Installation and User Guide

BMW F48

For the BimmerTech MultiMedia Interface

BMW F48 1

Introduction 3

Kit contents 4

Recommended and useful tools 7

Setting up the DIP switches on the MMI 8

Installing the MMI 10

Installing the Front View Camera (FVC) 31

Installing the Rear View Camera (RVC) 40

SmartView HD FLEX 57

SmartView HD ATV4 59

Installation Manual 59

Final tests and settings 62

Q & A 64

Introduction

Thank you for making a purchase from BimmerTech! The CarPlay systems are do it yourself friendly, but if you're not fond of working on your car don't worry. You can always take your kit along with these installation instructions to one of our recommended installers:

https://www.bimmer-tech.net/dealers

or to any other professional installer in your area. If you will be handing the installation over to a shop from outside our recommended list ideally it should specialize in BMW vehicles.

If you will be installing the kit by yourself then it is recommended to do so in a clean, spacious, well lit and climate controlled garage without pressing time constraints. It's also possible to perform the installation in a driveway or parking lot if you prepare the correct tools and are accompanied by nice weather.

The installation requires disassembling various trim pieces of the vehicle so it's best to take your time, be gentle, careful and diligent in keeping track of which screw and clip came from where in order to reinstall the parts correctly. Make sure to test the devices operation before final reassembly.

Please read the instructions in full before beginning the installation and also make sure to have a look at the below installation videos. The videos are showing a different kind of MMI being installed in an F30 BMW. Because of this the cable connections and settings will be different but the MMI and Camera installations will be similar:

https://www.youtube.com/watch?v=SksfQZnKILg

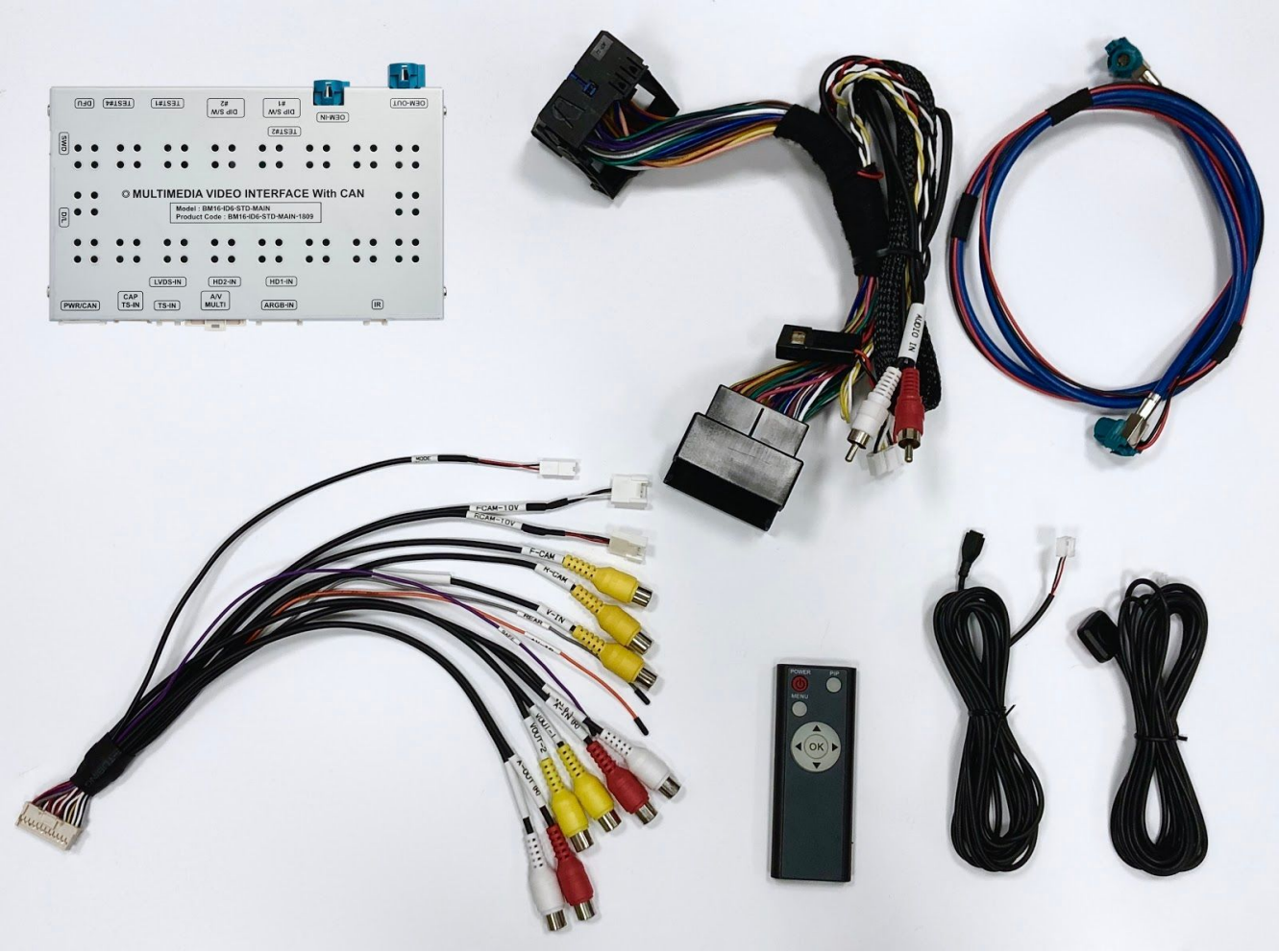
https://www.youtube.com/watch?v=7h_b8z7qxGk

This manual contains information on how to install the MMI, Front Camera, Rear Camera and various versions of our SmartView HD devices. If you will not be installing one or more of the components from the above list simply skip the respective installation steps specific to them.

This manual also contains user guides for setup and operation of the various kit components as well as a Q&A portion that explains what to do when you encounter the most common setup or operation obstacles.

Kit contents

1. MMI QHI-BM16 ID6
2. IR Remote
3. IR receiver
4. RCA Harness
5. Input Selection Switch
6. PnP Harness
7. Video output cable from MMI to BMW screen

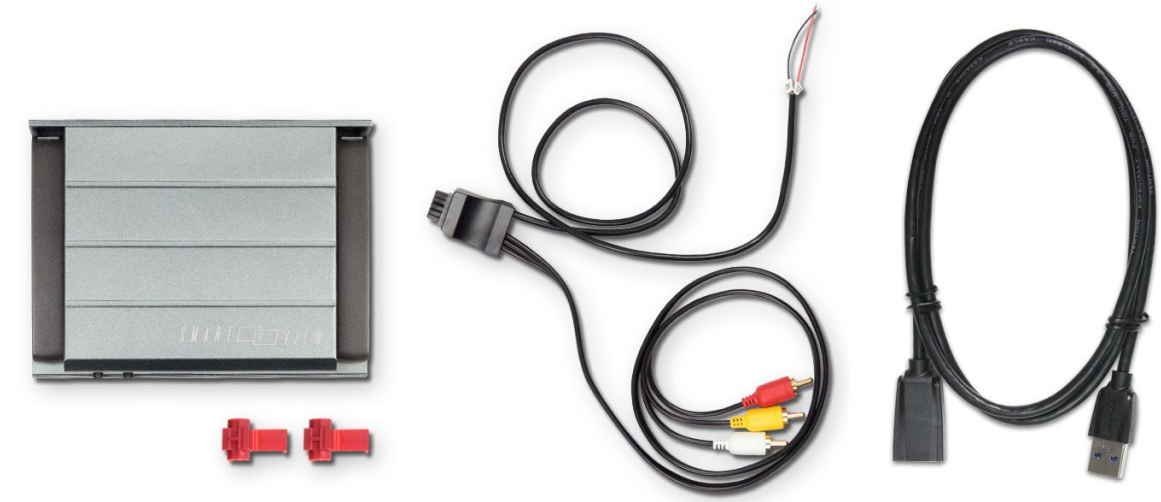


Rear View Camera + Extension Cable (optional)

Front View Camera + Extension Cable (optional)

SmartView HD ATV4

SmartView HD FLEX



Recommended and useful tools

- BimmerTech Trim Tool Kit (Highly Recommended)
- T-20, T-25, and T-30 Bits
- Phillips Head Screwdriver
- Electrical Tape
- Zip Ties
- Pliers
- 8mm and 10mm Socket and Ratchet
- 3mm Allen Key
- Double Sided Mounting Tape (Recommended)
- Sturdy Wire or Thin Hanger for Feeding wire
- Flashlight

Setting up the DIP switches on the MMI

The Multi Media Interface (MMI) included in your kit is the piece equipment that allows to transfer additional video signals different from the original iDrive view onto your BMW's factory screen. In order for the MMI module to work correctly the little DIP switches on the side of the MMI module will have to be set up according to your vehicles specification as well as the additional video sources being connected (e.g cameras and SmartView).

To make life easier for you during final pre-shipping Quality Assurance process we pre-set the DIP switches according to your vehicle specification and order list however if you will be installing additional devices the DIP switches functionality is explained below. Please pay close attention, as the settings can be counterintuitive.

Important Note: every time you change DIP switch settings make sure to disconnect the MMI modules POWER connector for 10 seconds. This will allow the new DIP switch settings to take effect. After that you can reconnect the power cable.

On this MMI there are 2 DIP switch clusters one with 4 switches and one with 8.

DIP switches 1-4

DIP switch 1 should always be set to ON
DIP switch 2 should always be set to ON

DIP switch 3 corresponding to input HDMI 1:
ON if you are not connecting an HDMI 1 input
OFF if you are connecting an HDMI 1 input

DIP switch 4 corresponding to input HDMI 2:
ON if you are not connecting an HDMI 2 input
OFF if you are connecting an HDMI 2 input

DIP switches 1-8

DIP switch 1 corresponding to input AV1:
OFF if you will be installing a composite video device to AV1 like SmartView FLEX
ON if you will not be installing a composite video device AV1 like SmartView FLEX

DIP switch 2 corresponding to Front Camera:
OFF if you will be installing a Front Camera
ON if you will not be installing a Front Camera

DIP switch 3 OFF

DIP switches 4 and **5** are responsible for correct cooperation between the **MMI** module and your original screen, ensuring that the image is displayed correctly with our device installed between the original radio head unit and **LCD** screen.

For BMW's with **Navigation System Professional** (very large panoramic **10.2"** screen present in 5, 7 and X5 series) set **4 OFF**, **5 OFF**

For BMW's with **Navigation System Professional** (panoramic **8.8"** screen) set **4 OFF**, **5 ON**

For BMW's with a small **6.5"** screen set: **4 ON**, **5 ON**

For **Minis** with **8.8" touch screens** set: **4 ON, 5 OFF**

DIP switch 6 corresponding to BMW/Mini series:
OFF for 5 and 7 Series
ON for 1, 2, 3, 4, 6, X, Minis

DIP switch 7 corresponding OEM Rear View Camera:
OFF for OEM or no Rear View Camera
ON if you are installing a BimmerTech Rear View Camera

DIP switch 8: OFF

Installing the MMI

Begin the installation by disconnecting the negative battery terminal of the car battery to reduce the risk of damage to electrical components:

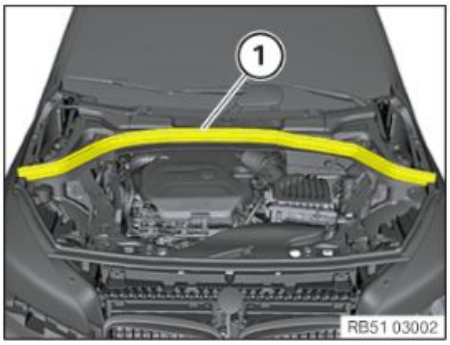
61 20 900 Disconnecting and connecting battery earth lead

Warning!

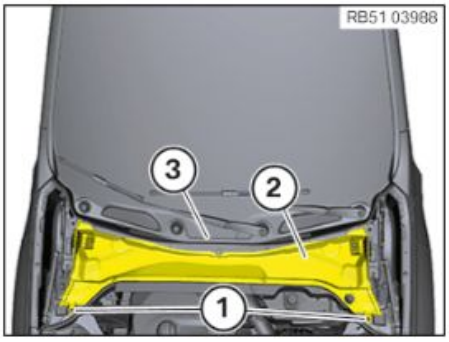
Follow the safety regulations for handling the vehicle battery.

