

**WHEELS, TIRES, WHEEL ALIGNMENT > DIAGNOSIS AND TESTING > ADAPTIVE
CRUISE CONTROL SENSOR, ADJUSTING****Special tools and workshop equipment required**

- Adjustment Tool VAS 6190/2
- ACC Setting device VAS 6430 or Setting Device Basic set VAS 6430/1
- ACC reflector mirror VAS 6430/3
- Vehicle diagnosis, testing and information system VAS 5051 B
- Wheel alignment computer

NOTE:

- *Before driving the vehicle onto the alignment stand, check whether there is a sufficiently large space between the vehicle and the VAS 6430. The distance between the VAS 6430 and the VW emblem must be 120 cm ± 2.5 cm.*
- *If there is not sufficient space, drive the vehicle backward onto the alignment stand in order to be able to use the corresponding space.*
- *If the VAS 6430/3 is repositioned on the calibration beam during the adjustment, the VAS 6430 Setting must be checked (e.g. bubble levels, individual toe Settings at the calibration beam, etc.).*

- Before beginning the adjustment, check the DTC memory and correct any malfunctions present.

The adjustment procedure is described here with the VAS 6430.

Follow the sequence for adjusting:

1. Establish a distance of 120 cm ± 2.5 cm between the centrally positioned VAS 6430/3 and the VW emblem in the radiator grille,
2. Install the VAS 6430/3 on the right next to the vertical slits (viewed in the direction of travel),
3. Adjust the distance regulation control module -J428- "master",
4. Move the ACC reflector mirror to the opposite side of the calibration beam,
5. Check the position of the bubble levels and the calibration beam and correct if necessary,
6. Adjust the distance regulation control module 2 -J850- "slave".

If there was a previous axle alignment, the steps under "Calibration procedure without a previous axle alignment" should not be performed.

Calibration Procedure without a Previous Axle Alignment

- Select the ACC calibration with dual radar button on the wheel alignment computer.
- Follow the prerequisites for alignment. Refer to WHEEL ALIGNMENT TEST PREREQUISITES .

Vehicles with Air Suspension

- set the vehicle to the standard height.

-- Activate vehicle lift mode. Refer to VEHICLE LIFT MODE .

Continuation for All Vehicles

-- Drive the vehicle onto the vehicle alignment platform.

-- Connect the battery charger. Refer to General Information .

-- Connect the VAS 5051 B to the vehicle. (Guide the diagnostic cable through the open window.)

NOTE: During the adjustment procedure, make sure all the vehicle doors remain closed and the vehicle exterior lighting is switched off.

-- Position the front wheels so they are straight.

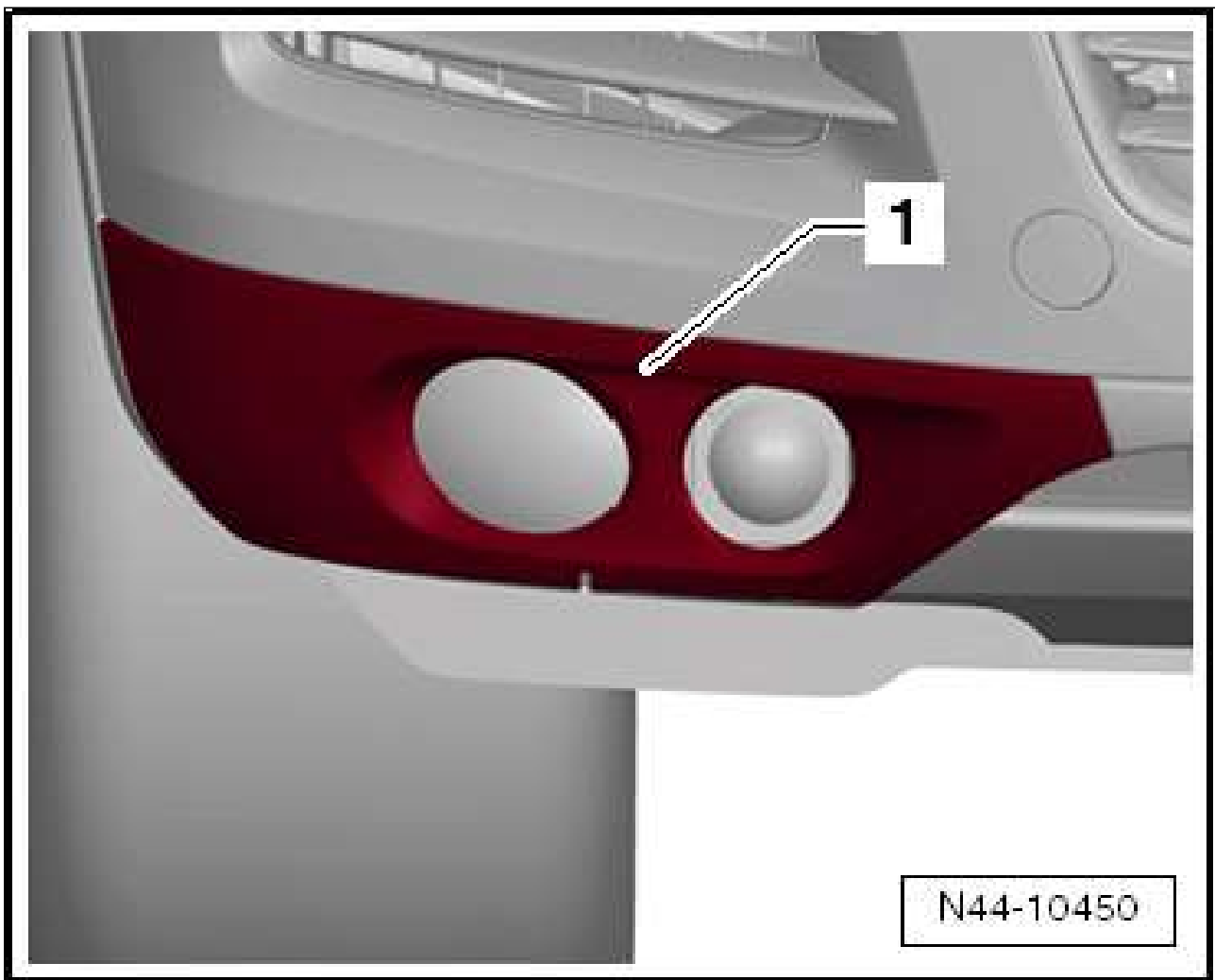
-- Mount the quick clamps to the rear wheels.

-- Mount the measurement sensor to the rear wheels.

-- Perform a wheel run-out compensation and the rear wheels.

