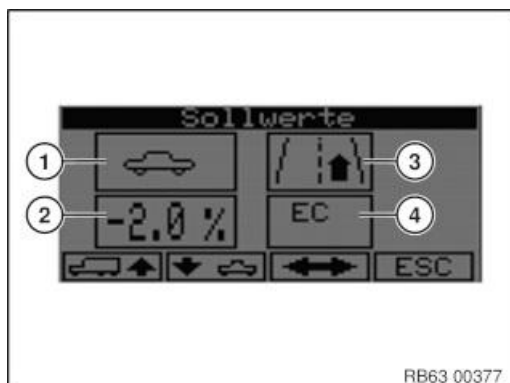


63 10 ... Adjust the fog lights (with electronic headlight adjustment device MAHA Lite 3)



[Comply with test prerequisites for headlight adjustment!](#)

Refer to the operating instructions for the headlight adjustment device!

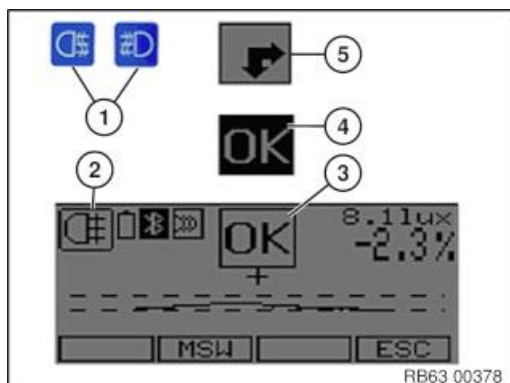


Switch on the headlight adjustment device by pressing any button. Press **F2** button. The shown display screen appears.

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.

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



Important!

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

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

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

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

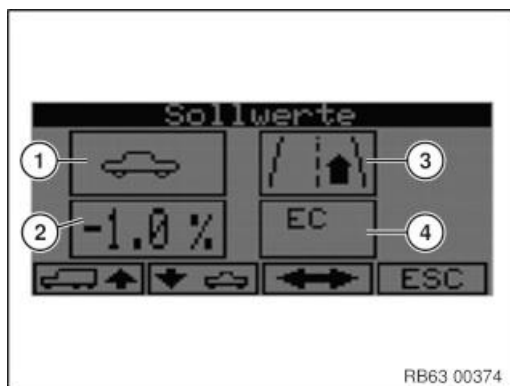


Comply with test prerequisites for headlight adjustment.

Refer to the operating instructions for the headlight adjustment device!

Necessary preliminary work:

[Adjust the low-beam headlight](#)

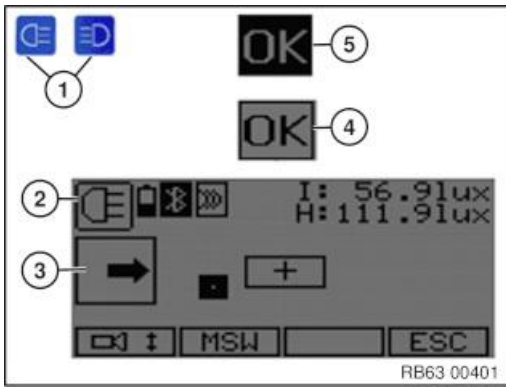


Switch on the headlight adjustment device by pressing any button. Press **F2** button. The shown display screen appears.

Perform the following settings:

1. The passenger car must be selected.
2. Enter the setting dimension of the headlight via the buttons **F1/F2**: **-1.0 % to -1.1 %**
(see "light/dark boundary of the headlight in the headlight adjustment device" in the document [observe the test prerequisites for the headlight adjustment](#)).
3. The right / left-hand traffic must be selected according to the country.
4. Select the headlight type via the button **F3**:
 - **EC**: for halogen and xenon headlights
 - **EC LED**: for LED headlight

The adjusted values are adopted for future measurements.



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.

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



[Comply with test prerequisites for headlight adjustment!](#)

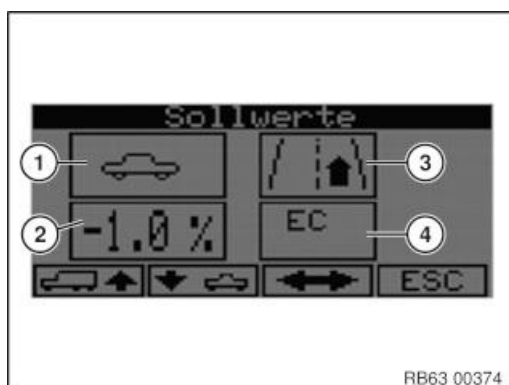
Refer to the operating instructions for the headlight adjustment device!



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.](#)

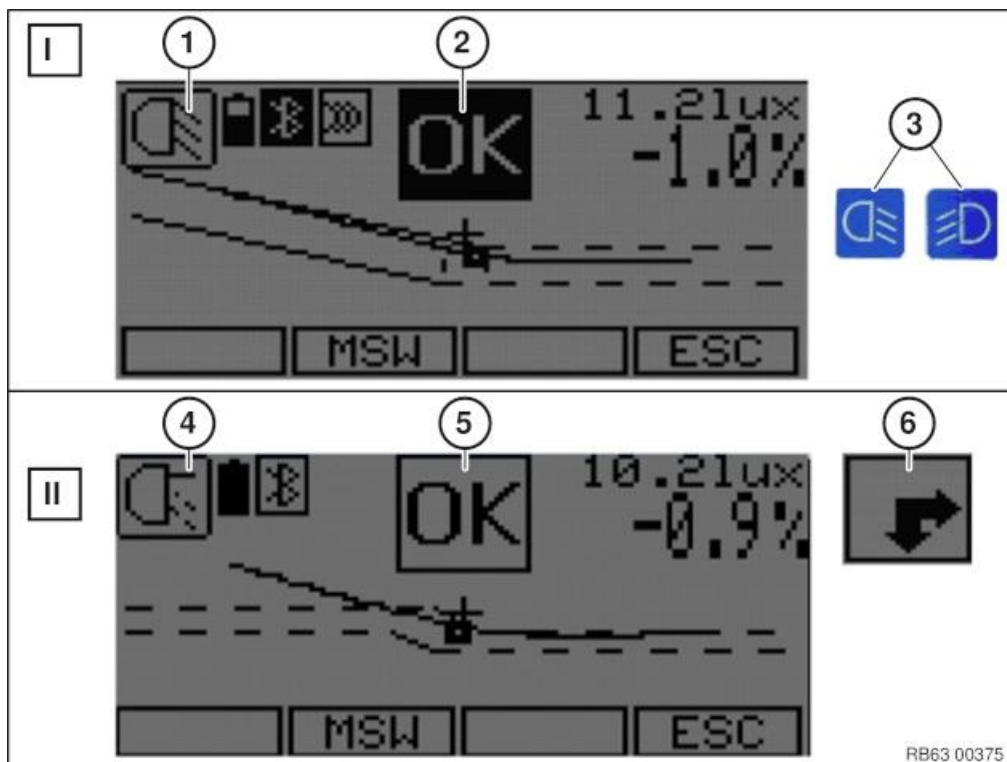


Switch on the headlight adjustment device by pressing any button. Press **F2** button. The shown display screen appears.

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.



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:

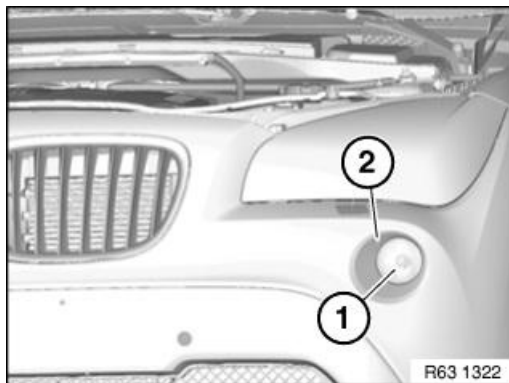
- O. K. (2): Adjustment is optimal.
- O. K. (5): Adjustment is within the legal tolerance range. [Adjust headlight](#) until O. K. (2) is displayed.
- Arrows (6): Adjustment is incorrect. [Adjust headlight](#) using arrows (6) until O. K. (2) is displayed.

63 10 014 Adjusting fog lights



Note:

Comply with [test preconditions for headlight adjustment](#).



Adjust fog light (1) by turning adjusting screw (2).



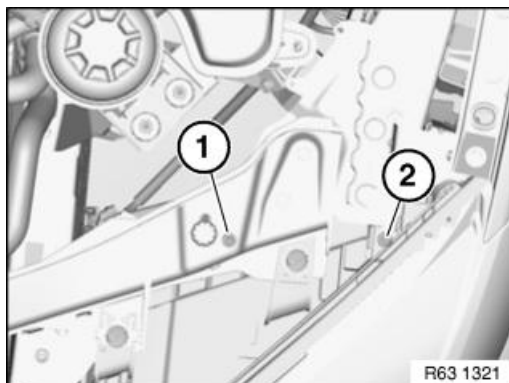
Note:

Comply with [test prerequisites for headlight adjustment](#).



Caution!

Do not damage adjusting screws when adjusting headlights.



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

A definite allocation of adjusting screws is not possible.

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 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**.



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

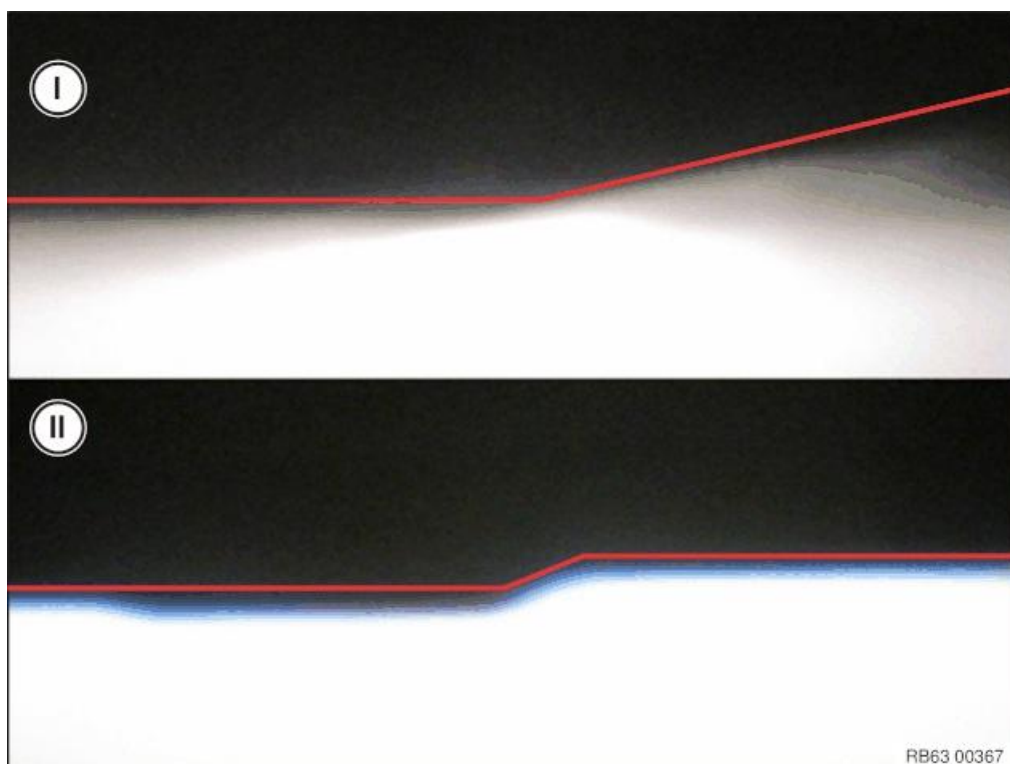
- Halogen headlights (low-beam and high-beam headlights)
- Xenon headlights (low-beam and high-beam headlights)
- LED headlights (low-beam and high-beam headlights)
- Laser headlights (high-beam headlight booster, low-beam and high-beam headlights are lit by LEDs)

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.

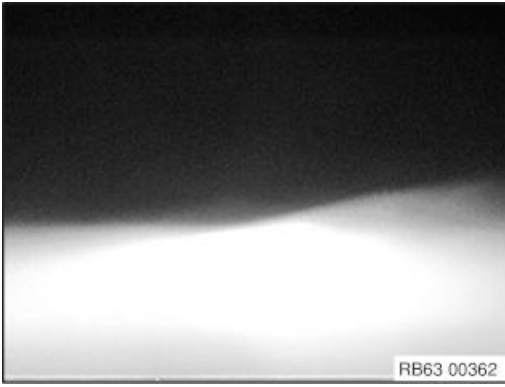


Important!

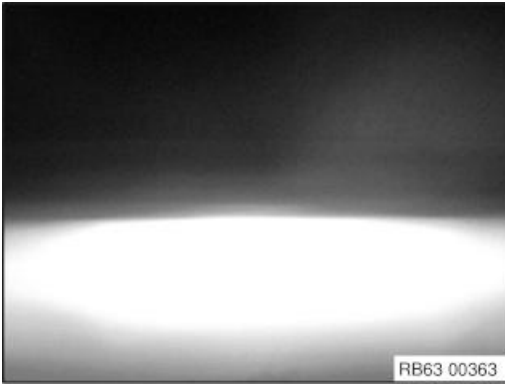
For headlight adjustment with electronic headlight adjusting devices, it is essential to determine the light pattern type!

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

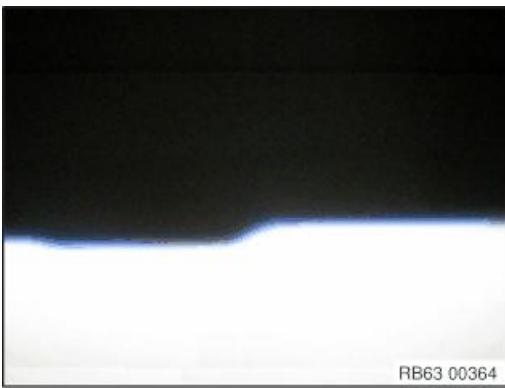
Type II: Light pattern screen shows a short increase in the light/dark boundary.



