



Rear View Camera System

Note:

- *Before troubleshooting or servicing, the technicians must be familiar with the function and operation of the Rear View Camera System.*

- *For additional information, ⇒ Operating instructions .*

- *When performing service work or fault-finding, use ⇒ Diagnostic Operation System VAS 5051A or Vehicle Diagnosis Service Syst. VAS5052 in the function "Guided Fault Finding" , ⇒ Electrical Wiring Diagrams, Troubleshooting and Component Locations binder .*

- *When the battery is re-attached, remember to check the vehicle accessories (radio, clock, electronic conveniences, etc.) according to the repair manual and/or the operators manual.*

General information

The Rear View Camera System assists the driver during back-up driving by providing the driver with an image of the traffic situation behind the vehicle via the monitor of the radio/navigation system. The system is a vehicle option and is only available in conjunction with the "electronic parking assistance" system and radio/navigation system "Radio/Navigation system "Sound II" " .

The system switches itself on by selecting the reverse driving gear, even when radio/navigation system is switched off.

The Rear View Camera System consists of the following components:

- Rear View Camera R189

- Rear View Camera System Control Module J772

- Radio/Navigation Display Control Module J503

- and steering wheel with Steering Angle Sensor G85

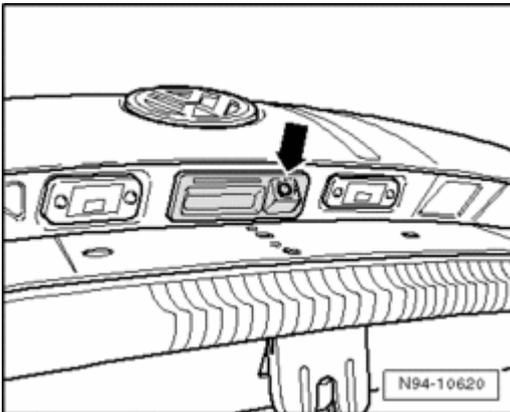
Note:

- *It is not permitted to install an auxiliary license plate holder for vehicles with rear view camera system because it would impair the function of the rear view camera system. License plate lights may also be impaired.*

On Board Diagnostic (OBD), function

Rear view camera system is equipped with On Board Diagnostic (OBD).

When performing fault-finding, use Diagnostic Operation System VAS 5051A or Vehicle Diagnosis Service Syst. VAS5052 in the function "Guided Fault Finding" .

Rear view camera, removing and installing**Removing:**

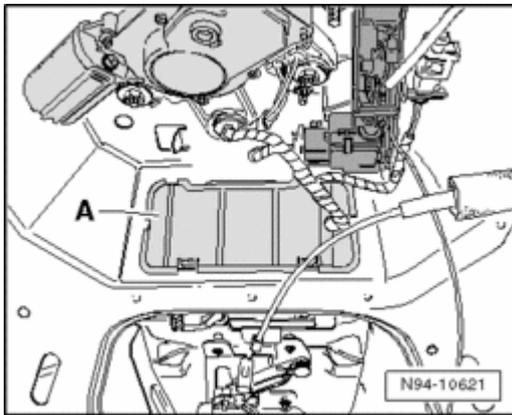
Component location of rear view camera in rear lid - arrow

Caution!**Before beginning repairs on electrical system**

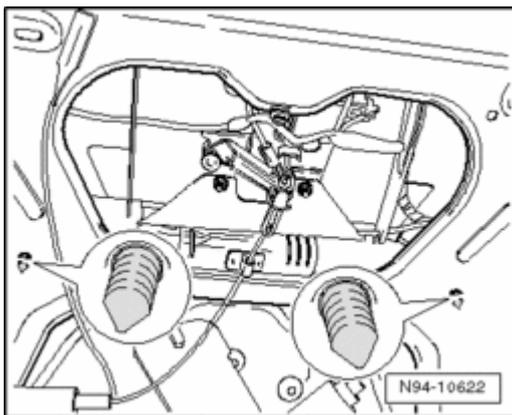
- **Switch off all electrical consumers.**
- **Switch ignition off and remove ignition key.**

