



Headlight with one gas-discharge lamp

Note:

- *Before working on headlights, always switch off the headlights and remove the ignition key.*
- *The headlight leveling control uses on-board diagnostics.*
- *Familiarity with the function and operation of the lighting system is essential in the event of customer complaints.*
- *Additional information ⇒ Operating instructions ,
⇒ Self-study program no. 891303 The Phaeton .*

DTC recognition and display:

The automatic driving light system is equipped with on-board diagnostics which simplifies faultfinding.

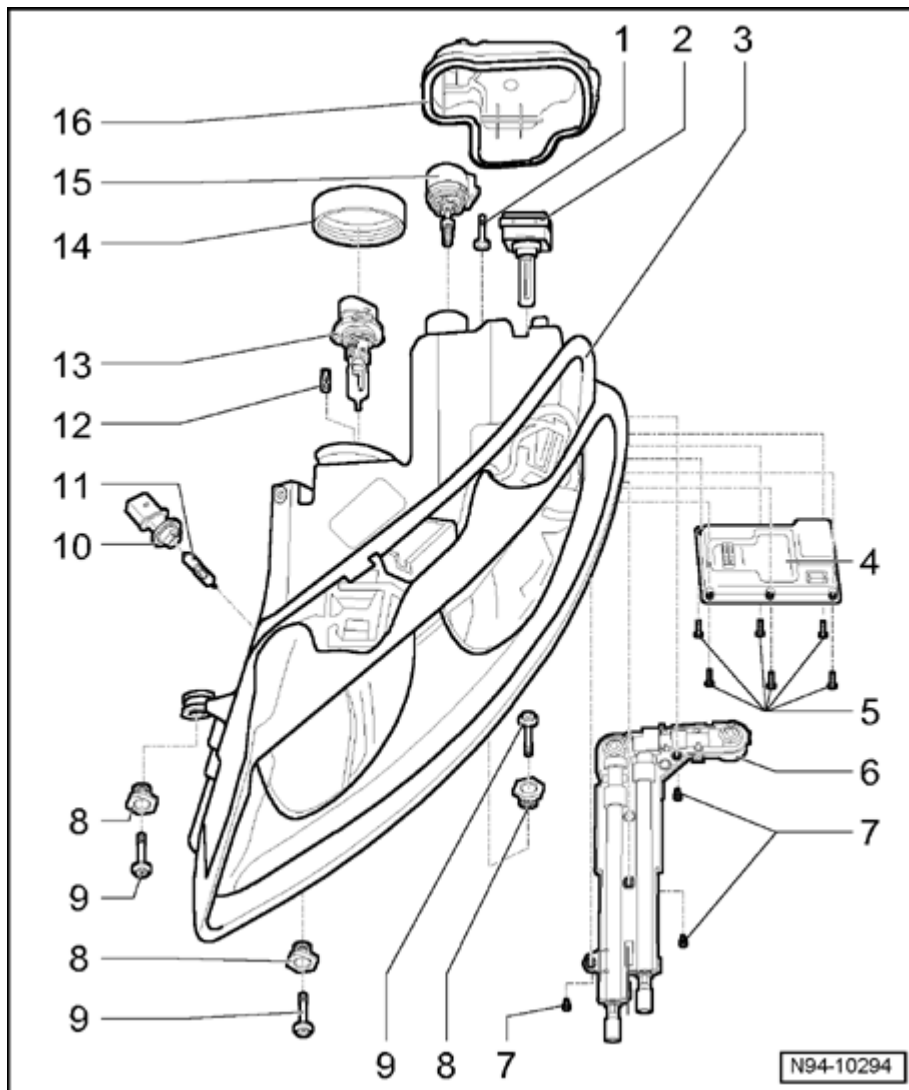
Performing on-board diagnostics: Use the "Guided Fault Finding" function of the Diagnostic Operation System VAS 5051 .

Headlight with one gas-discharge lamp, assembly overview

Note:

- *Check possible influences upon the headlight adjustment, check the adjustment itself, and if needed, adjust the headlights.*

⇒ [Repair Manual, Maintenance](#)



1 - Mounting bolt

- 6 Nm

2 - Left Low Beam Headlamp M29 or Right Low Beam Headlamp M31 .

- Type D1S, 35W
- Removing and installing, ⇒ [94-2, Gas discharge lamp for low beam, replacing](#)

3 - Headlight

- Removing and installing, ⇒ [94-2, Headlight, removing and installing](#)

4 - Left Headlamp Range Control Module J567 or Right Headlamp Range Control Module J568

- Removing and installing, ⇒ [94-2,](#)

[Headlight range control module,
removing and installing](#)

- Coding control module for headlight range control ⇒ [94-2, Coding control module for headlight range control](#) . .

