



## Headlamps with Adaptive High Intensity Gas Discharge (HID) Bi-Xenon Lamps and Cornering Lamps

### General information

Headlamps with Adaptive High Intensity Gas Discharge (HID) Xenon lamps have "Bi-Xenon" function.

In a standard "Xenon" system, only the low beams use HID bulbs. In a "Bi-Xenon" system, a single HID bulb is used for both low beam and high beam functions. This is accomplished through use of electro-mechanical headlamp adjusters ( Left Low Beam Reflector Motor V294 and Right Low Beam Reflector Motor V295 ) that tilt the HID bulb reflectors to refocus the light beam during high beam operation. For this reason, high beam is also adjusted automatically with low beam for "Bi-Xenon" headlamps. HID headlamp system uses an automatic vertical headlamp beam adjustment system to minimize glare for oncoming traffic.

The adaptive headlamp function (may also be known as "adaptive cornering lamps " ) consists of the following:

- Horizontally swivelling HID low/high beam lamps active at vehicle speeds above 10 km h
- Separate, static cornering lamps are activated at 500 m steering radius and vehicle speeds below 50 km h

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](#)

**Warning!**

- **HIGH VOLTAGE!**
  
- ***The physical and mechanical properties of HID bulbs are very sensitive. Internal pressure of HID glass bulb may exceed 100 bar (in operation). Bulb temperature may exceed 700 degrees Celsius.***
  
- ***Danger of explosion and burning.***
  
- ***The control modules for HID lamps must never be operated (headlamps turned on) without an HID lamp.***
  
- ***HID bulbs must only be operated (headlamps turned on) when installed in the headlamp housing.***
  
- ***Always wear safety glasses and gloves when removing and installing HID bulb.***
  
- ***Never look directly at an operating HID bulb. The UV emissions of an HID bulb are approximately 2.5 times that of a comparable halogen bulb.***

**Caution!**

***Before beginning repairs on HID headlamp system***

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

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

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

For troubleshooting, use Vehicle Diagnostic, Testing and Information System VAS 5051/5052 in operating mode "Guided Fault Finding" ⇒ [97-1, VAS 5051 / 5052](#) .

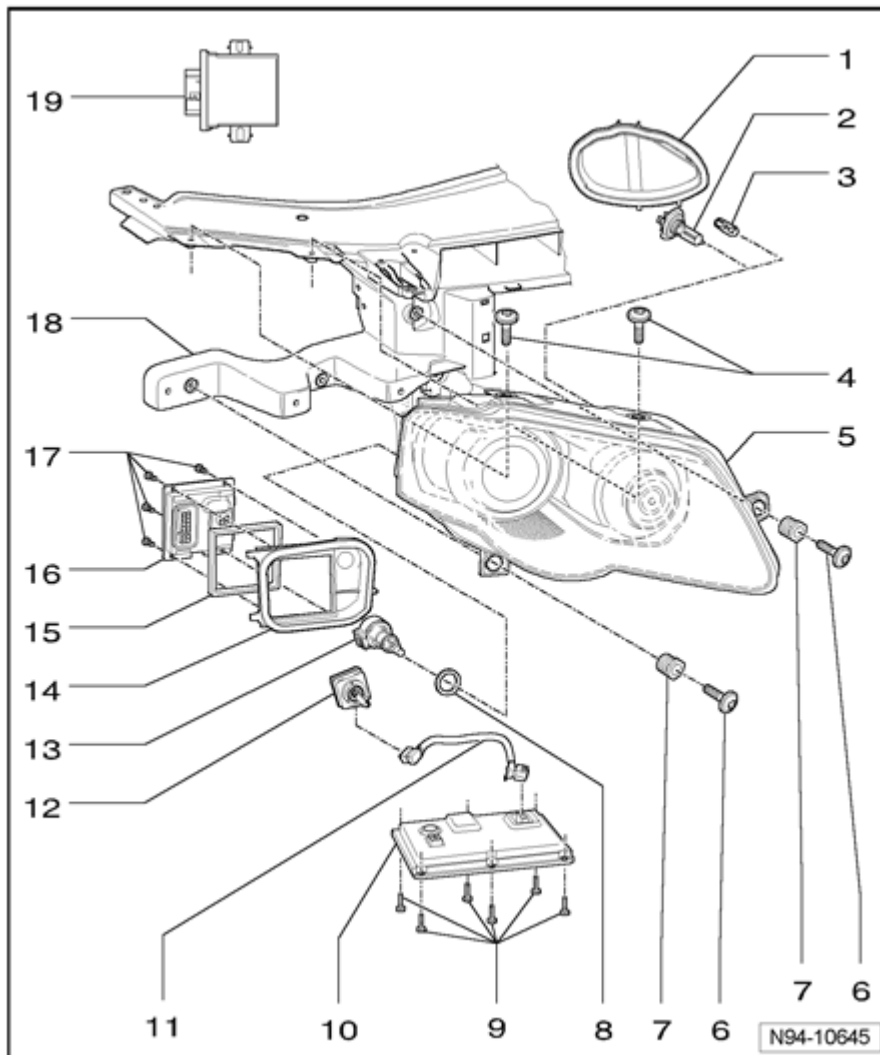
**Note:**

- In the event of a malfunction in the adaptive HID headlamp system, the "Bulb failure" indicator in the instrument cluster is activated ⇒ [Item - 21 -](#) .

