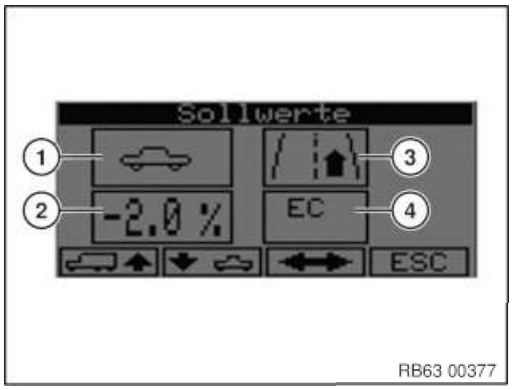
63 10 ... Adjust the fog lights (with electronic headlight adjustment device MAHA Lite 3)

Comply with test prerequisites for headlight adjustment!

Refer to the operating instructions for the headlight adjustment device!



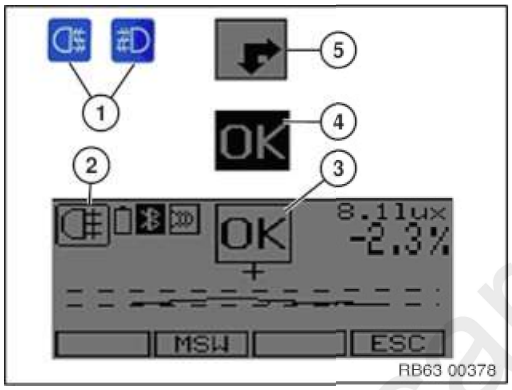
Switch on the headlight adjustment device by pressing any button.

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

Perform the following settings:

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

The adjusted values are adopted for future measurements.



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

The following symbols appear in the display:

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

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

Important!

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

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

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

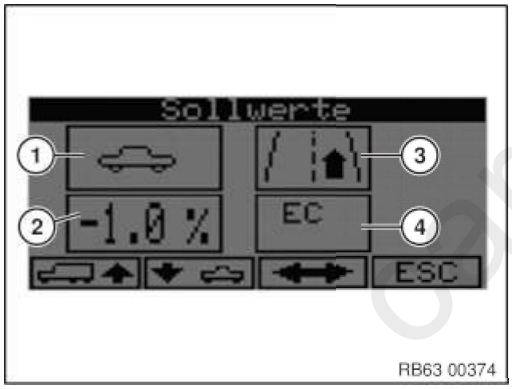
(Exception E52, BMW i 01, additional headlight MINI)

Comply with test prerequisites for headlight adjustment.

Refer to the operating instructions for the headlight adjustment device!

<u>Necessary preliminary work:</u>

Adjust the low-beam headlight



Switch on the headlight adjustment device by pressing any button.

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

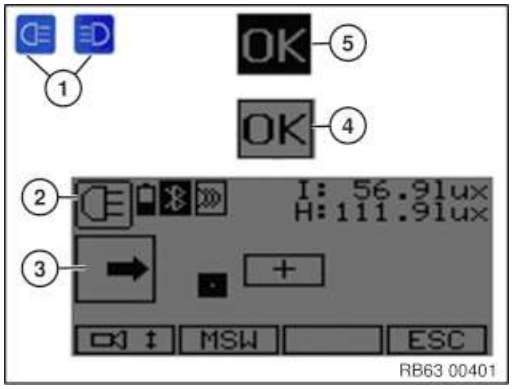
<u>Perform the following settings:</u>

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

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

The adjusted values are adopted for future measurements.

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

The following symbols appear in the display:

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

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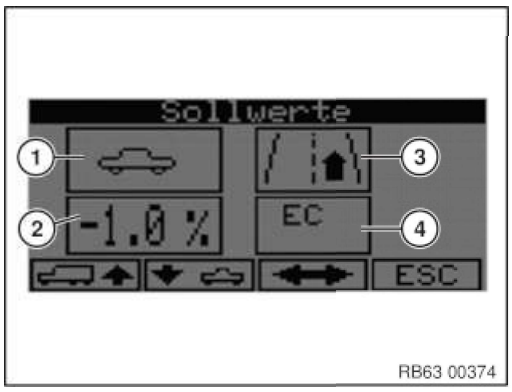
63 10 ... Adjust the low-beam headlight (with electronic headlight adjustment device MAHA Lite 3)

Comply with test prerequisites for headlight adjustment!

Refer to the operating instructions for the headlight adjustment device!

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

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



Switch on the headlight adjustment device by pressing any button.

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

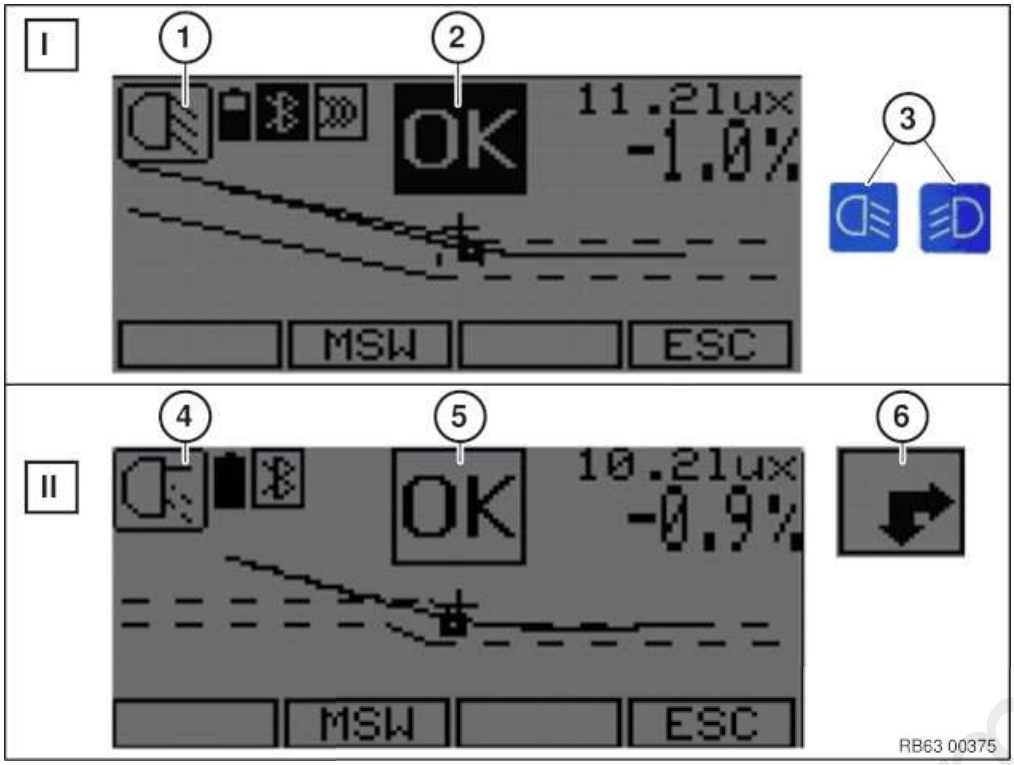
Perform the following settings:

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

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

The adjusted values are adopted for future measurements.

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Important!

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

An incorrect selection leads to an incorrect setting!

Transparent screen **Type I**:

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

Transparent screen **Type II**:

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

The following symbols appear in the display:

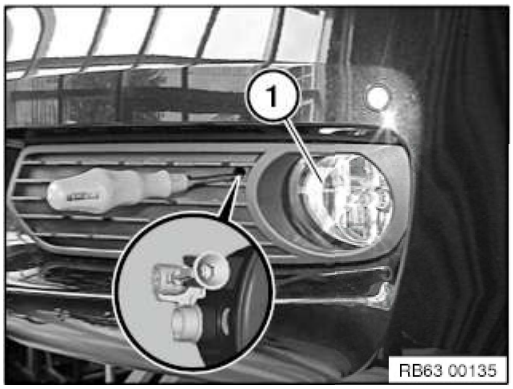
- O. K. (2): Adjustment is optimal.
- O. K. (5): Adjustment is within the legal tolerance range. Adjust headlight until O. K. (2) is displayed.
- Arrows (6): Adjustment is incorrect. Adjust headlight using arrows (6) until O. K. (2) is displayed.

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63 10 014 Adjusting fog lights

Comply with test preconditions for headlight adjustment.

Important!
Do not damage adjusting screw when adjusting fog light.



Note:
Work shown on the F20 by way of example, deviations in detail are possible in other models.

Adjust fog lightÂ (1) by turning adjusting screw.

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

Comply with test prerequisites for headlight adjustment.

Functional description of non-dazzle high beam headlight

Refer to the operating instructions for the headlight adjustment device!

Caution!

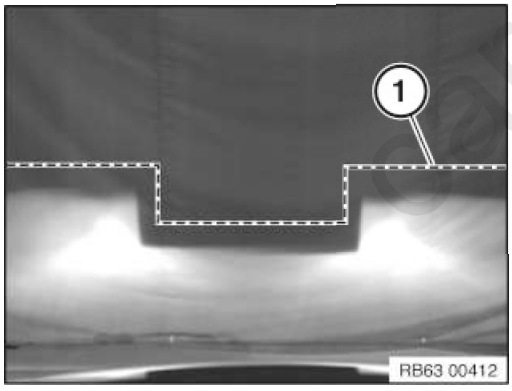
The high-beam headlight must only be adjusted in the following case using the MAHA Lite 3 headlight adjuster:

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

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

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

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



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

only F22, F23, F30, F31:

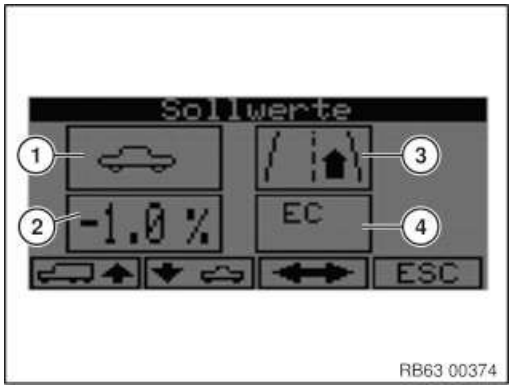
- Switch on high-beam headlight. Non-dazzle high-beam headlights can be recognized by the figure (1) shown.

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

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

All vehicles: The following optional equipment must be installed:

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



Switch on the headlight adjustment device by pressing any button.

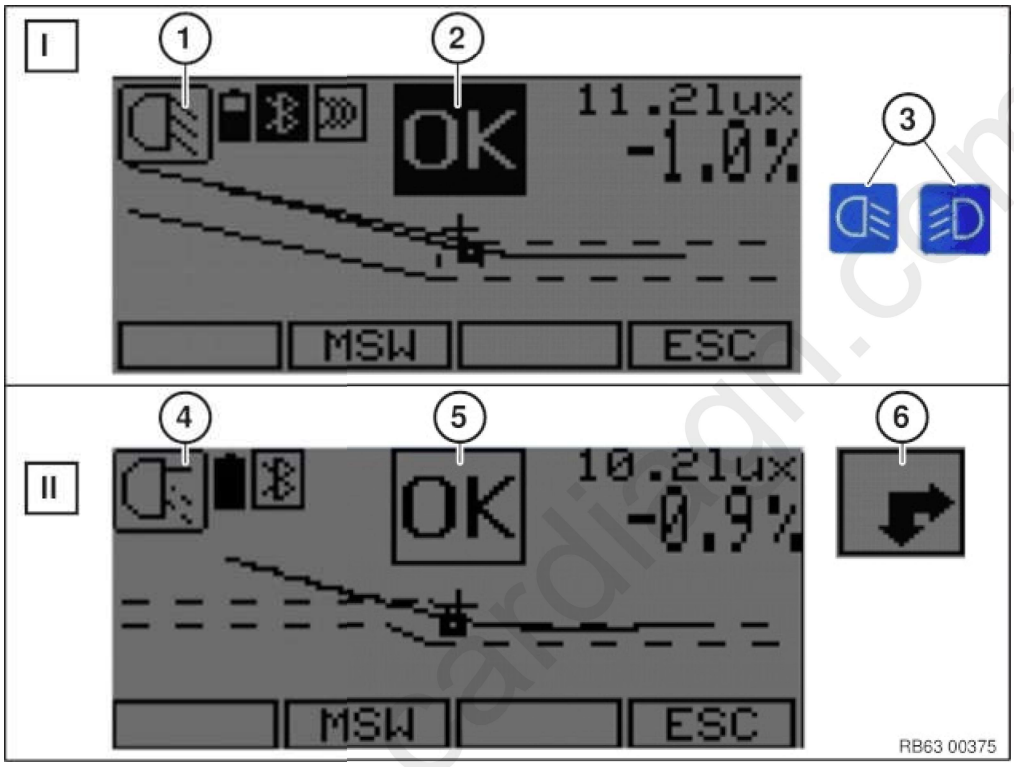
Press **F2** button. The shown display screen appears.

Perform the following settings:

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

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

The adjusted values are adopted for future measurements.



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

Caution!

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

An incorrect selection leads to an incorrect setting!

Transparent screen **Type I**:

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

Transparent screen **Type II**:

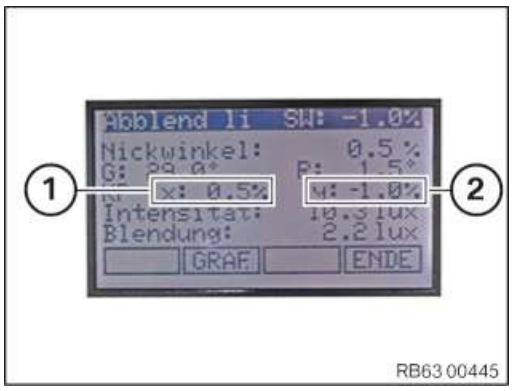
Press longer the button for the applicable side of the vehicle (3) until symbol (4) appears.

The following symbols appear in the display:

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

O. K. (2): Setting optimal.

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



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

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

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

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

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

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

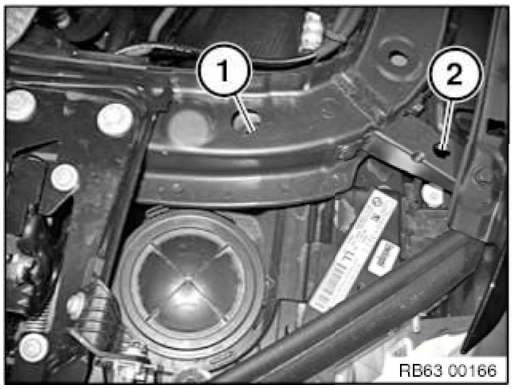
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63 10 004 Adjusting headlights

Comply with test prerequisites for headlight adjustment.

Caution!

Do not damage adjusting screws when adjusting headlights.



Only for F30, F31, F35, F80:

Carry out headlight adjustment at adjusting screws (1) and (2).

1. Adjustment screw primarily for vertical adjustment
2. Adjusting screw primarily for lateral adjustment
3. Adjust the height at the adjusting screw (1)

   US version only:

   Only carry out the setting of the lateral adjustment when the safety web in the adjusting screw for the lateral adjustment is missing or is damaged.

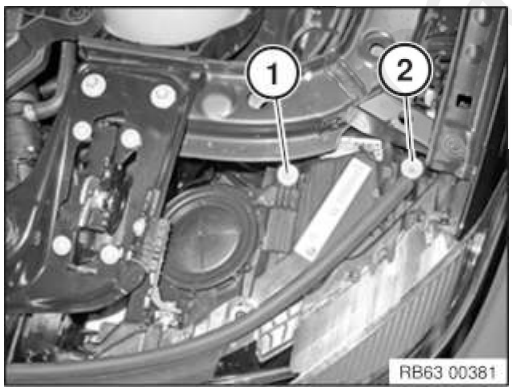
   If necessary, remove the damaged plug
4. Make the lateral adjustment at the adjusting screw (2)

After headlight adjustment:

Perform reference run. For this purpose, switch off and on the headlights. Check again headlight adjustment.

US version only:

If the lateral adjustment is checked or corrected, press the new plug into the adjusting screw for the lateral adjustment **without any damage**.



F34 only:

Carry out headlight adjustment at adjusting screws (1) and (2).

1. Adjustment screw primarily for vertical adjustment
2. Adjusting screw primarily for lateral adjustment
3. Adjust the height at the adjusting screw (1)

   US version only:

   Only carry out the setting of the lateral adjustment when the securing plug in the adjusting screw for the lateral adjustment is missing or is damaged

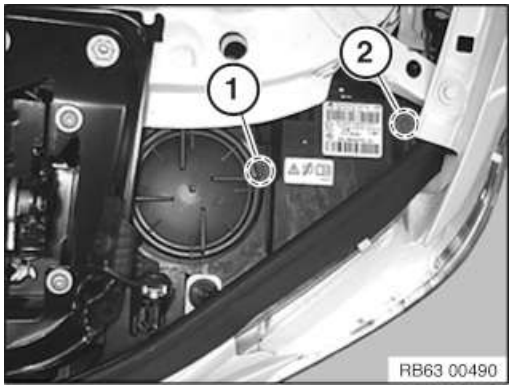
   If necessary, remove damaged plug with suitable tool
4. Make the lateral adjustment at the adjusting screw (2)

After headlight adjustment:

Perform reference run. For this purpose, switch off and on the headlights. Check again headlight adjustment.

US version only:

If the lateral adjustment is checked or corrected, press the new plug into the adjusting screw for the lateral adjustment **without any damage**.



Only for F32, F33, F36, F82, F83:

Carry out headlight adjustment at adjusting screws (1) and (2).

1. Adjustment screw primarily for vertical adjustment
2. Adjusting screw primarily for lateral adjustment
3. Adjust the height at the adjusting screw (1)

   US version only:

   Only carry out the setting of the lateral adjustment when the safety web in the adjusting screw for the lateral adjustment is missing or is damaged.

   If necessary, remove damaged plug with suitable tool
4. Make the lateral adjustment at the adjusting screw (2)

<u>After headlight adjustment:</u>

Perform reference run. For this purpose, switch off and on the headlights. Check again headlight adjustment.

US version only:

If the lateral adjustment was corrected, use a suitable tool to push a new plug using a suitable tool into the adjusting screw for the lateral adjustment **without damaging it**.

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

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

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

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

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

The transparent screens from the right headlight are the same.

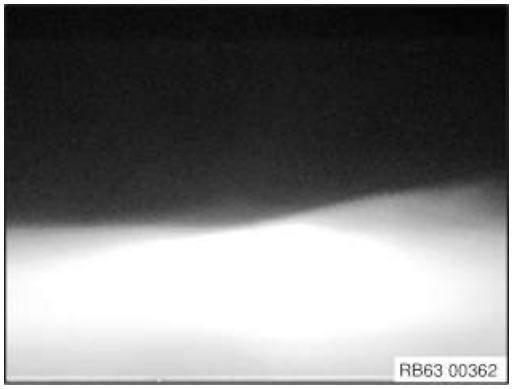
The transparent screens correspond with those in an accumulator box of a headlight adjusting device.



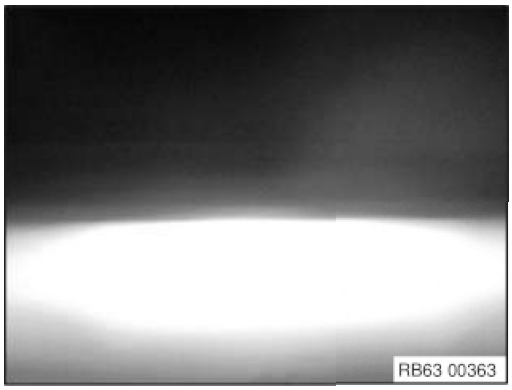
Important!
For headlight adjustment with electronic headlight adjusting devices, it is essential to determine the light pattern type!

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

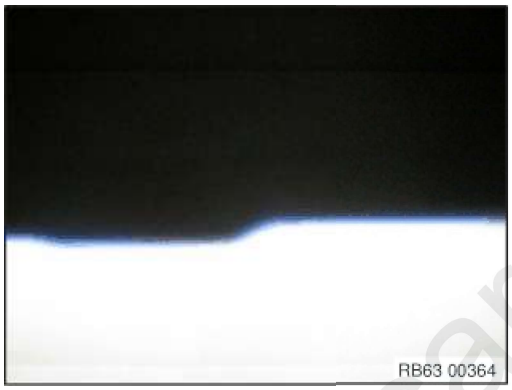
Type II: Light pattern screen shows a short increase in the light/dark boundary.



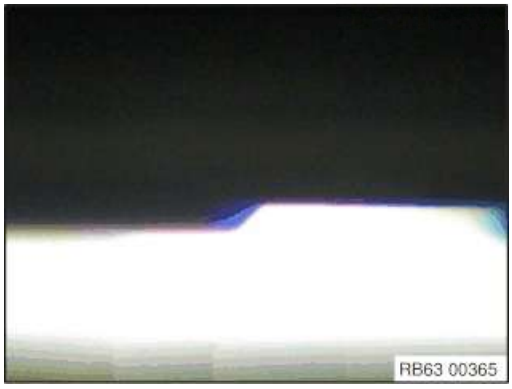
1. Halogen headlight
Type I



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

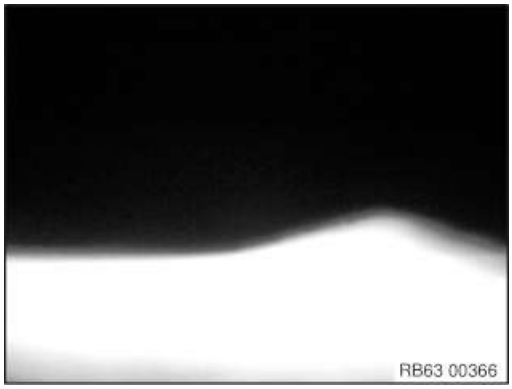


3. Xenon headlights
Type II



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

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

Type I

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

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

Headlight types:

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

Headlight:

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

Light functions:

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

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

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

Important!

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

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63 10 542 Setting the high-beam headlight to prevent dazzle (with headlight adjustment aid)



Warning!

Danger of injury!

Laser radiation at headlight adjustment aid.

Do not look into the beam!

Comply with test prerequisites for headlight adjustment!

Functional description of non-dazzle high beam headlight

Necessary preliminary work:

- Adjust the low-beam headlight

Refer to Service Information (bulletin) SI 02 11 11 782!

Important!

The dazzle-free high beam must only be adjusted with headlight adjusting aid in the following case:

- In the case of a **further customer complaint** regarding the dazzle of the high beam **in spite of a previous setting with a headlight setting device**.
- For the **initial customer complaint** regarding the glare from the high beam, adjust the glare-free high beam with the headlight adjustment device.

Note:

All vehicles except F22, F23:

First make the height and lateral adjustments of the low-beam headlight.

Afterwards check the lateral adjustment from the dazzle-free high beam headlight, correct if applicable.

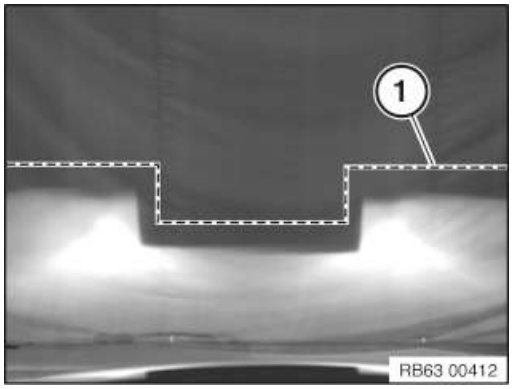
F22, F23 only:

First make the height and lateral adjustments of the low-beam headlight.

Afterwards check the lateral adjustment from the dazzle-free high beam headlight, correct if applicable.

Height adjustment may be necessary after lateral adjustment has been completed.

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

only F22, F23, F30, F31:

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

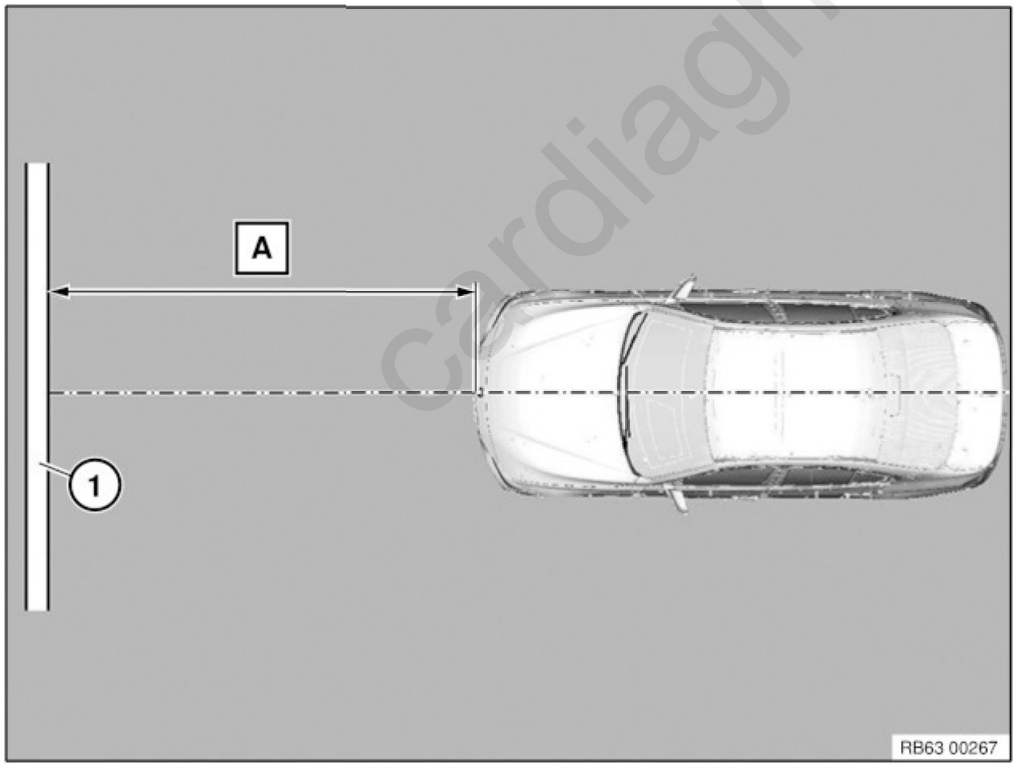
  (The figure can slightly vary depending on the specific vehicle)

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

All vehicles: The following optional equipment must be installed:

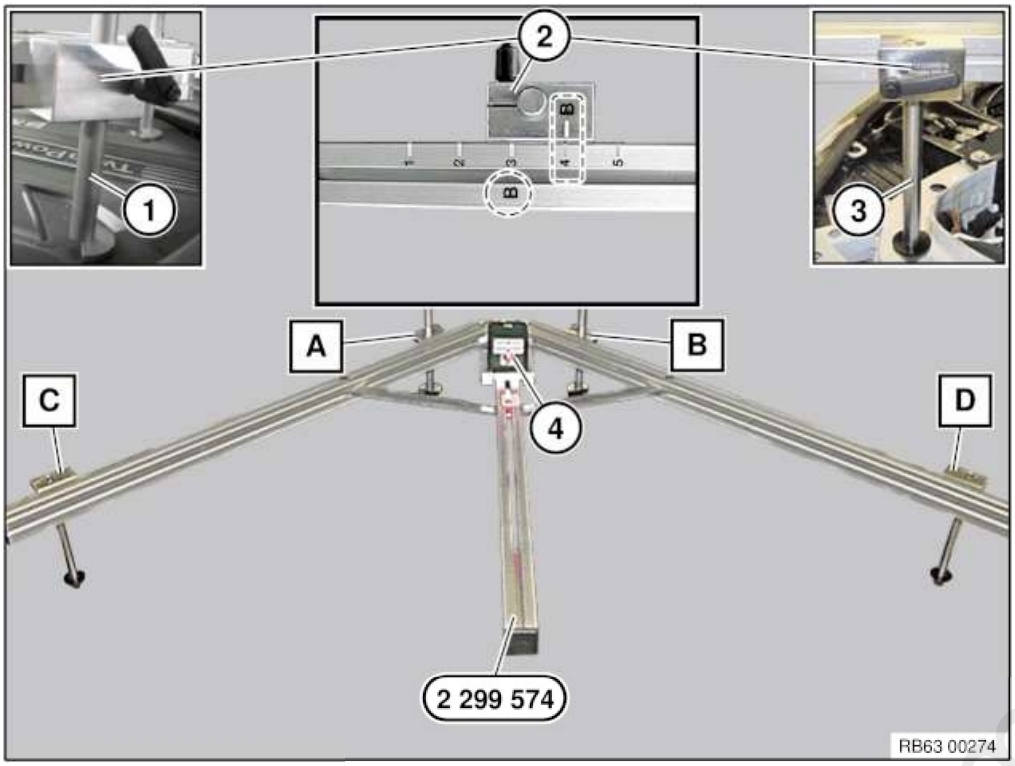
- "High-beam assistant" (5AC) **and** "adaptive headlight" (524) **or** "high-beam assistant" (5AC) **and** "adaptive LED headlight" (552)

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Prerequisites for adjusting the high-beam headlight to prevent glare using the headlight adjustment aid:

- Position vehicle in front of vertical surface, e. g. a wall (1), as shown.
- Distance (A): 4 - 10 m
- Dim lighting is helpful.
- Have a tape measure and black adhesive tape (maximum width of 2 cm) ready.



