

What is ADAS and how does it work?

Most road accidents are the result of human error. Advanced driver assistance systems (ADAS) were developed to automate, adapt, and enhance vehicle systems for safety and better driving. In short, they help the driver, and increase car and road safety.



Sergio Múgica

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“Today, advanced driver assistance systems (or ADAS for short) are standard on our roads. Almost all new cars are equipped with advanced safety features such as park assist, adaptive cruise control, blindspot monitoring, object recognition, and autonomous emergency braking assist. ADAS work through sensors and a camera that is usually fitted at the centre of the windscreen. After replacing a windscreen, it is important to perform a full calibration of the camera, otherwise the car’s assistance systems may not work properly, putting the lives of the driver, passengers, and other road users at risk. Installing a new windscreen requires an excellent product, an experienced professional fitter and detailed technical knowhow. So, whether you do your own, or outsource your calibration, you need to understand the process.”

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GLAVISTA

Autoglass history
and evolution



▶ Our video guide clearly shows how to avoid costly mistakes – making calibration easy and straightforward. Watch it at the Glavista YouTube channel. Or check out the most important steps on the following pages.

Investing in successful calibration

Glavista has invested in extensive calibration research. Our experts worked with key industry partners to build our understanding of how both glass manufacturers and fitters could make improvements. Based on this research, we also took steps to improve our own production processes. After identifying any potential issues, we adapted our production facilities to eradicate them e.g., special templates to control the position of the camera bracket, quality control of the gap between the bracket and the glass and the most important thing, the control of the curvature in the camera area.

As the curvature is key, a robot checks all of our models with a camera during production, to ensure that we achieve the tolerances needed for perfect calibration.



Calibrating the camera

Before removing the damaged windshield

- Use diagnostic equipment to check that there are no failures related to the front camera or ADAS system. (If there are, try to fix them. If they remain, it's recommended not to change the windshield).
- Establish that the old windshield can be calibrated without any issues, through the standard calibration process.
- Verify that the Eurocode of the new windshield matches the old one.

During the fitting process

- Control the position of the old windshield both vertically and horizontally. It should be aligned with the car body (conditioned by the quantity of PU and pressure), to leave the new glass in the same position as the old one.
- Clean the glass in the camera area, both inside and out, ensuring that there is no dirt on it.
- Ensure that the camera is fitted correctly into the bracket (noting that there are a lot of different fixation systems).
- Ensure that all wires related to the camera are correctly plugged.

During the calibration process

- Connect the calibration system properly, to avoid any communication failures with the car CPU.
- Ensure light conditions are correct (avoiding low light, direct light over the camera coming from windows, or even the front lights of the car).
- Ensure the conditions of the car are correct. Mainly no overload in the backside and standard pressure of the wheels.
- There shouldn't be any people or objects between the calibration board and the front camera, not even in the lateral.
- Use the standard procedure and tools that the calibration system supplier recommends.
- Be very accurate with the measurements when locating the car related to the calibration board.

In the case of calibration failure

- Lower the board and place it closer to the car (at the maximum tolerance allowed by the calibration system manufacturer) and recalibrate.
- If the failure has not been resolved, raise the board, and place it further from the car (again, at the maximum tolerance allowed by the calibration system manufacturer), and recalibrate again.
- Verify that the camera is well fixed, and no part from the bracket has been damaged during the fixation process.