5 - Mounting bolts

- For Left Headlamp Range Control Module J567 or Right Headlamp Range Control Module J568

6 - Adjusting mechanism for headlight range control

7 - Mounting bolts

- For headlight range control adjusting mechanism

8 - Adjusting bush

- Corrects installation position of headlight ⇒ [94-2, Headlight installation position, correcting](#)

9 - Mounting bolts

- 6 Nm

10 - Socket for turn signal light

11 - Left Front Turn Signal Lamp M5 or Right Front Turn Signal Lamp M7

- Bulb 12 V, H 21W
- Removing and installing, ⇒ [94-2, Bulb for left or right turn signal, replacing](#)

12 - Left Parking Lamp M1 or Right Parking Lamp M3

- Bulb 12 V, W 5W Xenon blue
- Removing and installing, ⇒ [94-2, Bulb for left or right parking light, replacing](#)

13 - Left High Beam Headlamp M30 or Right High Beam Headlamp M32

- Bulb HB 3 12 V, 60 W

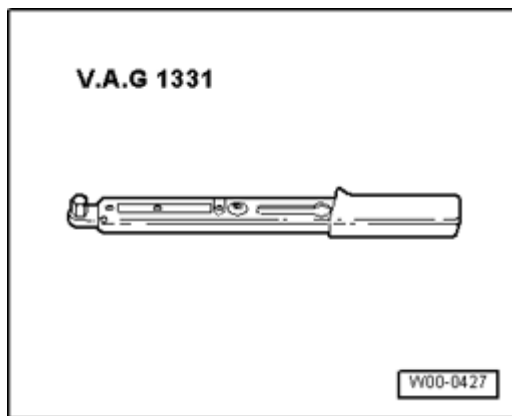
- Removing and installing, ⇒ [94-2, Bulb for left or right high beam headlight, replacing](#)

14 - Cover

15 - Left Headlamp Beam Adjustment Motor V48 or Right Headlamp Beam Adjustment Motor V49 .

- Removing and installing, ⇒ [94-2, Headlight beam adjusting motors, removing and installing](#)

16 - Cover



Headlight, removing and installing

Special tools, testers and auxiliary items required

- Torque wrench V.A.G 1331

Removing:

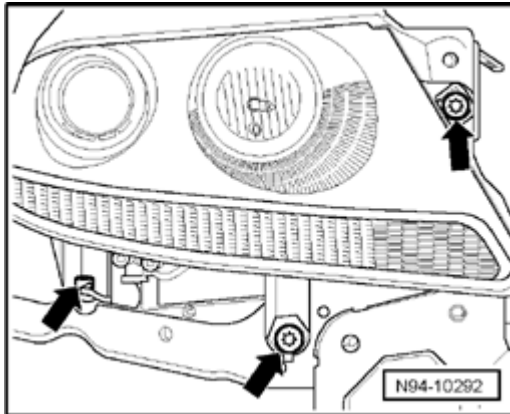
Note:

- *It is not necessary to remove the grounding strap from the battery.*

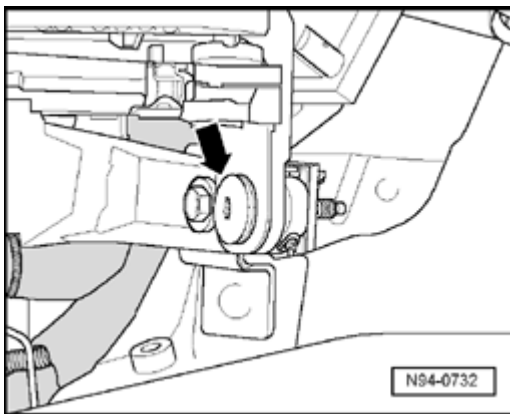
- Switch off the ignition and all vehicle electrical devices and remove the ignition key.

- Remove front bumper cover.

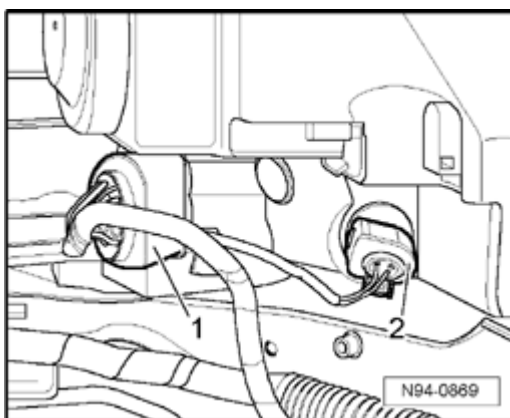
⇒ [Repair Manual, Body Exterior, Repair Group 63, Front bumper; Bumper cover, removing and installing](#)



- Remove mounting bolts - **arrows** - .
- Unscrew the mounting bolt at the rear of the headlight.



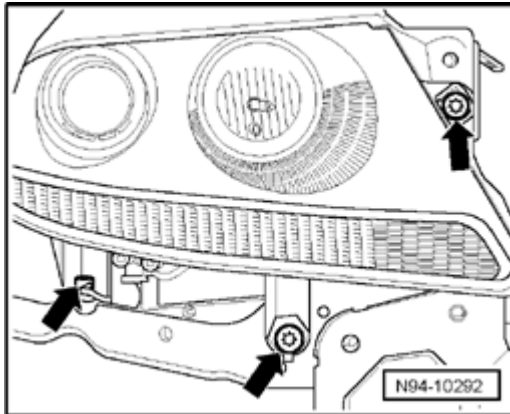
- Pull the headlight housing toward the front.



