



## Headlamps

### General information

Headlamps from two different manufacturers may be installed:

- Hella
  
- Valeo

With the exception of the various bulb mountings, assembly and disassembly of headlamps and their attachments is identical.

Before troubleshooting or servicing, technicians must be familiar with the functions and operation specifics of the standard or optional headlamp or lighting system. Always read the owners manual and review applicable system functions.

#### **Note:**

- *Additional information:*

⇒ *Owners Manual*

⇒ *Self Study Program - Course Number 891503 "The 2006 Passat Introduction"*

⇒ *Self Study Program - Course Number 871503 "The 2006 Passat Electrical Systems Design and Function"*

⇒ *Electrical Wiring Diagrams, Troubleshooting and Component Locations binder*

CAN-Bus wire repairs ⇒ [97-8, Repairing CAN-Bus wires](#)

### **On Board Diagnostic (OBD), function**

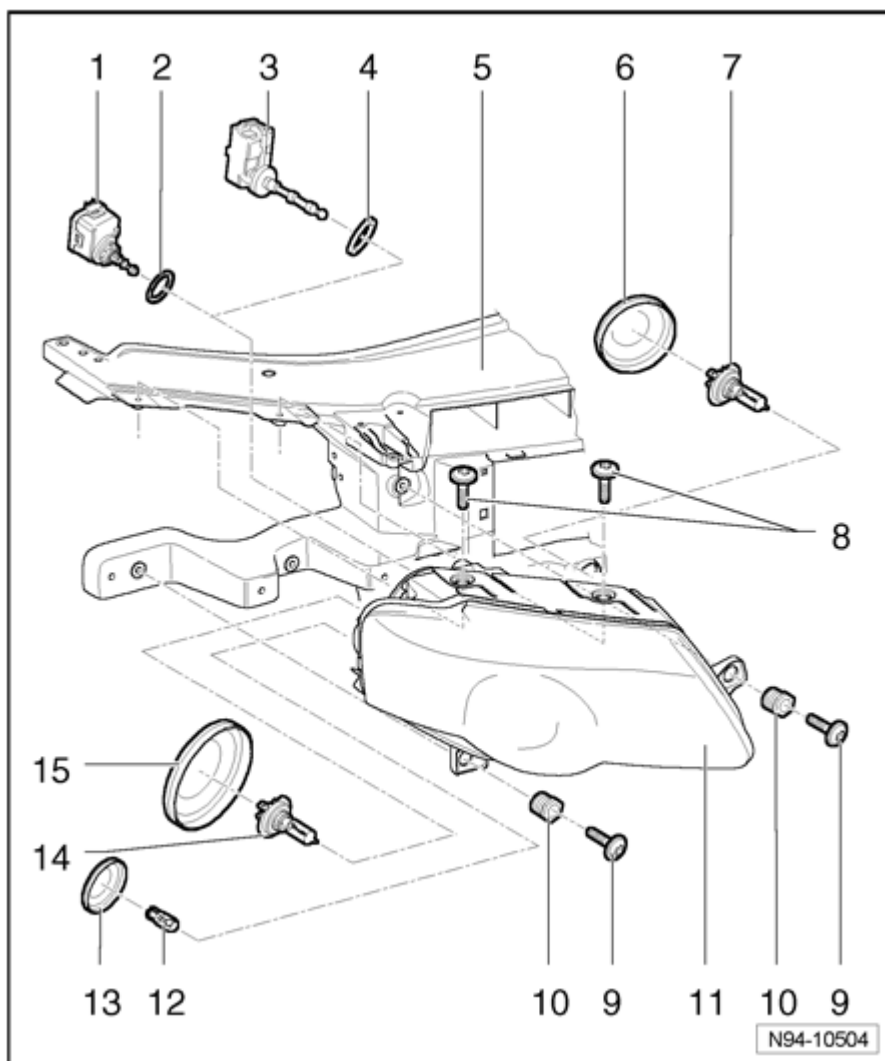
Vehicle electrical system control is equipped with On Board Diagnostics (OBD) capabilities which assists in troubleshooting headlamps.

For troubleshooting, use Vehicle Diagnostic, Testing and Information System VAS 5051/5052 in operating mode "Guided Fault Finding" .

### **Headlamps, assembly**

**Note:**

- After performing any repairs or service that could affect headlamp aim, check/adjust aim
- Tightening torques ⇒ [94-12, Headlamps, tightening torques](#)



- Not applicable to USA/CDN models with standard headlamp system
- Not applicable to USA/CDN models with standard headlamp system
- Not applicable to USA/CDN models with standard headlamp system
- Not applicable to USA/CDN

## models with standard headlamp system

- **Body cross section**
- **Cover**
- **Left High Beam Headlamp M30 and Right High Beam Headlamp M32**
  - Bulb H7 12 V, 55 W
  - Replacing, manufacturer: Hella ⇒ [94-1, High Beam Headlamp Bulbs M30 / M32, replacing](#)
  - Replacing, manufacturer: Valeo ⇒ [94-1, High Beam Headlamp Bulbs M30 / M32, replacing](#)
- **Screws**
  - 2 Nm
- **Screws**
  - 8 Nm
- **Adjustment bushings**
  - Correcting installation position of headlamp ⇒ [94-1, Headlamp installation position, correcting](#)
- **Headlamp housing**
  - Removing and installing ⇒ [94-1, Headlamps, removing and installing](#)
  - Headlamp installation position, correcting ⇒ [94-1, Headlamp installation position, correcting](#)
  - Headlamp securing lugs, servicing ⇒ [94-1, Headlamp securing lugs, servicing](#)

- **Left Parking Light M1 and Right Parking Light M3**

- Bulb: 12 V, WY 5 W
- Replacing, manufacturer:  
Hella ⇒ [94-1, Parking Lamp Bulbs M1 / M3, replacing](#)
- Replacing, manufacturer:  
Valeo ⇒ [94-1, Parking Lamp Bulbs M1 / M3, replacing](#)

- **Cover**

- **Left Low Beam headlamp M29 and Right Low Beam headlamp M31**

- Bulb H7 12 V, 55 W
- Replacing, manufacturer:  
Hella ⇒ [94-1, Low Beam Headlamp Bulbs M29 / M31, replacing](#)
- Replacing, manufacturer:  
Valeo ⇒ [94-1, Low Beam Headlamp Bulbs M29 / M31, replacing](#)

- **Cover**

## Headlamps, removing and installing

### Headlamps, removing

#### **Note:**

- *Removal and installation of standard headlamps and headlamps with High Intensity Gas Discharge (HID) lamps is the same as described below. In the event an HID headlamp requires removal, read, understand and observe all safety precautions for servicing HID lamps ⇒ [94-2, General information](#)*
- *It is not necessary to disconnect battery.*
- *The following illustrations depict removal and installation of left headlamp. Procedure for right*