Note:
Headlight adjustment aid (2 299 574) and mountings (2) are labelled (see middle graphic):

- Headlight adjustment aid (2 299 574) has label A, B, C, D with the associated numbers 1 to 5.
- Mountings (2) are labelled A, B, C, D.

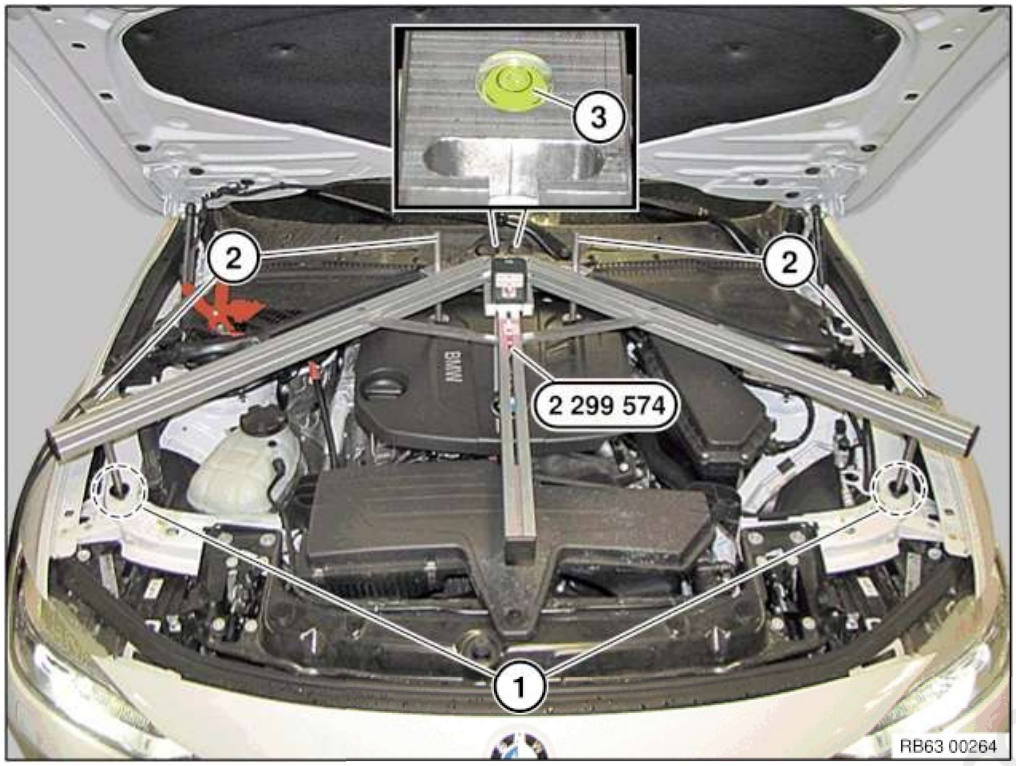
Position of mounting (2) on headlight adjustment aid (2 299 574) is specified:

- Here by way of example mounting (B) at B4.

Prepare the headlight adjustment aid (2 299 574) as shown:

- Insert rods (1) into mountings (2) with identification (A, B) and clamp.
- Insert rods (3) into mountings (2) with identification (C, D) and clamp.
- Position front mountings (C, D) with rods (3) on headlight adjustment aid (2 299 574) as follows:
  - Mounting (C) at C5
  - Mounting (D) at D5
- Position rear mountings (A, B) with rods (1) on headlight adjustment aid (2 299 574) as follows:
  - Mounting (A) at A4
  - Mounting (B) at B4
- Secure the laser (4) on the adjustment aid of the headlight (2 299 574). To switch on the laser (4) slide up the flap in front of the laser (4).

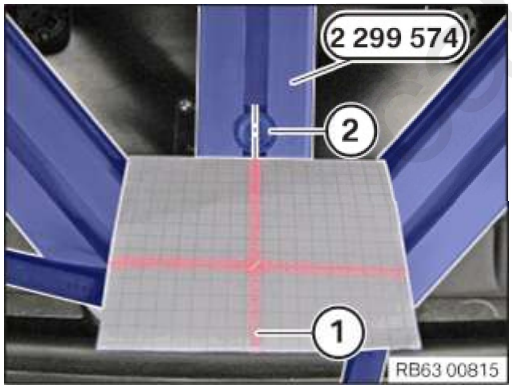
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Position headlight adjustment aid (2 299 574) at marked openings (1) in engine compartment as shown.
Align headlight adjustment aid (2 299 574) with longitudinally adjustable rods (2) using bubble level (3).

Important!
During the alignment of the adjustment aid of the headlight (2 299 574) by means of the bubble level (3) do not use the vehicle as a support!

Note:
The height of the headlight adjustment aid (2 299 574) has no influence on the setting.



Important!
When the high-beam headlight is correctly set to prevent dazzle, the laser beam is at the height of the middle of the vehicle.

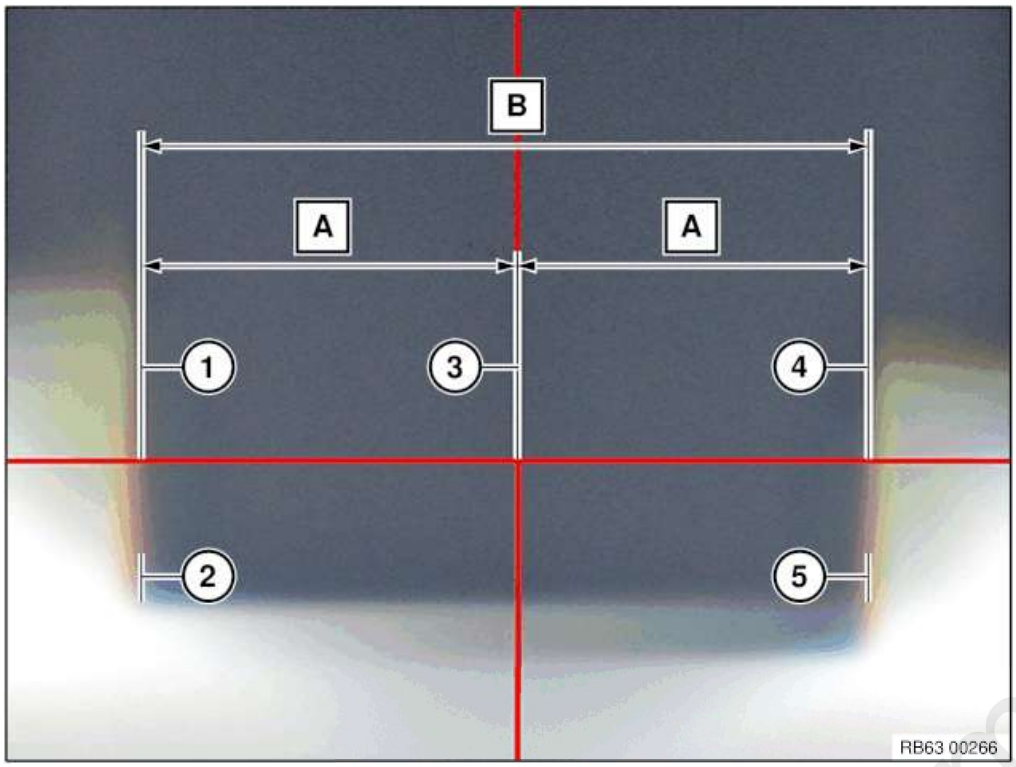
Align laser (position 4 in image RB6300274) by slight twisting towards right or left in such a way that laser beam (1) meets exactly the centre of the screw (2).

Switch the ignition on.

Switch on the low-beam headlight (high-beam headlight is switched on by the procedure).

Perform test procedure via path:

- Body
- Lights
- Adjust non-dazzle high-beam headlight



Check the dazzle-free high beam headlight setting as follows:

1. Visibly mark the vertical line from the laser beam (3) on the wall using adhesive tape, for example.
2. Measure distance (A) (see table) from line (3) both to the left and right.

   Visibly mark distance (A) on the wall using adhesive tape, for example (1, 4).

   Distance (B): see table

Vehicle	Headlight type	Distance (A)	Distance (B)
F30/F31/F32/F33/F34/F36/F80/F82/F83	Xenon	69 cm	138 cm
F32/F33/F36/F80/F82/F83	LED	70 cm	140 cm

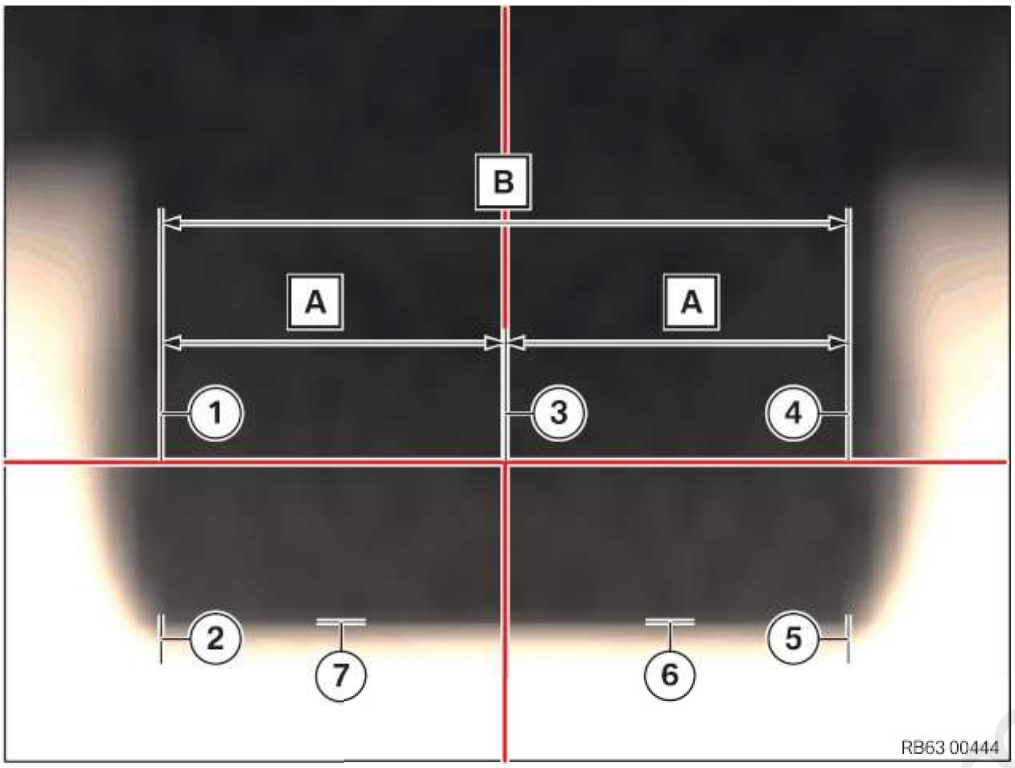
Note:
The following procedure applies for all vehicles **except F22, F23**.

The vertical light-dark boundary of the left high-beam headlight (2) without dazzle must be at mark (1).

The vertical light-dark boundary of the right high-beam headlight (5) without dazzle must be at mark (4).

Correct the lateral adjustment if necessary.

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Check the dazzle-free high beam headlight setting as follows:

1. Visibly mark the vertical line from the laser beam (3) on the wall using adhesive tape, for example.
2. Measure distance (A) (see table) from line (3) both to the left and right.
   Visibly mark distance (A) on the wall using adhesive tape, for example (1, 4).
   Distance (B): see table

Vehicle	Headlight type	Distance (A)	Distance (B)
F22/F23	Xenon	66 cm	132 cm

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Note:
The following procedure **only applies to F22, F23**.

Before performing lateral adjustment, mark horizontal light-dark boundary (6, 7) on the wall e.g. with adhesive tape:

Left headlight: cover right headlight and mark horizontal light-dark boundary (7) on the wall.

Right headlight: cover left headlight and mark horizontal light-dark boundary (6) on the wall.

The vertical light-dark boundary of the left high-beam headlight (2) without dazzle must be at mark (1).

The vertical light-dark boundary of the right high-beam headlight (5) without dazzle must be at mark (4).

Correct the lateral adjustment if necessary.

After lateral adjustment is completed, check whether horizontal light-dark boundary (6, 7) corresponds with the wall marking.

If not,correct the height adjustment until the horizontal light-dark boundary (6, 7) corresponds with the wall marking.

Note:
Then check again if the vertical light-dark boundary (2, 5) is aligned with the vertical line (1, 4).

If not, repeat entire adjustment procedure until the vertical light-dark boundary (2, 5) is aligned with the vertical line (1, 4)

and the horizontal light-dark boundary (6, 7) is aligned with the wall marking.

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

Comply with test preconditions for headlight adjustment.

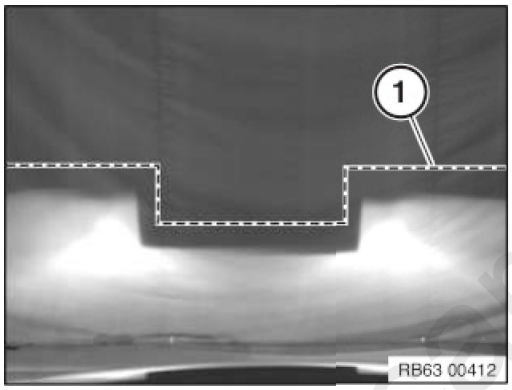
Functional description non-dazzle high-beam headlight

Refer to the operating instructions for the headlight adjustment device!

Important!

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

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



Note:

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

only F22, F23, F30, F31:

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

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

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

All vehicles: The following optional equipment must be installed:

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

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

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

   This adjusts the headlight roughly 0.5Â % to the outside.

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

Attention!

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

Attention!

Observe the operating instructions for the headlight adjusting device!

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

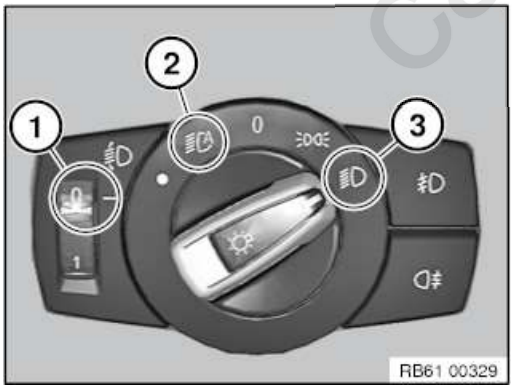
These specifications are described in "Planning principles for layout of BMW service workshops".

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

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

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

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



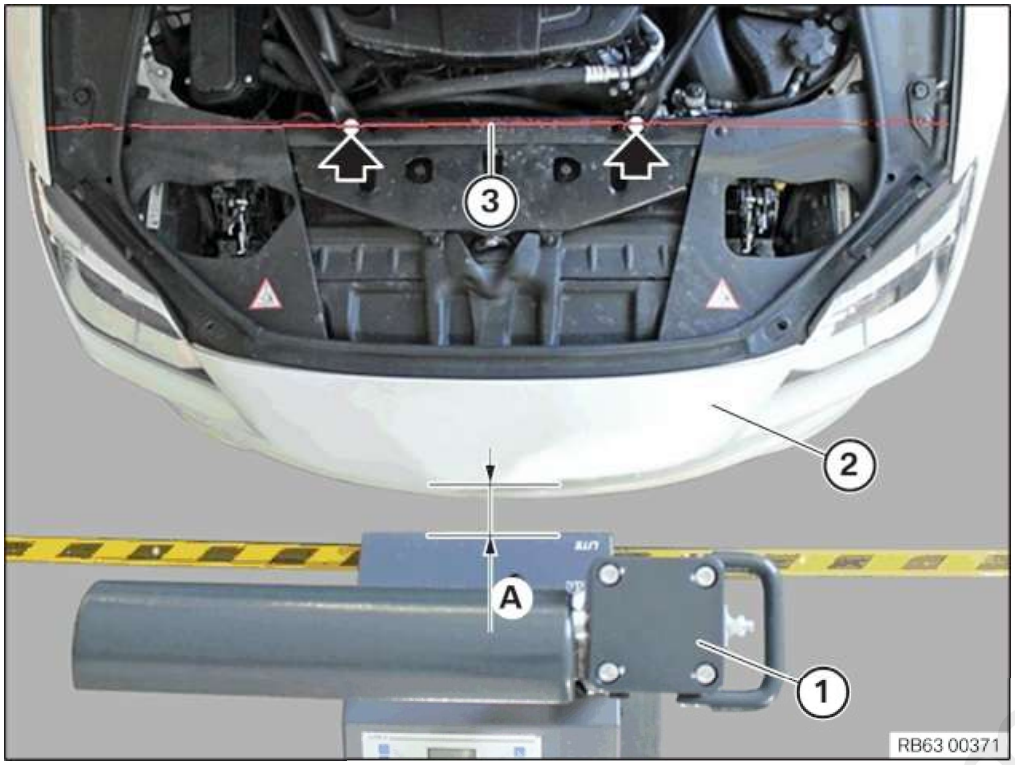
- Switch the ignition on.
- Manual headlight beam throw adjustment: Move handwheel to neutral position (1).
- **Light switch must be in "low beam/driving light" position (3).**
- Do not carry out the headlight adjustment in the "automatic driving lights control" light switch position (2).
- Version with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

Attention!

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

Wheels must be in the straight-ahead position!

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Attention!

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

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

This applies to all headlights!

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

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

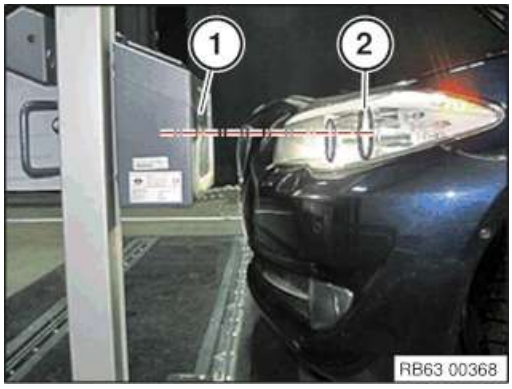
Attention!

Points must be vehicle proof!

Points must be separated as wide as possible!

Trim panels are not suitable!

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



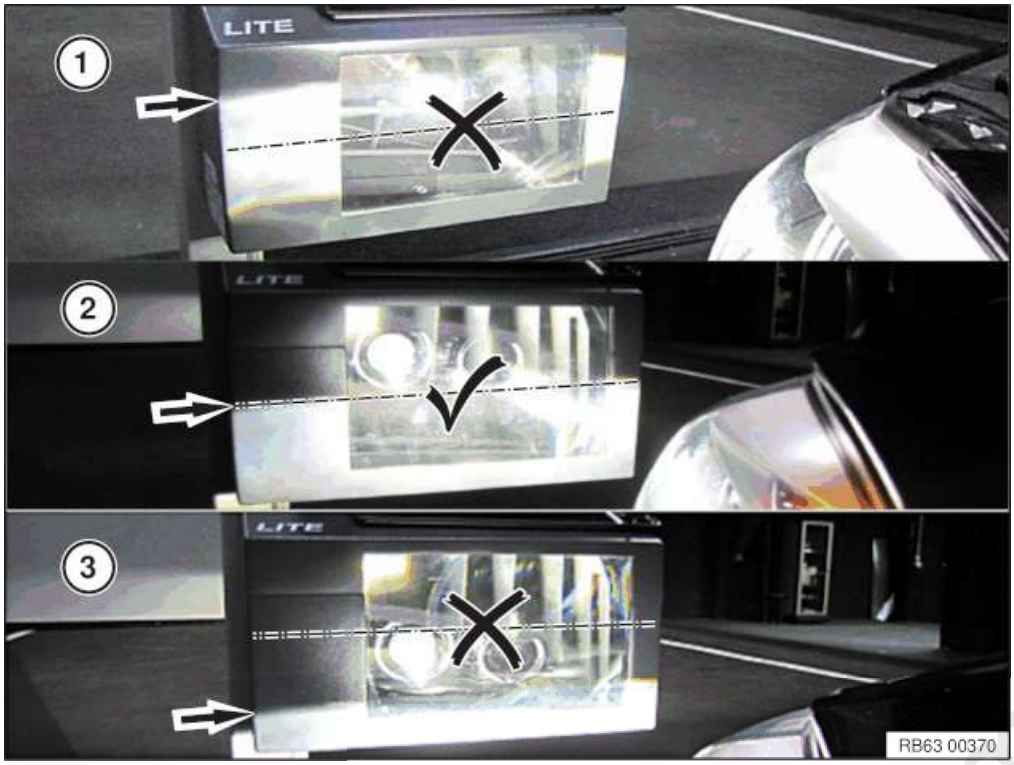
Attention!

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

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

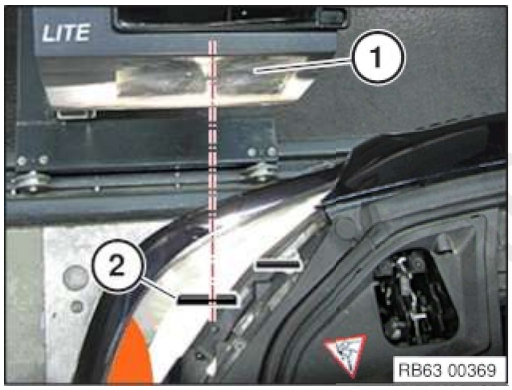
Corrections are made by raising or lowering the headlight adjusting device.

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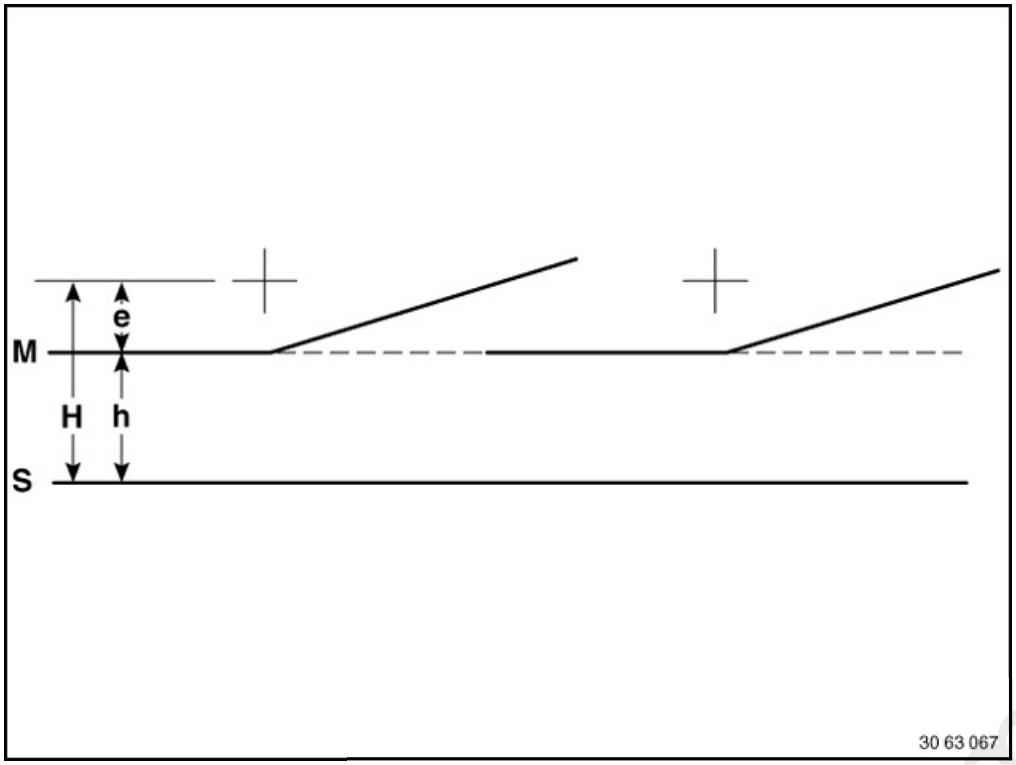
When positioned correctly, the light/dark boundary of the headlight (marked with arrow) must hit the collecting lens of the adjusting device in the centre:

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



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

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



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

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

Light/dark boundary of headlights in headlight adjusting device

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

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

Setting dimension, fog lights:

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

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

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

{H} Height of headlight centre above parking surface

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

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

{M} Marker line of the headlight adjusting device

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

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

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63 11 560 Removing and installing (replacing) the headlight driver module

Warning!