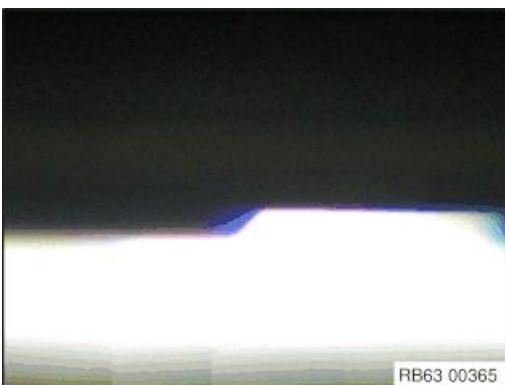
1. Halogen headlight
Type I



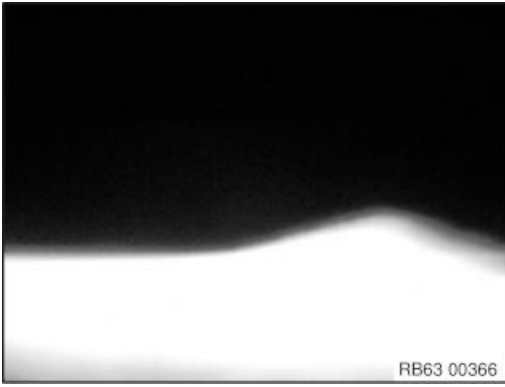
2. Halogen headlight **US version R60 only**



3. Xenon headlights
Type II



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



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

Type I

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

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!

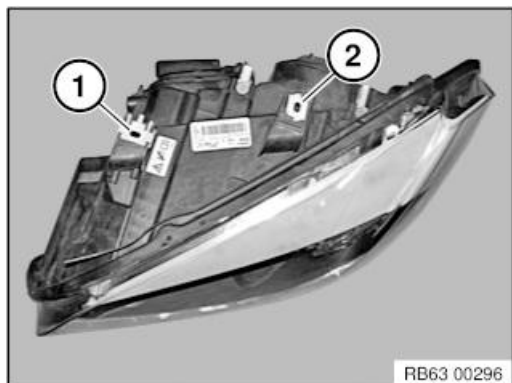
All lighting functions specified above can be adjusted **both with a non-electronic as well as with an electronic headlight adjusting device.**

63 11 ... Installing headlight repair kit



Necessary preliminary work:

- [Remove headlight](#)

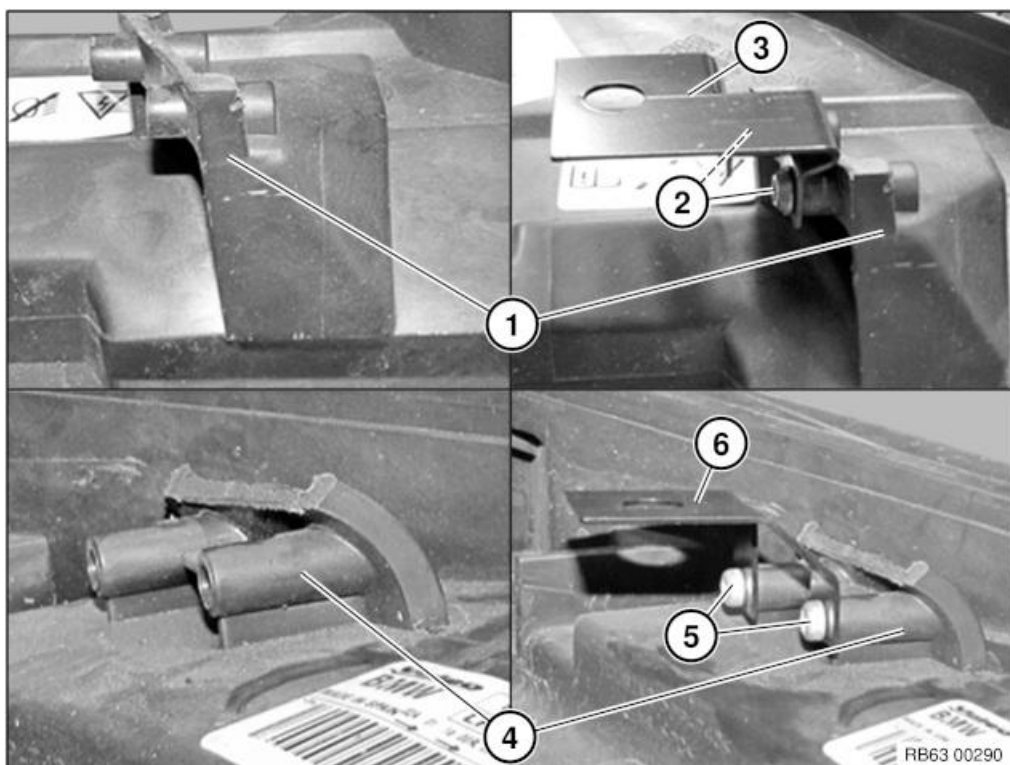


Note:

Damaged holders (1,2) can be replaced with the repair kit.

Replacement of headlight is **not required!**

If necessary, use screws from repair kit (part number 7 225 228).



Retaining tab 1 of first image:

Remove the damaged holder (1) as shown. Fit holder from repair kit (3) and secure with screws (2).

Retaining tab 2 of first image:

Remove the damaged holder (4) as shown. Fit holder from repair kit (6) and secure with screws (5).

After installation:

- [Adjust headlights](#)

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).

63 12 ... Headlight fogging fault pattern



Note:

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

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



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

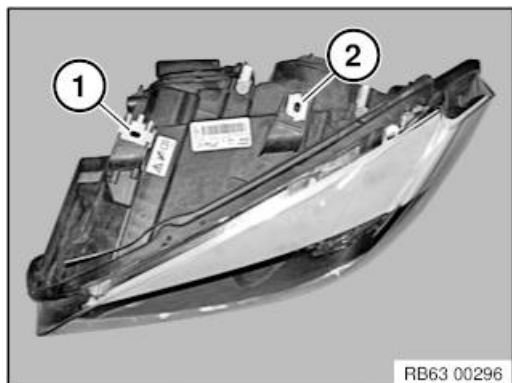
Bottom row (B): Impermissible fogging. Replace the headlight.

63 11 ... Installing headlight repair kit



Necessary preliminary work:

- [Remove headlight](#)

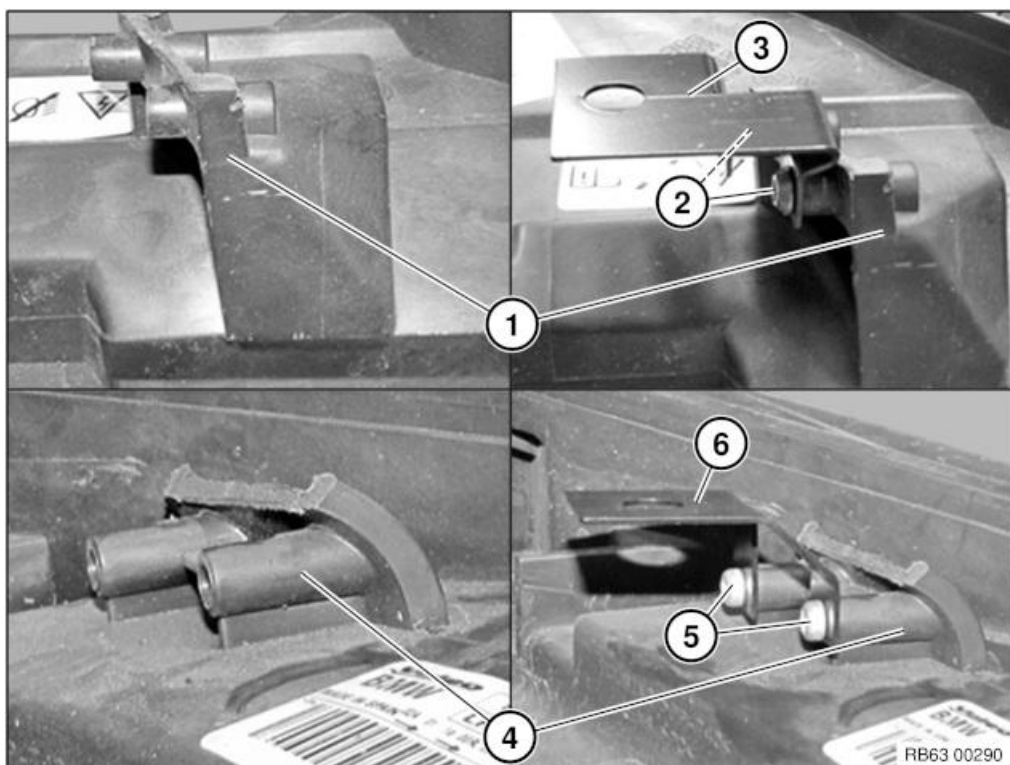


Note:

Damaged holders (1,2) can be replaced with the repair kit.

Replacement of headlight is **not required!**

If necessary, use screws from repair kit (part number 7 225 228).



Retaining tab 1 of first image:

Remove the damaged holder (1) as shown. Fit holder from repair kit (3) and secure with screws (2).

Retaining tab 2 of first image:

Remove the damaged holder (4) as shown. Fit holder from repair kit (6) and secure with screws (5).

After installation:

- [Adjust headlights](#)

**Important!****Risk of damage!**

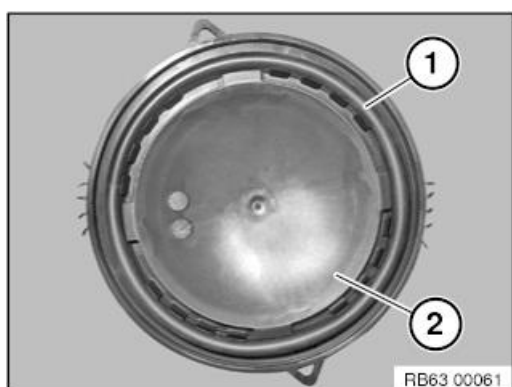
Damaged seals on the protective caps will lead to moisture penetration into the headlight.

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



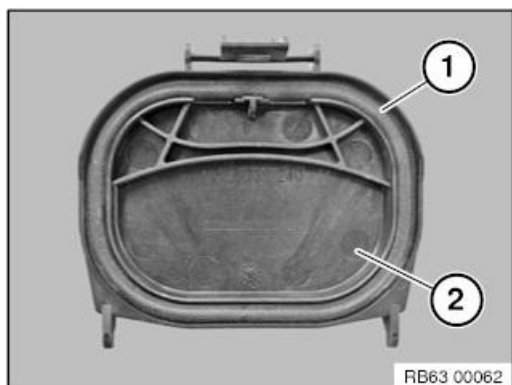
When working on the headlight system, check the protective cap seals.

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).

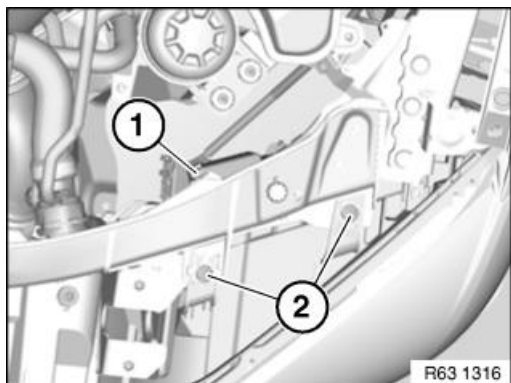


Follow notes for handling light bulbs ([exterior lights](#)).



Necessary preliminary work:

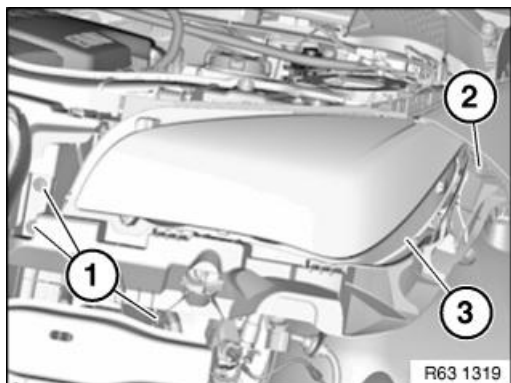
- Remove [front bumper panel](#)



Unlock plug connection (1) and disconnect.

Unfasten screws (2).

Tightening torque [63 12 9AZ](#).



Release screws (1).

Tightening torque [63 12 9AZ](#).

Release screw (2).

Remove headlight (3) with support.

Installation note:

- Observe [gap dimensions](#)
- Adjust [headlights](#)



Replacement:

- **US version:** Checking [blocking at horizontal position](#)
- Remove headlight holder
- If necessary, remove [bulbs](#)

63 12 017
headlight)

Removing and installing (replacing) right headlight (adaptive



Operation is described in:

Removing and installing [left headlight](#)



Warning!

Version with xenon headlights: Danger to life due to high voltage!
Therefore, before removing, disconnect all components from the power supply (lighting system and ignition off).

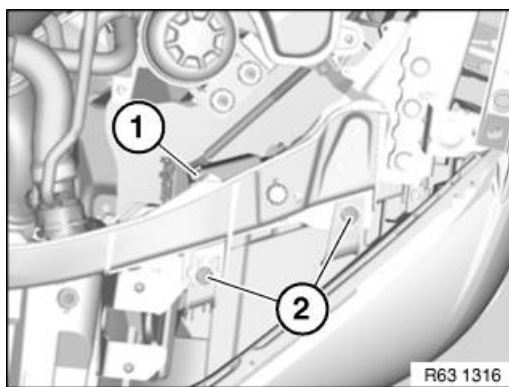
Work on the entire xenon lighting system (control unit, ignition unit with bulb) may only be carried out by specialist personnel.

Follow notes for handling light bulbs ([exterior lights](#)).



Necessary preliminary work:

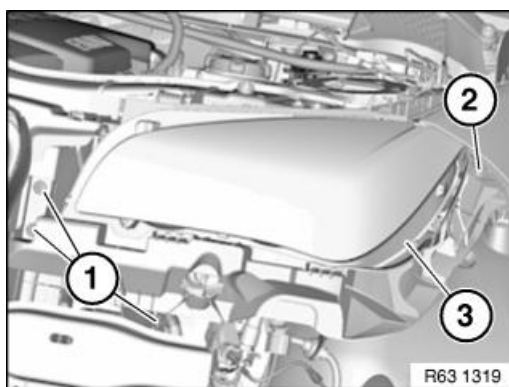
- Remove [front bumper panel](#)
- [Remove high-pressure nozzle of headlight cleaning system](#)



Unlock plug connection (1) and disconnect.

Unfasten screws (2).

Tightening torque [63 12 9AZ](#).



Release screws (1).

Tightening torque [63 12 9AZ](#).

Release screw (2).

Remove headlight (3) with support.