Follow instructions on intelligent battery sensor (IBS).

Removal:

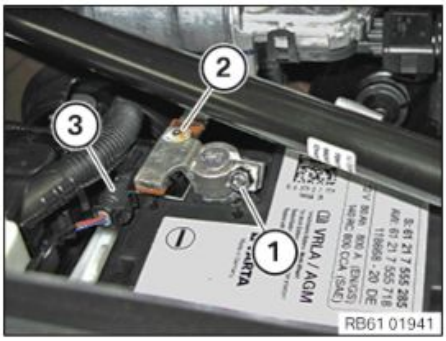


Pull off gasket (1) towards the top.



Release expanding rivet (1).

Pull out the cowl panel cover (2) from the rear cowl panel cover (3) towards the front.



Loosen nut (1).

Unlock and disconnect plug (3) as required.

Disconnect battery earth lead (2) and secure at side.

Installation:

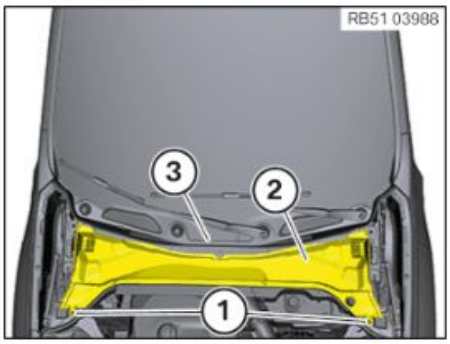
Join battery earth lead (2).

Tighten nut (1).

Tightening torque 61 21 1AZ.

If applicable, connect the connector (3).

Remove the protective cover of the positive battery terminal.

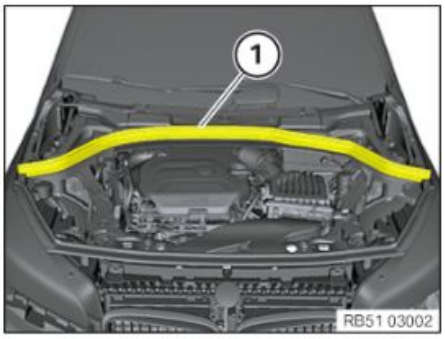


Insert the cowl panel cover (2) into the rear cowl panel cover (3).

Note:

Check front cover is correctly seated relative to rear cover.

Mount expanding rivets (1).



Press gasket (1) towards the bottom.

Note:

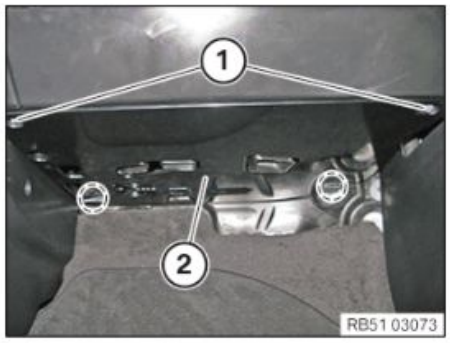
Ensure gasket (1) is seated correctly.

Head Unit Removal

Remove the trim surrounding the factory head unit and vents, using a trim tool, being careful to not scratch any components. To do this, gently slide one of your trim tools under the trim, as shown below, and slowly pry up as you make your way across the top and bottom of the trim. To access the head unit:

51 45 195 Removing and installing/replacing instrument panel trim, bottom right

Removal:

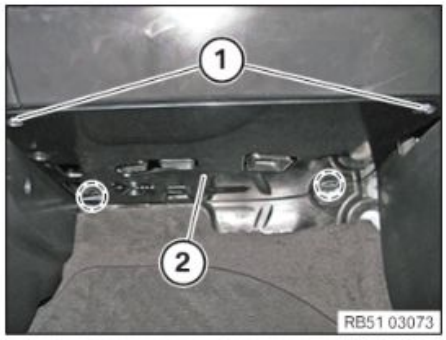


Unscrew nuts (1).

Lower trim panel (2) slightly and disconnect plug connections behind it.

Feed the trim panel (2) out of the guides and remove.

Installation:



Hold on to the trim panel (2) and connect the plug connection.

Feed in the trim panel (2) into the guides at the front.

Note:

Feed the guides of the trim panel (2) correctly into the corresponding holders on the vehicle.

Tighten down nuts (1).

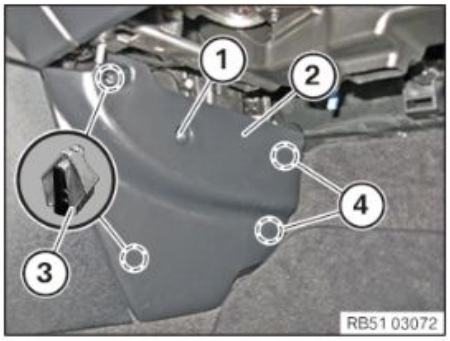
51 45 ... Removing and installing (replacing) side centre console trim panel

Necessary preliminary tasks:

Right side only:

- Remove bottom right dashboard trim panel

Removal:

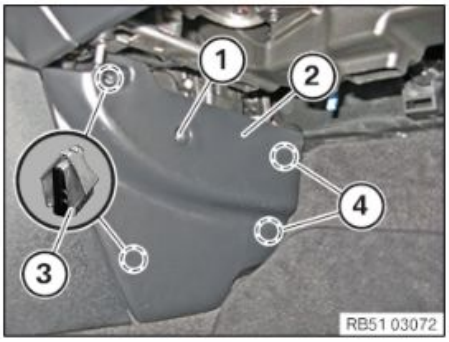


Release screw (1).

Release side centre console trim panel (2) from the retaining clips (3).

Feed out side centre console trim panel (2) from the guides (4) and remove.

Installation:



Feed in trim panel (2) into the guides (4) and lock in the clamps (3).

Tighten screw (1).

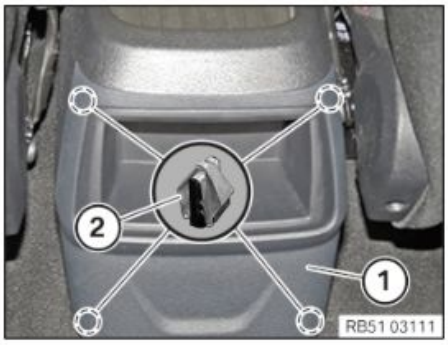
51 16 163 Removing and installing/replacing rear centre console cover

Special tools required:

- 00 9 325

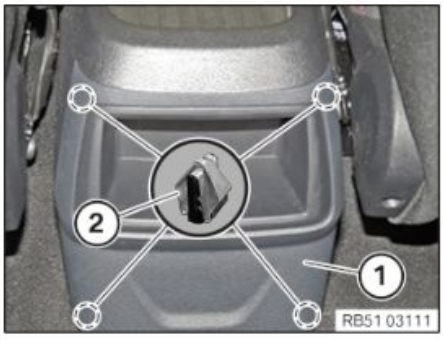
When working on trim panel components, make sure that the sensitive surfaces are not scratched or damaged.

Removal:



Lever out and remove trim (1) from the clamps (2) using special tool 00 9 325.

Installation:



Engage trim (1) in clamps (2).

61 31 251 Removing and installing (replacing) audio operating facility

Special tools required:

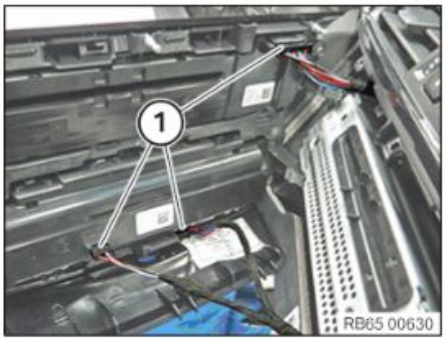
- Spezialwerkzeug

Important!

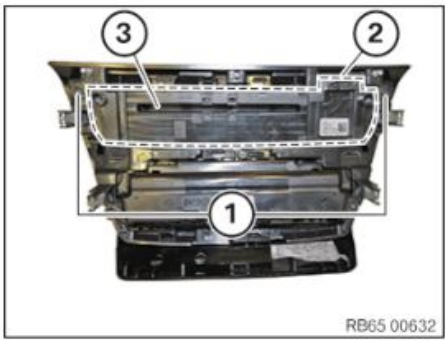
Read and comply with notes on protection against electrostatic damage (ESD protection).

Removal:

Unclip the trim (1) using Spezialwerkzeug 2 298 505.



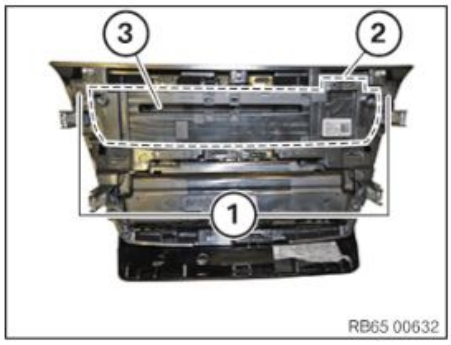
Unlock and disconnect the connector (1).



Release screws (1).

Unlock the latch mechanisms (2) and remove the audio operating facility (3).

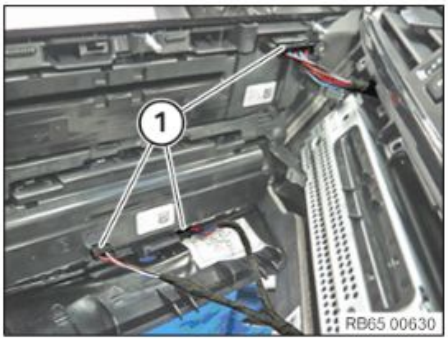
Installation:



Correctly position the audio operating facility (3) and engage with the latch mechanisms (2).

Tighten down screws (1).

Tightening torque 61 31 5AZ.



Insert and connect connector (1).

Correctly position the trim (1) and engage it with the instrument panel (2).

51 16 178 Removing and installing (replacing) side clip at centre console

Special tools required:

- 00 9 327

When working on trim panel components, make sure that visible surfaces are not scratched or damaged (e.g. by sharp-edged tools).

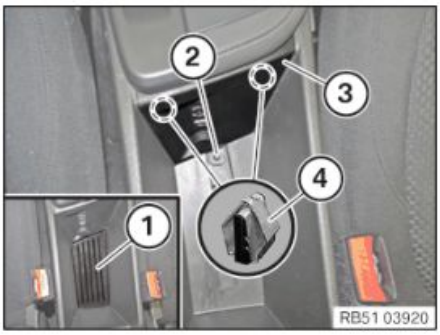
Removal:

Lever out and remove the cover (1) using special tool 00 9 327.

Unfasten screws (2).

Lever out and remove the cover (1) using special tool 00 9 327.

Unfasten screws (2).



Lever out and remove the insert (1) using special tool 00 9 327.

Release screw (2).

Lever out the trim (3) from the clamps (4) towards the rear using special tool 00 9 327.

Disconnect the plug connections and remove the trim (3).

Release screw (1).

Remove the decorative trim detailing (2) and in this process, disconnect all plug connections.

Installation:

Install the decorative trim detailing (2) and in this process connect all plug connections.

Tighten screw (1).

Tightening torque 51 16 7AZ.

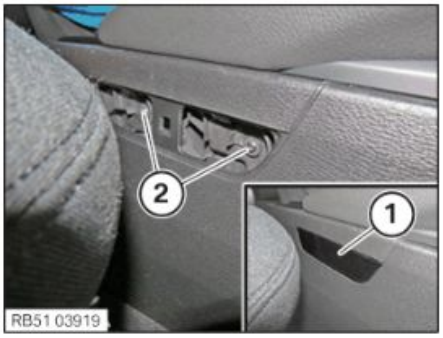
Install the trim (3) and connect the plug connections.

Engage the trim (3) with the clamps (4).

Tighten screw (2).

Tightening torque 51 16 7AZ.

Insert the insert (1).



Tighten down screws (2).

Tightening torque 51 16 7AZ.

Install and engage the cover (1).

Tighten down screws (2).

Tightening torque 51 16 7AZ.

Install and engage the cover (1).

25 11 081 Replacing gearshift lever cover

Removal:

Unclip gaiter (1) using chocks (1) and pull off upwards.

Important!