In order to remove the camera, the lower rear lid trim must be removed first,

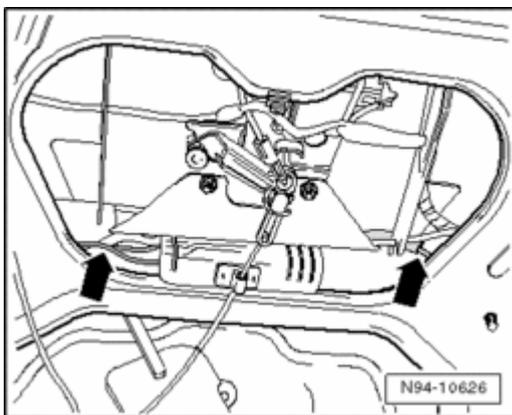
⇒ [Repair Manual, Body Interior, Repair Group 70, Trim/noise insulation; rear lid trim; removing and installing lower rear lid trim](#)



- Unclip cover - **A** - in rear lid.

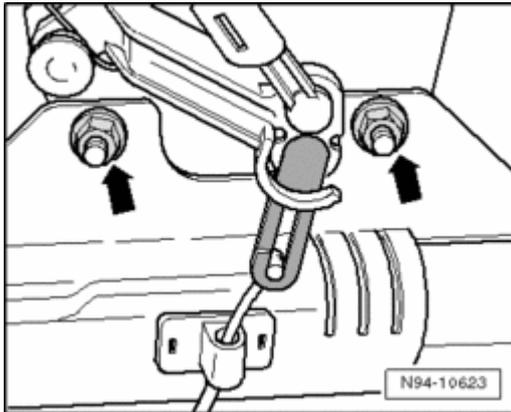


- Push both securing clips - **magnified areas** - inward out of assembly holes.

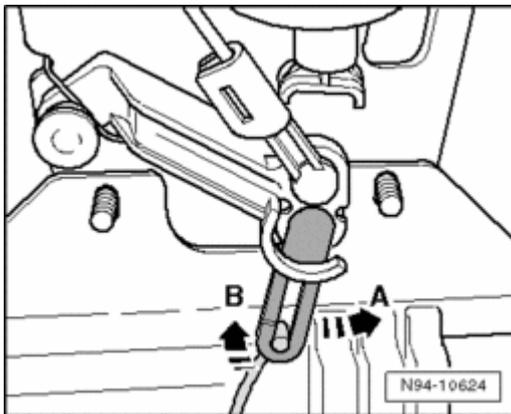


- Pull out both wiring harnesses - **arrows** - from rear lid interior so that harness connectors in both wiring harnesses emerge.

- Press locking mechanisms of harness connectors and disconnect them.

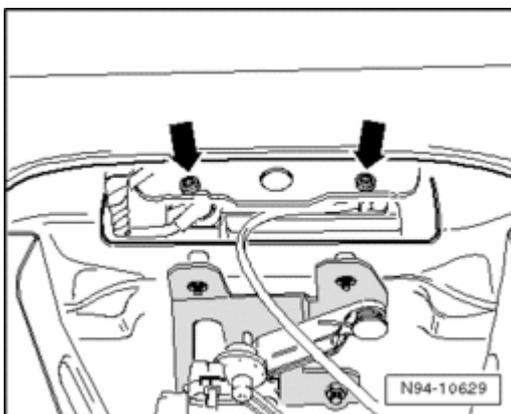


- Remove both nuts on bracket for emergency release cable - **arrows** - .

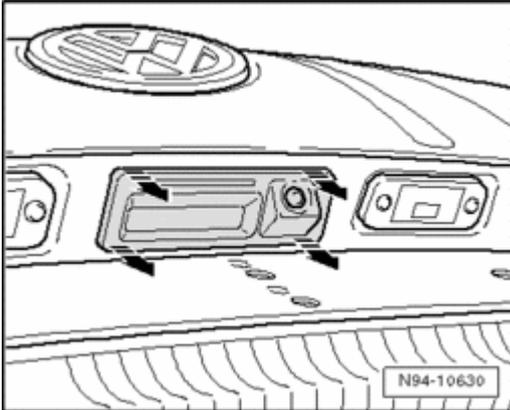


- Remove emergency release cable by moving gray plastic bracket in direction - **A** - and simultaneously moving emergency release cable in direction - **B** - until both parts unhook from lock linkage and can be removed.

