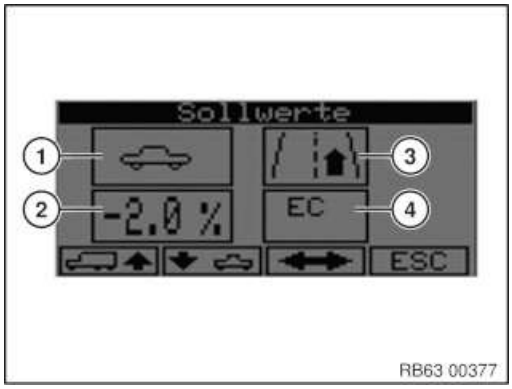
# 63 10 ... Adjust the fog lights (with electronic headlight adjustment device MAHA Lite 3)

Comply with test prerequisites for headlight adjustment!

**Refer to the operating instructions for the headlight adjustment device!**



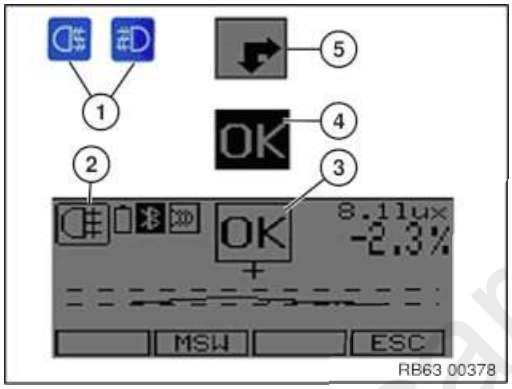

Switch on the headlight adjustment device by pressing any button.

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!**

The high-beam headlight can only be adjusted in the following cases:

- 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.**

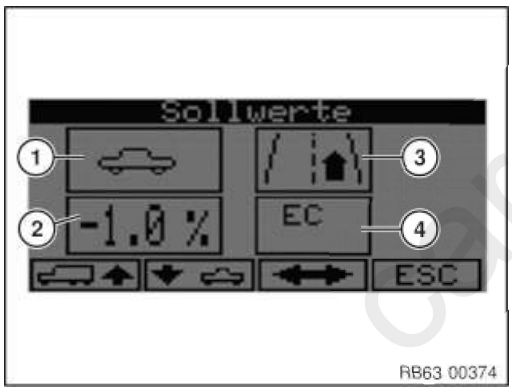
**(Exception E52, BMW i 01, additional headlight MINI)**

Comply with test prerequisites for headlight adjustment.

**Refer to the operating instructions for the headlight adjustment device!**

Necessary preliminary work:

Adjust the low-beam headlight




Switch on the headlight adjustment device by pressing any button.

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

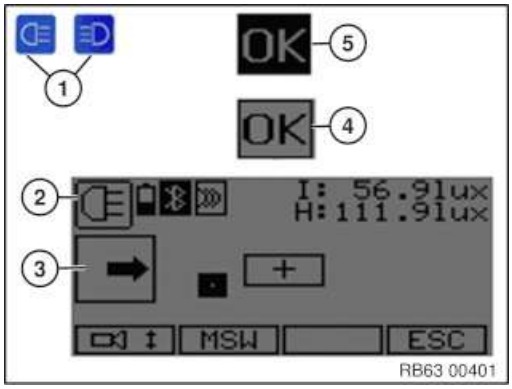
Perform the following settings:

1. The passenger car must be selected.
2. Enter the setting dimension 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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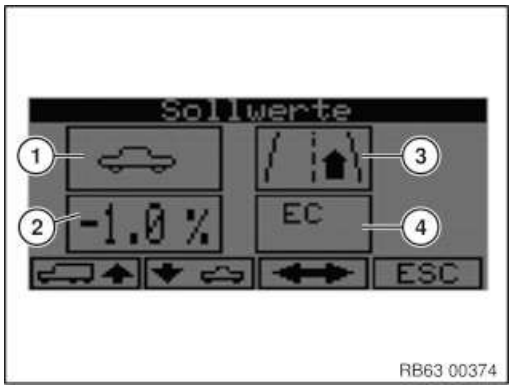
# 63 10 ... Adjust the low-beam headlight (with electronic headlight adjustment device MAHA Lite 3)

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.

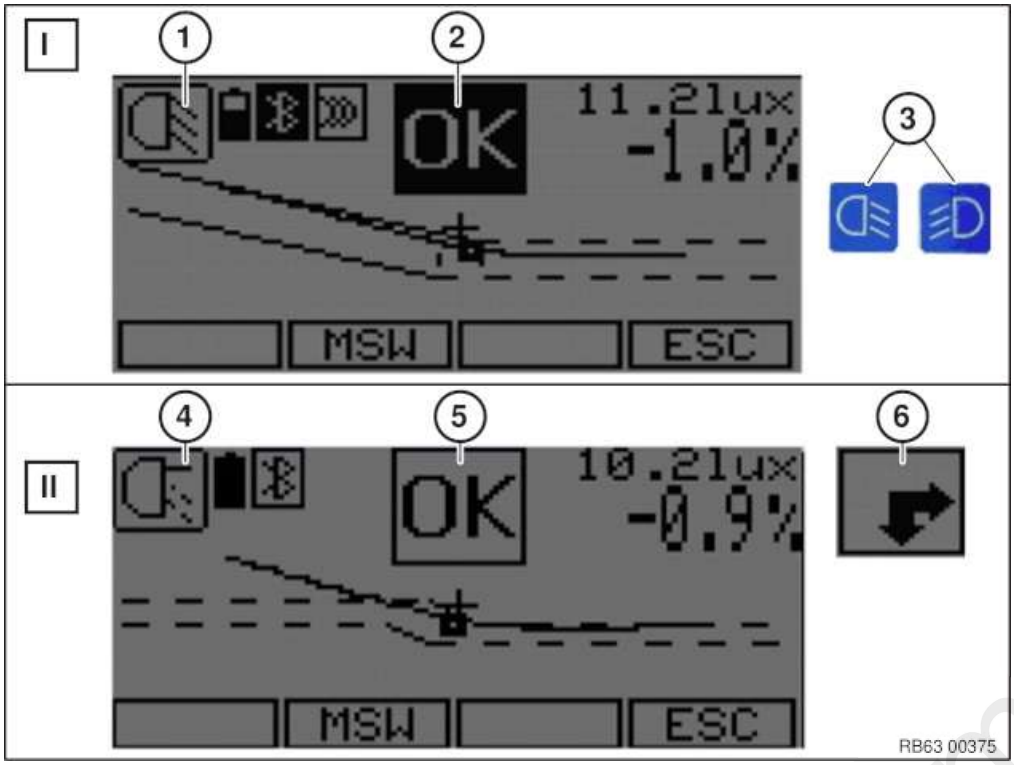
Perform the following settings:

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 10 014 Adjusting fog lights

**TECHNICAL INFORMATION**

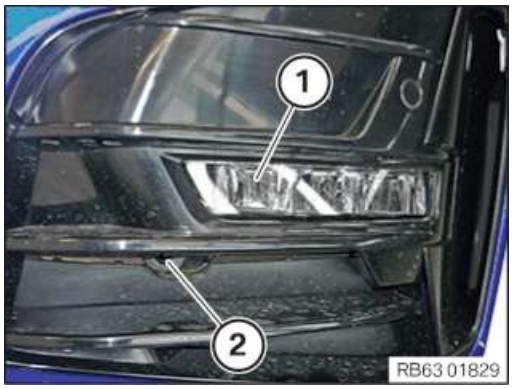
Notes on headlight adjustment are a fundamental requirement for these repair instructions and must be complied with at all times.

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

### 1 Adjusting 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

### Links

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

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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.

*Note:*
The non-dazzle high-beam headlight must be adjusted as a matter of priority in the event of a dazzling effect from vehicles **in front**.

Functional description of non-dazzle high beam headlight

**Observe the operating instructions for the headlight adjustment device!**

*Note:*
**The following optional equipment must be installed:**

- "BMW Laserlight" (5AZA) or "Adaptive LED Headlights" (552A)

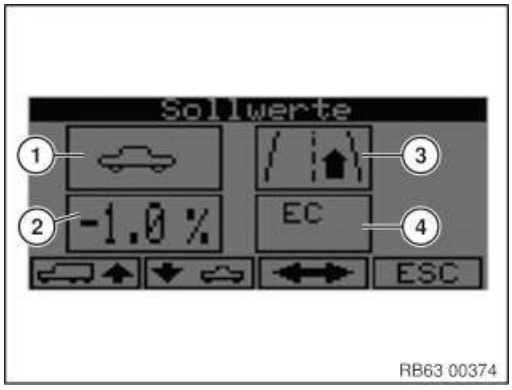
Proceed as follows in response to **first-time** customer complaint:

1. Perform **height and lateral adjustment of the low-beam headlights** on the left and right sides

Proceed as follows in response to a **further customer complaint**:

1. Start by performing **height and lateral adjustment of the low-beam headlights** on the left and right sides
2. Then, in **measured value mode** on the headlight adjustment device, turn the adjusting screw for lateral adjustment on the headlight right and left so that the low beam is adjusted outwards to approx. 0.5%.

**Procedure:**




Switch on the headlight adjustment device by pressing any button.

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

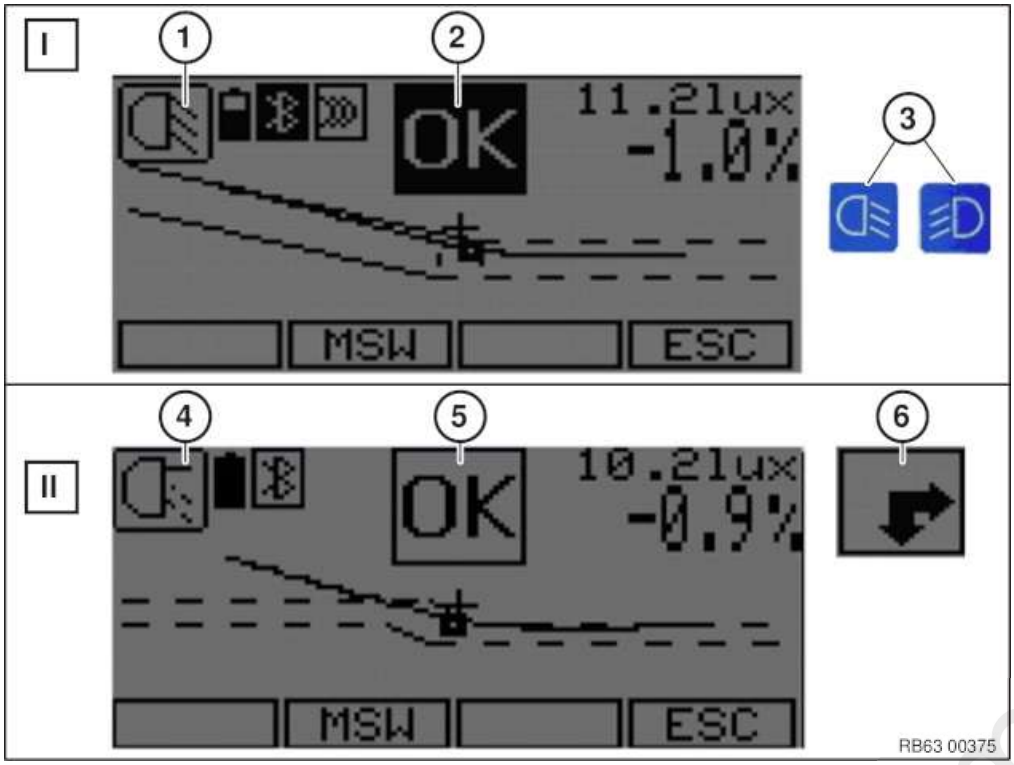
Perform the following settings:

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 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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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.

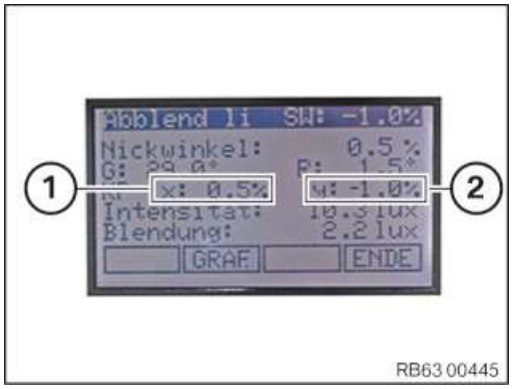
Transparent screen **Type II**:

**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. (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.

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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.

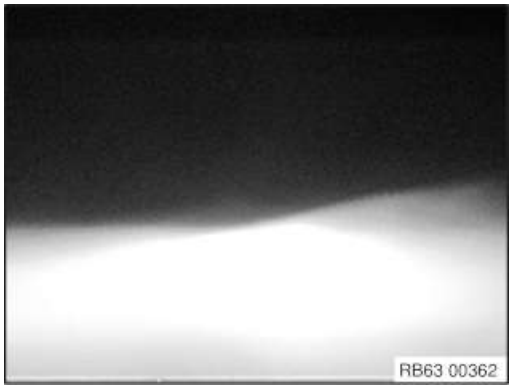
The transparent screens correspond with those in an accumulator box of a headlight adjusting device.




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

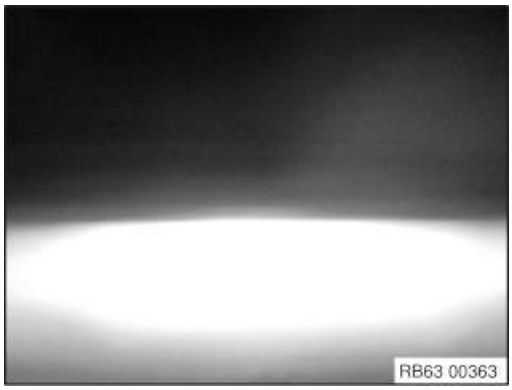
**Type I**: Light pattern shows a continuous increase in the light/dark boundary.

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

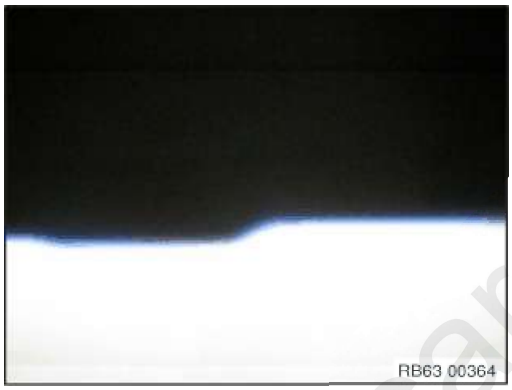



1. Halogen headlight

**Type I**

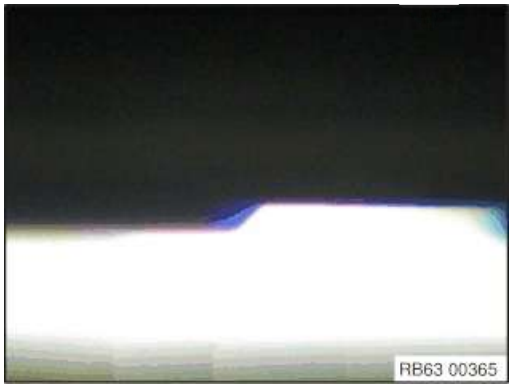



2. Halogen headlight **US version R60 only**




3. Xenon headlights

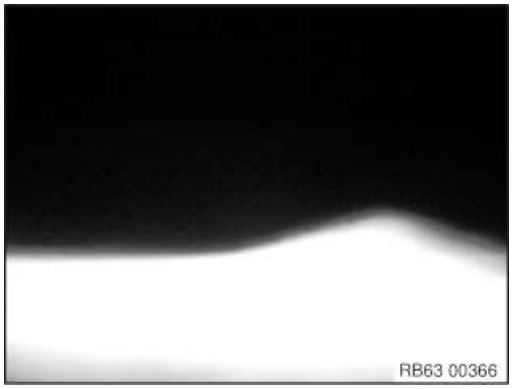
**Type II**




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<br>- Electronic headlight adjusting device |
| High-beam headlight | No,<br>Adjusted with the low-beam headlight * | |
| Automatic high beam<br>(main-beam assistant) | No,<br>Adjusted with the low-beam headlight * | |
| Non-dazzle high beam headlight | Yes,<br>Adjusted with the low-beam headlight | - Non-electronic headlight adjusting device<br>- Electronic headlight adjusting device |
| | Yes (with test module) | Adjustment aid for headlight |
| Additional laser headlight | No,<br>Adjusted with the low-beam headlight | |
| Adaptive Headlight | No,<br>Adjusted with the low-beam headlight | |
| Fog lights | Yes | - Non-electronic headlight adjusting device<br>- Electronic headlight adjusting device |
| Dynamic marker light<br>(to F-series) | Yes (with the test module) | - Non-electronic headlight adjusting device<br>- Electronic headlight adjusting device<br>Adjustment aid for headlight |
| Dynamic marker light<br>(from G-series) | No,<br>Adjusted with the low-beam headlight | |

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| | | |
|---|---|---|
| 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 ... Test requirements for headlights vertical aim adjustment

**Caution!**

**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.**

**Caution!**

**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)!**

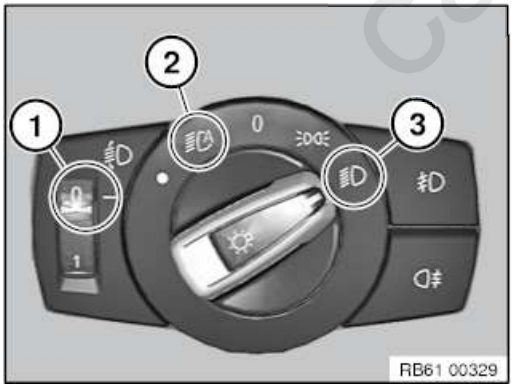
**These specifications are described in "Planning principles for layout of BMW service workshops".**

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

- Vehicle parked on level ground.
- 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 Light Spot. Not required in case of vehicles with automatic headlight range control:

- 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.



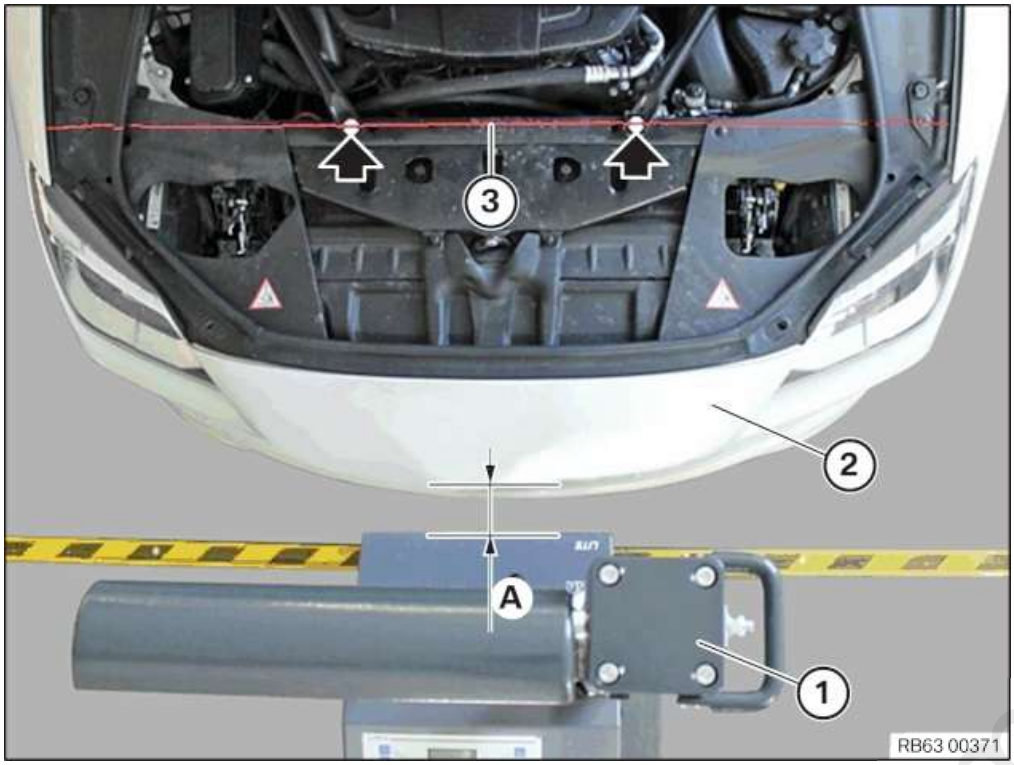

- Switch the ignition on.
- Manual headlight beam throw adjustment: Move handwheel to neutral position (1).
- **Light switch must be in "low beam/driving light" position (3).**
- Do not carry out the headlight adjustment in the "automatic driving lights control" light switch position (2).
- Version with 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.

**Caution!**

**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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**Caution!**

**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 adjustment device (1) with the laser beam (3). The laser beam (3) must meet two suitable spots, e.g. highlighted by arrows.

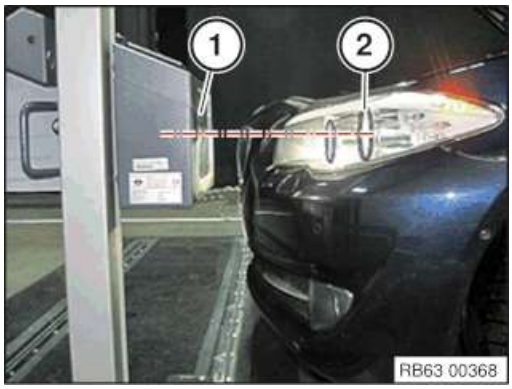
**Caution!**

**Define two reference points on the vehicle in order to align the headlight adjustment device!**

**The points should be as far as possible from each other!**

**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.



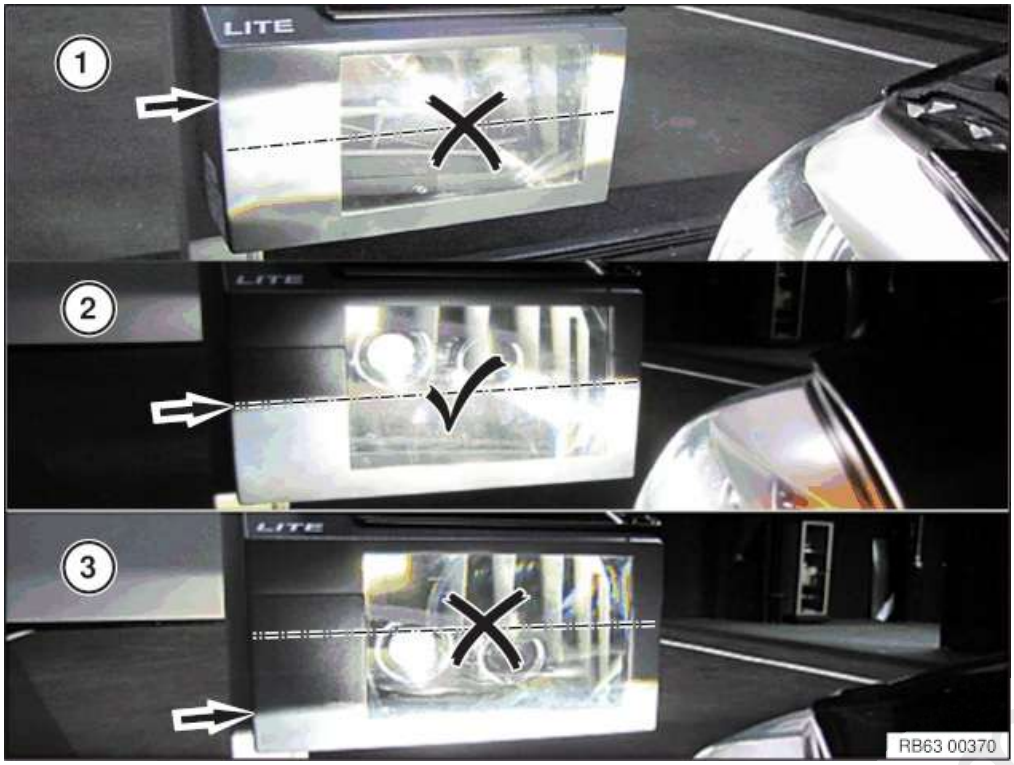

**Caution!**

**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.

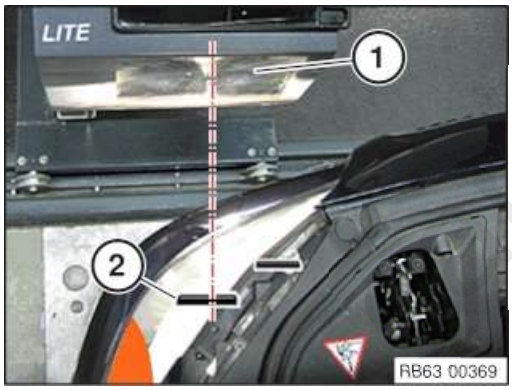
Corrections are made by raising or lowering the headlight adjusting device.

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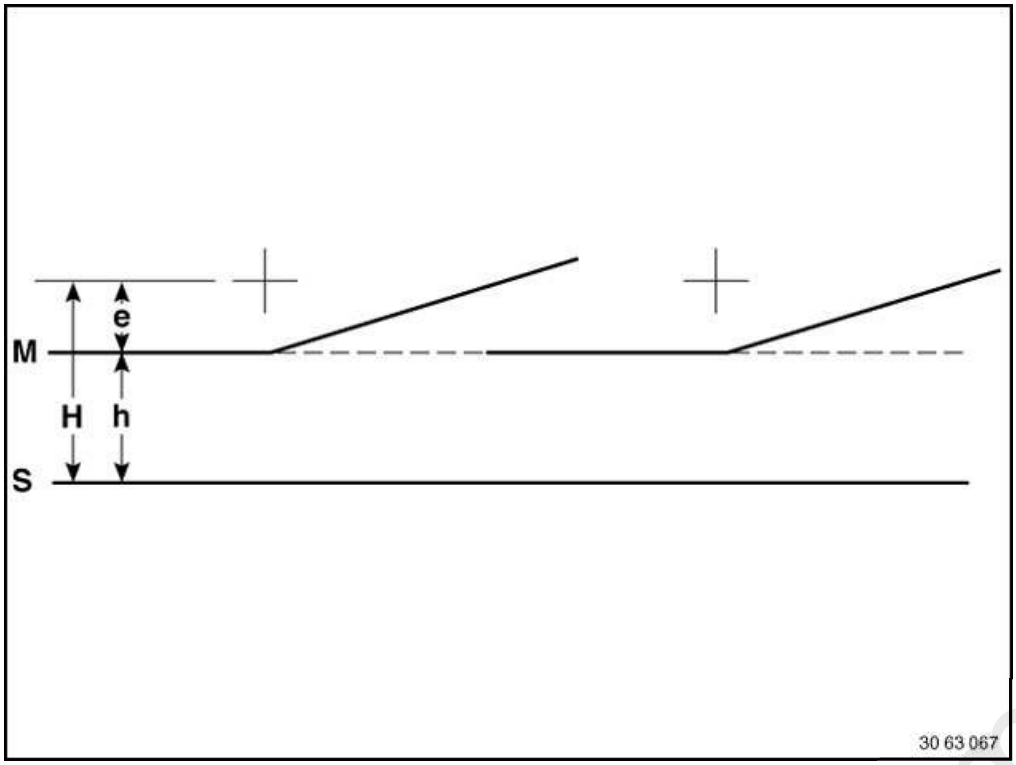

When positioned correctly, the light/dark boundary of the headlight (marked with arrow) must hit the collecting lens of the adjusting device in the centre:

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. Value **1.1%** applies to these vehicles (adjustment value **- 1.1%**).

**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

**The setting dimension {e} specified above is only valid for ECE. For example, observe differing country-specific regulations:**

Setting dimension headlights, **USA**: **0.7 %** = -7 cm/10 m = **- 0.7 %** on the headlight adjusting device.

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

**Prerequisite**

- Removed headlight support

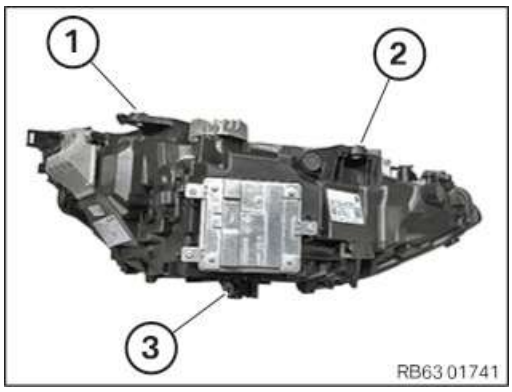
**TECHNICAL INFORMATION**

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

**NOTICE**

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

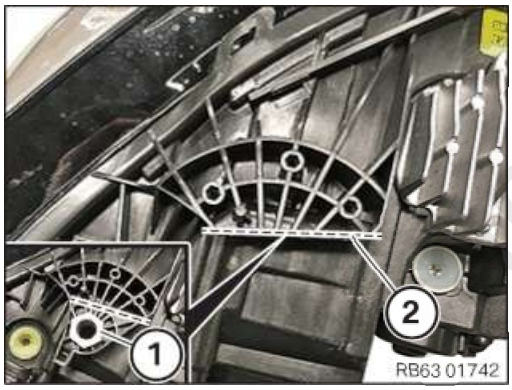
### 1 – Installing the repair kit for the headlight



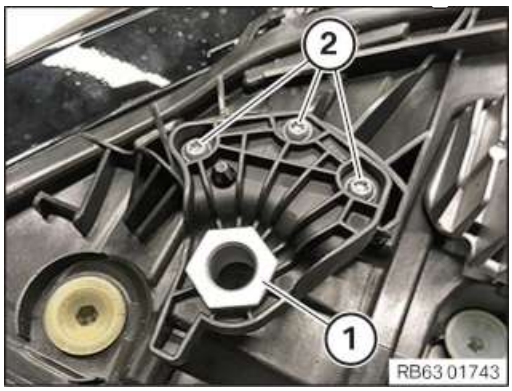

**TECHNICAL INFORMATION**

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

- Observe that the repair kit for the headlight can be used for the holder (1), (2) and (3).

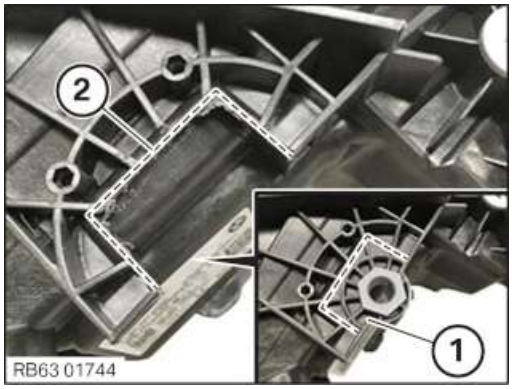



- If necessary, remove the damaged holder (1) along the dotted line as shown (2).

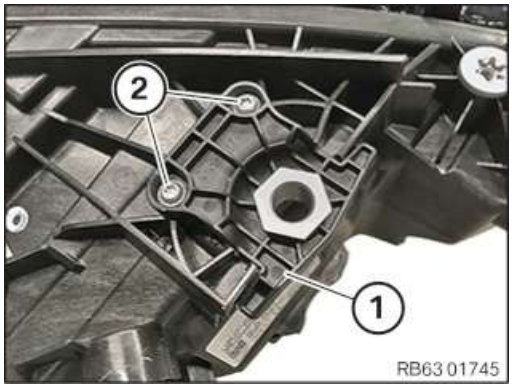



- Fasten the new holder (1) with the accompanying screws (2).

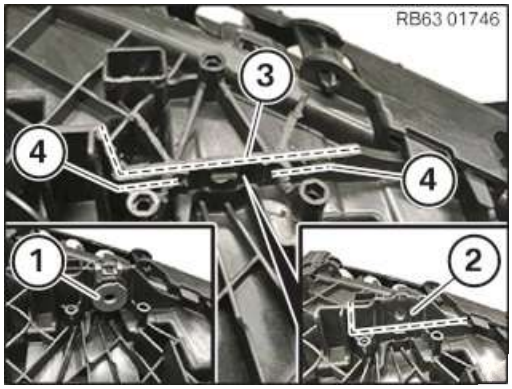
tdiagn.com



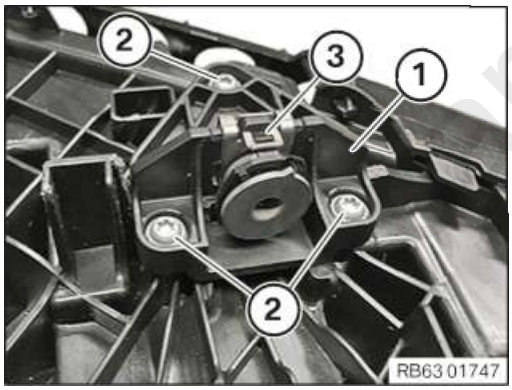

- If necessary, remove the damaged holder (1) along the dotted line as shown (2).




- Fasten the new holder (1) with the accompanying screws (2).




- Remove adjusting element (1).
- If necessary, remove the damaged holder (2) along the dotted line as shown (3).
- In order to ensure a flat surface, remove some material around the screw holes if necessary (4).




- Fasten the new holder (1) with the accompanying screws (2).
- Remount the adjusting element (3) on the new holder (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 a range of almost 600 m (US vehicles with laser additional headlight have a shorter range), the laser additional headlight illuminates almost twice as far as the high beam of 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
- Lighting
- 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**

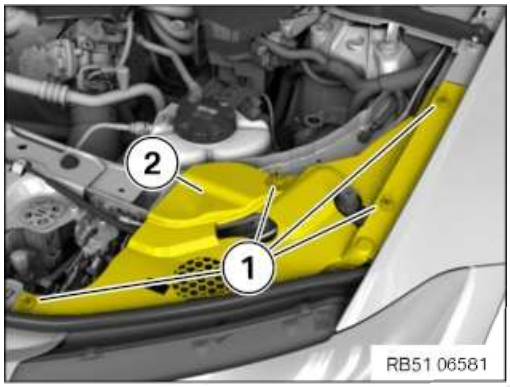
**Electrostatic discharge.**

**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 ... Notes for ESD protection (electrostatic discharge)

## PRELIMINARY WORK

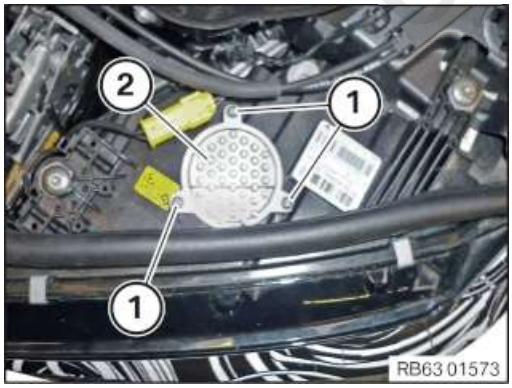
### 1 – Remove the cover in the engine compartment on top




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

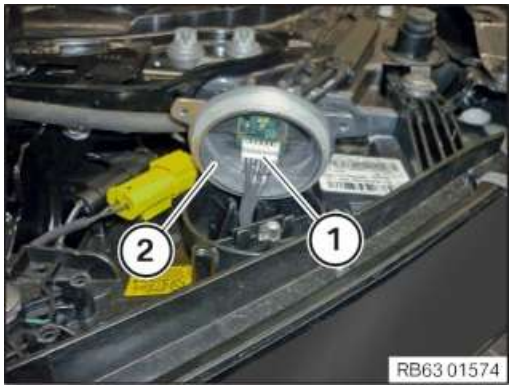
## MAIN WORK

### 2 – Remove LED module for daytime driving lights



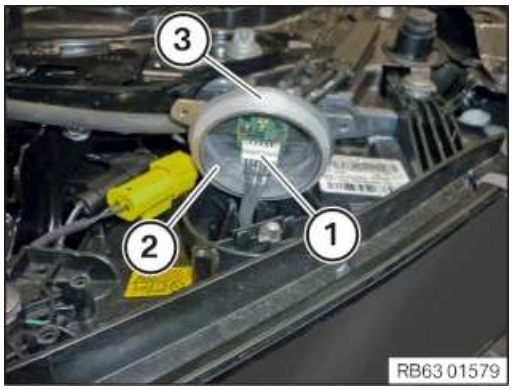

- Loosen screws (1).
- Feed out daytime driving lights LED module (2) and raise slightly.

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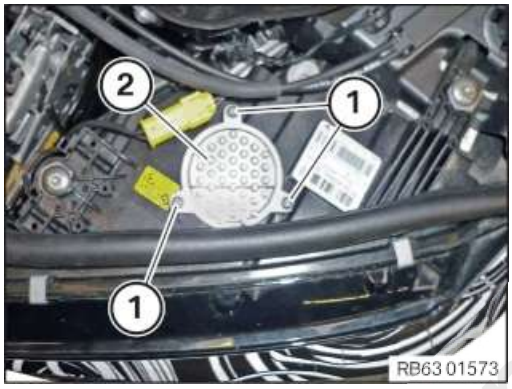



- Unlock plug connection (1) and disconnect.
- Remove daytime driving lights LED module (2).

**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.



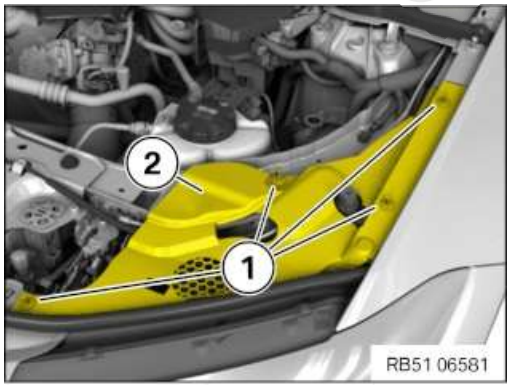

- Insert and correctly position LED module lighting ring (2).
- Tighten the screws (1).

**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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## Links

| Repair instructions | Used in step |
| --- | --- |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |

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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 11 761 Replace FLER control unit

**RISK OF DAMAGE**

**Electrostatic discharge.**

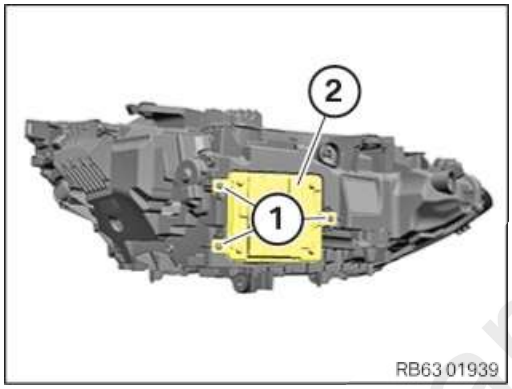
**Damage to or destruction of electrical components.**

- 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 ... Notes for ESD protection (electrostatic discharge)

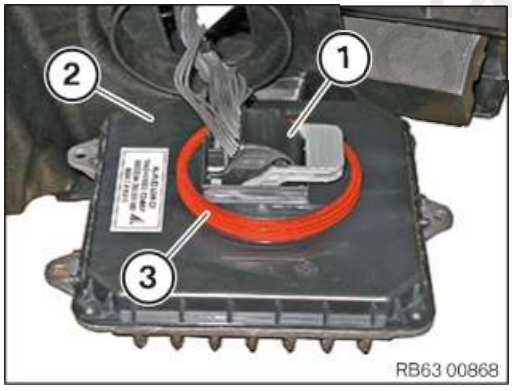
### 1 – Removing the control unit for the Frontal Light Electronics Right (FLER)

**NOTICE**

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




- Loosen screws (1).
- Pull control unit for the Frontal Light Electronics (2) out of the headlight.

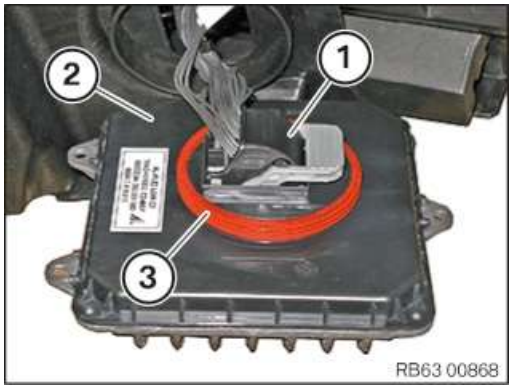



- Unlock and disconnect connector (1).
- Remove control unit for the Frontal Light Electronics (2).

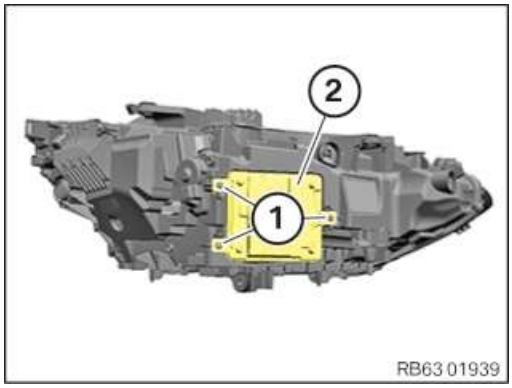
### 2 – Install right Frontal Light Electronics control unit (FLER)

**NOTICE**

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



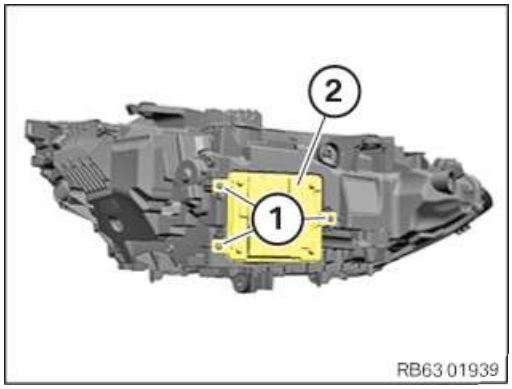

- Check the seal (3) on the control unit (2) for damage and renew it if necessary.
- Connect connectors (1) and lock.




- Position the control unit (2) in the headlight.
- Tighten the screws (1).

**Frontal light electronics (FLE)**

| | | | |
|---|---|---|---|
| PT-SCREW 40x12 | | Tightening torque | 1,5 Nm |




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### 3 – Encode/program control unit(s)

**Prerequisite**

Component has been replaced.

**TECHNICAL INFORMATION**

Use the most recent software version to prevent faults during programming/encoding.

The battery voltage must not fall below 13.0 V during programming.

Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

**TECHNICAL INFORMATION**

**No high-voltage switch off is required** in electric vehicles or hybrid vehicles for programming/encoding.

The high-voltage system will be automatically switched off by the programming system.

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

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## Additional Information

### Overview of Tightening Torques

**Frontal light electronics (FLE)** Used in step 2

| | | | |
|---|---|---|---|
| PT-SCREW 40x12 | | Tightening torque | 1,5 Nm |

### Links

| Repair instructions | Used in step |
|---|---|
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |

# 63 11 762 Replacing both control unit Frontal Light Electronics

**RISK OF DAMAGE**

**Electrostatic discharge.**

**Damage to or destruction of electrical components.**

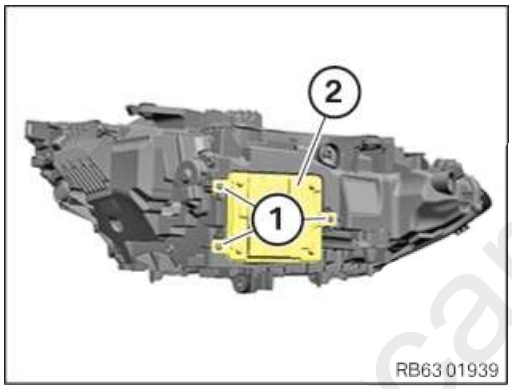
- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the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

## 1 – Removing the control unit on left and right for Frontal Light Electronics (FLEL and FLER)

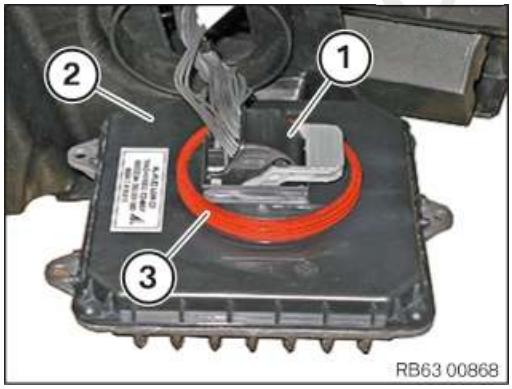
**NOTICE**

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

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




- Loosen screws (1).
- Pull the control unit (2) out of the headlights.




- Unlock and disconnect connector (1).
- Remove control unit (2).

**2 – Encode/program control unit(s)**

**Prerequisite**

Component has been replaced.

**TECHNICAL INFORMATION**

Use the most recent software version to prevent faults during programming/encoding.

The battery voltage must not fall below 13.0 V during programming.

Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

**TECHNICAL INFORMATION**

**No high-voltage switch off is required** in electric vehicles or hybrid vehicles for programming/encoding.

The high-voltage system will be automatically switched off by the programming system.

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

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## Additional Information

### Links

| Repair instructions | Used in step |
|---|---|
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |

# 63 11 711 Replacing both LED flashing turn indicators

**RISK OF DAMAGE**

**Electrostatic discharge.**

**Damage to or destruction of electrical components.**

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

## 1 – Removing the LED module for the left and right indicator lamps

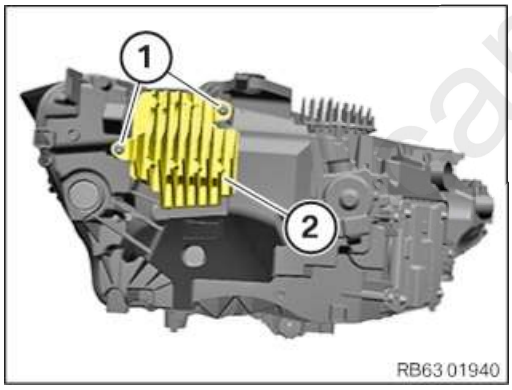
**NOTICE**

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

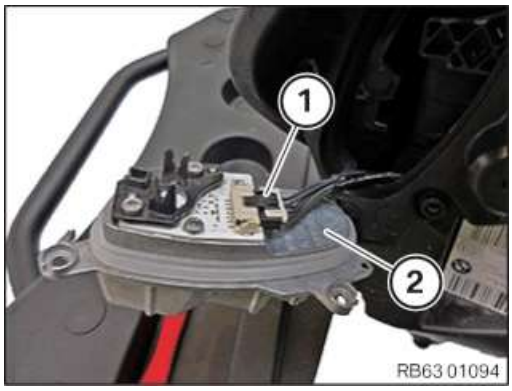
▸ **Remove the LED module for the turn indicator**

**NOTICE**

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




- Loosen screws (1).
- Pull LED module (2) out of headlight.




- Unlock and disconnect plug connection (1) on LED module (2).

## 2 – Installing the LED module for the left and right indicator lamp

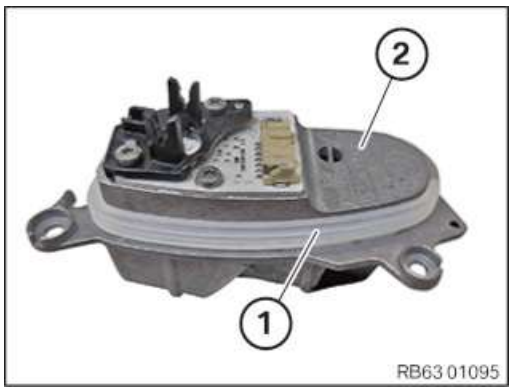
**NOTICE**

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

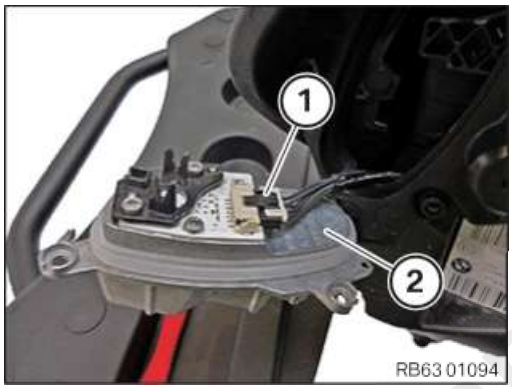
▸ **Installing LED module for turn indicator**

**NOTICE**

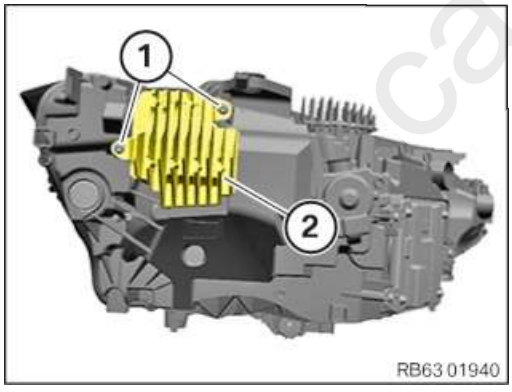
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Check the seal (1) on the LED module (2) for damage and, if necessary, renew it.




- Connect connector (1) with the LED module (2) and lock it.




