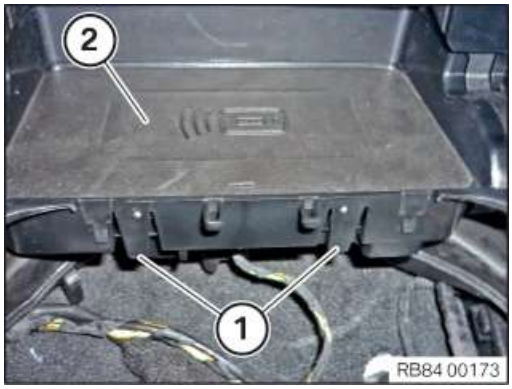
Description is for left component only. Procedure on the right side is identical.



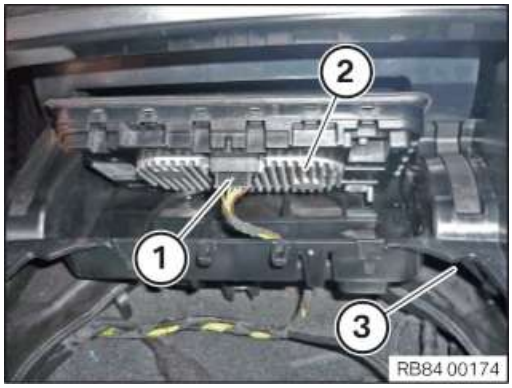
- Lever out the rear decorative trim (1) from the latch mechanisms (2) starting from the top.
- Feed out the decorative trim (1) backwards out of the guide (3) and remove.

6 – Removing the wireless charging station

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- Loosen the latch mechanisms (1) and push out the wireless charging station (2) upwards.



- Unlock and disconnect the plug connection (1) and remove the wireless charging tray (2) from the centre console (3).

7 – Remove the operating facility in the centre console

▸ **Deactivating the 48 V electrical system**

Prerequisite

Ignition is switched off.

WARNING

Deactivation of the 12 V vehicle electrical system.

Risk of short circuits! Risk of fire!

- Make sure that **no battery charger** is connected to the jump start terminal point in the engine compartment.
- For vehicles with additional electrical systems (48 V electrical system, high-voltage vehicle electrical system), it is mandatory to deactivate them **before** disconnecting the vehicle battery.

WARNING

Deactivation of the 48 V electrical system.

Risk of short circuits! Risk of fire!

- Make sure that **no charger** is connected to the jump start support point in the engine compartment.

RISK OF DAMAGE

Damage to 48-V battery

If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.

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TECHNICAL INFORMATION

Follow notes for 48-V battery. See further information 6120 ... Notes on 48-V battery.



- Deactivate the 48V electrical system by opening the bonnet.

  The deactivation takes place automatically.

Check



TECHNICAL INFORMATION

Zero voltage (48V electrical system is switched off) is displayed only in PAD mode.

- Press the START-STOP button quickly 3 times without stepping on the brake pedal to establish the PAD mode.
- Check isolation from the supply in the instrument cluster in PAD mode.

desired state

- The Check Control message "48V electrical system switched off." (1) is displayed.

Result

» **The absence of voltage** cannot be determined by means of the Check Control message "48V electrical system switched off:" (1). Work is not permitted to be started.

Measure

- Carry out the service function "48 V electrical system deactivation".
  - Vehicle management > Service functions > Voltage supply > Deactivate 48 V electrical system

  Only when the Check Control message “48 V electrical system switched off.” (1) is displayed in the instrument cluster is it permitted to disconnect the 12 V battery.

  If the absence of voltage is not indicated clearly, contact Technical Support.

Result

» The Check Control message signals that the 48V electrical system has been switched off.

Measure

- Exit PAD mode by pressing the START-STOP button once without depressing the brake pedal.

  The work “Disconnecting the negative battery cable of the 48-V battery” can be started.

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- Unlock and disconnect plug connection (1) of the CAN bus.
- Release the clip (2).



- Loosen nut (1).
- Pull off negative battery cable (2) of the 48-V battery from the negative battery terminal, set it aside and secure it.



WARNING

Unprotected battery terminals.

Risk of short circuits! Risk of fire!

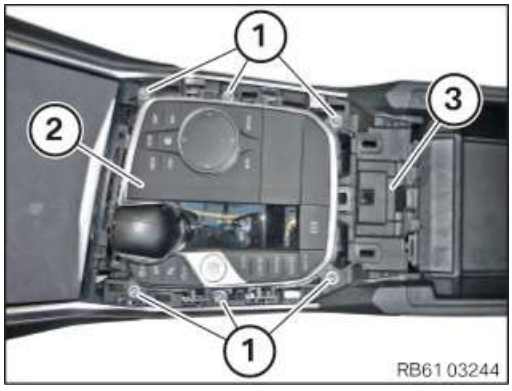
- Cover the vehicle battery.

- Cover the vehicle battery with the special tool as shown.
- Position the battery earth lead (1) as shown.

▸ **Disconnecting all battery earth leads**

- See additional information.

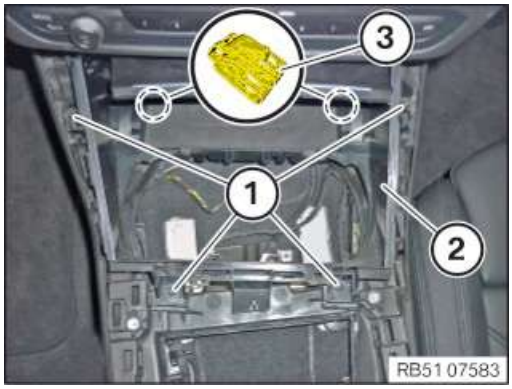




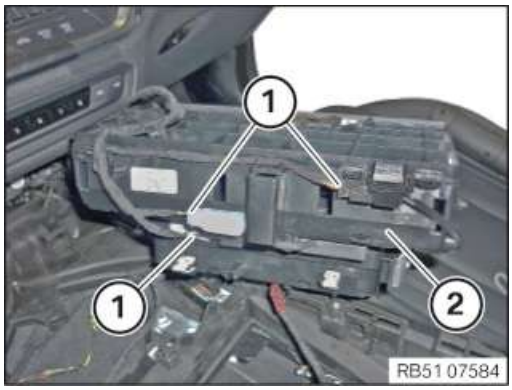
- Loosen screws (1).
- Remove the operating facility in the centre console (2) from the centre console (3).

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8 – Removing the storage compartment in the front centre console



- Loosen screws (1).
- Pull the storage compartment in front centre console (2) backwards from the clamps (3).



- Unlock and disconnect the plug connections (1) and remove the storage compartment in centre console (2).

9 – Removing the rear centre console trim

RISK OF DAMAGE

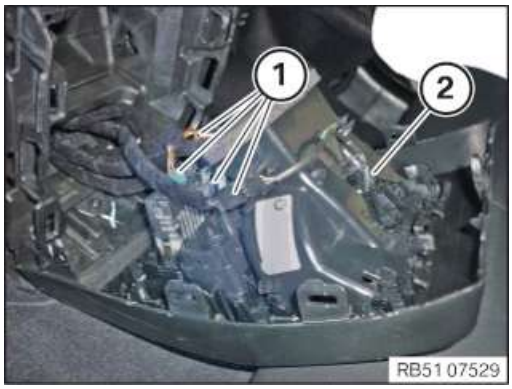
Careless handling of tools and sharp-edged components.

Scratch, surface damage.

- Protect working area.
- Handle tools and components carefully.



- Release centre console trim (1) backwards from the latch mechanisms at the side and remove it slightly at the back.



- Unlock and disconnect plug connections (1).
- Remove the centre console trim (2).

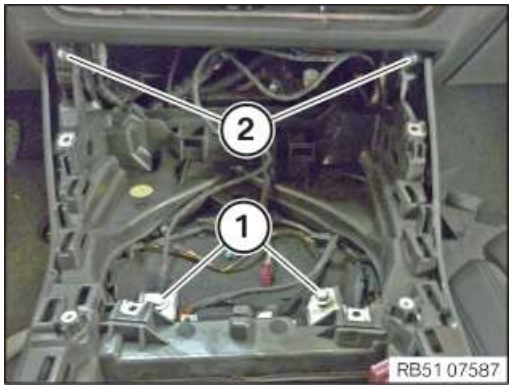
10 – Removing the centre console

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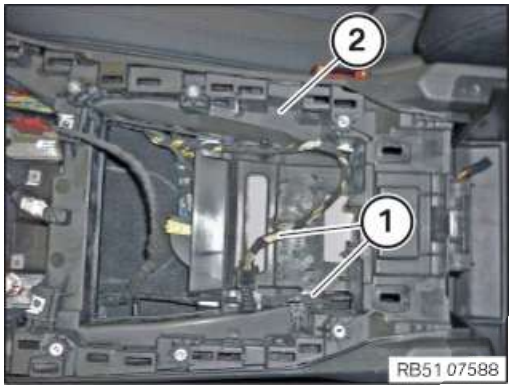
10 – Removing the centre console



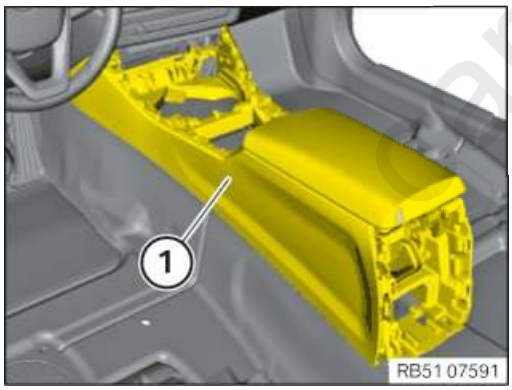
- Loosen screws (1).



- Loosen screws (1) and (2).



- Release the wiring harness (1) from the centre console (2).

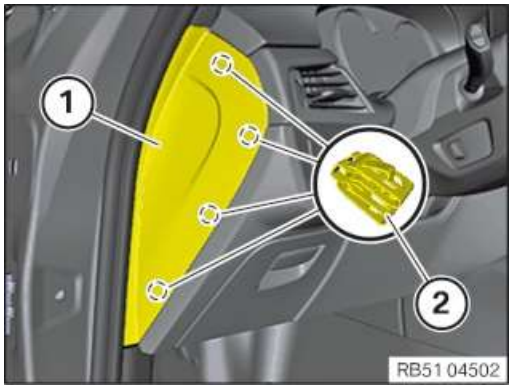


NOTICE

To provide a better overview: Schematic diagram with partially hidden components.

- Carefully raise rear centre console (1).
- Feed out wiring harness from the centre console (1) and unlock and disconnect existing plug connections, if required.
- Feed out and remove the centre console (1) on the instrument panel .

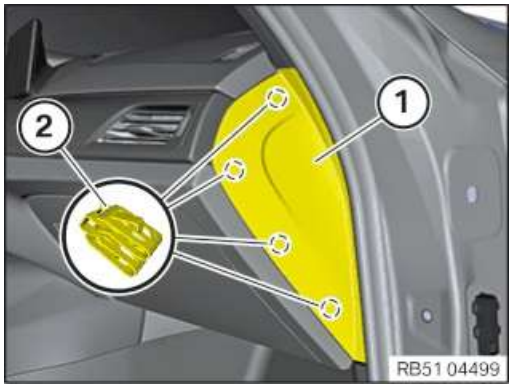
11 – Remove the side panel on the left instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).

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12 – Remove the side panel on the right instrument panel



- Unclip and remove the side panel (1) towards the outside from the clamps (2).
- If necessary, unlock associated plug connection and disconnect.

13 – Remove left and right A-pillar trim panel

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Remove the A-pillar trim panel**

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

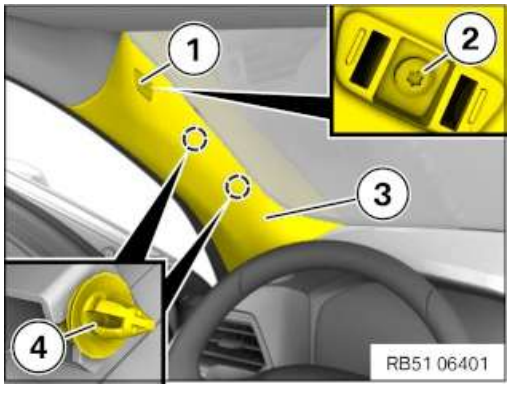
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

RISK OF DAMAGE

Damage to the head airbag.