*headlamp is the same.*

- *If one headlamp is removed, it must always be adjusted after installation*

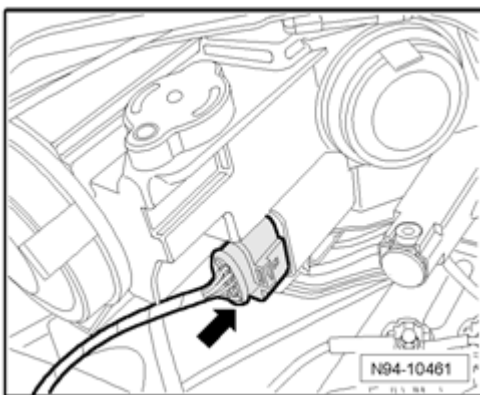
⇒ *Repair Manual, Maintenance, Repair Group 00,*

- *Should an HID headlamp be removed, perform basic setting after installation*

⇒ *Repair Manual, Maintenance, Repair Group 00,*

### **Caution!**

- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**



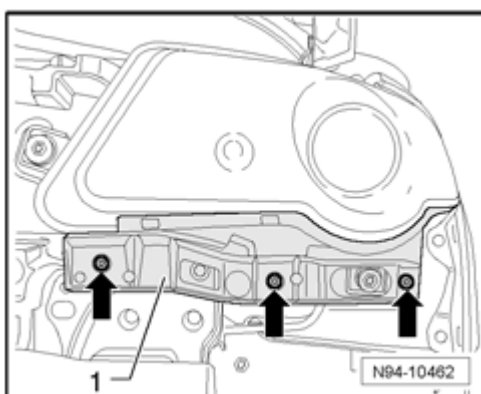
- Release and disconnect electrical connection - **arrow** -

- Remove radiator grille

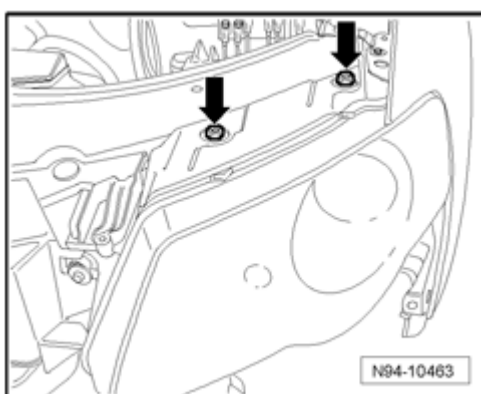
⇒ [Repair Manual, Body Exterior, Repair Group 66, Strips and panels; removing and installing radiator grille](#)

- Remove front bumper cover

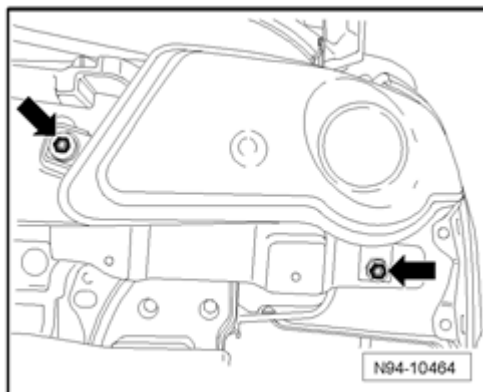
⇒ [Repair Manual, Body Exterior, Repair Group 63, Front bumper](#)



- Remove screws - **arrows** - and remove retainer bracket  
- 1 - .



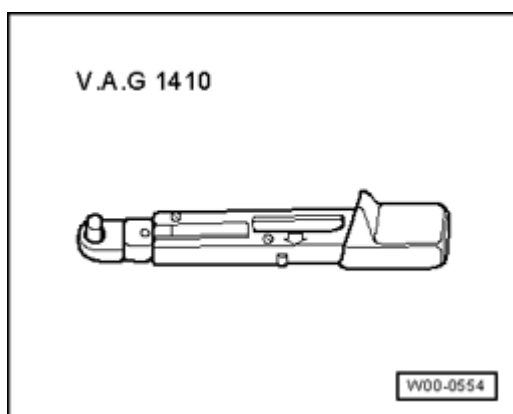
- Remove screws - **arrow** - at top of headlamp.



- Remove screws - **arrow** - at bottom of headlamp.
- Remove headlamp from body opening.

### Headlamp, installing

### Special tools, testers and auxiliary items required



- Torque wrench VAG 1410 (or 4 - 20 Nm equivalent)

Install in reverse order of removal, noting the following:

- Torque all fasteners according to value in table ⇒ [94-12, Headlamps, tightening torques](#) .
- Check the installed position of the headlamp for uniform gap dimensions.

If the gaps are uneven in relation to the body, the installed position of the headlamp must be corrected ⇒ [94-1, Headlamp installation position, correcting](#) .

- Check headlamp function.

### Note:

- *If one headlamp is removed, it must always be*

*adjusted after installation.*

- *Should an HID headlamp be removed, perform basic setting after installation*

⇒ *Repair Manual, Maintenance, Repair Group 00,*

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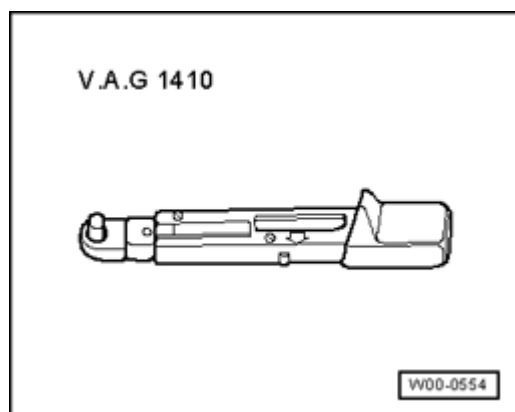
- Check and adjust headlamp aim if necessary

⇒ *Repair Manual, Maintenance, Repair Group 00,*

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### **Headlamp installation position, correcting**

#### **Special tools, testers and auxiliary items required**



- Torque wrench VAG 1410 (or 4 - 20 Nm equivalent)

#### **Note:**

- *The following illustrations depict the left headlamp.*
- *Installation position for right and left headlamps is the same.*

If during the check of the final installation position it is established that headlamp gaps are uneven with the body, correct installation position as follows:



**Caution!**

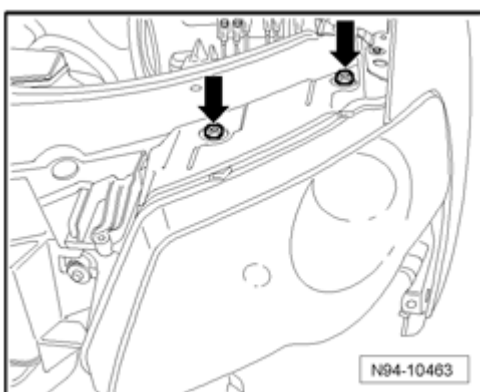
- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**