Version with xenon lighting system: Danger to life due to high voltage! Disconnect all components from voltage supply before removal.

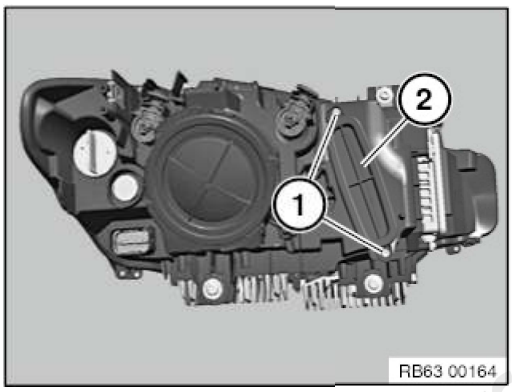
Work on the entire xenon lighting system (ignition device, control unit and bulb) may only be carried out by qualified personnel.

Important!

Read and comply with information on protection against electrostatic discharge !

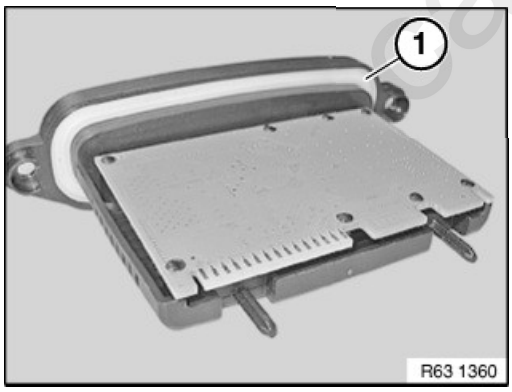
Necessary preliminary tasks:

- Remove headlight



Release screws (1).

Pull headlight driver module (2) out of the headlight.



Installation note:

During installation, make sure gasket (1) is correctly positioned.

Gasket (1) must not be damaged and must be installed free from grease.

Guides must not be missing or damaged.

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Replacement:

Teach in headlight driver module (1) via vehicle diagnosis.

- Service functions
- Body
- Lights
- Initialise the headlight driver module and teach in LEDs in headlight
- Code the FEM (if FEM is installed in the vehicle)

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63 11 562 Removing and installing (replacing) the right headlight driver module

Operation is described in:

Removing and installing (replacing) headlight driver module left.

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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



Operation is described in:

Replace FLEL control unit

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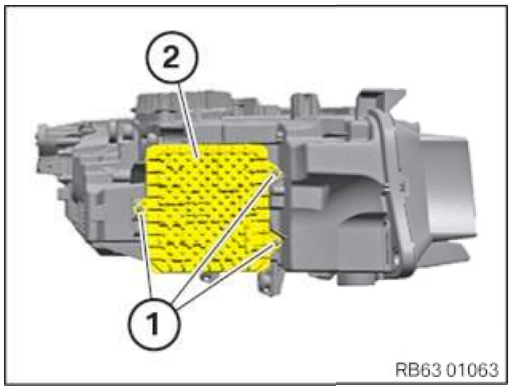
63 11 760 Replacing FLEL control unit

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

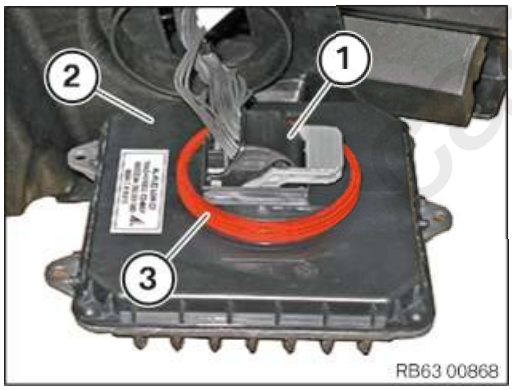
Necessary preliminary tasks:

- Remove headlight

Removal:



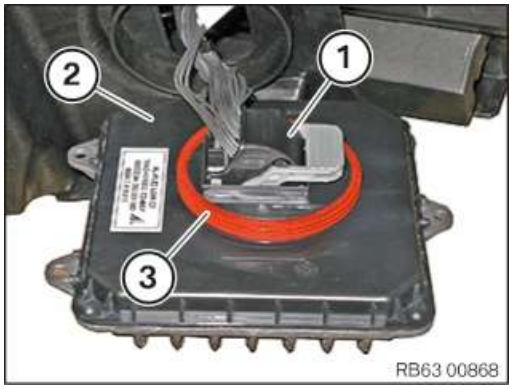
Release screws (1).
Remove Frontal Light Electronics control unit (2).



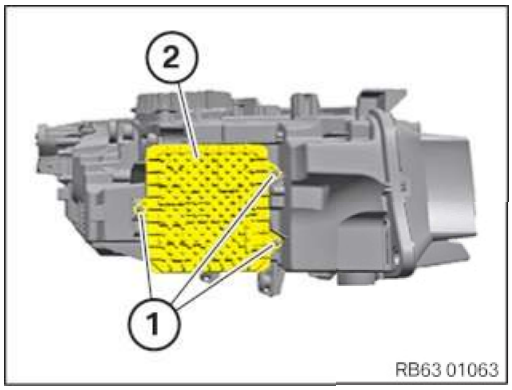
Unlock and disconnect the connector (1).

Installation:

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Connect and lock the connector (1).*Installation note:*
Gasket (3) on control unit Frontal Light Electronics (2) should not be damaged or missing.



Install Frontal Light Electronics control unit (2).

Tighten down screws (1).

Tightening torque 63 11 1AZ.

Required reworking:

- Install headlight
- Carry out programming/encoding.

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63 11 735 Replacing LED module for right daytime driving lights



Operation is described in:

Replacing LED module for left daytime driving lights

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63 11 734 Replacing LED module for right daytime driving lights



Operation is described in:

Replacing LED module for left daytime driving lights

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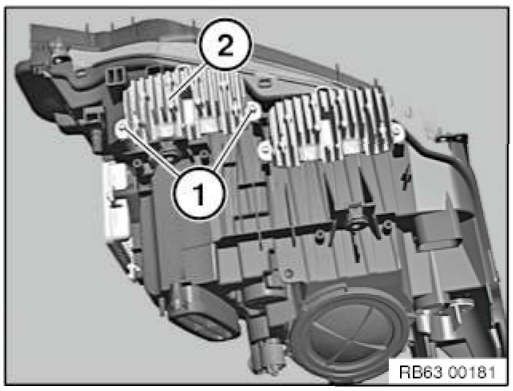
63 11 731 Replacing left daytime driving lights LED modules

Warning!

Follow instructions for handling light bulbs (exterior lights).

Necessary preliminary tasks:

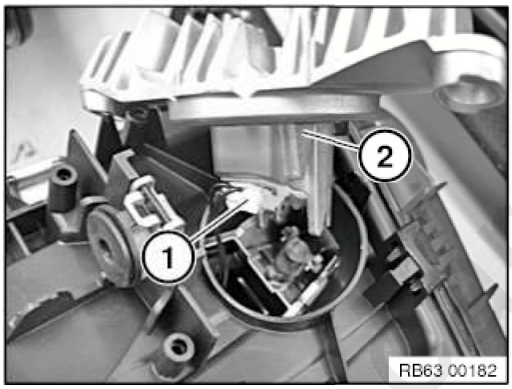
- Remove headlight



Release screws (1).

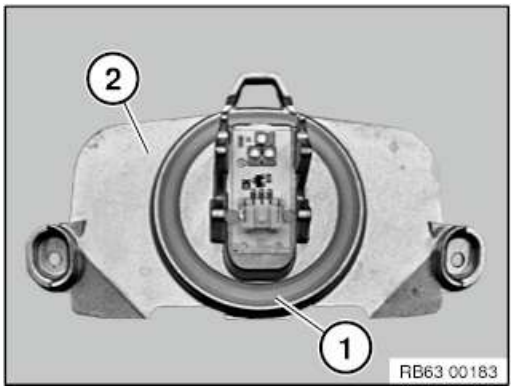
Tightening torque 63 12 3AZ.

Pull LED module (2) out of headlight towards top.



Disconnect plug connection (1).

Remove LED module (2).



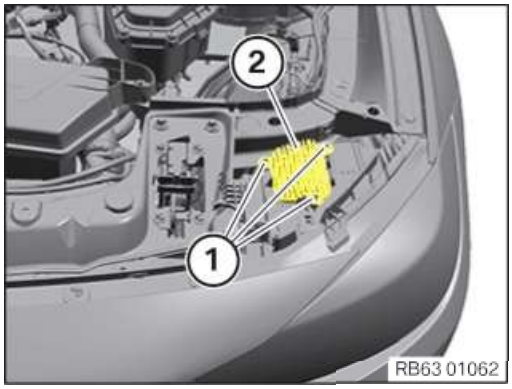
Installation note:

Gasket (1) on LED module (2) must not be damaged.

Always replace LED modules (2) as a pair.

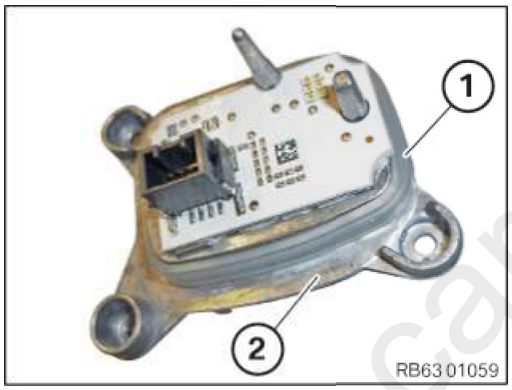
63 11 730 Replacing the LED module for left daytime riding lights

Removal:

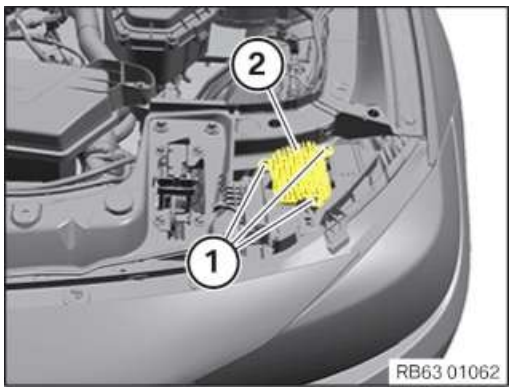


Release screws (1).
Remove the LED module (2) from the headlight to the top.
Unlock and disconnect corresponding connector.

Installation:



The seal (1) on the LED module (2) must not be damaged or missing.



Connect associated connector.
Position LED module (2) in the headlight.
Tighten down screws (1).
Tightening torque 63 11 2AZ.

Required reworking:

- Carry out programming/encoding.

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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 rowÂ (B): Impermissible fogging. Replace the headlight.

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

Important!

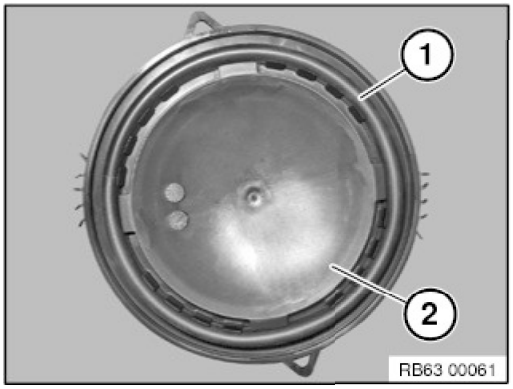
Risk of damage!

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.

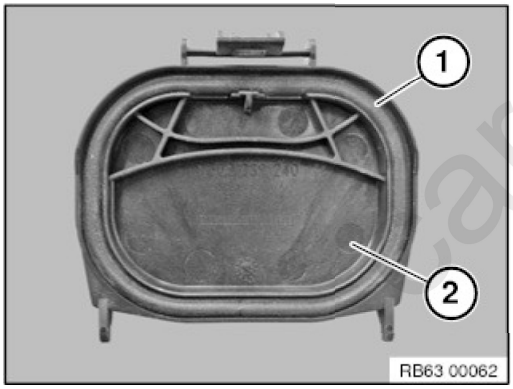
When working on the headlight system, check the protective cap seals.

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 12 010 Removing and installing (replacing) left (Xenon) headlight

Warning!

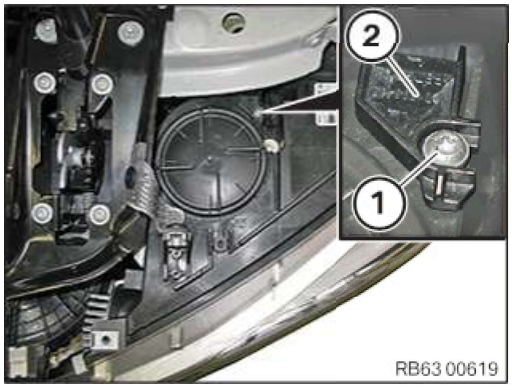
Version with xenon lighting system:

Danger to life due to high voltage! Therefore disconnect all components from voltage supply before removal.

Work on the entire xenon lighting system (ignition device, control unit and bulb) may only be carried out by qualified personnel.

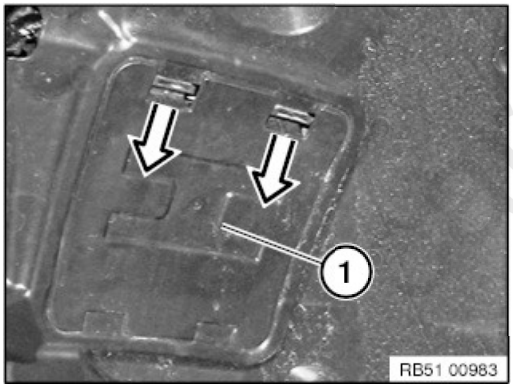
Necessary preliminary work:

- Remove front bumper panel

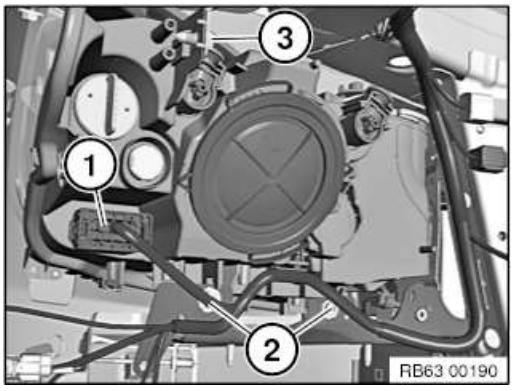


Note:
If the retaining clip (2) is present, the central connector on the headlight cannot be disconnected!

Release screw (1) and remove retaining clip (2) if necessary.



Unlock and remove cover (1).



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

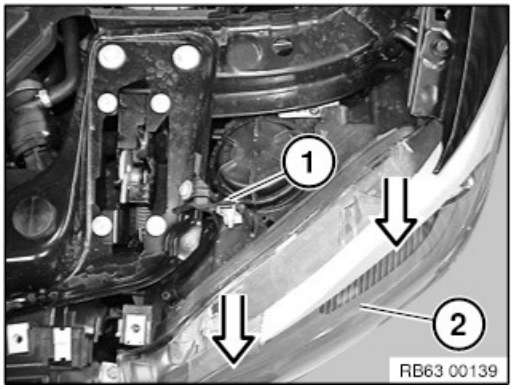
Unlock plug connection (1) and disconnect.

Unfasten screws (2).

Tightening torque 63 12 1AZ.

Release screw (3).

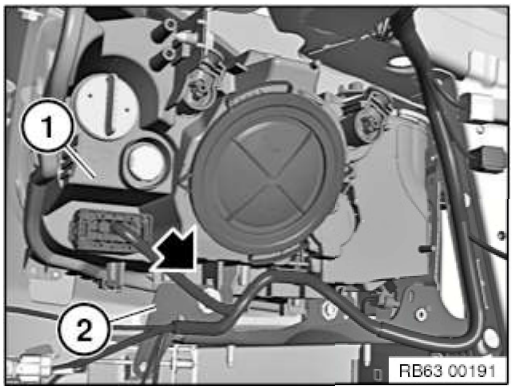
Tightening torque 63 12 1AZ.



Release screw (1).

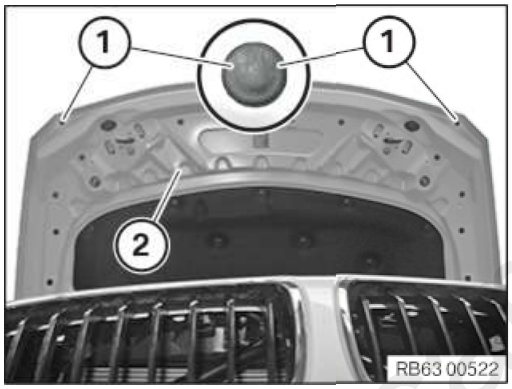
Tightening torque 63 12 1AZ.

Carefully remove headlight (2) in direction of arrow.



Installation note:
Correctly install headlight (1) relative to holder (2).

Adjust headlight.



Installation note:
Rubber plugs (1) in engine compartment lid (2) must not be missing or damaged.

No cavity preservation may emerge from the rubber plugs (1).

Replacement:

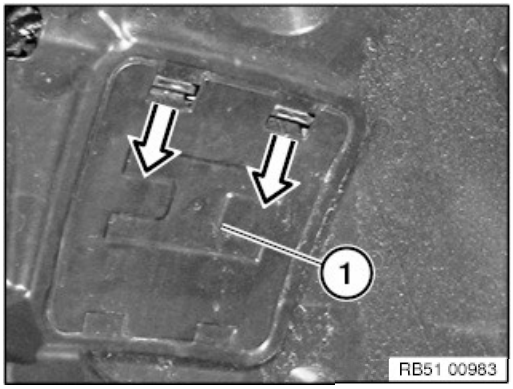
- **US version:** Checking blocking at horizontal position
- Remount xenon control unit
- Remount ignition device with bulb
- Remount headlight driver module
- Remount LED module for daytime driving lights

cardiagn.com

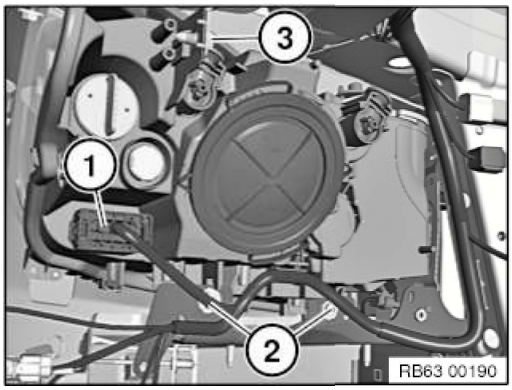
63 12 003 Removing and installing (replacing) left headlight

Necessary preliminary work:

- Remove front bumper panel



Unlock and remove cover (1).



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

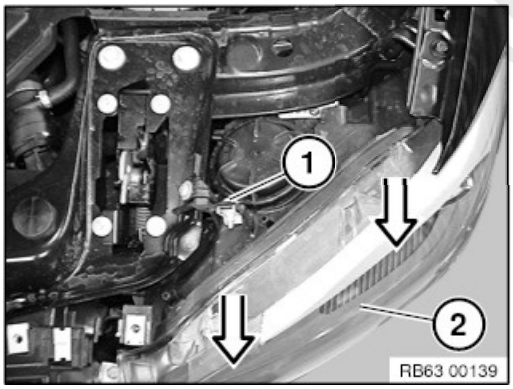
Unlock plug connection (1) and disconnect.

Unfasten screws (2).

Tightening torque 63 12 1AZ.

Release screw (3).

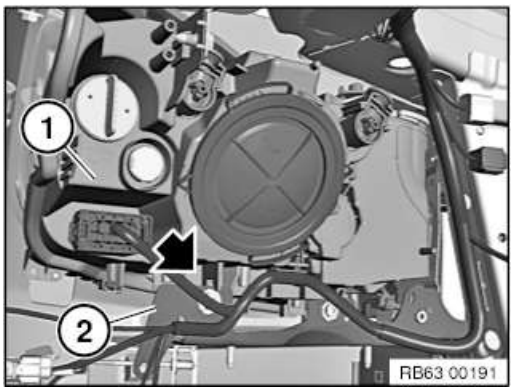
Tightening torque 63 12 1AZ.



Release screw (1).

Tightening torque 63 12 1AZ.

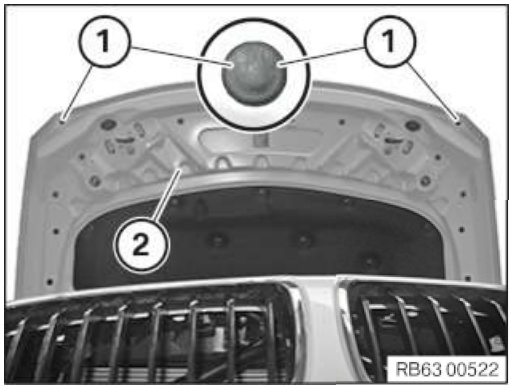
Carefully remove headlight (2) in direction of arrow.



Installation note:
Correctly install headlight (1) relative to holder (2).

Adjust headlight.

US version: Checking blocking at horizontal position



Installation note:
Rubber plugs (1) in engine compartment lid (2) must not be missing or damaged.

No cavity preservation may emerge from the rubber plugs (1).

Replacement:

- If necessary, remount bulbs
- Note bulb type

cardiagn.com

63 12 015 Removing and installing (replacing) left headlight (adaptive headlight)



Operation is described in:

Remove and install left xenon headlight

cardiagn.com

63 12 017 Removing and installing (replacing) right headlight (adaptive headlight)



Operation is described in:

Remove and install left xenon headlight

cardiagn.com

63 11 560 Removing and installing (replacing) the headlight driver module

Warning!

Version with xenon lighting system: Danger to life due to high voltage! Disconnect all components from voltage supply before removal.

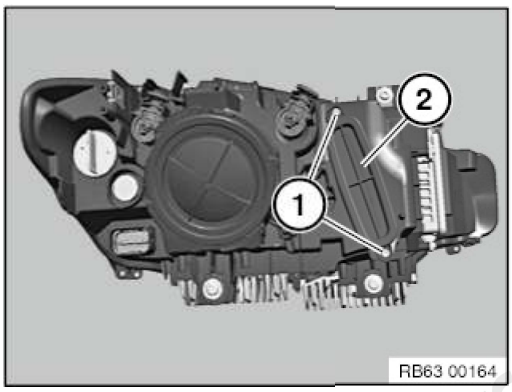
Work on the entire xenon lighting system (ignition device, control unit and bulb) may only be carried out by qualified personnel.

Important!

Read and comply with information on protection against electrostatic discharge !

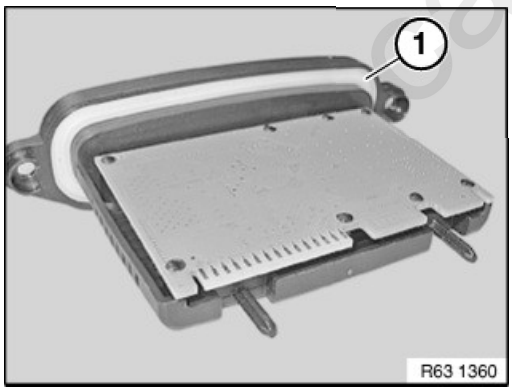
Necessary preliminary tasks:

- Remove headlight



Release screws (1).

Pull headlight driver module (2) out of the headlight.



Installation note:

During installation, make sure gasket (1) is correctly positioned.

Gasket (1) must not be damaged and must be installed free from grease.

Guides must not be missing or damaged.

carsdiagn.com



Replacement:

Teach in headlight driver module (1) via vehicle diagnosis.

- Service functions
- Body
- Lights
- Initialise the headlight driver module and teach in LEDs in headlight
- Code the FEM (if FEM is installed in the vehicle)

cardiagn.com

63 12 012 Removing and installing (replacing) the right headlight (Xenon)



Operation is described in:

Remove and install left xenon headlight

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63 11 562 Removing and installing (replacing) the right headlight driver module

Operation is described in:

Removing and installing (replacing) headlight driver module left.

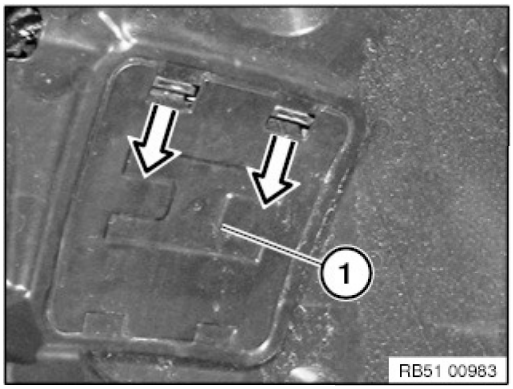
cardiagn.com

63 12 140 Removing and installing left LED technology headlight

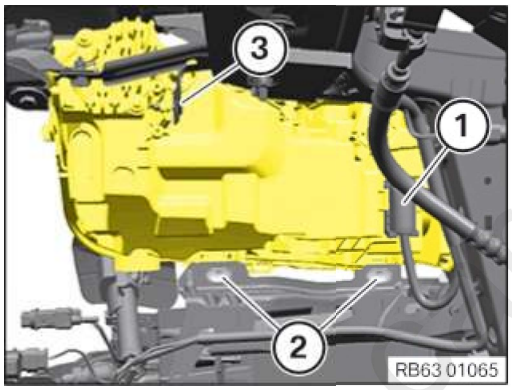
Necessary preliminary work:

- Remove front bumper panel

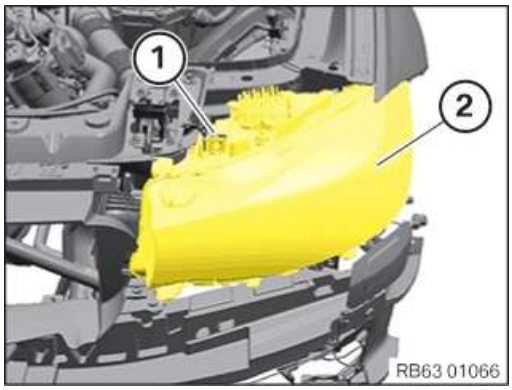
Removal:



Unlock and remove cover (1).



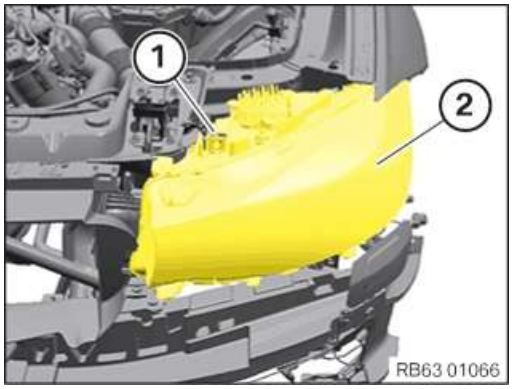
Unlock plug connection (1) and disconnect.
Unfasten screws (2).
Release screw (3).