Improper use of a tool when removing the trim panel may damage the head airbag.

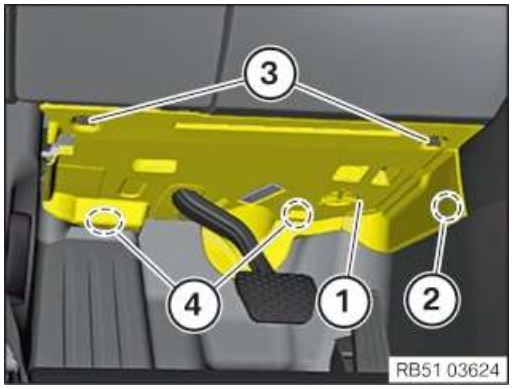
- Do not use sharp-edged tools when removing the trim panel.



- Unclip cover (1) with a suitable special tool from the special tool kit 0 493 752 (00 9 329).
- Loosen screw (2).
- Unclip A-pillar trim panel (3) with clips (4) and feed it out to the top.

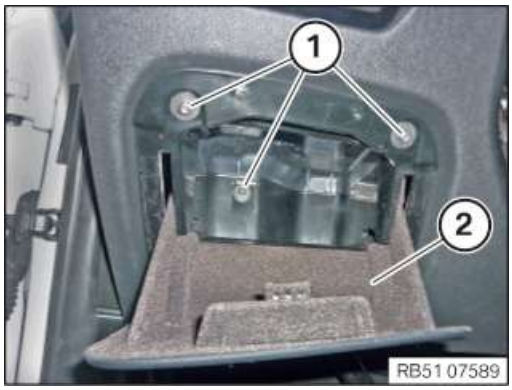
14 – Removing the trim panel for pedal mechanism

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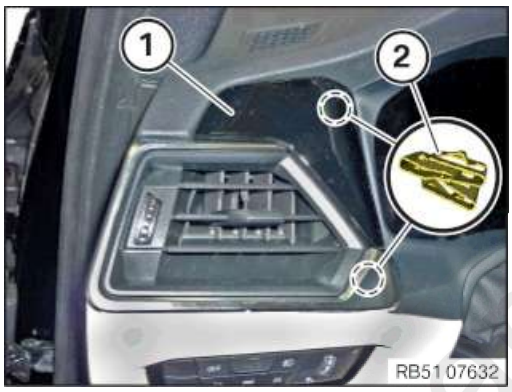
- Unclip the trim panel for the pedal mechanism (1) towards the inside in this area (2).
- Turn the locks (3) by 90°.
- Detach the trim panel for the pedal mechanism (1) inwards out of the guides (4).
- Unlock associated plug connection and disconnect.

15 – Removing the left fold-down compartment



- Loosen screws (1).
- Remove the fold-down compartment (2) toward the bottom.

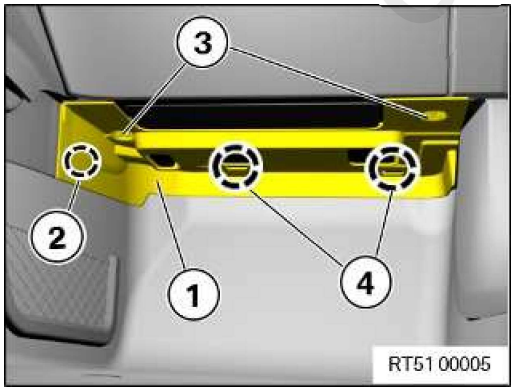
16 – Remove the finisher on the instrument panel on the left



- Unclip decorative strip (1) to the rear out of the clamps (2).
- Unlock associated plug connection and disconnect.

  Remove the decorative strip (1).

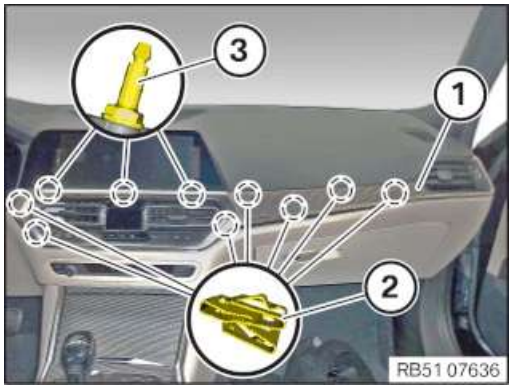
17 – Remove the right footwell trim



- Turn the locks (3) by 90°.
- Feed the footwell trim (1) out of the guide (2).
- Detach the footwell trim (1) inward out of the guides (4).
- Unlock associated plug connection and disconnect.

18 – Remove the finisher on the right instrument panel

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- Unclip the decorative strip (1) towards rear at the clamps (2) and the pins (3).
- Unlock associated plug connection and disconnect.
- Remove the decorative strip (1).

19 – Remove Central Information Display (CID)

RISK OF DAMAGE

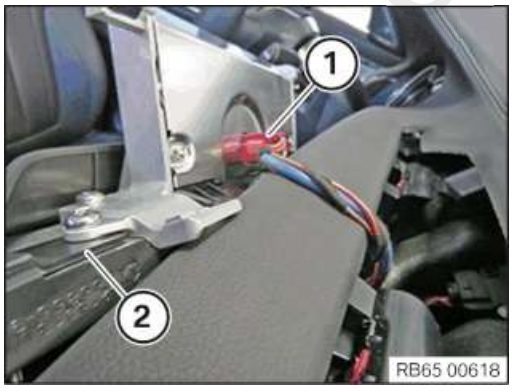
Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)



- Loosen screws (1).
- Pull out central information display (CID) (2) slightly off the instrument panel.



- Unlock plug connection (1) and disconnect.
- Remove the central information display (CID) (2).

20 – Removing the airbag unit

WARNING

Airbag unit.

Danger! Life-threatening injuries!

- Before performing any work on the airbag, always disconnect the battery earth lead from the battery.
- Airbag unit may only be set down with the cushion (airbag itself) facing upwards.
- For additional information see: 72 00 ... Safety regulations on handling airbag system components/gas generators

RISK OF DAMAGE

Damage to the steering wheel.

Incorrect handling of the tool may damage the steering wheel.

- Ensure the tool is positioned correctly (angle and inclination).
- When unlocking, do not use "levering" action. Instead, press in the Torx screwdriver toward the centre of steering wheel only.

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

▸ **Removing the airbag unit for sports steering wheel**



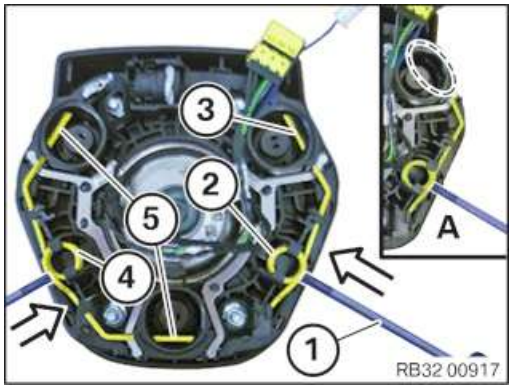
- Insert Torx screwdriver T25 (1) diagonally upwards in the hidden opening (2) on the rear side of the steering wheel until a spring resistance is felt.



NOTICE

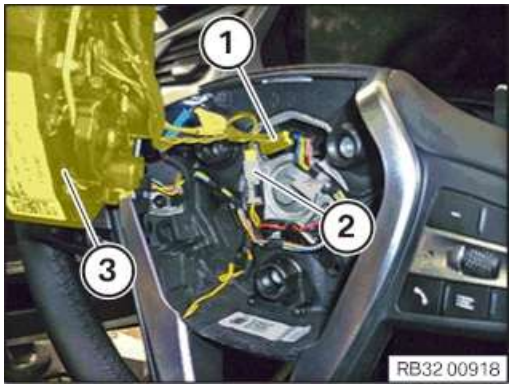
To provide a better overview: Diagram with airbag unit removed.

- To unlock the airbag unit, press Torx screwdriver T25 (1) diagonally upwards in the direction of the arrow to the centre of the steering wheel.



- Press the airbag unit over a large area of the steering wheel.
- Use Torx screwdriver T25 (1) to press wire spring clip (2) in the direction of the arrow towards the centre of the steering wheel and release lock (3).

  (A): Wire spring clip (2) is unlocked.
- Press wire spring clip (4) with Torx screwdriver T25 (1) in the direction of the arrow towards the centre of the steering wheel and release locks (5).
- Carefully raise the airbag unit.



- Unlock and disconnect the plug connections (1) and (2).
- Remove airbag unit (3).

▸ Removing the airbag unit for M Sport steering wheel



NOTICE

Perform the operations on the left and right side.

- Locate the mark (1) for unlocking the airbag unit on the steering wheel by touching it.



NOTICE

Perform the operations on the left and right side.

- Cut the mark (1) carefully with a knife (2) to an approx. length of 4 mm .

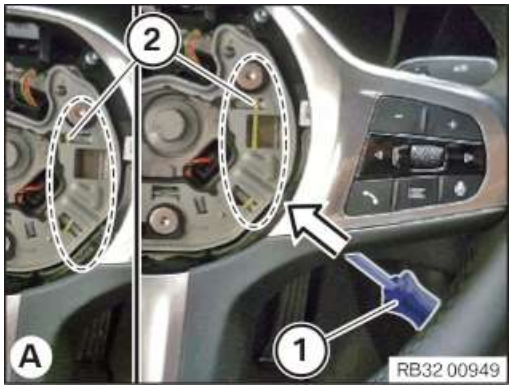


TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

- In case of vehicles with shift paddles (2) made of carbon-fibre-reinforced plastic, use a Torx socket T15 (1) for unlocking the airbag unit.

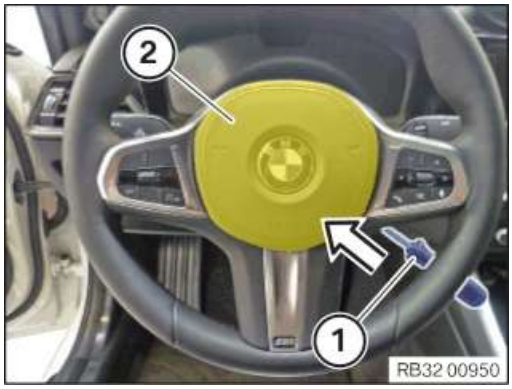
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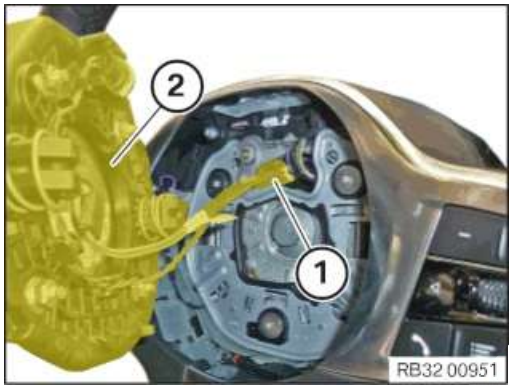
NOTICE

To provide a better overview: Diagram with airbag unit removed.

- Insert the Torx socket T15 (1) diagonally upwards until a resilient resistance is felt.
- Press in Torx socket T15(1) straight in the direction of arrow towards the centre of the steering wheel in order to unlock the wire spring clip (2) or to unlock the airbag unit (A).

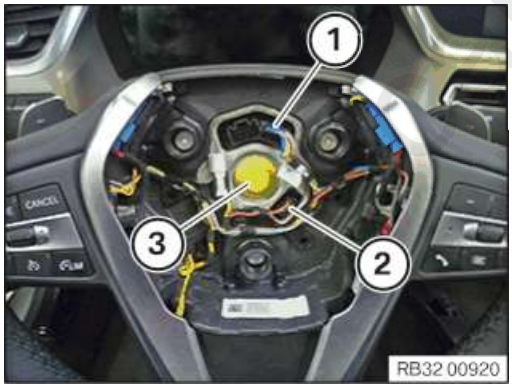


- Press in Torx screwdriver T15 (1) straight in direction of arrow towards the centre of the steering wheel and lift the airbag unit (2) on the unlocked side.
- Repeat procedure on left side and carefully release airbag unit (2) from the steering wheel.