Calibration Procedure with or without a Previous Axle Alignment

Fig 1: Identifying Fog Light Trim

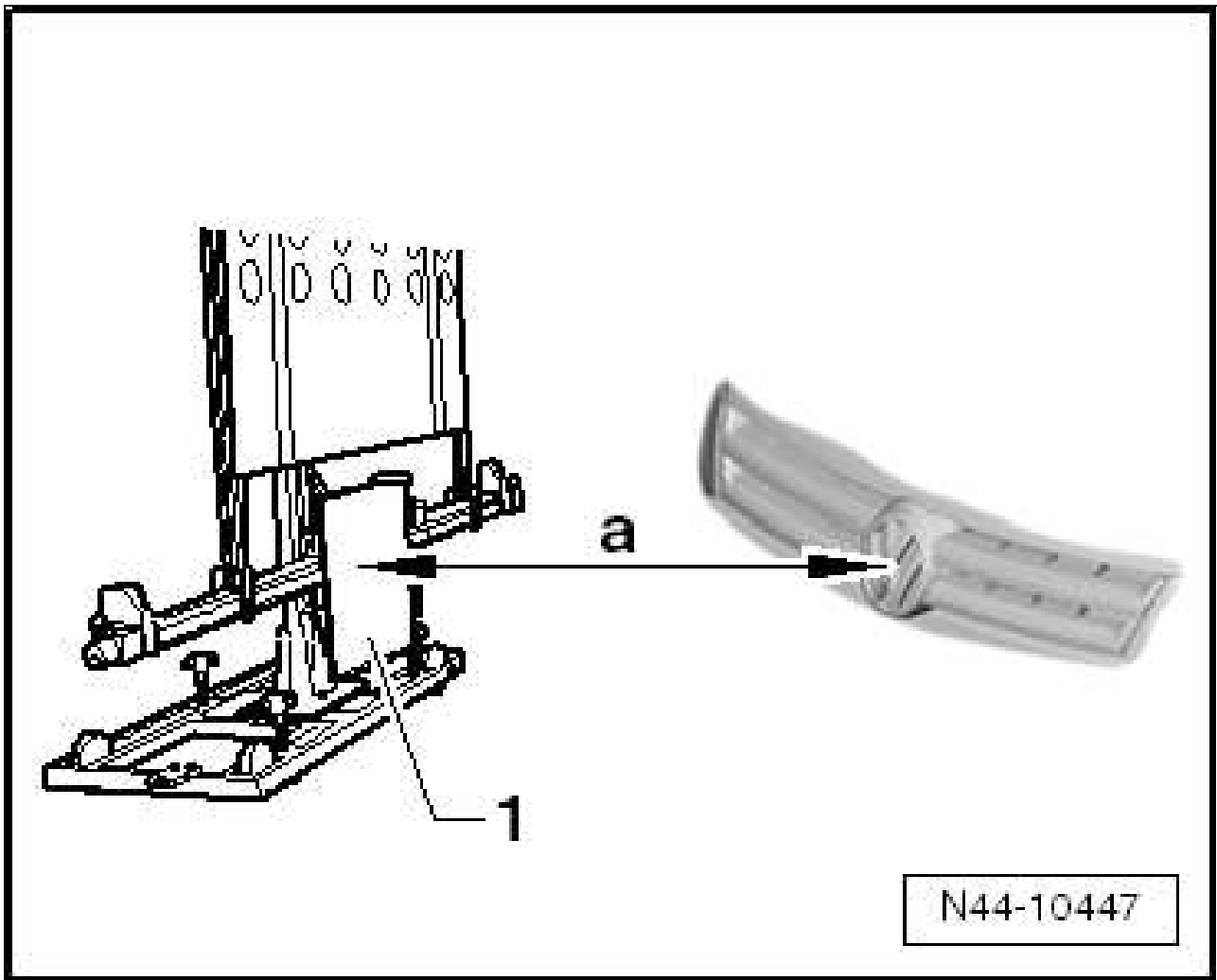


Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

-- Remove the right and left fog lamp trims. Refer to -1- Bumpers .

- Remove any dirt that may be on the sensor lens.
- Position the VAS 6430 at a distance -a- from the centrally positioned VAS 6430/3 in the center and parallel with respect to the VW emblem in the radiator grille.

Fig 2: Identifying Special Tool Required And Placement



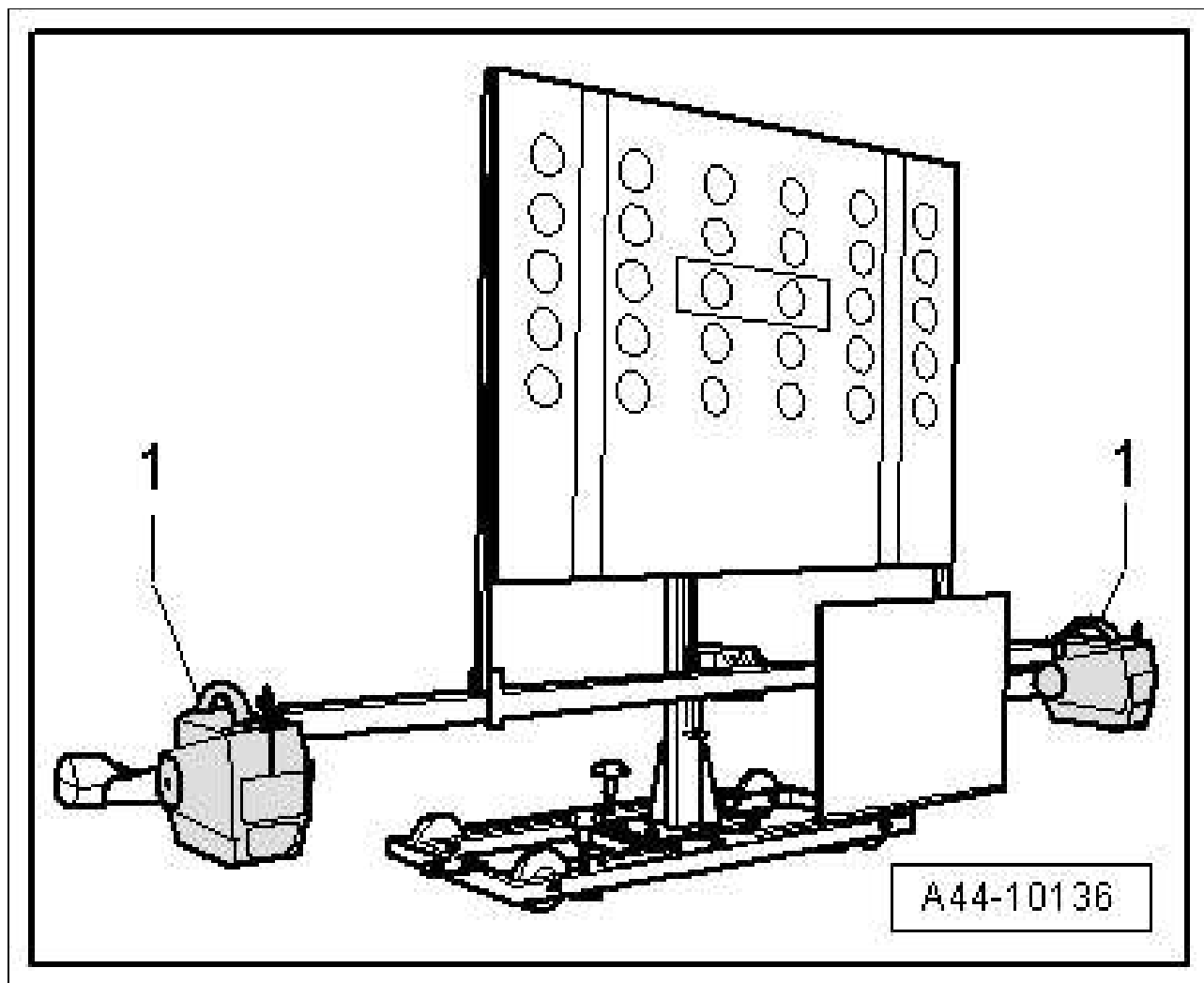
Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