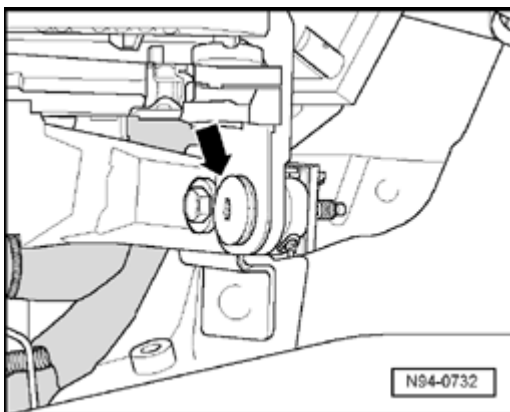
- Separate the multiconnectors - **1** - and - **2** - .

Installing:

Install in reverse order of removal, noting the following:



- Tighten the mounting bolts - **arrows** - using 6 Nm torque.



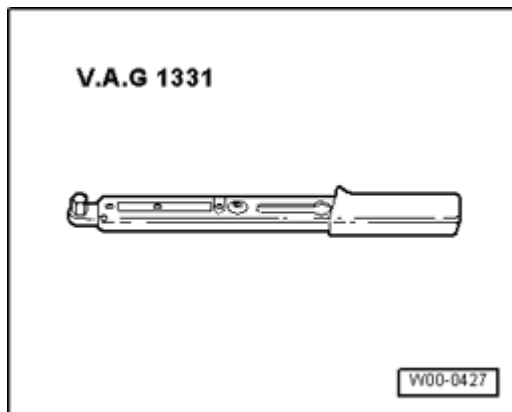
- Tighten the lower mounting bolt at rear of headlight - **arrow** - using 6 Nm torque.
- Check the position of the headlight for even gaps.

If the gaps are uneven in relation to the body, the position of the headlight must be corrected ⇒ [94-2, Headlight installation position, correcting](#) .

- Check and correct headlight adjustment if needed.

⇒ [Repair Manual, Maintenance](#)

- Finally check headlight functions.



Headlight installation position, correcting

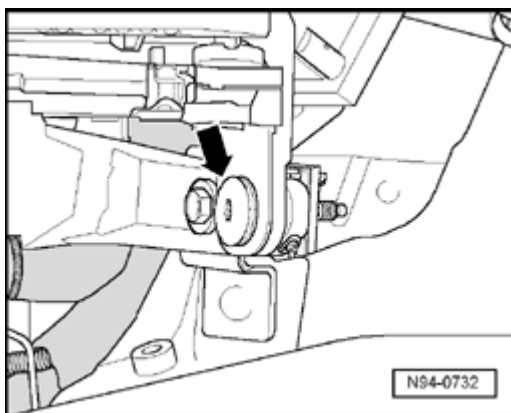
Special tools, testers and auxiliary items required

- Torque wrench V.A.G 1331

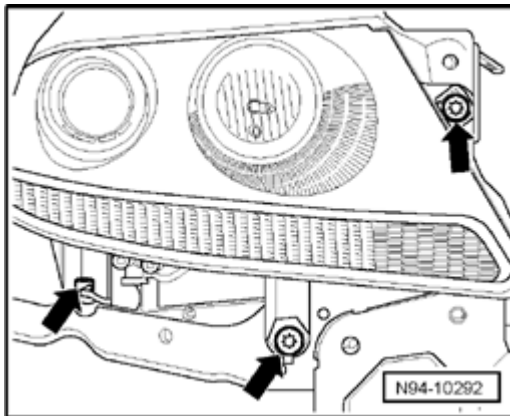
If, when inspecting the installation position of the headlight, you see that the gaps between the headlight and body are uneven, you must reposition the headlight.

- Switch off the ignition and all vehicle electrical devices and remove the ignition key.
- Remove front bumper cover.

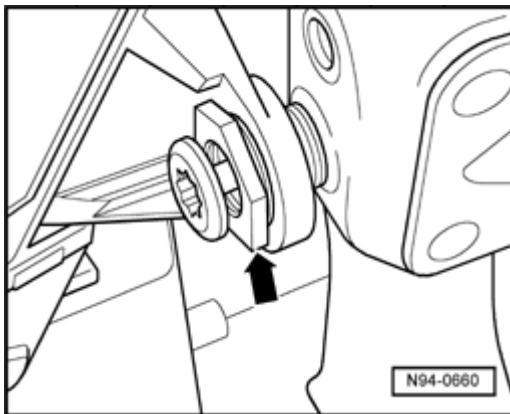
⇒ [*Repair Manual, Body Exterior, Repair Group 63, Front bumper; Bumper cover, removing and installing*](#)



- Loosen, but do not remove lower mounting bolt at the rear of the headlight.



- Loosen the three front mounting bolts only until the headlight moves freely among the adjusting screws.



- Adjust the gaps by tightening or loosening the adjusting screws - **arrow** - .
- Tighten mounting bolts with 6 Nm torque, re-check the position of the headlight for even gaps, and correct if needed.
- Check and correct headlight adjustment if needed.