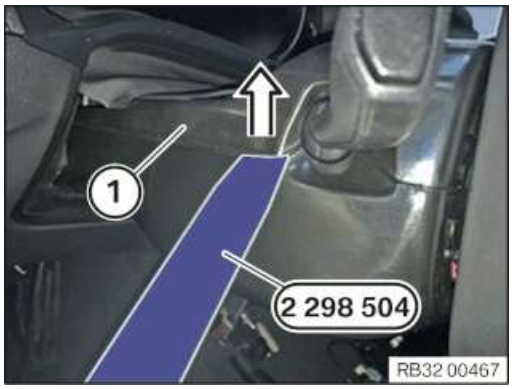
- Unlock and disconnect the plug connection (1) and remove the airbag unit (2).

21 – Remove sports steering wheel



- Move the steering wheel and wheels to the straight-ahead position.
- Unlock plug connection (1) and disconnect.
- If installed: Unlock plug connection (2) and disconnect.
- Release the screw (3) and pull off and remove the steering wheel.

22 – Removing steering column shroud upper section

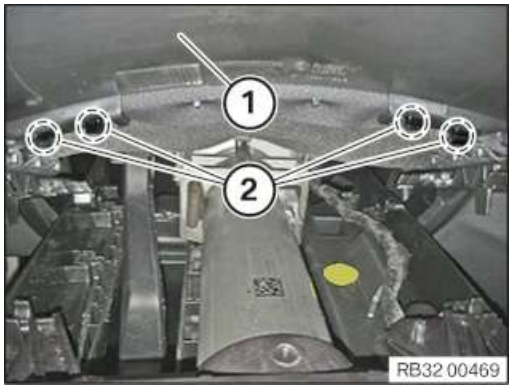


NOTICE

Perform the operations on the left and right side.

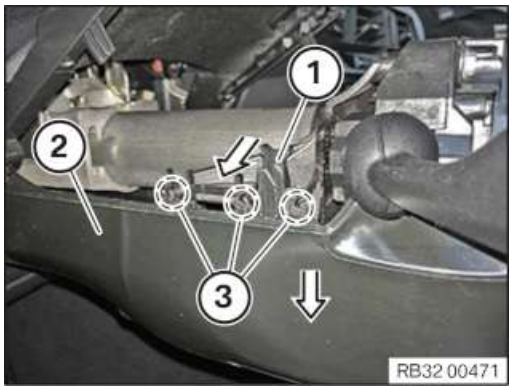
- Unlock the steering column shroud upper section (1) with the special tool 2 298 504 and fold up.

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- Unclip the steering column shroud upper section (1) from the brackets (2).
- Remove the steering column shroud upper section (1).

23 – Removing steering column shroud lower section



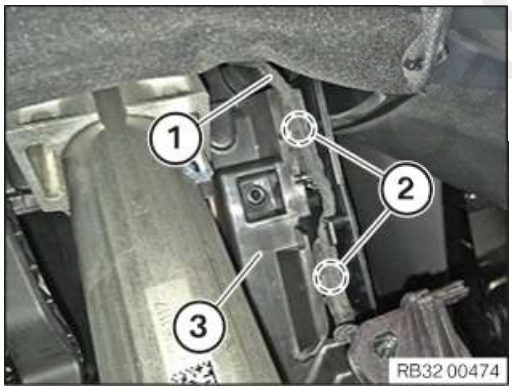
NOTICE

Perform the operations on the left and right side.

- Push the retaining lug (1) to the outside in the direction of the arrow and unclip the steering column shroud lower section (2) from the holders (3) in the direction of the arrow to the bottom at the same time.

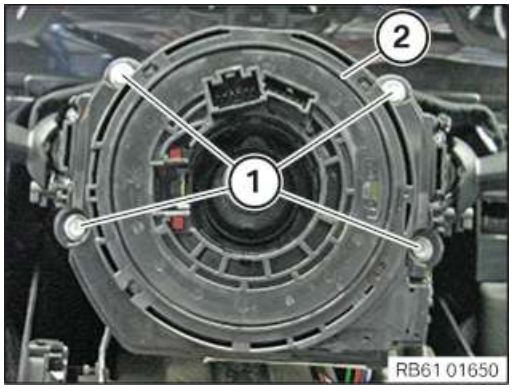


- Fold the steering column shroud lower section down.
- Unlock and disconnect connector (1).

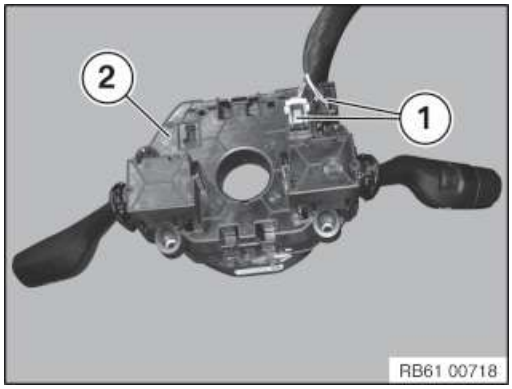


- Detach the cable (1) from the brackets (2).
- Remove the steering column shroud lower section (3).

24 – Removing the steering column switch cluster (SZL)



- Loosen screws (1).
- Remove the steering column switch cluster (SZL) (2).



- Unlock and disconnect plug connections (1) on the SZL (2).

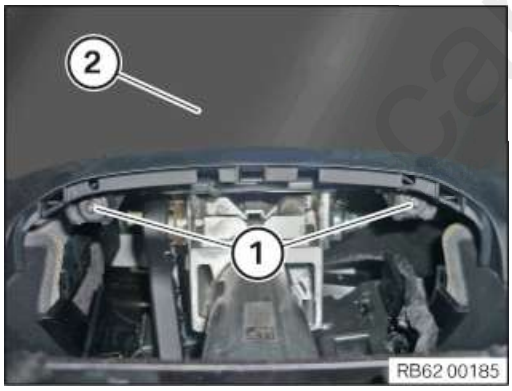
25 – Removing the instrument cluster (KOMBI)



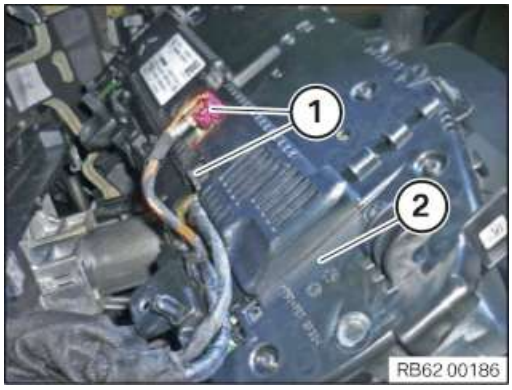
- Loosen screw (1).



- Loosen screw (1).



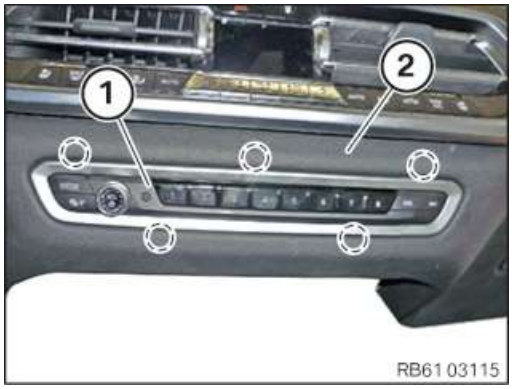
- Loosen screws (1).
- Feed out instrument cluster (KOMBI) (2).



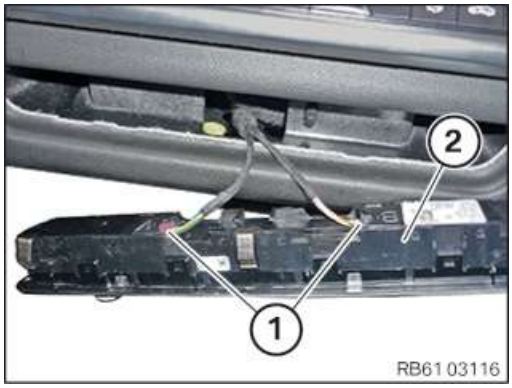
- Unlock and disconnect plug connections (1) from instrument cluster (KOMBI) (2).
- Remove the instrument cluster (KOMBI) (2).

26 – Remove the audio operating unit

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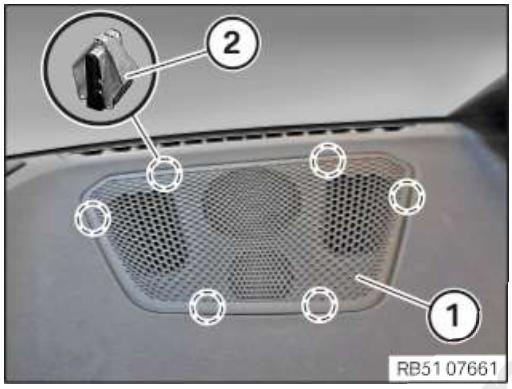


- Unclip the audio operating unit (1) from the instrument panel (2) at the points marked using special tool 0 496 571 (00 9 327).



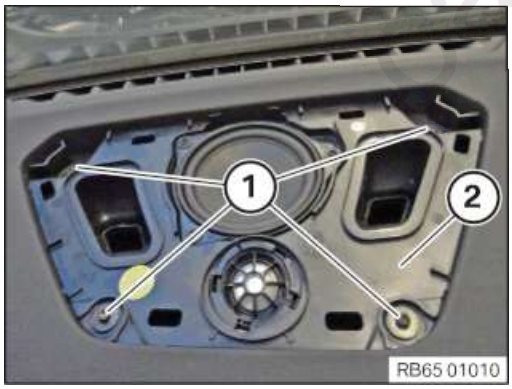
- Disconnect plug connections (1) and remove the audio operating unit (2).

27 – Remove the speaker trim at the instrument panel

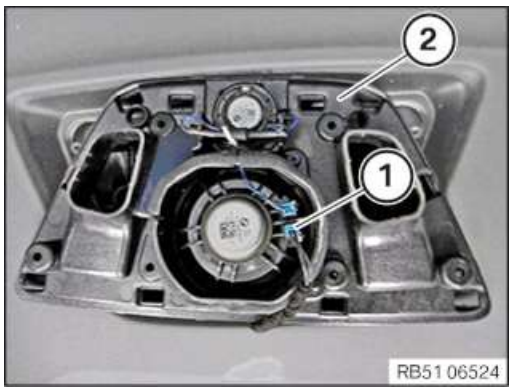


- Lever out the speaker trim (1) with the special tool 0 496 569 (00 9 325) from the clamps (2) toward the top and remove.

28 – Remove the speaker holder at the instrument panel



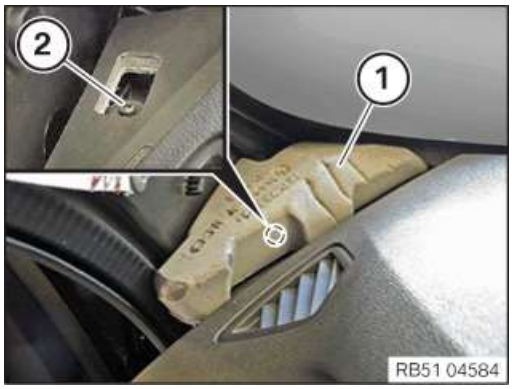
- Loosen screws (1).
- Pull out speaker holder (2) slightly with the loudspeakers and tilt it to the side.



- Unlock plug connection (1) and disconnect.
- Remove the speaker holder (2).

erdiagn.com

29 – Remove the instrument panel trim panel



NOTICE

Perform the operations on the left and right side.

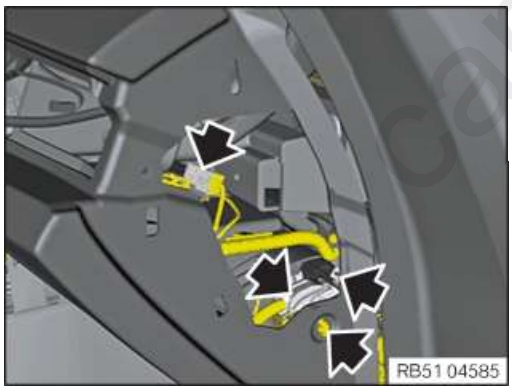
- Remove the sound insulation (1).
- Loosen screw (2).