a - 47.24 in +/- 0.98 in

NOTE: The VAS 6430 must not be moved on the calibration beam.

Procedure for All

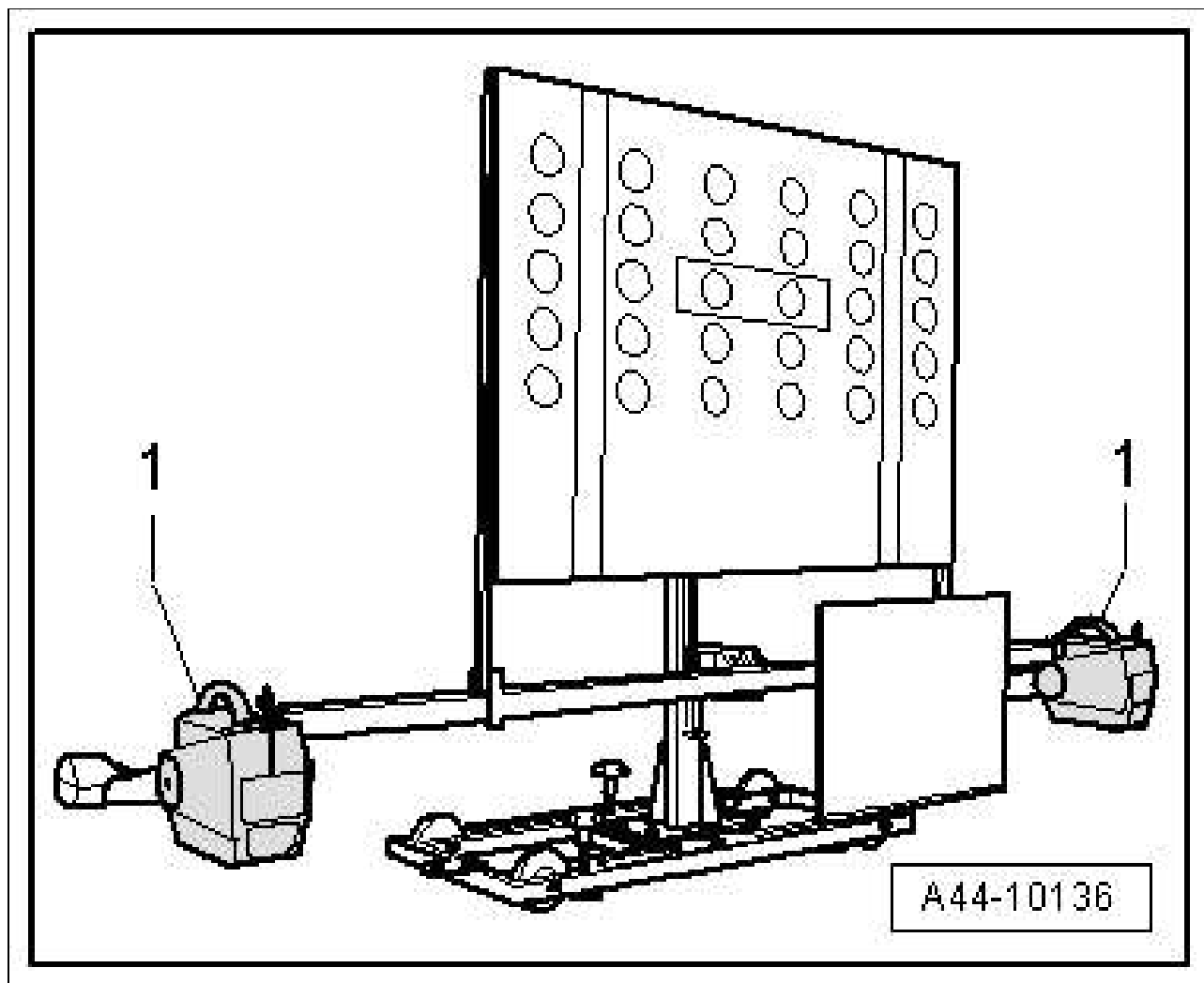
Fig 3: Identifying Front Wheel Measuring Sensors



Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

- Install the front wheel measuring sensors -1- on the VAS 6430.
- Remove the centrally positioned mirror and install it all the way on the right next to the vertical slits.