- The pull rod must not be bent or damaged!
- Do not twist knob during removal as this would cause the anti-twist lock in the knob to shear off.

Tug firmly in a vertical direction to remove gearshift lever knob.

Installation:

Important!

Do not bend the tie rod of the gearshift lever during installation!

Connect gearshift lever knob onto the gearshift lever and align in the direction of travel by gently pressing on it (until the anti-twist lock engages)!

Press the gearshift lever knob with the palm of the hand until it can be felt to engage.

Clip in gaiter.

51 16 160 Removing and installing (replacing) center console trim

Special tools required:

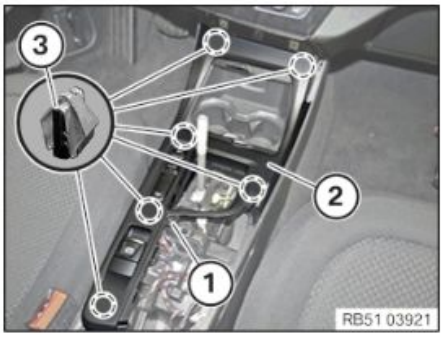
- 00 9 325

When working on trim panel components, make sure that visible surfaces are not scratched or damaged (e.g. by sharp-edged tools).

Necessary preliminary work:

- Remove gearshift lever cover
- Remove side clip on centre console

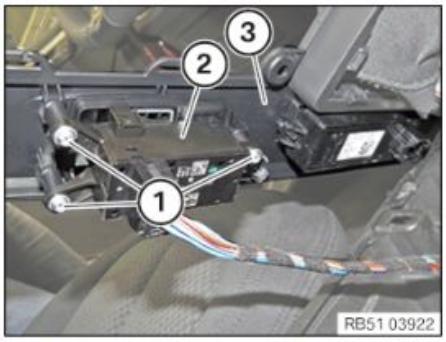
Removal:



Release screw (1).

Lever out trim (2) from clamps (3) using special tool 00 9 325.

Lift trim (2) upwards.



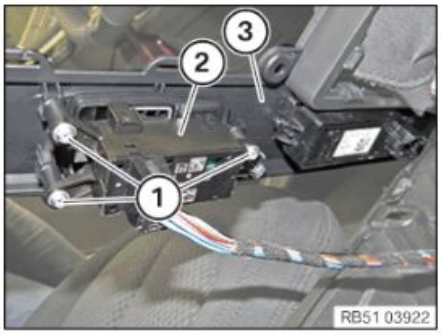
Note:
Do not disconnect plug connection.

Release screws (1).

Remove switch for electromechanical parking brake (2) from trim (3) and put down.

Disconnect associated plug connections and remove trim (3).

Installation:

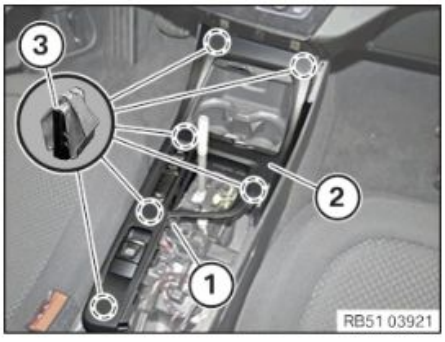


Install trim (3) and connect the corresponding plug connections.

Install switch for electromechanical parking brake (2).

Tighten down screws (1).

Tightening torque 61 31 4AZ.



Engage trim (2) in clamps (3).

Tighten screw (1).

Tightening torque 51 16 7AZ.

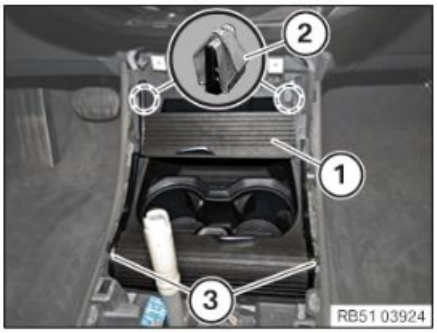
51 16 150 Removing and installing (replacing) front storage compartment

When working on trim panel components, make sure that the sensitive surfaces are not scratched or damaged.

Necessary preliminary tasks:

- Remove centre console cover

Removal:

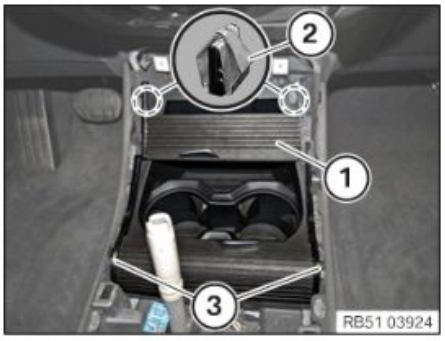


Lift storage compartment (1) upwards out of clamps (2).

Fold storage compartment (1) towards rear until it can be lifted out of guides (3).

Disconnect plug connections and remove storage compartment (1).

Installation:



Replacement:

Remount 12 V power socket.

Attach storage compartment (1) and connect plug connections.

Guide storage compartment (1) into guides (3) and fold forwards.

Engage storage compartment (1) at top in clamps (2).

51 16 165 Removing and installing/replacing complete centre console

Necessary preliminary tasks:

- Remove front storage compartment
- Remove rear centre console cover
- Remove side centre console trim panel

Important!

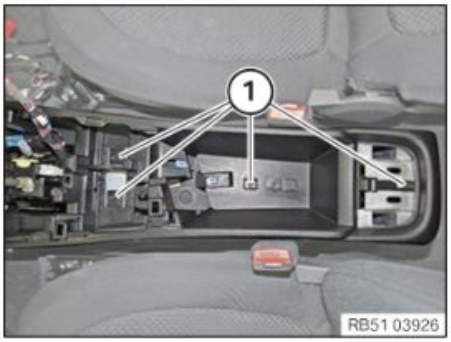
Read and comply with notes on handling wiring harnesses and cables.

Removal:

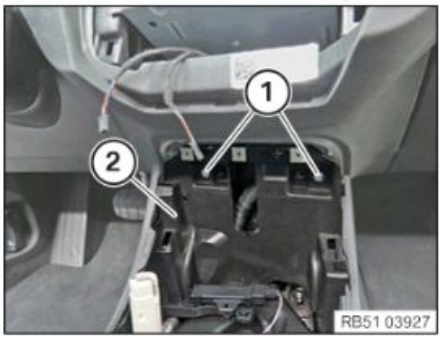
Lift off cover (1).

Version with centre armrest:

Remove the centre armrest.



Release screws (1).

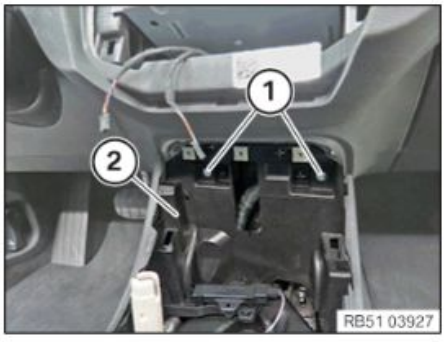


Release screws (1).

Lift the rear centre console (2) and in this process, disconnect all plug connections.

Remove the wiring harness and remove the centre console (2) from the motor vehicle.

Installation:



Replacement:

Remount interior aerial for Comfort Access.

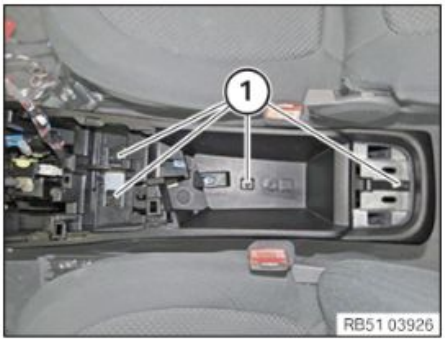
Lift the rear centre console (2) and insert towards the front.

Connect the plug connection .

Insert the wiring harness into the centre console (2).

Tighten down screws (1).

Tightening torque 51 16 7AZ.



Tighten down screws (1).

Tightening torque 51 16 7AZ.

Version with centre armrest:

Install the centre armrest.

Install cover (1).

65 12 315 Removing and installing (replacing) HU-H)

Attention!
Risk of damage!

There is a hard disk installed in the head unit.

Carry out mechanical work on the head unit and adjacent components with care.

Avoid subjecting the head unit to vibration/shocks.

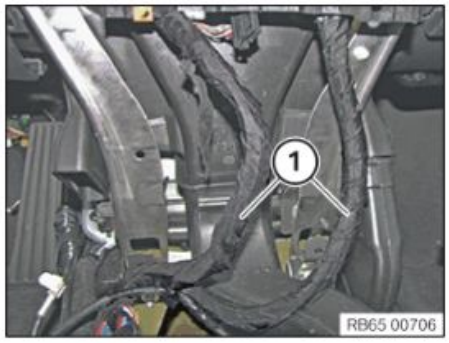
Attention!
Read and comply with notes on protection against electrostatic damage (ESD protection).

Note:
Comply with notes and notes on handling optical fibres.

Necessary preliminary work:

- Remove the audio operating unit
- Disconnect battery earth lead
- Remove centre console

REMOVAL:



Note:

At the factory, the wiring harness (1) is routed so that not enough excess length exists to remove the head unit.

Expose wiring harness (1) as shown.

Release screws (1).

Pull out the head unit (2) a bit.

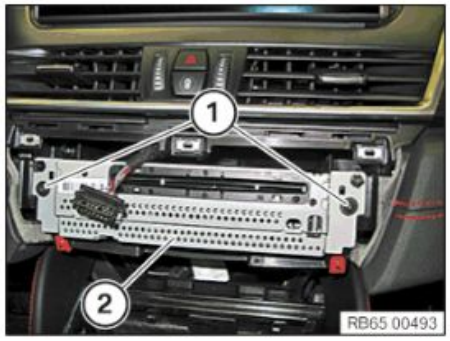
Unlock and disconnect all connectors in the marked area.

Remove head unit (1).

INSTALLATION:

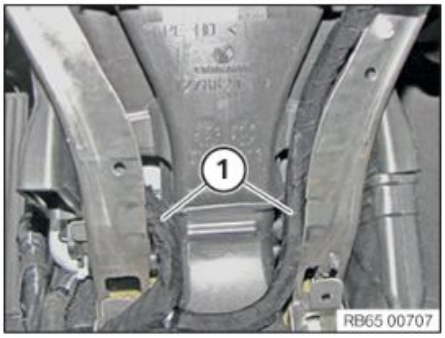
Position head unit (1).

Connect and lock all plug connections in the marked area.



Correctly insert the head unit (2).

Tighten down screws (1).

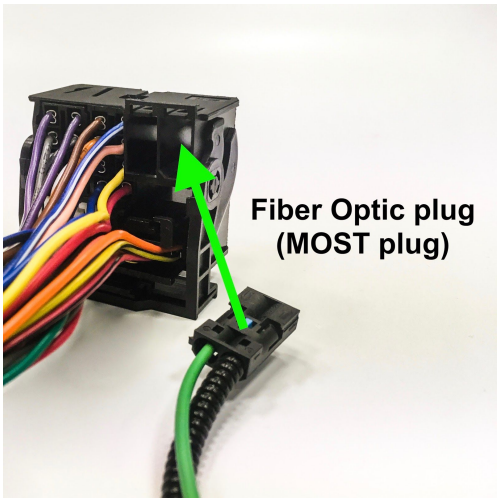


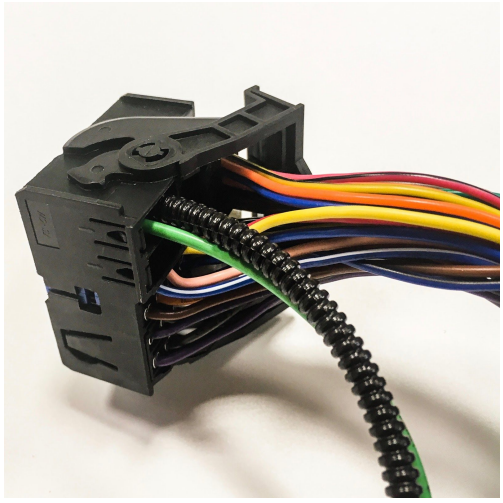
Lay wiring harness (1) as shown.

Connect the Power plug from the PnP harness to the MMI module, and also connect the RCA harness to the module.