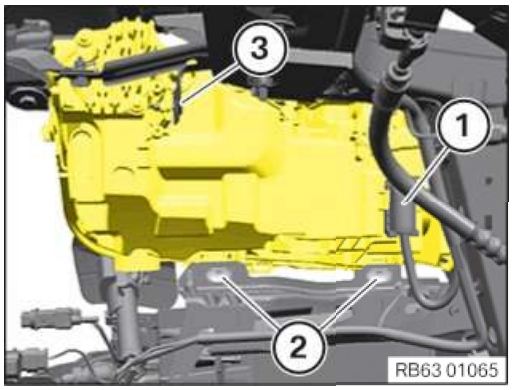
Release screw (1).
Remove headlight (2) forwards.

Installation:

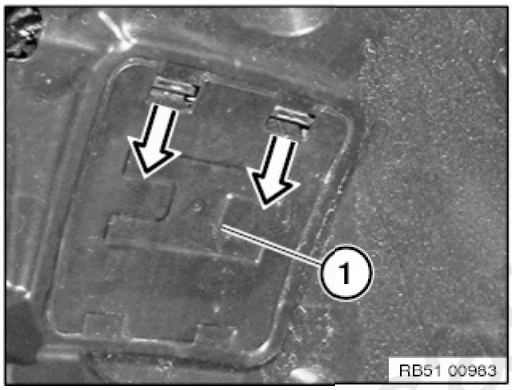
carldiag.com



Thread in and position headlights (2).
Tighten screw (1).
Tightening torque 63 12 1AZ.



Tighten screws (2).
Tightening torque 63 12 1AZ.
Tighten screw (3).
Tightening torque 63 12 1AZ.
Connect and lock plug connection (1).



Install cover (1) and lock against the direction of arrow.

Required follow-up work:

- Install front bumper panel
- Adjust headlight.
- **US version:** Checking blocking at horizontal position

cardiagn.com

63 12 143 Removing and installing right LED technology headlight



Operation is described in:

Removing and installing left headlight (LED technology).

cardiagn.com

63 12 009 Removing and installing/replacing right headlight



Operation is described in:

Removing and installing left headlight.

cardiagn.com

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).

cardiagn.com

63 11 761 Replace FLER control unit



Operation is described in:

Replace FLEL control unit

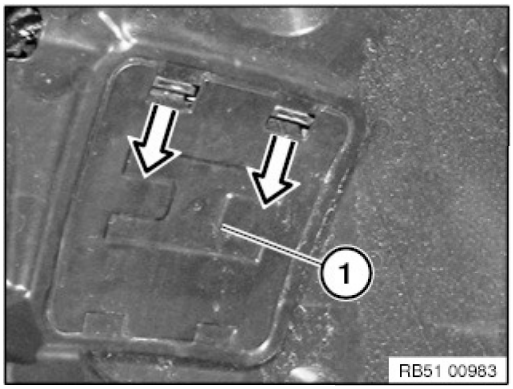
cardiagn.com

63 12 140 Replace the left LED technology headlight

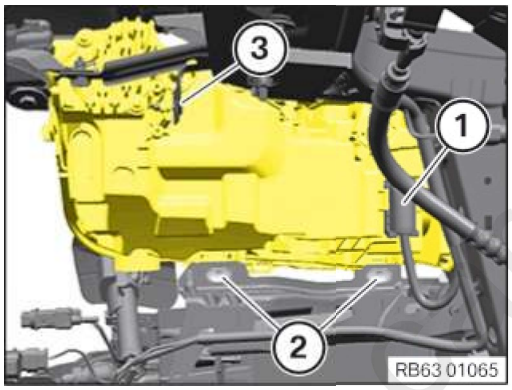
Necessary preliminary work:

- Remove front bumper panel

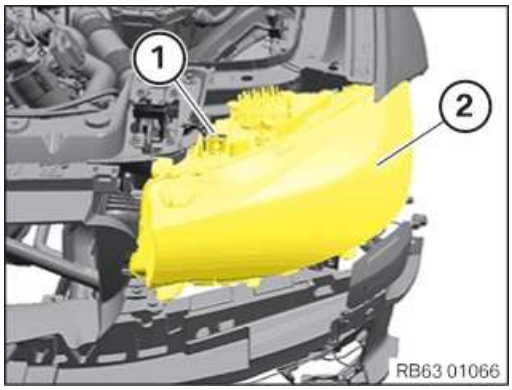
Removal:



Unlock and remove cover (1).



Unlock plug connection (1) and disconnect.
Unfasten screws (2).
Release screw (3).



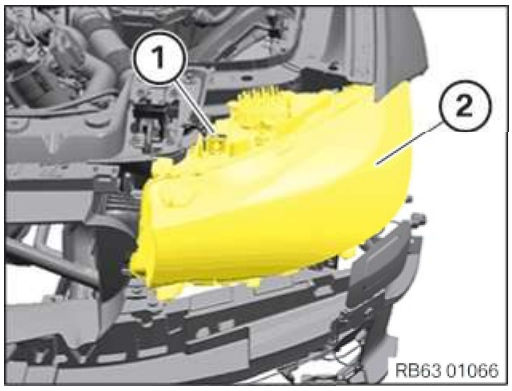
Release screw (1).
Remove headlight (2) forwards.

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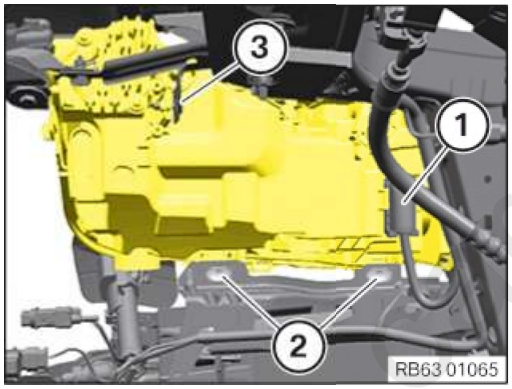
US version: Checking blocking at horizontal position **Remounting control units / modules:**

- Remount front light electronics control unit
- Remount LED module for daytime driving lights
- Remount LED module direction-indicator light

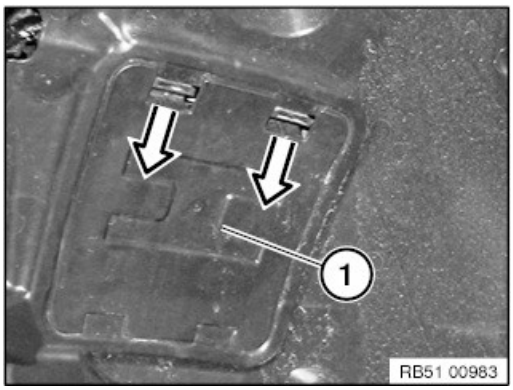
Installation:



Thread in and position headlights (2).
Tighten screw (1).
Tightening torque 63 12 1AZ.



Tighten screws (2).
Tightening torque 63 12 1AZ.
Tighten screw (3).
Tightening torque 63 12 1AZ.
Connect and lock plug connection (1).



Install cover (1) and lock against the direction of arrow.

Required follow-up work:

- Install front bumper panel
- Adjust headlight.
- **US version:** Checking blocking at horizontal position

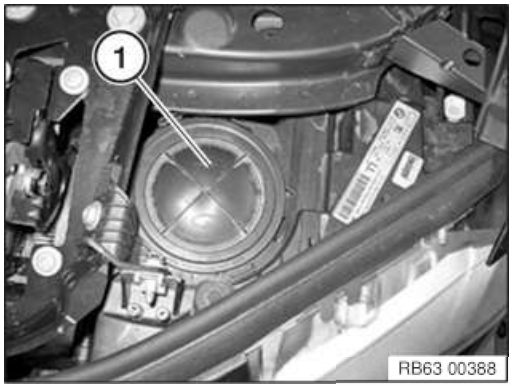
cardiagn.com

63 99 110 Replacing bulb for daytime driving lights, left



Warning!

Follow instructions for handling light bulbs (exterior lights).



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Turn protective cap (1) counterclockwise and remove.**Important!**

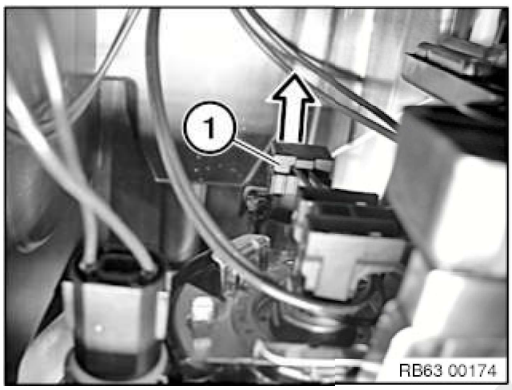
Risk of damage due to moisture penetration!

Installation note:
Check seal. Replace protective cap (1) if necessary.

Comply with Instructions for replacing the protective cap.

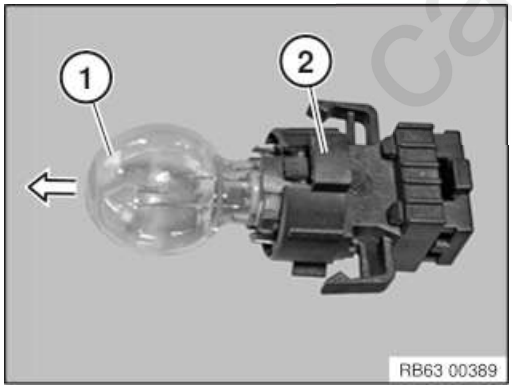
Protective cap (1) must lock correctly!

Turn protective cap (1) clockwise to limit position.



Pull back bulb holder (1) in direction of arrow out of headlight.

Installation note:
Make sure bulb holder (1) is exactly seated in headlight.



Pull bulb for daytime driving lights (1) out of bulb socket (2).

Installation note:
Note bulb type.

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63 99 112 Replacing bulb for daytime driving lights, right



Operation is described in:

Replace bulb of daytime driving lights on left.

cardiagn.com

63 99 076 Replacing bulb for left xenon headlight (with ignition unit)



Operation is described in:

Replacing ignition unit for left xenon headlight

cardiagn.com

63 99 077 Replacing bulb for right xenon headlight (with ignition unit)



Operation is described in:

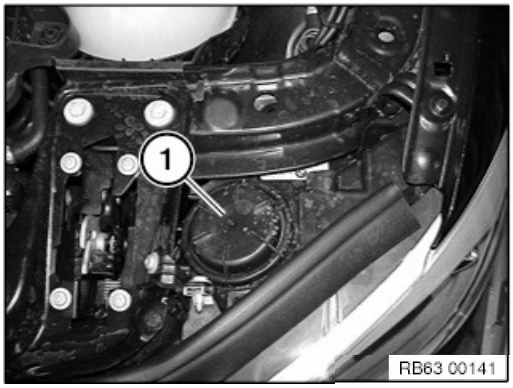
Replace ignition unit for left xenon headlight.

cardiagn.com

63 99 132 Replacing bulb for side lights, front left

Warning!

Follow instructions for handling light bulbs (exterior lights).



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Turn protective cap (1) counterclockwise and remove.**Important!**

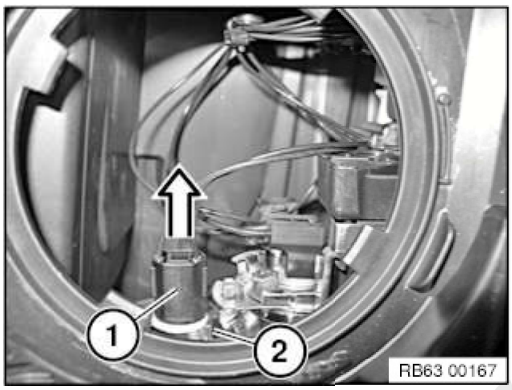
Risk of damage due to moisture penetration!

Installation note:
Check seal. Replace protective cap (1) if necessary.

Comply with Instructions for replacing the protective cap.

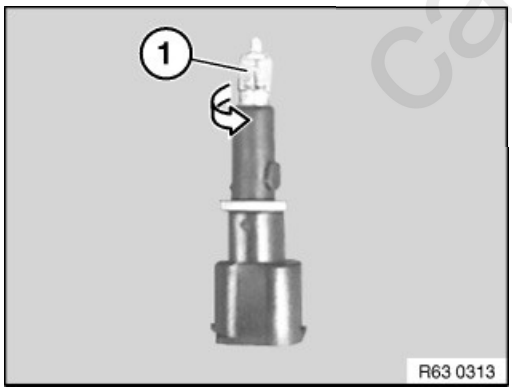
Protective cap (1) must lock correctly!

Turn protective cap (1) clockwise to limit position.



Firstly turn bulb holder (1) left and then pull out of headlight in direction of arrow.

Installation note:
Make sure bulb holder (1) is exactly seated in headlight.



Note:
Similar to graphic.

Firstly turn bulb for side lights (1) in direction of arrow and then pull out of bulb holder.

Installation note:
Note bulb type.

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63 99 133 Replacing bulb for side lights, front right



Operation is described in:

Replacing bulb for front left side lights.

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63 12 860 Replacing control unit for left xenon headlight

Warning!

Version with xenon lighting system: 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 bulb) may only be carried out by qualified personnel.

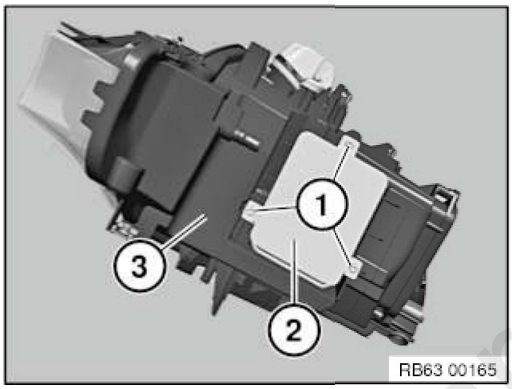
Comply with notes and notes on handling exterior lights.

Important!

Read and comply with information on protection against electrostatic discharge !

Necessary preliminary tasks:

- Remove left headlight

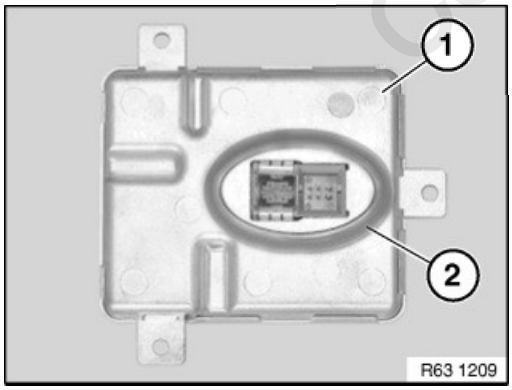


Note:
Graphics shown on the F30 by way of example, deviations in detail are possible in other models.

Release screws (1).

Tightening torque 63 12 3AZ.

Remove control unit for xenon headlight (2) upwards from headlight (3).



Installation note:
When installing control unit for xenon headlight (1), make sure gasket (2) is correctly seated.

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63 12 861 Replacing control unit for right xenon headlight



Operation is described in:

Replace control unit for left xenon headlight.

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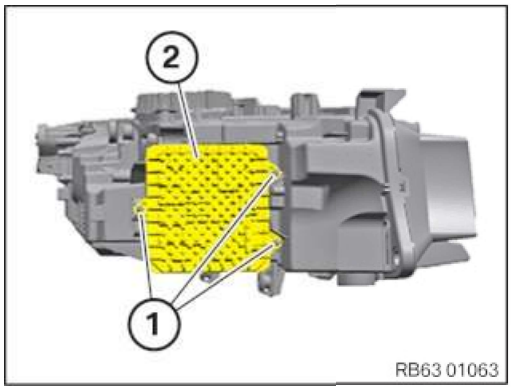
63 11 760 Replacing FLEL control unit

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

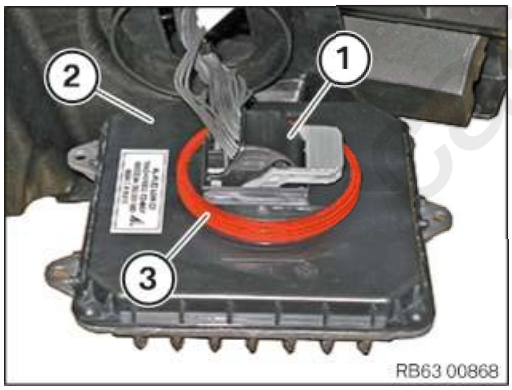
Necessary preliminary tasks:

- Remove headlight

Removal:



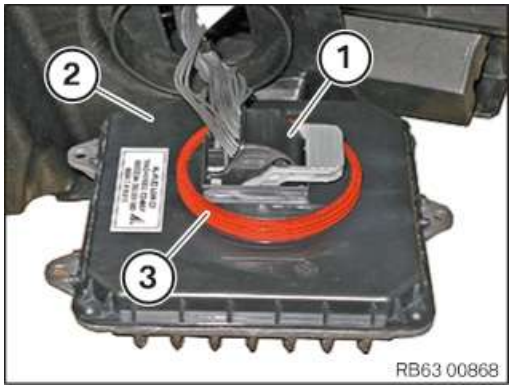
Release screws (1).
Remove Frontal Light Electronics control unit (2).



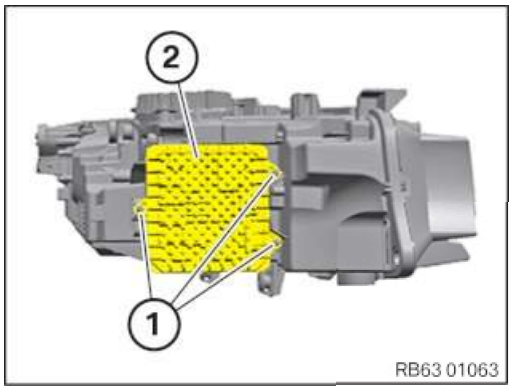
Unlock and disconnect the connector (1).

Installation:

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Connect and lock the connector (1).*Installation note:*
Gasket (3) on control unit Frontal Light Electronics (2) should not be damaged or missing.



Install Frontal Light Electronics control unit (2).

Tighten down screws (1).

Tightening torque 63 11 1AZ.

Required reworking:

- Install headlight
- Carry out programming/encoding.

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63 99 073 Replacing halogen bulb for headlight on right

Operation is described in:

Replacing halogen bulb for headlight on left.

cardiagn.com

63 99 003 Replacing halogen bulb for high beam headlight on right



Operation is described in:

Replace halogen bulb for high beam headlight on left.

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63 12 870 Replacing ignition unit for left xenon headlight

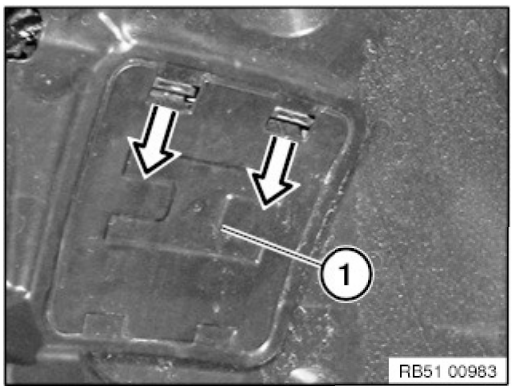


Warning!

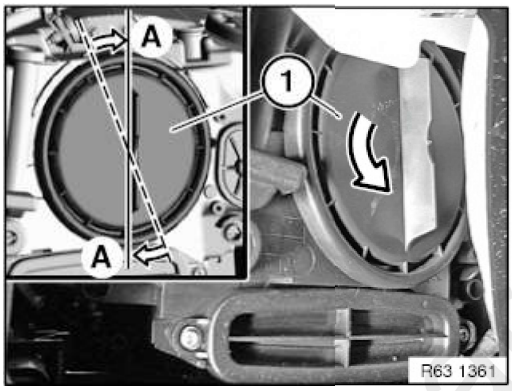
Version with xenon headlights: Danger to life due to high voltage! Therefore disconnect all components from voltage supply before removal.

Work on the entire xenon lighting system (ignition device, control unit and bulb) may only be carried out by qualified personnel.

Follow notes for handling light bulbs (exterior lights).



Unlock and remove cover (1).



Note:
Work shown on the F20 by way of example, deviations in detail are possible in other models.

Turn protective cap (1) to the left and remove.**Attention!**
Risk of damage due to moisture penetration!

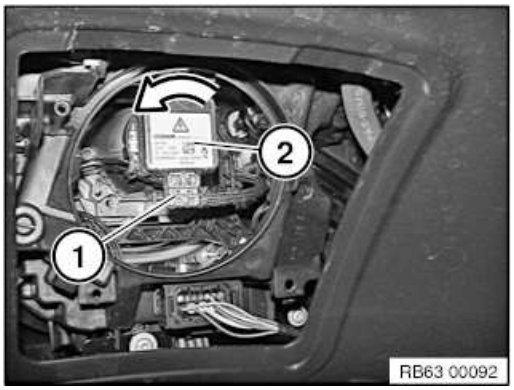
Installation note:
Check seal. Replace protective cap (1) if necessary.

Comply with Instructions for replacing the protective cap.

US version: Checking blocking at horizontal position

Protective cap (1) must lock correctly!

Turn the protective cap (1) to the right to end stop (A)!



Disconnect plug connection (1) on ignition device with bulb (2).

Remove ignition device with bulb (2) in direction of arrow.

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Recommendation:
Check headlight adjustment, correct if necessary.

cardiagn.com

63 11 735 Replacing LED module for right daytime driving lights



Operation is described in:

Replacing LED module for left daytime driving lights

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63 11 734 Replacing LED module for right daytime driving lights



Operation is described in:

Replacing LED module for left daytime driving lights

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63 12 144 Replacing right headlight - LED technology

Operation is described in:

Replacing left LED technology headlight

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63 12 871 Replacing right ignition unit for right xenon headlight



Operation is described in:

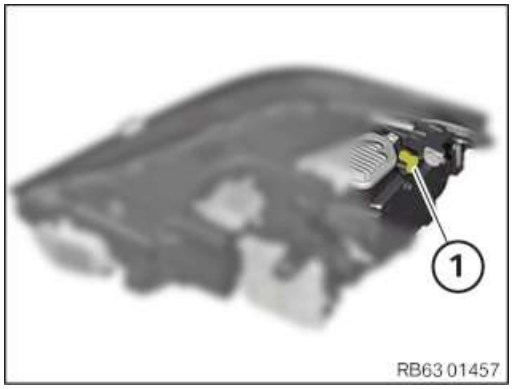
Replace ignition unit for left xenon headlight.

cardiagn.com

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

Note:

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

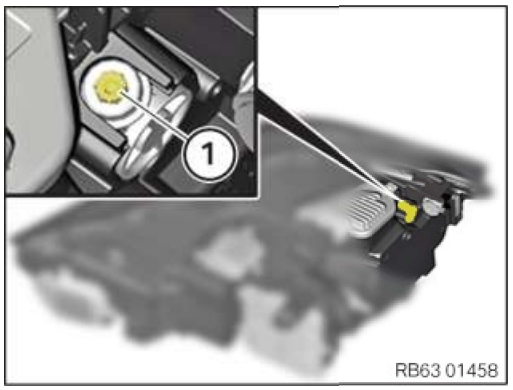


Check:

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

Desired state:

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



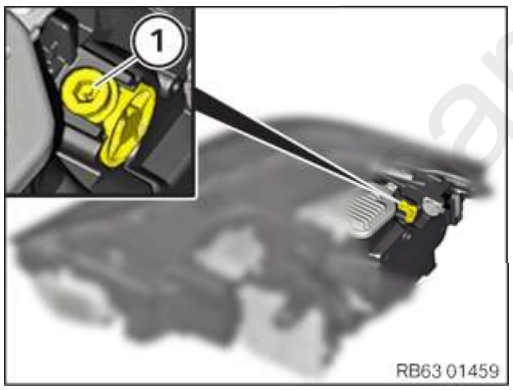
Result:

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

Measure:

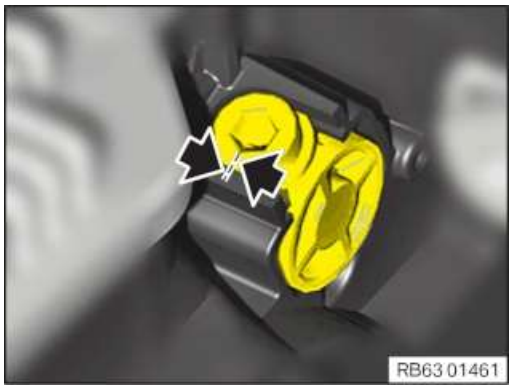
Install headlight

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



Result:

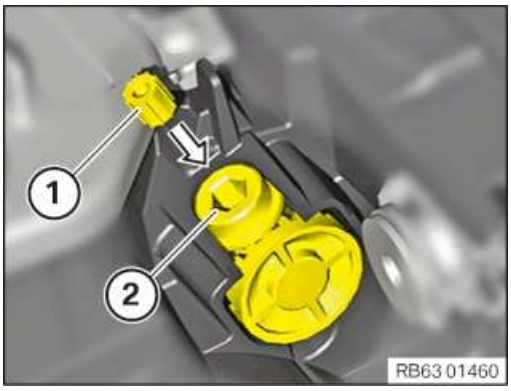
No plug is fitted in the horizontal adjustment screw (1) (schematic diagram)



Measure:

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

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

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

Install headlight

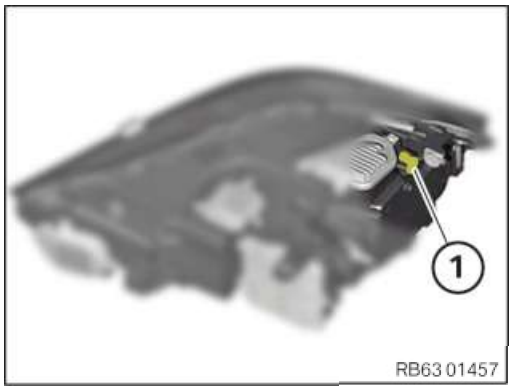
After installation, check **vertical** headlamp setting and correct if necessary

cardiagn.com

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

Special tools required:

- 23 0 490

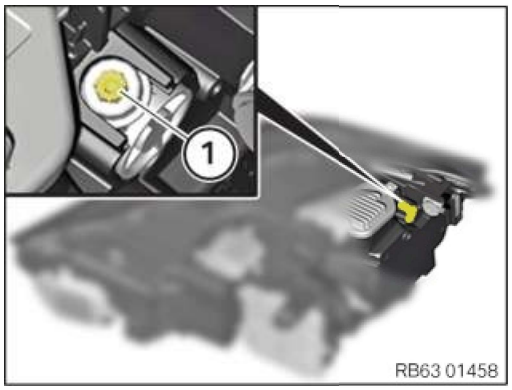


Check:

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

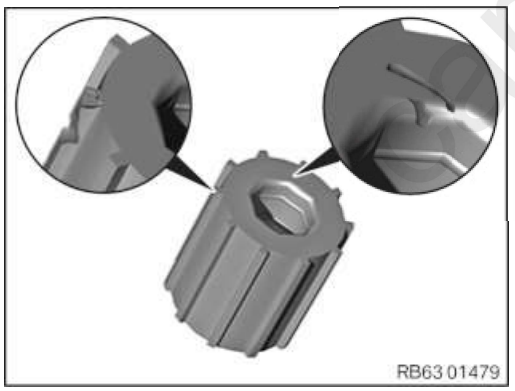
Desired state:

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

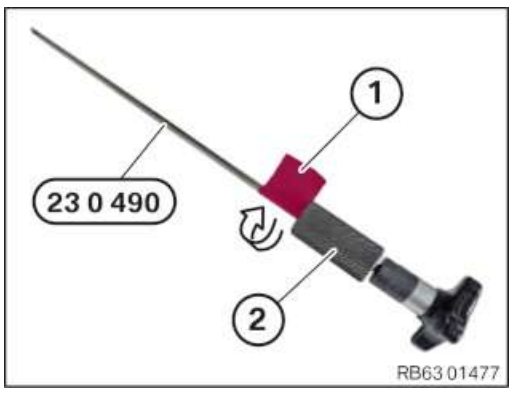


Result:

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



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



Measure:

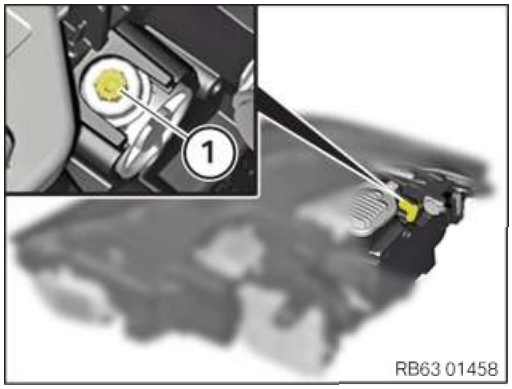
Remove blockage from horizontal adjustment screw

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

carxdiagn.com



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



Result:

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

Measure:

No check or adjustment of the horizontal adjustment necessary

cardiagn.com

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

Special tools required:

- 2 467 369

Note:

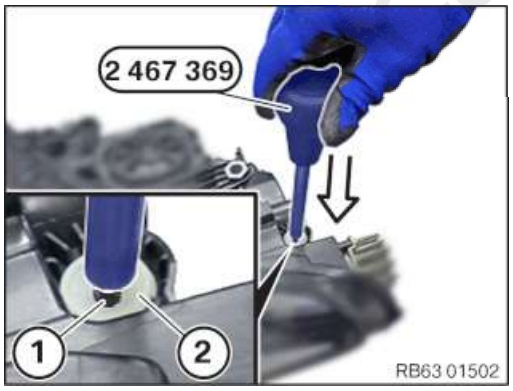
Before installing the new headlamp, make sure that the headlamp adjustment screw for horizontal adjustment is secured against tampering with a plug.