- Position the LED module (2) on the headlight.
- 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 |

### Links

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| Repair instructions | Used in step |
| --- | --- |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |

61 35 ... Notes on ESD protection (Electro Static Discharge)

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# 63 11 760 Replacing FLEL control unit

**RISK OF DAMAGE**



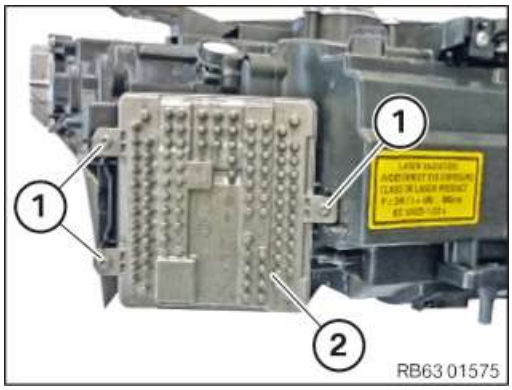
**Electrostatic discharge.**

**Damage to or destruction of electrical components.**

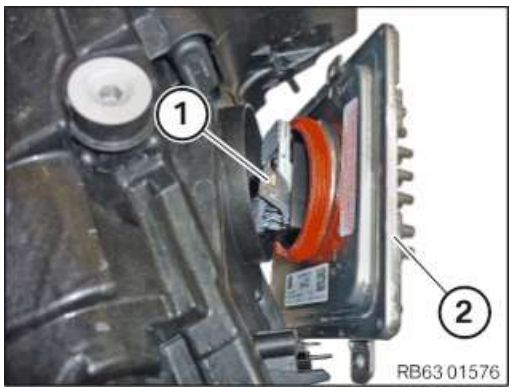
- Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.
- Read and comply with user information on using the associated special tool 12 7 060.
- Only touch the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

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

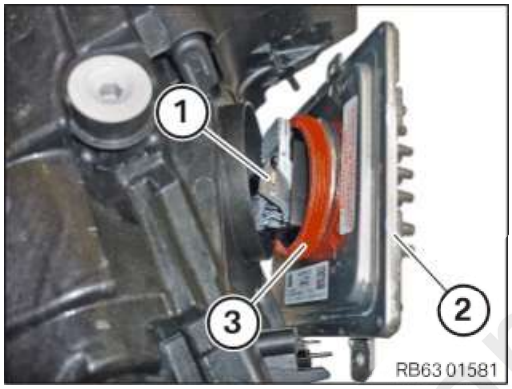



- Loosen screws (1).
- Feed out the Frontal Light Electronics (FLEL) control unit (2).

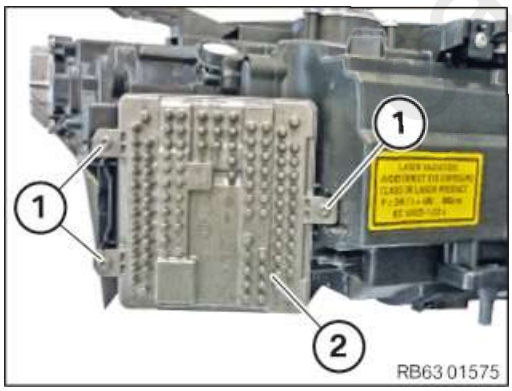



- Unlock plug connection (1) and disconnect.
- Remove the Frontal Light Electronics (FLEL) control unit (2).

### 2 – Installing Frontal Light Electronics (FLEL) control unit




- 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 |

**3 – Encode/program control unit(s)**

**Prerequisite**

Component has been replaced.

**TECHNICAL INFORMATION**

Use the most recent software version to prevent faults during programming/encoding.

The battery voltage must not fall below 13.0 V during programming.

Use only chargers for a low volt-vehicle electrical system that are recommended by BMW.

**TECHNICAL INFORMATION**

**No high-voltage switch off is required** in electric vehicles or hybrid vehicles for programming/encoding.

The high-voltage system will be automatically switched off by the programming system.

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

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## Additional Information

### Overview of Tightening Torques

**Front lighting electronics control unit to headlight** — Used in step 2

| | | | |
|---|---|---|---|
| Screw | | Tightening torque | 1,5 Nm |

### Links

| Repair instructions | Used in step |
|---|---|
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |

# 63 11 701 Replacing left LED flashing turn indicator

**RISK OF DAMAGE**

**Electrostatic discharge.**

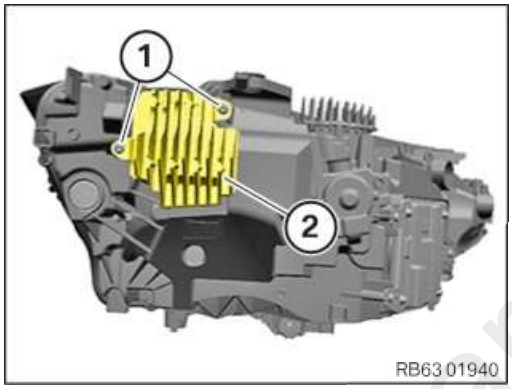
**Damage to or destruction of electrical components.**

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

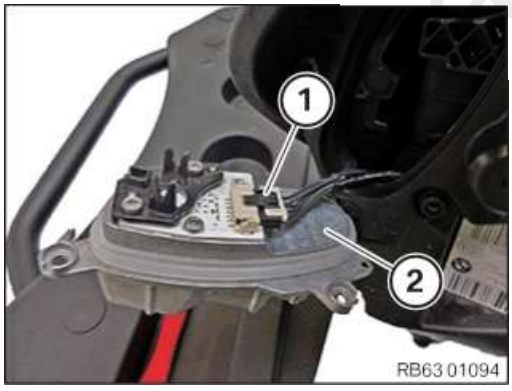
### 1 – Remove the LED module for the turn indicator

**NOTICE**

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




- Loosen screws (1).
- Pull LED module (2) out of headlight.

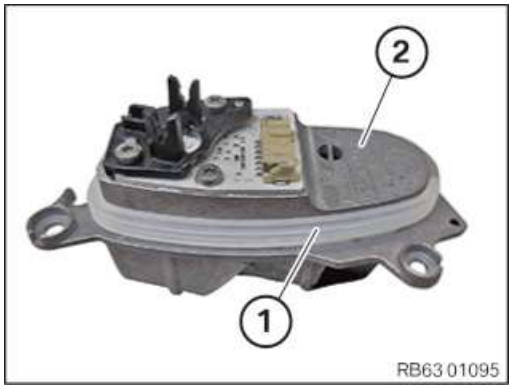



- Unlock and disconnect plug connection (1) on LED module (2).

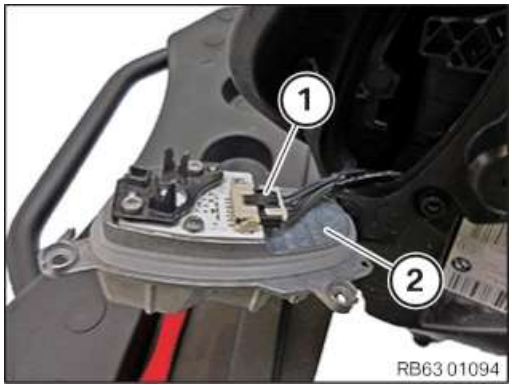
### 2 – Installing LED module for turn indicator

**NOTICE**

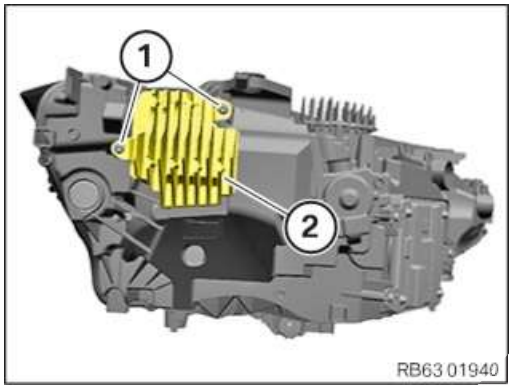
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Check the seal (1) on the LED module (2) for damage and, if necessary, renew it.




- Connect connector (1) with the LED module (2) and lock it.




- Position the LED module (2) on the headlight.
- 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 |

### Links

| Repair instructions | Used in step |
|---|---|
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |

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# 63 11 706 Replacing right LED flashing turn indicator

**RISK OF DAMAGE**

**Electrostatic discharge.**

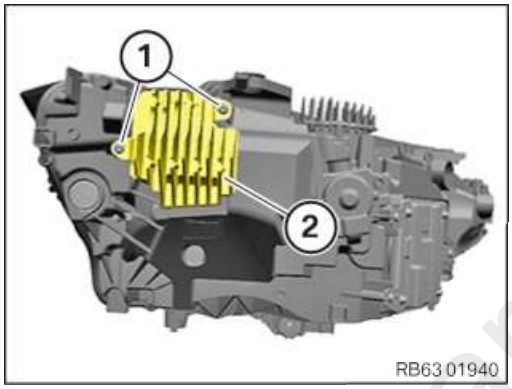
**Damage to or destruction of electrical components.**

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

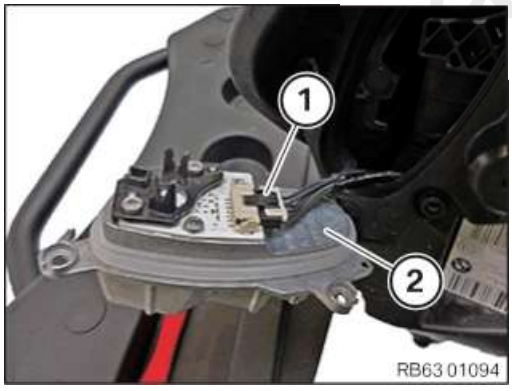
### 1 – Remove the LED module for the turn indicator

**NOTICE**

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




- Loosen screws (1).
- Pull LED module (2) out of headlight.

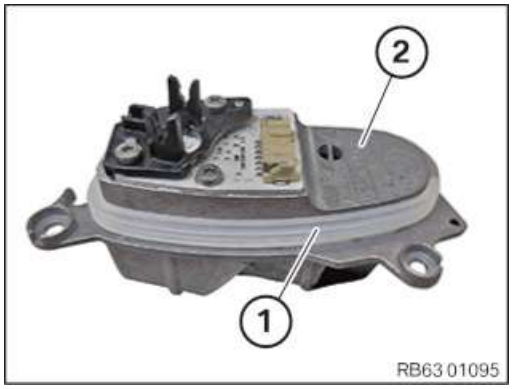



- Unlock and disconnect plug connection (1) on LED module (2).

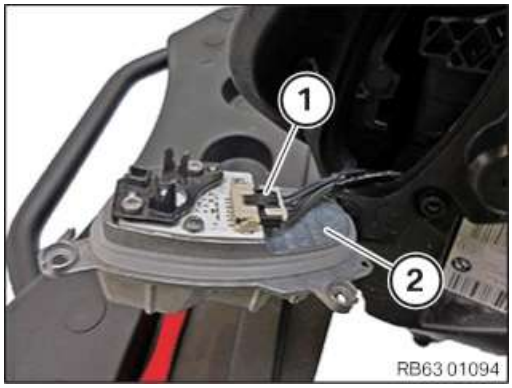
### 2 – Installing LED module for turn indicator

**NOTICE**

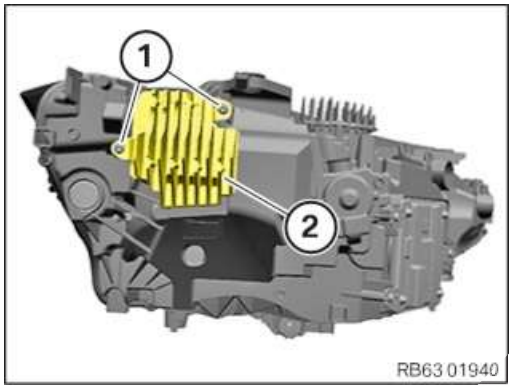
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Check the seal (1) on the LED module (2) for damage and, if necessary, renew it.




- Connect connector (1) with the LED module (2) and lock it.




- Position the LED module (2) on the headlight.
- 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 |

### Links

| Repair instructions | Used in step |
|---|---|
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |
| 61 35 ... Notes on ESD protection (Electro Static Discharge) | |

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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!**

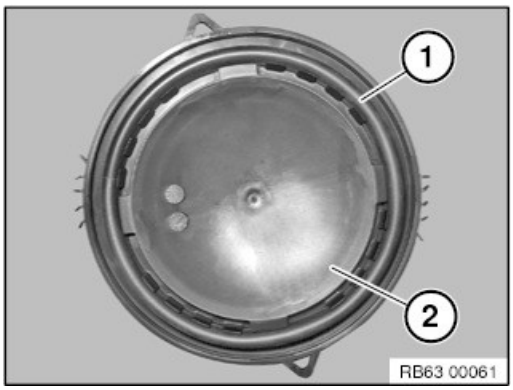
**Risk of damage!**

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.

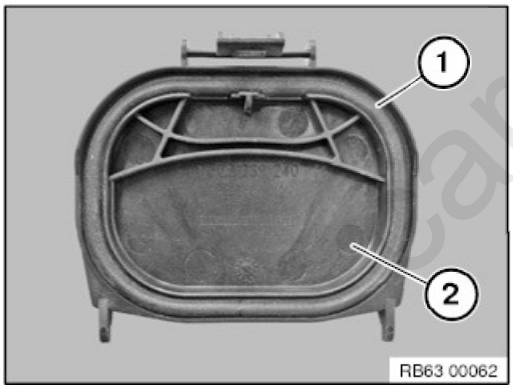
When working on the headlight system, check the protective cap seals.

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

**RISK OF DAMAGE**

**Mechanical effects.**

**Paint damage.**

- Mask those working areas at risk with yellow plastic adhesive tape.
- Remove and install heavy or bulky components with the aid of another person/other persons.

**TECHNICAL INFORMATION**

To guarantee the quality of the driver assistance functions in vehicles with concealed radar sensors installed, the component may only be repainted by observing the repair specifications described in the document "Standards for repair painting with sensor systems".

Sourcing reference:

https://colorsystem-paint.com/

Aftersales Information Research (AIR) - Repair and service messages - HG99 - ColorSystem

ISTA - HG99 - ColorSystem

No stickers or foils (transparent or coloured) may be attached in the radiation areas of the radar sensors.

The component may be painted if no radar sensors have been installed.

The following features can be used to identify whether radar sensors are installed on the vehicle:

Radar sensors are installed at the rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame).

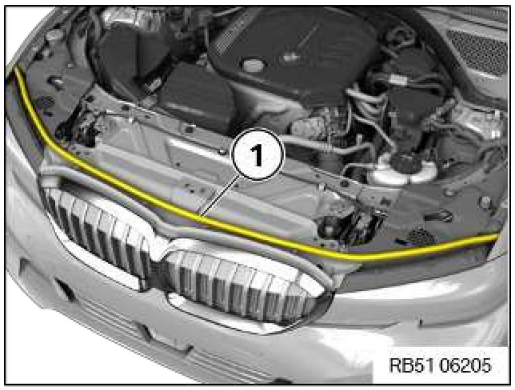
Radar sensors are installed at the front and rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame) in conjunction with the optional equipment S5ATA or S5AUA.

## PRELIMINARY WORK

### 1 – Remove the seal for the bonnet in front

**NOTICE**

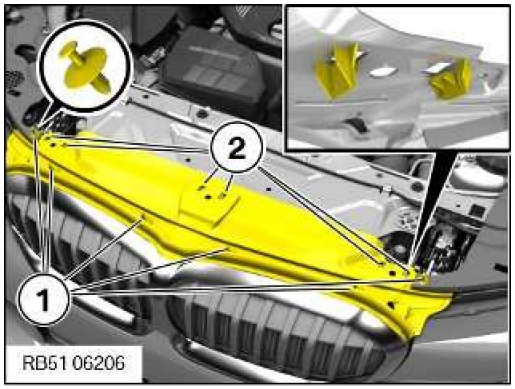
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Pull offfront bonnet seal (1) upwards.

### 2 – Removing the centre engine compartment cover

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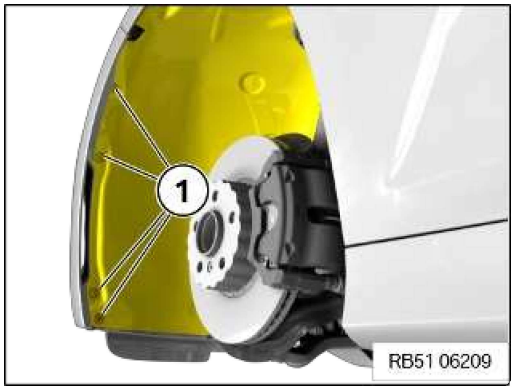

- Detach all expanding rivets (1).
- Release the cover at the latch mechanisms (2) and feed it out to the rear.

### 3 – Partially releasing the front left and right 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**

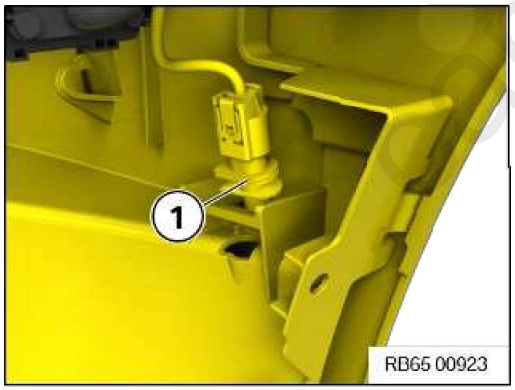



**NOTICE**

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

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

### 4 – Partially removing the temperature sensor

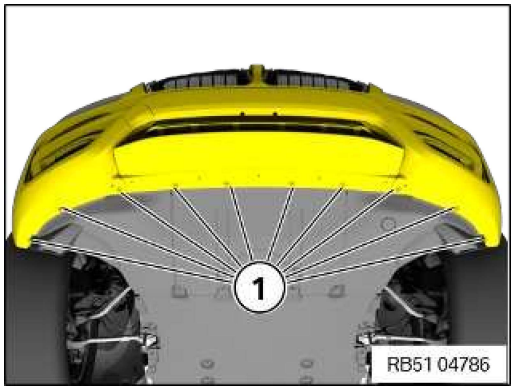



- Unclip temperature sensor (1) from the front bumper panel to the top.

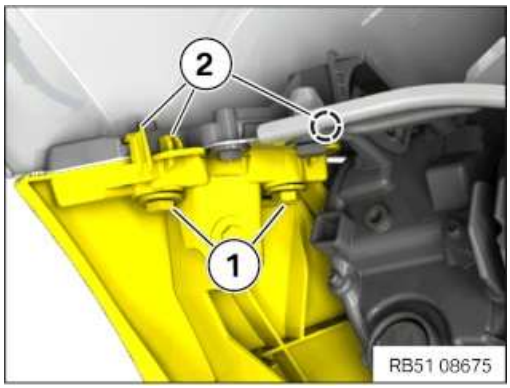
### 5 – Remove front bumper panel

**NOTICE**

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



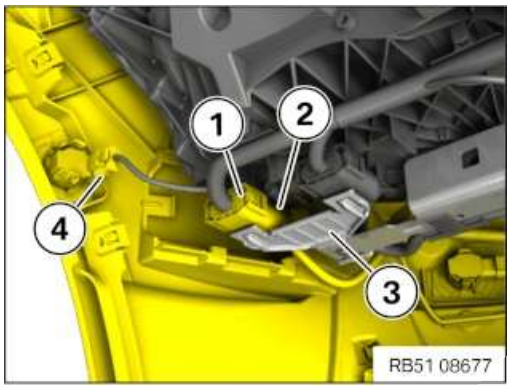

- Loosen screws (1).




**NOTICE**

Perform the operations on the left and right side.

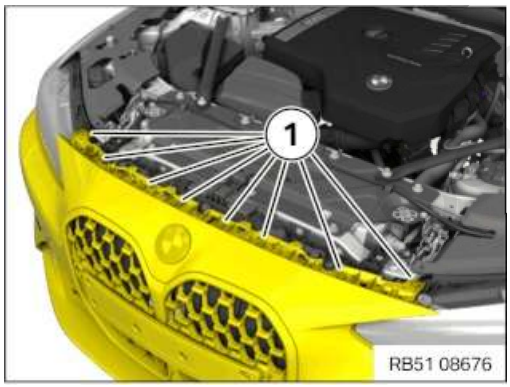
- Loosen screws (1).
- The bumper panel with the latch mechanisms (2) is to be released and removed from the guide.




**NOTICE**

Perform the operations on the left and right side.

- Unlock plug connection (1) and disconnect.
- Unclip the connector (2) from the holder (3).
- If necessary, unlock and disconnect the plug connection (4).




- Loosen screws (1).
- Remove the bumper panel towards the front.

## MAIN WORK

### 6 – Remove headlight on left and right

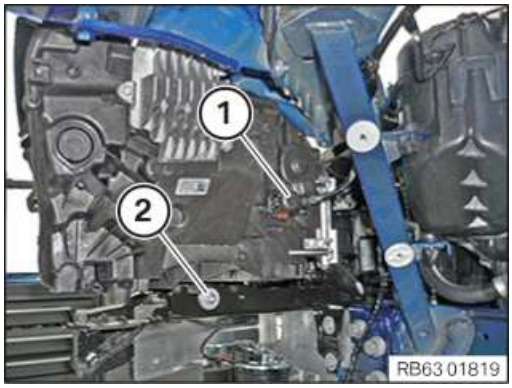
**NOTICE**

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

▸ **Remove headlight**



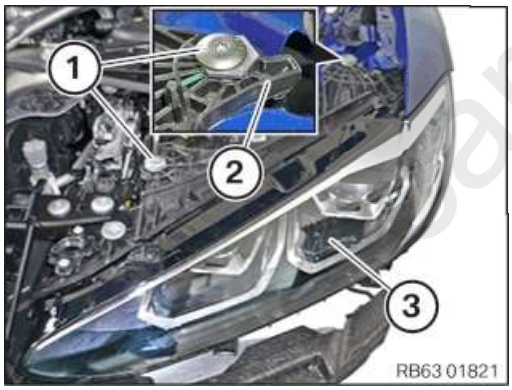

- Mask off the body in the marked area with adhesive tape.




- Unlock plug connection (1) and disconnect.
- Loosen screw (2).




- Release connector holder (1) from the headlight.




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

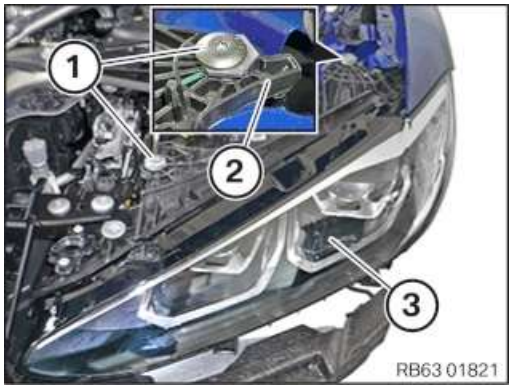
### 7 – Installing headlight on the left and right

**NOTICE**

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

▸ **Install headlight**

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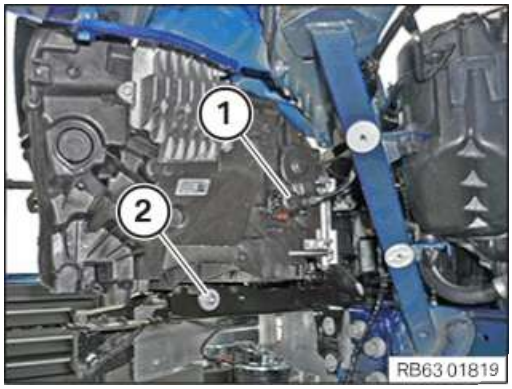

- Insert the headlight (3) from the front and clip it in with the latch mechanism (2).
- Tighten the screws (1).

**Front light combination, top**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 8 Nm |




- Secure connector holder (1) to the headlight.




- Tighten down screw (2).

**Front light combination, bottom**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 5 Nm |

- Connect connectors (1) and lock.




- Remove adhesive tape in the marked area.

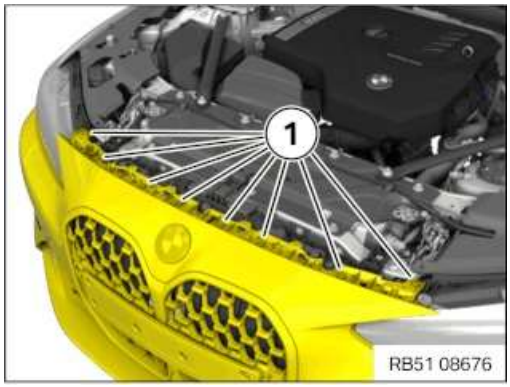
## POSTPROCESSES

### 8 – Install bumper panel, front

**NOTICE**

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

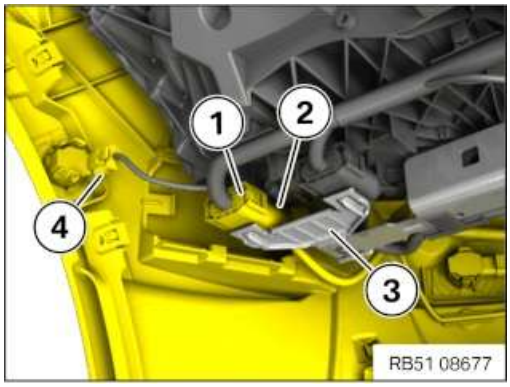
mdiagn.com




- Fit the bumper panel from the front and position it.
- Tighten the screws (1).

**Bumper panel, front top**

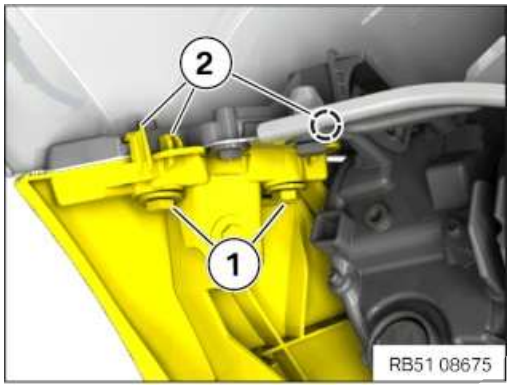
| | | | |
|---|---|---|---|
| Oval-head screwM6 | | Tightening torque | 4,6 Nm |




**NOTICE**

Perform the operations on the left and right side.

- Clip in the connector (2) in the holder (3).
- Connect connectors (1) and lock.
- If necessary, connect and lock the connector (4).




- Feed in the bumper panel in the guide and clip in with the latch mechanisms (2).

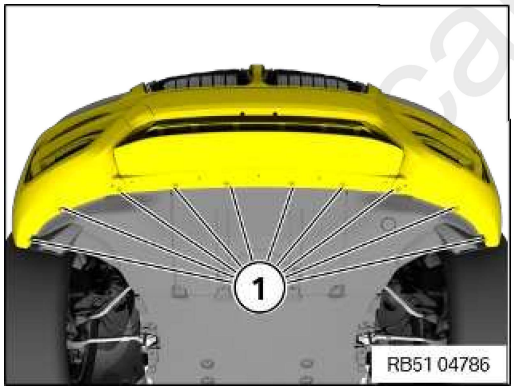
**NOTICE**

Perform the operations on the left and right side.

- Tighten the screws (1).

**Front bumper panel to front side panel**

| | | | |
|---|---|---|---|
| Torx screw 5x35 | | Tightening torque | 3 Nm |

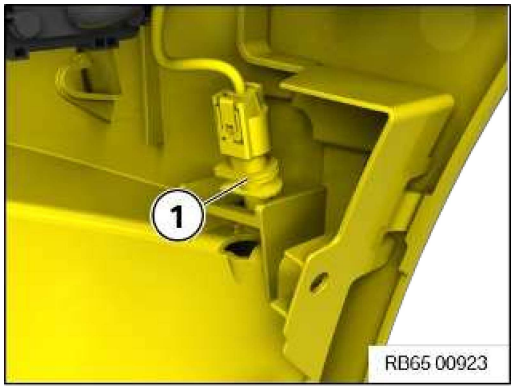



- Tighten the screws (1).

**Front bumper panel to underbody protection**

| | | | |
|---|---|---|---|
| Hexagon screw for thermoplastic | | Tightening torque | 2,6 Nm |

**9 – Partially installing the temperature sensor**



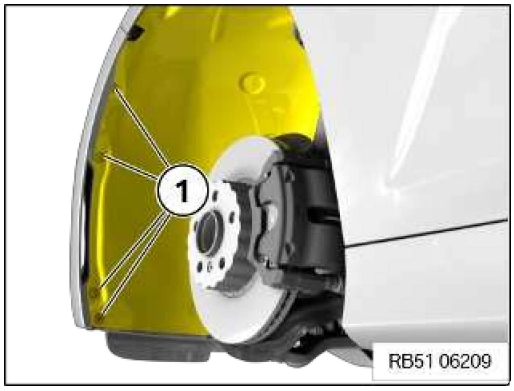

- Clip the temperature sensor (1) downwards into the front bumper panel.

### 10 – Partially installing the front left and right 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**

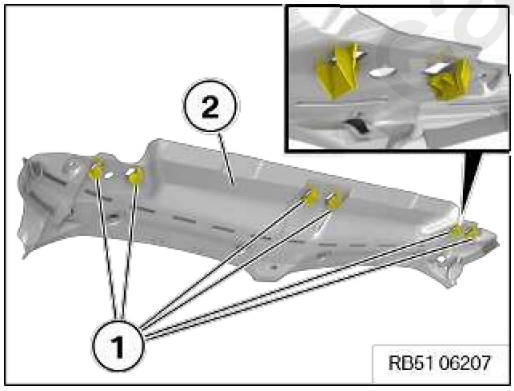
To provide a better overview: Schematic diagram without front wheel.

- 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 |

### 11 – Installing the cover for the centre engine compartment




**Check**

- Check the latch mechanisms (1) of the cover (2) for damage.

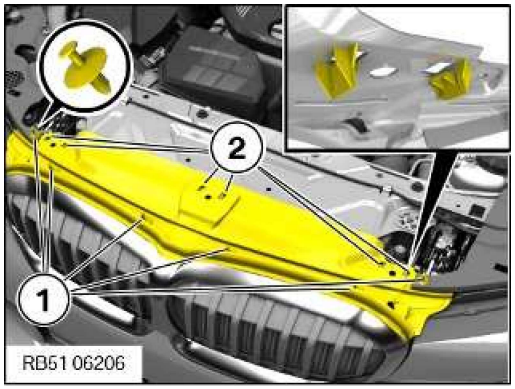
**Result**

» Latch mechanisms (1) are damaged.

**Measure**

- Replace the cover (2).

  **Parts:** Cover

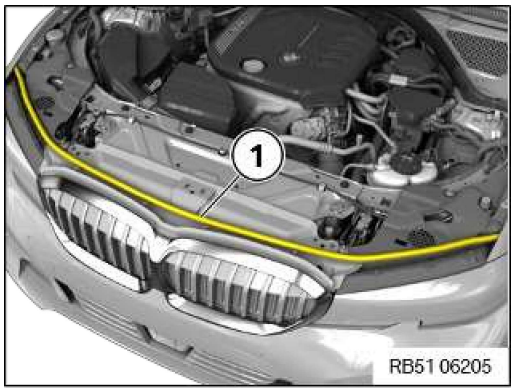



- Insert the cover from the rear and position it.
- Clip in the latch mechanisms (2).
- Mount all expanding rivets (1).

### 12 – Install the seal for the front bonnet

**NOTICE**

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




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

### 13 – 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.

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## Additional Information

### Overview of Tightening Torques

| **Front light combination, top** | | | Used in step 7 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 8 Nm |

| **Front light combination, bottom** | | | Used in step 7 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 5 Nm |

| **Bumper panel, front top** | | | Used in step 8 |
|---|---|---|---|
| Oval-head screwM6 | | Tightening torque | 4,6 Nm |

| **Front bumper panel to front side panel** | | | Used in step 8 |
|---|---|---|---|
| Torx screw 5x35 | | Tightening torque | 3 Nm |

| **Front bumper panel to underbody protection** | | | Used in step 8 |
|---|---|---|---|
| Hexagon screw for thermoplastic | | Tightening torque | 2,6 Nm |

| **Wheel arch trim panel, front** | | | Used in step 10 |
|---|---|---|---|
| Thermoplastic hexagon screw | | Tightening torque | 2,6 Nm |

### Links

| **Repair instructions** | **Used in step** |
|---|---|
| 63 10 ... Test requirements for headlights vertical aim adjustment | 13 |

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# 63 12 003 Removing and installing left headlight

**RISK OF DAMAGE**

**Mechanical effects.**

**Paint damage.**

- Mask those working areas at risk with yellow plastic adhesive tape.
- Remove and install heavy or bulky components with the aid of another person/other persons.

**TECHNICAL INFORMATION**

To guarantee the quality of the driver assistance functions in vehicles with concealed radar sensors installed, the component may only be repainted by observing the repair specifications described in the document "Standards for repair painting with sensor systems".

Sourcing reference:

https://colorsystem-paint.com/

Aftersales Information Research (AIR) - Repair and service messages - HG99 - ColorSystem

ISTA - HG99 - ColorSystem

No stickers or foils (transparent or coloured) may be attached in the radiation areas of the radar sensors.

The component may be painted if no radar sensors have been installed.

The following features can be used to identify whether radar sensors are installed on the vehicle:

Radar sensors are installed at the rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame).

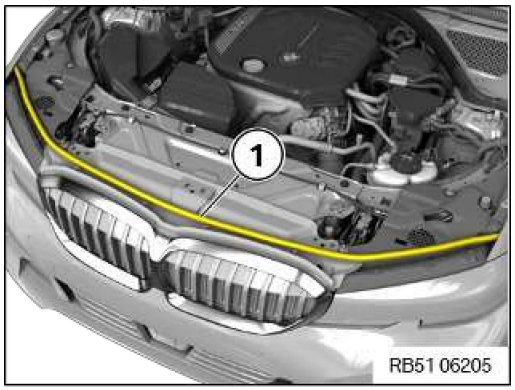
Radar sensors are installed at the front and rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame) in conjunction with the optional equipment S5ATA or S5AUA.

## PRELIMINARY WORK

### 1 – Remove the seal for the bonnet in front

**NOTICE**

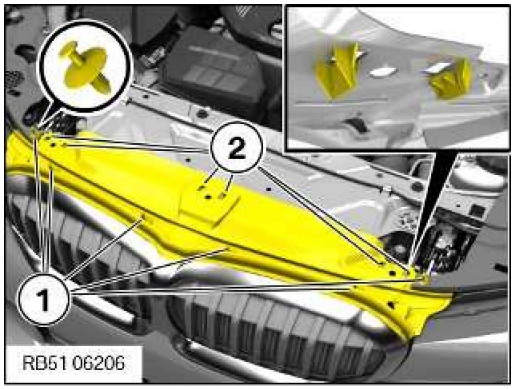
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Pull offfront bonnet seal (1) upwards.

### 2 – Removing the centre engine compartment cover

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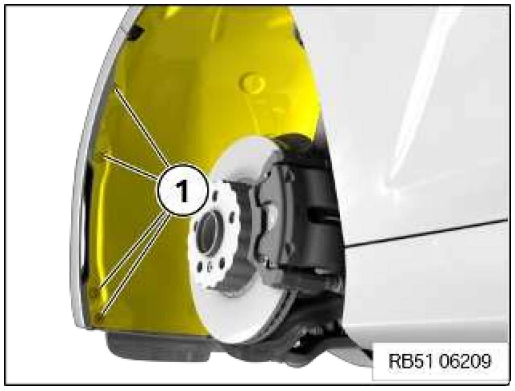

- Detach all expanding rivets (1).
- Release the cover at the latch mechanisms (2) and feed it out to the rear.

### 3 – Partially releasing the front left and right 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**

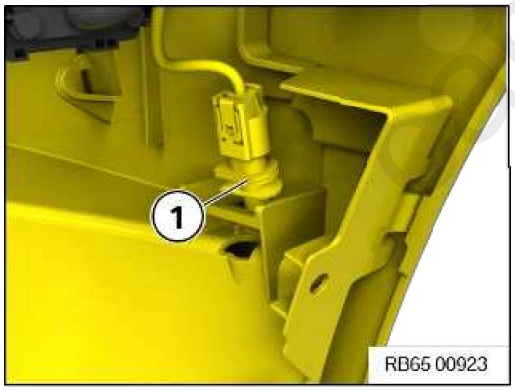



**NOTICE**

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

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

### 4 – Partially removing the temperature sensor

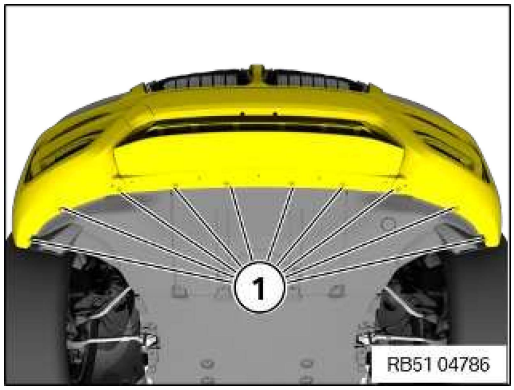



- Unclip temperature sensor (1) from the front bumper panel to the top.

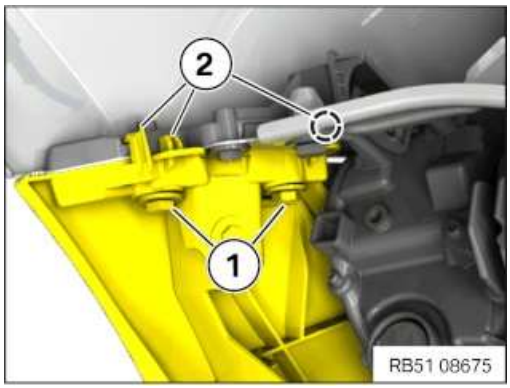
### 5 – Remove front bumper panel

**NOTICE**

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



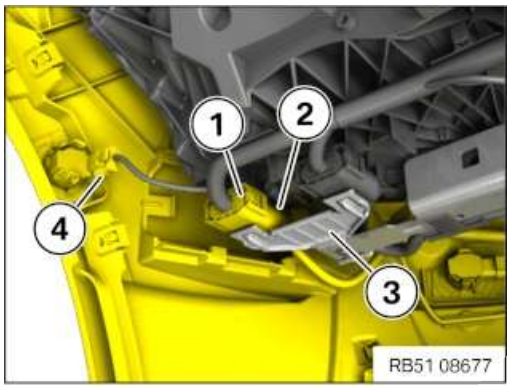

- Loosen screws (1).




**NOTICE**

Perform the operations on the left and right side.

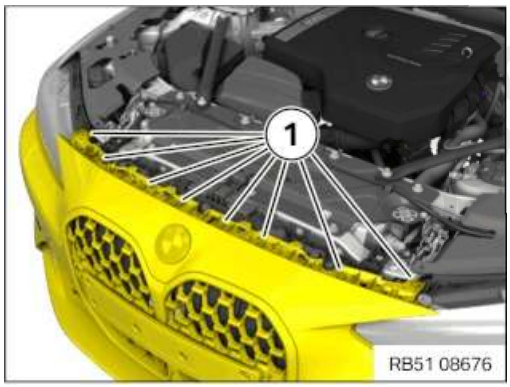
- Loosen screws (1).
- The bumper panel with the latch mechanisms (2) is to be released and removed from the guide.




**NOTICE**

Perform the operations on the left and right side.

- Unlock plug connection (1) and disconnect.
- Unclip the connector (2) from the holder (3).
- If necessary, unlock and disconnect the plug connection (4).



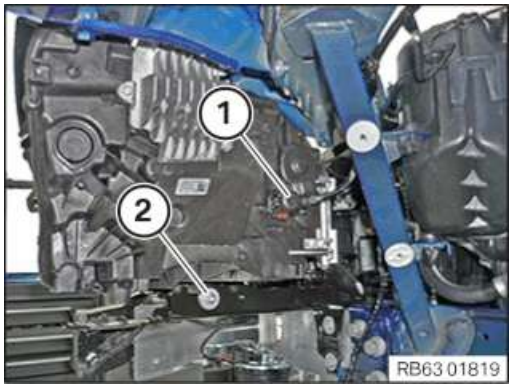

- Loosen screws (1).
- Remove the bumper panel towards the front.

## MAIN WORK

### 6 – Remove headlight



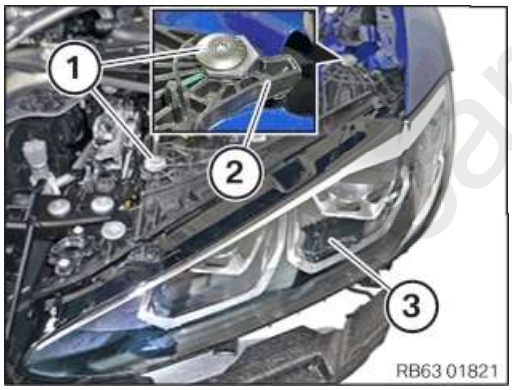

- Mask off the body in the marked area with adhesive tape.




- Unlock plug connection (1) and disconnect.
- Loosen screw (2).

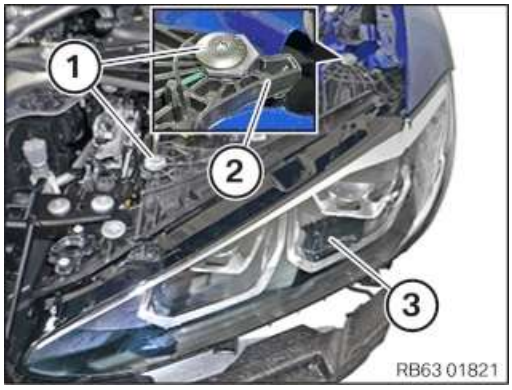



- Release connector holder (1) from the headlight.




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

### 7 – Install headlight




- Insert the headlight (3) from the front and clip it in with the latch mechanism (2).
- Tighten the screws (1).

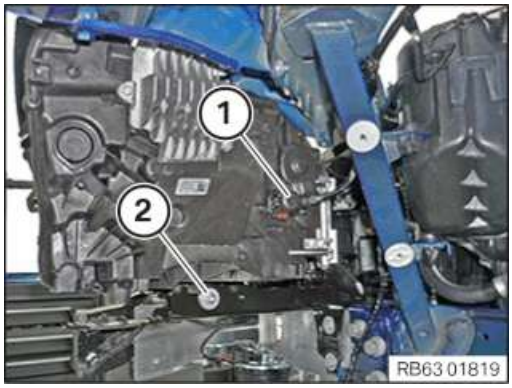
**Front light combination, top**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 8 Nm |

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- Secure connector holder (1) to the headlight.




- Tighten down screw (2).

**Front light combination, bottom**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 5 Nm |

- Connect connectors (1) and lock.



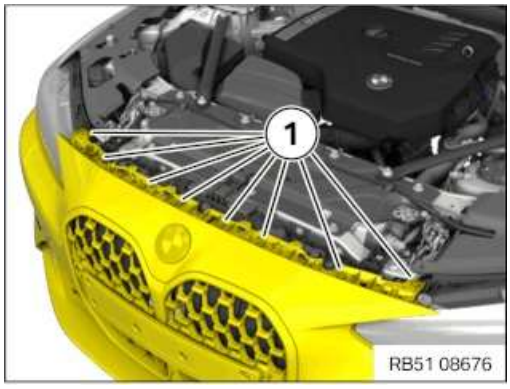

- Remove adhesive tape in the marked area.

## POSTPROCESSES

### 8 – Install bumper panel, front

**NOTICE**

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

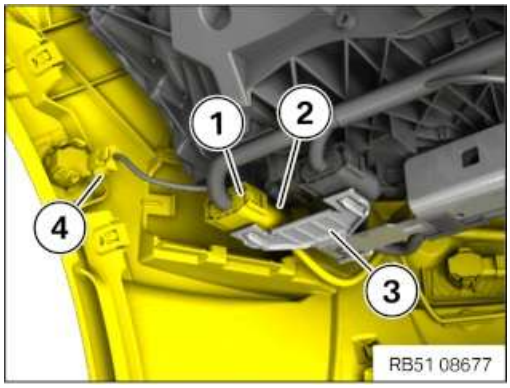



- Fit the bumper panel from the front and position it.
- Tighten the screws (1).

**Bumper panel, front top**

| | | | |
|---|---|---|---|
| Oval-head screwM6 | | Tightening torque | 4,6 Nm |

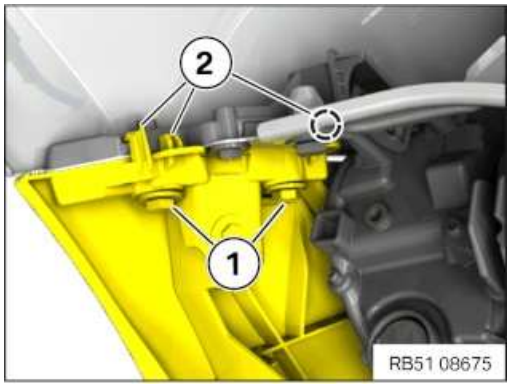
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**NOTICE**

Perform the operations on the left and right side.

- Clip in the connector (2) in the holder (3).
- Connect connectors (1) and lock.
- If necessary, connect and lock the connector (4).




- Feed in the bumper panel in the guide and clip in with the latch mechanisms (2).

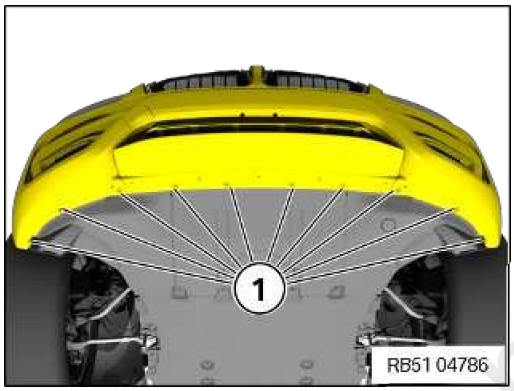
**NOTICE**

Perform the operations on the left and right side.

- Tighten the screws (1).

**Front bumper panel to front side panel**

| | | | |
|---|---|---|---|
| Torx screw 5x35 | | Tightening torque | 3 Nm |

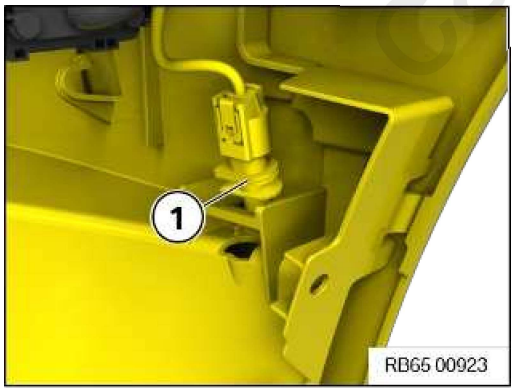



- Tighten the screws (1).

**Front bumper panel to underbody protection**

| | | | |
|---|---|---|---|
| Hexagon screw for thermoplastic | | Tightening torque | 2,6 Nm |

### 9 – Partially installing the temperature sensor




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

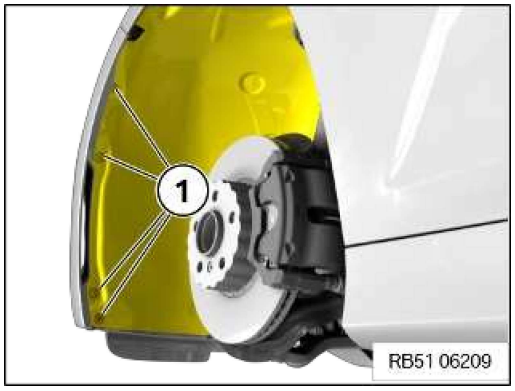
### 10 – Partially installing the front left and right wheel arch trim panels

**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**

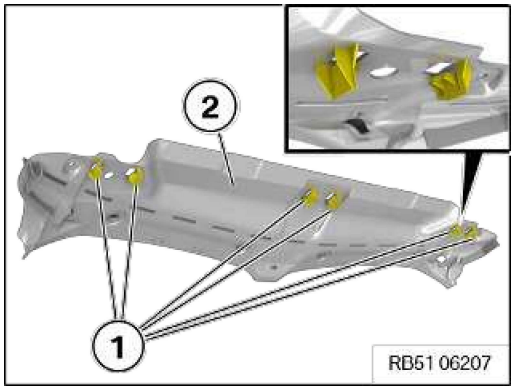
To provide a better overview: Schematic diagram without front wheel.

- 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 |

### 11 – Installing the cover for the centre engine compartment




**Check**

- Check the latch mechanisms (1) of the cover (2) for damage.

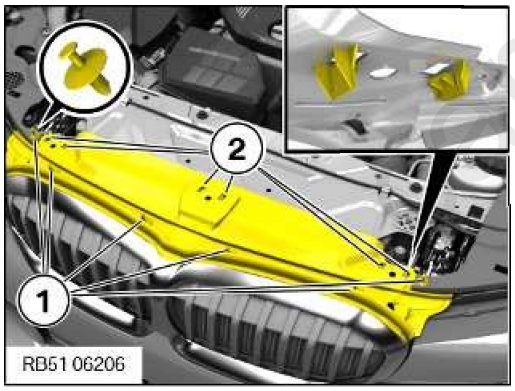
**Result**

» Latch mechanisms (1) are damaged.

**Measure**

- Replace the cover (2).

  **Parts:** Cover

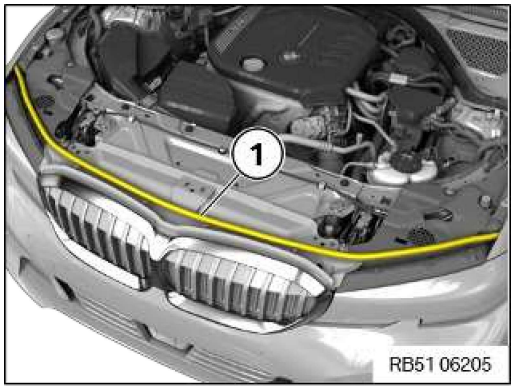



- Insert the cover from the rear and position it.
- Clip in the latch mechanisms (2).
- Mount all expanding rivets (1).

### 12 – Install the seal for the front bonnet

**NOTICE**

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




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

## Additional Information

### Overview of Tightening Torques

| **Front light combination, top** | | | Used in step 7 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 8 Nm |

| **Front light combination, bottom** | | | Used in step 7 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 5 Nm |

| **Bumper panel, front top** | | | Used in step 8 |
|---|---|---|---|
| Oval-head screwM6 | | Tightening torque | 4,6 Nm |

| **Front bumper panel to front side panel** | | | Used in step 8 |
|---|---|---|---|
| Torx screw 5x35 | | Tightening torque | 3 Nm |

| **Front bumper panel to underbody protection** | | | Used in step 8 |
|---|---|---|---|
| Hexagon screw for thermoplastic | | Tightening torque | 2,6 Nm |

| **Wheel arch trim panel, front** | | | Used in step 10 |
|---|---|---|---|
| Thermoplastic hexagon screw | | Tightening torque | 2,6 Nm |

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# 63 12 009 Removing and installing right headlight

**RISK OF DAMAGE**

**Mechanical effects.**

**Paint damage.**

- Mask those working areas at risk with yellow plastic adhesive tape.
- Remove and install heavy or bulky components with the aid of another person/other persons.

