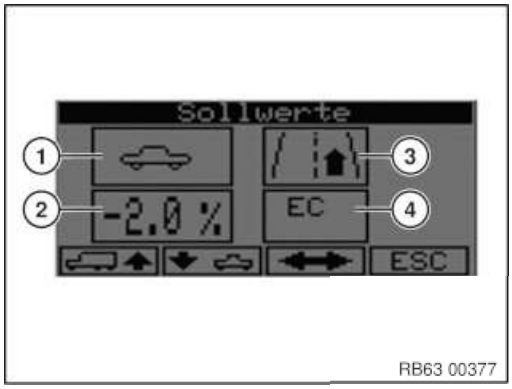
63 10 ... Adjust the fog lights (with electronic headlight adjustment device MAHA Lite 3)

Comply with test prerequisites for headlight adjustment!

Refer to the operating instructions for the headlight adjustment device!



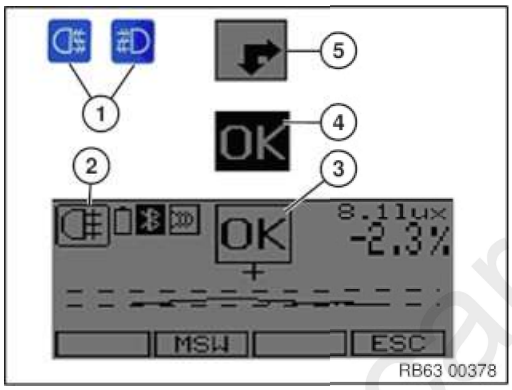
Switch on the headlight adjustment device by pressing any button.

Press **F2** button. The shown display screen appears.

Perform the following settings:

1. The passenger car must be selected.
2. Enter the setting dimension for the headlight with buttons **F1/F2**: **- 2,0 %**
3. The right / left-hand traffic must be selected according to the country.
4. Select the fog light type with the **F3** button:
   - **EC**: for halogen fog lights
   - **EC LED**: for LED fog lights

The adjusted values are adopted for future measurements.



Press briefly the button for the applicable side of the vehicle (1) until symbol (2) appears.

The following symbols appear in the display:

- O. K. (4): Adjustment is optimal.
- O. K. (3): Adjustment is within the legal tolerance range. Adjust fog light until O. K. (4) is displayed.
- Arrows (5): Adjustment is incorrect. Adjust fog light using arrows (5) until O. K. (4) is displayed.

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63 10 ... Adjust the high-beam headlight (with electronic headlight adjustment device MAHA Lite 3)

Important!

<u>The high-beam headlight can only be adjusted in the following cases:</u>

- The low-beam headlight and high-beam headlight are located in separate housings and each has a separate range of adjustment (e.g. E52, BMW i 01).
- Low-beam headlight and high-beam headlight are located in one housing with one separate range of adjustment each.
- With separately mounted additional headlights (e.g. MINI).

On vehicles from 1995, separate adjustment of the high-beam headlight is not possible.

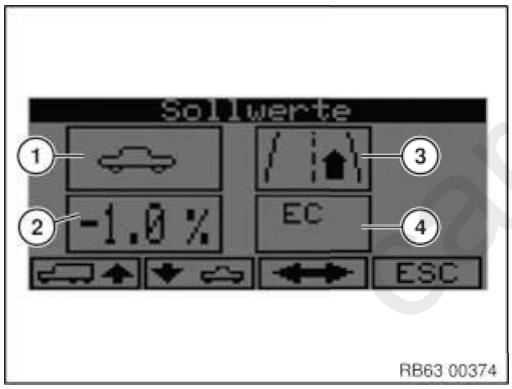
(Exception E52, BMW i 01, additional headlight MINI)

Comply with test prerequisites for headlight adjustment.

Refer to the operating instructions for the headlight adjustment device!

<u>Necessary preliminary work:</u>

Adjust the low-beam headlight



Switch on the headlight adjustment device by pressing any button.

Press **F2** button. The shown display screen appears.

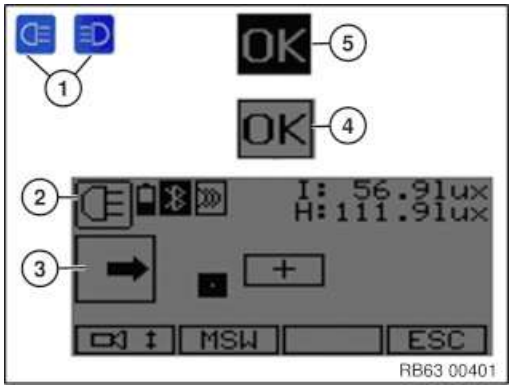
<u>Perform the following settings:</u>

1. The passenger car must be selected.
2. Enter the setting dimension of the headlight via the buttons **F1/F2**: **- 1.0 % to - 1.1 %**

   (see "light/dark boundary of the headlight in the headlight adjustment device" in the document observe the test prerequisites for the headlight adjustment).
3. The right / left-hand traffic must be selected according to the country.
4. Select the headlight type via the button **F3**:
   - **EC**: for halogen and xenon headlights
   - **EC LED**: for LED headlight

The adjusted values are adopted for future measurements.

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Press briefly the button for the applicable side of the vehicle (1) until symbol (2) appears.

The following symbols appear in the display:

- O. K. (5): Adjustment is optimal.
- O. K. (4): Adjustment is within the legal tolerance range. Adjust high-beam headlight until O. K. (5) is displayed.
- Arrows (3): Adjustment is incorrect. Adjust high-beam headlight using arrows (3) until O. K. (5) is displayed.

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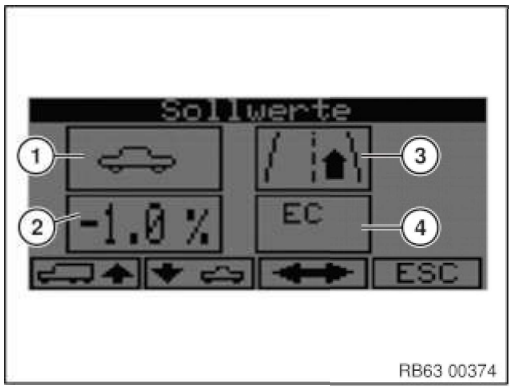
63 10 ... Adjust the low-beam headlight (with electronic headlight adjustment device MAHA Lite 3)

Comply with test prerequisites for headlight adjustment!

Refer to the operating instructions for the headlight adjustment device!

Note:
On vehicles with **anti-glare high-beam headlight** it is sufficient to adjust the low-beam headlight.

Only in the event of a customer complaint regarding dazzle/glare Adjust anti-glare high-beam headlight separately.



Switch on the headlight adjustment device by pressing any button.

Press **F2** button. The shown display screen appears.

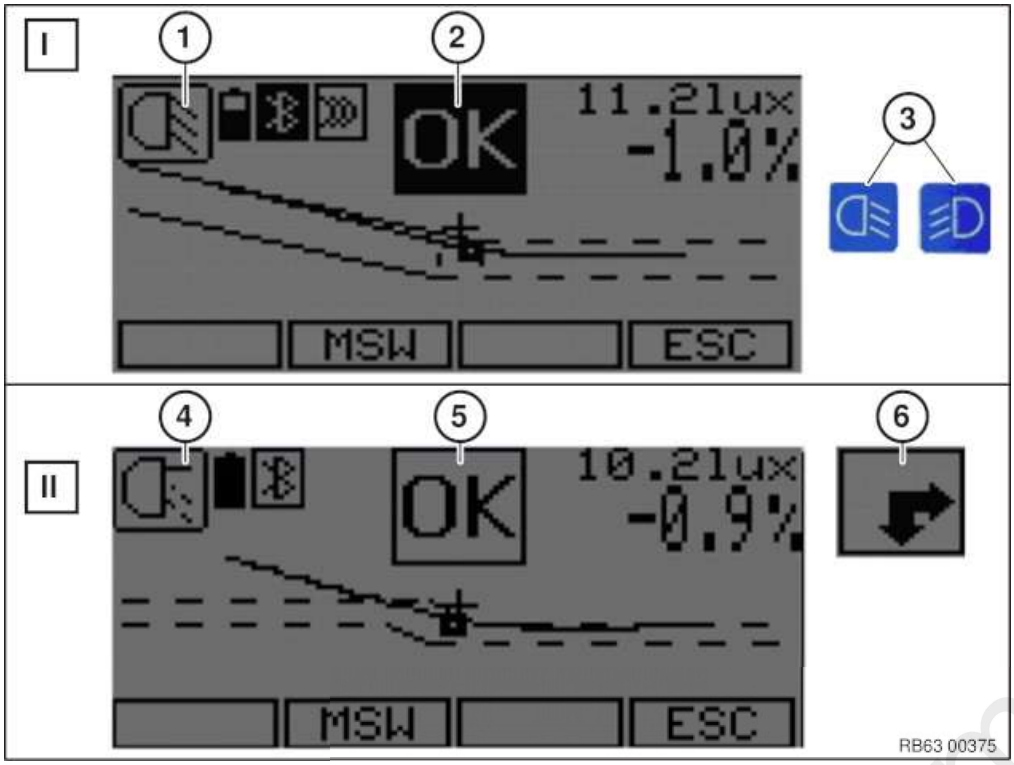
Perform the following settings:

1. Passenger car must be selected
2. Enter the setting dimension of the headlight via the buttons **F1/F2**: **- 1,0 % to - 1,1 %**

   (see "light/dark boundary of the headlight in the headlight adjustment device" in the document observe the test prerequisites for the headlight adjustment).
3. The right / left-hand traffic must be selected according to the country.
4. Select the headlight type via the button **F3**:
   - **EC**: for halogen and xenon headlights
   - **EC LED**: for LED headlight

The adjusted values are adopted for future measurements.

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Important!

Before measuring/adjusting the low-beam headlight, it is absolutely necessary to determine the transparent screen of the headlight!

An incorrect selection leads to an incorrect setting!

Transparent screen **Type I**:

Press briefly the button for the applicable side of the vehicle (3) until symbol (1) appears.

Transparent screen **Type II**:

Press longer the button for the applicable side of the vehicle (3) until symbol (4) appears.

The following symbols appear in the display:

- O. K. (2): Adjustment is optimal.
- O. K. (5): Adjustment is within the legal tolerance range. Adjust headlight until O. K. (2) is displayed.
- Arrows (6): Adjustment is incorrect. Adjust headlight using arrows (6) until O. K. (2) is displayed.

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63 10 ... Adjusting glare-free high-beam headlight (with headlight adjustment device MAHA Lite 3)

Comply with test prerequisites for headlight adjustment.

Functional description of non-dazzle high beam headlight

Refer to the operating instructions for the headlight adjustment device!

Caution!

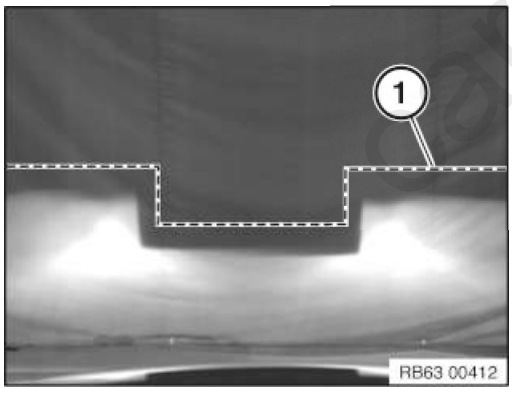
The high-beam headlight must only be adjusted in the following case using the MAHA Lite 3 headlight adjuster:

- In event of **first-time customer complaint** regarding the high beam dazzle characteristics.
- In event of further **customer complaint** despite preceding adjustment with MAHA Lite 3 headlight adjuster, use headlight adjustment device to set the non-dazzle high-beam headlight.

Note:
Anti-glare high-beam headlight is adjusted as follows:

In response to customer complaint the **height and lateral adjustment on the low beams** is performed first.

Then the **lateral adjustment setting of the low beams** is adjusted **0.5 % toward the outside**.



Note:
Whether vehicle has optional equipment "Non-dazzle high-beam headlights" can only be recognized by the following criteria:

only F22, F23, F30, F31:

- Switch on high-beam headlight. Non-dazzle high-beam headlights can be recognized by the figure (1) shown.

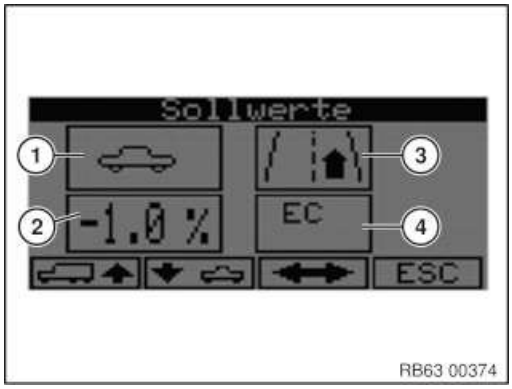
  (The figure can slightly vary depending on the specific vehicle)

With other vehicles, "Non-dazzle high-beam headlights" can **not** be recognized by the figure!

All vehicles: The following optional equipment must be installed:

- "High-beam assistant" (5AC) **and** "adaptive headlight" (524) **or** "high-beam assistant" (5AC) **and** "adaptive LED headlight" (552)

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Switch on the headlight adjustment device by pressing any button.

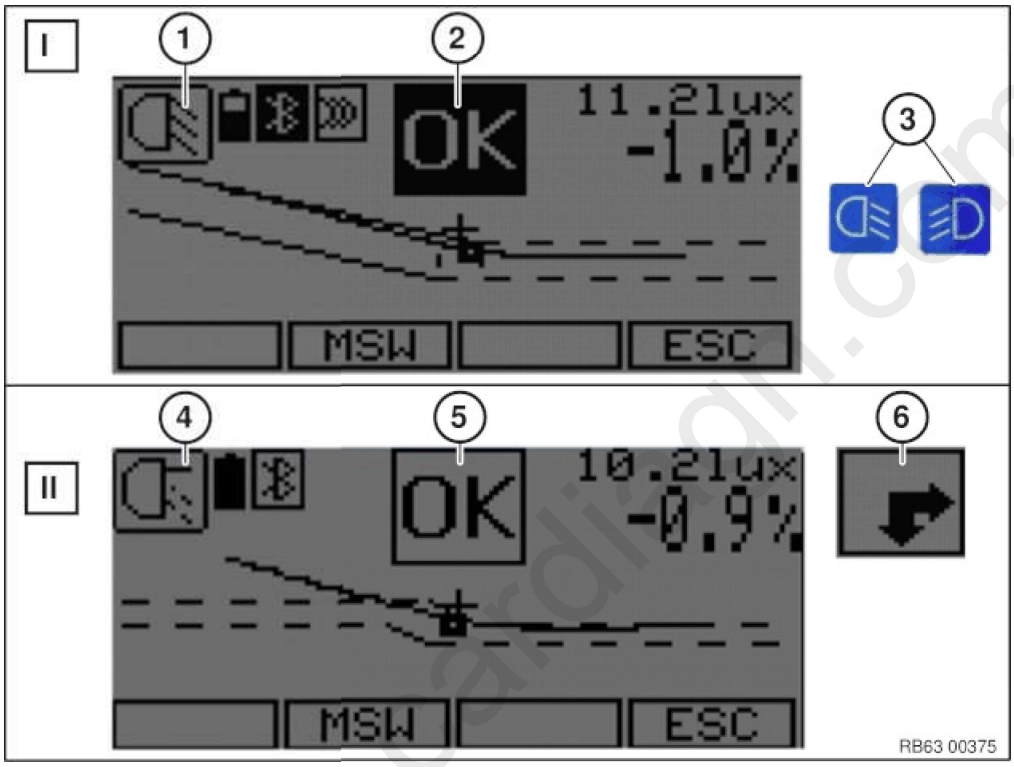
Press **F2** button. The shown display screen appears.

Perform the following settings:

1. Passenger car must be selected
2. Enter the setting dimension of the headlight via the buttons **F1/F2**: **- 1.0% to - 1.1%**

   (see "light/dark boundary of the headlight in the headlight adjustment device" in the document observe the test prerequisites for the headlight adjustment).
3. The right / left-hand traffic must be selected according to the country.
4. Select the headlight type via the button **F3**:
   - **EC**: for Halogen- and xenon headlight
   - **EC LED**: for LED-headlight

The adjusted values are adopted for future measurements.



1. Adjusting low beams on right and left in graphic mode:

Caution!

Before measuring/adjusting the low-beam headlight, it is absolutely necessary to determine the transparent screen of the headlight!

An incorrect selection leads to an incorrect setting!

Transparent screen **Type I**:

Press briefly the button for the applicable side of the vehicle (3) until symbol (1) appears.

Transparent screen **Type II**:

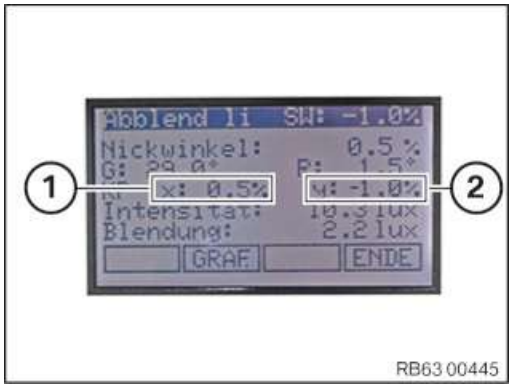
Press longer the button for the applicable side of the vehicle (3) until symbol (4) appears.

The following symbols appear in the display:

- O. K. (2): Setting optimal.

O. K. (2): Setting optimal.

- O. K. (5): Setting within legally stipulated tolerance range. Adjust headlight, until O. K. (2) is displayed.
- Arrows (6): Setting incorrect. Using arrows (6) Adjust headlight until O. K. (2) is displayed.



2. Adjust left and right low beams to the outside in the measured value mode:

Caution!
No update of the data in the measured value mode is performed during lateral adjustment using the adjusting screw on the headlight.

1. Press the **F2** (MSW) button. The measured value mode appears in the display.
2. Record the correctly adjusted **x-value** (1) (example: 0,5 %).
3. Briefly turn adjusting screw for lateral adjustment on headlight so that low-beam headlight is adjusted outwards.
4. Press the button **F2** (GRAF) and wait until the values in the graphic mode have been updated.
5. Press the **F2** (MSW) button. The updated values are displayed in the measured value mode.
6. Repeat the process, continuing until the following **x-values** (1) are obtained:

left headlight:
Correctly adjusted x-value (1) **- 0.5 %**
Example: 0.5% - 0.5% = 0%
x-value of 0 % must be reached.

right headlight:
Correctly adjusted x-value (1) **+ 0.5 %**
Example: 0.5% + 0.5% = 1%
x-value of 1 % must be reached.

Explanations:
MSW = Measured value mode
GRAF = Graphic mode
x-value (1): Value for lateral adjustment
y-value (2): Value for height adjustment
left headlight: in direction of travel, left headlight
right headlight: in direction of travel, right headlight

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63 10 004 Adjusting headlights

TECHNICAL INFORMATION

Notes on headlight adjustment are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 6310 ... Test prerequisite for adjusting headlights

1 Adjusting headlights

TECHNICAL INFORMATION

Notes on headlight adjustment are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 6310 ... Test prerequisite for adjusting headlights

NOTICE

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



- If necessary, remove the cover over the adjusting screws for headlight adjustment.
- Adjust the height at the adjusting screw (1).
- **US version:** Set the lateral adjustment only if the plug on the adjusting screw for lateral adjustment is missing or damaged.

  Remove damaged plug if necessary (refer to additional information).
- Turn adjusting screw (2) for a correct lateral adjustment.
- **US version:** If the lateral adjustment has been checked or corrected: Renew plugs and push into the adjusting screw for the lateral adjustment **without damaging it** (see additional information).
- If necessary, fit a cover over the adjusting screws for headlight adjustment.

Additional Information

Links

General repair instructions	Used in step
63 12 ... US version: Setting the horizontal blocking when headlamp is set	
63 12 ... US version: Remove the horizontal blocking before adjusting the headlamp	

Repair instructions	Used in step
63 10 ... Test requirements for headlights vertical aim adjustment	1

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63 10 ... Light patterns from different low-beam headlight types

The following equipment-specific and model-specific headlight types are used in BMW Group vehicles:

- Halogen headlights (low-beam and high-beam headlights)
- Xenon headlights (low-beam and high-beam headlights)
- LED headlights (low-beam and high-beam headlights)
- Laser headlights (high-beam headlight booster, low-beam and high-beam headlights are lit by LEDs)

Every headlight type has its specific transparent screen for the low-beam headlight. In spite of these differences, all headlight types meet statutory specifications.

The images below show transparent screens from the left headlight in the low-beam headlight switch position projected onto a wall (no automatic setting!).

The transparent screens from the right headlight are the same.

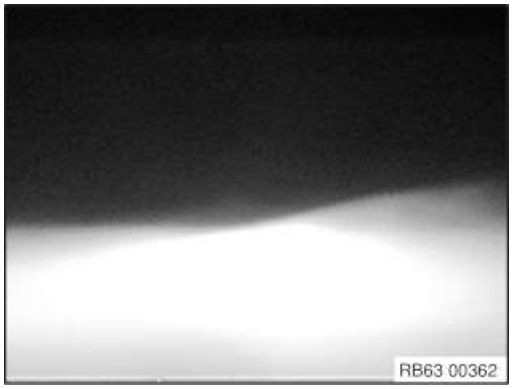
The transparent screens correspond with those in an accumulator box of a headlight adjusting device.



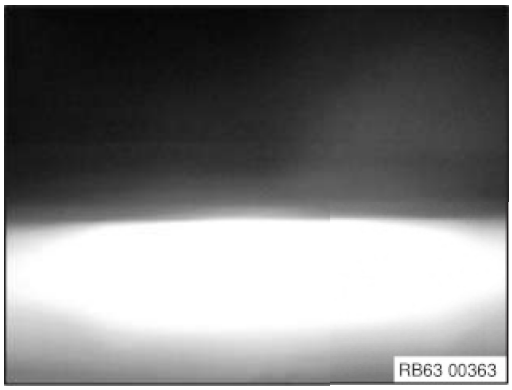
Important!
For headlight adjustment with electronic headlight adjusting devices, it is essential to determine the light pattern type!

Type I: Light pattern shows a continuous increase in the light/dark boundary.

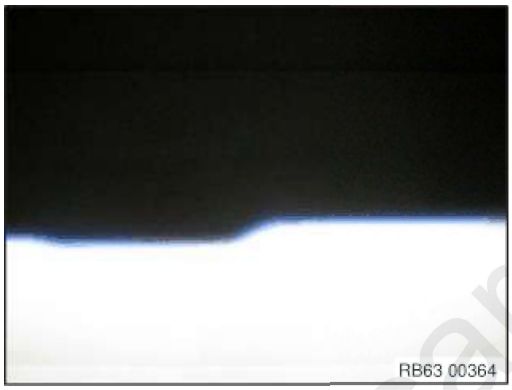
Type II: Light pattern screen shows a short increase in the light/dark boundary.



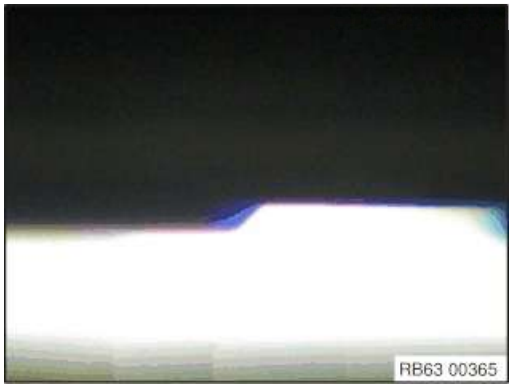
1. Halogen headlight
Type I



2. Halogen headlight **US version R60 only**

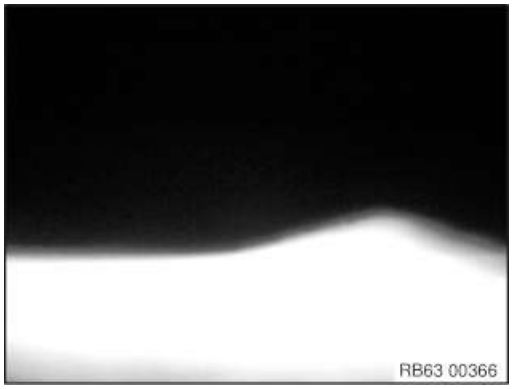


3. Xenon headlights
Type II



4. LED headlight e.g. F01, F02, F03
Type II

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5. LED headlight e.g. F06, F12, F13, E71

Type I

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63 10 ... Notes on headlight adjustment (overview of adjustment options of the lighting functions)

The following light-related components are used in BMW Group vehicles on an equipment-specific and model-specific basis:

Headlight types:

- Halogen headlights (low-beam and high-beam headlights)
- Xenon headlights (low-beam and high-beam headlights)
- LED headlights (low-beam and high-beam headlights)
- Laser headlights (high-beam booster)

Headlight:

- Headlight (low beam and high beam; cornering light, daytime driving lights, adaptive headlight, laser high-beam booster, dynamic marker light)
- High-beam headlight*
- Fog light (fog light, cornering light)
- Headlight dynamic marker light (dynamic marker light, no fog light)

Light functions:

Lighting function	*Setting possible*	*Setting tool*
Low-beam headlights	Yes	- Non-electronic headlight adjusting device - Electronic headlight adjusting device
High-beam headlight	No, Adjusted with the low-beam headlight *	
Automatic high beam (main-beam assistant)	No, Adjusted with the low-beam headlight *	
Non-dazzle high beam headlight	Yes, Adjusted with the low-beam headlight	- Non-electronic headlight adjusting device - Electronic headlight adjusting device
	Yes (with test module)	Adjustment aid for headlight
Additional laser headlight	No, Adjusted with the low-beam headlight	
Adaptive Headlight	No, Adjusted with the low-beam headlight	
Fog lights	Yes	- Non-electronic headlight adjusting device - Electronic headlight adjusting device
Dynamic marker light (to F-series)	Yes (with the test module)	- Non-electronic headlight adjusting device - Electronic headlight adjusting device Adjustment aid for headlight

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Dynamic marker light (from G-series)	No, Adjusted with the low-beam headlight	
Cornering light	No	
Daytime driving lights	No	

*****A setting is only possible for models with a separate housing for the high beam (E52, I01, MINI additional headlight).

Important!

All lighting functions specified above can be adjusted **both with a non-electronic as well as with an electronic headlight adjusting device**.

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63 10 ... Right/left-hand traffic - measures for avoiding dazzling effect of headlights



- When crossing a border into a country in which vehicles drive on the other side of the road than in the country of registration, perform a changeover via iDrive:
  - My vehicle
  - Vehicle settings
  - Light
  - Exterior lighting
  - Right/left-hand traffic

Note:

- Vehicles with adaptive headlights must not be driven with the "Automatic driving lights control" setting enabled after the above changeover has been performed, otherwise the adaptive headlight could dazzle oncoming traffic.

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63 10 ... Setting the high-beam headlight to prevent dazzle (with non-electronic headlight adjustment aid)

Comply with test preconditions for headlight adjustment.

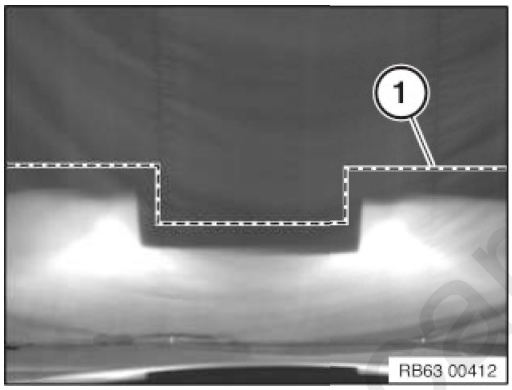
Functional description non-dazzle high-beam headlight

Refer to the operating instructions for the headlight adjustment device!

Important!

The high-beam headlight must only be adjusted to prevent dazzle in the following case using a non-electronic headlight adjuster:

- In event of **first-time customer complaint** regarding the high beam dazzle characteristics.
- In event of **further customer complaint** despite preceding adjustment with non-electronic headlight adjuster, use headlight adjuster to set the non-dazzle high beam.



Note:
Whether vehicle has optional equipment "Non-dazzle high-beam headlights" can only be recognized by the following criteria:

only F22, F23, F30, F31:

- Switch on high-beam headlight. Non-dazzle high-beam headlights can be recognized by the figure (1) shown.

  (The figure can slightly vary depending on the specific vehicle)

With other vehicles, "Non-dazzle high-beam headlights" can **not** be recognized by the figure!

All vehicles: The following optional equipment must be installed:

- "High-beam assistant" (5AC) **and** "adaptive headlight" (524) **or** "high-beam assistant" (5AC) **and** "adaptive LED headlight" (552)

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In the event of a customer complaint, please proceed as follows:

1. Start by performing **height and lateral adjustment of the low beams** on the left and right sides.
2. Then turn the adjusting screw for lateral adjustment on the right and left headlights **half a turn** so that the low-beam headlight is adjusted outwards.

   This adjusts the headlight roughly 0.5 % to the outside.

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63 10 ... Test requirements for headlights vertical aim adjustment

Attention!

Do not perform headlight adjustment immediately after lowering the vehicle on the vehicle hoist. In this case, move the vehicle for approx. 15 m on its own wheels before headlight adjustment.

Attention!

Observe the operating instructions for the headlight adjusting device!

The headlight adjusting bay must comply with the specifications as set out in StVZO (German road traffic licensing regulations) § 29 Annex 8d (or ISO 10604)!

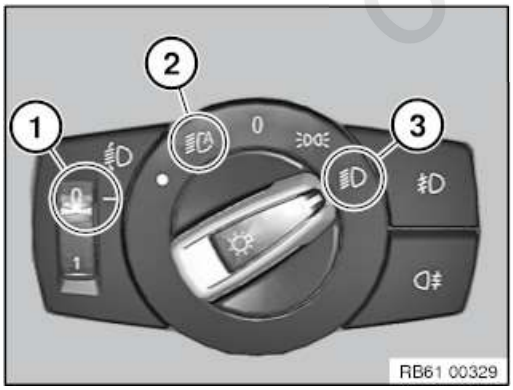
These specifications are described in "Planning principles for layout of BMW service workshops".

(Can be found in the ASAP portal, Chapter 3.2.6.1 Headlight adjusting bay)

- Park vehicle on flat and even surface.
- Replace faulty glass and mirrors and blackened light bulbs.
- Check correct adjustment of headlights in relation to engine compartment lid (gap dimensions).
- Check tyre pressure and correct if necessary.

Only halogen headlight, fog light and headlight for dynamic marker light (dynamic spotlight):

- Apply load equivalent to one person on driver's seat (approx. 75 kg).
- Vehicle with full fuel tank or appropriate additional weight in luggage compartment.



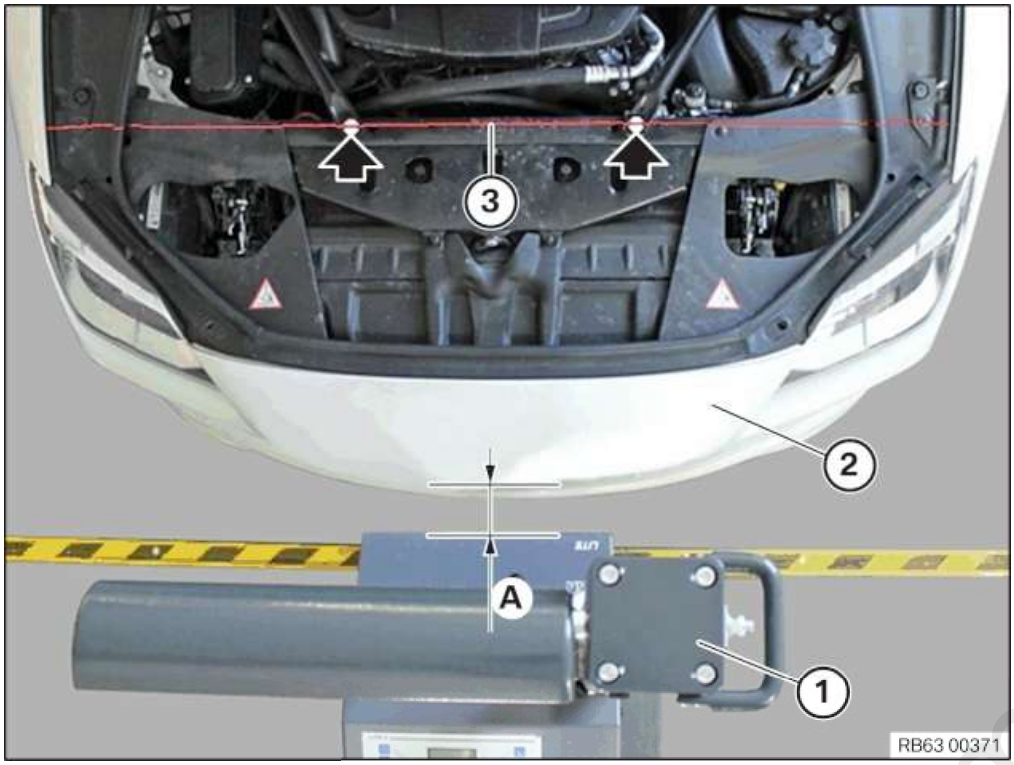
- Switch the ignition on.
- Manual headlight beam throw adjustment: Move handwheel to neutral position (1).
- **Light switch must be in "low beam/driving light" position (3).**
- Do not carry out the headlight adjustment in the "automatic driving lights control" light switch position (2).
- Version with Xenon or LED (automatic headlight beam throw adjustment): Wait 80 s after switching on lights. During this time, do not move the vehicle and avoid vibrations.

Attention!

Do not move the vehicle and steering wheel during the measuring and adjustment procedures!

Wheels must be in the straight-ahead position!

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Attention!

A correct measurement/adjustment requires exact positioning of the headlight adjusting device (1)!

The headlight adjusting device (1) must stand vertically to the vehicle longitudinal axis!

This applies to all headlights!

Position the headlight adjusting device (1) centrally in front of the vehicle (2) at distance (A) = **10 cm**.

Align the headlight adjusting device (1) by laser beam (3). Laser beam (3) must hit two suitable points, e.g. marked by arrows.

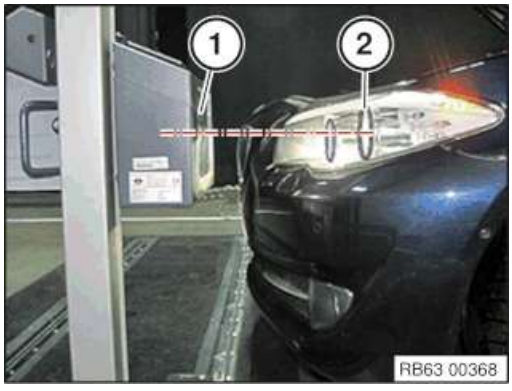
Attention!

Points must be vehicle proof!

Points must be separated as wide as possible!

Trim panels are not suitable!

If the headlight adjusting device (1) does not have a laser beam (3), complete the alignment analogous with the line in the mirror.



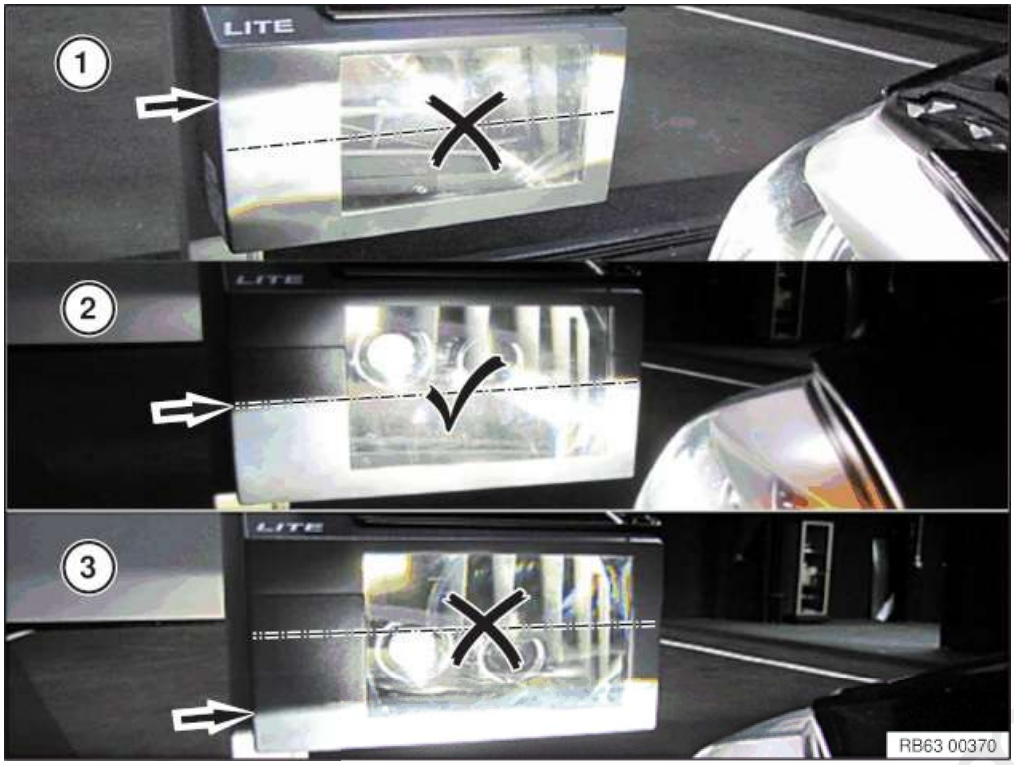
Attention!

Always perform positioning of the headlight adjusting device (1) at the outer headlight (2)!

The centre of the collecting lens (1) must match the centre of headlight (2) horizontally.

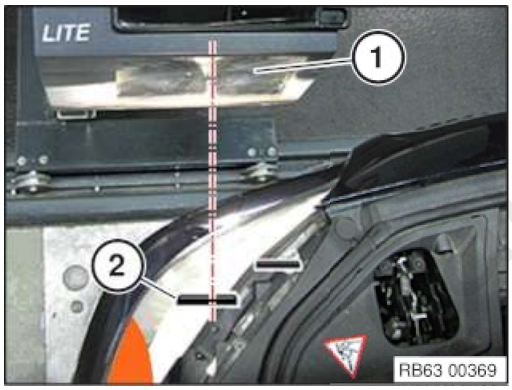
Corrections are made by raising or lowering the headlight adjusting device.

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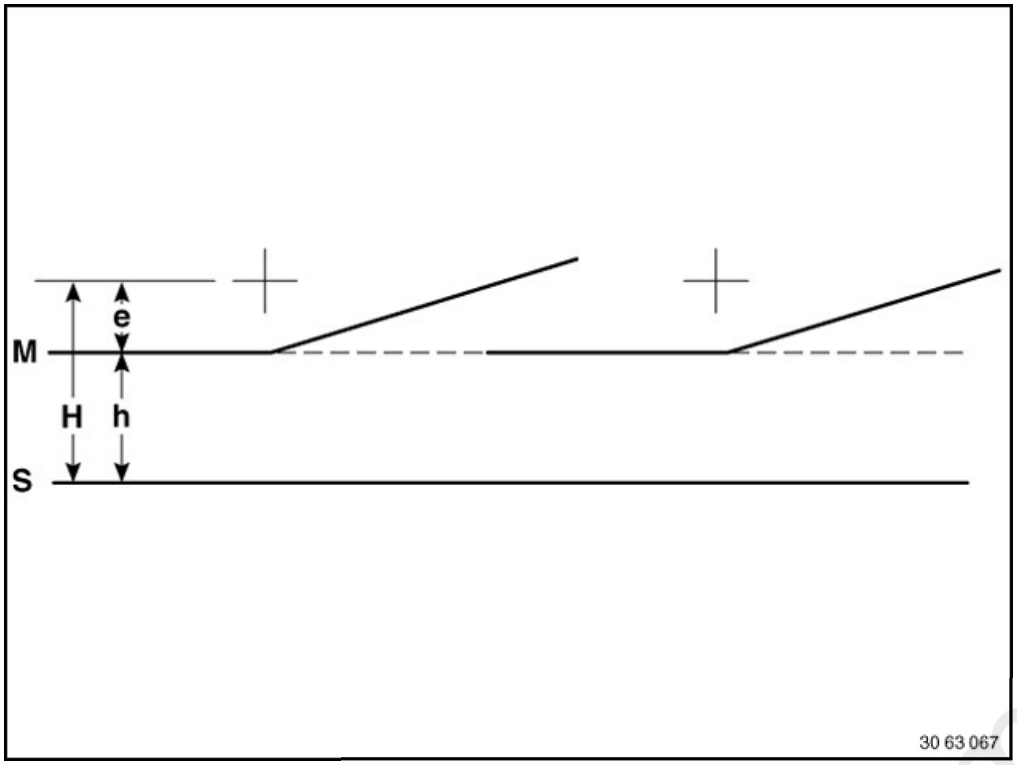
When positioned correctly, the light/dark boundary of the headlight (marked with arrow) must hit the collecting lens of the adjusting device in the centre:

1. The headlight adjusting device is too low.
2. The headlight adjusting device is positioned correctly.
3. The headlight adjusting device is too high.



The centre of the collecting lens (1) must match the centre of headlight (2) vertically.

Corrections are made by sliding the side of the headlight adjusting device to the left or right.



Note:
The figure shows an example for the transparent screen of halogen headlights.
Overview of transparent screens of different headlight types.

Set the marker line {M} on the headlight adjusting device to dimension {e}. Scale graduations on the headlight adjusting device are equal to a gradient in cm at a distance of 10 metres.

Light/dark boundary of headlights in headlight adjusting device

{e} **Setting dimension, headlights:**

- Value is indicated on the **headlight housing** and on vehicles with production date up to 2011 on the **type plate** in %.
  (e.g.: **1.0 %** = -10 cm/10 m = **- 1.0 %** on the headlight adjusting device)
- Value **1.0 %** (adjustment value **- 1.0 %**) applies to all BMW Group vehicles.
- Exception: E53, E70, E71, E72, E83, F15, F16, F25, F26, R60, R61, F60. For these vehicles, value **1.1%** (adjustment value **- 1.1%**) applies.

Setting dimension, fog lights:

- Value **2.0%** = -20 cm/10 m = **- 2.0%** on the headlight adjustment device applies to all BMW Group vehicles.

Headlight setting dimension, dynamic marker light (dynamic spotlight):

- Value **0.0%** = 0 cm/10 m = **0%** on the headlight adjustment device applies to all BMW Group vehicles.

{H} Height of headlight centre above parking surface

{h} {H} - {e} = height of marking line above parking surface

\+ Central mark = centre point of high beam headlight.

{M} Marker line of the headlight adjusting device

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{S} Standing surface of the vehicle and headlight adjusting device

Adjustment dimension {e} is only valid for EUR. Observe differing national regulations.

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63 11 980 Install the headlight support repair kit on left or right

Prerequisite

- Removed headlight support

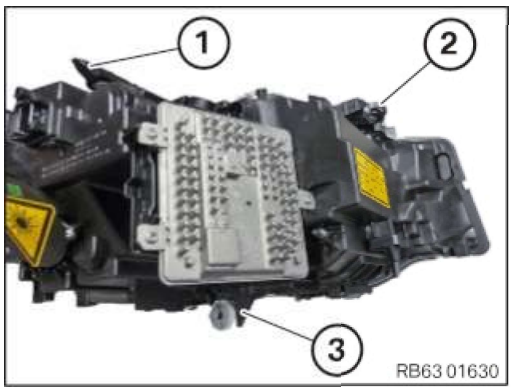
TECHNICAL INFORMATION

Damaged holders can be replaced with the repair kit. The replacement of the headlight is **not required.**

NOTICE

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

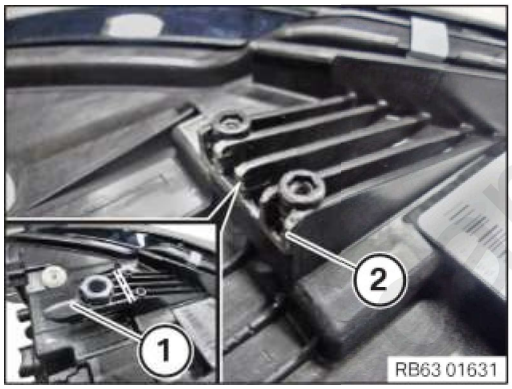
1 Installing headlight repair kit



TECHNICAL INFORMATION

To protect the component from scratches: place the component on soft surface.

- The headlight support repair kit can be used for the bracket (1) and (2) and (3).

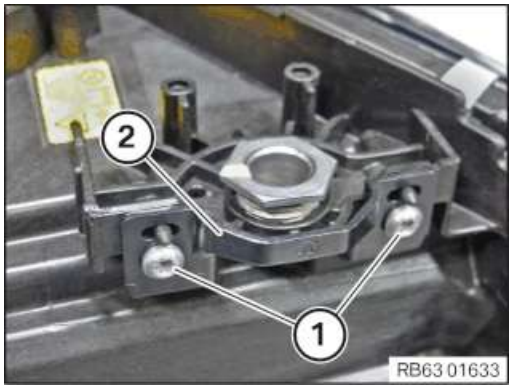


- If necessary, remove damaged bracket (1) along the dotted line as shown (2).



- Secure the new bracket (1) with enclosed screws (2).

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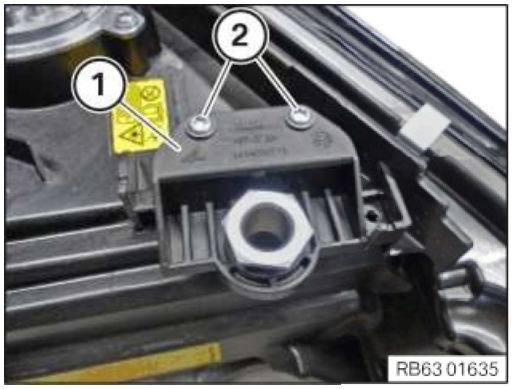


- Unscrew screws (1) and remove part (2).

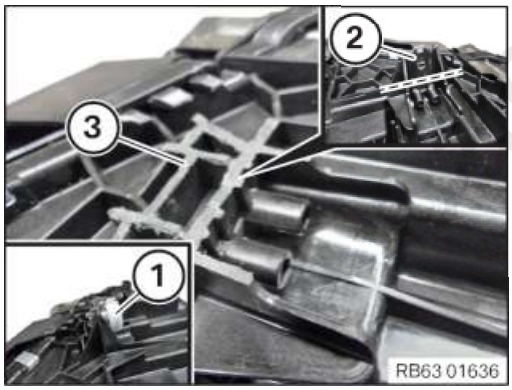
  Part (2) is no longer needed.



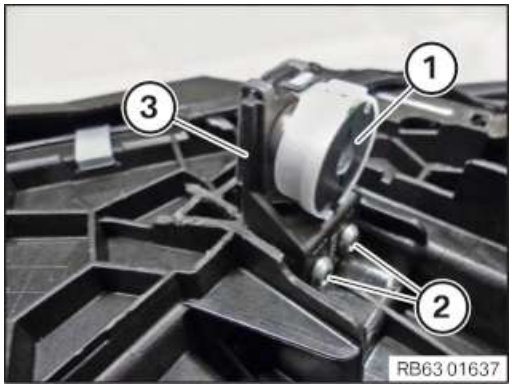
- If necessary, remove damaged bracket (1) along the dotted line as shown (2).



- Secure the new bracket (1) with enclosed screws (2).



- Remove adjusting element (1).
- If necessary, remove damaged bracket (2) along the dotted line as shown (3).



- Secure the new bracket (1) with enclosed screws (2).
- Remount adjusting element (3) on new bracket (1).

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63 11 ... Notes on laser headlight

Laser headlights will be available as optional equipment **SA5AZ I12 starting in 11/2014**.

The laser headlight is a combined LED laser headlight. Low- and high-beam headlights are generated by LEDs, as with an LED headlight. The laser will be activated with the auxiliary high beam (high beam booster) and non-glare high beam.

Multiple high-performance light emitting diodes emit highly bundled laser beams (blue light) via special optics on to a deflection mirror. The deflection mirror directs the laser light to a phosphorous membrane. Only there, by use of yellow phosphorous, a strongly illuminating white light is generated (as with LEDs) from the blue laser light.

The light generated by the laser headlight is therefore a very light white light.

Laser beams are not emitted by the laser headlight.

With an almost 600 m range, the additional laser high beam illuminates almost twice as far as the high beam from an LED headlight.

When the high-beam assistant function is activated, the additional laser high beam and the high beam of the LED high beam headlights are also switched on additionally, from a driving speed of approx. **60 km/h** onwards. When the driving speeds falls below 55 km/h again, the laser auxiliary high beam and the high beam of the LED high beam headlights will switch off with a delay again. Therefore, when using the vehicle stationarily on a roller test stand, do not look into the light beam.

Observe the Safety Information

It is not possible for the driver to manually switch the additional laser high beam on and off, as is the case with conventional high beams. This is true both when driving and when the vehicle is at a standstill.

In the workshop, the additional laser high beam **can only be switched on using a test module for roughly 1 sec with greatly reduced light intensity** through the following path:

- 03 Body
- Lights
- Headlight LED
- LED headlight

The **laser headlight adjustment** is coupled with the low-beam headlight and occurs **exclusively with the adjustment of the low-beam headlight**.

If the **laser unit is defective,** the **complete laser headlight** is replaced. A **dismantling** of the laser unit is **not permitted**.

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63 11 730 Rep. LED mod (s) for L daytime dr. lights

RISK OF DAMAGE

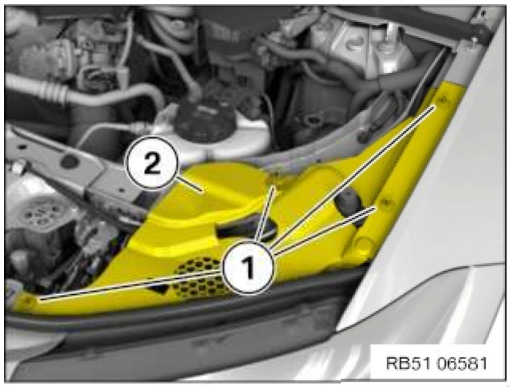
Electrostatic discharge.

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 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

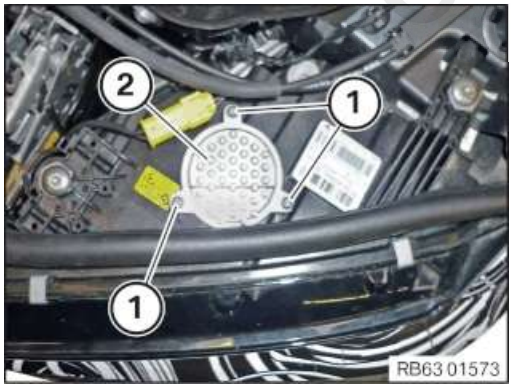
1 – Remove the cover in the engine compartment on top



- Loosen the expanding rivet (1).
- Remove the cover in the engine compartment on top (2) partially.

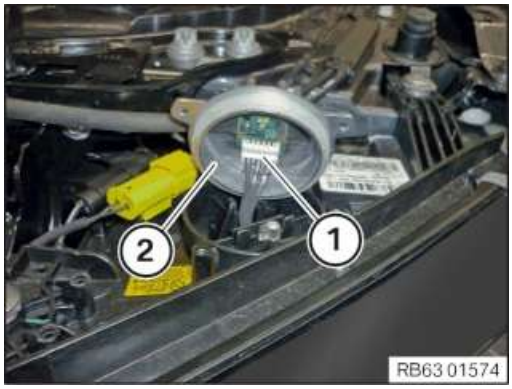
MAIN WORK

2 – Remove LED module for daytime driving lights



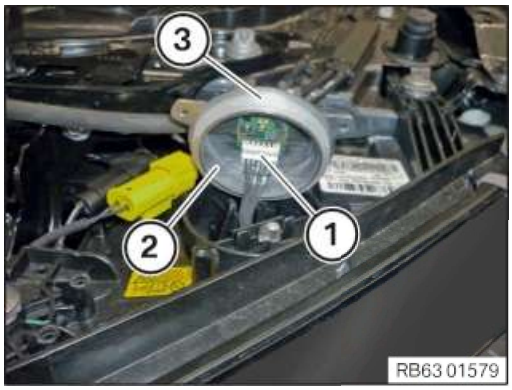
- Loosen screws (1).
- Feed out daytime driving lights LED module (2) and raise slightly.

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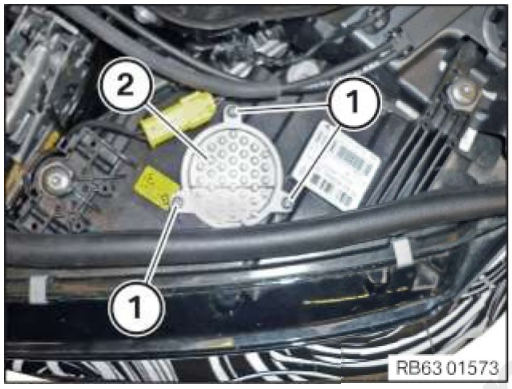


- Unlock plug connection (1) and disconnect.
- Remove daytime driving lights LED module (2).

3 – Install LED module for daytime driving lights



- Check the seal (3) for damage and replace if necessary.
- Position the lighting ring LED module (2).
- Connect connectors (1) and lock.



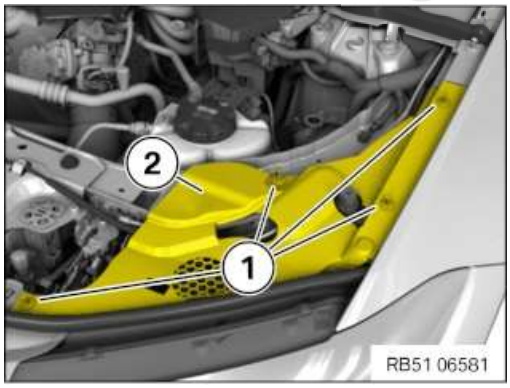
- Insert and correctly position LED module lighting ring (2).
- Tighten the screws (1).

LED module of daytime driving lights to headlight

Screw		Tightening torque	1,5 Nm

POSTPROCESSES

4 – Install the cover in the engine compartment on top



- Install the cover in the engine compartment on top (2).
- Secure expanding rivet (1).

Additional Information

Overview of Tightening Torques

LED module of daytime driving lights to headlight Used in step 3

Screw		Tightening torque	1,5 Nm

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63 12 ... Repairing headlights

It is possible to repair the following damage:

- Deformed or broken holders can be replaced using the available repair kits.
  Replacement of headlight is **not required**!
  For reasons of pedestrian safety it is **not permitted** to use adhesive or reinforcements to repair broken holders!

Note:

Headlight repair kits are not available for every vehicles (see Electronic Parts Catalogue).

Follow the vehicle-specific repair instructions.

It is not possible to repair the following damage:

- Deformed or broken headlight housing.
- Scratched or damaged headlight lenses
  The standard coating of headlight lens cannot be restored. Commercially available repair systems are unable to provide sufficient protection from ultraviolet radiation and external influences (stone chipping).

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63 11 760 Replacing FLEL control unit

RISK OF DAMAGE

Electrostatic discharge.

Damage to or destruction of electrical components.

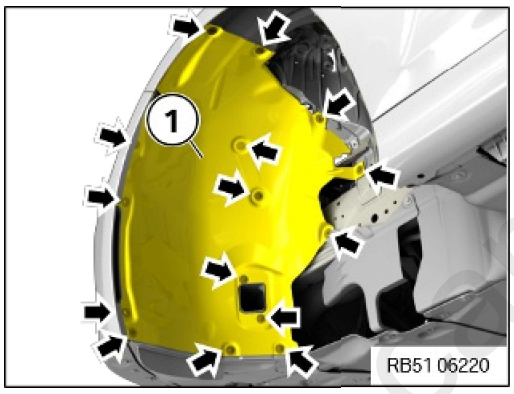
- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the 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 Information on electrostatic discharge (ESD) protection.

PRELIMINARY WORK

1 – Removing the front section of the front wheel arch cover

NOTICE

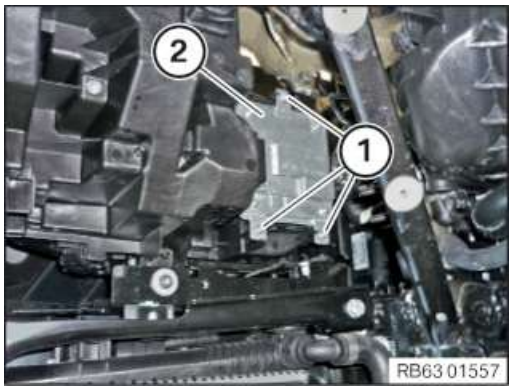
To provide a better overview: Schematic diagram with partially hidden components.



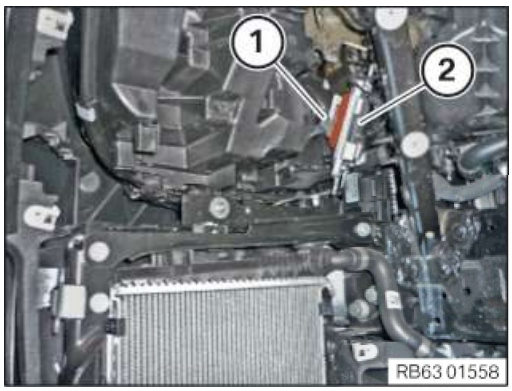
- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

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2 – Remove the Frontal Light Electronics (FLEL) control unit (LED basis)

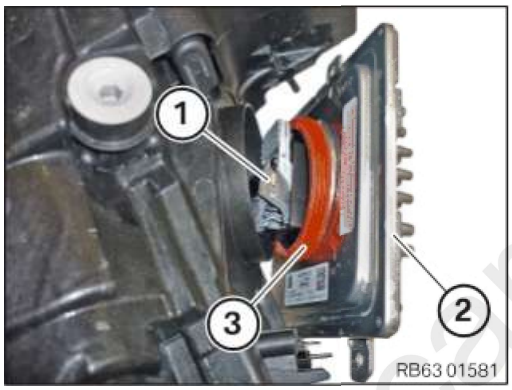


- Loosen screws (1).
- Feed out the Frontal Light Electronics (FLEL) control unit (2).

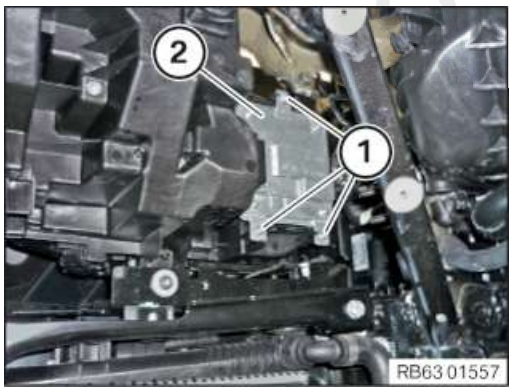


- Unlock plug connection (1) and disconnect.
- Remove the Frontal Light Electronics (FLEL) control unit (2).

3 – Installing the Frontal Light Electronics control unit (LED based)



- Check the seal (3) for damage and replace if necessary.
- Position Frontal Light Electronics control unit (2).
- Connect connectors (1) and lock.



- Feed in the Frontal Light Electronics control unit (2) and position correctly.
- Tighten the screws (1).

Front lighting electronics control unit to headlight

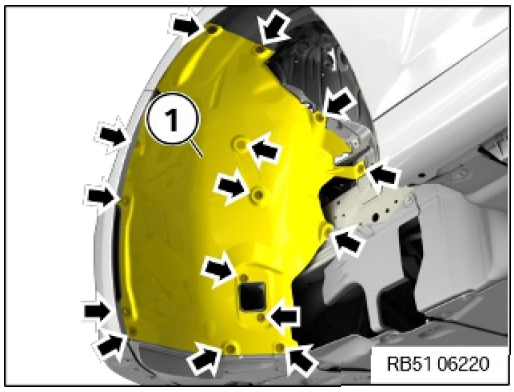
Screw		Tightening torque	1,5 Nm

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4 – Install the front section of the front wheel arch cover

NOTICE

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



- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

5 – Encode/program control unit(s)

Prerequisite

Replacement of component.

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

Front lighting electronics control unit to headlight Used in step 3

Screw		Tightening torque	1,5 Nm

Wheel arch trim panel, front Used in step 4

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

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63 11 760 Replacing FLEL control unit

RISK OF DAMAGE



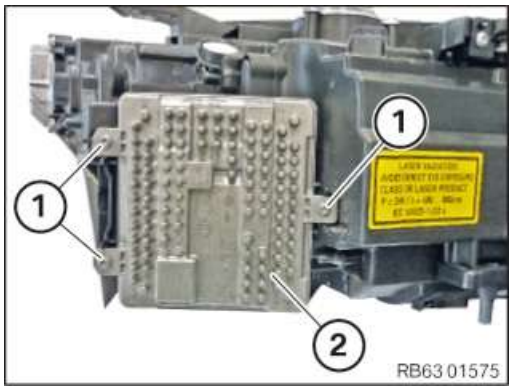
Electrostatic discharge.

Damage to or destruction of electrical components.

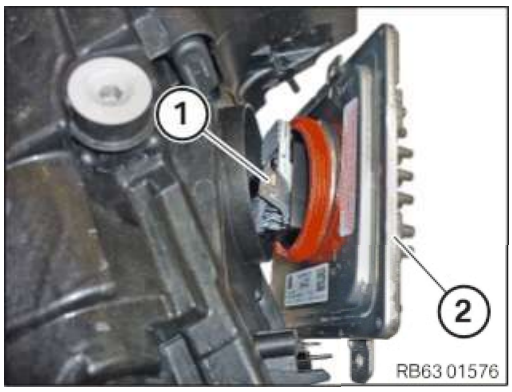
- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the 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 Information on electrostatic discharge (ESD) protection.

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1 – Removing the Frontal Light Electronics (FLEL) control unit (laser)

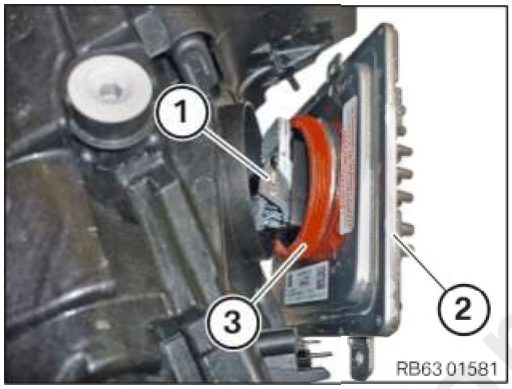


- Loosen screws (1).
- Remove Frontal Light Electronics (FLEL) control unit (2).

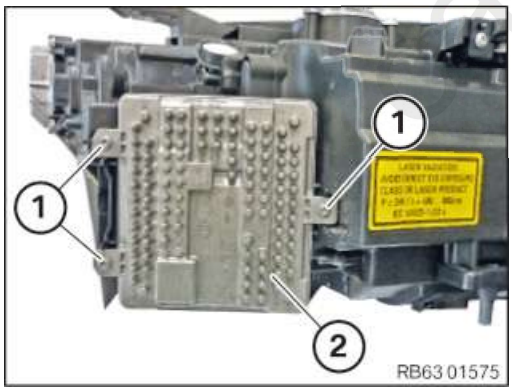


- Unlock plug connection (1) and disconnect.
- Remove the Frontal Light Electronics (FLE) control unit (2).

2 – Install Frontal Light Electronics control unit (FLE) (Laser)



- Check the seal (3) for damage and replace if necessary.
- Position Frontal Light Electronics control unit (FLE) (2).
- Connect connectors (1) and lock.



- Feed in the Frontal Light Electronics control unit (FLE) (2) and position correctly.
- Tighten the screws (1).

Front lighting electronics control unit to headlight

Screw		Tightening torque	1,5 Nm

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3 – Encode/program control unit(s)

Prerequisite

Replacement of component.

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 fuly process the measures plan.
- If applicable, connect the workshop system to the vehicle, depending on the reworking ist.
- 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

Front lighting electronics control unit to headlight Used in step 2

Screw		Tightening torque	1,5 Nm

63 11 842 Replacing left LED fan

WARNING

Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see: 00 ... Raising the vehicle using a vehicle hoist.

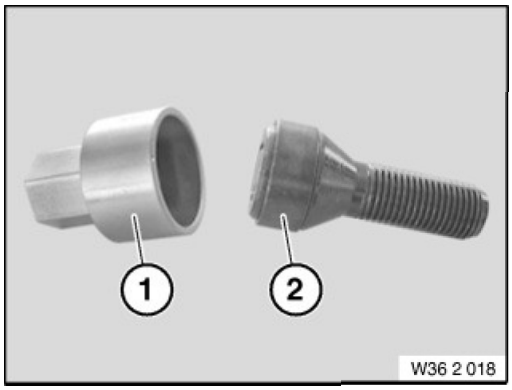
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1 – Removing the wheel



- If several wheels are removed simultaneously, mark each tyre with a piece of chalk to show the axle and side on which the corresponding wheel is fitted.
- Release the wheel bolts (arrows) crosswise and remove the wheel.