- Press locking mechanism of harness connector and disconnect it.



- Remove both bolts - **arrows** - on rear view camera holder.

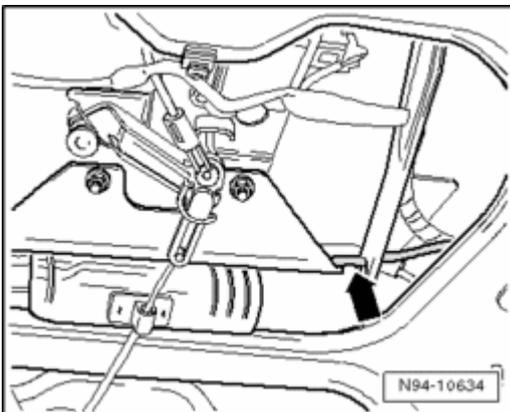


- Remove rear view camera together with holder in - **direction of arrow** - out of rear lid, when doing so pay attention to wires on rear side of rear view camera.

Remove rear view camera from holder, ⇒ [94-12, Removing rear view camera from holder](#) .

Installing:

Install in reverse order.

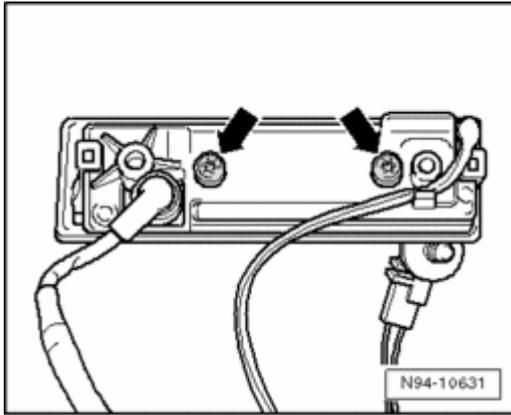


Make sure that wire connection is routed as depicted in the illustration - **arrow** - .

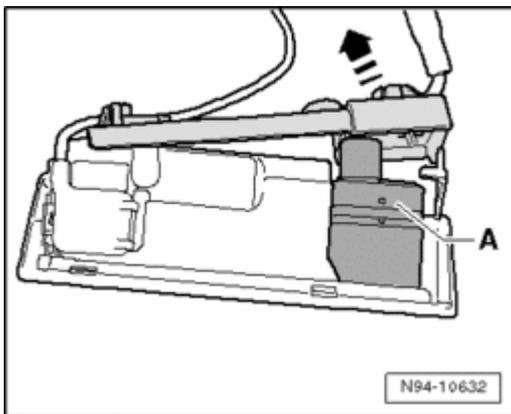
- After installing, clean rear view camera optical lens using a lint-free cloth so that later a "clean" image is ensured.

- Calibrate the system anew, ⇒ [94-12, Rear view camera system, calibrating](#) .

Removing rear view camera from holder



- Remove both bolts - **arrows** - .



- Remove retaining bracket in - **direction of arrow** - and pull rear view camera - **A** - out of holder.
- Guide wire connection of rear view camera out through opening in retaining bracket.
- Separate securing clip from harness connector.

Now the harness connector fits through opening in retaining bracket and both parts can be disconnected from each other.

Install in reverse order.

Rear View Camera System Control Module J772 , removing and installing

Removing:

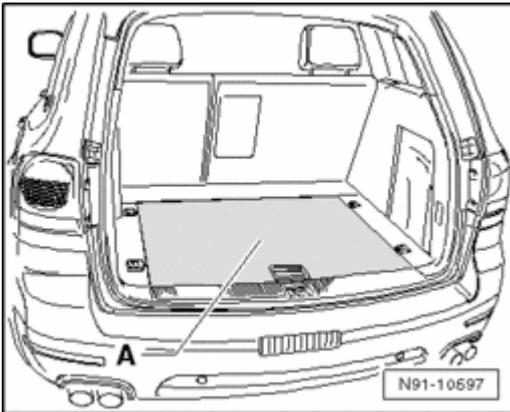
Control module is installed in luggage compartment behind right side wall trim.

Caution!