⇒ [Repair Manual, Maintenance](#)

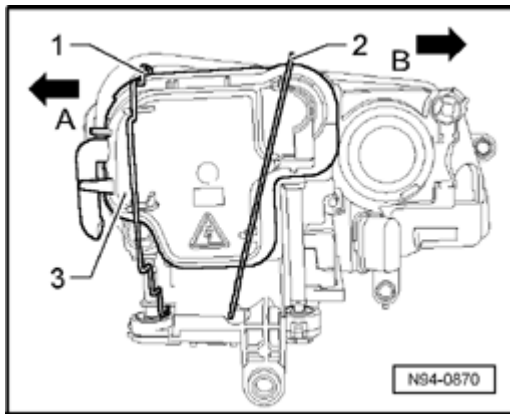
- Finally check headlight functions.

Headlight lamps with gas discharge lamps, replacing

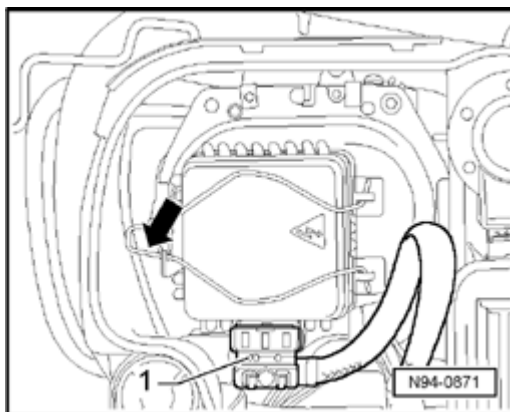
Gas discharge lamp for low beam, replacing

Removing:

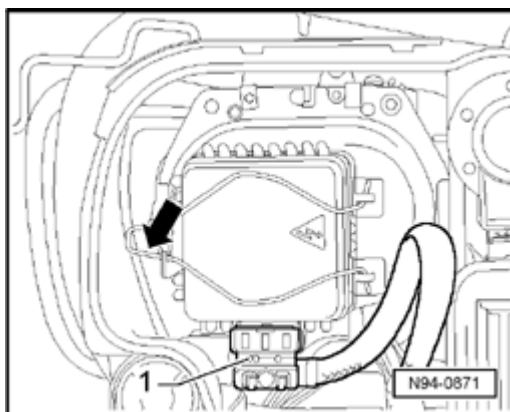
- Remove headlight ⇒ [94-2, Headlight, removing and installing](#) .



- Press bulb retaining spring - 1 - in to the side in arrow direction - A - and bulb retaining spring - 2 - in arrow direction B and remove the cover - 3 - .



- Remove plug connector - 1 - .



- Compress and unlatch the bulb retaining spring - **arrow** - .

Warning!

- **When working with gas discharge lamps always wear safety glasses and gloves!**
- **Safety glasses and gloves are necessary because the glass bulbs of gas discharge lamps**

are delicate; interior pressure can range from 7 bar (cold) to 100 bar (hot); the bulbs can reach 700 C.

- Pull the lamp carefully from the socket.

Installing:

Install in reverse order of removal, noting the following:

Note:

- *Do not touch the glass bulb when installing the gas discharge lamp. Your fingers will leave traces of grease on the bulb which, when the lamp is switched on, will cloud the glass.*
- *Do not subject the lamp to any mechanical stress. The glass bulb is very fragile and is under high pressure.*
- *Do not look directly into the light beam, since a gas discharge lamp gives off UV waves that are 2.5 times stronger than those of a halogen bulb.*
- *Make sure the cover is properly seated when replaced. The bulb will be destroyed if it comes in contact with water.*

- Replace new bulbs so that the lugs fit into the reflector grooves.
- Attach the bulb retaining spring.
- Attach metal connectors.
- Install headlight ⇒ [94-2, Headlight, removing and installing](#) .
- Check and correct headlight adjustment if needed.

⇒ [Repair Manual, Maintenance](#)

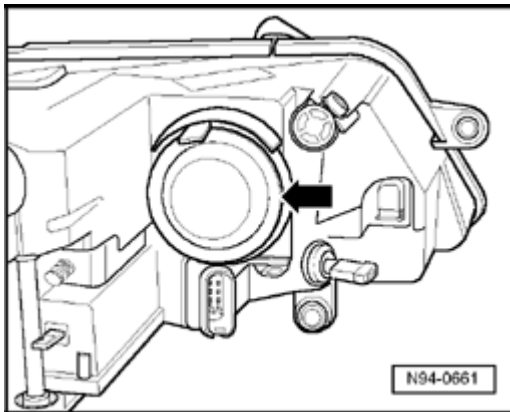
- Finally check headlight functions.