▶ **If installed: Remove the locking wheel bolt**

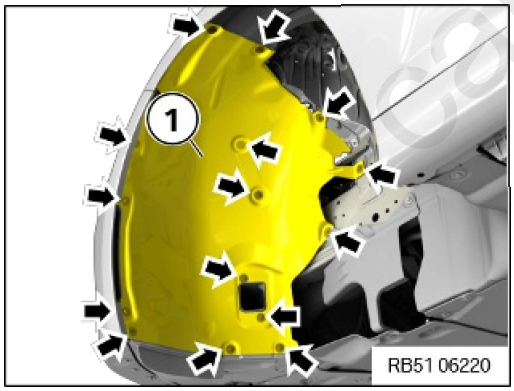


- To unscrew and tighten the wheel bolts with locking wheel bolts (2), use the correct adapter (1) from the set of special tools .

2 – Removing the front section of the front wheel arch cover

NOTICE

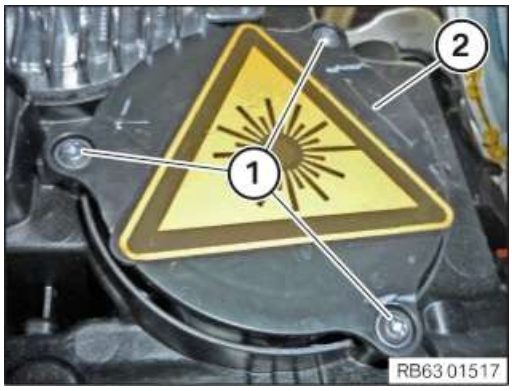
To provide a better overview: Schematic diagram with partially hidden components.



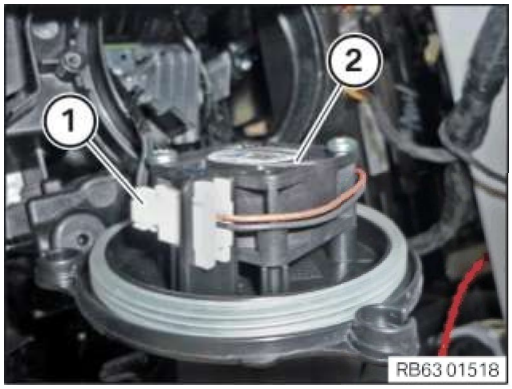
- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

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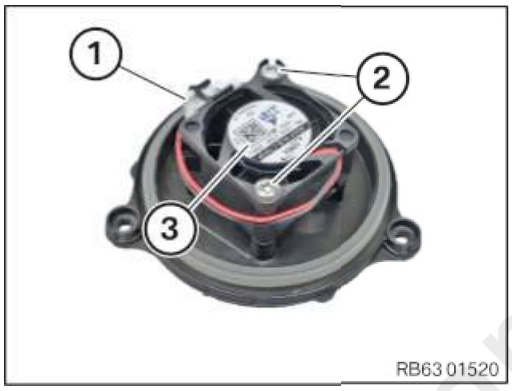
3 – Removing the LED fan



- Loosen screws (1).
- Remove protective cap (2).



- Unlock plug connection (1) and disconnect.
- Remove LED fan (2) using cover cap.



- Unclip the connector (1).
- Loosen screws (2).
- Removing the LED fan (3).

4 – Installing the LED fan



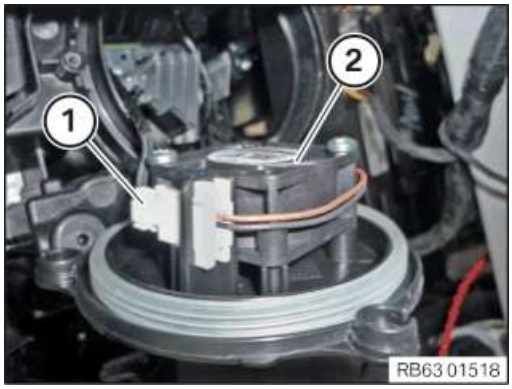
- Position the LED fan (3).
- Tighten the screws (2).

LED fan to cover

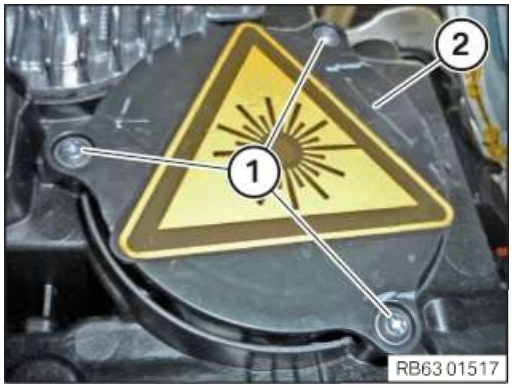
Screw		Tightening torque	1,5 Nm

- Clip in the connector (1).
- Check seal (4) for damage and replace if necessary.

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- Connect connector (1) to LED fan (2).



- Position the protective cap (2).
- Tighten the screws (1).

LED fan with cover to headlamp

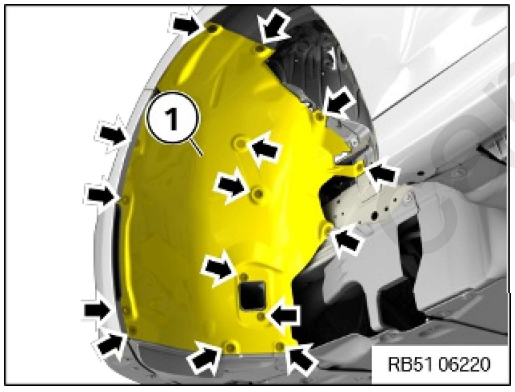
Screw		Tightening torque	1,5 Nm

POSTPROCESSES

5 – Install the front section of the front wheel arch cover

NOTICE

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



- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

6 – Mounting the wheel

▸ **Clean the contact surfaces between the brake disc and the wheel rim**

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TECHNICAL INFORMATION

The contact surface between the brake disc and the wheel rim must be clean and free from oil and grease. There is otherwise a risk of the wheel becoming loose at a later time.

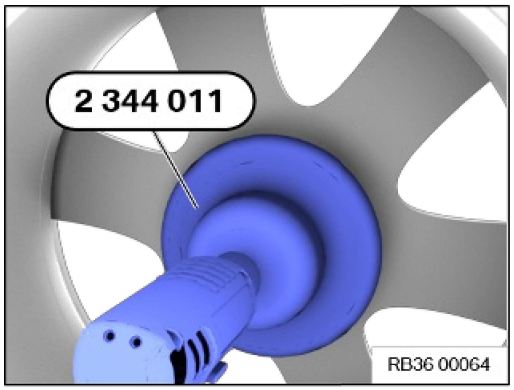
- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool 2 344 011.

  Do not operate special tool 2 344 011 with an impact screwdriver.
- Degrease contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981

- In the event of grease residue in the area of the wheel bolt holes, remove and clean the brake disc.

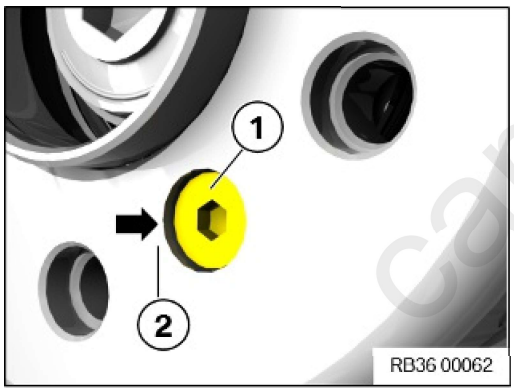


- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool 2 344 011.

  Do not operate special tool 2 344 011 with an impact screwdriver.
- Degrease contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981

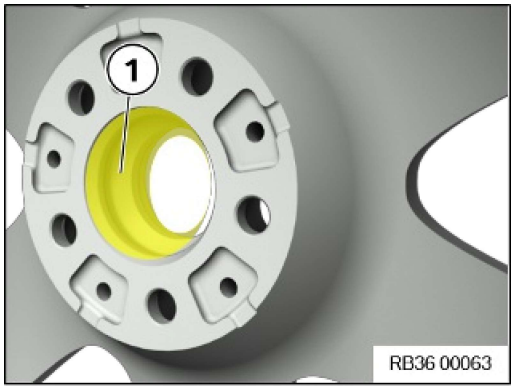


- Check that the mounting bolt (1) for the brake disc is securely seated.

  The mounting bolt (1) for the brake disc may not protrude under any circumstances on the contact surface (2) between the brake disc and the wheel rim.

Brake disc to wheel hub

M8	Renew screw.	Tightening torque	16 Nm



- Thinly grease the wheel centring (1) in the wheel rim.

Expendable materials

Brake block paste * TU = Trade Unit. TU numbers cannot be ordered! For invoicing purposes only.	3 g, Bag	83192158851
	100 g, Tube	83192158852
	5 g, TU*	83230140233

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TECHNICAL INFORMATION

Never use impact screwdrivers or electric screwdrivers to screw in and tighten the wheel bolts.

The wheel rim must rest uniformly against the brake disc.

In the case of non-original BMW wheel bolts/wheel rims, it may be necessary to retighten the wheel bolts on account of setting properties (refer to the documentation from the manufacturer).

Do not apply oil to new wheel bolts.

- Clean the wheel bolts.
- Check the wheel bolts and threads for damage, renew the wheel bolts if necessary.
- Renew corroded wheel bolts.

  Parts: Wheel bolts
- Tighten the wheel bolts (arrows) as follows:

  Screw in the wheel bolts crosswise by hand.

  Hand-tighten the wheel bolts evenly crosswise to centre the wheel rim.

  Use the torque wrench to tighten the wheel bolts crosswise.

  Tighten all wheel bolts crosswise again to check.

Wheel bolts

M14 / SW17	Screw in wheel bolts and evenly tighten crosswise by hand in order to centre the wheel rim.	Tightening torque	140 Nm
	Tighten wheel bolts to the prescribed tightening torque with a calibrated torque wrench in a crosswise sequence.		
	Check all the wheel bolts in the same order or retighten to the prescribed tightening torque again.	Check	140 Nm

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Additional Information

Overview of Tightening Torques

LED fan to cover — Used in step 4

Screw		Tightening torque	1,5 Nm

LED fan with cover to headlamp — Used in step 4

Screw		Tightening torque	1,5 Nm

Wheel arch trim panel, front — Used in step 5

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Brake disc to wheel hub — Used in step 6

M8	Renew screw.	Tightening torque	16 Nm

Wheel bolts — Used in step 6

M14 / SW17	Screw in wheel bolts and evenly tighten crosswise by hand in order to centre the wheel rim. Tighten wheel bolts to the prescribed tightening torque with a calibrated torque wrench in a crosswise sequence. Check all the wheel bolts in the same order or retighten to the prescribed tightening torque again.	Tightening torque Check	140 Nm 140 Nm

Overview of Special Tools

2 344 011 Tool



Common — Used in step 6

Usage	Tool (wheel hub grinder) for cleaning the connection of the wheel rim (wheel contact face) to the wheel hub.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	08 08 12 (872)

Replacement tools:

0 495 221 (36 1 323) Wheel stud



Common — Used in step 1

Usage	(Code 30) Code 39 available separately, (see EPC) under 36 13 1 181 259
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

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0 495 224 (36 1 326) Wheel stud



Common	Used in step 1
Usage	(Code 33) With centring bore available separately, (see EPC) under 36 13 6 765 546
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 225 (36 1 327) Wheel stud



Common	Used in step 1
Usage	(Code 34) With centring bore available separately (see EPC) under 36 13 6 765 547
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 226 (36 1 328) Wheel stud



Common	Used in step 1
Usage	(Code 35) With centring bore available separately, (see EPC) under 36 13 6 762 340
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

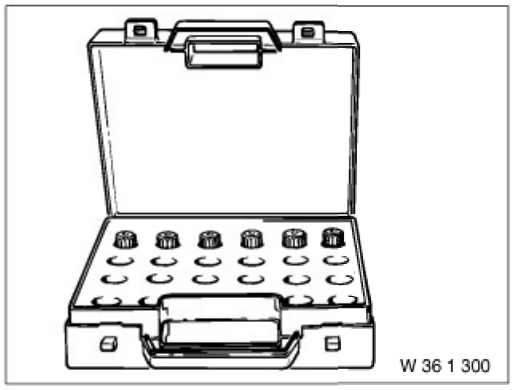
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0 495 227 (36 1 329) Wheel stud



Common	Used in step 1
Usage	(Code 36) With centring bore available separately (see EPC) under 36 13 6 762 341
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 228 (36 1 331) Wheel stud



Common	Used in step 1
Usage	(Code 37) With centring bore available separately (see EPC) under 36 13 6 762 342
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 229 (36 1 332) Wheel stud



Common	Used in step 1
Usage	(Code 38) With centring bore available separately (see EPC) under 36 13 6 762 343
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

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0 495 230 (36 1 333) Wheel stud



Common	Used in step 1
Usage	(Code 40) With centring bore available separately (see EPC) under 36 13 6 762 344
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

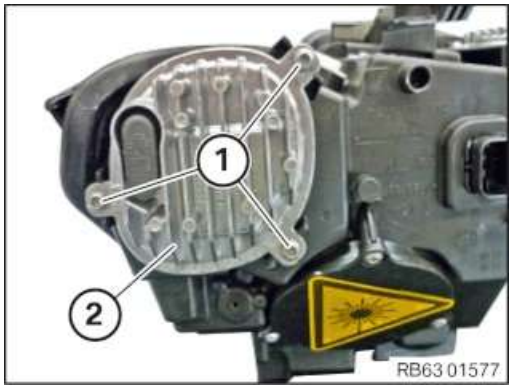
cardiagn.com

Links

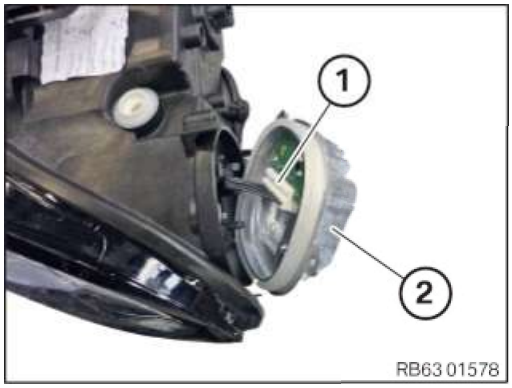
Repair instructions	**Used in step**
00 .. ... Raising the vehicle using a vehicle hoist	

63 11 701 Replacing left LED flashing turn indicator

1 – Removing LED turn indicator



- Loosen screws (1).
- Feed out the LED turn indicator (2).

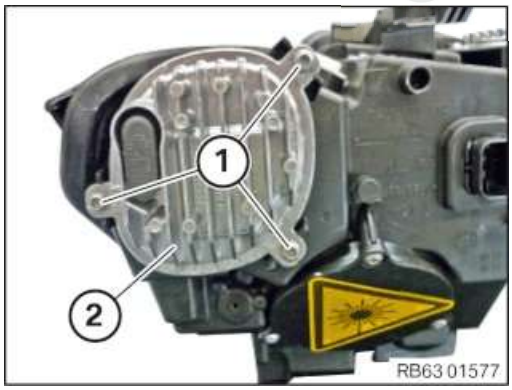


- Unlock plug connection (1) and disconnect.
- Remove the LED turn indicator (2).

2 – Installing the LED turn indicator



- Check the seal (3) for damage and replace if necessary.
- Position LED turn indicator (2).
- Connect connectors (1) and lock.



- Guide in LED turn indicator (2) and position it correctly.
- Tighten the screws (1).

LED turn indicator to headlight

Screw		Tightening torque	1,5 Nm

Additional Information

Overview of Tightening Torques

LED turn indicator to headlight Used in step 2

Screw		Tightening torque	1,5 Nm

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63 12 ... Headlight fogging fault pattern

Note:
Certain weather conditions can lead to fogging on the inside of the headlight lens.

This is not necessarily a fault that requires replacement of the headlight.



Top row (A): Permissible fogging. **Headlight does not need to be replaced.**

Bottom row (B): Impermissible fogging. Replace the headlight.

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63 99 ... Notes for replacing the protective cap of the headlight

Important!

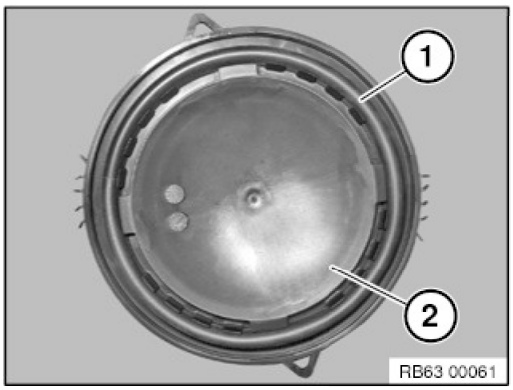
Risk of damage!

Damaged seals on the protective caps will lead to moisture penetration into the headlight.

This will in turn cause porous cable insulations and malfunctioning of the headlight.

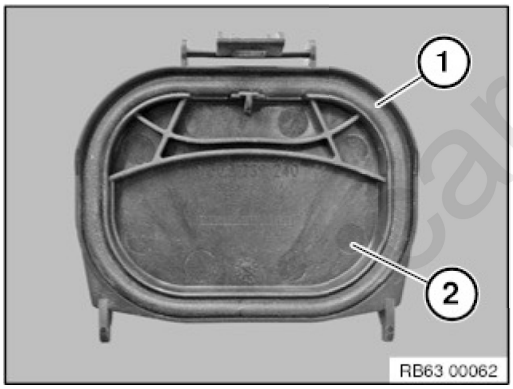
When working on the headlight system, check the protective cap seals.

Replace the protective cap in the event of damage!



Example: screwed protective cap

Seal (1) on protective cap (2).



Example: latchable protective cap

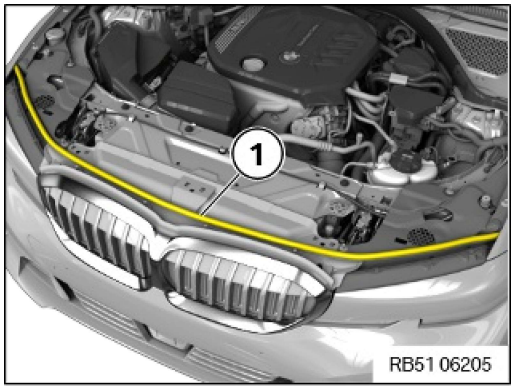
Seal (1) on protective cap (2).

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63 12 021 Remove and install both headlights

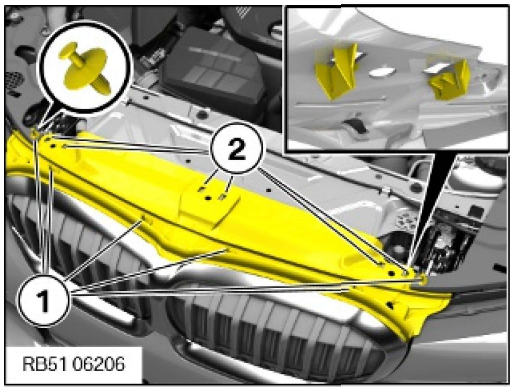
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



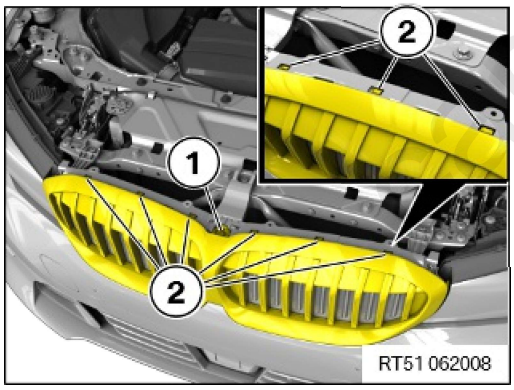
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

3 – Remove centre radiator ornamental grille



- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

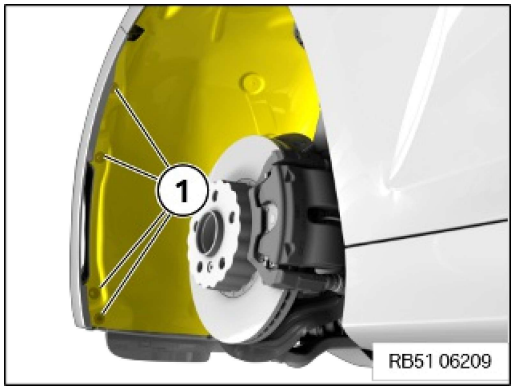
4 – Partially remove both front wheel arch trim panels

NOTICE

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

▸ **Partially removing front wheel arch trim panel**

diagn.com

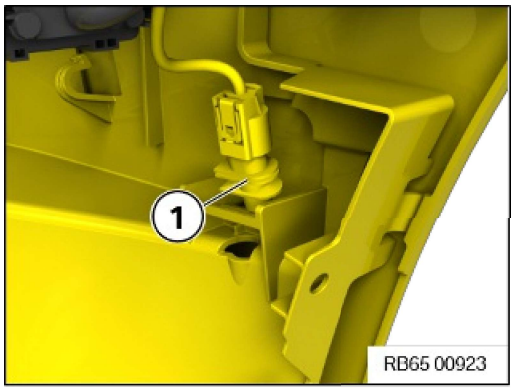


NOTICE

To provide a better overview: Schematic diagram without front wheel.

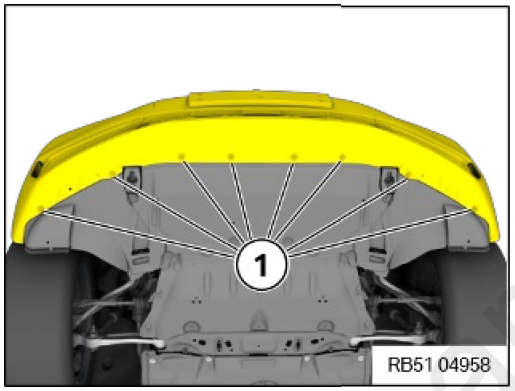
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

5 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

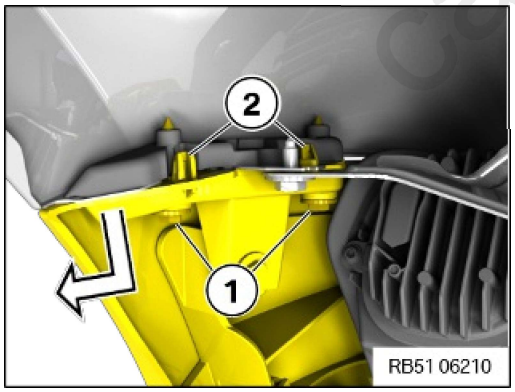
6 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

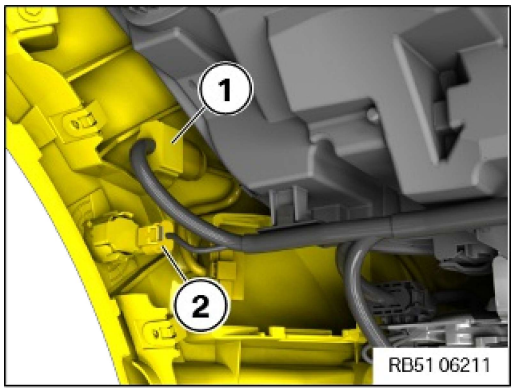
- Loosen screws (1).



NOTICE

Perform the operations on the left and right side.

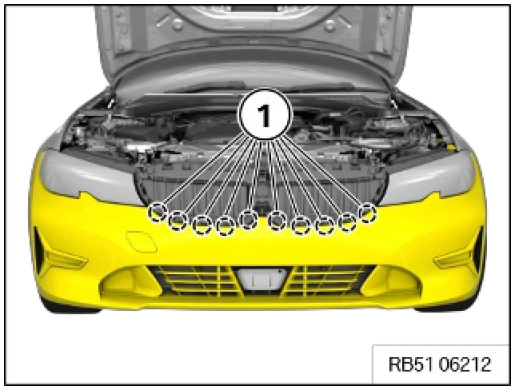
- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.



NOTICE

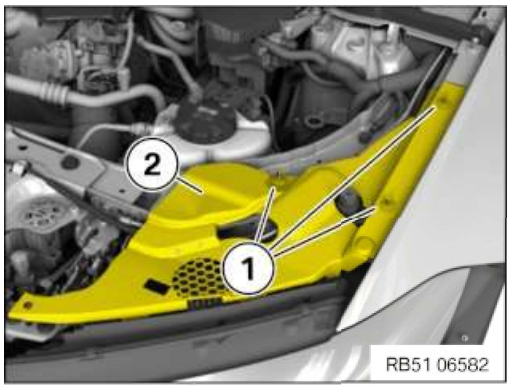
Perform the operations on the left and right side.

- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.



- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

7 – Removing the cover in the engine compartment on top partially

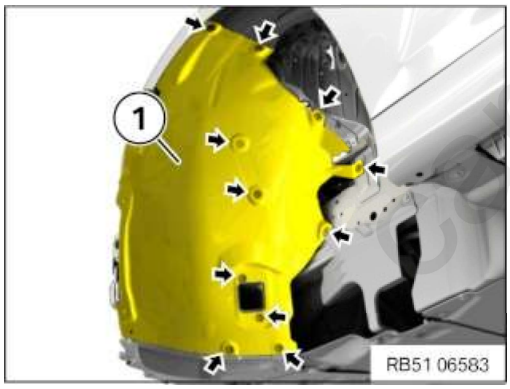


- Loosen the expanding rivet (1).
- Remove the cover in the engine compartment on top (2) partially.

8 – Removing the front section of the front wheel arch cover partially

NOTICE

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



- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

MAIN WORK

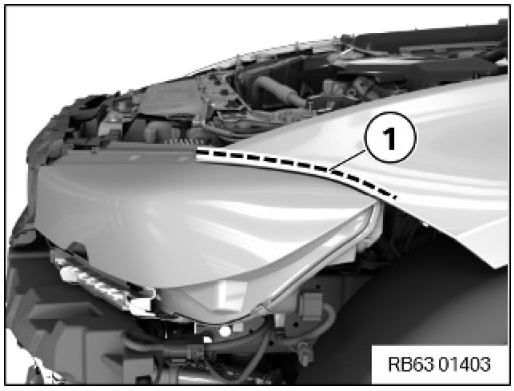
9 – Removing both headlights

NOTICE

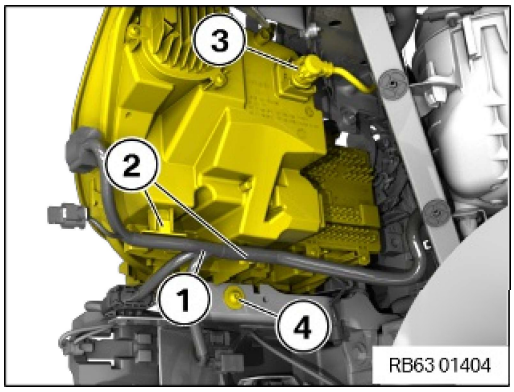
Description is for left component only. Procedure on the right side is identical.

▸ **Remove headlight**

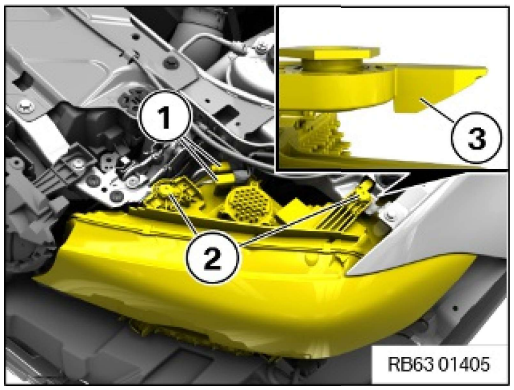
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- Mask off the body in area (1) with adhesive tape.



- Release wiring harness (1) with holders (2) from the headlight.
- Unlock plug connection (3) and disconnect.
- Loosen screw (4).

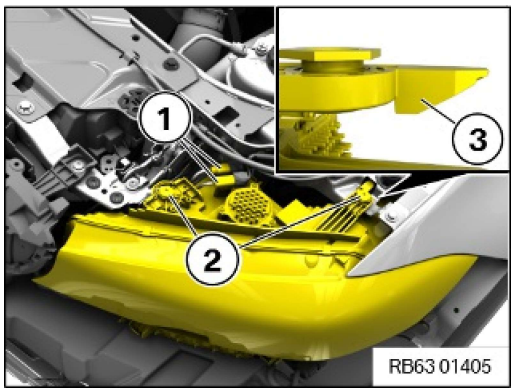


- Release connector holder (1) from the headlight.
- Loosen screws (2).
- Lift the headlight, release it with latch mechanism (3) and guide it out to the front.

10 – Installing both headlights

NOTICE

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



▶ **Install headlight**

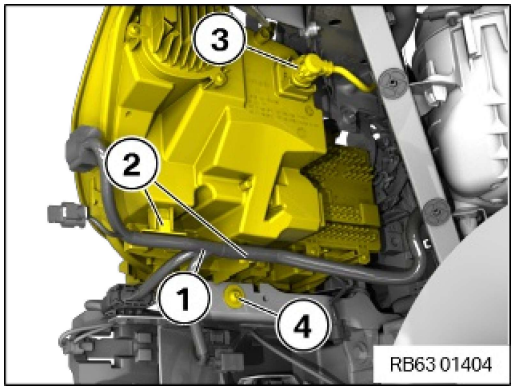
- Guide in the headlight from the front and clip it in with latch mechanism (3).
- Tighten down screws (2).

Front light combination, top

Oval-head screw		Tightening torque	8 Nm

- Secure connector holder (1) to the headlight.

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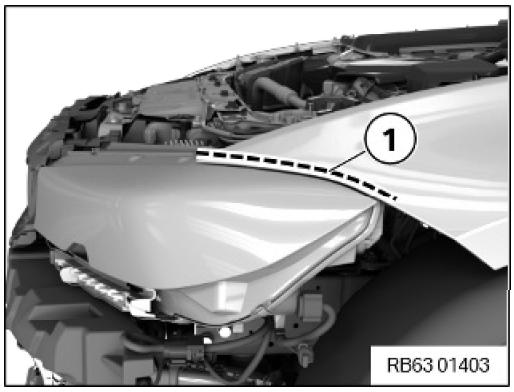


- Tighten down screw (4).

Front light combination, bottom

Oval-head screw		Tightening torque	5 Nm

- Connect plug connection (3) and lock.
- Secure wiring harness (1) to the headlight with holders (2).



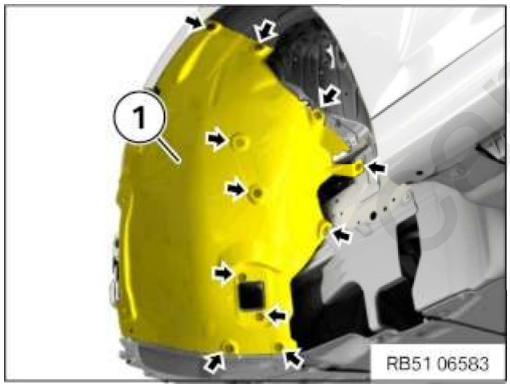
- Remove the adhesive tape in area (1).

POSTPROCESSES

11 – Partially installing front section of the front wheel arch cover

NOTICE

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

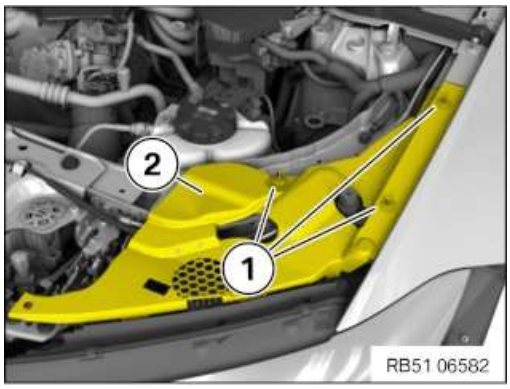


- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

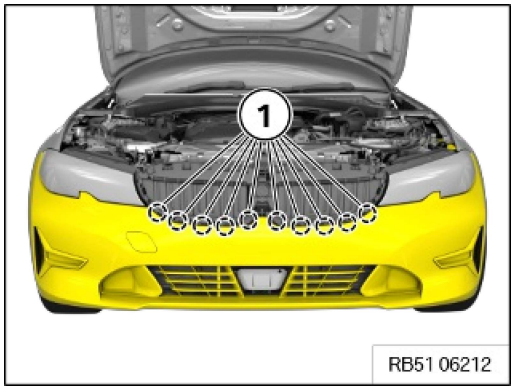
12 – Installing the cover in the engine compartment on top partially



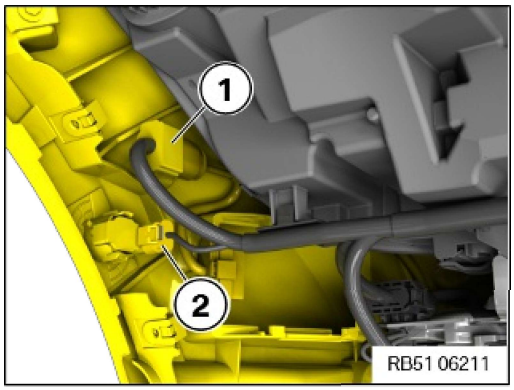
- Install the cover in the engine compartment on top (2).
- Secure expanding rivet (1).

13 – Install bumper panel, front

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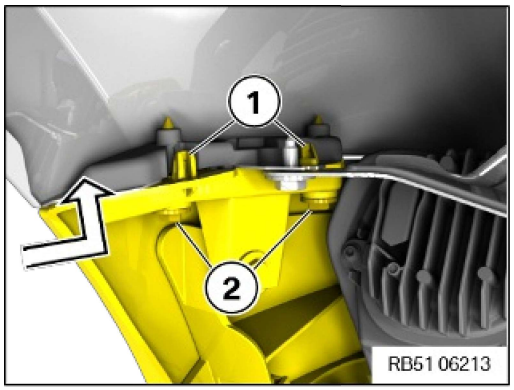
- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).



NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.



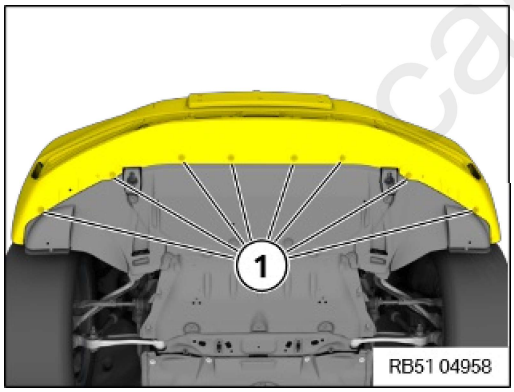
NOTICE

Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm



NOTICE

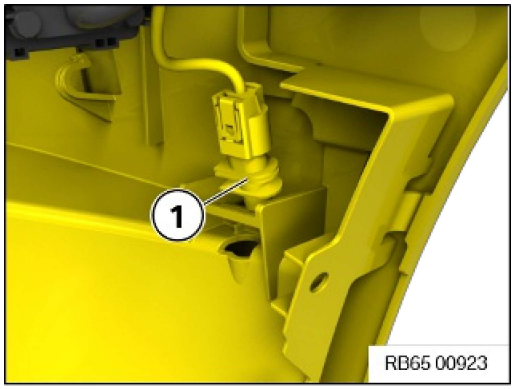
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

14 – Partially installing the temperature sensor



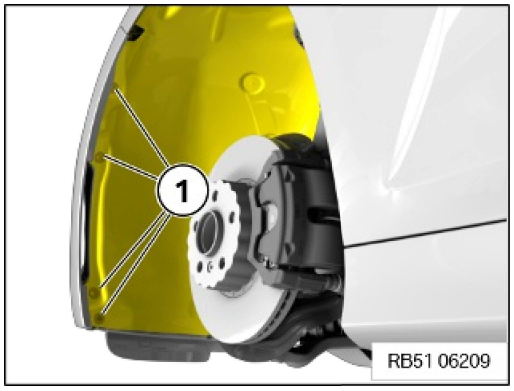
- Clip the temperature sensor (1) downwards into the front bumper panel.

15 – Partially installing both front wheel arch trim panels

NOTICE

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

▸ **Partially installing front wheel arch trim panel**



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

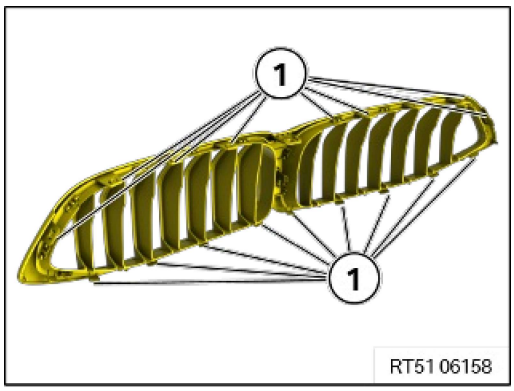
Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

16 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



Check

- Check latch mechanisms (1) for damage.

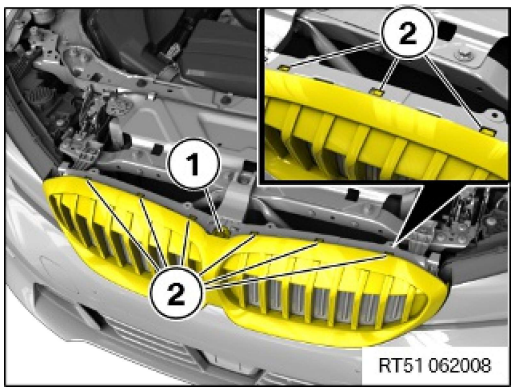
Result

» The latch mechanism (1) is damaged.

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Measure

- Renew the front ornamental grille, centre.

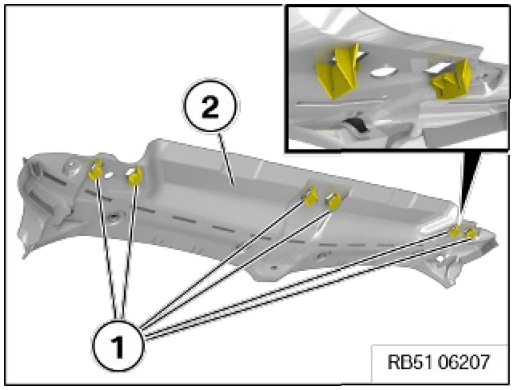


- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

17 – Installing cover for engine compartment centre



Check

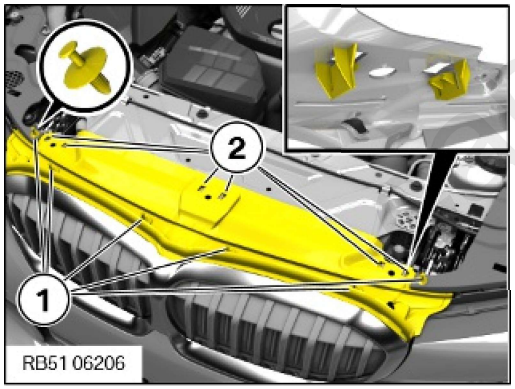
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

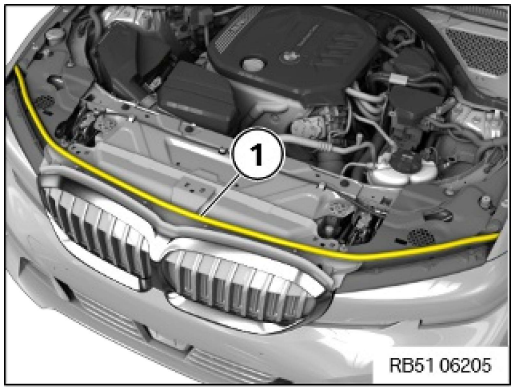
Measure

- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

18 – Install the seal for the front bonnet



- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

19 – Adjusting headlights

TECHNICAL INFORMATION

Notes on headlight adjustment are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 6310 ... Test prerequisite for adjusting headlights

NOTICE

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



- If necessary, remove the cover over the adjusting screws for headlight adjustment.
- Adjust the height at the adjusting screw (1).
- **US version:** Set the lateral adjustment only if the plug on the adjusting screw for lateral adjustment is missing or damaged.

  Remove damaged plug if necessary (refer to additional information).
- Turn adjusting screw (2) for a correct lateral adjustment.
- **US version:** If the lateral adjustment has been checked or corrected: Renew plugs and push into the adjusting screw for the lateral adjustment **without damaging it** (see additional information).
- If necessary, fit a cover over the adjusting screws for headlight adjustment.

Additional Information

Overview of Tightening Torques

Front light combination, top — Used in step 10

Oval-head screw		Tightening torque	8 Nm

Front light combination, bottom — Used in step 10

Oval-head screw		Tightening torque	5 Nm

Wheel arch trim panel, front — Used in step 1115

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Front bumper panel to front side panel — Used in step 13

Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection — Used in step 13

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control — Used in step 16

Oval-head screwM6		Tightening torque	4,6 Nm

Links

Repair instructions	Used in step

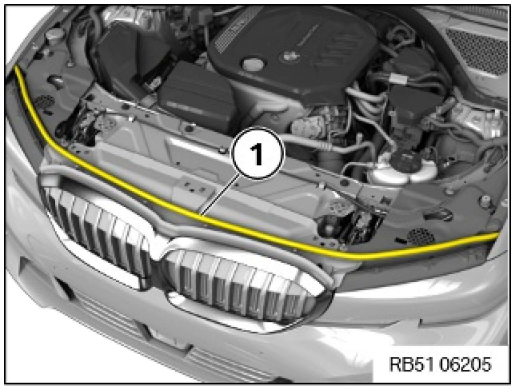
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63 12 003 Removing and installing left headlight

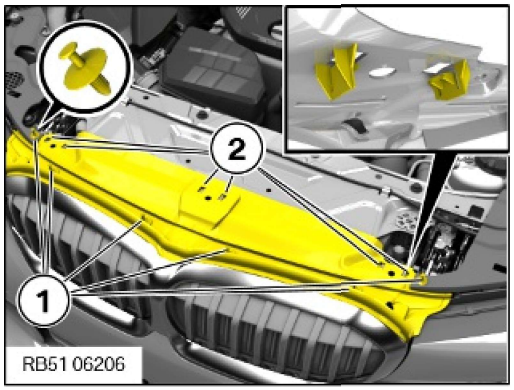
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



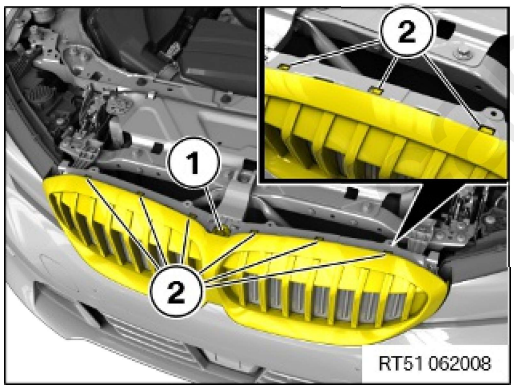
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

3 – Remove centre radiator ornamental grille



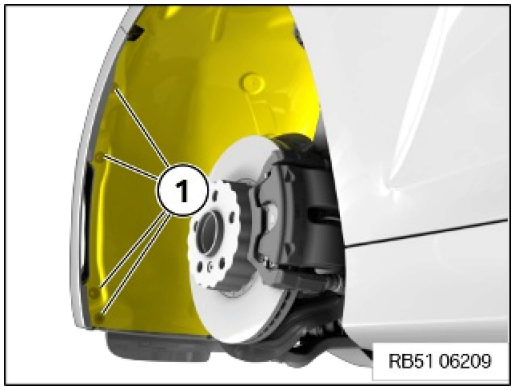
- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

4 – Partially remove both front wheel arch trim panels

NOTICE

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

▸ **Partially removing front wheel arch trim panel**

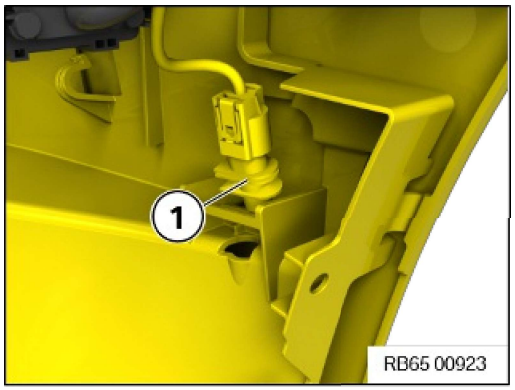


NOTICE

To provide a better overview: Schematic diagram without front wheel.

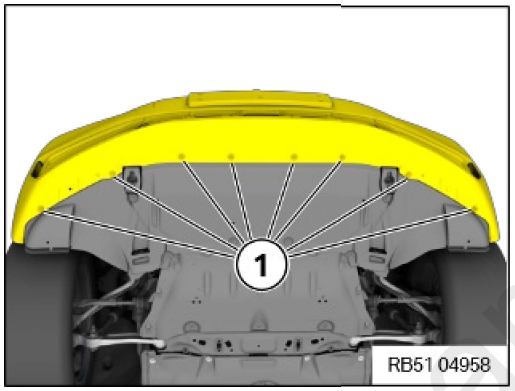
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

5 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

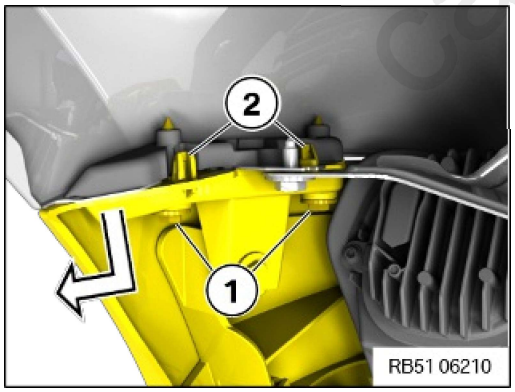
6 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

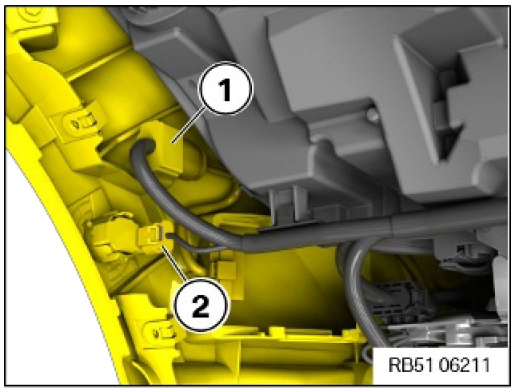
- Loosen screws (1).



NOTICE

Perform the operations on the left and right side.

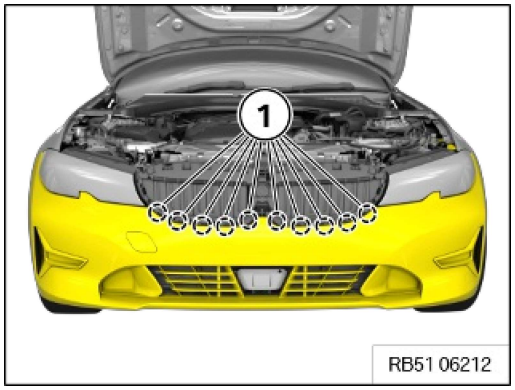
- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.



NOTICE

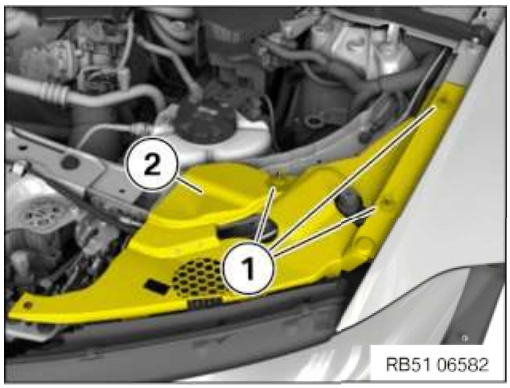
Perform the operations on the left and right side.

- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.



- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

7 – Removing the cover in the engine compartment on top partially

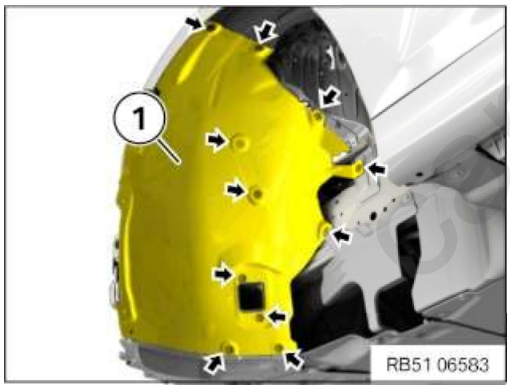


- Loosen the expanding rivet (1).
- Remove the cover in the engine compartment on top (2) partially.

8 – Removing the front section of the front wheel arch cover partially

NOTICE

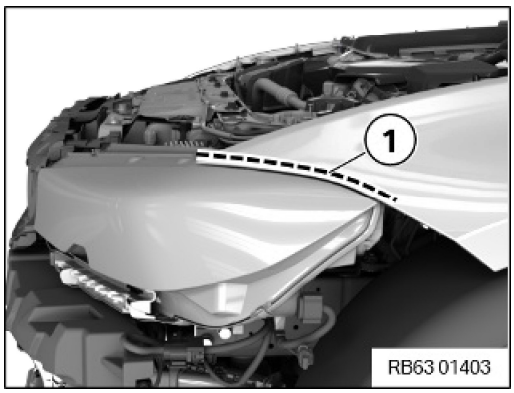
To provide a better overview: Schematic diagram with partially hidden components.



- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

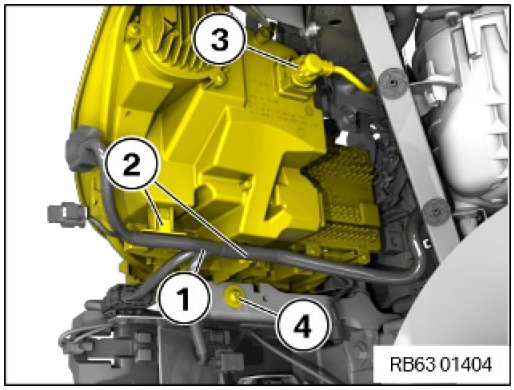
MAIN WORK

9 – Remove headlight

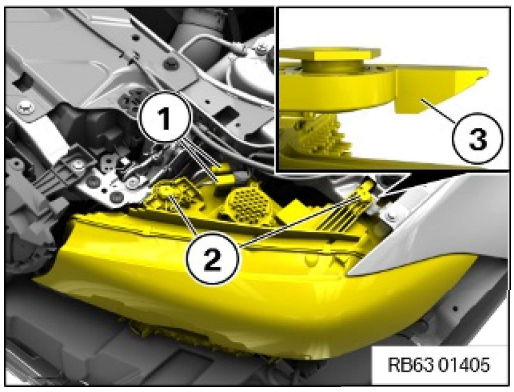


- Mask off the body in area (1) with adhesive tape.

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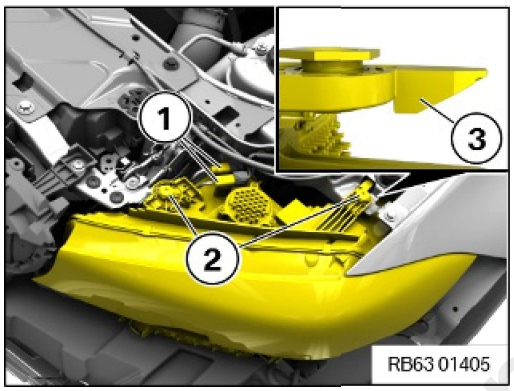


- Release wiring harness (1) with holders (2) from the headlight.
- Unlock plug connection (3) and disconnect.
- Loosen screw (4).



- Release connector holder (1) from the headlight.
- Loosen screws (2).
- Lift the headlight, release it with latch mechanism (3) and guide it out to the front.

10 – Install headlight

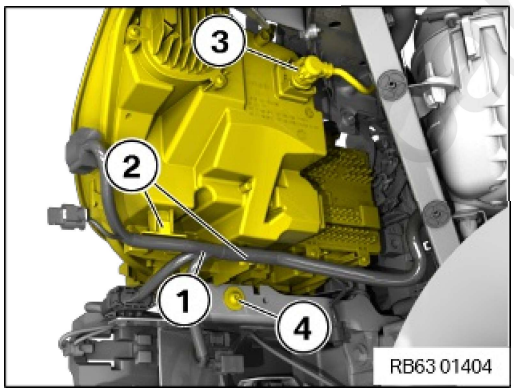


- Guide in the headlight from the front and clip it in with latch mechanism (3).
- Tighten down screws (2).

Front light combination, top

Oval-head screw		Tightening torque	8 Nm

- Secure connector holder (1) to the headlight.

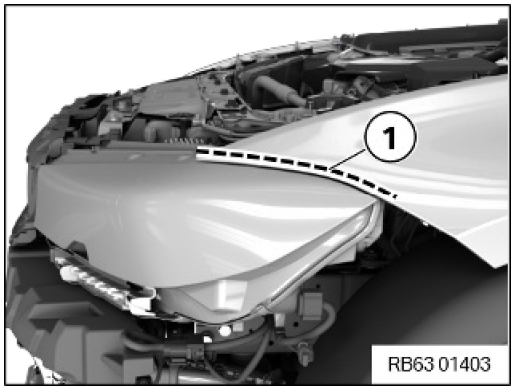


- Tighten down screw (4).

Front light combination, bottom

Oval-head screw		Tightening torque	5 Nm

- Connect plug connection (3) and lock.
- Secure wiring harness (1) to the headlight with holders (2).



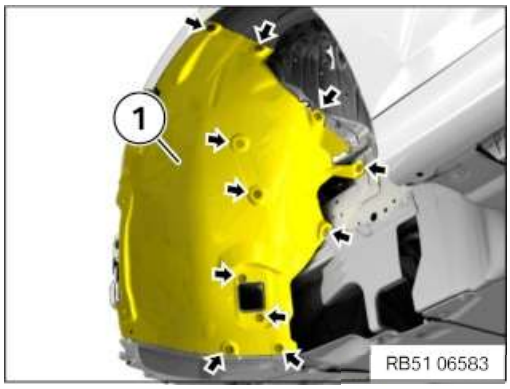
- Remove the adhesive tape in area (1).

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11 – Partially installing front section of the front wheel arch cover

NOTICE

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

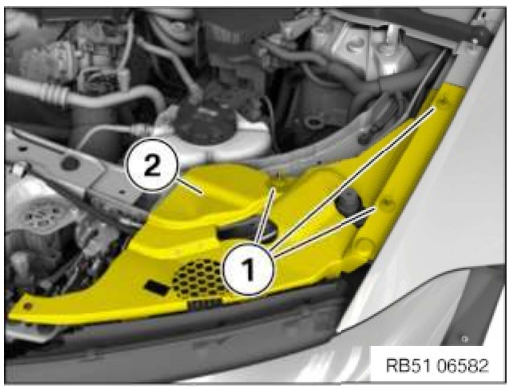


- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

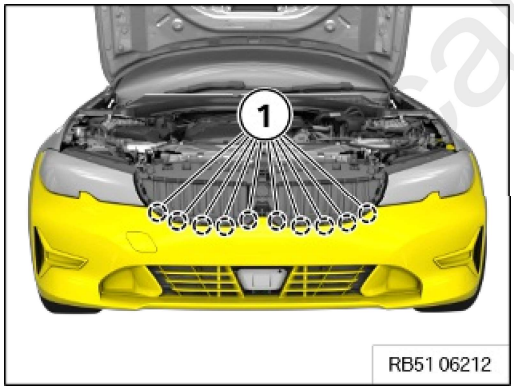
Thermoplastic hexagon screw		Tightening torque	2,6 Nm

12 – Installing the cover in the engine compartment on top partially

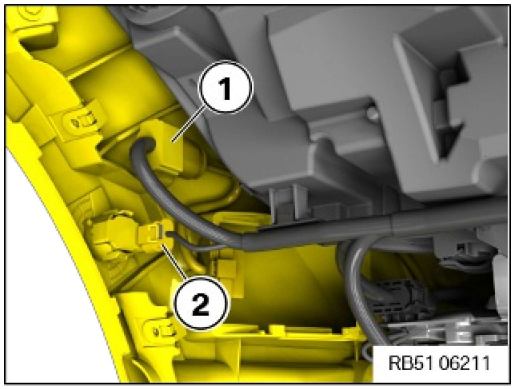


- Install the cover in the engine compartment on top (2).
- Secure expanding rivet (1).

13 – Install bumper panel, front



- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).

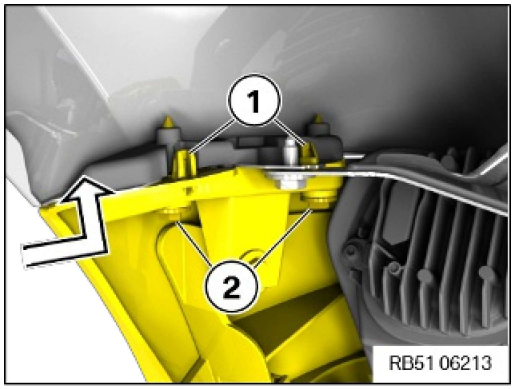


NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.

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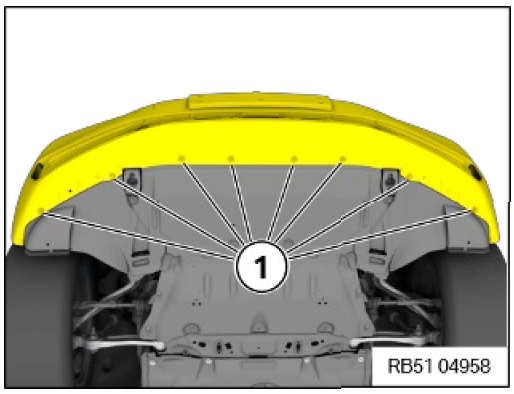
NOTICE

Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm



NOTICE

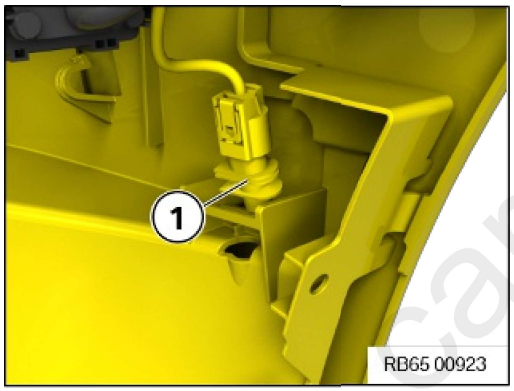
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

14 – Partially installing the temperature sensor



- Clip the temperature sensor (1) downwards into the front bumper panel.

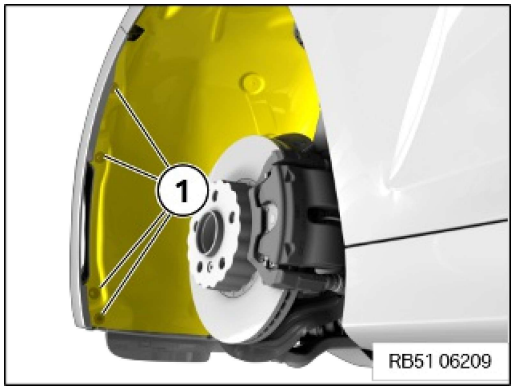
15 – Partially installing both front wheel arch trim panels

NOTICE

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

▸ **Partially installing front wheel arch trim panel**

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NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

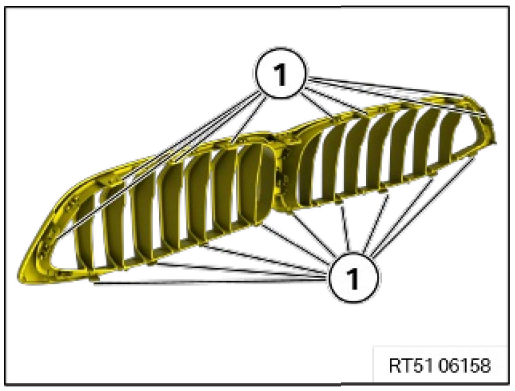
Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

16 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



Check

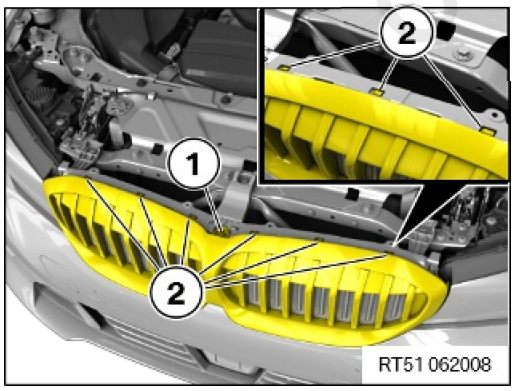
- Check latch mechanisms (1) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

- Renew the front ornamental grille, centre.



- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

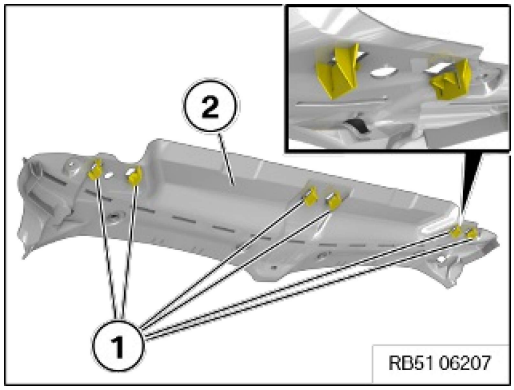
Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

17 – Installing cover for engine compartment centre

Check

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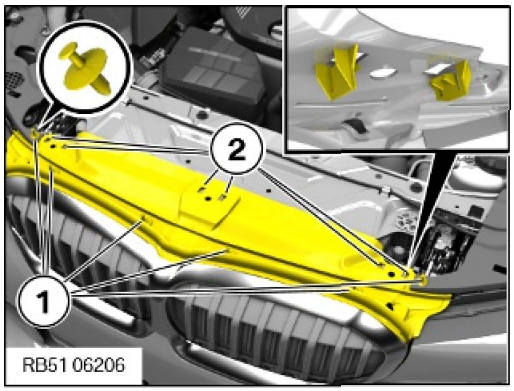
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

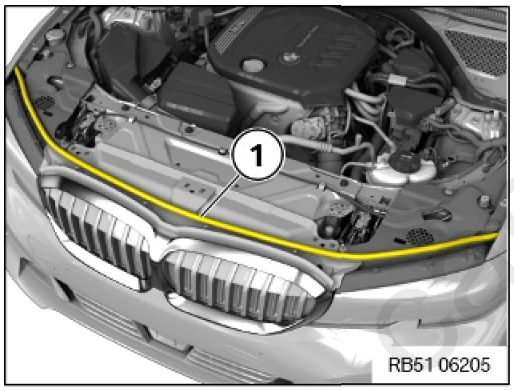
Measure

- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

18 – Install the seal for the front bonnet



- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

19 – Adjusting headlights

TECHNICAL INFORMATION

Notes on headlight adjustment are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 6310 ... Test prerequisite for adjusting headlights

NOTICE

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

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- If necessary, remove the cover over the adjusting screws for headlight adjustment.
- Adjust the height at the adjusting screw (1).
- **US version:** Set the lateral adjustment only if the plug on the adjusting screw for lateral adjustment is missing or damaged.

  Remove damaged plug if necessary (refer to additional information).
- Turn adjusting screw (2) for a correct lateral adjustment.
- **US version:** If the lateral adjustment has been checked or corrected: Renew plugs and push into the adjusting screw for the lateral adjustment **without damaging it** (see additional information).
- If necessary, fit a cover over the adjusting screws for headlight adjustment.

Additional Information

Overview of Tightening Torques

Front light combination, top			Used in step 10
Oval-head screw		Tightening torque	8 Nm

Front light combination, bottom			Used in step 10
Oval-head screw		Tightening torque	5 Nm

Wheel arch trim panel, front			Used in step 1115
Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Front bumper panel to front side panel			Used in step 13
Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection			Used in step 13
Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control			Used in step 16
Oval-head screwM6		Tightening torque	4,6 Nm

Links

Repair instructions	**Used in step**
63 10 ... Test requirements for headlights vertical aim adjustment	19

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63 12 ... Repairing headlights

It is possible to repair the following damage:

- Deformed or broken holders can be replaced using the available repair kits.
  Replacement of headlight is **not required**!
  For reasons of pedestrian safety it is **not permitted** to use adhesive or reinforcements to repair broken holders!

Note:

Headlight repair kits are not available for every vehicles (see Electronic Parts Catalogue).

Follow the vehicle-specific repair instructions.