Before beginning repairs on electrical system

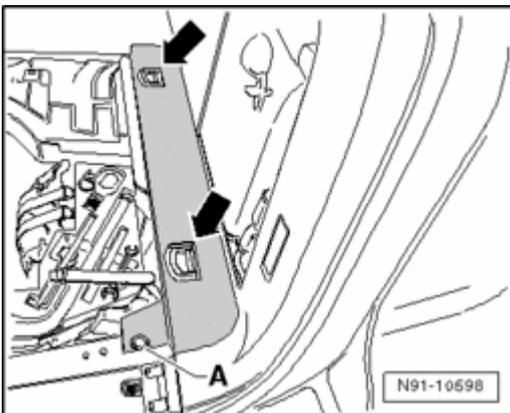
- **Switch off all electrical consumers.**

- **Switch ignition off and remove ignition key.**

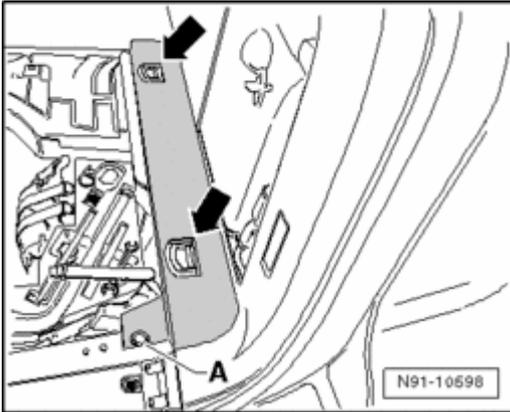


- Remove center loading floor - **A** - in luggage compartment.
- Remove cover from lock carrier

⇒ [Repair Manual, Body Interior, Repair Group 70, Trim, noise insulation; Luggage compartment trim; removing and installing lock carrier cover](#)

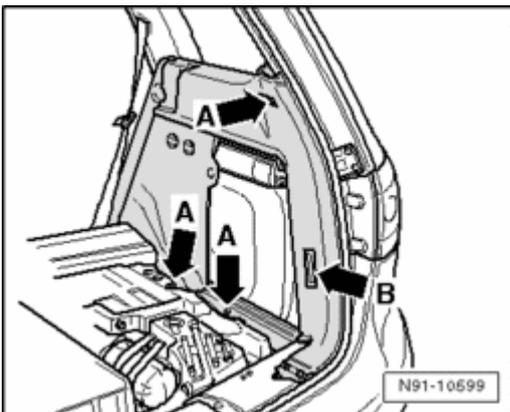


- Remove tie-downs - **arrows** - .

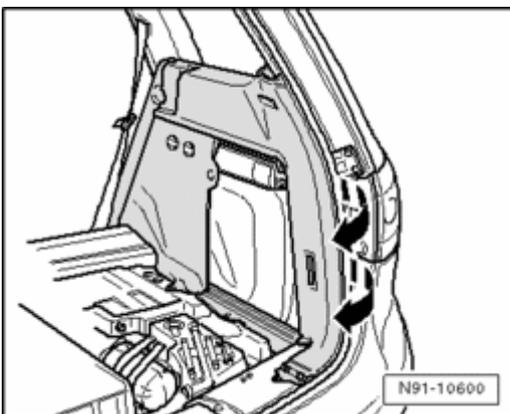


- Remove screw - **A** - and remove right loading floor.
- Remove right D-pillar trim

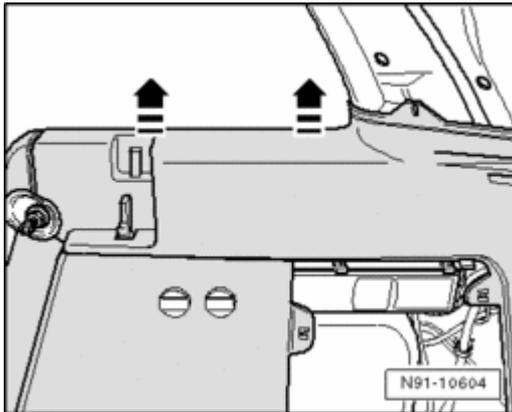
⇒ [Repair Manual, Body Interior, Repair Group 70, Trim/noise insulation; pillar trim; removing and installing D-pillar trim](#)



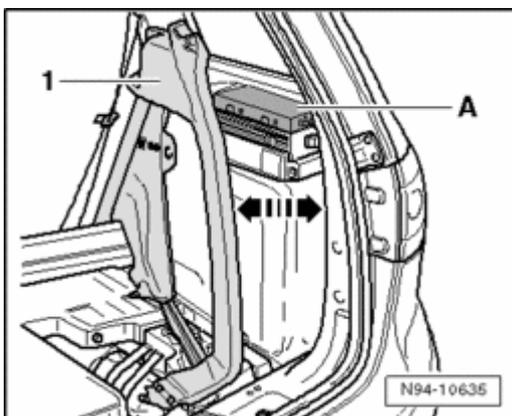
- Remove screws - **A** - and unclip interior light - **B** - from trim.