Bulb for left or right high beam headlight, replacing

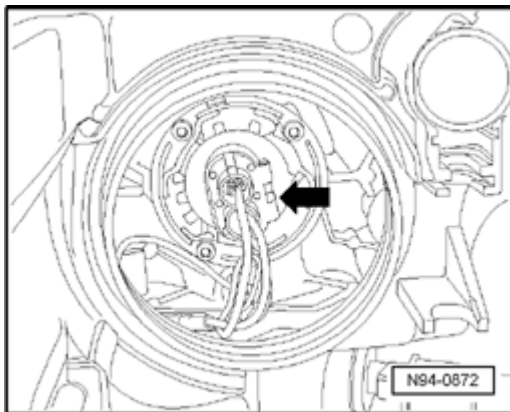
Removing:

- Remove headlight ⇒ [94-2, Headlight, removing and](#)

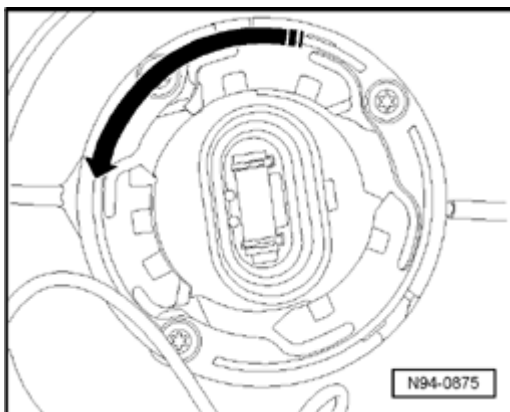
[installing](#) .



- Remove the rubber cover - **arrow** - on the headlight housing.



- Pull off the plug - **arrow** - .



- Rotate the lamp socket in the direction of the arrow and remove it from the headlight.

The headlight lamp is permanently attached to the socket and cannot be replaced separately.

Installing:

Install in reverse order of removal, noting the following:

Note:

- *Make sure the cover is properly seated when replaced. The bulb will be destroyed if it comes in contact with water.*
- *Do not touch the glass bulb when installing the lamp. Your fingers will leave traces of grease on the bulb which, when the lamp is switched on, will cloud the glass.*

- Install headlight ⇒ [94-2, Headlight, removing and installing](#) .

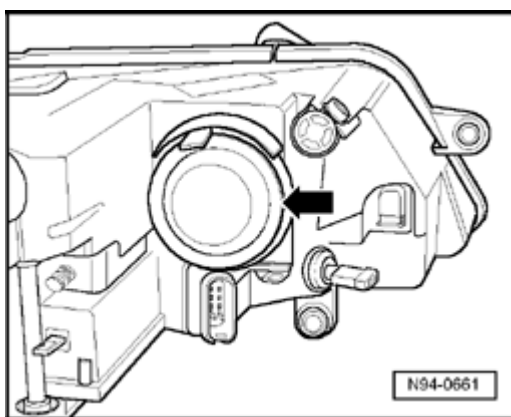
- Check and correct headlight adjustment if needed.

⇒ [Repair Manual, Maintenance](#)

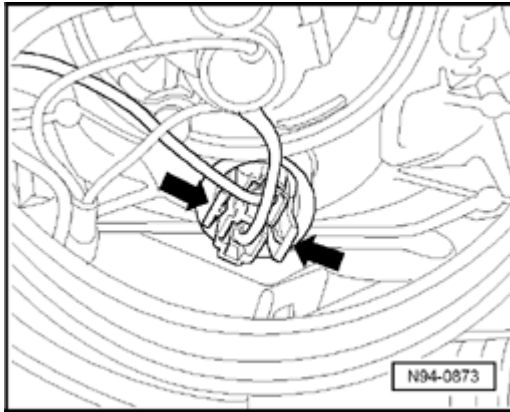
- Finally check headlight functions.

Bulb for left or right parking light, replacing**Removing:**

- Remove headlight ⇒ [94-2, Headlight, removing and installing](#) .



- Remove the rubber cover - **arrow** - on the headlight housing.



- Press the two retainers inward - **arrows** - and remove the socket together with the lamp.
- Pull the lamp out of the socket.

Installing:

Install in reverse order of removal, noting the following:

Note:

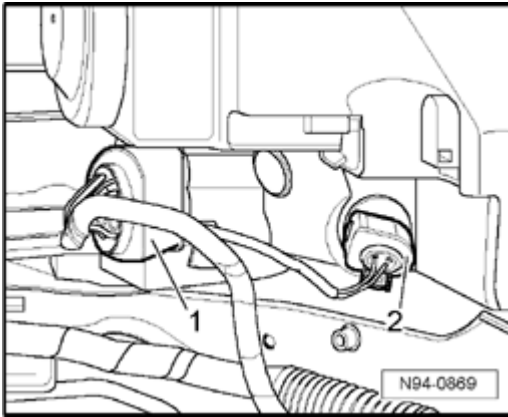
- *Make sure the cover is properly seated when replaced. The bulb will be destroyed if it comes in contact with water.*
- *Do not touch the glass bulb when installing the lamp. Your fingers will leave traces of grease on the bulb which, when the lamp is switched on, will cloud the glass.*

- Install headlight ⇒ [94-2, Headlight, removing and installing](#) .
 - Check and correct headlight adjustment if needed.
- ⇒ [Repair Manual, Maintenance](#)
- Finally check headlight functions.