It is not possible to repair the following damage:

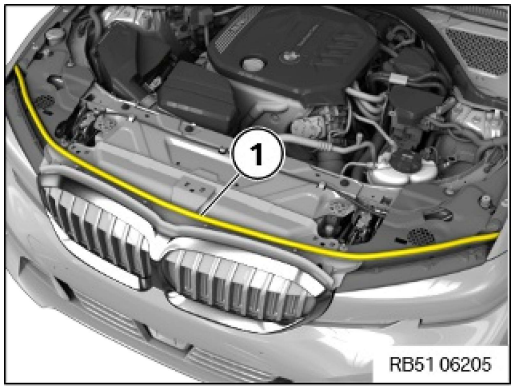
- Deformed or broken headlight housing.
- Scratched or damaged headlight lenses
  The standard coating of headlight lens cannot be restored. Commercially available repair systems are unable to provide sufficient protection from ultraviolet radiation and external influences (stone chipping).

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63 12 141 Replacing left LED headlight

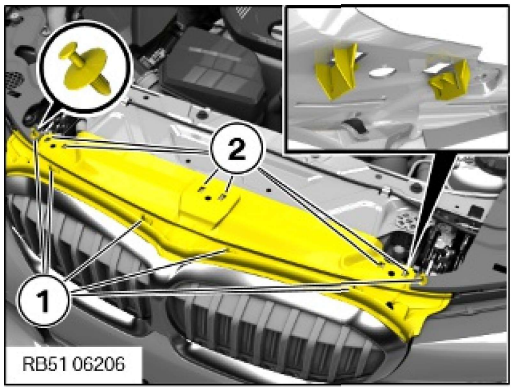
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



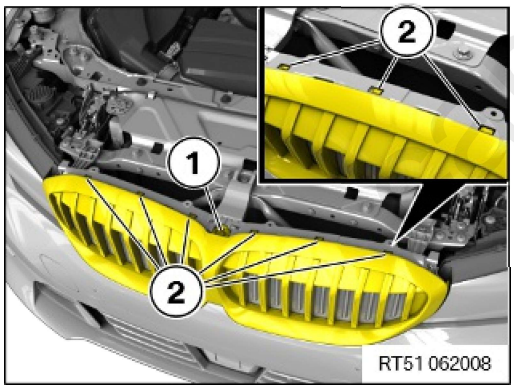
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

3 – Remove centre radiator ornamental grille



- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

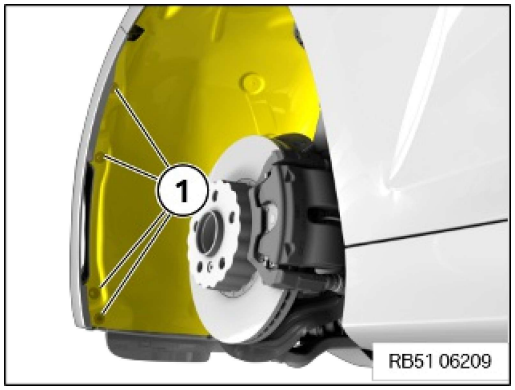
4 – Partially remove both front wheel arch trim panels

NOTICE

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

▸ **Partially removing front wheel arch trim panel**

diagn.com

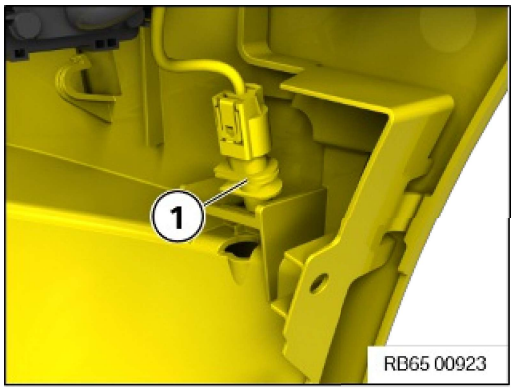


NOTICE

To provide a better overview: Schematic diagram without front wheel.

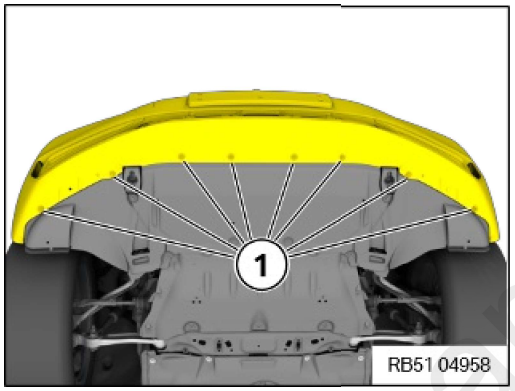
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

5 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

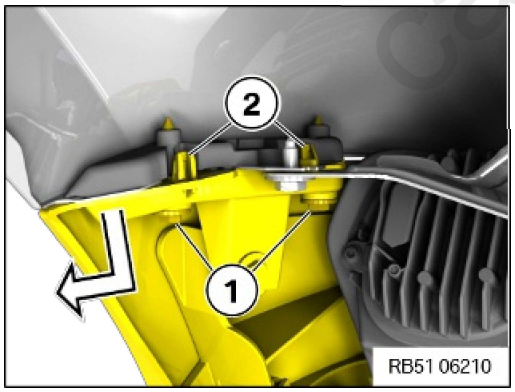
6 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

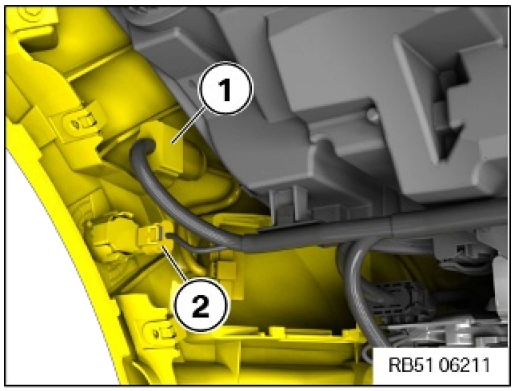
- Loosen screws (1).



NOTICE

Perform the operations on the left and right side.

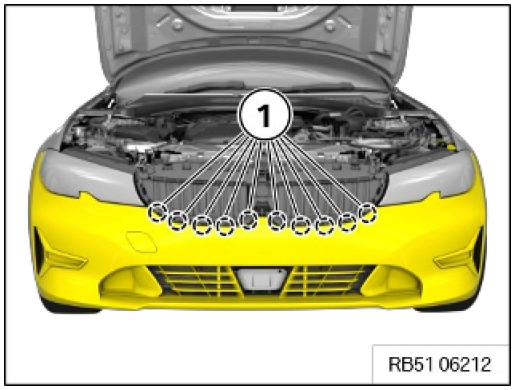
- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.



NOTICE

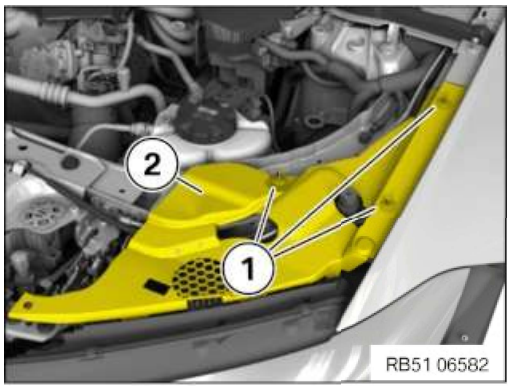
Perform the operations on the left and right side.

- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.



- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

7 – Removing the cover in the engine compartment on top partially

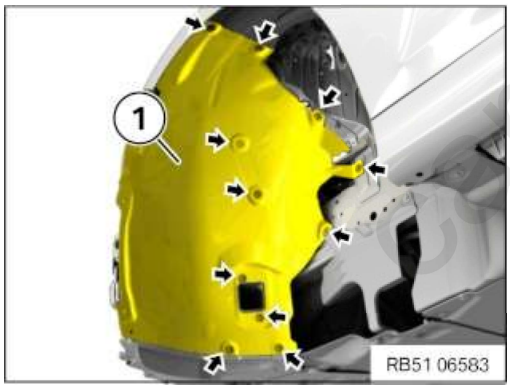


- Loosen the expanding rivet (1).
- Remove the cover in the engine compartment on top (2) partially.

8 – Removing the front section of the front wheel arch cover partially

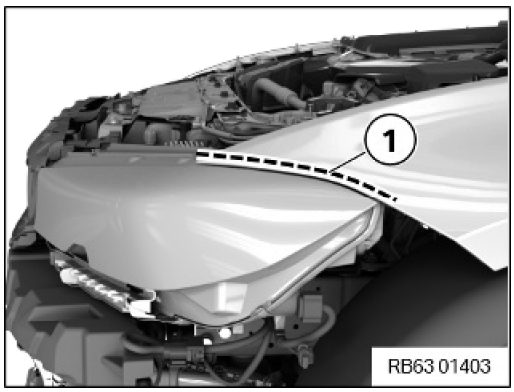
NOTICE

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



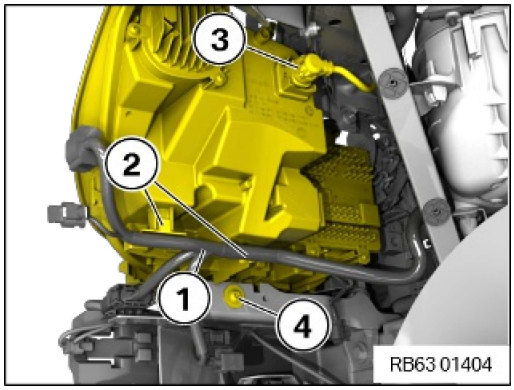
- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

9 – Remove headlight

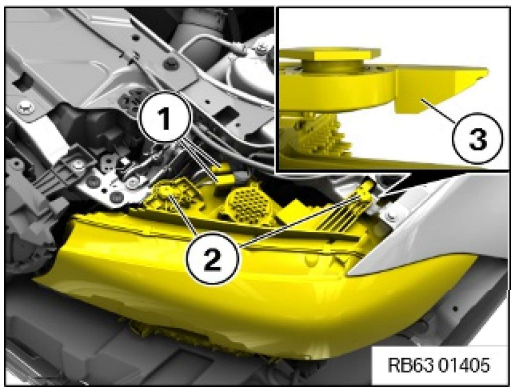


- Mask off the body in area (1) with adhesive tape.

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- Release wiring harness (1) with holders (2) from the headlight.
- Unlock plug connection (3) and disconnect.
- Loosen screw (4).

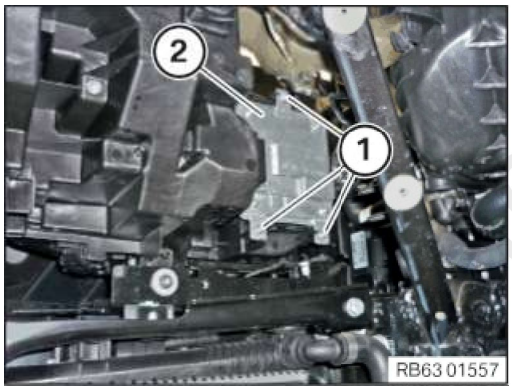


- Release connector holder (1) from the headlight.
- Loosen screws (2).
- Lift the headlight, release it with latch mechanism (3) and guide it out to the front.

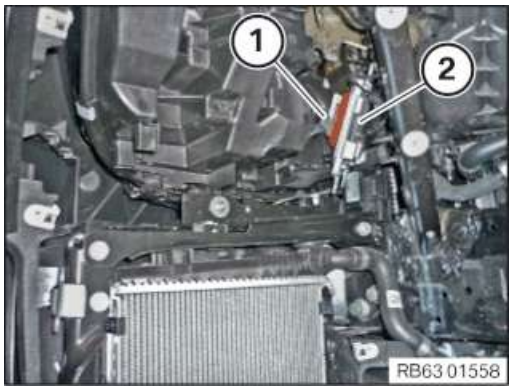
MAIN WORK

10 – Remounting control unit for Frontal Light Electronics (FLEL) (Basis)

▸ **Remove the Frontal Light Electronics (FLEL) control unit (LED basis)**



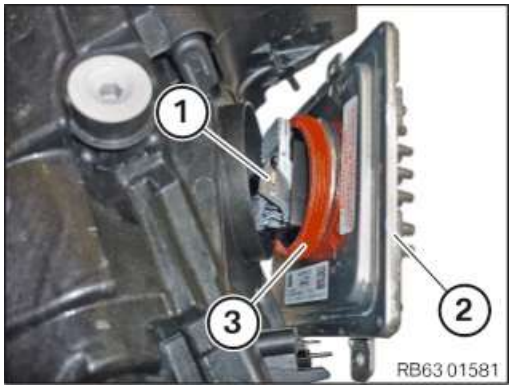
- Loosen screws (1).
- Feed out the Frontal Light Electronics (FLEL) control unit (2).



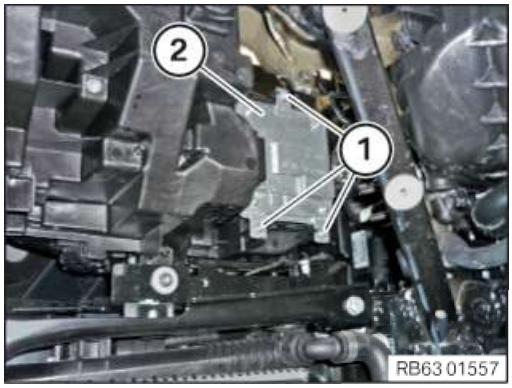
- Unlock plug connection (1) and disconnect.
- Remove the Frontal Light Electronics (FLEL) control unit (2).

▸ **Installing the Frontal Light Electronics control unit (LED based)**

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- Check the seal (3) for damage and replace if necessary.
- Position Frontal Light Electronics control unit (2).
- Connect connectors (1) and lock.



- Feed in the Frontal Light Electronics control unit (2) and position correctly.
- Tighten the screws (1).

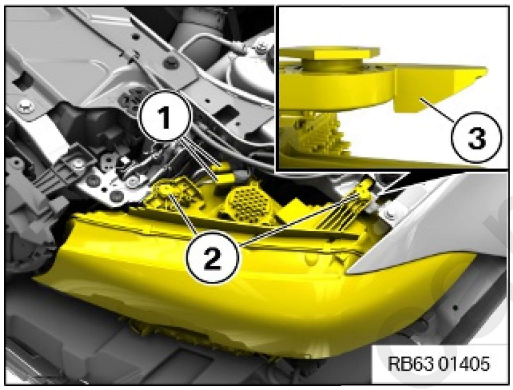
Front lighting electronics control unit to headlight

Screw		Tightening torque	1,5 Nm

11 – Remounting headlight holder

POSTPROCESSES

12 – Install headlight

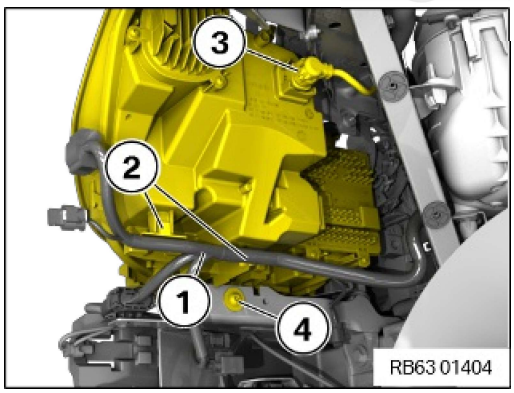


- Guide in the headlight from the front and clip it in with latch mechanism (3).
- Tighten down screws (2).

Front light combination, top

Oval-head screw		Tightening torque	8 Nm

- Secure connector holder (1) to the headlight.

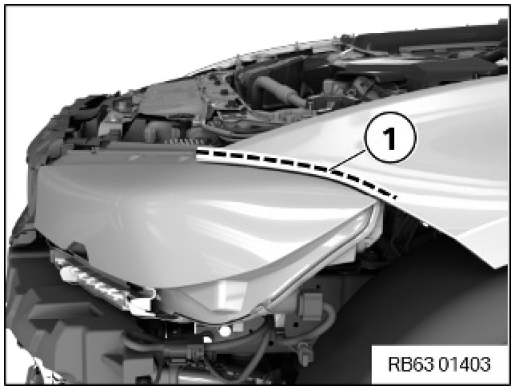


- Tighten down screw (4).

Front light combination, bottom

Oval-head screw		Tightening torque	5 Nm

- Connect plug connection (3) and lock.
- Secure wiring harness (1) to the headlight with holders (2).

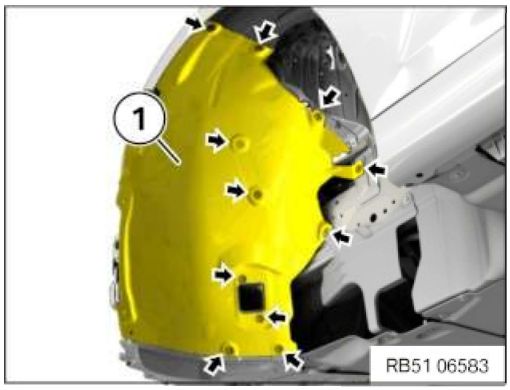


- Remove the adhesive tape in area (1).

13 – Partially installing front section of the front wheel arch cover

NOTICE

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

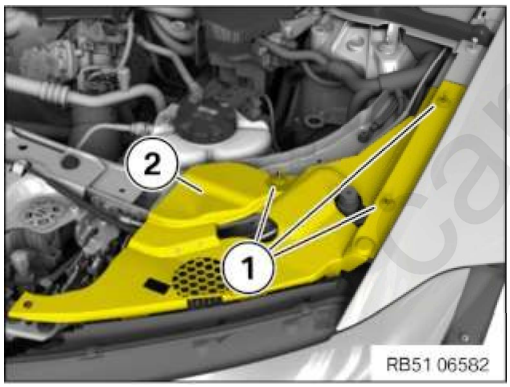


- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

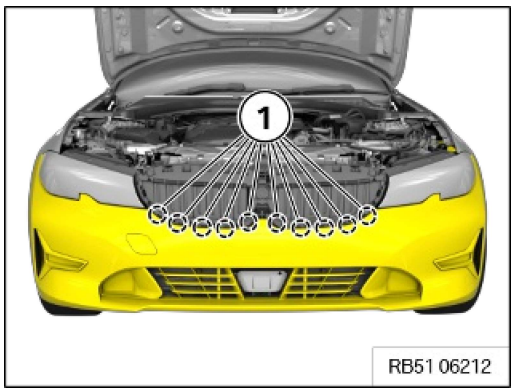
Thermoplastic hexagon screw		Tightening torque	2,6 Nm

14 – Installing the cover in the engine compartment on top partially



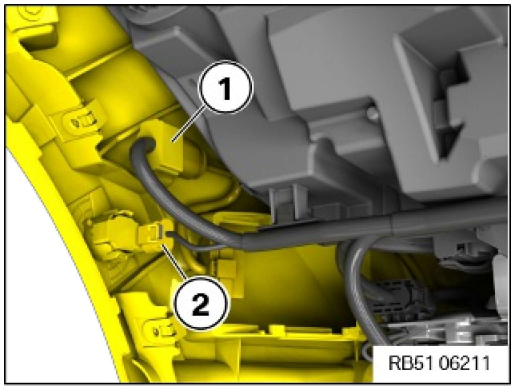
- Install the cover in the engine compartment on top (2).
- Secure expanding rivet (1).

15 – Install bumper panel, front



- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).

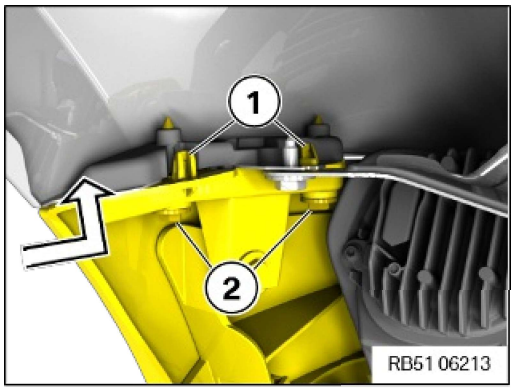
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NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.



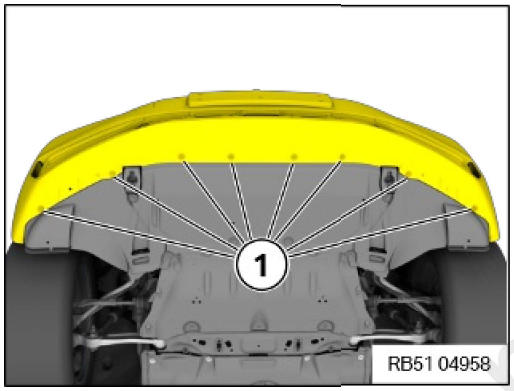
NOTICE

Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm



NOTICE

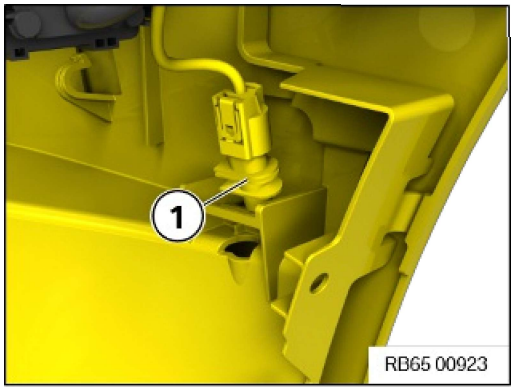
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

16 – Partially installing the temperature sensor



- Clip the temperature sensor (1) downwards into the front bumper panel.

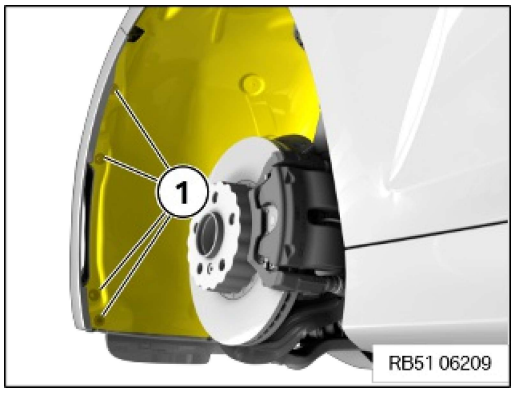
17 – Partially installing both front wheel arch trim panels

NOTICE

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

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▸ **Partially installing front wheel arch trim panel**



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

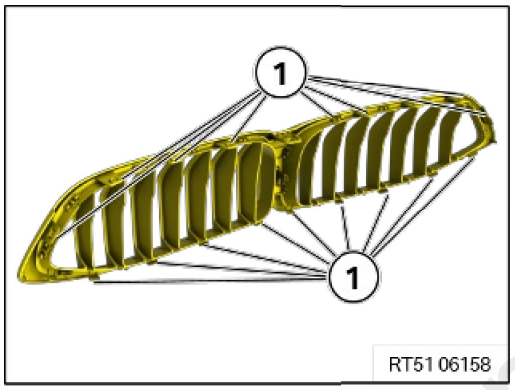
Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

18 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



Check

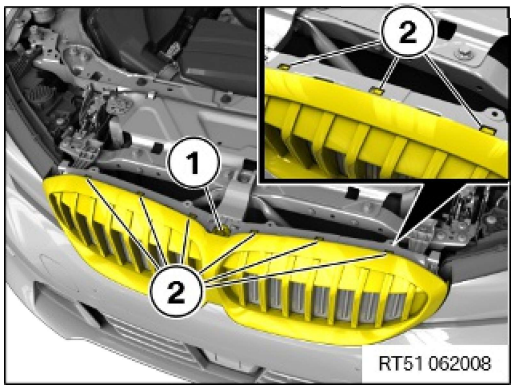
- Check latch mechanisms (1) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

- Renew the front ornamental grille, centre.



- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

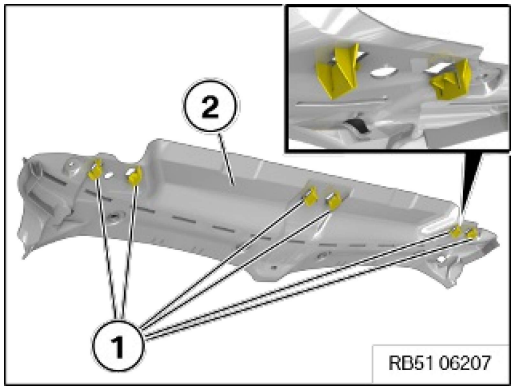
Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

19 – Installing cover for engine compartment centre

Check

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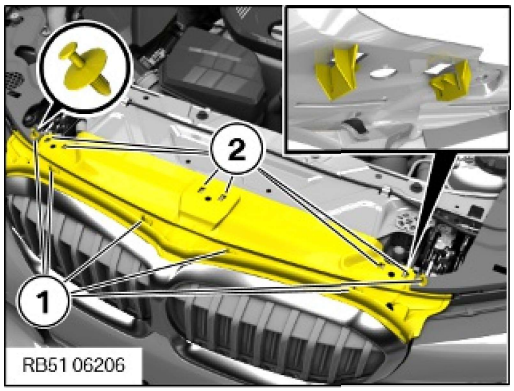
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

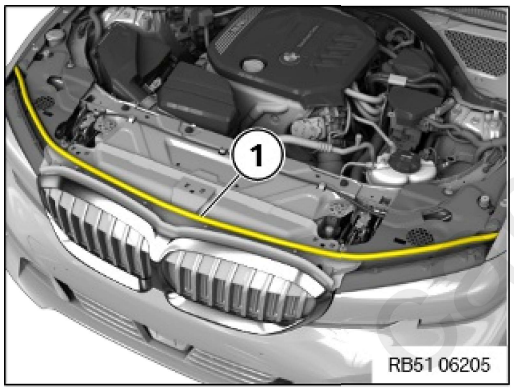
Measure

- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

20 – Install the seal for the front bonnet



- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

21 – Adjusting headlights

TECHNICAL INFORMATION

Notes on headlight adjustment are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 6310 ... Test prerequisite for adjusting headlights

NOTICE

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

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- If necessary, remove the cover over the adjusting screws for headlight adjustment.
- Adjust the height at the adjusting screw (1).
- **US version:** Set the lateral adjustment only if the plug on the adjusting screw for lateral adjustment is missing or damaged.

  Remove damaged plug if necessary (refer to additional information).
- Turn adjusting screw (2) for a correct lateral adjustment.
- **US version:** If the lateral adjustment has been checked or corrected: Renew plugs and push into the adjusting screw for the lateral adjustment **without damaging it** (see additional information).
- If necessary, fit a cover over the adjusting screws for headlight adjustment.

Additional Information

Overview of Tightening Torques

Front lighting electronics control unit to headlight			Used in step 10
Screw		Tightening torque	1,5 Nm

Front light combination, top			Used in step 12
Oval-head screw		Tightening torque	8 Nm

Front light combination, bottom			Used in step 12
Oval-head screw		Tightening torque	5 Nm

Wheel arch trim panel, front			Used in step 1317
Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Front bumper panel to front side panel			Used in step 15
Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection			Used in step 15
Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control			Used in step 18
Oval-head screwM6		Tightening torque	4,6 Nm

Links

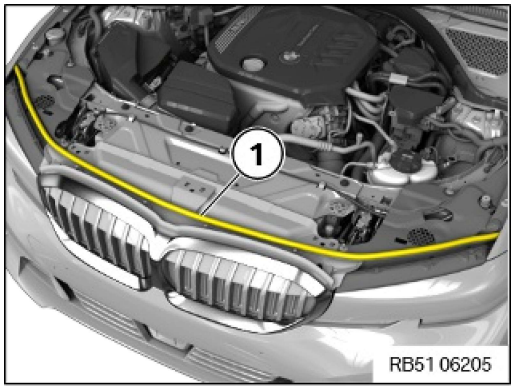
Repair instructions	**Used in step**
63 10 ... Test requirements for headlights vertical aim adjustment	21

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63 12 151 Replacing left LED headlight

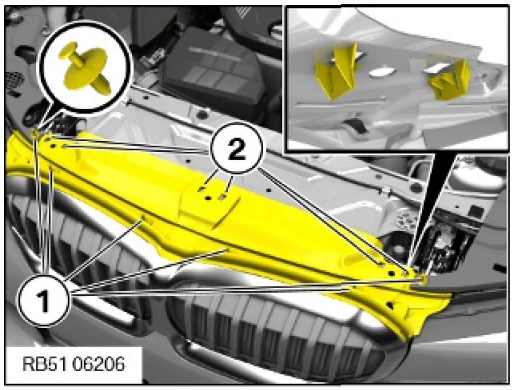
PRELIMINARY WORK

1 – Remove the seal for the bonnet in front



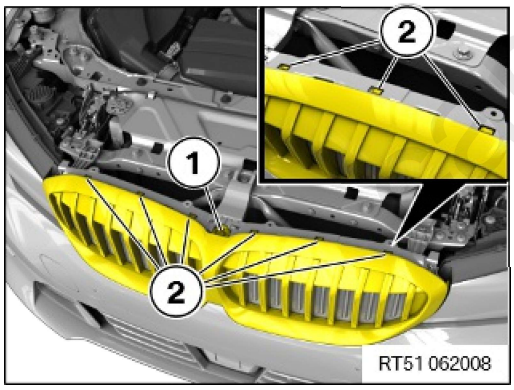
- Pull off front bonnet seal (1) upwards.

2 – Removing the centre engine compartment cover



- Detach all expanding rivets (1).
- Release the cover of the centre engine compartment with the latch mechanisms (2) .
- Feed the cover for the centre engine compartment out to the rear.

3 – Remove centre radiator ornamental grille



- Loosen screw (1).
- Release the centre front ornamental grille from the latch mechanisms (2).
- Release the centre front ornamental grille from the remaining latch mechanism towards the front and remove it.
- Unlock and disconnect plug connections according to the equipment.

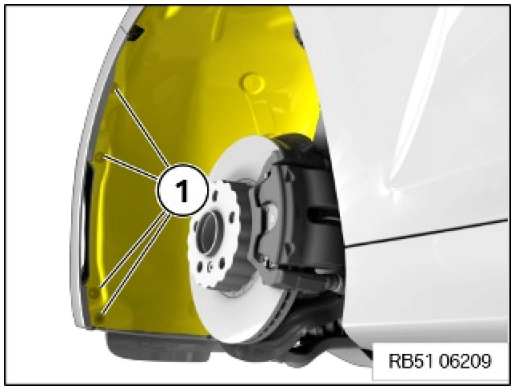
4 – Partially remove both front wheel arch trim panels

NOTICE

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

▸ **Partially removing front wheel arch trim panel**

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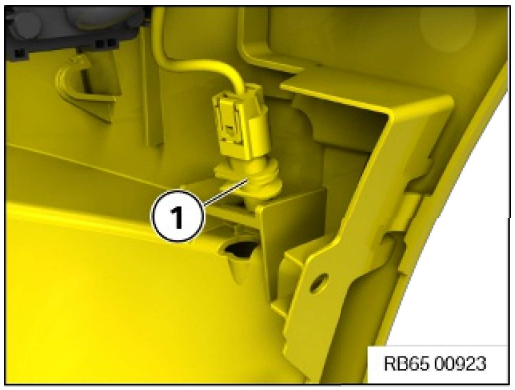


NOTICE

To provide a better overview: Schematic diagram without front wheel.

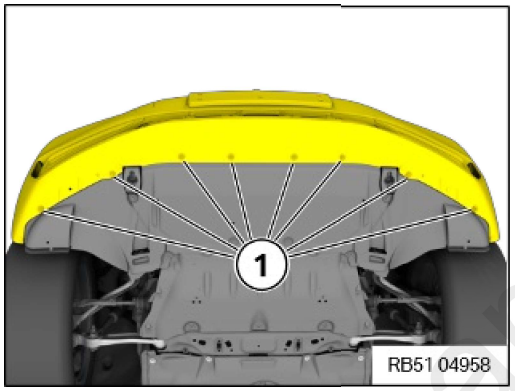
- Loosen screws (1).
- Fold the front wheel arch trim panel to one side.

5 – Partially removing the temperature sensor



- Unclip temperature sensor (1) from the front bumper panel to the top.

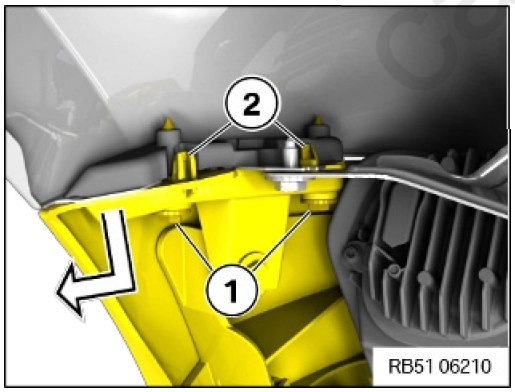
6 – Remove front bumper panel



NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.

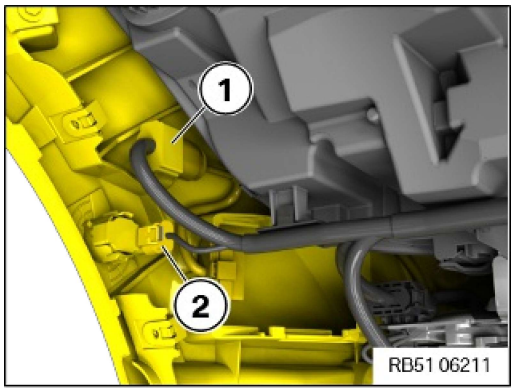
- Loosen screws (1).



NOTICE

Perform the operations on the left and right side.

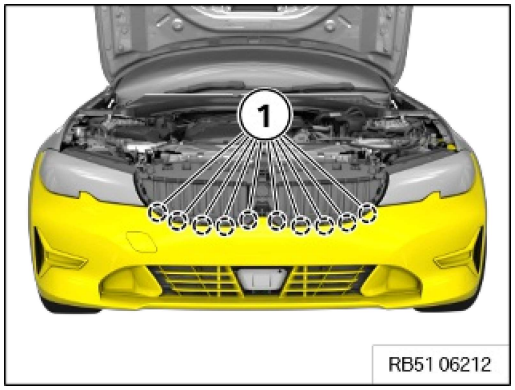
- Loosen screws (1).
- Release the front bumper panel along with the latch mechanisms (2) and feed out in the direction of arrow out of the guide.



NOTICE

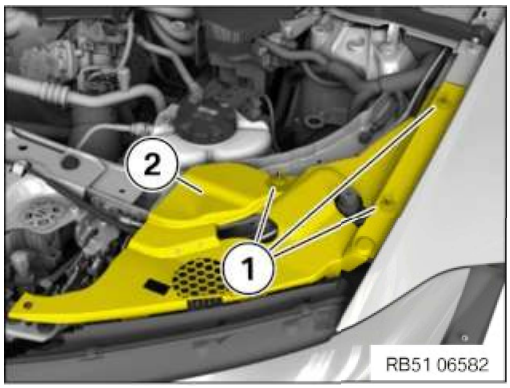
Perform the operations on the left and right side.

- Unlock plug connection (1) and disconnect.
- If necessary, unlock plug connection (2) and disconnect.



- Release the front bumper panel from the latch mechanisms (1) towards the front.
- Remove the front bumper panel.

7 – Removing the cover in the engine compartment on top partially

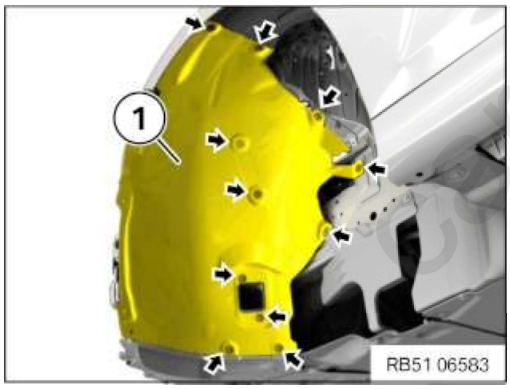


- Loosen the expanding rivet (1).
- Remove the cover in the engine compartment on top (2) partially.

8 – Removing the front section of the front wheel arch cover partially

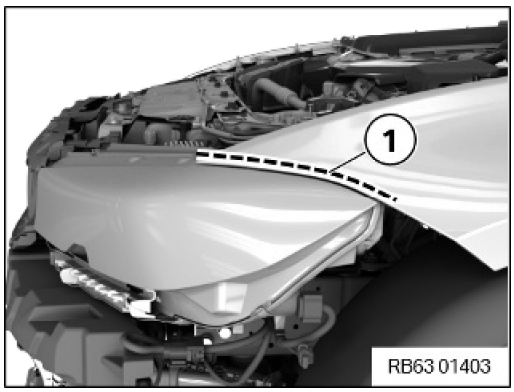
NOTICE

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



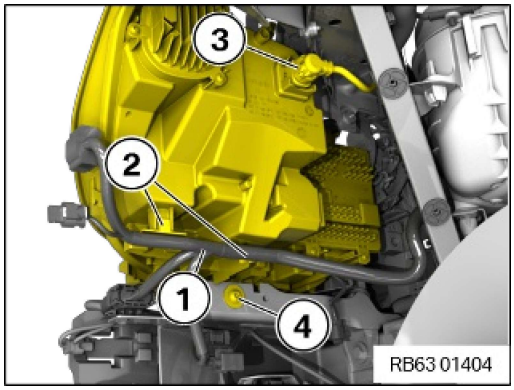
- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

9 – Remove headlight

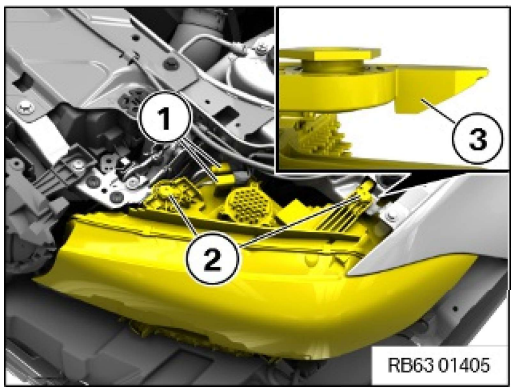


- Mask off the body in area (1) with adhesive tape.

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- Release wiring harness (1) with holders (2) from the headlight.
- Unlock plug connection (3) and disconnect.
- Loosen screw (4).

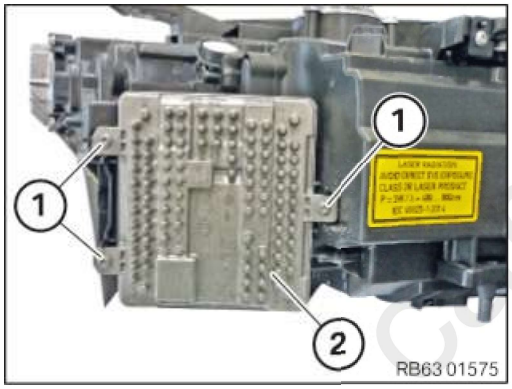


- Release connector holder (1) from the headlight.
- Loosen screws (2).
- Lift the headlight, release it with latch mechanism (3) and guide it out to the front.

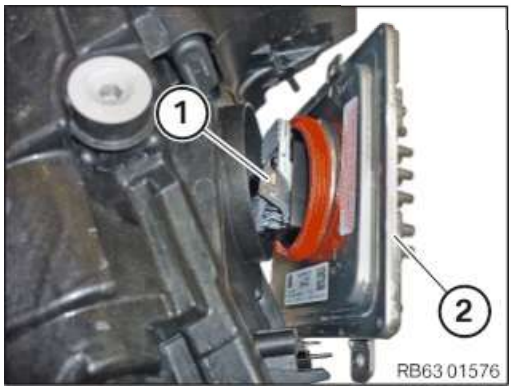
MAIN WORK

10 – Remounting control unit for Frontal Light Electronics (FLEL)

▸ **Removing the Frontal Light Electronics (FLEL) control unit (laser)**



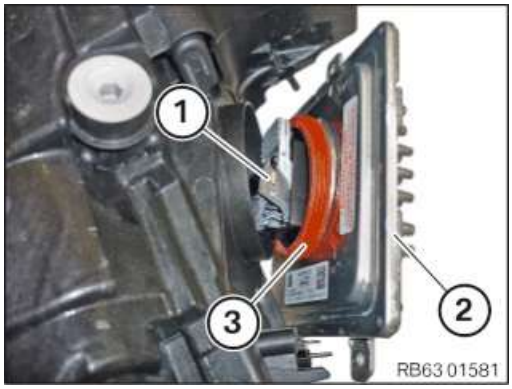
- Loosen screws (1).
- Remove Frontal Light Electronics (FLEL) control unit (2).



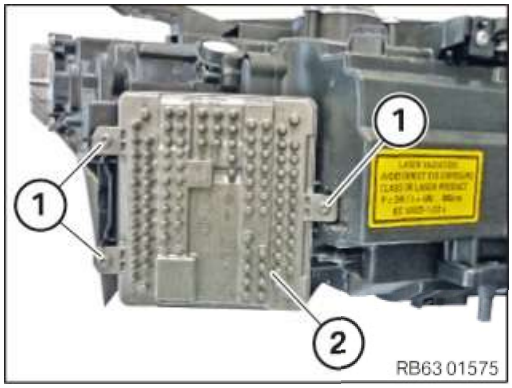
- Unlock plug connection (1) and disconnect.
- Remove the Frontal Light Electronics (FLE) control unit (2).

▸ **Install Frontal Light Electronics control unit (FLE) (Laser)**

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- Check the seal (3) for damage and replace if necessary.
- Position Frontal Light Electronics control unit (FLE) (2).
- Connect connectors (1) and lock.



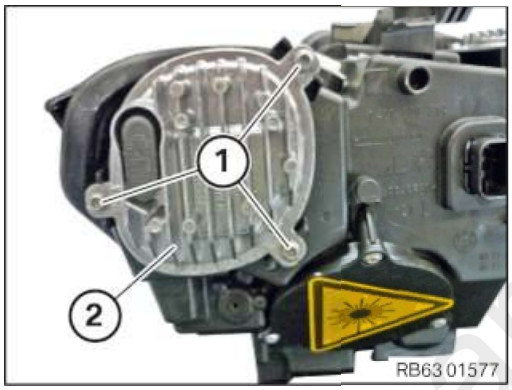
- Feed in the Frontal Light Electronics control unit (FLE) (2) and position correctly.
- Tighten the screws (1).

Front lighting electronics control unit to headlight

Screw		Tightening torque	1,5 Nm

11 – Remounting LED turn indicator

▶ **Removing LED turn indicator**



- Loosen screws (1).
- Feed out the LED turn indicator (2).



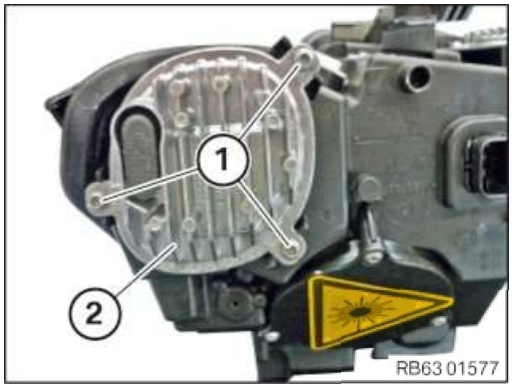
- Unlock plug connection (1) and disconnect.
- Remove the LED turn indicator (2).

▶ **Installing the LED turn indicator**

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- Check the seal (3) for damage and replace if necessary.
- Position LED turn indicator (2).
- Connect connectors (1) and lock.



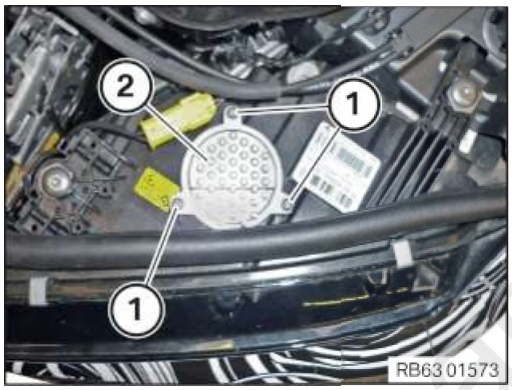
- Guide in LED turn indicator (2) and position it correctly.
- Tighten the screws (1).

LED turn indicator to headlight

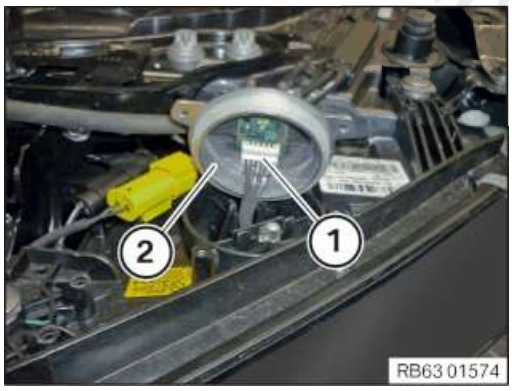
Screw		Tightening torque	1,5 Nm

12 – Remount LED module for daytime driving lights

▸ **Remove LED module for daytime driving lights**



- Loosen screws (1).
- Feed out daytime driving lights LED module (2) and raise slightly.



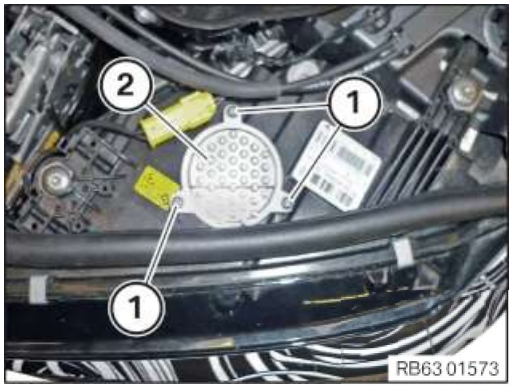
- Unlock plug connection (1) and disconnect.
- Remove daytime driving lights LED module (2).

▸ **Install LED module for daytime driving lights**

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- Check the seal (3) for damage and replace if necessary.
- Position the lighting ring LED module (2).
- Connect connectors (1) and lock.



- Insert and correctly position LED module lighting ring (2).
- Tighten the screws (1).

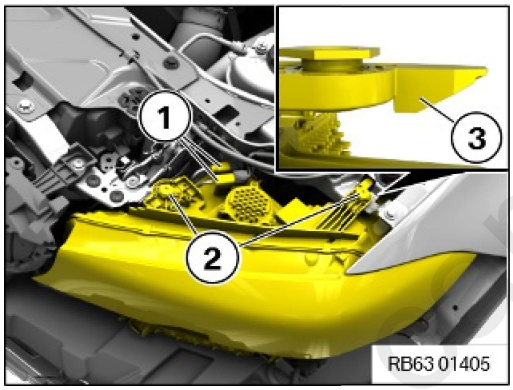
LED module of daytime driving lights to headlight

Screw		Tightening torque	1,5 Nm

13 – Remounting headlight holder

POSTPROCESSES

14 – Install headlight

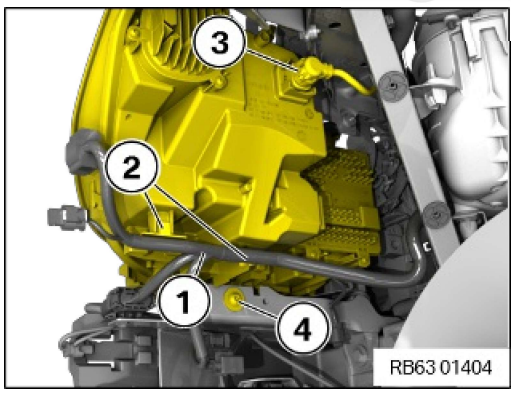


- Guide in the headlight from the front and clip it in with latch mechanism (3).
- Tighten down screws (2).

Front light combination, top

Oval-head screw		Tightening torque	8 Nm

- Secure connector holder (1) to the headlight.

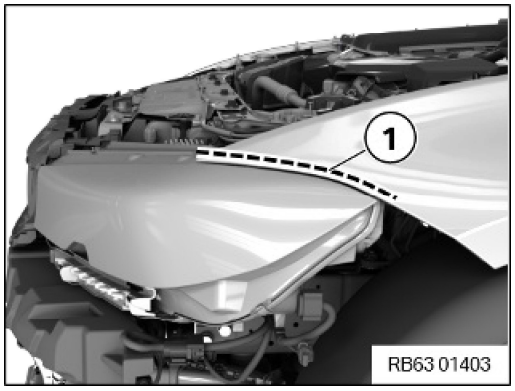


- Tighten down screw (4).

Front light combination, bottom

Oval-head screw		Tightening torque	5 Nm

- Connect plug connection (3) and lock.
- Secure wiring harness (1) to the headlight with holders (2).

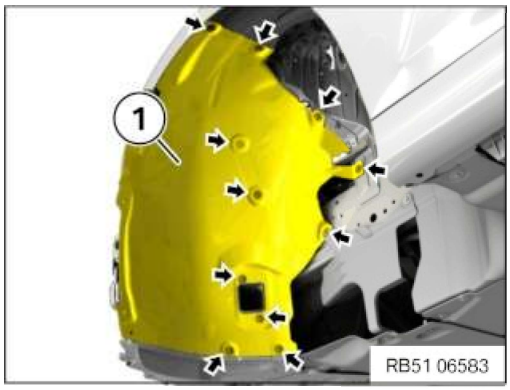


- Remove the adhesive tape in area (1).

15 – Partially installing front section of the front wheel arch cover

NOTICE

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

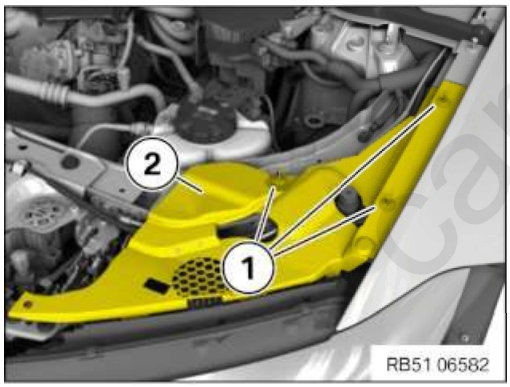


- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

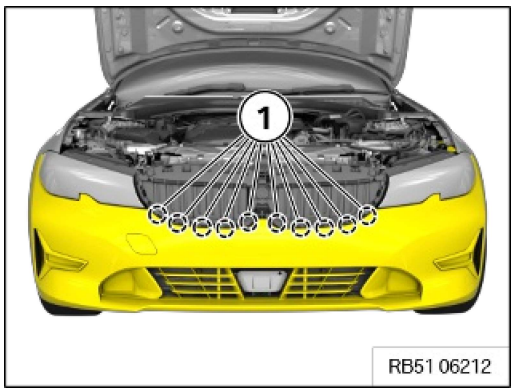
Thermoplastic hexagon screw		Tightening torque	2,6 Nm

16 – Installing the cover in the engine compartment on top partially



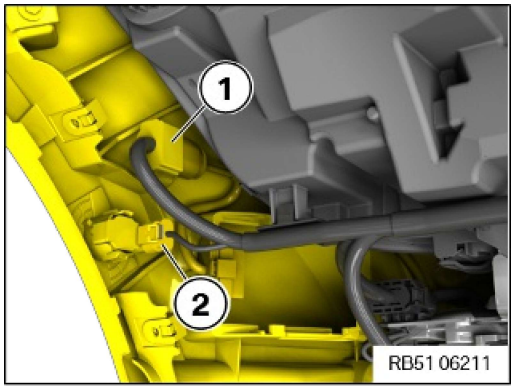
- Install the cover in the engine compartment on top (2).
- Secure expanding rivet (1).

17 – Install bumper panel, front



- Position the front bumper panel.
- Clip the front bumper panel into latch mechanisms (1).

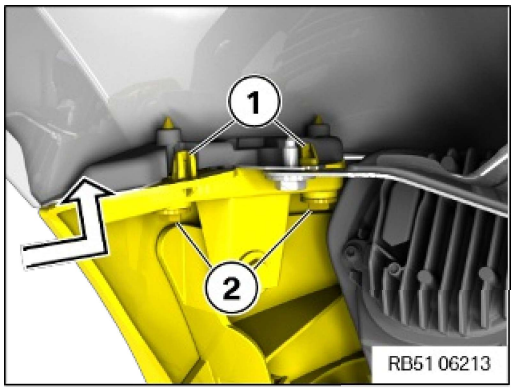
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NOTICE

Perform the operations on the left and right side.

- Connect connectors (1) and lock.
- If necessary, connect the connector (2) and lock it.



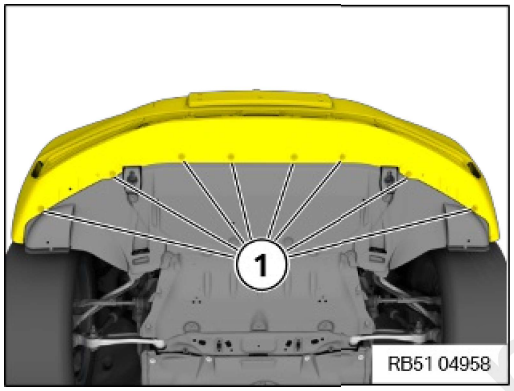
NOTICE

Perform the operations on the left and right side.

- Feed the bumper panel in arrow direction into the guide and clip in with the latch mechanism(1).
- Tighten down screws (2).

Front bumper panel to front side panel

Torx screw 5x35		Tightening torque	3 Nm



NOTICE

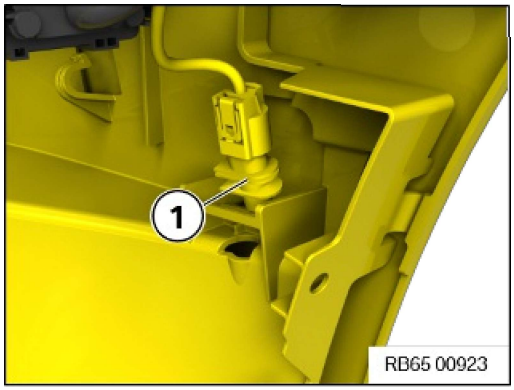
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Tighten the screws (1).

Front bumper panel to underbody protection

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

18 – Partially installing the temperature sensor



- Clip the temperature sensor (1) downwards into the front bumper panel.

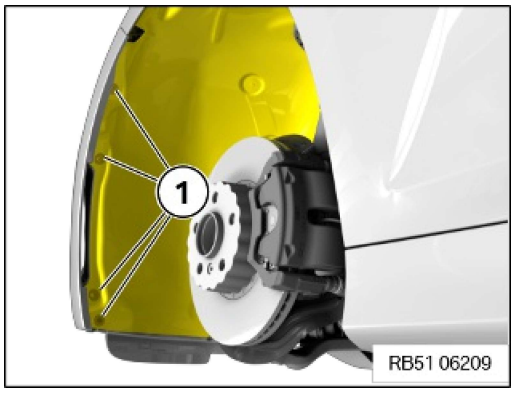
19 – Partially installing both front wheel arch trim panels

NOTICE

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

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▸ **Partially installing front wheel arch trim panel**



NOTICE

To provide a better overview: Schematic diagram without front wheel.

- Fold back the front wheel arch trim panel.
- Tighten the screws (1).

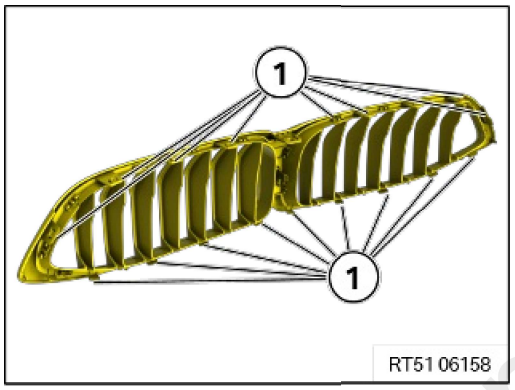
Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

20 – Install centre radiator grille

NOTICE

Schematic diagram is for example purposes. Some parts may differ in certain details.



Check

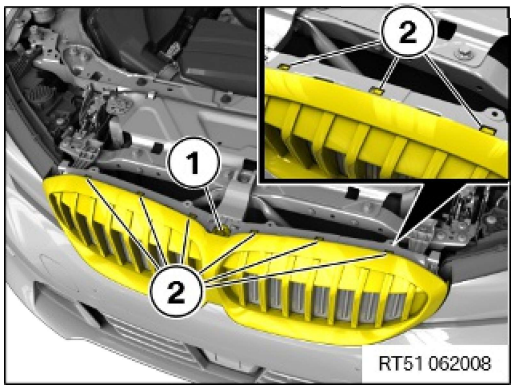
- Check latch mechanisms (1) for damage.

Result

» The latch mechanism (1) is damaged.

Measure

- Renew the front ornamental grille, centre.



- Depending on the equipment, connect and lock connectors.
- Position the front ornamental grille, centre and clip in all latch mechanisms (2) from the front.
- Tighten down screw (1).

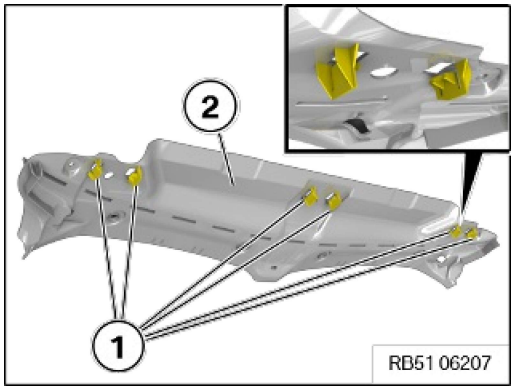
Centre of front ornamental grille to top air flap control

Oval-head screwM6		Tightening torque	4,6 Nm

21 – Installing cover for engine compartment centre

Check

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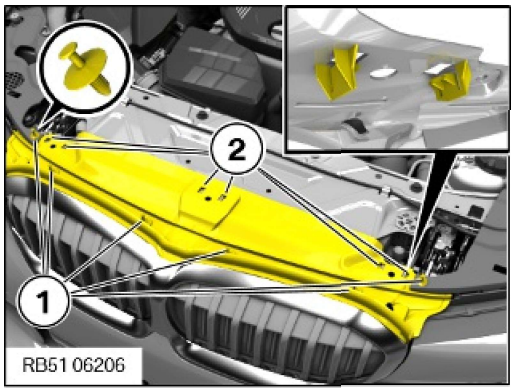
- Check latch mechanisms (1) of cover for engine compartment centre (2) for damage.

Result

» The latch mechanism (1) is damaged.

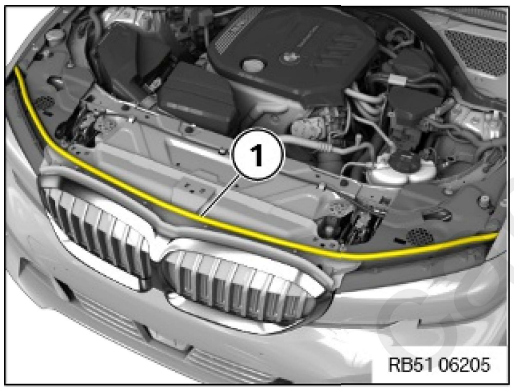
Measure

- Renew cover for engine compartment centre (2).



- Guide in the cover for the engine compartment centre from the rear and position it.
- Clip in the cover for the engine compartment centre with latch mechanisms (2).
- Mount all expanding rivets (1).

22 – Install the seal for the front bonnet



- Position the bonnet seal(1) and connect it on the mounting on the bumper and on the headlights.

23 – Adjusting headlights

TECHNICAL INFORMATION

Notes on headlight adjustment are a fundamental requirement for these repair instructions and must be complied with at all times.

For additional information see: 6310 ... Test prerequisite for adjusting headlights

NOTICE

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

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- If necessary, remove the cover over the adjusting screws for headlight adjustment.
- Adjust the height at the adjusting screw (1).
- **US version:** Set the lateral adjustment only if the plug on the adjusting screw for lateral adjustment is missing or damaged.

  Remove damaged plug if necessary (refer to additional information).
- Turn adjusting screw (2) for a correct lateral adjustment.
- **US version:** If the lateral adjustment has been checked or corrected: Renew plugs and push into the adjusting screw for the lateral adjustment **without damaging it** (see additional information).
- If necessary, fit a cover over the adjusting screws for headlight adjustment.

Additional Information

Overview of Tightening Torques

Front lighting electronics control unit to headlight			Used in step 10
Screw		Tightening torque	1,5 Nm

LED turn indicator to headlight			Used in step 11
Screw		Tightening torque	1,5 Nm

LED module of daytime driving lights to headlight			Used in step 12
Screw		Tightening torque	1,5 Nm

Front light combination, top			Used in step 14
Oval-head screw		Tightening torque	8 Nm

Front light combination, bottom			Used in step 14
Oval-head screw		Tightening torque	5 Nm

Wheel arch trim panel, front			Used in step 1519
Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Front bumper panel to front side panel			Used in step 17
Torx screw 5x35		Tightening torque	3 Nm

Front bumper panel to underbody protection			Used in step 17
Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Centre of front ornamental grille to top air flap control			Used in step 20
Oval-head screwM6		Tightening torque	4,6 Nm

Links

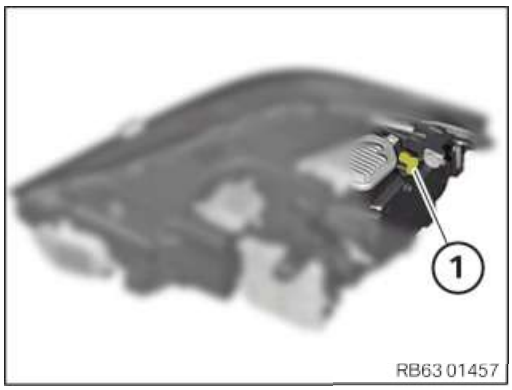
Repair instructions	**Used in step**
63 10 ... Test requirements for headlights vertical aim adjustment	23

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63 12 ... US version: Check / position the horizontal blocking when headlight is replaced

Note:

Before installing the new headlamp, make sure that the headlamp adjustment screw for lateral adjustment is secured against tampering with a plug.

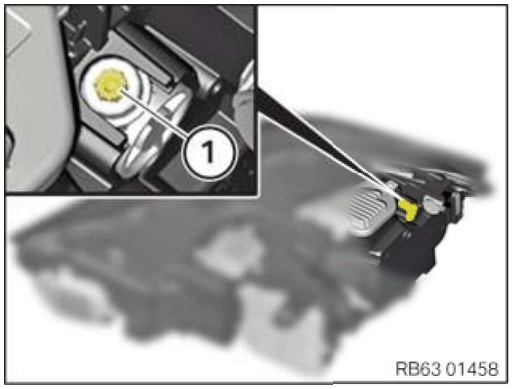


Check:

Check the adjustment screw for horizontal adjustment for blocking (schematic diagram) For the precise location of the adjusting screws, if necessary, refer to the vehicle-specific documents for the headlamp setting)

Desired state:

The adjustment screw for side adjustment must be blocked with a plug (1) (schematic diagram)



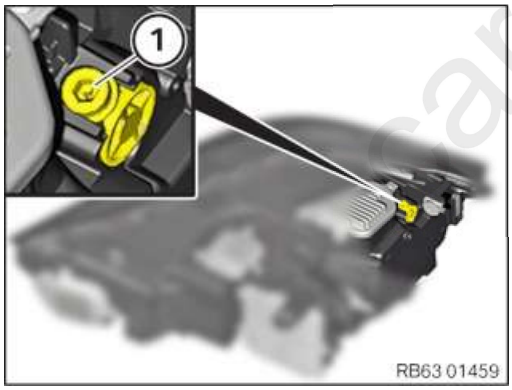
Result:

Plug (1) is mounted in the the horizontal adjustment screw (schematic diagram))

Measure:

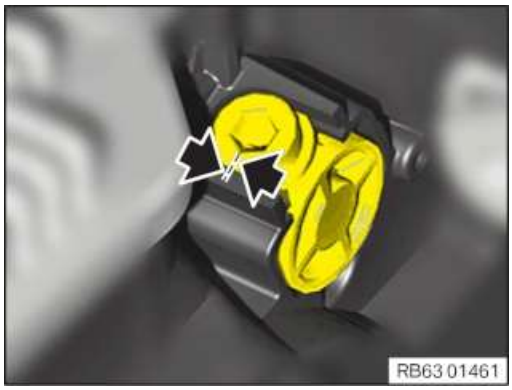
Install headlight

After installation, check **vertical** headlamp setting and correct if necessary



Result:

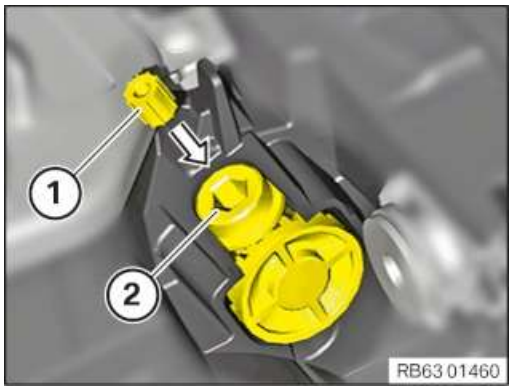
No plug is fitted in the horizontal adjustment screw (1) (schematic diagram)



Measure:

Mark the position of the horizontal adjustment screw to identify a possible adjustment of the adjustment screw after mounting the horizontal lock (schematic diagram).