**TECHNICAL INFORMATION**

To guarantee the quality of the driver assistance functions in vehicles with concealed radar sensors installed, the component may only be repainted by observing the repair specifications described in the document "Standards for repair painting with sensor systems".

Sourcing reference:

https://colorsystem-paint.com/

Aftersales Information Research (AIR) - Repair and service messages - HG99 - ColorSystem

ISTA - HG99 - ColorSystem

No stickers or foils (transparent or coloured) may be attached in the radiation areas of the radar sensors.

The component may be painted if no radar sensors have been installed.

The following features can be used to identify whether radar sensors are installed on the vehicle:

Radar sensors are installed at the rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame).

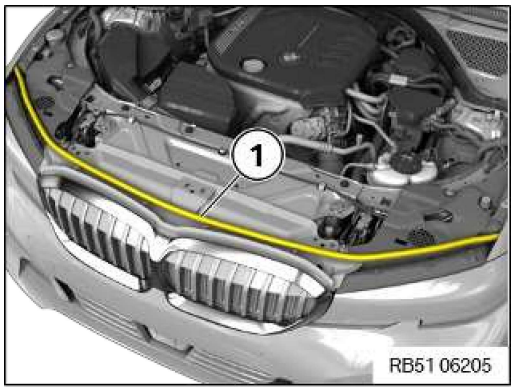
Radar sensors are installed at the front and rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame) in conjunction with the optional equipment S5ATA or S5AUA.

## PRELIMINARY WORK

### 1 – Remove the seal for the bonnet in front

**NOTICE**

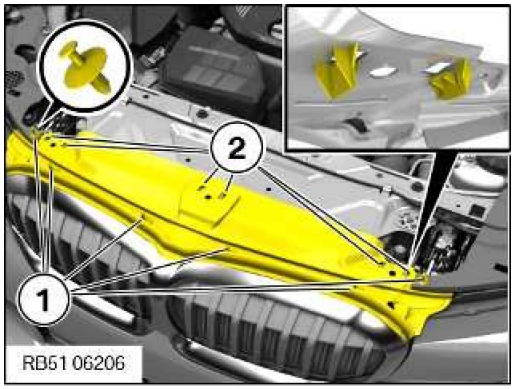
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Pull offfront bonnet seal (1) upwards.

### 2 – Removing the centre engine compartment cover

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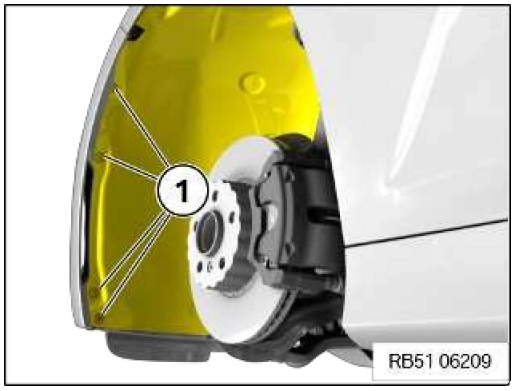

- Detach all expanding rivets (1).
- Release the cover at the latch mechanisms (2) and feed it out to the rear.

### 3 – Partially releasing the front left and right 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**

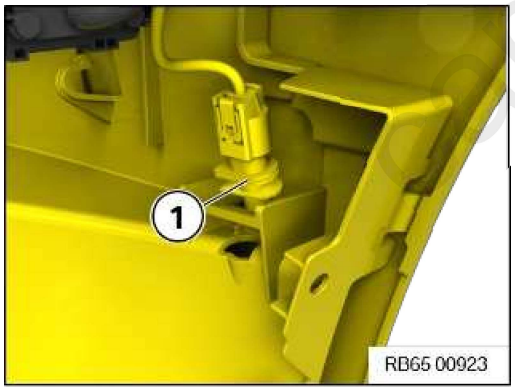



**NOTICE**

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

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

### 4 – Partially removing the temperature sensor

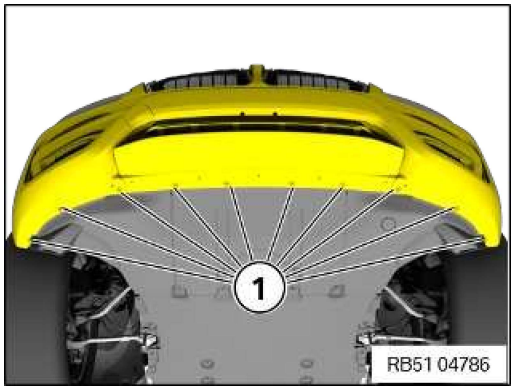



- Unclip temperature sensor (1) from the front bumper panel to the top.

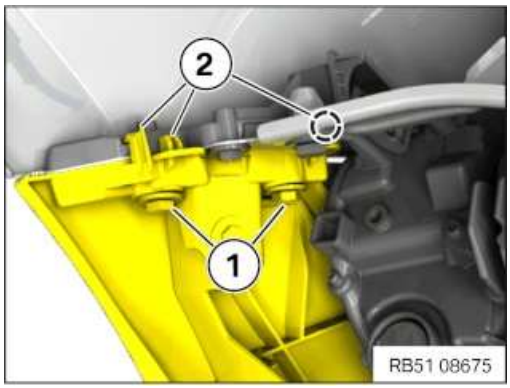
### 5 – Remove front bumper panel

**NOTICE**

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



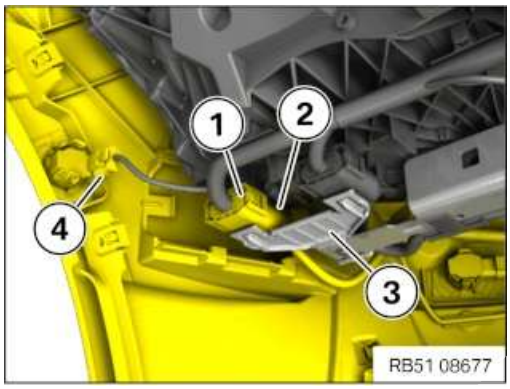

- Loosen screws (1).




**NOTICE**

Perform the operations on the left and right side.

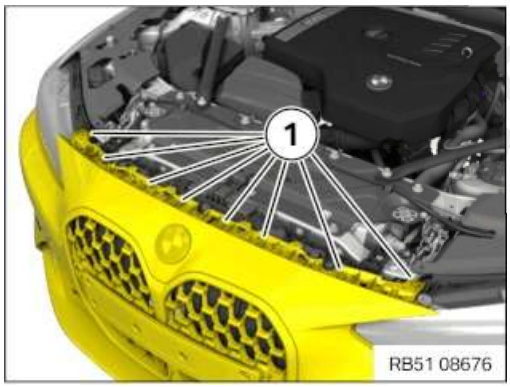
- Loosen screws (1).
- The bumper panel with the latch mechanisms (2) is to be released and removed from the guide.




**NOTICE**

Perform the operations on the left and right side.

- Unlock plug connection (1) and disconnect.
- Unclip the connector (2) from the holder (3).
- If necessary, unlock and disconnect the plug connection (4).



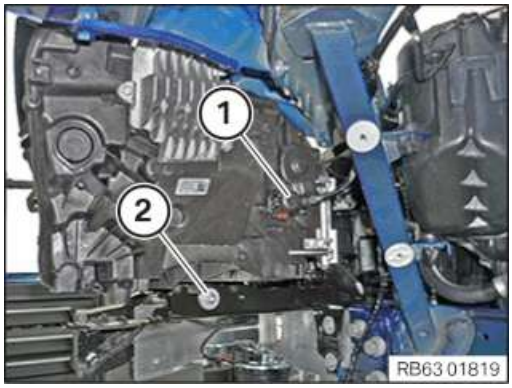

- Loosen screws (1).
- Remove the bumper panel towards the front.

## MAIN WORK

### 6 – Remove headlight



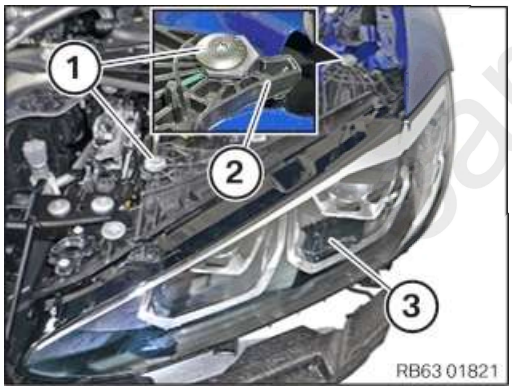

- Mask off the body in the marked area with adhesive tape.




- Unlock plug connection (1) and disconnect.
- Loosen screw (2).

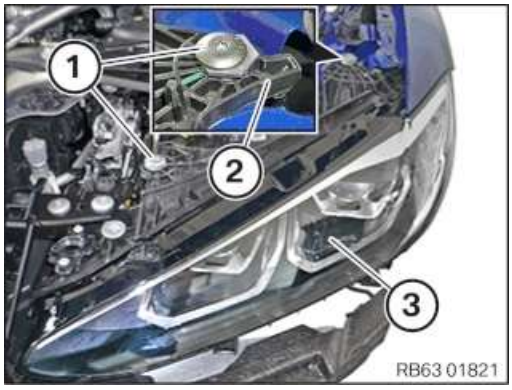



- Release connector holder (1) from the headlight.




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

### 7 – Install headlight




- Insert the headlight (3) from the front and clip it in with the latch mechanism (2).
- Tighten the screws (1).

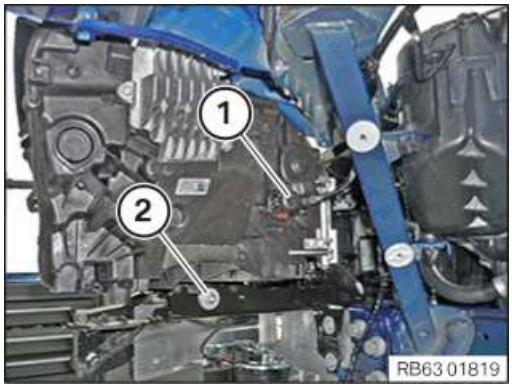
**Front light combination, top**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 8 Nm |

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- Secure connector holder (1) to the headlight.




- Tighten down screw (2).

**Front light combination, bottom**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 5 Nm |

- Connect connectors (1) and lock.



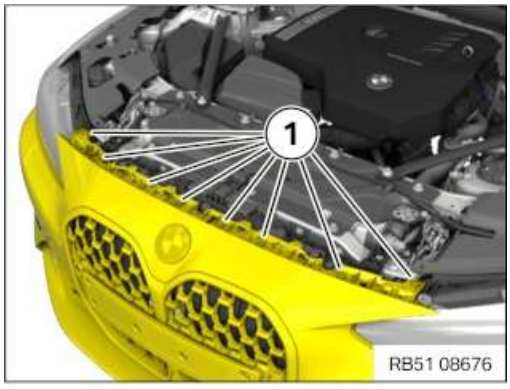

- Remove adhesive tape in the marked area.

## POSTPROCESSES

### 8 – Install bumper panel, front

**NOTICE**

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

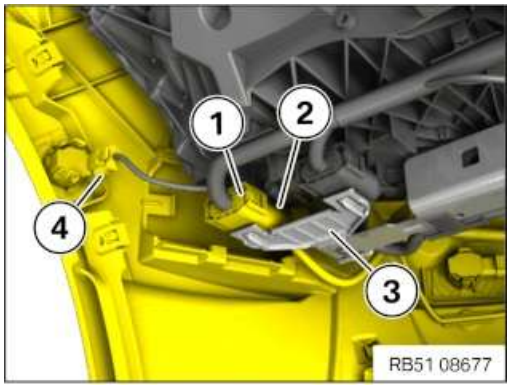



- Fit the bumper panel from the front and position it.
- Tighten the screws (1).

**Bumper panel, front top**

| | | | |
|---|---|---|---|
| Oval-head screwM6 | | Tightening torque | 4,6 Nm |

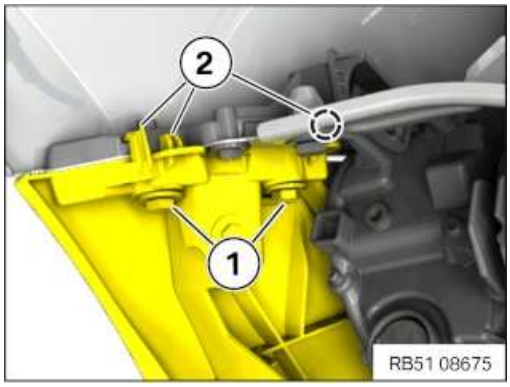
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**NOTICE**

Perform the operations on the left and right side.

- Clip in the connector (2) in the holder (3).
- Connect connectors (1) and lock.
- If necessary, connect and lock the connector (4).




- Feed in the bumper panel in the guide and clip in with the latch mechanisms (2).

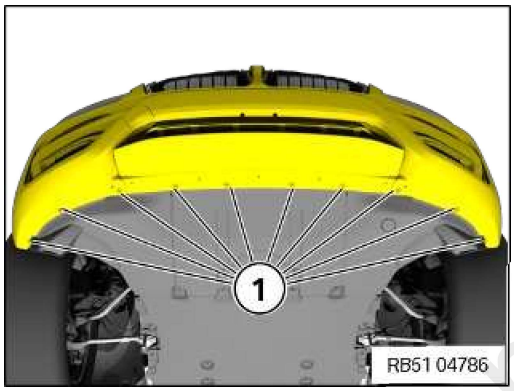
**NOTICE**

Perform the operations on the left and right side.

- Tighten the screws (1).

**Front bumper panel to front side panel**

| | | | |
|---|---|---|---|
| Torx screw 5x35 | | Tightening torque | 3 Nm |

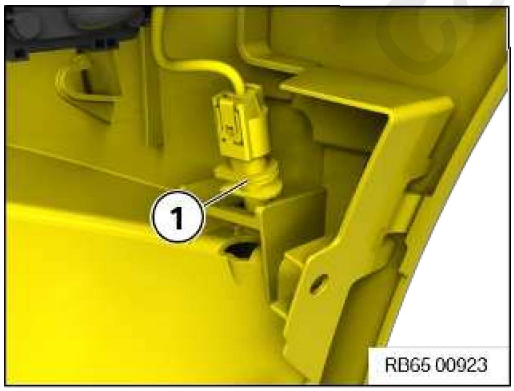



- Tighten the screws (1).

**Front bumper panel to underbody protection**

| | | | |
|---|---|---|---|
| Hexagon screw for thermoplastic | | Tightening torque | 2,6 Nm |

### 9 – Partially installing the temperature sensor




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

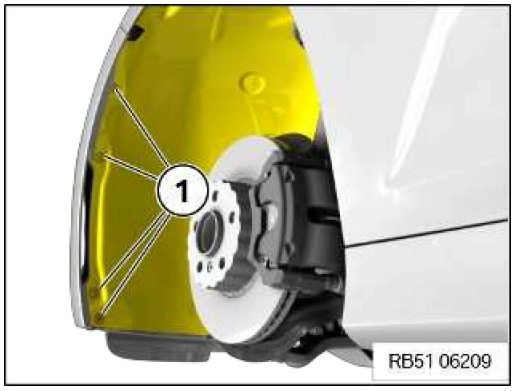
### 10 – Partially installing the front left and right wheel arch trim panels

**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**

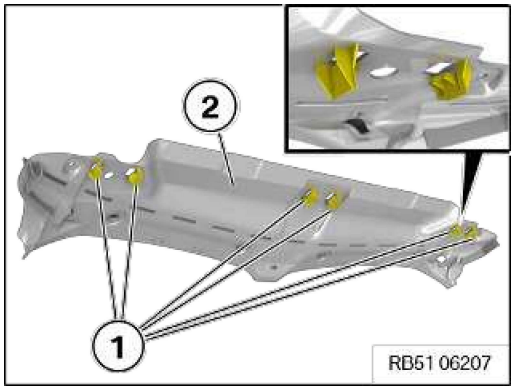
To provide a better overview: Schematic diagram without front wheel.

- 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 |

### 11 – Installing the cover for the centre engine compartment




**Check**

- Check the latch mechanisms (1) of the cover (2) for damage.

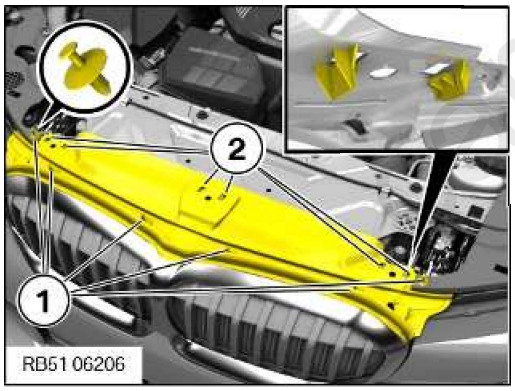
**Result**

» Latch mechanisms (1) are damaged.

**Measure**

- Replace the cover (2).

  **Parts:** Cover

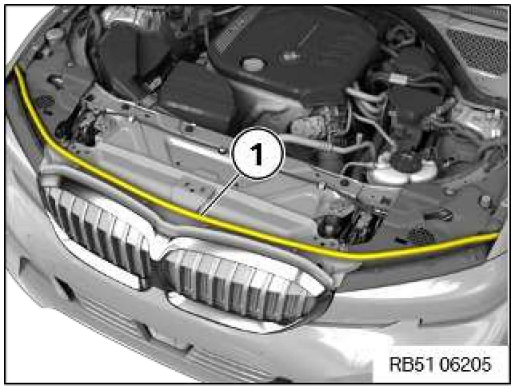



- Insert the cover from the rear and position it.
- Clip in the latch mechanisms (2).
- Mount all expanding rivets (1).

### 12 – Install the seal for the front bonnet

**NOTICE**

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




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

**13 – 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 7

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 8 Nm |

**Front light combination, bottom** — Used in step 7

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 5 Nm |

**Bumper panel, front top** — Used in step 8

| | | | |
|---|---|---|---|
| Oval-head screwM6 | | Tightening torque | 4,6 Nm |

**Front bumper panel to front side panel** — Used in step 8

| | | | |
|---|---|---|---|
| Torx screw 5x35 | | Tightening torque | 3 Nm |

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**Front bumper panel to underbody protection** Used in step 8

| | | | |
|---|---|---|---|
| Hexagon screw for thermoplastic | | Tightening torque | 2,6 Nm |

**Wheel arch trim panel, front** Used in step 10

| | | | |
|---|---|---|---|
| Thermoplastic hexagon screw | | Tightening torque | 2,6 Nm |

## Links

| Repair instructions | Used in step |
|---|---|
| 63 10 ... Test requirements for headlights vertical aim adjustment | 13 |

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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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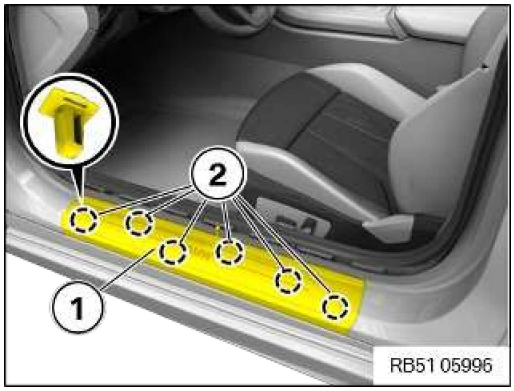
# 63 14 300 Remove and install the LED module for the light carpet on the left

## PRELIMINARY WORK

### 1 – Remove the front sill trim

**NOTICE**

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



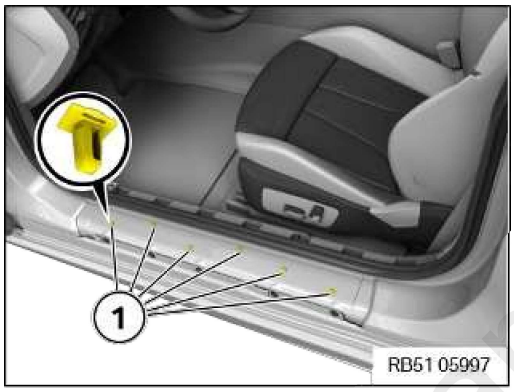

**RISK OF DAMAGE**

**Bending of plastic parts.**

**Application of too much force can lead to bending of plastic parts.**

- Place special tool directly beside the mounting clip.
- Continue unclipping the part without using the tool if possible.

- Release and remove the front sill trim (1) using special tool 0 496 569 (00 9 325) from clips (2).




- Remove clips (1) if necessary and connect them on the front sill trim.

### 2 – Removing the side sill trim panel

**RISK OF DAMAGE**

**Mechanical effects.**

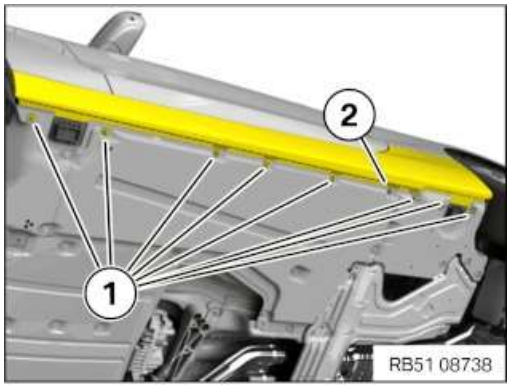
**Paint damage.**

- Mask those working areas at risk with yellow plastic adhesive tape.
- Remove and install heavy or bulky components with the aid of another person/other persons.

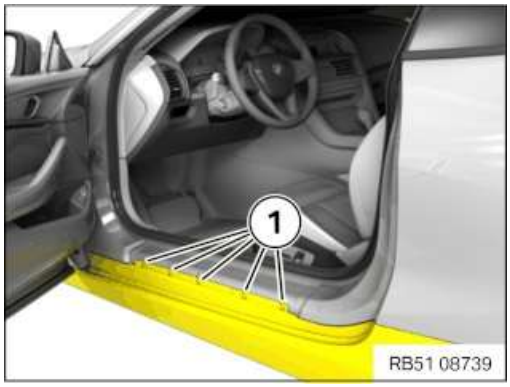
**NOTICE**

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

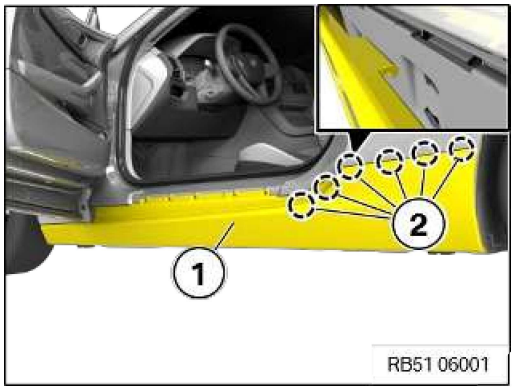
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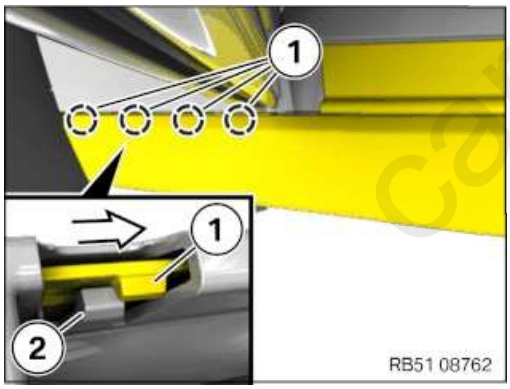

- Loosen screws (1).
- Release nut (2).




- Release the expanding rivet (1).




- Release side sill trim panel (1) from latch mechanisms (2) using a suitable tool, starting from the rear.




- Slide the side sill trim panel to the front in the direction of the arrow to release latch mechanisms (1) from supporting strip (2).
- Release the side sill trim panel with latch mechanisms (1) from supporting strip (2) and remove it with the help of another person.

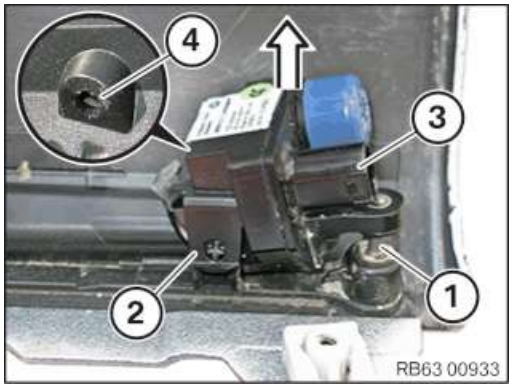
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## MAIN WORK

### 3 – Removing the right LED module for the light carpet

**NOTICE**

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



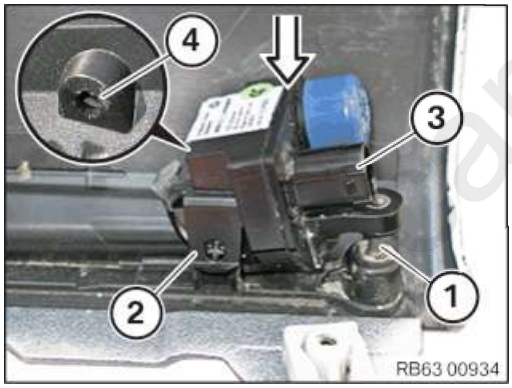

▸ **Remove the LED module for the light carpet**

- Unscrew the adjusting screw (1) from the LED module (3) by turning it counter-clockwise.
- Loosen the latch mechanism (2).
- Guide the LED module (3) out of the guide (4).

### 4 – Installing the right LED module for the light carpet

**NOTICE**

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




▸ **Install the LED module for the light carpet**

- Position the LED module (3) in the guide (4).
- Press LED module (3) into latch mechanism (2).
- Turn the adjusting screw (1) clockwise to screw it into the LED module (3).

## POSTPROCESSES

### 5 – Installing the side sill trim panel

**RISK OF DAMAGE**

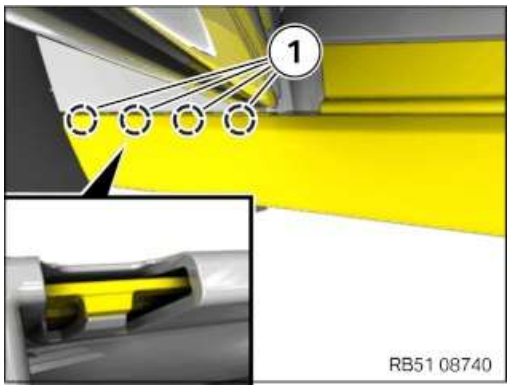
**Mechanical effects.**

**Paint damage.**

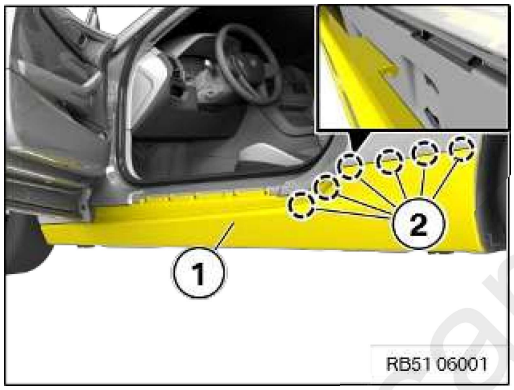
- Mask those working areas at risk with yellow plastic adhesive tape.
- Remove and install heavy or bulky components with the aid of another person/other persons.

**NOTICE**

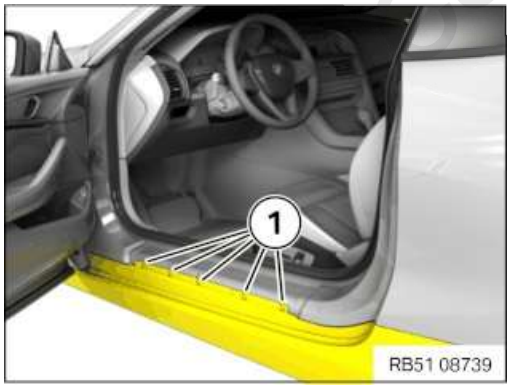
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Position the side sill trim panel.
- Clip in the front side sill trim panel at the latch mechanisms (1).

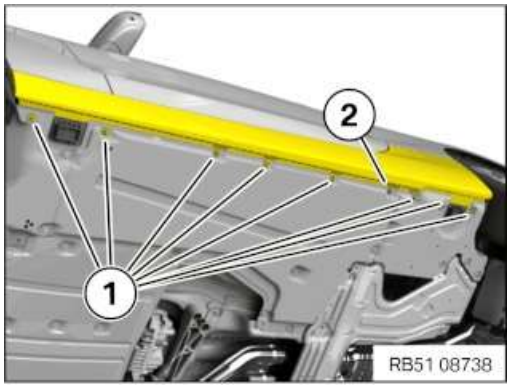



- Clip in the side sill trim panel (1) at the rear into the latch mechanisms (2).




- Secure expanding rivet (1).

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- Tighten the screws (1) and nuts (2).

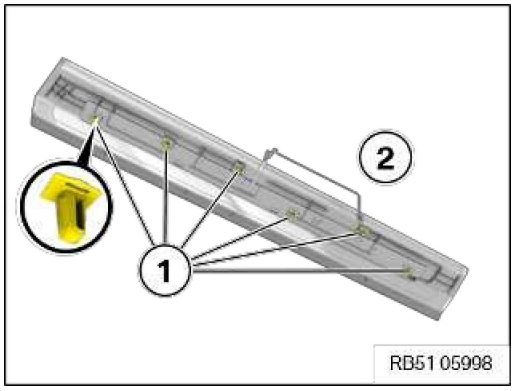
**Underbody panelling, side**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.6 Nm |
| Plastic nut | | Tightening torque | 2.6 Nm |

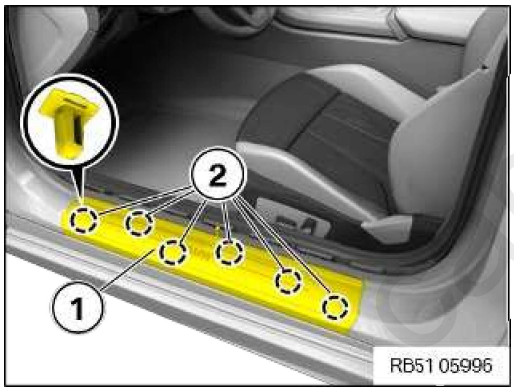
### 6 – Installing the front sill trim

**NOTICE**

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




- Check if clips (1) on the front sill trim (2) are missing or damaged and renew them if necessary.

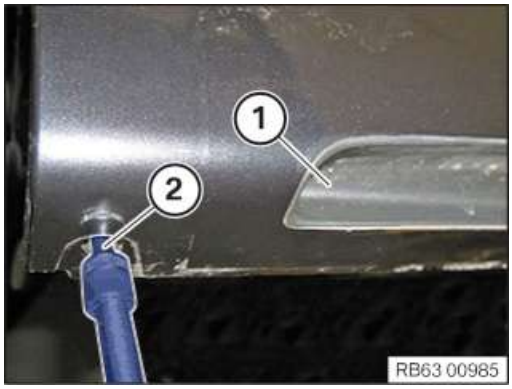



- Position the front sill trim (1) correctly.
- Clip in the front sill trim (1) with the clips (2).

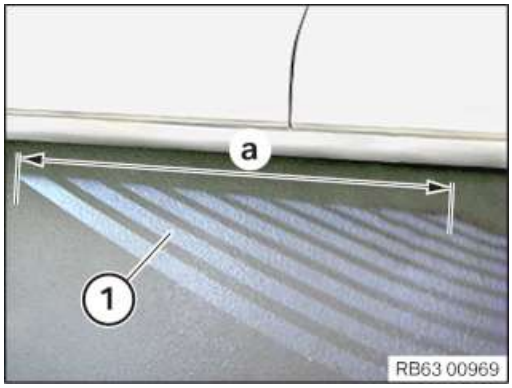
### 7 – Adjust the LED module for the light carpet

**NOTICE**

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




- Adjust the LED module (1) by turning the adjusting screw (2).




- Adjust the light carpet (1) to the specified length (a).

**Light carpet length**

| | |
|---|---|
| Length (a) | 130 cm |

## Additional Information

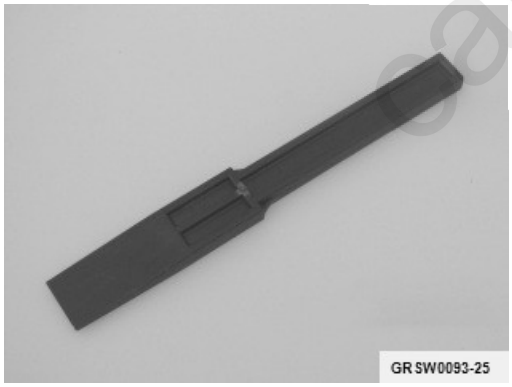
### Overview of Tightening Torques

**Underbody panelling, side** — Used in step 5

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.6 Nm |
| Plastic nut | | 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) |

### Overview Technical Data

**Light carpet length** — Used in step 7

| | |
|---|---|
| Length (a) | 130 cm |

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# 63 14 120 Removing and installing or replacing rear reflector

**TECHNICAL INFORMATION**

To guarantee the quality of the driver assistance functions in vehicles with concealed radar sensors installed, the component may only be repainted by observing the repair specifications described in the document "Standards for repair painting with sensor systems".

Sourcing reference:

https://colorsystem-paint.com/

Aftersales Information Research (AIR) - Repair and service messages - HG99 - ColorSystem

ISTA - HG99 - ColorSystem

No stickers or foils (transparent or coloured) may be attached in the radiation areas of the radar sensors.

The component may be painted if no radar sensors have been installed.

The following features can be used to identify whether radar sensors are installed on the vehicle:

Radar sensors are installed at the rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame).

Radar sensors are installed at the front and rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame) in conjunction with the optional equipment S5ATA or S5AUA.

**NOTICE**

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

## PRELIMINARY WORK

### 1 – Removing the luggage compartment floor trim panel

▸ **Removing the luggage compartment floor trim panel**

**NOTICE**

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



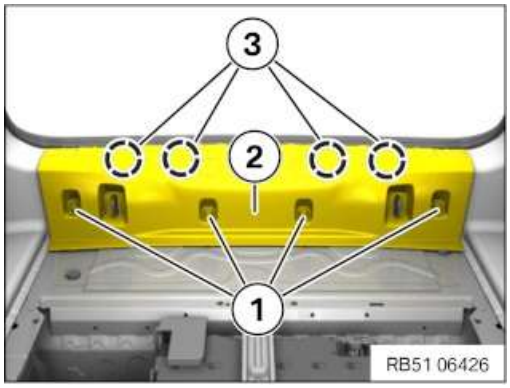

- Remove luggage compartment floor trim panel (1).

### 2 – Removing the loading edge trim

**NOTICE**

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

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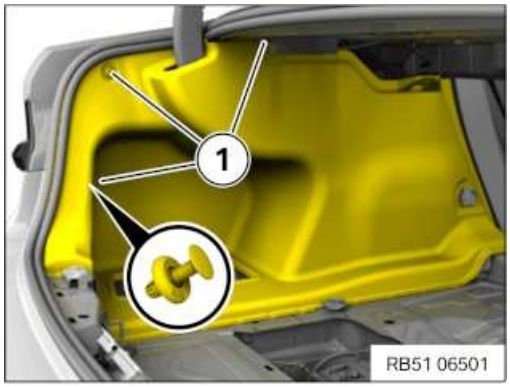

- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

**3 – Removing part of the luggage compartment wheel arch trim panel on the left and right**

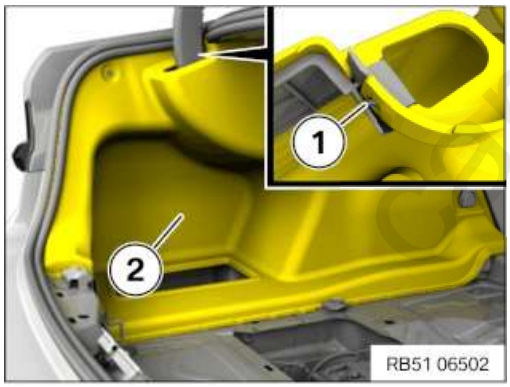
▸ **Partially remove luggage compartment wheel arch panel on left**

**NOTICE**

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




- Loosen the expanding rivet (1).



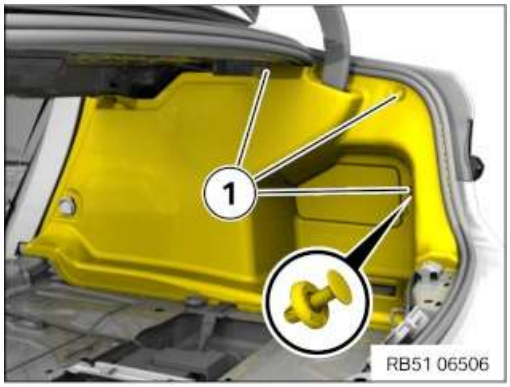

- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ **Partially remove luggage compartment wheel arch panel on right**

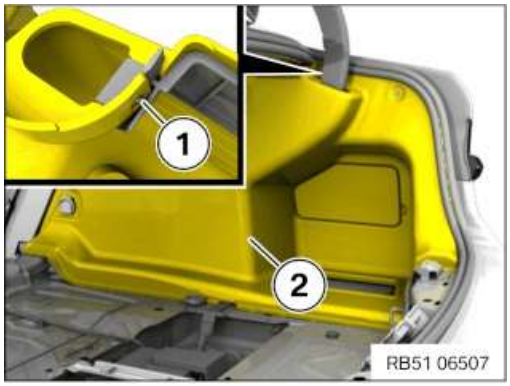
**NOTICE**

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

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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.

### 4 – Removing trim from water channel on left and right

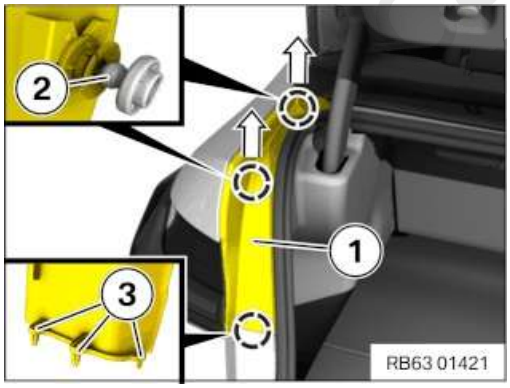
**NOTICE**

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

▸ **Removing trim from water channel**

**NOTICE**

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




- Unclip trim (1) in upward direction from ball pins (2).
- Release trim (1) from guides (3) and remove.

### 5 – Removing the rear light on the left and right side panels

**NOTICE**

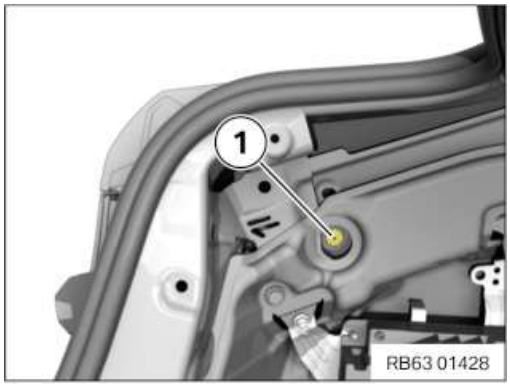
Description is for left component only. Procedure on the right side is identical.

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

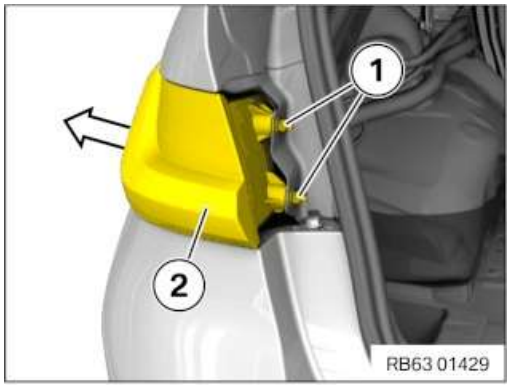
cardiagn.com

**NOTICE**

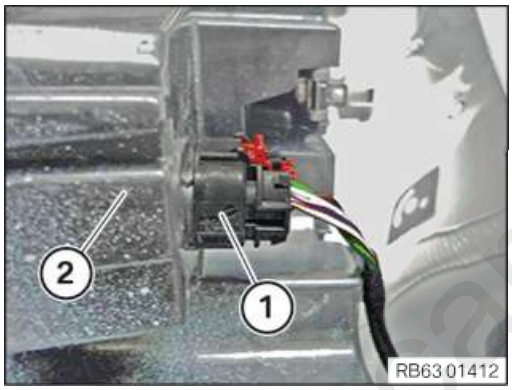
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Loosen nut (1).




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



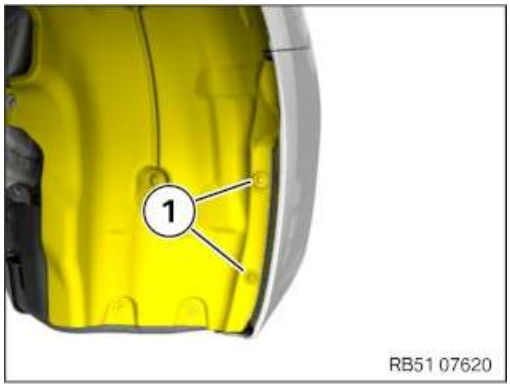

**TECHNICAL INFORMATION**

Observe note on unlocking and disconnecting plug connections.

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

- Unlock plug connection (1) and disconnect.
- Remove the rear light on the side panel (2).

### 6 – Remove rear bumper panel




**NOTICE**

Perform the operations on the left and right side.

**NOTICE**

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

- Loosen screws (1).

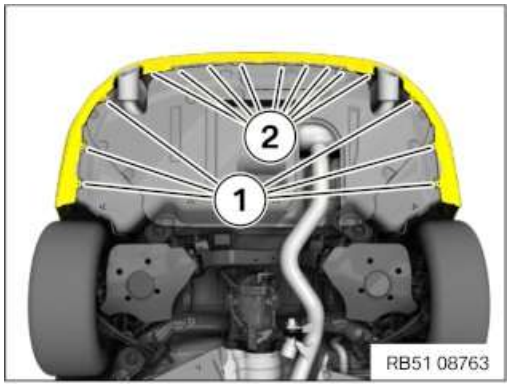
carlogn.com




**NOTICE**

Perform the operations on the left and right side.

- Release the screw (1).




- Loosen screws (1).
- Release the bumper panel at the latch mechanisms (2).




**NOTICE**

Perform the operations on the left and right side.

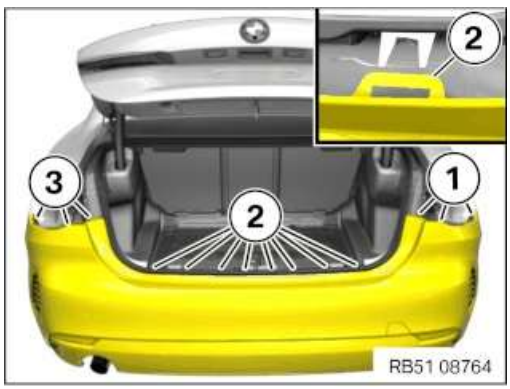
- Release the screw (1).




**NOTICE**

Perform the operations on the left and right side.

- Release the bumper panel with the latch mechanisms (1).



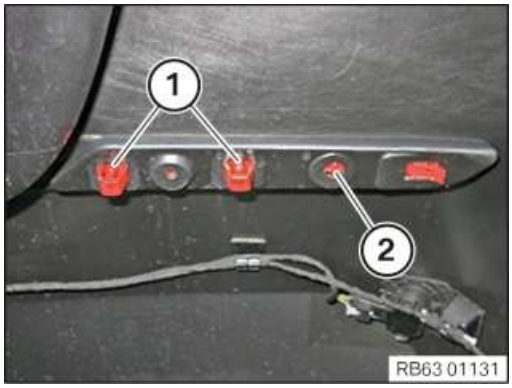

- Release the bumper panel with the latch mechanisms (1).
- Release the bumper panel from the latch mechanisms (2) starting from the right.
- Release the bumper panel from the latch mechanisms (3)




- Unlock plug connection and disconnect.
- Remove bumper panel.

## MAIN WORK

### 7 – Remove rear reflector

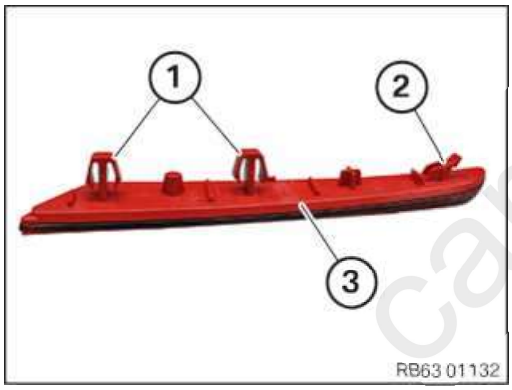



**NOTICE**

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

- Release the retaining lugs (1) and feed out the rear reflector (2) from the bumper panel.

### 8 – Installing rear reflector




**Check**

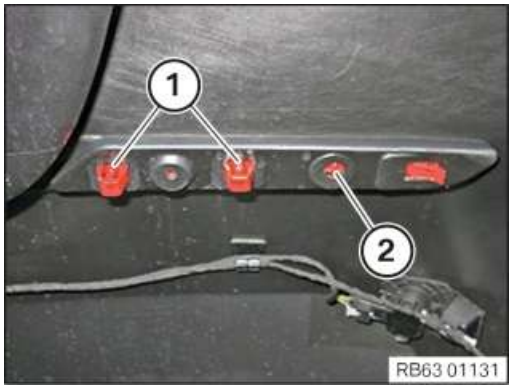
- Check retaining lugs (1) and guide (2) on rear reflector (3) for damage.

**Result**

» Latch mechanisms (1) or guide (2) are damaged.

**Measure**

- Renew rear reflector (3).




**NOTICE**

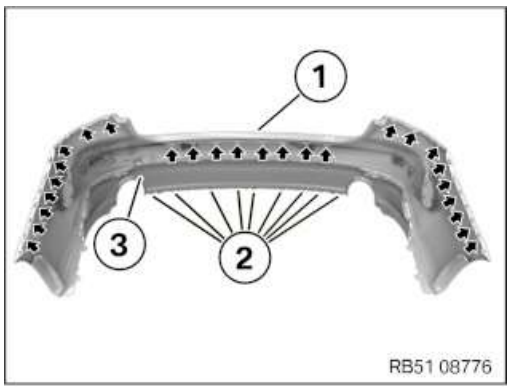
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Position rear reflector (2) in the bumper panel and clip it in with retaining lugs (1).

## POSTPROCESSES

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## 9 – Install rear bumper panel




**Check**

- Check the latch mechanisms (arrows) on the bumper panel (1) for damage.

  Check the latch mechanisms (2) on the bumper trim (3) for damage.

**Result**

» Latch mechanisms (arrows) are damaged.

**Measure**

- Renew the bumper panel (1).

**Result**

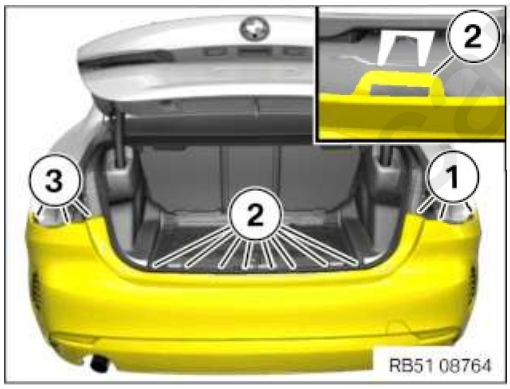
» Latch mechanisms (2) are damaged.

**Measure**

- Renew the bumper trim (3).




- Position the bumper panel.
- Connect connectors (1) and lock.




- Clip in the bumper panel with the latch mechanisms (1),(2) and (3).

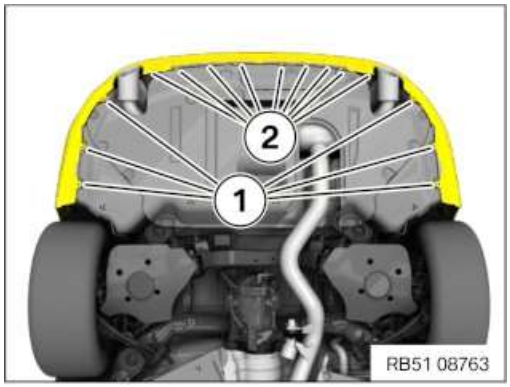



**NOTICE**

Perform the operations on the left and right side.

- Clip in the bumper panel with latch mechanisms (1).

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

**Rear bumper trim panel to guide**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.5 Nm |




**NOTICE**

Perform the operations on the left and right side.

- Tighten down screw (1).

**Rear bumper trim panel to guide**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.5 Nm |



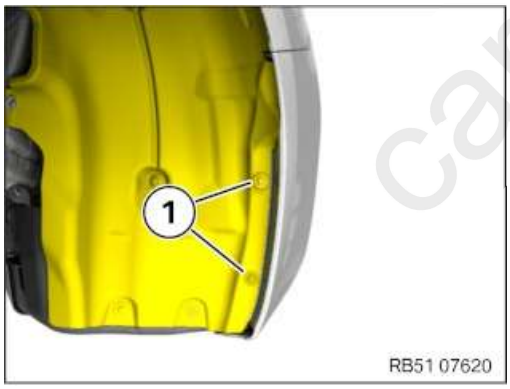

**NOTICE**

Perform the operations on the left and right side.

- Tighten down screw (1).