**Headlamps with Adaptive High Intensity Gas Discharge (HID) Bi-Xenon Lamps and Cornering Lamps, assembly**

**Note:**

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



- **Cover**
- **Left Cornering Lamp L148 and Right Cornering Lamp L149**
  - Bulb H7 12 V, 55 W
  - Replacing ⇒ [94-2, Cornering Lamp Bulbs L148 / L149, replacing](#)
  - Checking ⇒ [94-2, Headlamp Range/Cornering Lamp Control Module J745, performing Output Diagnostic Test Mode \(DTM\)](#)
- **Left Parking Lamp M1 and Right Parking Lamp M3**
  - Bulb 12 V, 5 W
  - Replacing ⇒ [94-2, Parking Lamp Bulbs M1 / M3, replacing](#)
  - Checking ⇒ [97-6, Vehicle Electrical System Control Module J519, Output Diagnostic Test Mode \(DTM\)](#)
- **Screws**
  - 2 Nm
- **Headlamp housing**
  - Removing and installing ⇒ [94-1, Headlamps, removing and installing](#)
  - Headlamp installation position, checking ⇒ [94-1, Headlamp installation position, correcting](#)
  - Perform headlamp basic setting

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

- **Screws**

- 8 Nm

- **Adjusters**

- Headlamp installation position, checking ⇒ [94-1, Headlamp installation position, correcting](#)

- **Crimp gasket**

- **Screws**

- **Left High-intensity Gas Discharge Lamp Control Module J343 and Right High-intensity Gas Discharge Lamp Control Module J344**

- Removing and installing ⇒ [94-2, High Intensity Gas Discharge Lamp Control Module J343 / J344, removing and installing](#)

- **Wiring harness**

- **Left High Intensity Gas Discharge (HID) Lamp L13 and Right High Intensity Gas Discharge (HID) Lamp L14**

- Type D1S, 35 W
- Replacing ⇒ [94-2, High Intensity Gas Discharge \(HID\) Lamp Bulbs L13 / L14, replacing](#)
- Checking ⇒ [97-6, Vehicle Electrical System Control Module J519 , Output Diagnostic Test Mode \(DTM\)](#)

- **Left Headlamp Beam Adjustment Motor V48 and Right Headlamp Beam Adjustment Motor V49**

- Removing and installing ⇒ [94-2, Headlamp Beam Adjustment Motors V48 / V49, removing and installing](#)
- Checking ⇒ [94-2, Headlamp Range/Cornering Lamp Control Module J745, performing Output Diagnostic Test Mode \(DTM\)](#)

- **Cover**

- **Gasket**

- **Left Headlamp Power Output Stage J667 and Right Headlamp Power Output Stage J668**

- Removing and installing ⇒ [94-2, Headlamp Power Output Stages J667 / J668, removing and installing](#)

**Note :**

- *Should a new power output stage be installed it must first be coded ⇒ [94-2, Headlamp Range/Cornering Lamp Control Module J745, coding](#) and headlamp basic setting must be performed*

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

- **Screws**

- **Body cross section**

- **Headlamp Range/Cornering Lamp Control Module J745**

- Removing and installing ⇒

[94-2, Headlamp  
Range/Cornering Lamp  
Control Module J745 ,  
removing and installing](#)

- Coding ⇒ [94-2, Headlamp  
Range/Cornering Lamp  
Control Module J745 ,  
coding](#)
- Checking with Output  
Diagnostic Test Mode (DTM)  
⇒ [94-2, Headlamp  
Range/Cornering Lamp  
Control Module J745 ,  
performing Output  
Diagnostic Test Mode  
\(DTM\)](#)
- Adapting ⇒ [94-2, Headlamp  
Range/Cornering Lamp  
Control Module J745 ,  
adapting](#)

**Note :**

- *Should the control module require coding, headlamp basic setting must be performed*

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

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### **Headlamps, removing and installing**

- HID headlamp removal and installation procedure is the same as standard headlights ⇒ [94-1, Headlamps, removing and installing](#) .

### **Headlamp installation position, checking**

- Headlamp installation position, checking ⇒ [94-1, Headlamp installation position, correcting](#) .