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Insert the headlamp-specific plug (1) **into the adjustment screw (2) without damage** (schematic diagram)

Attention: After installing the plug (1), check the correct position of the adjustment screw (2) according to the markings applied and correct if necessary.

Install headlight

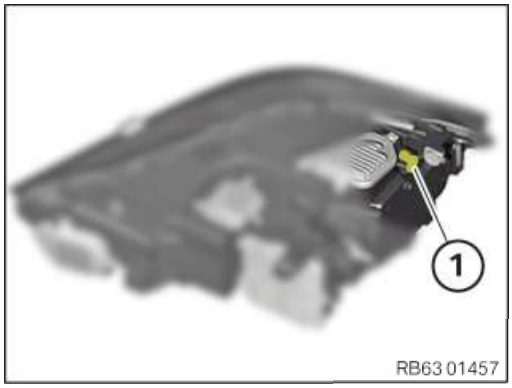
After installation, check **vertical** headlamp setting and correct if necessary

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63 12 ... US version: Remove the horizontal blocking before adjusting the headlamp

Special tools required:

- 23 0 490

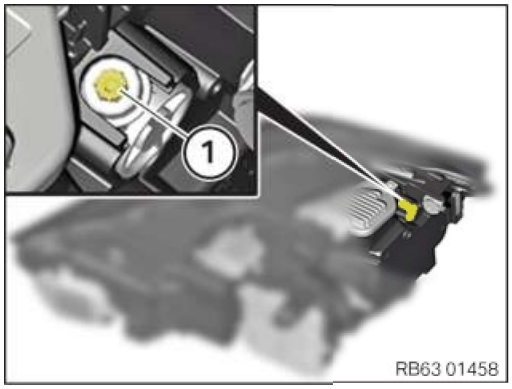


Check:

Check the adjustment screw for horizontal adjustment for blocking (schematic diagram) For the precise location of the adjusting screws, if necessary, refer to the vehicle-specific documents for the headlamp setting)

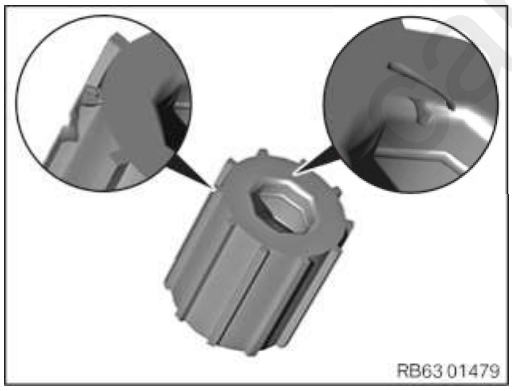
Desired state:

The adjustment screw for side adjustment must be blocked with a plug (1) (schematic diagram)



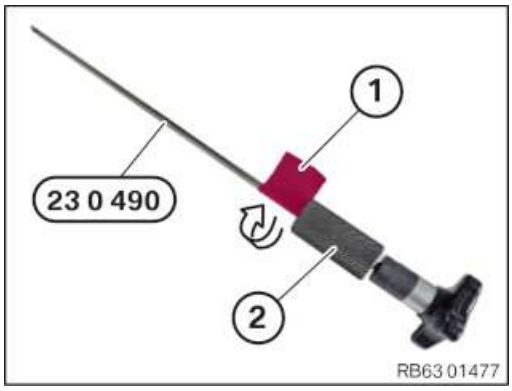
Result:

Plug (1) is mounted in the the horizontal adjustment screw (schematic diagram))



Plug (1) has **damage / deformation on ribs / bore**, which suggest possible manipulation of the headlamp setting

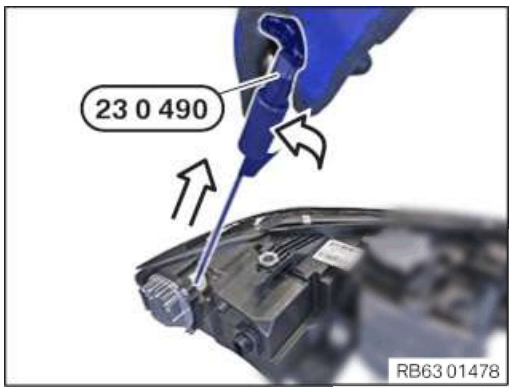
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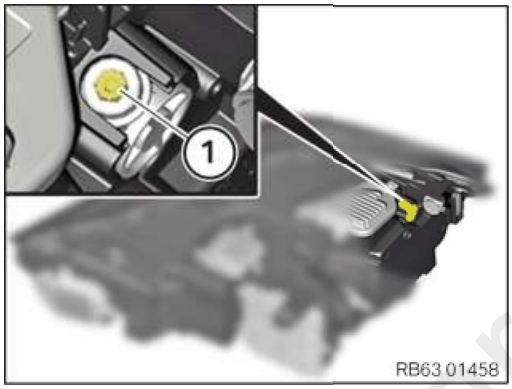
Measure:

Remove blockage from horizontal adjustment screw

In order to prevent damage to the vehicle, the impact weight (2) of the special tool 23 0 490 must be fixed close to the handle with adhesive tape (1).



Screw special tools 23 0 490 into plugs and remove them from the adjusting screw by pulling (schematic diagram)



Result:

Plug (1) is mounted in the horizontal adjustment screw and has no **damage / deformation** suggesting possible manipulation of the headlamp setting (schematic diagram)

Measure:

No check or adjustment of the horizontal adjustment necessary

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63 12 ... US version: Setting the horizontal blocking when headlamp is set

Special tools required:

- 2 467 369

Note:

Before installing the new headlamp, make sure that the headlamp adjustment screw for horizontal adjustment is secured against tampering with a plug.



Special tool 2 467 369 has a freewheel for damage-free, torque-free installation of the horizontal blocking



Carefully insert the plug (1) for blocking the horizontal adjustment onto the special tool 2 467 369, free of damage



Press in the plug (1) with the special tool 2 467 369 **damage-free** into the adjustment screw for horizontal adjustment (2) (schematic diagram)

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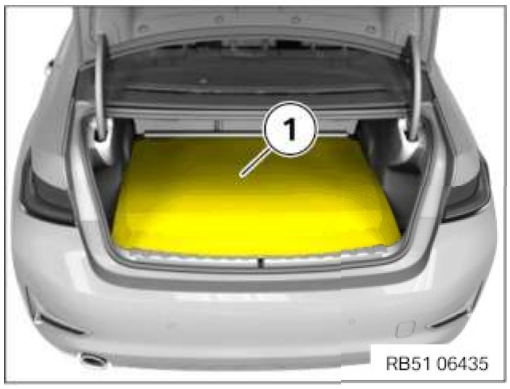
63 14 120 Removing and installing/ replacing rear reflector (on rear bumper panel)

NOTICE

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

PRELIMINARY WORK

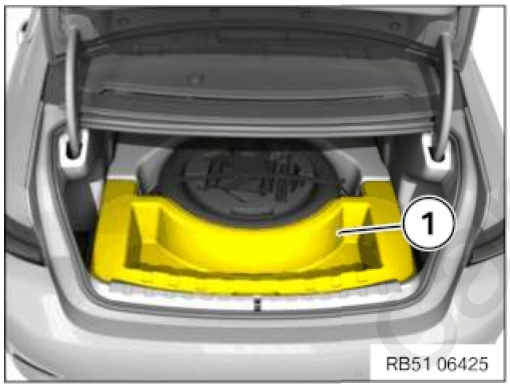
1 – Removing the luggage compartment floor trim panel



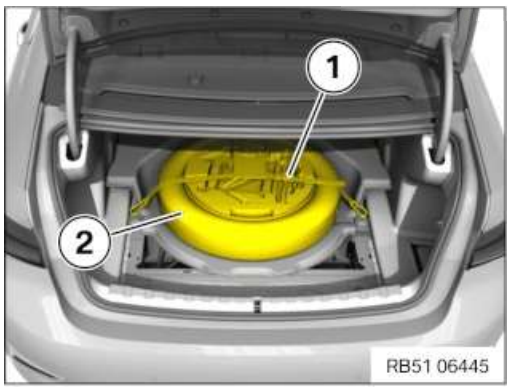
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**



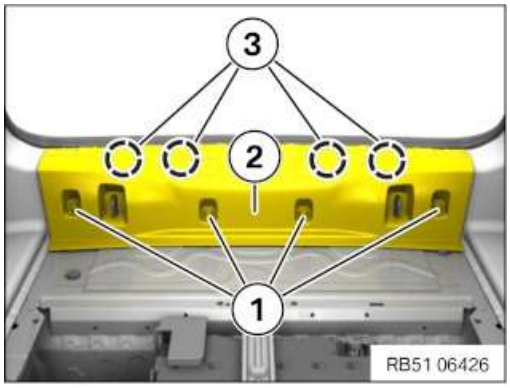
- Remove rear luggage compartment well (1).



- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

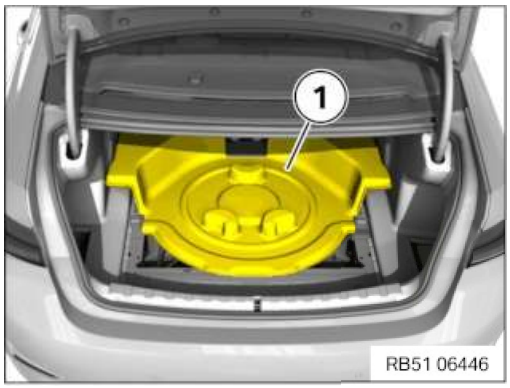
3 – Removing the loading edge trim

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- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

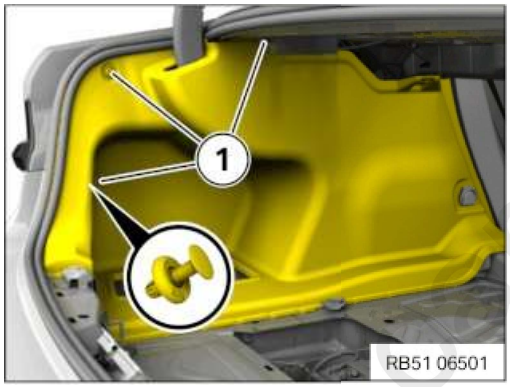
4 – Removing front luggage compartment well



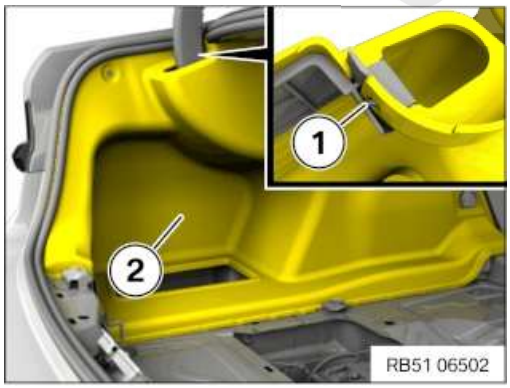
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▸ Partially remove luggage compartment wheel arch trim on left



- Loosen the expanding rivet (1).

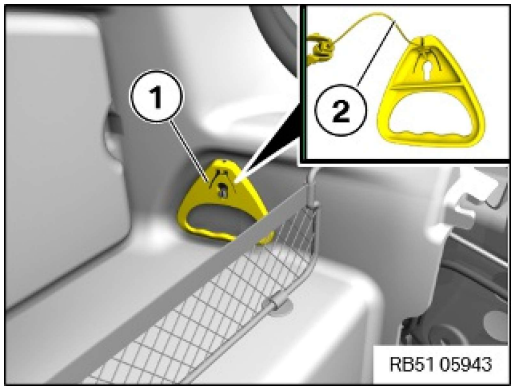


- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ Partially remove luggage compartment wheel arch panel on right

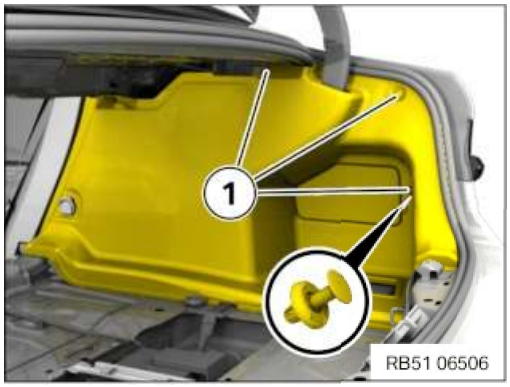
▹ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)

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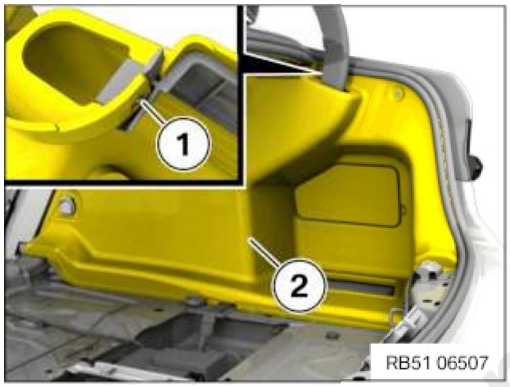


- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

◁



- Loosen the expanding rivet (1).



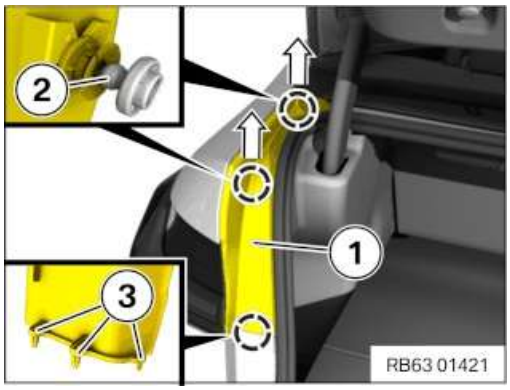
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

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

▸ **Remove the trim in the water channel**



- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

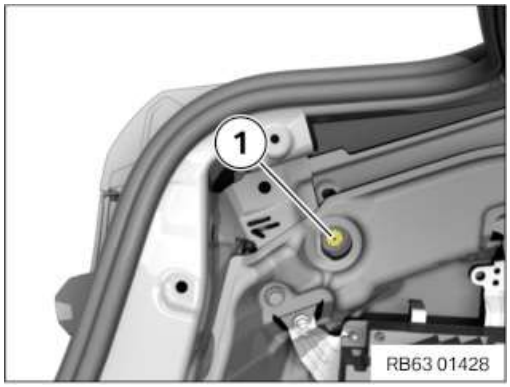
7 – Remove both rear lights from the side panel

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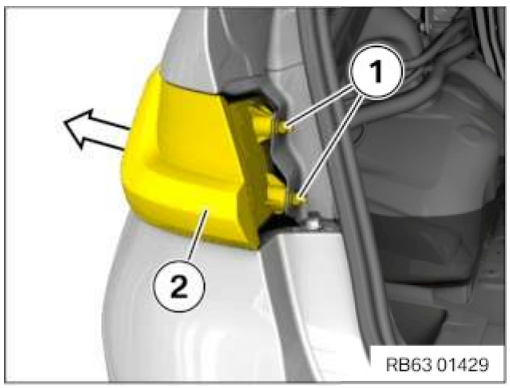
NOTICE

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

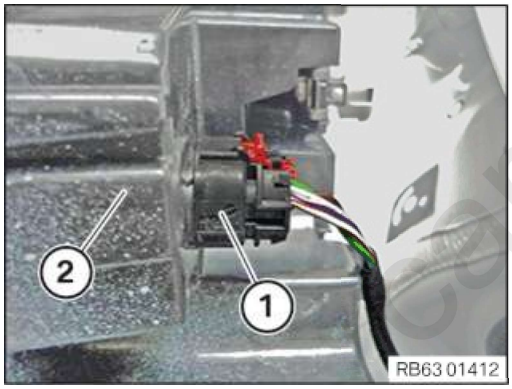
▶ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Remove rear bumper panel

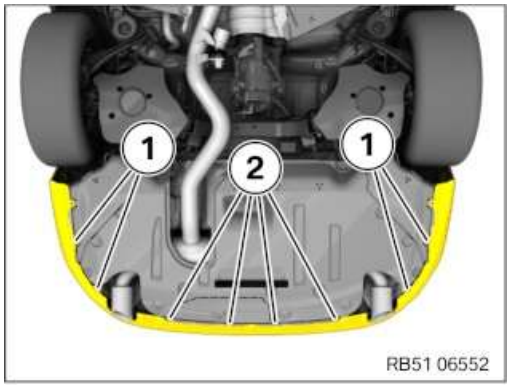


NOTICE

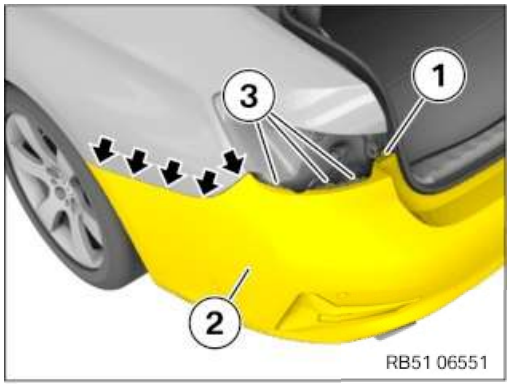
Perform the operations on the left and right side.

- Loosen screws (1).

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- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.



NOTICE

Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).



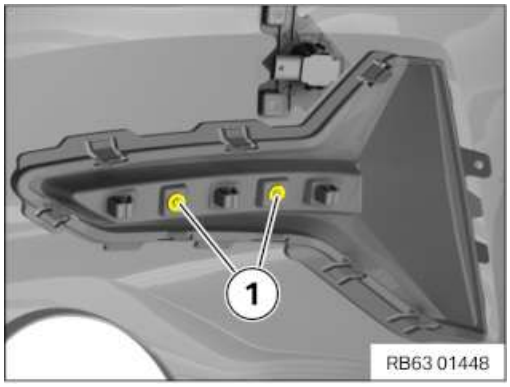
- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

MAIN WORK

9 – Removing the rear rear reflector

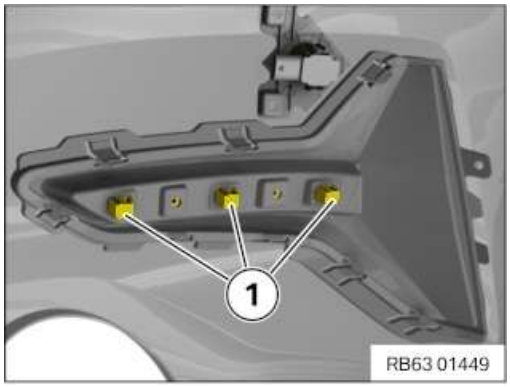
NOTICE

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



- Loosen screws (1).

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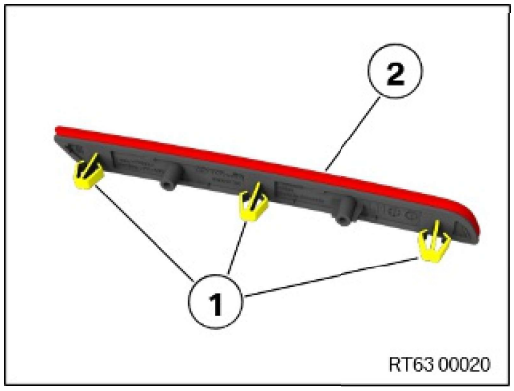


- Unlock clamps (1) and remove the rear reflector form the trim.

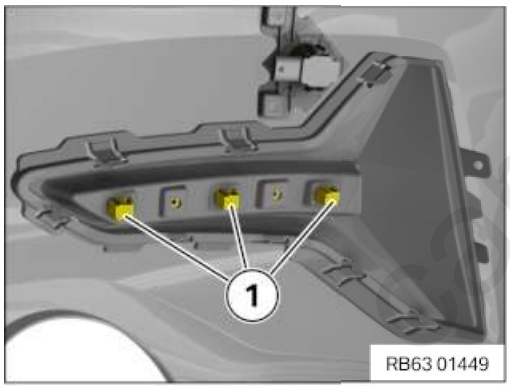
10 – Installing the rear rear reflector

NOTICE

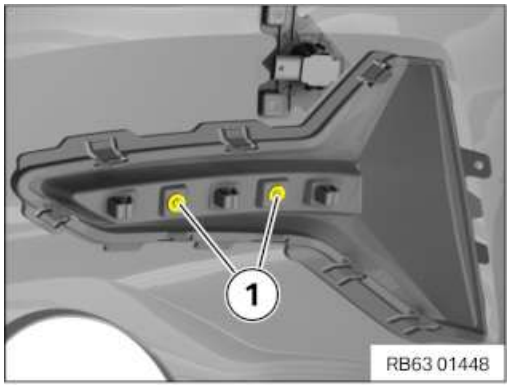
Description is for left component only. Procedure on the right side is identical.



- Check clamps (1) on rear reflector (2) for damage and, if necessary, renew them.



- Position rear reflector in the rear bumper panel and clip it in with clamps (1).



- Tighten the screws (1).

Rear reflector to rear bumper panel

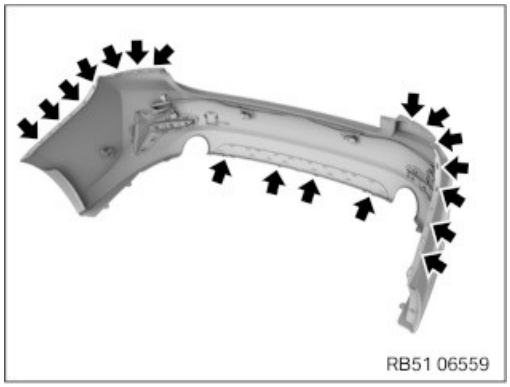
Screw for thermoplastic		Tightening torque	3 Nm

POSTPROCESSES

11 – Install rear bumper panel

Check

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- Check the latch mechanisms (arrows) for damage.

Result

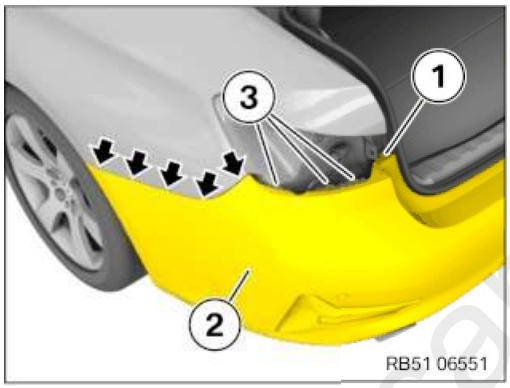
» Latch mechanisms are damaged.

Measure

- Renew the bumper panel.



- Position the bumper panel (1) straight with the help of another person.
- Connect all connectors and lock.



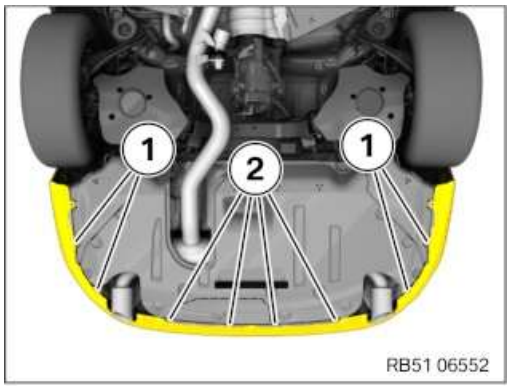
NOTICE

Perform the operations on the left and right side.

- Clip bumper panel (2) on the side in the latch mechanisms (arrows).
- Clip bumper panel (2) in the area of the rear light housing in latch mechanisms (3).
- Tighten down screw (1).

Rear bumper panel guide on rear centre guide

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm



- Clip bumper panel into latch mechanisms (2).
- Tighten the screws (1).

Mounting for rear bumper panel on support for rear bumper panel

Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

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NOTICE

Perform the operations on the left and right side.

- Tighten the screws (1).

Rear bumper panel to rear side panel

Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

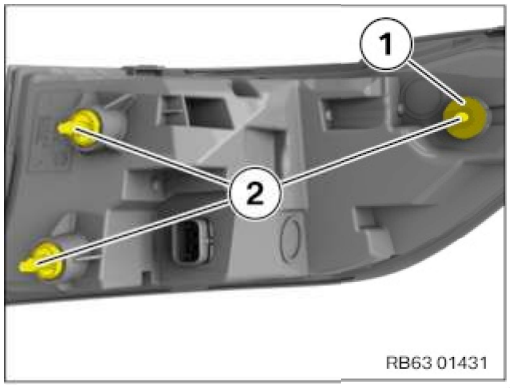
12 – Install both rear lights on the side panel

NOTICE

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

▸ **Install the rear light on the side panel**

Check



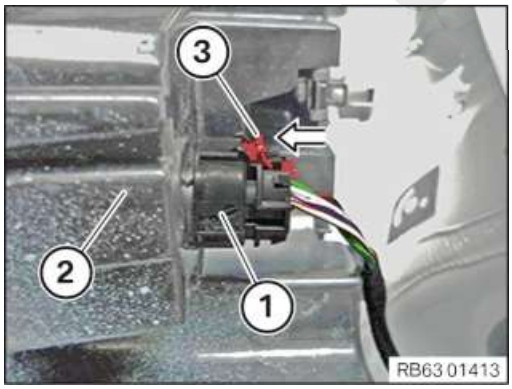
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

Measure

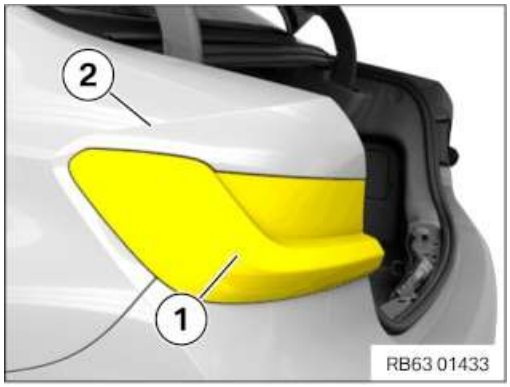
- Replace rear light.



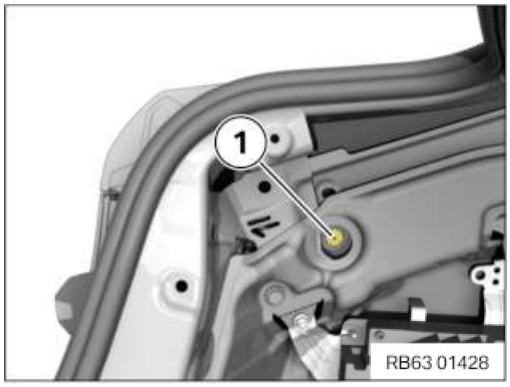
- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

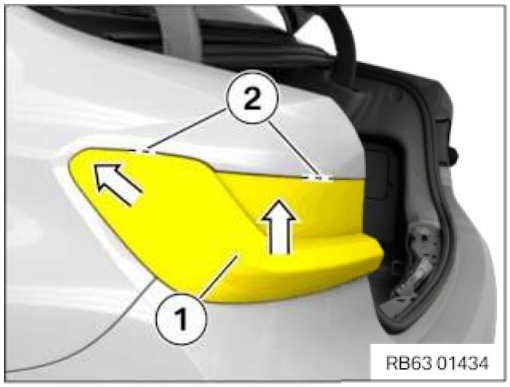
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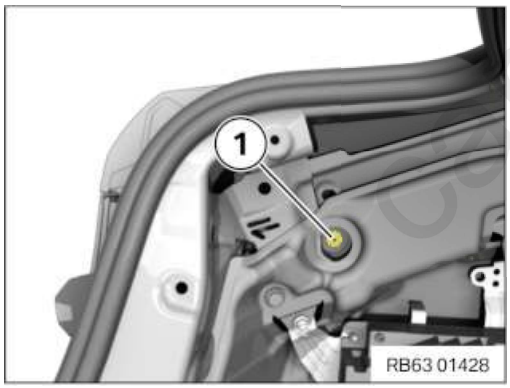
- Position the rear light on the side panel (1) on the side panel (2).



- Position the nut (1).



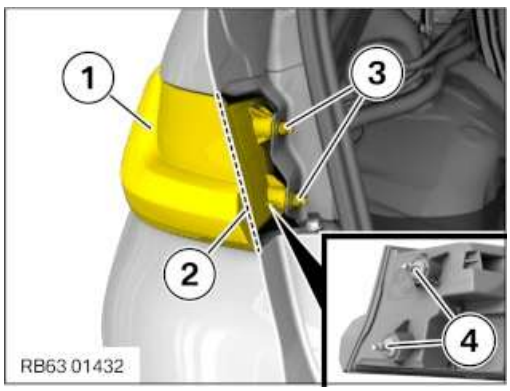
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

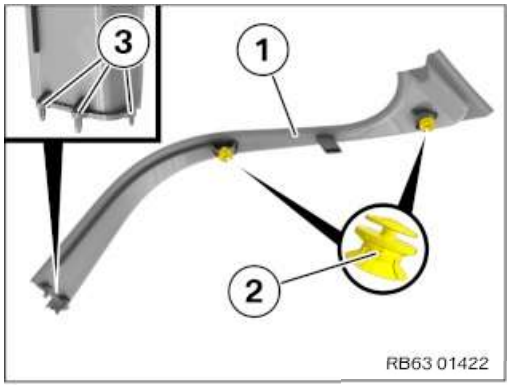
Nut M5, AF 10		Tightening torque	4 Nm

13 – Installing both trims of the water channel

NOTICE

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

▸ **Install the trim in the water channel**



Check

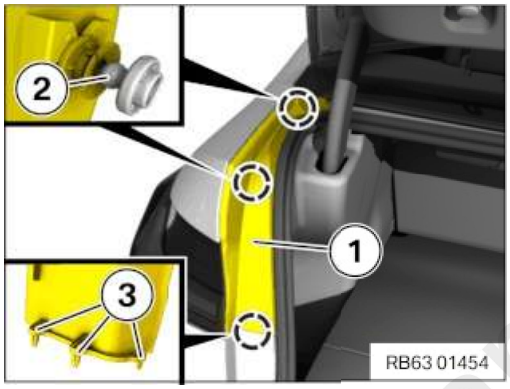
- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

Result

» The guides are damaged.

Measure

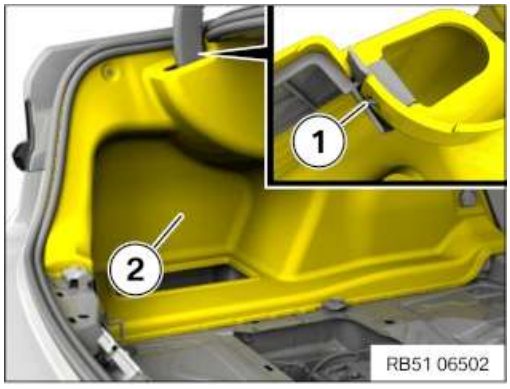
- Renew trim in the water channel .



- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

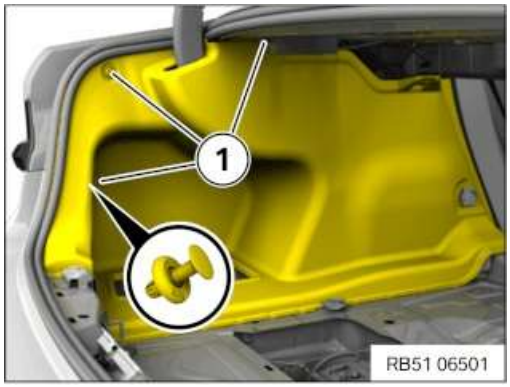
14 – Installing both luggage compartment wheel arch trim panels partially

▸ **Partially installing the left luggage compartment wheel arch trim panel**



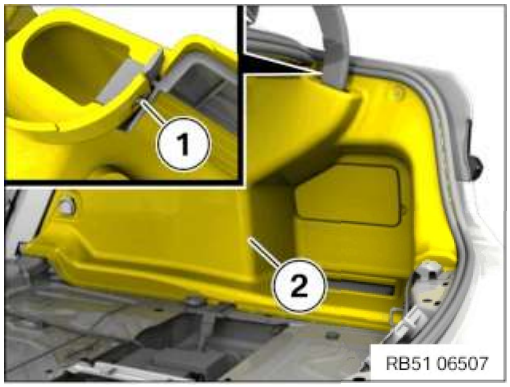
- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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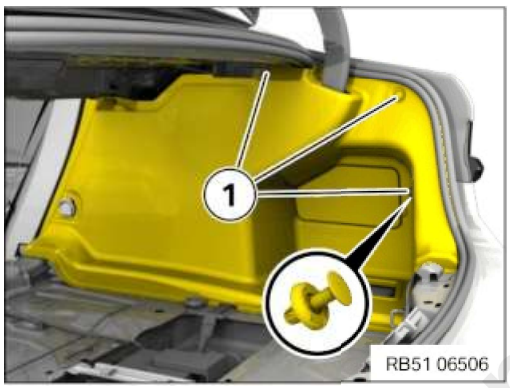


- Secure expanding rivet (1).

▶ **Partially installing right luggage compartment wheel arch trim panel**

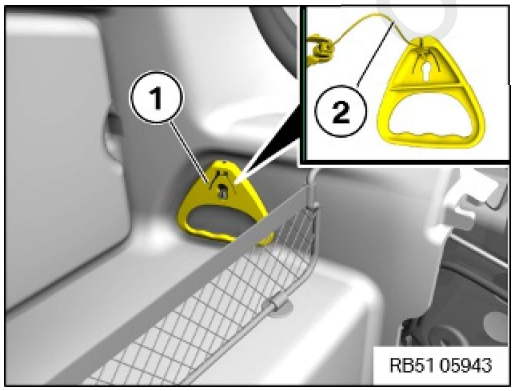


- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



- Secure expanding rivet (1).

▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**

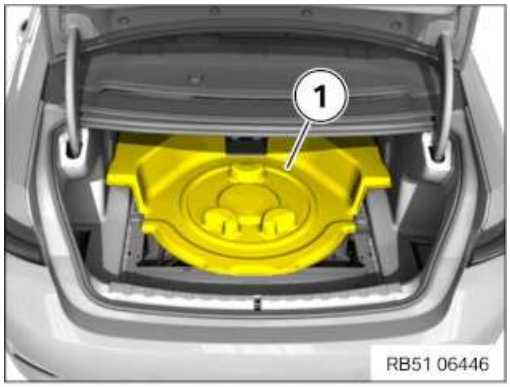


- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

◁

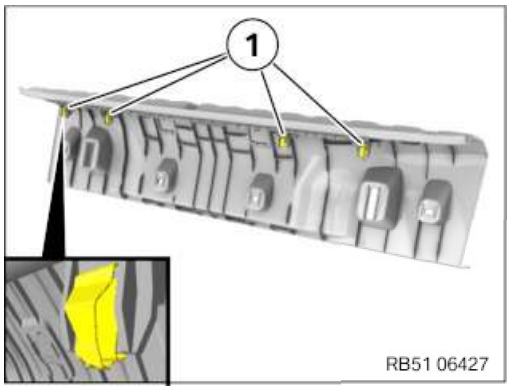
15 – Install the luggage compartment well in front

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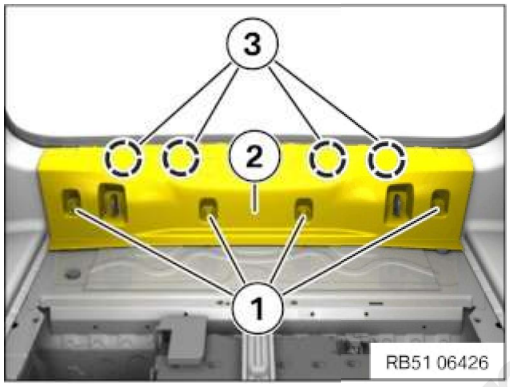


- Feed in and insert front luggage compartment well (1) on the seat belt strap.

16 – Installing loading edge trim

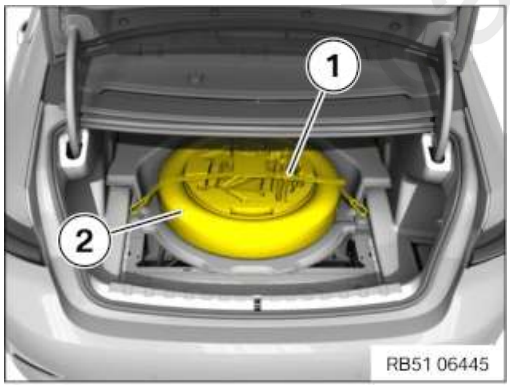


- Check the clamps (1) for damage and renew if necessary.



- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

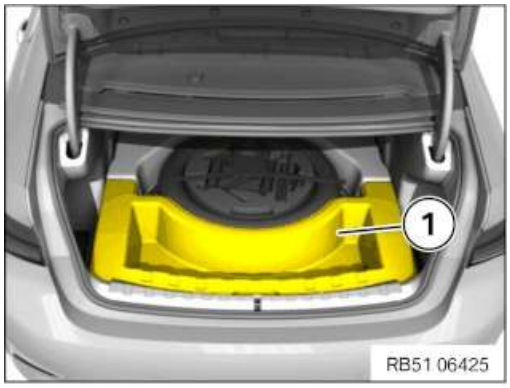
17 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

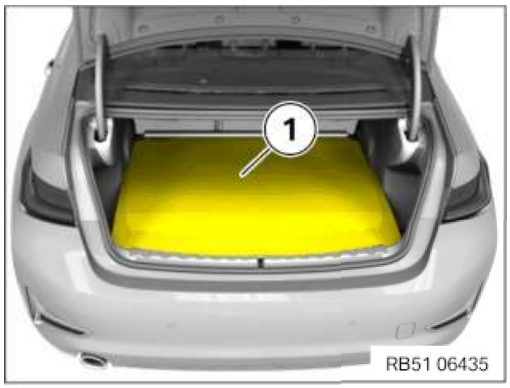
► **Installing rear luggage compartment well**

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- Install rear luggage compartment well (1).

18 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

Rear reflector to rear bumper panel			Used in step 10
Screw for thermoplastic		Tightening torque	3 Nm

Rear bumper panel guide on rear centre guide			Used in step 11
Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Mounting for rear bumper panel on support for rear bumper panel			Used in step 11
Hexagon screw for thermoplastic		Tightening torque	2,6 Nm

Rear bumper panel to rear side panel			Used in step 11
Hexagon screw for thermoplastic		Tightening torque	2,5 Nm

Rear light to side panel			Used in step 12
Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel			Used in step 12
Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	**Used in step**
61 13 ... Unlocking and disconnecting different plug connections	7

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63 14 125 Removing and installing/replacing both rear reflectors

PRELIMINARY WORK

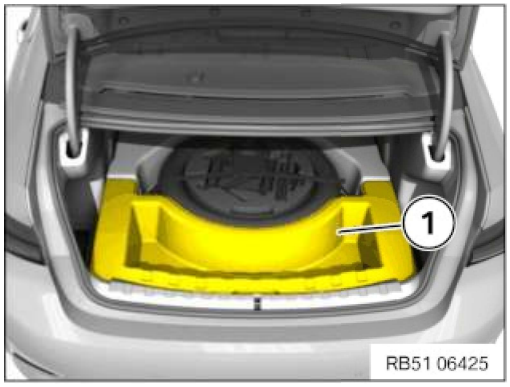
1 – Removing the luggage compartment floor trim panel



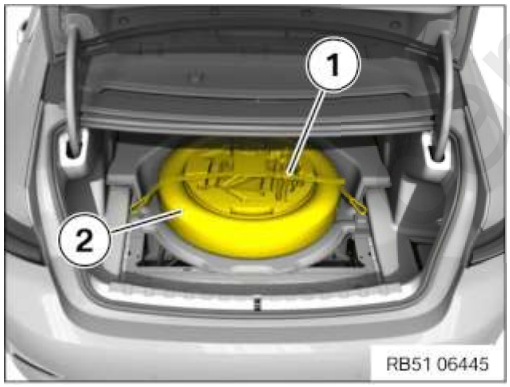
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

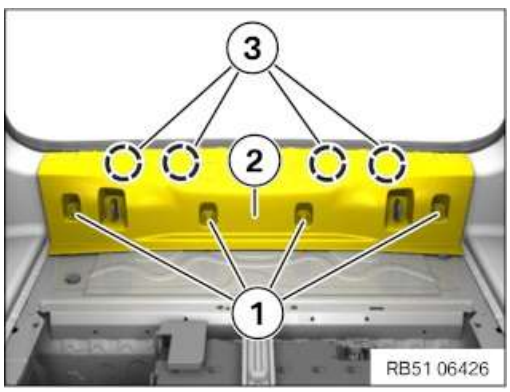


- Remove rear luggage compartment well (1).



- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

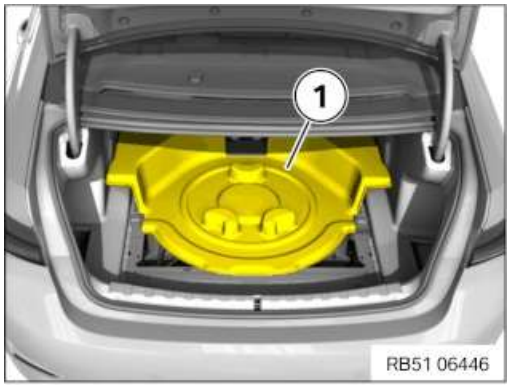
3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

4 – Removing front luggage compartment well

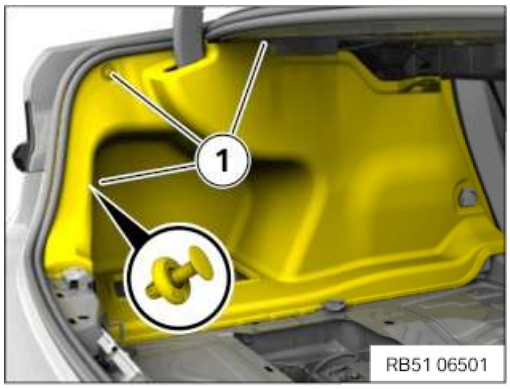
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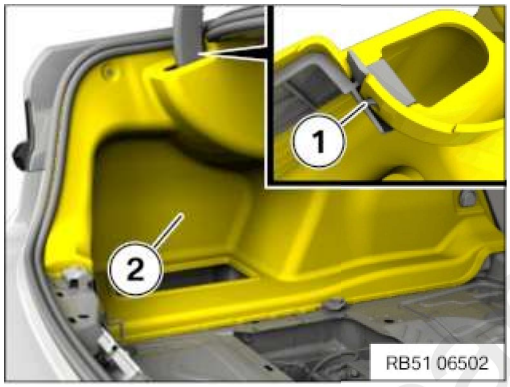
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Removing both luggage compartment wheel arch trim panels partially

▶ Partially remove luggage compartment wheel arch trim on left



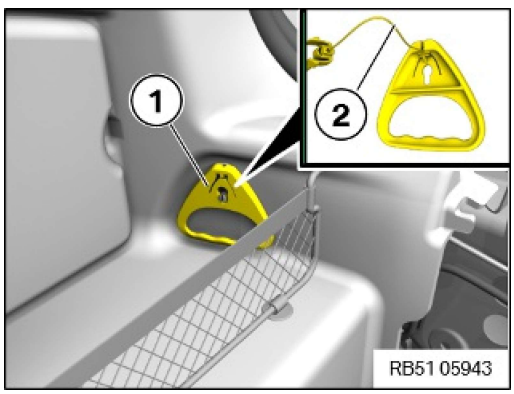
- Loosen the expanding rivet (1).



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▶ Partially remove luggage compartment wheel arch panel on right

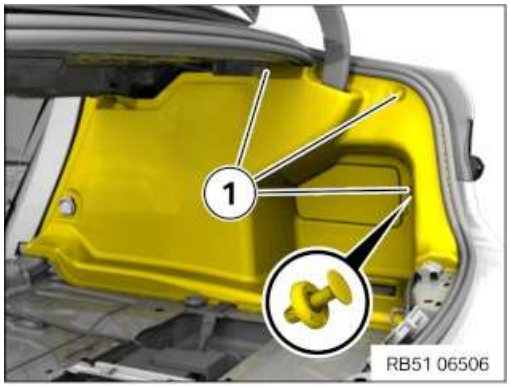
▷ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)



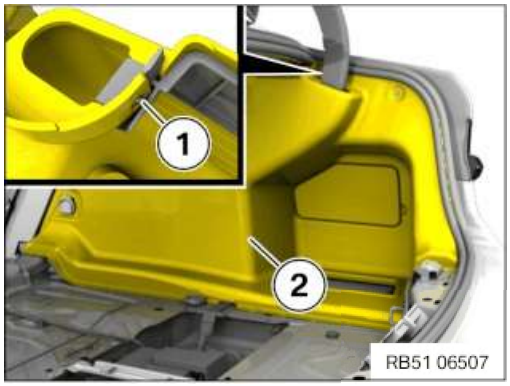
- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).

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- Loosen the expanding rivet (1).



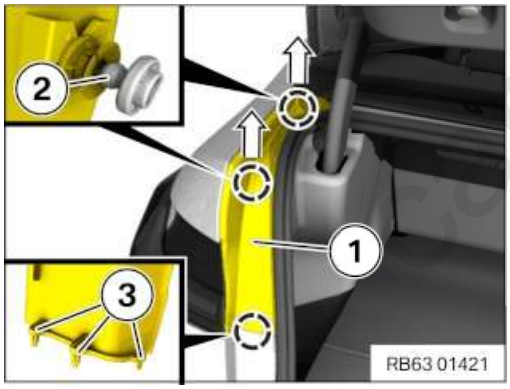
- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Removing both trims of water channel

NOTICE

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

▸ **Remove the trim in the water channel**



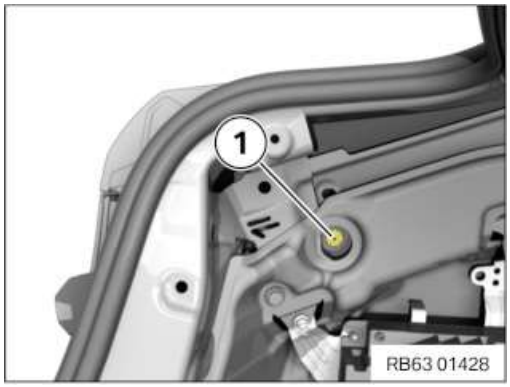
- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

7 – Remove both rear lights from the side panel

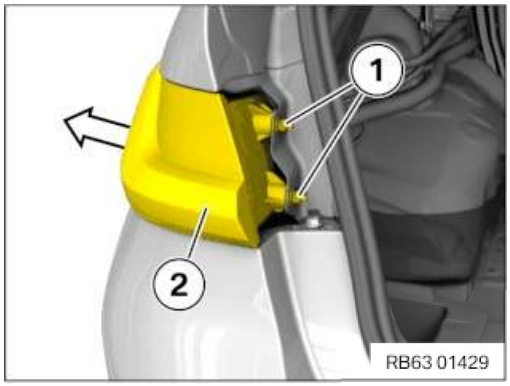
NOTICE

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

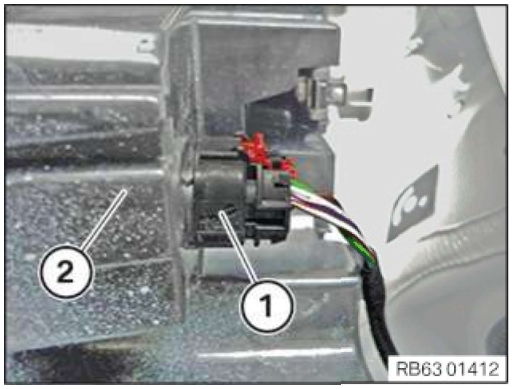
▸ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.
For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

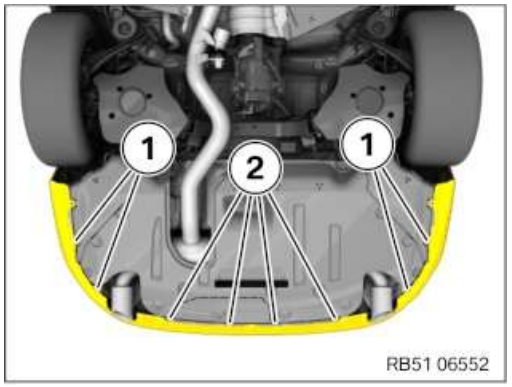
8 – Remove rear bumper panel



NOTICE

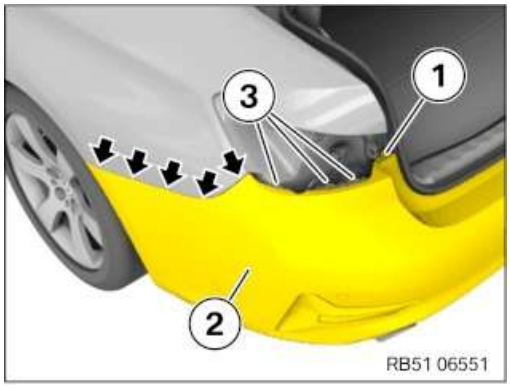
Perform the operations on the left and right side.

- Loosen screws (1).



- Loosen screws (1).
- Release the bumper panel on latch mechanisms (2) with a suitable tool.

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NOTICE

Perform the operations on the left and right side.

- Loosen screw (1).
- Release bumper panel (2) in the area of the rear light housing from latch mechanisms (3) with a suitable tool.
- Release side bumper panel (2) from the remaining latch mechanisms (arrows).



- Remove bumper panel (2) straight to the rear with the help of an auxiliary person.
- Unlock all plug connections and disconnect.
- Remove the bumper panel (1).

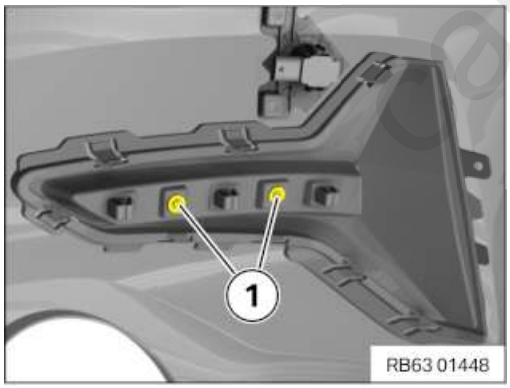
MAIN WORK

9 – Removing both rear reflectors in the rear

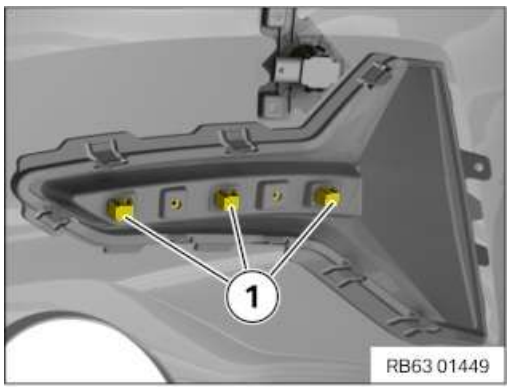
▸ **Removing the rear rear reflector**

NOTICE

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



- Loosen screws (1).



- Unlock clamps (1) and remove the rear reflector form the trim.

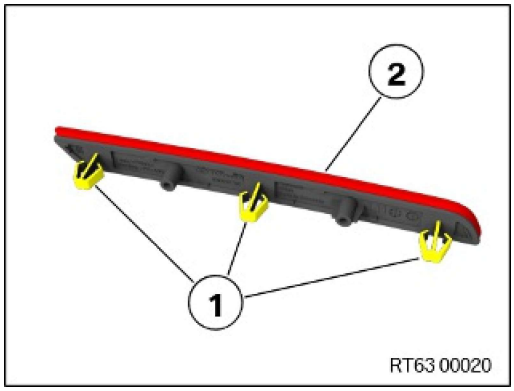
10 – Installing both rear reflectors

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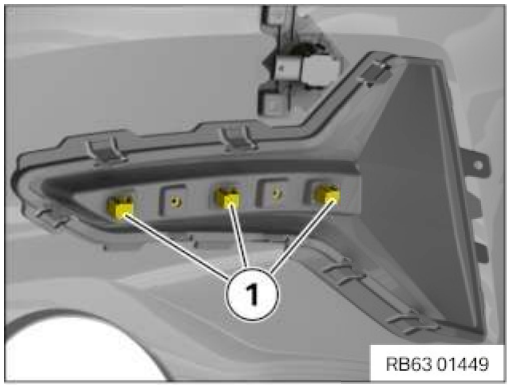
▸ **Installing the rear rear reflector**

NOTICE

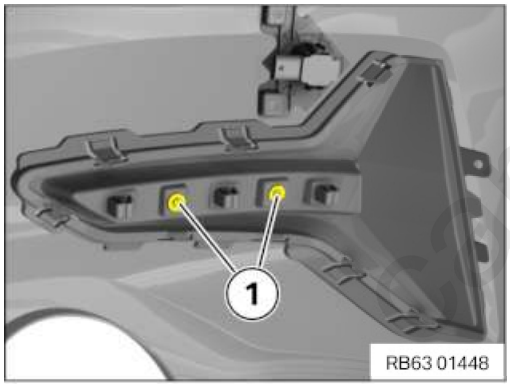
Description is for left component only. Procedure on the right side is identical.



- Check clamps (1) on rear reflector (2) for damage and, if necessary, renew them.



- Position rear reflector in the rear bumper panel and clip it in with clamps (1).



- Tighten the screws (1).

Rear reflector to rear bumper panel

Screw for thermoplastic		Tightening torque	3 Nm

POSTPROCESSES

11 – Install both rear lights on the side panel

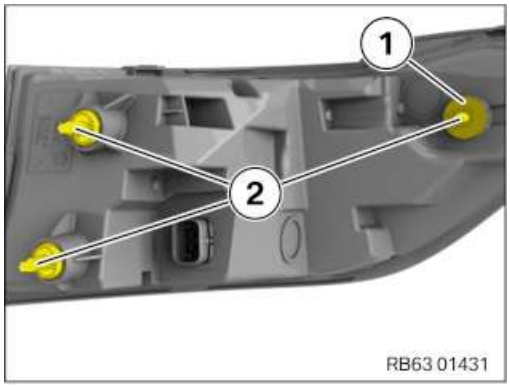
NOTICE

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

▸ **Install the rear light on the side panel**

Check

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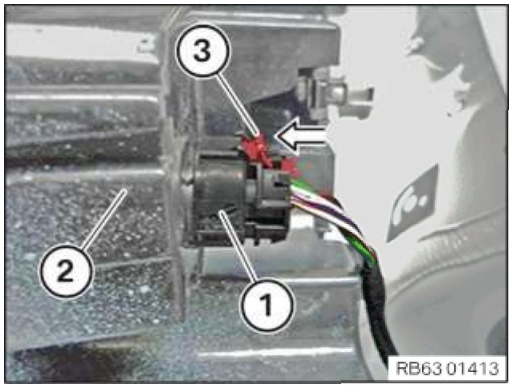
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

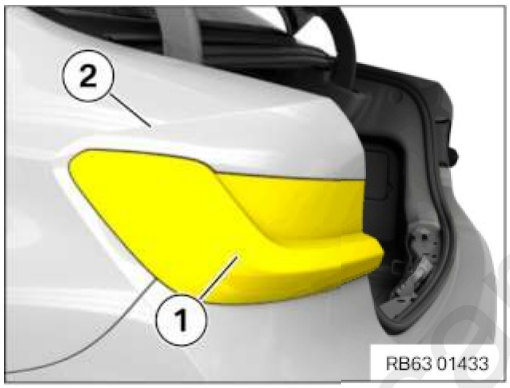
Measure

- Replace rear light.

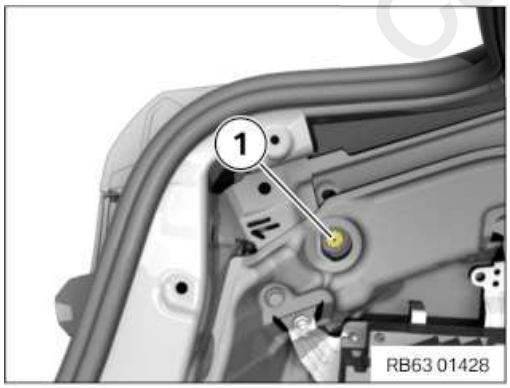


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

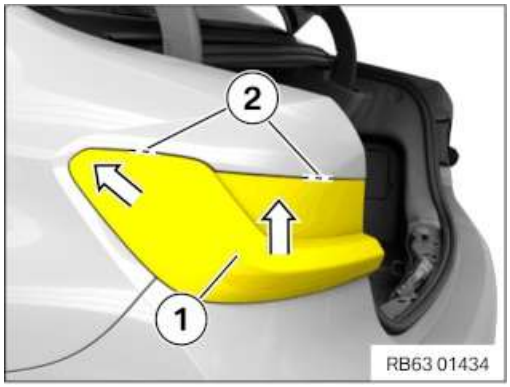


- Position the rear light on the side panel (1) on the side panel (2).

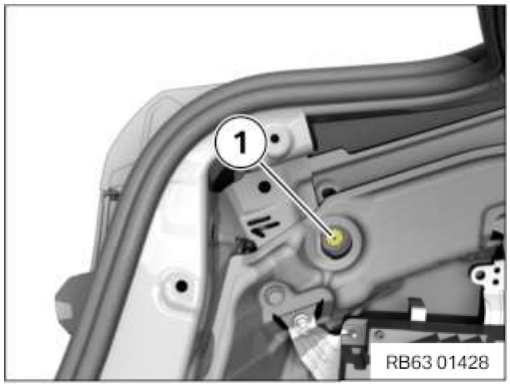


- Position the nut (1).

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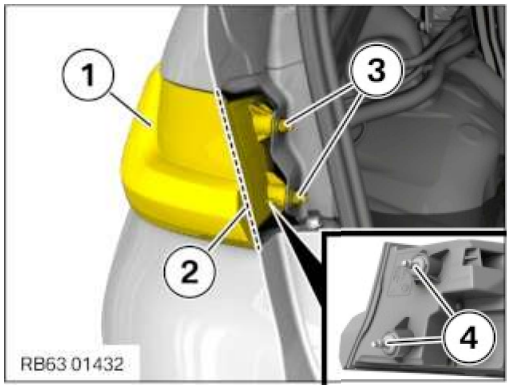
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

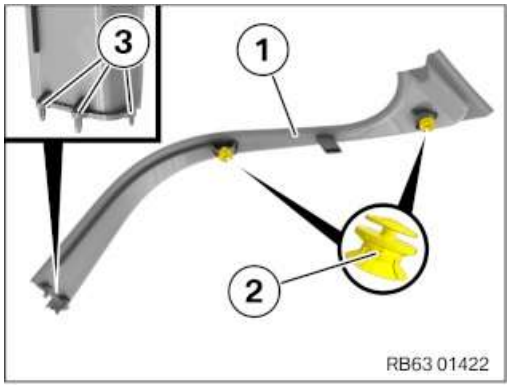
Nut M5, AF 10		Tightening torque	4 Nm

12 – Installing both trims of the water channel

NOTICE

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

▸ **Install the trim in the water channel**



Check

- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

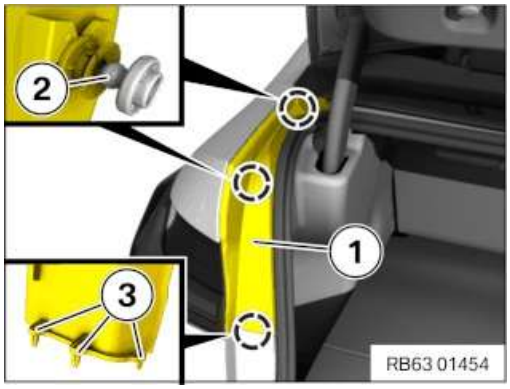
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Result

» The guides are damaged.

Measure

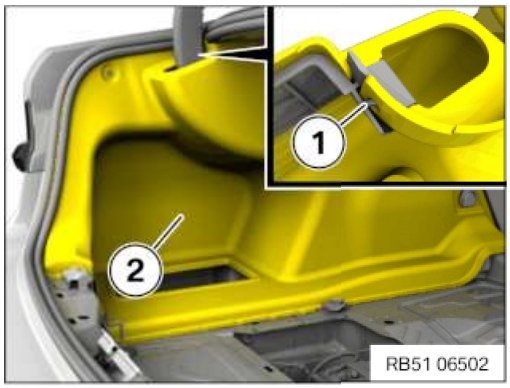
- Renew trim in the water channel .



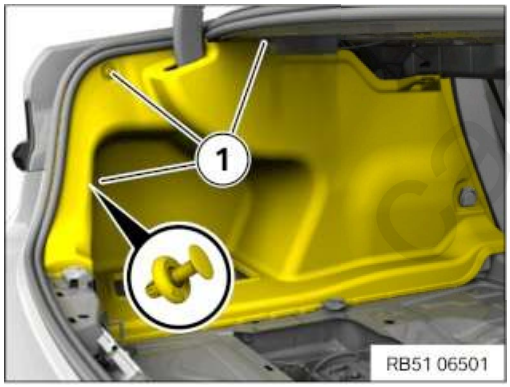
- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

13 – Installing both luggage compartment wheel arch trim panels partially

▸ Partially installing the left luggage compartment wheel arch trim panel

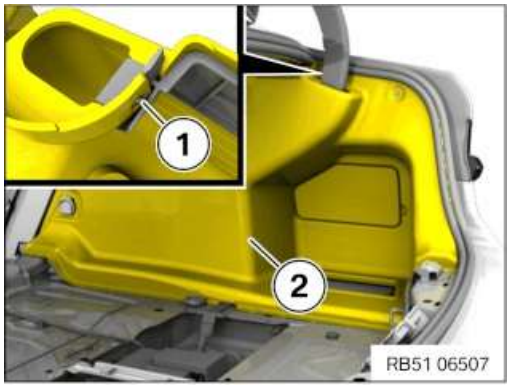


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



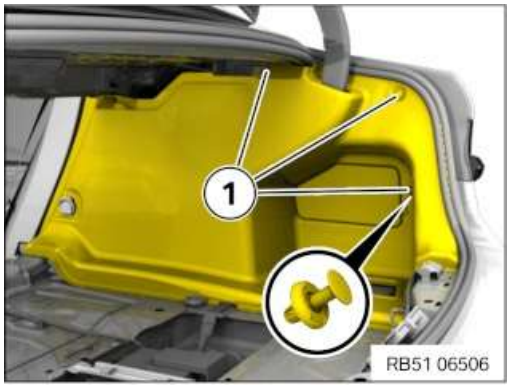
- Secure expanding rivet (1).

▸ Partially installing right luggage compartment wheel arch trim panel



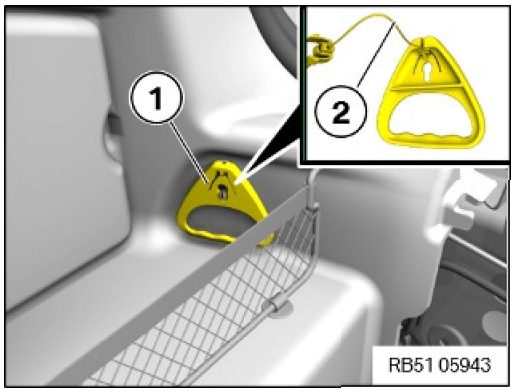
- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).

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- Secure expanding rivet (1).

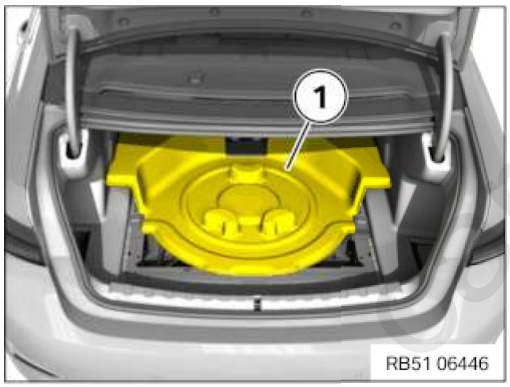
▷ **If installed: Installing the emergency tailgate release handle (additional work for US version)**



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

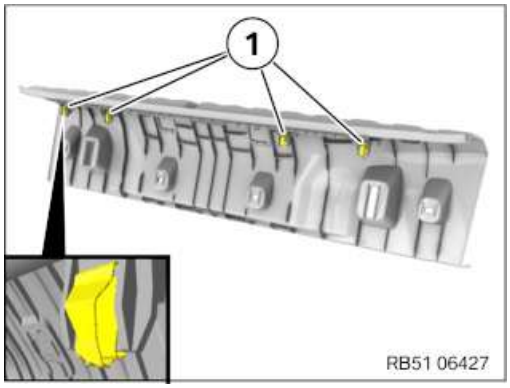
◁

14 – Install the luggage compartment well in front



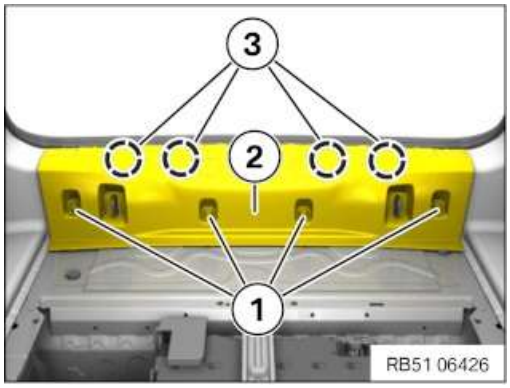
- Feed in and insert front luggage compartment well (1) on the seat belt strap.