**Lower bumper panel to body**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 2.5 Nm |




**NOTICE**

Perform the operations on the left and right side.

**NOTICE**

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

- Tighten the screws (1).

**Rear wheel arch cover to bumper trim panel**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2,6 Nm |

## 10 – Installing the rear light on the left and right side panels

**NOTICE**

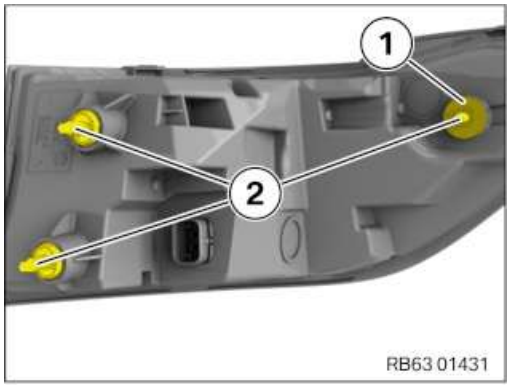
Description is for left component only. Procedure on the right side is identical.

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

**NOTICE**

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




**Check**

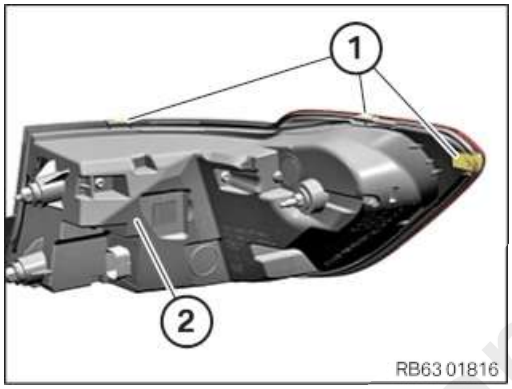
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

**Result**

» The threaded inserts are damaged.

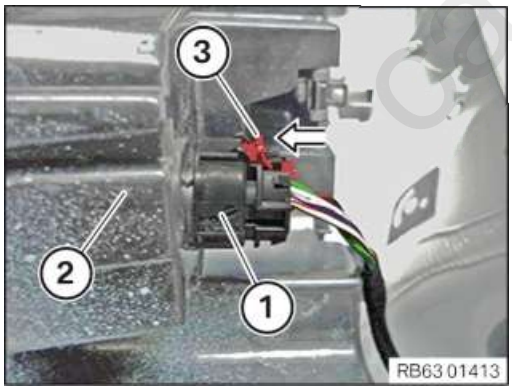
**Measure**

- Replace rear light.



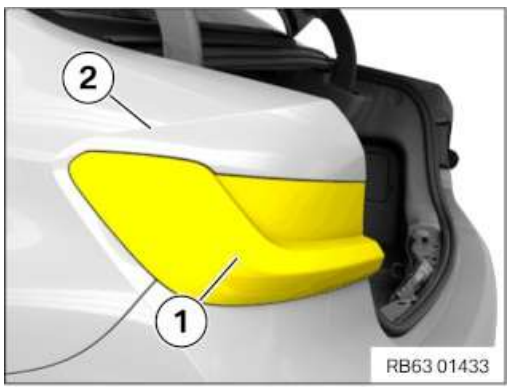

- Contact surfaces (1) on rear light (2) must not be damaged or missing.

  Missing contact surfaces (1) could cause paintwork damage.



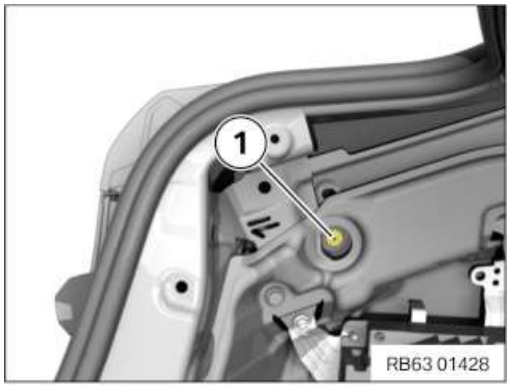

- Connect the connector (1) to the rear light on the side panel (2).

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

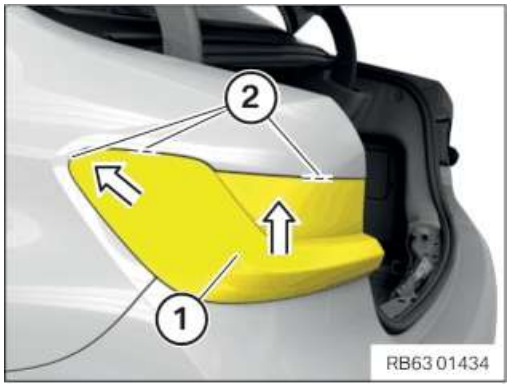



- Position the rear light on the side panel (1) on the side panel (2).

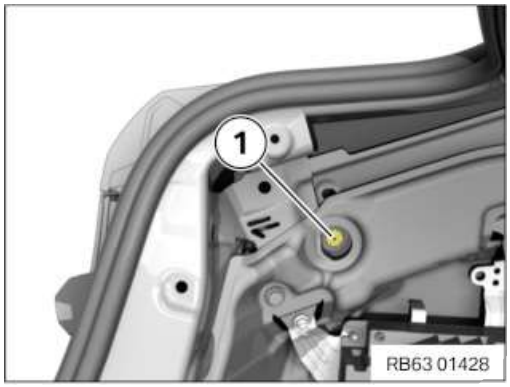
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- Position the nut (1).



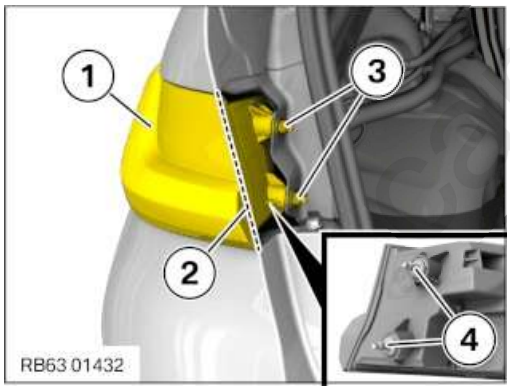

- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.




- Tighten nut (1).

**Rear light to side panel to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 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 to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

### 11 – Installing trim in water channel on left and right

**NOTICE**

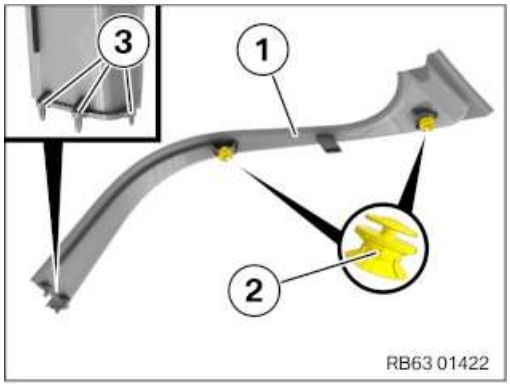
Description is for left component only. Procedure on the right side is identical.

▸ **Installing trim in water channel**

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**NOTICE**

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




**Check**

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

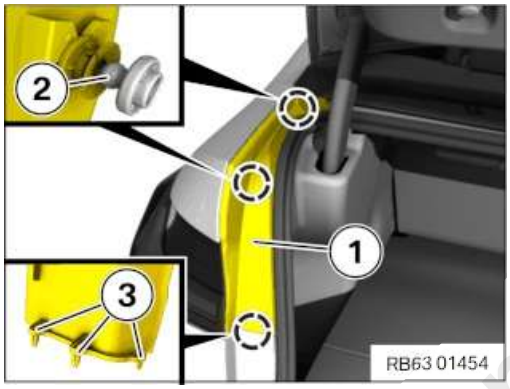
**Result**

» The guides are damaged.

**Measure**

- Renew the trim .

  **Parts**: trim



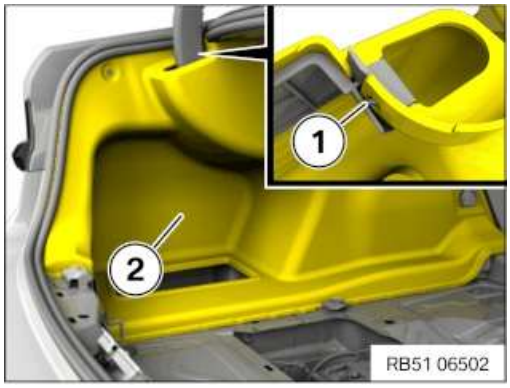

- Insert trim (1) in guides (3).
- Clip trim (1) from above into ball pins (2).

## 12 – Partially installing the luggage compartment wheel arch trim panel on the left and right

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

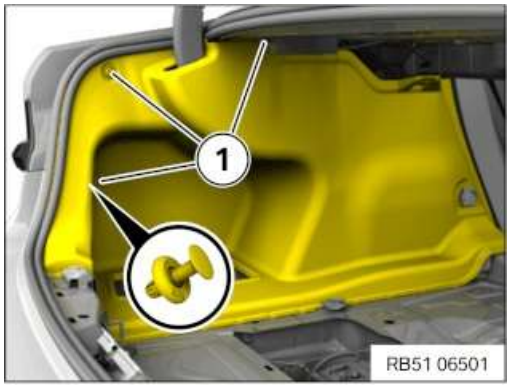
**NOTICE**

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




- Feed the luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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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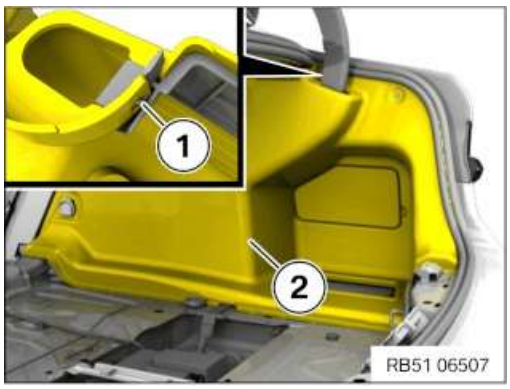



- Secure expanding rivet (1).

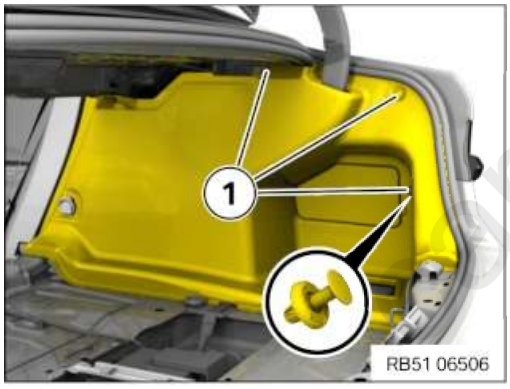
▸ **Partially installing right luggage compartment wheel arch trim panel**

**NOTICE**

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




- Guide luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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).

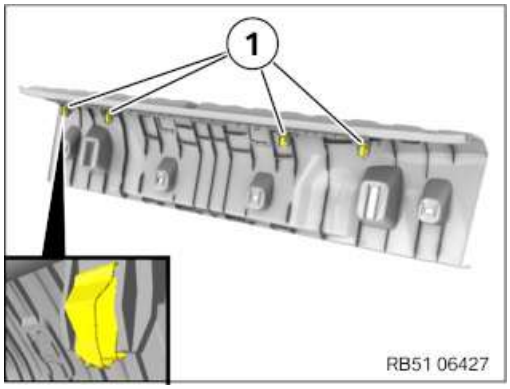



- Secure expanding rivet (1).

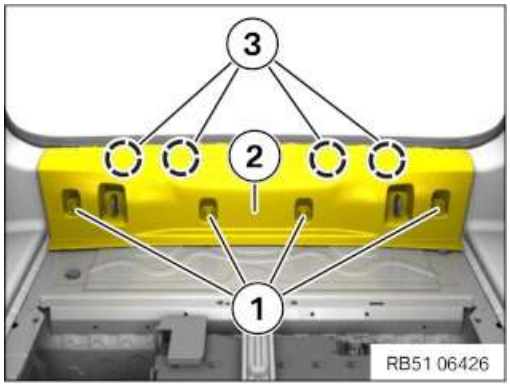
**13 – Installing loading edge trim**

**NOTICE**

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




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



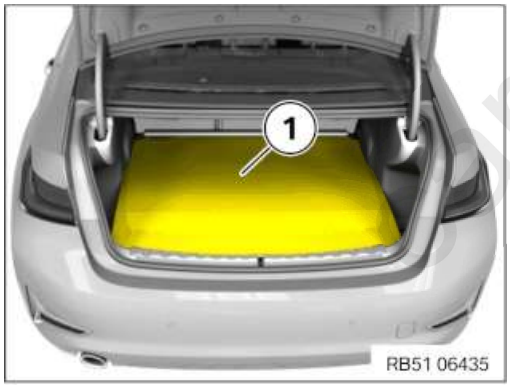

- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

**14 – Installing the luggage compartment floor trim panel**

▸ **Installing the luggage compartment floor trim panel**

**NOTICE**

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




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

## Additional Information

### Overview of Tightening Torques

| **Rear bumper trim panel to guide** | | | Used in step 9 |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.5 Nm |

| **Lower bumper panel to body** | | | Used in step 9 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 2.5 Nm |

| **Rear wheel arch cover to bumper trim panel** | | | Used in step 9 |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2,6 Nm |

| Rear light to side panel to body | | | Used in step 10 |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

## Links

| Repair instructions | Used in step |
|---|---|
| 61 13 ... Unlocking and disconnecting different plug connections | 5 |

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# 63 14 125 Removing and installing/replacing both rear reflectors

**TECHNICAL INFORMATION**

To guarantee the quality of the driver assistance functions in vehicles with concealed radar sensors installed, the component may only be repainted by observing the repair specifications described in the document "Standards for repair painting with sensor systems".

Sourcing reference:

https://colorsystem-paint.com/

Aftersales Information Research (AIR) - Repair and service messages - HG99 - ColorSystem

ISTA - HG99 - ColorSystem

No stickers or foils (transparent or coloured) may be attached in the radiation areas of the radar sensors.

The component may be painted if no radar sensors have been installed.

The following features can be used to identify whether radar sensors are installed on the vehicle:

Radar sensors are installed at the rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame).

Radar sensors are installed at the front and rear if the triangular warning light is located on the exterior mirror (in the mirror glass or on the mirror frame) in conjunction with the optional equipment S5ATA or S5AUA.

**NOTICE**

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

## PRELIMINARY WORK

### 1 – Removing the luggage compartment floor trim panel

▸ **Removing the luggage compartment floor trim panel**

**NOTICE**

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



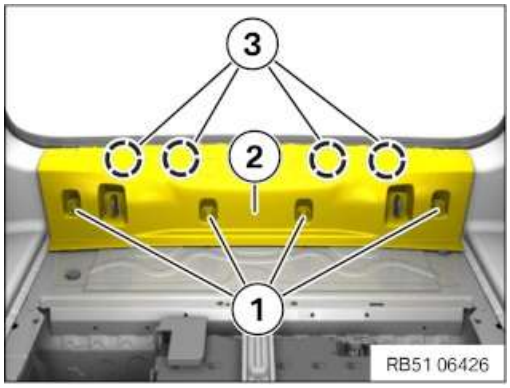

- Remove luggage compartment floor trim panel (1).

### 2 – Removing the loading edge trim

**NOTICE**

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

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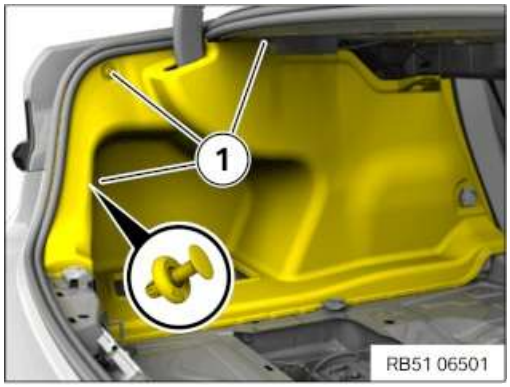

- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

**3 – Removing part of the luggage compartment wheel arch trim panel on the left and right**

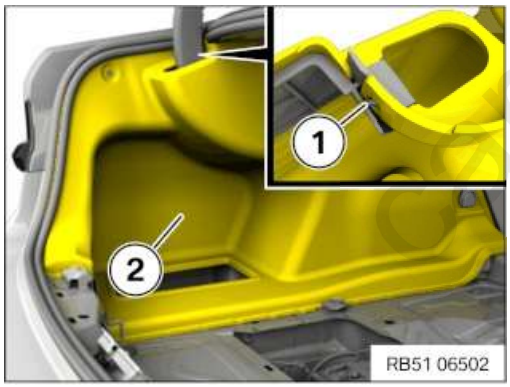
▸ **Partially remove luggage compartment wheel arch panel on left**

**NOTICE**

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




- Loosen the expanding rivet (1).



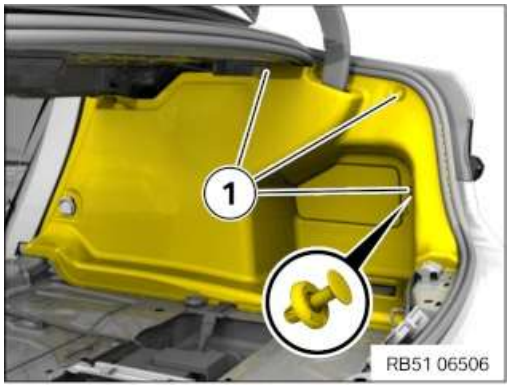

- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

▸ **Partially remove luggage compartment wheel arch panel on right**

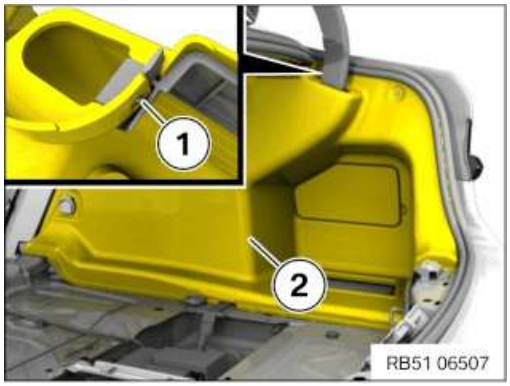
**NOTICE**

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

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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.

### 4 – Removing trim from water channel on left and right

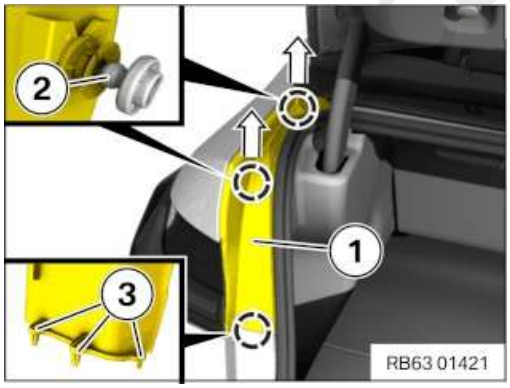
**NOTICE**

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

▸ **Removing trim from water channel**

**NOTICE**

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




- Unclip trim (1) in upward direction from ball pins (2).
- Release trim (1) from guides (3) and remove.

### 5 – Removing the rear light on the left and right side panels

**NOTICE**

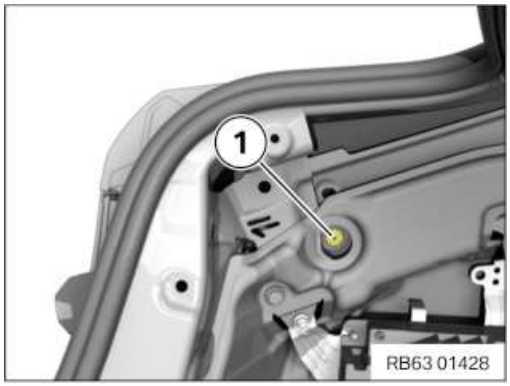
Description is for left component only. Procedure on the right side is identical.

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

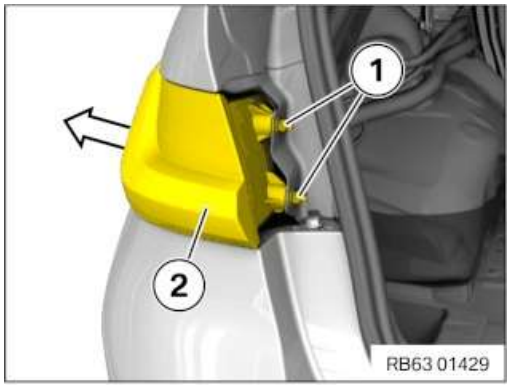
cardiagn.com

**NOTICE**

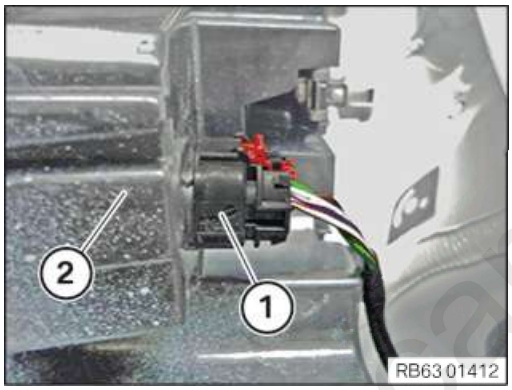
Schematic diagram is for example purposes. Some parts may differ in certain details.




- Loosen nut (1).




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



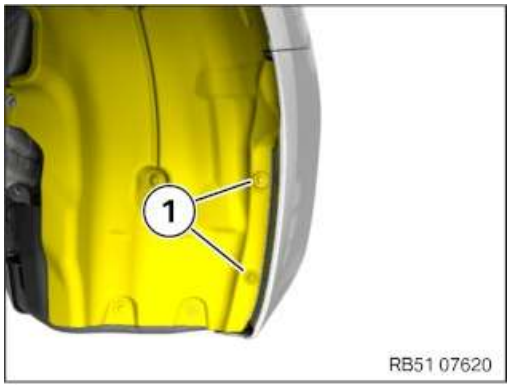

**TECHNICAL INFORMATION**

Observe note on unlocking and disconnecting plug connections.

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

- Unlock plug connection (1) and disconnect.
- Remove the rear light on the side panel (2).

### 6 – Remove rear bumper panel




**NOTICE**

Perform the operations on the left and right side.

**NOTICE**

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

- Loosen screws (1).

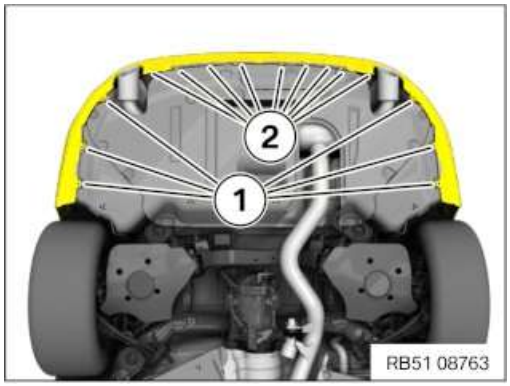
carlogn.com




**NOTICE**

Perform the operations on the left and right side.

- Release the screw (1).




- Loosen screws (1).
- Release the bumper panel at the latch mechanisms (2).




**NOTICE**

Perform the operations on the left and right side.

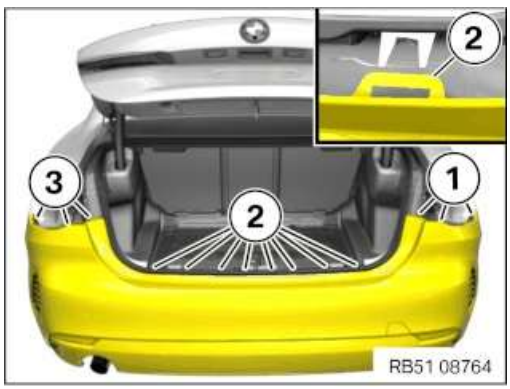
- Release the screw (1).




**NOTICE**

Perform the operations on the left and right side.

- Release the bumper panel with the latch mechanisms (1).



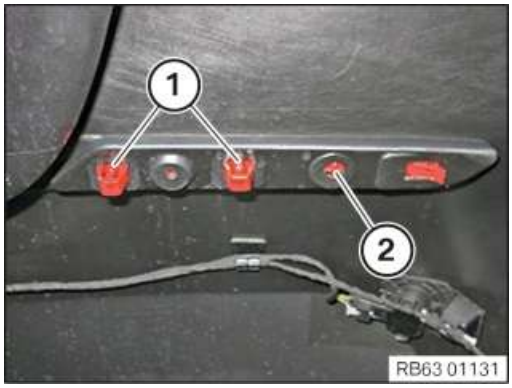

- Release the bumper panel with the latch mechanisms (1).
- Release the bumper panel from the latch mechanisms (2) starting from the right.
- Release the bumper panel from the latch mechanisms (3)




- Unlock plug connection and disconnect.
- Remove bumper panel.

## MAIN WORK

### 7 – Remove rear reflector

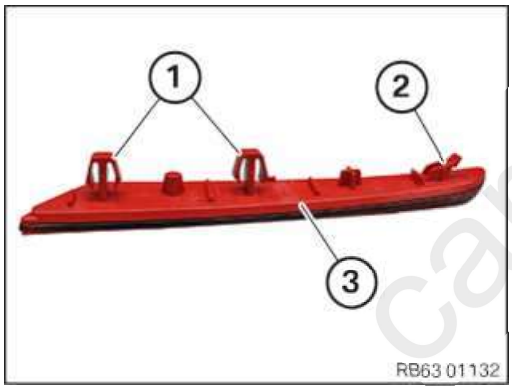



**NOTICE**

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

- Release the retaining lugs (1) and feed out the rear reflector (2) from the bumper panel.

### 8 – Installing rear reflector




**Check**

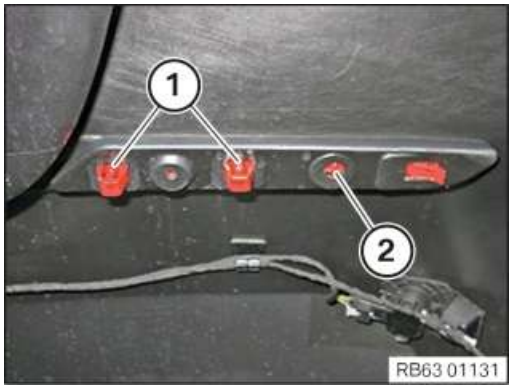
- Check retaining lugs (1) and guide (2) on rear reflector (3) for damage.

**Result**

» Latch mechanisms (1) or guide (2) are damaged.

**Measure**

- Renew rear reflector (3).




**NOTICE**

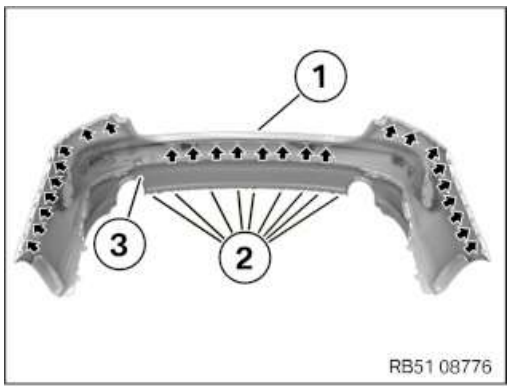
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Position rear reflector (2) in the bumper panel and clip it in with retaining lugs (1).

## POSTPROCESSES

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## 9 – Install rear bumper panel




**Check**

- Check the latch mechanisms (arrows) on the bumper panel (1) for damage.

  Check the latch mechanisms (2) on the bumper trim (3) for damage.

**Result**

» Latch mechanisms (arrows) are damaged.

**Measure**

- Renew the bumper panel (1).

**Result**

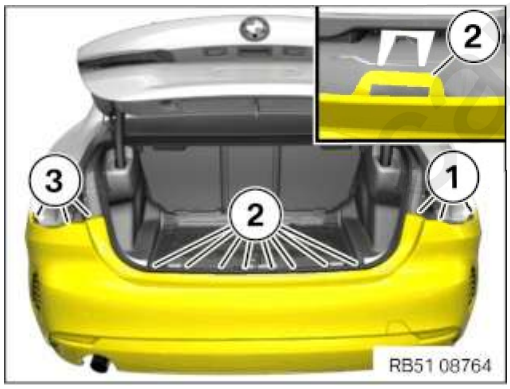
» Latch mechanisms (2) are damaged.

**Measure**

- Renew the bumper trim (3).




- Position the bumper panel.
- Connect connectors (1) and lock.




- Clip in the bumper panel with the latch mechanisms (1),(2) and (3).

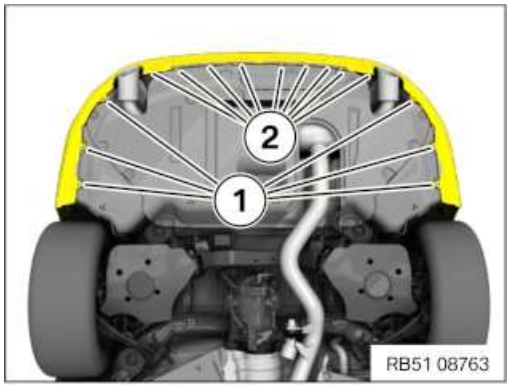



**NOTICE**

Perform the operations on the left and right side.

- Clip in the bumper panel with latch mechanisms (1).

carsdiagn.com




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

**Rear bumper trim panel to guide**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.5 Nm |




**NOTICE**

Perform the operations on the left and right side.

- Tighten down screw (1).

**Rear bumper trim panel to guide**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.5 Nm |



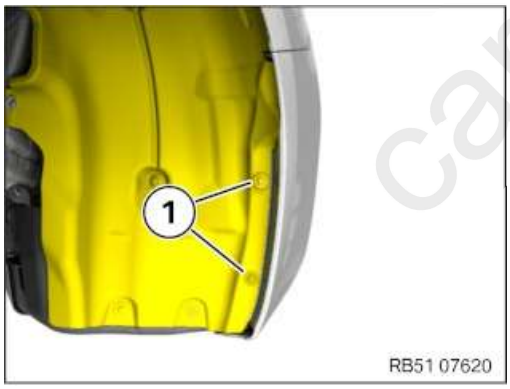

**NOTICE**

Perform the operations on the left and right side.

- Tighten down screw (1).

**Lower bumper panel to body**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 2.5 Nm |




**NOTICE**

Perform the operations on the left and right side.

**NOTICE**

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

- Tighten the screws (1).

**Rear wheel arch cover to bumper trim panel**

| | | | |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2,6 Nm |

## 10 – Installing the rear light on the left and right side panels

**NOTICE**

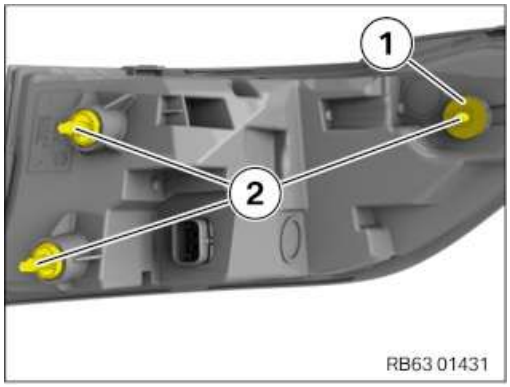
Description is for left component only. Procedure on the right side is identical.

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

**NOTICE**

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




**Check**

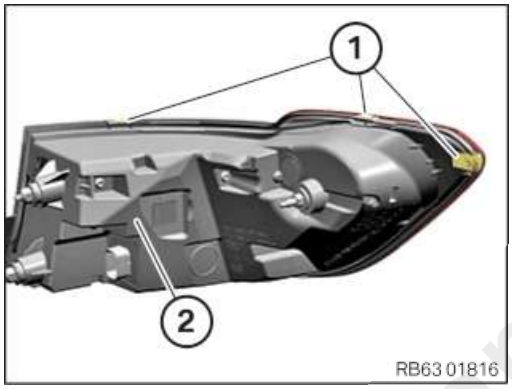
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

**Result**

» The threaded inserts are damaged.

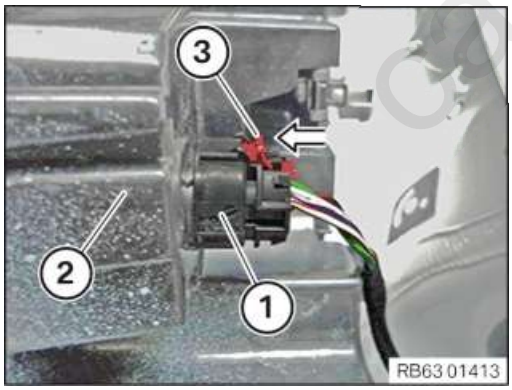
**Measure**

- Replace rear light.



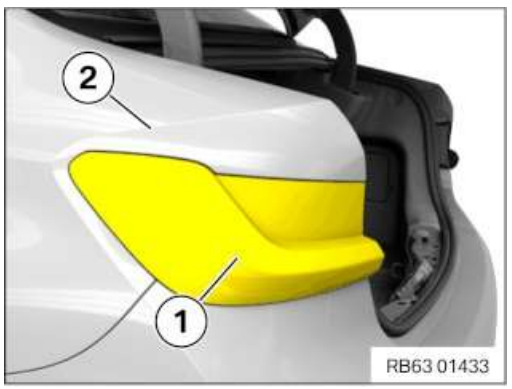

- Contact surfaces (1) on rear light (2) must not be damaged or missing.

  Missing contact surfaces (1) could cause paintwork damage.



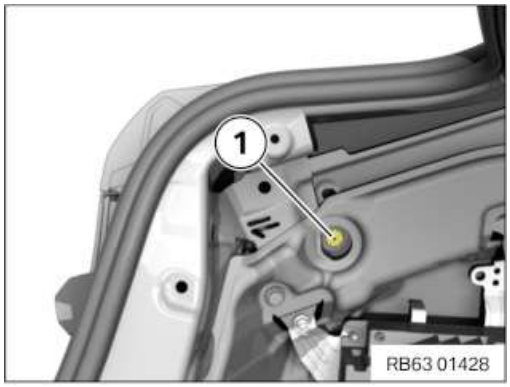

- Connect the connector (1) to the rear light on the side panel (2).

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

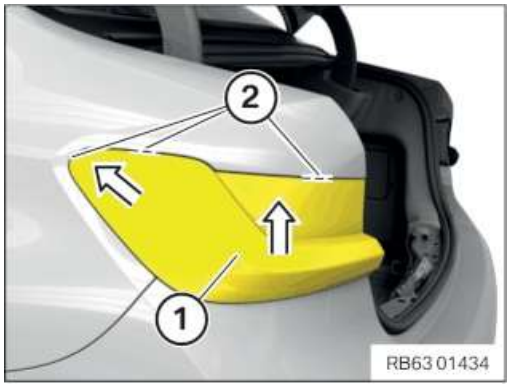



- Position the rear light on the side panel (1) on the side panel (2).

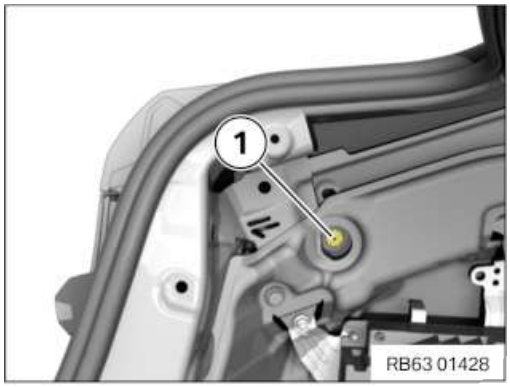
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- Position the nut (1).



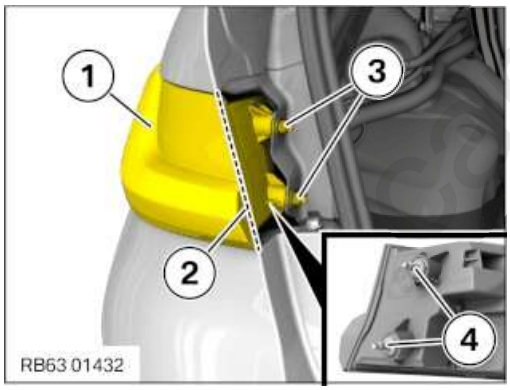

- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.




- Tighten nut (1).

**Rear light to side panel to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 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 to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

### 11 – Installing trim in water channel on left and right

**NOTICE**

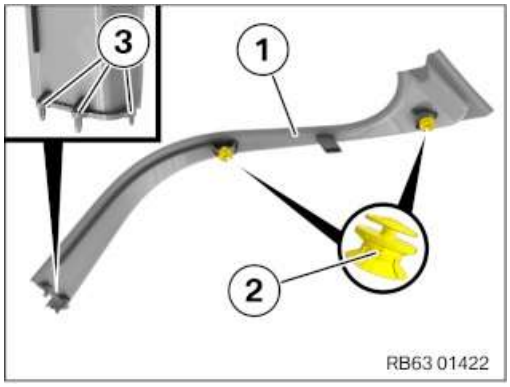
Description is for left component only. Procedure on the right side is identical.

▸ **Installing trim in water channel**

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**NOTICE**

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




**Check**

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

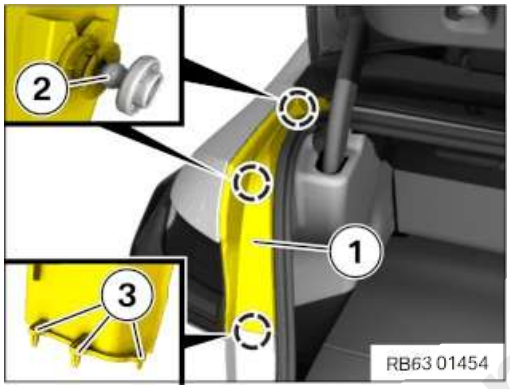
**Result**

» The guides are damaged.

**Measure**

- Renew the trim .

  **Parts**: trim



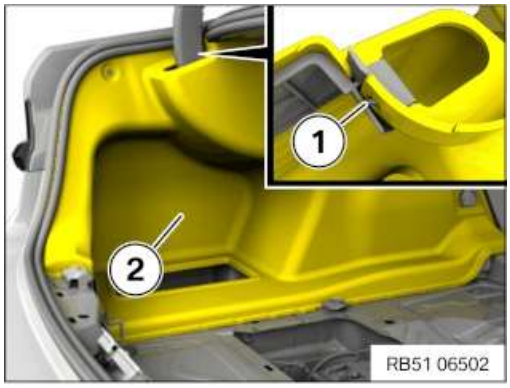

- Insert trim (1) in guides (3).
- Clip trim (1) from above into ball pins (2).

## 12 – Partially installing the luggage compartment wheel arch trim panel on the left and right

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

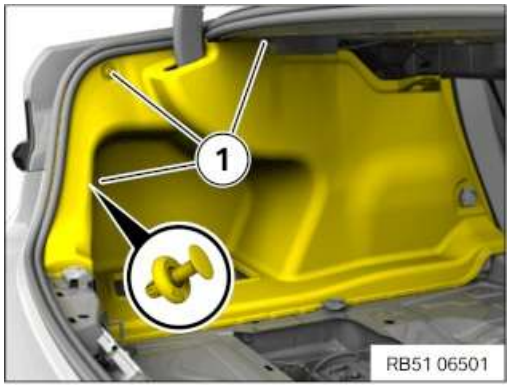
**NOTICE**

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




- Feed the luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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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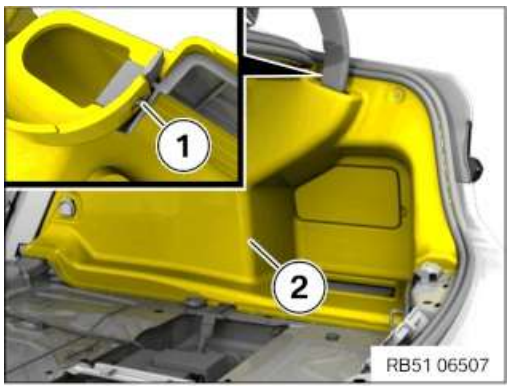



- Secure expanding rivet (1).

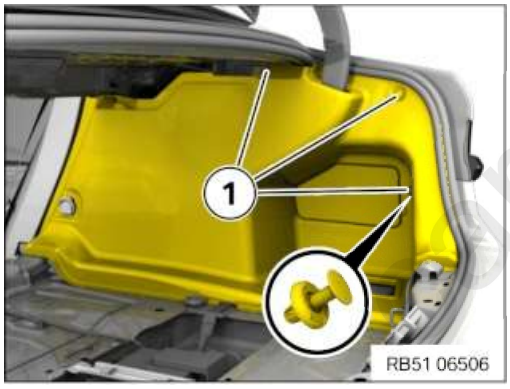
▸ **Partially installing right luggage compartment wheel arch trim panel**

**NOTICE**

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




- Guide luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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).

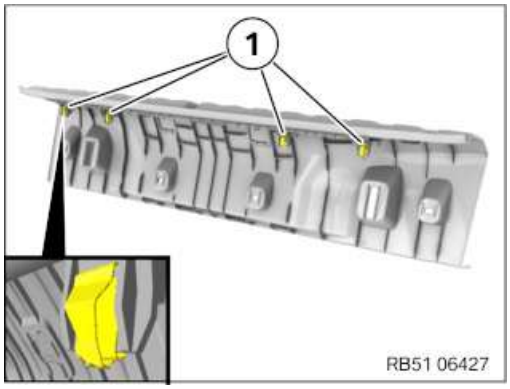



- Secure expanding rivet (1).

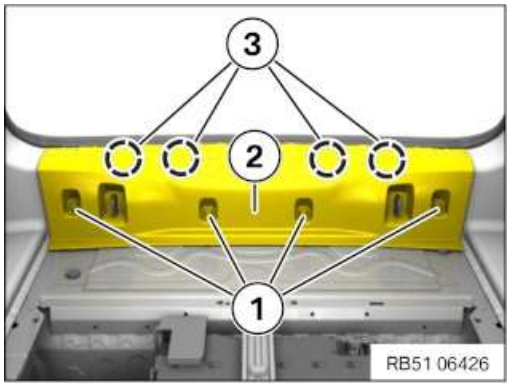
**13 – Installing loading edge trim**

**NOTICE**

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




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



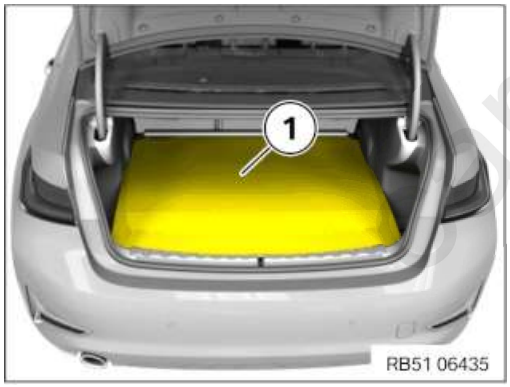

- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

**14 – Installing the luggage compartment floor trim panel**

▸ **Installing the luggage compartment floor trim panel**

**NOTICE**

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




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

## Additional Information

### Overview of Tightening Torques

| **Rear bumper trim panel to guide** | | | Used in step 9 |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2.5 Nm |

| **Lower bumper panel to body** | | | Used in step 9 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 2.5 Nm |

| **Rear wheel arch cover to bumper trim panel** | | | Used in step 9 |
|---|---|---|---|
| Hexagon screw | | Tightening torque | 2,6 Nm |

| Rear light to side panel to body | | | Used in step 10 |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

## Links

| Repair instructions | Used in step |
|---|---|
| 61 13 ... Unlocking and disconnecting different plug connections | 5 |

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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 ... Raise the vehicle using a vehicle lift.

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## 1 – Removing the wheel




**TECHNICAL INFORMATION**

A wheel lift is recommended for easier wheel removal and installation without exertion (see Retailer Equipment Catalogue).

- **In vehicles with M Carbon ceramic brake: The wheel lift must be used to remove the wheel.**

  This process is intended to prevent damage to the brake disc.

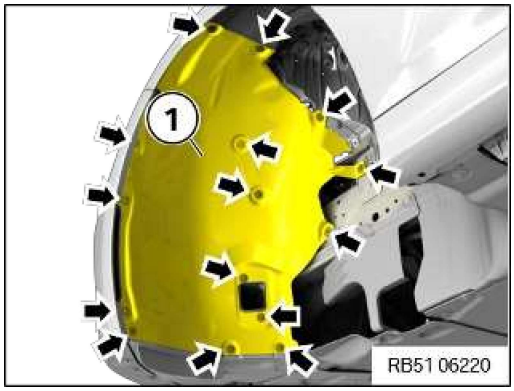



- If several wheels are removed at the same time: Use a piece of chalk to mark on each tyre the axle and side on which the corresponding wheel is fitted.
- Release the wheel bolts (arrows) crosswise and remove the wheel.
- To release and tighten wheel bolts with a security code: Use the correct adapter 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.

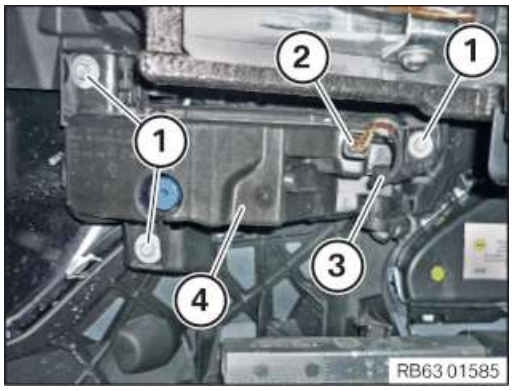



- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

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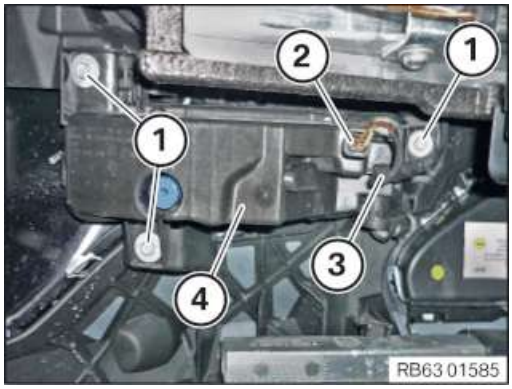
## MAIN WORK

### 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 |

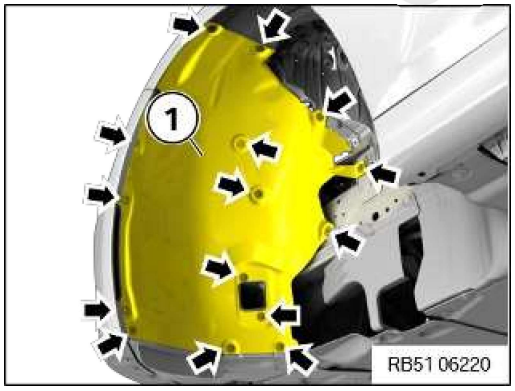
- Connect connectors (2) and lock.
- Clip in the cable clip (3).

## 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

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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.

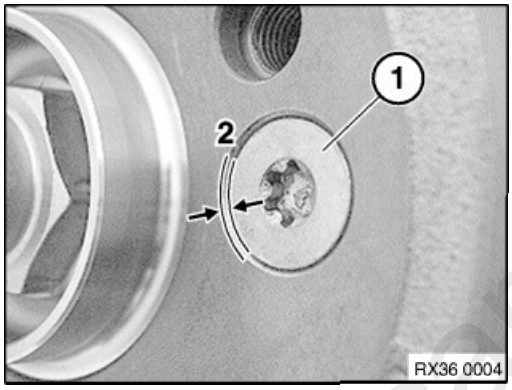
- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool 2 344 011.

  Do not operate special tool 2 344 011 with an impact screwdriver.
- Degrease the contact surfaces with the universal cleaner (see BMW Group Parts).
- 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 the contact surfaces with the universal cleaner (see BMW Group Parts).




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

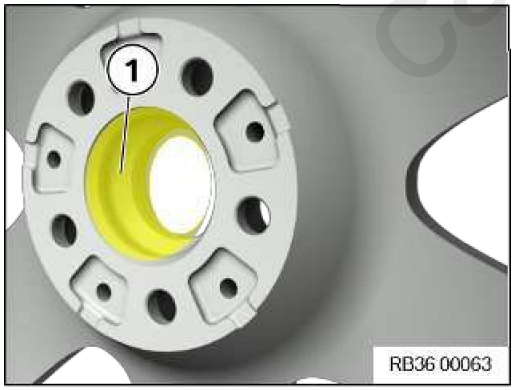
  The mounting bolt (1) for the brake disc **may not** protrude on the contact surface (2) between the brake disc and the wheel rim.

**Brake disc to front wheel hub**

| | | | |
|---|---|---|---|
| M8 | Renew screw. | Tightening torque | 16 Nm |

**Brake disc to rear wheel hub**

| | | | |
|---|---|---|---|
| M8 | Renew screw. | Tightening torque | 16 Nm |




**TECHNICAL INFORMATION**

Wheel hubs and wheel centering on the models G80, G82 and G83 **must not** be greased.

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

**Expendable materials**

| | | |
|---|---|---|
| Brake block paste<br>* 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**

Wheel hubs and wheel centering on the models G80, G82 and G83 **must not** be greased.

- Apply a thin layer of grease to the front and rear wheel hubs (1) to protect against corrosion.

**Expendable materials**

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




**TECHNICAL INFORMATION**

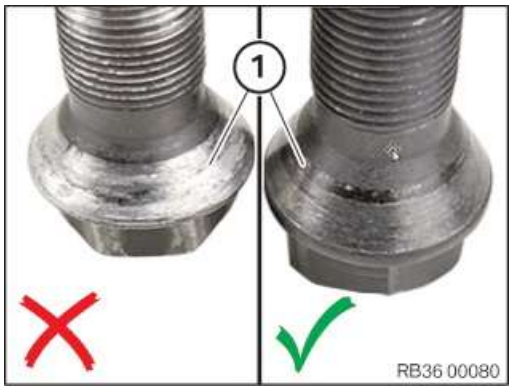
A wheel lift is recommended for easier wheel removal and installation without exertion (see Retailer Equipment Catalogue).