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



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



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

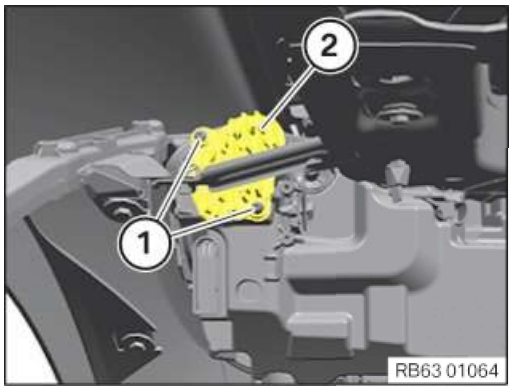
carsdiagn.com

63 13 086 Removing and installing LED module of left turn indicator

Necessary preliminary tasks:

- Partially detach front wheel arch cover (front section)

Removal:

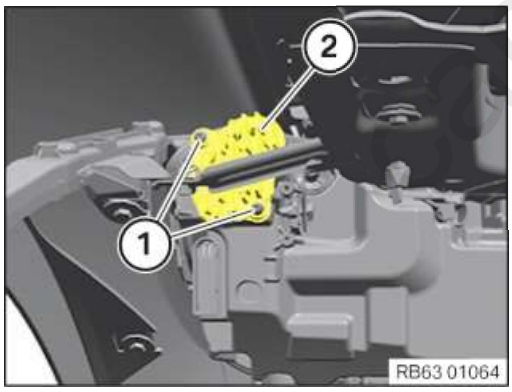


Release screws (1).

Unlock and disconnect the corresponding connector.

Remove turn indicator LED module (2).

Installation:



Installation note:
The gasket on the turn indicator LED module may not be damaged or missing.

Connect and lock the associated connector.

Position turn indicator LED module (2) in the headlights.

Tighten down screws (1).

Tightening torque 63 11 5AZ.

Necessary preliminary tasks:

- Install front wheel arch cover (front section)
- Carry out programming/encoding

bmwdiagn.com

63 13 088 Removing and installing LED module of right turn indicator



Operation is described in:

Removing and installing/replacing LED module of right turn indicator

cardiagn.com

63 13 250 Removing and installing/replacing front left or right side repeater mirror



Operation is identical to:

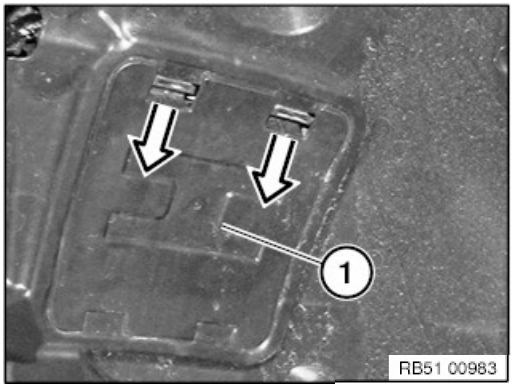
Removing and installing/replacing housing on left or right exterior mirror.

cardiagn.com

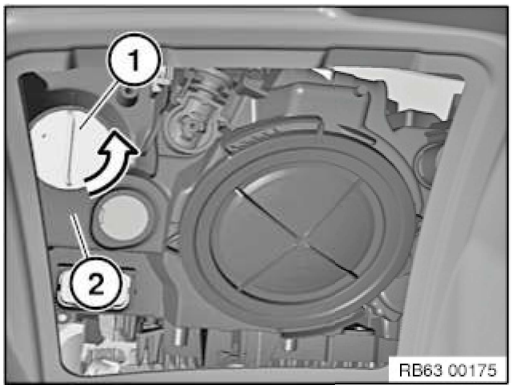
63 99 273 Replacing bulb for turn indicator, front left

Important!

Follow instructions for handling light bulbs (exterior lights).



Unlock and remove cover (1).



Turn bulb holder (1) in direction of arrow and remove from headlight (2).**Important!**

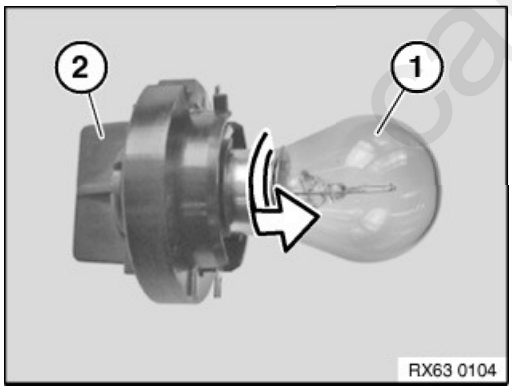
Risk of damage due to moisture penetration!

Installation note:
Check seal. Replace bulb holder (1) if necessary.

Comply with Instructions for replacing the protective cap.

Turn bulb holder (1) clockwise to limit position.

Bulb holder (1) must lock correctly.

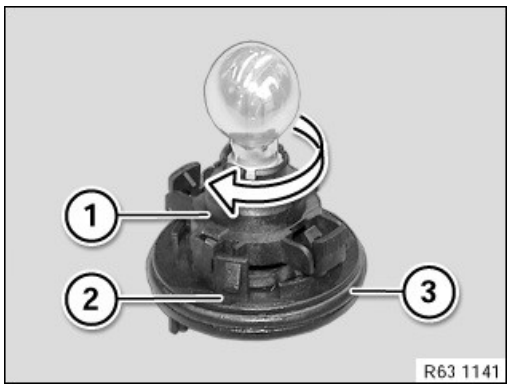


21W version:

Pull bulb (1) in direction of arrow out of bulb holder (2).

Installation note:
Note bulb type.

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Type PY24W:

Turn bulb with socket (1) in direction of arrow and remove from bulb holder (2) toward the top.

Installation note:
Check that bulb with socket (1) and sealing ring (3) on bulb holder (2) are correctly seated.

Note bulb type.

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63 99 275 Replacing bulb for turn indicator, front right



Operation is described in:

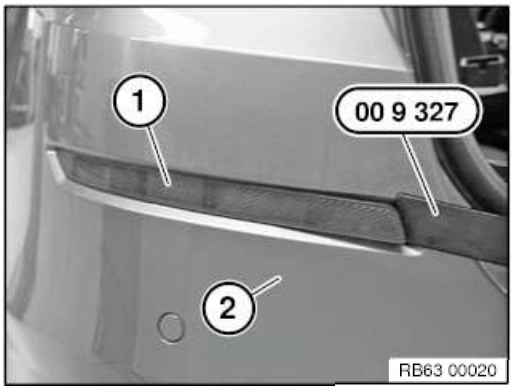
Replacing bulb for front left turn indicator

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63 14 120 Removing and installing/replacing rear reflector (until 05/2013)

Special tools required:

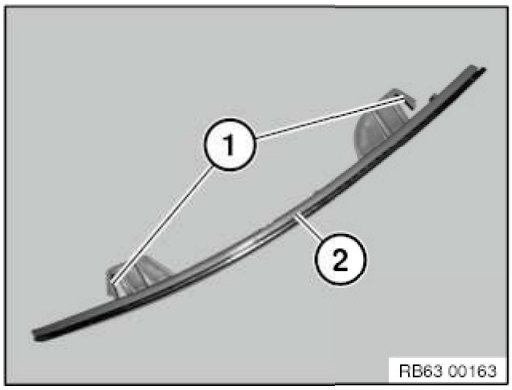
- 00 9 327



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Carefully unclip rear reflector (1) on the right side using special tool 00 9 327 .

Remove rear reflector (1) toward the rear from bumper panel (2).



Installation note:
Retaining lugs (1) must not be damaged.

Make sure rear reflector (2) is correctly seated.

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63 14 060 Removing and installing/replacing the front left or right side marker

Special tools required:

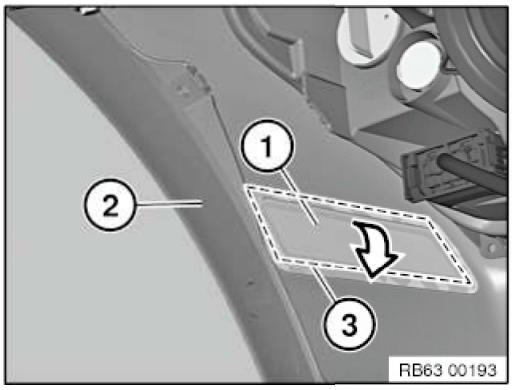
- 00 9 325

Necessary preliminary tasks:

- Partially remove front wheel arch cover (front section)

Note:
Minimum object temperature of side marker and bumper panel ≥ 18 °C.

If this temperature is not achieved, the components must be preheated.



Remove side marker:

Carefully preheat side marker (1) in area (3) using hot air blower and use special tool 00 9 325 to release it from the bumper panel (2).

Note:
The side marker (1) cannot be used again.

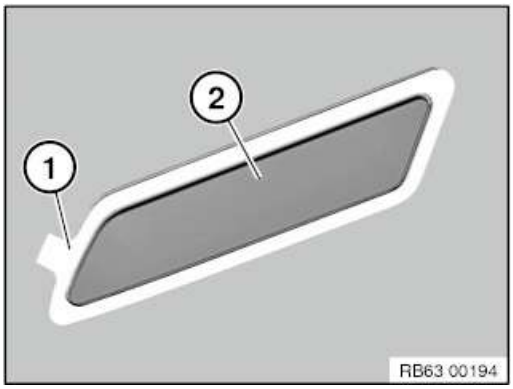
Clean bumper panel:

To clean use a lint-free disposable cloth or a clean cleaning cloth.

Clean bonding surface of bumper panel using spirits.

Air drying time at least 1 minute.

Do not grip bonding surface.



Install side marker:

Release liner* (1) and lightly press side marker (2) to bumper panel.

Check position and realign, if necessary.

The minimum contact pressure is achieved by firmly pressing your thumbs or the balls of your hands over the entire joining area (holding time approx 1 second).

Firm thumb pressure approx. 35 N/cm^2.

* Liner is protective film at new side marker.

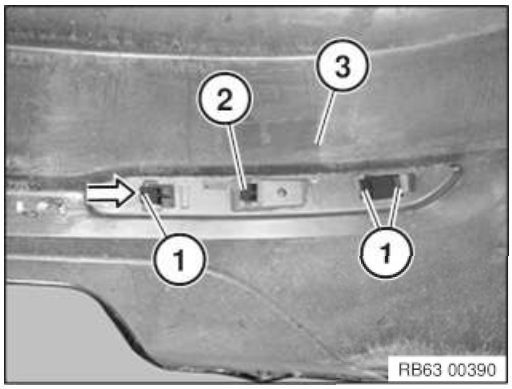
cardiagn.com

63 14 140 Replacing rear reflector (from 05/2013)

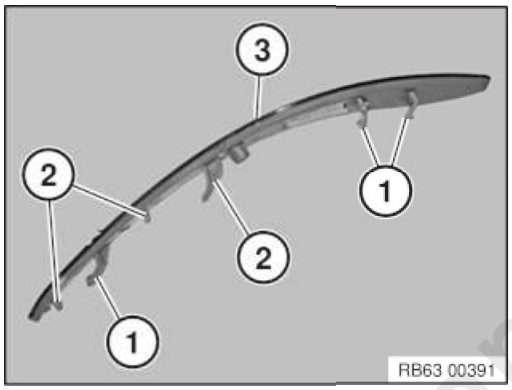
Necessary preliminary work:

- Remove rear bumper panel

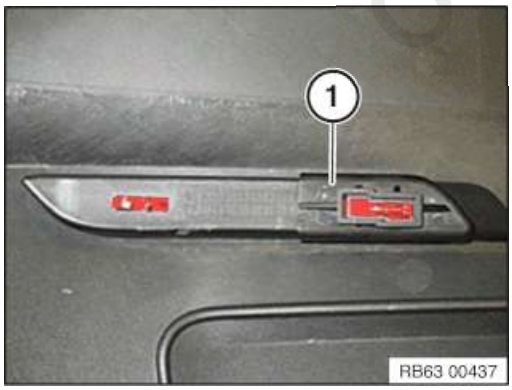
Note:
In vehicles produced from 05/2013, the rear reflector can no longer be removed without destroying it.



Release the latch mechanism (1) on the rear reflector (2), and remove from the bumper panel (3) in the direction of the arrow.*Installation note:* Make sure replacement rear reflector (2) is correctly fitted in bumper panel (3).



Installation note:
Latch mechanisms (1) and guides (2) on replacement rear reflector (3) must not be damaged or missing.



Note:
In the following national-market versions, component (1) on the back of the bumper panel must be removed before the replacement rear reflector can be installed:

- India
- China
- Korea
- Gulf States

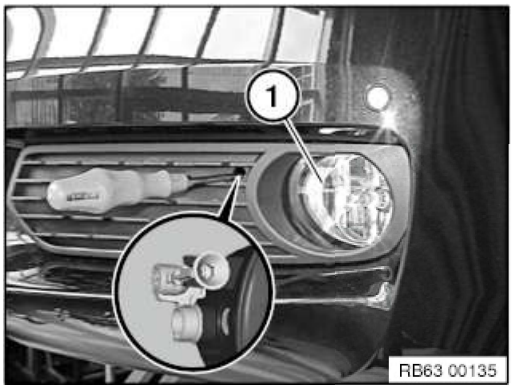
Component (1) is bonded.

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63 10 014 Adjusting fog lights

Comply with test preconditions for headlight adjustment.

Important!
Do not damage adjusting screw when adjusting fog light.



Note:
Work shown on the F20 by way of example, deviations in detail are possible in other models.

Adjust fog lightÂ (1) by turning adjusting screw.

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63 17 070 Removing and installing/replacing left fog light

Important!

Follow instructions for handling light bulbs (exterior lights)

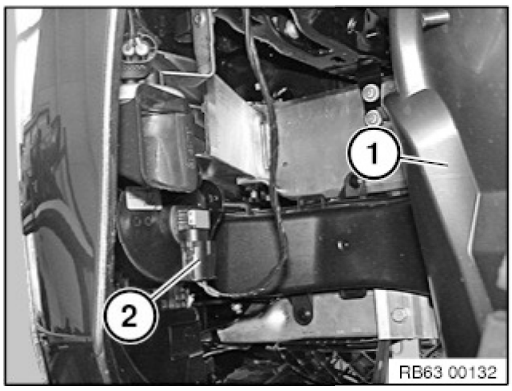
Necessary preliminary tasks:

Version with left wheel arch auxiliary radiator:

- Partially release auxiliary radiator

On all other versions:

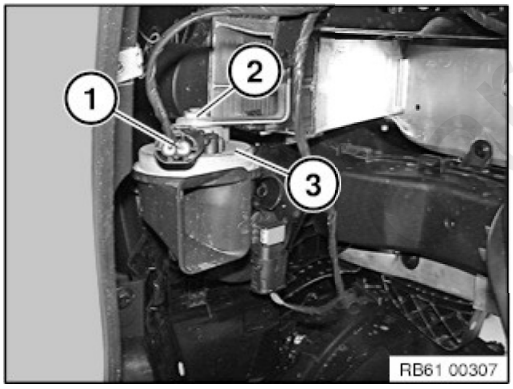
- Partially release wheel arch cover front (front section)



Only on version without auxiliary radiator:

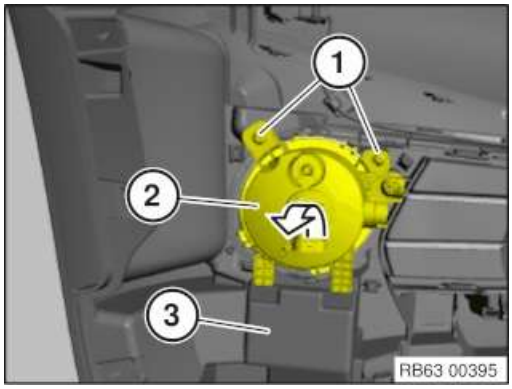
Fold wheel arch cover (1) back.

Unfasten plug connection (2) and disconnect.



Unfasten plug connection (1) and disconnect.

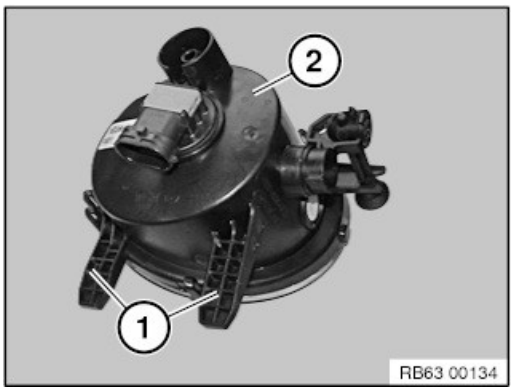
Release nut (2) and remove fanfare (3).



Release screw (1).

Tightening torque 63 12 2AZ.

Remove fog light (2) out of bumper panel (3) in direction of arrow.



Installation note:
Guides (1) on fog light (2) must not be damaged or missing.

On replacement of fog light or bumper panel at front:

- If necessary, remount bulb
- Adjust fog lights

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63 17 075 Removing and installing/replacing right front fog light

Warning!

Follow instructions for handling light bulbs (exterior lights)

Necessary preliminary tasks:

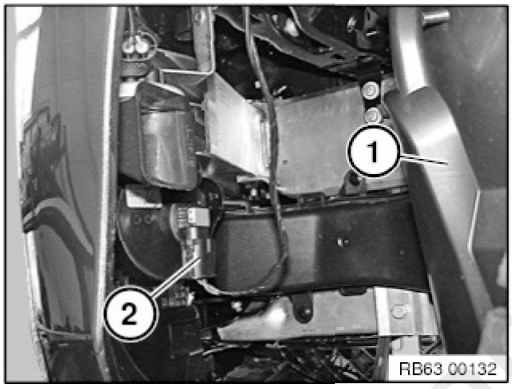
Version with right wheel arch auxiliary radiator:

- Partially release auxiliary radiator

On all other versions:

- Partially release wheel arch cover front (front section)

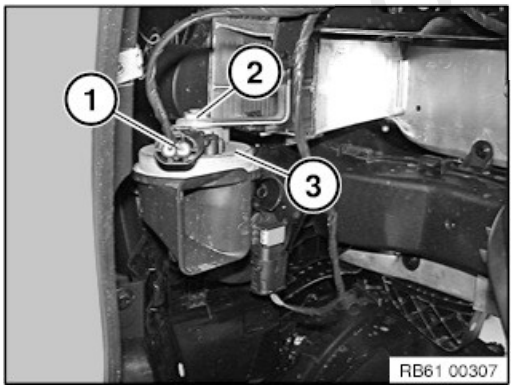
Note:
Perform operations on right side the same as the left side shown, use graphics in mirror image.



Only on version without auxiliary radiator:

Fold wheel arch cover (1) back.

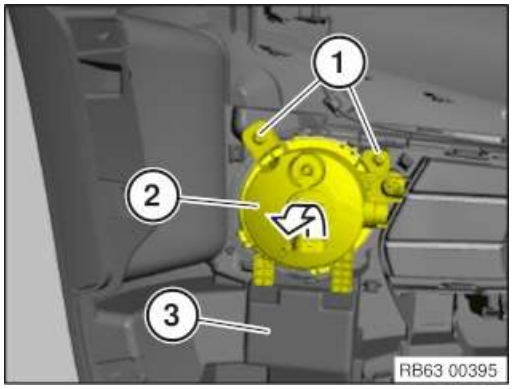
Unfasten plug connection (2) and disconnect.



Unfasten plug connection (1) and disconnect.

Release nut (2) and remove fanfare (3).

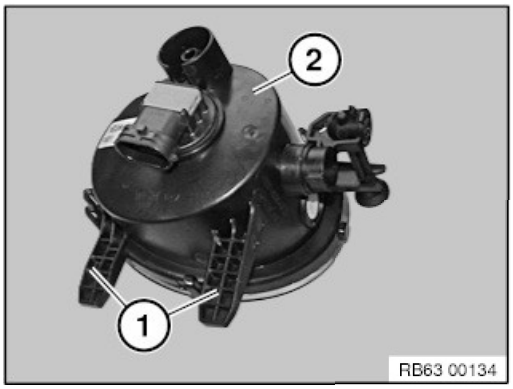
carldiag.com



Release screw (1).

Tightening torque 63 12 2AZ.

Remove fog light (2) out of bumper panel (3) in direction of arrow.



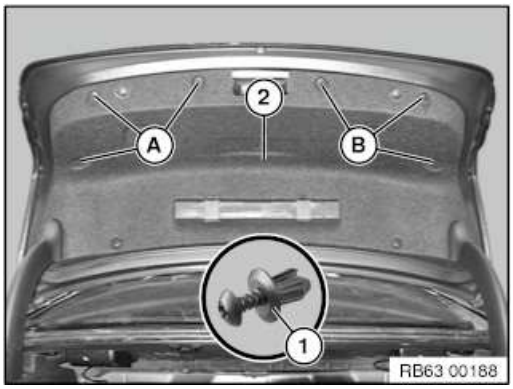
Installation note:
Guides (1) on fog light (2) must not be damaged or missing.

On replacement of fog light or bumper panel at front:

- If necessary, convert bulb.
- Adjust fog lights

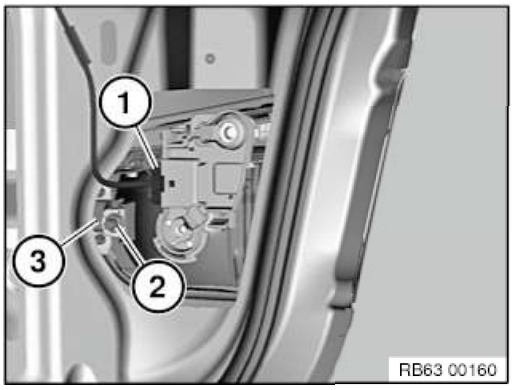
cardiagn.com

63 21 240 Removing and installing (replacing) left rear light (on tailgate)



Release expanding rivet (1) and trim panel (2) in area (A).*Note:*
The right rear light is removed in an analogous manner; to do so, release expanding rivet (1) and trim panel (2) in area (B).

The following graphics show the removal of the left rear light.



Unfasten plug connection (1) and disconnect.

Release nut from threaded bolt (2) and remove retaining bracket (3).

Tightening torque 61 21 1AZ.

Press on threaded bolt (2) to release rear light from tailgate.



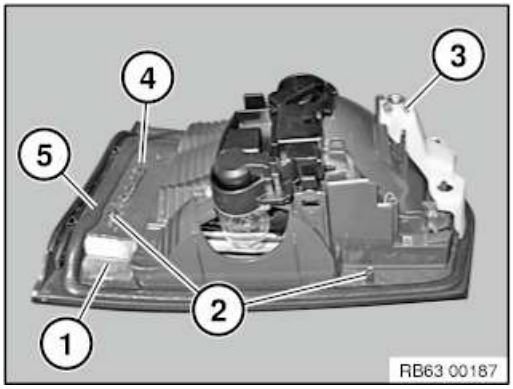
Important!

Risk of damage, rear light is partially bonded from version 07/2012.
Disassembly can therefore be difficult!



Feed out rear light (1) in direction of arrow toward the rear.

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Installation note:
Attach retaining bracket with nut; when doing so, only screw on the nut to the point where the threaded bolt and nut are flush.