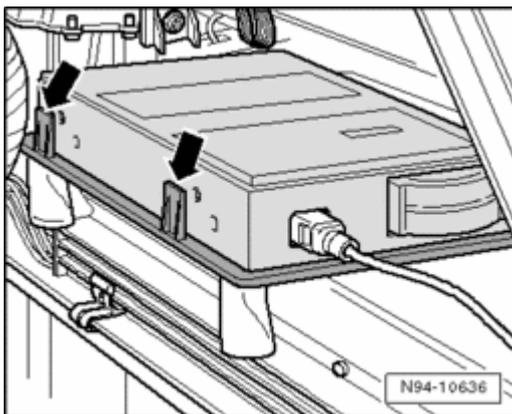
- Unclip trim from D-pillar in - **direction of arrow** - .



- Unclip trim at side window in - **direction of arrow** - .



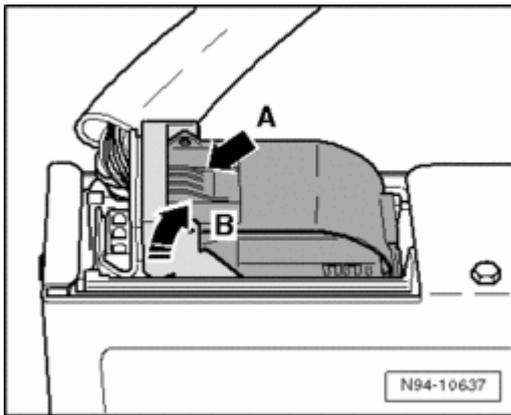
- Carefully swing trim - **1** - as far in - **direction of arrow** - so that control module for rear view camera system - **A** - is accessible.



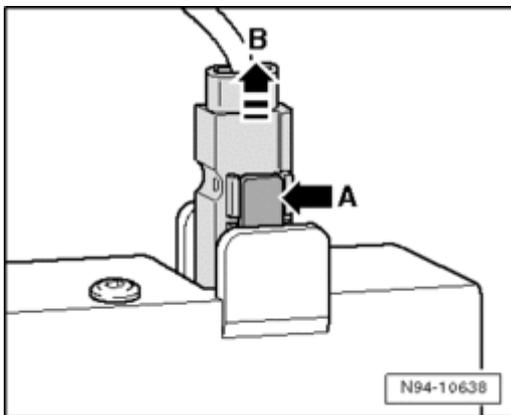
- Press both locking mechanisms - **arrows** - and remove control module for rear view camera system.

Note:

- *It is possible that the control module is also secured with Velcro on the bottom. Then, carefully detach control module from base plate.*



- Press locking mechanism - **A** - and fold the bracket over in direction - **B** - . Then disconnect harness connector from control module.



- Press locking mechanism - **A** - and pull harness connector out of control module in direction - **B** - .

Installing:

Install in reverse order.

If necessary, replace Velcro strips - **arrows** - on bottom of control module.

Only if the control module has been replaced:

- Calibrate the system anew, ⇒ [94-12, Rear view camera system, calibrating](#) .

Rear view camera system, calibrating

At the time of publication, tool numbers and definition of terms for the tools to be used were not available.

After performing service work on the vehicle, it may be necessary to calibrate the rear view camera system anew. In detail, this is the case after:

- removing and installing rear view camera

- replacing the control module for rear view camera system
- after repair work performed on rear lid following an accident
- after a vehicle alignment
- after performing a repair at front or rear axle

Extensive preparatory work must be completed before the appropriate calibrating procedure can be performed using Diagnostic Operation System VAS5051A or Vehicle Diagnosis Service Syst. VAS5052 . This is described in the following.