- Remove radiator grille

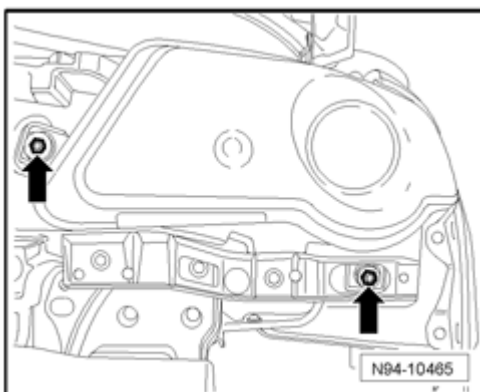
⇒ [Repair Manual, Body Exterior, Repair Group 66, Strips and panels; removing and installing radiator grille](#)

- Remove front bumper cover

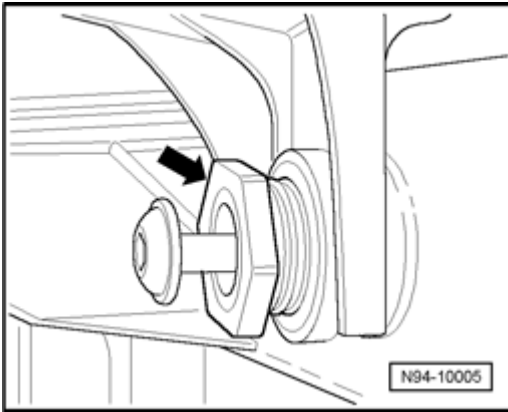
⇒ [Repair Manual, Body Exterior, Repair Group 63, Front bumper](#)



- Loosen screws - **arrow** - at top of headlamp.



- Loosen screws - **arrow** - at bottom of headlamp.



- Adapt surface alignment to body by screwing in or screwing out adjustment bushing - **arrow** - at lower left of headlamp or at lower right of headlamp.
- Torque all fasteners according to value in table ⇒ [94-12, Headlamps, tightening torques](#) .
- Check and if necessary correct installation position of headlamp again for uniform gap dimension.
- Install front bumper cover

⇒ [Repair Manual, Body Exterior, Repair Group 63, Front bumper](#)

- .
- Install radiator grille

⇒ [Repair Manual, Body Exterior, Repair Group 66, Strips and panels; removing and installing radiator grille](#)

- .
- Check headlamp function.

**Note:**

- *If a headlamp is removed or adapted to the body, it must always be adjusted after installing or after adapting.*

- Check and adjust headlamp aim if necessary

⇒ [Repair Manual, Maintenance, Repair Group 00,](#)

## Hella headlamps - bulbs, replacing

**Low beam headlamp bulbs M29 / M31, replacing** ⇒ [94-1, Low Beam Headlamp Bulbs M29 / M31, replacing](#)

**High beam headlamp bulbs M30 / M32, replacing** ⇒ [94-1, High Beam Headlamp Bulbs M30 / M32, replacing](#)

**Parking lamp bulbs M1 / M3, replacing** ⇒ [94-1, Parking Lamp Bulbs M1 / M3, replacing](#)

**Low Beam Headlamp Bulbs M29 / M31, replacing**

### **Note:**

- *Left Low Beam Headlamp M29 and Right Low Beam Headlamp M31 function can be checked using Vehicle Electrical System Control Module J519 On Board Diagnostic (OBD) function "Output Diagnostic Test Mode (DTM)".*

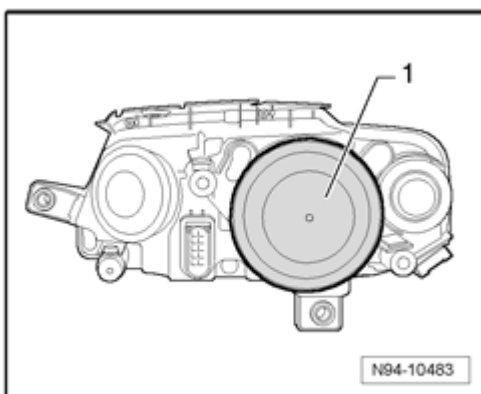
### **Removing:**

#### **Caution!**

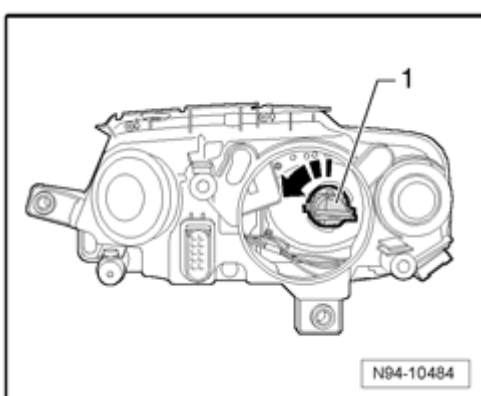
- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

### **Note:**

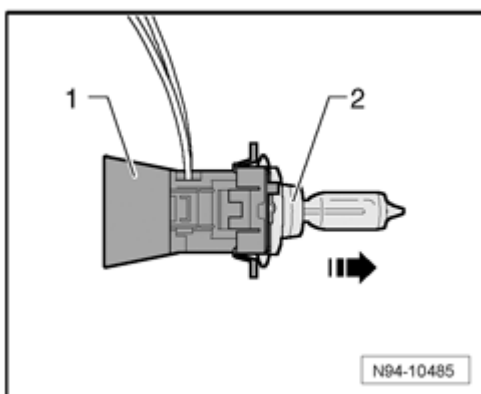
- *The following illustrations depict replacement of right low beam headlamp bulb.*
- *Procedure to replace Left Low Beam Headlamp M29 and Right Low Beam Headlamp M31 is the same.*



- Remove cap - 1 - .



- Turn low beam bulb socket - 1 - in direction of - **arrow** - and remove from headlamp housing, and pull out as far as wiring harness allows.



- Remove bulb - 2 - in direction of - **arrow** - from bulb socket - 1 - .

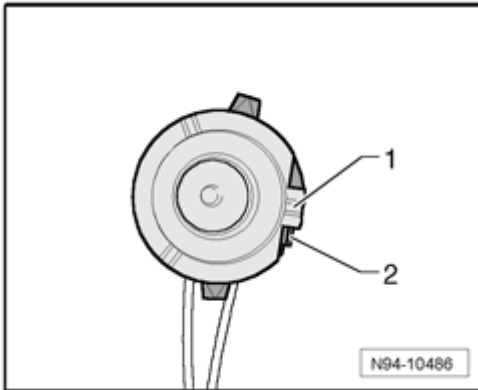
### Installing:

#### **Caution!**

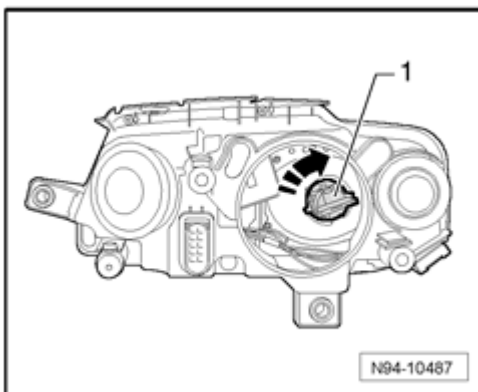
- **Do not touch glass portion of bulb with bare hands. Even the smallest amount of moisture and/or contaminants from fingers that**

**evaporates on the bulb during operation can cause the glass to cloud over.**

- **When installing cap, ensure proper seating. Water intrusion will damage headlamp.**



- Insert bulb in socket so that the bulb tab - **1** - aligns with the bulb socket guide - **2** - .