Installation note:

- Observe [gap dimensions](#)
- Adjust [headlights](#)



Replacement:

- **US version:** Checking [blocking at horizontal position](#)
- Remove headlight holder
- Remove [ignition unit/bulb for xenon headlight](#)
- Remove [control unit for xenon headlights](#)
- If necessary, remove [powertrain/electronics box for adaptive headlight](#)



Operation is described in:

Removing and installing [left headlight](#)



Warning!

Version with xenon headlights: Danger to life due to high voltage!
Therefore, before removing, disconnect all components from the power supply (lighting system and ignition off).

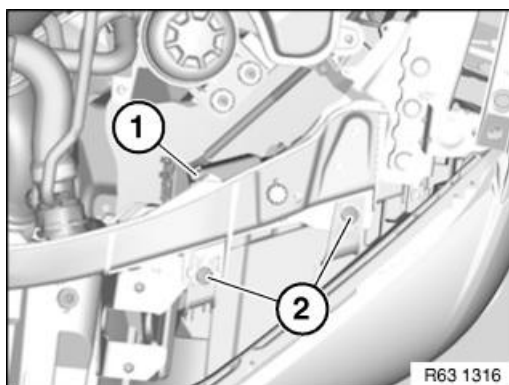
Work on the entire xenon lighting system (control unit, ignition unit with bulb) may only be carried out by specialist personnel.

Follow notes for handling light bulbs ([exterior lights](#)).



Necessary preliminary work:

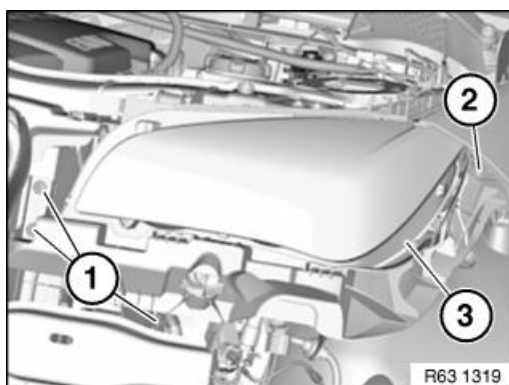
- Remove [front bumper panel](#)
- [Remove high-pressure nozzle of headlight cleaning system](#)



Unlock plug connection (1) and disconnect.

Unfasten screws (2).

Tightening torque [63 12 9AZ](#).



Release screws (1).

Tightening torque [63 12 9AZ](#).

Release screw (2).

Remove headlight (3) with support.

Installation note:

- Observe [gap dimensions](#)
- Adjust [headlights](#)



Replacement:

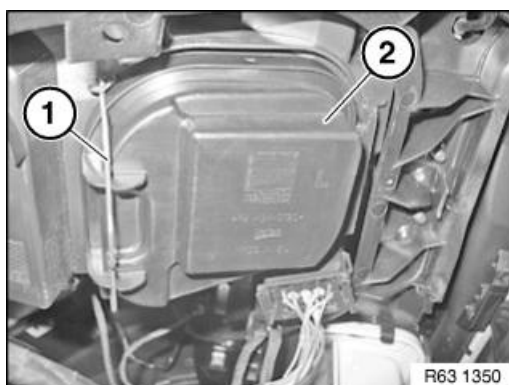
- **US version:** [Checking blocking at horizontal](#) position
- Remove headlight holder
- Remove [ignition unit/bulb for xenon headlight](#)
- Remove [control unit for xenon headlights](#)
- Remove [powertrain/electronics box for adaptive headlights](#)



Warning!

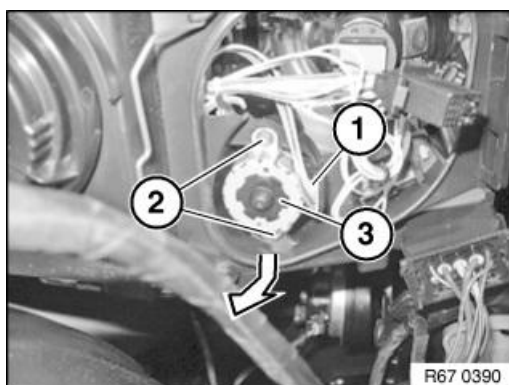
Version with xenon headlights: Danger to life due to high voltage!
Therefore disconnect all components from voltage supply before removal.

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



Unlock retainer clip (1) and remove cover (2).

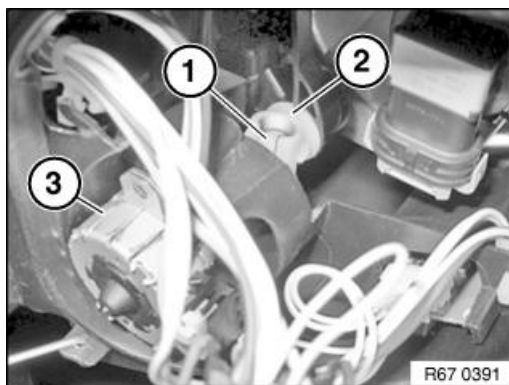
If necessary, unlock and remove plug-in connection in the back (electronic box adaptive forward light).



Unfasten plug connection (1) and disconnect.

Unfasten screws (2).

Unclip headlight vertical aim adjuster (3) in direction of arrow.



Installation note:

Insert ball head (1) into mounting (2).

Check that headlight vertical aim adjuster (3) is securely seated.



After installation:

- Adjust [headlight](#)



Operation is described in:

Removing and installing [left-hand fog light](#) .



Operation is described in:

Removing and installing [left headlight](#)

67 16 015
adjuster

Removing and installing/replacing right headlight vertical aim



Operation is described in:

[Removing and installing left headlight vertical aim adjuster](#)

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).

**Warning!**

Version with xenon headlights: Danger to life due to high voltage! Therefore, before removing, disconnect all components from the voltage supply (lighting system and ignition off).

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

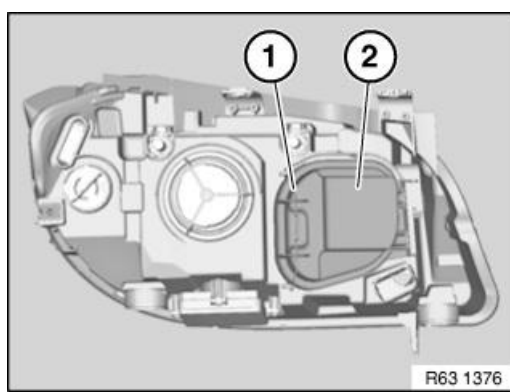
Follow instructions for handling light bulbs ([exterior lights](#)).

**Necessary preliminary tasks:**

- If necessary, remove [intake silencer housing](#)

Note:

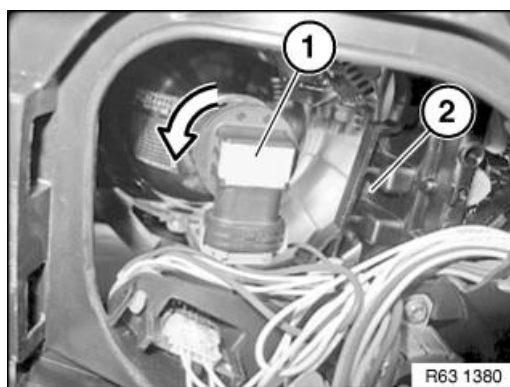
Headlight removed for purposes of clarity.



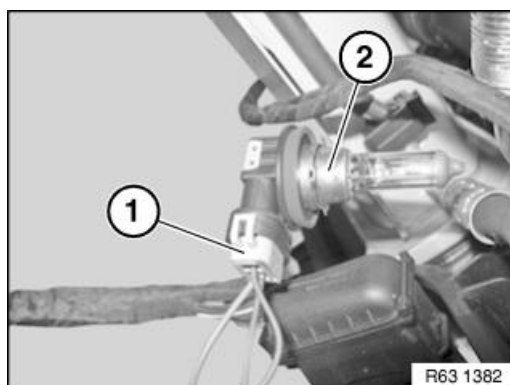
Unlock wire spring clips (1).

Remove protective cap (2) from headlight.

Unlock plug connection behind and disconnect.



Turn bulb (1) in direction of arrow and remove from headlights (2).



Unfasten plug connection (1) and disconnect.

Remove bulb (2).



Installation note:

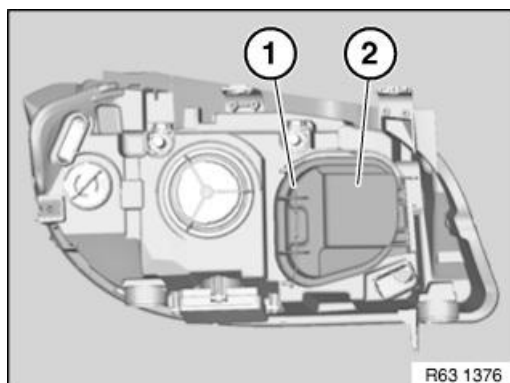
- Make sure bulb is correctly seated and engaged in headlight
- Note [bulb type](#)

**Warning!**

Follow instructions for [handling light bulbs \(exterior lights\)](#).

**Necessary preliminary tasks:**

- If necessary, remove [intake silencer housing](#)

*Note:*

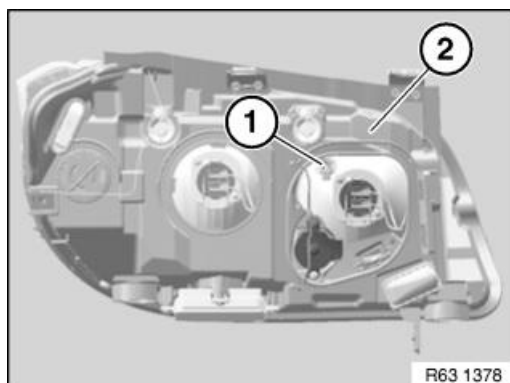
Headlight removed for purposes of clarity.

Unlock wire spring clips (1).

Remove cover (2) from headlight.

Installation note:

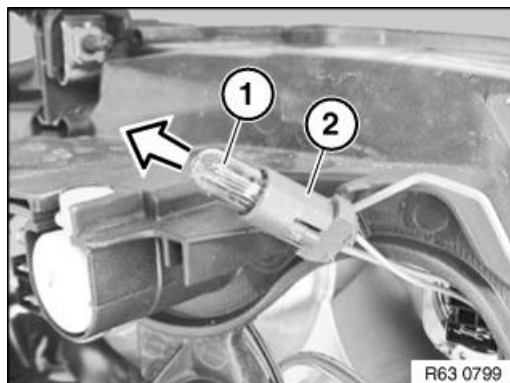
Make sure cover is correctly seated on headlight.



Grip bulb holder (1) on both sides and pull towards rear out of headlight (2).

Installation note:

Make sure bulb holder (1) is exactly seated in headlight (2).



Withdraw bulb for side lights (1) in direction of arrow from bulb holder (2).

Installation note:

Note [bulb type](#).

63 99 133

Replacing bulb for side lights, front right



Operation is described in:

Replacing [bulb for front left side lights](#).

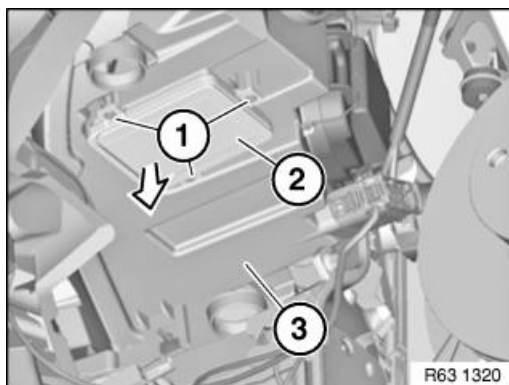
**Warning!**

Version with xenon lighting system: Danger to life due to high voltage! Therefore, before removing, disconnect all components from the power supply (lighting system and ignition off).

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

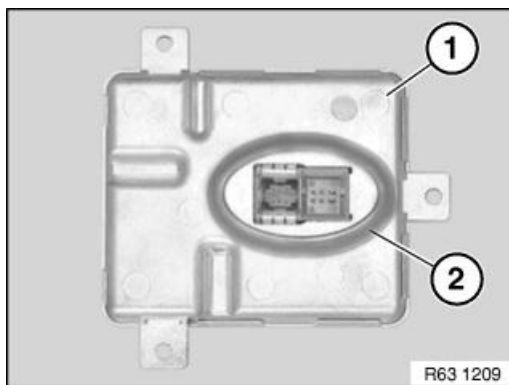
**Necessary preliminary tasks:**

- Remove [front left wheel arch cover](#)



Release screws (1).

Remove control unit for xenon headlight (1) downward from headlight (2) in direction of arrow.

**Installation:**

When installing control units for xenon headlight (1), make sure sealing cup (2) is correctly seated.



Operation is described in:

Replacing [control unit for left xenon headlight](#)

**Important!**

Read and comply with notes on [protection against electrostatic discharge \(ESD protection\)](#).

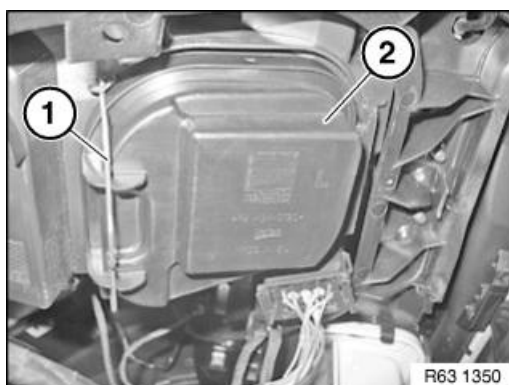
**Warning!**

Version with xenon headlights: Danger to life due to high voltage! Therefore, before removing, disconnect all components from the voltage supply (lighting system and ignition off).

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

**Necessary preliminary tasks:**

- If necessary, remove [intake silencer housing](#)

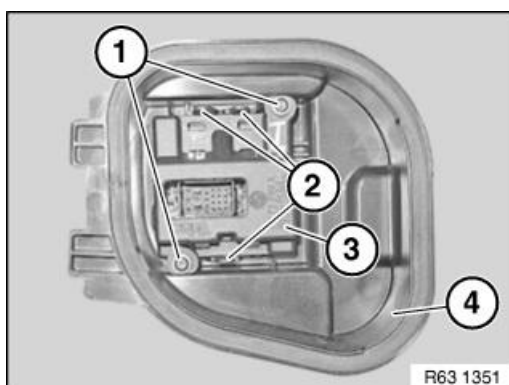


Unlock retaining clip (1) and remove protective cap (2).

Unlock and disconnect plug connection behind.