Special tools and equipment

At the time of publication, tool numbers and definition of terms for the tools to be used were not available.

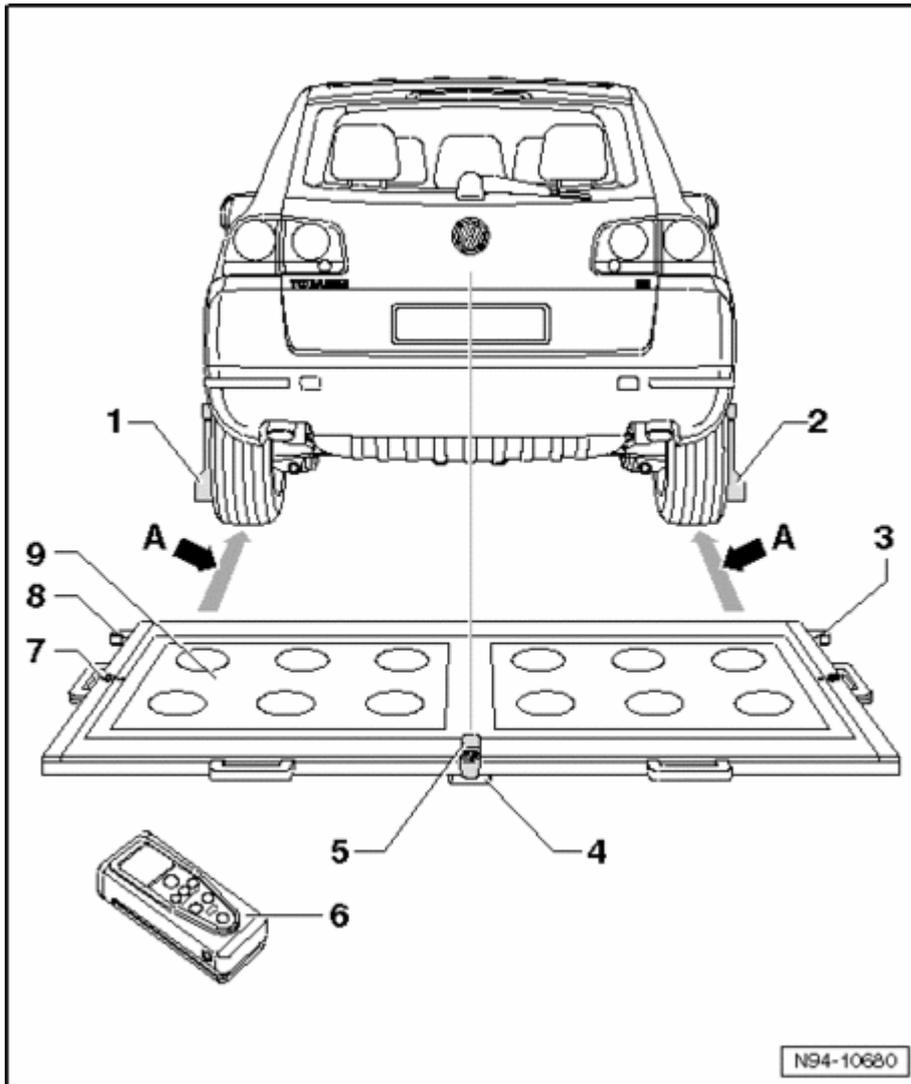
Preparatory work procedures for calibrating:

Vehicle must stand on a firm and level surface to perform the calibration. No persons may be in the vehicle interior during the measurement. Vehicle must not be moved during the measurement, opening and closing of vehicle doors is to be avoided.

Connect Diagnostic Operation System VAS5051A ⇒ [97-1, VAS 5051 / 5052](#) .

- Bring the Steering Angle Sensor G85 into 0-position (wheels straight ahead).