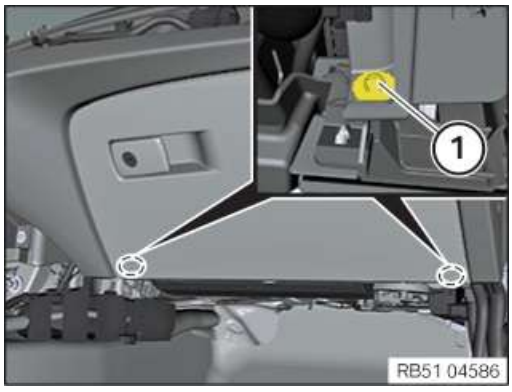
- Loosen screws (1).



- Loosen screws (1).

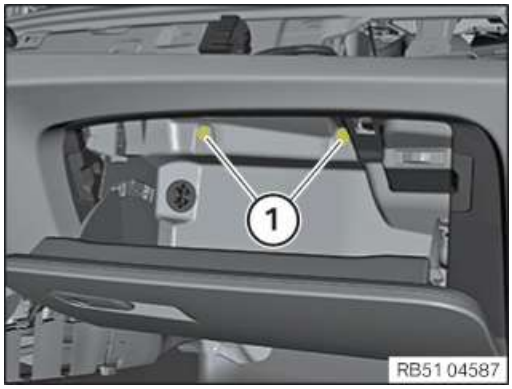


- Release all plug connections and cable clips (arrows) behind the glove box.

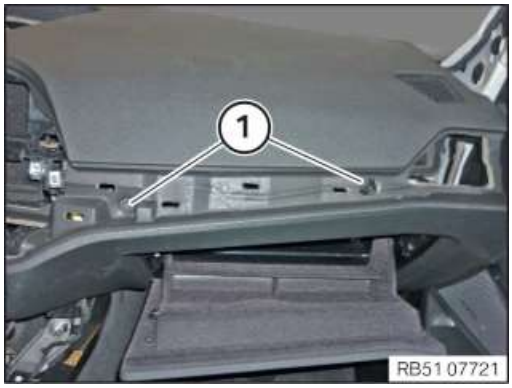


- Release the screws (1) on the lower side of the glove box.

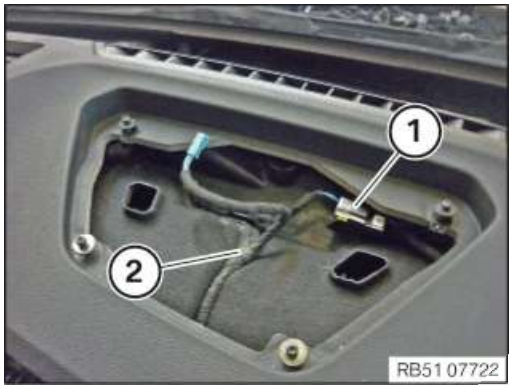
cardiagn.com



- Open glovebox.
- Loosen screws (1).



- Loosen screws (1).



- Unlock plug connection (1) and disconnect.
- Release the wiring harness (2) on the holders.



- Unlock the plug connection (1) on the light operating unit and disconnect it.



- Loosen screws (1).

TECHNICAL INFORMATION

Conduct the following operation with the assistance of a second person.

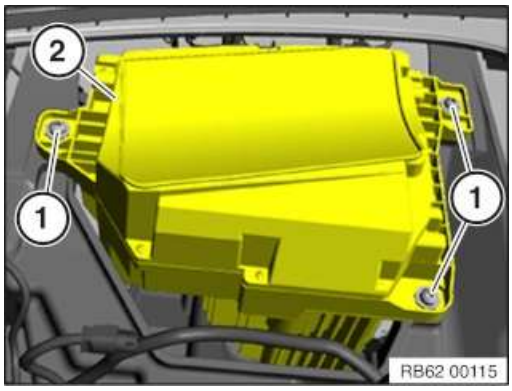
- Pull the instrument panel trim back slightly.

  If necessary, unlock and disconnect additional plug connections.
- Remove the instrument panel trim from the vehicle.

rdiagn.com

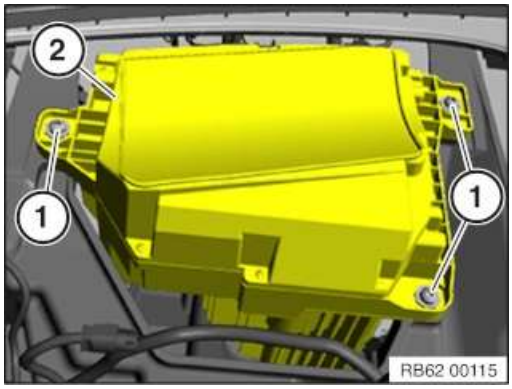
MAIN WORK

30 – Removing the Head-Up Display



- Loosen screws (1).
- Remove head-up display (2) from support.
- Unlock associated cable and disconnect.

31 – Installing the head-up display



- Connect the associated connector to the Head-Up Display.
- Guide the Head-Up Display (2) into the support.
- Tighten the screws (1).

Head-Up Display to support

M6x25 screw		Tightening torque	13 Nm

POSTPROCESSES

32 – Install the trim panel for the instrument panel



TECHNICAL INFORMATION

Conduct the following operation with the assistance of a second person.

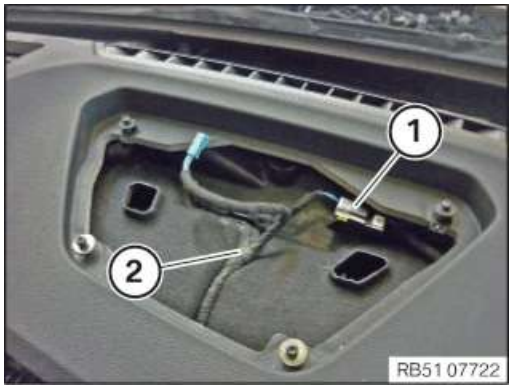
- Insert the instrument panel trim in the vehicle and position it at the support.
- Insert the associated wiring harnesses and connect the connectors.
- Tighten the screws (1).

Dashboard to support

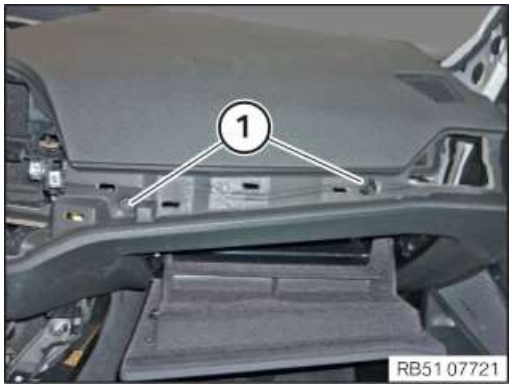
Screw		Tightening torque	2,4 Nm



- Connect connector (1) to the light operating unit and lock.



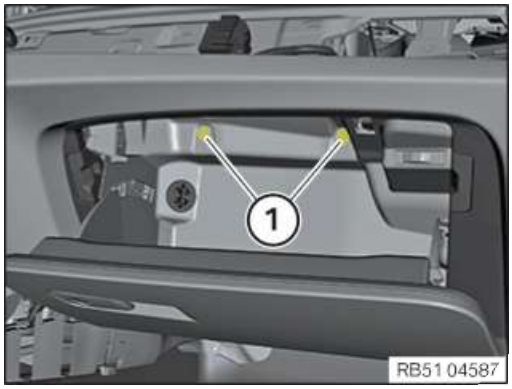
- Secure the wiring harness (2) on the holders.
- Connect connectors (1) and lock.



- Tighten the screws (1).

Dashboard to support

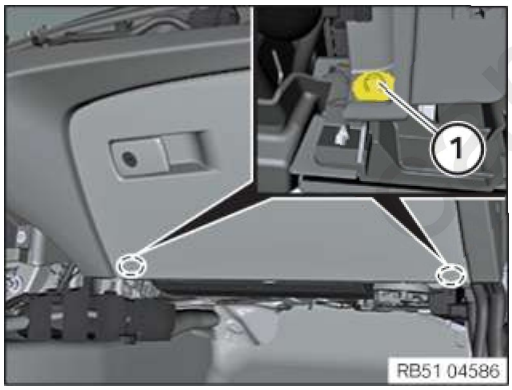
Screw		Tightening torque	2,4 Nm



- Open glovebox.
- Tighten the screws (1).

Dashboard to support

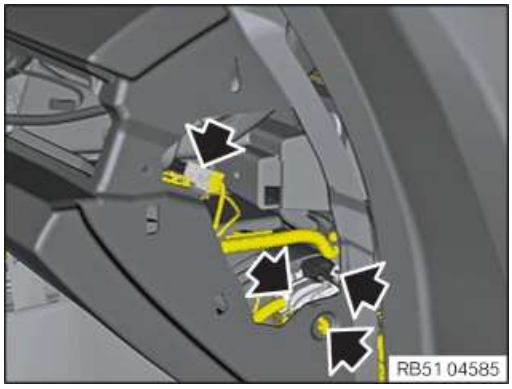
Screw		Tightening torque	2,4 Nm



- Tighten the screws (1) on the lower side of the glove box button.

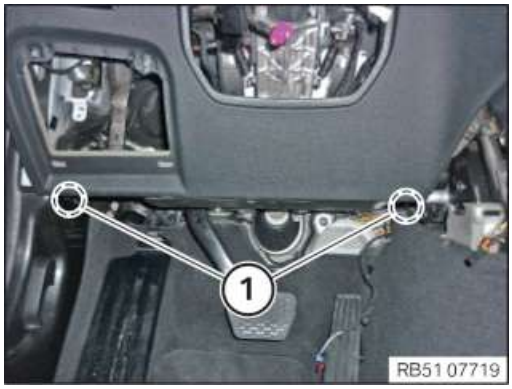
Dashboard to support

Screw		Tightening torque	2,4 Nm



- Connect all plug connections and cable clips (arrows) behind the glove box.

autodiagn.com



- Tighten the screws (1).

Dashboard to support

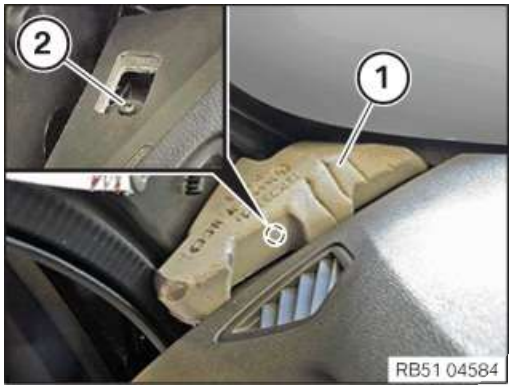
Screw		Tightening torque	2,4 Nm



- Tighten the screws (1).

Dashboard to support

Screw		Tightening torque	2,4 Nm



NOTICE

Perform the operations on the left and right side.

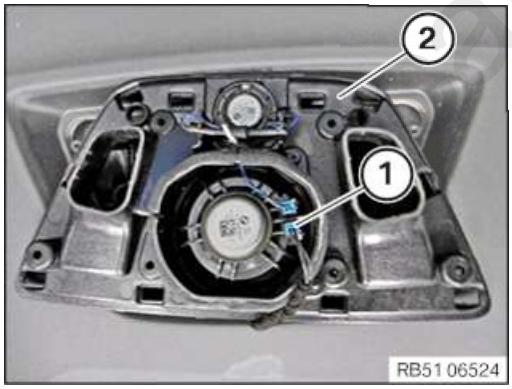
- Tighten down screw (2).

Dashboard to support

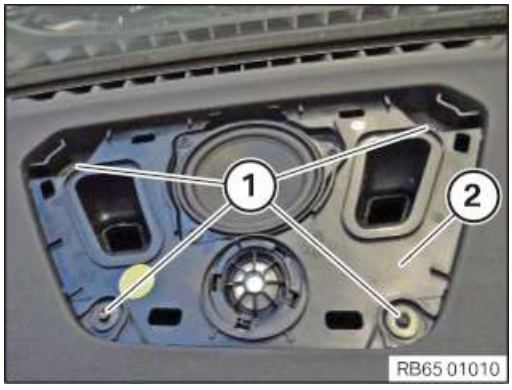
Screw		Tightening torque	2,4 Nm

- Use sound insulation (1).

33 – Install the speaker holder at the instrument panel



- Position the speaker holder (2).
- Connect connector (1).



- Install the speaker holder (2).
- Tighten the screws (1).