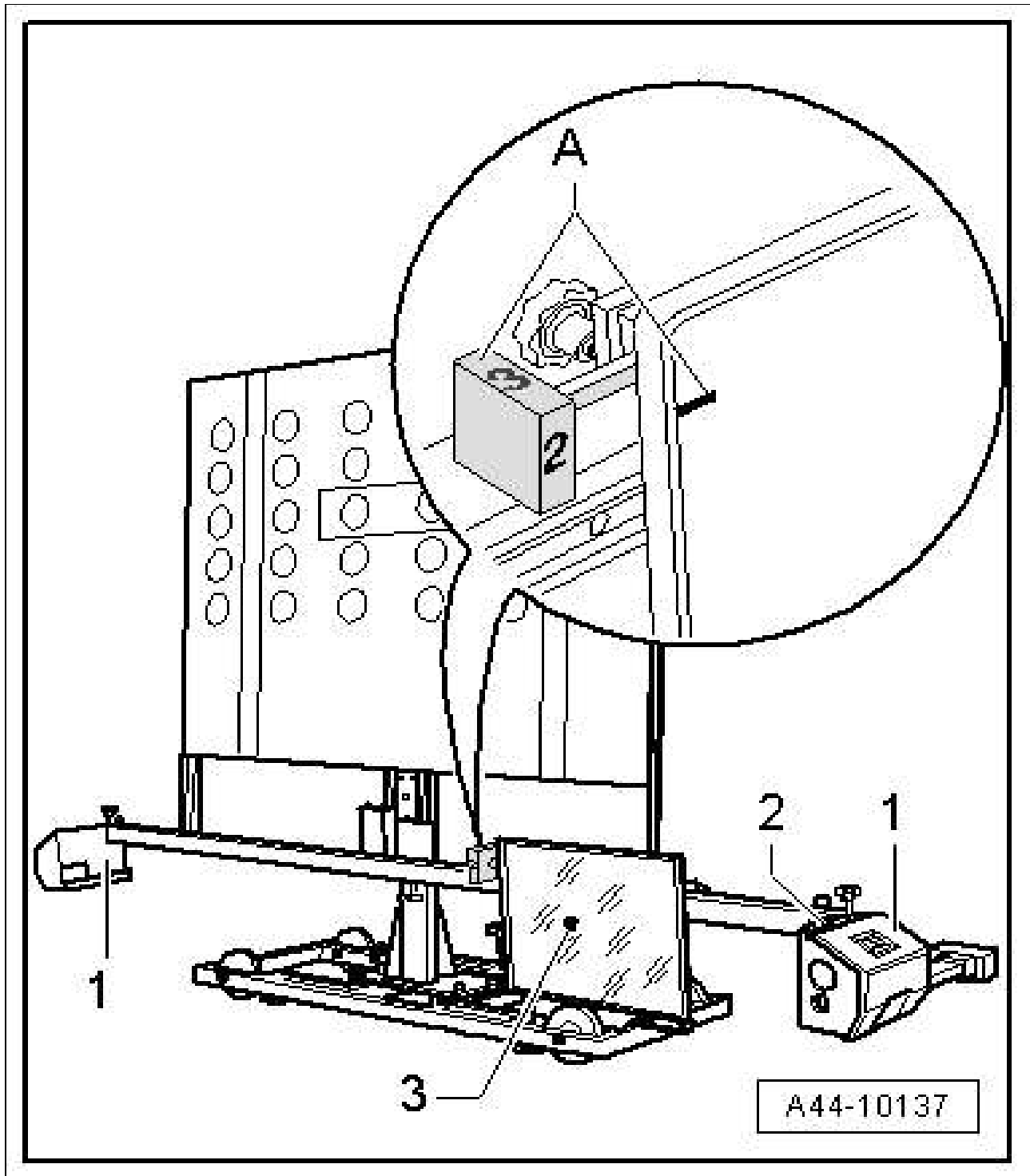
Fig 4: Identifying Front Wheel Measuring Sensors



Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

-- In area -A-, bring item -2- on the rotary knob into alignment with the marking on the mirror (number 2 on the rotary knob must face the vehicle).

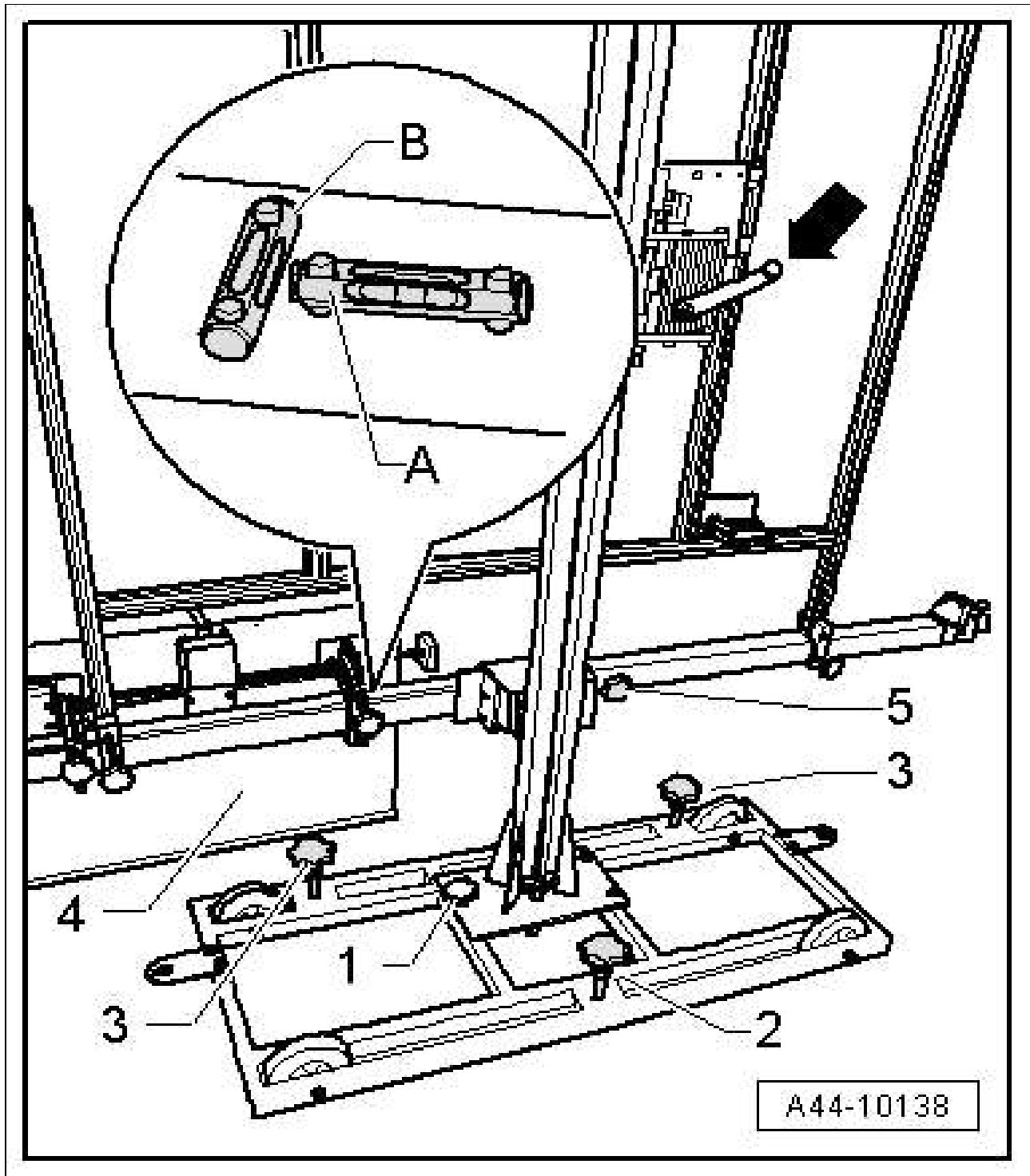
Fig 5: Identifying Special Tool VAS 6430/3 Setup



Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

- Use the adjustment bolts -1-, -2- and -3- to level the bubble levels -A- and -B- on the VAS 6430.
- Adjust the mirror -4- via the crank -arrow- so that the laser beam is in the center of the sensor lens.