Overview of the assembled measuring device:



- **Left paddle**
- **Right paddle**
- **Right-side angle bracket for mounting measuring unit for distance measurement**
- **Plastic base**
 - Total of three on under side of measuring device
 - Adjustable, for aligning horizontal position of measuring device
- **Laser camera on measuring device**
 - Switching on and off ⇒ *operating instructions*

- **Measuring unit for distance measurement**
 - Notes on operation, ⇒ *operating instructions*

- **Fluid level on measuring device**
 - for checking horizontal position of measuring device

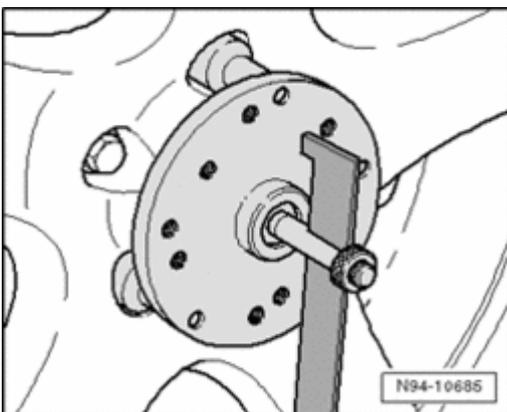
- **Left-side angle bracket for mounting measuring unit for distance measurement**

- **Measuring field of measuring device**
 - Distance to rear wheels
1.20m-1.70 m - **dimension A** -

- Check which hole circle the rims have.

- Install the wheel pick-ups which fit the Touareg: For this purpose, secure three adapters for wheel mounting bolts for Touareg on the hole circle with designation "120" or "130" on each wheel pick-up.

- Attach paddles to both wheel pick-ups and secure them with clamping screw.



- Set the wheel pick-ups on to wheel mounting bolts at the rear wheels. When doing this, the wheel pick-ups are positioned by the "O-rings" in the adapters and held in place.

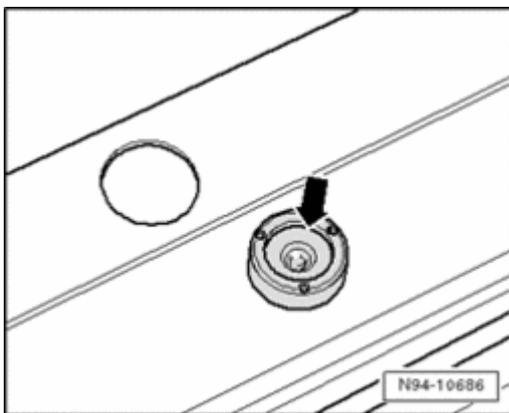
Note:

- *Attach wheel pick-ups on to wheels so that any installed "anti-theft wheel mounting bolts" are not connected to the wheel pick-ups.*

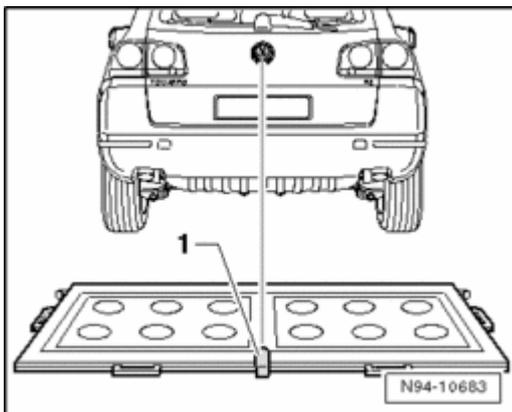
- Set the paddles via the clamping screw so that they are free to move just above the ground.

Make sure paddles move easily.

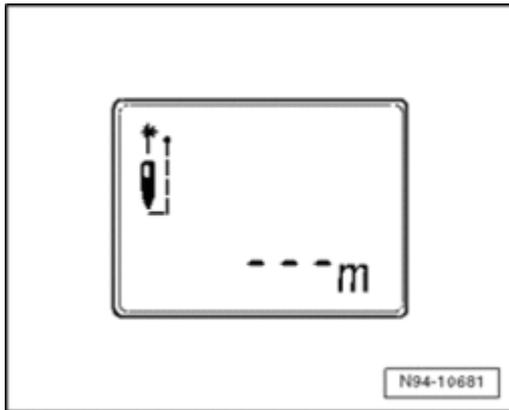
- Position measuring device behind vehicle at a distance of 1.20m - 1.70m from the rear wheels as depicted in the overview - **dimension A** - => [Item - 9](#) - .



