



90 Overhead view camera (TopView) calibration fails

90 23 13 2069670/1 March 15, 2023.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A8	2018 – 2024	All	Not Applicable
S8	2018 2020 – 2024		
A6, A7, Q7, and Q8	2019 – 2024		
e-tron quattro	2019 2021 – 2024		
A6 allroad, S6, RS 6 Avant, S7, RS 7, e-tron Sportback quattro, SQ7, SQ8, and RS Q8	2020 – 2024		
A8 e quattro	2020 – 2021		
A7 e quattro	2021 – 2022		
e-tron S quattro, e-tron GT, and RS e-tron GT	2022 - 2024		

Condition

Workshop findings:

- The overhead view camera system cannot be calibrated.

Technical Background

1. The repair process isn't followed correctly.
2. Correction values of camera (X, Y or Z) are outside the tolerances.

Production Solution

Not Applicable



Service

1.1 Calibration unit not set up properly

The diagnostic tester and the MMI calibration screen indicate that not all areas of the calibration unit have been identified correctly (see **Figure 1**).

The calibration was not successful.

Message in diagnostic tester and entry in diagnostic log (example only):

Calibration could not be performed.

Status: not active

Line calibration error:

Rear left area: detected

Rear right area: detected

Front left area: NOT detected

Front right area: detected

Left horizontal area: detected

Left vertical area: detected

Right horizontal area: detected

Right vertical area: detected

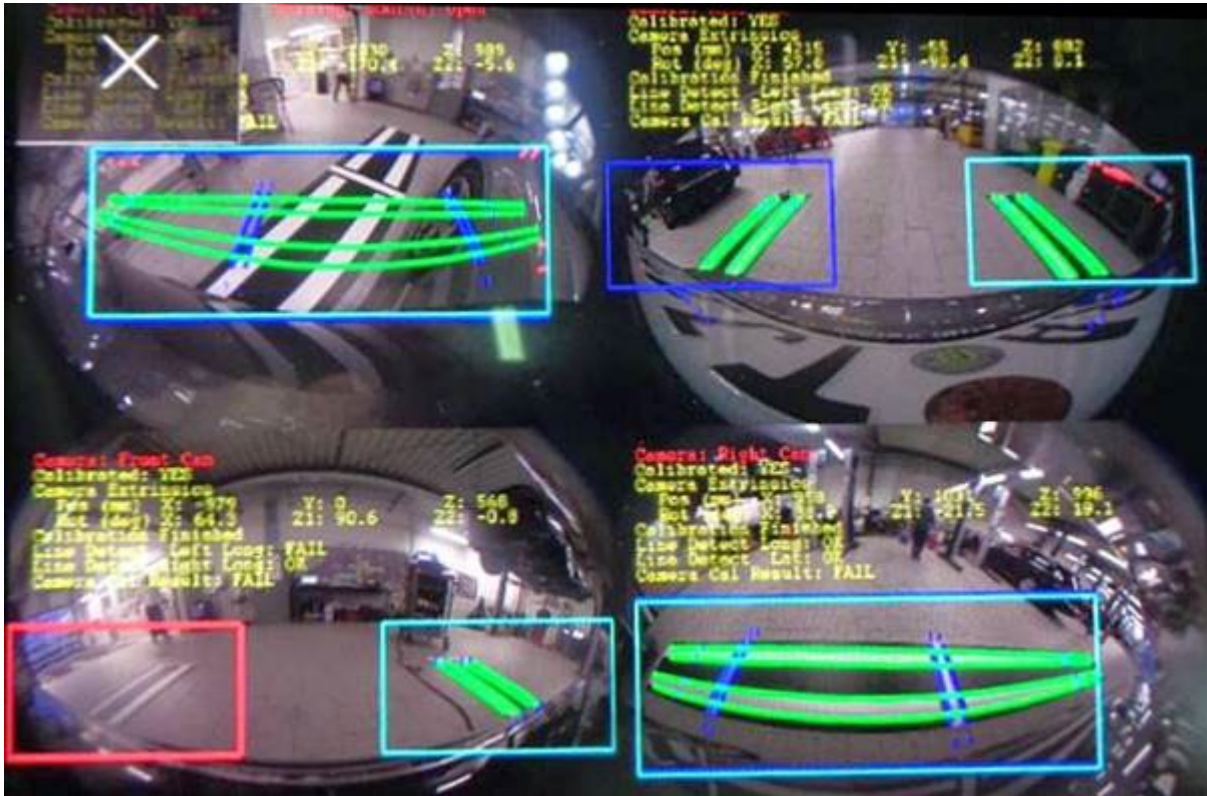


Figure 1: Camera calibration as displayed on the MMI screen

- Check whether the calibration unit has been set up as specified in the Workshop Manual and correct the setup if necessary.