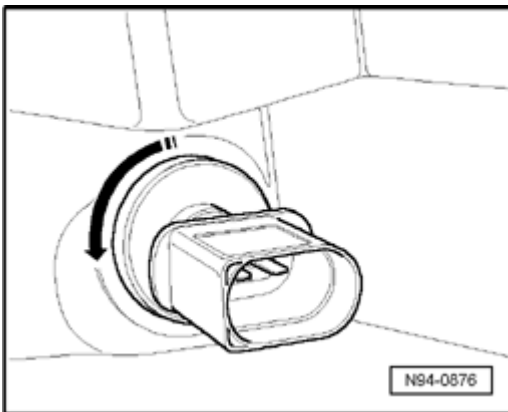
Bulb for left or right turn signal, replacing

Removing:

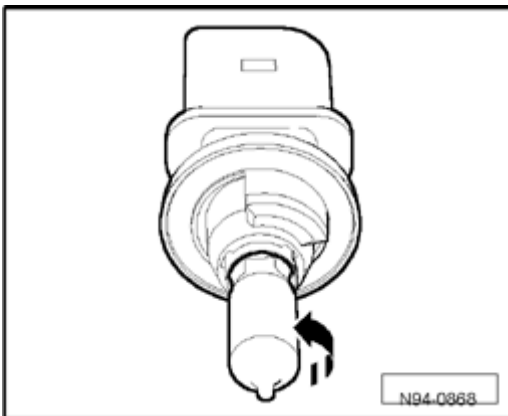
- Switch off the ignition and all vehicle electrical devices and remove the ignition key.



- Unlatch the plug - **2** - and pull it off.



- Rotate the lamp socket in the direction of the arrow.
- Pull the socket along with the lamp for the turn signal out of the reflector.



- Press the lamp into the socket and rotate the lamp in the direction of the arrow.
- Pull the lamp from the socket.

Installing:

Install in reverse order of removal, noting the following:

Note:

- *Do not touch the glass bulb when installing the lamp. Your fingers will leave traces of grease on the bulb which, when the lamp is switched on, will cloud the glass.*

- Press the socket with the lamp into the reflector until the stop point, and rotate right until it latches.
- Finally check headlight functions.

Headlight beam adjusting motors, removing and installing

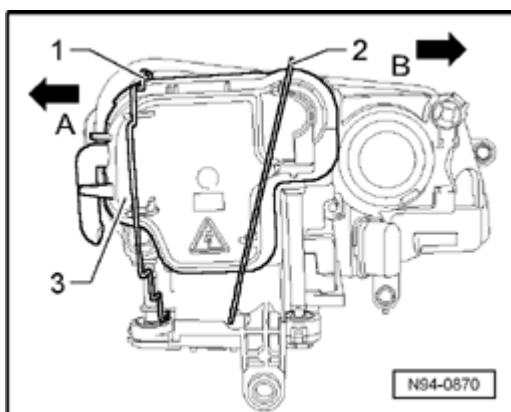
Note:

- *The removal and installation of the headlight beam adjusting motor is described for the left headlight. For the removal and replacement of the right headlight, the rotation is in the opposite direction.*
- *When adjusting motors are removed or replaced, the headlight should always be re-aimed*

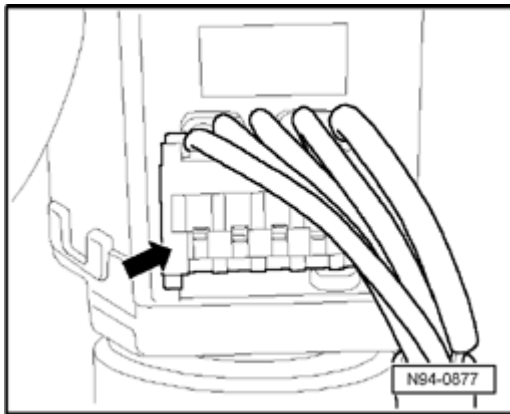
⇒ [Repair Manual, Maintenance](#)

Removing:

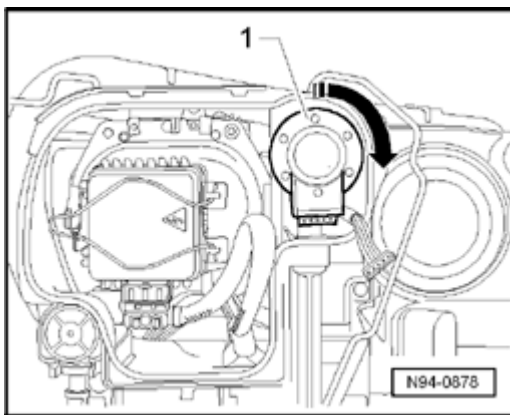
- Remove headlight ⇒ [94-2, Headlight, removing and installing](#) .



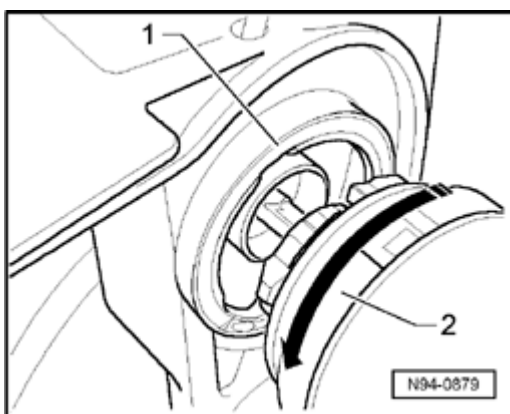
- Press bulb retaining spring - **1** - in to the side in arrow direction - **A** - and bulb retaining spring - **2** - in arrow direction B.
- Remove the cover - **3** - .