15 – Installing loading edge trim



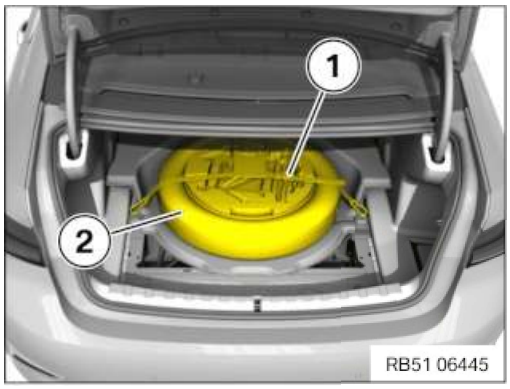
- Check the clamps (1) for damage and renew if necessary.

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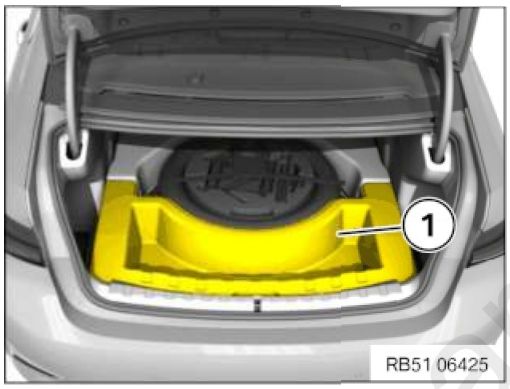
- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

16 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

17 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

Rear reflector to rear bumper panel Used in step 10

Screw for thermoplastic		Tightening torque	3 Nm

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Rear light to side panel			Used in step 11
Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel			Used in step 11
Nut M5, AF 10		Tightening torque	4 Nm

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

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63 17 250 Removing and installing left LED fog light

WARNING

Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see: 00 ... Raising the vehicle using a vehicle hoist.

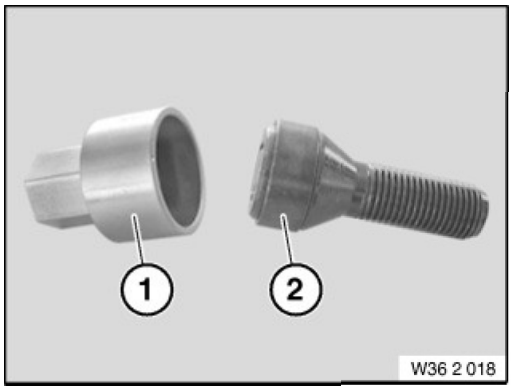
cardiagn.com

1 – Removing the wheel



- If several wheels are removed simultaneously, mark each tyre with a piece of chalk to show the axle and side on which the corresponding wheel is fitted.
- Release the wheel bolts (arrows) crosswise and remove the wheel.

▶ **If installed: Remove the locking wheel bolt**

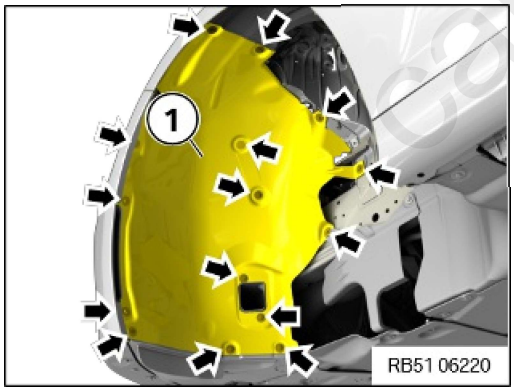


- To unscrew and tighten the wheel bolts with locking wheel bolts (2), use the correct adapter (1) from the set of special tools .

2 – Removing the front section of the front wheel arch cover

NOTICE

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

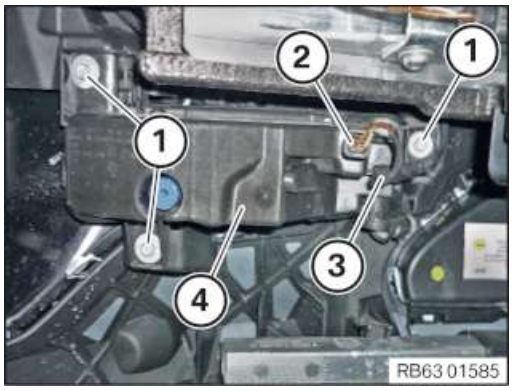


- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

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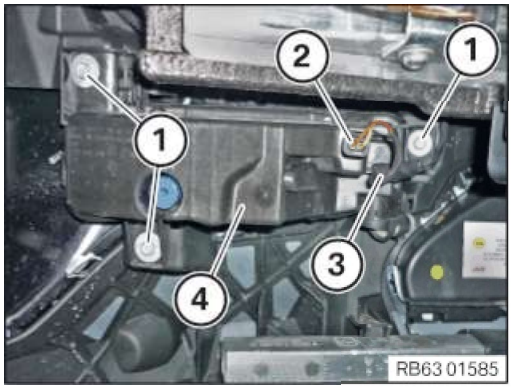
MAIN WORK

3 – Remove fog light



- Loosen screws (1).
- Unlock plug connection (2) and disconnect.
- Unclip the cable clip (3).
- Feed out the fog light insert (4).

4 – Installing the fog light



- Feed in fog light insert (4) and position correctly.
- Tighten the screws (1).

Fog light on bumper panel

Screw		Tightening torque	3,5 Nm

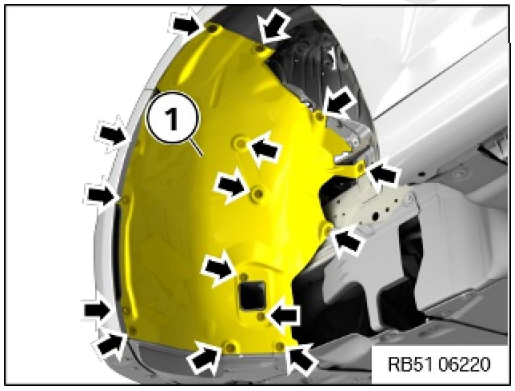
- Connect connectors (2) and lock.
- Clip in the cable clip (3).

POSTPROCESSES

5 – Install the front section of the front wheel arch cover

NOTICE

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



- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

6 – Mounting the wheel

▸ **Clean the contact surfaces between the brake disc and the wheel rim**

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TECHNICAL INFORMATION

The contact surface between the brake disc and the wheel rim must be clean and free from oil and grease. There is otherwise a risk of the wheel becoming loose at a later time.

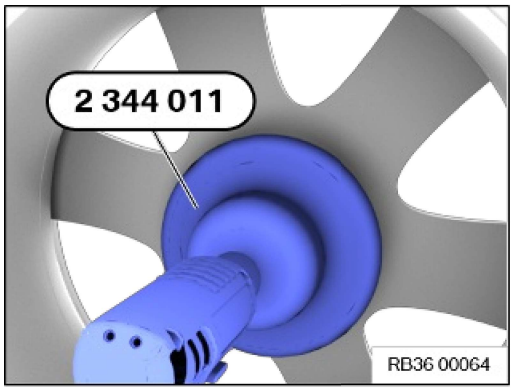
- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool 2 344 011.

  Do not operate special tool 2 344 011 with an impact screwdriver.
- Degrease contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981

- In the event of grease residue in the area of the wheel bolt holes, remove and clean the brake disc.

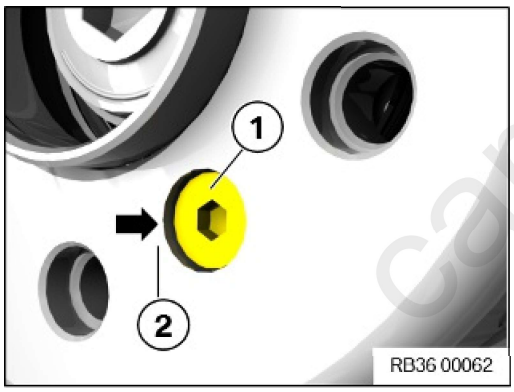


- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool 2 344 011.

  Do not operate special tool 2 344 011 with an impact screwdriver.
- Degrease contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981

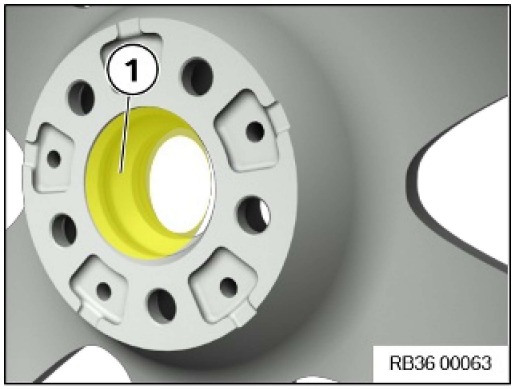


- Check that the mounting bolt (1) for the brake disc is securely seated.

  The mounting bolt (1) for the brake disc may not protrude under any circumstances on the contact surface (2) between the brake disc and the wheel rim.

Brake disc to wheel hub

M8	Renew screw.	Tightening torque	16 Nm



- Thinly grease the wheel centring (1) in the wheel rim.

Expendable materials

Brake block paste * TU = Trade Unit. TU numbers cannot be ordered! For invoicing purposes only.	3 g, Bag	83192158851
	100 g, Tube	83192158852
	5 g, TU*	83230140233

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TECHNICAL INFORMATION

Never use impact screwdrivers or electric screwdrivers to screw in and tighten the wheel bolts.

The wheel rim must rest uniformly against the brake disc.

In the case of non-original BMW wheel bolts/wheel rims, it may be necessary to retighten the wheel bolts on account of setting properties (refer to the documentation from the manufacturer).

Do not apply oil to new wheel bolts.

- Clean the wheel bolts.
- Check the wheel bolts and threads for damage, renew the wheel bolts if necessary.
- Renew corroded wheel bolts.

  Parts: Wheel bolts
- Tighten the wheel bolts (arrows) as follows:

  Screw in the wheel bolts crosswise by hand.

  Hand-tighten the wheel bolts evenly crosswise to centre the wheel rim.

  Use the torque wrench to tighten the wheel bolts crosswise.

  Tighten all wheel bolts crosswise again to check.

Wheel bolts

M14 / SW17	Screw in wheel bolts and evenly tighten crosswise by hand in order to centre the wheel rim.	Tightening torque	140 Nm
	Tighten wheel bolts to the prescribed tightening torque with a calibrated torque wrench in a crosswise sequence.		
	Check all the wheel bolts in the same order or retighten to the prescribed tightening torque again.	Check	140 Nm

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7 – Adjusting fog lights

NOTICE

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



- Adjust the fog light (1) on the adjusting screw (2).

Additional Information

Overview of Tightening Torques

Fog light on bumper panel — Used in step 4

Screw		Tightening torque	3,5 Nm

Wheel arch trim panel, front — Used in step 5

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Brake disc to wheel hub — Used in step 6

M8	Renew screw.	Tightening torque	16 Nm

Wheel bolts — Used in step 6

M14 / SW17	Screw in wheel bolts and evenly tighten crosswise by hand in order to centre the wheel rim. Tighten wheel bolts to the prescribed tightening torque with a calibrated torque wrench in a crosswise sequence. Check all the wheel bolts in the same order or retighten to the prescribed tightening torque again.	Tightening torque Check	140 Nm 140 Nm

Overview of Special Tools

2 344 011 Tool



Common — Used in step 6

Usage	Tool (wheel hub grinder) for cleaning the connection of the wheel rim (wheel contact face) to the wheel hub.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	08 08 12 (872)

Replacement tools:

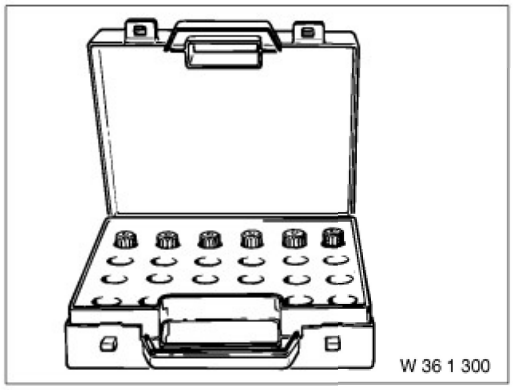
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0 495 221 (36 1 323) Wheel stud



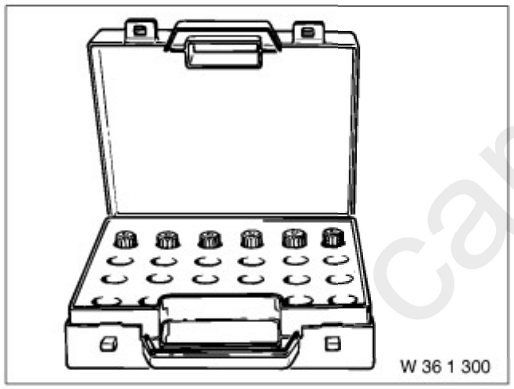
Common	Used in step 1
Usage	(Code 30) Code 39 available separately, (see EPC) under 36 13 1 181 259
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 224 (36 1 326) Wheel stud



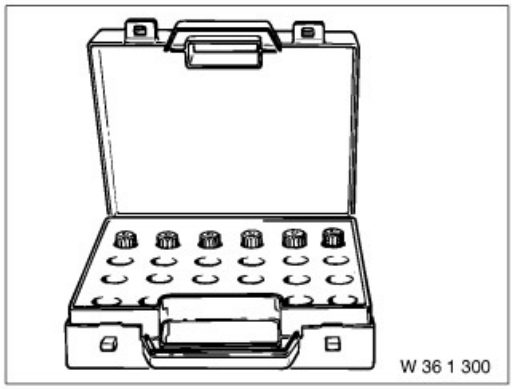
Common	Used in step 1
Usage	(Code 33) With centring bore available separately, (see EPC) under 36 13 6 765 546
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 225 (36 1 327) Wheel stud



Common	Used in step 1
Usage	(Code 34) With centring bore available separately (see EPC) under 36 13 6 765 547
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 226 (36 1 328) Wheel stud



Common	Used in step 1
Usage	(Code 35) With centring bore available separately, (see EPC) under 36 13 6 762 340
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

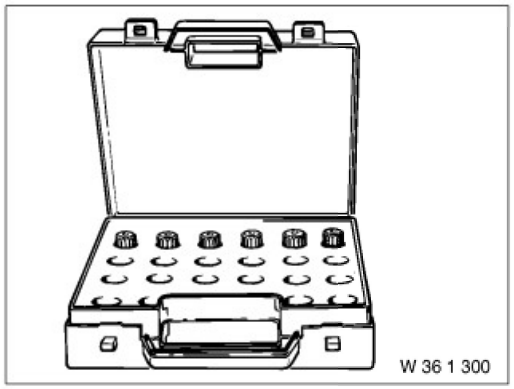
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0 495 227 (36 1 329) Wheel stud



Common	Used in step 1
Usage	(Code 36) With centring bore available separately (see EPC) under 36 13 6 762 341
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 228 (36 1 331) Wheel stud



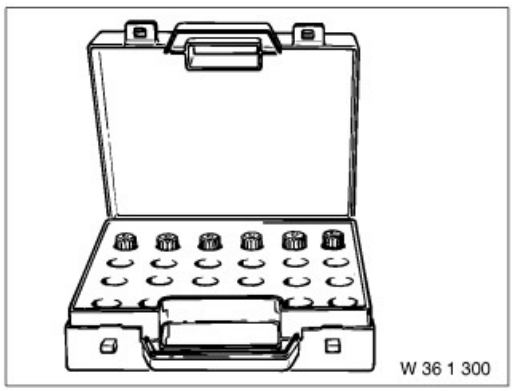
Common	Used in step 1
Usage	(Code 37) With centring bore available separately (see EPC) under 36 13 6 762 342
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 229 (36 1 332) Wheel stud



Common	Used in step 1
Usage	(Code 38) With centring bore available separately (see EPC) under 36 13 6 762 343
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 230 (36 1 333) Wheel stud



Common	Used in step 1
Usage	(Code 40) With centring bore available separately (see EPC) under 36 13 6 762 344
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

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Links

Repair instructions	Used in step
00 .. ... Raising the vehicle using a vehicle hoist	

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63 17 251 Replacing left LED fog light

WARNING

Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see: 00 ... Raising the vehicle using a vehicle hoist.

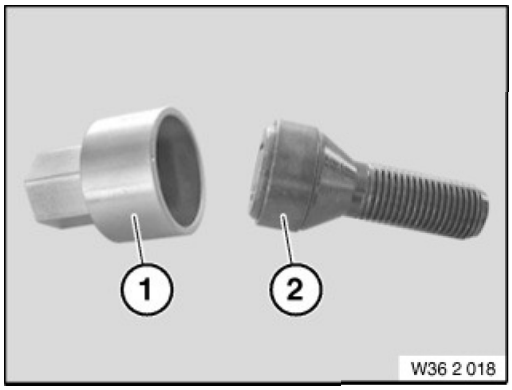
cardiagn.com

1 – Removing the wheel



- If several wheels are removed simultaneously, mark each tyre with a piece of chalk to show the axle and side on which the corresponding wheel is fitted.
- Release the wheel bolts (arrows) crosswise and remove the wheel.

▶ **If installed: Remove the locking wheel bolt**

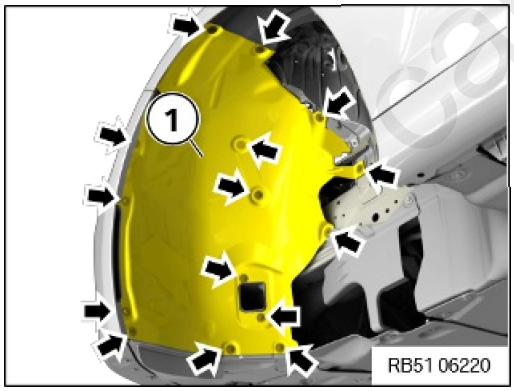


- To unscrew and tighten the wheel bolts with locking wheel bolts (2), use the correct adapter (1) from the set of special tools .

2 – Removing the front section of the front wheel arch cover

NOTICE

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

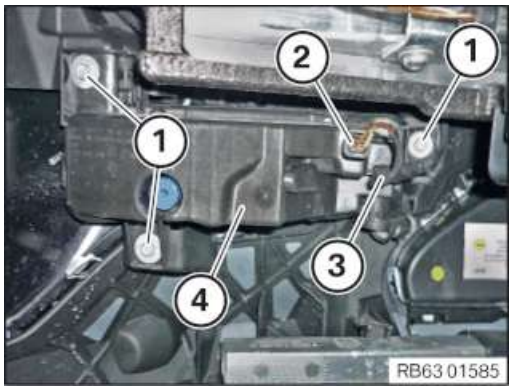


- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

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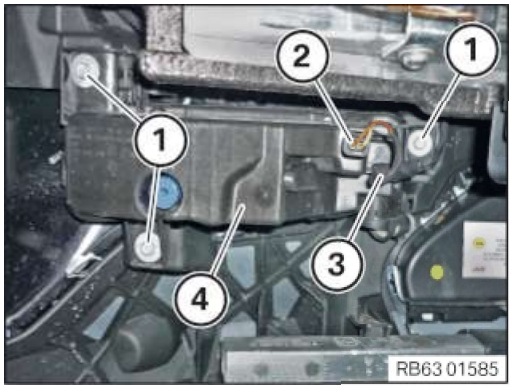
MAIN WORK

3 – Remove fog light



- Loosen screws (1).
- Unlock plug connection (2) and disconnect.
- Unclip the cable clip (3).
- Feed out the fog light insert (4).

4 – Installing the fog light



- Feed in fog light insert (4) and position correctly.
- Tighten the screws (1).

Fog light on bumper panel

Screw		Tightening torque	3,5 Nm

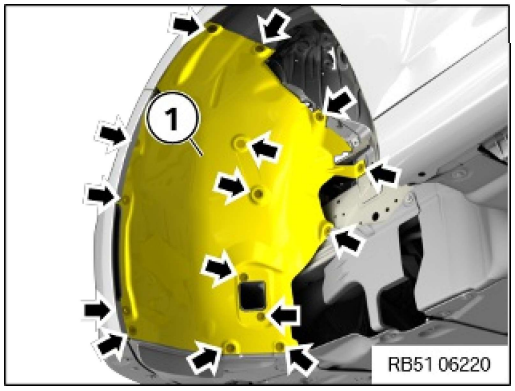
- Connect connectors (2) and lock.
- Clip in the cable clip (3).

POSTPROCESSES

5 – Install the front section of the front wheel arch cover

NOTICE

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



- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

6 – Mounting the wheel

▸ **Clean the contact surfaces between the brake disc and the wheel rim**

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TECHNICAL INFORMATION

The contact surface between the brake disc and the wheel rim must be clean and free from oil and grease. There is otherwise a risk of the wheel becoming loose at a later time.

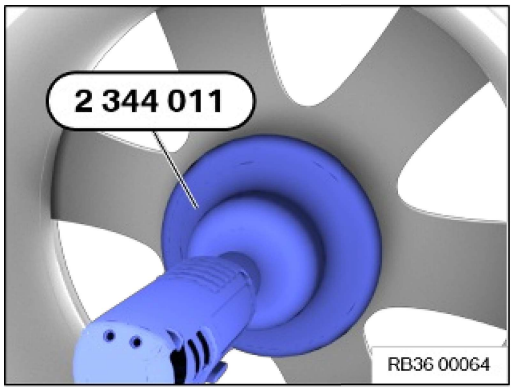
- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool 2 344 011.

  Do not operate special tool 2 344 011 with an impact screwdriver.
- Degrease contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981

- In the event of grease residue in the area of the wheel bolt holes, remove and clean the brake disc.

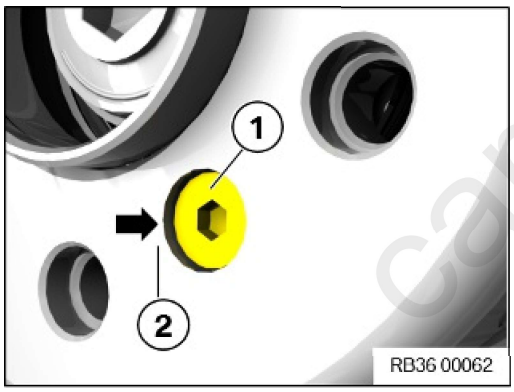


- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool 2 344 011.

  Do not operate special tool 2 344 011 with an impact screwdriver.
- Degrease contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981

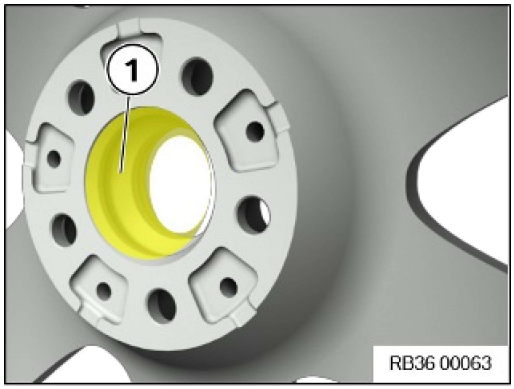


- Check that the mounting bolt (1) for the brake disc is securely seated.

  The mounting bolt (1) for the brake disc may not protrude under any circumstances on the contact surface (2) between the brake disc and the wheel rim.

Brake disc to wheel hub

M8	Renew screw.	Tightening torque	16 Nm



- Thinly grease the wheel centring (1) in the wheel rim.

Expendable materials

Brake block paste * TU = Trade Unit. TU numbers cannot be ordered! For invoicing purposes only.	3 g, Bag	83192158851
	100 g, Tube	83192158852
	5 g, TU*	83230140233

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TECHNICAL INFORMATION

Never use impact screwdrivers or electric screwdrivers to screw in and tighten the wheel bolts.

The wheel rim must rest uniformly against the brake disc.

In the case of non-original BMW wheel bolts/wheel rims, it may be necessary to retighten the wheel bolts on account of setting properties (refer to the documentation from the manufacturer).

Do not apply oil to new wheel bolts.

- Clean the wheel bolts.
- Check the wheel bolts and threads for damage, renew the wheel bolts if necessary.
- Renew corroded wheel bolts.

  Parts: Wheel bolts
- Tighten the wheel bolts (arrows) as follows:

  Screw in the wheel bolts crosswise by hand.

  Hand-tighten the wheel bolts evenly crosswise to centre the wheel rim.

  Use the torque wrench to tighten the wheel bolts crosswise.

  Tighten all wheel bolts crosswise again to check.

Wheel bolts

M14 / SW17	Screw in wheel bolts and evenly tighten crosswise by hand in order to centre the wheel rim.	Tightening torque	140 Nm
	Tighten wheel bolts to the prescribed tightening torque with a calibrated torque wrench in a crosswise sequence.		
	Check all the wheel bolts in the same order or retighten to the prescribed tightening torque again.	Check	140 Nm

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7 – Adjusting fog lights

NOTICE

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



- Adjust the fog light (1) on the adjusting screw (2).

Additional Information

Overview of Tightening Torques

Fog light on bumper panel — Used in step 4

Screw		Tightening torque	3,5 Nm

Wheel arch trim panel, front — Used in step 5

Thermoplastic hexagon screw		Tightening torque	2,6 Nm

Brake disc to wheel hub — Used in step 6

M8	Renew screw.	Tightening torque	16 Nm

Wheel bolts — Used in step 6

M14 / SW17	Screw in wheel bolts and evenly tighten crosswise by hand in order to centre the wheel rim. Tighten wheel bolts to the prescribed tightening torque with a calibrated torque wrench in a crosswise sequence. Check all the wheel bolts in the same order or retighten to the prescribed tightening torque again.	Tightening torque Check	140 Nm 140 Nm

Overview of Special Tools

2 344 011 Tool



Common — Used in step 6

Usage	Tool (wheel hub grinder) for cleaning the connection of the wheel rim (wheel contact face) to the wheel hub.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	08 08 12 (872)

Replacement tools:

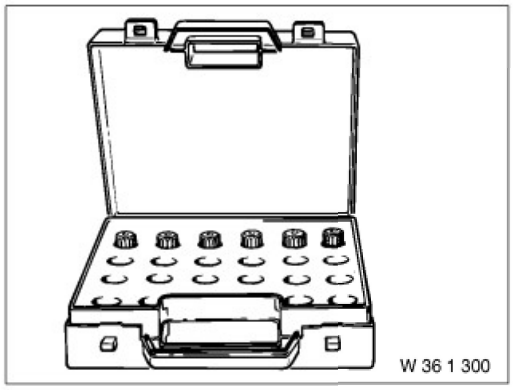
carmagn.com

0 495 221 (36 1 323) Wheel stud



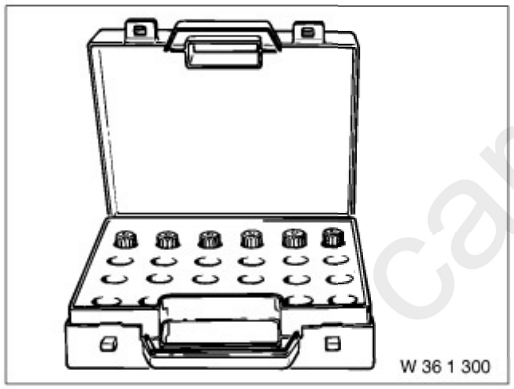
Common	Used in step 1
Usage	(Code 30) Code 39 available separately, (see EPC) under 36 13 1 181 259
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 224 (36 1 326) Wheel stud



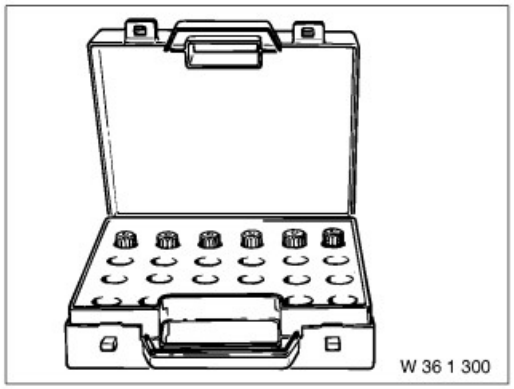
Common	Used in step 1
Usage	(Code 33) With centring bore available separately, (see EPC) under 36 13 6 765 546
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 225 (36 1 327) Wheel stud



Common	Used in step 1
Usage	(Code 34) With centring bore available separately (see EPC) under 36 13 6 765 547
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 226 (36 1 328) Wheel stud



Common	Used in step 1
Usage	(Code 35) With centring bore available separately, (see EPC) under 36 13 6 762 340
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

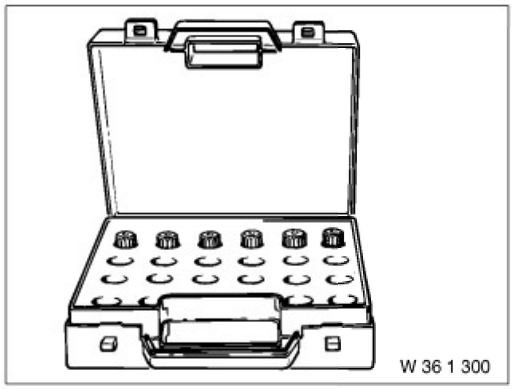
cardiagn.com

0 495 227 (36 1 329) Wheel stud



Common	Used in step 1
Usage	(Code 36) With centring bore available separately (see EPC) under 36 13 6 762 341
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 228 (36 1 331) Wheel stud



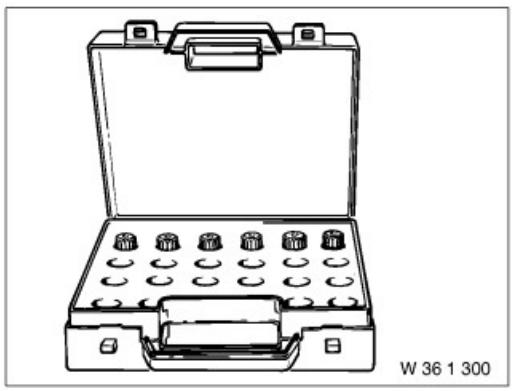
Common	Used in step 1
Usage	(Code 37) With centring bore available separately (see EPC) under 36 13 6 762 342
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 229 (36 1 332) Wheel stud



Common	Used in step 1
Usage	(Code 38) With centring bore available separately (see EPC) under 36 13 6 762 343
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 230 (36 1 333) Wheel stud



Common	Used in step 1
Usage	(Code 40) With centring bore available separately (see EPC) under 36 13 6 762 344
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

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Links

Repair instructions	Used in step
00 .. ... Raising the vehicle using a vehicle hoist	

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63 21 275 Remove and install rear left light of side panel

PRELIMINARY WORK

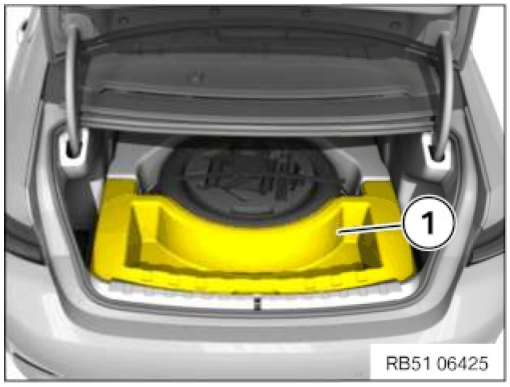
1 – Removing the luggage compartment floor trim panel



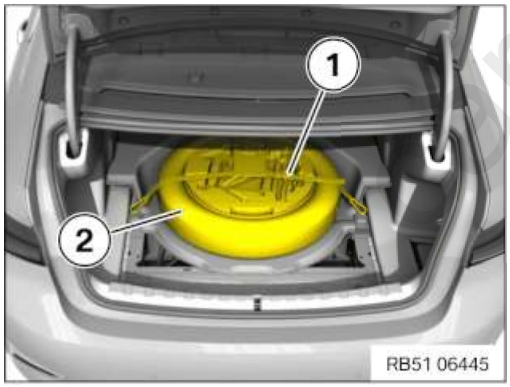
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

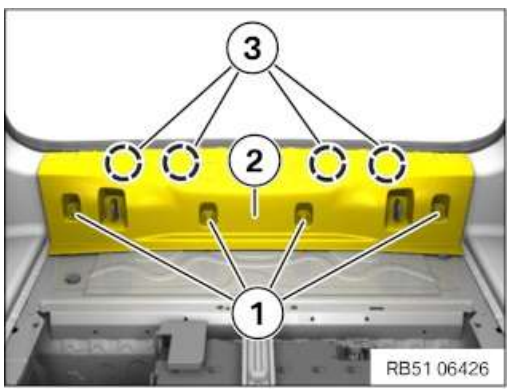


- Remove rear luggage compartment well (1).



- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

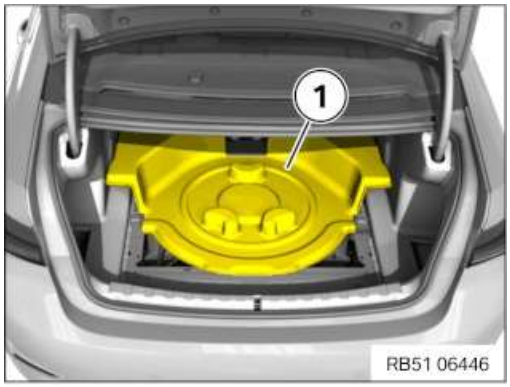
3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

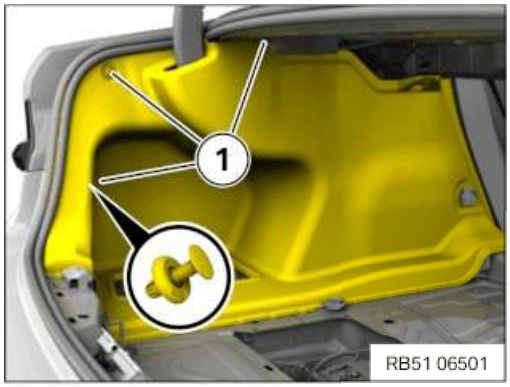
4 – Removing front luggage compartment well

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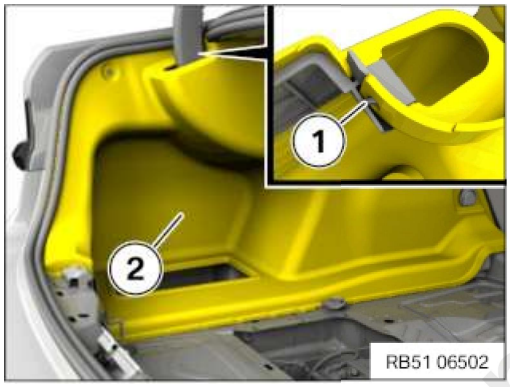


- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Partially remove luggage compartment wheel arch trim on left

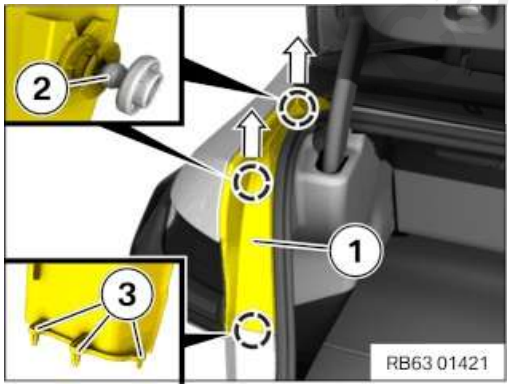


- Loosen the expanding rivet (1).



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

6 – Remove the trim in the water channel

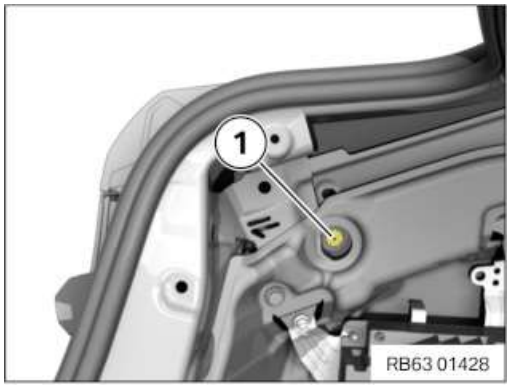


- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

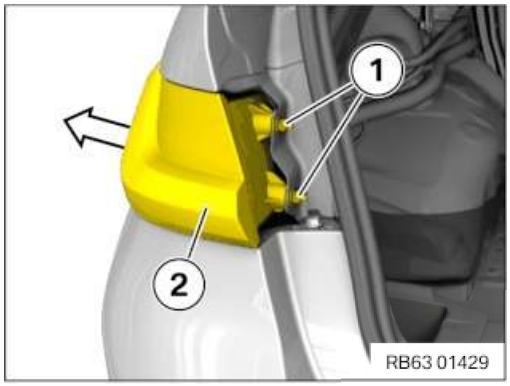
MAIN WORK

7 – Remove the rear light on the side panel

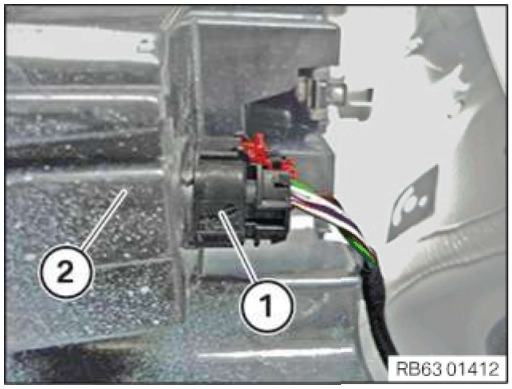
ardiagn.com



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.

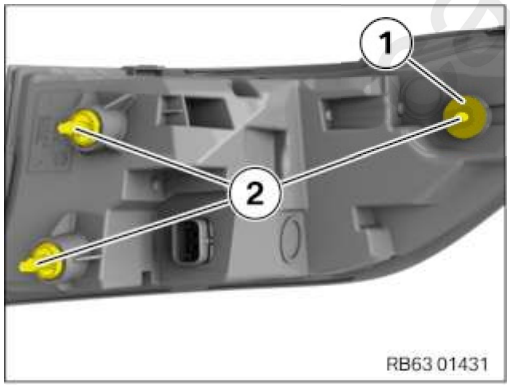


TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.
For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Install the rear light on the side panel



Check

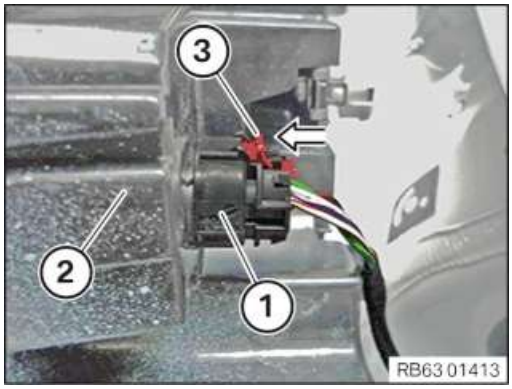
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

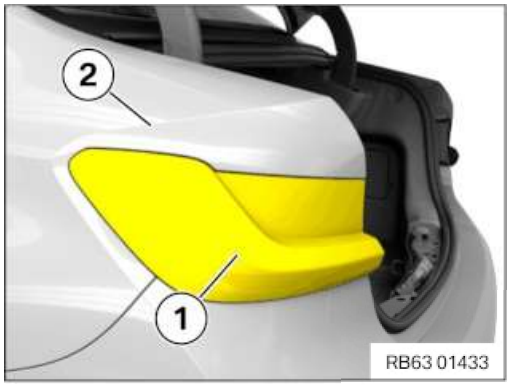
Measure

- Replace rear light.

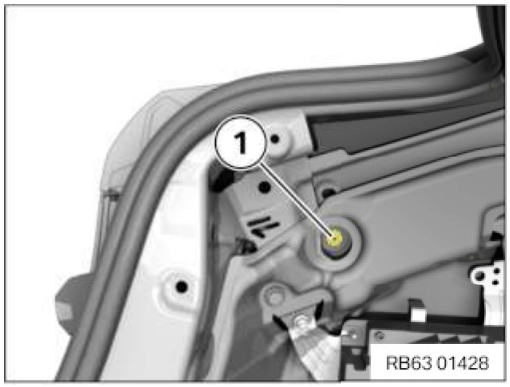


- Connect the connector (1) to the rear light on the side panel (2).

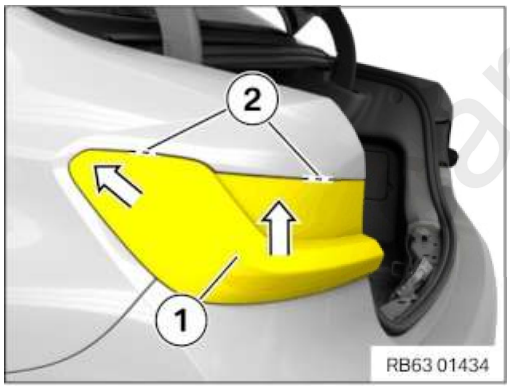
  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).



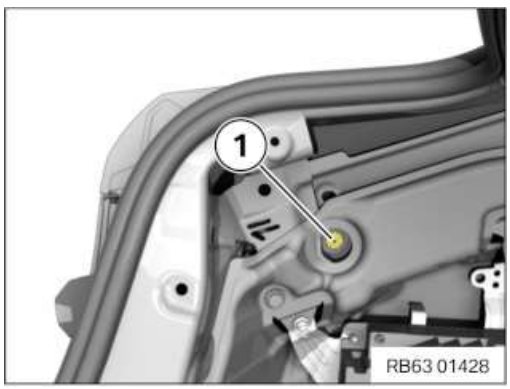
- Position the rear light on the side panel (1) on the side panel (2).



- Position the nut (1).



- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.

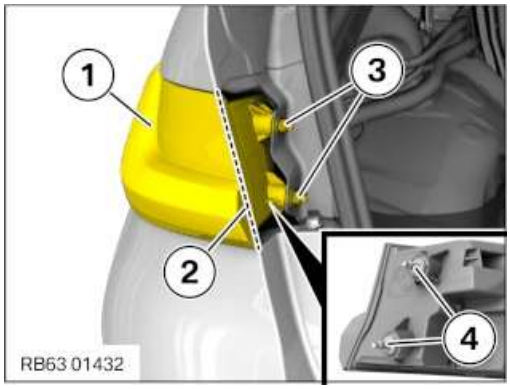


- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm

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- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

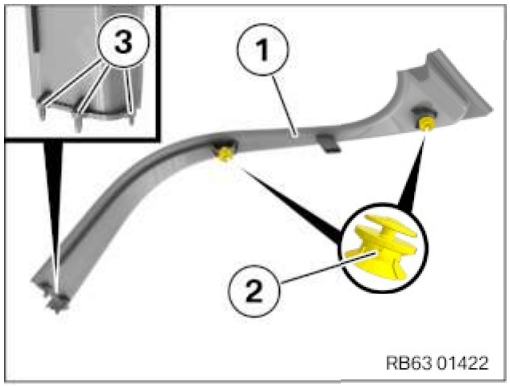
  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

Nut M5, AF 10		Tightening torque	4 Nm

POSTPROCESSES

9 – Install the trim in the water channel



Check

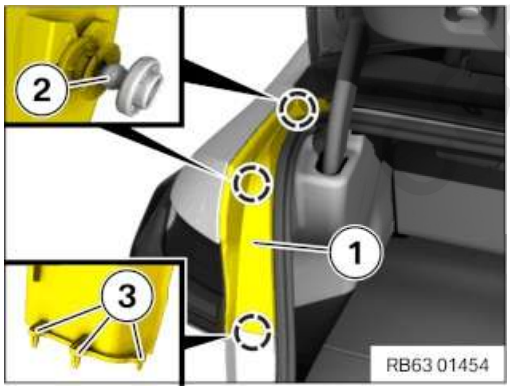
- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

Result

» The guides are damaged.

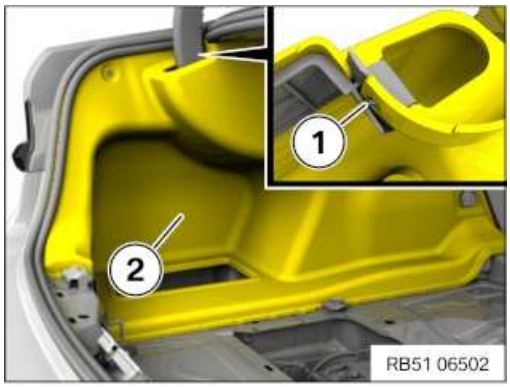
Measure

- Renew trim in the water channel .

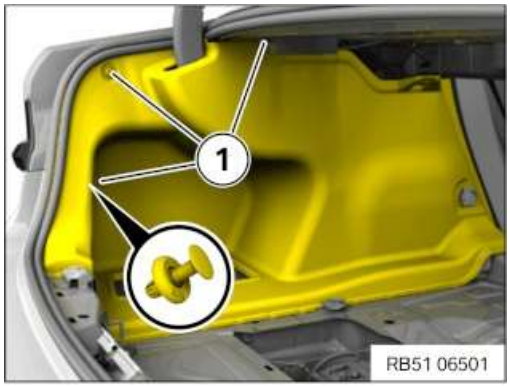


- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

10 – Partially installing the left luggage compartment wheel arch trim panel

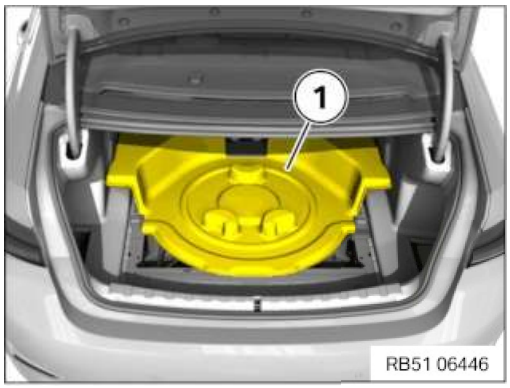


- Feed the luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal of the tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



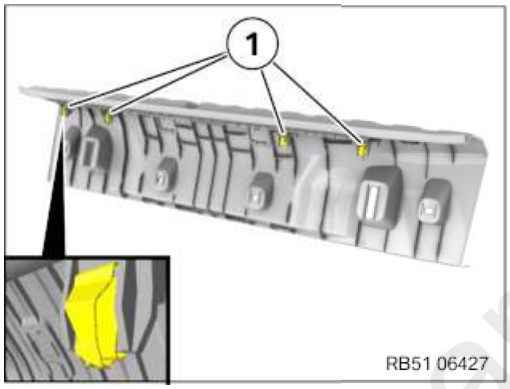
- Secure expanding rivet (1).

11 – Install the luggage compartment well in front

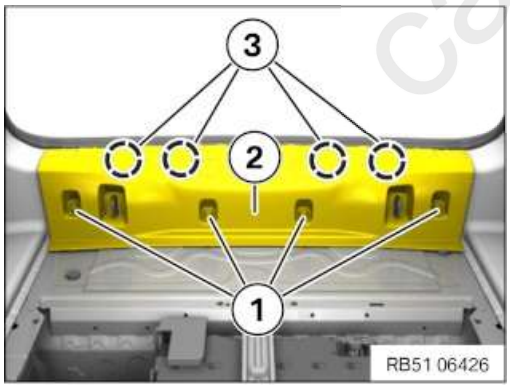


- Feed in and insert front luggage compartment well (1) on the seat belt strap.

12 – Installing loading edge trim



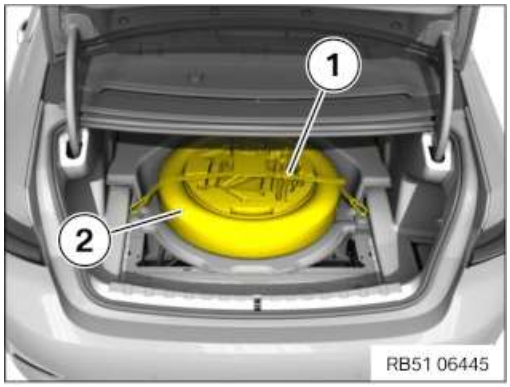
- Check the clamps (1) for damage and renew if necessary.



- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

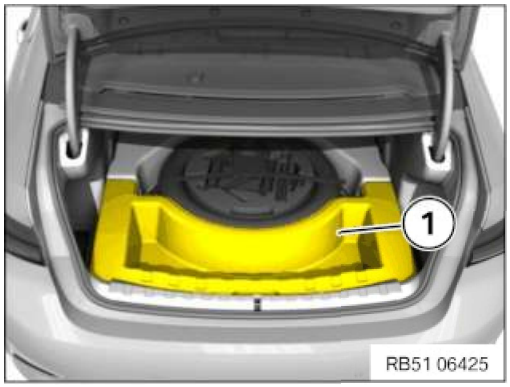
13 – If installed: Install the emergency wheel

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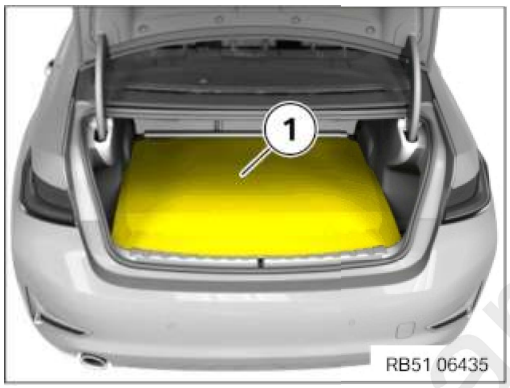
- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

▶ **Installing rear luggage compartment well**



- Install rear luggage compartment well (1).

14 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

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Additional Information

Overview of Tightening Torques

Rear light to side panel			Used in step 8
Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel			Used in step 8
Nut M5, AF 10		Tightening torque	4 Nm

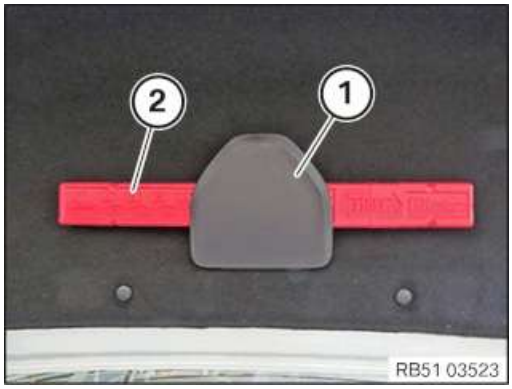
Links

Repair instructions	**Used in step**
61 13 ... Unlocking and disconnecting different plug connections	7

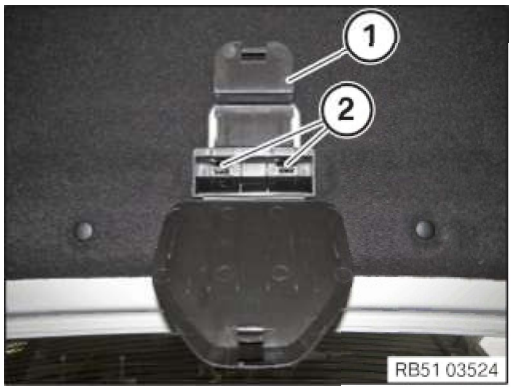
63 21 279 Remove and install rear left light of tailgate

PRELIMINARY WORK

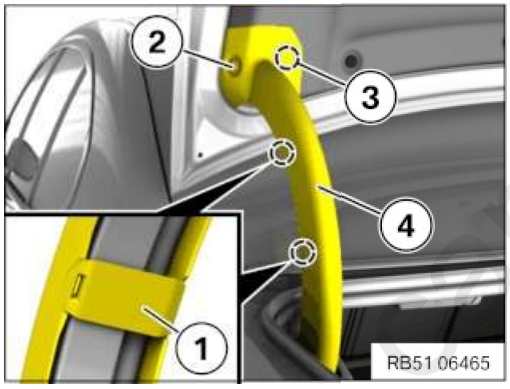
1 – Remove tailgate trim panel



- Fold the cover (1) towards the bottom.
- Remove the warning triangle (2).



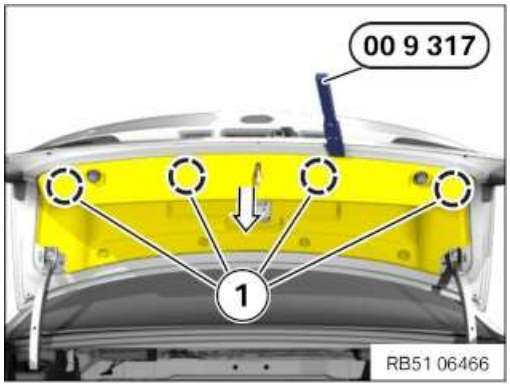
- Detach the warning triangle holder (1) from the latch mechanisms (2) and slide downwards.



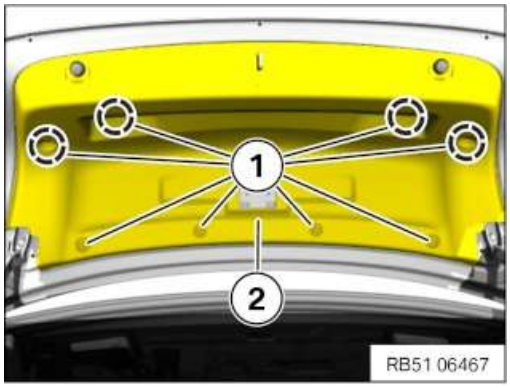
NOTICE

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

- Unclip the tabs (1).
- Loosen expanding rivet (2).
- To avoid damage, release the trim panel for the hinge of the tailgate (4) without using a tool by jerking it along the hinge bracket and out of the clip fastening (3).



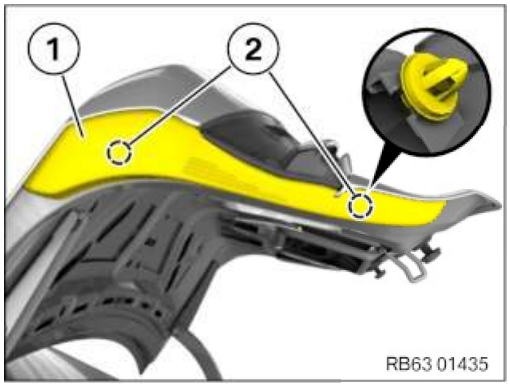
- Unclip clips (1) with special tool 0 490 534 (00 9 317) in the direction of arrow.



- Release expanding rivet (1) on the tailgate trim panel (2).
- Remove tailgate trim panel (2).
- **If installed**: Unlock plug connection of the switch for the tailgate lift and disconnect.

MAIN WORK

2 – Remove the rear light on the tailgate



- Unclip cover (1) with the clips (2).

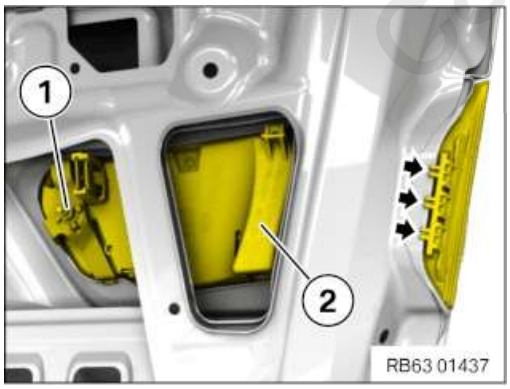


TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

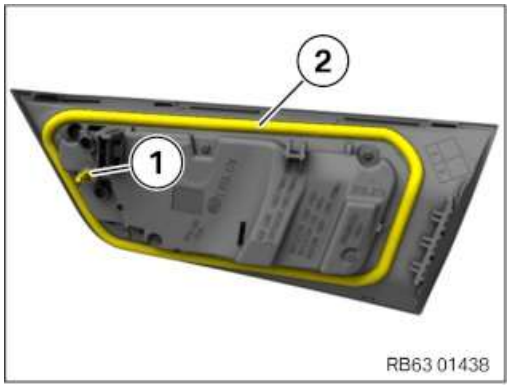
- Unlock and disconnect the plug connection (1) as described in position #11 in the additional information.



- Loosen nut (1).
- Release and remove rear light on the tailgate (2) at the guides (arrows).

3 – Install the rear light on the tailgate

Check



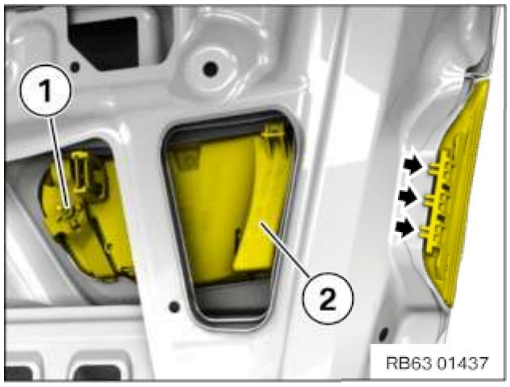
- Check the threaded bolt (1) and the seal (2) on the rear light on the tailgate for damage.

Result

» Threaded bolt or seal is damaged.

Measure

- Renew the rear light on the tailgate.



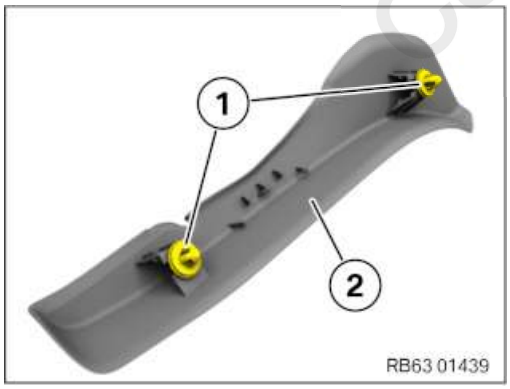
- Position rear light on the tailgate (2) at the guides (arrows).
- Position clamping claw and tighten the nut (1).

Rear light at tailgate

Nut M5		Tightening torque	3 Nm

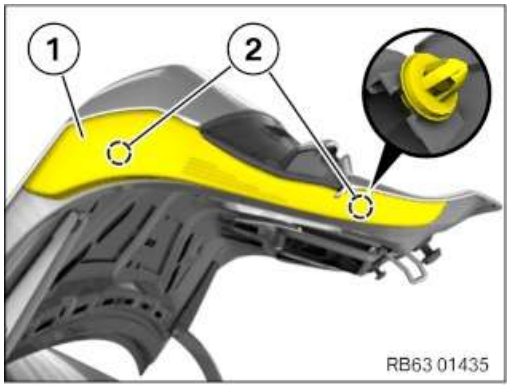


- Connect connectors (1) and lock.



- Check clips of the (1) cover (2) for damage, renew if necessary.

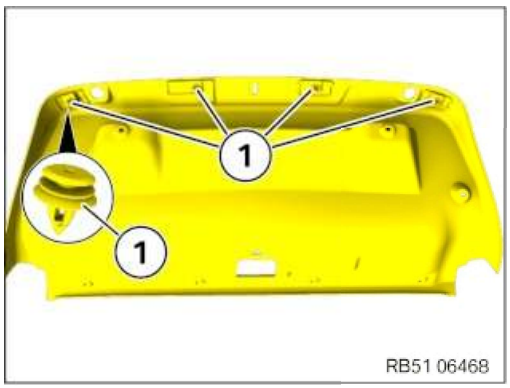
cardiagn.com



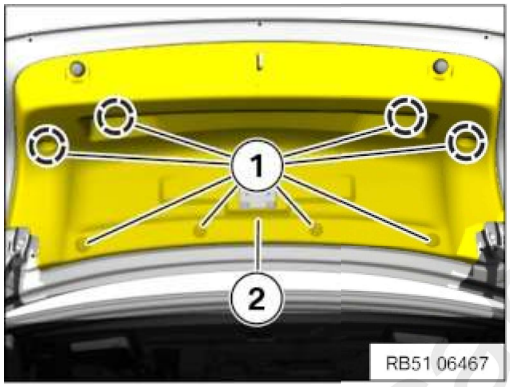
- Position the cover (1) and clip it in with the clips .

POSTPROCESSES

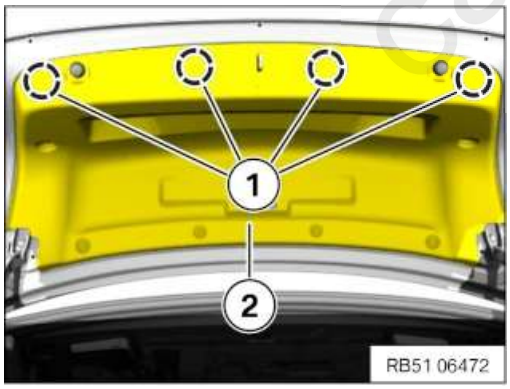
4 – Installing the tailgate trim panel



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

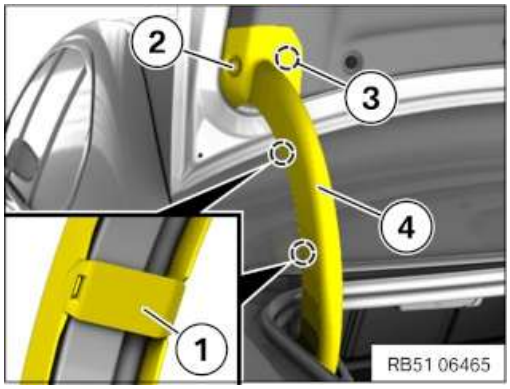


- Fit the tailgate trim panel (2) and fasten in place with the expanding rivets (1).
- **If installed**: Connect and lock plug connection on the switch for the tailgate lift.



- Clip in the tailgate trim panel (2) with the clips (1).

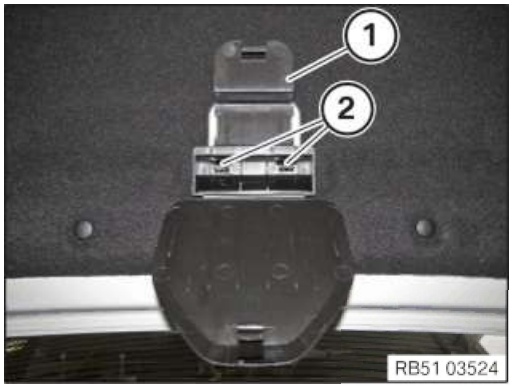
carfdiagn.com



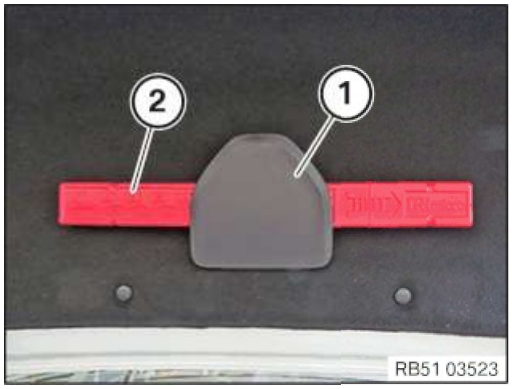
NOTICE

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

- Clip in the trim panel for the hinge of the tailgate (4) to the clip fastening (3).
- Fasten expanding rivet (2).
- Clip in tabs (1).



- Position the warning triangle holder (1) and snap into the latch mechanisms (2).



- Install the warning triangle (2).
- Clip in the cover (1).

Additional Information

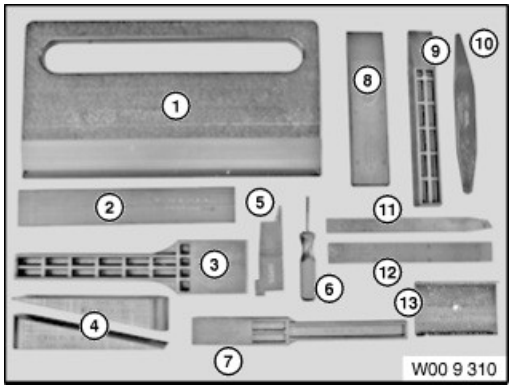
Overview of Tightening Torques

Rear light at tailgate — Used in step 3

Nut M5		Tightening torque	3 Nm

Overview of Special Tools

0 490 534 (00 9 317) Wedge



Common — Used in step 1

Usage	(Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)
Included in the tool or work	0 490 527
Storage location	
Replaced by	
In connection with	
SI-Number	

cardiagn.com

Links

Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	2

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63 21 277 Remove and install rear right light of side panel

PRELIMINARY WORK

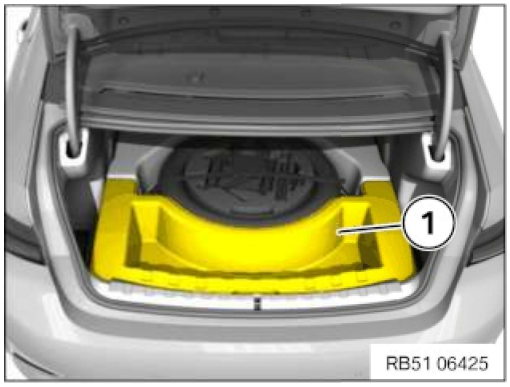
1 – Removing the luggage compartment floor trim panel



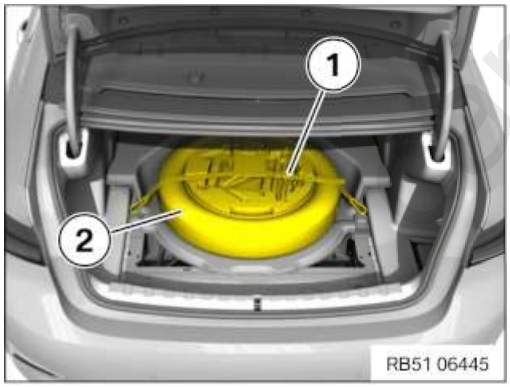
- Remove luggage compartment floor trim panel (1).