### **Headlamp bulbs, replacing**

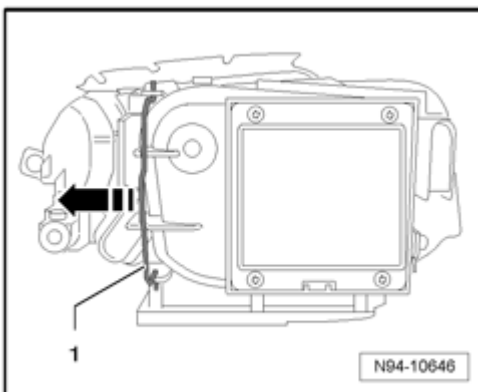
**High Intensity Gas Discharge (HID) Lamp Bulbs L13 / L14, replacing**

**Note:**

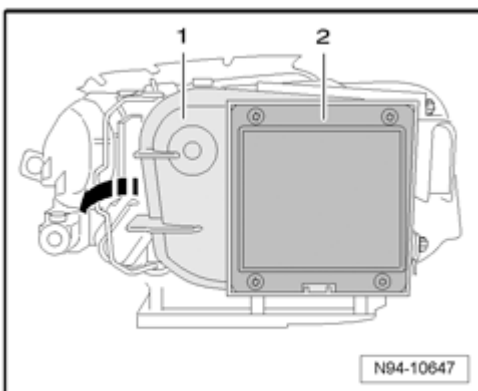
- *HID lamp bulb function can be checked using Vehicle Electrical System Control Module J519 On Board Diagnostic (OBD) program function "Output Diagnostic Test Mode (DTM)" ⇒ [97-6, Vehicle Electrical System Control Module J519 , Output Diagnostic Test Mode \(DTM\)](#) .*
- *Illustrations depict replacement of left HID bulb.*
- *Replacement of left and right bulbs is the same.*

**Removing:**

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



- Unclip wire retainer - 1 - in direction of - **arrow** - .



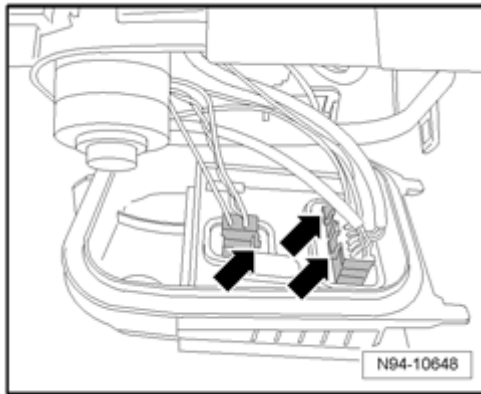
- Remove cover - 1 - with output stage - 2 - in direction of - **arrow** - as far as harness allows.

**Caution!**

***It is not necessary to separate power output stage - 2 -***



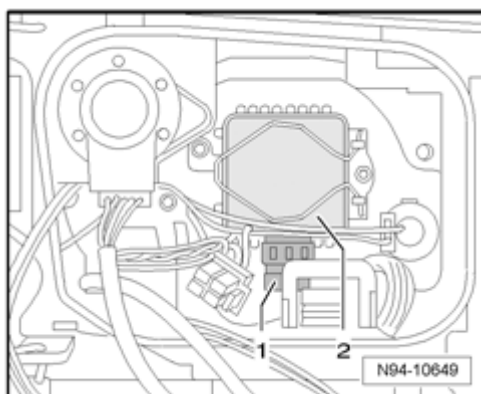
**from cover - 1 - .**



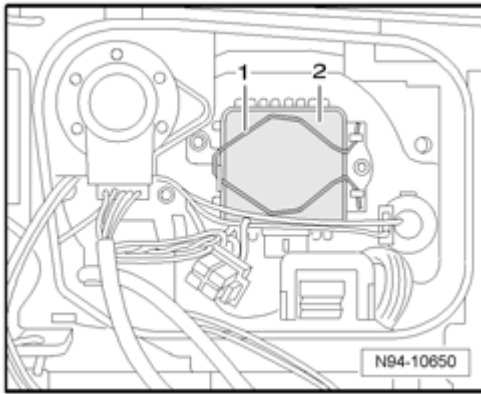
- Disconnect electrical connections - **arrows** - .

**Warning!**

- **The physical and mechanical properties of HID bulbs are very sensitive. Internal pressure of HID glass bulb may exceed 100 bar (in operation). Bulb temperature may exceed 700 degrees Celsius.**
- **Danger of explosion and burning.**
- **Always wear safety glasses and gloves when removing and installing HID bulb.**



- Disconnection electrical connection - **1** - from HID bulb - **2** - .



- Unclip wire retainer - **1** - and set aside.
- Carefully pull HID bulb - **2** - out of mounting.

### 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.**

- Insert new bulb so that lugs align with grooves in reflector.
- Perform functional check of headlamp.
- Perform headlamp "Basic Setting" in conjunction with checking headlamp aim

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

### Parking Lamp Bulbs M1 / M3, replacing

#### **Note:**

- *Parking lamp bulb function can be checked using Vehicle Electrical System Control Module J519 On Board Diagnostic (OBD) program function "Output Diagnostic Test Mode (DTM)" ⇒ [97-6, Vehicle Electrical System Control Module J519 , Output](#)*

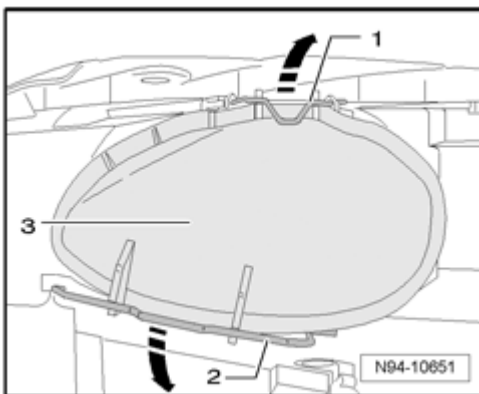
[Diagnostic Test Mode \(DTM\)](#) .