1.2 Insufficient lighting

The diagnostic tester and the MMI calibration screen indicate that not all areas of the calibration unit have been detected correctly (see **Figure 2**).

Calibration was not successful.

Message in diagnostic tester and entry in diagnostic log (example only):

Calibration could not be performed.

Status: not active

Line calibration error:

Rear left area: detected

Rear right area: detected

Front left area: detected



Front right area: detected
Left horizontal area: detected
Left vertical area: NOT detected
Right horizontal area: detected
Right vertical area: NOT detected

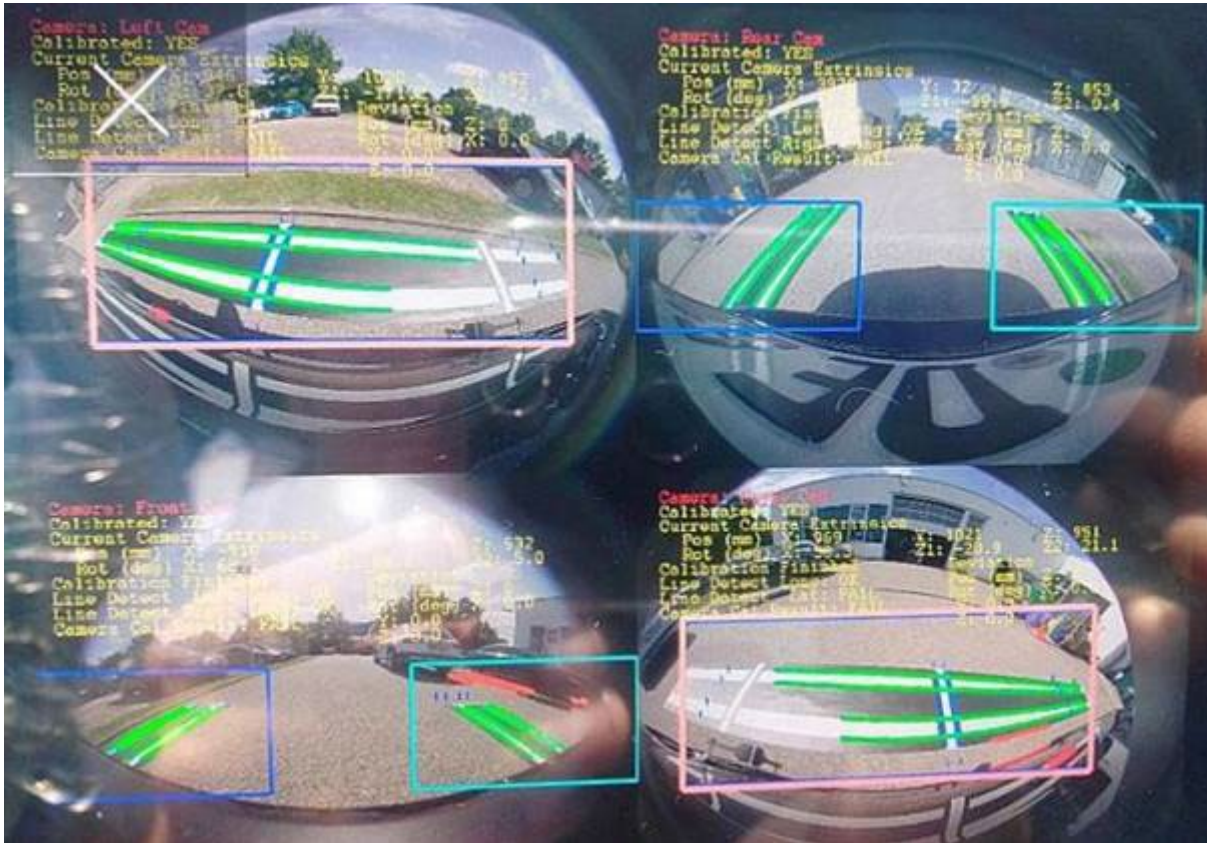


Figure 2: Camera calibration as displayed on the MMI with insufficient or excessive lighting

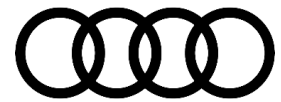
- When the corresponding camera image appears on the MMI, no reflections or shadows must be visible on the calibration unit. All the lines of the calibration unit must be clearly recognizable. If this is not the case, adjust the lighting.