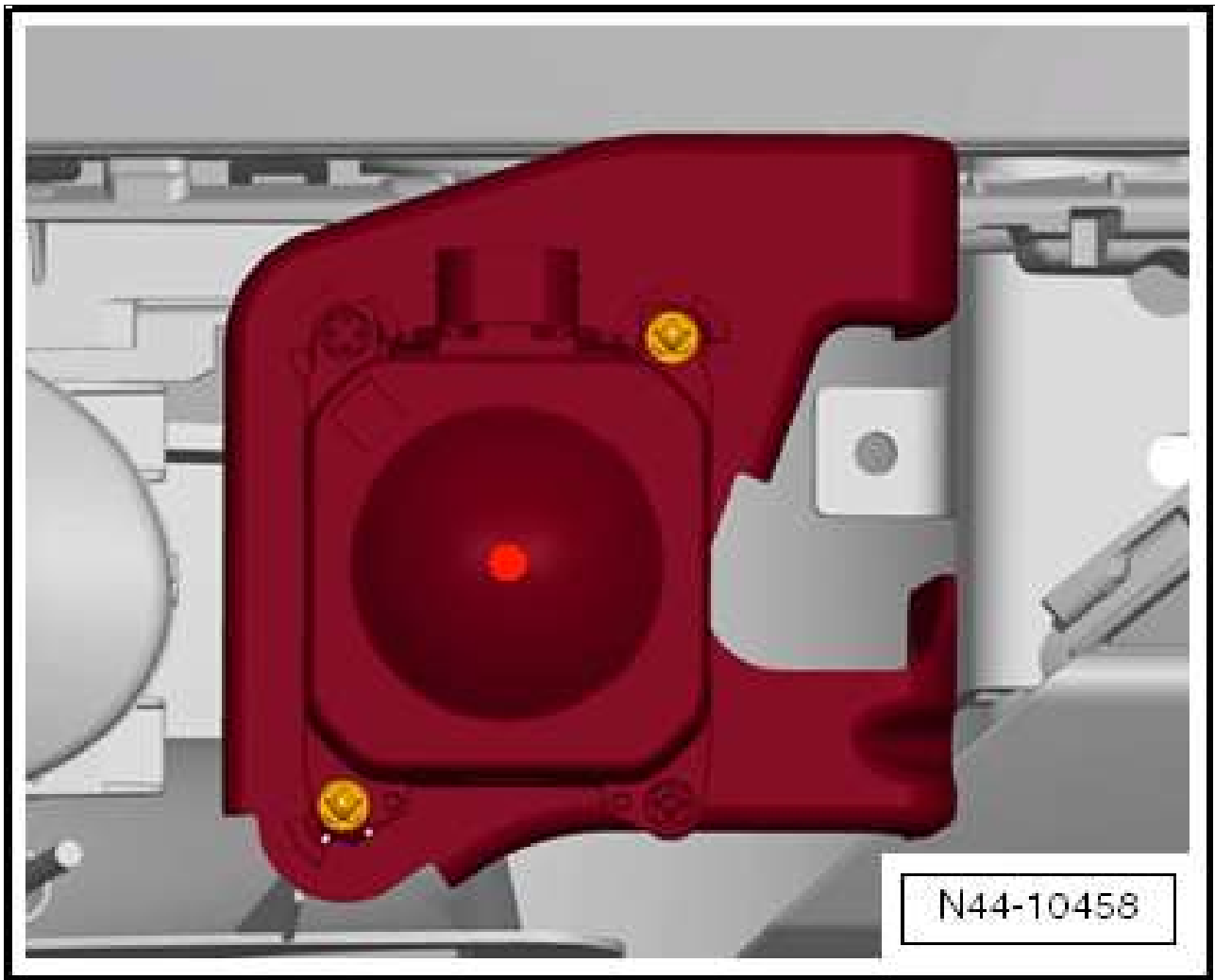
Fig 6: Adjusting Special Tool VAS 6430/3 Mirror



Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

-- Position the mirror -4- on the side of the calibration beam so that the laser beam is in the center of the sensor lens.