- *Illustrations depict replacement of right parking lamp bulb.*
- *Replacement of left and right bulbs is the same.*

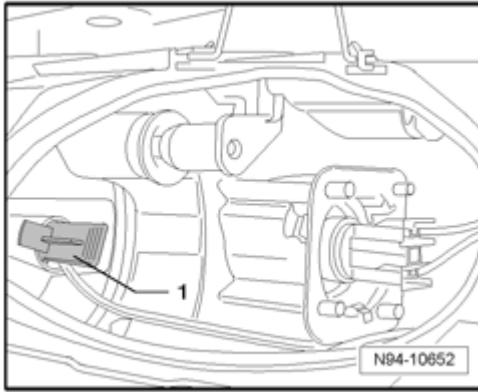
**Removing:**

**Caution!**

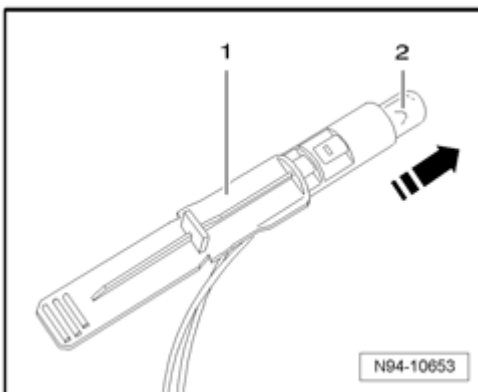
- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**
- **Leave remote control ignition key in passenger compartment in order to prevent accidental headlamp "Coming home/leaving home" activation.**



- Unclip wire retainers - **1** - and - **2** - in direction of - **arrow** - .
- Remove cap - **3** - from headlamp.



- Pull bulb holder - 1 - out of reflector.



- Remove bulb - 2 - from bulb holder - 1 - in direction of - arrow - .

### 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.***

- Insert new bulb in bulb holder and install in reflector.

- Perform functional check of parking lamp.

Cornering Lamp Bulbs L148 / L149, replacing

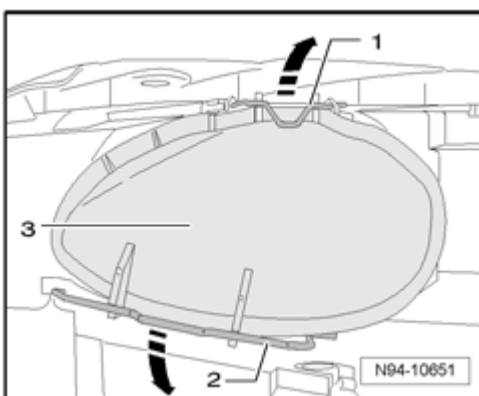
### **Note:**

- *Cornering lamp bulb function can be checked using Headlamp Range/Cornering Lamp Control Module J745 On Board Diagnostic (OBD) program function "Output Diagnostic Test Mode (DTM)" ⇒ [94-2, Headlamp Range/Cornering Lamp Control Module J745 , performing Output Diagnostic Test Mode \(DTM\)](#)*
- *Illustrations depict replacement of right cornering lamp bulb.*
- *Replacement of left and right bulbs is the same.*

### Removing:

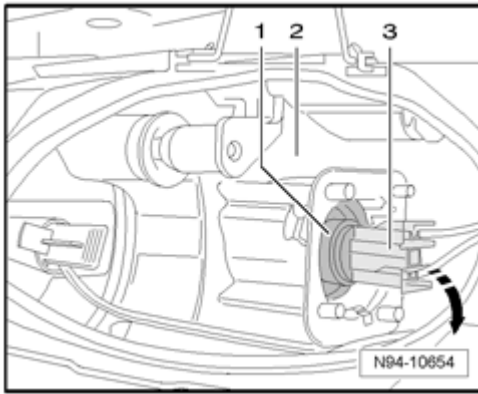
#### **Caution!**

- **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.**



- Unclip wire retainers - 1 - and - 2 - in direction of - arrow - .
- Remove cap - 3 - from headlamp.

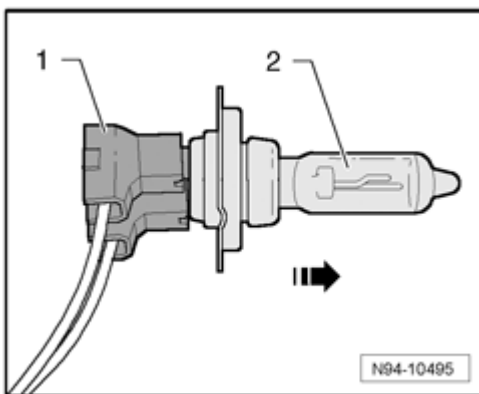
#### **Note:**



- *Cornering lamp bulb - 1 - is clipped into reflector - 2 - .*
- *Do not disconnect electrical connection - 3 - prior to removing bulb.*

- Press electrical connection - 3 - in direction of - **arrow** - until it is felt to loosen.