1.3. License plate frame and/or license plate in field of vision of the front camera

The diagnostic tester and the MMI calibration screen indicate that not all areas of the calibration unit have been detected correctly (see **Figure 3**).

Calibration was not successful.

Message in diagnostic tester and entry in diagnostic log (example only):



Calibration could not be performed.

Status: not active

Line calibration error:

Rear left area: detected

Rear right area: detected

Front left area: NOT detected

Front right area: NOT detected

Left horizontal area: detected

Left vertical area: detected

Right horizontal area: detected

Right vertical area: detected

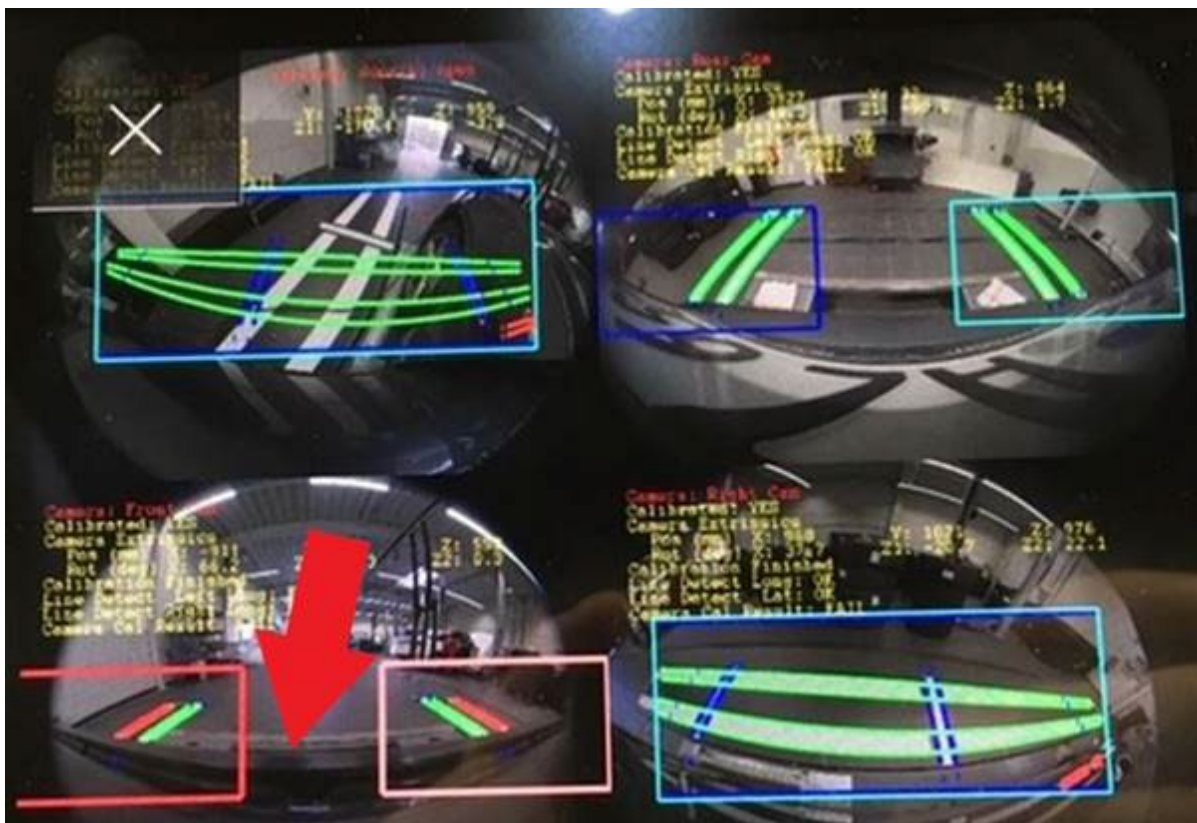


Figure 3: Camera calibration as displayed on the MMI with license plate visible

- If the license plate frame or the license plate itself interferes with the calibration of the cameras, the license plate and its frame should be removed while performing the calibration procedure.



1.4. Camera picture fuzzy/distorted

- All cameras must have a clear field of view. If a camera image appears to be washed out, distorted or shows any other signs of contamination, please clean the affected camera with a microfiber cloth and attempt the calibration again.

2.1. Camera not installed correctly

The diagnostic tester and the MMI calibration screen indicate that all areas of the calibration unit have been detected correctly.

However, calibration was still not successful.