- **In vehicles with M Carbon ceramic brake: The wheel lift must be used to install the wheel.**

  This process is intended to prevent damage to the brake disc.

**Check**

- **Check wheel bolts for wear.**




**Result**

» Places (> 30%) of the bearing surfaces (1) of the taper on the screw head show a silver wear.

**Measure**

- Replace wheel bolts.

  **Parts**: Wheel bolts




**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.

- Renew the corroded wheel bolts (arrows).

  **Parts:** Wheel bolts
- Clean the wheel bolts (arrows).
- Check the wheel bolts (arrows) and threads for damage, renew the wheel bolts (arrows) if necessary.
- Join and tighten the wheel bolts (arrows).

**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 | 140 Nm |
| | Check all the wheel bolts in the same order or retighten to the prescribed tightening torque again. | | |

### 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

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## 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 front wheel hub** — Used in step 6

| | | | |
|---|---|---|---|
| M8 | Renew screw. | Tightening torque | 16 Nm |

**Brake disc to rear 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.<br>Tighten wheel bolts to the prescribed tightening torque with a calibrated torque wrench in a crosswise sequence.<br>Check all the wheel bolts in the same order or retighten to the prescribed tightening torque again. | Tightening torque<br><br><br><br>Check | 140 Nm<br><br><br><br>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 | |

**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 | |

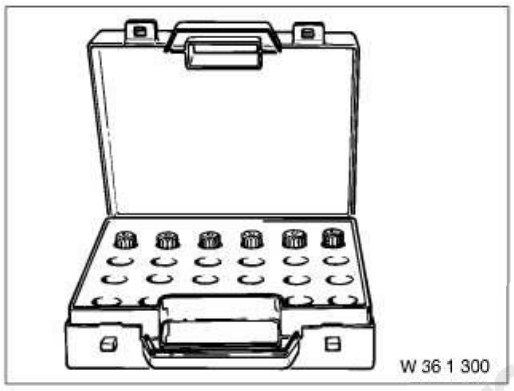
cardiagn.com

**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 | |

## Links

| Repair instructions | Used in step |
|---|---|
| 00 02 001 Raising the vehicle using a vehicle lift | 16 |

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# 63 21 283 Remove and install both rear lights of side panel

## PRELIMINARY WORK

### 1 – Removing the luggage compartment floor trim panel

▸ **Removing the luggage compartment floor trim panel**

**NOTICE**

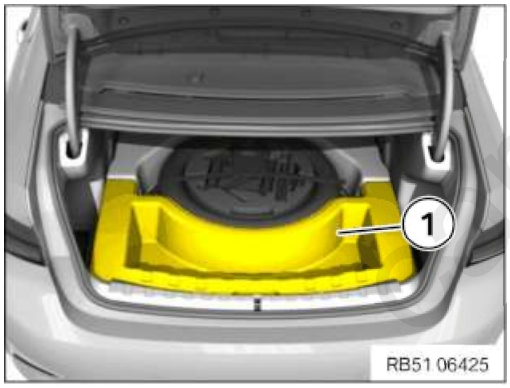
Schematic diagram is for example purposes. Some parts may differ in certain details.



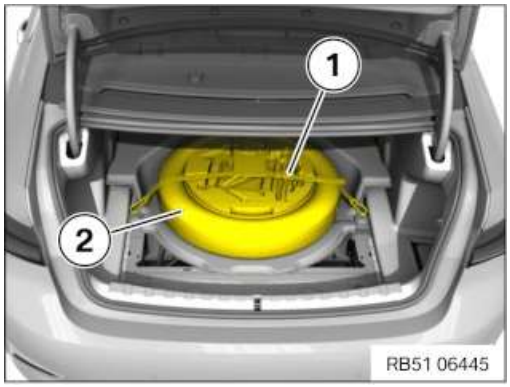

- Remove luggage compartment floor trim panel (1).

### 2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**




- Remove rear luggage compartment well (1).

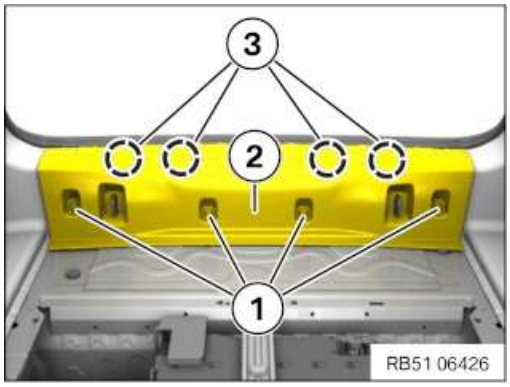



- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

### 3 – Removing the loading edge trim

**NOTICE**

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

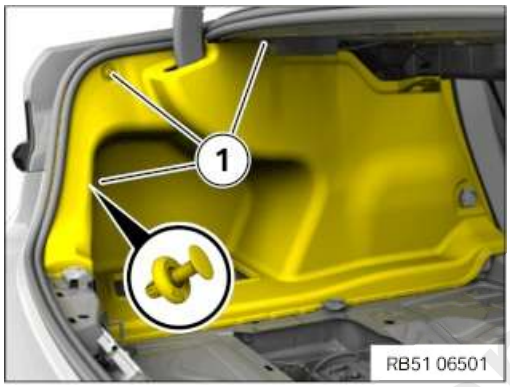



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

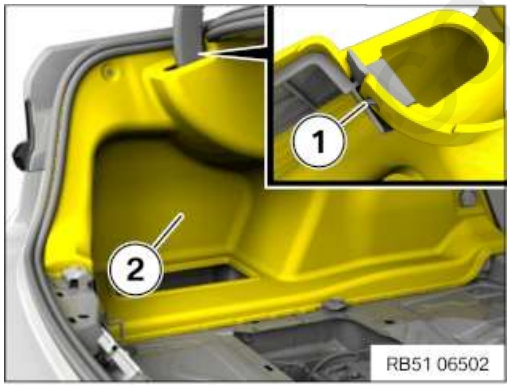
**4 – Partially remove luggage compartment wheel arch panel on left**

**NOTICE**

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




- Loosen the expanding rivet (1).

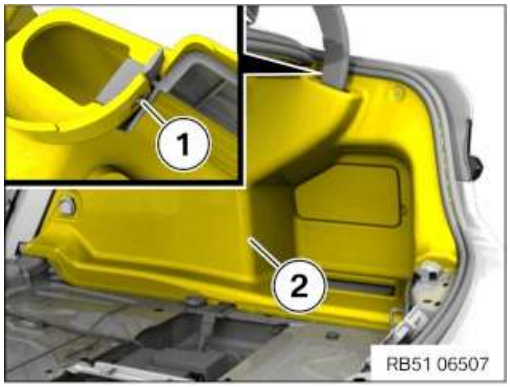



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

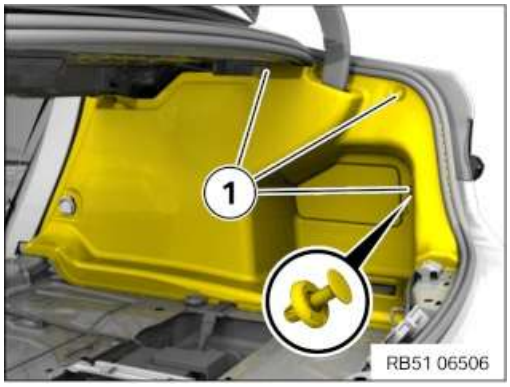
**5 – Partially installing right luggage compartment wheel arch trim panel**

**NOTICE**

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




- Guide luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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).

### 6 – Removing trim from water channel on left and right

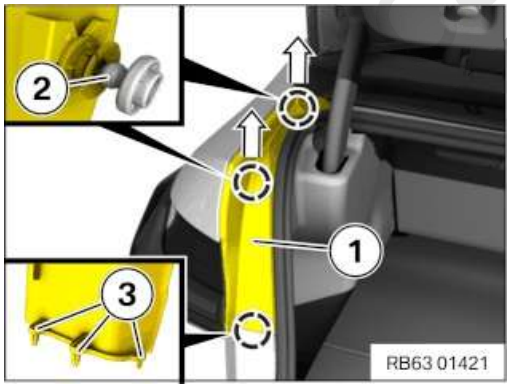
**NOTICE**

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

▸ **Removing trim from water channel**

**NOTICE**

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




- Unclip trim (1) in upward direction from ball pins (2).
- Release trim (1) from guides (3) and remove.

## MAIN WORK

### 7 – Removing the rear light on the left and right side panels

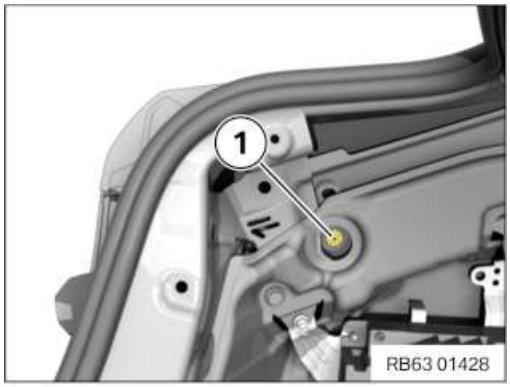
**NOTICE**

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

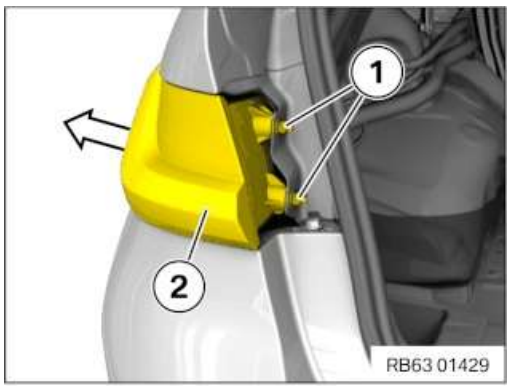
▸ **Removing the rear light on the side panel**

**NOTICE**

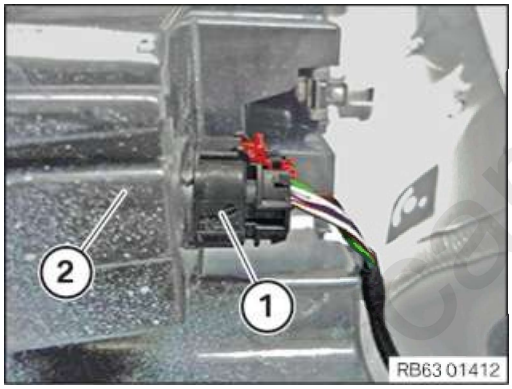
Schematic diagram is for example purposes. Some parts may differ in certain details.




- 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 plug connection (1) and disconnect.
- Remove the rear light on the side panel (2).

**8 – Installing the rear light on the left and right side panels**

**NOTICE**

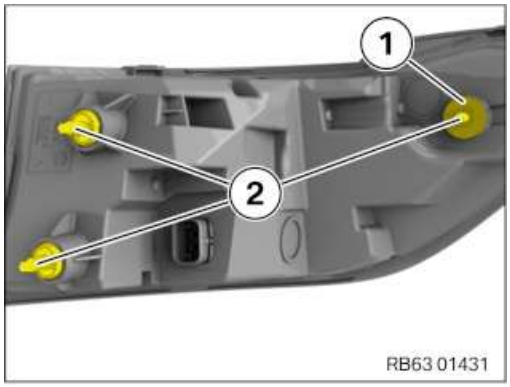
Description is for left component only. Procedure on the right side is identical.

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

**NOTICE**

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

**Check**



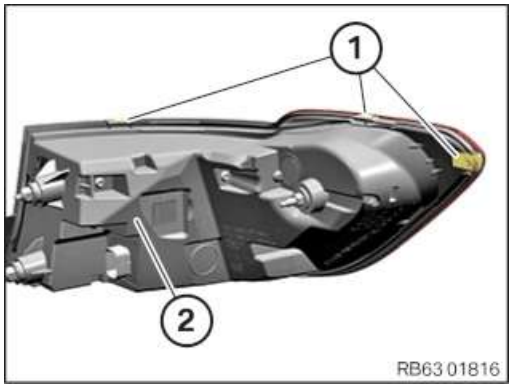

- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

**Result**

» The threaded inserts are damaged.

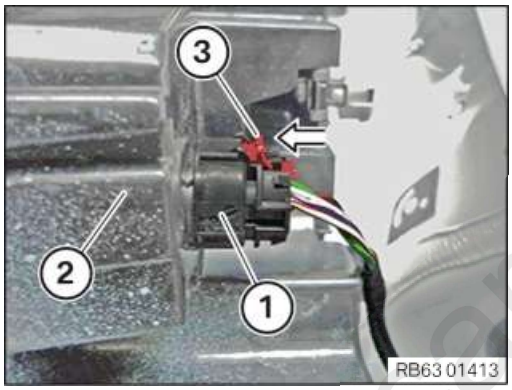
**Measure**

- Replace rear light.



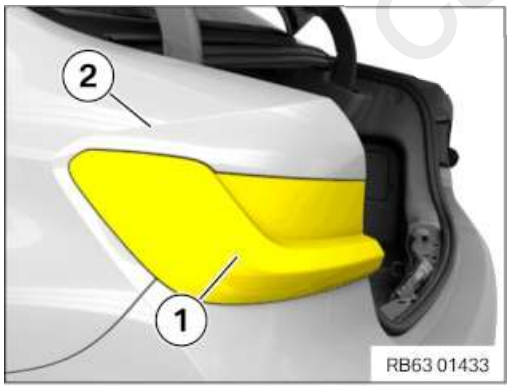

- Contact surfaces (1) on rear light (2) must not be damaged or missing.

  Missing contact surfaces (1) could cause paintwork damage.



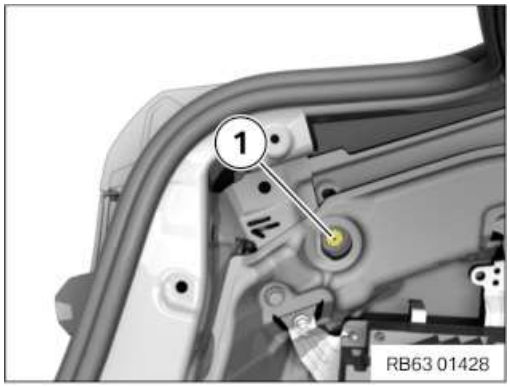

- Connect the connector (1) to the rear light on the side panel (2).

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

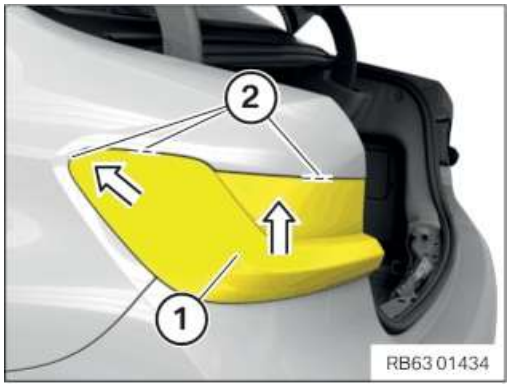



- Position the rear light on the side panel (1) on the side panel (2).

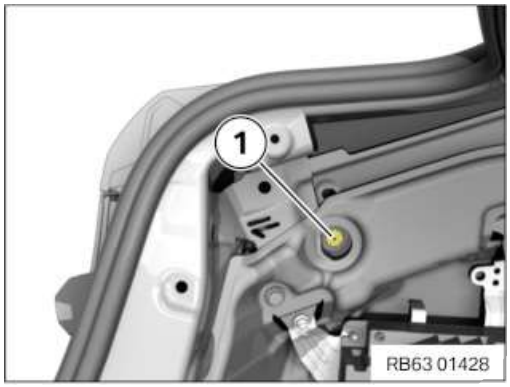
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- Position the nut (1).



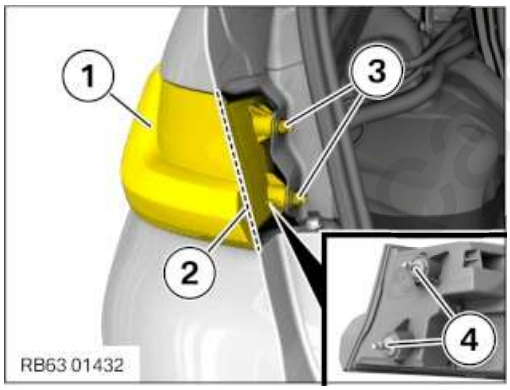

- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.




- Tighten nut (1).

**Rear light to side panel to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 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 to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

## POSTPROCESSES

### 9 – Installing trim in water channel on left and right

**NOTICE**

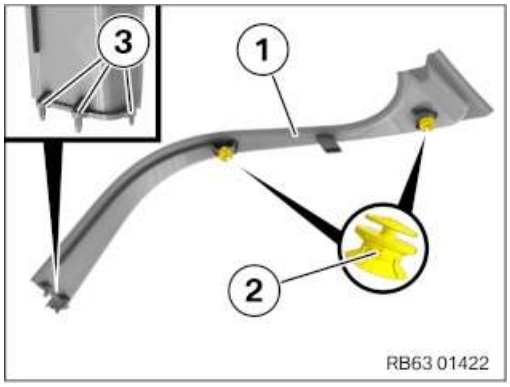
Description is for left component only. Procedure on the right side is identical.

▸ **Installing trim in water channel**

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**NOTICE**

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




**Check**

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

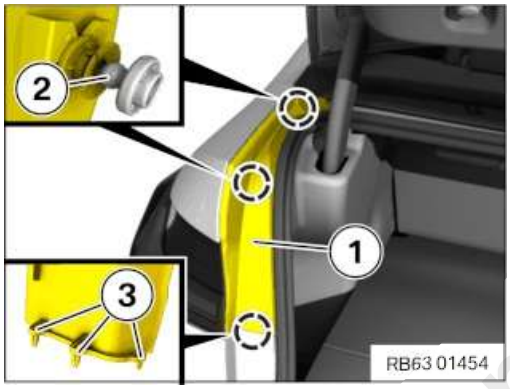
**Result**

» The guides are damaged.

**Measure**

- Renew the trim .

  **Parts**: trim

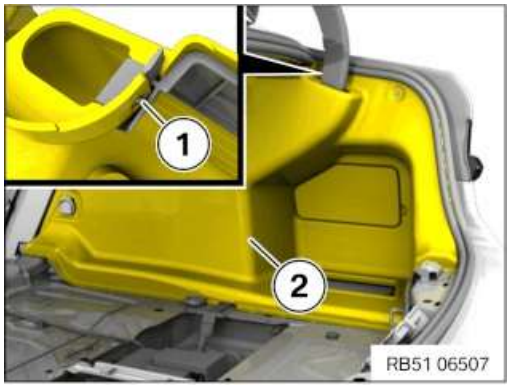



- Insert trim (1) in guides (3).
- Clip trim (1) from above into ball pins (2).

**10 – Partially installing right luggage compartment wheel arch trim panel**

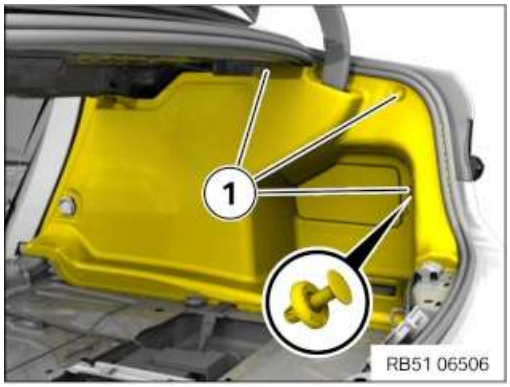
**NOTICE**

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




- Guide luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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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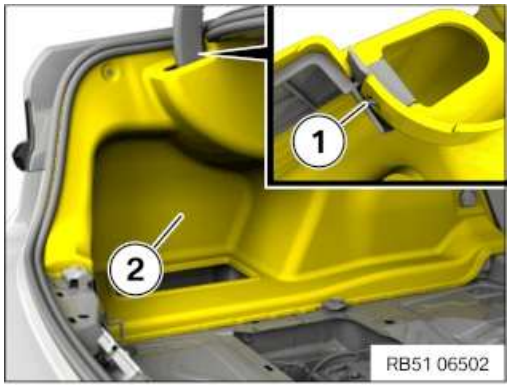



- Secure expanding rivet (1).

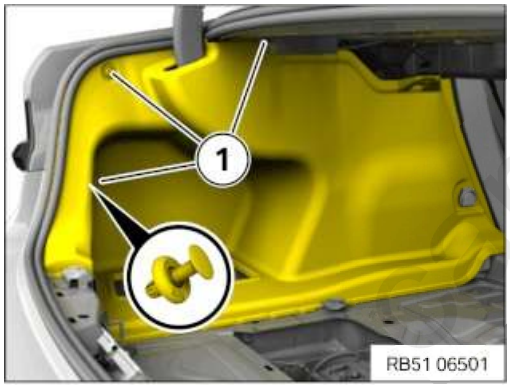
### 11 – Partially installing the left luggage compartment wheel arch trim panel

**NOTICE**

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




- Feed the luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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).

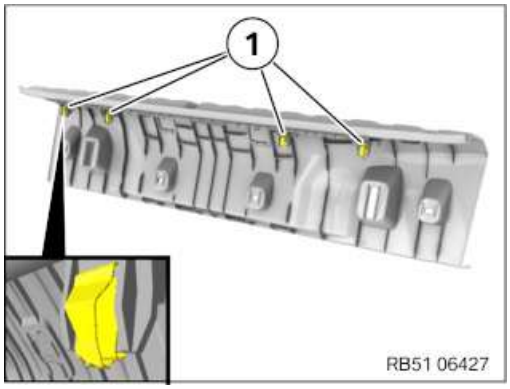



- Secure expanding rivet (1).

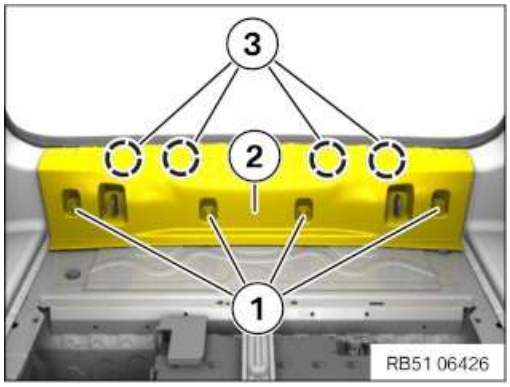
### 12 – Installing loading edge trim

**NOTICE**

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

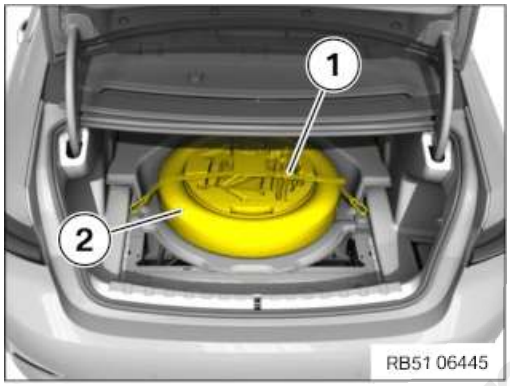



- Check the clamps (1) for damage and renew if necessary.



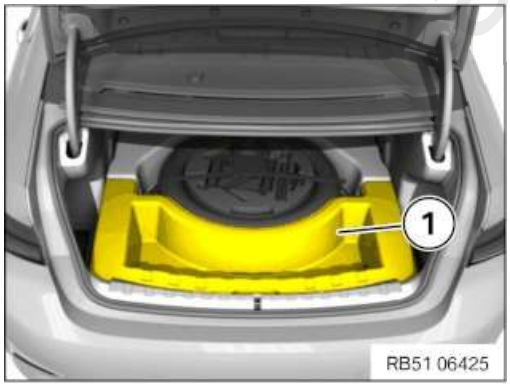

- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

**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**




- Install rear luggage compartment well (1).

**14 – Installing the luggage compartment floor trim panel**

▸ **Installing the luggage compartment floor trim panel**

**NOTICE**

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

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

## Additional Information

### Overview of Tightening Torques

| Rear light to side panel to body | | | Used in step 8 |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

### Links

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

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

## PRELIMINARY WORK

### 1 – Removing the luggage compartment floor trim panel

▸ **Removing the luggage compartment floor trim panel**

**NOTICE**

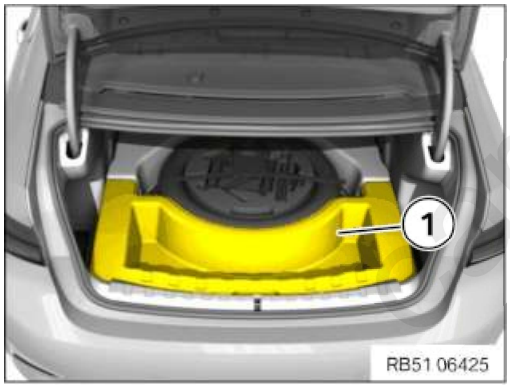
Schematic diagram is for example purposes. Some parts may differ in certain details.



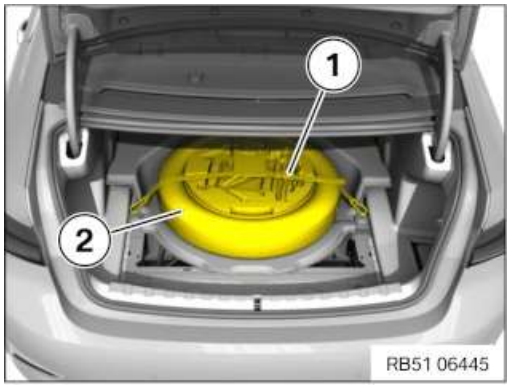

- Remove luggage compartment floor trim panel (1).

### 2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**




- Remove rear luggage compartment well (1).

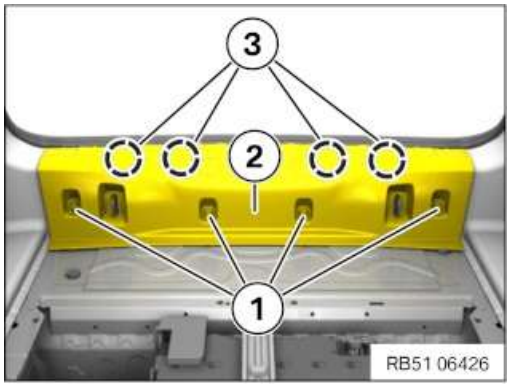



- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

### 3 – Removing the loading edge trim

**NOTICE**

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

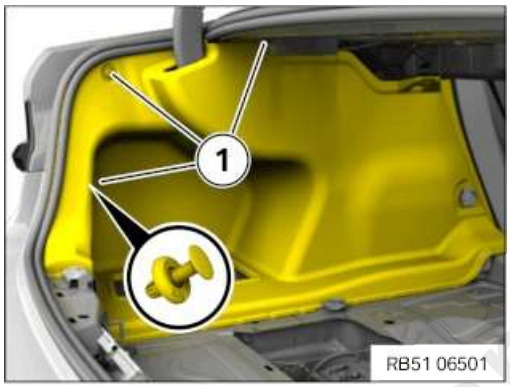



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

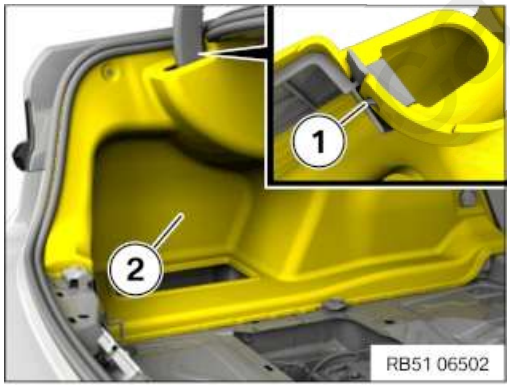
**4 – Partially remove luggage compartment wheel arch panel on left**

**NOTICE**

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




- Loosen the expanding rivet (1).

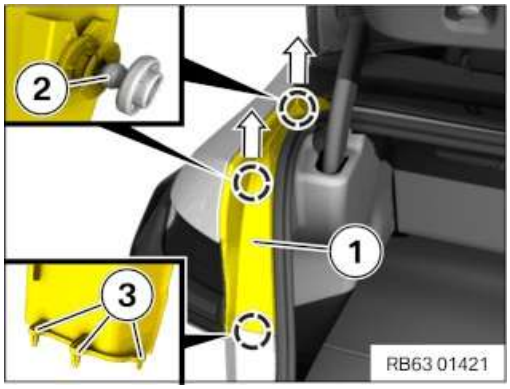



- Press the tab for luggage compartment wheel arch trim panel (2) on the outer side of the hinge to the front using the stop on trim (1).
- Guide out luggage compartment wheel arch trim panel (2) under the sealing lip of the tailgate seal and release it in the rear area.

**5 – Removing trim from water channel**

**NOTICE**

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



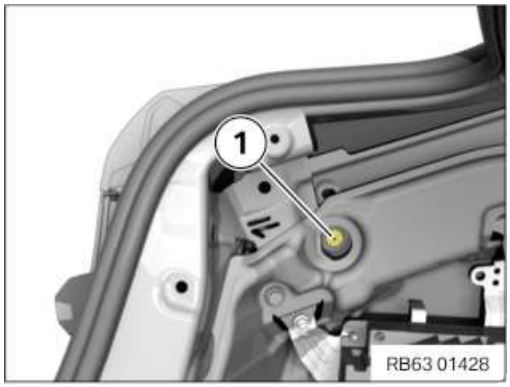

- Unclip trim (1) in upward direction from ball pins (2).
- Release trim (1) from guides (3) and remove.

## MAIN WORK

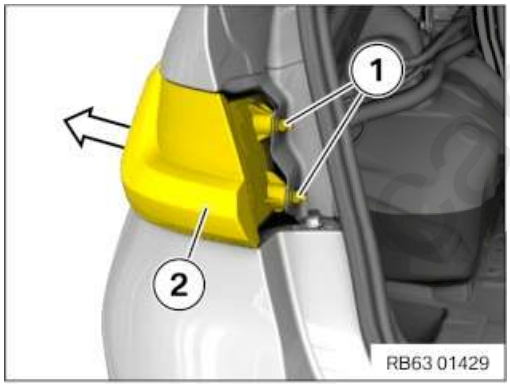
### 6 – Removing the rear light on the side panel

**NOTICE**

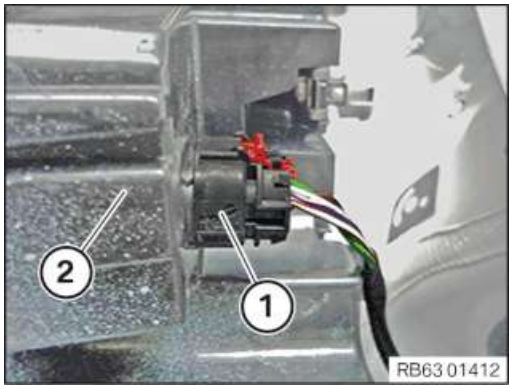
Schematic diagram is for example purposes. Some parts may differ in certain details.




- 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

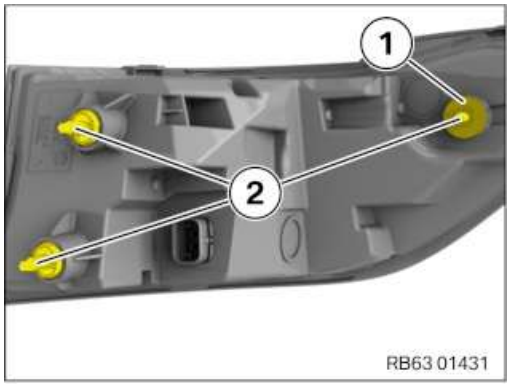
- Unlock plug connection (1) and disconnect.
- Remove the rear light on the side panel (2).

### 7 – Install the rear light on the side panel

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**NOTICE**

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




**Check**

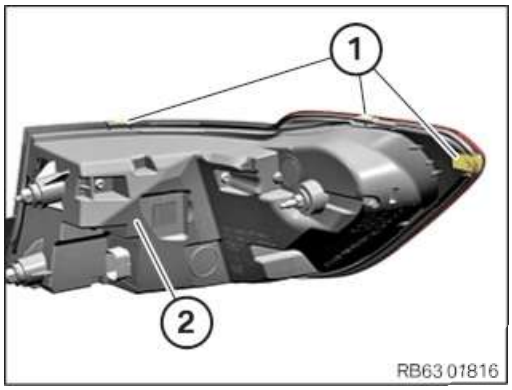
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

**Result**

» The threaded inserts are damaged.

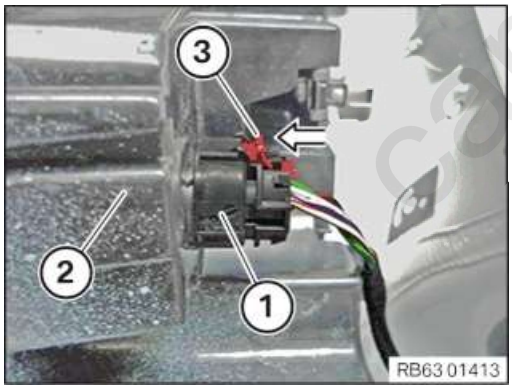
**Measure**

- Replace rear light.



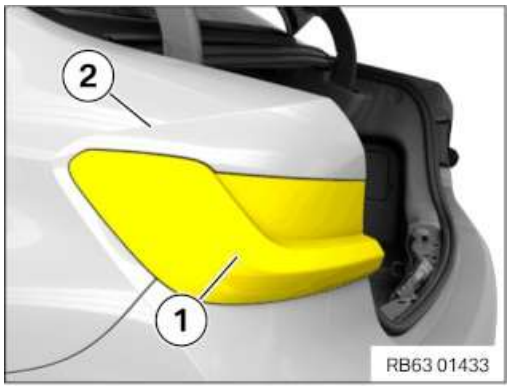

- Contact surfaces (1) on rear light (2) must not be damaged or missing.

  Missing contact surfaces (1) could cause paintwork damage.



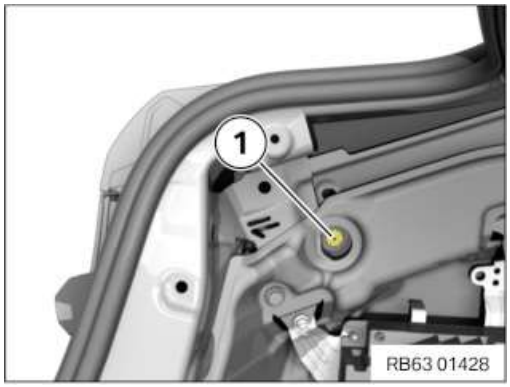

- Connect the connector (1) to the rear light on the side panel (2).

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

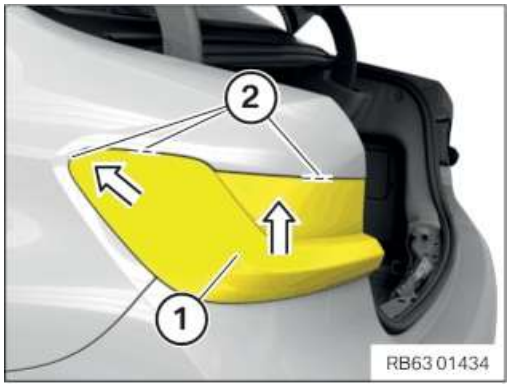



- Position the rear light on the side panel (1) on the side panel (2).

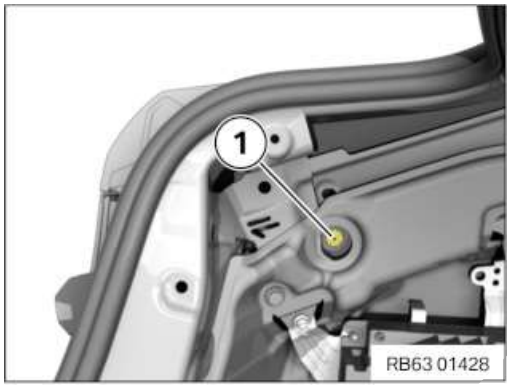
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- Position the nut (1).



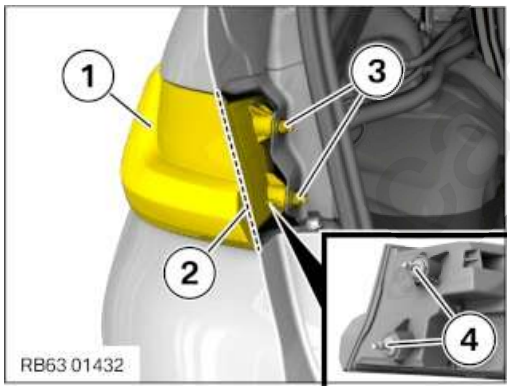

- Position the rear light on the side panel (1) to the front at the top.
- Move the contact surfaces (2) of the rear light on the side panel (1) upwards (arrow) so that they are in place.
- Hold the rear light on the side panel (1) in position.




- Tighten nut (1).

**Rear light to side panel to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 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 to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

## POSTPROCESSES

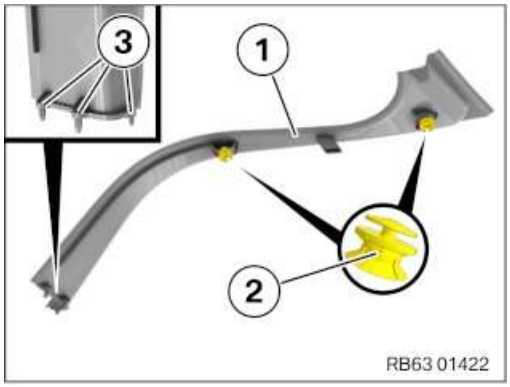
### 8 – Installing trim in water channel

**NOTICE**

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

**Check**

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

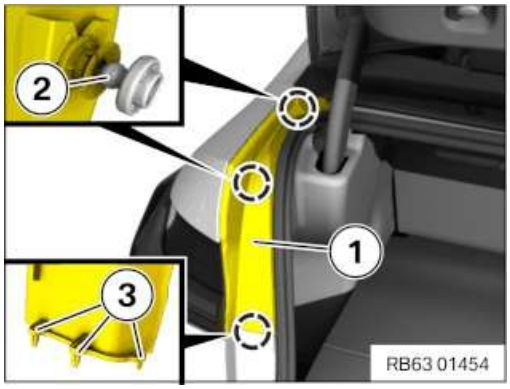
**Result**

» The guides are damaged.

**Measure**

- Renew the trim .

  **Parts**: trim

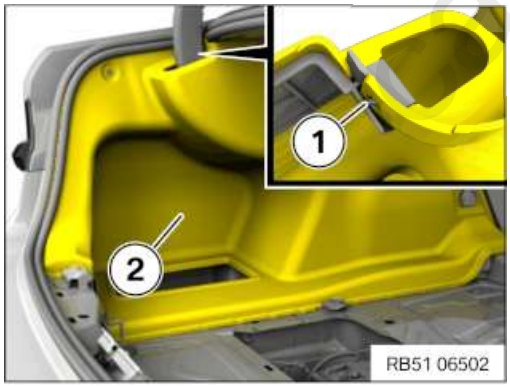



- Insert trim (1) in guides (3).
- Clip trim (1) from above into ball pins (2).

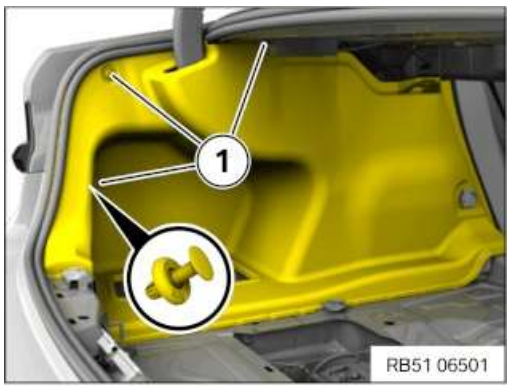
**9 – Partially installing the left luggage compartment wheel arch trim panel**

**NOTICE**

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




- Feed the luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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).

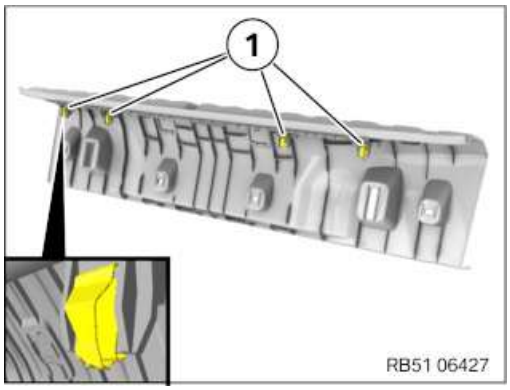



- Secure expanding rivet (1).

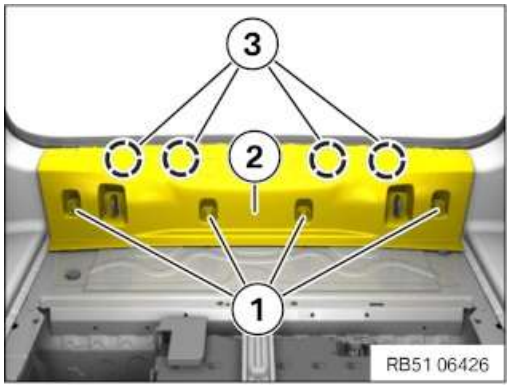
### 10 – Installing loading edge trim

**NOTICE**

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

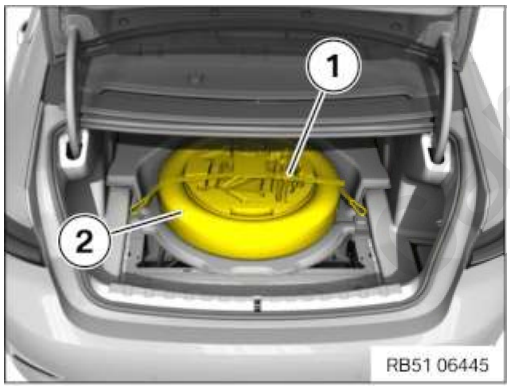



- Check the clamps (1) for damage and renew if necessary.



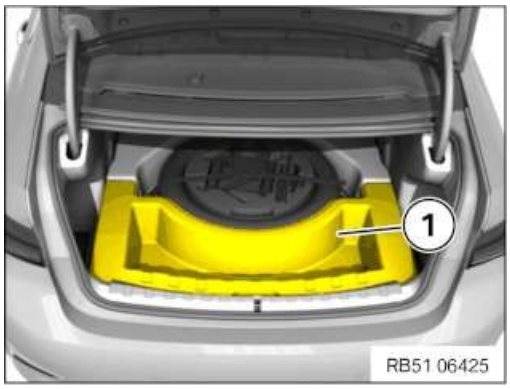

- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

### 11 – 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).

### 12 – Installing the luggage compartment floor trim panel

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▶ **Installing the luggage compartment floor trim panel**

**NOTICE**

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




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

## Additional Information

### Overview of Tightening Torques

| **Rear light to side panel to body** | | | Used in step 7 |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

### Links

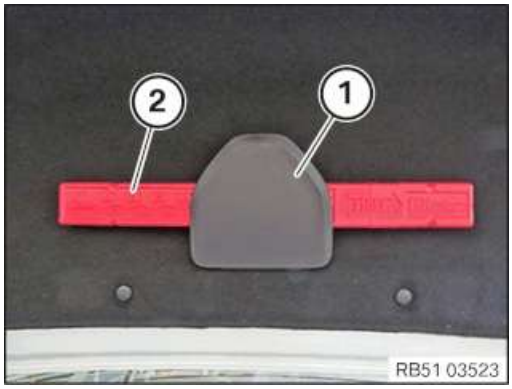
| **Repair instructions** | **Used in step** |
|---|---|
| 61 13 ... Unlocking and disconnecting different plug connections | 6 |

cardiagn.com

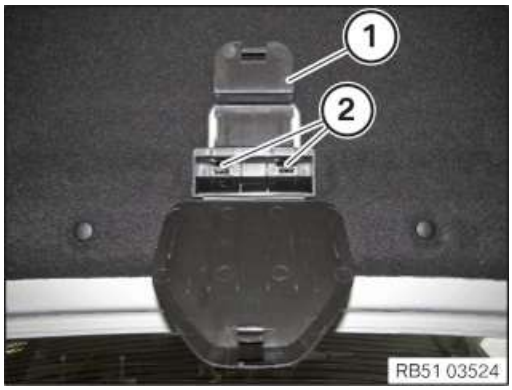
# 63 21 279 Remove and install rear left light of tailgate

## PRELIMINARY WORK

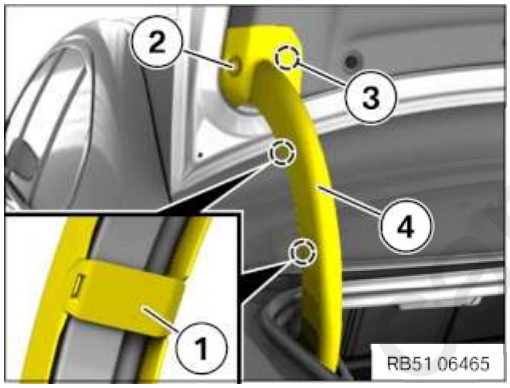
### 1 – Remove tailgate trim panel




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



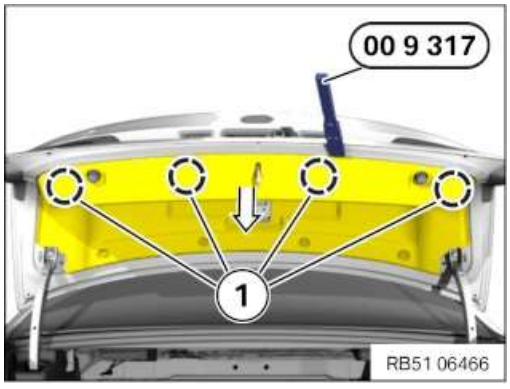

- Detach the warning triangle holder (1) from the latch mechanisms (2) and slide downwards.



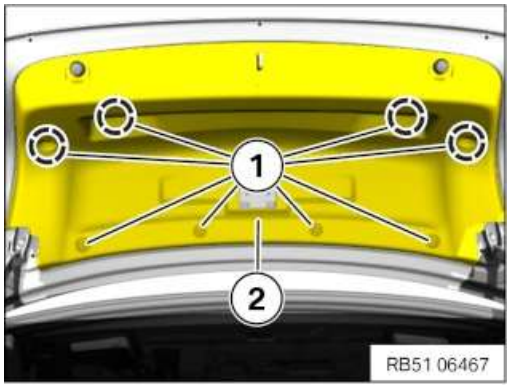

**NOTICE**

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).



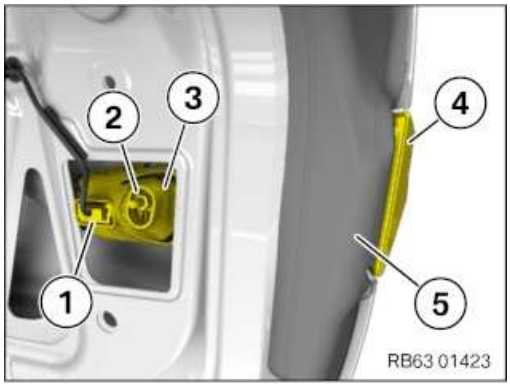

- Unclip clips (1) with special tool 0 490 534 (00 9 317) in the direction of arrow.




- 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




**TECHNICAL INFORMATION**

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

- Unlock plug connection (1) and disconnect.
- Release the nut (2) using the clamping claw (3).
- Feed out the rear light (4) from the tailgate and at the sealing lip of the trim (5).




- If necessary, release the soft-top bow (1) at the guides (2) and remove outwards.

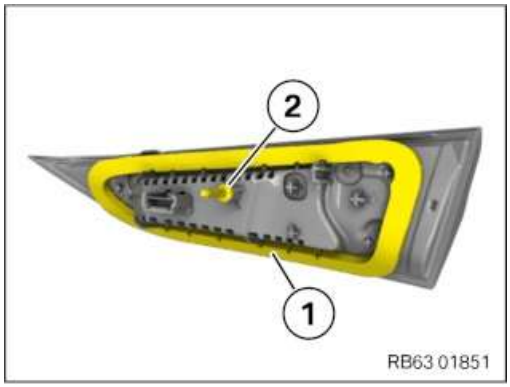
### 3 – Install the rear light on the tailgate




- If necessary, insert the soft-top bow (1) from the outside in the tailgate and position it with the guides (2).

**Check**

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- Check the seal (1) and the threaded bolts (2) of the rear light for damage.

**Result**

» The seal (1) is damaged.

**Measure**

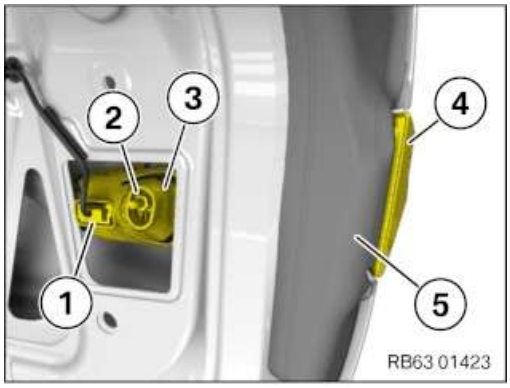
- Renew gasket.

**Result**

» The threaded bolt (2) is damaged.

**Measure**

- Replace rear light.




- Insert and position the rear light (4) in the tailgate. While doing so, insert the rear light (4) below the sealing lip of the trim (5) and in the clamping claw (3).
- Tighten the nut (2) with the clamping claw (3).