Following parts on rear light (1) must not be missing or damaged:

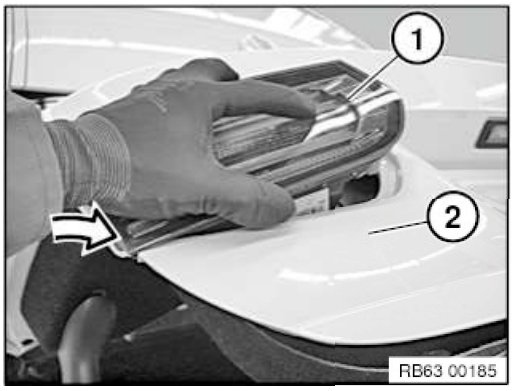
(2) Guides

(3) Threaded bolt/nut/retaining bracket

(4) Retaining tab

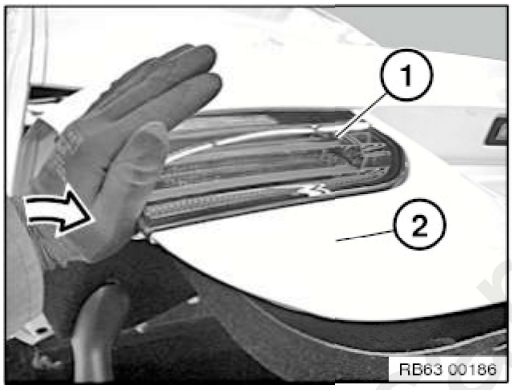
(5) Seal

The guides (2) must be fed into the appropriate recesses in the tailgate.



Installation note:
First insert rear light (1) with the retaining tab in the appropriate recess of tailgate (2).

Align rear light (1) until guides align with the associated recesses of the tailgate (2).



Important!

Risk of damage!

Do no push or strike rear light (1) with force to install it in the tailgate (2)!

If properly aligned, rear light (1) slides effortlessly into its end position.

Installation note:
Carefully press rear light (1) toward centre of vehicle until guides are fed into the associated recesses of the tailgate (2).

Make sure rear light (1) is correctly seated in tailgate (2).

Make sure retaining bracket is fitted correctly on tailgate (2).

Make sure plug connections are correctly seated.

Tighten nut on retaining bracket.

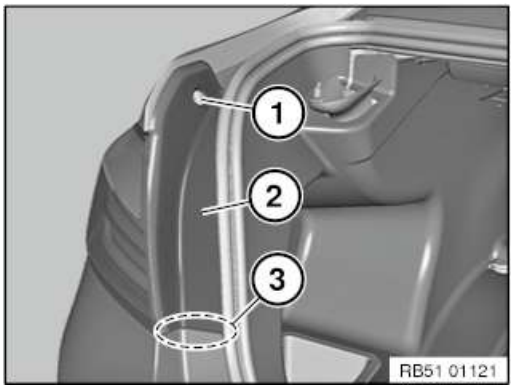
Tightening torque 61 21 1AZ.

Replacement:

- If necessary, remount bulbs
- Note bulb type

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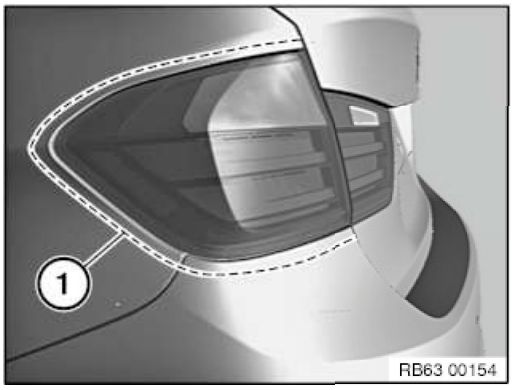
63 21 260 Removing and installing (replacing) left, rear light (on side wall)



Unscrew clip (1).

Feed cover (2) in upward direction out of guides (3).

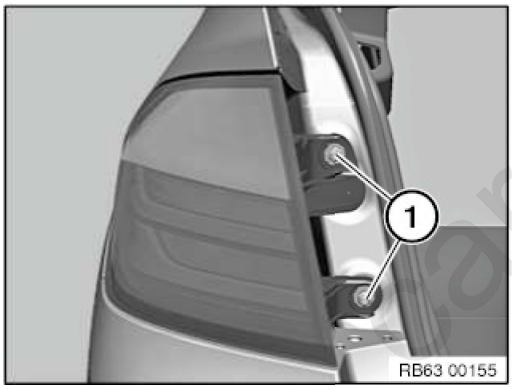
Installation note:
Make sure cover (2) is correctly seated.



Important!

Risk of paint damage!

Tape off entire area (1) with yellow plastic adhesive tape.



Unscrew nuts (1).

Tightening torque 63 21 1AZ.

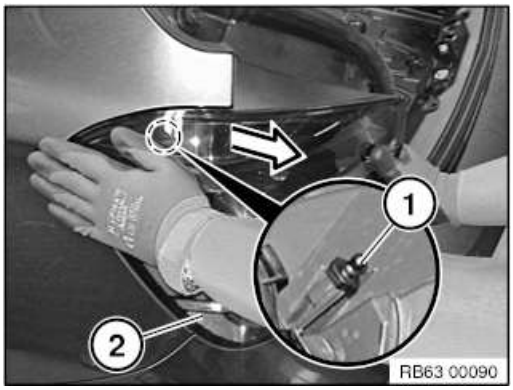


Important!

The rear light is secured in the body with a latch!

In the interests of avoiding damage to the rear light and the paintwork the following text describes how to release the latch.

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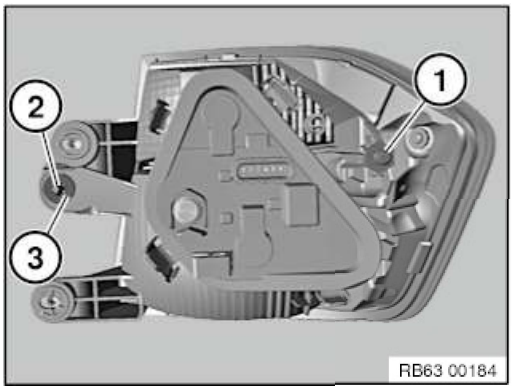
Note:
Similar to graphic.

Detach the rear light (2) in direction of arrow from the latch mechanism (1).

Unlock associated plug connection and disconnect.

Remove rear light (2).

Installation note:
Make sure that rear light (2) is correctly locked.



Installation note:
Latch (1) must not be missing or damaged.

Guide (2) and seal (3) must not be damaged or missing.

Replacement:

Convert bulbs if necessary.

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63 21 265 Removing and installing (replacing) right rear light (on side wall)



Operation is described in:

Removing and installing (replacing) left rear light (on side wall).

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63 21 245 Removing and installing (replacing) right rear light (on tailgate)

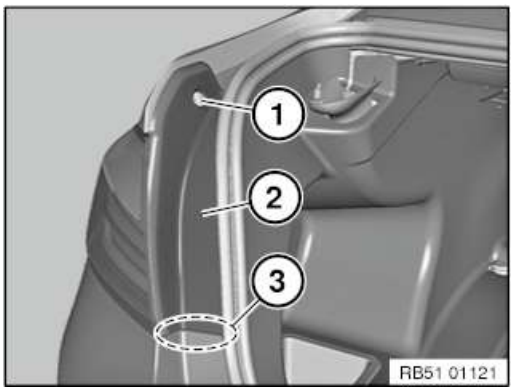


Operation is described in:

Removing and installing (replacing) left rear light (on tailgate).

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51 49 ... Removing and installing/replacing left or right water channel trim strip on rear side panel



Unscrew clip (1).

Feed cover (2) in upward direction out of guides (3).

Installation note:
Sealing lip of cover (2) must not lie below edge protection for tailgate.

Sealing lip of cover (2) must rest correctly on edge protection for tailgate.

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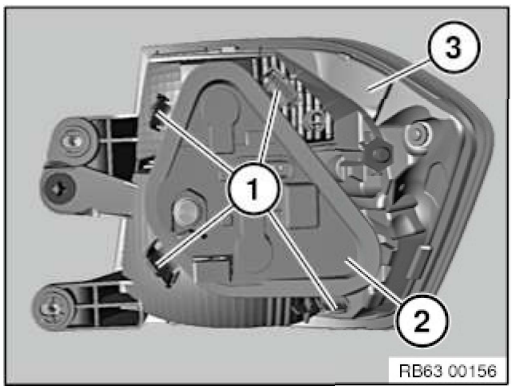
63 21 030 Removing and installing/replacing left socket housing for rear light (on side wall)

Warning!

Follow instructions for handling light bulbs (exterior lights).

Necessary preliminary tasks:

- Remove rear light

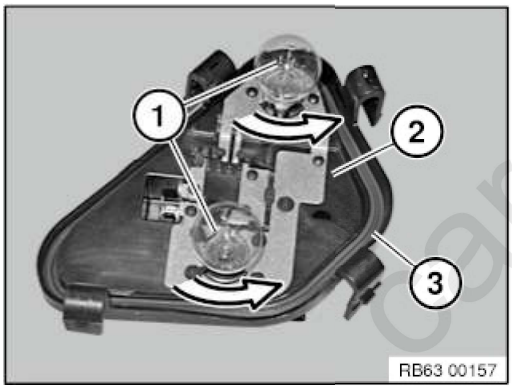


Release catches (1).

Remove socket housing (2) from rear light (3).

Installation note:
Catches (1) must not be damaged or missing.

Make sure socket housing (2) is correctly seated on rear light (3).



Installation note:
Seal (3) on socket housing (2) must not be missing or damaged.

Replacement:

Carefully press down bulb (1), turn in direction of arrow and remove from socket housing (2).

Note bulb type.

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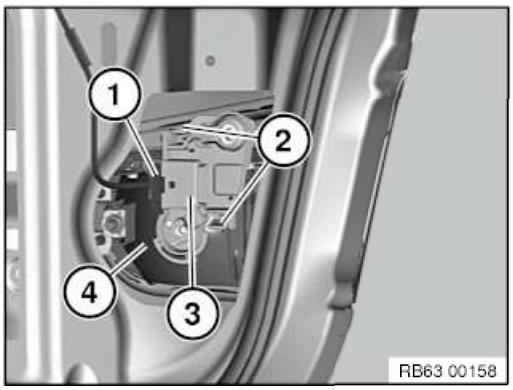
63 21 035 Removing and installing/replacing left socket housing for rear light (on tailgate)

Warning!

Follow instructions for handling light bulbs (exterior lights).

Necessary preliminary tasks:

- Partially removing trim for rear lid



Unfasten plug connection (1) and disconnect.

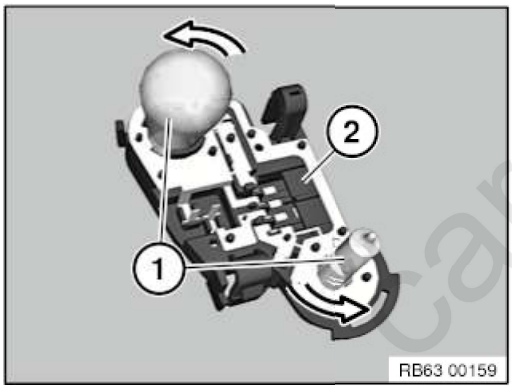
Unlock latches (2) and remove socket housing (3) from rear light (4).

Installation note:

Make sure plug connection (1) is correctly seated.

Catches (2) must not be damaged or missing.

Make sure socket housing (3) is correctly seated on rear light (4).



Replacement:

Carefully press down bulb (1), turn in direction of arrow and remove from socket housing (2).

Note bulb type.

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63 21 040 Removing and installing/replacing right socket housing for rear light (on side wall)



Operation is described in:

Removing and installing/replacing left socket housing for rear light.

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63 21 042 Removing and installing/replacing right socket housing for rear light (on tailgate)



Operation is described in:

Removing and installing/replacing left socket housing for rear light.

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63 99 316 Replacing bulb(s) for left or right rear light (on side wall)



Operation is described in:

Removing socket housing for rear light on side wall.

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63 99 308 Replacing bulb(s) for left or right rear light (rear lid)



Operation is described in:

Removing socket housing for rear light on tailgate.

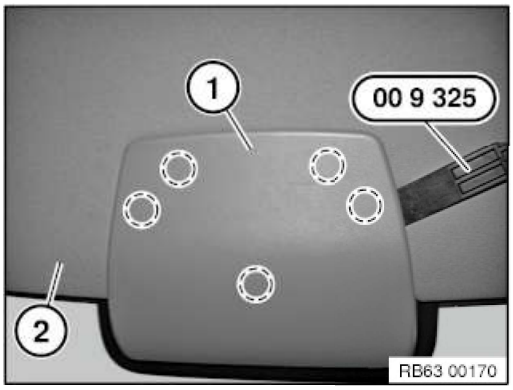
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63 25 004 Removing and installing/replacing auxiliary brake light

Special tools required:

- 00 9 325

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

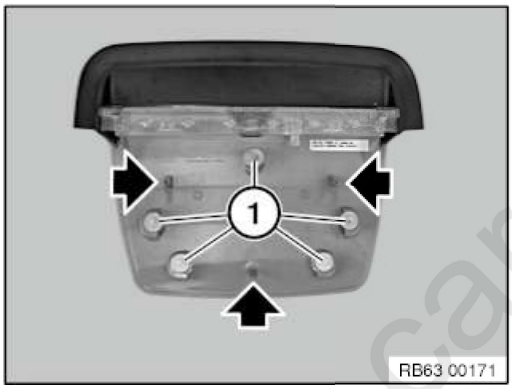


Unclip additional brake light (1) with special tool 00 9 325 at marked points from moulded roofliner (2).

Unlock associated plug connection and disconnect.

Remove additional brake light (1).

Installation note:
Make sure additional brake light (1) is correctly seated on moulded roofliner (2).



Installation note:
Clips (1) and guides (arrow) must not be missing or damaged.

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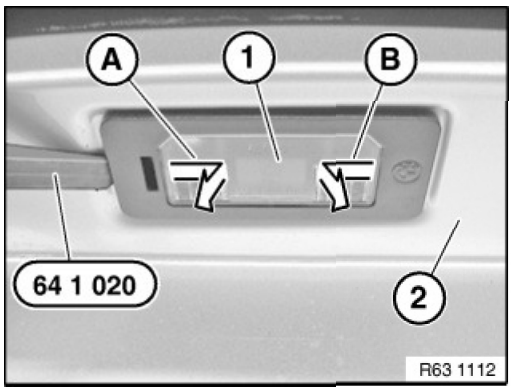
63 26 000 Removing and installing/replacing left or right number/license plate light

Special tools required:

- 64 1 020

Important!

Follow instructions for handling light bulbs (exterior lights).



Lever out licence plate light (1) with special tool 64 1 020 in direction of arrow (A) from tailgate (2).

Remove number/license plate light (1) in direction of arrow (B).

Disconnect plug connection underneath.

Replacement:

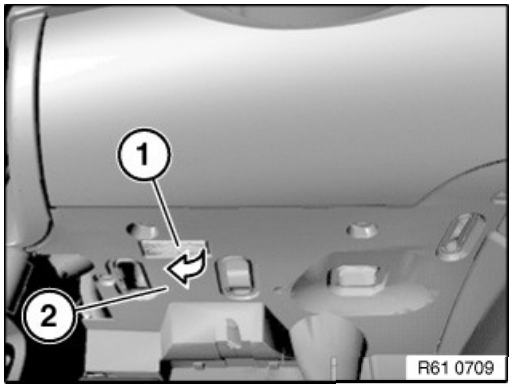
Note bulb type.

LED technology lights can only be replaced completely!

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63 31 020 Removing and installing/renewing footwell light

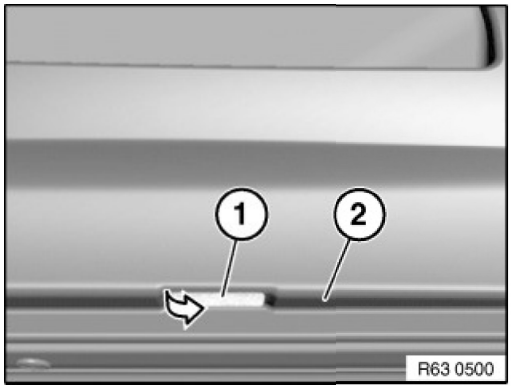
Important!
Follow instructions for handling light bulbs (interior lighting).



Footwell, left/right:

Lever footwell light (1) in direction of arrow out of trim panel (2).

Disconnect plug connection behind and remove footwell light (1).



Door, left/right:

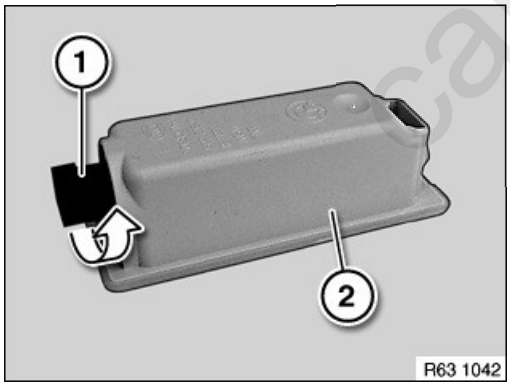
Lever footwell light (1) in direction of arrow out of door trim panel (2).

Disconnect plug connection behind and remove footwell light (1).

Replacement:

- If necessary, remove bulb, note bulb type

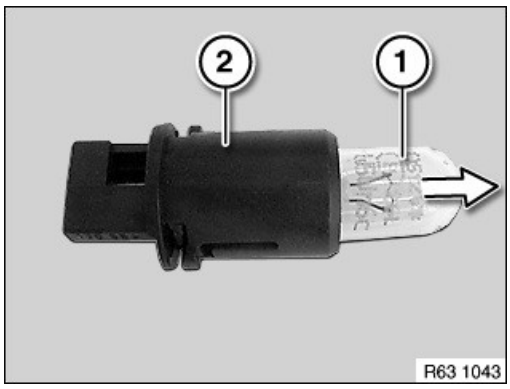
  The footwell light in LED technology must be completely replaced!



Turn bulb holder (1) in direction of arrow and pull out of footwell light (2).

Installation note:
Make sure bulb holder (1) is correctly seated and latched on footwell light (2).

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Pull bulb (1) in direction of arrow out of bulb holder (2).

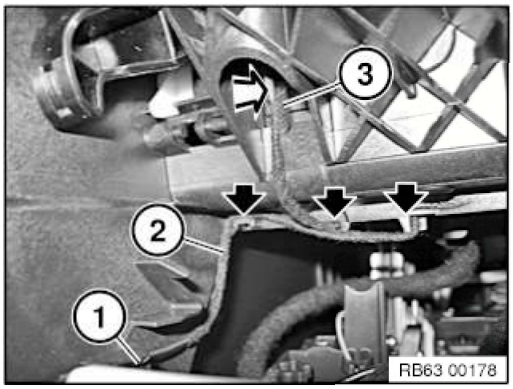
cardiagn.com

63 31 176 Removing and installing/replacing centre armrest storage compartment LED

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

Necessary preliminary tasks:

- Remove insert in centre armrest storage compartment
- Remove rear centre console trim



Unfasten plug connection (1) and disconnect.

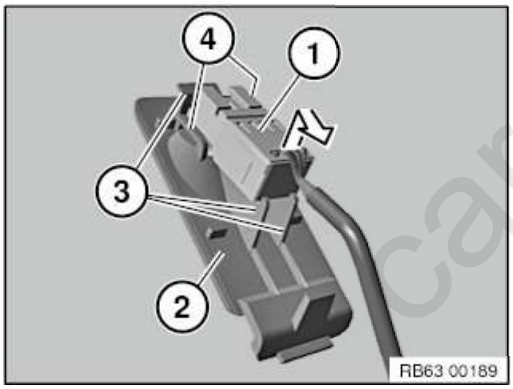
Feed cable (2) out of centre console.

Press LED module cover (3) in direction of arrow out of centre console.

Feed out LED module cover (3) with cable (2) from centre console.

Installation note:
Make sure cable (2) is correctly laid in centre console.

Make sure LED module cover (3) is correctly seated in centre console.



Replacement:

Disengage and remove LED module (1) from cover (2) in direction of arrow.

Installation note:
Retaining lugs (3) and guides (4) on cover (2) must not be damaged or missing.

Ensure correct seat of LED module (1) on the cover (2).

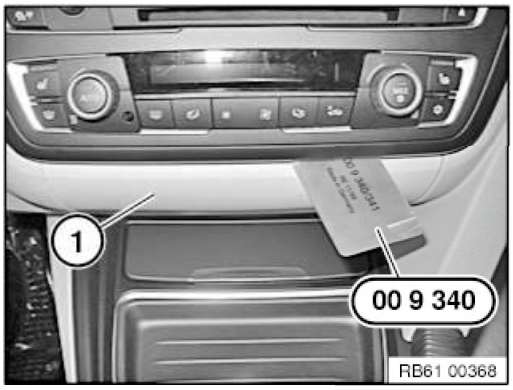
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63 31 165 Removing and installing/replacing centre console LED

Special tools required:

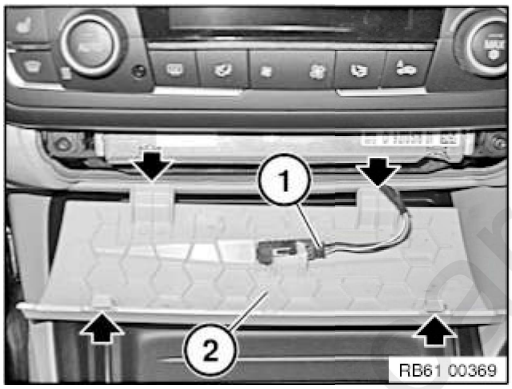
- 00 9 340

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



Insert special tool 00 9 340 as illustrated.

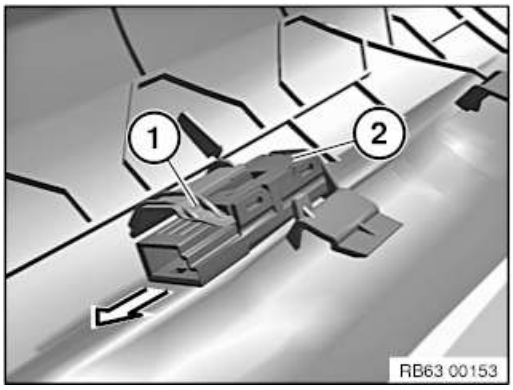
Lever trim cover (1) slightly forward and unclip.



Unlock plug connection (1) and disconnect.

Remove cover (2).

Installation note:
Retaining lugs and guides must not be missing or damaged.



Lever out latch (1) and pull out LED (2) in direction of arrow.*Installation note:*
Latch (1) must not be missing or damaged.

Make sure LED (2) is correctly seated.

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63 31 000 Removing and installing/replacing complete interior roof light (front)

Special tools required:

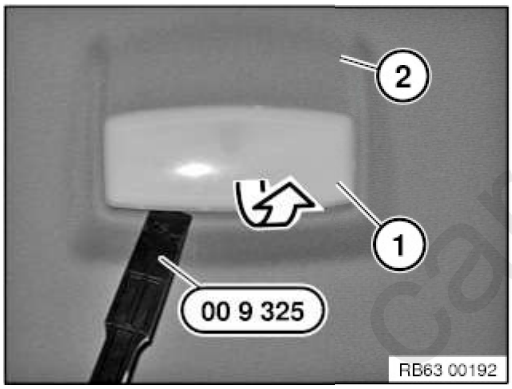
- 00 9 325

Important!
Follow instructions for handling light bulbs (interior lighting).

Important!
Read and comply with notes on protection against electrostatic discharge (ESD protection).

Necessary preliminary tasks:
Only version with roof switch cluster:

- Remove roof switch cluster

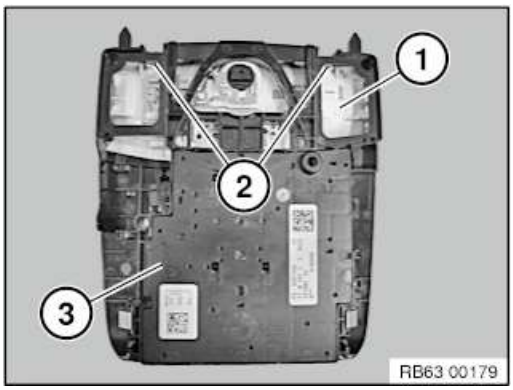


For interior roof light equipment:

Carefully lever out interior roof light (1) with special tool 00 9 325 in direction of arrow.

Unlock and disconnect associated plug connection, remove interior roof light (1).

Installation note:
Make sure interior roof light (1) is correctly seated.



For roof switch cluster equipment:

Release interior roof light (1) at clamps (2) and feed out of roof switch cluster (3).

Installation note:
Clips (2) must not be missing or damaged.

Make sure interior roof light (1) is correctly seated in roof switch cluster (3).

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Replacement:

- If necessary, convert bulb.
- Note bulb type

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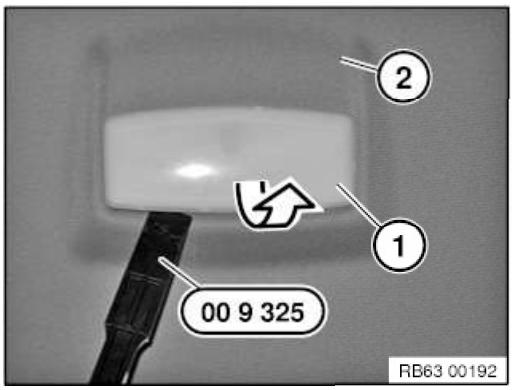
63 31 003 Removing and installing/replacing complete interior roof light (rear)

Special tools required:

- 00 9 325

Important!

Follow instructions for handling light bulbs (interior lighting).



Carefully lever out interior roof light (1) with special tool 00 9 325 in direction of arrow.

Unlock and disconnect associated plug connection, remove interior roof light (1).

Replacement:

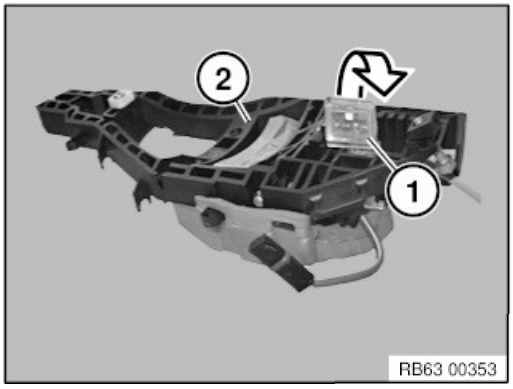
- If necessary, convert bulb.
- Note bulb type

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63 31 170 Removing and installing/replacing door handle light on left or right front door

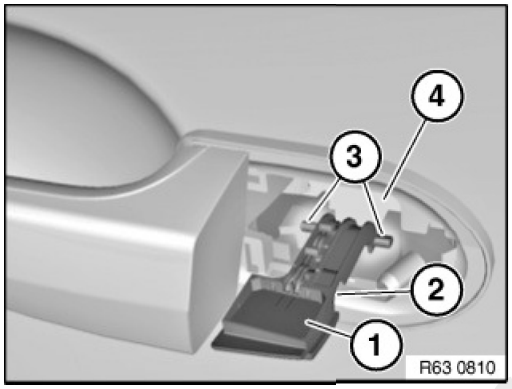
Necessary preliminary tasks:

- Remove front support for outer door handle



Note:
Graphic shown on the F30 by way of example

Feed out outside door handle light (1) with cable from support for outer door handle (2).