2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**

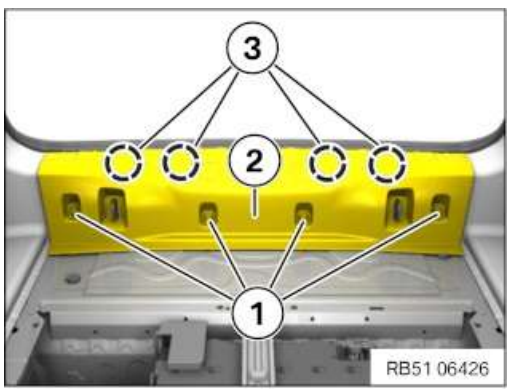


- Remove rear luggage compartment well (1).



- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

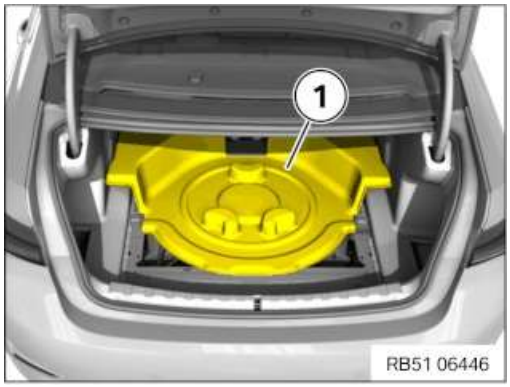
3 – Removing the loading edge trim



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

4 – Removing front luggage compartment well

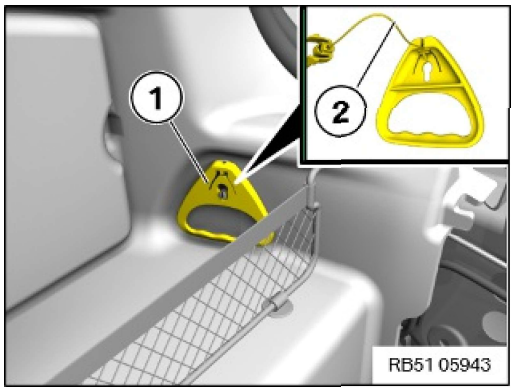
ardiagn.com



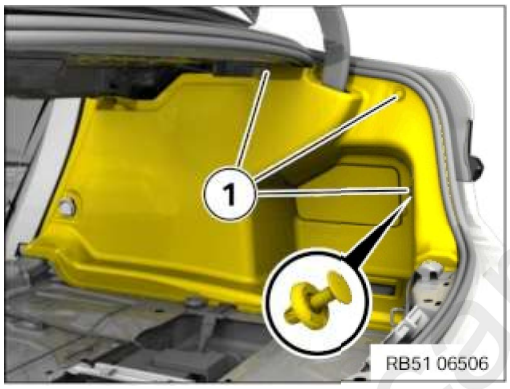
- Guide out and remove front luggage compartment well (1) on the seat belt strap.

5 – Partially remove luggage compartment wheel arch panel on right

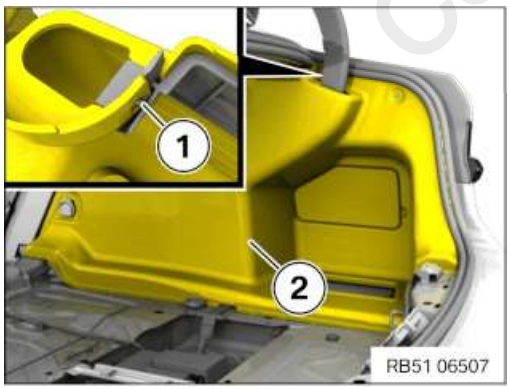
▸ If installed: Remove the emergency release handle for the tailgate (additional work in the US version)



- Release the emergency release handle for tailgate (1) from the holder.
- Detach Bowden cable (2) and remove the emergency release handle for tailgate (1).



- Loosen the expanding rivet (1).



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

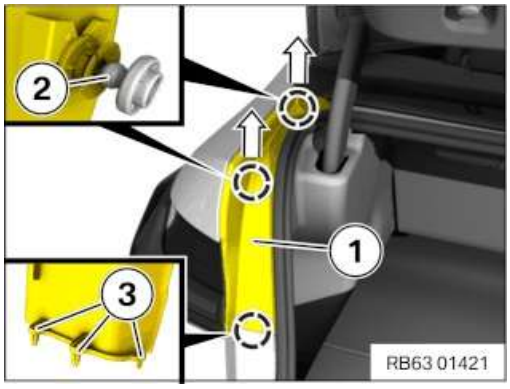
6 – Removing the trim in the right water channel

NOTICE

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

▸ Remove the trim in the water channel

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- Unclip the trim in the water channel (1) from the ball pins (2) towards the top.
- Release the trim in the water channel (1) from the guides (3) and remove it.

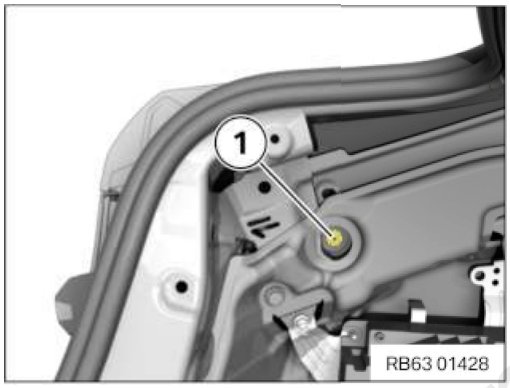
MAIN WORK

7 – Remove the rear light on the right side panel

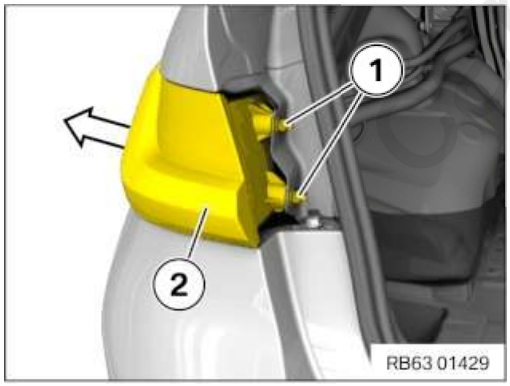
NOTICE

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

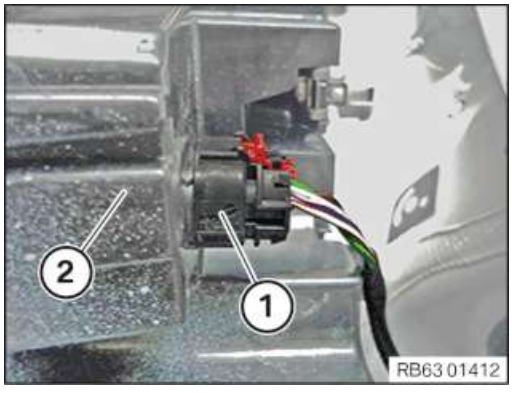
▸ **Remove the rear light on the side panel**



- Loosen nut (1).



- Release the nuts (1) and feed out the rear light on the side panel (2) in the direction of arrow.



TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect plug connection (1) as described in position #28 in additional information.
- Remove the rear light on the side panel (2).

8 – Installing rear light onto side panel at right

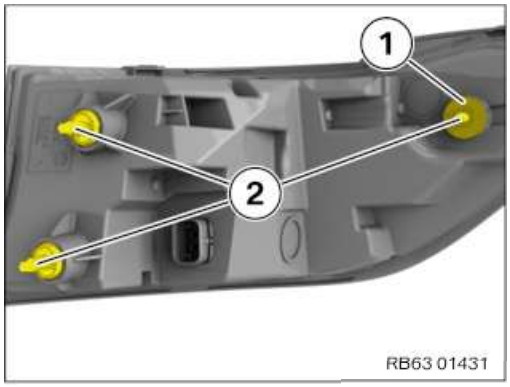
carmanualsdiagn.com

NOTICE

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

▶ **Install the rear light on the side panel**

Check



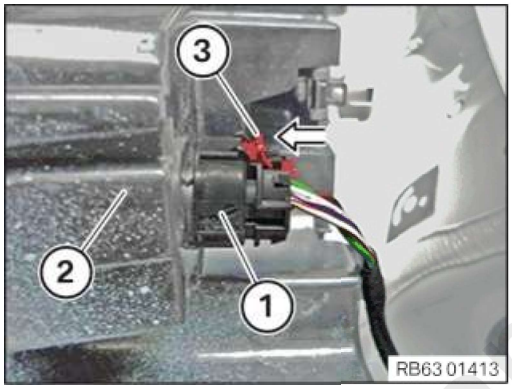
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

Result

» The threaded inserts are damaged.

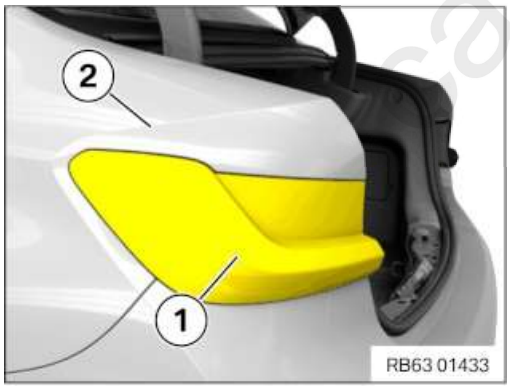
Measure

- Replace rear light.

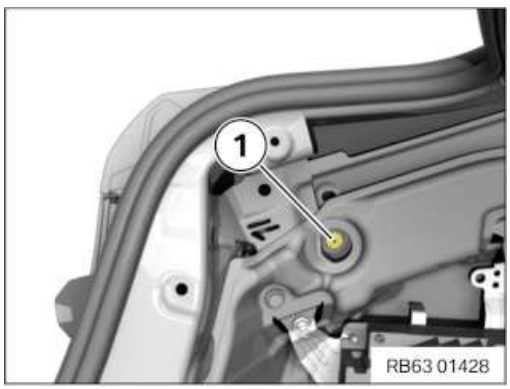


- Connect the connector (1) to the rear light on the side panel (2).

  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).

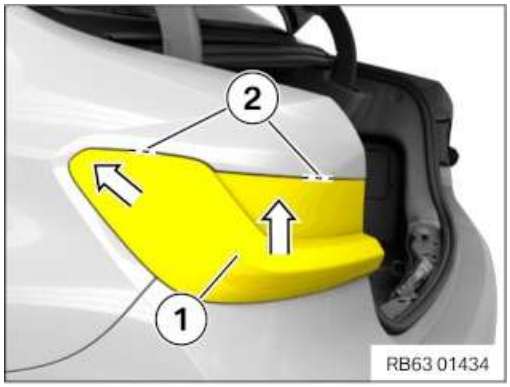


- Position the rear light on the side panel (1) on the side panel (2).

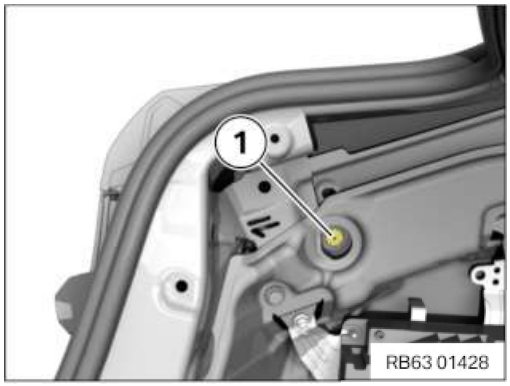


- Position the nut (1).

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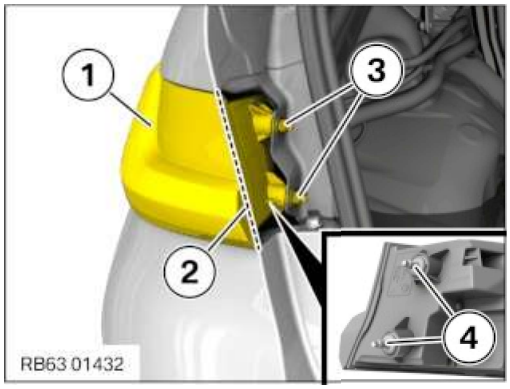
- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.



- Tighten nut (1).

Rear light to side panel

Nut M5, AF 8		Tightening torque	3 Nm



- Position nuts (3).
- Align rear light on the side panel (1) with the connecting line (2).

  The alignment is done through threaded inserts (4) on the rear light on the side panel (2).
- If necessary, correct the position of the rear light on the side panel (1) by twisting threaded inserts (4).
- Tighten nuts (3).

Rear light to side panel

Nut M5, AF 10		Tightening torque	4 Nm

POSTPROCESSES

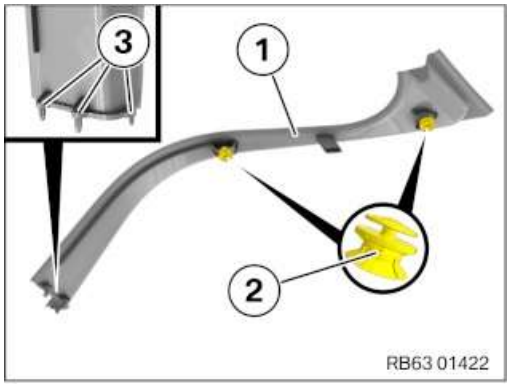
9 – Installing the trim in the right water channel

NOTICE

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

▸ **Install the trim in the water channel**

Check



- Check the clips (2) for damage and renew if necessary.
- Check the guides (3) for damage.

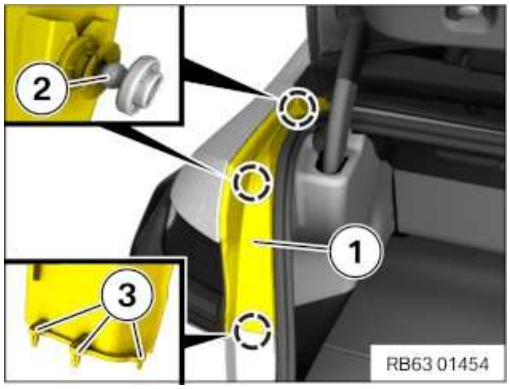
cardiagn.com

Result

» The guides are damaged.

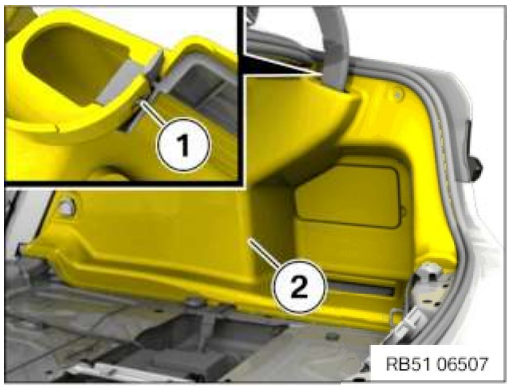
Measure

- Renew trim in the water channel .

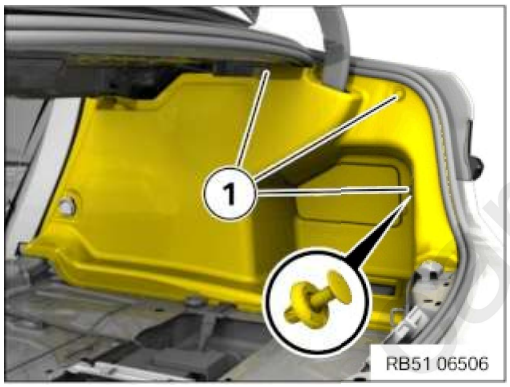


- Insert the trim in the water channel (1) in the guides (3).
- Clip in the water channel trim (1) from the front into the ball pin (2).

10 – Partially installing right luggage compartment wheel arch trim panel

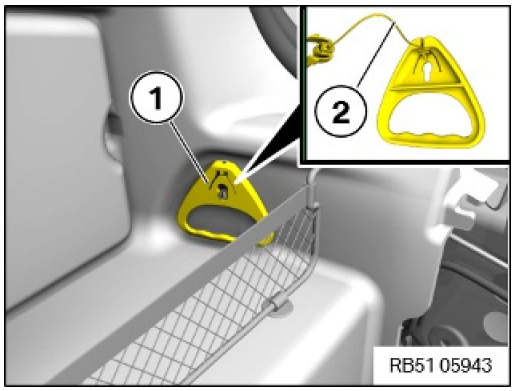


- Guide luggage compartment wheel arch trim panel (2) in the rear area under the sealing lip of the seal for tailgate.
- Feed the tab of the luggage compartment wheel arch trim panel (2) on the outer side of the hinge into the stop on the trim (1).



- Secure expanding rivet (1).

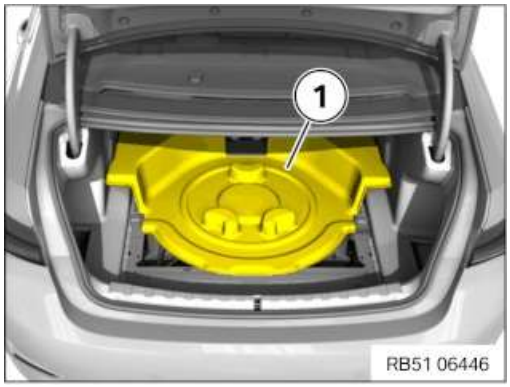
▸ If installed: Installing the emergency tailgate release handle (additional work for US version)



- Attach the Bowden cable (2).
- Fasten emergency tailgate release handle (1) to the bracket.

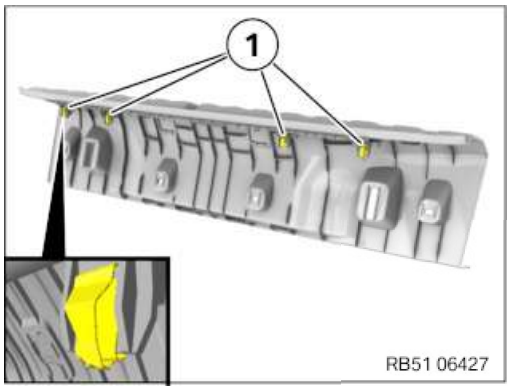
11 – Install the luggage compartment well in front

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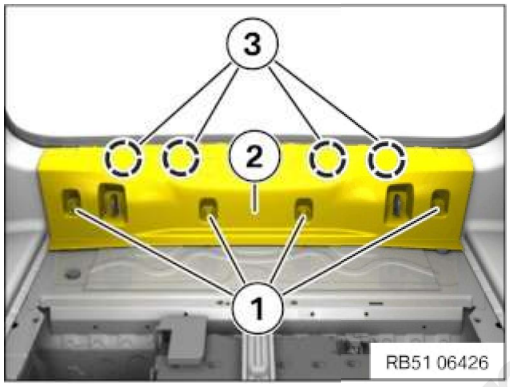


- Feed in and insert front luggage compartment well (1) on the seat belt strap.

12 – Installing loading edge trim

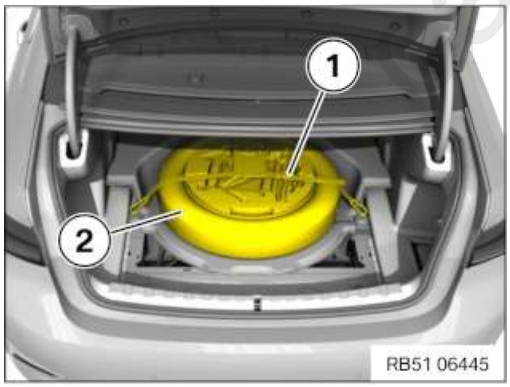


- Check the clamps (1) for damage and renew if necessary.



- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

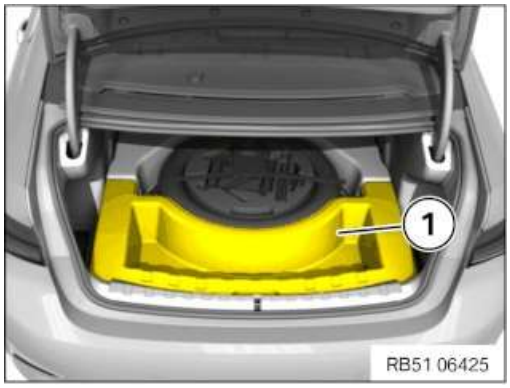
13 – If installed: Install the emergency wheel



- Install the emergency wheel (2) with the insert.
- Position the seat belt strap above the emergency wheel and close the buckle on the seat belt strap (1).

► **Installing rear luggage compartment well**

erdiagn.com



- Install rear luggage compartment well (1).

14 – Installing the luggage compartment floor trim panel



- Insert the luggage compartment floor trim panel (1).

Additional Information

Overview of Tightening Torques

Rear light to side panel			Used in step 8
Nut M5, AF 8		Tightening torque	3 Nm

Rear light to side panel			Used in step 8
Nut M5, AF 10		Tightening torque	4 Nm

Links

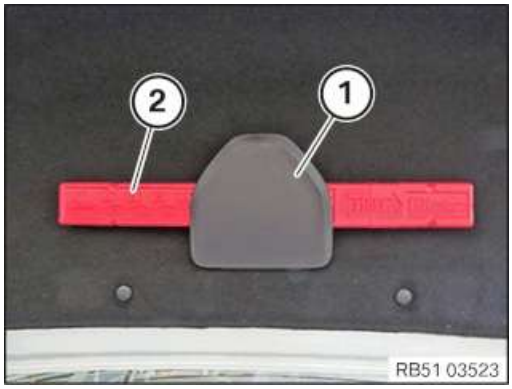
Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	7

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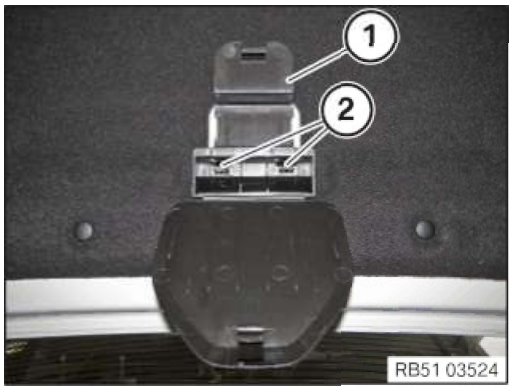
63 21 281 Removing and install rear right light of tailgate

PRELIMINARY WORK

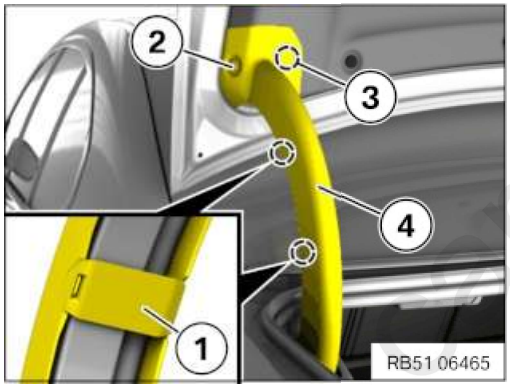
1 – Remove tailgate trim panel



- Fold the cover (1) towards the bottom.
- Remove the warning triangle (2).



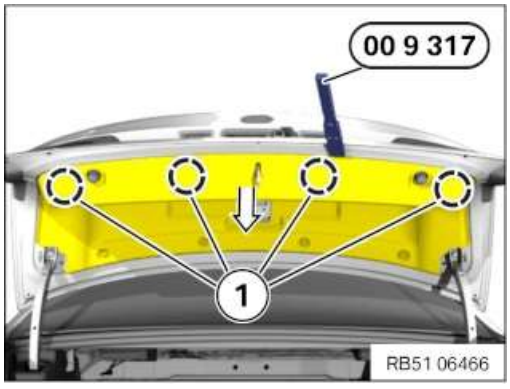
- Detach the warning triangle holder (1) from the latch mechanisms (2) and slide downwards.



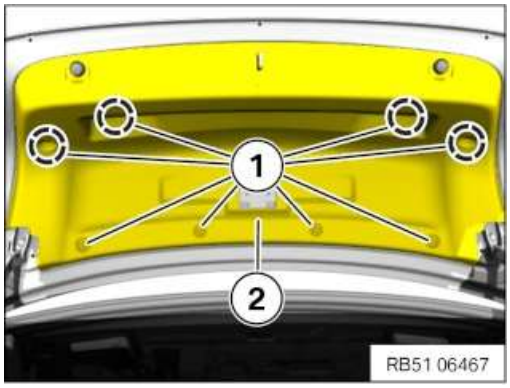
NOTICE

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

- Unclip the tabs (1).
- Loosen expanding rivet (2).
- To avoid damage, release the trim panel for the hinge of the tailgate (4) without using a tool by jerking it along the hinge bracket and out of the clip fastening (3).



- Unclip clips (1) with special tool 0 490 534 (00 9 317) in the direction of arrow.



- Release expanding rivet (1) on the tailgate trim panel (2).
- Remove tailgate trim panel (2).
- **If installed**: Unlock plug connection of the switch for the tailgate lift and disconnect.

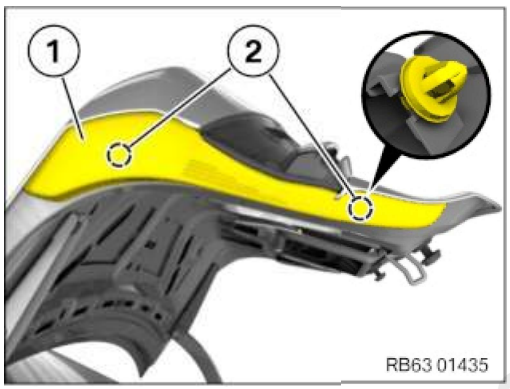
MAIN WORK

2 – Removing the rear light on the right tailgate

NOTICE

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

▸ **Remove the rear light on the tailgate**



- Unclip cover (1) with the clips (2).

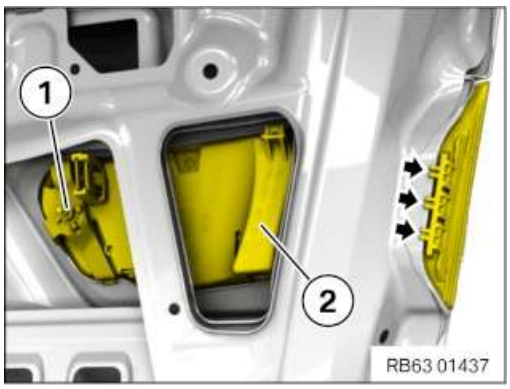
TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections



- Unlock and disconnect the plug connection (1) as described in position #11 in the additional information.



- Loosen nut (1).
- Release and remove rear light on the tailgate (2) at the guides (arrows).

3 – Installing the right rear light on the tailgate

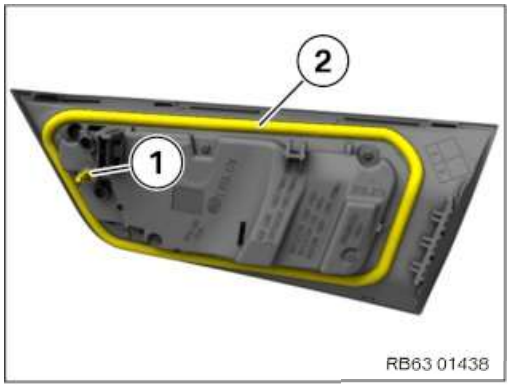
carsdiagn.com

NOTICE

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

▶ **Install the rear light on the tailgate**

Check



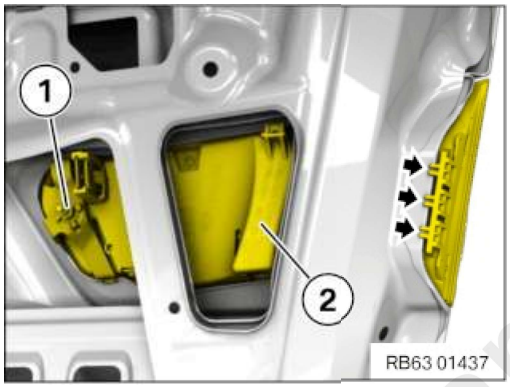
- Check the threaded bolt (1) and the seal (2) on the rear light on the tailgate for damage.

Result

» Threaded bolt or seal is damaged.

Measure

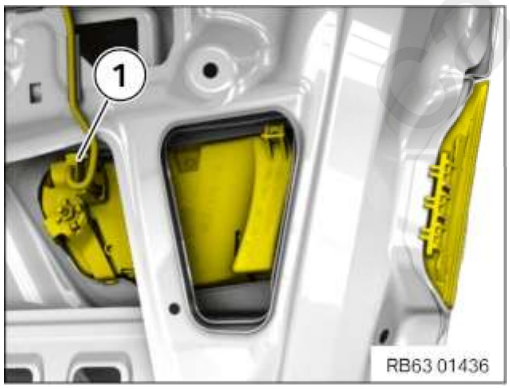
- Renew the rear light on the tailgate.



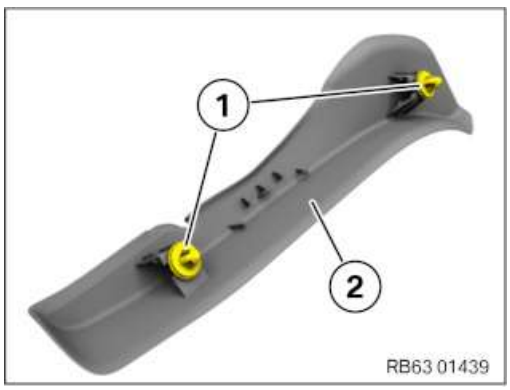
- Position rear light on the tailgate (2) at the guides (arrows).
- Position clamping claw and tighten the nut (1).

Rear light at tailgate

Nut M5	Tightening torque	3 Nm

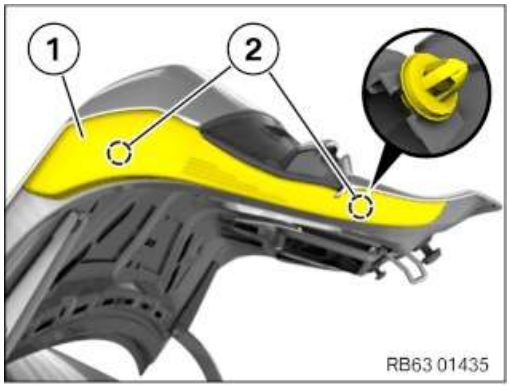


- Connect connectors (1) and lock.



- Check clips of the (1) cover (2) for damage, renew if necessary.

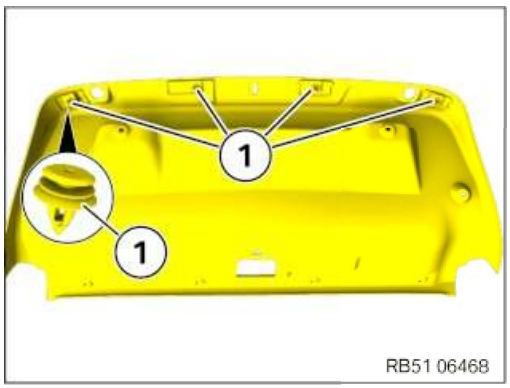
cardiagn.com



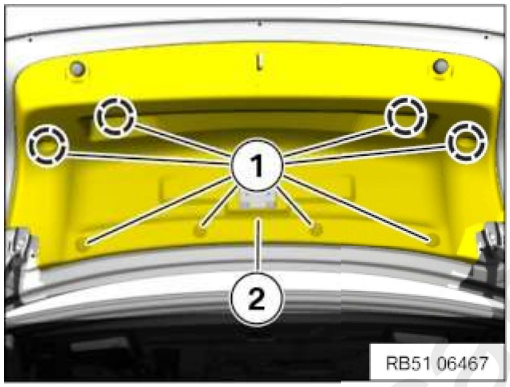
- Position the cover (1) and clip it in with the clips .

POSTPROCESSES

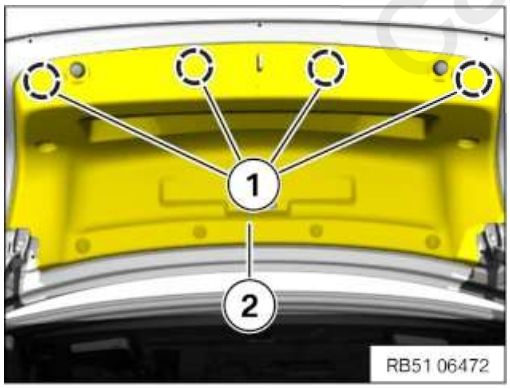
4 – Installing the tailgate trim panel



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

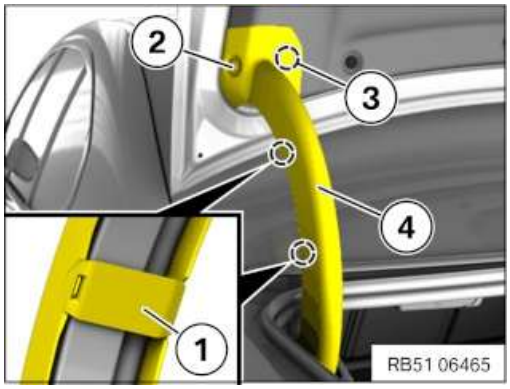


- Fit the tailgate trim panel (2) and fasten in place with the expanding rivets (1).
- **If installed**: Connect and lock plug connection on the switch for the tailgate lift.



- Clip in the tailgate trim panel (2) with the clips (1).

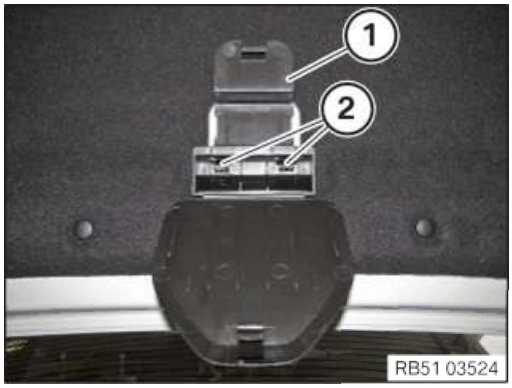
carfdiagn.com



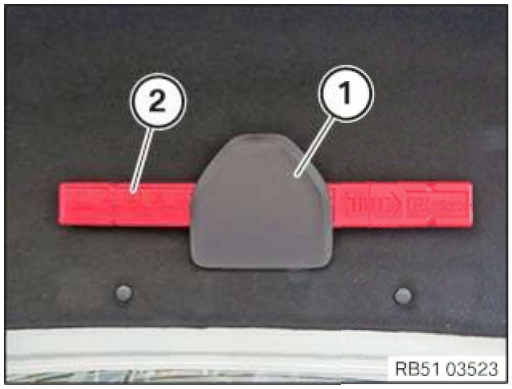
NOTICE

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

- Clip in the trim panel for the hinge of the tailgate (4) to the clip fastening (3).
- Fasten expanding rivet (2).
- Clip in tabs (1).



- Position the warning triangle holder (1) and snap into the latch mechanisms (2).



- Install the warning triangle (2).
- Clip in the cover (1).

Additional Information

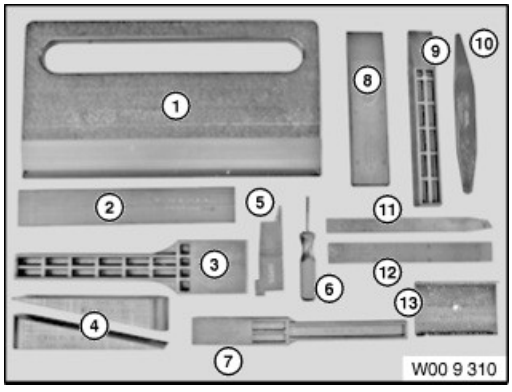
Overview of Tightening Torques

Rear light at tailgate — Used in step 3

Nut M5		Tightening torque	3 Nm

Overview of Special Tools

0 490 534 (00 9 317) Wedge



Common — Used in step 1

Usage	(Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)
Included in the tool or work	0 490 527
Storage location	
Replaced by	
In connection with	
SI-Number	

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Links

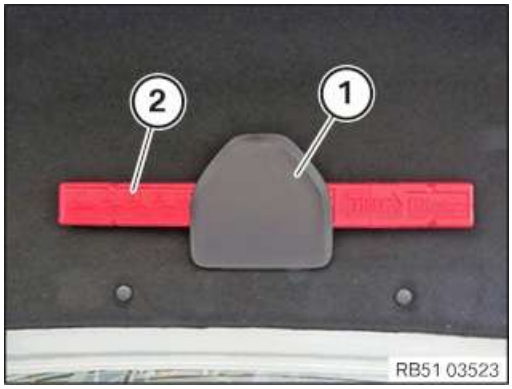
Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	2

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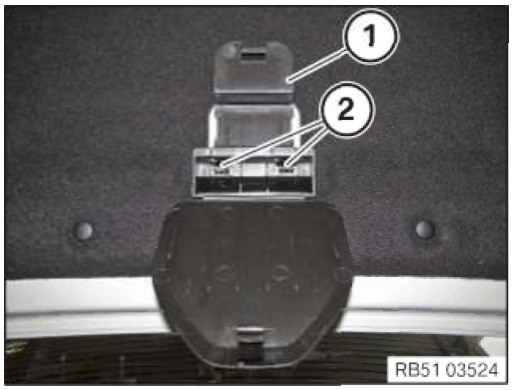
63 21 285 Removing and installing both rear lights of tailgate

PRELIMINARY WORK

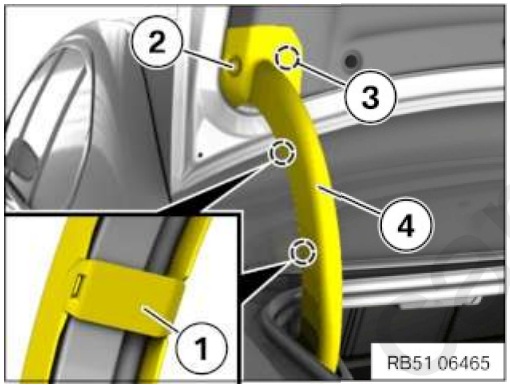
1 – Remove tailgate trim panel



- Fold the cover (1) towards the bottom.
- Remove the warning triangle (2).



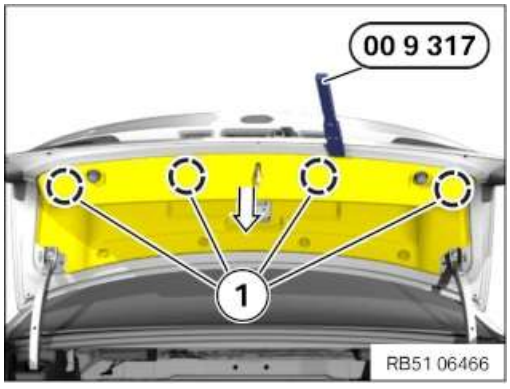
- Detach the warning triangle holder (1) from the latch mechanisms (2) and slide downwards.



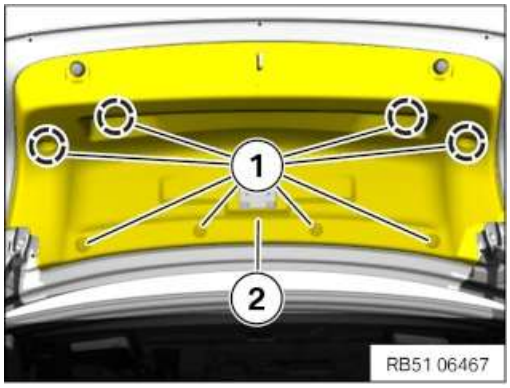
NOTICE

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

- Unclip the tabs (1).
- Loosen expanding rivet (2).
- To avoid damage, release the trim panel for the hinge of the tailgate (4) without using a tool by jerking it along the hinge bracket and out of the clip fastening (3).



- Unclip clips (1) with special tool 0 490 534 (00 9 317) in the direction of arrow.



- Release expanding rivet (1) on the tailgate trim panel (2).
- Remove tailgate trim panel (2).
- **If installed**: Unlock plug connection of the switch for the tailgate lift and disconnect.

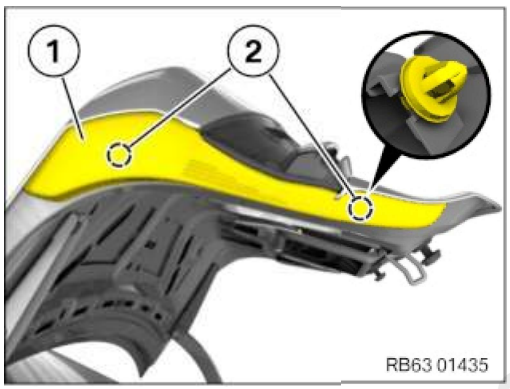
MAIN WORK

2 – Remove both rear lights from the tailgate

NOTICE

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

▸ **Remove the rear light on the tailgate**



- Unclip cover (1) with the clips (2).

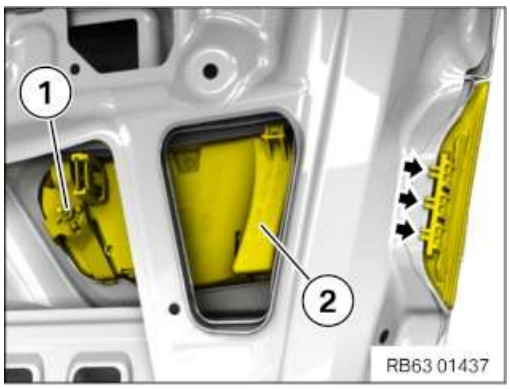


TECHNICAL INFORMATION

Observe note on unlocking and disconnecting plug connections.

For additional information see: 6113 ... Unlocking and disconnecting different plug connections

- Unlock and disconnect the plug connection (1) as described in position #11 in the additional information.



- Loosen nut (1).
- Release and remove rear light on the tailgate (2) at the guides (arrows).

3 – Install both rear lights on the tailgate

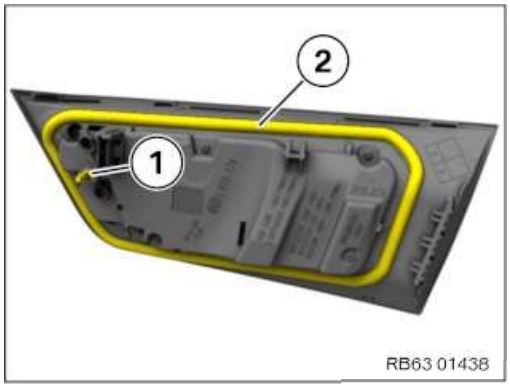
carsdiagn.com

NOTICE

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

▶ **Install the rear light on the tailgate**

Check



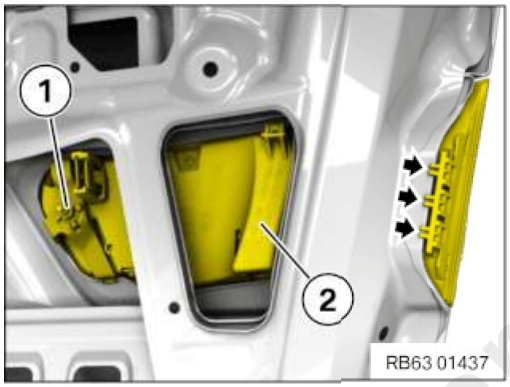
- Check the threaded bolt (1) and the seal (2) on the rear light on the tailgate for damage.

Result

» Threaded bolt or seal is damaged.

Measure

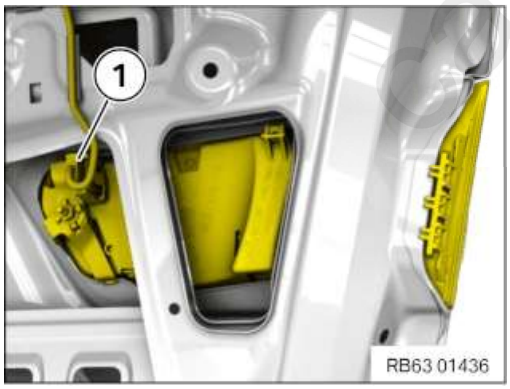
- Renew the rear light on the tailgate.



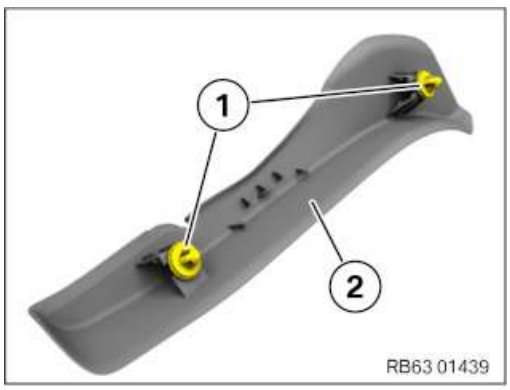
- Position rear light on the tailgate (2) at the guides (arrows).
- Position clamping claw and tighten the nut (1).

Rear light at tailgate

Nut M5	Tightening torque	3 Nm

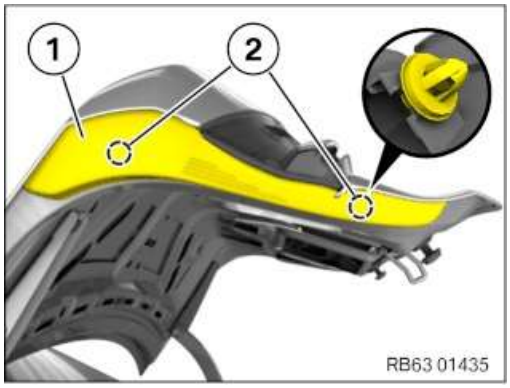


- Connect connectors (1) and lock.



- Check clips of the (1) cover (2) for damage, renew if necessary.

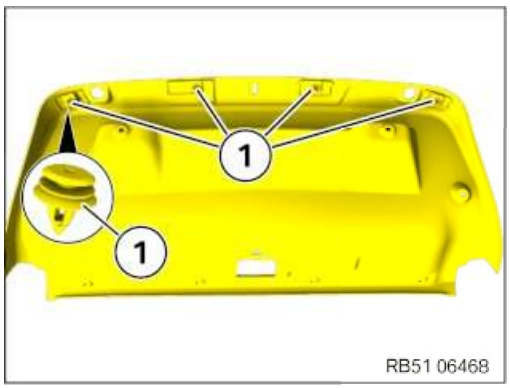
cardiagn.com



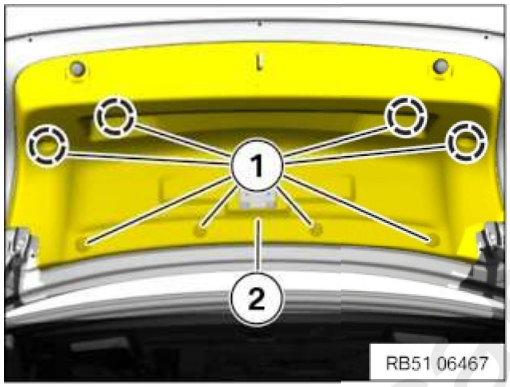
- Position the cover (1) and clip it in with the clips .

POSTPROCESSES

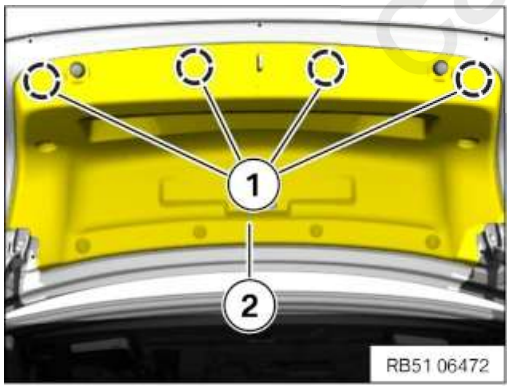
4 – Installing the tailgate trim panel



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

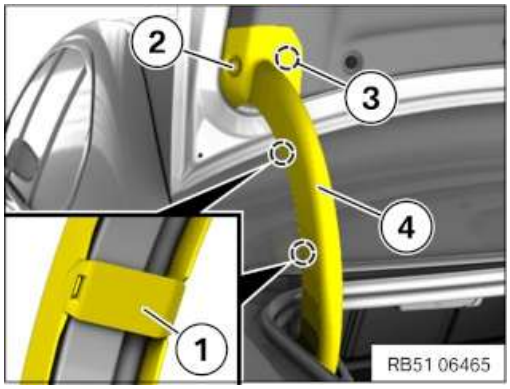


- Fit the tailgate trim panel (2) and fasten in place with the expanding rivets (1).
- **If installed**: Connect and lock plug connection on the switch for the tailgate lift.



- Clip in the tailgate trim panel (2) with the clips (1).

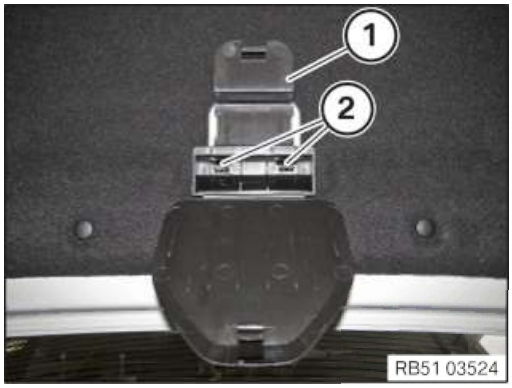
carfdiagn.com



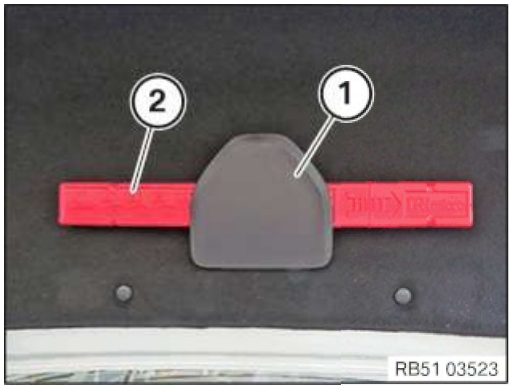
NOTICE

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

- Clip in the trim panel for the hinge of the tailgate (4) to the clip fastening (3).
- Fasten expanding rivet (2).
- Clip in tabs (1).



- Position the warning triangle holder (1) and snap into the latch mechanisms (2).



- Install the warning triangle (2).
- Clip in the cover (1).

Additional Information

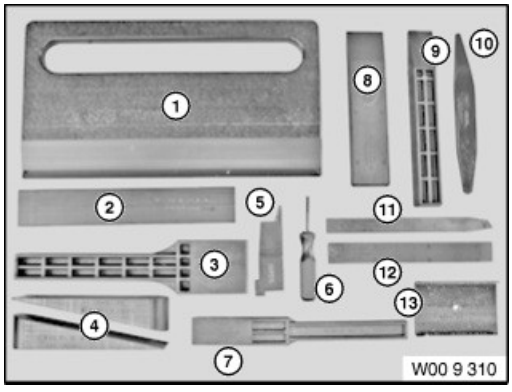
Overview of Tightening Torques

Rear light at tailgate — Used in step 3

Nut M5		Tightening torque	3 Nm

Overview of Special Tools

0 490 534 (00 9 317) Wedge



Common — Used in step 1

Usage	(Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)
Included in the tool or work	0 490 527
Storage location	
Replaced by	
In connection with	
SI-Number	

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Links

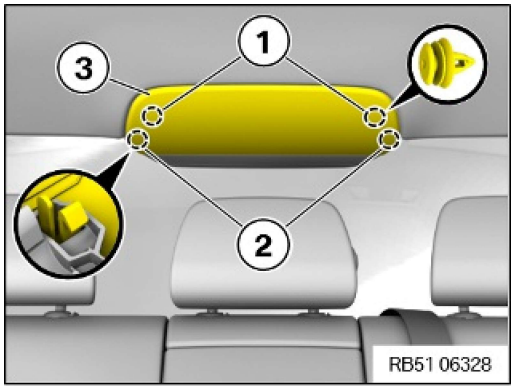
Repair instructions	Used in step
61 13 ... Unlocking and disconnecting different plug connections	2

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63 25 003 Removing and installing add. brake light

PRELIMINARY WORK

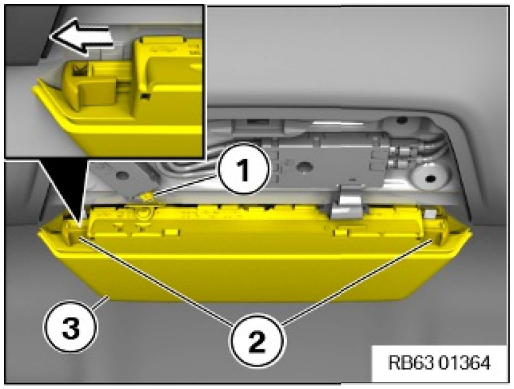
1 – Removing the trim of the additional brake light



- Loosen the clips (1).
- Release the latch mechanisms (2) and remove the trim of the additional brake light (3).

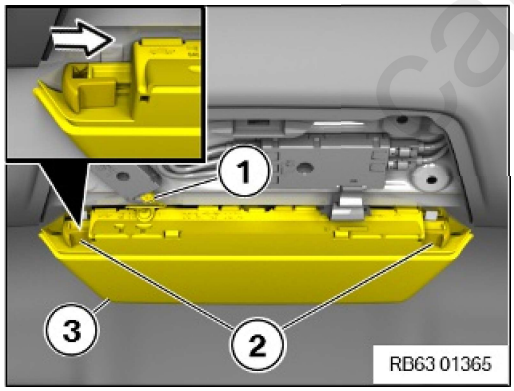
MAIN WORK

2 – Remove additional brake light



- Disconnect plug connection (1).
- Unlock both slides (2) outwards in the direction of the arrow and remove additional brake light (3).

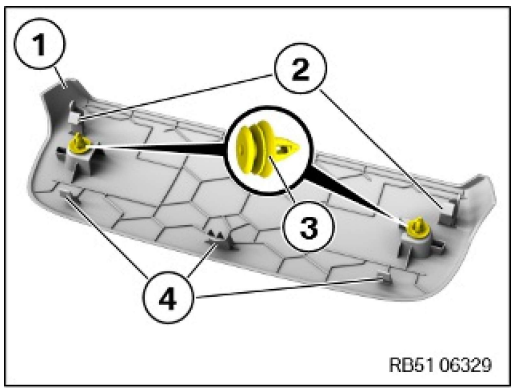
3 – Install the auxiliary stop lamp



- Position the additional brake light (3).
- Lock both slides (2) inwards in the direction of the arrow.
- Connect connector (1).

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4 – Installing trim for additional brake light



Check

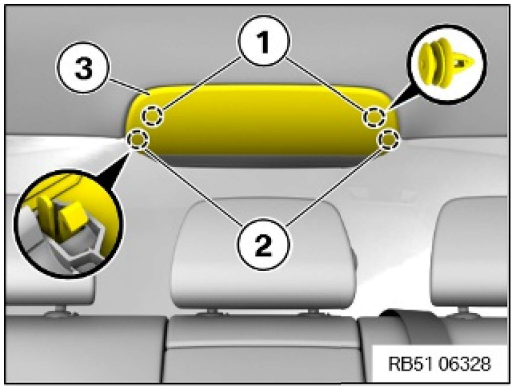
- Check the clips (3) for damage and renew if necessary.
- Check latch mechanisms (2) and guides (4) for damage.

Result

» The latch mechanism or the guide is damaged.

Measure

- Renew the trim for the additional brake light.



- Position trim for additional brake light (1) from the bottom and clip it in with latch mechanisms (2).
- Clip in clips (1).

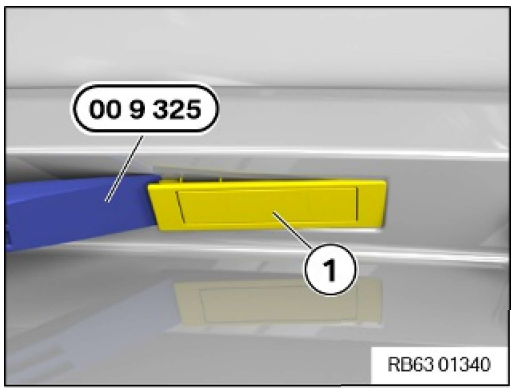
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63 26 020 Removing and installing/replacing both number plate lights

NOTICE

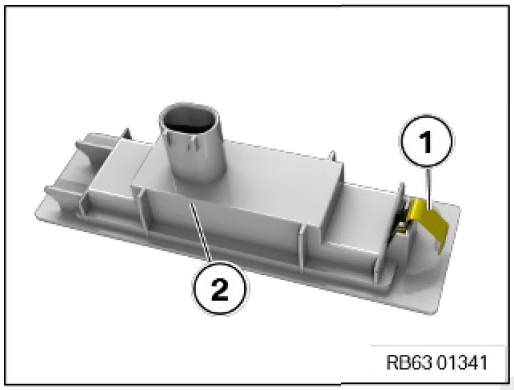
Description is for left component only. Procedure on the right side is identical.

1 – Remove number plate light

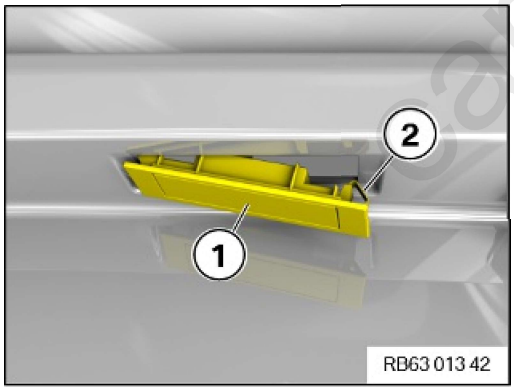


- Remove the number plate light (1) with the special tool 0 496 569 (00 9 325).
- Unlock plug connection and disconnect.

2 – Installing number plate light



- Check the clamp (1) on the number plate light (2) for damage.



- Connect connectors and lock.
- Position the number plate light (1) and clip it in with the clamp (2).

Additional Information

Overview of Special Tools

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0 496 569 (00 9 325) Wedge

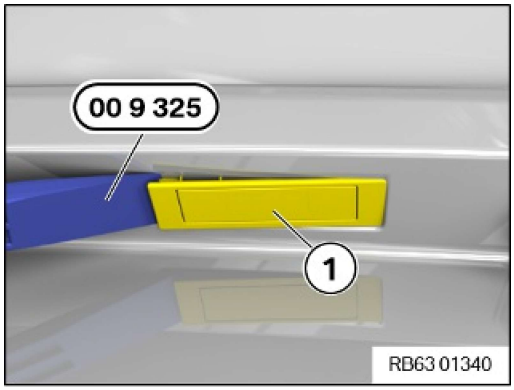


Common	Used in step 1
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

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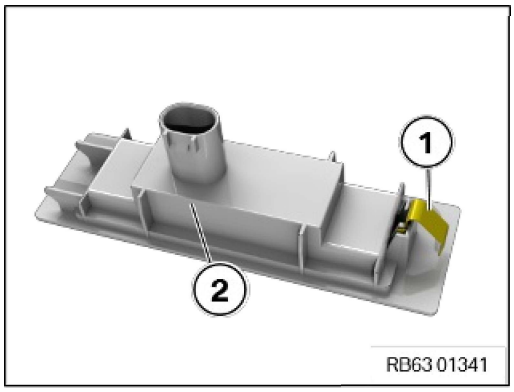
63 26 000 Removing and installing/replacing left or right number/license plate light

1 – Remove number plate light

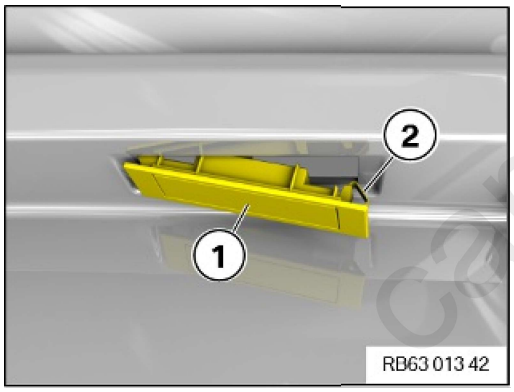


- Remove the number plate light (1) with the special tool 0 496 569 (00 9 325).
- Unlock plug connection and disconnect.

2 – Installing number plate light



- Check the clamp (1) on the number plate light (2) for damage.



- Connect connectors and lock.
- Position the number plate light (1) and clip it in with the clamp (2).

Additional Information

Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common	Used in step 1
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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63 31 100 Remove and install front interior light

RISK OF DAMAGE

Scratches.

Tools and sharp-edged components can cause scratches.

- 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 Information on electrostatic discharge (ESD) protection.

TECHNICAL INFORMATION

With the optional equipment SA6UA, the camera for gesture control is integrated in the roof control module. Separate exchange of this camera in the event of a fault is not possible.

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1 – Removing the roof function centre (FZD)



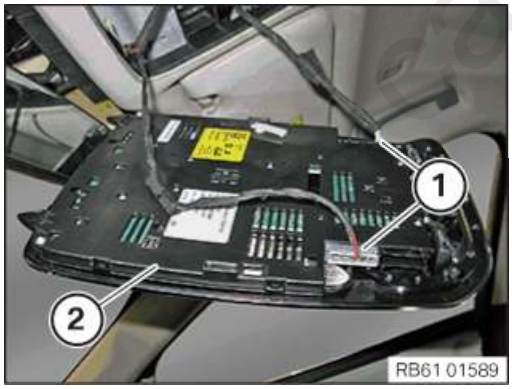
- Unclip the cover (1).



- Loosen screws (1).



- Unclip the roof function centre (FZD) (1) from the clamps (2).
- Thread the roof function centre (FZD) (1) out of the guides (3).



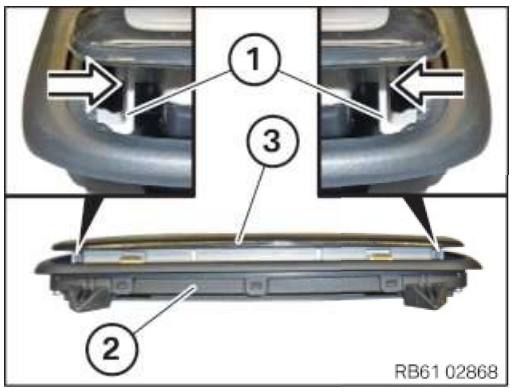
- Unlock and disconnect plug connections (1).
- Unclip the cable for the roof function centre (FZD) (2) from the cable clip.

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2 – Remove interior roof light



- Lever out the interior roof light with the special tool 0 490 527 (00 9 310) in the direction of the arrow from the frames (1).



- Release both latch mechanisms (1) in the direction of the arrow.
- Feed out interior roof light (3) from the frames (2).

3 – Install interior roof light



Check

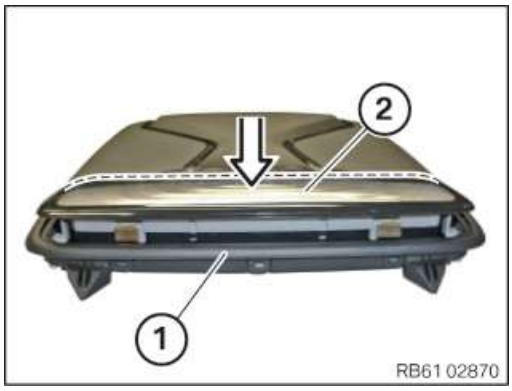
- Check guides (1), clamps (3) and latch mechanisms (2) for damage.

Result

» Guides (1), clamps (3) and latch mechanisms (2) are damaged

Measure

- Renew the interior roof light (4).

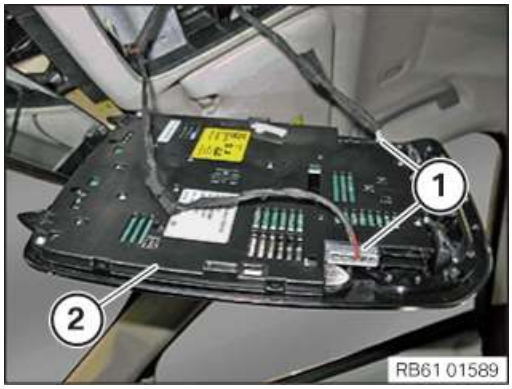


- First insert interior roof light (2) in the marked area.
- Engage interior roof light (2) in the frame (1)in direction of arrow.