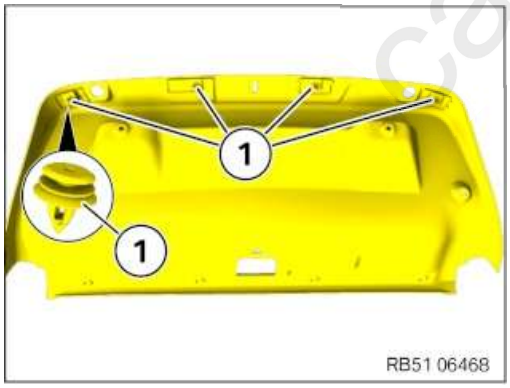
**Rear light at tailgate**

| | | | |
|---|---|---|---|
| Clamping claw | | Tightening torque | 2,6 Nm |

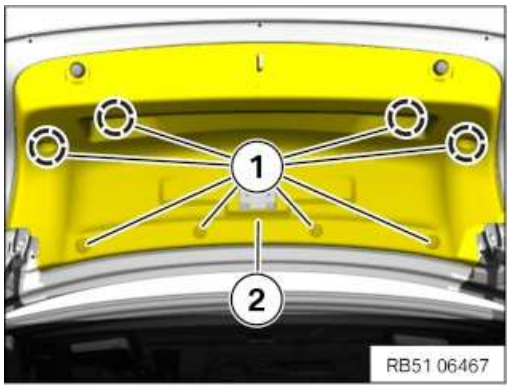
- Connect connectors (1) and lock.

## POSTPROCESSES

### 4 – Installing the tailgate trim panel

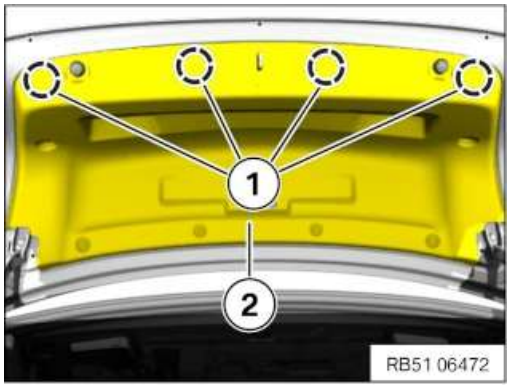



- Check the clips (1) for damage and renew if necessary.

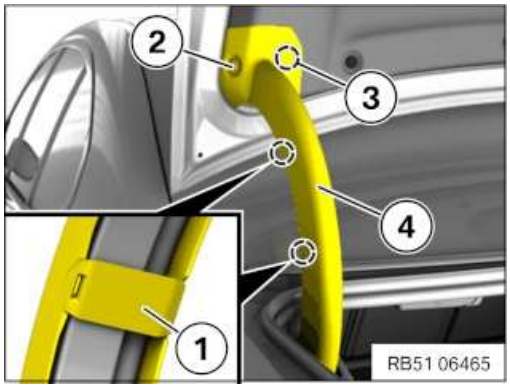



- Fit the tailgate trim panel (2) and fasten in place with the expanding rivets (1).
- **If installed**: Connect and lock plug connection on the switch for the tailgate lift.

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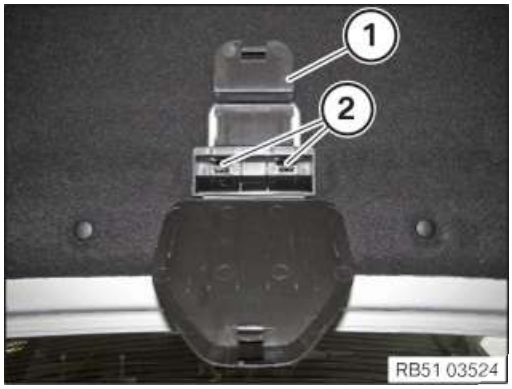

- Clip in the tailgate trim panel (2) with the clips (1).



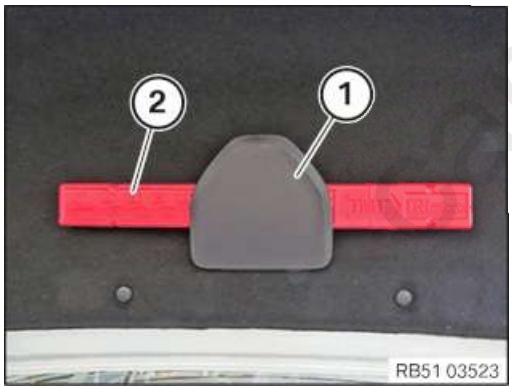

**NOTICE**

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

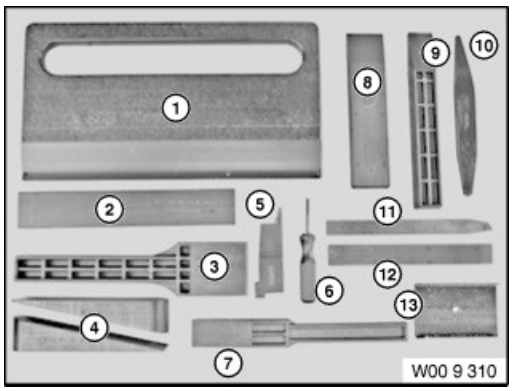
### Overview of Tightening Torques

**Rear light at tailgate** Used in step 3

| | | | |
|---|---|---|---|
| Clamping claw | | Tightening torque | 2,6 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 | |

## 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

▸ **Removing the luggage compartment floor trim panel**

**NOTICE**

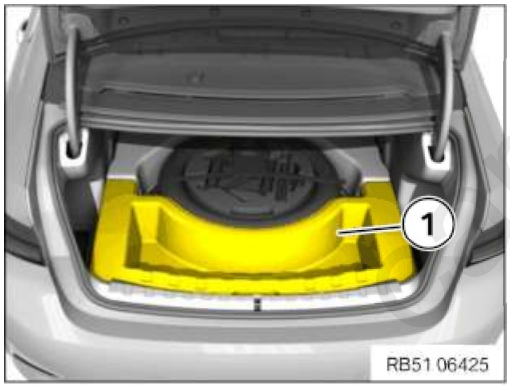
Schematic diagram is for example purposes. Some parts may differ in certain details.



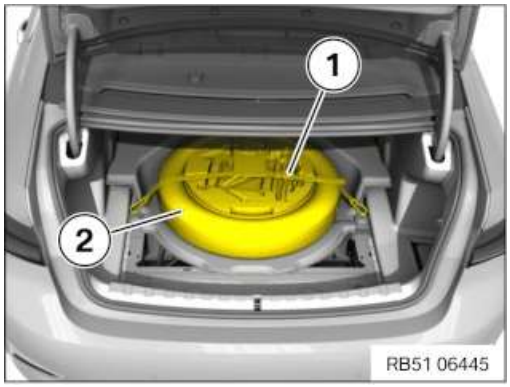

- Remove luggage compartment floor trim panel (1).

### 2 – If installed: Removing the compact spare wheel

▸ **Removing rear luggage compartment well**




- Remove rear luggage compartment well (1).

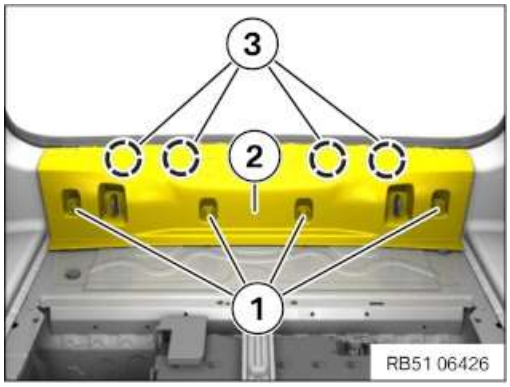



- Open buckle on seat belt strap (1) and set it aside.
- Remove emergency wheel (2) with the insert.

### 3 – Removing the loading edge trim

**NOTICE**

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

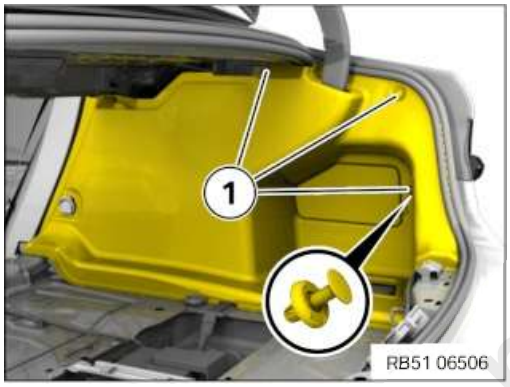



- Loosen the expanding rivet (1).
- Unclip loading edge trim(2) upwards from latch mechanisms (3).
- Guide out and remove loading edge trim (2) under the sealing lip of the tailgate seal.

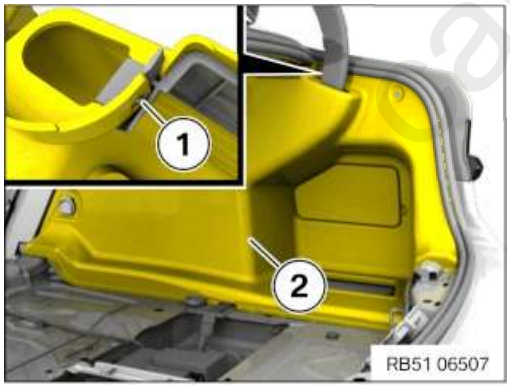
**4 – Partially remove luggage compartment wheel arch panel on right**

**NOTICE**

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




- 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.

**5 – Removing the trim in the right water channel**

**NOTICE**

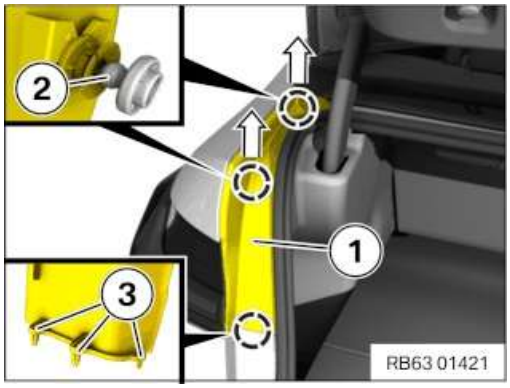
Description is for left component only. Procedure on the right side is identical.

▸ **Removing trim from water channel**

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**NOTICE**

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




- Unclip trim (1) in upward direction from ball pins (2).
- Release trim (1) from guides (3) and remove.

## MAIN WORK

### 6 – Remove the rear light on the right side panel

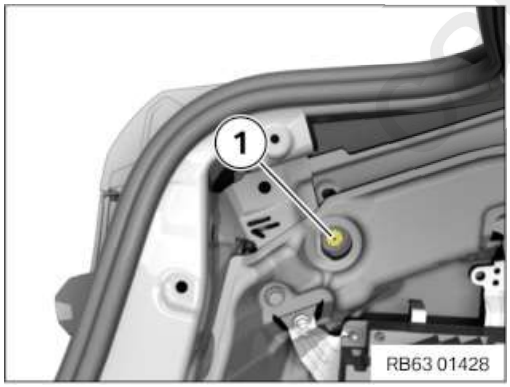
**NOTICE**

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

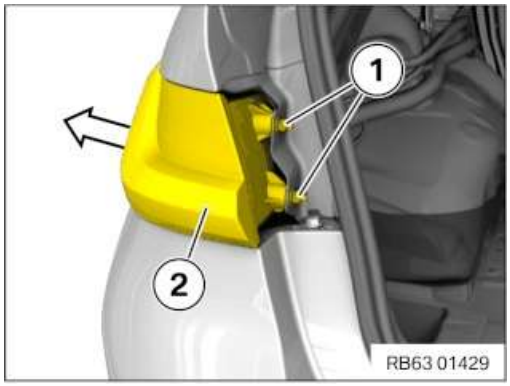
▸ **Removing the rear light on the side panel**

**NOTICE**

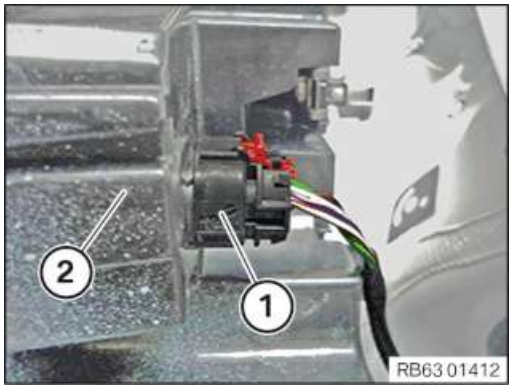
Schematic diagram is for example purposes. Some parts may differ in certain details.




- 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 plug connection (1) and disconnect.
- Remove the rear light on the side panel (2).

### 7 – Installing rear light onto side panel at right

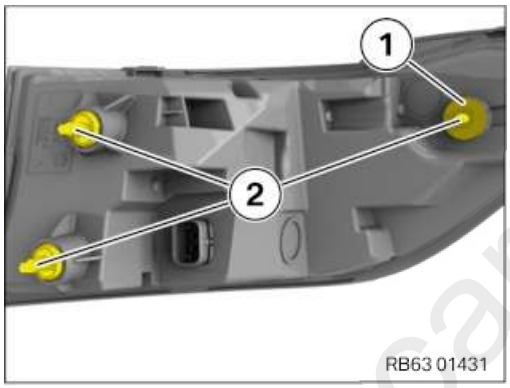
**NOTICE**

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

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

**NOTICE**

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




**Check**

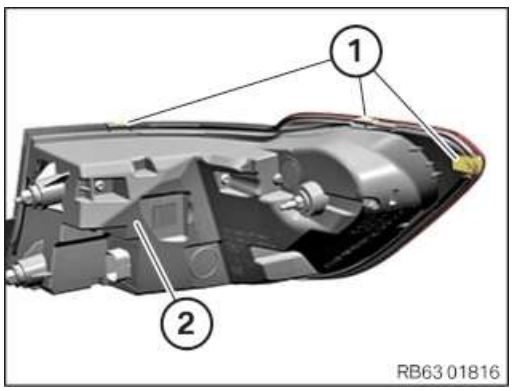
- Check the seal (1) for damage and renew if necessary.
- Check the threaded inserts (2) for damage.

**Result**

» The threaded inserts are damaged.

**Measure**

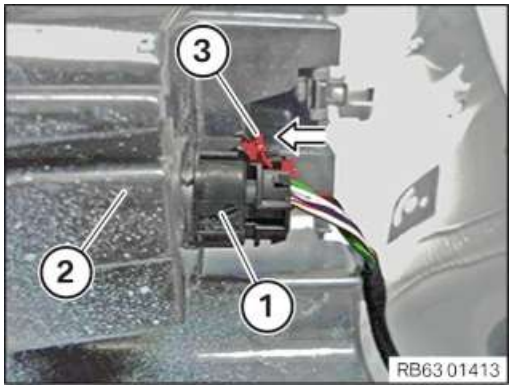
- Replace rear light.




- Contact surfaces (1) on rear light (2) must not be damaged or missing.

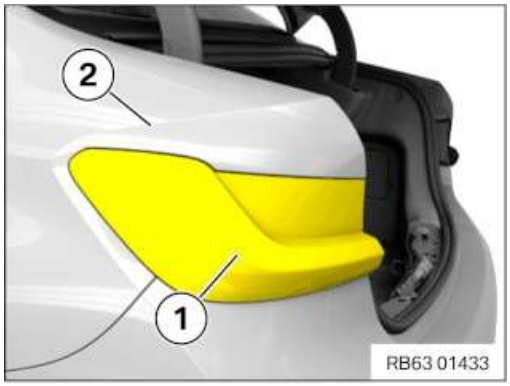
  Missing contact surfaces (1) could cause paintwork damage.

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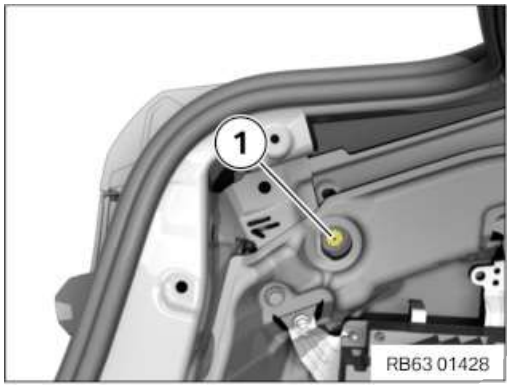



- Connect the connector (1) to the rear light on the side panel (2).

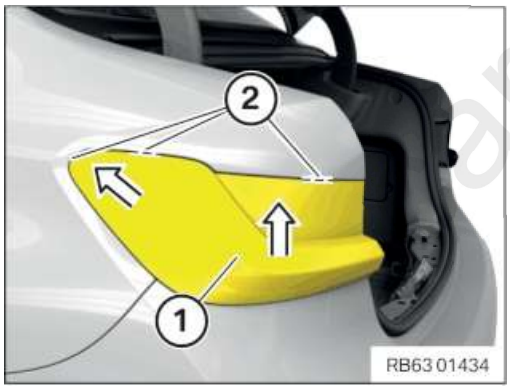
  The connector (1) must engage audibly.
- Lock the lock in direction of arrow (3).



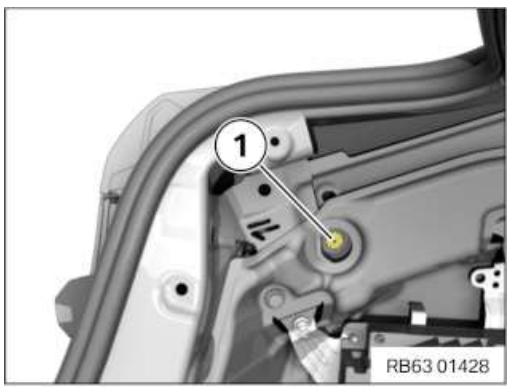

- Position the rear light on the side panel (1) on the side panel (2).




- 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.

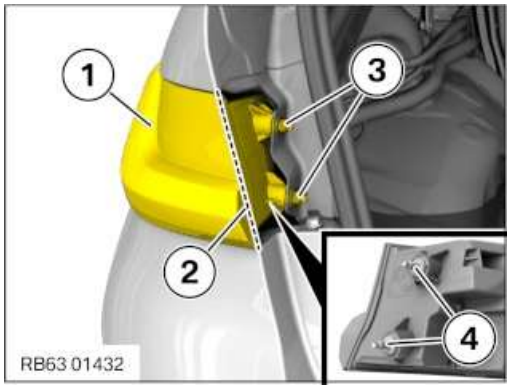



- Tighten nut (1).

**Rear light to side panel to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 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 to body**

| | | | |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

## POSTPROCESSES

### 8 – Installing the trim in the right water channel

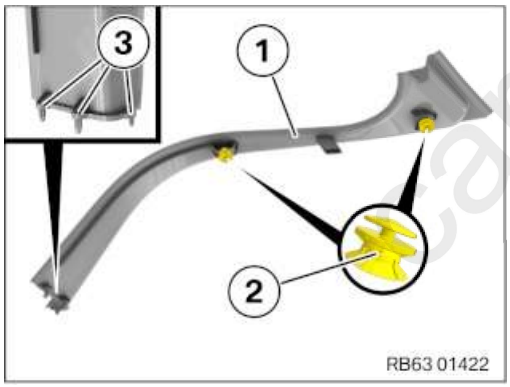
**NOTICE**

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

▸ **Installing trim in water channel**

**NOTICE**

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




**Check**

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

**Result**

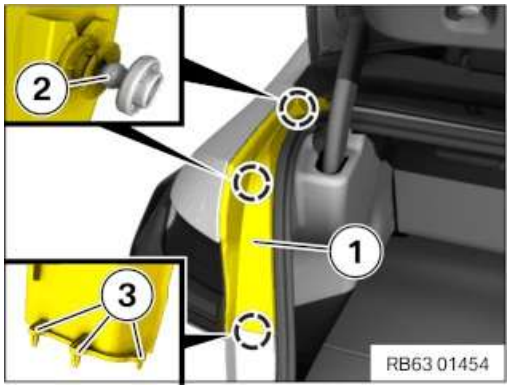
» The guides are damaged.

**Measure**

- Renew the trim .

  **Parts**: trim

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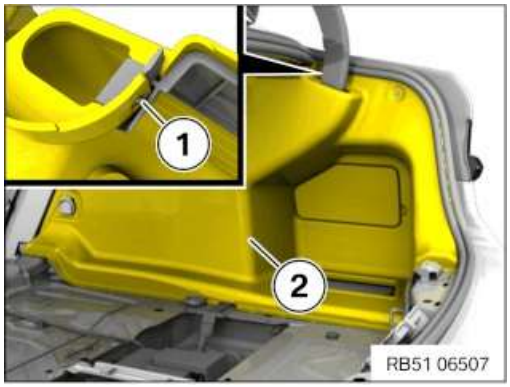



- Insert trim (1) in guides (3).
- Clip trim (1) from above into ball pins (2).

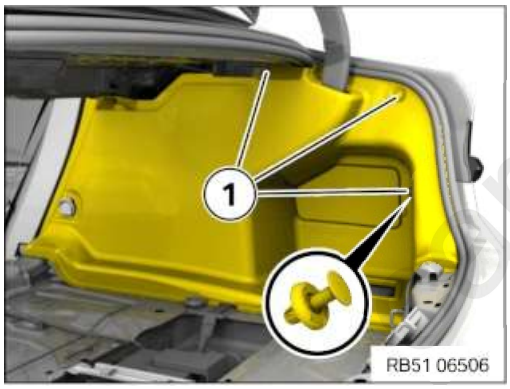
### 9 – Partially installing right luggage compartment wheel arch trim panel

**NOTICE**

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




- Guide luggage compartment wheel arch trim panel (2) into the rear area under the sealing lip of the tailgate seal.
- 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).

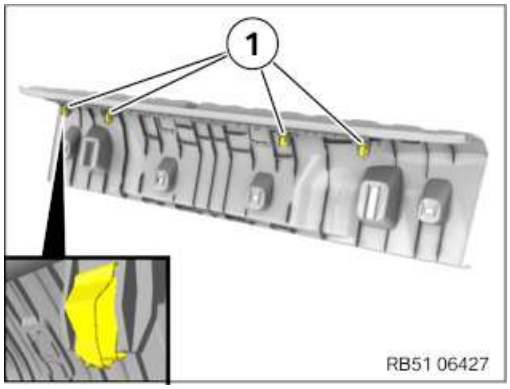



- Secure expanding rivet (1).

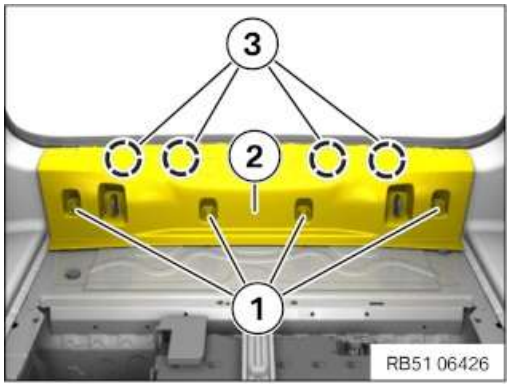
### 10 – Installing loading edge trim

**NOTICE**

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

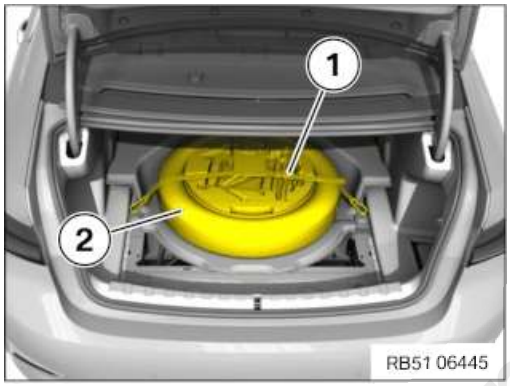



- Check the clamps (1) for damage and renew if necessary.



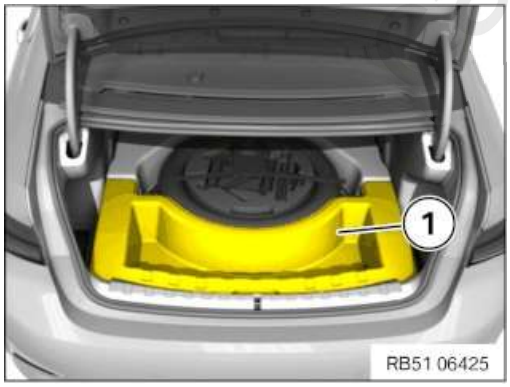

- Insert the loading edge trim (2) under the sealing lip of the tailgate seal.
- Fit the trim of the loading edge (2) at the latch mechanisms (3) and clip it in to the bottom.
- Secure expanding rivet (1).

**11 – 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).

**12 – Installing the luggage compartment floor trim panel**

▸ **Installing the luggage compartment floor trim panel**

**NOTICE**

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

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

## Additional Information

### Overview of Tightening Torques

| Rear light to side panel to body | | | Used in step 7 |
|---|---|---|---|
| Combination hexagon nut | | Tightening torque | 4 Nm |

### Links

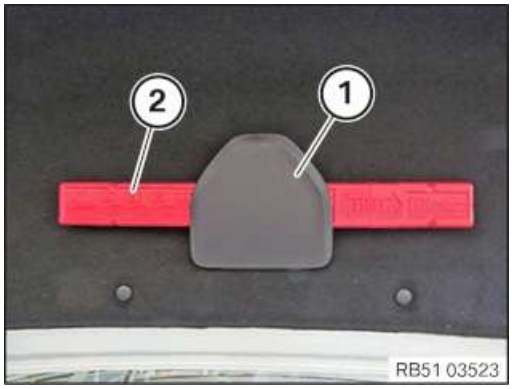
| Repair instructions | Used in step |
|---|---|
| 61 13 ... Unlocking and disconnecting different plug connections | 6 |

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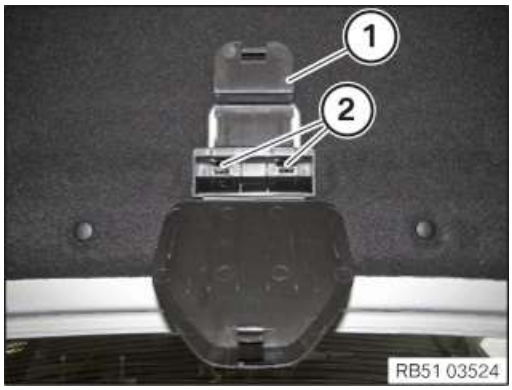
# 63 21 281 Removing and install rear right light of tailgate

## PRELIMINARY WORK

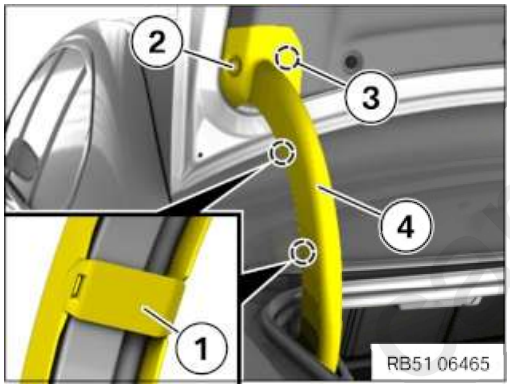
### 1 – Remove tailgate trim panel




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



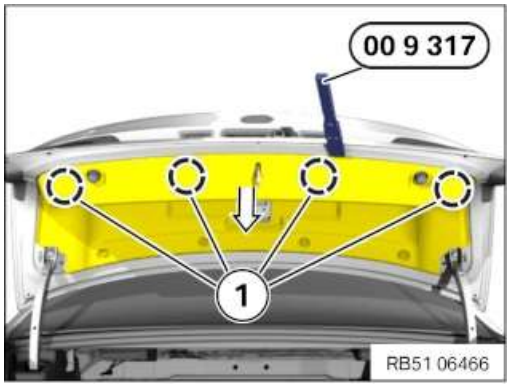

- Detach the warning triangle holder (1) from the latch mechanisms (2) and slide downwards.



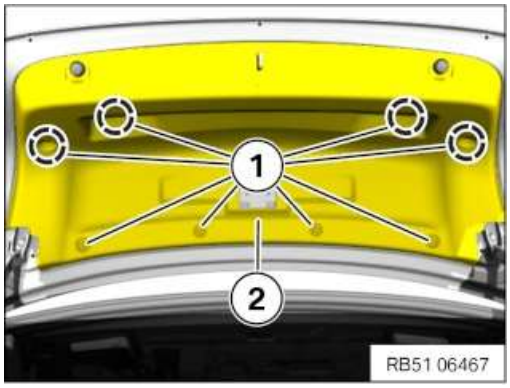

**NOTICE**

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.

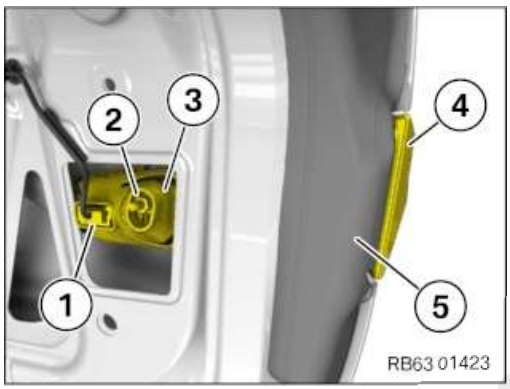
## MAIN WORK

### 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**




**TECHNICAL INFORMATION**

Observe note on unlocking and disconnecting plug connections.

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

- Unlock plug connection (1) and disconnect.
- Release the nut (2) using the clamping claw (3).
- Feed out the rear light (4) from the tailgate and at the sealing lip of the trim (5).
- If necessary, release the soft-top bow (1) at the guides (2) and remove outwards.




### 3 – Installing the right rear light on the tailgate

**NOTICE**

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

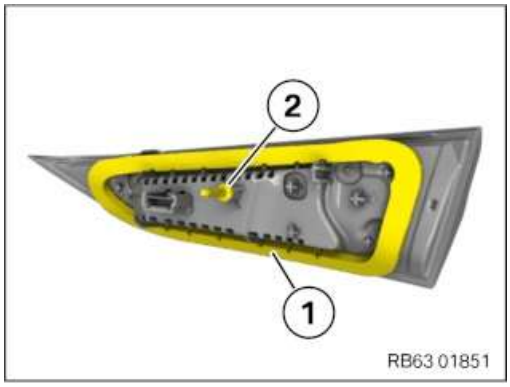
▸ **Install the rear light on the tailgate**

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- If necessary, insert the soft-top bow (1) from the outside in the tailgate and position it with the guides (2).

**Check**




- Check the seal (1) and the threaded bolts (2) of the rear light for damage.

**Result**

» The seal (1) is damaged.

**Measure**

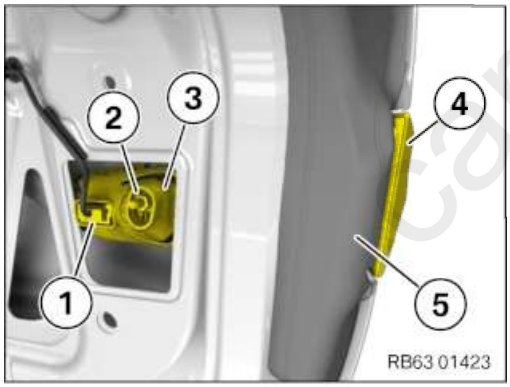
- Renew gasket.

**Result**

» The threaded bolt (2) is damaged.

**Measure**

- Replace rear light.




- Insert and position the rear light (4) in the tailgate. While doing so, insert the rear light (4) below the sealing lip of the trim (5) and in the clamping claw (3).
- Tighten the nut (2) with the clamping claw (3).

**Rear light at tailgate**

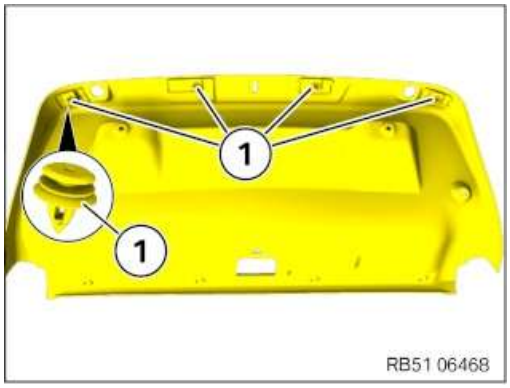
| | | | |
|---|---|---|---|
| Clamping claw | | Tightening torque | 2,6 Nm |

- Connect connectors (1) and lock.

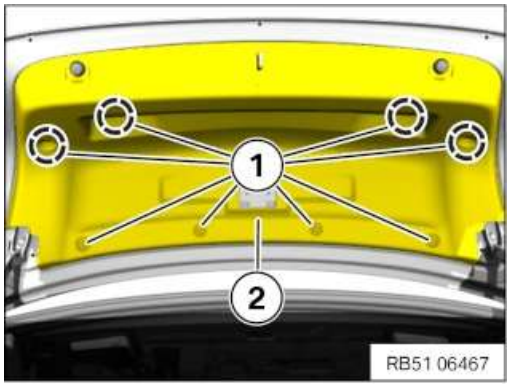
## POSTPROCESSES

### 4 – Installing the tailgate trim panel

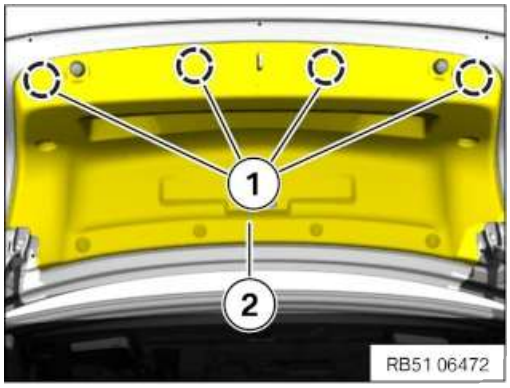
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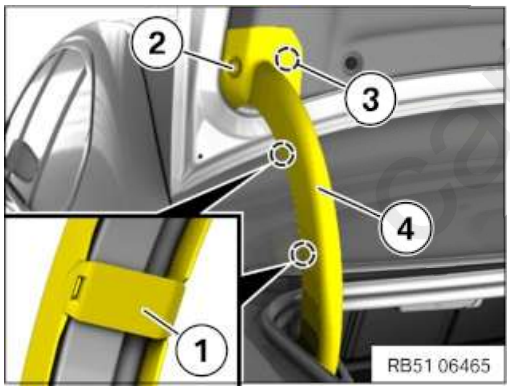

- Check the clips (1) for damage and renew if necessary.




- 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.



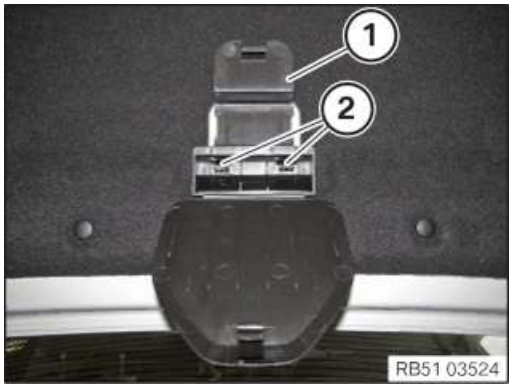

- Clip in the tailgate trim panel (2) with the clips (1).




**NOTICE**

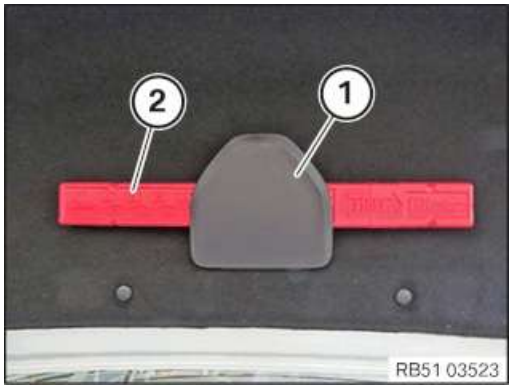
Description is for left component only. Procedure on the right side is identical.

- 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).

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

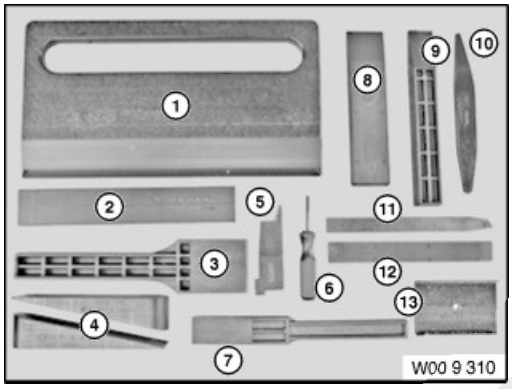
## Additional Information

### Overview of Tightening Torques

| Rear light at tailgate | | | Used in step 3 |
|---|---|---|---|
| Clamping claw | | Tightening torque | 2,6 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 | |

### Links

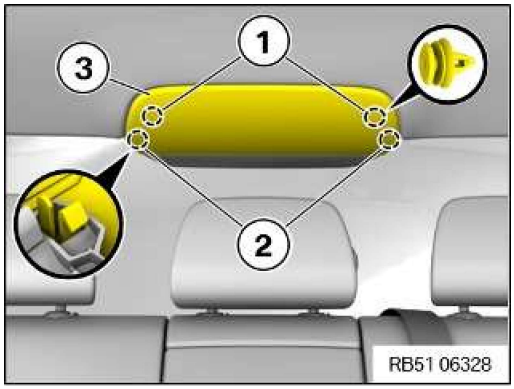
| Repair instructions | Used in step |
|---|---|
| 61 13 ... Unlocking and disconnecting different plug connections | 2 |

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# 63 25 003 Removing and installing add. brake light

## PRELIMINARY WORK

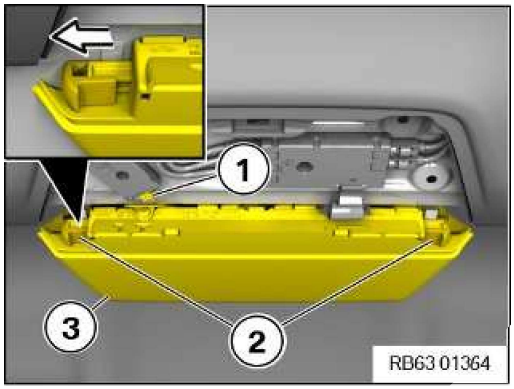
### 1 – Removing the trim of the additional brake light




- Loosen the clips (1).
- Release the latch mechanisms (2) and remove the trim of the additional brake light (3).

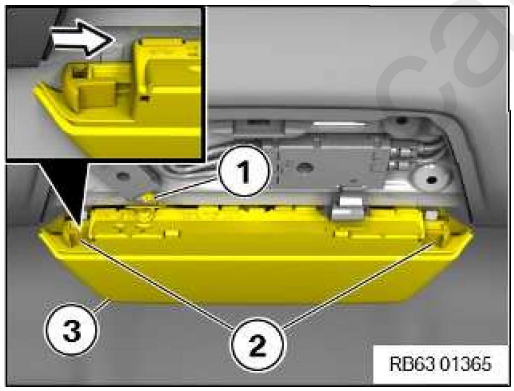
## MAIN WORK

### 2 – 3. Removing the brake light




- Unlock plug connection (1) and disconnect.
- Unlock both slides (2) outwards in the direction of arrow and remove the 3rd brake light (3).

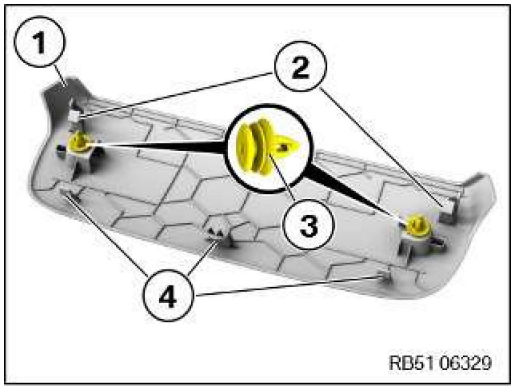
### 3 – 3. brake light




- 3. Position the brake light (3).
- Lock both slides (2) inwards in the direction of the arrow.
- Connect connectors (1) and lock.

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### 4 – Installing trim for additional brake light




**Check**

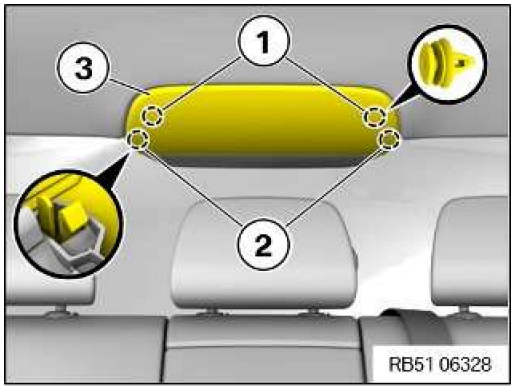
- Check the clips (3) for damage and renew if necessary.
- Check latch mechanisms (2) and guides (4) for damage.

**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).

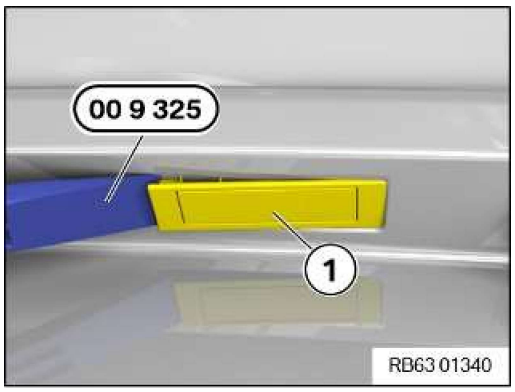
cardiagn.com

# 63 26 020 Removing and installing/replacing both number plate lights

**NOTICE**

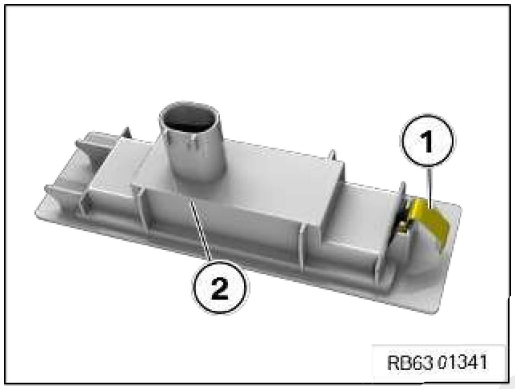
Description is for left component only. Procedure on the right side is identical.

### 1 – Remove number plate light

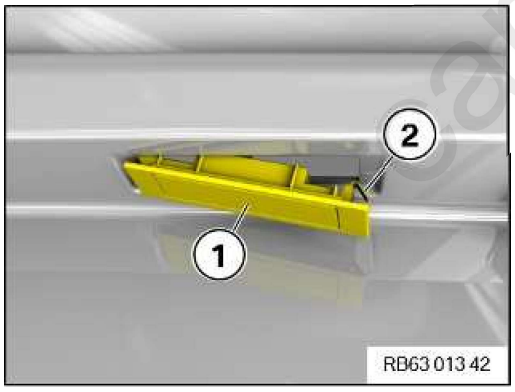



- Remove the number plate light (1) with the special tool 0 496 569 (00 9 325).
- Unlock plug connection and disconnect.

### 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

**0 496 569 (00 9 325) Wedge**

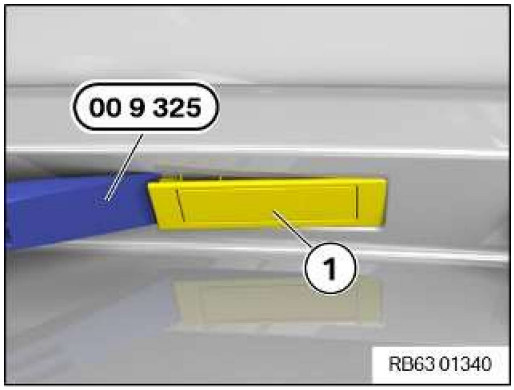



| **Common** | Used in step 1 |
|---|---|
| Usage | (Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material) |
| Included in the tool or work | 0 490 527 |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 41 01 09 (507) |

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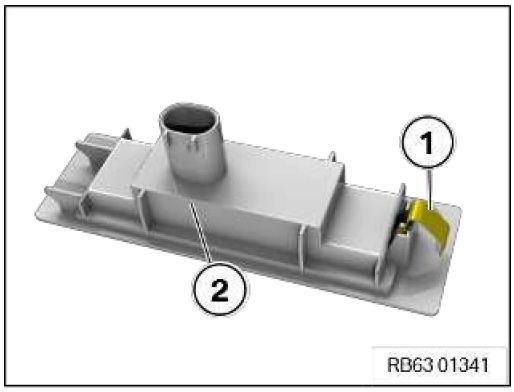
# 63 26 000 Removing and installing/replacing left or right number/license plate light

### 1 – Remove number plate light

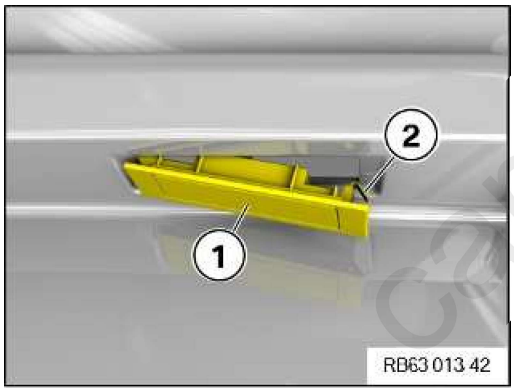



- Remove the number plate light (1) with the special tool 0 496 569 (00 9 325).
- Unlock plug connection and disconnect.

### 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**

**Careless handling of tools and sharp-edged components.**

**Scratch, surface damage.**

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

**RISK OF DAMAGE**



**Electrostatic discharge.**

**Damage to or destruction of electrical components.**

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

**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)



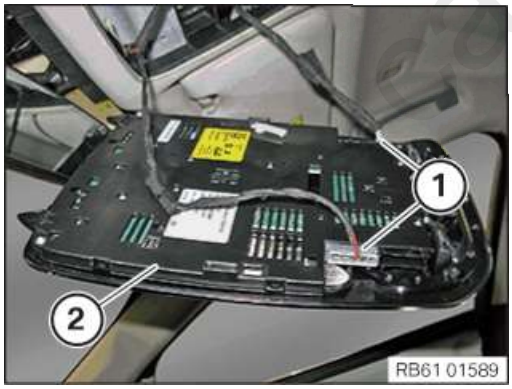

- Unclip the cover (1).




- 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).



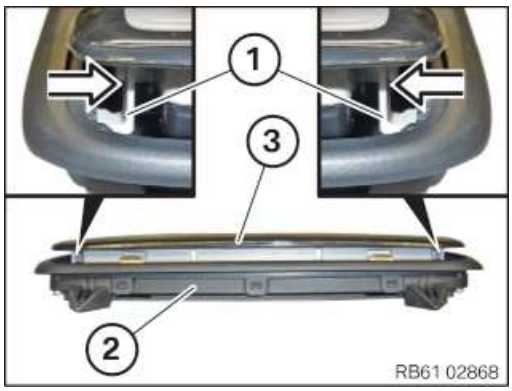

- Unlock and disconnect plug connections (1).
- Unclip the cable clip from roof function centre (FZD) (2) and remove the roof function centre (FZD) (2).

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### 2 – Remove interior roof light

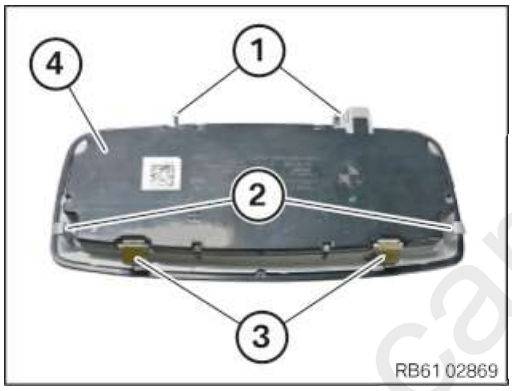



- Lever out the interior roof light with the special tool 0 490 527 (00 9 310) in the direction of the arrow from the frames (1).




- 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**

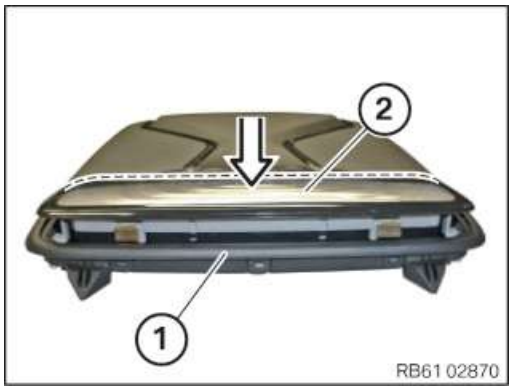
- Check guides (1), clamps (3) and latch mechanisms (2) for damage.

**Result**

» Guides (1), clamps (3) or latch mechanisms (2) are damaged.

**Measure**

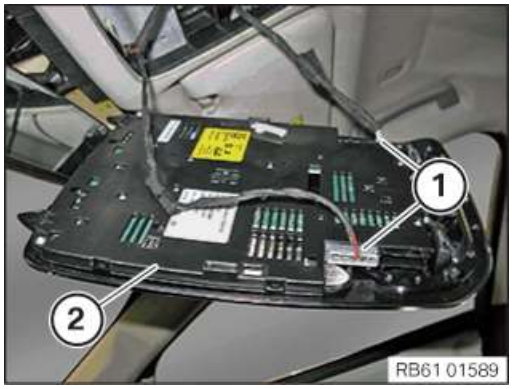
- Renew the interior roof light (4).



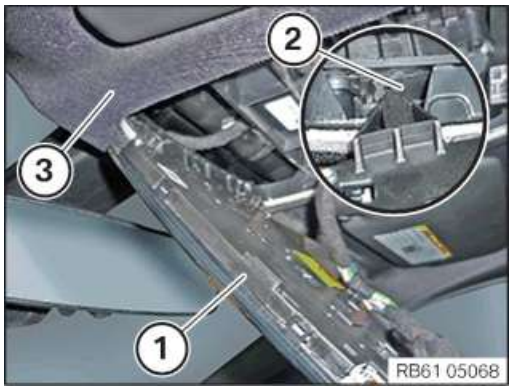

- Insert the interior roof light (2) in the marked area.
- Engage interior roof light (2) in the frame (1)in direction of arrow.

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### 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.