The MMI calibration screen indicates that the correction values of the camera (X, Y, Z) are outside the tolerance (see **Figure 4**).

Message in diagnostic tester and entry in diagnostic log (example only):

Calibration could not be performed.

Status: not active

Line calibration error:

Rear left area: detected

Rear right area: detected

Front left area: detected

Front right area: detected

Left horizontal area: detected

Left vertical area: detected

Right horizontal area: detected

Right vertical area: detected

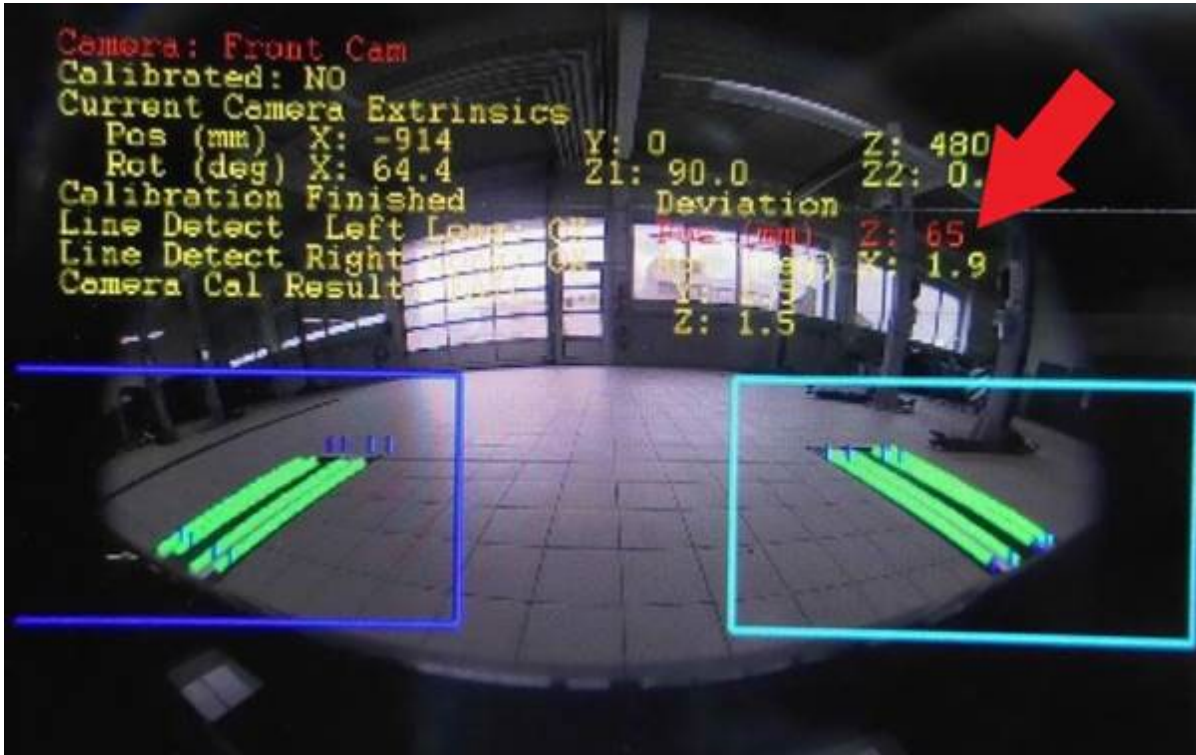
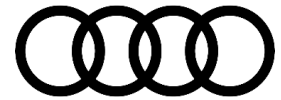


Figure 4: Camera calibration as displayed on the MMI with incorrectly installed camera

- Check the camera installation (e.g. camera position in camera bracket and camera bracket in bumper not level/not engaged or similar) and correct the installation position in the event of discrepancies.

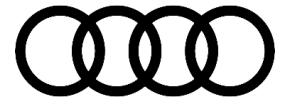
2.2. Insufficient vehicle ride height

The diagnostic tester and the MMI calibration screen indicate that all areas of the calibration unit have been detected correctly.

However, calibration was still not successful.

The MMI calibration screen indicates that the height correction values of the camera (Z) are outside the tolerances (see **Figure 5**).