Connect the Audio out RCA plugs from the RCA harness to the Audio In RCA plugs on the PnP harness. Even if you will not be installing a SmartView mirroring device at the moment they will come in handy if you decide to add a SmartView mirroring system in the future.

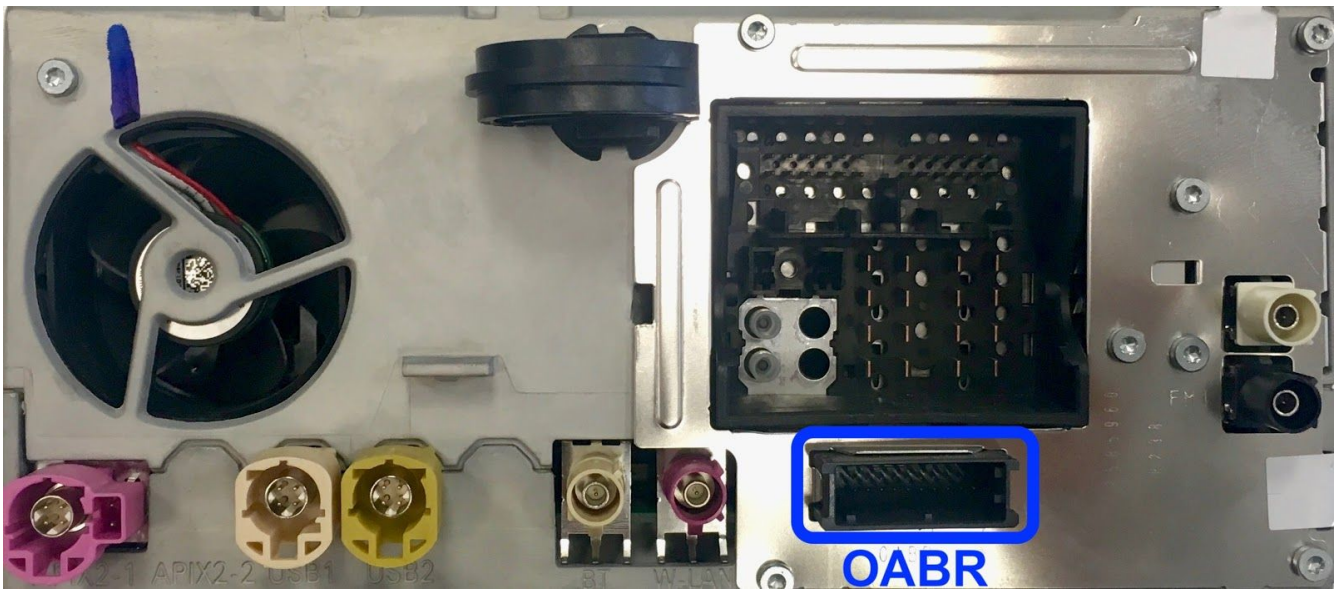
Please move the fiber optic cable from the factory quadlock (if you have one in the original quadlock as not all vehicles do) by unfastening the securing tab and pulling the Fiber Optic cable out. The cable will not resist if the securing latch is released correctly. Reinsert it in the PnP harnesses quadlock in the same spot.Once the Fiber Optic Cable has been moved to the new harness, plug in the square harness into the back of the head unit and to the existing harness.





At this point you can reattach the quadlock to the head unit and remount it.You might want to keep the head unit trim disassembled in order to confirm the CA kit works before you put all of the trim back into place.

If you disconnected any other cables from the back of the head unit for easier access - make sure to reconnect them. It is especially crucial to have the OABR connector (located below the Quadlock) reattached to the head unit before powering anything on.



Before reinstalling the trim pieces removed, you may connect the IR receiver to the MMI in the IR port and install the other end of the cable in a place that can be reached by the Remote Control.

To remove the screen:

51 45 380 Removing and installing decorative strip on right dashboard

Special tools required:

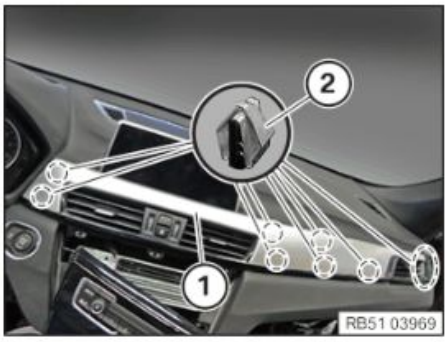
- 00 9 325

When working on trim panel components, make sure that the sensitive surfaces are not scratched or damaged.

Necessary preliminary tasks:

- Partially remove the audio operating facility

Removal:

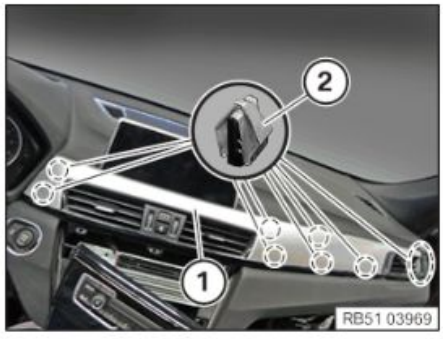


Carefully unclip the decorative strip (1) from the clamps (2) using special tool 00 9 325, starting on the side.

Lift decorative strip (1) and disconnect plug connections located beneath.

Remove decorative strip (1).

Installation:



Replacement:

Remount the central fresh air grille

Remount the right-hand fresh air grille

Note:

Replace any faulty clamps (2) on the rear of the decorative strip.

Mount decorative strip (1).

Connect plug connections.

Engage the decorative strip (1) into the clamps (2).

65 50 057 Removing and installing/replacing Central Information Display (CID)

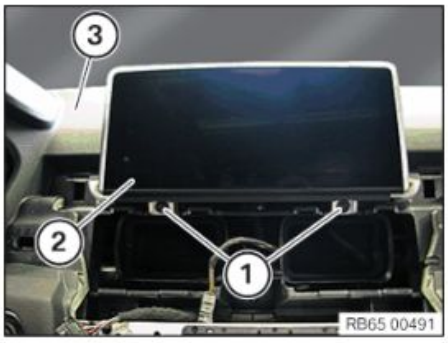
Attention!

Read and comply with notes on protection against electrostatic damage (ESD protection).

Necessary preliminary work:

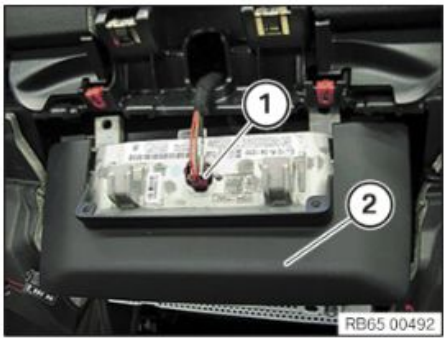
- Remove decorative strip on dashboard on right

Removal:



Release screws (1).

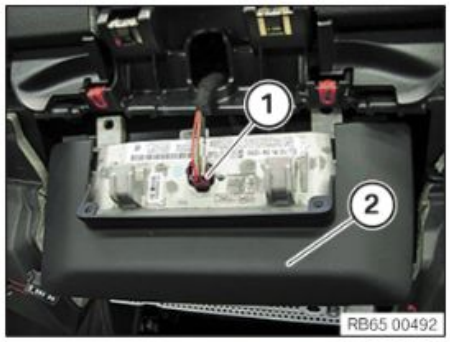
Remove the CID (2) upwards out of the instrument panel (3).



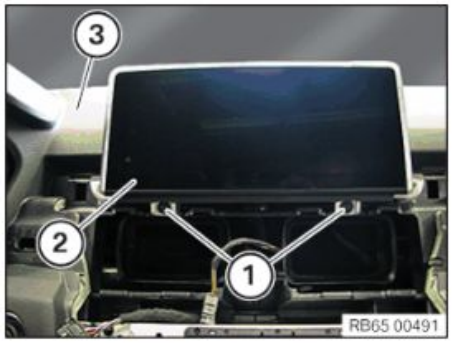
Unlock and disconnect the connector (1).

Remove CID (2).

Installation:



Plug in the connector (1) to the CID (2).



Feed in the CID (2) downwards into the instrument panel (3).

Make sure that the CID (2) is correctly seated.

Tighten down screws (1).

Tightening torque 65 50 1AZ.

Required reworking:

- Install the decorative strip on the right side of the instrument panel

Unplug the pink connector from the screen and plug it into the LCD IN port in the MMI and connect the supplied video cable with teal plugs from the LCD OUT port on the MMI to the back of the screen.In some vehicles it is necessary to take a bit of time to release the original screen cable from the dashboard as it may have been taped to other cables as well as clipped into the dash. Make sure to release it carefully without inducing any damage.

Installing the Front View Camera (FVC)

Once again the F30 video installation guide will offer you invaluable information on the front camera installation process:

https://youtu.be/SksfQZnKILg?t=11m57s

Drop the plastic area shown below, by removing the two 10mm nuts, as pictured below. Once the nuts are removed, use a trim tool to gently pry down and pop the remaining clips. Run the wires under the plastic by the foot well of the driver's seat, being careful not to interfere with the airbag.

Remove the three 10mm plastic bolts. Turn these 90 degrees counter clockwise to release. Pull off the plastic panel to expose the firewall and the grommet that we will be drilling through.

The simplest and most efficient way to route the Front View Camera wire through the firewall is to drill a hole in the existing grommet, as shown below. Be sure to drill a large enough hole (yellow dot), so that the plastic clip will easily fit through, while being extremely careful not to make contact with any other wires.

Once you've drilled through the grommet, use a sturdy wire or a thin hanger to route the wire through the grommet.

Please remember the battery must be disconnected – we don't want fans to turn on while you're working with your hands under the hood.

Route the camera cable around the engine bay all the way to the rubber grommet in the firewall as space permits, and proceed to run it up to the MMI module, connecting it via the camera connecting cable to the F-CAM video input and F-CAM power socket on the RCA harness.

Make sure the front camera picture is unobstructed by the grille and not upside down. If the camera works fine you can now secure the camera cable with cable ties to prevent it from moving around. After the cable is in its final location seal the hole you made in the grommet with black silicone. Proceed to reassemble all of the trim pieces.

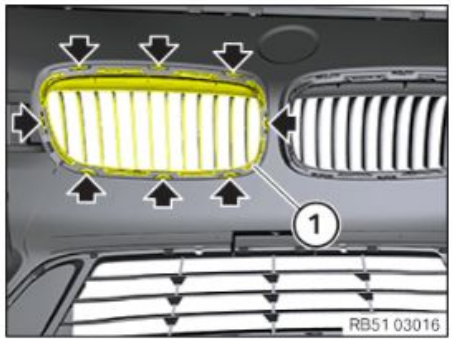
If your vehicle has a mesh grille, simply unscrew the camera and install it through the grille mesh from the back and screw it back together. Then connect the camera to the extension cable and heat shrink the connection. You might be able to do this without removing the bumper cover if you first remove one of the kidney grilles for easy access. A more than firm pull on the grille might be necessary for the clips to release the grille from the bumper but if on your car it does not want to pop out then you'll need to release the clips at the back. Do not use excessive force to pull off the grille as it might get damaged.

Some mesh grilles might require the use of a dremel tool to trim the grille ever so slightly to allow the installation of the camera. Be sure not to trim too much. Then slide the heat shrink provided with the front camera over one of the cables making sure the small white connectors are firmly attached to each other. Confirm the camera works and heat up the heat shrink carefully making sure not to

disconnect the connectors inside. The heat shrink has thermal glue inside which has very good moisture isolation properties but is also really hard to remove if you make a mistake.

51 13 146 Replacing front radiator grille, middle left or right

Removal:



Disconnecting longitudinal bars of the kidney grille (break off).

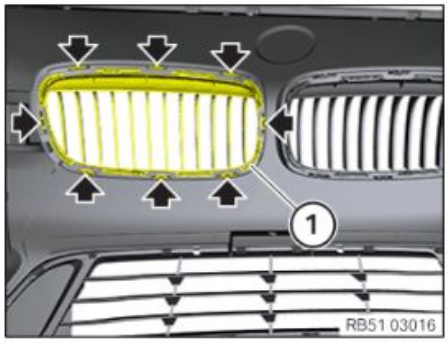
Release latch mechanisms on front ornamental grille (1) from outside.