- Insert the roof function centre (FZD) (1) as shown at a steep angle in 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).




- Slide the special tool 2 298 505 in the direction of arrow between the FZD frame and the headlining along the dotted line to adjust the headlining correctly.




- Tighten the screws (1).

**Roof function centre (FZD)**

| | | |
|---|---|---|
| | Tightening torque | 1.2 Nm |

rdiagn.com




- Clip in the cover (1).

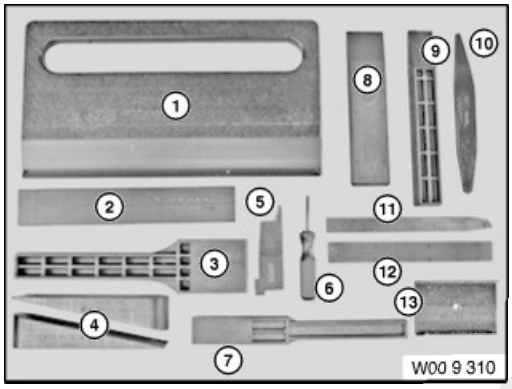
## Additional Information

### Overview of Tightening Torques

| Roof function centre (FZD) | | Used in step 4 |
|---|---|---|
| | Tightening torque | 1.2 Nm |

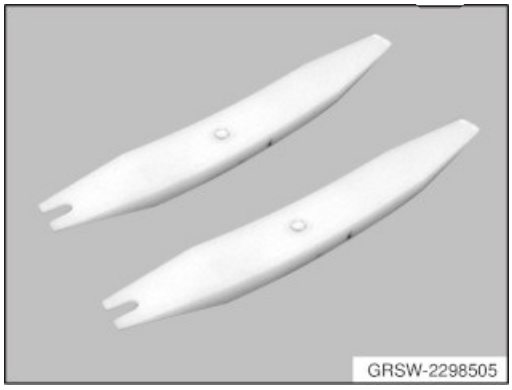
### Overview of Special Tools

**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:

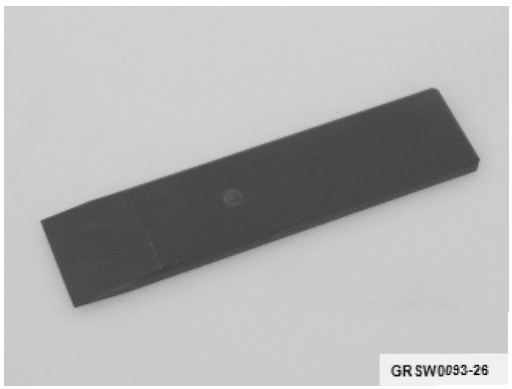
carflagn.com

**0 496 569 (00 9 325) Wedge**



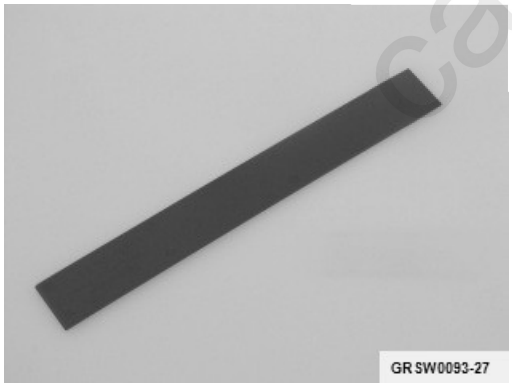

| Common | Used in step 2 |
|---|---|
| Usage | (Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material) |
| Included in the tool or work | 0 490 527 |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 41 01 09 (507) |

**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) | |

61 35 ... Notes on ESD protection (Electro Static Discharge)

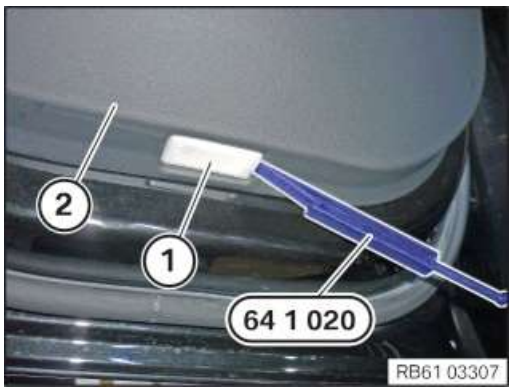
cardiagn.com

# 63 31 092 Remove and install/replace the door entry light in the door trim panel

**NOTICE**

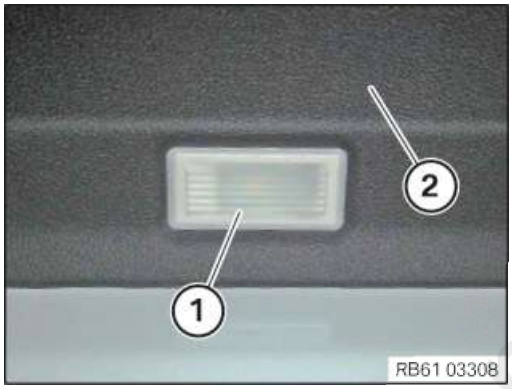
Description is for left component only. Procedure on the right side is identical.

### 1 – Remove the entry door light in the front door trim panel




- Remove the door entry light (1) from the front door trim panel (2) using the special tool 0 493 681 (64 1 020).
- Disconnect the plug connection and remove the door entry light (1).

### 2 – Installing the door entry light in the front door trim panel

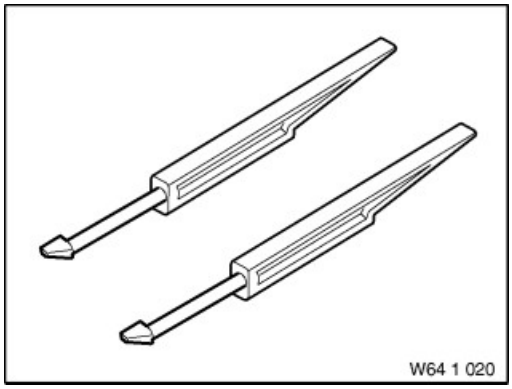



- Connect the connector with the door entry light (1).
- Position the door entry light (1)and install it in the door trim panel (2).

## 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) |

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# 63 31 241 Remove and install/replace the front left or right door opener optical fibre

## PRELIMINARY WORK

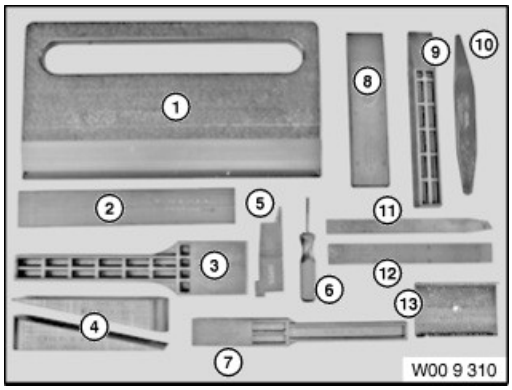
### 1 – Remove front door trim panel

**RISK OF DAMAGE**

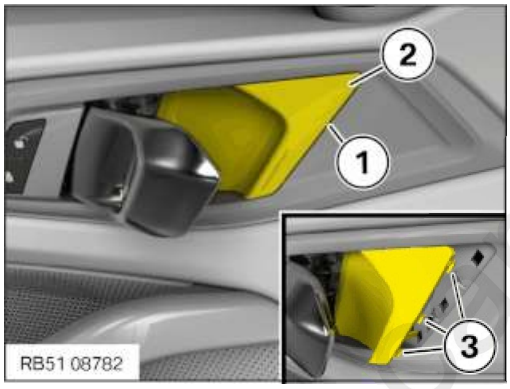
**Damage of high-quality surfaces.**

**Plastic wedges can damage high-quality surfaces.**

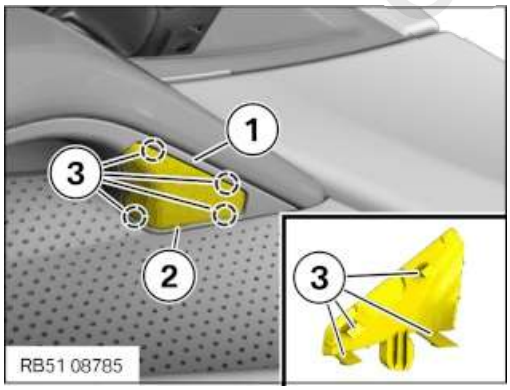
- Protect surfaces from damage.



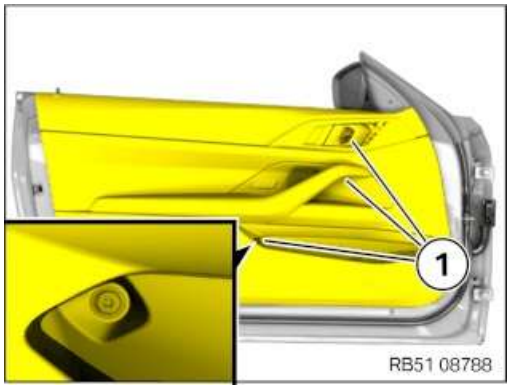

- Have the set of special tools 0 493 752 (00 9 329) ready.



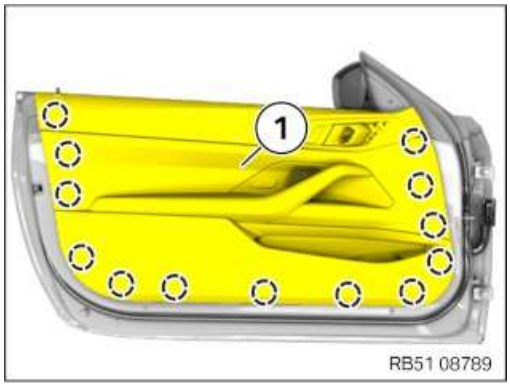

- Pull the door handle.
- Position suitable special tool on the recess in the area (1) .
- Unclip the cover of the door handle (2) with the latch mechanisms (3).
- Feed out the cover of the door handle (2) from the latch mechanisms and remove it forwards.



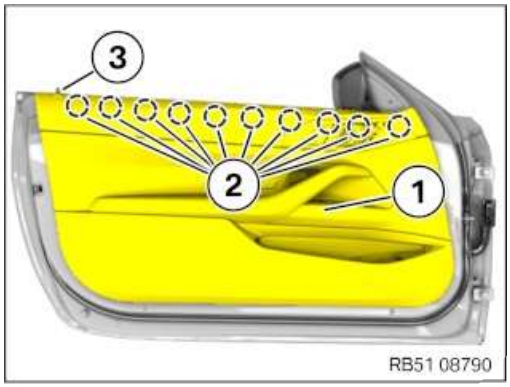

- Position suitable special tool on the recess in the area (1) .
- Unclip the cover (2) with the latch mechanisms (3) and remove it downwards.



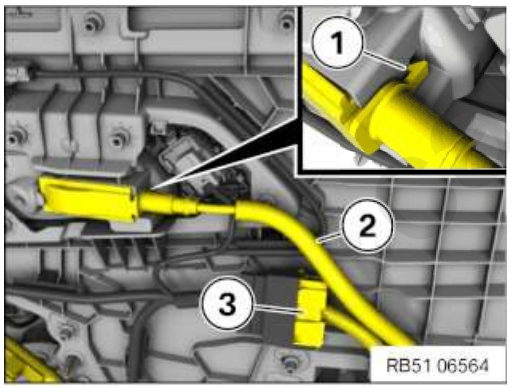

- Loosen screws (1).




- Unclip the door trim panel (1) with the suitable special tool at the marked places.




- Release the door trim panel (1) with the latch mechanisms (2).
- Lift the door trim panel (1) upwards over the operating rod (3).




**NOTICE**

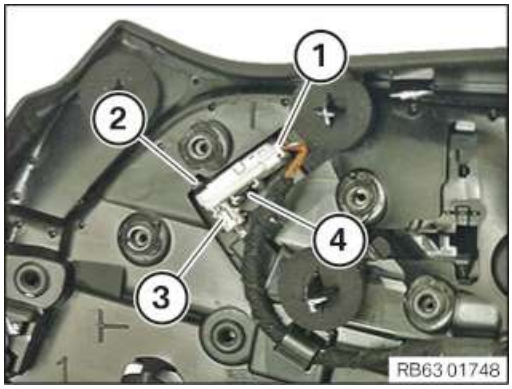
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Release the latch mechanism (1) and feed out the Bowden cable for the inner door handle (2).

  While doing so, the Bowden cable for the inner door handle (2) is guided out independently from the door handle.
- Unlock the plug connection (3), disconnect and remove the door trim panel.

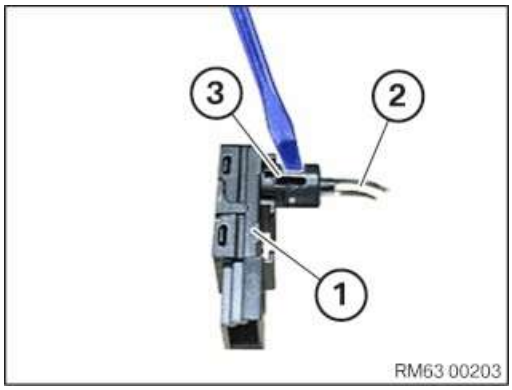
## MAIN WORK

### 2 – Remove door opener fibre-optic cable

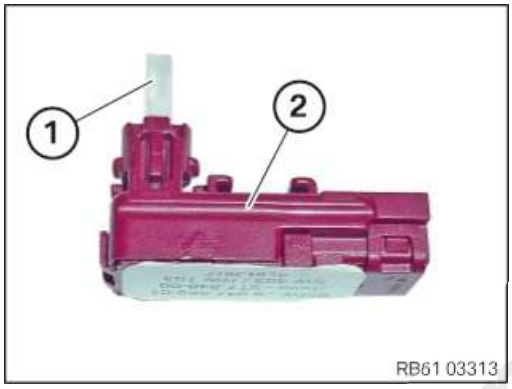



- Disconnect (1) connector.
- Release latch mechanism (2).
- Remove LED module with optical fibre (3) from the holder (4).

### 3 – Replacing the optical fibre cable of the front door opener



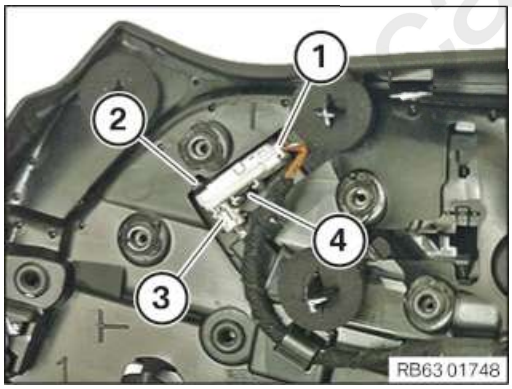

- Release the latch mechanism (3) by using a screwdriver (3 mm blade) on the LED module (1). Then pull out the optical fibre (2).




- 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

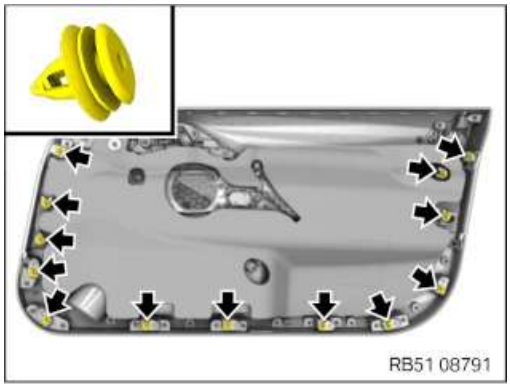



- Correctly position the LED module with optical fibre (3) on the holder (4) and engage it in the latch mechanism (2).
- Connect connector (1).

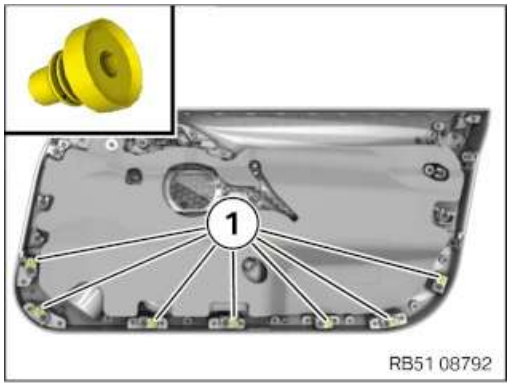
## POSTPROCESSES

### 5 – Install front door trim panel

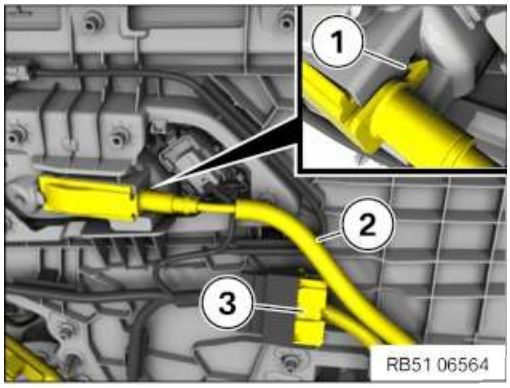
cardiagn.com




- Check clips (arrows) for damage and, if necessary, renew them.



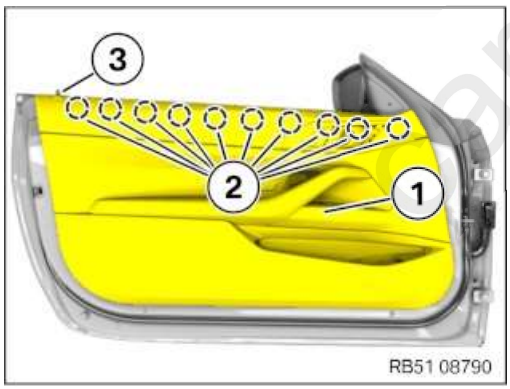

- Check the stop pad (1) for damage, renew if necessary.



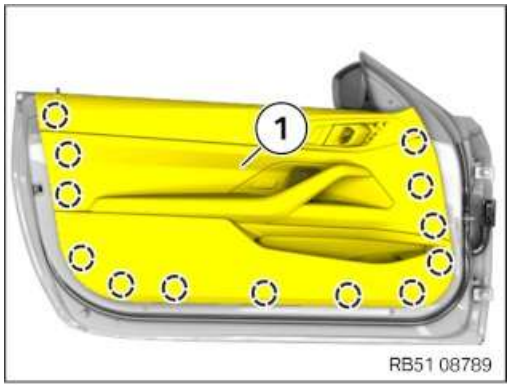

**NOTICE**

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

- Push the inner door opener in closed direction.
- Insert the Bowden cable for the door handle inside (2) and clip it in with the latch mechanism (1) .
- Connect connectors (3) and lock.

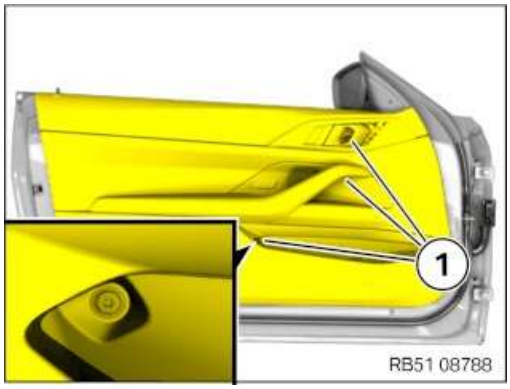



- Insert the front door trim panel (1) from the top over the operating rod (3) and clip it in with the latch mechanisms (2) .




- Clip in the door trim panel (1) at the marked places.

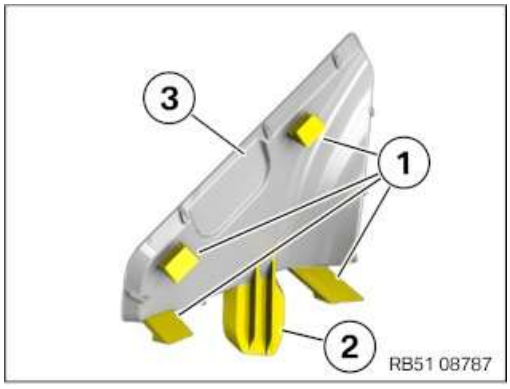
carmanual.com




- Tighten the screws (1).

**Door trim panel**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 3 Nm |




**Check**

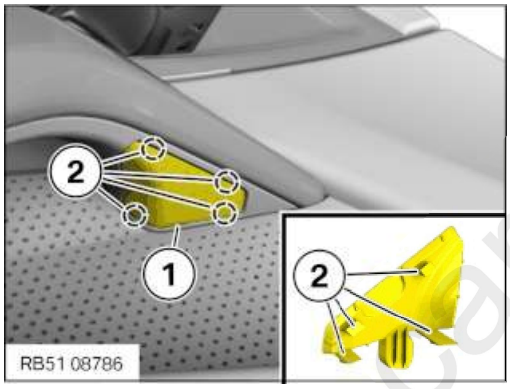
- Check the latch mechanisms (1) and the guide (2) at the cover (3) for damage.

**Result**

» The latch mechanisms (1) or the guides (2) are damaged.

**Measure**

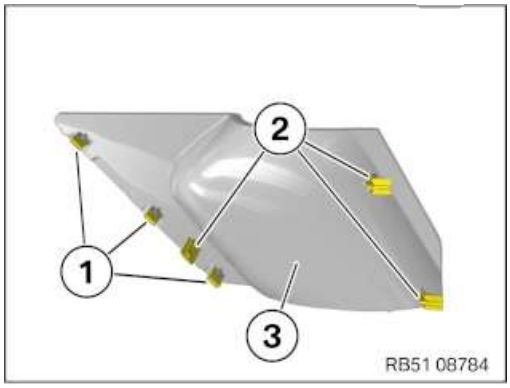
- Replace the cover (3).




- Position the cover (1) and clip it in with the latch mechanisms (2) .

**Check**

- Check the latch mechanisms (1) and the guides (2) at the cover of the door handle (3) for door handle.



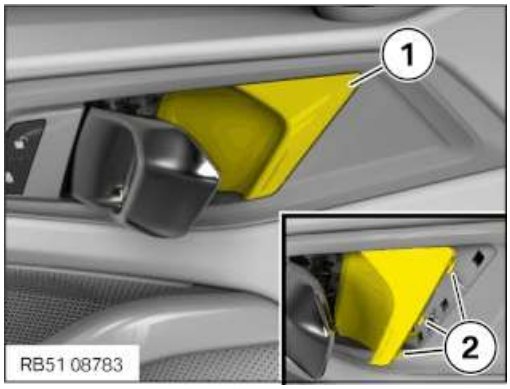

**Result**

» The latch mechanisms (1) or the guides (2) are damaged.

**Measure**

- Replace door handle cover (3).

cardiagn.com




- Pull the door handle.
- Insert the cover of the door handle (1) with the guides and clip it in with the latch mechanisms (2) .

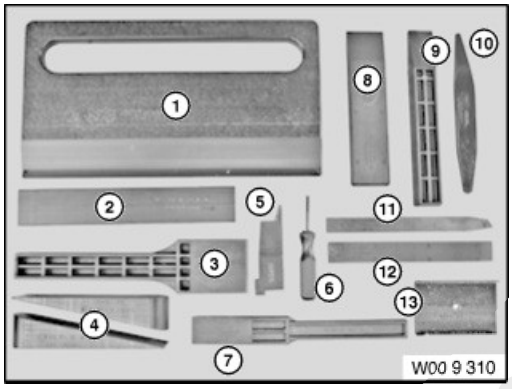
## Additional Information

### Overview of Tightening Torques

| **Door trim panel** | | | Used in step 5 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 3 Nm |

### Overview of Special Tools

**0 493 752 (00 9 329) Case**




| **Common** | Used in step 1 |
|---|---|
| Usage | (Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019. |
| Included in the tool or work | 0 490 527 |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 01 07 09 (530) |

carorgn.com

# 63 31 240 Remove and install/replace the optical fibre for folding compartment on the front left or right

## PRELIMINARY WORK

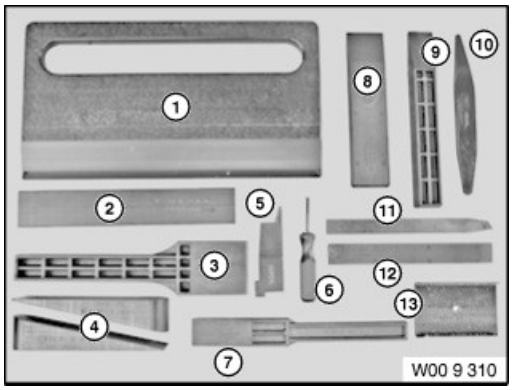
### 1 – Remove front door trim panel

**RISK OF DAMAGE**

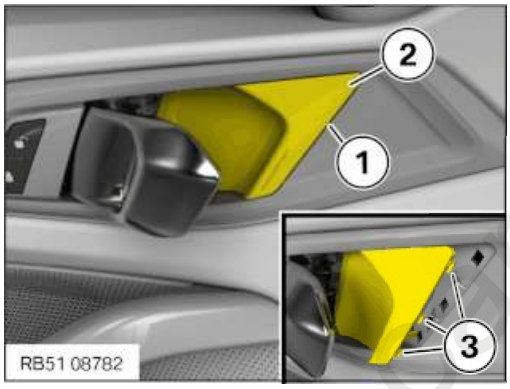
**Damage of high-quality surfaces.**

**Plastic wedges can damage high-quality surfaces.**

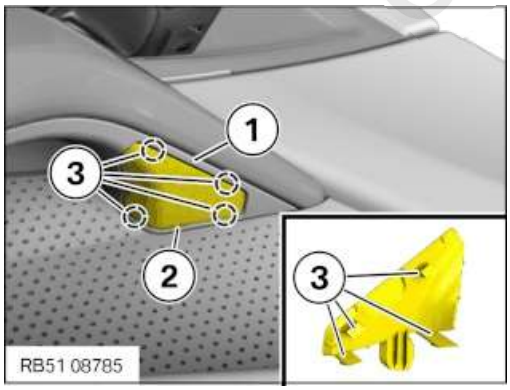
- Protect surfaces from damage.



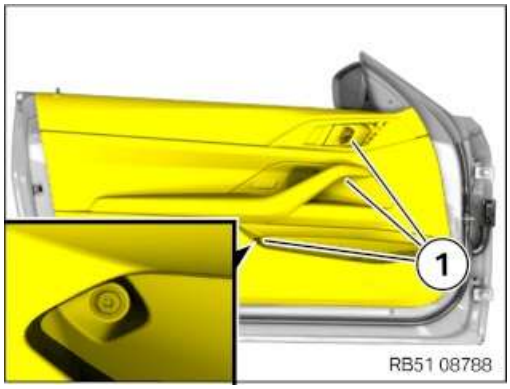

- Have the set of special tools 0 493 752 (00 9 329) ready.



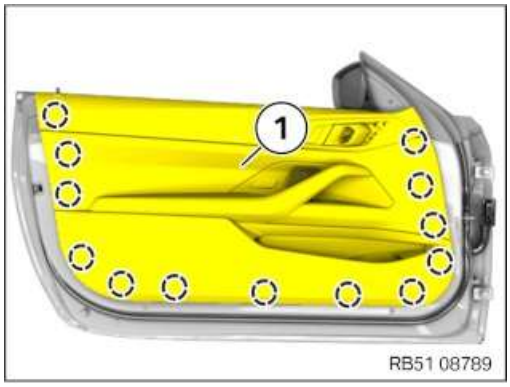

- Pull the door handle.
- Position suitable special tool on the recess in the area (1) .
- Unclip the cover of the door handle (2) with the latch mechanisms (3).
- Feed out the cover of the door handle (2) from the latch mechanisms and remove it forwards.



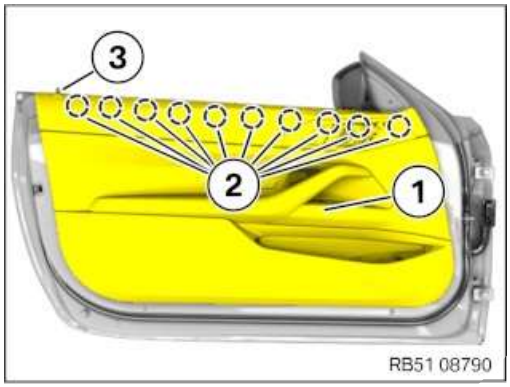

- Position suitable special tool on the recess in the area (1) .
- Unclip the cover (2) with the latch mechanisms (3) and remove it downwards.



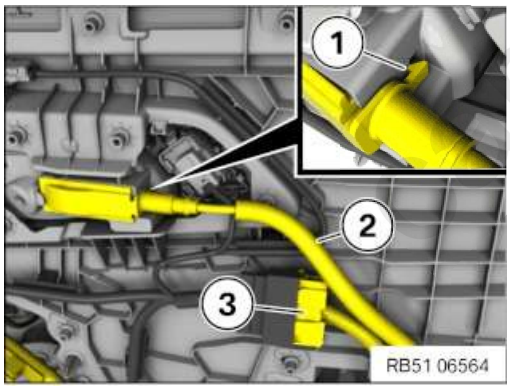

- Loosen screws (1).




- Unclip the door trim panel (1) with the suitable special tool at the marked places.




- Release the door trim panel (1) with the latch mechanisms (2).
- Lift the door trim panel (1) upwards over the operating rod (3).




**NOTICE**

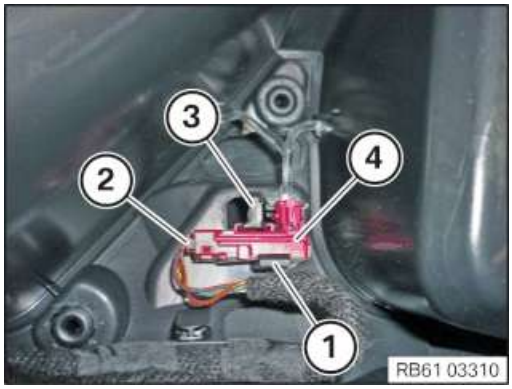
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Release the latch mechanism (1) and feed out the Bowden cable for the inner door handle (2).

  While doing so, the Bowden cable for the inner door handle (2) is guided out independently from the door handle.
- Unlock the plug connection (3), disconnect and remove the door trim panel.

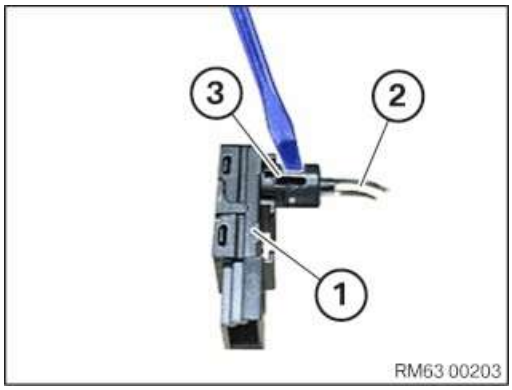
## MAIN WORK

### 2 – Remove door pocket fibre-optic cable

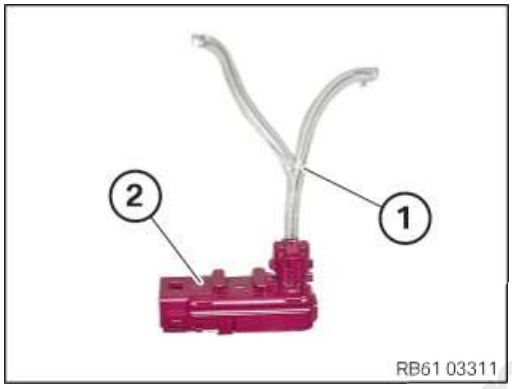



- Unplug connector (2).
- Release latch mechanism (1).
- Remove LED module with fibre-optic cable (4) from the holder (3).

**3 – Replacing the optical fibre cable of the front door pocket**



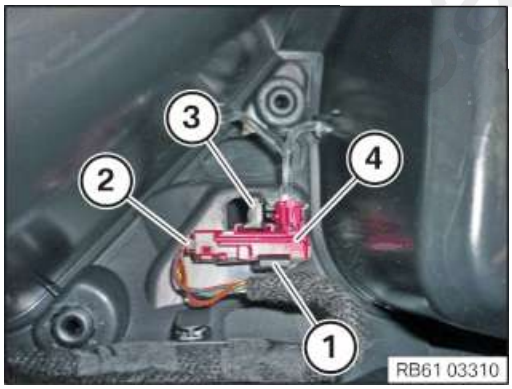

- Release the latch mechanism (3) by using a screwdriver (3 mm blade) on the LED module (1). Then pull out the optical fibre (2).




- Renew the optical fibre (1).

  **Parts**: Optical fibres
- Carefully clip the optical fibre (1) into the LED module (2).

**4 – Installing the optical fibre in the front door pocket**

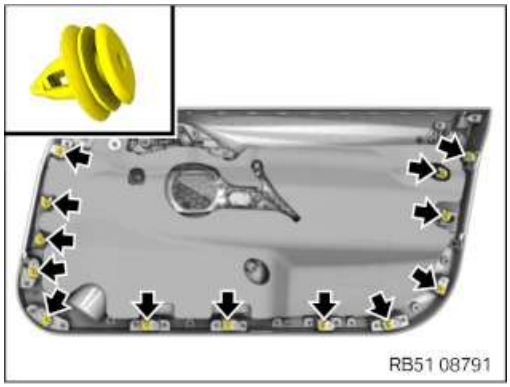



- Position LED module with optical fibre (4) correctly on the holder (3) and engage it in the latch mechanism (1).
- Connect connector (2).

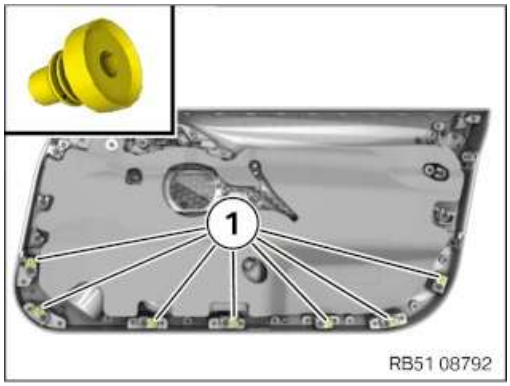
## POSTPROCESSES

**5 – Install front door trim panel**

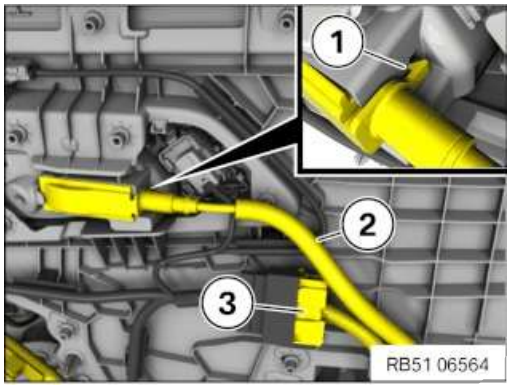
erdiagr.com




- Check clips (arrows) for damage and, if necessary, renew them.



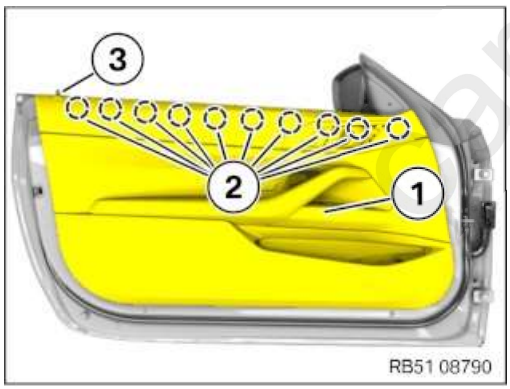

- Check the stop pad (1) for damage, renew if necessary.



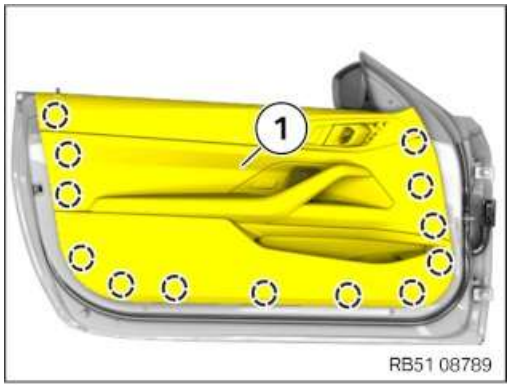

**NOTICE**

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

- Push the inner door opener in closed direction.
- Insert the Bowden cable for the door handle inside (2) and clip it in with the latch mechanism (1) .
- Connect connectors (3) and lock.

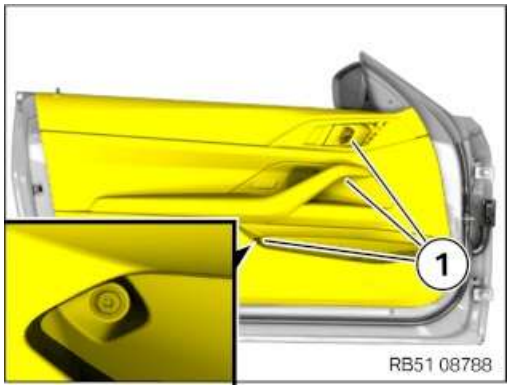



- Insert the front door trim panel (1) from the top over the operating rod (3) and clip it in with the latch mechanisms (2) .




- Clip in the door trim panel (1) at the marked places.

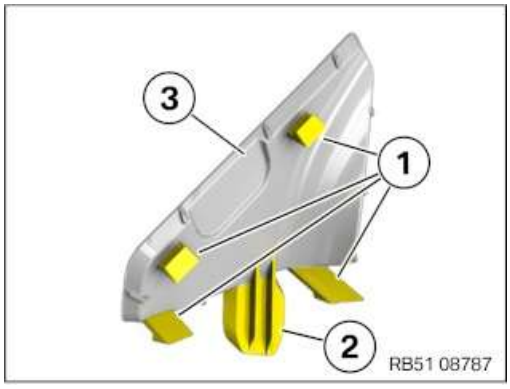
carmanual.com




- Tighten the screws (1).

**Door trim panel**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 3 Nm |




**Check**

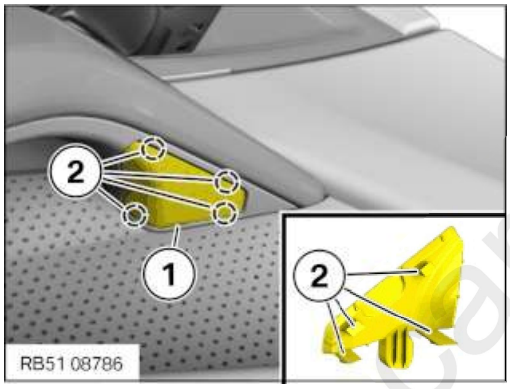
- Check the latch mechanisms (1) and the guide (2) at the cover (3) for damage.

**Result**

» The latch mechanisms (1) or the guides (2) are damaged.

**Measure**

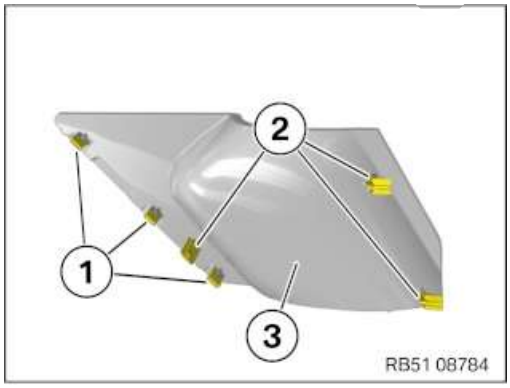
- Replace the cover (3).




- Position the cover (1) and clip it in with the latch mechanisms (2) .

**Check**

- Check the latch mechanisms (1) and the guides (2) at the cover of the door handle (3) for door handle.



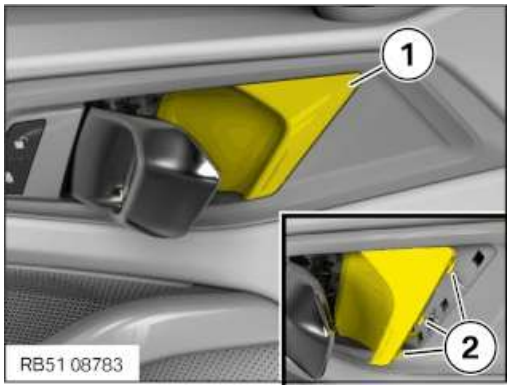

**Result**

» The latch mechanisms (1) or the guides (2) are damaged.

**Measure**

- Replace door handle cover (3).

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- Pull the door handle.
- Insert the cover of the door handle (1) with the guides and clip it in with the latch mechanisms (2) .

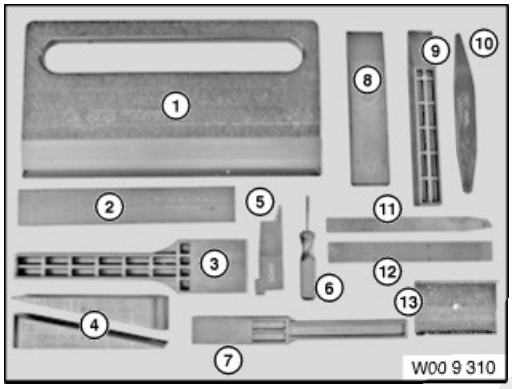
## Additional Information

### Overview of Tightening Torques

| **Door trim panel** | | | Used in step 5 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 3 Nm |

### Overview of Special Tools

**0 493 752 (00 9 329) Case**




| **Common** | Used in step 1 |
|---|---|
| Usage | (Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019. |
| Included in the tool or work | 0 490 527 |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 01 07 09 (530) |

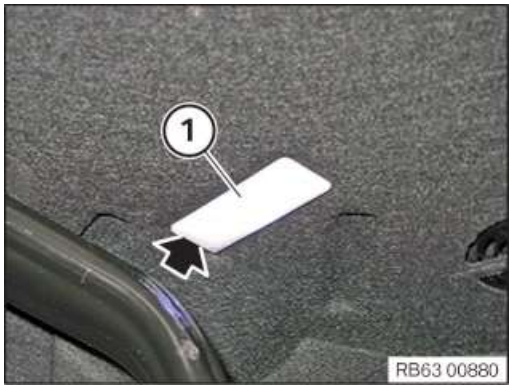
carorgn.com

# 63 31 020 Removing and installing/renewing footwell light

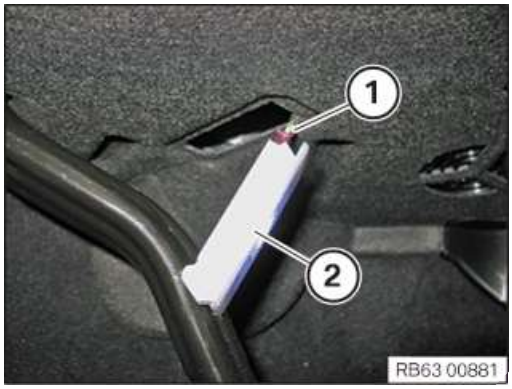
### 1 – Removing the footwell light at the front left or right

**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.

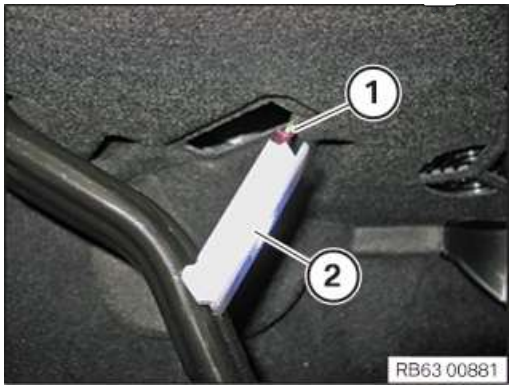



- Unlock and disconnect connector (1).
- Remove the footwell light (2).

### 2 – Installing the footwell light at the front left or right

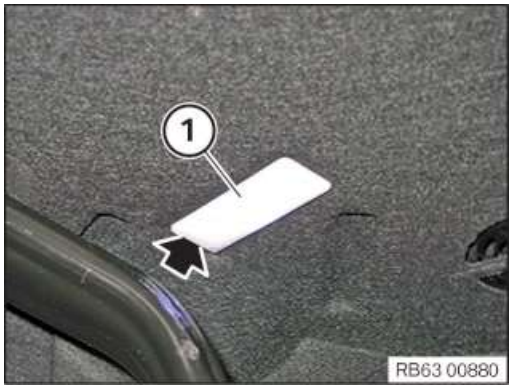
**NOTICE**

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

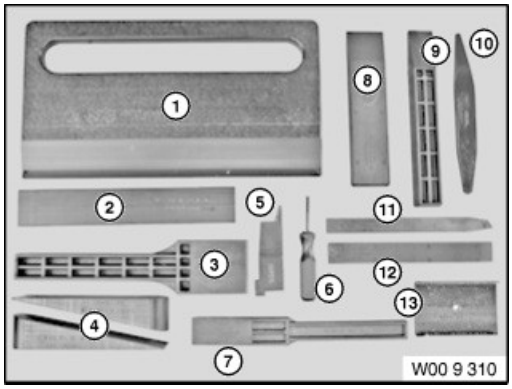



- Position the footwell light (1) in the footwell trim (arrow).

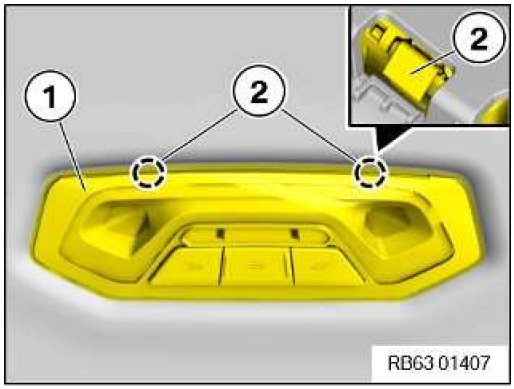
cardiagn.com

# 63 31 003 Removing and installing/replacing complete ceiling light

### 1 – Remove interior roof light

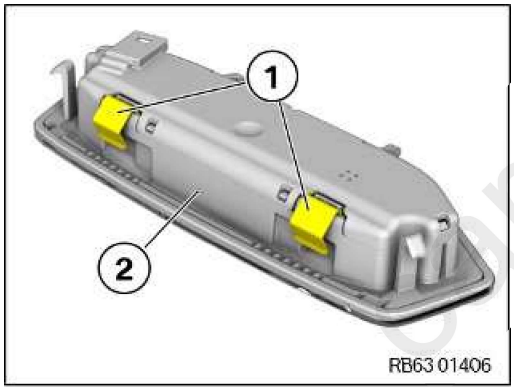



- Have the set of special tools 0 493 752 (00 9 329) ready.




- Lever interior roof light (1) out of clamps (2) using a suitable tool.
- Unlock plug connection and disconnect.

### 2 – Install interior roof light




**Check**

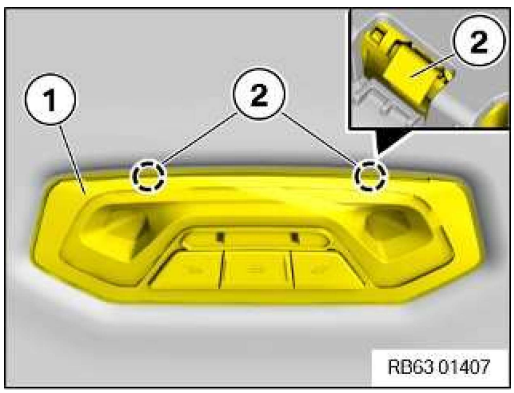
- Check the clamps (1) for damage.

**Result**

» Clamps (1) are damaged.

**Measure**

- Renew the interior roof light (2).



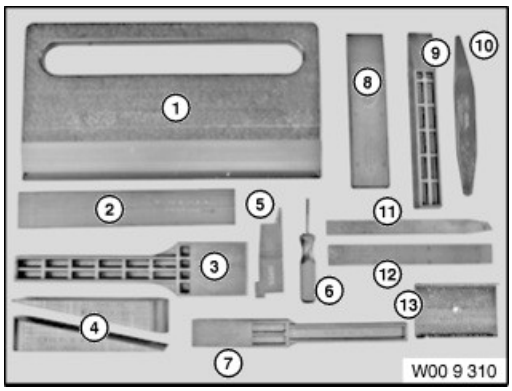

- Connect connectors and lock.
- Clip in the interior roof light (1) with clamps (2).

## Additional Information

ordiagn.com

## Overview of Special Tools

### 0 493 752 (00 9 329) Case




| Common | Used in step 1 |
|---|---|
| Usage | (Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019. |
| Included in the tool or work | 0 490 527 |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 01 07 09 (530) |

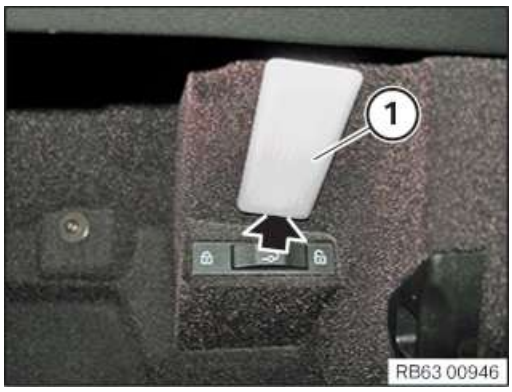
cardiagn.com

# 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**

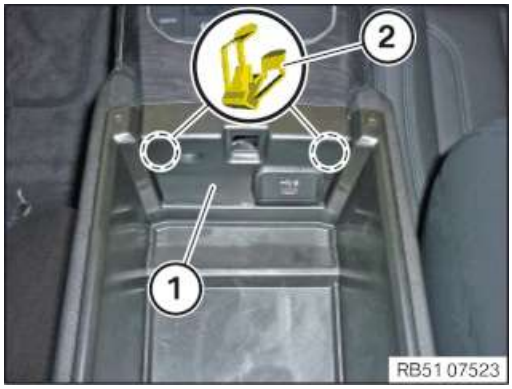
**Damage of high-quality surfaces.**

**Plastic wedges can damage high-quality surfaces.**

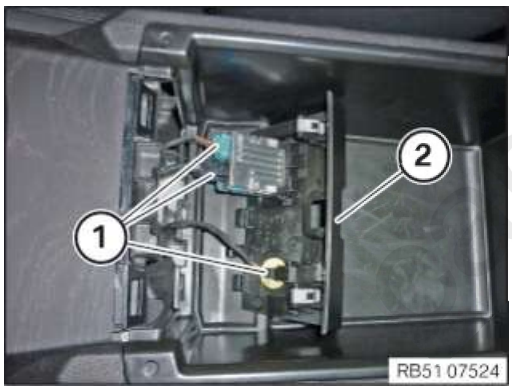
- Protect surfaces from damage.