Installation note:

Make sure protective cap (2) is correctly seated.



Release screws (1).

Unlock retaining lugs (2).

Remove electronics box/control unit for Adaptive Headlight (3) from protective cap (4).

Installation note:

Retaining lugs (2) must not be damaged.

Make sure the electronics box/control unit for Adaptive Headlight (3) is correctly seated.



Carry out [vehicle programming/coding](#).



Operation is described in:

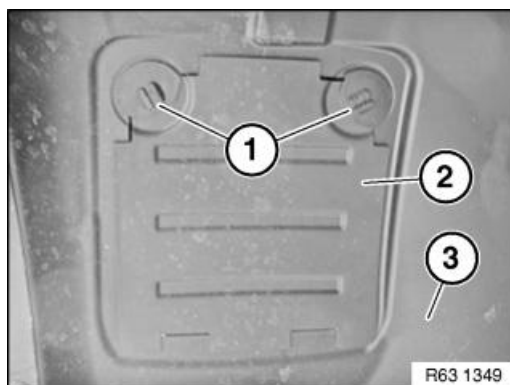
Replace [electronics box/control unit for left adaptive headlight](#).

**Warning!**

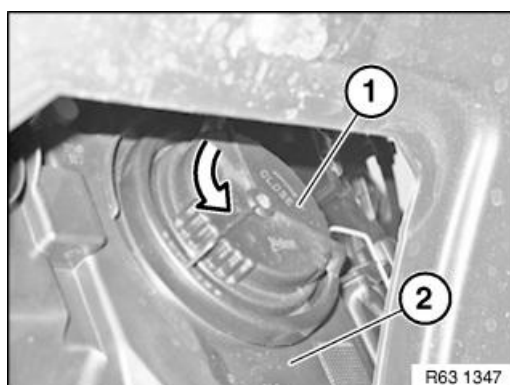
Version with xenon headlights: Danger to life due to high voltage!
Therefore, before removing, disconnect all components from the voltage supply (lighting system and ignition off).

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

Follow instructions for handling light bulbs ([exterior lights](#)).



Unlock plastic fasteners (1) by turning counterclockwise through 180°. Pull lid (2) out of front wheel arch cover (3).



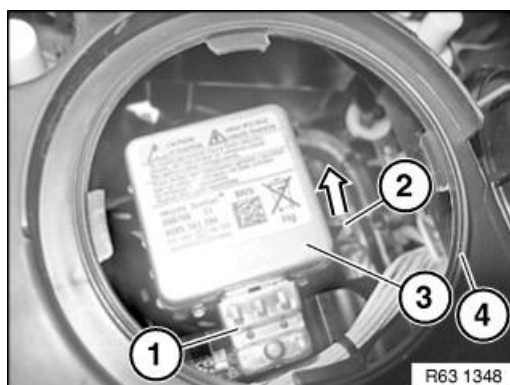
Unlock protective cap (1) in direction of arrow and remove from headlight (2). *Installation note:*

Protective cap (1) must noticeably lock.

Check seal.

Replace protective cap (1) if necessary.

Comply with [Instructions for replacing the protective cap](#).



Disconnect plug connection (1).

Press locking mechanism (2) upward in the direction of the arrow.

Feed out ignition unit for xenon headlight (3) through opening (4) in headlight.

**Recommendation:**

Check [headlight adjustment](#), correct if necessary.



Operation is described in:

Removing and installing [left headlight](#)



Operation is described in:

Removing and installing [right headlight](#)

63 12 871

Replacing right ignition unit for right xenon headlight



Operation is described in:

Replacing [ignition unit for left xenon headlight](#)

63 13 200 Removing and installing/replacing front left or right auxiliary direction indicator



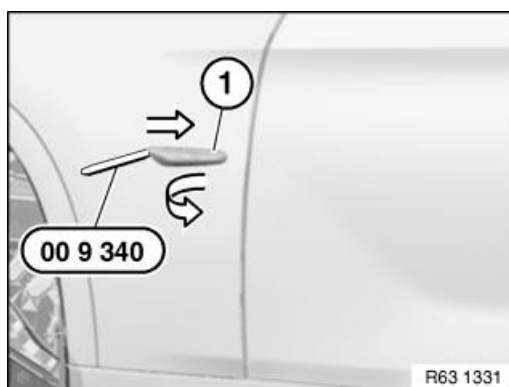
Special tools required:

- [00 9 340](#)



Warning!

Follow instructions for handling light bulbs [\(exterior lights\)](#).

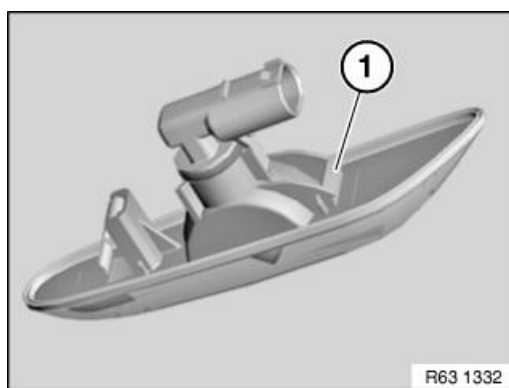


Use special tool [00 9 340](#) to carefully push front auxiliary turn indicator to the back.

Remove front auxiliary turn indicator (1) in direction of arrow.

Unlock associated plug connection and disconnect.

Remove front auxiliary turn signal lamp (1).



Installation:

Retaining lug (1) must not be damaged.



Replacement:

If necessary, remove [bulb](#).

63 13 250 Removing and installing/replacing front left or right side repeater mirror (from 07/12)



Operation is identical to:

Removing and installing/replacing [housing on left or right exterior mirror](#).

63 17 075

Removing and installing/replacing right front fog light



Operation is described in:

Removing and installing [leftÂ fog light](#) .

**Warning!**

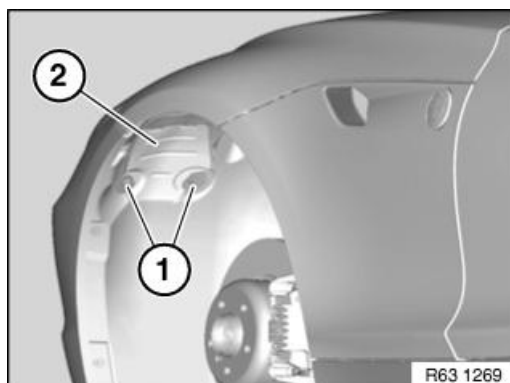
Version with xenon headlights: Danger to life due to high voltage! Therefore, before removing, disconnect all components from the voltage supply (lighting system and ignition off).

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

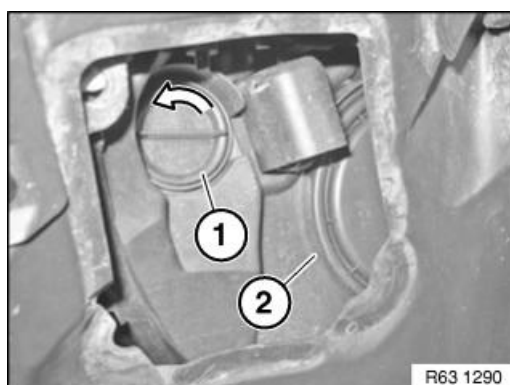
Follow instructions for handling light bulbs ([exterior lights](#)).

Note:

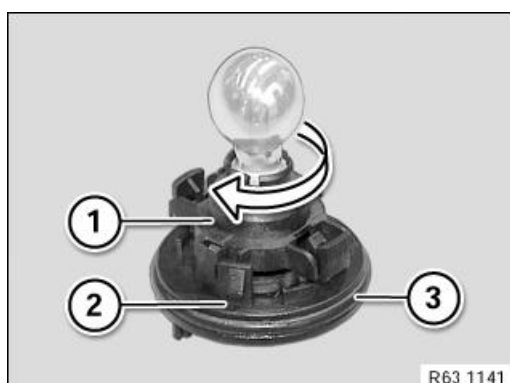
Front wheel removed for purposes of clarity.



Unlock fasteners (1) by turning counterclockwise through 180° and fold up cover (2) in direction of arrow.



Turn bulb holder (1) approx. 30° anticlockwise and remove from headlight (2).

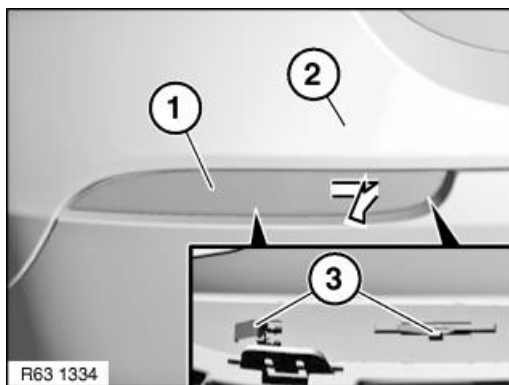


Turn bulb with socket (1) in direction of arrow and remove from bulb holder (2) towards top.

Installation note:

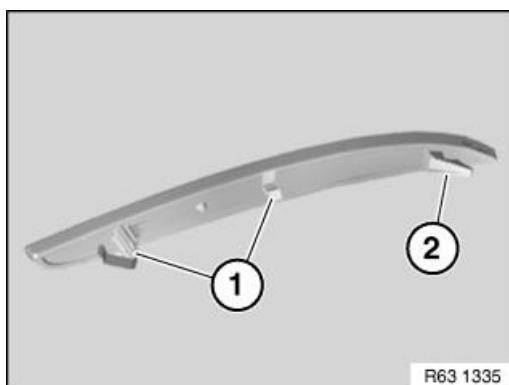
Make sure bulb with socket (1) and sealing ring (3) on bulb holder (2) are fitted correctly.

Note [bulb type](#).



Unclip reflector (1) from bumper trim (2) in area (3).

Pull reflector (1) in direction of arrow out of guide and detach towards rear from bumper trim (2).



Installation:

Catches (1) and guide (2) on rear reflector must not be damaged.

**Note:**

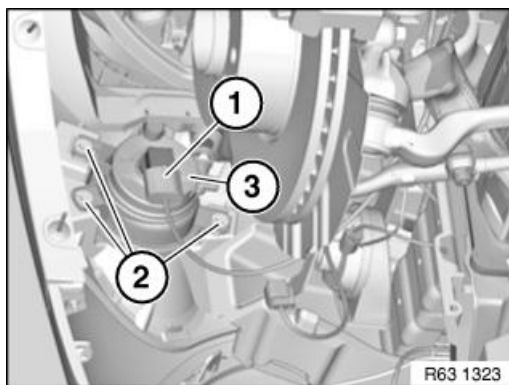
The time value of this job does not include adjustment of the [fog lamps](#) !

**Necessary preliminary tasks:**

- Remove [front left wheel arch cover](#)

**Warning!**

Follow instructions for handling light bulbs [\(exterior lights\)](#) .



Unfasten plug connection (1) and disconnect.

Unfasten screws (2).

Remove fog lamp (3).

**Replacement:**

Adjust [front fog lamps](#) .

If necessary, remove [bulb](#) .

63 17 075

Removing and installing/replacing right front fog light



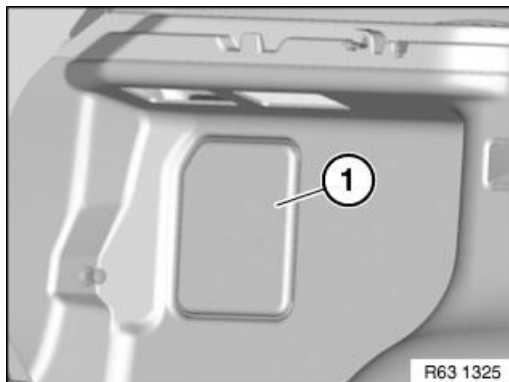
Operation is described in:

Removing and installing [leftÂ fog light](#) .



Important!

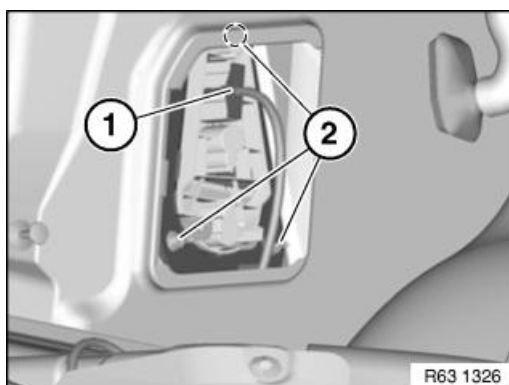
Read and comply with notes on protection against electrostatic damage ([ESD protection](#)) .



Remove rear light cover (1).

Installation:

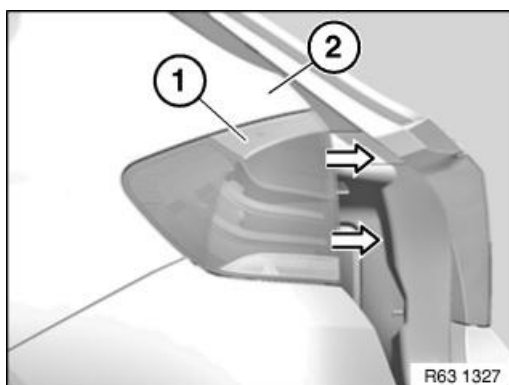
Make sure rear light cover (1) is correctly seated.



Unfasten plug connection (1) and disconnect.

Unscrew nuts (2).

Tightening torque [63 21 2AZ](#) .



Remove rear light (1) in direction of arrow from side panel (2).

Installation:

- Make sure [sealing frame for rear light](#) is correctly seated on rear light
- Make sure [gap](#) (outer) between rear light and side panel is uniform



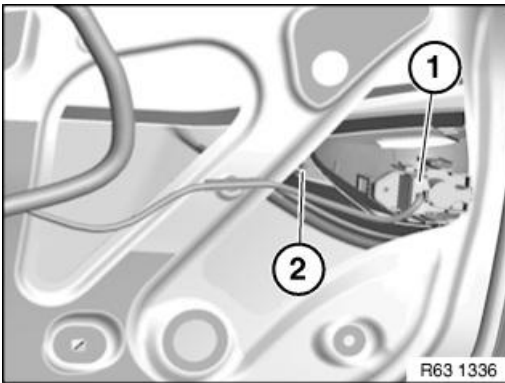
Important!

Read and comply with notes on protection against electrostatic discharge ([ESD protection](#)).