- Remove bulb with electrical connection - 3 - from reflector and out of headlamp housing.



- Separate bulb - 2 - from electrical connection - 1 - .

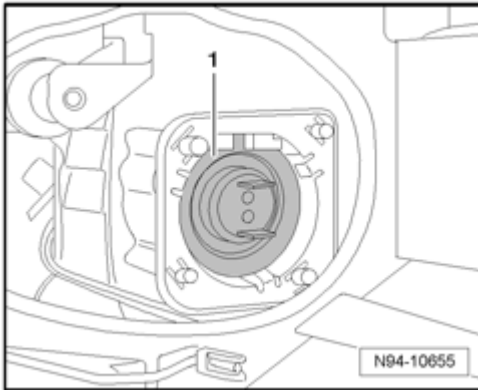
### **Installing:**

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.**



- Insert and press bulb - 1 - into reflector as illustrated. Bulb must engage audibly
- Connect electrical connection.
- Perform functional check of cornering lamp.

### Headlamp Beam Adjustment Motors, servicing

#### Headlamp Beam Adjustment Motors V48 / V49, removing and installing

##### **Note:**

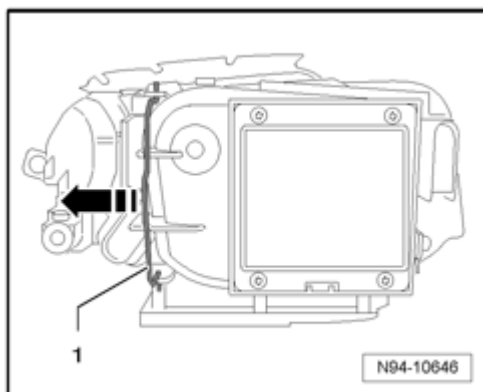
- *Illustrations depict removal and installation of right headlamp beam adjustment motor.*
- *Replacement of left and right motors is the same.*

##### **Removing:**

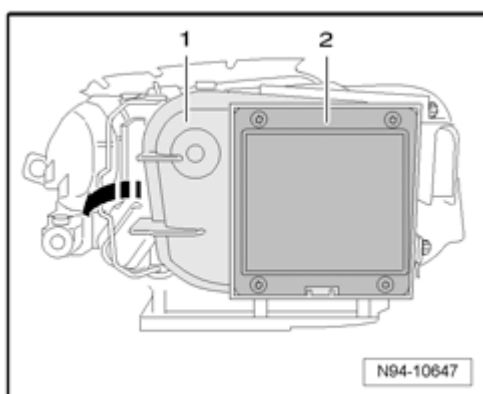
##### **Caution!**

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

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



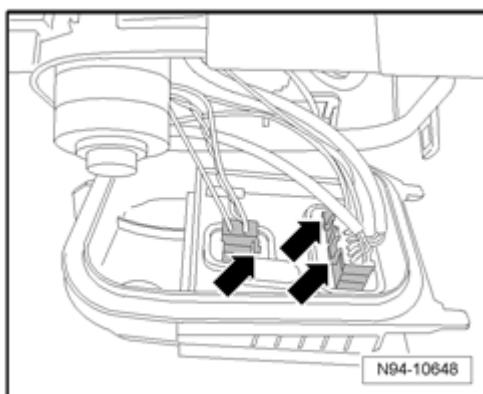
- Unclip wire retainer - 1 - in direction of - **arrow** - .



- Remove cover - 1 - with output stage - 2 - in direction of  
- **arrow** - as far as harness allows.

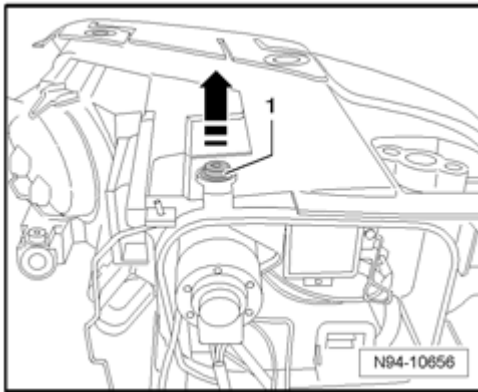
**Caution!**

**It is not necessary to separate power output stage - 2 -  
from cover - 1 - .**

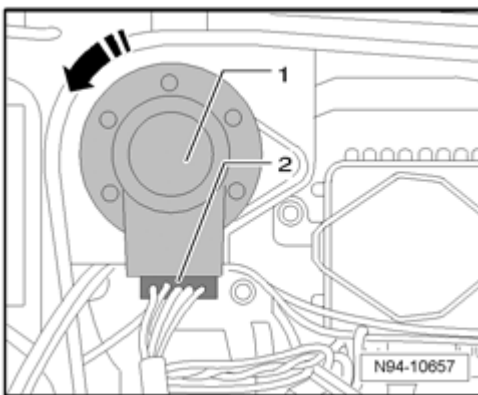


- Disconnect electrical connections - **arrows** - .