## 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.

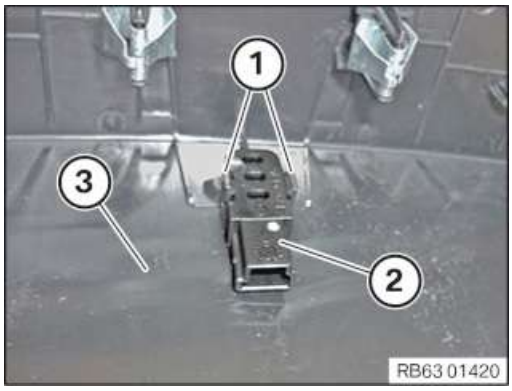



- Unlock and disconnect the plug connections (1) and remove the trim (2) .

.com

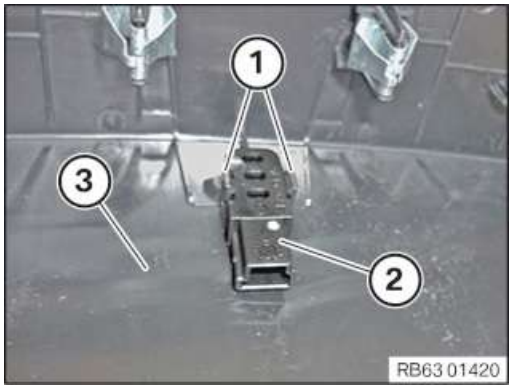
## MAIN WORK

### 2 – Removing the LED in the storage compartment on the centre armrest




- Unlock the latch mechanisms (1).
- Remove the LED (2) from the storage compartment trim (3).

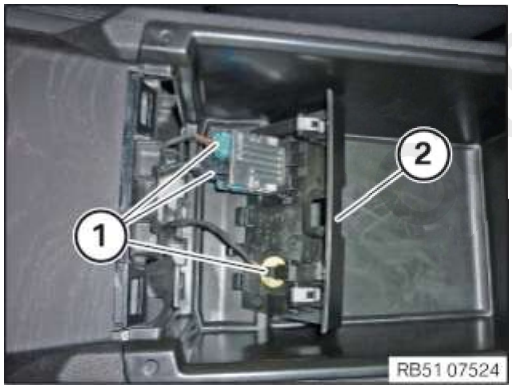
### 3 – Installing the LED in the storage compartment of the centre armrest



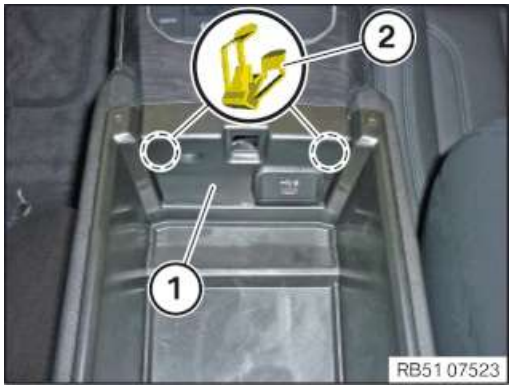

- Position LED (2) correctly in the storage compartment trim (3) and engage it into latch mechanisms (1).

## POSTPROCESSES

### 4 – Installing the trim in the storage compartment of the centre armrest




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

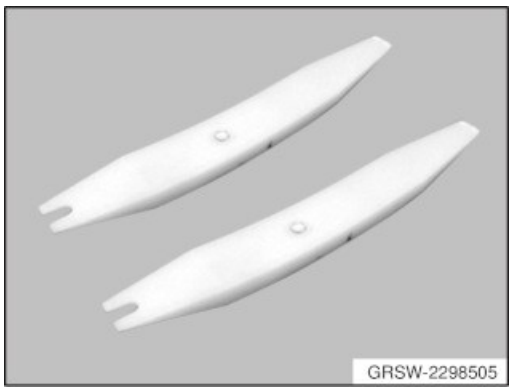



- Correctly position trim (1) and snap into the clamps (2).

## Additional Information

## Overview of Special Tools

### 2 298 505 Wedge



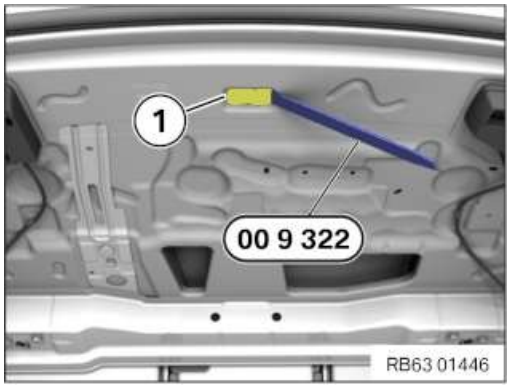

**Common** Used in step 1

| | |
|---|---|
| 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) |

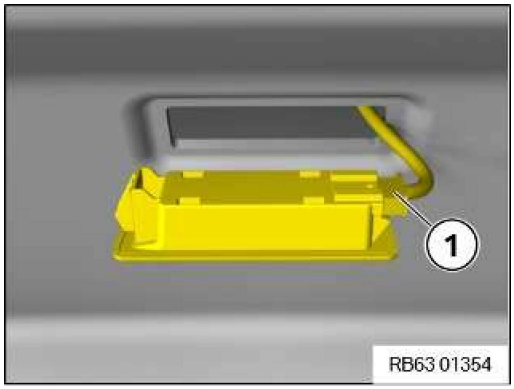
cardiagn.com

# 63 31 080 Removing and installing/replacing luggage compartment light

### 1 – Removing the luggage compartment light

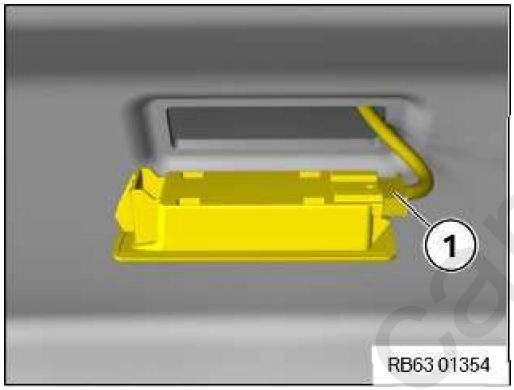



- Unclip luggage compartment light (1) on the top partition wall with the special tool 0 490 539 (00 9 322).

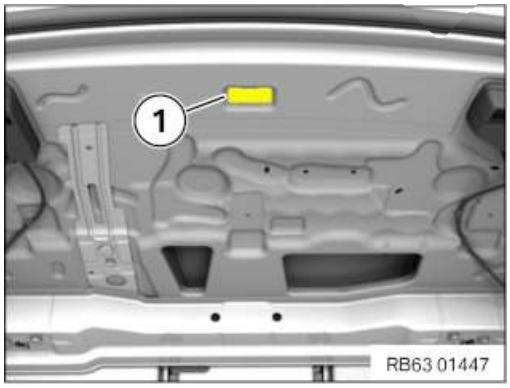



- Unlock plug connection (1) and disconnect.

### 2 – Installing the luggage compartment light




- Connect connectors (1) and lock.



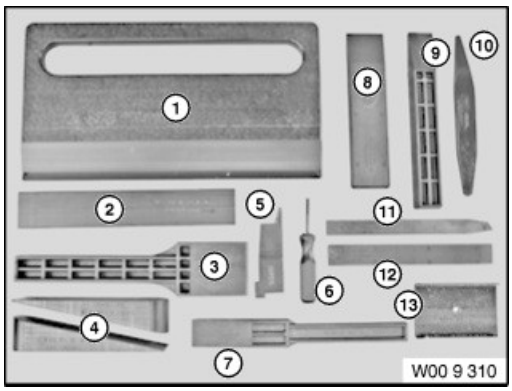

- Position the luggage compartment light (1) on the top partition wall and clip in.

## Additional Information

### Overview of Special Tools

cardiagn.com

**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) |

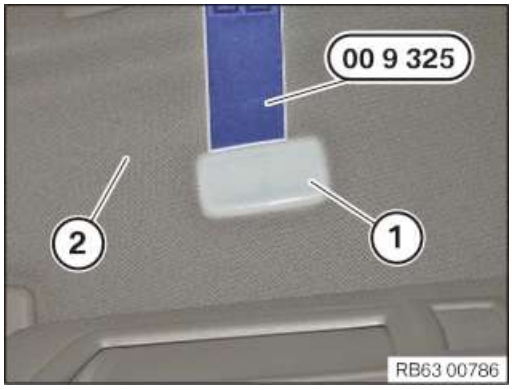
cardiagn.com

# 63 31 050 Removing and installing/replacing mirror light

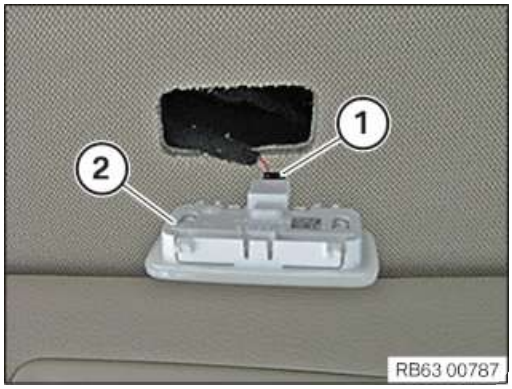
## 1 – Removing front vanity mirror light

**NOTICE**

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




- Lever out the front vanity mirror light (1) with the special tool 0 496 569 (00 9 325) from the headlining (2).

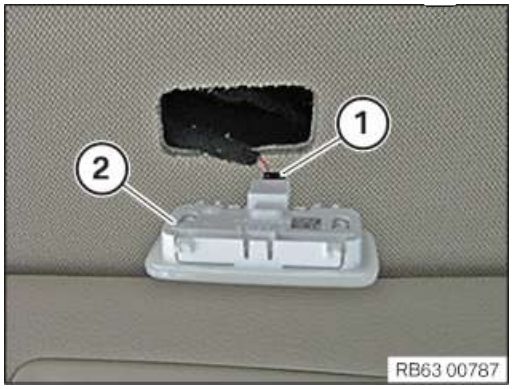



- Unlock plug connection (1) and disconnect.
- Remove the front vanity mirror light (2).

## 2 – Installing front vanity mirror light

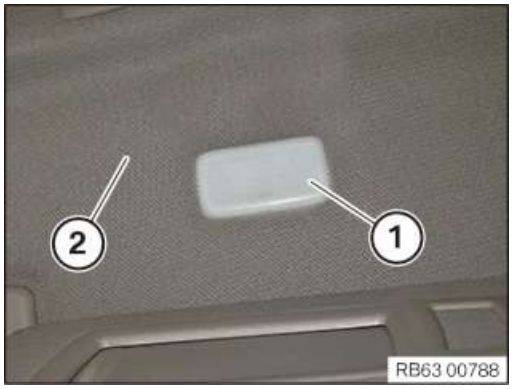
**NOTICE**

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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- Clip in 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) |

cardiagn.com

# 63 31 319 Replace the LED module in the front door opener on the left or right

## PRELIMINARY WORK

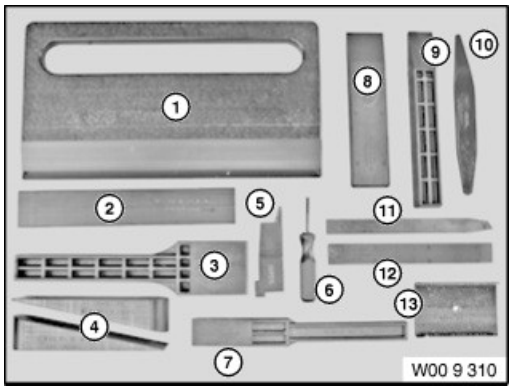
### 1 – Remove front door trim panel

**RISK OF DAMAGE**

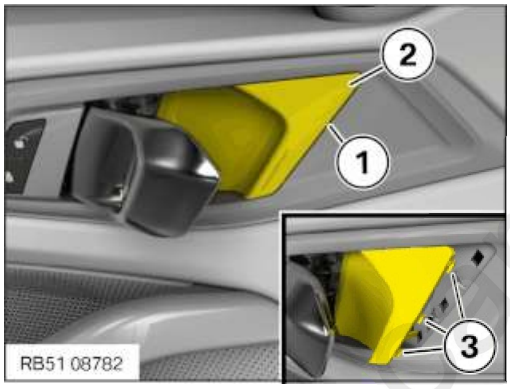
**Damage of high-quality surfaces.**

**Plastic wedges can damage high-quality surfaces.**

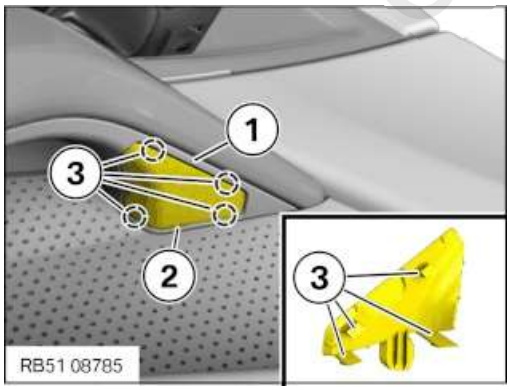
- Protect surfaces from damage.



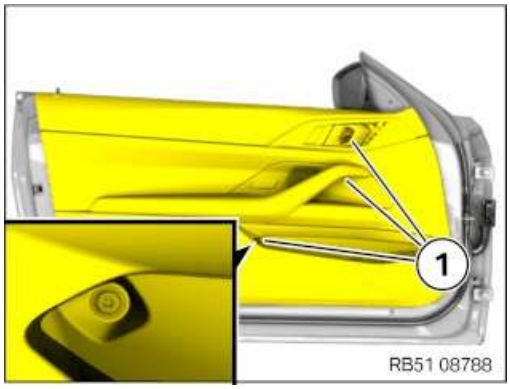

- Have the set of special tools 0 493 752 (00 9 329) ready.



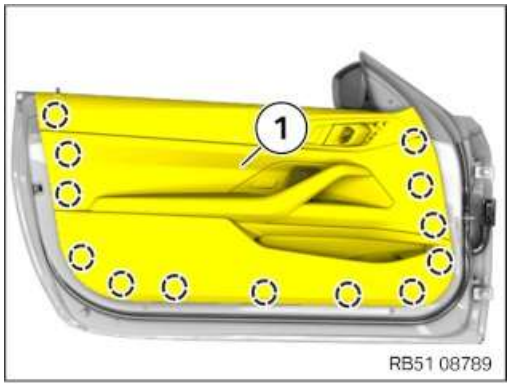

- Pull the door handle.
- Position suitable special tool on the recess in the area (1) .
- Unclip the cover of the door handle (2) with the latch mechanisms (3).
- Feed out the cover of the door handle (2) from the latch mechanisms and remove it forwards.



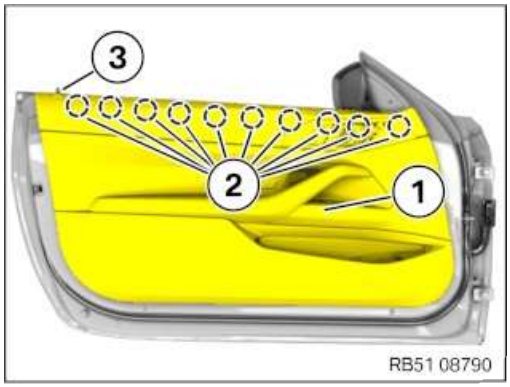

- Position suitable special tool on the recess in the area (1) .
- Unclip the cover (2) with the latch mechanisms (3) and remove it downwards.



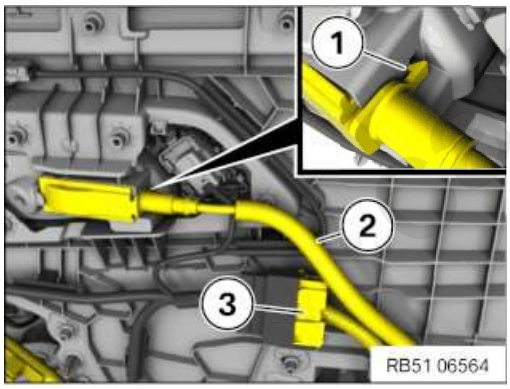

- Loosen screws (1).




- Unclip the door trim panel (1) with the suitable special tool at the marked places.




- Release the door trim panel (1) with the latch mechanisms (2).
- Lift the door trim panel (1) upwards over the operating rod (3).




**NOTICE**

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

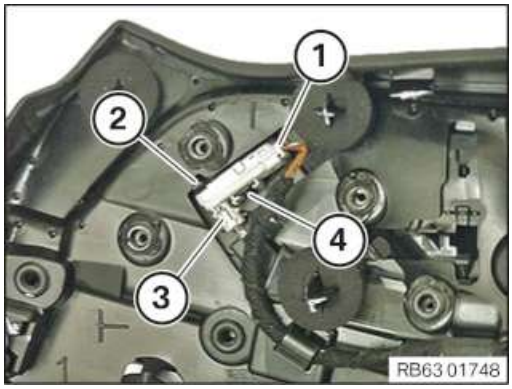
- Release the latch mechanism (1) and feed out the Bowden cable for the inner door handle (2).

  While doing so, the Bowden cable for the inner door handle (2) is guided out independently from the door handle.
- Unlock the plug connection (3), disconnect and remove the door trim panel.

## MAIN WORK

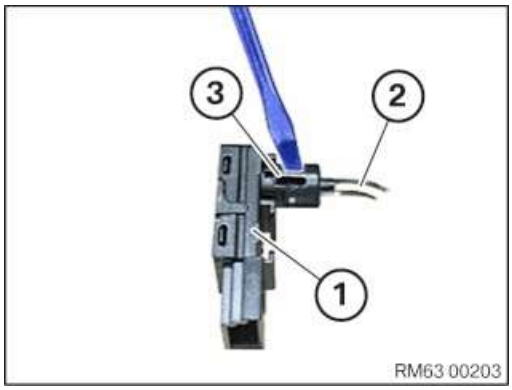
### 2 – Remove front LED module for door opener

mydiagn.com

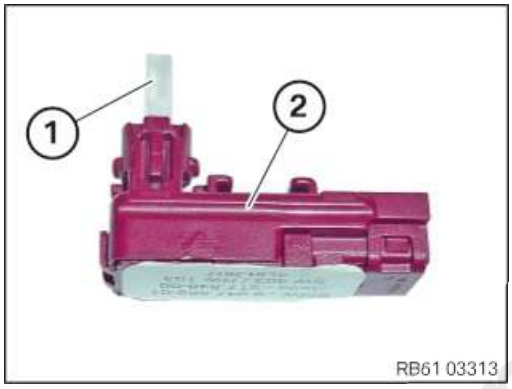



- Disconnect (1) connector.
- Loosen (2) latch mechanism.
- Remove LED module with optical fibre (3) from the holder (4).

### 3 – Replacing the LED module of the front door opener



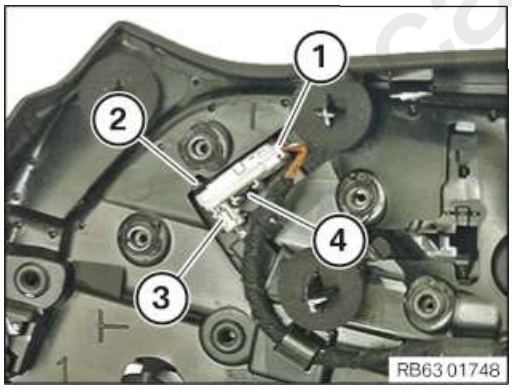

- Release the latch mechanism (3) by using a screwdriver (3 mm blade) on the LED module (1). Then pull out the optical fibre (2).




- Replace LED module (2).

  **Parts**: LED module
- Carefully clip the optical fibre (1) into the LED module (2).

### 4 – Installing front door handle LED module

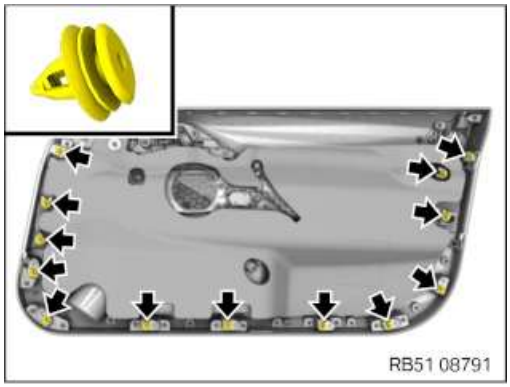



- Correctly position the LED module with optical fibre (3) on the holder (4) and engage it in the latch mechanism (2).
- Connect connector (1).

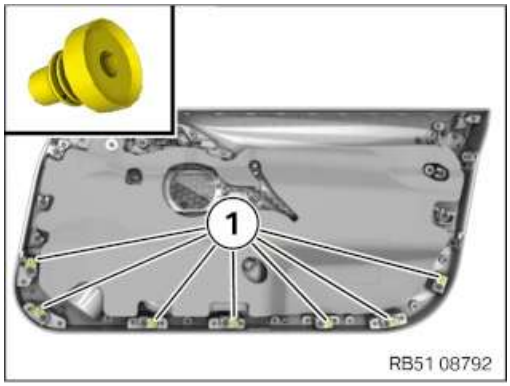
## POSTPROCESSES

### 5 – Install front door trim panel

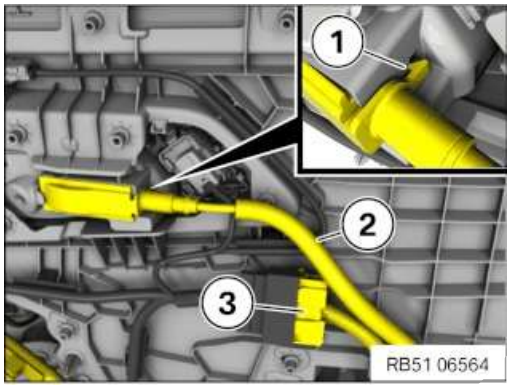
cardiagn.com




- Check clips (arrows) for damage and, if necessary, renew them.



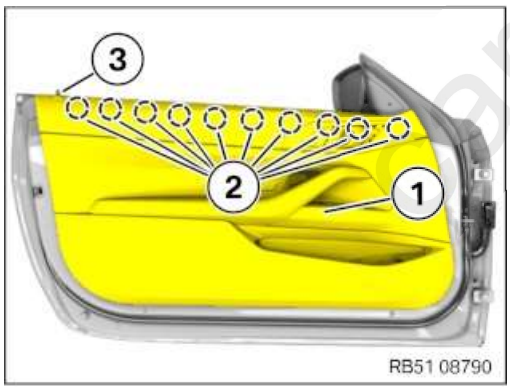

- Check the stop pad (1) for damage, renew if necessary.



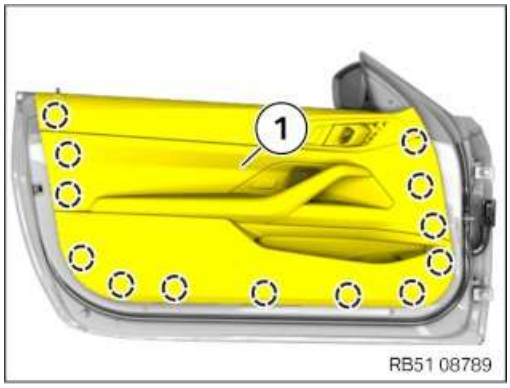

**NOTICE**

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

- Push the inner door opener in closed direction.
- Insert the Bowden cable for the door handle inside (2) and clip it in with the latch mechanism (1) .
- Connect connectors (3) and lock.

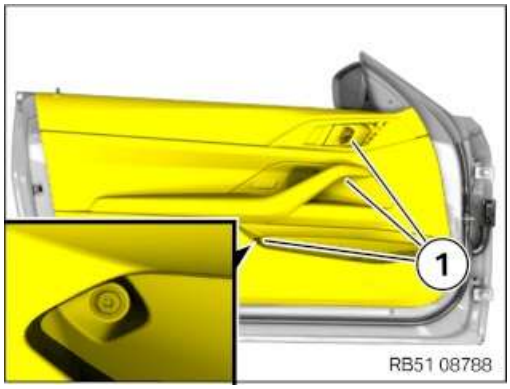



- Insert the front door trim panel (1) from the top over the operating rod (3) and clip it in with the latch mechanisms (2) .




- Clip in the door trim panel (1) at the marked places.

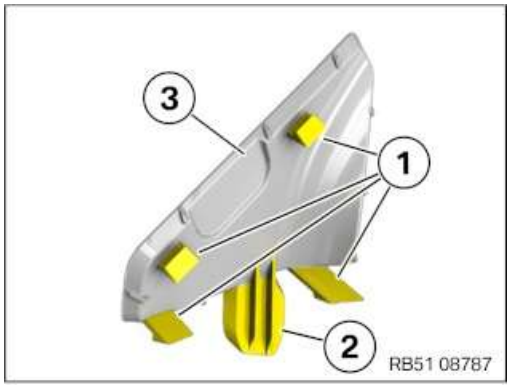
carmanual.com




- Tighten the screws (1).

**Door trim panel**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 3 Nm |




**Check**

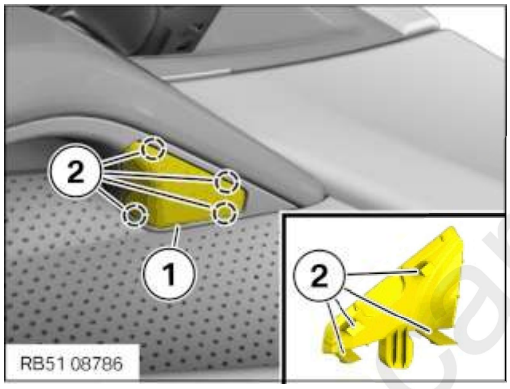
- Check the latch mechanisms (1) and the guide (2) at the cover (3) for damage.

**Result**

» The latch mechanisms (1) or the guides (2) are damaged.

**Measure**

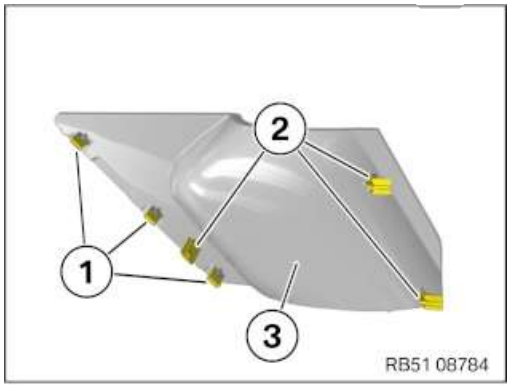
- Replace the cover (3).




- Position the cover (1) and clip it in with the latch mechanisms (2) .

**Check**

- Check the latch mechanisms (1) and the guides (2) at the cover of the door handle (3) for door handle.



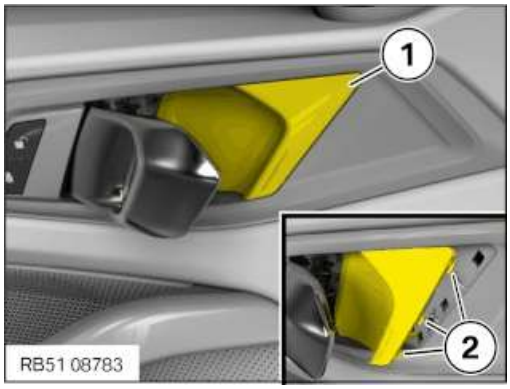

**Result**

» The latch mechanisms (1) or the guides (2) are damaged.

**Measure**

- Replace door handle cover (3).

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- Pull the door handle.
- Insert the cover of the door handle (1) with the guides and clip it in with the latch mechanisms (2) .

**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

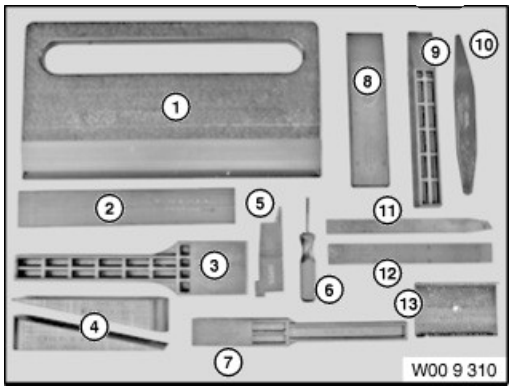
## Additional Information

### Overview of Tightening Torques

| Door trim panel | | | Used in step 5 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 3 Nm |

### Overview of Special Tools

**0 493 752 (00 9 329) Case**




| Common | Used in step 1 |
|---|---|
| Usage | (Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019. |
| Included in the tool or work | 0 490 527 |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 01 07 09 (530) |

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# 63 31 318 Replace the LED module in the front folding compartment on the left or right

## PRELIMINARY WORK

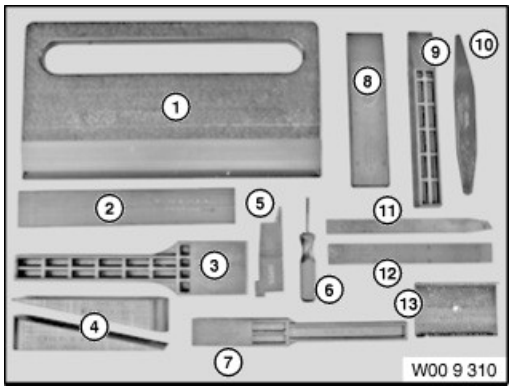
### 1 – Remove front door trim panel

**RISK OF DAMAGE**

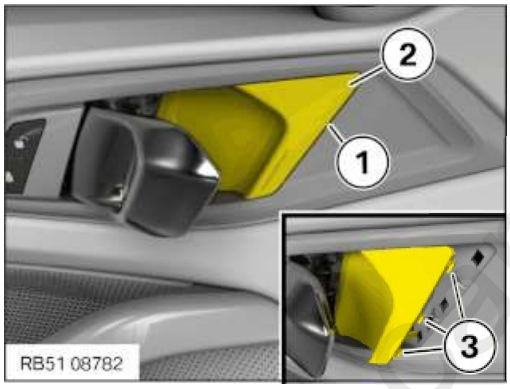
**Damage of high-quality surfaces.**

**Plastic wedges can damage high-quality surfaces.**

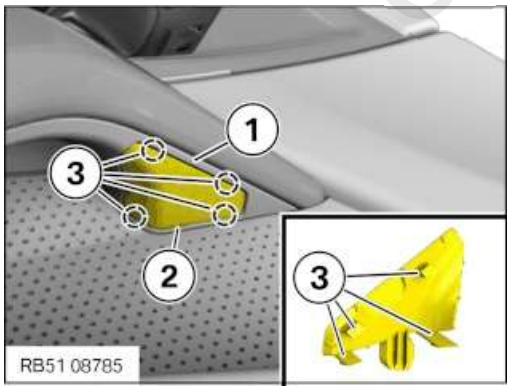
- Protect surfaces from damage.



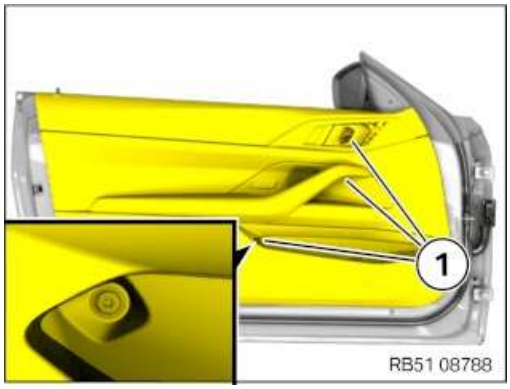

- Have the set of special tools 0 493 752 (00 9 329) ready.



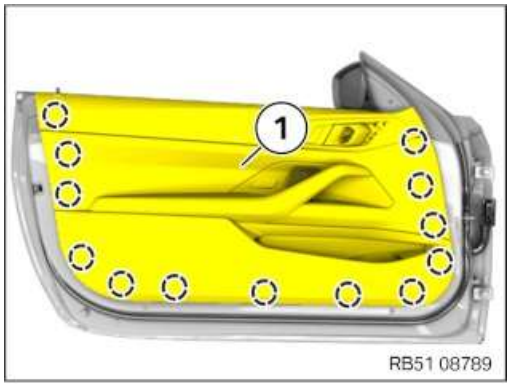

- Pull the door handle.
- Position suitable special tool on the recess in the area (1) .
- Unclip the cover of the door handle (2) with the latch mechanisms (3).
- Feed out the cover of the door handle (2) from the latch mechanisms and remove it forwards.



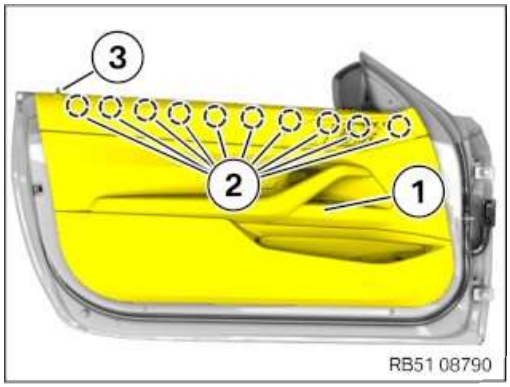

- Position suitable special tool on the recess in the area (1) .
- Unclip the cover (2) with the latch mechanisms (3) and remove it downwards.



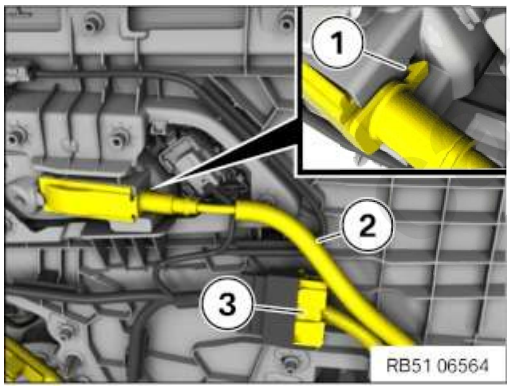

- Loosen screws (1).




- Unclip the door trim panel (1) with the suitable special tool at the marked places.




- Release the door trim panel (1) with the latch mechanisms (2).
- Lift the door trim panel (1) upwards over the operating rod (3).




**NOTICE**

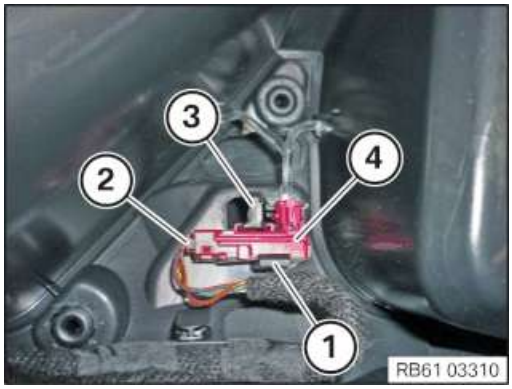
Schematic diagram is for example purposes. Some parts may differ in certain details.

- Release the latch mechanism (1) and feed out the Bowden cable for the inner door handle (2).

  While doing so, the Bowden cable for the inner door handle (2) is guided out independently from the door handle.
- Unlock the plug connection (3), disconnect and remove the door trim panel.

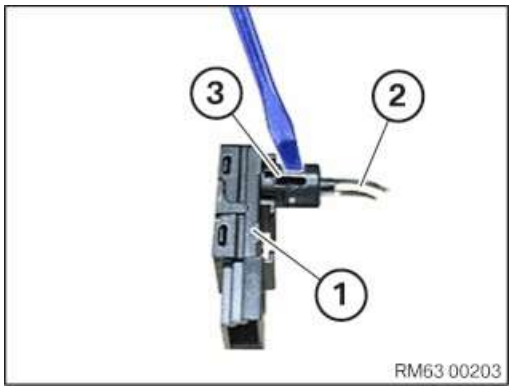
## MAIN WORK

### 2 – Removing the LED module of front folding compartment

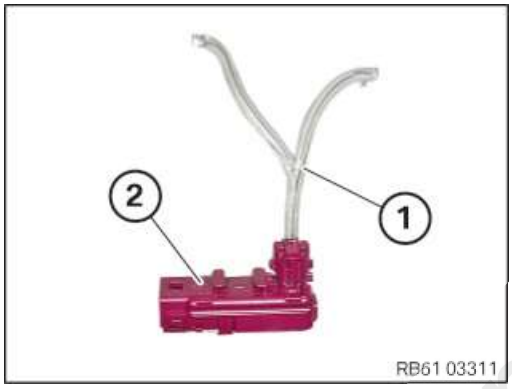



- Disconnect the connector (2).
- Release latch mechanism (1).
- Remove LED module with optical fibre (4) from holder (3).

**3 – Replacing the LED module of the front door pocket**



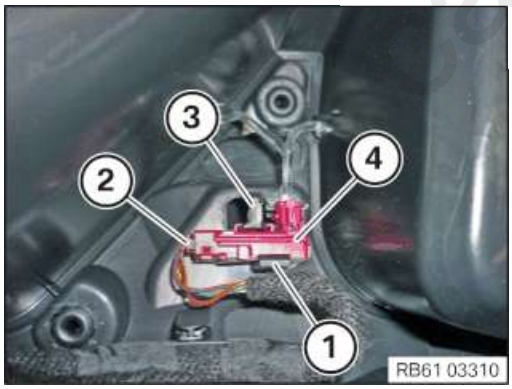

- Release the latch mechanism (3) on the LED module (1) using a screwdriver (3-mm blade). Then pull out the optical fibre (2).




- 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)**

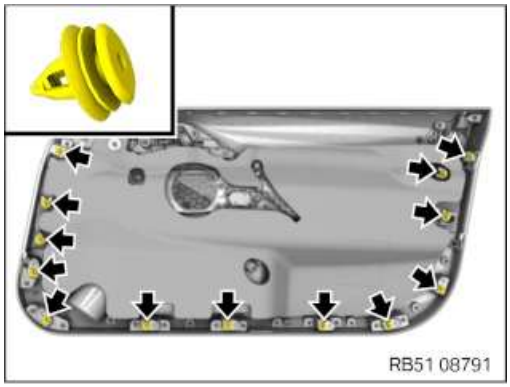



- Correctly position the LED module with optical fibre (4) on the holder (3) and engage it in the latch mechanism (1).
- Connect connector (2).

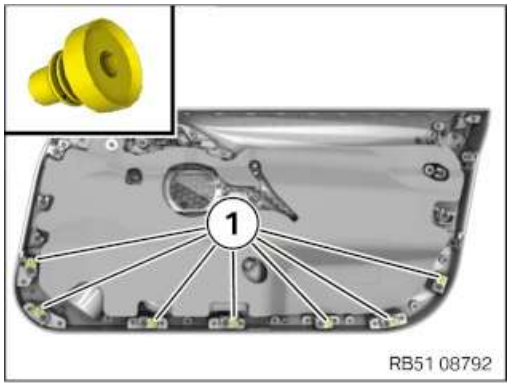
## POSTPROCESSES

**5 – Install front door trim panel**

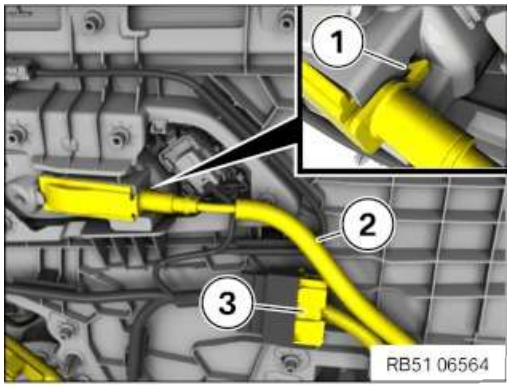
erdiagr.com




- Check clips (arrows) for damage and, if necessary, renew them.



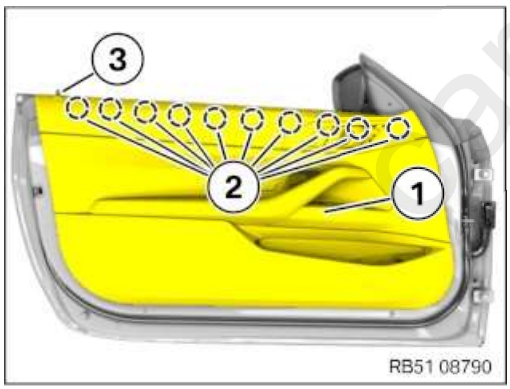

- Check the stop pad (1) for damage, renew if necessary.



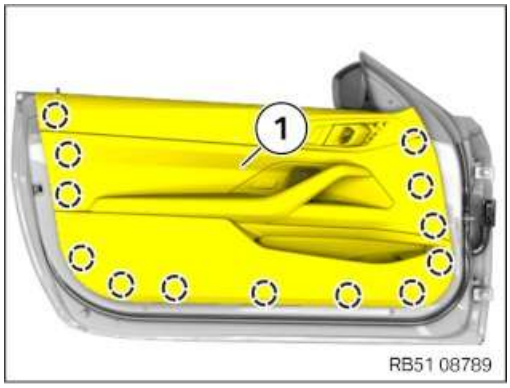

**NOTICE**

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

- Push the inner door opener in closed direction.
- Insert the Bowden cable for the door handle inside (2) and clip it in with the latch mechanism (1) .
- Connect connectors (3) and lock.

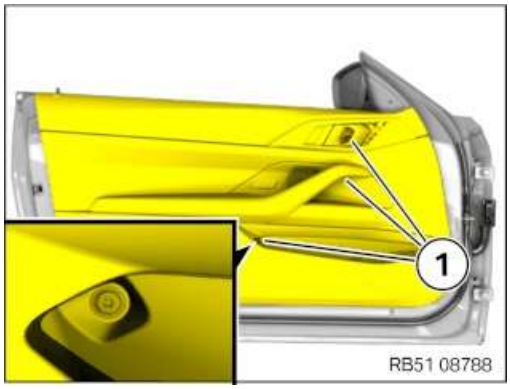



- Insert the front door trim panel (1) from the top over the operating rod (3) and clip it in with the latch mechanisms (2) .




- Clip in the door trim panel (1) at the marked places.

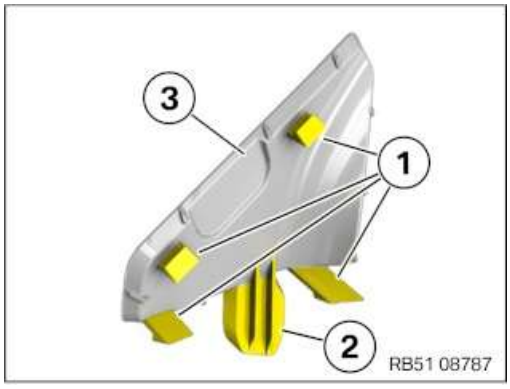
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- Tighten the screws (1).

**Door trim panel**

| | | | |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 3 Nm |




**Check**

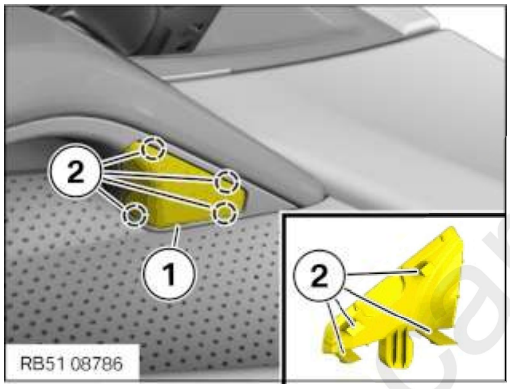
- Check the latch mechanisms (1) and the guide (2) at the cover (3) for damage.

**Result**

» The latch mechanisms (1) or the guides (2) are damaged.

**Measure**

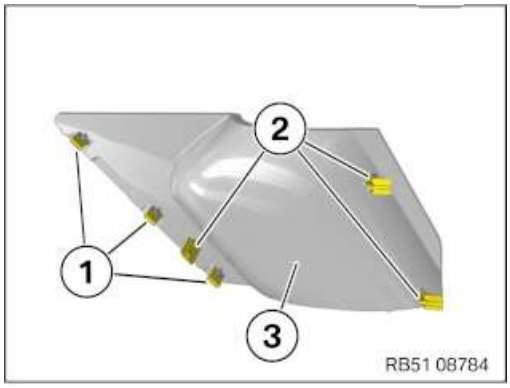
- Replace the cover (3).




- Position the cover (1) and clip it in with the latch mechanisms (2) .

**Check**

- Check the latch mechanisms (1) and the guides (2) at the cover of the door handle (3) for door handle.



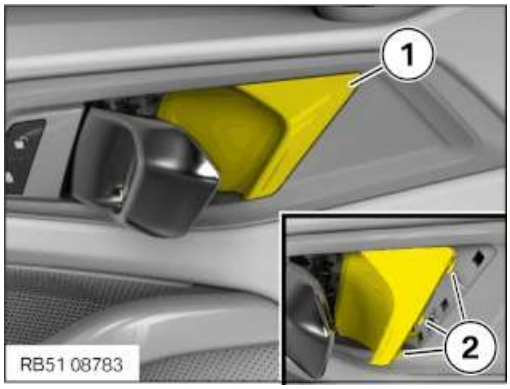

**Result**

» The latch mechanisms (1) or the guides (2) are damaged.

**Measure**

- Replace door handle cover (3).

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- Pull the door handle.
- Insert the cover of the door handle (1) with the guides and clip it in with the latch mechanisms (2) .

**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

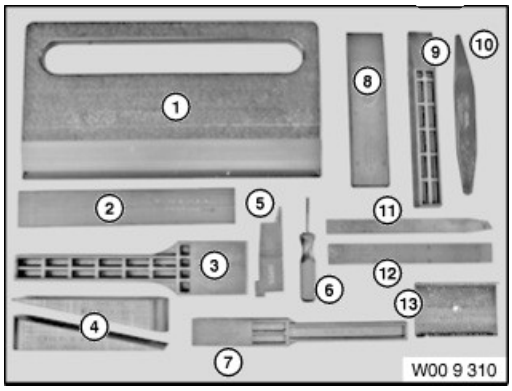
## Additional Information

### Overview of Tightening Torques

| Door trim panel | | | Used in step 5 |
|---|---|---|---|
| Oval-head screw | | Tightening torque | 3 Nm |

### Overview of Special Tools

**0 493 752 (00 9 329) Case**




| Common | Used in step 1 |
|---|---|
| Usage | (Case) with insert without mounting wedges, delivery while stocks last - as of 02/2019. |
| Included in the tool or work | 0 490 527 |
| Storage location | Individual |
| Replaced by | |
| In connection with | |
| SI-Number | 01 07 09 (530) |

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

**Important!**

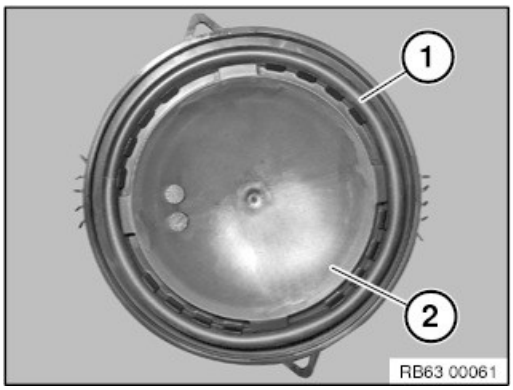
**Risk of damage!**

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.

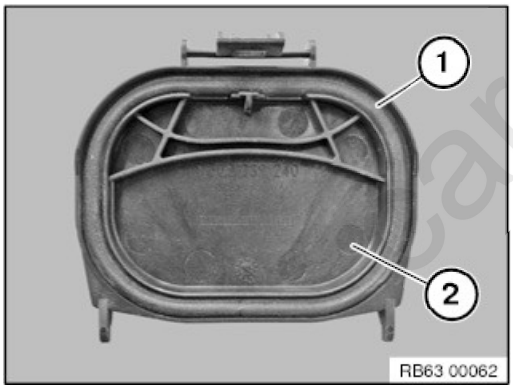
When working on the headlight system, check the protective cap seals.

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!**

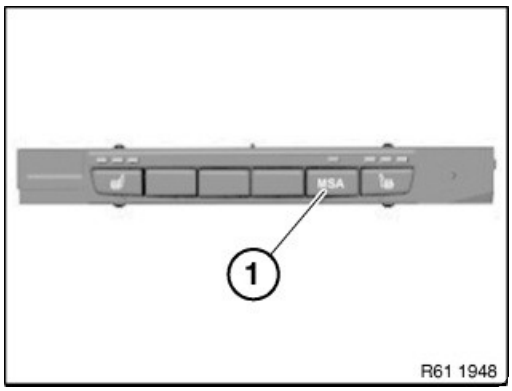
If the engine hood/bonnet contact is pulled upwards (workshop mode), the information "switch closed" is output. The automatic engine start-stop function is active.

An automatic engine start is possible.

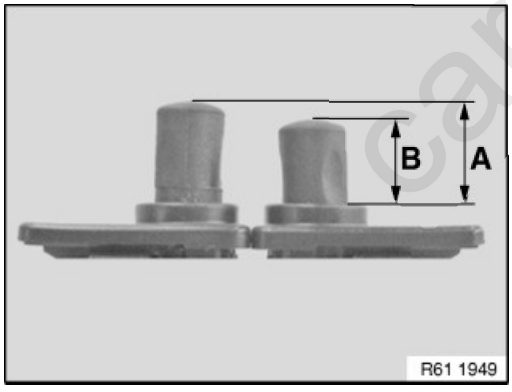
**Observe safety precautions when working on MSA vehicles.**

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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