Installation note:
Make sure door handle light (1) is correctly positioned in area (2).

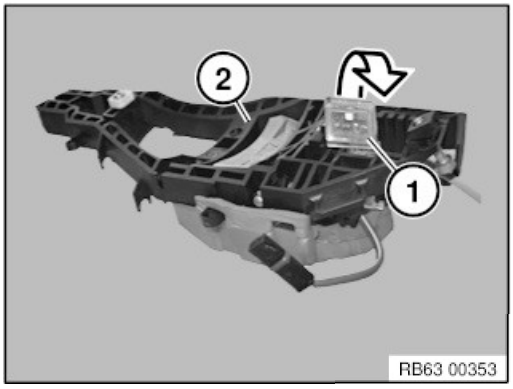
Guides (3) of door handle light (1) must be seated in support for outer door handle (4).

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63 31 175 Removing and installing/replacing door handle light on left or right rear door

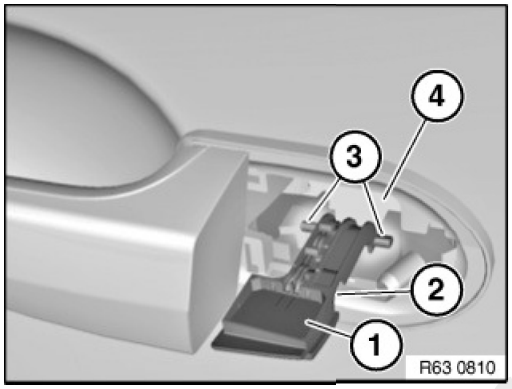
Necessary preliminary work:

- Remove rear support for outer door handle



Note:
Graphic shown on the F30 by way of example

Feed out outside door handle light (1) with cable from support for outer door handle (2).



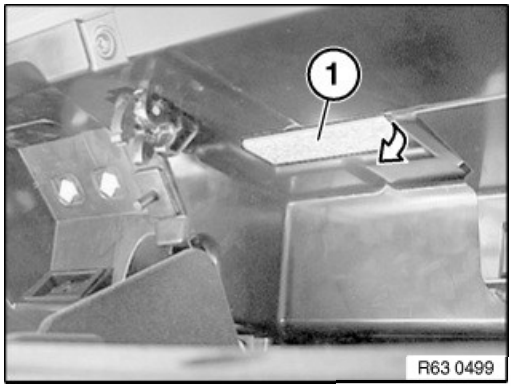
Installation note:
Make sure door handle light (1) is correctly positioned in area (2).

Guides (3) of door handle light (1) must be seated in support for outer door handle (4).

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63 31 150 Removing and installing/replacing glovebox light

Important!
Follow notes for handling light bulbs (interior lights).



Note:
Similar to graphic.

Lever out glove box light (1) in direction of arrow.

Unfasten plug connection and disconnect.

Remove glove box light (1).

Replacement:

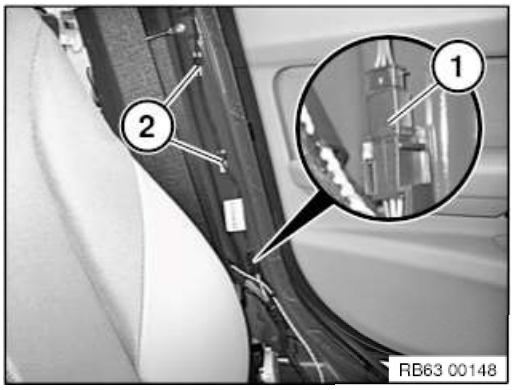
- If necessary, remount bulb, check bulb type

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63 31 187 Removing and installing/replacing LED for left or right door post trim panel

Necessary preliminary tasks:

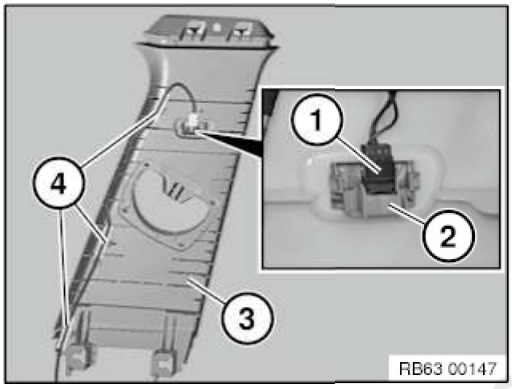
- Partially remove trim panel for top of door post



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Unlock and disconnect plug connection (1) on door post.

Lever out cable at cable clip (2) from door post.



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Graphic shows trim panel (3) removed.

Carefully lever out LED module (1) from holder (2) with a suitable tool.

Lever out cable at cable clip (4) from trim panel (3) and remove LED module (1).

Installation note:
Make sure LED module (1) is correctly fitted in holder (2).

Cable clips (4) must not be missing or damaged.

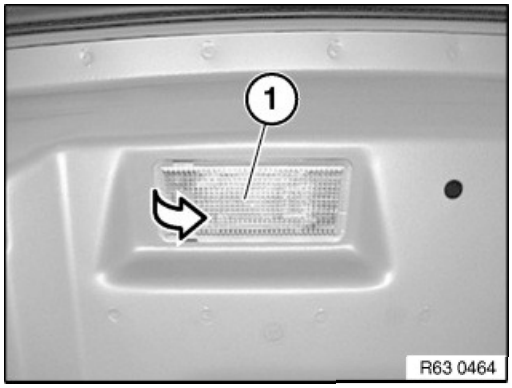
Ensure correct cable routing.

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63 31 080 Removing and installing/replacing luggage compartment light

Important!

Follow instructions for handling light bulbs (interior lighting).



Lever out luggage compartment light (1) in direction of arrow.

Disconnect plug connection underneath and remove luggage compartment light (1).

Replacement:

- If necessary, remount bulb, noting bulb type

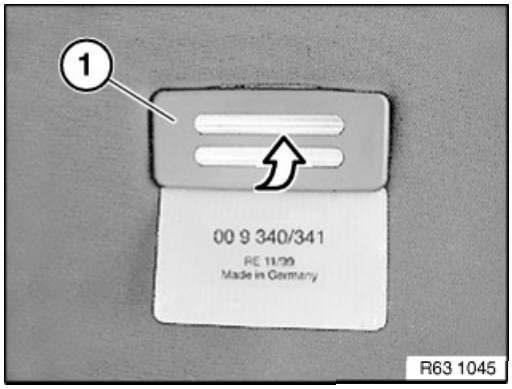
  Luggage compartment light in LED technology must be completely replaced!

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63 31 050 Removing and installing/replacing mirror light

Special tools required:

- 00 9 340



Lift off make-up mirror light (1) from roofliner with special tool 00 9 340 in direction of arrow.

Disconnect plug connection underneath and remove make-up mirror light (1).

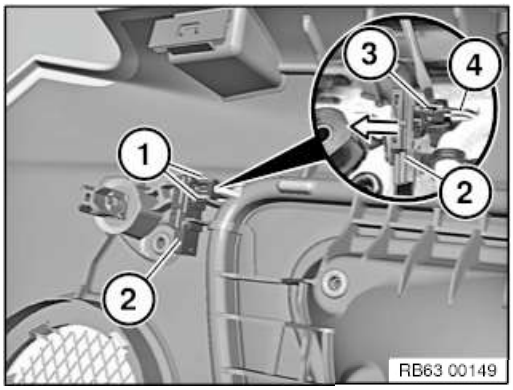
Note:
Mirror light (1) in LED technology, LED cannot be replaced.

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63 31 182 Replacing LED for front inside door opener (left or right)

Necessary preliminary tasks:

- Remove front door trim panel



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Release latch mechanisms (1) and lift out LED module (2).

Carefully release latch mechanism (3) on LED module (2) with a suitable tool.

Pull LED module (2) off of fibre-optic conductor (4) in direction of arrow.

Installation note:
Make sure that the fibre-optic conductor (4) latches correctly in LED module (2).

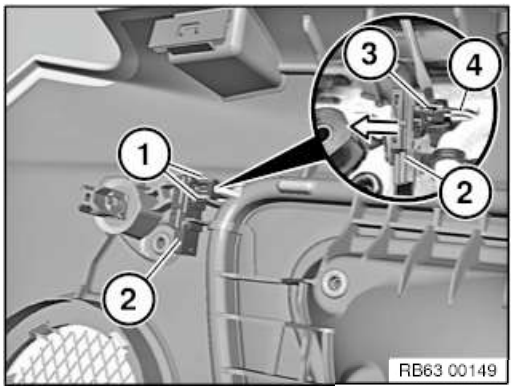
Catches (1; 3) must not be damaged or missing.

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63 31 193 Replacing LED for rear inside door opener (left or right)

Necessary preliminary tasks:

- Remove rear door trim panel



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Release latch mechanisms (1) and lift out LED module (2).

Carefully release latch mechanism (3) on LED module (2) with a suitable tool.

Pull LED module (2) off of fibre-optic conductor (4) in direction of arrow.

Installation note:
Make sure that the fibre-optic conductor (4) latches correctly in LED module (2).

Catches (1; 3) must not be damaged or missing.

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

Important!

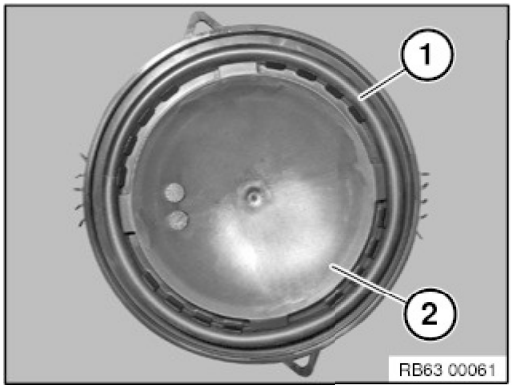
Risk of damage!

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.

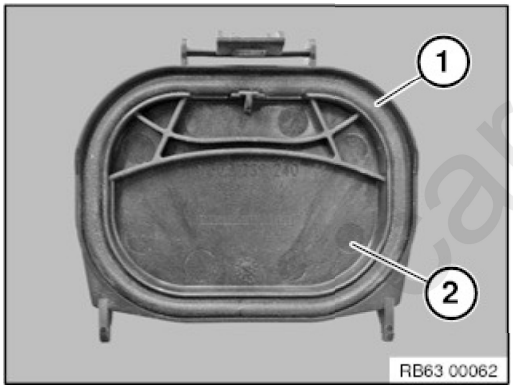
When working on the headlight system, check the protective cap seals.

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).

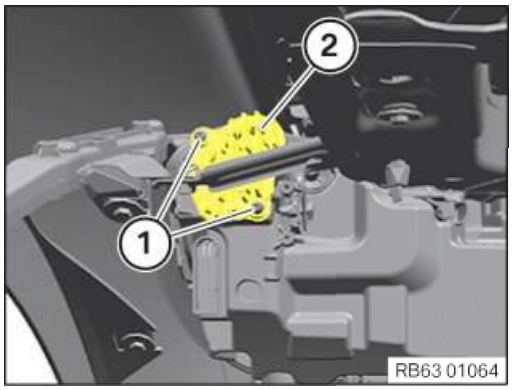
.cardiagn.com

63 13 086 Removing and installing LED module of left turn indicator

Necessary preliminary tasks:

- Partially detach front wheel arch cover (front section)

Removal:

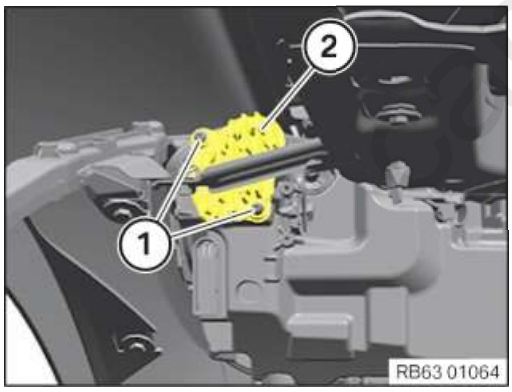


Release screws (1).

Unlock and disconnect the corresponding connector.

Remove turn indicator LED module (2).

Installation:



Installation note:
The gasket on the turn indicator LED module may not be damaged or missing.

Connect and lock the associated connector.

Position turn indicator LED module (2) in the headlights.

Tighten down screws (1).

Tightening torque 63 11 5AZ.

Necessary preliminary tasks:

- Install front wheel arch cover (front section)
- Carry out programming/encoding

bmwdiagn.com

63 13 088 Removing and installing LED module of right turn indicator



Operation is described in:

Removing and installing/replacing LED module of right turn indicator

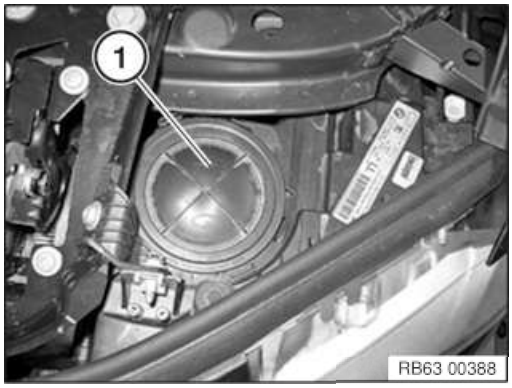
cardiagn.com

63 99 110 Replacing bulb for daytime driving lights, left



Warning!

Follow instructions for handling light bulbs (exterior lights).



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Turn protective cap (1) counterclockwise and remove.**Important!**

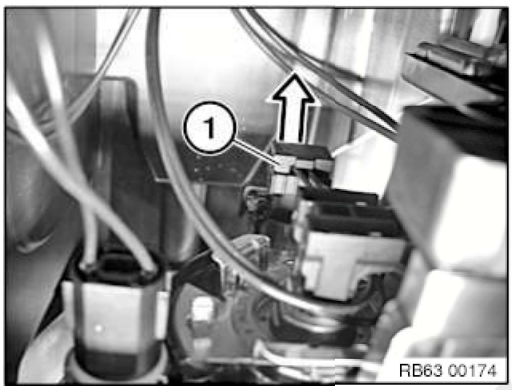
Risk of damage due to moisture penetration!

Installation note:
Check seal. Replace protective cap (1) if necessary.

Comply with Instructions for replacing the protective cap.

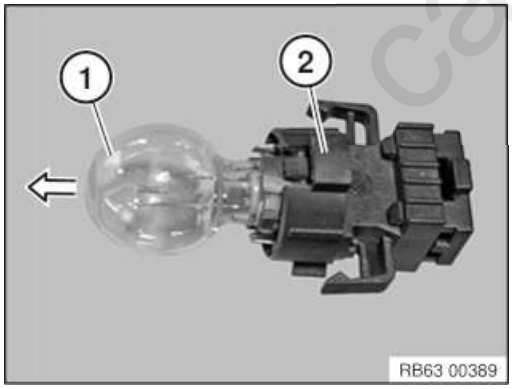
Protective cap (1) must lock correctly!

Turn protective cap (1) clockwise to limit position.



Pull back bulb holder (1) in direction of arrow out of headlight.

Installation note:
Make sure bulb holder (1) is exactly seated in headlight.



Pull bulb for daytime driving lights (1) out of bulb socket (2).

Installation note:
Note bulb type.

cardiagn.com

63 99 112 Replacing bulb for daytime driving lights, right



Operation is described in:

Replace bulb of daytime driving lights on left.

cardiagn.com

63 99 431 Replacing bulb for front interior roof light

Warning!

Follow notes for handling light bulbs (interior lights).

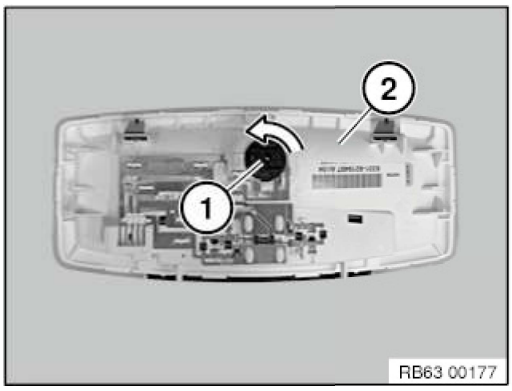
Necessary preliminary tasks:

Version with roof switch cluster:

- Partially remove roof switch cluster

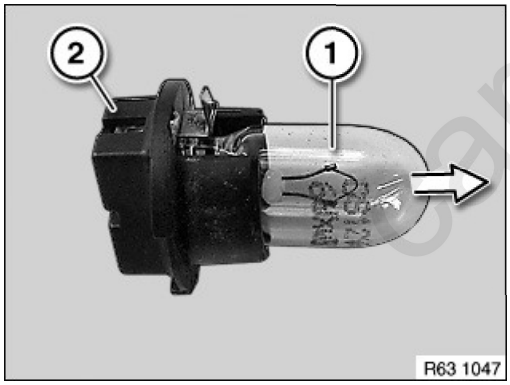
Version with interior roof light only:

- Partially remove interior roof light



Note:
Interior roof light shown removed for purposes of clarity.

Turn bulb holder (1) in direction of arrow and pull out of interior roof light (2).



Pull bulb (1) in direction of arrow out of bulb holder (2).*Installation note:*
Note bulb type.

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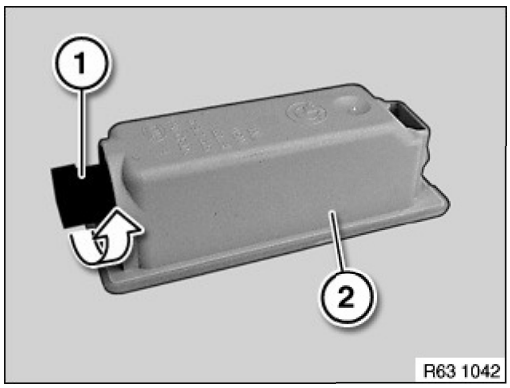
63 99 461 Replacing bulb for glove box light

Warning!

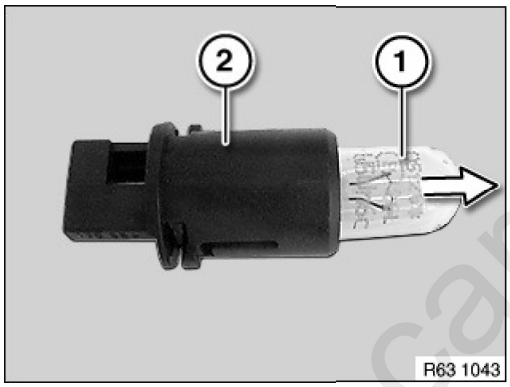
Follow instructions for handling light bulbs (interior lights).

Necessary preliminary tasks:

- Remove glovebox light



Turn bulb holder (1) in direction of arrow and pull out of light (2).*Installation note:*
Make sure bulb holder (1) is correctly seated and engaged in light (2).



Remove bulb (1) from bulb holder (2) in direction of arrow.*Installation note:*
Note bulb type.

Note:
LED technology lights can only be replaced completely!

cardiagn.com

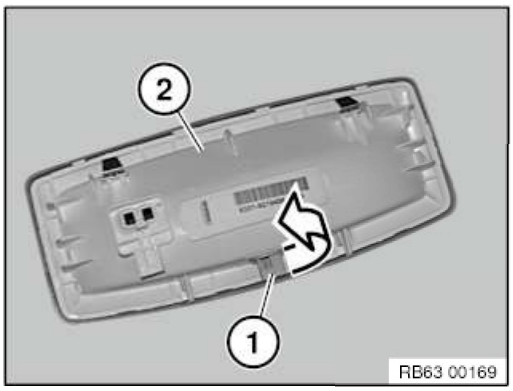
63 99 432 Replacing bulb for interior roof light (rear)

Warning!

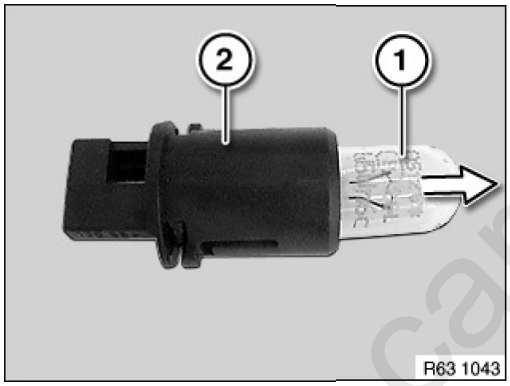
Follow instructions for handling light bulbs (interior lights).

Necessary preliminary tasks:

- Remove rear interior roof light



Turn bulb holder (1) in direction of arrow and pull out of interior roof light (2).



Remove bulb (1) from bulb holder (2) in direction of arrow.*Installation note:*
Note bulb type.

cardiagn.com

63 99 076 Replacing bulb for left xenon headlight (with ignition unit)



Operation is described in:

Replacing ignition unit for left xenon headlight

cardiagn.com

63 99 077 Replacing bulb for right xenon headlight (with ignition unit)



Operation is described in:

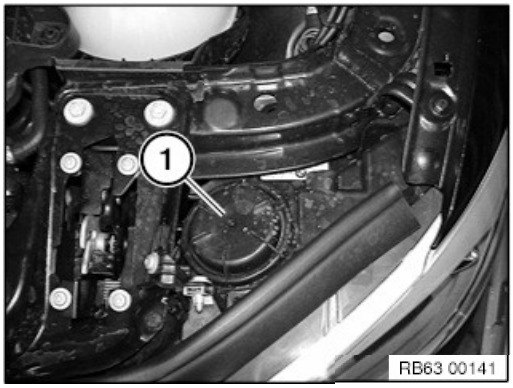
Replace ignition unit for left xenon headlight.

cardiagn.com

63 99 132 Replacing bulb for side lights, front left

Warning!

Follow instructions for handling light bulbs (exterior lights).



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

Turn protective cap (1) counterclockwise and remove.**Important!**

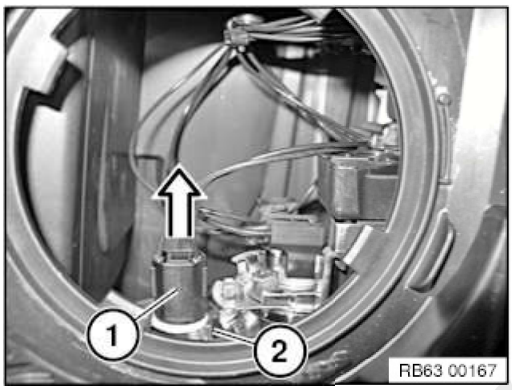
Risk of damage due to moisture penetration!

Installation note:
Check seal. Replace protective cap (1) if necessary.

Comply with Instructions for replacing the protective cap.

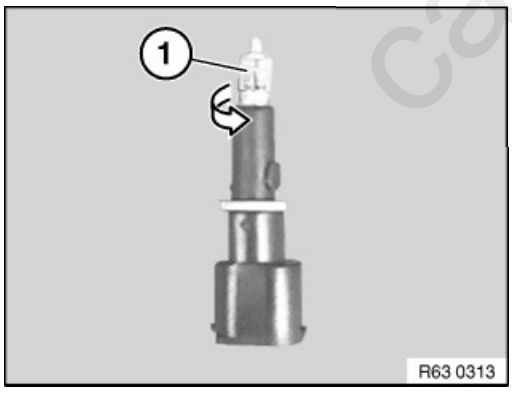
Protective cap (1) must lock correctly!

Turn protective cap (1) clockwise to limit position.



Firstly turn bulb holder (1) left and then pull out of headlight in direction of arrow.

Installation note:
Make sure bulb holder (1) is exactly seated in headlight.



Note:
Similar to graphic.

Firstly turn bulb for side lights (1) in direction of arrow and then pull out of bulb holder.

Installation note:
Note bulb type.

cardiagn.com

63 99 133 Replacing bulb for side lights, front right



Operation is described in:

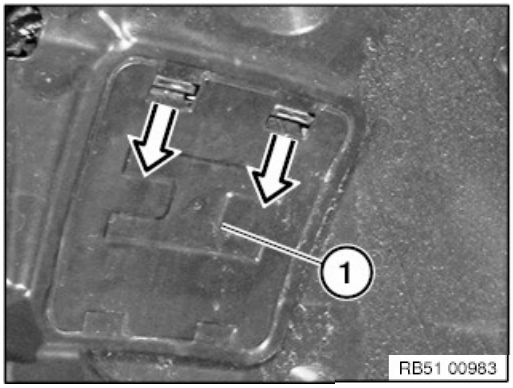
Replacing bulb for front left side lights.

cardiagn.com

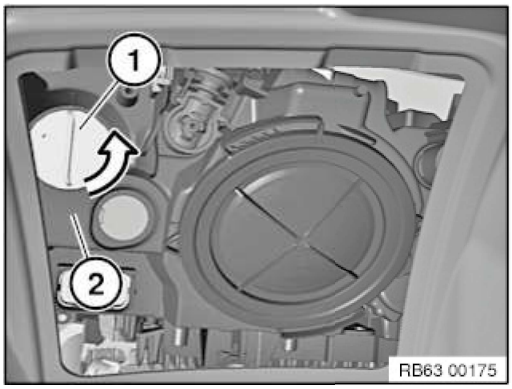
63 99 273 Replacing bulb for turn indicator, front left

Important!

Follow instructions for handling light bulbs (exterior lights).



Unlock and remove cover (1).



Turn bulb holder (1) in direction of arrow and remove from headlight (2).**Important!**

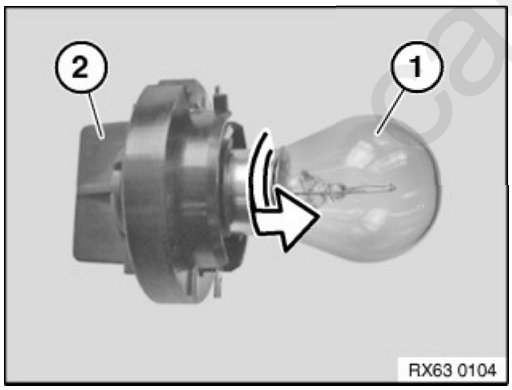
Risk of damage due to moisture penetration!

Installation note:
Check seal. Replace bulb holder (1) if necessary.

Comply with Instructions for replacing the protective cap.

Turn bulb holder (1) clockwise to limit position.

Bulb holder (1) must lock correctly.