- Pull off the plug for the headlight beam adjusting motor - **arrow** - .



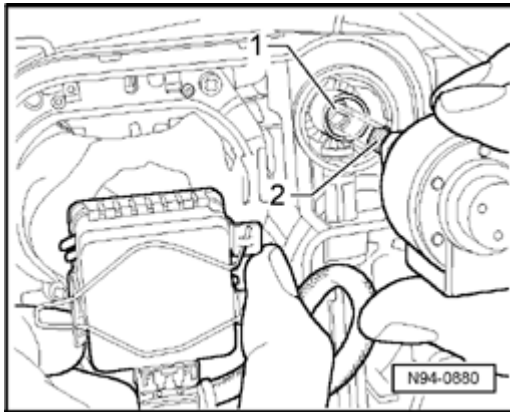
- Rotate the headlight beam adjusting motor - **1** - in the direction of the arrow.
- Pull the motor - **2** - about 1 cm. out of the receptacle - **1** - .



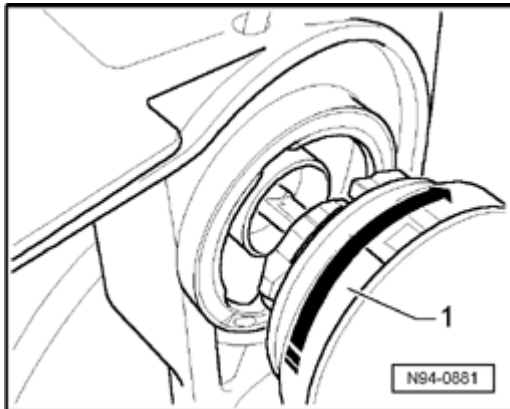
- Rotate the motor - **2** - in the direction of the arrow until you feel some resistance.
- Rotate the motor - **2** - about 2 ° in the opposite direction and pull the motor - **2** - out of the receptacle - **1** - .

Installing:

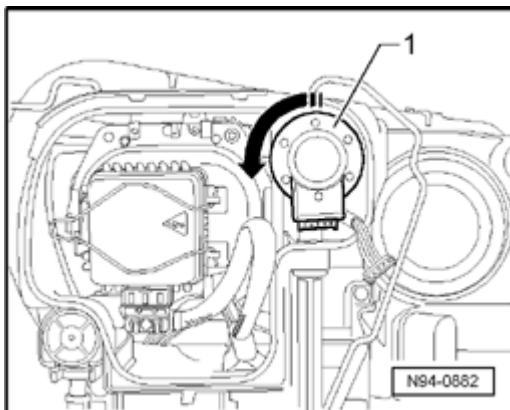
Install in reverse order of removal, noting the following:



- Grasp the low beam light and press the motor control shaft - 2 - into the shaft receptacle - 1 - .



- Rotate the motor - 1 - in the direction of the arrow until you feel some resistance.



- Place the headlight beam adjusting motor into the receptacle and slide it in while rotating it in the direction of the arrow.

Note:

- *Make sure the cover is properly seated when replaced. The bulb will be destroyed if it comes in contact with water.*

- Check and correct headlight adjustment if needed.

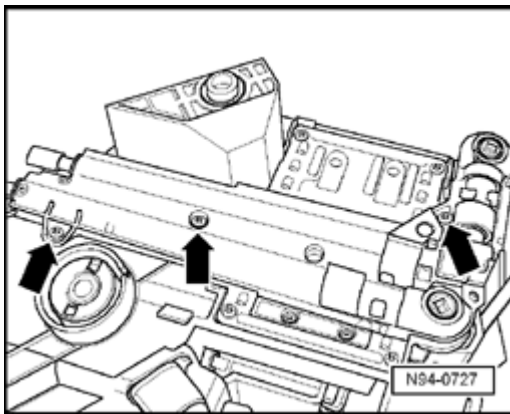
⇒ [Repair Manual, Maintenance](#)

- Finally check headlight functions.