- Insert socket with bulb - **1** - in headlamp housing and secure by turning in direction of - **arrow** - .
- Install cap.
- Check headlamp function.
- Check and adjust headlamp aim if necessary

⇒ *Repair Manual, Maintenance, Repair Group 00,*

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**High Beam Headlamp Bulbs M30 / M32, replacing**

**Note:**

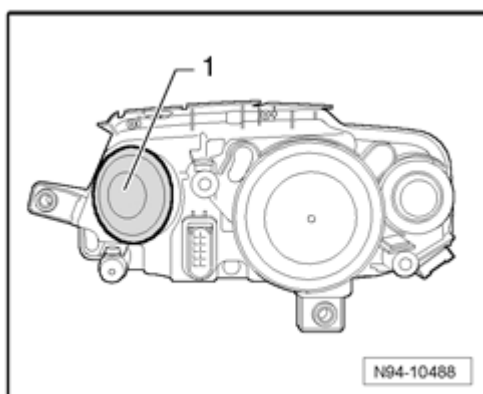
- *Left High Beam Headlamp M30 and Right High Beam Headlamp M32 function can be checked using Vehicle Electrical System Control Module J519 On Board Diagnostic (OBD) function "Output Diagnostic Test Mode (DTM)" .*

**Removing:****Caution!**

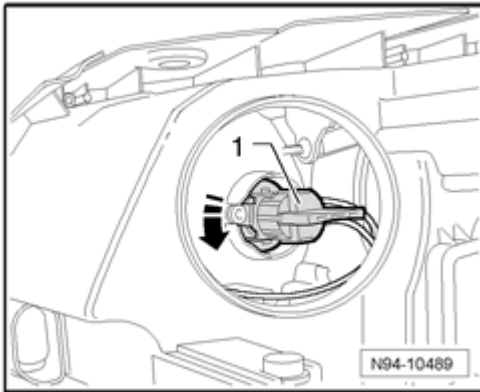
- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

**Note:**

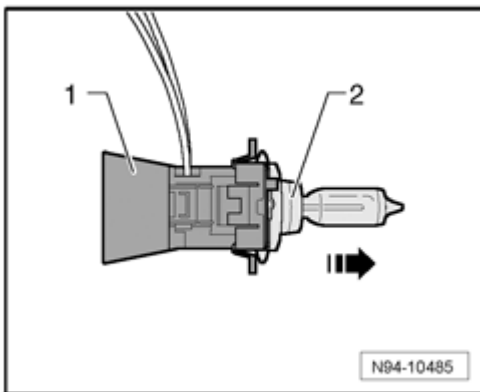
- *The following illustrations depict replacement of right high beam headlamp bulb.*
- *Procedure to replace Left High Beam Headlamp M30 and Right High Beam Headlamp M32 is the same.*



- Remove cap - 1 - .



- Turn high beam bulb socket - **1** - in direction of - **arrow** - and remove from headlamp housing, and pull out as far as wiring harness allows.

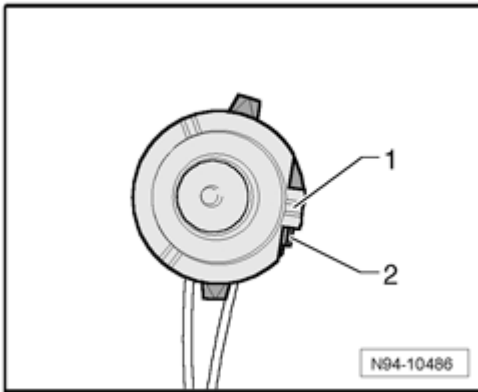


- Remove bulb - **2** - in direction of - **arrow** - from bulb socket - **1** - .

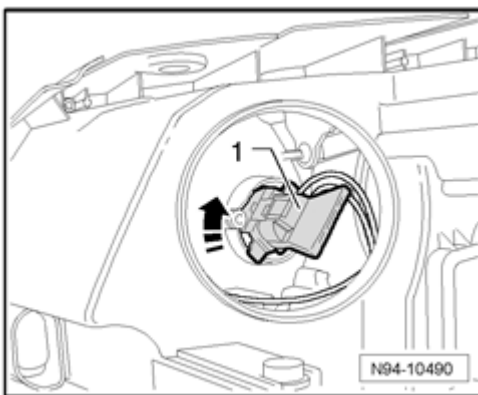
### Installing:

#### **Caution!**

- **Do not touch glass portion of bulb with bare hands. Even the smallest amount of moisture and/or contaminants from fingers that evaporates on the bulb during operation can cause the glass to cloud over.**
- **When installing cap, ensure proper seating. Water intrusion will damage headlamp.**



- Insert bulb in socket so that the bulb tab - **1** - aligns with the bulb socket guide - **2** - .



- Insert socket with bulb - **1** - in headlamp housing and secure by turning in direction of - **arrow** - .
- Install cap.
- Check headlamp function.
- Check and adjust headlamp aim if necessary

⇒ *Repair Manual, Maintenance, Repair Group 00,*

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### **Parking Lamp Bulbs M1 / M3, replacing**

#### **Note:**

- *Left Parking Lamp M1 and Right Parking Lamp M3 function can be checked using Vehicle Electrical System Control Module J519 On Board Diagnostic (OBD) program function "Output Diagnostic Test Mode (DTM)" .*

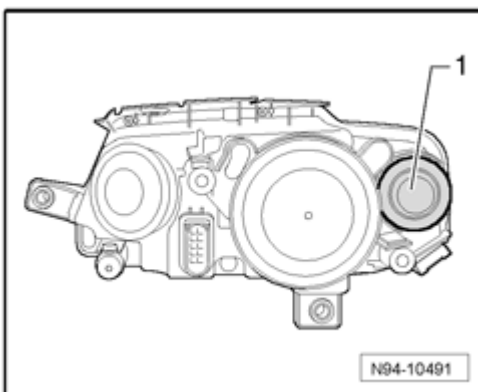


**Removing:****Caution!**

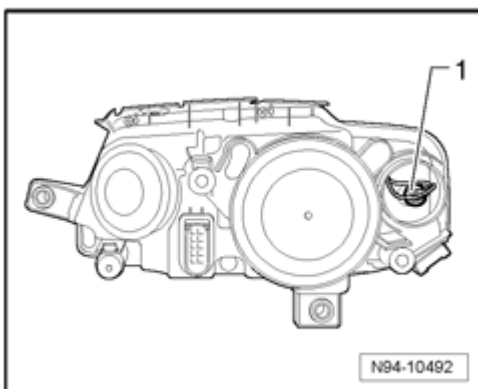
- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