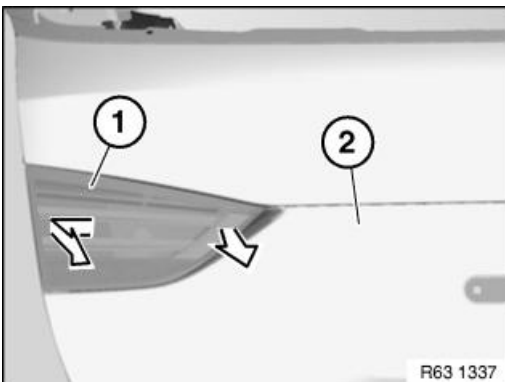


Necessary preliminary tasks:

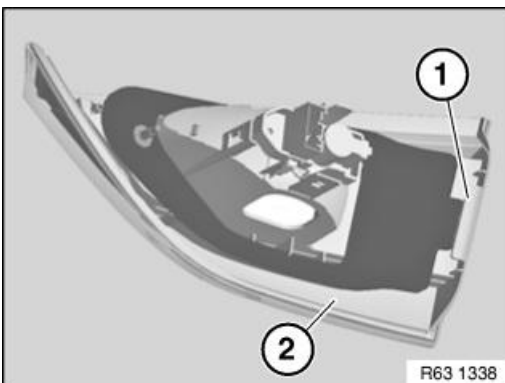
- Remove [tailgate trim](#)



Unfasten plug connection (1) and disconnect.
Slacken nut (2).



Carefully lift rear light (1) toward the rear and remove from rear lid (2) in direction of arrow.



Installation note:

Guide (1) from rear light (2) must not be damaged.

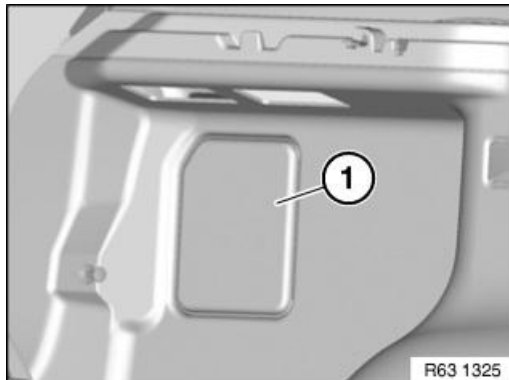


Replacement:

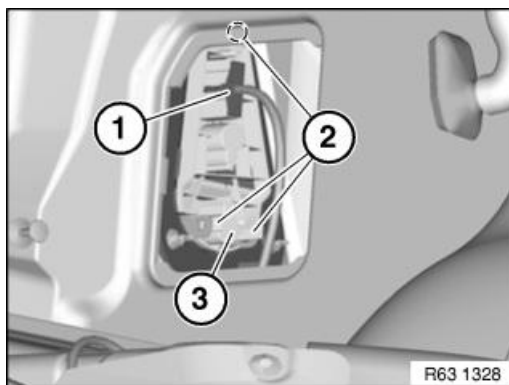
- Replace [sealing frame](#)
- Note [bulb type](#)

**Warning!**

Follow instructions for handling light bulbs [\(exterior lights\)](#).



Remove rear light cover (1).



Unlock plug connection (1) and disconnect.

Unlock catches (2) and remove rear light socket housing (3).

Installation:

- Retaining lugs must not be damaged.
- Make sure rear light socket housing (3) is correctly seated.

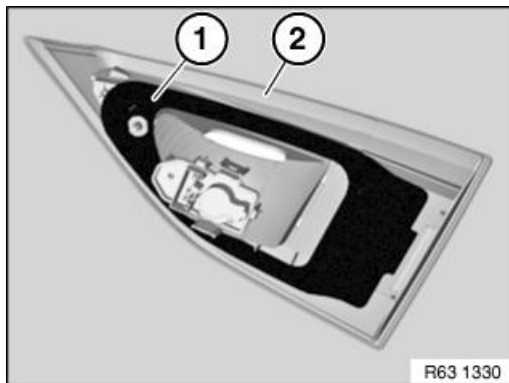
**Replacement:**

Convert [bulbs](#), replace if necessary.



Necessary preliminary tasks:

- Remove [rear light](#)



Remove sealing frame for rear light (1) in upwards direction from rear light (2).

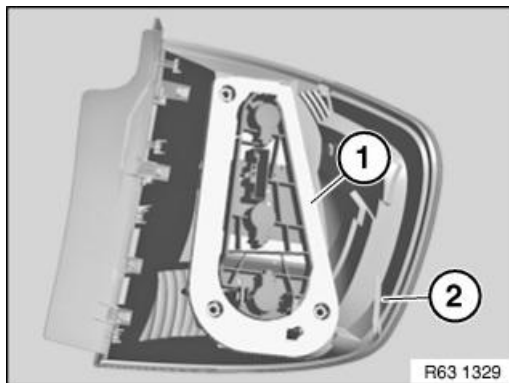
Installation:

Make sure sealing frame for rear light (1) is correctly seated on rear light (2).



Necessary preliminary tasks:

- Remove [rear light](#)



Remove sealing frame for rear light (1) in upwards direction from rear light (2).

Installation:

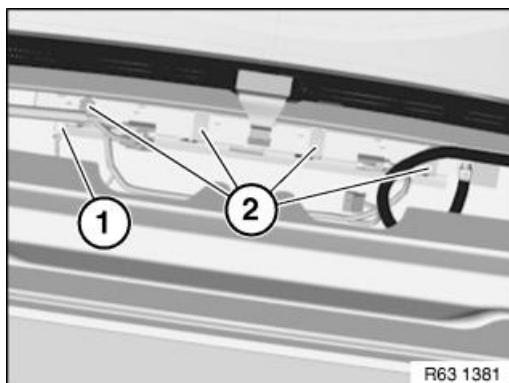
Make sure sealing frame for rear light (1) is correctly seated on rear light (2).

**Special tools required:**

- [00 9 340](#)

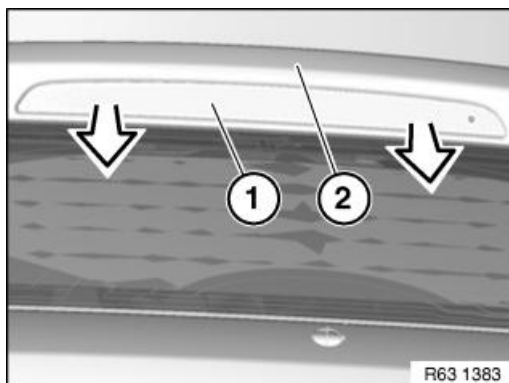
**Necessary preliminary work:**

- Remove [aerial amplifier](#)



Unlock plug connection (1) and disconnect.

Unlock retaining lugs (2) on both sides with suitable tool and press upward.



Press additional brake light (1) out of the tailgate (2) in direction of arrow; if necessary, release it from the tailgate with special tool [00 9 340](#).

Disconnect hose connection to the washer jet.

Installation note:

From version 12/2009 additional brake light is fitted with gasket sealing on both sides.

If the gasket is damaged, the additional brake light must be replaced!

**Replacement:**

Where applicable, remove gasket residue from the tailgate.

Remove protective film from gasket on the new part.



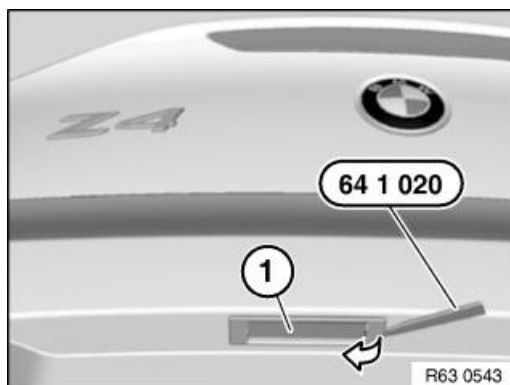
Special tools required:

- [64 1 020](#)



Warning!

Follow instructions for [handling light bulbs \(exterior lights\)](#).



Lever out number/license plate light (1) with special tool [64 1 020](#) as illustrated.

Disconnect associated plug connection and remove number/license plate light (1).



Replacement:

[Replace number/license plate light](#)

63 31 004 Removing and installing or replacing complete ceiling light (rear, with module for passenger compartment protection)



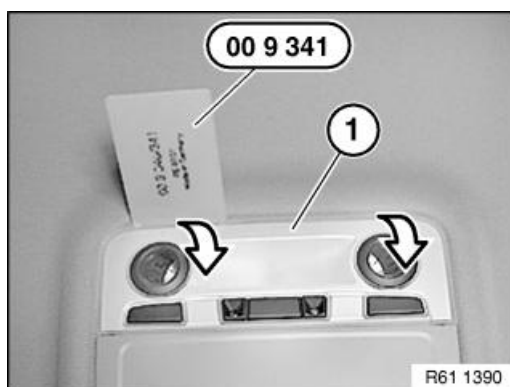
Special tools required:

- [00 9 341](#)



Important!

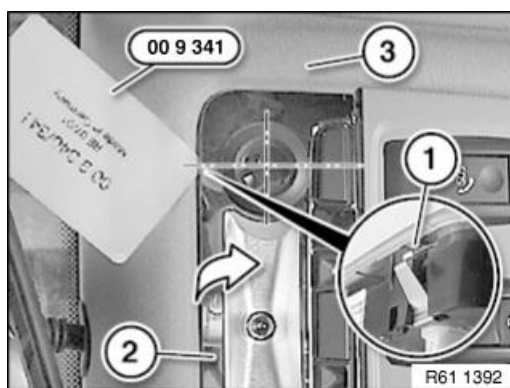
Follow instructions for handling light bulbs ([interior lights](#)).



Important!

Reflector on ceiling light must not be damaged.

Carefully unclip trim of ceiling light (1) with special tool [00 9 341](#) in direction of arrow from ceiling light and remove.



Version with reading lights:

Note:

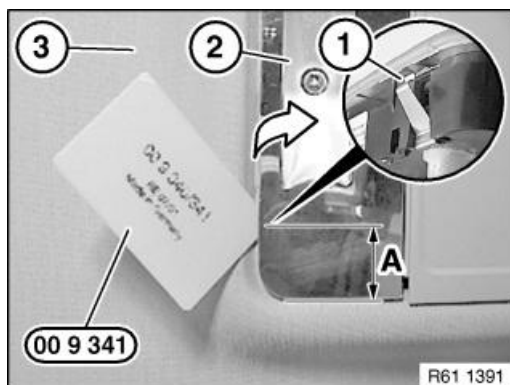
Operation is shown by way of example on the roof switch centre.

Important!

Reflector (2) and roof liner (3) must not be damaged.

Retaining clips (1) are located on centreline of both reading lights.

Carefully unlock retaining clips (1) with special tool [00 9 341](#).



Version without reading lights:

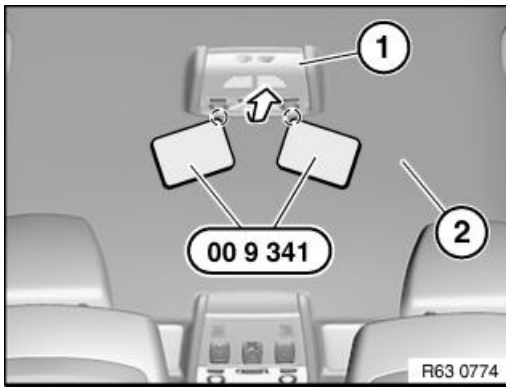
Important!

Reflector (2) and roof liner (3) must not be damaged.

Retaining clips (1) are located at distance (A) from outer edges of ceiling light.

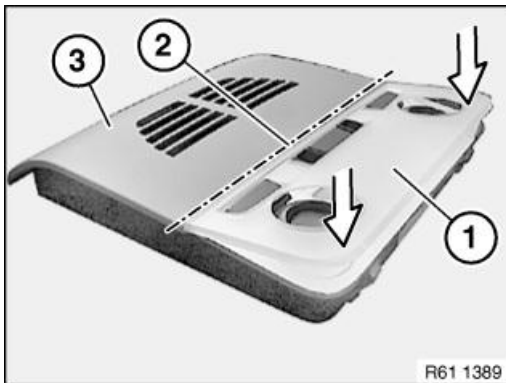
(A) = 35 mm

Carefully unlock retaining clips (1) with special tool [00 9 341](#).



Lever ceiling light (1) with special tool [00 9 341](#) in direction of arrow out of roofliner (2).

Disconnect plug connection underneath and remove ceiling light (1).



Installation:

Assemble ceiling light trim prior to installation:

- Feed in ceiling light trim (1) at line (2)
- Press ceiling light trim (1) in direction of arrow onto ceiling light (3)

Make sure ceiling light trim (1) is correctly engaged on ceiling light (3).



Replacement:

- Remove [module for interior movement detector](#)
- If necessary, remove [bulbs](#).



Operation is described in:

Removing and installing/replacing complete [ceiling light](#) (rear, with module for passenger compartment protection)

63 31 000
(front)

Removing and installing/replacing complete interior roof light



Special tools required:

- [00 9 340](#)



Important!

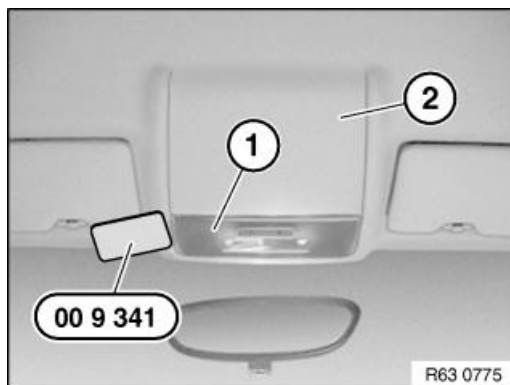
Follow instructions for handling light bulbs ([interior lights](#)).



Version with roof switch cluster:

Operation is described in:

- Removing and installing or replacing [roof switch cluster](#)



Version without roof switch cluster:

Important!

Interior roof light (1) and roofliner (2) must not be damaged.

Lift interior roof light (1) from roofliner (2) with special tool [00 9 340](#) / 00 9 341.

Disconnect associated plug connection and remove interior roof light (1).

Replacement:

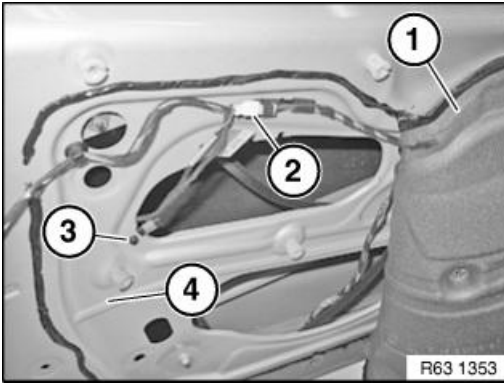
Convert [bulbs](#) if necessary.