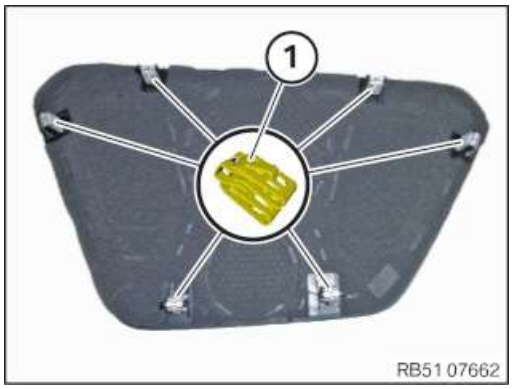
Speaker to support / support to instrument panel / support to body

Screw		Tightening torque	1,8 Nm

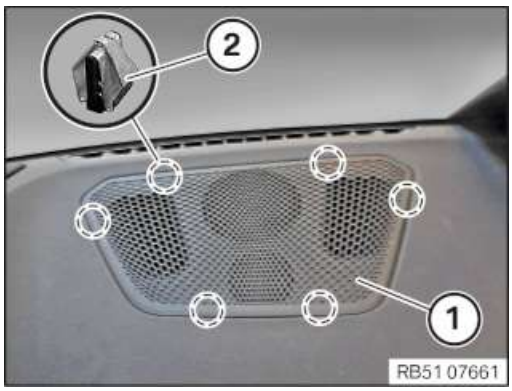
34 – Install the speaker trim at the instrument panel

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34 – Install the speaker trim at the instrument pan_.

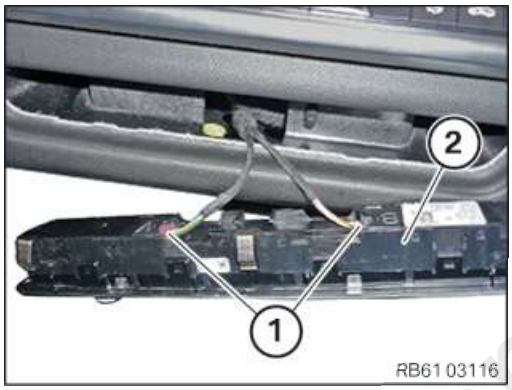


- Check clamps (1) for damage.
- Replace broken or missing clamps (1).

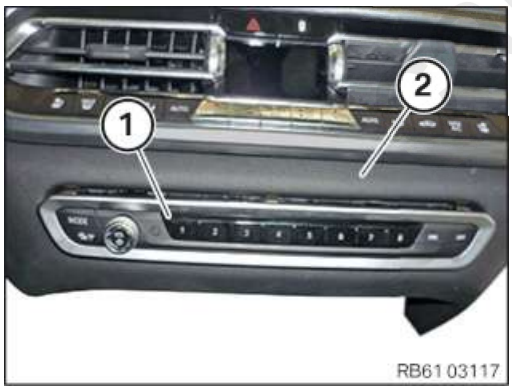


- Position the speaker trim (1) correctly and engage it at the clamps (2).

35 – Install the audio operating unit



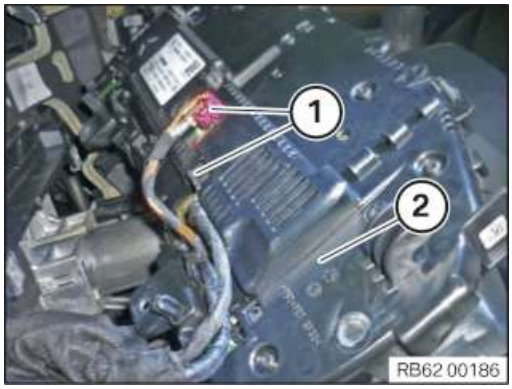
- Connect the connector (1) to the audio operating unit (2).



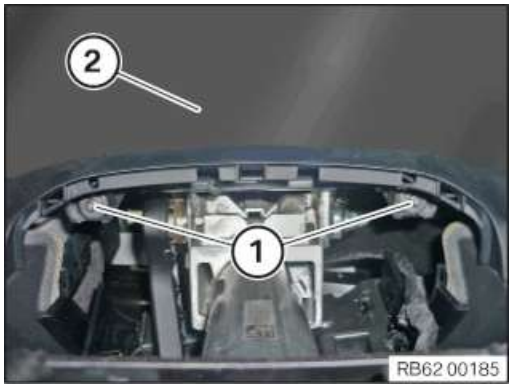
- Correctly position the audio operating unit (1) and install in the instrument panel(2).

36 – Installing the instrument cluster (KOMBI)

rdiagn.com



- Connect and lock connector (1) to the instrument cluster (KOMBI) (2).



- Feed in and position the instrument cluster (KOMBI) (2).
- Tighten the screws (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm



- Tighten down screw (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm

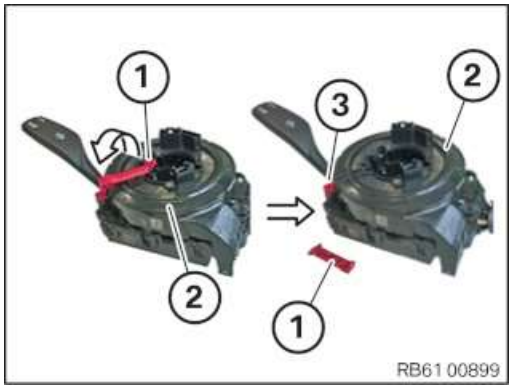


- Tighten down screw (1).

Instrument cluster (KOMBI) to support

Screw		Tightening torque	1,8 Nm

37 – Installing the steering column switch cluster (SZL)

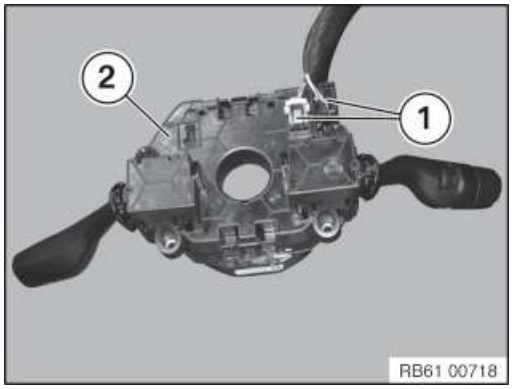


- **Replacement:**

  Break off the transportation retainer (1) on the steering column switch cluster (SZL) (2) in direction of arrow.

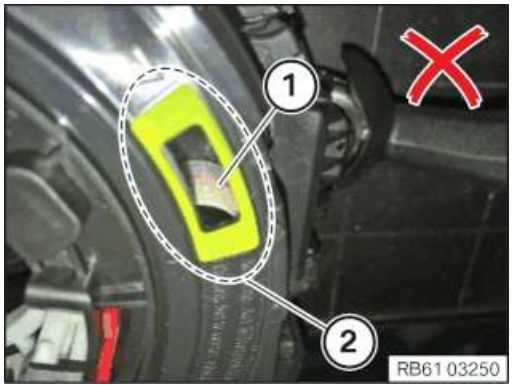
  The broken off piece (3) of the transportation retainer (1) remains in the steering column switch cluster (SZL) (2).

carjiagn.com



- Connect the connector (1) with the steering column switch cluster (SZL) (2).

Check



- **Version A:**

  Check whether the correct marking (1) is seen in inspection glass (2).

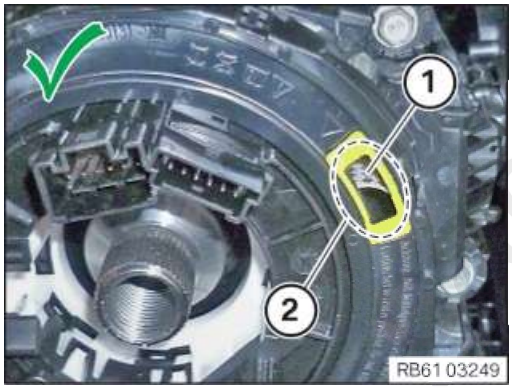
Result

» Ensure that no incorrect marking (1) is seen in inspection glass (2).

Measure

- Turn the coil spring cassette until the right mark (1) becomes visible in the inspection glass (2).

Check



- **Version A:**

  Check whether the correct marking (1) is seen in inspection glass (2).

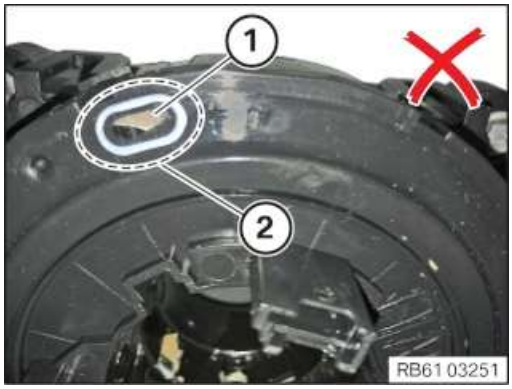
Result

» Correct marking (1) is seen in inspection glass (2).

Measure

- Continue with the next step.

Check



- **Version B:**

  Check whether the correct marking (1) is seen in inspection glass (2).

Result

» Ensure that no incorrect marking (1) is seen in inspection glass (2).

Measure

- Turn the coil spring cassette until the right mark (1) becomes visible in the inspection glass (2).

Check



- **Version B:**

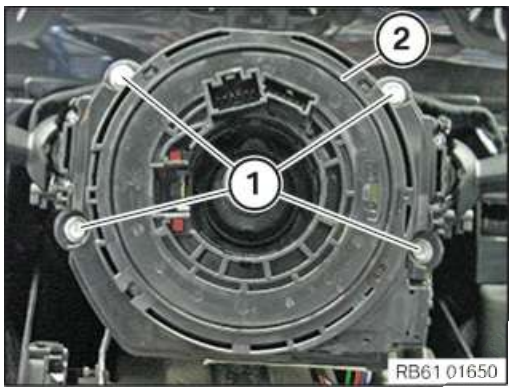
  Check if the correct mark (1) can be seen in the inspection glass (2).

Result

» Correct marking (1) is seen in inspection glass (2).

Measure

- Continue with the next work step.

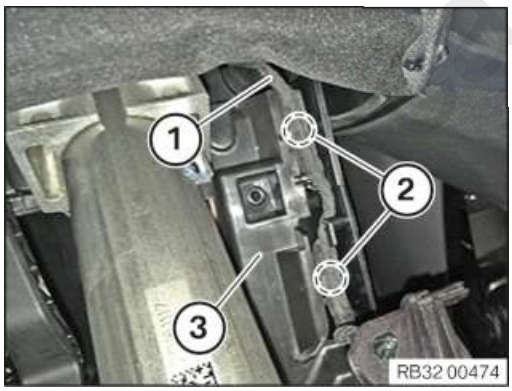


- Position the steering column switch cluster (SZL) (2).
- Tighten the screws (1).

Steering column switch cluster (SZL) on the steering column

Screw TS5x20		Tightening torque	3 Nm

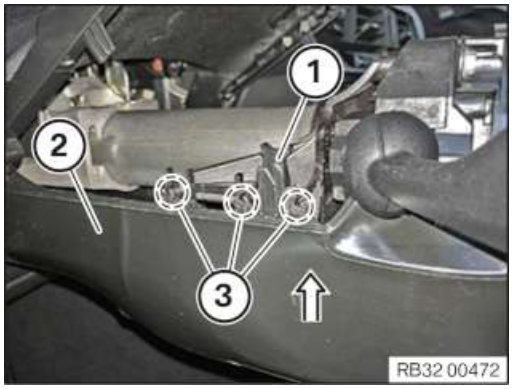
38 – Install steering column shroud lower section



- Position the steering column shroud lower section (3).
- Secure the line (1) on the brackets (2).



- Connect the connector (1).

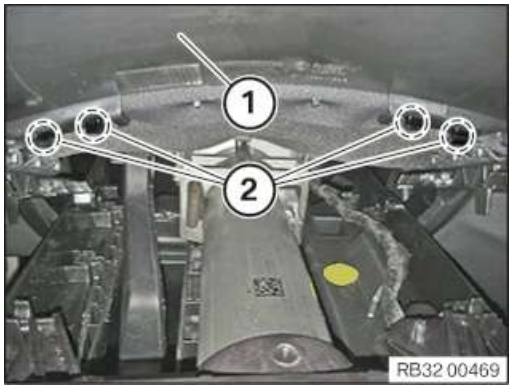


NOTICE

Perform the operations on the left and right side.