**Note:**

- *The following illustrations depict replacement of right parking lamp bulb.*
- *Procedure to replace Left Parking Lamp M1 and Right Parking Lamp M3 is the same.*

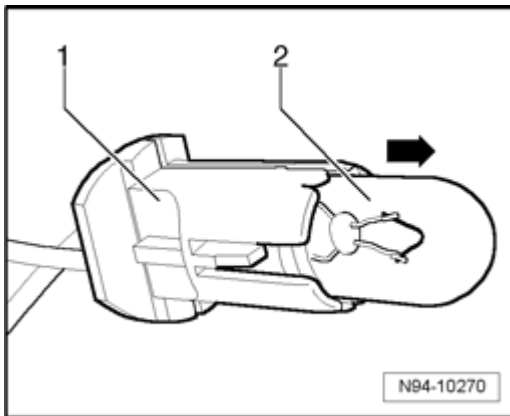


- Remove cap - 1 - .



- Pull socket - 1 - with bulb out of reflector, and pull out as

far as wiring harness allows.



- Remove bulb - **2** - in direction of - **arrow** - from bulb socket - **1** - .

### Installing:

Install in reverse order of removal, noting the following:

### **Caution!**

- **Do not touch glass portion of bulb with bare hands. Even the smallest amount of moisture and/or contaminants from fingers that evaporates on the bulb during operation can cause the glass to cloud over.**
- **When installing cap, ensure proper seating. Water intrusion will damage headlamp.**

- Check headlamp function.
- Check and adjust headlamp aim if necessary

⇒ *Repair Manual, Maintenance, Repair Group 00,*

### Valeo headlamps - bulbs, replacing

**Low beam headlamp bulbs M29 / M31, replacing** ⇒ [94-1, Low Beam Headlamp Bulbs M29 / M31, replacing](#)

**High beam headlamp bulbs M30 / M32, replacing** ⇒ [94-1, High Beam Headlamp Bulbs M30 / M32, replacing](#)

**Parking lamp bulbs M1 / M3, replacing** ⇒ [94-1, Parking Lamp Bulbs M1 / M3, replacing](#)

## Low Beam Headlamp Bulbs M29 / M31, replacing

### Note:

- *Left Low Beam Headlamp M29 and Right Low Beam Headlamp M31 function can be checked using Vehicle Electrical System Control Module J519 On Board Diagnostic (OBD) function "Output Diagnostic Test Mode (DTM)".*

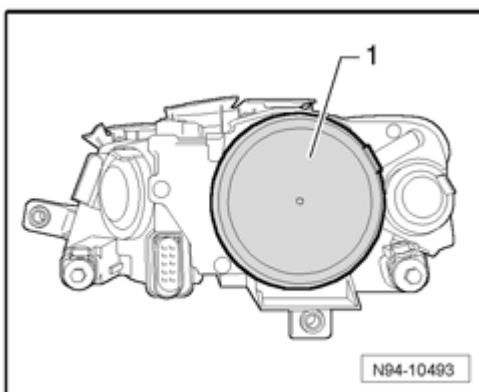
### Removing:

#### Caution!

- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

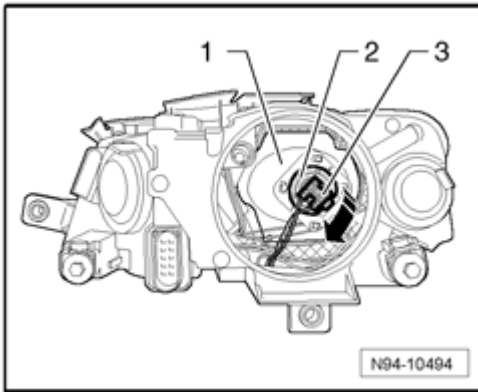
### Note:

- *The following illustrations depict replacement of right low beam headlamp bulb.*
- *Procedure to replace Left Low Beam Headlamp M29 and Right Low Beam Headlamp M31 is the same.*



- Remove cap - 1 - .

### Note:

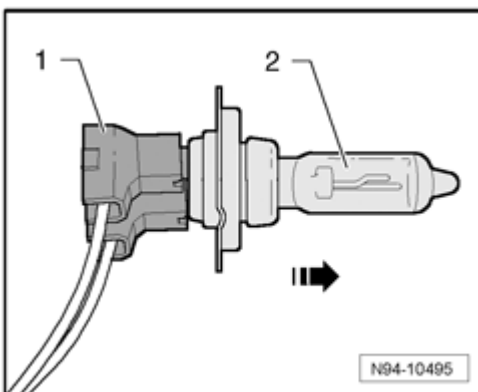


- *Low beam bulb - 2 - is clipped into reflector - 1 - .*
- *When removing low beam bulb - 2 - , connection - 3 - remains connected.*

- Press socket/connection in direction of - **arrow** - until bulb is loosened.

- Remove socket/connection with bulb - 3 - from reflector.

- Guide bulb with socket/connection out of headlamp housing.



- Remove bulb - 2 - from socket/connection - 1 - .

### **Installing:**

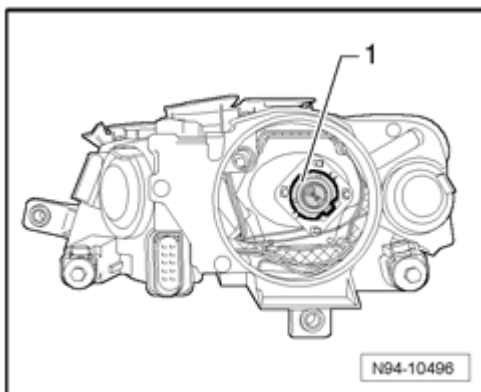
Install in reverse order of removal, noting the following:

### **Caution!**

- ***Do not touch glass portion of bulb with bare hands. Even the smallest amount of moisture and/or contaminants from fingers that evaporates on the bulb during operation can cause the glass to cloud over.***

- **When installing cap, ensure proper seating. Water intrusion will damage headlamp.**

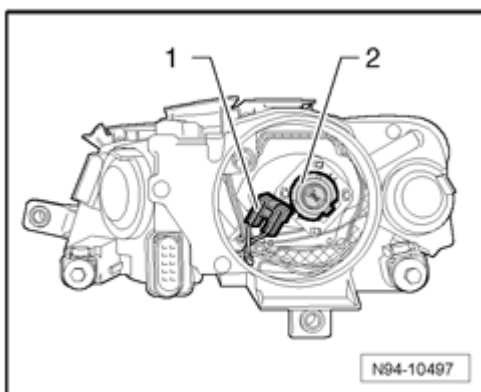
- Guide bulb into headlamp housing.