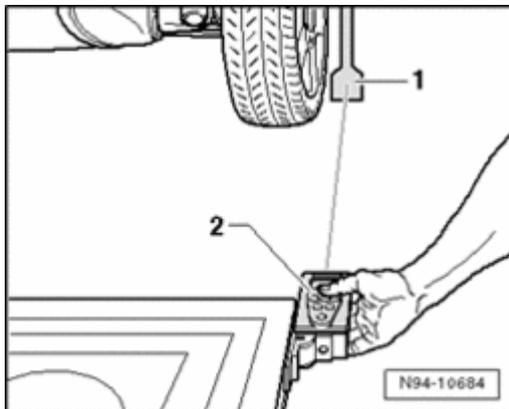
- Bring measuring device to a horizontal position. To do so, twist plastic bases under measuring device so that air bubble in fluid-level is located exactly in the center of the indicator - **arrow** - .



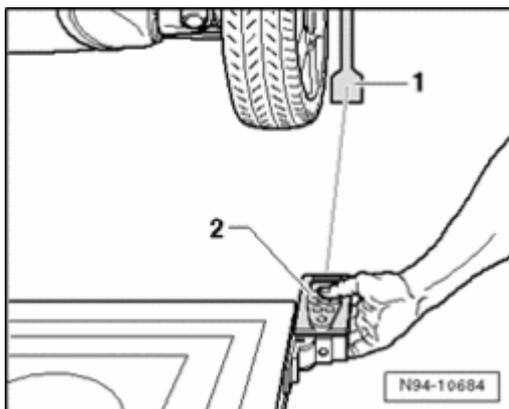
- Switch on the laser on the measuring device - **1** - and align the entire measuring device so that laser beam strikes on center of vehicle rear end above the VW logo.



- Switch on the measuring unit for distance measurement via the ON button. The following display appears and laser switches itself on:

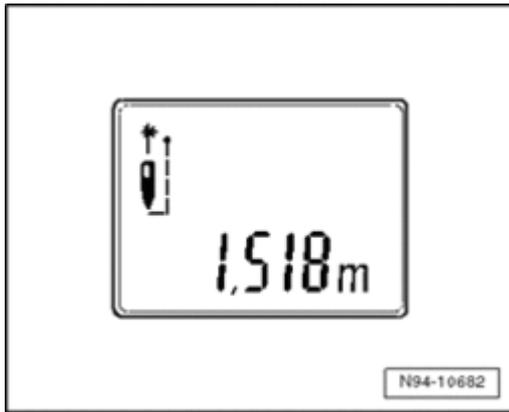


- Hold measuring device for distance measurement - **2** - flush into angle bracket on one side of measuring device as shown in the illustration, measuring unit must make contact firmly on angle bracket when doing this.



- Make sure that the laser beam from the measuring unit for distance measurement strikes the paddle - **1** - at the lower, enlarged part.

If this is not the case, paddles must be corrected accordingly via the clamping screws on the wheel pick-ups.



- Hold the measuring unit for distance measurement firmly by hand in the angle bracket on the measuring device while the laser beam can be seen on the paddle. Now press the ON button briefly for the distance measurement. When doing this, the following display appears on screen:

The distance measurement is specified on the display in "meters" .

- Note the value read off.

- Repeat measuring procedure in the same manner for the other rear wheel on the other side of the measuring device.

The value read off for distance must be identical on both sides. If the value is not identical, align the measuring device only as long until the values on both sides are identical.

When aligning the measuring device, make sure the measuring device laser beam still strikes the center above the VW logo and indicator of fluid-level remains centered. If necessary, make further corrections accordingly.

The dimension for distance that was measured must now be entered in "millimeters" into the Diagnostic Operation System VAS5051A or the Vehicle Diagnosis Service Syst. VAS5052 .

Proceed as follows:

Rear view camera system, calibrating:

Select "Guided Functions" in Diagnostic Operation System VAS 5051A or Vehicle Diagnosis Service Syst. VAS5052 .

or

Select "Guided Fault Finding" in Diagnostic Operation System VAS5051A or Vehicle Diagnosis Service Syst. VAS5052 .

- Select the corresponding vehicle data in the "vehicle selection" menu.
- Select "rear view camera system" .
- Select "functions" .
- Select "Calibrate rear view camera system" .

From here, you will be directed by the Diagnostic Operation System VAS5051A or the Vehicle Diagnosis Service Syst. VAS5052 during the calibrating procedure.