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

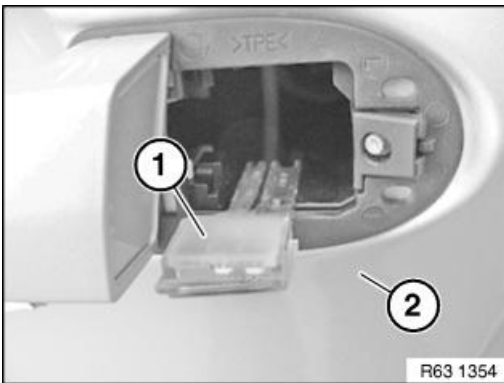


Necessary preliminary tasks:

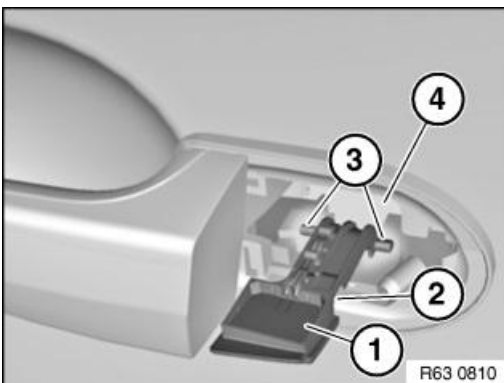
- Remove [exterior door handle cover](#)
- Remove [front left door trim panel](#)



Secure sound insulation (1) on the side.
Disconnect plug connection (2).
Unclip wiring harness (3) from door (4).



Raise outside door handle light (1) slightly and feed through out door (2).



Installation:

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

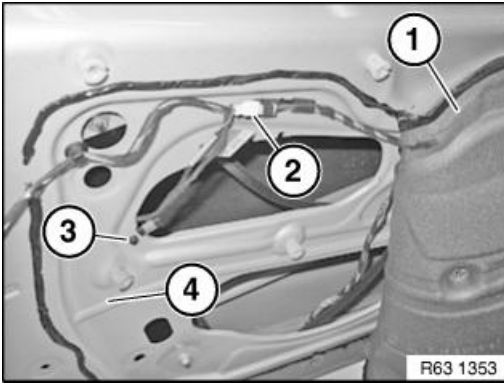
Guides (3) of door handle light (1) must be seated in carrier for outside door handle (4).

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

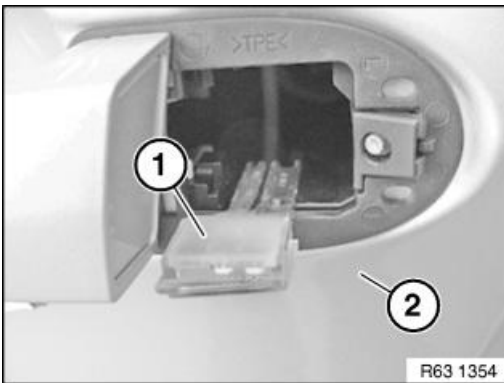


Necessary preliminary tasks:

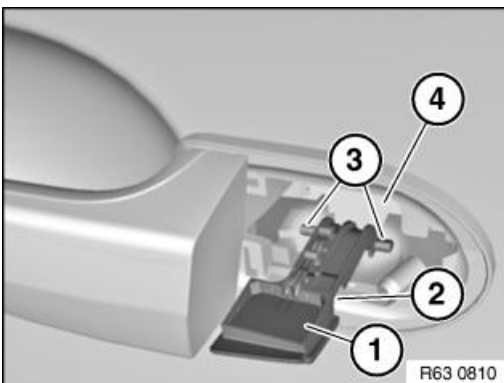
- [Remove cover of outer door handle](#)
- Remove [front rear door trim panel](#)



Secure sound insulation(1) in sideways direction.
Disconnect plug connection (2).
Unclip wiring harness (3) from door (4).



Slightly lift outside door handle light (1) and remove from door (2).



Installation:

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

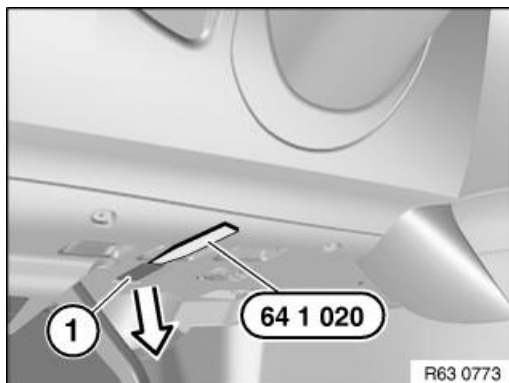
Guides (3) of door handle light (1) must be seated in carrier for outside door handle (4).

**Special tools required:**

- [64 1 020](#)

**Important!**

Follow instructions for handling light bulbs ([interior lights](#)) .



Lever footwell light (1) [64 1 020](#) with special tool in direction of arrow out of bottom right instrument panel trim.

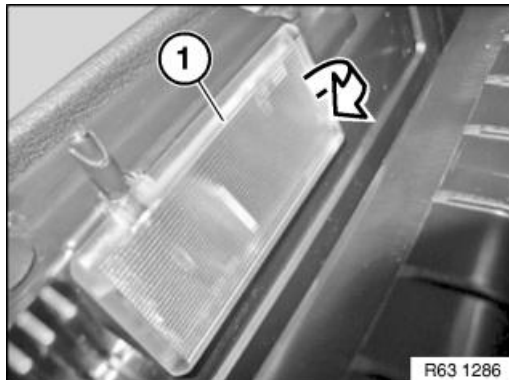
Disconnect associated plug connection and remove footwell light (1).

Replacement:

If necessary, remove [bulb](#) .

**Important!**

Follow instructions for [handling light bulbs \(interior lights\)](#) .

*Note:*

Open glove box.

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

Disconnect plug connection and remove glove box light (1).

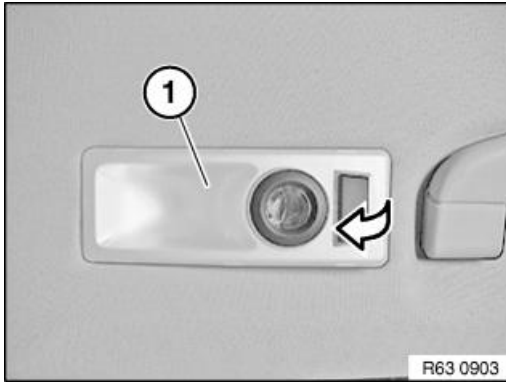
**Replacement:**

- If necessary, remove [bulb](#) .
- Note [bulb type](#)



Important!

Follow instructions for [handling light bulbs \(interior lights\)](#) .



Lever out interior light (1) in direction of arrow.

Disconnect plug connection underneath and remove interior light (1).

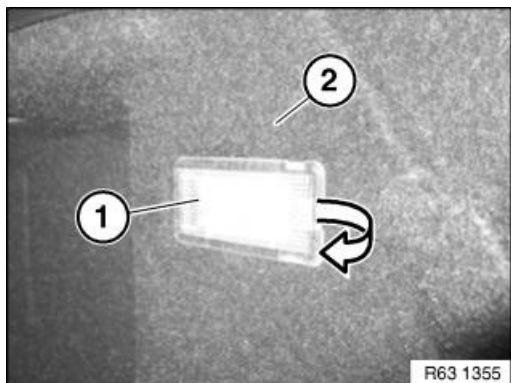


Replacement:

- If necessary, convert [bulbs](#) .
- Note [bulb type](#) .

**Important!**

Follow notes for [handling light bulbs \(interior lights\)](#).



Lever luggage compartment light (1) in direction of arrow out of luggage compartment wheel arch panel (2).

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

**Replacement:**

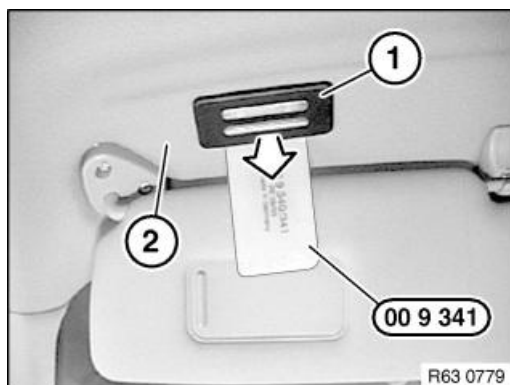
- If necessary, convert [bulb](#).
- Note [bulb type](#).

**Special tools required:**

- [00 9 341](#)

**Important!**

Follow instructions for handling light bulbs [\(interior lights\)](#) .



Lever off make-up mirror light (1) from roofliner (2) in direction of arrow with special tool [00 9 341](#) .

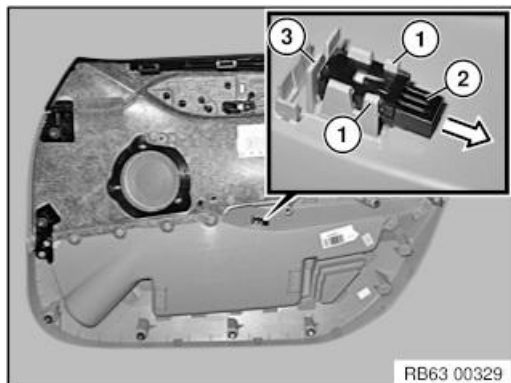
Disconnect plug connection underneath and remove mirror plate light (1).

Replacement:

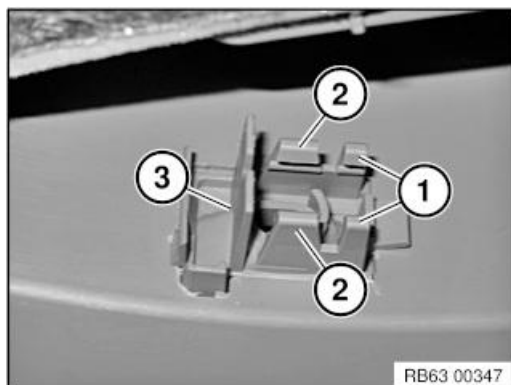
If necessary, remove [bulb](#) .

**Necessary preliminary work:**

- Remove [front door trim panel](#)



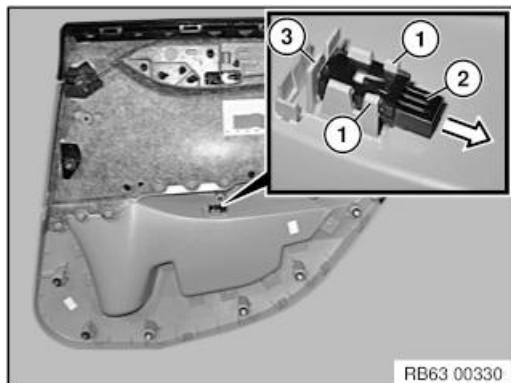
Unlock latch mechanisms (1) and pull LED for front door trim panel (2) out of bracket (3) in direction of arrow. *Installation note:* Make sure LED for front door trim panel (2) is correctly seated in bracket (3).

*Installation note:*

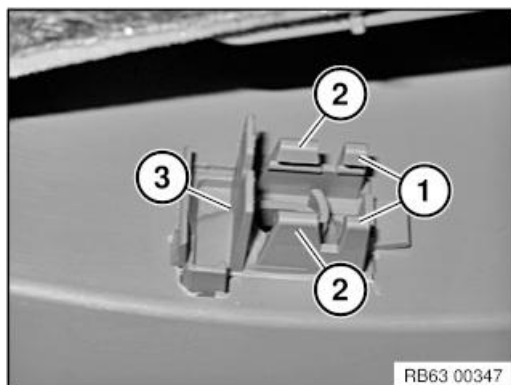
Latch mechanism (1) and guides (2) on bracket (3) must not be damaged or missing.

**Necessary preliminary work:**

- Remove [rear door trim panel](#)



unlocking latch mechanisms (1) and pull LED for rear door trim (2) out of bracket (3) in direction of arrow. *Installation note:* Make sure LED for rear door trim (2) is correctly fitted in bracket (3).

*Installation note:*

Latch mechanism (1) and guides (2) on bracket (3) must not be damaged or missing.

**Warning!**

Xenon headlamps: Danger to life due to high voltage!

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

**Warning!**

Halogen lamps are under pressure:

To avoid injury, wear protective goggles and gloves.

**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 light bulbs as even the smallest amount of dirt 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 instructions without fail.

**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 instructions without fail.

**Important!****Risk of damage!**

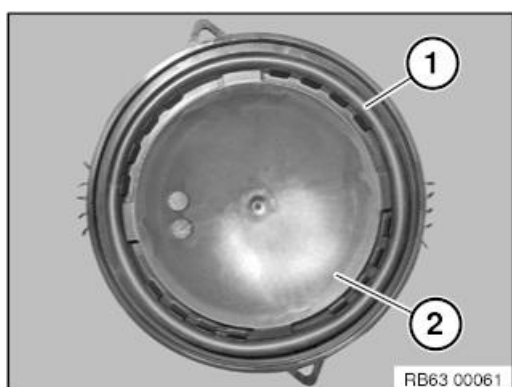
Damaged seals on the protective caps will lead to moisture penetration into the headlight.

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



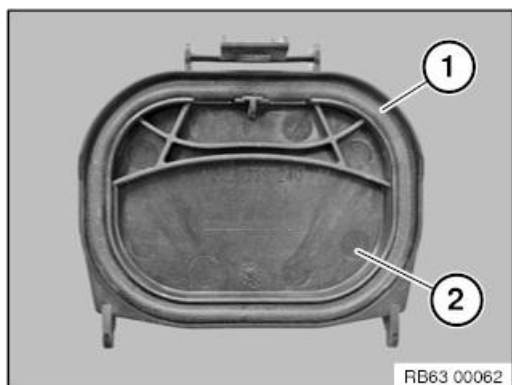
When working on the headlight system, check the protective cap seals.

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).

63 17 075

Removing and installing/replacing right front fog light



Operation is described in:

Removing and installing [leftÂ fog light](#) .

**Warning!**

Version with xenon headlights: Danger to life due to high voltage! Therefore, before removing, disconnect all components from the voltage supply (lighting system and ignition off).