- Press bulb into reflector as illustrated.

**Note:**

- *Bulb must felt and heard to engage.*



- Connect socket/connection - **1** - to bulb - **2** - .
- Check headlamp function.
- Check and adjust headlamp aim if necessary

⇒ *Repair Manual, Maintenance, Repair Group 00,*

**High Beam Headlamp Bulbs M30 / M32, replacing**

**Note:**

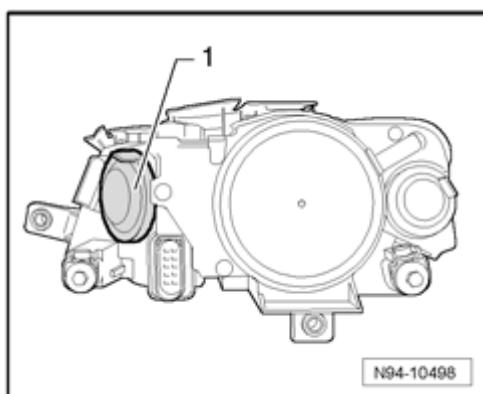
- *Left High Beam Headlamp M30 and Right High Beam Headlamp M32 function can be checked using Vehicle Electrical System Control Module J519 On Board Diagnostic (OBD) function "Output Diagnostic Test Mode (DTM)".*

**Removing:****Caution!**

- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

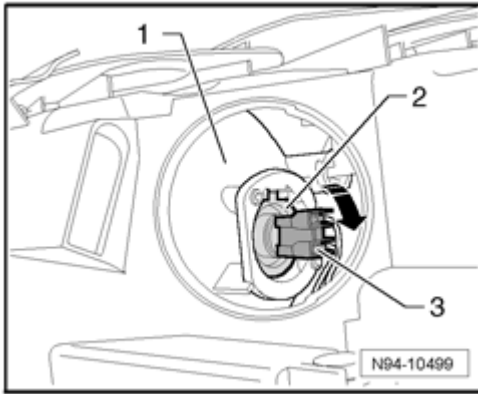
**Note:**

- *The following illustrations depict replacement of right high beam headlamp bulb.*
- *Procedure to replace Left High Beam Headlamp M30 and Right High Beam Headlamp M32 is the same.*



- Remove cap - 1 - .

**Note:**

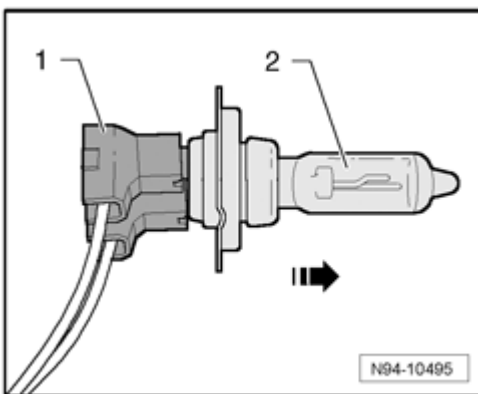


- High beam bulb - 2 - is clipped into reflector - 1 - .
- When removing high beam bulb - 2 - , connection - 3 - remains connected.

- Press socket/connection in direction of - **arrow** - until bulb is loosened.

- Remove socket/connection with bulb - 3 - from reflector.

- Guide bulb with socket/connection out of headlamp housing.



- Remove bulb - 2 - from socket/connection - 1 - .

### Installing:

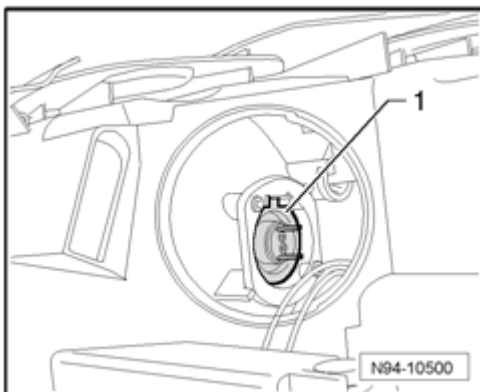
Install in reverse order of removal, noting the following:

### **Caution!**

- **Do not touch glass portion of bulb with bare hands. Even the smallest amount of moisture and/or contaminants from fingers that evaporates on the bulb during operation can cause the glass to cloud over.**

- **When installing cap, ensure proper seating. Water intrusion will damage headlamp.**

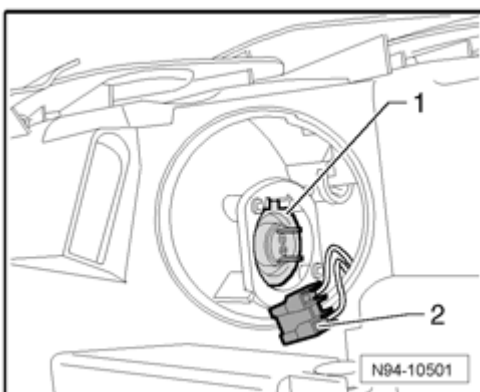
- Guide bulb into headlamp housing.



- Press bulb into reflector as illustrated.

**Note:**

- *Bulb must felt and heard to engage.*



- Connect socket/connection - 1 - to bulb - 2 - .
- Check headlamp function.
- Check and adjust headlamp aim if necessary

⇒ *Repair Manual, Maintenance, Repair Group 00,*

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**Parking Lamp Bulbs M1 / M3, replacing**



**Note:**

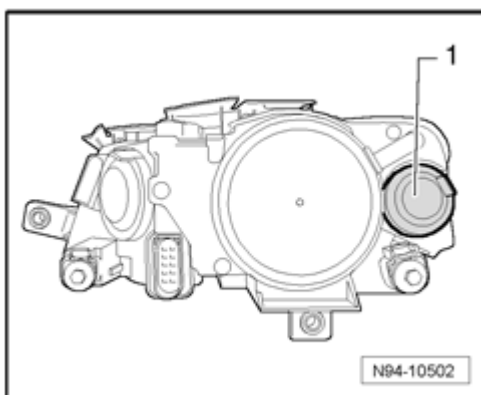
- *Left Parking Lamp M1 and Right Parking Lamp M3 function can be checked using Vehicle Electrical System Control Module J519 On Board Diagnostic (OBD) program function "Output Diagnostic Test Mode (DTM)" .*

**Removing:****Caution!**

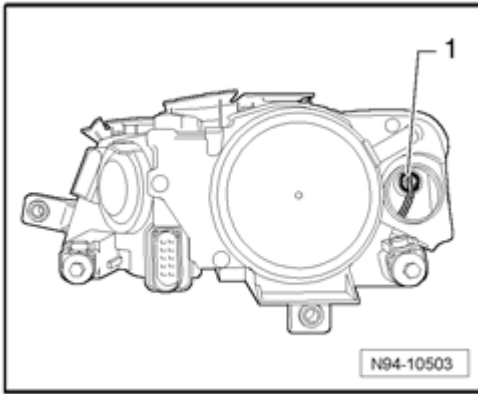
- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