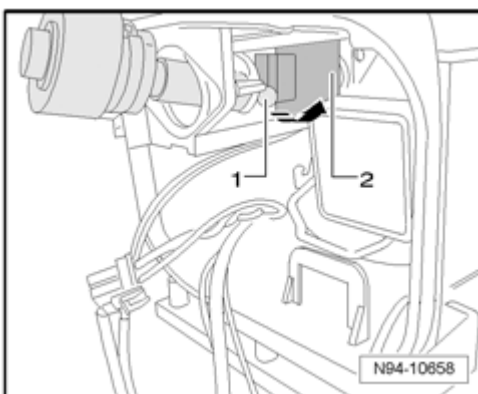
- Carefully pry adjustment screw - **1** - in direction of - **arrow** - from headlamp housing.



- Disconnect electrical connection - **2** - from motor - **1** - .  
- Turn motor - **1** - in direction of - **arrow** - and remove from housing.

### Installing:

Install in reverse order of removal, noting the following:



- Carefully insert motor ball head - **1** - in guide - **2** - while pulling reflector towards rear - **arrow** - .  
- Position motor in mounting and turn clockwise

approximately 30 ° until it engages.

**Caution!**

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

- Remaining installation in reverse order of removal.
- Perform functional check of headlamp.
- Perform headlamp "Basic Setting" in conjunction with checking headlamp aim

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

**Headlamp Beam Adjustment Motors V48 / V49, checking**

Headlamp beam adjustment motor function can be checked using Headlamp Range/Cornering Lamp Control Module J745 On Board Diagnostic (OBD) program function "Output Diagnostic Test Mode (DTM)" ⇒ [94-2, Headlamp Range/Cornering Lamp Control Module J745 , performing Output Diagnostic Test Mode \(DTM\)](#) .

**Dynamic Cornering Light Motors, servicing**

Left Dynamic Cornering Light Motor V318 and Right Dynamic Cornering Light Motor V319 are integrated with the headlamp housing and cannot be serviced, adjusted or replaced separately.

In the event of malfunction, replace complete headlamp housing ⇒ [94-1, Headlamps, removing and installing](#) .

**Dynamic Cornering Light Motors V318 / V319, checking**

Dynamic cornering light motor function can be checked using Headlamp Range/Cornering Lamp Control Module J745 On Board Diagnostic (OBD) program function "Output Diagnostic Test Mode (DTM)" ⇒ [94-2, Headlamp Range/Cornering Lamp Control Module J745 , performing Output Diagnostic Test Mode \(DTM\)](#) .

**Swivel Module Position Sensors, servicing**

Left Swivel Module Position Sensor G474 and Right Swivel Module Position Sensor G475 are integrated with the headlamp housing and cannot be serviced, adjusted or replaced separately.

In the event of malfunction, replace complete headlamp

housing ⇒ [94-1, Headlamps, removing and installing](#) .

### **Low Beam Reflector Motors, servicing**

Left Low Beam Reflector Motor V294 and Right Low Beam Reflector Motor V295 are integrated with the headlamp housing and cannot be serviced, adjusted or replaced separately.

In the event of malfunction, replace complete headlamp housing ⇒ [94-1, Headlamps, removing and installing](#) .

### **Low Beam Reflector Motors V294 / V295, checking**

Low beam reflector motor function can be checked using Vehicle Electrical System Control Module J519 On Board Diagnostic (OBD) program function "Output Diagnostic Test Mode (DTM)" ⇒ [97-6, Vehicle Electrical System Control Module J519 , Output Diagnostic Test Mode \(DTM\)](#) .

### **Headlamp Power Output Stages, servicing**

**Headlamp Power Output Stages J667 / J668, removing and installing**

#### **Note:**

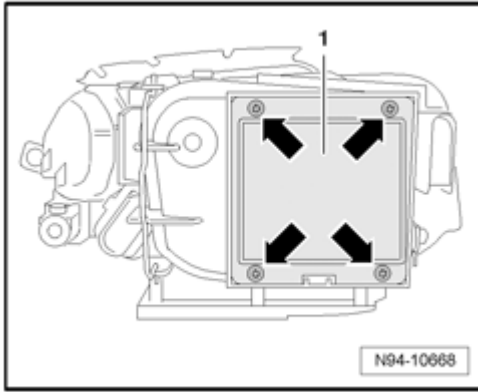
- *Illustrations depict removal and installation of right headlamp power output stage.*
  
- *Replacement of left and right stages is the same.*

#### **Removing:**

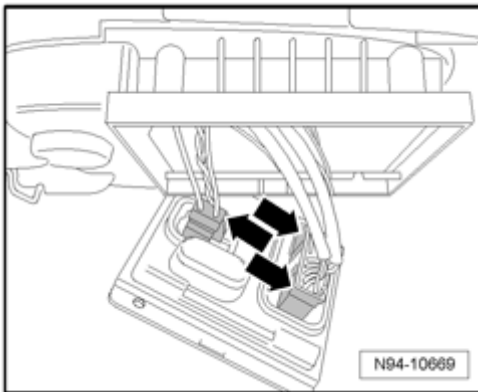
#### **Caution!**

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

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



- Remove screws - **arrows** - at power output stage - **1** -



- Disconnect electrical connections - **arrows** -
- Remove power output stage from headlamp housing.

