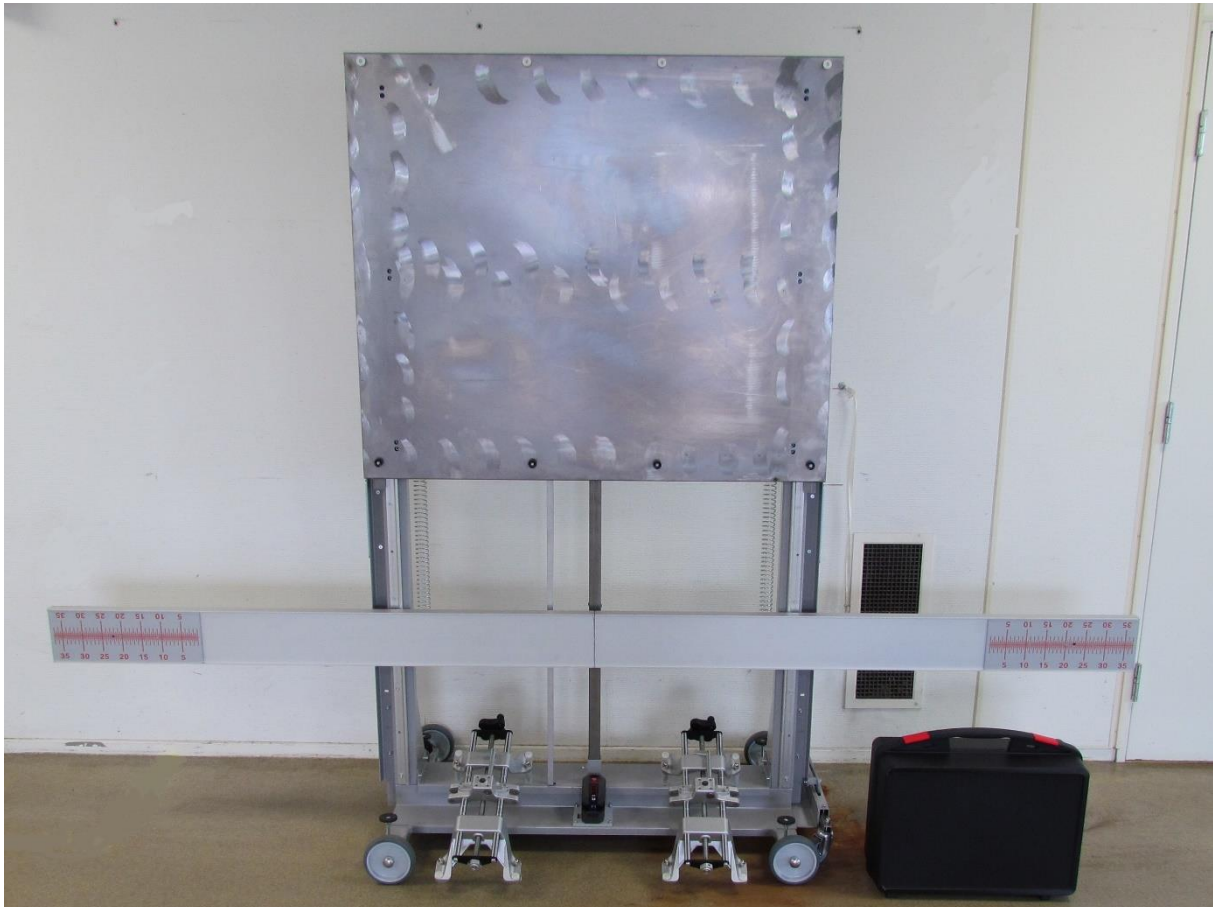


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## 1. ACS - ADVANCED CALIBRATION SYSTEM



The tool is manufactured by WMS Wagner GmbH

The ADAS calibration kit consists of the following parts:

1. Carriage
2. 2 wheel clamps
3. Suitcase for accessories
4. Double-sided target



Contents in the suitcase:

1. Centre laser
2. 2 scales with mirrors
3. Auxiliary holder for tape measure
4. Tape measure
5. Safety glasses

## 2. EXAMPLE OF A AUDI A4[16-]

### ➤ Calibration should be performed when.

"No or incorrect basic setting/adaptation" is stored in the fault memory.

The front camera for driver support -R242- has been replaced.

Windshield has been replaced or dismantled.

The rear axle toe-in has been set.

Rebuilds has been done on the vehicle that affects the body height.

The vehicle level sensor, in vehicles with damper regulation, has been adapted again.

Ensure that the illumination on the calibration board is very good.

### ➤ Connect Autocom diagnosis tool.

Start the computer and open Autocom CARS software.

Select the vehicle.

In the "Plug position" menu item, locate the OBD socket and plug in the Autocom diagnosis tool.

Attach vehicle to a suitable charger.

### ➤ Position the vehicle.

Position unloaded vehicle on level ground.

Parking brake applied.

Ignition on, engine off.

Check and adjust the tire pressure if necessary.

## ➤ How to setup the ADAS calibration tool.

Connect to camera calibration (found in "Multifunction> Driver help system>Camera module, front>).

In the menu item "Calibration" you find the camera calibration.

Attach Target on target holder, the correct distance and height can be found in the help text.