Remove front ornamental grille (1) forwards.

Note:

The bumper panel must be disassembled to ensure the removal will not cause any damage.

Installation:



Install front ornamental grille (1).

Engage latch mechanisms on front ornamental grille (1).

The heat shrink should be applied in a manner to cover all other heat shrink sleeves near the connections for best isolation from the elements. If you have to remove the front bumper:

To remove the front bumper panel:

51 76 031 Removing and installing/replacing bonnet gasket at the front

Removal:

Pull off gasket (1) towards the top.

Installation:

Centre the gasket (1) and press it into the mounting on the bumper and the headlights.

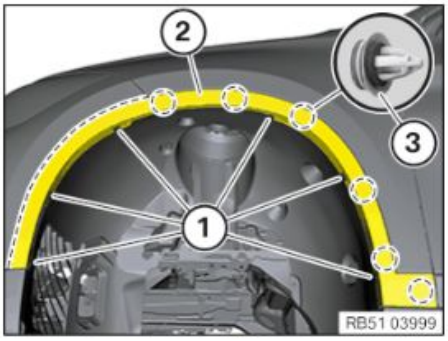
51 71 470 Removing and installing/replacing the wheel arch trim at the front left or right

Special tools required:

- 00 2 230

Note:
For clarity the vehicle is only partially pictured.

Removal:

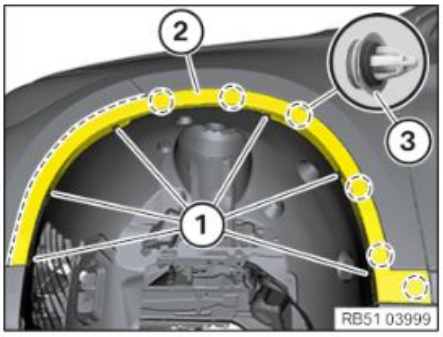


Remove the blind rivet (1).

Disengage the trim (2) from the clips (3) around the side panel.

Loosen and remove the trim (1) from the latch mechanisms on the bumper.

Installation:



Note:
Renew faulty clips (3).

Insert the trim (2) and engage with the clips (3).

Engage the trim (2) with the latch mechanisms on the bumper.

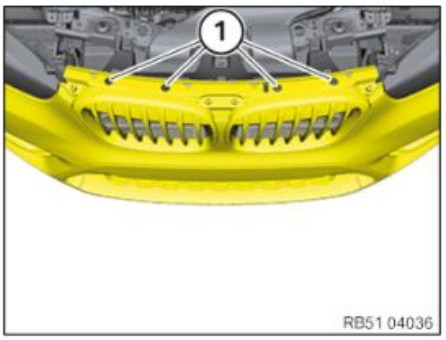
Install the blind rivet (1) using special tool 00 2 230.

51 11 156 Removing and installing front bumper panel

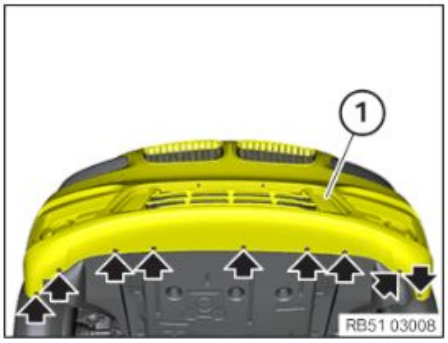
Necessary preliminary tasks:

- Remove the sealing for the bonnet
- Partially remove the wheel arch trim on the left and right

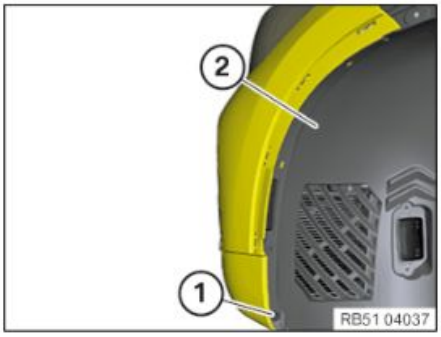
Removal:



Release screws (1).



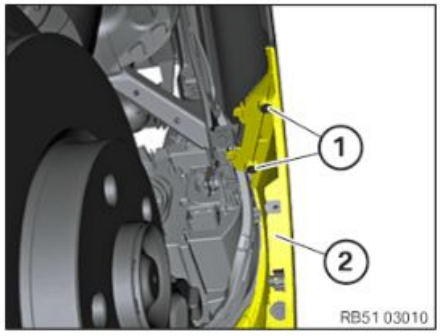
Release screws on bumper panel (1) at bottom.



Note:
Front wheel removed for purposes of clarity.

Loosen screw (1) on wheel arch trim panel (2).

Fold wheel arch cover (2) partially back.



Release screws (1) on bumper panel (2).

Detach bumper panel (2) at side.

Note:
The following tasks must be carried out with a second person assisting:

Tilt bumper panel (1) upwards.

Unlock and detach plug connections on the following components depending on the version.

- Ultrasonic sensors PDC
- Ultrasonic sensors for PMA
- Fog lights
- Temperature sensor
- Disconnect hose for headlight cleaning system

Remove bumper panel (1) towards front.

Installation:

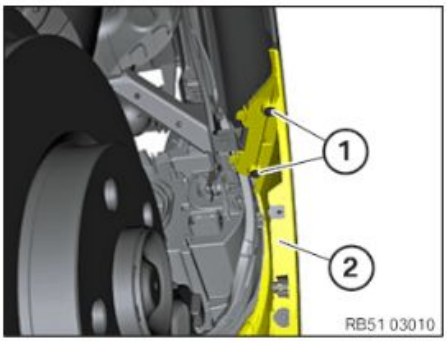
Note:
The following tasks must be carried out with a second person assisting:

Attach bumper panel (1) to bottom support.

Connect and lock plug connections on the following components depending on version:

- Connect hose for headlight cleaning system
- Ultrasonic sensors PDC
- Ultrasonic sensors for PMA
- Fog lights

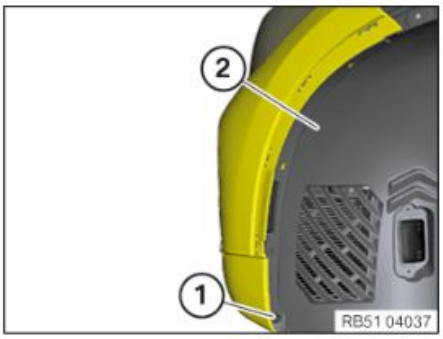
Tilt bumper panel (1) upwards and place in position.



Attach bumper panel (2) at side.

Tighten screws (1) on bumper panel (2).

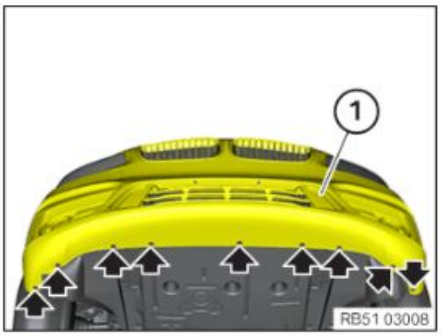
Tightening torque 51 11 16AZ.



Install wheel arch panel (2).

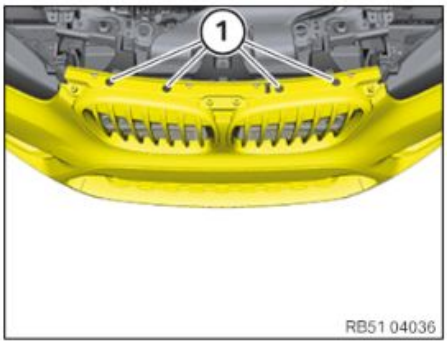
Tighten screw (1) on wheel arch trim panel (2).

Tightening torque 51 71 19AZ.



Tighten bottom screws on bumper panel (1).

Tightening torque 51 11 17AZ.



Tighten down screws (2).

Tightening torque 51 11 1AZ.

Route the camera cable around the engine bay all the way to the rubber grommet in the firewall as space permits, and proceed to run it up to the MMI module, connecting it via the camera connecting cable to the F-CAM video input and F-CAM power socket on the RCA harness.

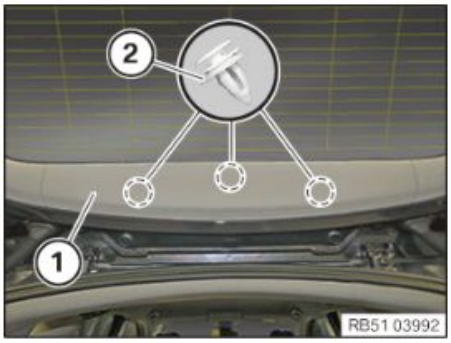
Make sure the front camera picture is unobstructed by the grille and not upside down. If the camera works fine you can now secure the camera cable with cable ties to prevent it from moving around. After the cable is in its final location seal the hole you made in the grommet with black silicone. Proceed to reassemble all of the trim pieces.

Installing the Rear View Camera (RVC)

Attached are instructions how to take apart the trunk lid. You have to replace the factory trunk handle with the new one (in the process move the switch mounted on a bit of plastic from your original trunk handle to the new one) and then run the camera cable all the way to the dashboard under various trim pieces, through the rear seats and under the door sills. A coat hanger feeder wire will come in handy during this part of the installation. Then connect the yellow RCA cable from the rear camera extension cable to the yellow RCA socket marked (R-CAM) in the RCA harness and also connect the rear camera power connector to the respective R-CAM power socket on the RCA Harness.

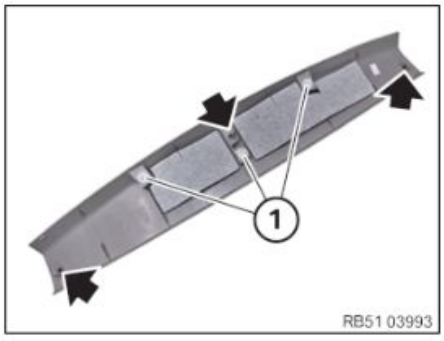
51 49 015 Removing and installing/replacing cover for rear window frame at top

Removal:



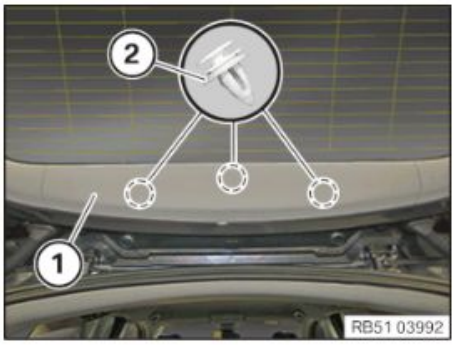
Unclip the trim (1) from the clips (2) and remove towards the bottom.

Installation:



Note:

The clips (1) and guides must not be damaged or missing.



Install the trim (1) and clip into the clips (2).

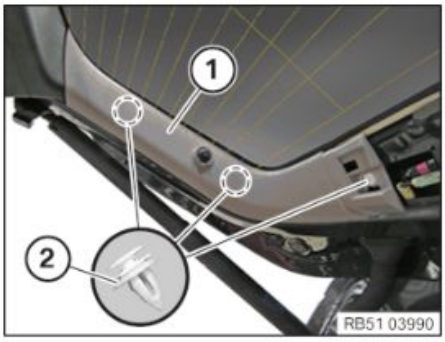
51 49 003 Removing and installing/replacing left or right rear window frame cover

When working on trim panel components, make sure that the sensitive surfaces are not scratched or damaged.

Necessary preliminary tasks:

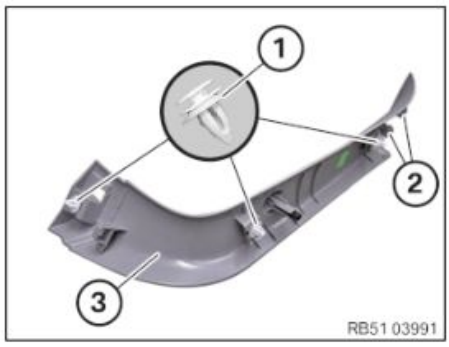
- Remove cover for rear window frame at top.