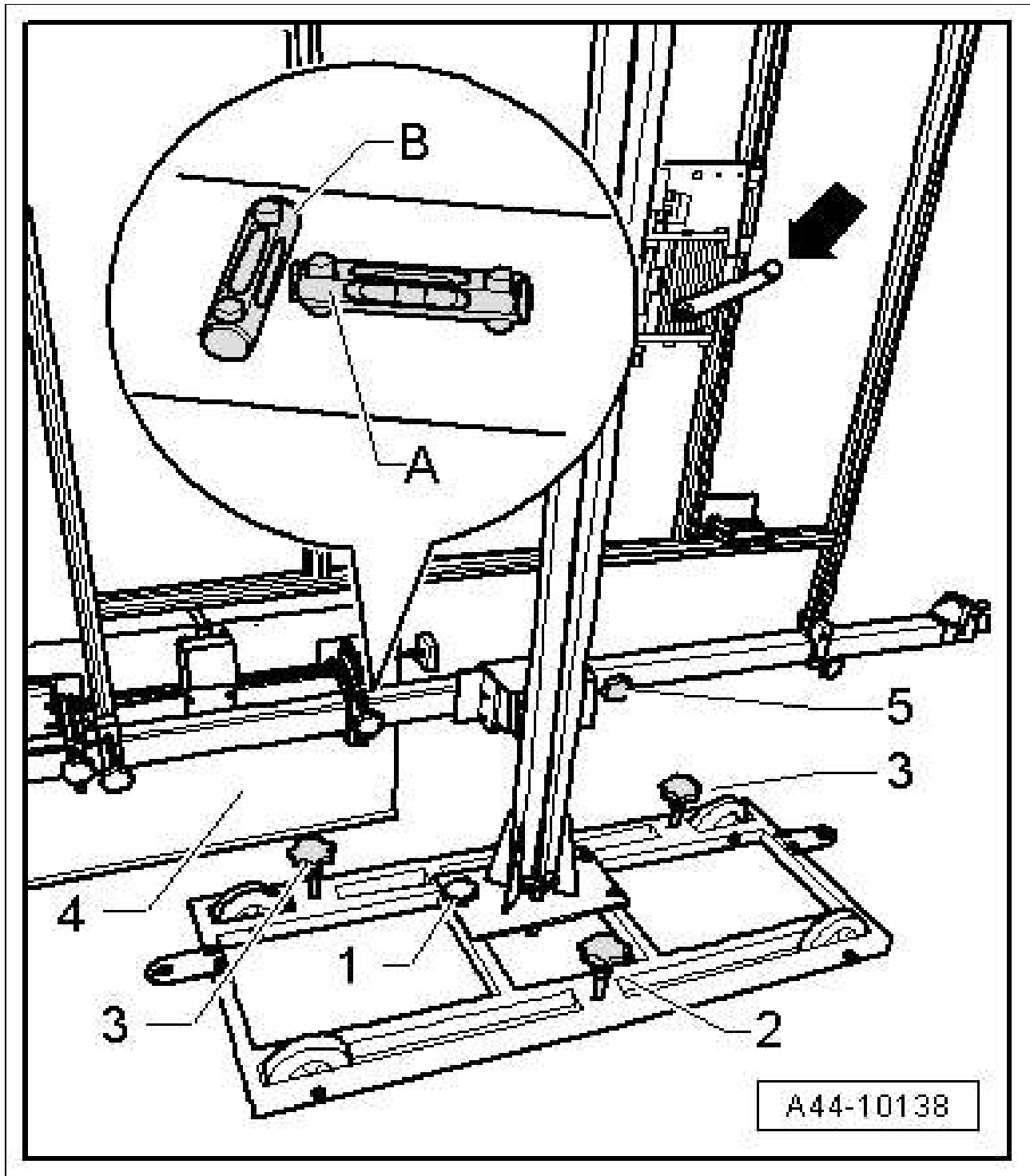
Fig 7: Identifying Calibration Beam



Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

-- set the same individual toe Settings of the front axle via the precision adjustment bolt -5-.

Fig 8: Adjusting Special Tool VAS 6430/3 Mirror

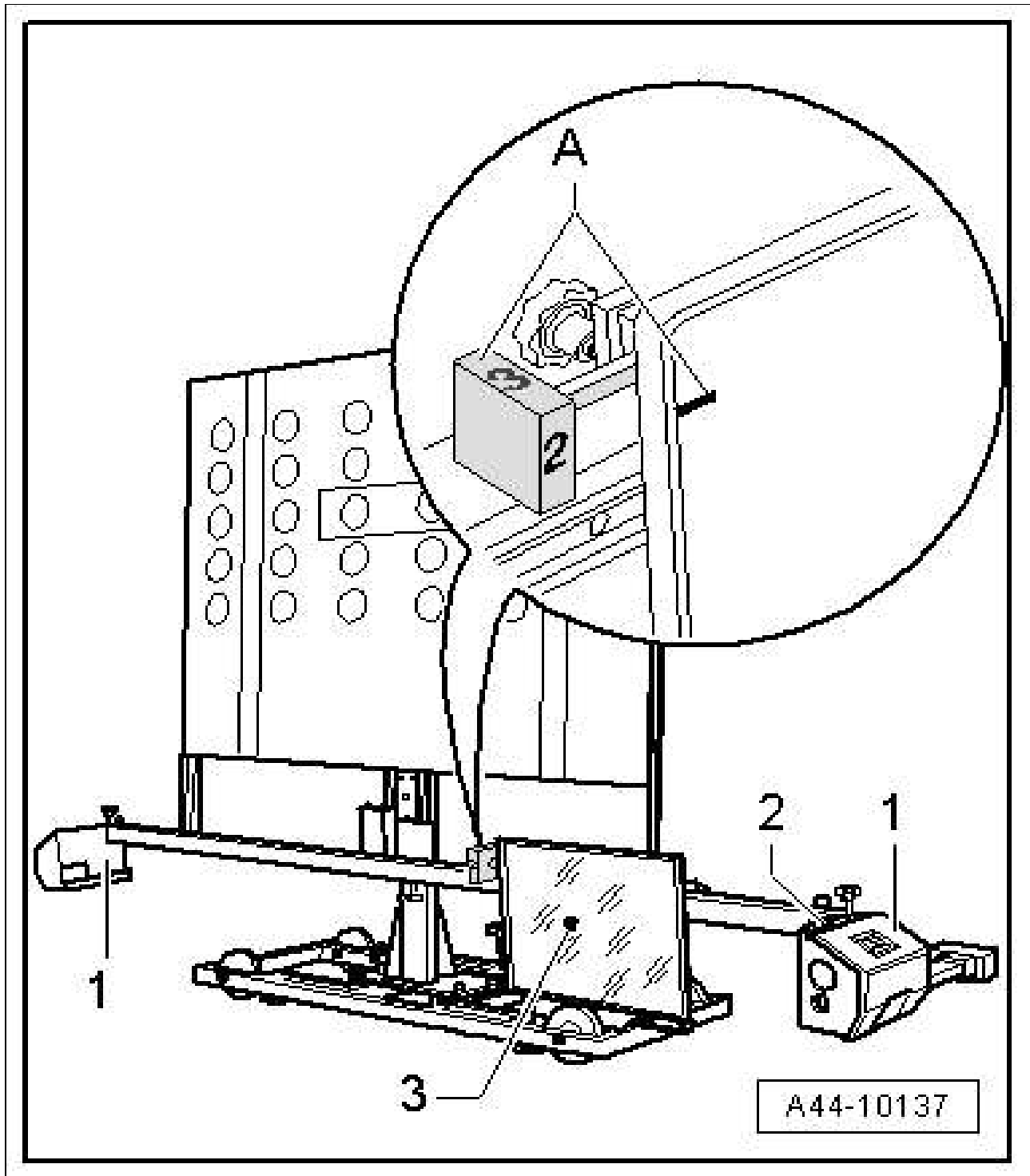


Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

- The difference between individual toe values must be less than 6' or they must be the same.

-- Level the bubble levels -2- of the measurement sensor -1-.

Fig 9: Identifying Special Tool VAS 6430/3 Setup



Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

-- Using the laser beam -3- on the VAS 6430/3, check whether the laser beam is in the center of the sensor lens.

NOTE:

- If the laser beam still meets the sensor lens at this step after adjusting the same individual toe values, the VAS

6430 is aligned correctly (positioned).

- If the laser beam does not meet the sensor lens, VAS 6430 alignment must be performed again.