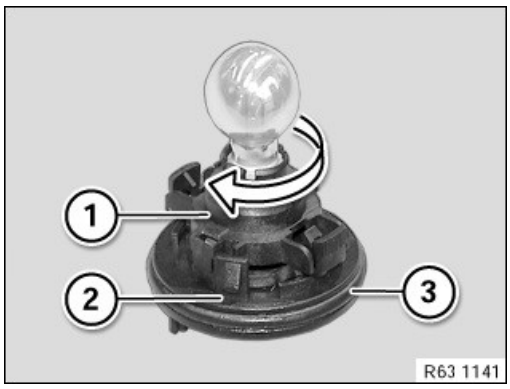


21W version:

Pull bulb (1) in direction of arrow out of bulb holder (2).

Installation note:
Note bulb type.

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Type PY24W:

Turn bulb with socket (1) in direction of arrow and remove from bulb holder (2) toward the top.

Installation note:
Check that bulb with socket (1) and sealing ring (3) on bulb holder (2) are correctly seated.

Note bulb type.

cardiagn.com

63 99 275 Replacing bulb for turn indicator, front right



Operation is described in:

Replacing bulb for front left turn indicator

cardiagn.com

63 99 316 Replacing bulb(s) for left or right rear light (on side wall)



Operation is described in:

Removing socket housing for rear light on side wall.

cardiagn.com

63 99 308 Replacing bulb(s) for left or right rear light (rear lid)



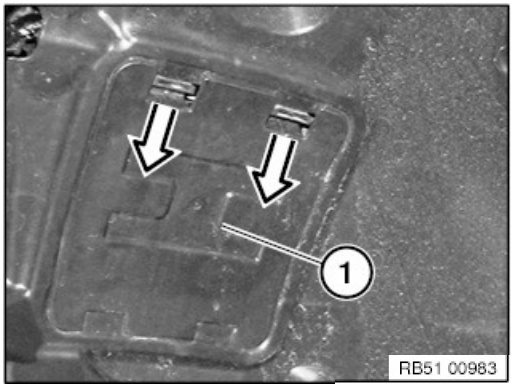
Operation is described in:

Removing socket housing for rear light on tailgate.

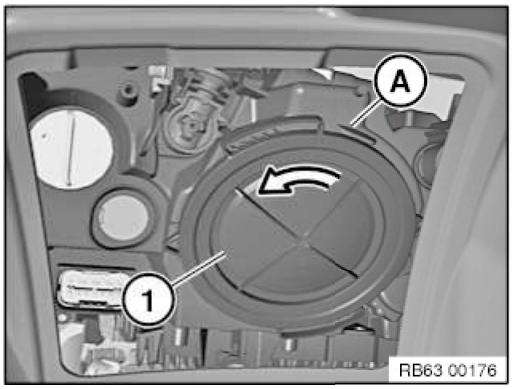
cardiagn.com

63 99 072 Replacing halogen bulb for headlight on left

Warning!
Follow instructions for handling light bulbs (exterior lights).



Unlock and remove cover (1).



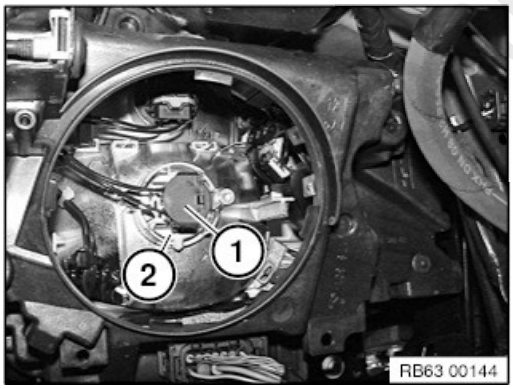
Turn protective cap (1) counterclockwise and remove.**Important!**
Risk of damage due to moisture penetration!

Installation note:
Check seal. Replace protective cap (1) if necessary.

Comply with Instructions for replacing the protective cap.

Protective cap (1) must lock correctly!

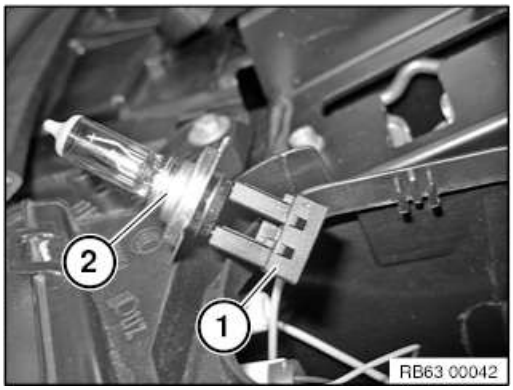
Turn the protective cap (1) clockwise to end stop (A)!



Note:
Similar to graphic.

Remove bulb holder (1) towards rear from headlight (2).

Installation note:
Make sure bulb holder (1) is correctly seated in headlight (2).



Detach bulb holder (1) from bulb (2).

Installation note:
Note bulb type.

Recommendation:

Check headlight adjustment, correct if necessary.

cardiagn.com

63 99 073 Replacing halogen bulb for headlight on right

Operation is described in:

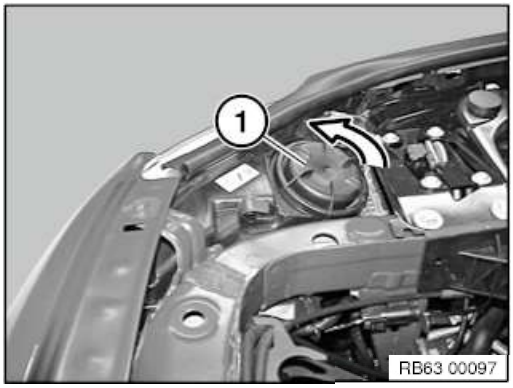
Replacing halogen bulb for headlight on left.

cardiagn.com

63 99 002 Replacing halogen bulb for high beam headlight on left



Warning!
Follow instructions for handling light bulbs (exterior lights).



Note:
Work shown on the F30 by way of example, deviations in detail are possible in other models.

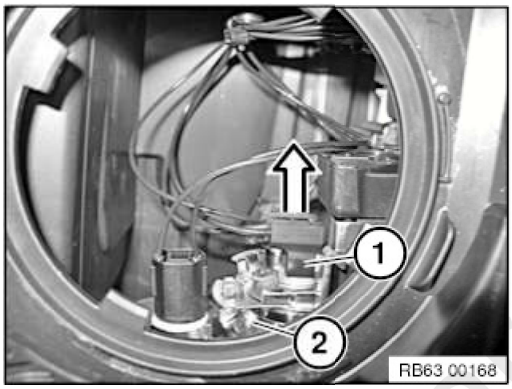
Turn protective cap (1) in direction of arrow and remove in upward direction.**Important!**
Risk of damage due to moisture penetration!

Installation note:
Seal in protective cap (1) must not be missing or damaged.

Replace protective cap (1) if necessary.

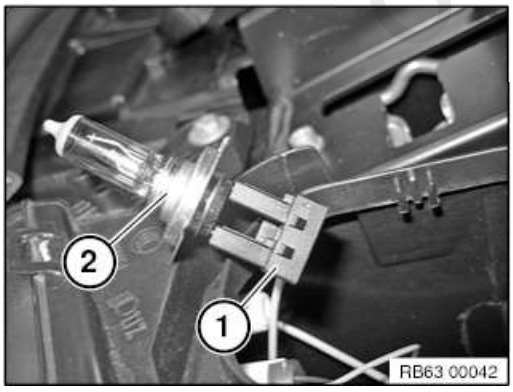
Comply with Instructions for replacing the protective cap.

Protective cap (1) must be correctly engaged.



Pull bulb holder (1) in direction of arrow out of headlight (2).

Installation note:
Make sure bulb holder (1) is correctly seated in headlight (2).



Detach bulb holder (1) from bulb (2).*Installation note:*
Note bulb type.

carsdiagn.com

63 99 003 Replacing halogen bulb for high beam headlight on right



Operation is described in:

Replace halogen bulb for high beam headlight on left.

cardiagn.com

63 99 210 Replacing halogen bulb for left fog light

Warning!

Follow instructions for handling light bulbs (exterior lights).

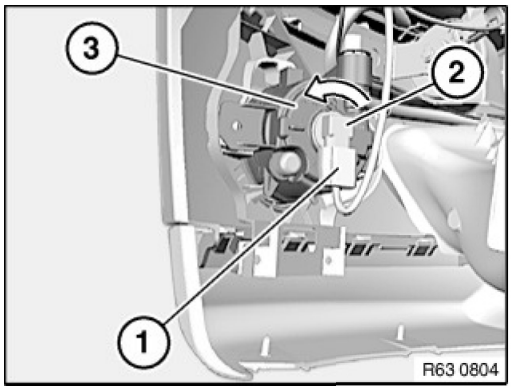
Necessary preliminary tasks:

For version with additional wheel arch radiator or "Luxury Line" equipment specification:

- Partially remove front wheel arch cover

All other equipment specifications:

- Remove ornamental grille in bumper panel to the side



Note:
Wheel arch panel is shown removed for purposes of clarity.

Unfasten plug connection (1) and disconnect.

Turn bulb holder (2) in direction of arrow and remove from fog light (3).

Installation note:
Note bulb type.

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63 99 211 Replacing halogen bulb for right fog light

Warning!

Follow notes for handling light bulbs (exterior lights).

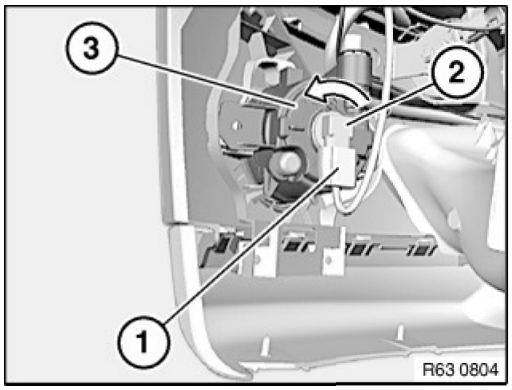
Necessary preliminary work:

For version with additional wheel arch radiator or "Luxury Line" equipment specification:

- Partially remove front wheel arch cover

All other versions:

- Remove ornamental grille in bumper panel towards the side



Note:
Wheel arch panel is shown removed for purposes of clarity.

Unlock plug connection (1) and disconnect.

Turn bulb holder (2) in direction of arrow and remove from fog light (3).

Installation note:
Note bulb type.

cardiagn.com

63 12 870 Replacing ignition unit for left xenon headlight

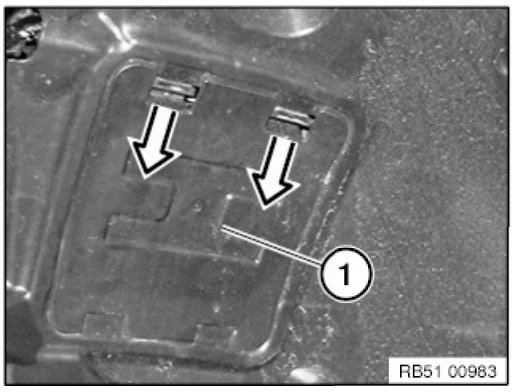


Warning!

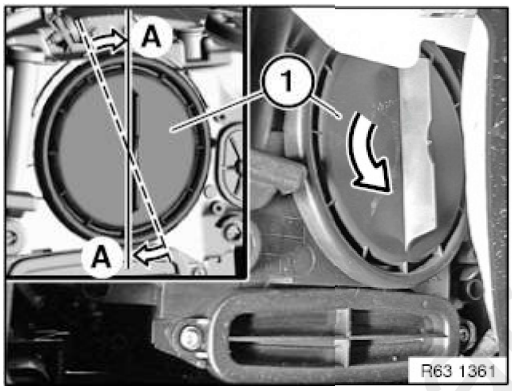
Version with xenon headlights: Danger to life due to high voltage! Therefore disconnect all components from voltage supply before removal.

Work on the entire xenon lighting system (ignition device, control unit and bulb) may only be carried out by qualified personnel.

Follow notes for handling light bulbs (exterior lights).



Unlock and remove cover (1).



Note:
Work shown on the F20 by way of example, deviations in detail are possible in other models.

Turn protective cap (1) to the left and remove.**Attention!**
Risk of damage due to moisture penetration!

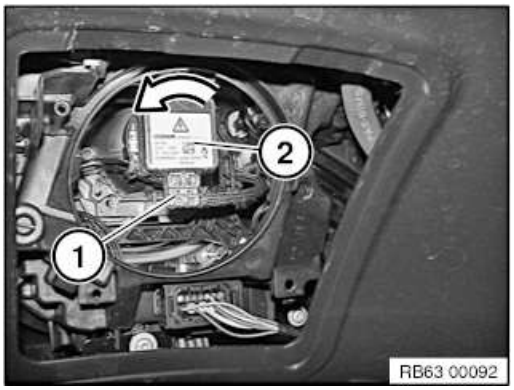
Installation note:
Check seal. Replace protective cap (1) if necessary.

Comply with Instructions for replacing the protective cap.

US version: Checking blocking at horizontal position

Protective cap (1) must lock correctly!

Turn the protective cap (1) to the right to end stop (A)!



Disconnect plug connection (1) on ignition device with bulb (2).

Remove ignition device with bulb (2) in direction of arrow.

cardiagn.com



Recommendation:
Check headlight adjustment, correct if necessary.

cardiagn.com

63 11 735 Replacing LED module for right daytime driving lights



Operation is described in:

Replacing LED module for left daytime driving lights

cardiagn.com

63 11 734 Replacing LED module for right daytime driving lights



Operation is described in:

Replacing LED module for left daytime driving lights

cardiagn.com

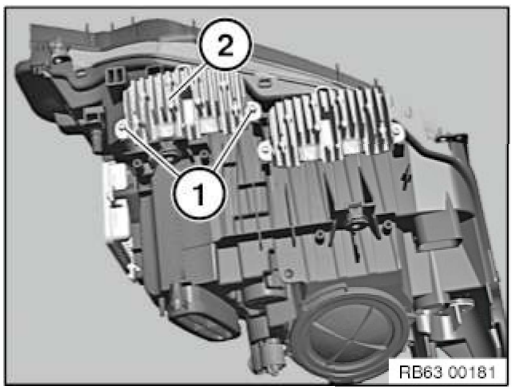
63 11 731 Replacing left daytime driving lights LED modules

Warning!

Follow instructions for handling light bulbs (exterior lights).

Necessary preliminary tasks:

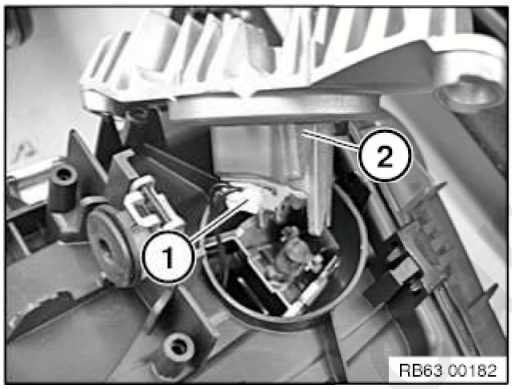
- Remove headlight



Release screws (1).

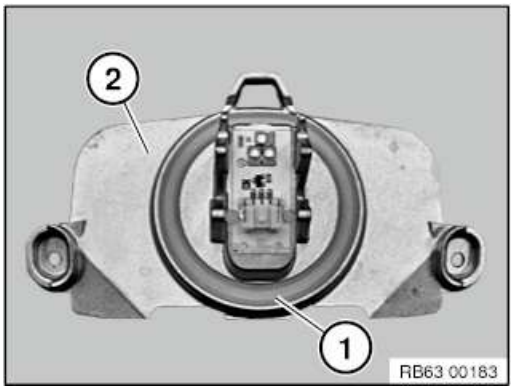
Tightening torque 63 12 3AZ.

Pull LED module (2) out of headlight towards top.



Disconnect plug connection (1).

Remove LED module (2).



Installation note:

Gasket (1) on LED module (2) must not be damaged.

Always replace LED modules (2) as a pair.

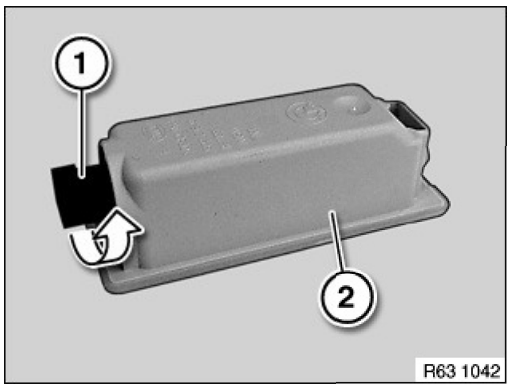
63 99 437 Replacing light bulb for footwell light

Warning!

Follow instructions for handling light bulbs (interior lights).

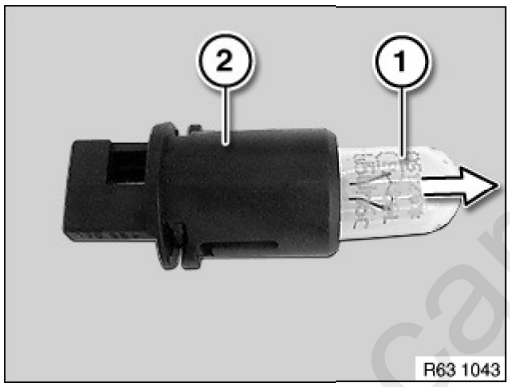
Necessary preliminary tasks:

- Remove footwell light



Turn bulb holder (1) in direction of arrow and pull out of footwell light (2).

Installation note:
Make sure bulb holder (1) is correctly seated and latched on footwell light (2).



Pull bulb (1) in direction of arrow out of bulb holder (2).

Installation note:
Note bulb type. Note:
LED technology lights can only be replaced completely!

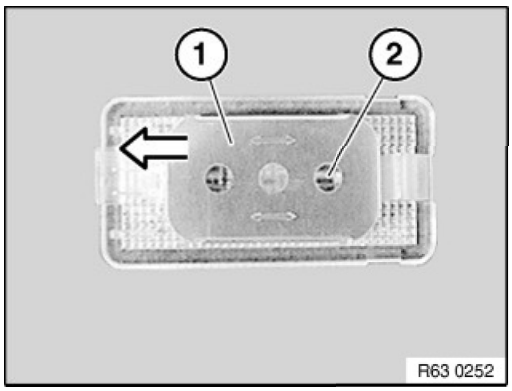
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63 99 451 Replacing light bulb for luggage compartment lighting

Warning!
Follow instructions for handling light bulbs (interior lights).

Necessary preliminary tasks:

- Remove luggage compartment light

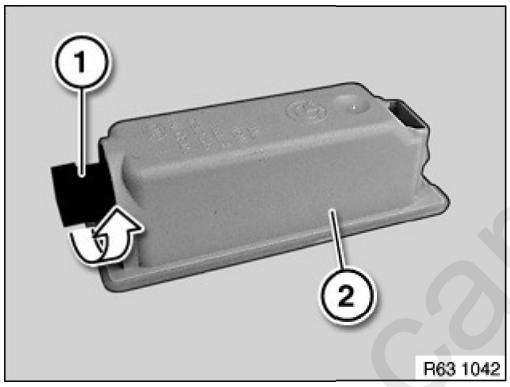


Version A:

Move headlight lens cover (1) in direction of arrow and remove.

Remove festoon (2) underneath.

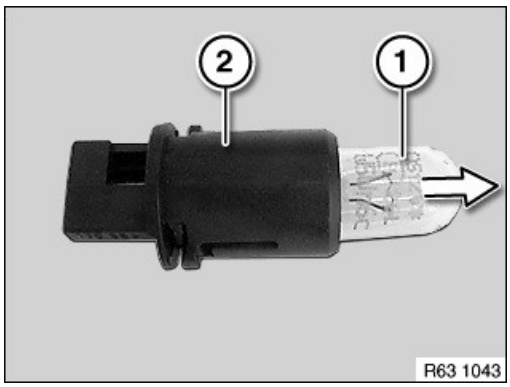
Installation note:
Note bulb type.



Version B:

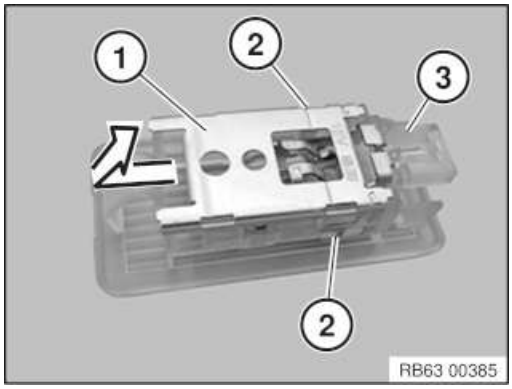
Turn bulb holder (1) in direction of arrow and pull out of light (2).

Installation note:
Make sure bulb holder (1) is correctly seated and engaged in light (2).



Remove bulb (1) from bulb holder (2) in direction of arrow.*Installation note:*
Note bulb type.

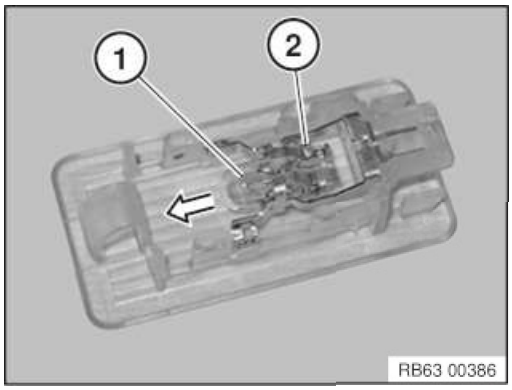
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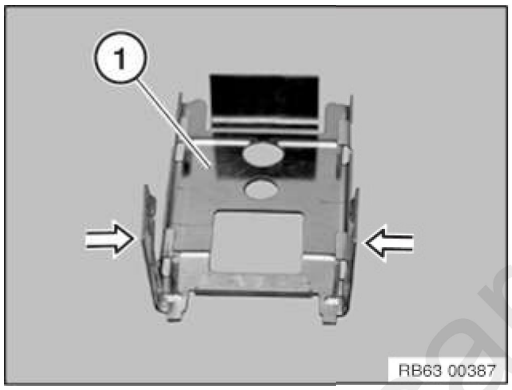
Version C:

Release headlight lens cover (1) at latch mechanisms (2) on both sides.

Remove headlight lens cover (1) from luggage compartment light (3) in direction of arrow.



Push bulb (1) out of the bulb socket with a suitable tool (e.g. screwdriver 3 mm blade) in the direction of arrow and remove.*Installation note:*
Note bulb type.



Check headlight lens cover (1) before fitting.

If necessary, carefully press together both side tabs a little in direction of arrow.

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63 12 871 Replacing right ignition unit for right xenon headlight



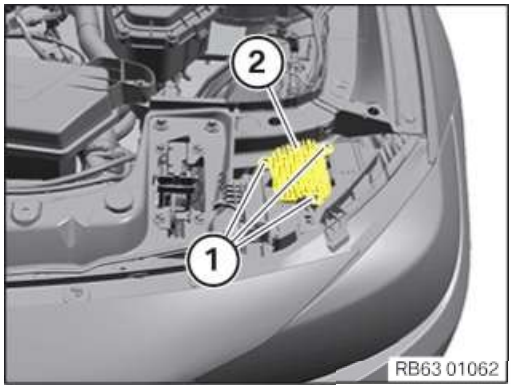
Operation is described in:

Replace ignition unit for left xenon headlight.

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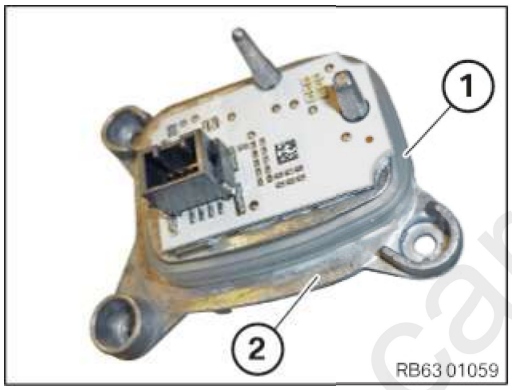
63 11 730 Replacing the LED module for left daytime riding lights

Removal:

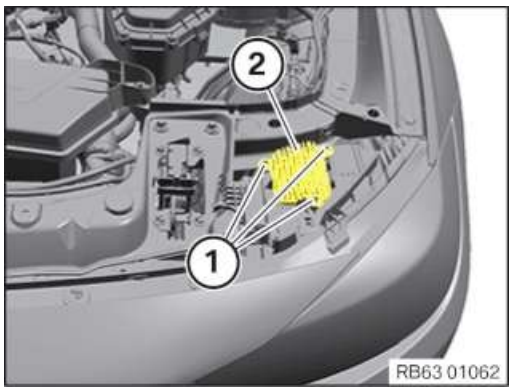


Release screws (1).
Remove the LED module (2) from the headlight to the top.
Unlock and disconnect corresponding connector.

Installation:



The seal (1) on the LED module (2) must not be damaged or missing.



Connect associated connector.
Position LED module (2) in the headlight.
Tighten down screws (1).
Tightening torque 63 11 2AZ.

Required reworking:

- Carry out programming/encoding.

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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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00 Safety information for working on vehicles with automatic engine start-stop function (MSA)



Warning!

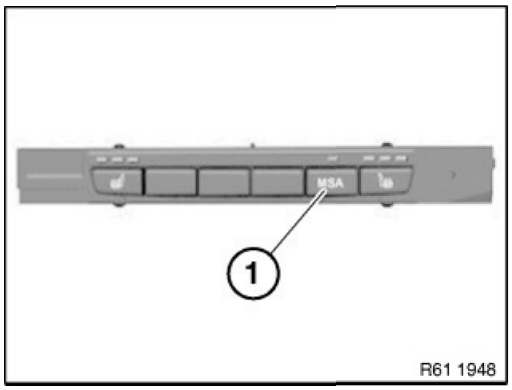
If the engine hood/bonnet contact is pulled upwards (workshop mode), the information "switch closed" is output. The automatic engine start-stop function is active.

An automatic engine start is possible.

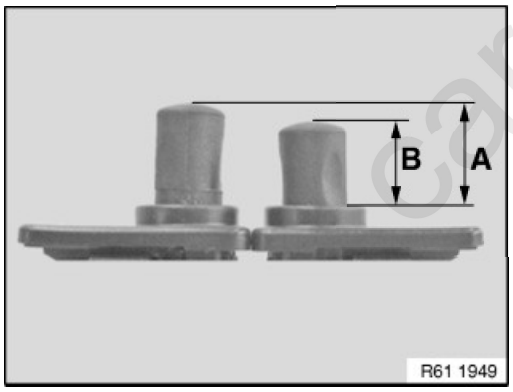
Observe safety precautions when working on MSA vehicles.

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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