- Align the steering column shroud lower section (2) to the steering column using the retaining lug (1).
- Push the steering column shroud lower section (2) up in the direction of the arrow until the brackets (3) engage.

39 – Fit steering column shroud upper section



- Clip in the steering column shroud upper section (1) at the brackets (2).



NOTICE

Perform the operations on the left and right side.

- Clip in the steering column shroud upper section (1)into the guide (2).



NOTICE

Perform the operations on the left and right side.

- Press the upper section of the steering column shroud (1) downwards in direction of arrow.

  The upper section of the steering column shroud must engage audibly and perceptibly.

40 – Installing the sports steering wheel

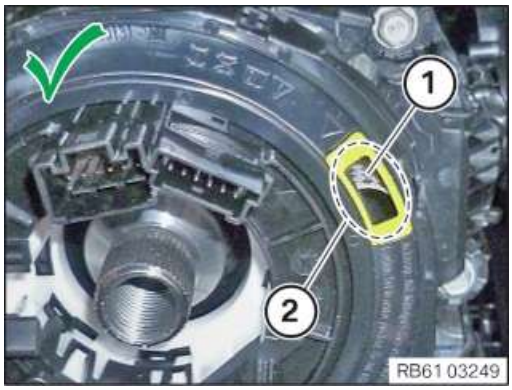
▸ **Check the neutral position of the clock spring**

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

▹ **Version A: Checking the visibility of the marking on the coil spring**

vwdiagn.com



Check

- Check the visibility of the marking (1) on the coil spring in the inspection glass (2) .

Result

» The mark (1) on the coil spring is not visible.

Measure

- Turn the coil spring cassette until the mark (1) on the coil spring becomes visible in the inspection glass (2).

◁

▷ **Version B: Checking the visibility of the marking on the coil spring**



Check

- Check the visibility of the marking (1) on the coil spring in the inspection glass (2) .

Result

» The mark (1) on the coil spring is not visible.

Measure

- Turn the coil spring cassette until the mark (1) on the coil spring becomes visible in the inspection glass (2).

◁



Check

- Check if a microencapsulated screw (3) is installed.

Result

» Screw (3) is micro-encapsulated.

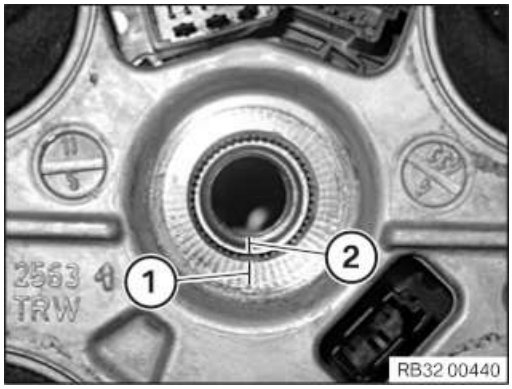
cardiagn.com

Measure

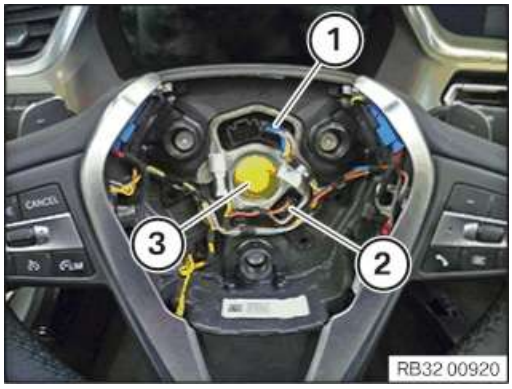
- Clean thread in the steering column.

  Renew the screw (3).

  Parts: Screw



- Align mark (1) on steering wheel to mark (2) on steering column.
- Connect steering wheel.



- Connect connectors (1) and lock.
- If installed: Connect connectors (2) and lock.
- Tighten screw (3) .

Steering wheel to steering column

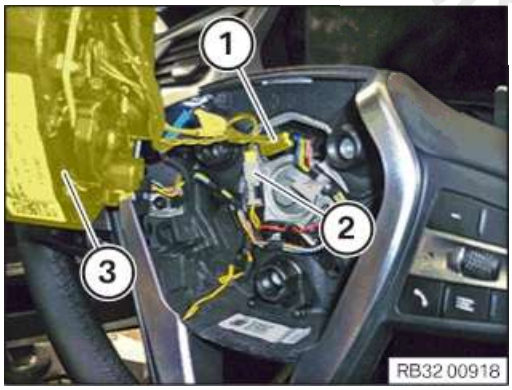
M14	Only for a micro-encapsulated screw: Renew screw.	Tightening torque	62,5 Nm

41 – Installing the airbag unit

TECHNICAL INFORMATION

Different variants may be installed depending on the vehicle equipment.

▸ **Installing the airbag unit for the sports steering wheel**



- Position airbag unit (3).
- Connect connectors (1) and (2) lock.



- Press the airbag unit (1) with even pressure in the direction of the arrow into the steering wheel.

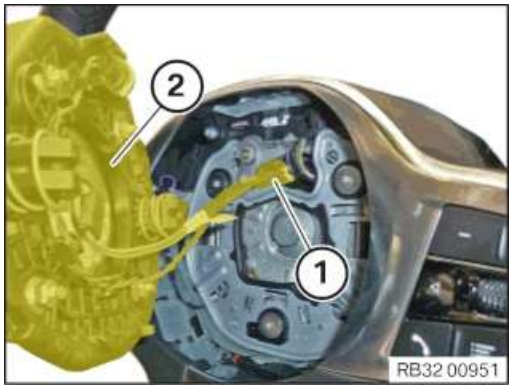
  The airbag unit (1) must engage audibly and perceptibly.

ardiagn.com

▸ **Installing the airbag unit for M Sport steering wheel**

TECHNICAL INFORMATION

After replacing the airbag unit (M sport steering wheel) or after a possible conversion of standard steering wheel and airbag unit to M-sports steering wheel, a software update or a programming/encoding via ISTA must be performed!



- Connect and lock the connector (1) of the airbag unit (2).



- Press the airbag unit further (1) with even pressure in the direction of the arrow into the steering wheel.

  The airbag unit (1) must engage audibly and perceptibly.

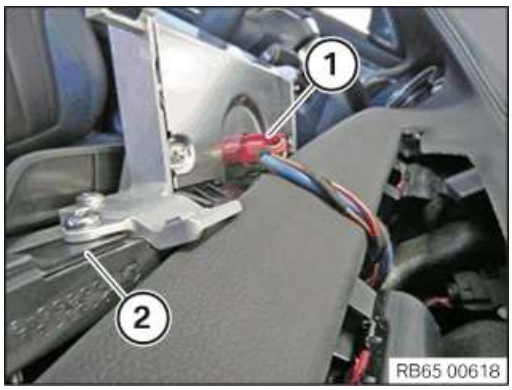
42 – Install the central information display (CID)

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.
- Wear electrically conductive clothing and antistatic shoes (with ESD symbol).
- For additional information see: 61 35 ... Notes for ESD protection (electrostatic discharge)



- Position Central Information Display (CID) (2).
- Connect plug connection (1) and lock.

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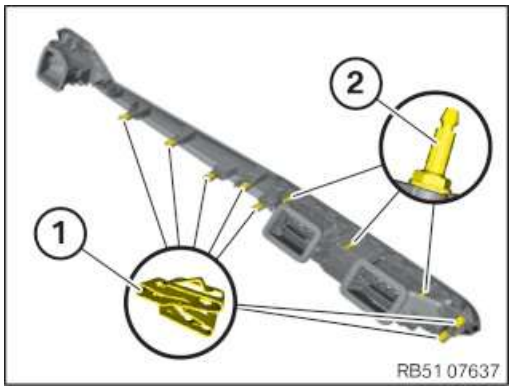


- Insert the central information display (CID) (2) in the instrument panel and position correctly.
- Tighten the screws (1).

Central information display to instrument panel

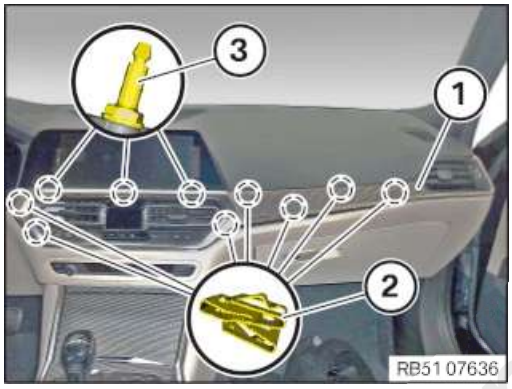
Screw		Tightening torque	2,4 Nm

43 – Install the finisher on the right instrument panel



- Checks clamps (1) for damage.

  Defective or missing clamps (1) need to be renewed.
- Check the pins (2) and the accompanying clamps at the instrument panel trim for damage, renew if necessary.



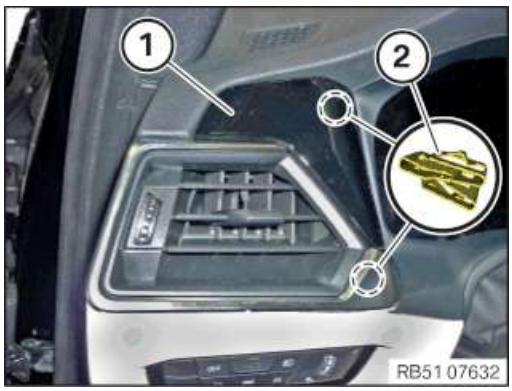
- Install the decorative strip (1).
- Connect and lock corresponding connectors.
- Correctly position the decorative strip (1) and at the clamps (2) and clip in the pins (3).

44 – Install the finisher on the instrument panel on the left



- Check the clamps (1) for damage and that they are present.

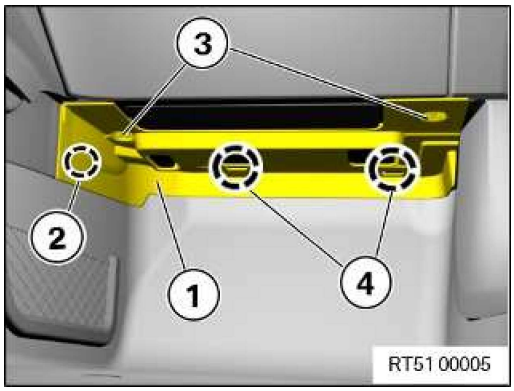
  Damaged or missing clamps (1) must be renewed.



- Install the decorative strip (1).
- Connect and lock the associated connectors.
- Clip decorative strip (1) into clamps (2).

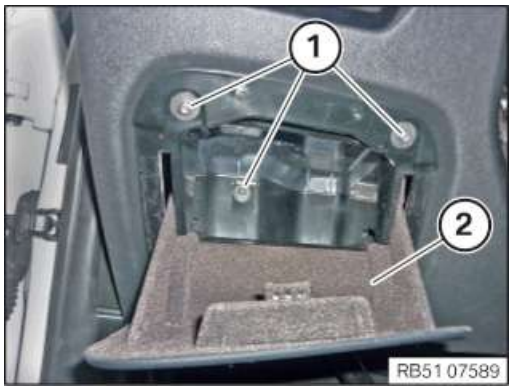
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45 – Install the right footwell trim panel



- Connect associated connector.
- Attach the footwell trim (1) to the guides (4) and fold up.
- Guide the footwell trim (1) into the guide (2) of the centre console.
- Position the locks (3) correctly and turn by 90°.

46 – Installing the left fold-down compartment

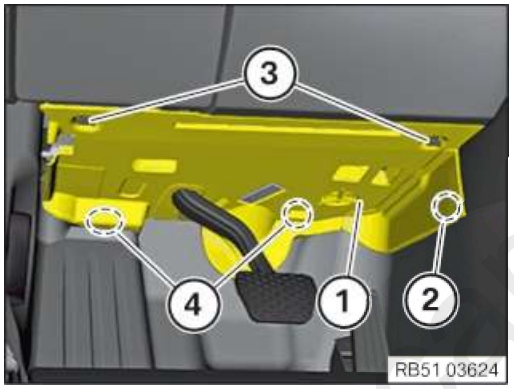


- Install the fold-down compartment (2).
- Tighten the screws (1).