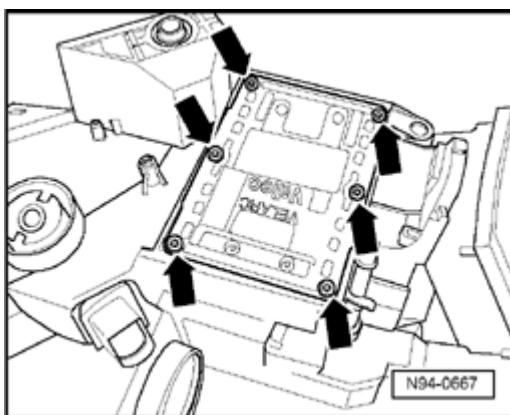
Headlight range control module, removing and installing

Removing:

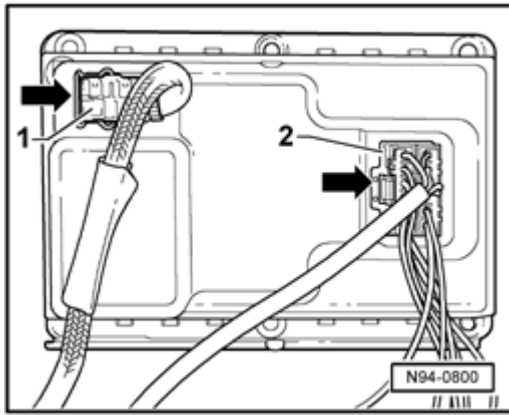
- Remove headlight ⇒ [94-2, Headlight, removing and installing](#) .



- Remove mounting bolts - **arrows** - .
- Remove the mechanism for the headlight adjustment.



- Remove mounting bolts - **arrows** - .
- Remove the headlight range control module from the headlight housing.



- Unclip the retaining clip for the gas discharge lamp - **1** - in the direction of the arrow and pull the plug off.
- Press the retainer on the plug - **2** - in the direction of the arrow and pull the plug off.

Installing:

Install in reverse order of removal, noting the following:

Note:

- *When installing the control module make sure the gaskets are properly seated. The bulb will be destroyed if it comes in contact with water.*

- Check the coding of the headlight with gas discharge lamp and recode the system if needed ⇒ [94-2, Coding control module for headlight range control](#) .
 - Install headlight ⇒ [94-2, Headlight, removing and installing](#) .
 - Check and correct headlight adjustment if needed.
- ⇒ [Repair Manual, Maintenance](#)
- Finally check headlight functions.

Level control system sensor, removing and installing

The level control system transmits the vehicle angle in the form of a signal to the automatic range control system. This signal is determined from all signals sent by the level control system sensor to the control module.

The vehicle level sensor is a component of the level control system. Level control system sensor, removing and installing

⇒ *Repair Manual, Suspension, Wheels, Steering, Repair Group 43, Self-levelling suspension, servicing*

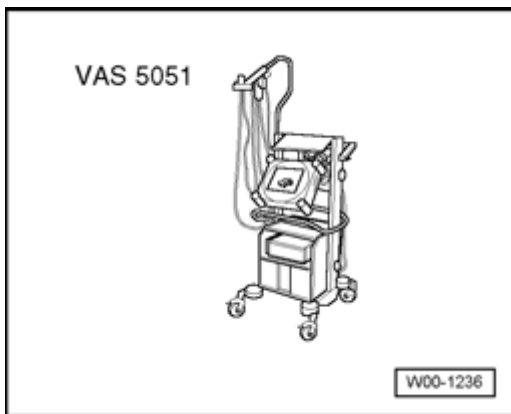
Coding control module for headlight range control .

DTC recognition and display

The headlight leveling control is equipped with on-board diagnostics which simplifies faultfinding.

Performing on-board diagnostics: Use the "Guided Fault Finding" function of the Diagnostic Operation System VAS 5051 .

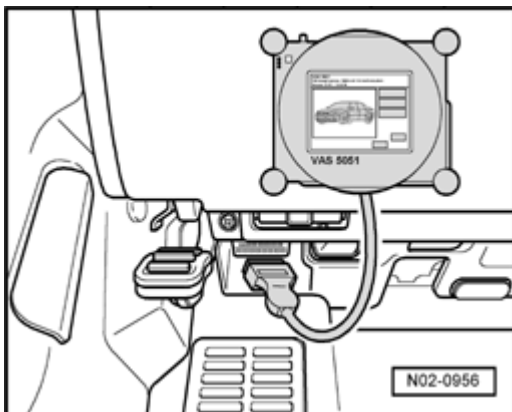
Special tools, testers and auxiliary items required



- Diagnostic Operation System VAS 5051
- Diagnostic cable VAS 5051/6A

Diagnostic Operation System VAS 5051 , attaching

- Apply parking brake.
- Place gear selector lever in "P" or "N" .



- Connect the Vehicle Diagnostic Testing and Information System Diagnostic Operation System VAS 5051 with the ignition switched off.
- Switch ignition on.
- Turn off all electrical consumers.

Note:

- *If 5051 display is blank ⇒ Operating instructions for Diagnostic Operation System VAS 5051 .*

- Select "Guided Fault-Finding" on the Diagnostic Operation System VAS 5051 .
- Select "Go To" , "Functions/Component Selection" and the following menu options in sequence:
 - Body (Repair Group 01; 27; 50 to 97)
 - Electrical Equipment (Repair Group 01; 27; 90 to 97)
 - 01 Systems capable of self-diagnosis
 - Automatic vertical headlight aim control
 - Automatic vertical headlight aim control, functions
 - Control module for auto. vert. headlight aim control, coding

Note:

- *There are two entries for "Control module for auto. vert. headlight aim control, coding" , one for each headlight module.*

Headlight, adjusting**Adjusting headlight with one gas discharge lamp**

⇒ [Repair Manual, Maintenance](#)