Removal:



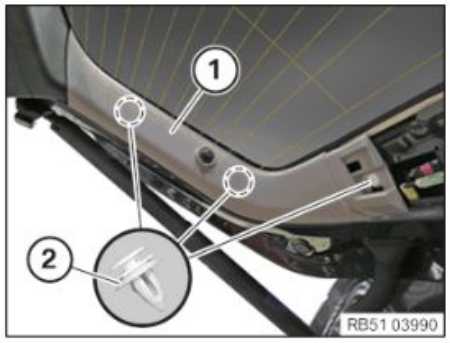
Release trim (1) from clips (2) and remove.

Installation:



Note:

Clips (1) and guides (2) on trim (3) must not be damaged or missing.



Attach trim (1) and engage at clips (2).

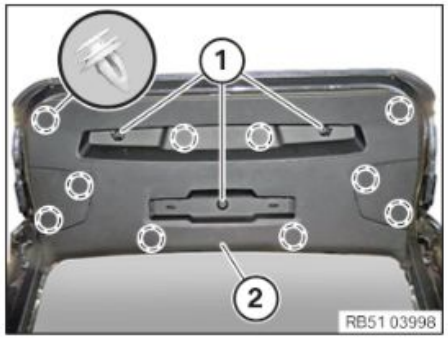
51 49 000 Removing and installing/replacing the tailgate trim panel

When working on trim panel components, make sure that the sensitive surfaces are not scratched or damaged.

Necessary preliminary tasks:

- Remove warning triangle.
- Remove cover for side rear window frame

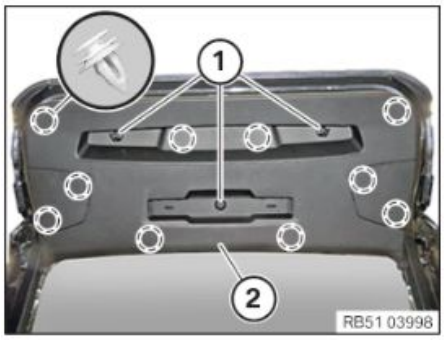
Removal:



Lever out the protective caps and loosen the screws (1).

Unclip trim panel (2) at the clips and remove downwards.

Installation:



Note:

Clips and guides on the tailgate trim panel must not be damaged or missing.

Replacement:

Remount the clips.

Attach trim panel (2) and clip into place.

Tighten down screws (1).

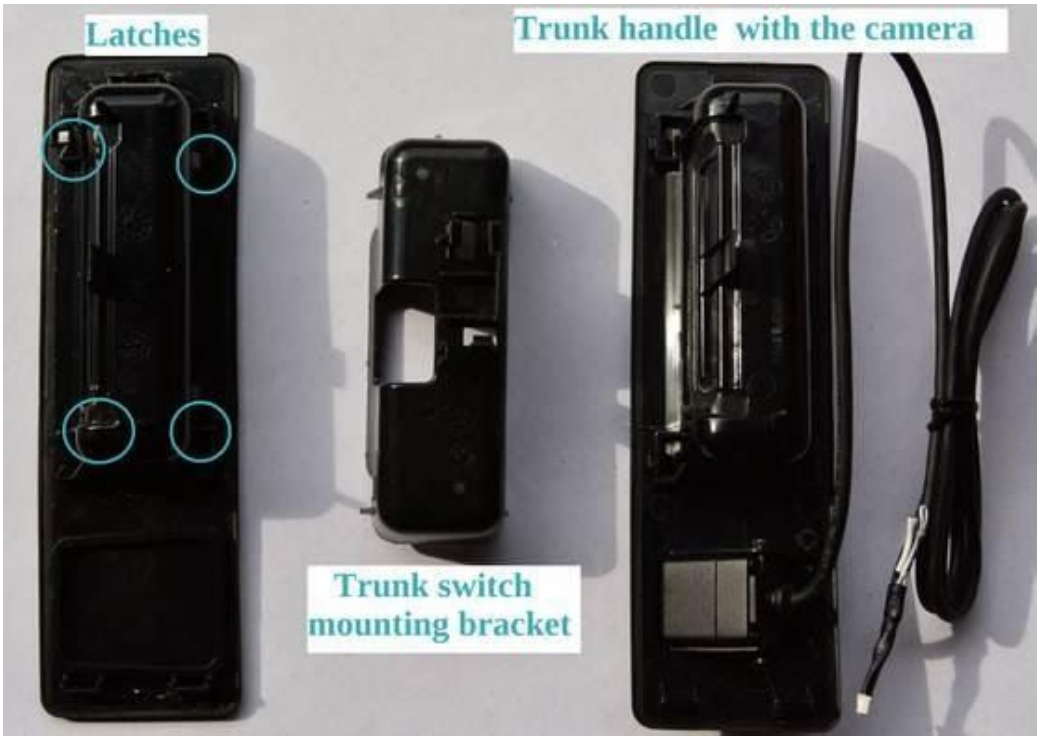
Tightening torque 51 49 1AZ.

Install the protective caps.

Remove the trunk handle with nylon pry bar from outside. Some force is needed to pop the latch.

The original trunk open handle has a trunk opening switch mounting bracket. Release the four latches (in blue cycles) that hold the trunk switch mounting bracket on the original handle.

Put the mounting bracket onto the new handle with the camera.



nstall the new handle to the original handle location.

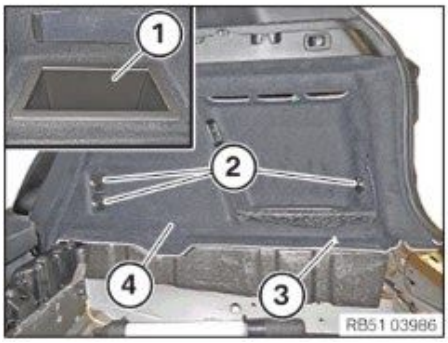
Remove the following trim and proceed to route the camera cable and its extension cable through the rubber grommet connecting the tailgate and luggage compartment. Make sure to secure the small connection with electrical tape or heat-shrink. Proceed to route the camera cable all the way to the front of the car under the trim pieces and carpet.

51 47 161 Removing and installing/replacing right luggage compartment wheel arch panel

Necessary preliminary tasks:

- Remove cover from tail panel
- Remove luggage compartment light

Removal:



Lift out storage compartment (1) upwards.

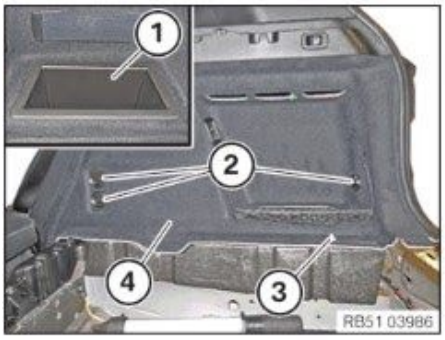
Lever out lashing eye covers (2) and loosen screws underneath.

Remove the lashing eyes (2).

Remove the pin (3).

Remove the trim panel (4) towards the inside and in this process, disconnect the plug connections.

Installation:



Insert the trim panel (4) and in this process, connect the plug connections.

Tighten the pin (3).

Tightening torque 51 47 6AZ.

Install lashing eyes (2) and tighten screws.

Tightening torque 51 47 1AZ.

Install lashing eye covers (2).

Install storage compartment (1).

Required follow-up work:

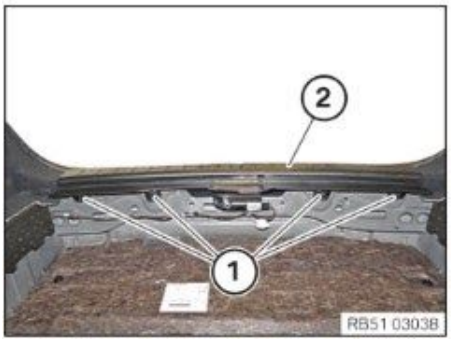
- Install cover on tail panel
- Install luggage compartment light

51 46 050 Removing and installing/replacing top cover on tail panel

Necessary preliminary tasks:

- Removing luggage compartment well

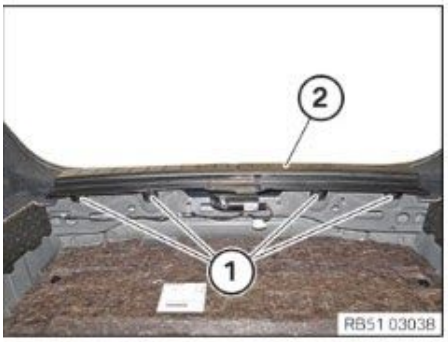
Removal:



Release expanding rivets (1) from tail panel trim (2).

Lift off trim on tail panel (2).

Installation:



Install trim on tail panel (2).

Mount expanding rivets (1) on tail panel trim (2).

Required follow-up work:

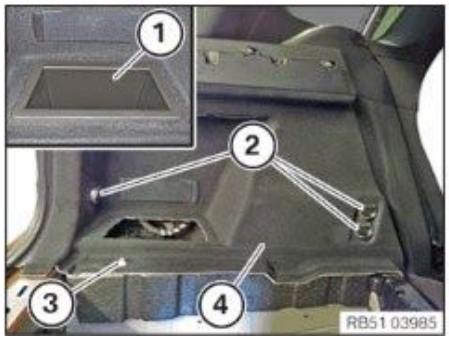
- Install luggage compartment well

51 47 151 Removing and installing/replacing left luggage compartment wheel arch trim

Necessary preliminary tasks:

- Remove cover from tail panel

Removal:



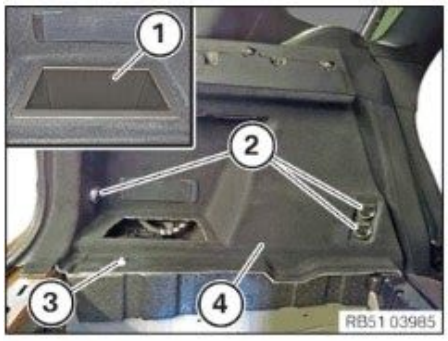
Lift out storage compartment (1) upwards.

Lever out lashing eye covers (2) and loosen screws underneath.

Remove the lashing eyes.

Remove the pin (3) and remove the trim panel (4) towards the inside.

Installation:



Insert the trim panel (4) and tighten the pin (3).

Tightening torque 51 47 6AZ.

Install lashing eyes and tighten screws.

Tightening torque 51 47 1AZ.

Install lashing eye covers (2).

Install storage compartment (1).

Required follow-up work:

- Install cover on tail panel

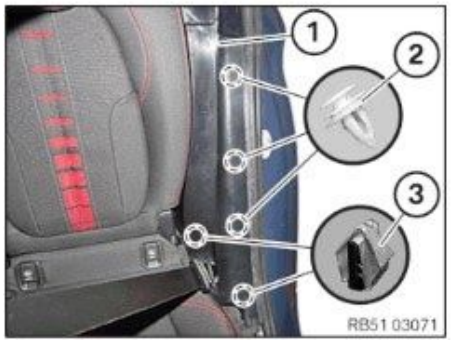
Feed the wires down and through the left side of the vehicle:

51 47 098 Removing and installing/replacing trim on C-pillar at bottom left or right

Necessary preliminary tasks:

- Remove door sill cover strip at rear
- Release rear end fitting

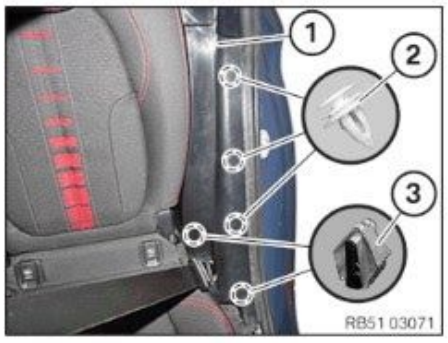
Removal:



Unclip the trim panel (1) from the clips (2) and the clamps (3).

Feed out seat belt and remove trim panel (1).

Installation:



Feed in seat belt and install trim panel (1).

Clip trim panel (1) in clips (2) and clamps (3).

Required follow-up work:

- Install rear door sill cover strip
- Mount rear end fitting

51 47 370 Detaching and attaching/replacing the C/D pillar trim

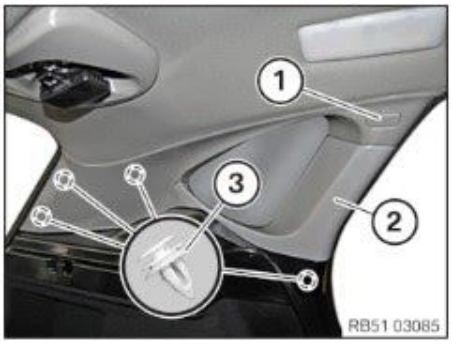
Necessary preliminary tasks:

- Remove luggage compartment wheel arch panel
- Remove C-pillar cover at bottom.