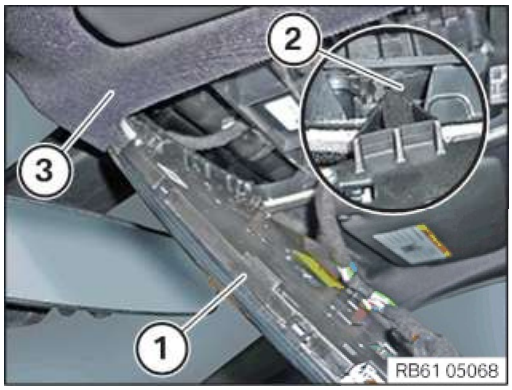
cardiagn.com

POSTPROCESSES

4 – Installing roof function centre (FZD)



- Connect connectors (1) and lock.
- Clip in the cable for the roof function centre (FZD) (2) in the cable clip.



- Thread the roof function centre (FZD) (1) as shown at a steep angle into the two guides (2) on the headlining (3).

  Make sure the headlining is not deformed during this operation.



- Clip the roof function centre (FZD) (1) upwards into the clamps (2).



- Pass through the FZD frame and headlining with the special tool 2 298 505 and adjust the headlining correctly.



- Tighten the screws (1).

Roof function centre

	Tightening torque	1,2 Nm

rdiagn.com



- Clip in the cover (1).

Additional Information

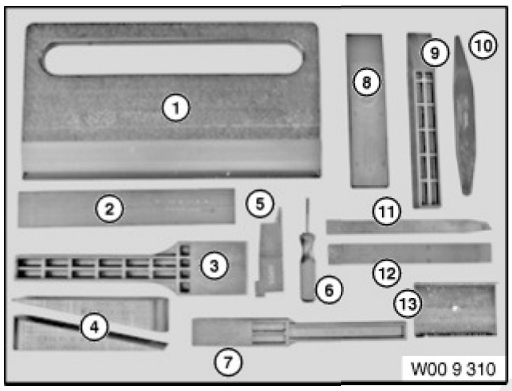
Overview of Tightening Torques

Roof function centre — Used in step 4

	Tightening torque	1,2 Nm

Overview of Special Tools

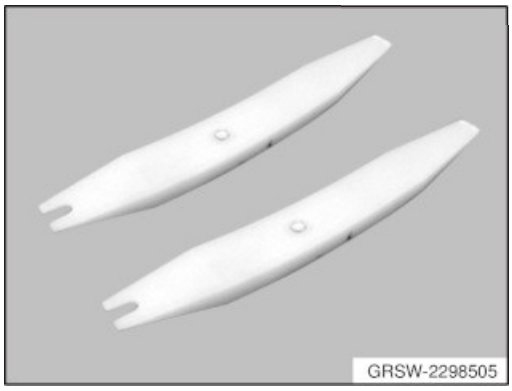
0 490 527 (00 9 310) Wedge



Common — Used in step 2

Usage	(Panel wedges (set in plastic case)) For straightening and installation work on the vehicle, e.g. feeding in trim panels, removing window cavity strips, removing minor dents, removing adhesive residue, measuring gap widths, levering out trim panels --> 12 pieces (item 6 = 009316 discontinued since 2009).
Included in the tool or work	
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

2 298 505 Wedge



Common — Used in step 4

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)

Replacement tools:

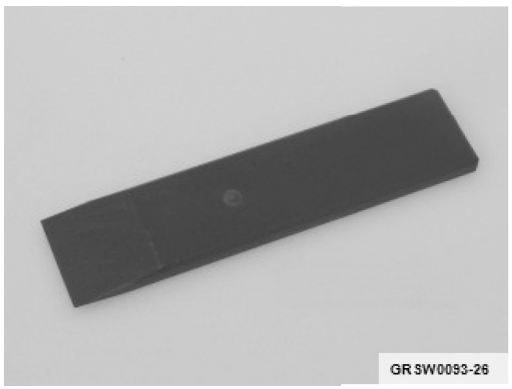
carflagm.com

0 496 569 (00 9 325) Wedge



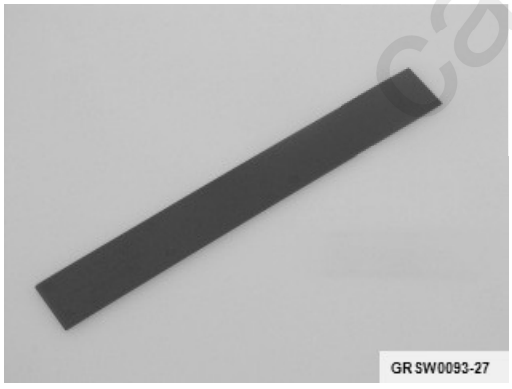
Common	Used in step 2
Usage	(Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	41 01 09 (507)

0 496 570 (00 9 326) Wedge



Common	Used in step 2
Usage	(Universal wedge) From 11/2008 this special tool replaces panel wedge 00 9 318 (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)

0 496 571 (00 9 327) Wedge



Common	Used in step 2
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)

Links

Repair instructions	Used in step
61 35 ... Notes on ESD protection (Electro Static Discharge)	

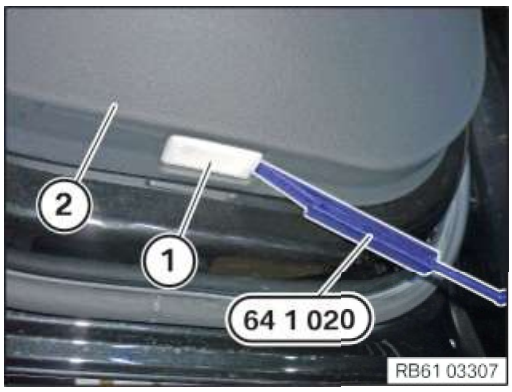
cardiagn.com

63 31 092 Remove and install/replace the door entry light in the door trim panel

NOTICE

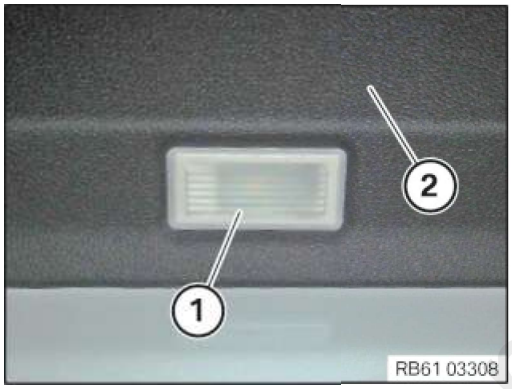
Description is for left component only. Procedure on the right side is identical.

1 – Remove the entry door light in the front door trim panel



- Remove the entry door light (1) from the front door trim panel (2) using the special tool 0 493 681 (64 1 020).
- Disconnect the corresponding connector and remove the entry door light (1).

2 – Installing the door entry light in the front door trim panel

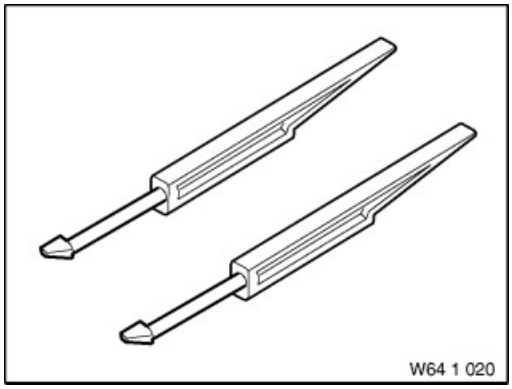


- Connect the associated connector to the door entry light (1).
- Position the door entry light (1)and install it in the door trim panel (2).

Additional Information

Overview of Special Tools

0 493 681 (64 1 020) Hook



Common	Used in step 1
Usage	(release hook) For releasing and removing fresh air grille. For removing various covers.
Included in the tool or work	
Storage location	C2
Replaced by	
In connection with	
SI-Number	01 15 99 (483)

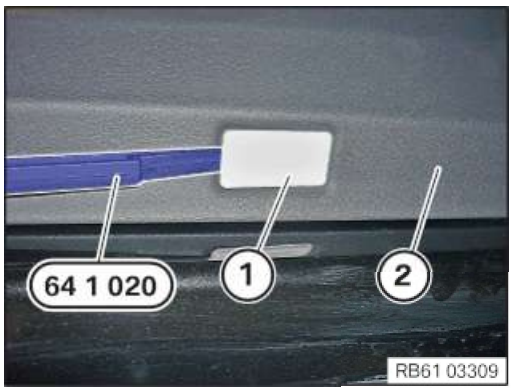
cardiagn.com

63 31 093 Remove and install/replace the Door entry light in the door trim panel in rear left or right

NOTICE

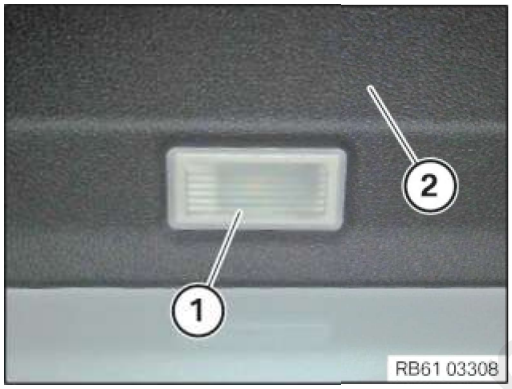
Description is for left component only. Procedure on the right side is identical.

1 – Removing the door entry light in the rear door trim panel



- Remove door entry light (1) using special tool 0 493 681 (64 1 020) from the rear door trim panel (2).
- Disconnect the associated connector and remove the door entry light (1).

2 – Install the door entry light on the rear door trim panel

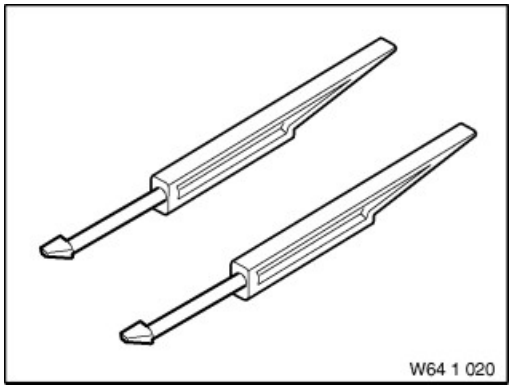


- Connect the associated connector with the door entry light (1).
- Position the door entry light (1) and install in the rear door trim panel (2).

Additional Information

Overview of Special Tools

0 493 681 (64 1 020) Hook



Common	Used in step 1
Usage	(release hook) For releasing and removing fresh air grille. For removing various covers.
Included in the tool or work	
Storage location	C2
Replaced by	
In connection with	
SI-Number	01 15 99 (483)

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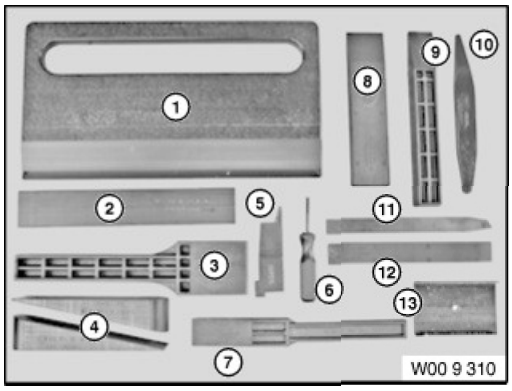
63 31 241 Remove and install/replace the front left or right door opener optical fibre

NOTICE

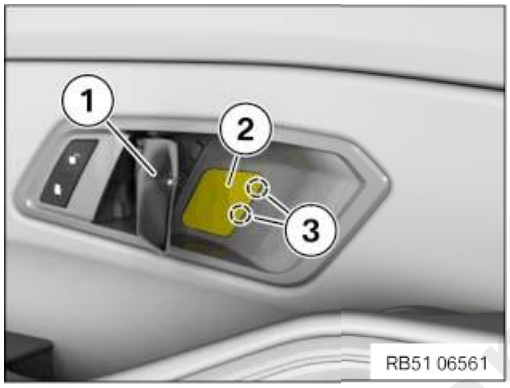
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

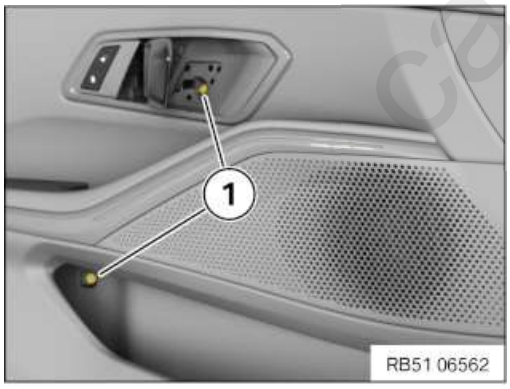
1 – Remove door trim panel



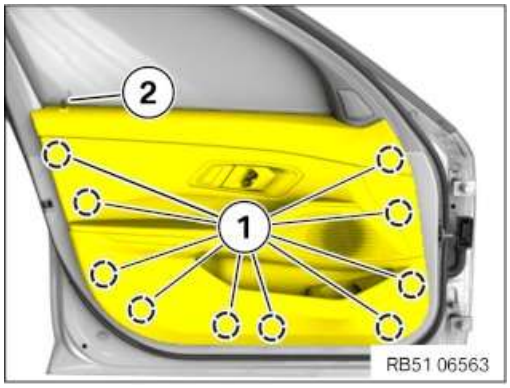
- Have the set of special tools 0 493 752 (00 9 329) ready.



- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable special tool.
- Remove trim (2).

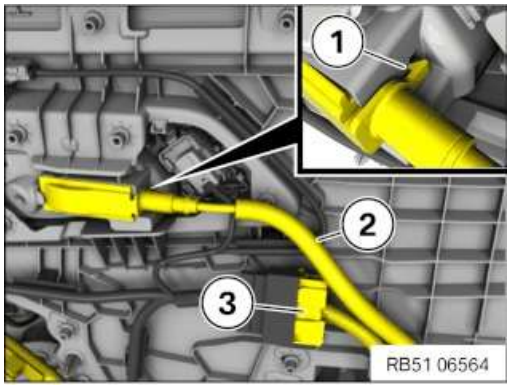


- Loosen screws (1).



- Unclip the door trim panel at the clips (1) using a suitable special tool.
- Guide the door trim panel upwards out of the front inner weather strip and the operating rod (2).

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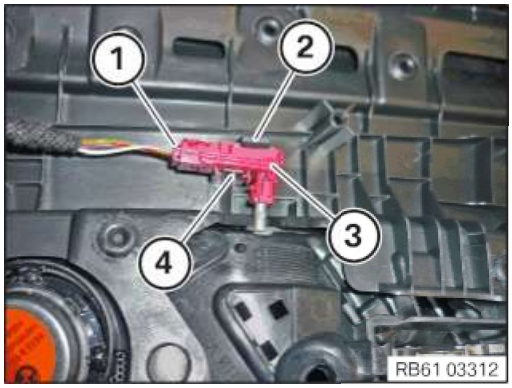


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock plug connection (3), disconnect it and remove the door trim panel.

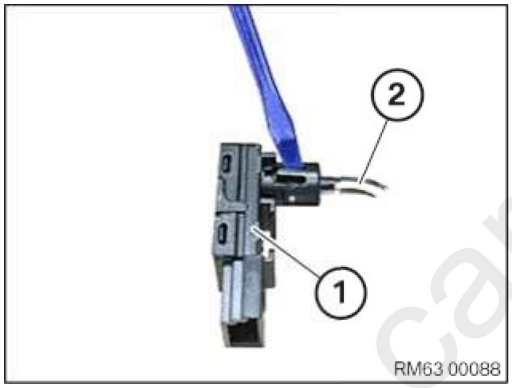
MAIN WORK

2 – Remove door opener fibre-optic cable

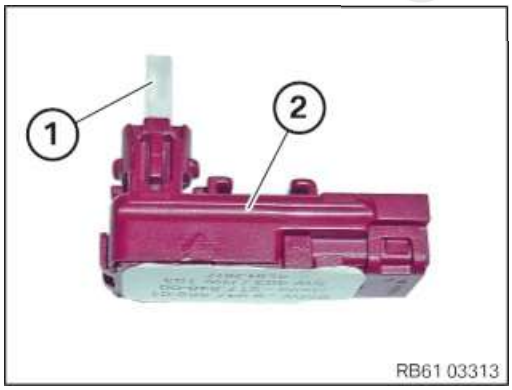


- Unplug connector (1).
- Release latch mechanism (2).
- Remove LED module with fibre-optic cable (3) from the holder (4).

3 – Replacing optical fibre of the front door handle



- Loosen latch mechanism on the LED module (1) using a screwdriver (3 mm blade). In doing so, pull out the optical fibre (2).

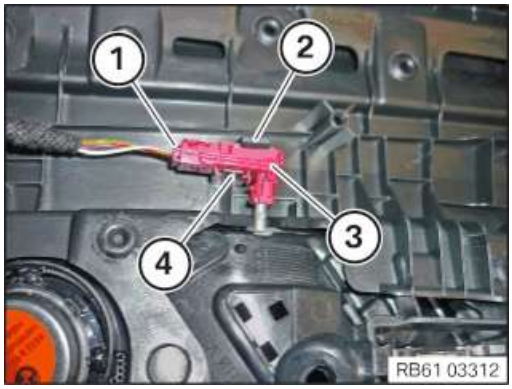


- Renew the optical fibre (1).

  Parts: Optical fibres
- Carefully clip the optical fibre (1)into the LED module (2).

4 – Installing the front door opener optical fibre

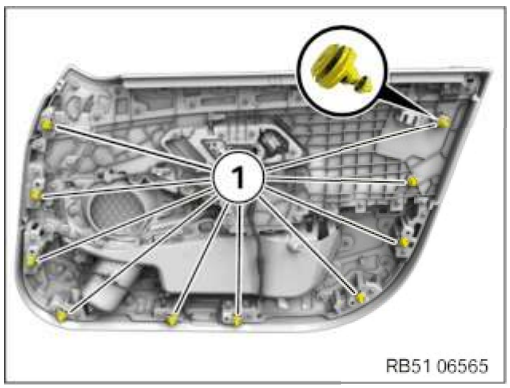
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- Correctly position the LED module with optical fibre (3) on the holder (4) and engage it in the latch mechanism (2).
- Connect connector (1).

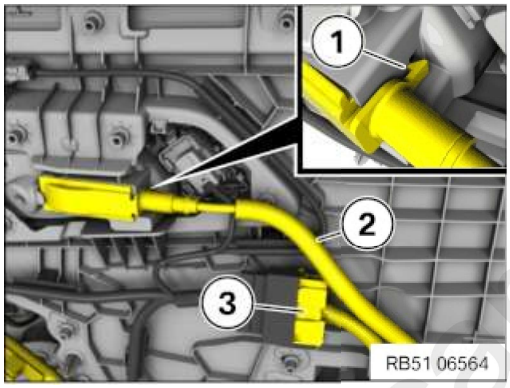
POSTPROCESSES

5 – Install door trim panel

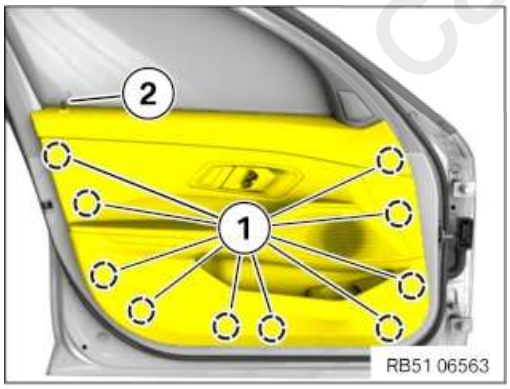


- Renew the clips (1).

  Parts: Clips

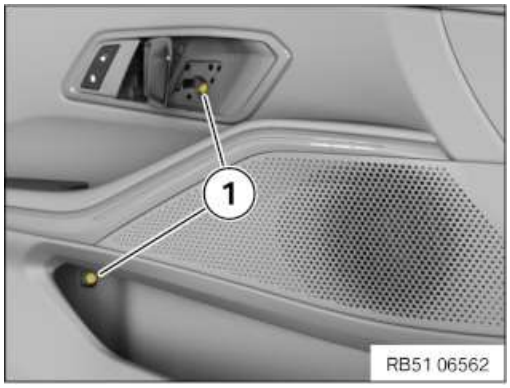


- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door opener (2) and clip in the latch mechanism (1).
- Connect connectors (3) and lock.



- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).

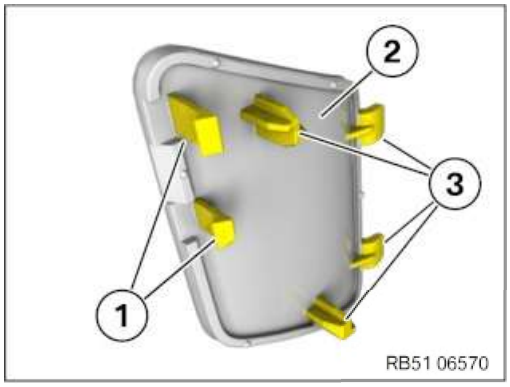
carldiagn.com



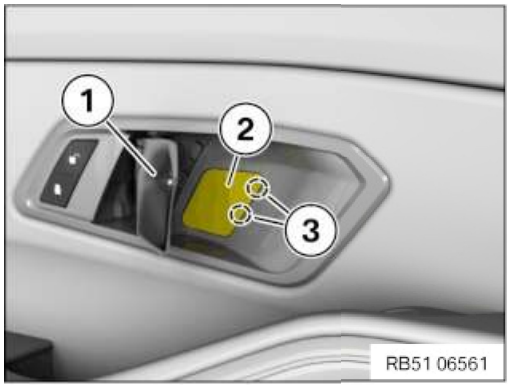
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

Additional Information

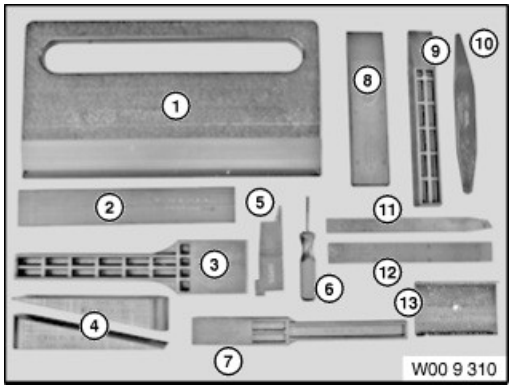
Overview of Tightening Torques

Door trim panel to door Used in step 5

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common Used in step 1

Usage	(Case) with insert not incl. panel wedges
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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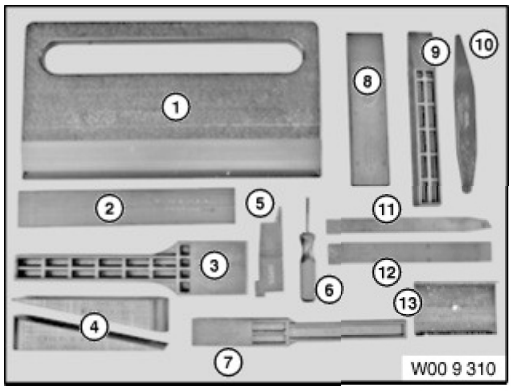
63 31 240 Remove and install/replace the optical fibre for folding compartment on the front left or right

NOTICE

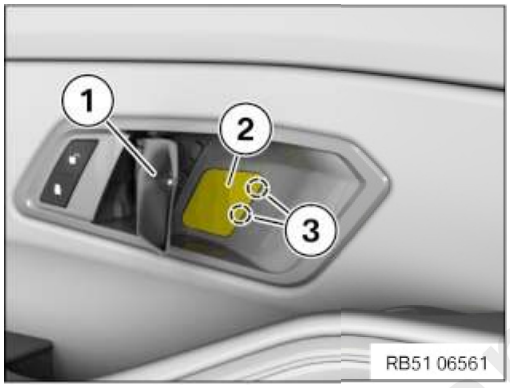
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

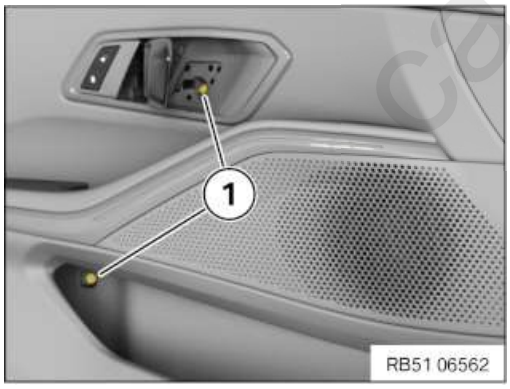
1 – Remove door trim panel



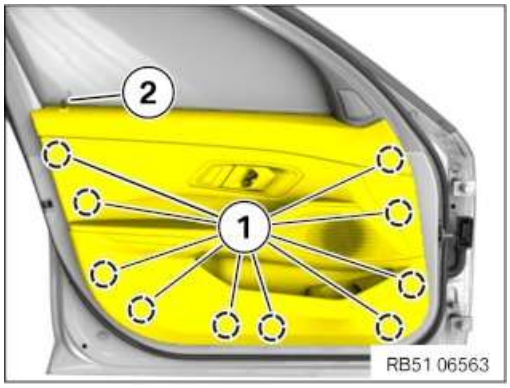
- Have the set of special tools 0 493 752 (00 9 329) ready.



- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable special tool.
- Remove trim (2).

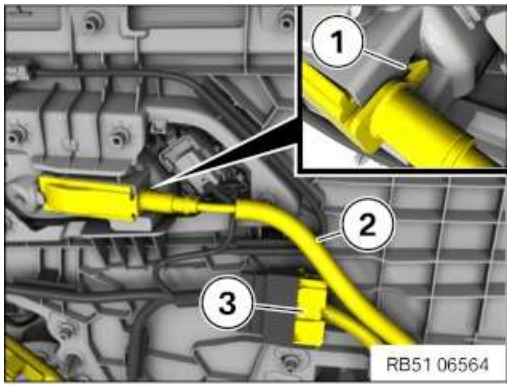


- Loosen screws (1).



- Unclip the door trim panel at the clips (1) using a suitable special tool.
- Guide the door trim panel upwards out of the front inner weather strip and the operating rod (2).

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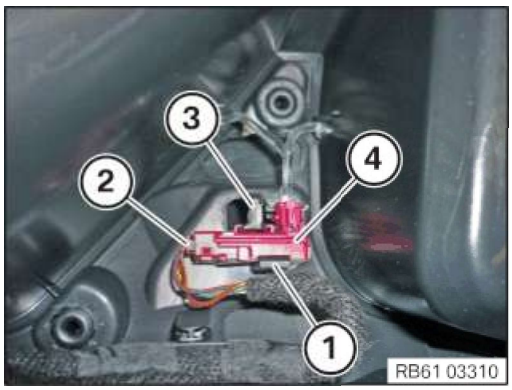


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock plug connection (3), disconnect it and remove the door trim panel.

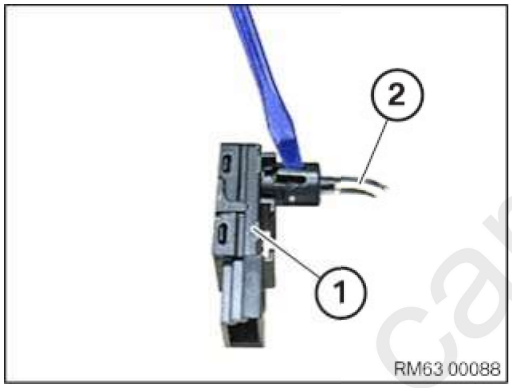
MAIN WORK

2 – Remove door pocket fibre-optic cable

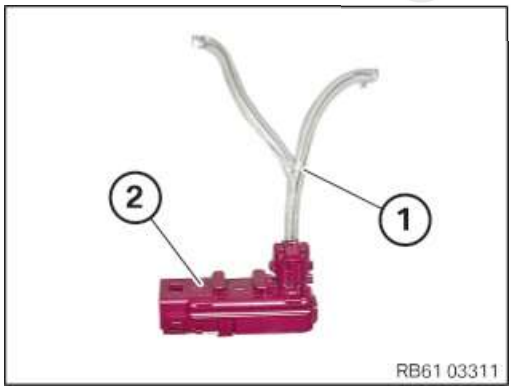


- Unplug connector (2).
- Release latch mechanism (1).
- Remove LED module with fibre-optic cable (4) from the holder (3).

3 – Replace front door pocket fibre-optic cable



- Unfasten latch mechanism using screwdriver (3-mm shank) on the LED module (1). Remove the fibre-optic cable (2).

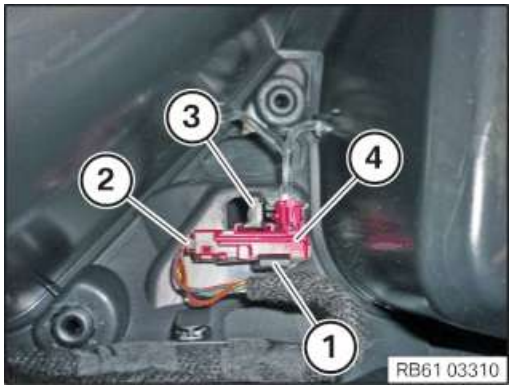


- Renew the optical fibre (1).

  Parts: Optical fibres
- Carefully clip the fibre-optic cable (1) into the LED module (2).

4 – Installing the optical fibre in the front door pocket

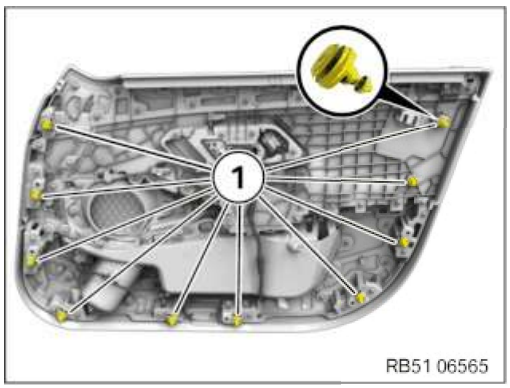
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- Position LED module with optical fibre (4) correctly on the holder (3) and engage it in the latch mechanism (1).
- Connect connector (2).

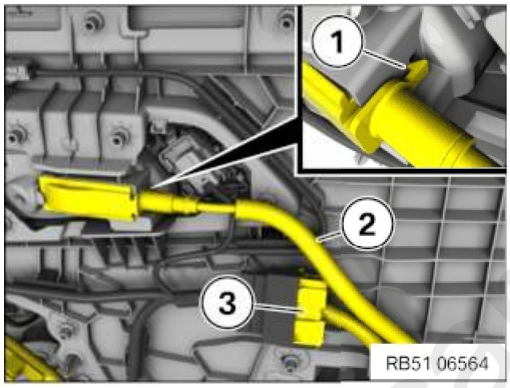
POSTPROCESSES

5 – Install door trim panel

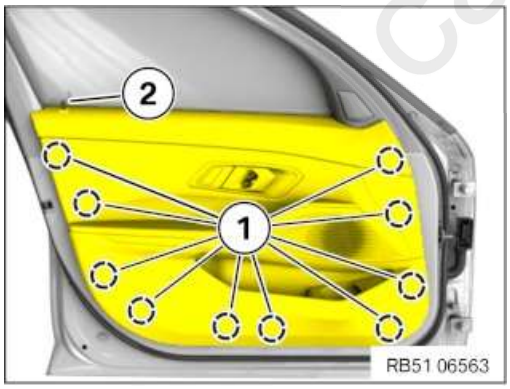


- Renew the clips (1).

  Parts: Clips

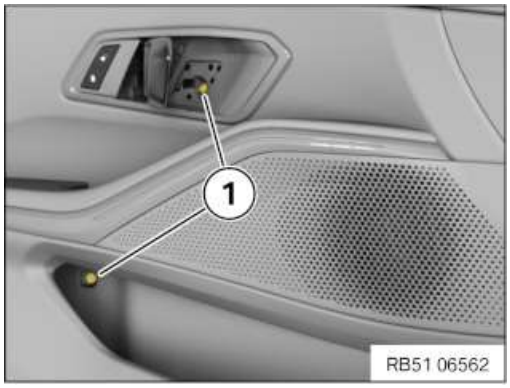


- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door opener (2) and clip in the latch mechanism (1).
- Connect connectors (3) and lock.



- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).

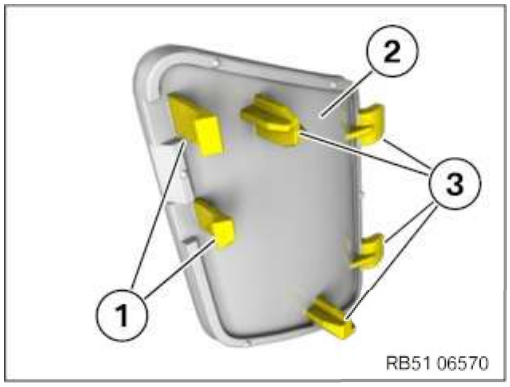
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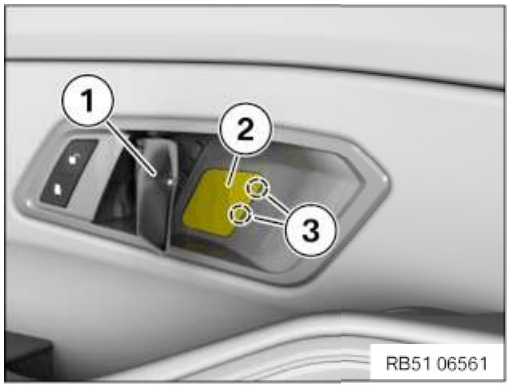
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

Additional Information

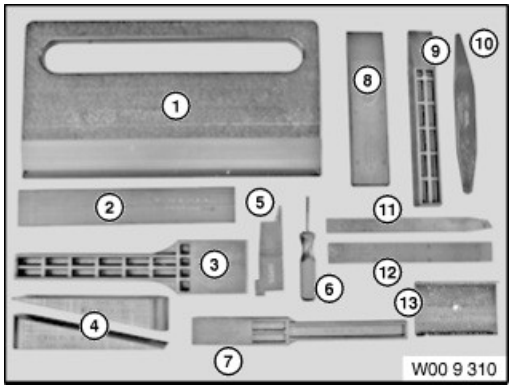
Overview of Tightening Torques

Door trim panel to door Used in step 5

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 493 752 (00 9 329) Case



Common Used in step 1

Usage	(Case) with insert not incl. panel wedges
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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63 31 242 Remove and install/replace the optical fibre for folding compartment on the rear left or right

RISK OF DAMAGE

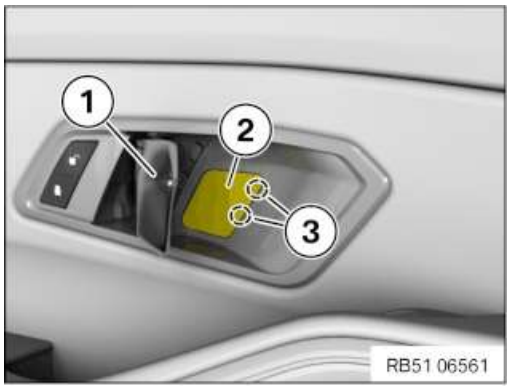
Scratches.

Tools and sharp-edged components can cause scratches.

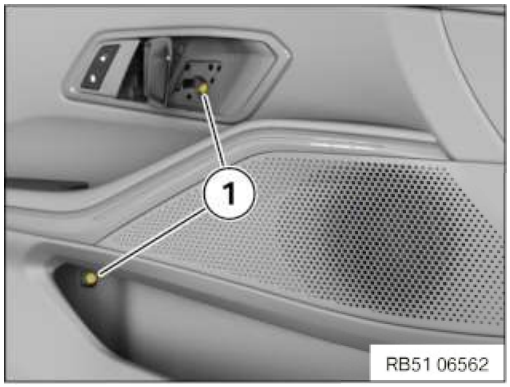
- Protect working area.
- Handle tools and components carefully.

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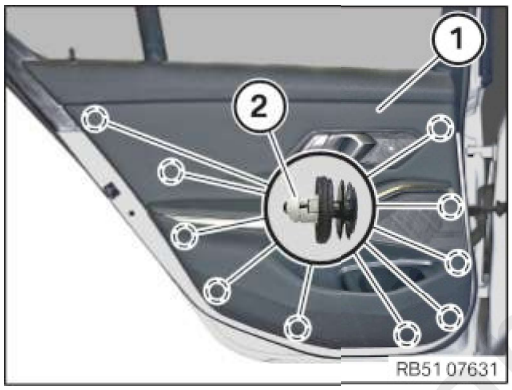
1 – Remove rear door trim



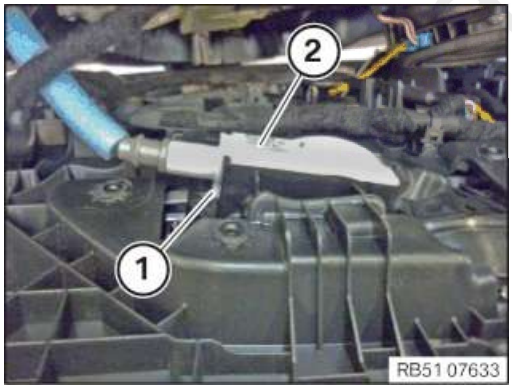
- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable tool.
- Remove trim (2).



- Loosen screws (1).



- Unclip the door trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Guide the door trim panel (1) upwards out of the weather strip.

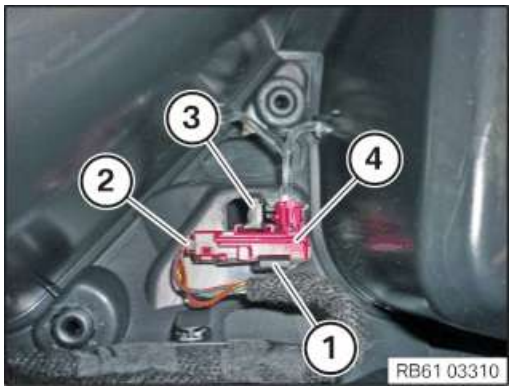


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock available plug connections and disconnect.
- Remove door trim panel.

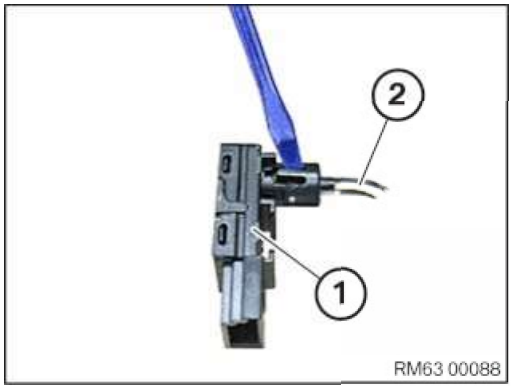
MAIN WORK

2 – Remove the fibre-optic cable for the rear door pocket

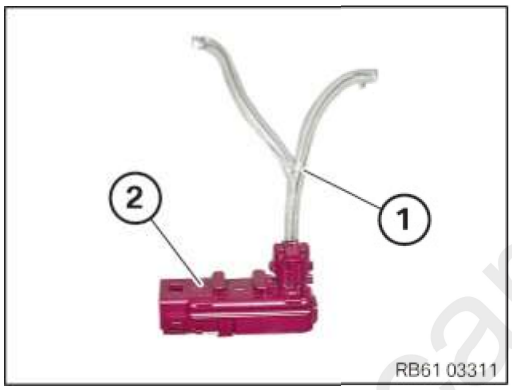


- Unplug the plug connector (2).
- Release latch mechanism (1).
- Remove LED module with fibre-optic cable (4) from bracket (3).

3 – Replace rear door pocket fibre-optic cable



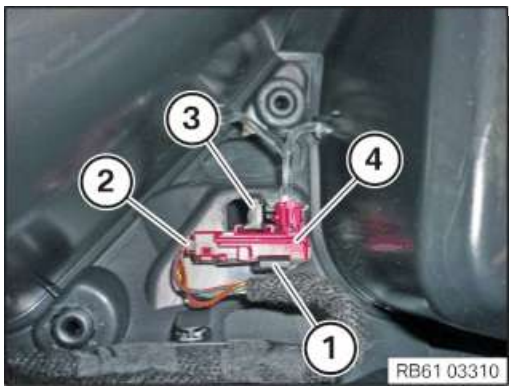
- Release latch mechanism from the LED module (1) using a screwdriver (3-mm blade). Pull fibre-optic cable (2) out at the same time.



- Renew the optical fibre (1).

  Parts: Optical fibres
- Carefully clip the fibre-optic cable (1) into the LED module (2).

4 – Installing rear folding compartment optical fibre

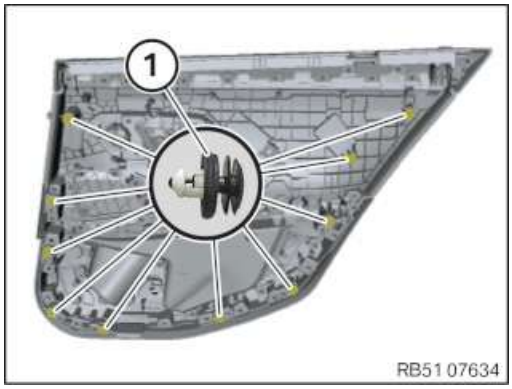


- Position LED module with optical fibre (4) on the holder (3) correctly and engage it in the latch mechanism (1).
- Connect connector (2).

POSTPROCESSES

5 – Installing rear door trim panel

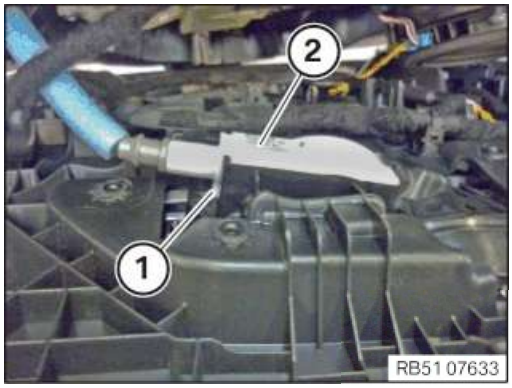
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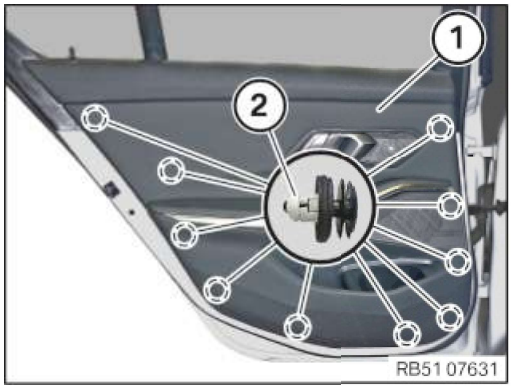
- Renew the clips (1).

  Parts: Clips

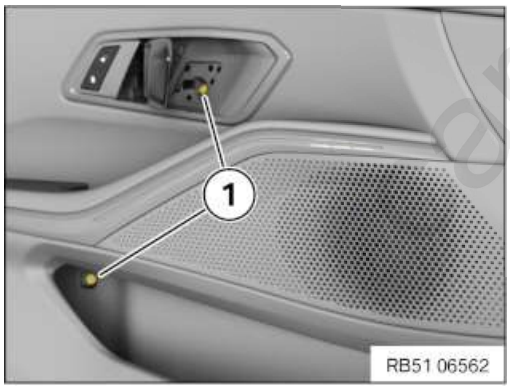
  The clips (1) **must not be engaged**. **The disengaged state is shown.**



- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door handle (2) and clip in to the latch mechanism (1).
- Connect existing connectors and lock.



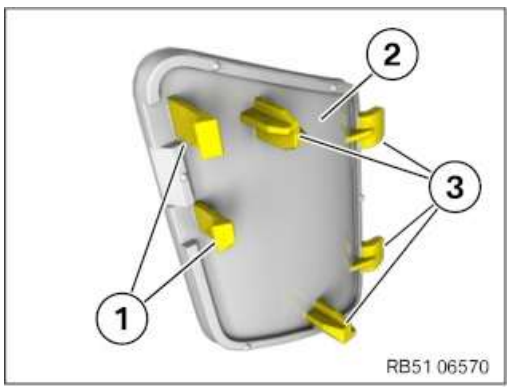
- Feed door trim panel from the top into the inner window recess finisher strip.
- Carefully clip in the door trim panel onto the clips (1).



- Tighten the screws (1).

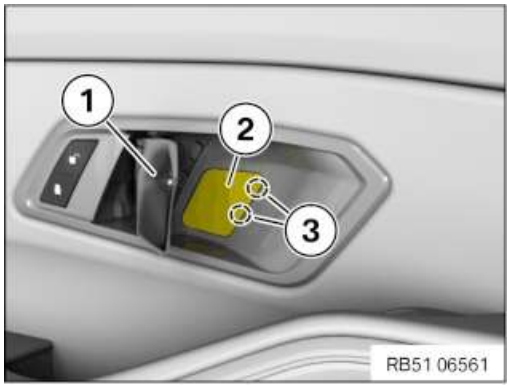
Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).

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- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

Additional Information

Overview of Tightening Torques

Door trim panel to door — Used in step 5

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common — Used in step 1

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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63 31 243 Remove or install/replace the rear left or right door opener optical fibre

RISK OF DAMAGE

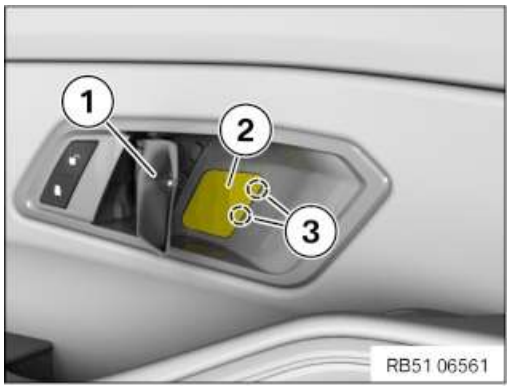
Scratches.

Tools and sharp-edged components can cause scratches.

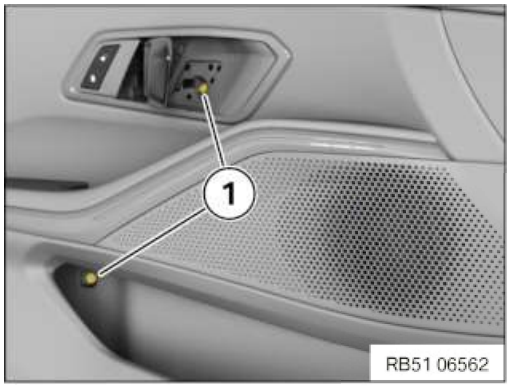
- Protect working area.
- Handle tools and components carefully.

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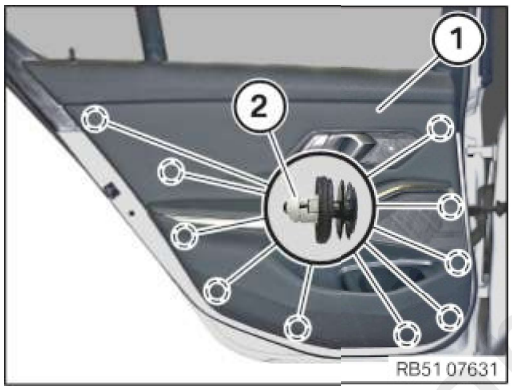
1 – Remove rear door trim



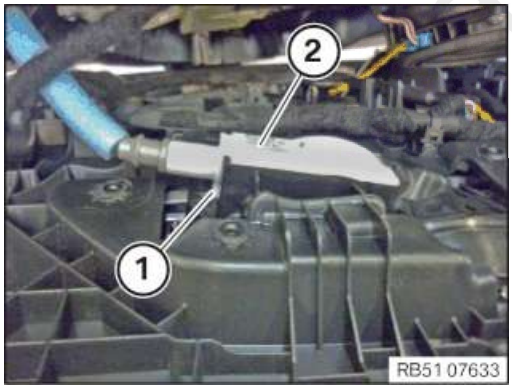
- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable tool.
- Remove trim (2).



- Loosen screws (1).



- Unclip the door trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Guide the door trim panel (1) upwards out of the weather strip.

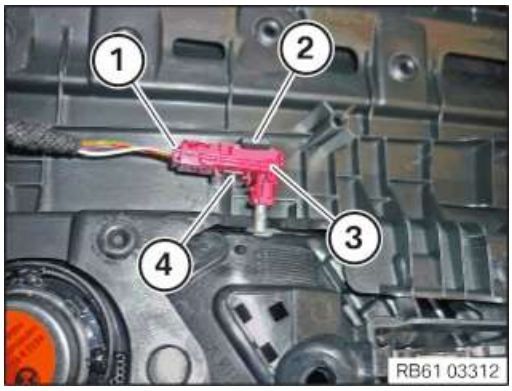


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock available plug connections and disconnect.
- Remove door trim panel.

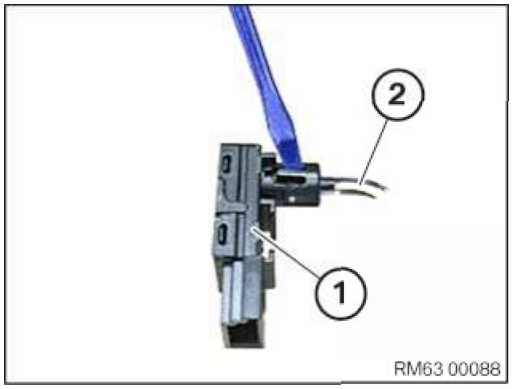
MAIN WORK

2 – Remove rear door opener fibre-optic cable

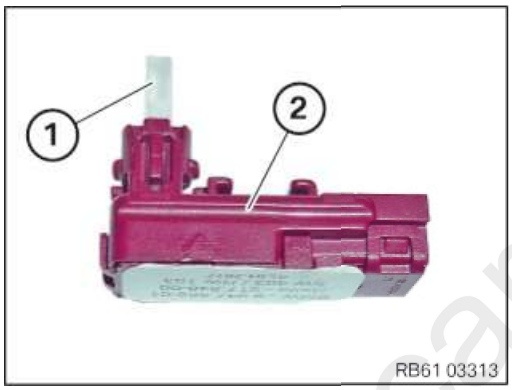


- Unplug the plug connector (1).
- Release latch mechanism (2).
- Remove LED module with fibre-optic cable (3) from bracket (4).

3 – Renewing the optical fibre of the rear door handle



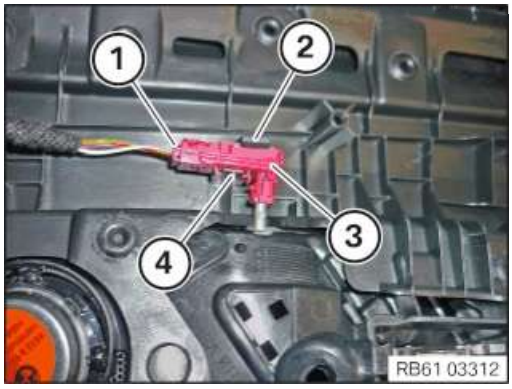
- Loosen the latch mechanism using a screwdriver (3 mm blade) on the LED module (1). Pull out the optical fibre (2) while doing so.



- Renew the optical fibre (1).

  Parts: Optical fibres
- Carefully clip the optical fibre (1) in the LED module (2).

4 – Install rear door opener fibre-optic cable

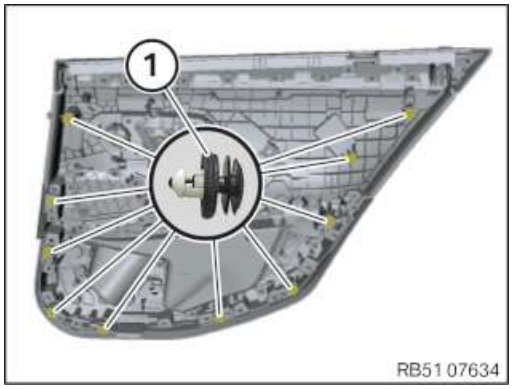


- Correctly position the LED module with fibre-optic cable (3) on the holder (4) and snap into the latch mechanism (2).
- Connect connector (1).

POSTPROCESSES

5 – Installing rear door trim panel

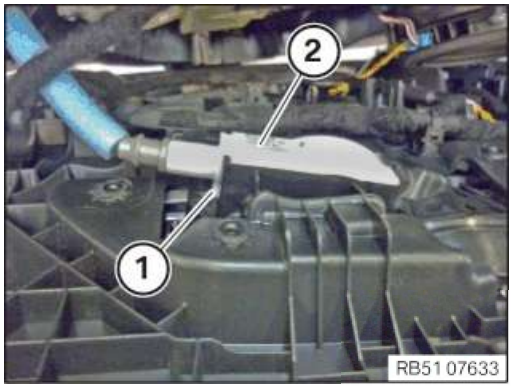
cardiagn.com



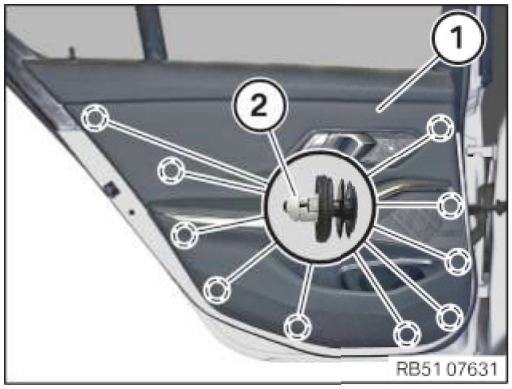
- Renew the clips (1).

  Parts: Clips

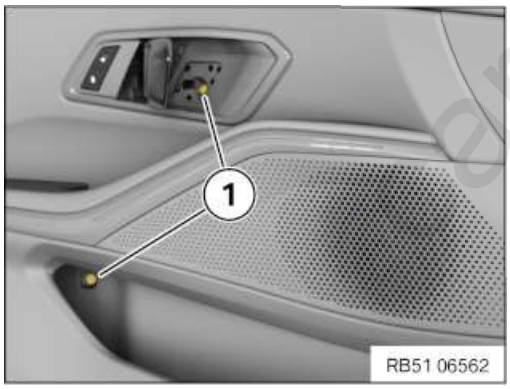
  The clips (1) **must not be engaged**. **The disengaged state is shown.**



- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door handle (2) and clip in to the latch mechanism (1).
- Connect existing connectors and lock.



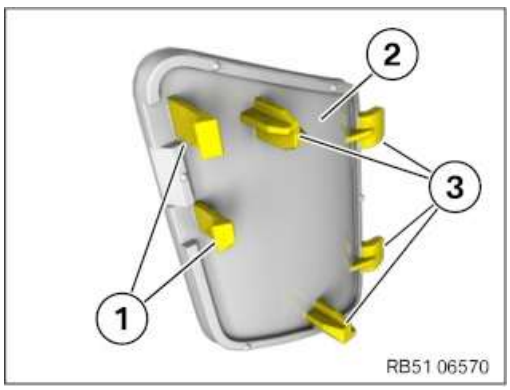
- Feed door trim panel from the top into the inner window recess finisher strip.
- Carefully clip in the door trim panel onto the clips (1).



- Tighten the screws (1).

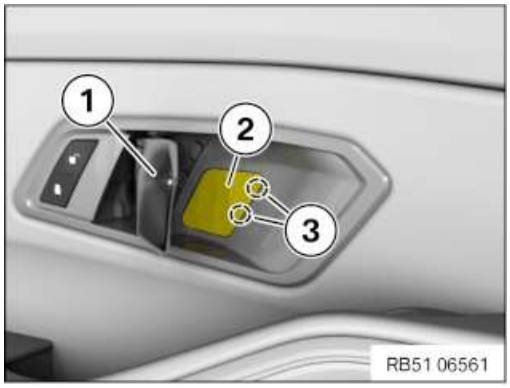
Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).

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- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

Additional Information

Overview of Tightening Torques

Door trim panel to door — Used in step 5

Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common — Used in step 1

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)

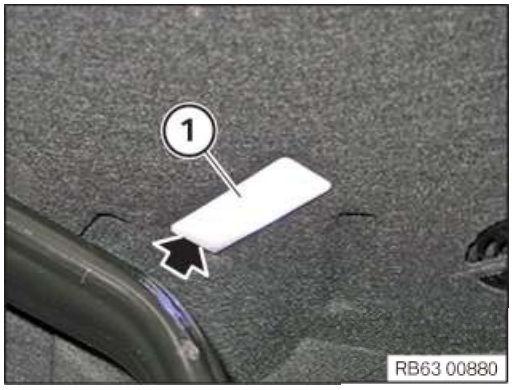
carmagn.com

63 31 020 Removing and installing/renewing footwell light

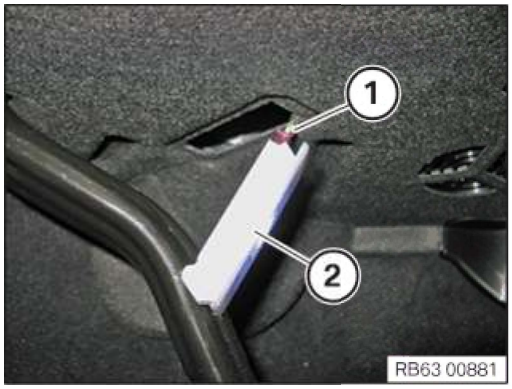
1 – Removing the footwell light at the front left or right

NOTICE

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



- Lever out the footwell light (1) from the footwell trim in the highlighted area.

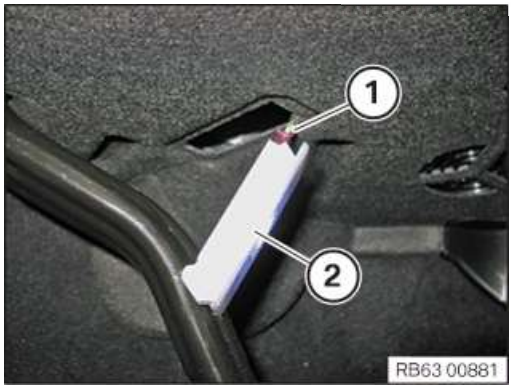


- Unlock and disconnect connector (1).
- Remove the footwell light (2).

2 – Installing the footwell light at the front left or right

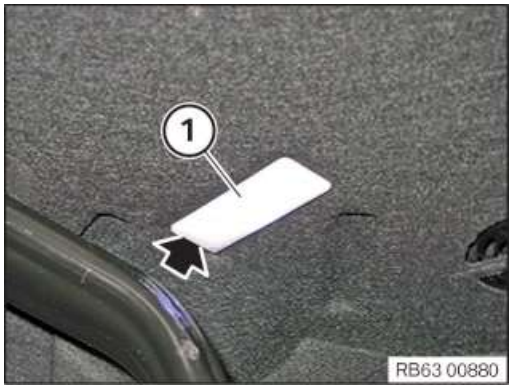
NOTICE

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



- Connect and lock the connector (1) with the footwell light (2).

cardiagn.com

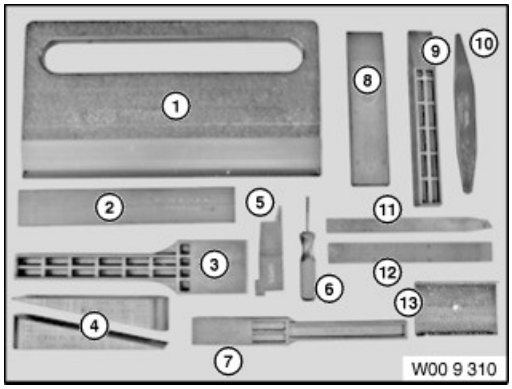


- Position the footwell light (1) in the footwell trim (arrow).

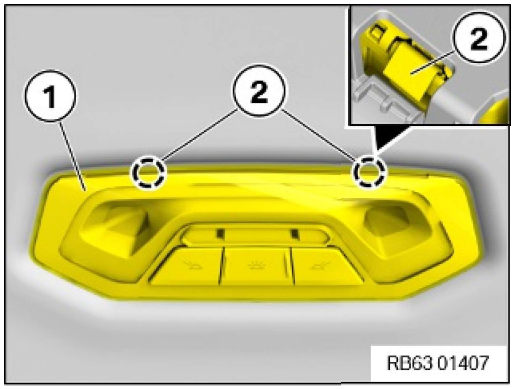
cardiagn.com

63 31 003 Removing and installing/replacing complete ceiling light

1 – Remove interior roof light

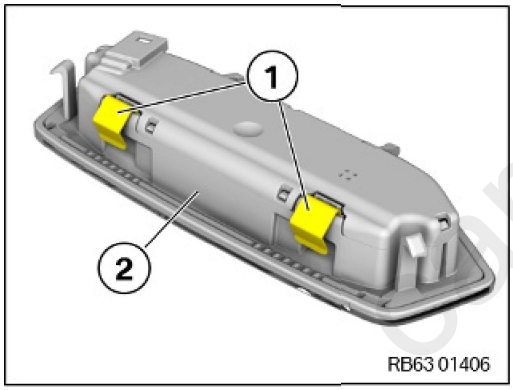


- Have the set of special tools 0 493 752 (00 9 329) ready.



- Lever interior roof light (1) out of clamps (2) using a suitable tool.
- Unlock plug connection and disconnect.

2 – Install interior roof light



Check

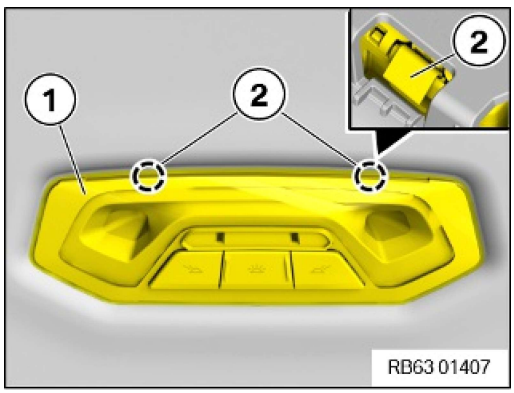
- Check the clamps (1) for damage.

Result

» Clamps (1) are damaged.

Measure

- Renew the interior roof light (2).



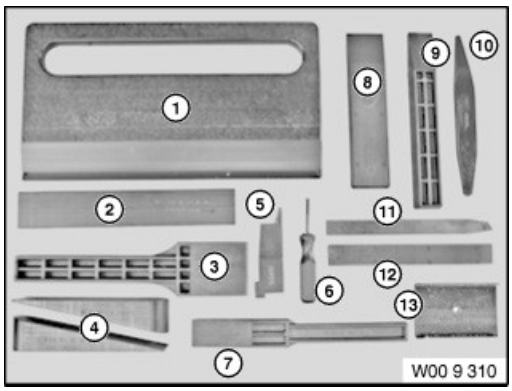
- Connect connectors and lock.
- Clip in the interior roof light (1) with clamps (2).

Additional Information

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Overview of Special Tools

0 493 752 (00 9 329) Case



Common	Used in step 1
Usage	(Case) with insert not incl. panel wedges
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

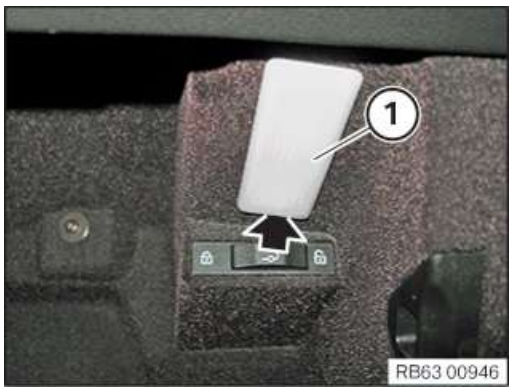
cardiagn.com

63 31 150 Removing and installing/replacing glovebox light

Prerequisite

- Glove box is opened.

1 – Remove glove box light



- Lever out the glove box light (1) at the marked position (arrow).
- Disconnect associated plug connection.

2 – Installing the glove box light



- Connect associated connector.
- Install the glove box light (1).

cardiagn.com

63 31 176 Removing and installing/replacing LED for centre armrest storage compartment

Prerequisite

- The lid of the centre armrest is open.

RISK OF DAMAGE

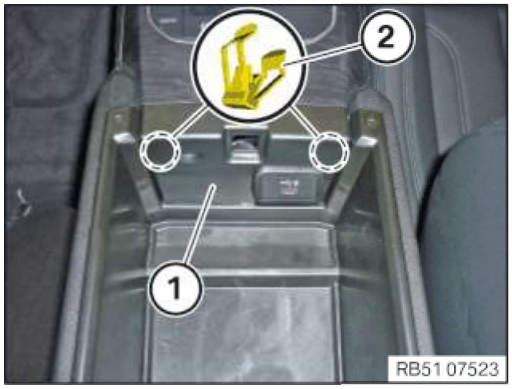
Damage of high-quality surfaces.

Plastic wedges can damage high-quality surfaces.