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

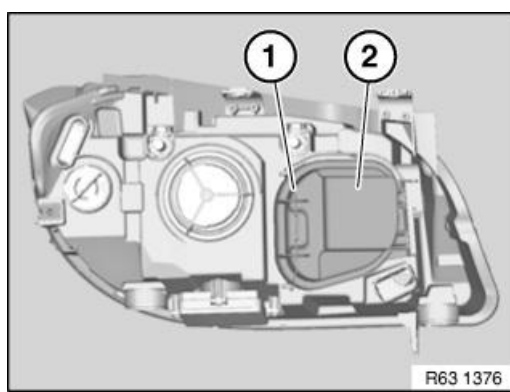
Follow instructions for handling light bulbs ([exterior lights](#)).

**Necessary preliminary tasks:**

- If necessary, remove [intake silencer housing](#)

Note:

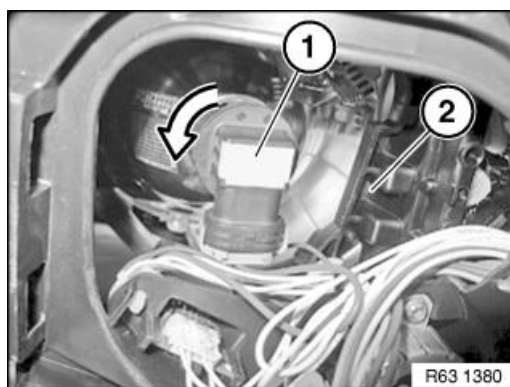
Headlight removed for purposes of clarity.



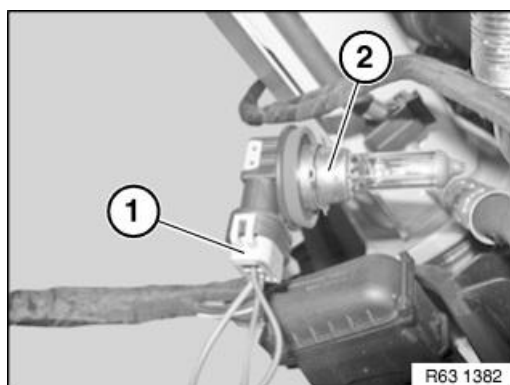
Unlock wire spring clips (1).

Remove protective cap (2) from headlight.

Unlock plug connection behind and disconnect.



Turn bulb (1) in direction of arrow and remove from headlights (2).



Unfasten plug connection (1) and disconnect.

Remove bulb (2).



Installation note:

- Make sure bulb is correctly seated and engaged in headlight
- Note [bulb type](#)

**Warning!**

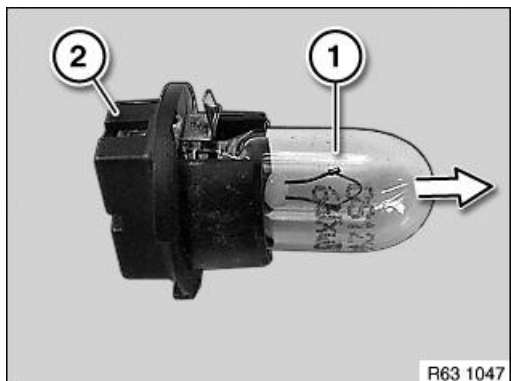
Follow instructions for handling light bulbs ([interior lights](#)).

**Necessary preliminary tasks:**

- Remove [front ceiling light](#)



Turn bulb holder in direction of arrow and remove.



Pull bulb (1) out of bulb holder (2).

**Installation:**

- Make sure bulb holder is correctly seated and engaged in ceiling light
- Note [bulb type](#)

**Warning!**

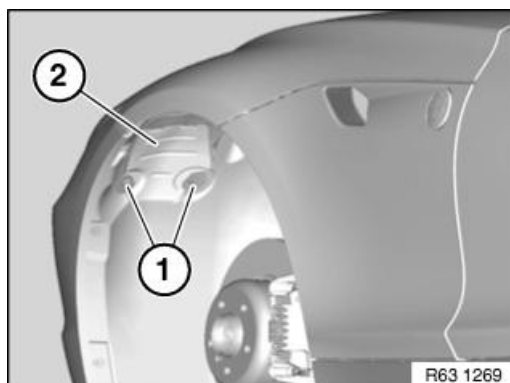
Version with xenon headlights: Danger to life due to high voltage! Therefore, before removing, disconnect all components from the voltage supply (lighting system and ignition off).

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

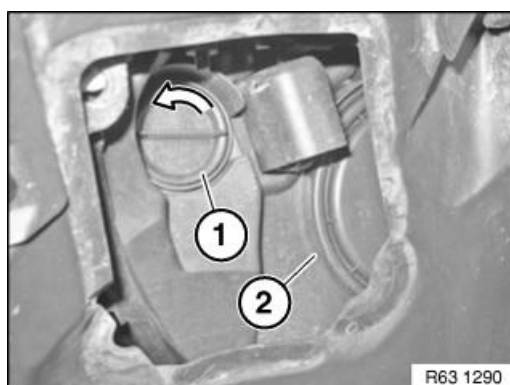
Follow instructions for handling light bulbs ([exterior lights](#)).

Note:

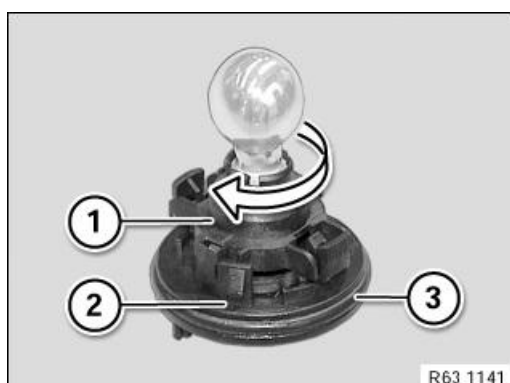
Front wheel removed for purposes of clarity.



Unlock fasteners (1) by turning counterclockwise through 180° and fold up cover (2) in direction of arrow.



Turn bulb holder (1) approx. 30° anticlockwise and remove from headlight (2).



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

Installation note:

Make sure bulb with socket (1) and sealing ring (3) on bulb holder (2) are fitted correctly.

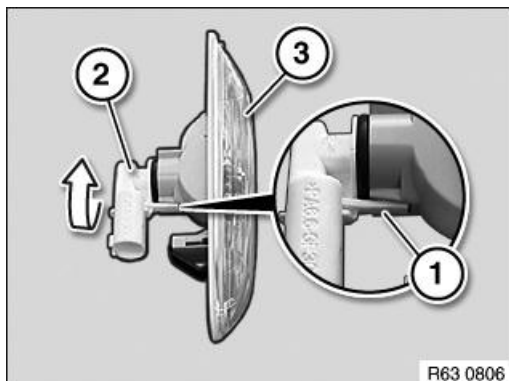
Note [bulb type](#).

**Warning!**

Follow instructions for [handling light bulbs \(exterior lights\)](#).

**Necessary preliminary work:**

- Remove [front side repeater](#)



Unlock retaining lug (1).

Turn bulb holder (2) in direction of arrow and remove from side repeater (3).

Pull bulb out of holder (2).

Installation note:

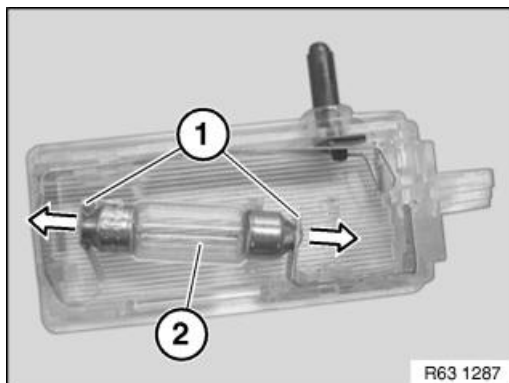
- Retaining lug (1) must not be damaged.
- Make sure bulb holder (2) is correctly latched in side repeater (3).
- [Note bulb type](#)

**Warning!**

Follow instructions for [handling light bulbs \(interior lights\)](#) .

**Necessary preliminary tasks:**

- Remove [glovebox light](#)



Press springs of glovebox light (1) in direction of arrow.

Remove bulb (2).

Installation:

Note [bulb type](#) .

63 99 076
unit)

Replacing bulb for left (or right) xenon headlight (with ignition



Operation is described in:

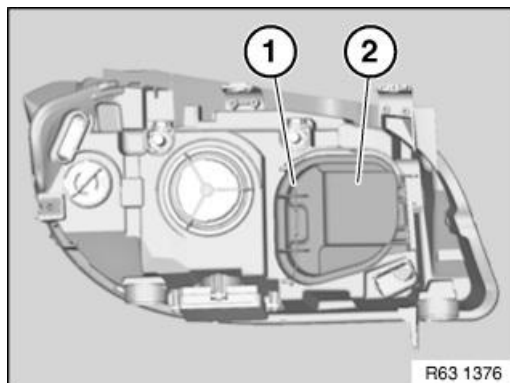
Replacing [ignition unit for left xenon headlight](#)

**Warning!**

Follow instructions for [handling light bulbs \(exterior lights\)](#).

**Necessary preliminary tasks:**

- If necessary, remove [intake silencer housing](#)

*Note:*

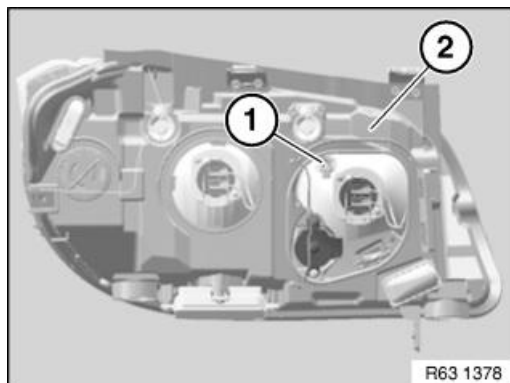
Headlight removed for purposes of clarity.

Unlock wire spring clips (1).

Remove cover (2) from headlight.

Installation note:

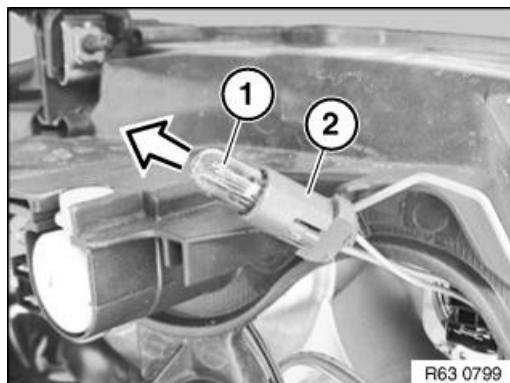
Make sure cover is correctly seated on headlight.



Grip bulb holder (1) on both sides and pull towards rear out of headlight (2).

Installation note:

Make sure bulb holder (1) is exactly seated in headlight (2).



Withdraw bulb for side lights (1) in direction of arrow from bulb holder (2).

Installation note:

Note [bulb type](#).

63 99 133

Replacing bulb for side lights, front right



Operation is described in:

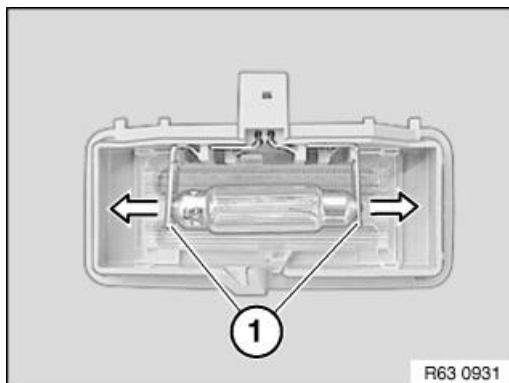
Replacing [bulb for front left side lights](#).

**Warning!**

Follow instructions for handling light bulbs ([interior lights](#)).

**Necessary preliminary tasks:**

- Remove [mirror light](#)



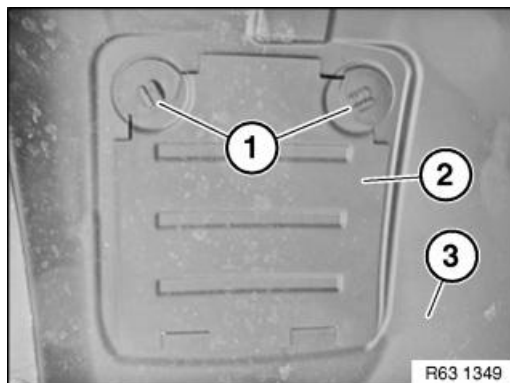
Expand bow contacts (1) and remove bulb for mirror light.

Installation:

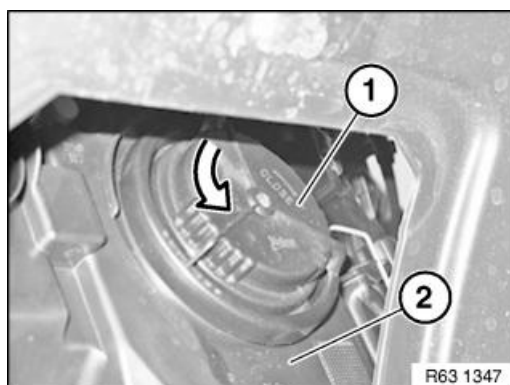
Note [bulb type](#).

**Warning!**

Follow instructions for [handling light bulbs \(exterior lights\)](#).



Unlock plastic fasteners (1) by turning counterclockwise through 180°. Pull flap (2) out of front wheel arch cover (3).



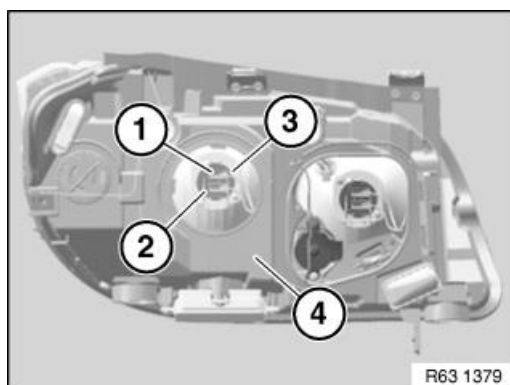
Unlock protective cap (1) in direction of arrow and remove from headlight (2). *Installation note:*

Protective cap (1) must be correctly engaged.

Check seal.

Replace protective cap (1) if necessary.

Comply with [Instructions for replacing the protective cap](#).

*Note:*

Headlight (4) shown removed for purposes of clarity.

Disconnect plug connection (1).

Disengage spring wire clip (2).

Remove bulb (3) towards rear from headlight (4).

Installation note:

Make sure bulb (3) is exactly seated in headlight (4).