Removal:

Release screws (1).

Undo and remove screw (1) from end fitting (2).



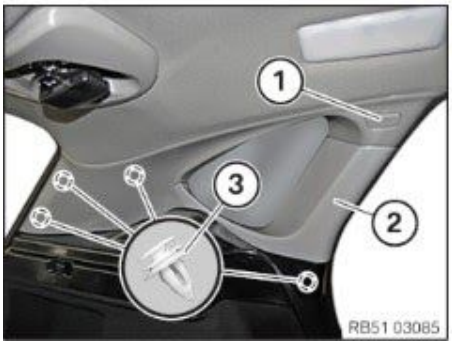
Remove cover (1) and release screw underneath.

Unclip trim (2) out of the clips (3).

Feed seat belt strap out of the trim (2).

Remove cover (2).

Installation:



Feed seat belt strap into the trim (2).

Attach trim (2) and clip into clips (3).

Tighten bolt and mount cover (1).

Tightening torque 54 43 1AZ.

Install end fitting (2) and tighten screw (1).

Tightening torque 72 11 21AZ.

Tighten down screws (1).

Tightening torque 51 43 2AZ.

Required follow-up work:

- Install luggage compartment wheel arch panel
- Install trim of bottom C-pillar

72 11 092 Removing and installing/replacing rear left or right seat belt (roller)

Necessary preliminary tasks:

- Remove C/D-pillar trim panel

Removal:

Release screw (1) of the end fitting (2).

Disconnect end fitting (2).

Unfasten plug connection (1) and disconnect.

Guide cable out of cover (2).

Feed out cover (2) towards top.

Release screw (1).

Remove inertia reel unit (2).

Installation:

Fit the inertia reel (2).

Renew screw (1).

Tighten screw (1).

Tightening torque 72 11 20AZ.

Feed in cover (2).

Guide cable into cover (2).

Connect and lock plug connection (1).

Note:
End fitting is encoded to prevent incorrect assembly.

Fit the end fitting (2).

Renew screw (1).

Tighten screw (1) of the end fitting (2).

Tightening torque 72 11 21AZ.

Required follow-up work:

- Install C/D-pillar trim panel

51 47 030 Removing and installing/replacing rear left or right door sill cover strip (inside)

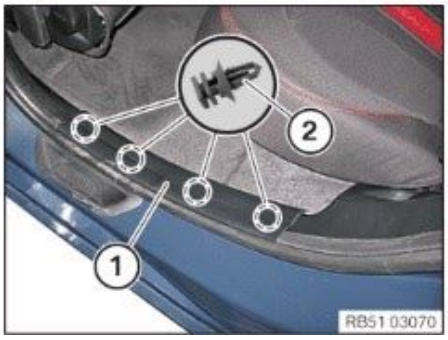
Special tools required:

- 00 9 325

Removal:

Lever the rocker panel trim (1) out of the clips (2) using special tool 00 9 325 and remove.

Installation:



Note:
Replace faulty clips (2).

Replacement

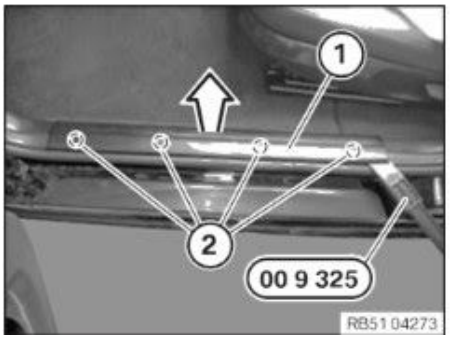
Remount clips (2).

Engage rocker panel trim (1) in clips (2).

51 47 000 Removing and installing/replacing front (inside) left or right door sill cover strip

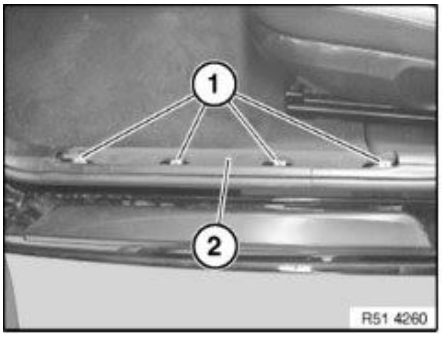
Special tools required:

- 00 9 325

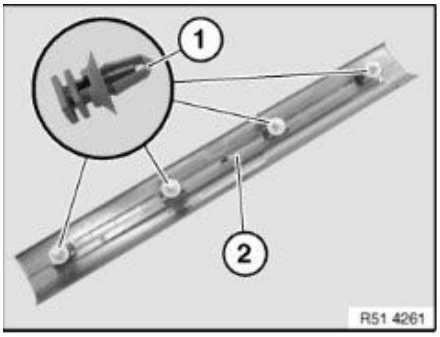


Attention!
Do not raise door sill cover strip (1) over entire length simultaneously.

Unclip rear door sill cover strip (1) from clips (2) starting from the rear with special tool 00 9 325.



If necessary lift clip (1) from floor panel (2) and clip on door sill cover strip.

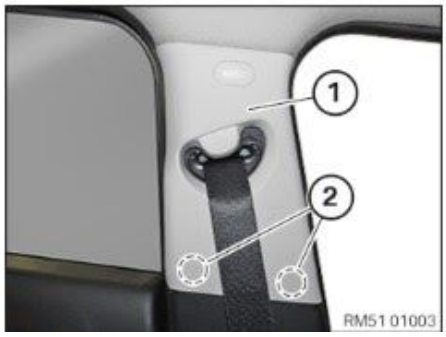


Installation note:

Replace defective clips (1) on door sill cover strip (2).

51 43 148 Remove and install/replace trim panel for B-pillars (above) left or right

Removal:



Detach trim panel (1) from clips (2).

Feed out trim panel (1) downwards within the guides and remove.

Complete removal only:

Remove end lining.

Pull out seat belt straps and remove trim panel for B-pillars.

Installation:

After complete removal only:

Merge the seat belt strap into the trim panel of the B-pillars.

Mount end lining.

Feed trim panel (1) upwards into the guides.

Engage trim panel (1) in clips (2).

Note:

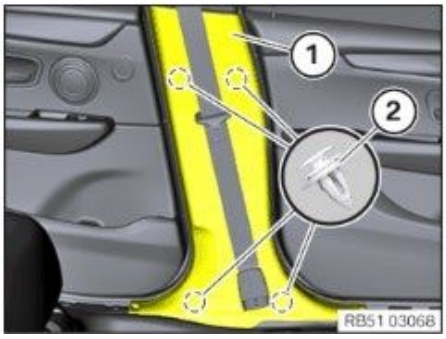
Make sure trim panel (1) is fitted correctly on the edge protection.

51 43 150 Removing and installing or replacing trim for left or right door pillar (bottom)

Necessary preliminary work:

- Remove trim panel for top of B-pillar
- Remove front entrance cover strip
- Remove rear door sill cover strip

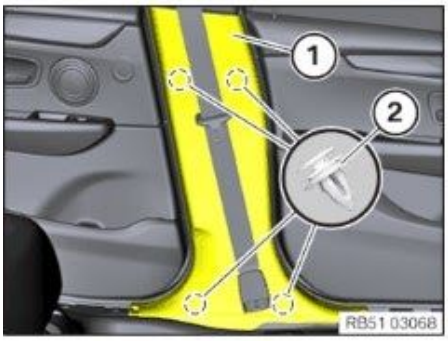
Removal:



Detach trim panel (1) from clips (2).

Remove trim panel (1) towards inside.

Installation:



Note:

Replace faulty clips (1).

Ensure edge protection is correctly positioned.

Install trim panel (1).

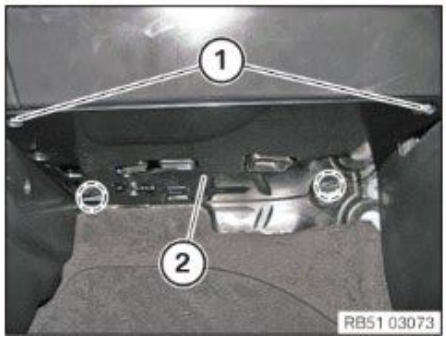
Engage the trim panel (1) with the clips (2).

Required follow-up work:

- Install front door sill cover strip
- Install rear door sill cover strip
- Install trim panel for top of B-pillar

51 45 195 Removing and installing/replacing instrument panel trim, bottom right

Removal:

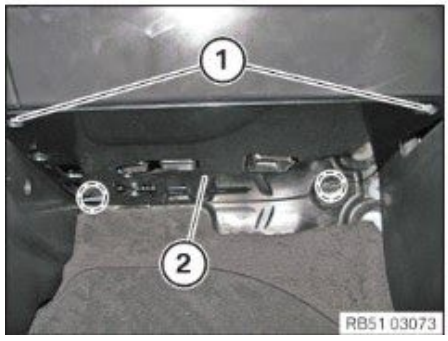


Unscrew nuts (1).

Lower trim panel (2) slightly and disconnect plug connections behind it.

Feed the trim panel (2) out of the guides and remove.

Installation:



Hold on to the trim panel (2) and connect the plug connection.

Feed in the trim panel (2) into the guides at the front.

Note:

Feed the guides of the trim panel (2) correctly into the corresponding holders on the vehicle.

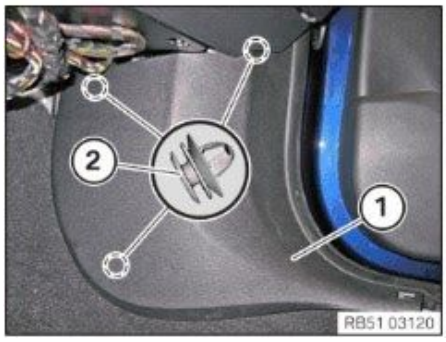
Tighten down nuts (1).

51 43 075 Removing and installing/replacing side trim panel, footwell, on A-pillar, right

Necessary preliminary tasks:

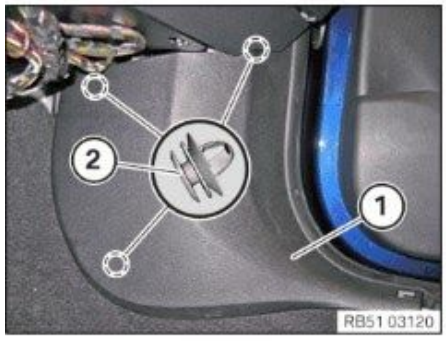
- Remove front door sill cover strip (inner), right
- Remove dashboard trim at bottom right

Removal:



Pull off trim panel (1) from clips (2) and remove.

Installation:



Note:

Clips (2) must not be missing or damaged.

Make sure trim panel (1) is correctly seated against the edge protection.

Install trim panel (1) and engage in clips (2).

Required follow-up work:

- Install right door sill cover strip (interior)
- Install bottom instrument panel trim on the right

Connect the yellow RCA cable from the rear camera extension cable to the yellow RCA socket marked (R-CAM) in the RCA harness

Connect the power plug from the rear camera extension cable to the connector (R-CAM) in the RCA harness. Please keep in you mind that your vehicle is a convertible and you need to route the camera cable with the extension cable in a way that when the hard-top is opening or closing it will not snap the cables to the rear view camera.

SmartView HD FLEX

SmartView HD FLEX - Installation Manual

Plug the yellow, red and white RCA plugs from the SmartView Harness to the respective AV1 RCA sockets on the MMI RCA Harness

The power wires will need to be connected to the PnP harnesses wires with tap-in connectors on a run of wire located after the fuse box and before the MMI.

The red power wire from the SmartView needs to be connected to the red power wire of the PnP Harness. The black wire from the SmartView needs to be connected to the black ground wire of the PnP Harness. Use the supplied tap-in connectors and squeeze them tightly with pliers.