-- Press the **Go to** button on the VAS 5051B and select the "function/component selection" function. Selection on the VAS 5051B for the adjustment of the distance regulation control module -J428- "master"

:

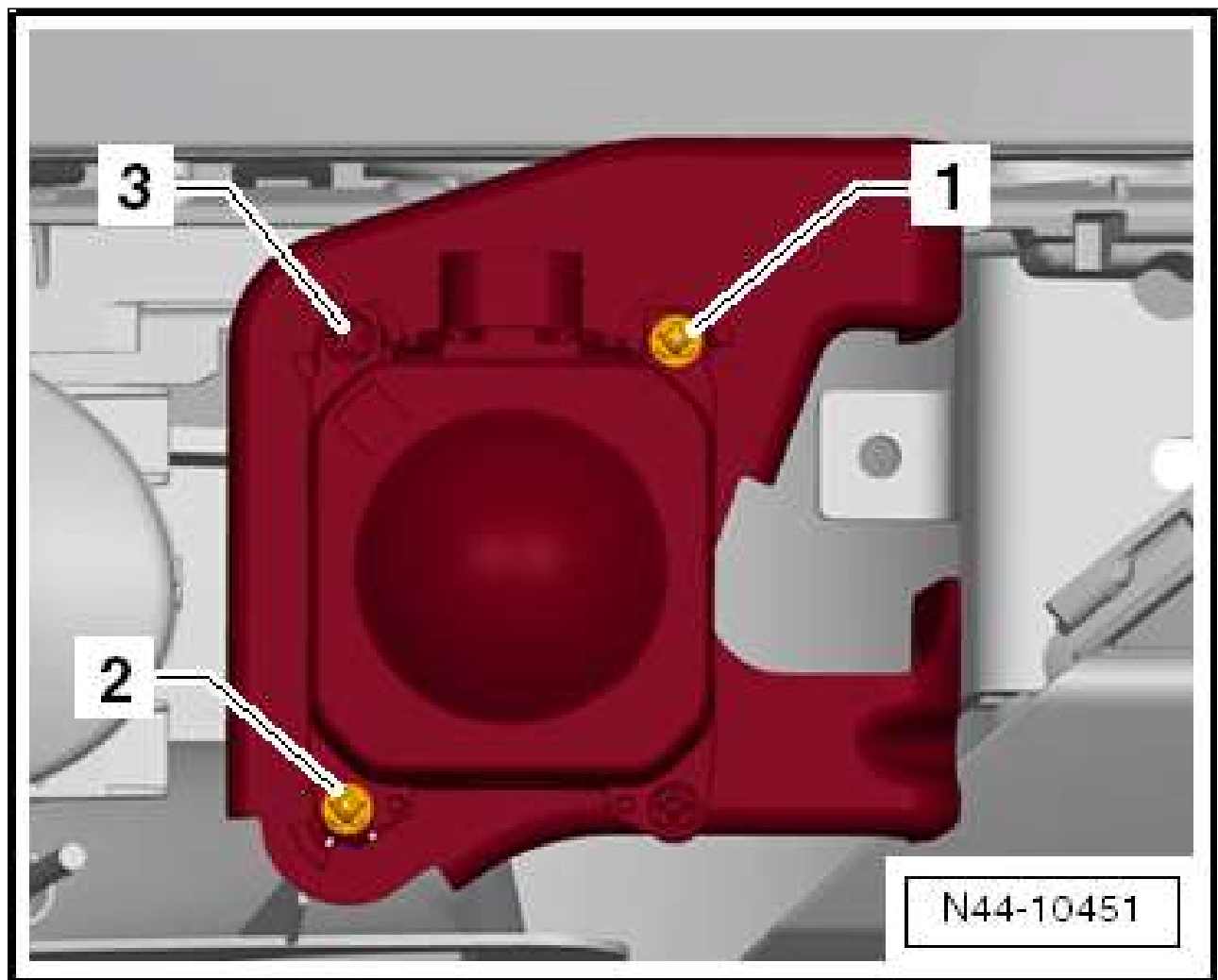
-- Press the following buttons one after another on the screen:

- **Chassis (Repair group 01; 40 - 49)**
- **Adaptive cruise control**
- **Master**
- **01 - OBD-capable system**
- **13 - Distance regulation I J428**
- **13 - Distance regulation, functions**
- **13 - Calibrating the distance regulation control module J428**

Follow the instructions on the screen to perform the adjustment.

Identification of the Adjustment Bolts of the Distance Regulation Control Module "Master"