Note [bulb type](#).

*Recommendation:*

Check [headlight adjustment](#), correct if necessary.

63 99 073

Replacing halogen bulb for headlight on right



Operation is described in:

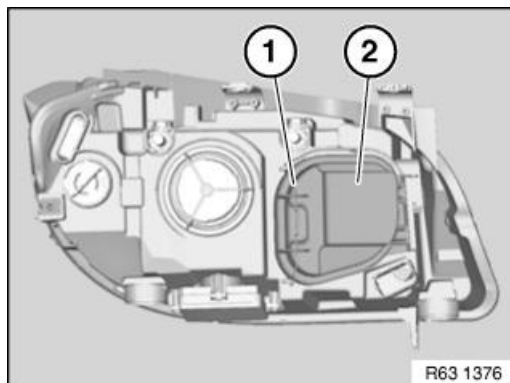
[Replacing halogen bulb for headlight on left](#) .

**Warning!**

Follow instructions for [handling light bulbs \(exterior lights\)](#).

Necessary preliminary work:

- If necessary, remove [intake filter housing](#)

*Note:*

Headlight removed for purposes of clarity.

Unlock spring wire clips (1).

Remove protective cap (2) from headlight.

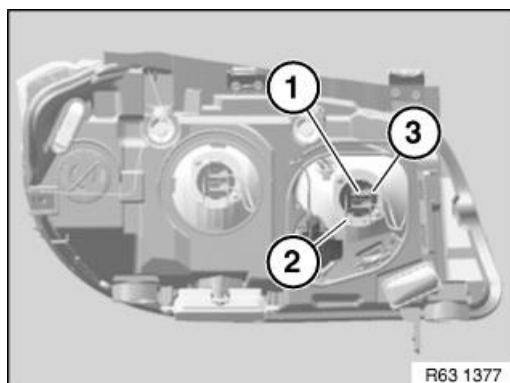
Installation note:

Protective cap (2) must be correctly engaged.

Check seal.

Replace protective cap (2) if necessary.

Observe [Notes for replacing the protective cap](#).



Disconnect plug connection (1).

Disengage spring wire clip (2).

Remove bulb (3) rearward from headlight.

Installation note:

Make sure bulb (3) is exactly seated in headlight.

Note [bulb type](#).

63 99 003

Replacing halogen bulb for high-beam headlight on right



Operation is described in:

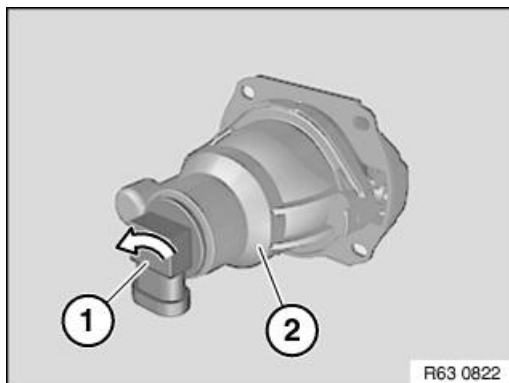
Replace [halogen bulb for high-beam headlight on left](#) .

**Warning!**

Follow instructions for handling light bulbs [\(exterior lights\)](#).

**Necessary preliminary tasks:**

- Remove [wheel arch cover at front](#) part way

**Note:**

For purposes of clarity, picture shows fog light (2) removed.

Turn bulb (1) in direction of arrow and remove from fog light (2).

Installation:

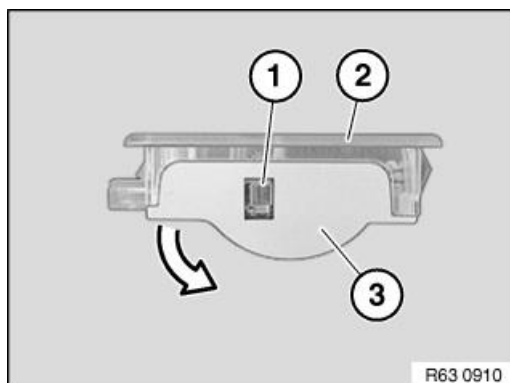
Note [bulb type](#).

**Warning!**

Follow instructions for handling light bulbs ([interior lights](#)) .

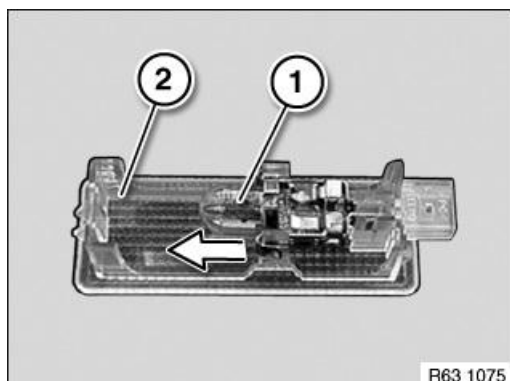
**Necessary preliminary tasks:**

- Remove [footwell light](#)

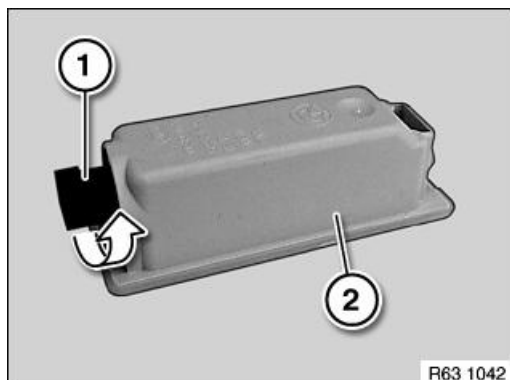
**Version A:**

Unlock catch (1) on footwell light (2).

Remove cover cap (3) in direction of arrow.



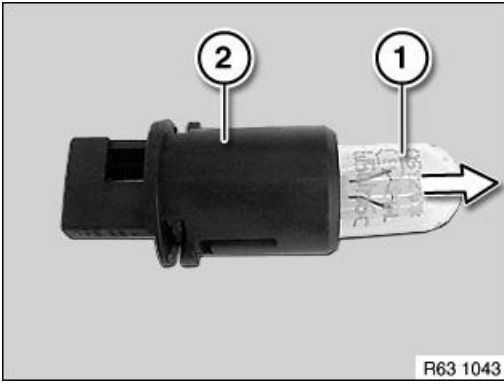
Remove bulb (1) from bulb holder (2) in direction of arrow.

**Version B:**

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

Installation:

Make sure bulb holder (1) is correctly engaged on footwell light (2).



Remove bulb (1) from bulb holder (2) in direction of arrow.



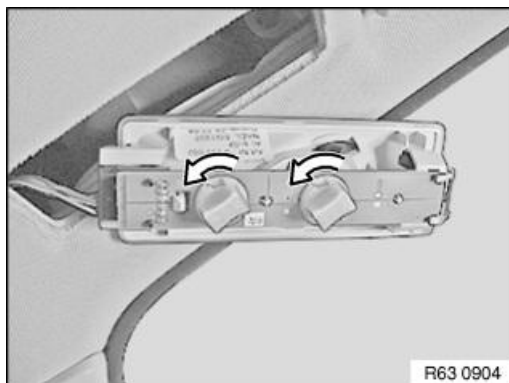
Installation:
Note [bulb type](#) .

**Warning!**

Follow instructions for [handling light bulbs \(interior lights\)](#) .

**Necessary preliminary tasks:**

- Remove [interior light](#)



Turn bulb in direction of arrow and remove. *Installation:*

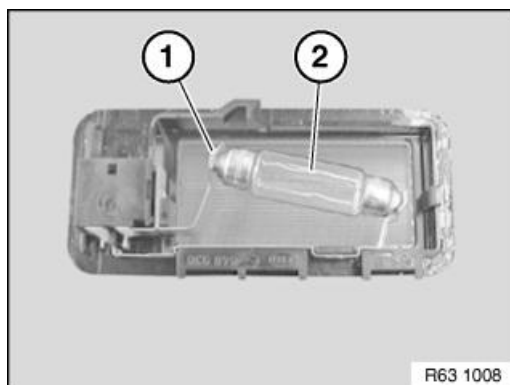
Note [bulb type](#) .

**Warning!**

Follow instructions for handling light bulbs ([interior lights](#)) .

**Necessary preliminary tasks:**

- Remove [luggage compartment light](#)



Press festoon (2) in direction of bow contact (1) and remove in upward direction from luggage compartment light.

Installation:

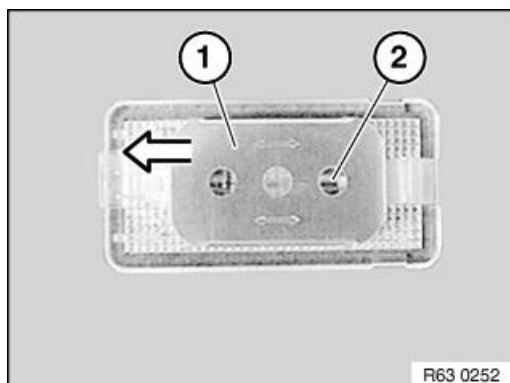
Note [bulb type](#) .

**Warning!**

Follow instructions for handling light bulbs ([interior lights](#)).

**Necessary preliminary tasks:**

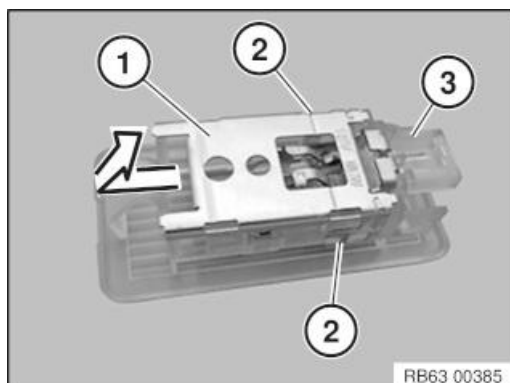
- Remove [luggage compartment light](#)

**Version A:**

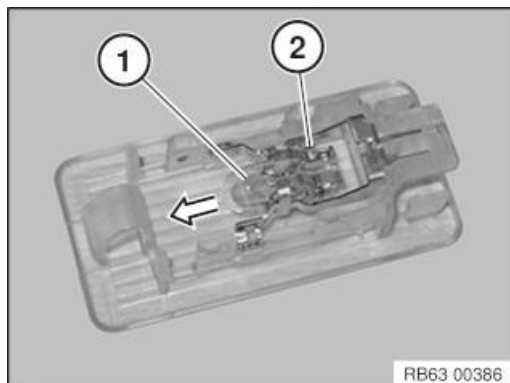
Move headlight lens cover (1) in direction of arrow and remove.
Remove festoon (2) underneath.

Installation note:

Note [bulb type](#).

**Version B:**

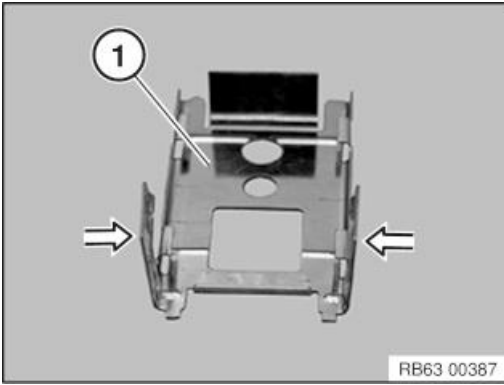
Release headlight lens cover (1) at latch mechanisms (2) on both sides.
Remove headlight lens cover (1) from luggage compartment light (3) in direction of arrow.



Push bulb (1) out of socket with a suitable tool (e.g. screwdriver 3 mm blade) in direction of arrow and remove.

Installation note:

Note [bulb type](#).



Check headlight lens cover (1) before fitting.

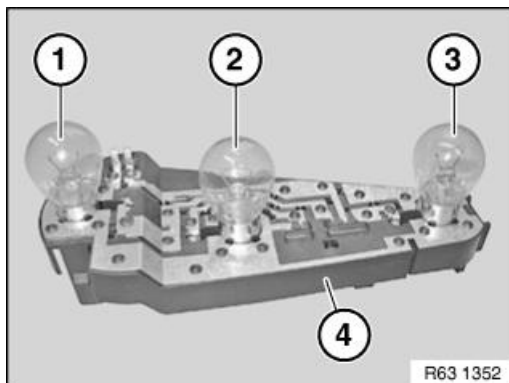
If necessary, carefully press together both side tabs a little in direction of arrow.

**Warning!**

Follow instructions for handling light bulbs [\(exterior lights\)](#) .

*Necessary preliminary tasks:*

- Remove [socket housing for rear light](#)



Press bulbs (1,2,3) in direction of socket housing (4), turn anti-clockwise and remove from socket housing (4).

Note:

1. Bulb, backup light
2. Bulb, brake light
3. Bulb, turn indicator light

Installation:

[Note type of bulb](#) .

**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.

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



Warning!

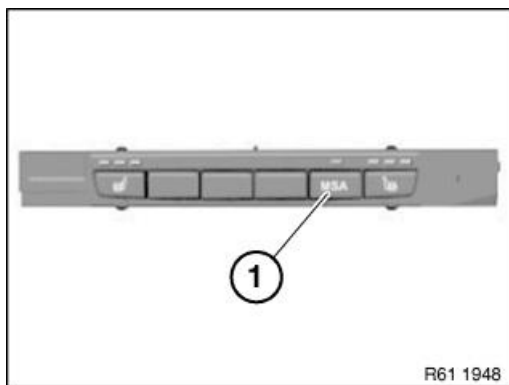
If the engine hood/bonnet contact is pulled upwards (workshop mode), the information "switch closed" is output. The automatic engine start-stop function is active.

An automatic engine start is possible.

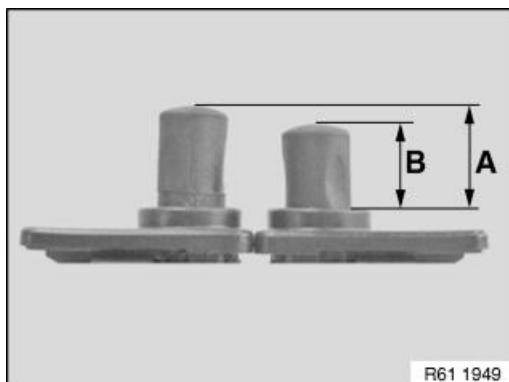
Observe safety precautions when working on MSA vehicles.

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
 $A = 10 \text{ mm}$
 - Basic setting (engine hood/bonnet open)
 $B = 7 \text{ mm}$

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



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](#)