Fold-down compartment to instrument panel

Oval-head screw		Tightening torque	1,8 Nm

47 – Installing the trim panel for the pedal mechanism



- Connect associated connector.
- Attach the trim panel for the pedal mechanism (1) in the guides (4) and fold it up.
- Clip the trim panel for the pedal mechanism (1) into the centre console in this area (2).

TECHNICAL INFORMATION

It is **imperative** that the screws caps of the trim panel be correctly locked. This is the only way to ensure that the trim panel does not come loose and potentially tilt into the pedal area.

- Insert screw caps (3) correctly and turn by 90° to lock.

48 – Install the A-pillar trim panel on the left and right

NOTICE

Description is for left component only. Procedure on the right side is identical.

▸ **Installing the A-pillar trim panel**

WARNING

Pyrotechnic components.

Danger! Life-threatening injuries!

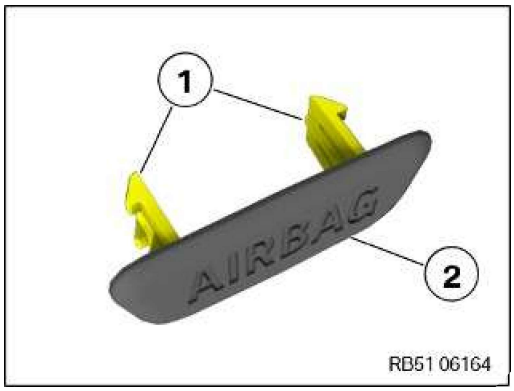
- All work on pyrotechnic parts may be carried out by technically experienced and appropriately trained personnel only.
- Replace any damaged part or ones that have been dropped.
- For additional information see: 72 00 Safety regulations on handling components with gas generators.

RISK OF DAMAGE

Damage to the head airbag.

Improper use of a tool when removing the trim panel may damage the head airbag.

- Do not use sharp-edged tools when removing the trim panel.



Check

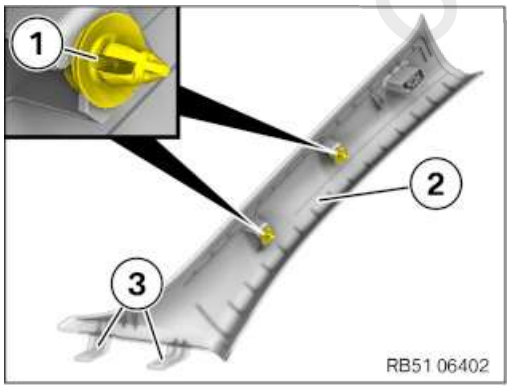
- Check retaining lugs (1) of cover (2) for damage.

Result

» Retaining lug is damaged.

Measure

- Renew the cover.



Check

- Check the clips (1) for damage and renew if necessary.
- Check the guides (3) for damage.

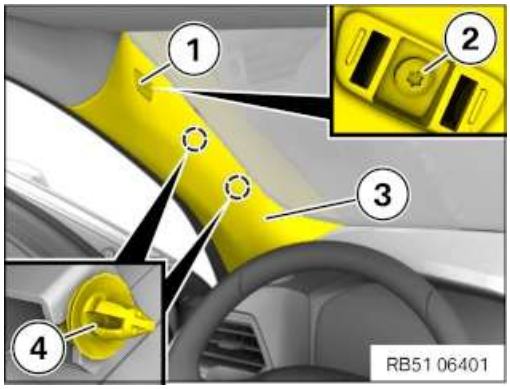
Result

» Guide is damaged.

Measure

- Renew the A-pillar trim panel.

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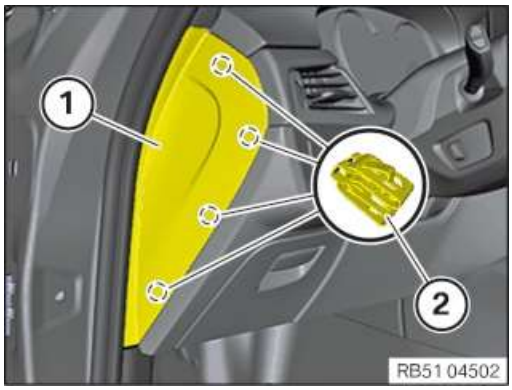
- Guide in A-pillar trim panel (3) downwards and clip it in with clips (4).
- Tighten down screw (2).

A-pillar trim panel to body

Sheet metal screw 4,8x38		Tightening torque	2,6 Nm

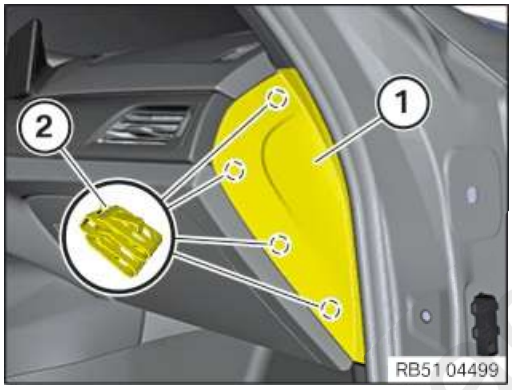
- Clip in the cover (1).

49 – Install the side panel on left instrument panel



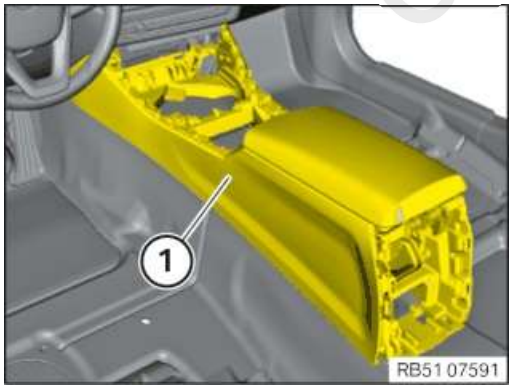
- Feed in the side panel (1) and clip it in at the clamps (2).

50 – Install the side panel on instrument panel on the right



- If required, connect the associated connector.
- Feed in the side panel (1) and clip it in at the clamps (2).

51 – Installing the centre console

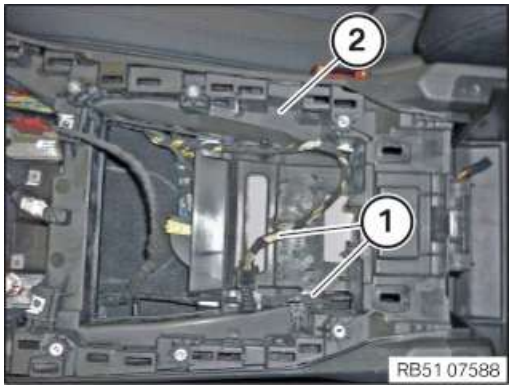


NOTICE

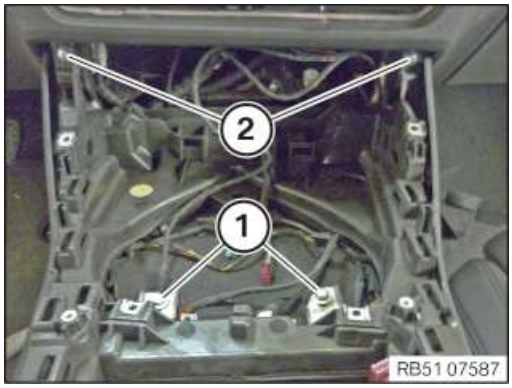
To provide a better overview: Schematic diagram with partially hidden components.

- Install centre console (1) and thereby feed in the wiring harness.
- Feed in the centre console (1) to the instrument panel and position correctly.

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- Secure the wiring harness to the centre console (1) and connect and lock the existing plug connections.



- Tighten the screws (1).

Centre console on tunnel

M6x18 Hexagon screw		Tightening torque	4,6 Nm

- Tighten the screws (2).

Centre console to instrument panel

Oval-head screw		Tightening torque	1,8 Nm

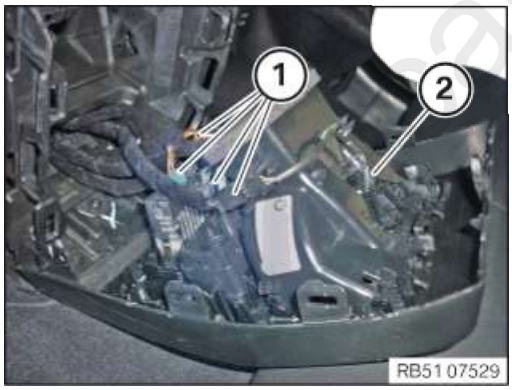


- Tighten the screws (1).

Centre console on tunnel

M6x18 Hexagon screw		Tightening torque	4,6 Nm

52 – Installing the rear centre console trim



- Install the centre console trim (2).
- Connect connectors (1) and lock.

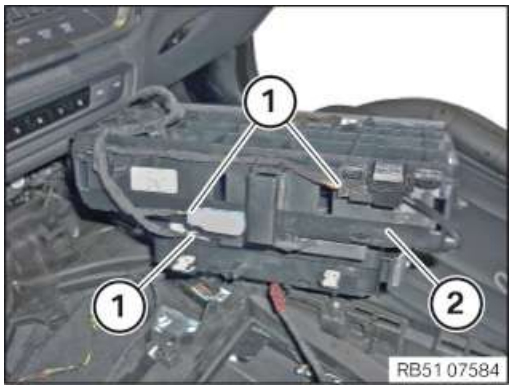


- Position centre console trim (1) and engage at the latch mechanisms at the side.

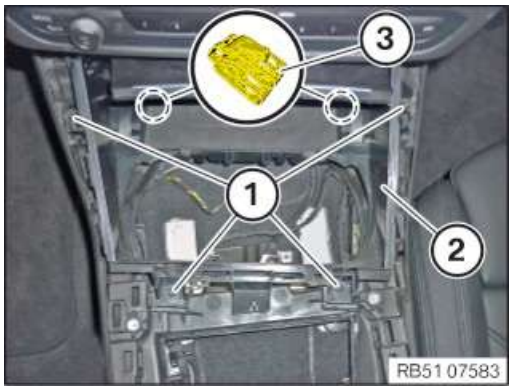
53 – Installing the storage compartment in the centre console in the front

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53 – Installing the storage compartment in the centre console in the front



- Mount the storage compartment in the centre console in the front (2) and connect and lock connectors (1).

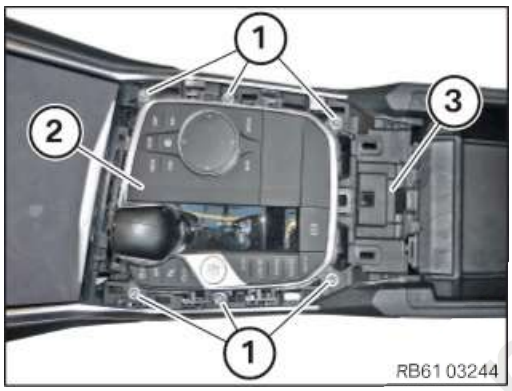


- Engage the storage compartment in the centre console in the front (2) into clamps (3) in the rear.
- Tighten the screws (1).

Storage compartment in centre console

Oval-head screw		Tightening torque	1,8 Nm

54 – Install the operating facility in the centre console



- Position the operating facility (2) in the centre console (3).
- Tighten the screws (1).

Gear selector switch to centre console trim

Screw		Tightening torque	1,8 Nm

▸ **Connecting all battery earth leads**



- See additional information.

▸ **Activating the 48 V electrical system**

Prerequisite

Ignition is switched off.

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RISK OF DAMAGE

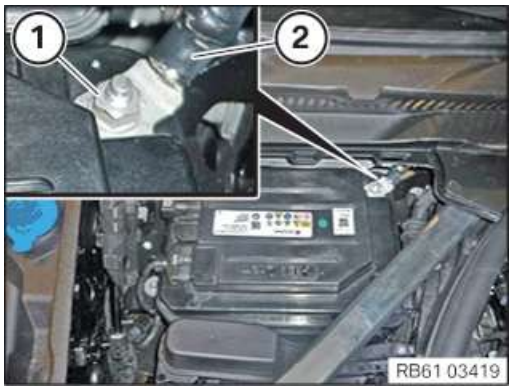
Damage to 48-V battery

If a 48-V battery that is disconnected from the electrical system is activated, the battery electronics will be damaged.

- Only carry out activation of the 48V electrical system with a completely connected 48-V battery.



- Lift battery earth lead (1).
- Remove special tool .