Fig 10: Identifying Distance Regulation Control Module Adjustment Bolts

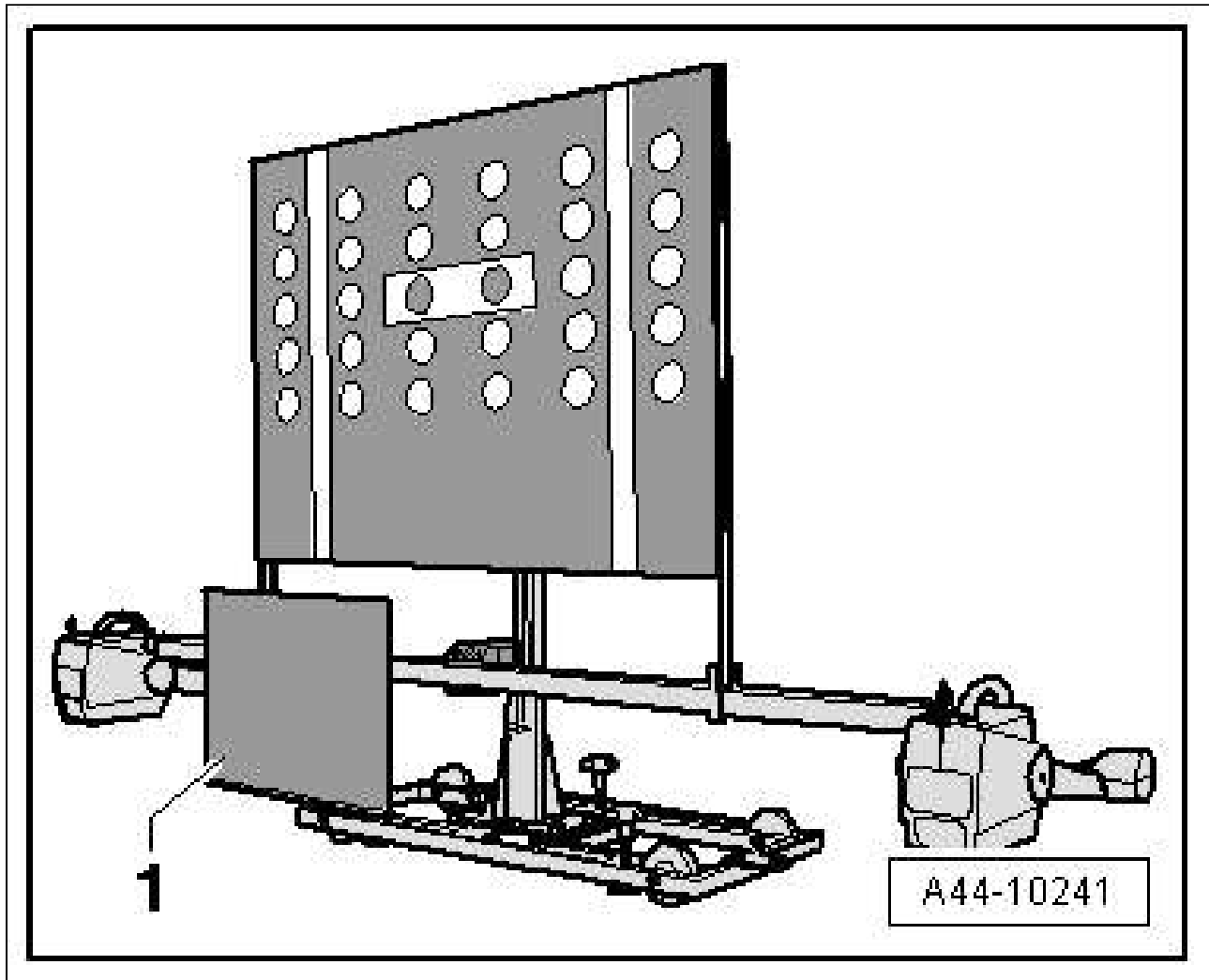


Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

1. Adjustment bolt
2. Adjustment bolt
3. Must not be turned - functions only as a pivot point

The procedure for adjusting the distance regulation control module 2 -J850- "slave" is identical to the procedure for adjusting the distance regulation control module "master".

Fig 11: Identifying VAS 6430/3



Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

To do this, move the VAS 6430/3 -1- to the opposite side of the calibration beam.

Selection on the VAS 5051B for the adjustment of the distance regulation control module 2 "slave" :

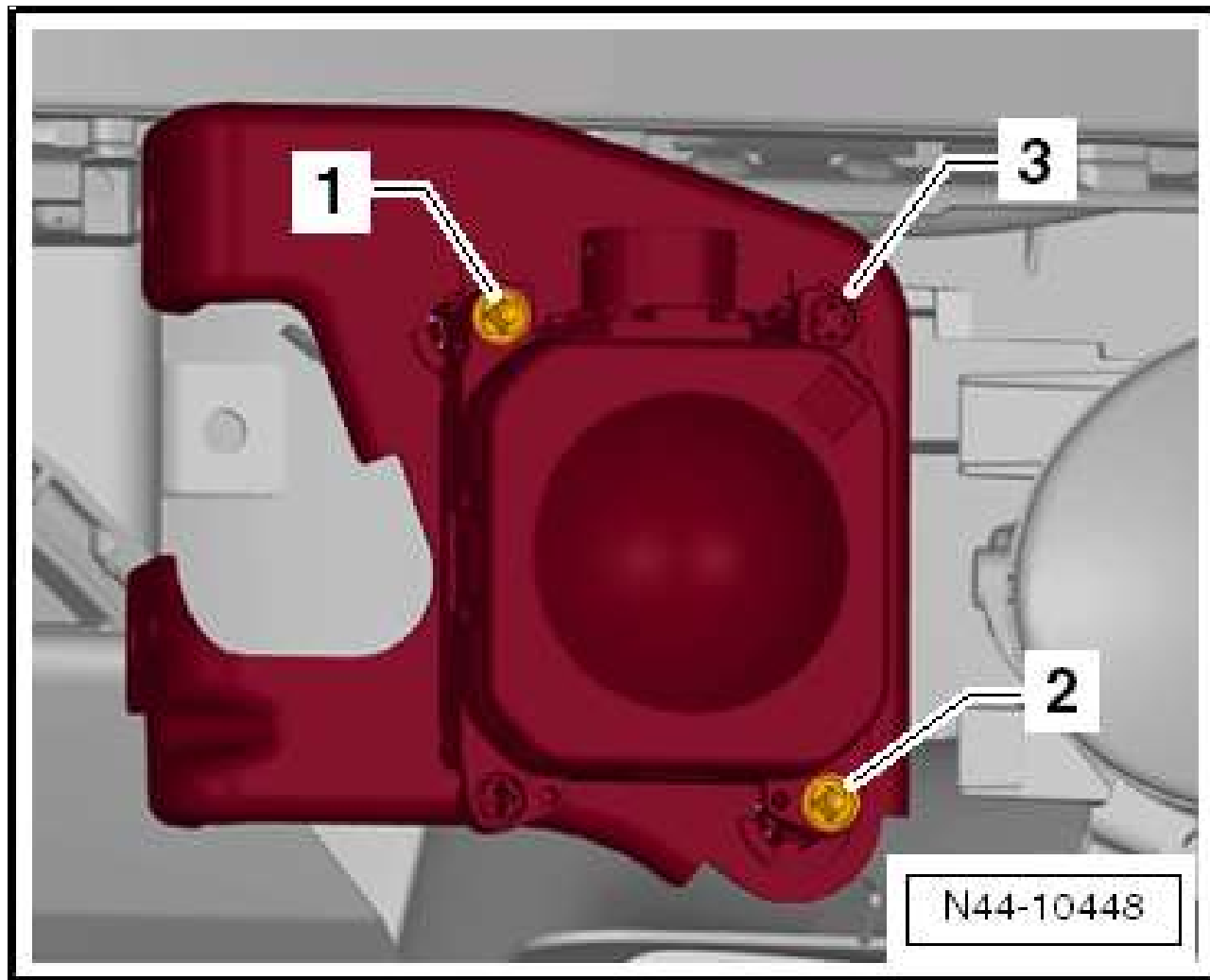
-- Press the following buttons one after another on the screen:

- **Chassis (Repair group 01; 40 - 49)**
- **Adaptive cruise control**
- **Slave**
- **01 - OBD-capable system**
- **8B - Distance regulation 2 | J850**
- **8B - Distance regulation, functions**
- **8B- calibrate the distance regulation control module 2 J850.**

Follow the instructions on the screen to perform the adjustment.

Identification of the Adjustment Bolts of the Distance Regulation Control Module 2

Fig 12: Identifying Distance Regulation Control Module Adjustment Bolts



Courtesy of VOLKSWAGEN GROUP OF AMERICA, INC.

1. Adjustment bolt
2. Adjustment bolt
3. Must not be turned - functions only as a pivot point

WARNING: *The ACC adjustment is confirmed when "output diagnostic test complete" appears in the VAS 5051B.*