### Installing:

Install in reverse order of removal, noting the following:

### **Caution!**

**When installing output stage, ensure proper seating.  
Water intrusion will damage headlamp**

- Perform functional check of headlamp.

### **Note:**

- *In the event a power output stage is replaced, the Headlamp Range/Cornering Lamp Control Module J745 must be coded ⇒ [94-2, Headlamp Range/Cornering Lamp Control Module J745, coding](#) and the headlamp basic setting be performed in conjunction with checking headlamp aim*

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

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### **Headlamp Power Output Stages J667 / J668, coding**

#### **Note:**

- *In the event a power output stage is replaced, the Headlamp Range/Cornering Lamp Control Module J745 must be coded ⇒ [94-2, Headlamp Range/Cornering Lamp Control Module J745, coding](#) and the headlamp basic setting be performed in conjunction with checking headlamp aim*

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

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### **High Intensity Gas Discharge Lamp Control Module J343 / J344, removing and installing**

#### **Note:**

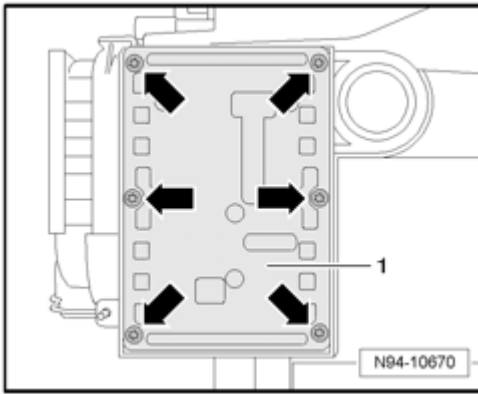
- *The Left High-intensity Gas Discharge Lamp Control Module J343 and Right High-intensity Gas Discharge Lamp Control Module J344 do not have On Board Diagnostic (OBD) capabilities.*
- *Illustrations depict removal and installation of control module at right headlamp.*
- *Replacement of left and right control modules is the same.*

#### **Removing:**

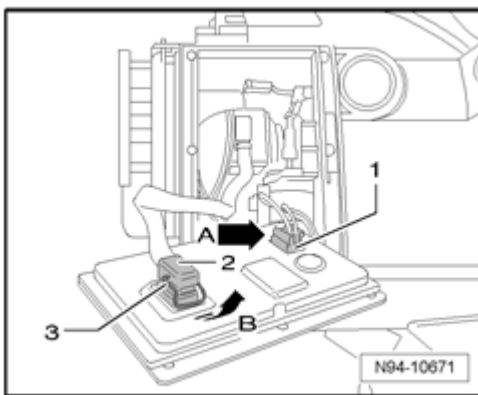
#### **Caution!**

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

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



- Remove screws - **arrows** - and remove control module - **1** - from headlamp housing as far as harness allows.



- Release connector lock - **arrow A** - and disconnect electrical connection - **1** - .
- Release retainer clip - **3** - and disconnect electrical connection - **2** - in direction of - **arrow B** - .

### Installing:

Install in reverse order of removal, noting the following:

### **Caution!**

**When installing control module, ensure proper seating.  
Water intrusion will damage headlamp**

- Perform functional check of headlamp.
- Perform headlamp "Basic Setting" in conjunction with checking headlamp aim

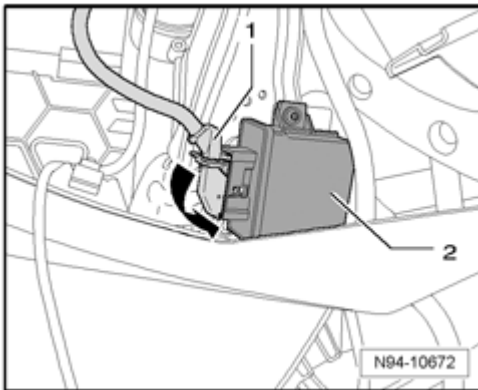
⇒ *Repair Manual, Maintenance, Repair Group 00,*

**Headlamp Range/Cornering Lamp Control Module J745 ,  
servicing**

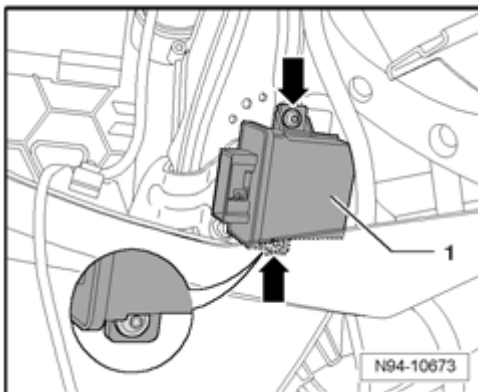
## Headlamp Range/Cornering Lamp Control Module J745 , removing and installing

- Remove glove compartment

⇒ [Repair Manual, Body Interior, Repair Group 68, Storage compartments, covers and trim; Glove compartment, removing and installing](#)



- Release connector lock in direction of - **arrow** - and disconnect electrical connection - **1** - from control module - **2** - .