- Release the negative battery cable (2) of the 48-V battery from the mounting.
- Position the negative battery cable (2) of the 48-V battery on the negative battery terminal.
- Tighten nut (1).

Negative battery cable to 48-V battery

Nut M8		Tightening torque	19 Nm



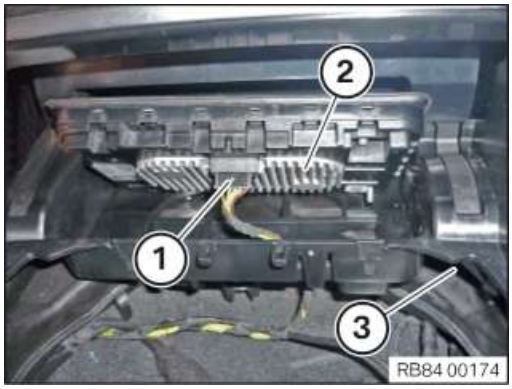
- Connect the connector (1) of the CAN bus and lock it.
- Clip in clip (2).



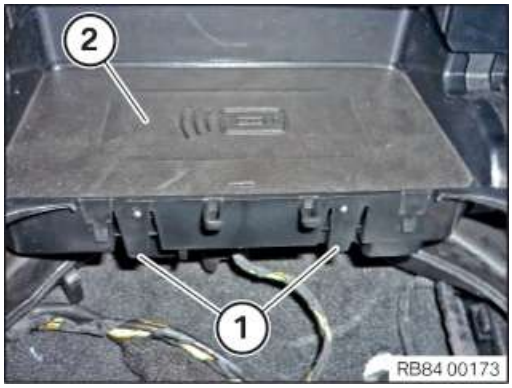
- Activate the 48V electrical system by closing the bonnet.

  The activation takes place automatically.

55 – Installing the wireless charging station



- Connect connectors (1) and lock.
- Position the wireless charging station (2) in the centre console (3).



- Push the wireless charging tray (2) down.

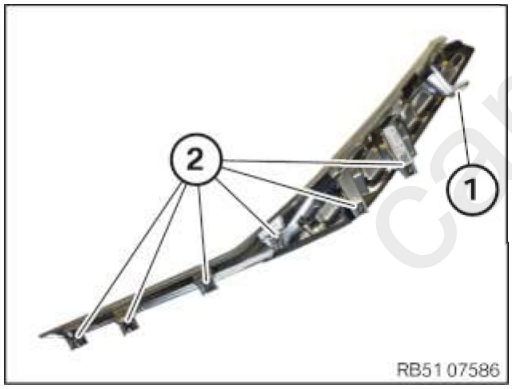
  The latch mechanisms (1) must engage correctly.

56 – Installing the decorative trim on the centre console on the left and right

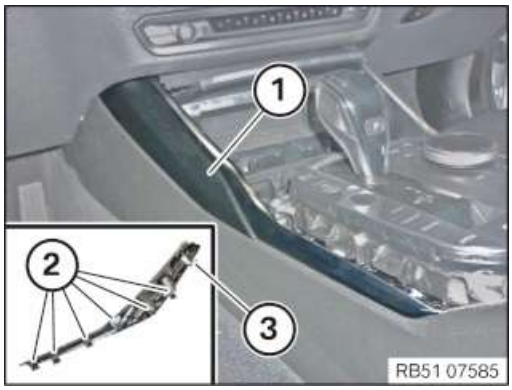
▸ **Installing the decorative trim on the centre console**

NOTICE

Description is for left component only. Procedure on the right side is identical.



- Check the guide (1) and the latch mechanisms (2) for damage, renew the decorative trim if necessary.



- Feed in the decorative trim (1) forward in the guide (3).
- Engage decorative trim (1) in latch mechanisms (2).

57 – Installing the centre console trim

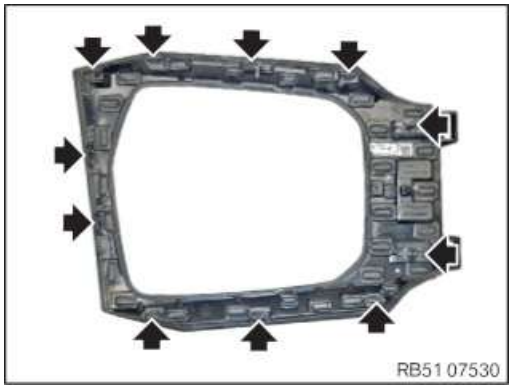
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RISK OF DAMAGE

Careless handling of tools and sharp-edged components.

Scratch, surface damage.

- Protect working area.
- Handle tools and components carefully.

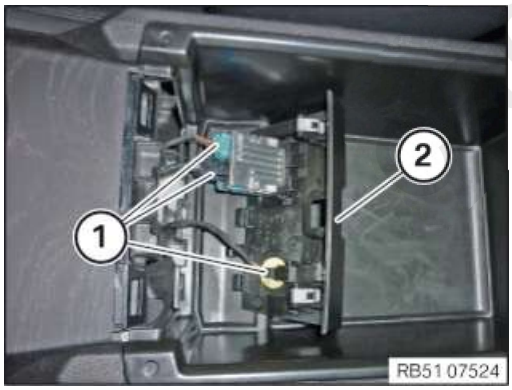


- Check all the latch mechanisms or clamps (arrows).
- In case the latch mechanisms or the clamps (arrows) are faulty, renew the centre console trim .

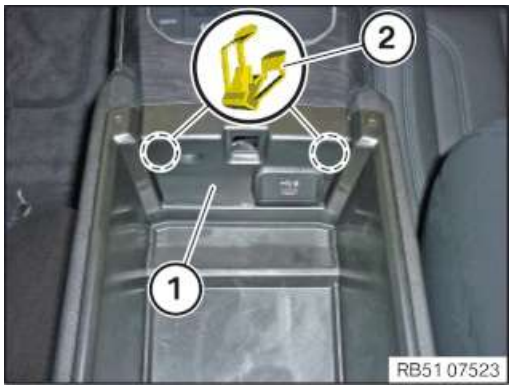


- Correctly position the centre console trim (1) and engage at the latch mechanisms.

58 – Installing the trim in the storage compartment of the centre armrest



- Mount the trim (2) and connect connector (1) and lock.



- Correctly position trim (1) and snap into the clamps (2).

59 – Install the cup holder



- Fix the cup holder (2) and the belonging connectors.
- Correctly position the cup holder (2).
- Tighten the screws (1).

Cup holder to centre console

Oval-head screw		Tightening torque	1,8 Nm



- Insert the insert (1).

60 – Encode/program control unit(s)

Prerequisite

Component has been replaced.

TECHNICAL INFORMATION

Use the most recent software version to prevent faults during programming/encoding.
The battery voltage must not fall below 13.0 V during programming.
Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

TECHNICAL INFORMATION

No high-voltage switch off is required in electric vehicles or hybrid vehicles for programming/encoding.
The high-voltage system will be automatically switched off by the programming system.

- Connect the battery charger to the vehicle.
- Connect the programming system with the vehicle.
- Determine the action plan.
- Accept and fully process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking list.
- Carry out vehicle test.
- Delete the fault memory.
- The information about programming the workshop system and the corresponding notes in the user documentation must be observed.
- Wait until programming/encoding has been completed.
- Disconnect the programming system from the vehicle.
- Disconnect the battery charger from the vehicle.

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Additional Information

Overview of Tightening Torques

Head-Up Display to support			Used in step 31
M6x25 screw		Tightening torque	13 Nm

Dashboard to support			Used in step 32
Screw		Tightening torque	2,4 Nm

Speaker to support / support to instrument panel / support to body			Used in step 33
Screw		Tightening torque	1,8 Nm

Instrument cluster (KOMBI) to support			Used in step 36
Screw		Tightening torque	1,8 Nm

Steering column switch cluster (SZL) on the steering column			Used in step 37
Screw TS5x20		Tightening torque	3 Nm

Steering wheel to steering column			Used in step 40
M14	Only for a micro-encapsulated screw: Renew screw.	Tightening torque	62,5 Nm

Central information display to instrument panel			Used in step 42
Screw		Tightening torque	2,4 Nm

Fold-down compartment to instrument panel			Used in step 46
Oval-head screw		Tightening torque	1,8 Nm

A-pillar trim panel to body			Used in step 48
Sheet metal screw 4,8x38		Tightening torque	2,6 Nm

Centre console on tunnel			Used in step 51
M6x18 Hexagon screw		Tightening torque	4,6 Nm

Centre console to instrument panel			Used in step 51
Oval-head screw		Tightening torque	1,8 Nm

Storage compartment in centre console			Used in step 53
Oval-head screw		Tightening torque	1,8 Nm

Gear selector switch to centre console trim			Used in step 54
Screw		Tightening torque	1,8 Nm

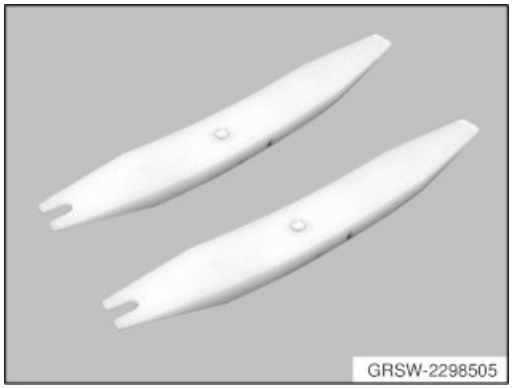
Negative battery cable to 48-V battery			Used in step 54
Nut M8		Tightening torque	19 Nm

Cup holder to centre console			Used in step 59
Oval-head screw		Tightening torque	1,8 Nm

Overview of Special Tools

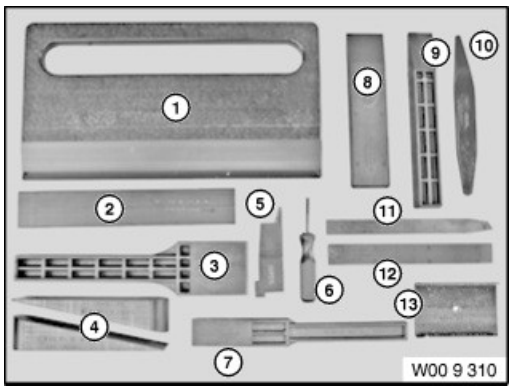
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2 298 505 Wedge



Common	Used in step 34
Usage	Set (delivery of 2 pieces)
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

0 493 752 (00 9 329) Case



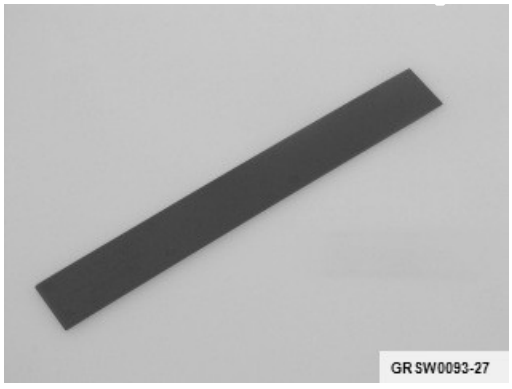
Common	Used in step 13
Usage	(Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019.
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

2 298 504 Wedge



Common	Used in step 22
Usage	Wedge with angled lug
Included in the tool or work	
Storage location	C34
Replaced by	
In connection with	
SI-Number	01 03 12 (792)

0 496 571 (00 9 327) Wedge



Common	Used in step 26
Usage	(Cleaning wedge) From 11/2008 this special tool replaces panel wedge 00 9 323 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

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0 496 569 (00 9 325) Wedge



Common	Used in step 27
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

Links

Repair instructions (PRE)	Used in step
Notes on 48-V battery	754

General repair instructions	Used in step
72 00 ... Safety regulations for handling components with gas generators	1320
72 00 ... Safety regulations for handling components with gas generators	13

Repair instructions	Used in step
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
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61 20 900 Disconnecting and connecting battery earth lead	754
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61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting battery earth lead (Plug-in Hybrid Electric Vehicle)	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
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61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting the battery earth lead (all battery earth leads)	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 20 900 Disconnecting and connecting battery earth lead	754
61 35 ... Notes on ESD protection (Electro Static Discharge)	1942
61 35 ... Notes on ESD protection (Electro Static Discharge)	1942

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61 00 ... Parking-residing-driving

Vehicles of the G series feature a new type of terminal control:

Functional description of the parking-residing-driving terminal control

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