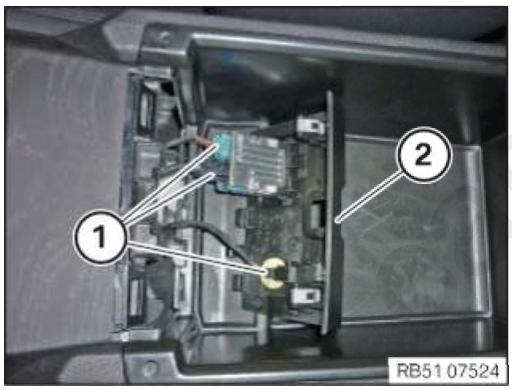
- Protect surfaces from damage.

PRELIMINARY WORK

1 – 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.

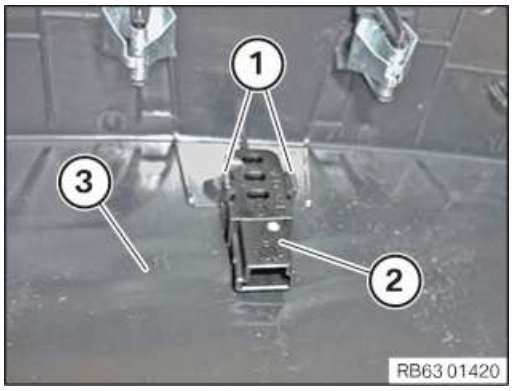


- Unlock and disconnect the plug connections (1) and remove the trim (2) .

partdiagn.com

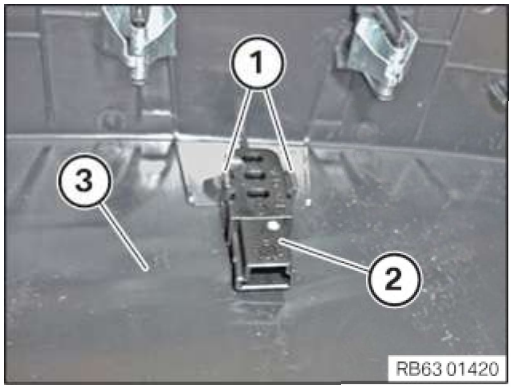
MAIN WORK

2 – Removing the LED in the centre armrest storage compartment



- Unlock the latch mechanisms (1).
- Remove the LED (2) from the storage compartment trim (3).

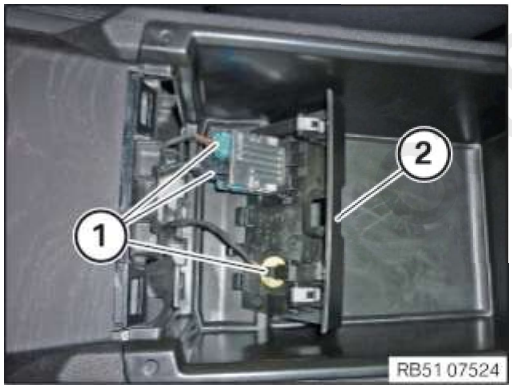
3 – Installing the LED in the centre armrest storage compartment



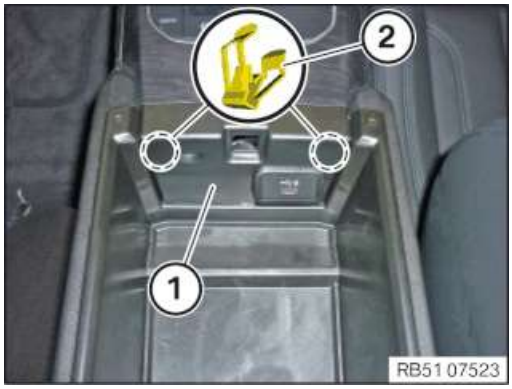
- Correctly position the LED (2) on the storage compartment trim (3) and engage it in the latch mechanisms (1).

POSTPROCESSES

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



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

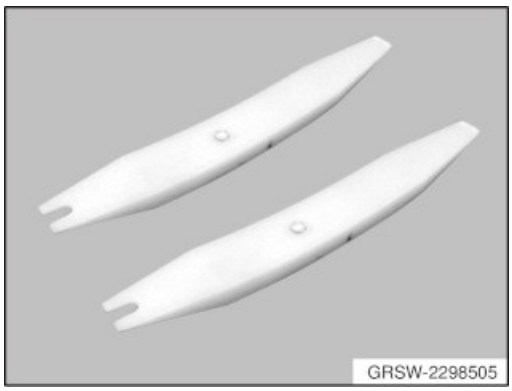


- Correctly position trim (1) and snap into the clamps (2).

Additional Information

Overview of Special Tools

2 298 505 Wedge



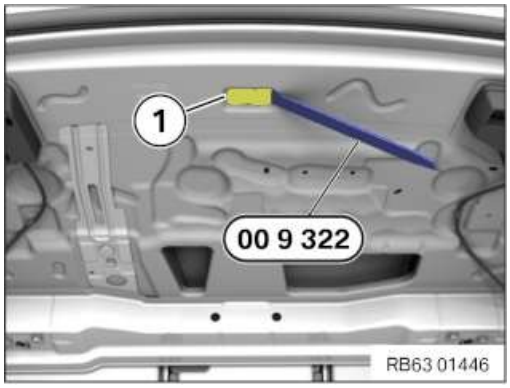
Common Used in step 1

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)

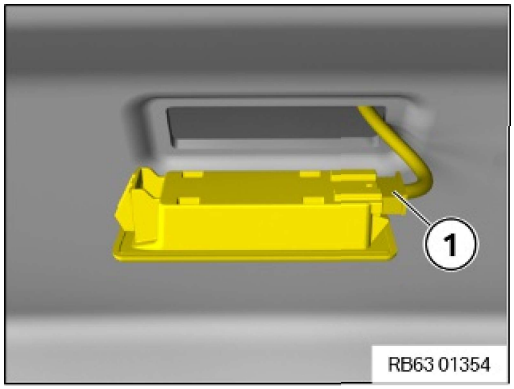
cardiagn.com

63 31 080 Removing and installing/replacing luggage compartment light

1 – Removing the luggage compartment light

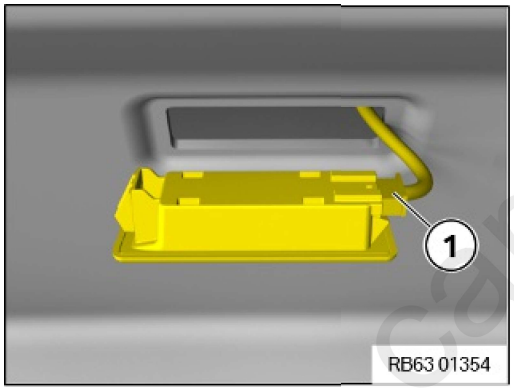


- Unclip luggage compartment light (1) on the top partition wall with the special tool 0 490 539 (00 9 322).

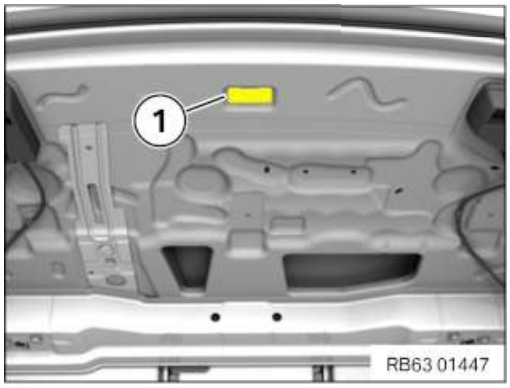


- Unlock plug connection (1) and disconnect.

2 – Installing the luggage compartment light



- Connect connectors (1) and lock.



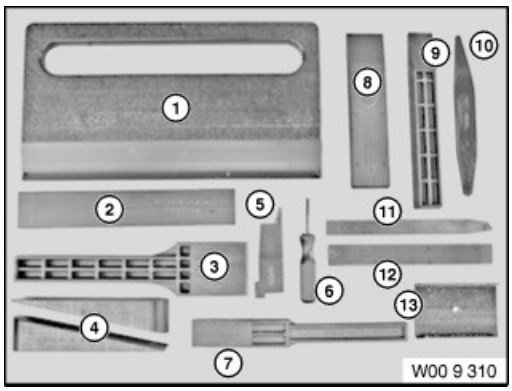
- Position the luggage compartment light (1) on the top partition wall and clip in.

Additional Information

Overview of Special Tools

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0 490 539 (00 9 322) Wedge



Common	Used in step 1
Usage	(Panel wedge)
Included in the tool or work	0 490 527
Storage location	Individual
Replaced by	
In connection with	
SI-Number	01 07 09 (530)

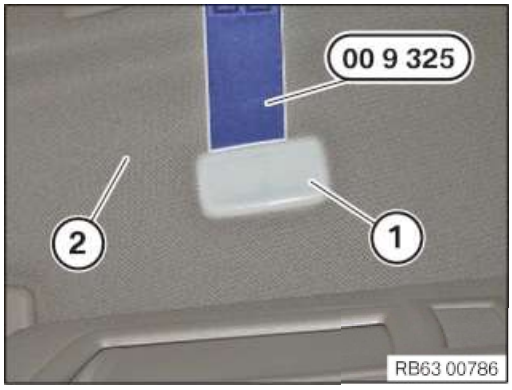
cardiagn.com

63 31 050 Removing and installing/replacing mirror light

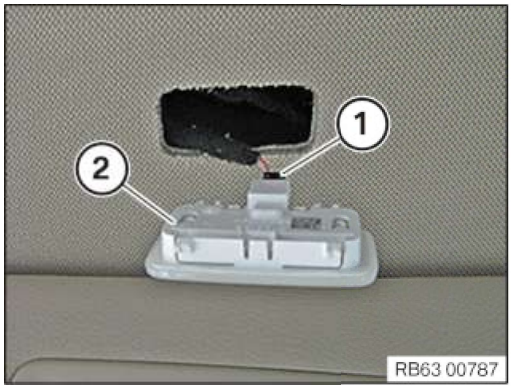
1 – Removing front vanity mirror light

NOTICE

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



- Lever out the front vanity mirror light (1) using special tool 0 496 569 (00 9 325) from the headlining (2).

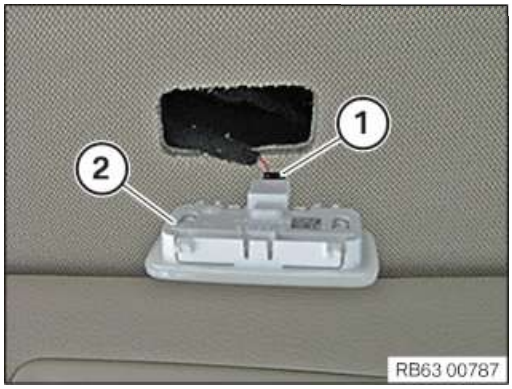


- Unlock and disconnect connector (1).
- Remove the front vanity mirror light (2).

2 – Installing front vanity mirror light

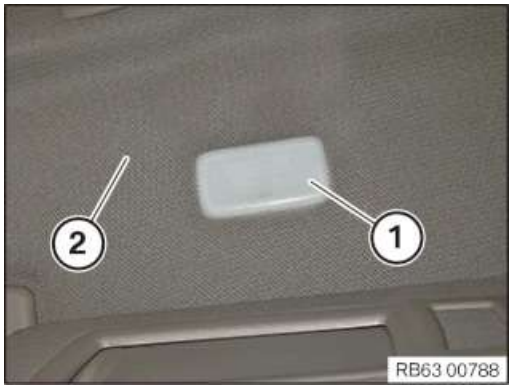
NOTICE

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



- Connect the connector (1) to the front vanity mirror light (2).

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- Position the front vanity mirror light (1) in the headlining (2).

Additional Information

Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common	Used in step 1
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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63 31 329 Replace the LED module for rear door opener, left or right

RISK OF DAMAGE

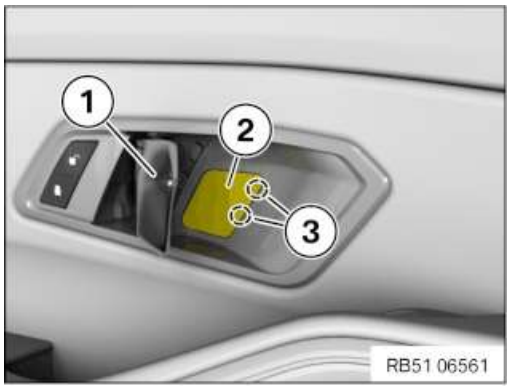
Scratches.

Tools and sharp-edged components can cause scratches.

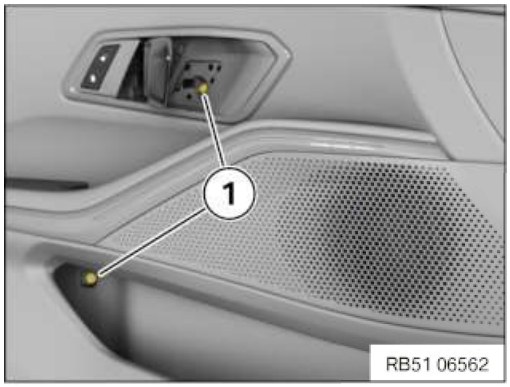
- Protect working area.
- Handle tools and components carefully.

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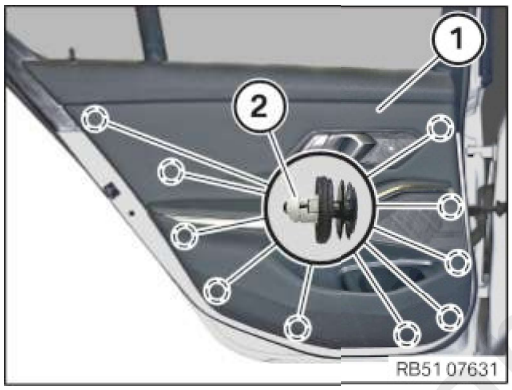
1 – Remove rear door trim



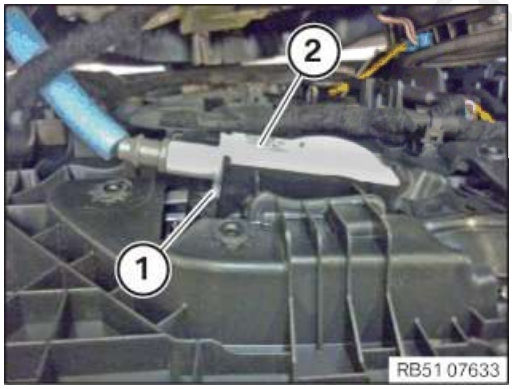
- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable tool.
- Remove trim (2).



- Loosen screws (1).



- Unclip the door trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Guide the door trim panel (1) upwards out of the weather strip.

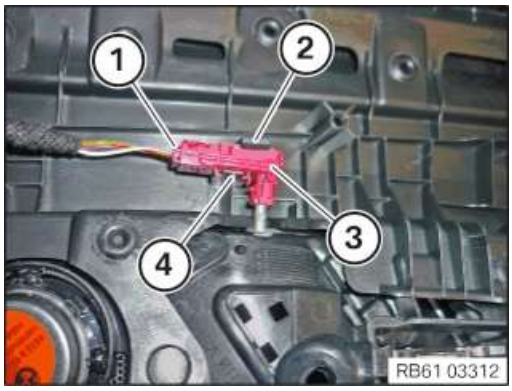


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock available plug connections and disconnect.
- Remove door trim panel.

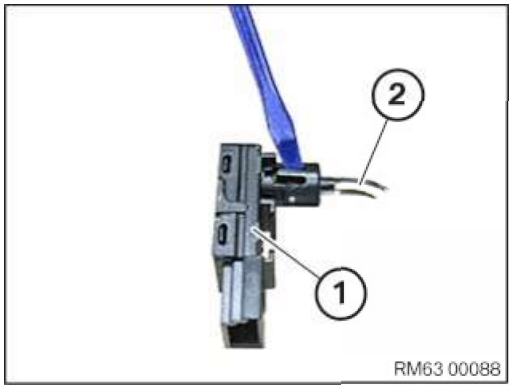
MAIN WORK

2 – Remove the rear door opener LED module

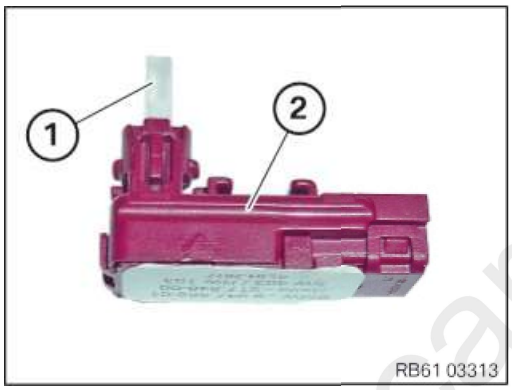


- Disconnect (1) connector.
- Loosen (2) latch mechanism.
- Remove LED module with optical fibre (3) from the holder (4).

3 – Renewing the LED module of the rear door handle



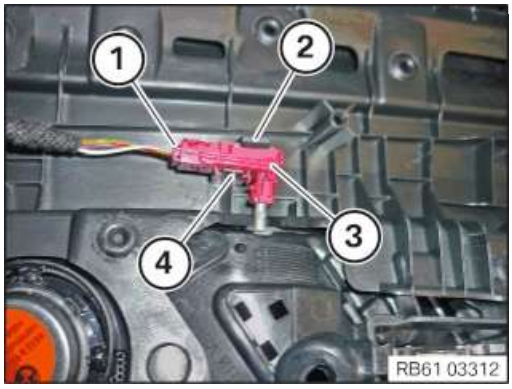
- Loosen the latch mechanism using a screwdriver (3 mm blade) on the LED module (1). Pull out the optical fibre (2) while doing so.



- Renew LED module (2).

  Parts: LED module
- Carefully clip the optical fibre (1) in the LED module (2).

4 – Installing the LED module of the rear door handle

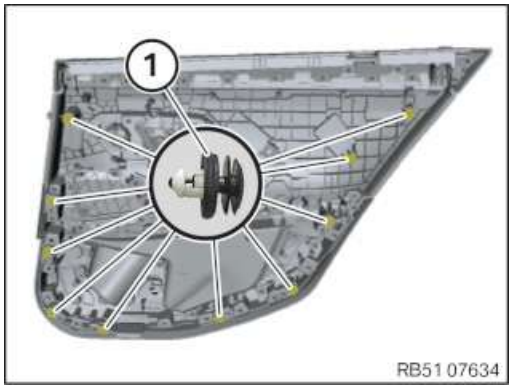


- Position LED module with optical fibre (3) correctly on the holder (4) and engage it into the latch mechanism (2).
- Connect connector (1).

POSTPROCESSES

5 – Installing rear door trim panel

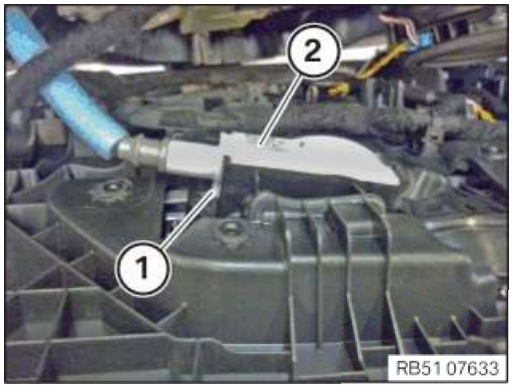
cardiagn.com



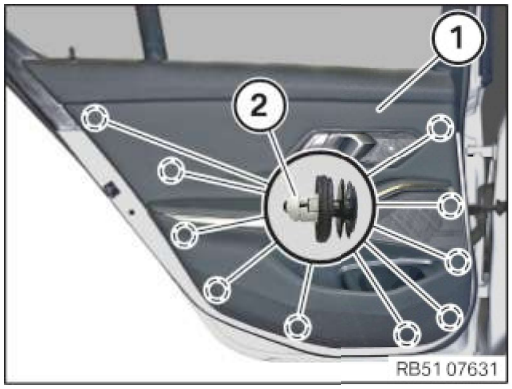
- Renew the clips (1).

  Parts: Clips

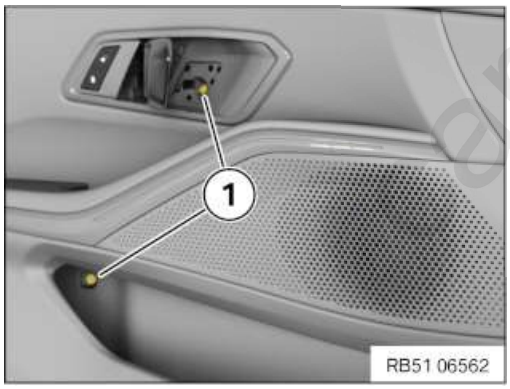
  The clips (1) **must not be engaged**. **The disengaged state is shown.**



- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door handle (2) and clip in to the latch mechanism (1).
- Connect existing connectors and lock.



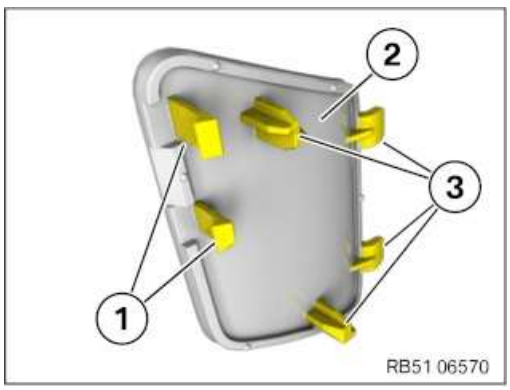
- Feed door trim panel from the top into the inner window recess finisher strip.
- Carefully clip in the door trim panel onto the clips (1).



- Tighten the screws (1).

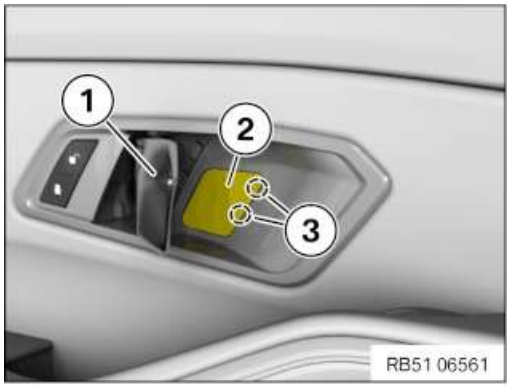
Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).

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- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

6 – Address LED module

TECHNICAL INFORMATION

The LED module must be re-addressed after replacement.
The address can only be configured with the diagnosis system.
If a swap of LED modules was carried out as part of the troubleshooting, this swap should be reversed prior to autoaddressing.

- Carry out the service function as follows:
  - Body
  - Lighting
  - Interior light autoaddressing

Additional Information

Overview of Tightening Torques

Door trim panel to door			Used in step 5
Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common		Used in step 1
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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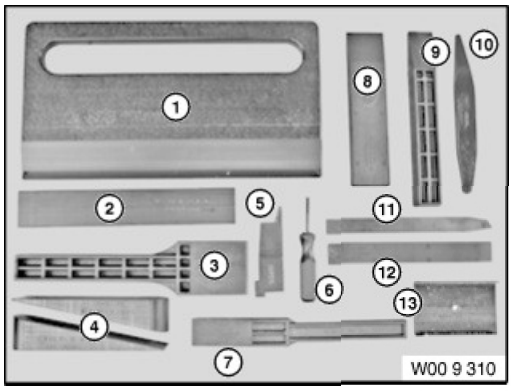
63 31 319 Replace the LED module in the front door opener on the left or right

NOTICE

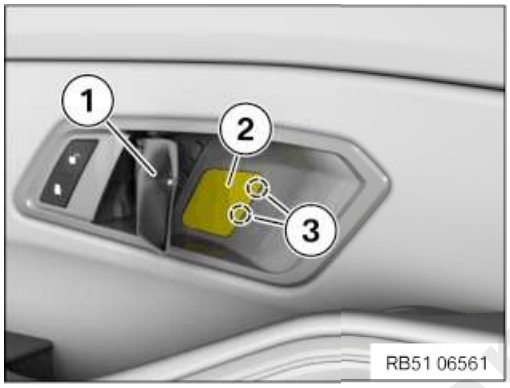
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

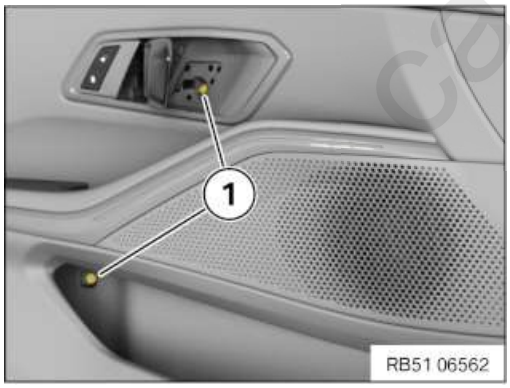
1 – Remove door trim panel



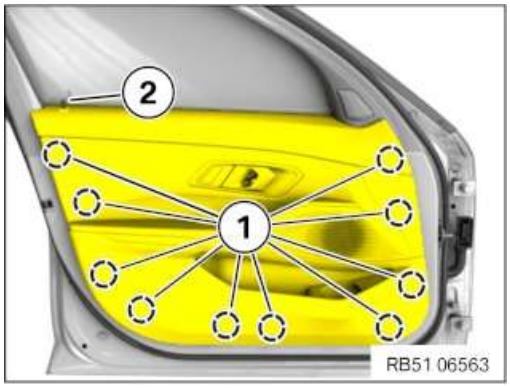
- Have the set of special tools 0 493 752 (00 9 329) ready.



- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable special tool.
- Remove trim (2).

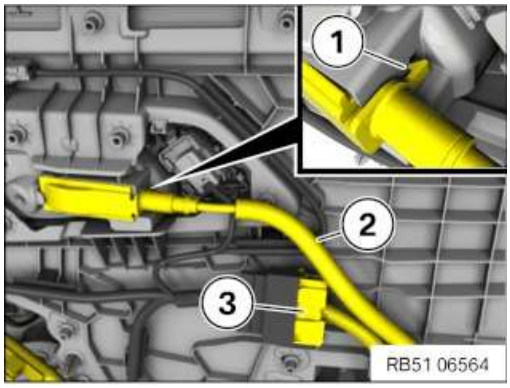


- Loosen screws (1).



- Unclip the door trim panel at the clips (1) using a suitable special tool.
- Guide the door trim panel upwards out of the front inner weather strip and the operating rod (2).

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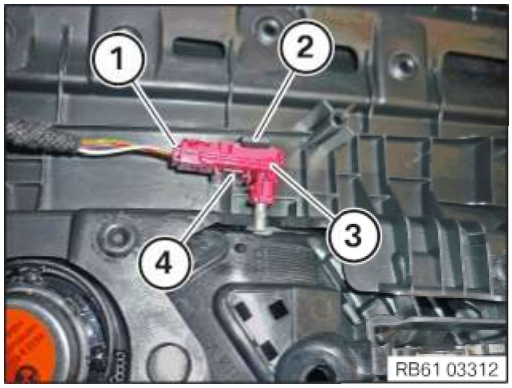


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock plug connection (3), disconnect it and remove the door trim panel.

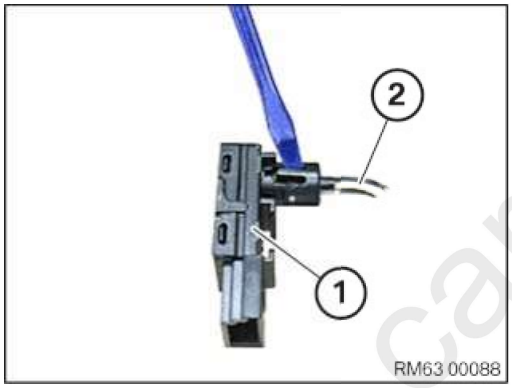
MAIN WORK

2 – Remove front LED module for door opener

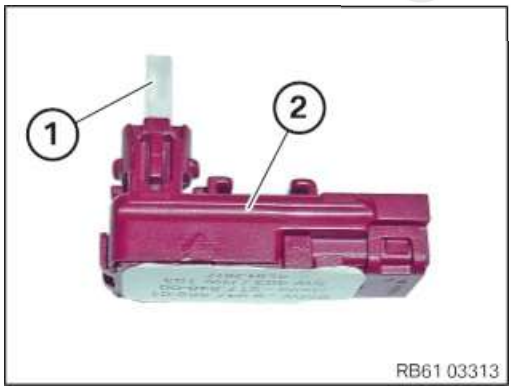


- Unplug connector (1).
- Release latch mechanism (2).
- Remove LED module with fibre-optic cable (3) from the bracket (4).

3 – Replace front door opener LED module



- Release latch mechanism from the LED module (1) using screwdriver (3-mm blade). Pull fibre-optic cable (2) out at the same time.

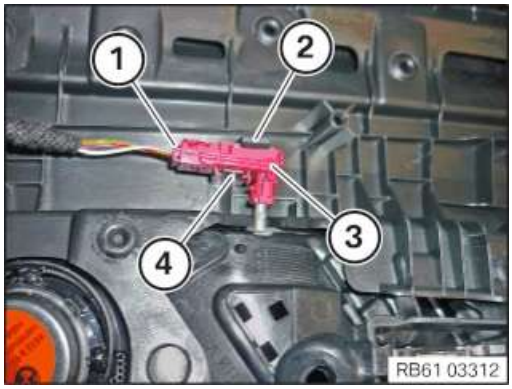


- Renew LED module (2) .

  Parts: LED module
- Carefully clip the fibre-optic cable (1) into the LED module (2).

4 – Installing front door handle LED module

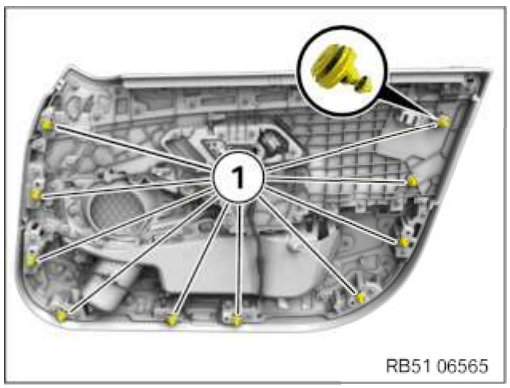
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- Position LED module with optical fibre(3)on the holder(4)correctly and engage it in the latch mechanism(2).
- Connect connector (1).

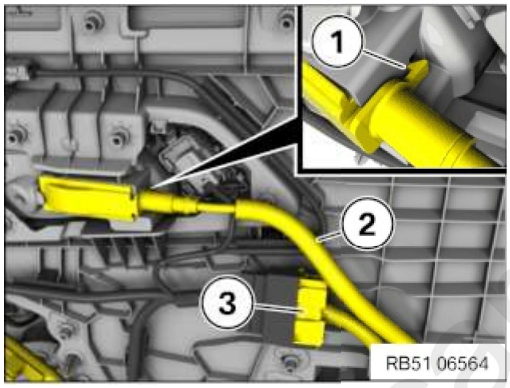
POSTPROCESSES

5 – Install door trim panel

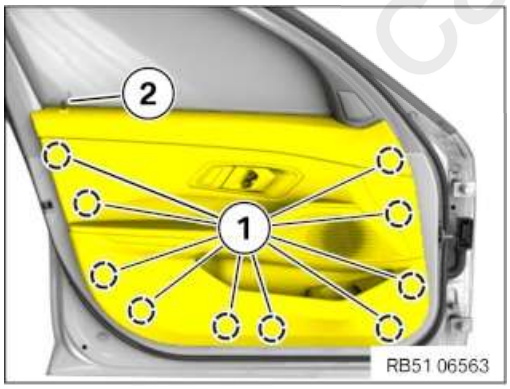


- Renew the clips (1).

  Parts: Clips

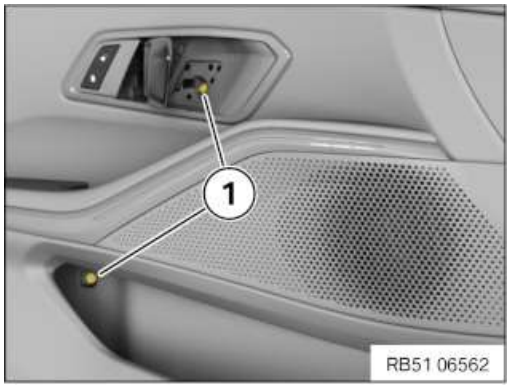


- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door opener (2) and clip in the latch mechanism (1).
- Connect connectors (3) and lock.



- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).

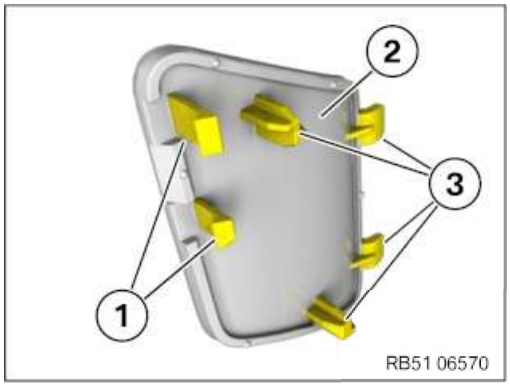
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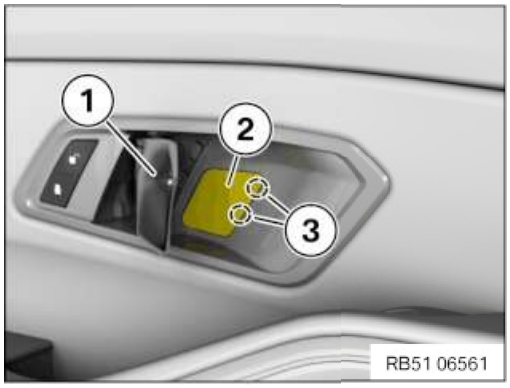
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

6 – Address LED module

TECHNICAL INFORMATION

The LED module must be re-addressed after replacement.
The address can only be configured with the diagnosis system.
If a swap of LED modules was carried out as part of the troubleshooting, this swap should be reversed prior to autoaddressing.

- Carry out the service function as follows:
  - Body
  - Lighting
  - Interior light autoaddressing

Additional Information

Overview of Tightening Torques

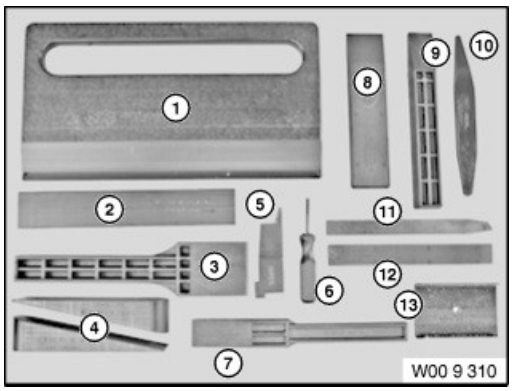
Door trim panel to door Used in step 5

Screw TS5x20		Tightening torque	2,6 Nm

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Overview of Special Tools

0 493 752 (00 9 329) Case



Common	Used in step 1
Usage	(Case) with insert not incl. panel wedges
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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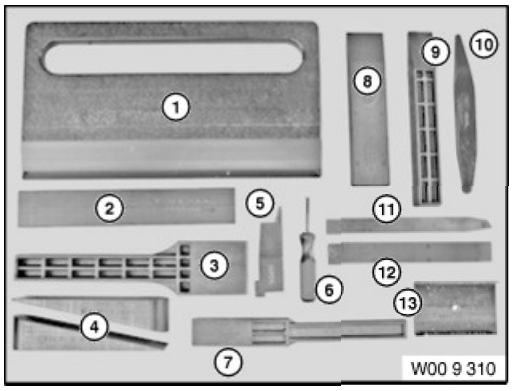
63 31 318 Replace the LED module in the front folding compartment on the left or right

NOTICE

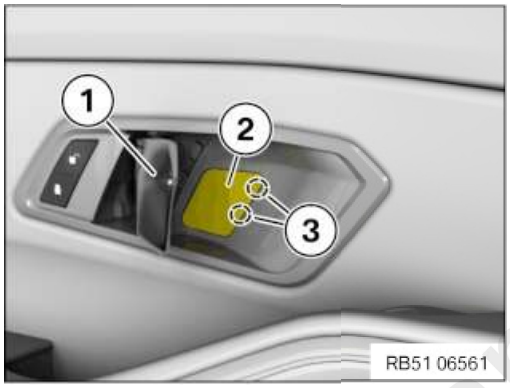
Description is for left component only. Procedure on the right side is identical.

PRELIMINARY WORK

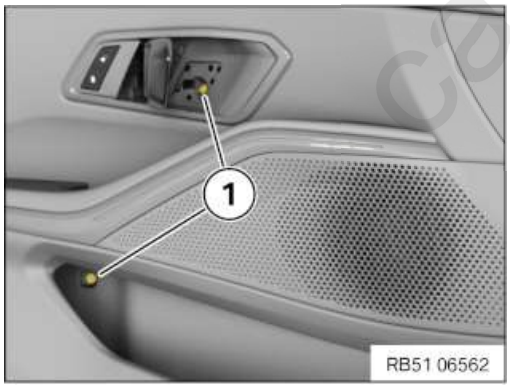
1 – Remove door trim panel



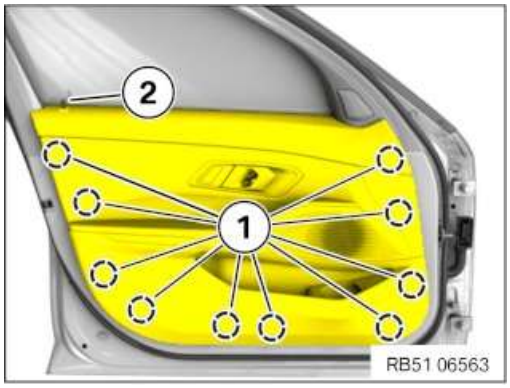
- Have the set of special tools 0 493 752 (00 9 329) ready.



- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable special tool.
- Remove trim (2).

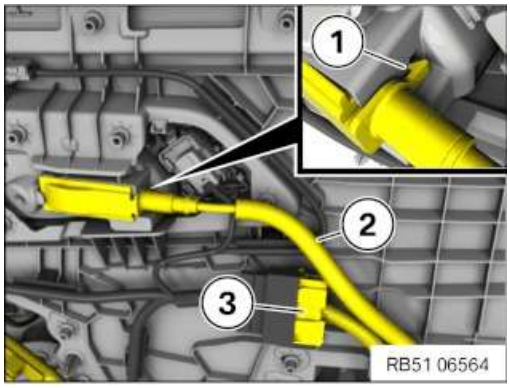


- Loosen screws (1).



- Unclip the door trim panel at the clips (1) using a suitable special tool.
- Guide the door trim panel upwards out of the front inner weather strip and the operating rod (2).

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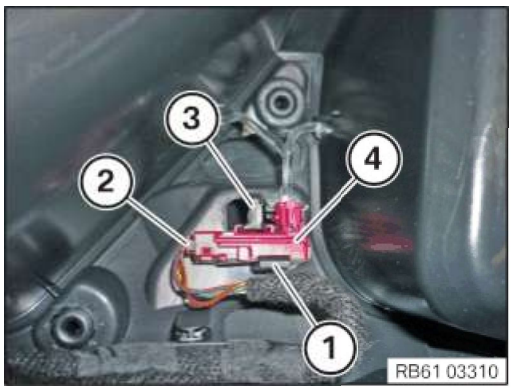


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock plug connection (3), disconnect it and remove the door trim panel.

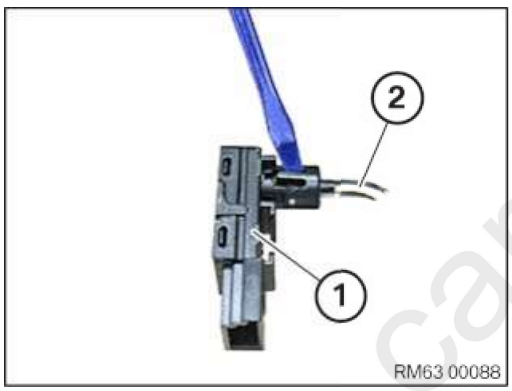
MAIN WORK

2 – Removing the LED module of front folding compartment

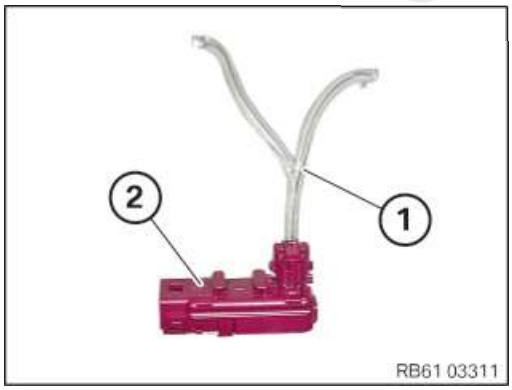


- Disconnect the connector (2).
- Release latch mechanism (1).
- Remove LED module with optical fibre (4) from holder (3).

3 – Replace the LED module of the door pocket (front)



- Loosen the latch mechanism using a screwdriver (3-mm blade) on the LED module (1). Then pull out the optical fibre (2).

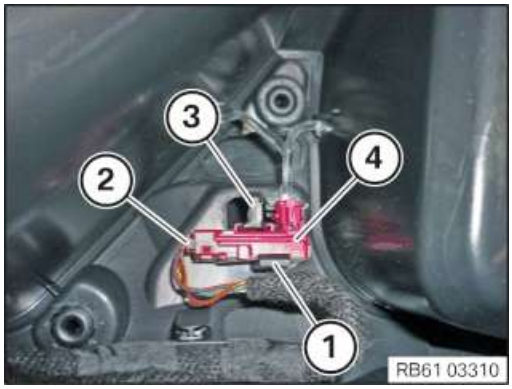


- Replace LED module (2).

  Parts: LED module
- Carefully clip the optical fibre (1) into the LED module (2).

4 – Install the LED module of the door pocket (front)

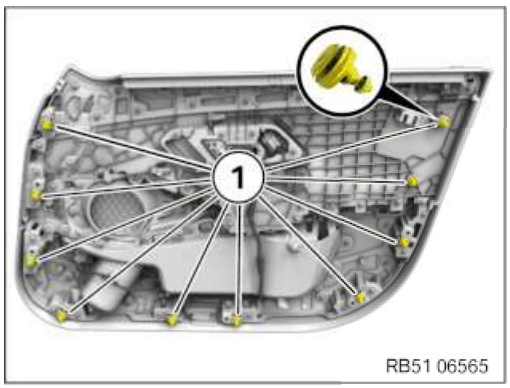
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- Correctly position the LED module with optical fibre (4) on the holder (3) and engage it in the latch mechanism (1).
- Connect connector (2).

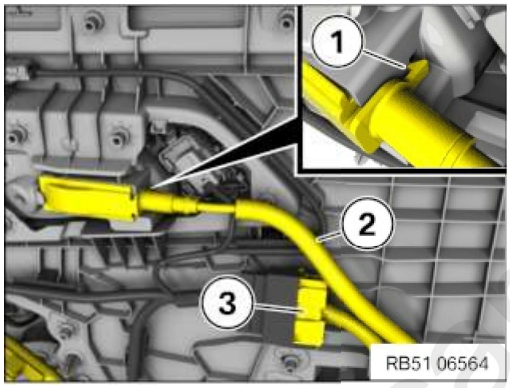
POSTPROCESSES

5 – Install door trim panel

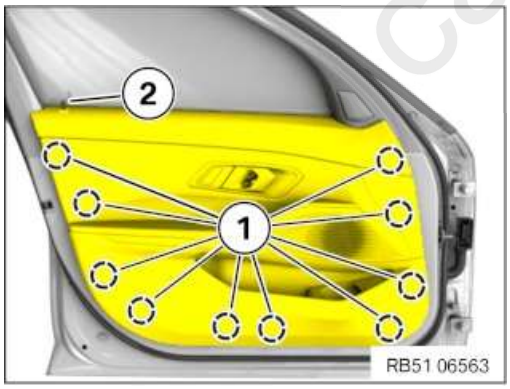


- Renew the clips (1).

  Parts: Clips

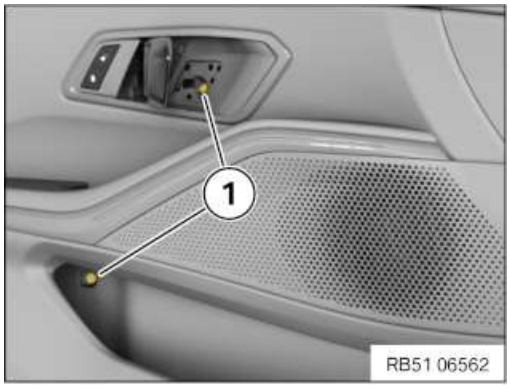


- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door opener (2) and clip in the latch mechanism (1).
- Connect connectors (3) and lock.



- Feed door trim panel from the top via the operating rod (2) into the inner front weather strip.
- Clip in the door trim panel with the clips (1).

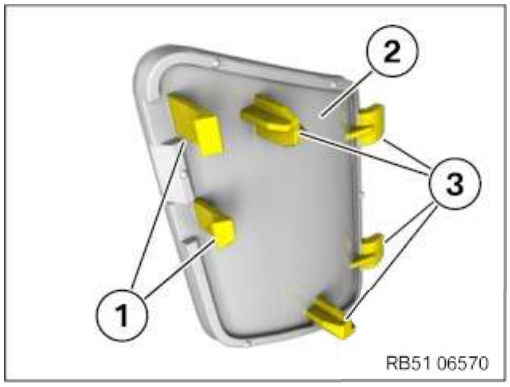
carDiagn.com



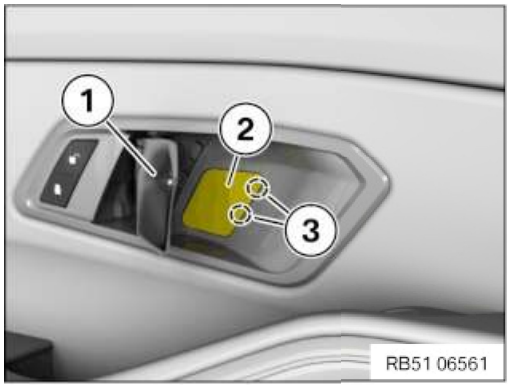
- Tighten the screws (1).

Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).



- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

6 – Address LED module

TECHNICAL INFORMATION

The LED module must be re-addressed after replacement.
The address can only be configured with the diagnosis system.
If a swap of LED modules was carried out as part of the troubleshooting, this swap should be reversed prior to autoaddressing.

- Carry out the service function as follows:
  - Body
  - Lighting
  - Interior light autoaddressing

Additional Information

Overview of Tightening Torques

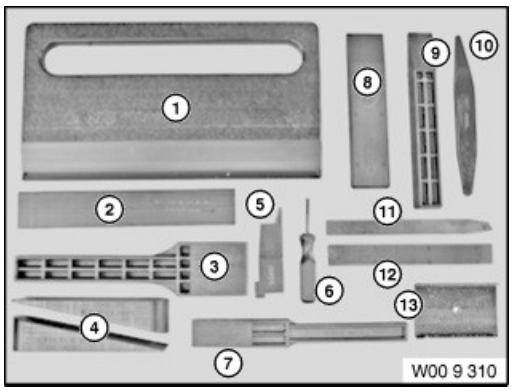
Door trim panel to door Used in step 5

Screw TS5x20		Tightening torque	2,6 Nm

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Overview of Special Tools

0 493 752 (00 9 329) Case



Common	Used in step 1
Usage	(Case) with insert not incl. panel wedges
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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63 31 328 Replacing the LED module in the rear door pocket on the left or right

RISK OF DAMAGE

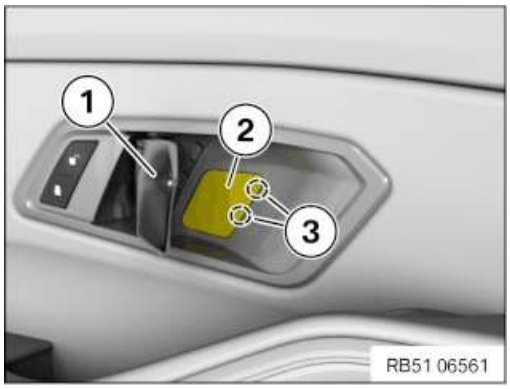
Scratches.

Tools and sharp-edged components can cause scratches.

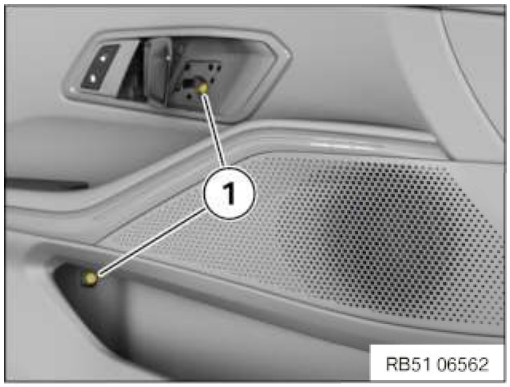
- Protect working area.
- Handle tools and components carefully.

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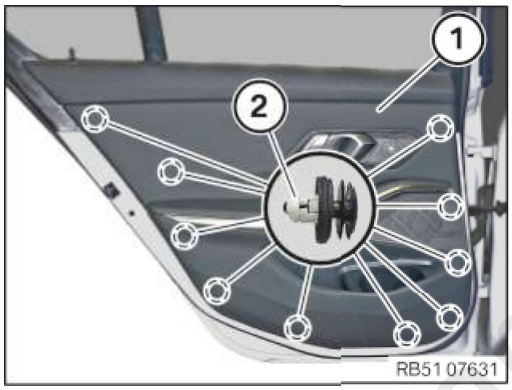
1 – Remove rear door trim



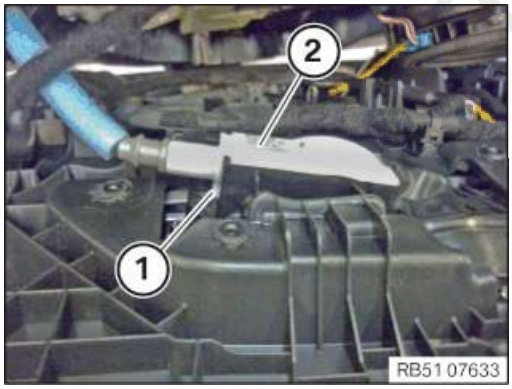
- Pull door opener (1).
- Release latch mechanisms (3) of the trim (2) with suitable tool.
- Remove trim (2).



- Loosen screws (1).



- Unclip the door trim panel (1) with the special tool 0 496 569 (00 9 325) at the clips (2).
- Guide the door trim panel (1) upwards out of the weather strip.

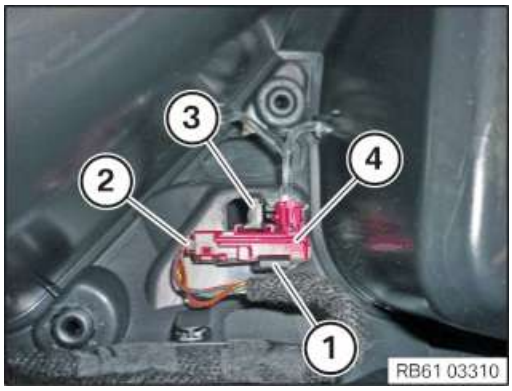


- Release latch mechanism (1) and feed out the Bowden cable for the inner door opener (2).

  In doing so, the Bowden cable for the inner door opener (2) is guided out of the door opener.
- Unlock available plug connections and disconnect.
- Remove door trim panel.

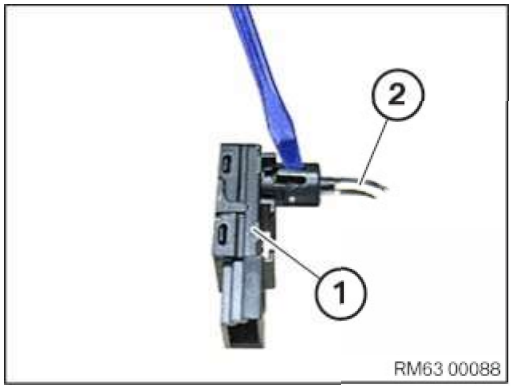
MAIN WORK

2 – Removing the LED module of rear folding compartment

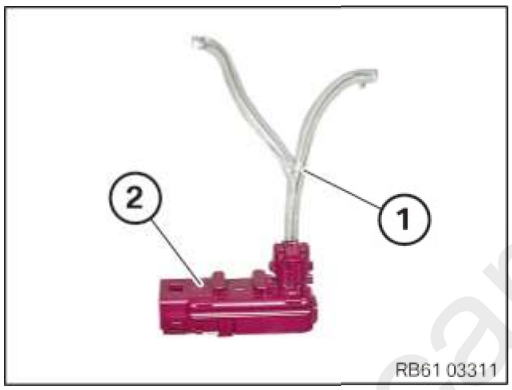


- Disconnect the connector (2).
- Release latch mechanism (1).
- Remove LED module with optical fibre (4) from holder (3).

3 – Renewing the LED module of the rear door handle



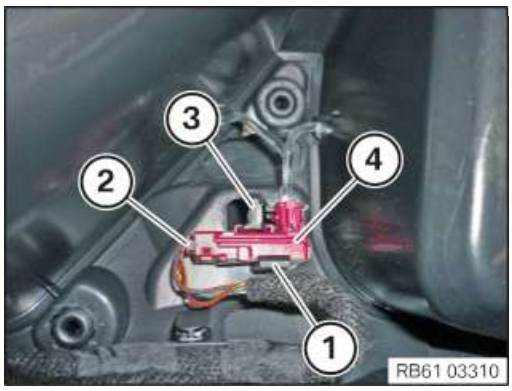
- Loosen the latch mechanism using a screwdriver (3 mm blade) on the LED module (1). Pull out the optical fibre (2) while doing so.



- Renew LED module (2).

  Parts: LED module
- Carefully clip the optical fibre (1) in the LED module (2).

4 – Install the LED module of the door pocket (rear)

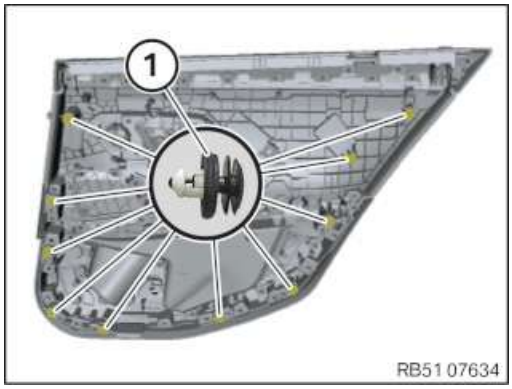


- Correctly position the LED module with optical fibre (4) on the holder (3) and engage it in the latch mechanism (1).
- Connect connector (2).

POSTPROCESSES

5 – Installing rear door trim panel

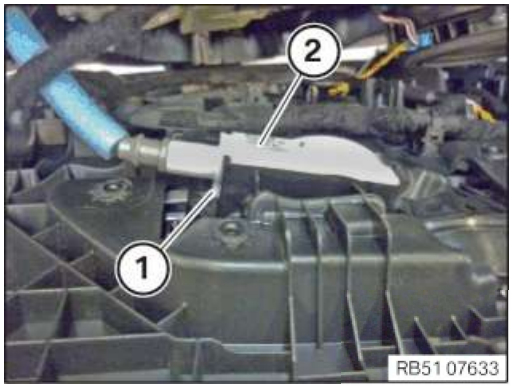
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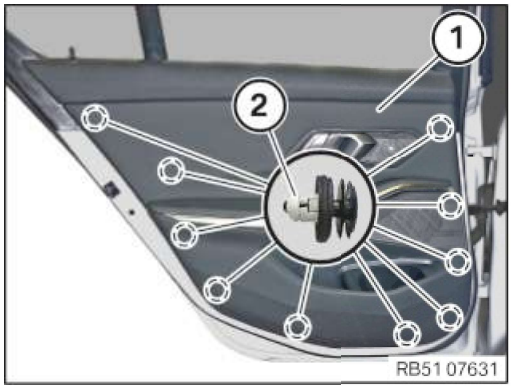
- Renew the clips (1).

  Parts: Clips

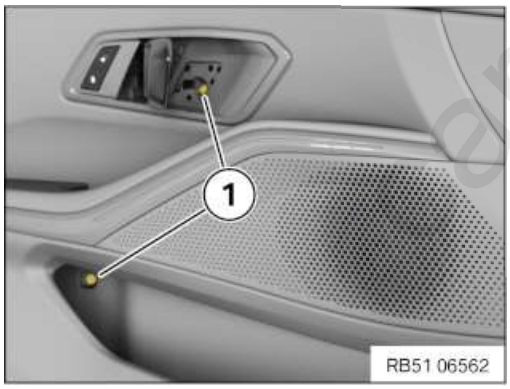
  The clips (1) **must not be engaged**. **The disengaged state is shown.**



- Push the inner door opener in closed direction.
- Feed in Bowden cable for the inner door handle (2) and clip in to the latch mechanism (1).
- Connect existing connectors and lock.



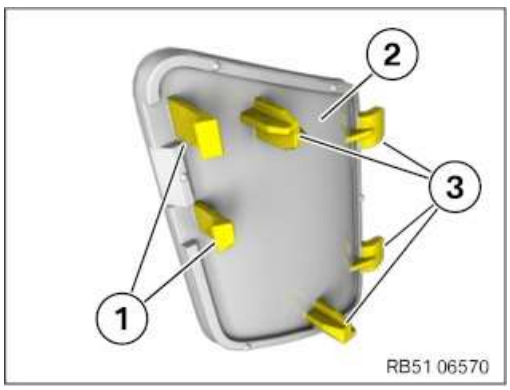
- Feed door trim panel from the top into the inner window recess finisher strip.
- Carefully clip in the door trim panel onto the clips (1).



- Tighten the screws (1).

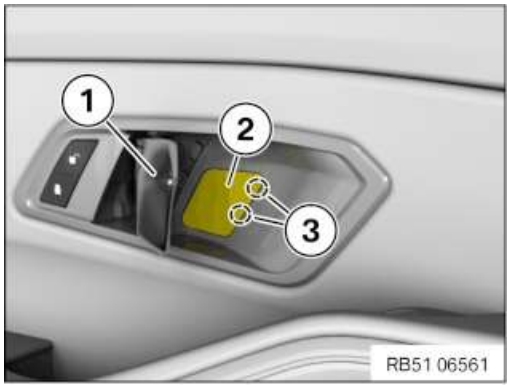
Door trim panel to door

Screw TS5x20		Tightening torque	2,6 Nm



- Check latch mechanisms (1) for damage, if necessary renew the trim (2).
- Check guides (3) for damage, if necessary renew the trim (2).

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- Pull door opener (1).
- Position trim (2) and clip in using the latch mechanisms (3).

6 – Address LED module

TECHNICAL INFORMATION

The LED module must be re-addressed after replacement.
The address can only be configured with the diagnosis system.
If a swap of LED modules was carried out as part of the troubleshooting, this swap should be reversed prior to autoaddressing.

- Carry out the service function as follows:
  - Body
  - Lighting
  - Interior light autoaddressing

Additional Information

Overview of Tightening Torques

Door trim panel to door			Used in step 5
Screw TS5x20		Tightening torque	2,6 Nm

Overview of Special Tools

0 496 569 (00 9 325) Wedge



Common		Used in step 1
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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63 99 ... Notes for replacing the protective cap of the headlight

Important!

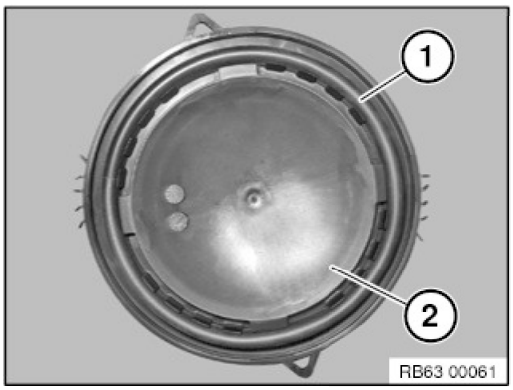
Risk of damage!

Damaged seals on the protective caps will lead to moisture penetration into the headlight.

This will in turn cause porous cable insulations and malfunctioning of the headlight.

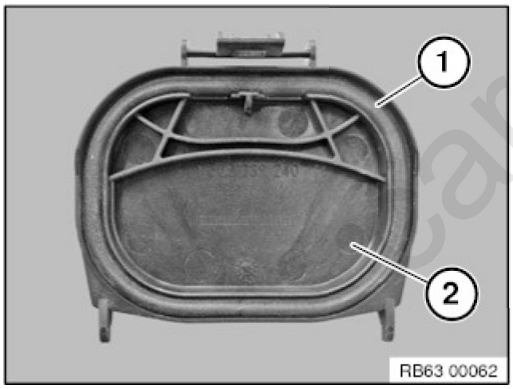
When working on the headlight system, check the protective cap seals.

Replace the protective cap in the event of damage!



Example: screwed protective cap

Seal (1) on protective cap (2).



Example: latchable protective cap

Seal (1) on protective cap (2).

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63 99 ... Safety information for exchanging bulbs (interior lighting)



Important!

To avoid short circuits, disconnect bulbs from the power supply before replacing them (lighting system and ignition off).



Do not touch the glass bulbs in new lights bulbs as even the slightest contamination will burn in and reduce bulb service life.

Only touch light bulbs with clean gloves or a clean cloth.

Do not expose light bulbs to mechanical vibrations.

Use only recommended light bulbs.

Follow the light bulb manufacturer's notes without fail.

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63 99 ... Safety information for handling bulbs / light sources (exterior lights)



Warning!

All headlight types, regardless of the type of light sources used, can be dangerous due to their dazzling effect!

Do not look directly and for long periods of time into the light.



Warning!

Laser, LED and Xenon headlights in particular can be very dangerous due to their dazzling effect:

Do not look directly and unprotected into the light.



Warning!

Xenon headlight: Danger to life due to high voltage!

Disconnect all components from voltage supply before removal.

Work on the entire xenon lighting system (ignition device, control unit and xenon bulb) may only be carried out by qualified personnel.



Warning!

Halogen bulbs are under pressure:

To avoid injury, wear protective goggles and gloves.



Important!

To avoid short circuits:

Disconnect bulbs / light sources from the voltage supply before changing them (lighting system and ignition off).



Do not touch glass bulbs with bare hands, as even the smallest amount of contamination will burn in and reduce bulb service life.

Only touch light bulbs with clean gloves or a clean cloth.

Do not expose light bulbs to mechanical vibrations.

Use only recommended light bulbs.

Follow the light bulb manufacturer's notes without fail.

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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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00 Safety information for working on vehicles with automatic engine start-stop function (MSA)

Warning!

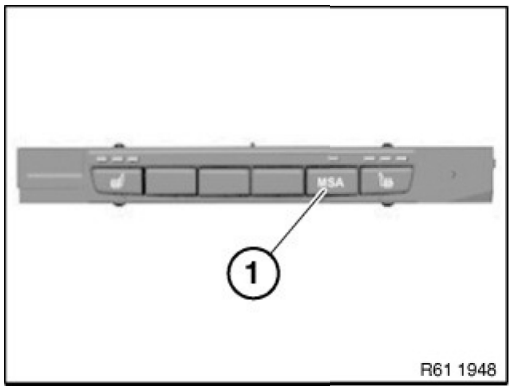
If the engine hood/bonnet contact is pulled upwards (workshop mode), the information "switch closed" is output. The automatic engine start-stop function is active.

An automatic engine start is possible.

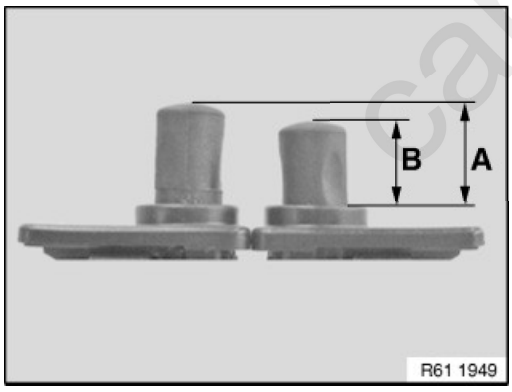
Observe safety precautions when working on MSA vehicles.

Before carrying out practical work on the engine, always ensure that the MSA functionality is deactivated so as to prevent automatic engine starting while work is being carried out in the engine compartment.

MSA function is deactivated by:



- Deactivate MSA by means of button (1) in passenger compartment
- Open seat belt buckle and driver's door



- Open engine bonnet/hood and ensure that engine hood/bonnet contact is not in workshop mode
  - Workshop mode

    A = 10 mm
  - Basic setting (engine hood/bonnet open)

    B = 7 mm

  To make sure that the engine hood/bonnet contact is at the basic setting, if necessary press the hood/bonnet contact up to the limit position before starting work and slowly release.

When working with diagnosis tools:

- Observe instructions in diagnosis tool

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Note:
For further information on automatic engine start-stop function (MSA):

- Refer to the Service Information (bulletin) (for manual transmissions) Service Information (bulletin) 61 01 07 335
- Refer to the Service Information (bulletin) (for automatic transmissions or twin-clutch gearboxes) Service Information (bulletin) 61 01 10 629

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