**Note:**

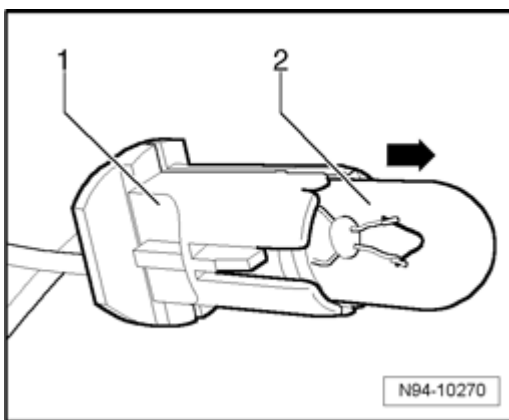
- *The following illustrations depict replacement of right parking lamp bulb.*
- *Procedure to replace Left Parking Lamp M1 and Right Parking Lamp M3 is the same.*



- Remove cap - 1 - .



- Pull socket - **1** - with bulb out of reflector, and pull out as far as wiring harness allows.



- Remove bulb - **2** - in direction of - **arrow** - from bulb socket - **1** - .

### **Installing:**

Install in reverse order of removal, noting the following:

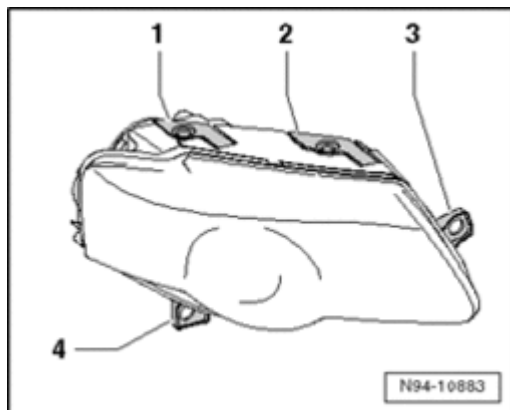
### **Caution!**

- **Do not touch glass portion of bulb with bare hands. Even the smallest amount of moisture and/or contaminants from fingers that evaporates on the bulb during operation can cause the glass to cloud over.**
- **When installing cap, ensure proper seating. Water intrusion will damage headlamp.**

- Check headlamp function.
- Check and adjust headlamp aim if necessary

⇒ *Repair Manual, Maintenance, Repair Group 00,*

### Headlamp securing lugs, servicing



Should one or more headlamp securing lugs be damaged or broken, they can be replaced by installing the repair set. It is not necessary to replace the entire headlamp.

- Top outer securing lug
- Top inner securing lug
- Side securing lug
- Lower securing lug

#### **Note:**

- *Check whether there is no other damage on the headlamp that would render the installation of the repair set unnecessary.*
- *Two different repair sets are available, one for the left and one for the right headlamp ⇒ ETKA (Electronic Parts Catalog) .*
- *The same repair sets are used for both Hella and Valeo manufacturers.*
- *Each repair set contains the corresponding top, side and lower headlamp securing lugs, four mounting bolts and two banjo fittings.*
- *The following illustrations depict replacement of right headlamp securing lugs.*
- *Replacement of securing lugs on left headlamp and on right headlamp are performed analogously.*

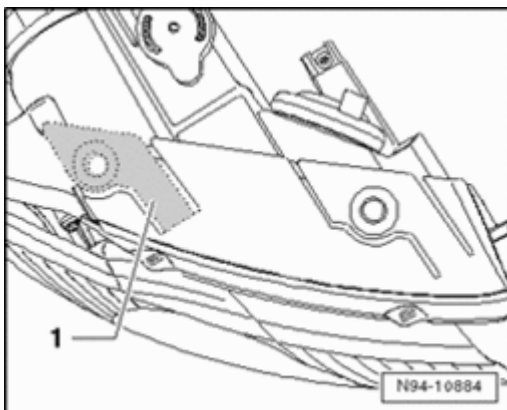
- Repairing top outer securing lug ⇒ [94-1, Repairing top outer securing lug](#) .
- Repairing top inner securing lug ⇒ [94-1, Repairing top inner securing lug](#) .
- Repairing side securing lug ⇒ [94-1, Repairing side securing lug](#) .
- Repairing lower securing lug ⇒ [94-1, Repairing lower securing lug](#) .

#### Repairing top outer securing lug

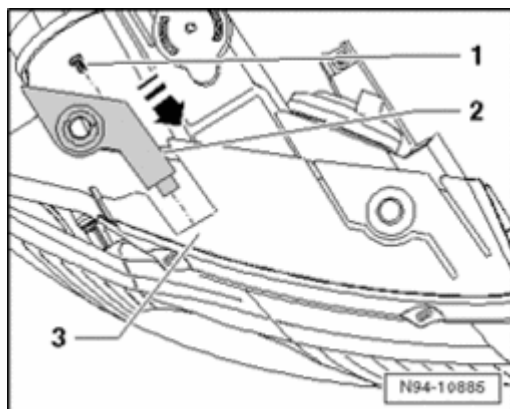
##### **Caution!**

- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

- Remove headlamp ⇒ [94-1, Headlamps, removing](#) .



- Remove remaining part of headlamp securing lug - **1** - as shown.



- Insert new securing lug - **2** - form-fitting into mount - **3** - on headlamp and secure the securing lug with mounting bolt - **1** - .

- Install headlamp ⇒ [94-1, Headlamp, installing](#) .

**Note:**

- *If one headlamp is removed, it must always be adjusted after installation.*

- Check and adjust headlamp aim if necessary

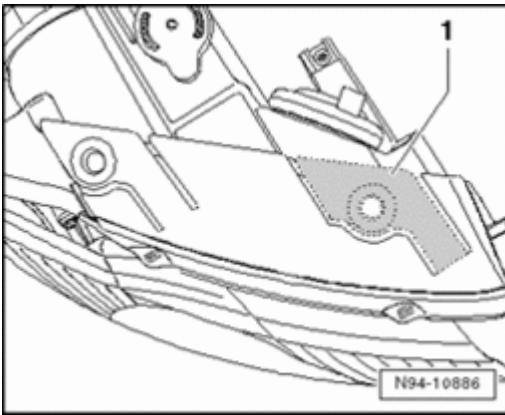
⇒ [Repair Manual, Maintenance](#)

**Repairing top inner securing lug**

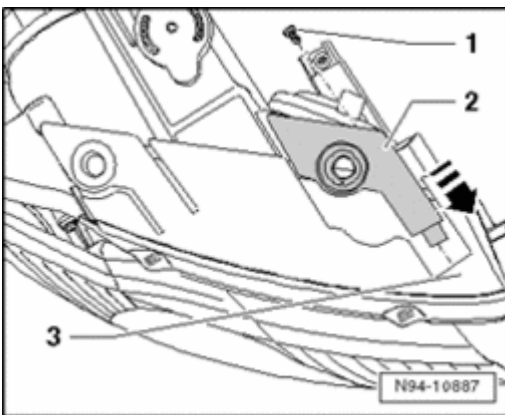
**Caution!**

- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

- Remove headlamp ⇒ [94-1, Headlamps, removing](#) .