Note: before attaching on alloy rim, it is advantageous to apply a layer of grease to the surface where to attach the wheel clamp to minimize damage on the rim.

The help text describes how the target shall be set with regard to distance and other dimensions.

- Adjust the height of the adjustment bar at the level of the centre of the axle. Before adjustment, release the scale to the floor.
  - Use scale 20 – 97 mm. measure centre position on wheel and adjust the bar height to the same level.
- The height is defined to 1090mm.
  - Use scale 98 – 185 towards the red top arrow at the bottom on the target holder as reference. The correct position set is the centre of the target holder.
  - When this is done, raise and lock the scale for smoother movement of the rig.
- The calibration rig shall be placed with a distance of 1500 mm ± 25 mm between the front wheel centre and the beam on the calibration rig.
  - To measure this, mount the wheel clamp on the front wheel and attach the measurement adapter in the hole on the end of mirror/scale. Measure and adjust to correct distance on both sides.

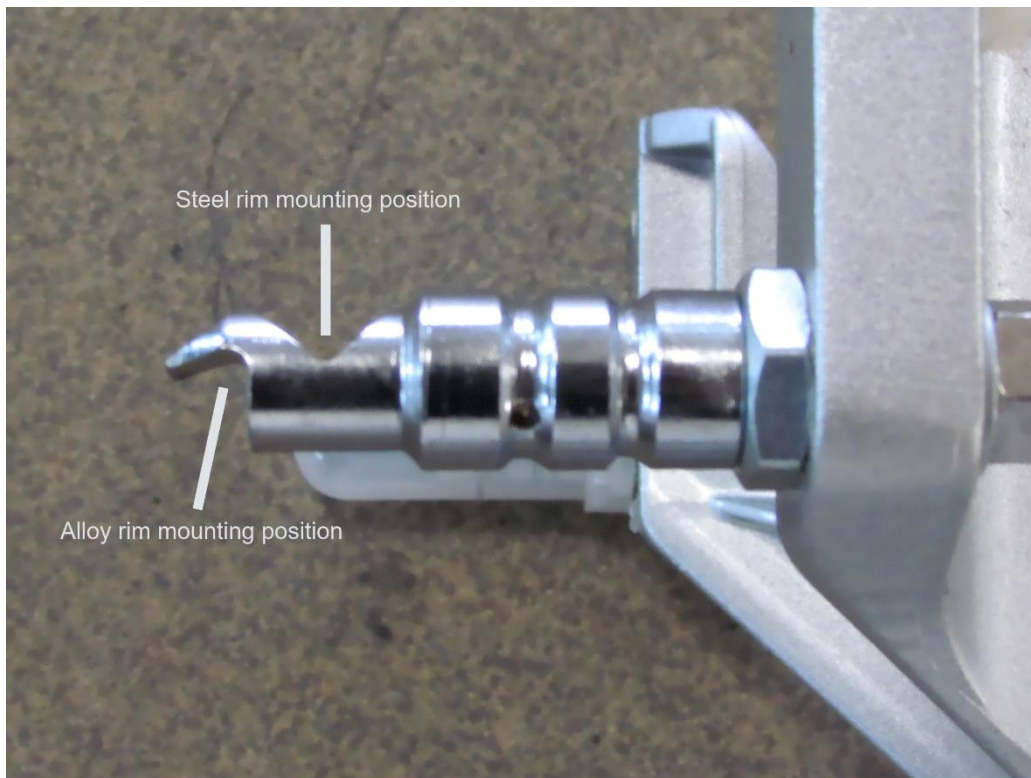
Insert the centre laser into the centre holder on the carriage, switch the laser ON and place the ADAS calibration tool carriage in the centre of the vehicle front.

Switch OFF the centre laser.

Attach the wheel clamps to the rims of the rear axle and insert scales, mirror side, towards the ADAS calibration tool.



Rim clamping position for steel and alloy rims.



How to establish parallelism of the target to the rear axle.

- Both lasers must hit both mirror.
- The laser point reflected back over the mirror must hit both laser scales on the adjustment bar.
- By turning the trolley with the auxiliary rod, set the adjusting bar so that both are adjusted by the mirror reflected laser points reach the same value on the laser scale.

**ATTENTION! Do not align the trolley with the adjusting bar!**

How to establish centre alignment of the target to the rear axle.

- Turn the mirror scales of the wheel clamps to the measuring scales.
- By moving the trolley in parallel (on the rollers) the laser point on both scales of the bring the wheel sensor to the same value.
- For smaller height differences in floor level this can be adjusted with the 4 corner screws. Adjust so that the laser beam hits at the same level on both side scale.

Now the calibration rig is set for calibration.

➤ **Perform scan before starting ADAS calibration.**

Select Brand/Model/Year then start ISS and save the complete scan.

➤ **Calibration procedur.**

- Start the camera calibration in the Autocom CARS software.
- Follow the steps of the calibration function.
- After the calibration has been completed, the new calibration data are displayed in the pop-up window.
- End the calibration with a drive cycle to ensure that the system works without problem.

➤ **Perform scan after ADAS calibration.**

Select Brand/Models/Year then start ISS and save the completed scan.

➤ **Calibration process is now finished.**

The vehicle can now be handed over to the customer.