Message in diagnostic tester and entry in diagnostic log:
Calibration could <u>not</u> be performed.
Status: not active
Line calibration error:
Rear left area: detected
Rear right area: detected
Front left area: detected



Front right area: detected
Left horizontal area: detected
Left vertical area: detected
Right horizontal area: detected
Right vertical area: detected

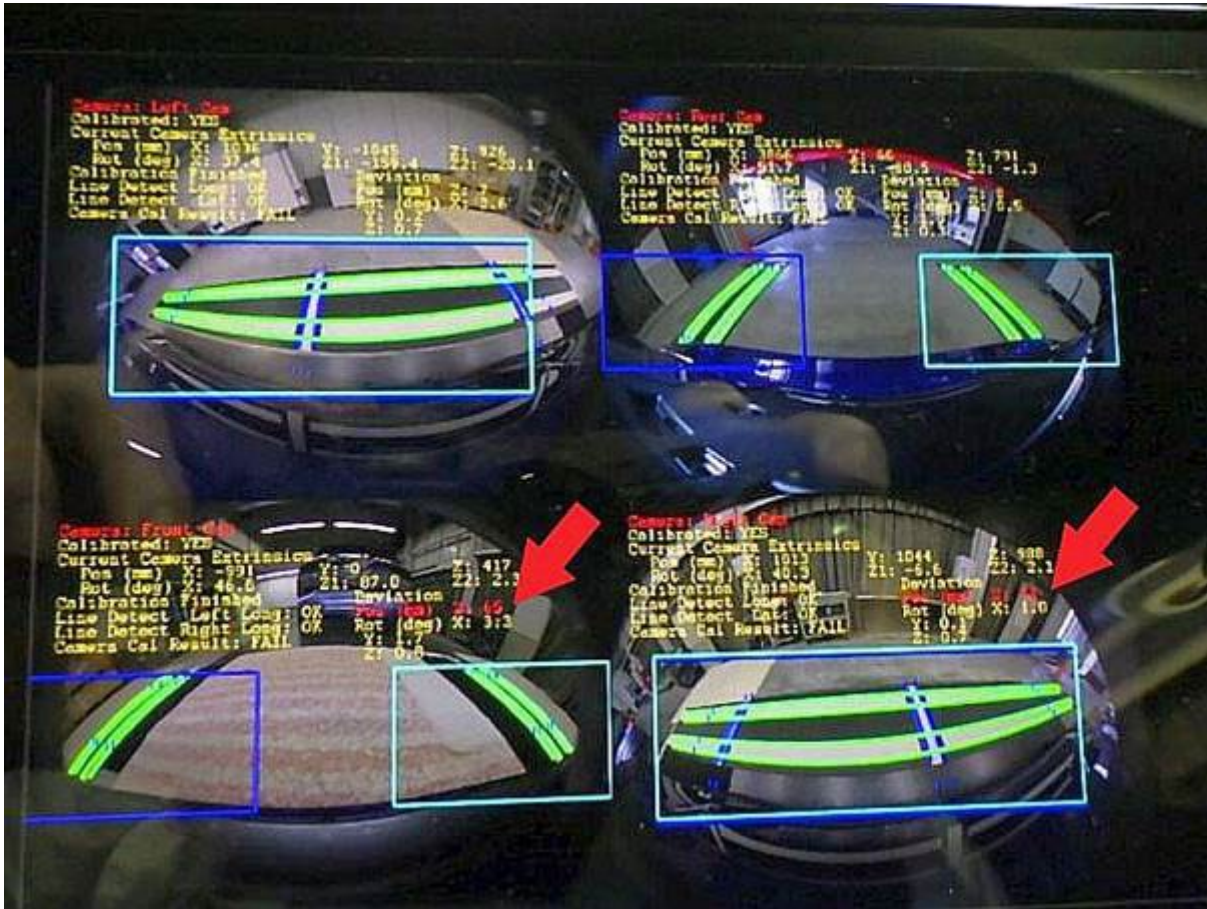


Figure 5: Camera calibration as displayed on the MMI with insufficient ride height

- Check the vehicle's ride height at both the front and rear wheel arches (e.g. transport locks fitted, tire pressure too low) and correct any discrepancies.
- Check that the vehicle level sensors are installed correctly and correct the installation in the event of any discrepancies.
- If the camera still doesn't calibrate due to insufficient ride height, run the plan item "Headlight basic setting" in "Guided Functions".
Re-calibrating the headlights will also re-calibrate the level sensors.
With the corrected values for the vehicle's ride height, the calibration of the overhead view (TopView) camera system will usually become possible.



Warranty

This TSB is informational only and not applicable to any Audi warranty.

Additional Information

All part and service references provided in this TSB (**2069670**) are subject to change and/or removal. Always check with your Parts Department and/or ETKA for the latest information and parts bulletins. Please check the Repair Manual for fasteners, bolts, nuts, and screws that require replacement during the repair.

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