- Remove screws - **arrows** - and remove control module - **1** - .

### Installing:

Install in reverse order of removal, noting the following:

- Perform functional check of headlamp.

### Note:

- *In the event the Headlamp Range/Cornering Lamp Control Module J745 is replaced, it must be coded*

⇒ [94-2, Headlamp Range/Cornering Lamp Control Module J745, coding](#) and the headlamp basic setting be performed in conjunction with checking headlamp aim

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

### **Headlamp Range/Cornering Lamp Control Module J745 , coding**

- Connect Vehicle Diagnostic, Testing and Information System VAS 5051/5052 ⇒ [97-1, VAS 5051 / 5052](#)

In Vehicle Diagnostic, Testing and Information System VAS 5051/5052 , select operating mode "Guided Fault Finding" .

- Using the "Go To" button, select "Functions/Component selection" and the following menu options in sequence:

- Body
  
- Electrical System
  
- 01 - Systems capable of self-diagnosis
  
- Automatic vertical headlight aim control, cornering light
  
- Automatic vertical headlight aim control, functions
  
- J745 - Headlamp Range/Cornering Lamp Control Module (AFS) , coding

#### **Note:**

- *In the event the Headlamp Range/Cornering Lamp Control Module J745 is coded, the headlamp basic setting be performed in conjunction with checking headlamp aim*

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



### **Headlamp Range/Cornering Lamp Control Module J745 , performing Output Diagnostic Test Mode (DTM)**

The following components and functions can be checked using Headlamp Range/Cornering Lamp Control Module J745 On Board Diagnostic (OBD) program function "Output Diagnostic Test Mode (DTM)" :

- Left Headlamp Beam Adjustment Motor V48 and Right Headlamp Beam Adjustment Motor V49
  
- Left Dynamic Cornering Light Motor V318 and Right Dynamic Cornering Light Motor V319
  
- Left Cornering Lamp L148 and Right Cornering Lamp L149
  
- Indicator lamps for Adaptive HID Headlamp and vertical headlamp beam adjustment in instrument cluster

#### **Note:**

- *In the event of a malfunction in the adaptive HID headlamp system, the "Bulb failure" indicator in the instrument cluster is activated ⇒ [Item - 21 -](#) .*

- Connect Vehicle Diagnostic, Testing and Information System VAS 5051/5052 ⇒ [97-1, VAS 5051 / 5052](#)

In Vehicle Diagnostic, Testing and Information System VAS 5051/5052 , select operating mode "Guided Fault Finding" .

- Using the "Go To" button, select "Functions/Component selection" and the following menu options in sequence:

- Body
  
- Electrical System
  
- 01 - Systems capable of self-diagnosis
  
- Automatic vertical headlight aim control, cornering light

- Automatic vertical headlight aim control, functions
- AFS output Diagnostic Test Mode (DTM)
- Follow tester prompts

### **Headlamp Range/Cornering Lamp Control Module J745 , adapting**

VAS 5051/5052 On Board Diagnostic (OBD) function  
"adaptation" not available at time of publication.

### **Vehicle Level Sensors, servicing**

#### **General information**

A vehicle level sensor is located on the front axle ( Left Front Level Control System Sensor G78 ) and rear axle ( Left Rear Level Control System Sensor G76 .

The vehicle level sensors are a component of vertical headlamp aim control system. The vehicle level sensors transmit a Pulse Width Modulation (PWM) signal (representing vehicle attitude, load etc. ) to Headlamp Range/Cornering Lamp Control Module J745 .

In order to generate this PWM-signal, voltage is supplied to the Left Rear Level Control System Sensor G76 via two plus-wires and one Ground (GND) wire. Voltage is supplied to Left Front Level Control System Sensor G78 via one plus-wire and two Ground (GND) wires.

#### **Vehicle Level Sensors G76 / G78, removing and installing**

Left Front Level Control System Sensor G78 removing and installing

⇒ [Repair Manual, Suspension, Wheels, Steering, Repair Group 40, Subframe, stabilizer bar, control arm; Assembly overview: Subframe, stabilizer bar, control arm](#)

Left Rear Level Control System Sensor G76 removing and installing

⇒ [Repair Manual, Suspension, Wheels, Steering, Repair Group 42, Subframe, transverse link, tie rod, assembly overview: Level control system sensors for vehicles with automatic headlight range control, Level control system sensor, replacing in vehicle](#)

**Note:**

- *In the event a vehicle level sensor is replaced, the headlamp basic setting be performed in conjunction with checking headlamp aim*

⇒ *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.

Repairs on headlamp securing lugs on High Intensity gas Discharge (HID) headlamps are performed as on standard headlamps ⇒ [94-1, Headlamp securing lugs, servicing](#) .

**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,*