- Remove remaining part of headlamp securing lug - **1** - as shown.



- Insert new securing lug - **2** - form-fitting into mount - **3** - on headlamp and secure the securing lug with mounting bolt - **1** - .
- Install headlamp ⇒ [94-1, Headlamp, installing](#) .

**Note:**

- *If one headlamp is removed, it must always be adjusted after installation.*

- Check and adjust headlamp aim if necessary

⇒ [Repair Manual, Maintenance](#)

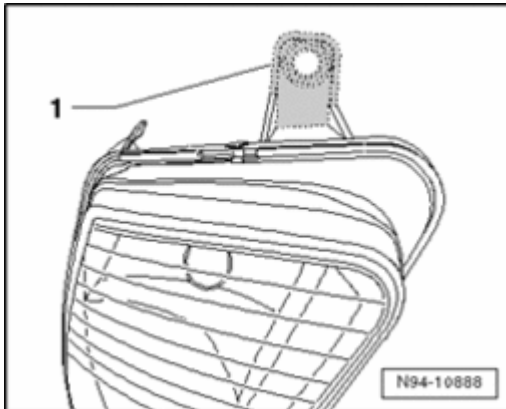
**Repairing side securing lug**

**Caution!**

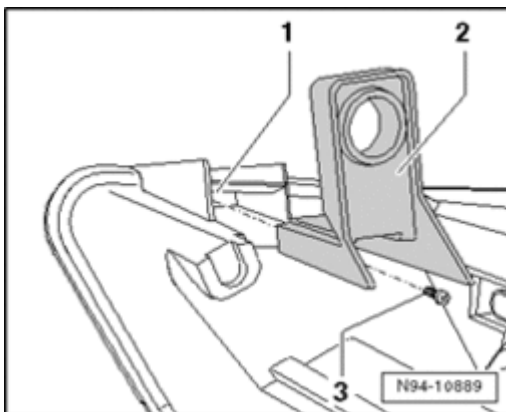
- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**

- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

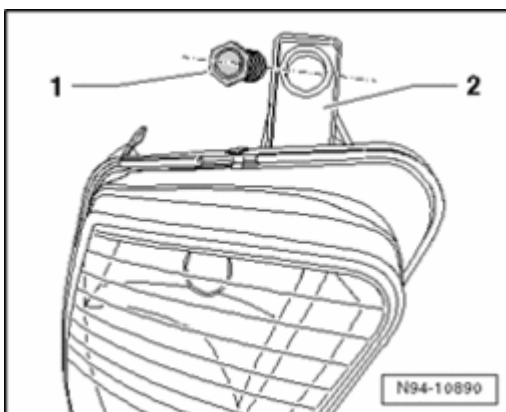
- Remove headlamp ⇒ [94-1, Headlamps, removing](#) .



- Remove remaining part of headlamp securing lug - **1** - as shown.



- Insert new securing lug - **2** - form-fitting into mount - **1** - on headlamp and secure the securing lug with mounting bolt - **3** - .



- Thread banjo fitting - **1** - into securing lug - **2** - .

- Install headlamp ⇒ [94-1, Headlamp, installing](#) .

**Note:**

- *If one headlamp is removed, it must always be adjusted after installation.*

- Check and adjust headlamp aim if necessary

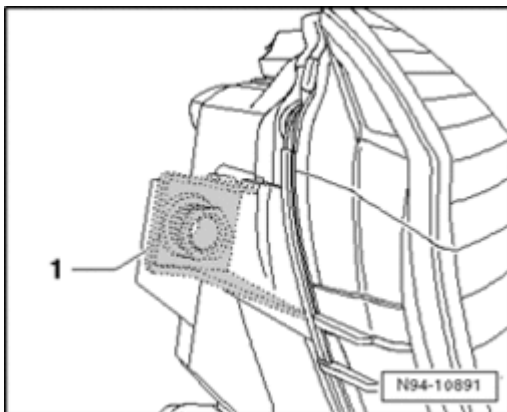
⇒ [Repair Manual, Maintenance](#)

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**Repairing lower securing lug****Caution!**

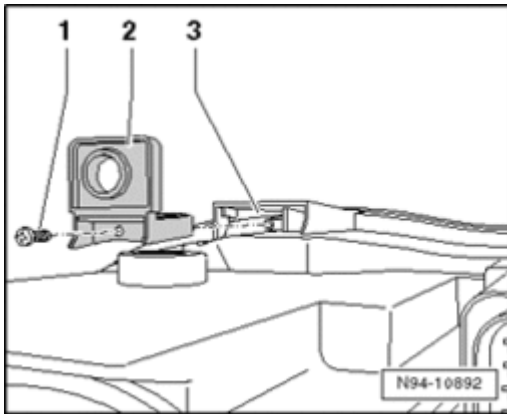
- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental door locking and automatic headlamp "Coming home/leaving home" activation.**

- Remove headlamp ⇒ [94-1, Headlamps, removing](#) .

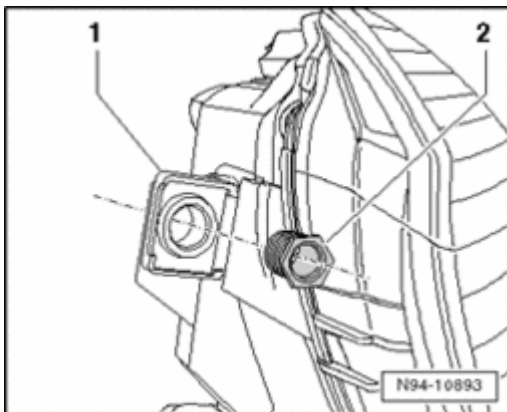


- Remove remaining part of headlamp securing lug - 1 - as shown.





- Insert new securing lug - 2 - form-fitting into mount - 3 - on headlamp and secure the securing lug with mounting bolt - 1 - .



- Thread banjo fitting - 2 - into securing lug - 1 - .
- Install headlamp ⇒ [94-1, Headlamp, installing](#) .

**Note:**

- *If one headlamp is removed, it must always be adjusted after installation.*

- Check and adjust headlamp aim if necessary

⇒ [Repair Manual, Maintenance](#)

## Headlamps, adjusting

### Special tools, testers and auxiliary items required

- Optical Headlight Aimer VAS 5107

Always adjust headlamps with optical headlamp aimer VAS 5107 using detailed aiming procedure and specifications

⇒ *Repair Manual, Maintenance, Repair Group 00,*

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