Once you have the SmartView image on your iDrive display the unit will boot up and eventually display a WiFi network and IP address. Connect to the WiFi network shown on the screen and activate AirPlay/Miracast mode on your smart device to mirror your iPhone or Android phone to your iDrive screen. Here is an instruction video on how to exactly to do this:

https://youtu.be/qBvaruad0Yo?t=1m12s

Included with the SmartView HD FLEX kit is a USB A extension cable (with standard rectangle plugs). This extension cable should be plugged into the SmartView HD FLEX's USB A port labeled "USB" and routed to a place where it will be accessible easily in the future. Access to it might come in handy to update the module's firmware if a iOS or Android update causes compatibility issues. If this happens the latest firmware version will always be updated below this firmware update instruction video:

https://www.youtube.com/watch?v=FLpmLU4tMSM

The USB A extension cable can be routed to the glove box or to the area where the center console trim and the carpeting meet in the passenger footwell area.

Connect Audio OUT RCA connectors from the MMI RCA harness through the 2x RCA to 3.5mm stereo minijack cable to the AUX input socket in your center console. Set the audio source to AUX in iDrive.

SmartView HD FLEX - User Manual

If you prefer a video manual we have one here: https://youtu.be/qBvaruad0Yo?t=1m12s

Engaging the SmartView is achieved by accessing the AV input to which you have the unit connected. If you are getting “No Signal” please check the power and video wires. Before reassembling the trim confirm the SmartView image is coming up:

MMI AV inputs can be activated by:

- Pressing the down arrow on the steering wheel
- Holding the SEL/INPUT button on the keypad
- Pressing the Input Selection Button/Mode Button

Please wait until there is an IP address on the display along with a network name (BimmerTech XXX) Then simply connect to the WiFi network shown on the welcome screen and activate AirPlay/Miracast mode to mirror your iPhone or Android phone onto your iDrive screen. Sometimes it is necessary to repeatedly attempt connecting to the BimmerTech WiFi network before a connection is established successfully.

If the unit is not powering up – make sure to check the power supply wires tap-in connections. If the unit is getting power a blue LED on the enclosure will be lit up.

If you cannot see a network name but the welcome screen comes on, then the first step is to perform a reset of the unit by disconnecting the power supply. Please note that it may take some time – about 5-10 seconds for the network name to appear after turning ON. If there are any issues with mirroring your iPhone/smartphone, please check if other phones have the same issue or not.

SmartView HD ATV4

Installation Manual

On the Apple TV4 there are 2 wires that need to be tapped into the PnP harness, marked with GROUND and +12V labels.

The wire labeled GROUND from the ATV4 needs to be tapped into the PnP harness wire marked GROUND (Pin 12 of the Quadlock connector, blue insulation)

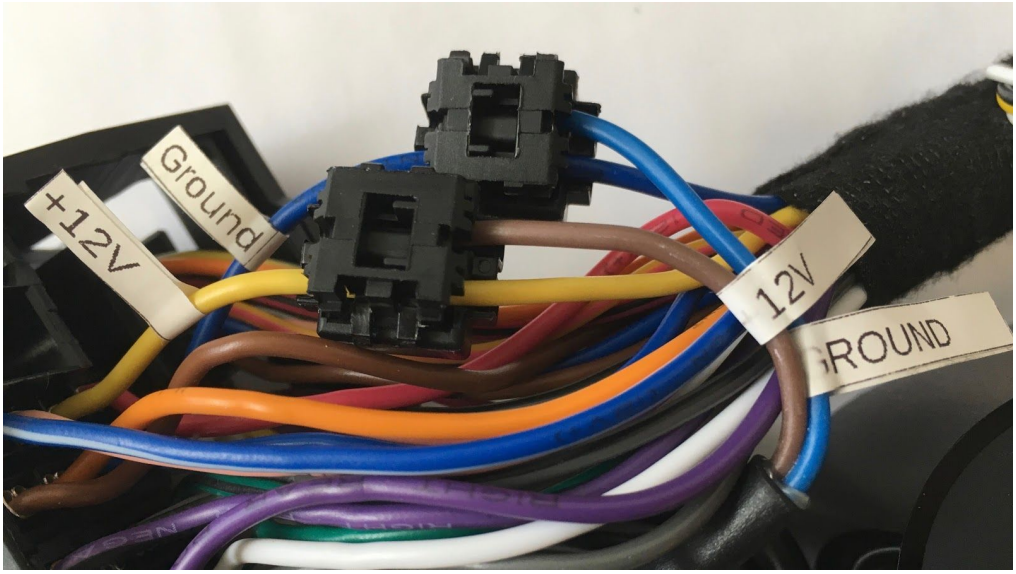
The wire labeled +12V from the ATV4 needs to be tapped into the PnP harness wire marked +12V (Pin 15 of the Quadlock connector, yellow insulation)

Please use the picture below for reference:

Squeeze the tap ins with pliers (hand strength will not suffice). Once the connections have been made the connections should look as shown below::

Brown +12V wire from ATV4 tapped into the yellow +12V wire from PnP harness

Blue GROUND wire from ATV4 tapped into the blue GROUND wire from the PnP harness



If your PnP harness did not come with labels on the blue and yellow wires, you can still hook up the wires for the ATV4 using the picture as your reference.

Connect the supplied HDMI cable from the Apple TV to HDMI-1 on the MMI

The Apple TV4 uses Bluetooth connectivity so it can be placed anywhere under the dash to communicate with the supplied remote control. We included a lightning cable that you can use to charge the remote.

Connect Audio IN RCA connectors from the PnP harness to the Audio OUT RCA sockets on the MMI RCA Harness. Make sure the vehicle's audio mode is set to AUX. If you are not getting sound in this setup connect the 2x RCA to 3.5mm stereo minijack cable from the Audio OUT on the RCA Harness to the AUX input in your center console.

User Manual

If you prefer a video manual we have one here: https://youtu.be/qBvaruad0Yo?t=2m48s

To start mirroring from your iPhone to the Apple TV you will need to host a WiFi Hotspot through the settings menu of your phone. Then you'll need to enter the menu of the Apple TV and manually connect the Apple TV to your phones hotspot. You only need to establish this connection once and the ATV will remember your hotspot however the next time you want to connect the iPhone to the ATV you will need to enter the hotspot menu in your iPhone even though it is still turned on.

Activate SmartView by holding the iDrive Controller Menu button for 3 seconds or press the #8 radio button. This will bring you to the ATV start Menu. On your first use, connect to your Wi- Fi/Hotspot through the settings menu. For Apple, swipe up on your iOS device and select AirPlay. Your Apple/iOS device is now mirrored.

Final tests and settings

Once all of cables have been connected as described you can reconnect the earth lead to the negative battery terminal, power up the car and set the system up to the check if everything works before you reassemble your car. Generally speaking everything should fire up nicely because we set up the module for your specific vehicle during final quality control. Still in some cases minor adjustments might be necessary.

Accessing the Factory Menu/Internal Menu of the MMI

To access the MMI's Factory Menu, you will need to access one of the AV input modes first. To bring up one of the AV input modes on the screen, press and hold the MENU button on the iDrive controller for about 3 seconds. When you can see one of the modes on the screen then press and hold the BACK button on the iDrive controller for 7 seconds to enter into the Factory Menu.

Preparing the IR Remote:

Make sure to remove the plastic insulator out of the battery in order for the remote to work. The IR remote must be able to have the IR sensor is line of sight in order to work properly.

Rear View Camera

If you installed the rear view camera and set DIP switch 7 to ON the rear camera is going to engage soon after inserting reverse gear. As described in the rear camera installation chapter if you have a manual transmission installing an additional wire will be necessary.

Toggling between split screen modes

When in reverse gear or any other auxiliary MMI video input like HDMI or AV it is always possible to toggle through a variety of split screen modes.

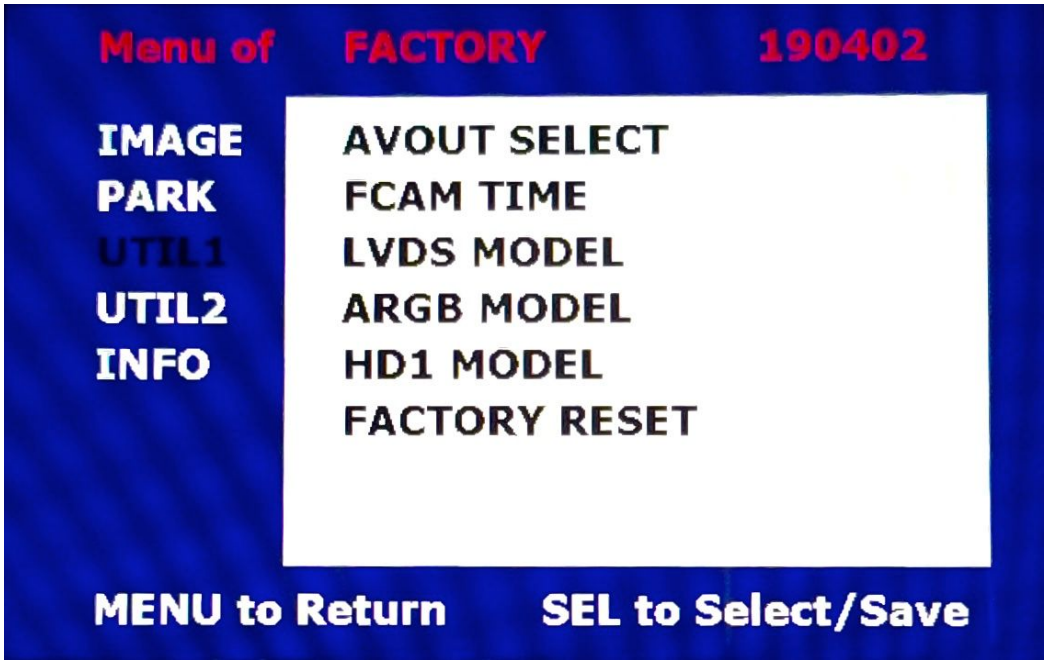
If you would like to activate the split screen mode, please move the iDrive controller towards the 6 o'clock position ⇩(DOWN) and hold it for 3-4 seconds until a change happens on the screen. Repeat this step until you achieve the desired display mode. One of the display modes shows the regular iDrive menu so don't be surprised when you see it instead of the camera mode or AV input. You can simply pull on the iDrive controller to toggle further.

Front View Camera Automatic Setup and Operation

It is possible to have the front camera engage automatically after shifting into D gear for a set period of time which is useful when parallel parking into a tight spot.

You can access the factory menu by entering one of the MMI modules auxiliary video inputs like the rear view camera mode or one of the HDMI or AV inputs by pressing MENU button on your iDrive controller for 3s (a black screen will appear if you do not have an HDMI signal source plugged into the MMI – this is completely fine).

Once you have one of the MMI video feeds on the screen press and hold the iDrive controllers BACK button for 7s. The internal MMI menu will appear on screen. In the menu navigate to UTIL 1 → FCAM KEY and change the setting to ON.



To set it up navigate to UTIL1 → FCAM TIME and set it up between 0 and 15s.

This function does not work with manual transmission BMW's.

Q & A

I see an orange NO SIGNAL message at the center of the screen

Make sure your factory LCD screen cable has its pink plug attached to the factory radio/head unit, the purple plug of the original screen cable (that you have disconnected from the original screen) connected to the LVDS IN port on the MMI module and finally the LCD cable that was supplied with our kit is connected between the LVDS out of the MMI and the input on the LCD screen. Make sure the plugs are fully seated in the sockets. In many cases any other arrangement of the LCD/LVDS cables will cause issues.

My screen is completely black at all times or the aspect ratio of the screen is wrong

Please try different combinations of the MMI modules DIP switch number 4, 5 and 6 as indicated in the chapter *Setting up the DIP switches on the MMI*.

I see a flicker on the screen when I engage reverse gear but the camera image does not appear

You probably have one of the MMI modules split screen modes engaged on the rear camera input. Please toggle through the modes while still in reverse gear until the camera view comes back onto the screen in the desired display mode.

No Signal message when reverse gear is engaged

Likely one of the connections between the rear camera and the MMI module is not connected or is connected incorrectly. Verify the connections next to the MMI on the RCA harness (both the video cable and the power cable) and make sure everything is securely connected under the trunk trim (to the handle)

If you have any other questions with regards to the installation or setup of your kit please contact our technical support team in reply to the instructions e-mail or directly to support@bimmer-tech.net including the last 7 characters of your vehicles VIN for easy order identification.

We hope you will enjoy the use of our devices!