

Calibrations: What Technicians Need to Consider



May 25, 2017 by Katherine Coig
kcoig@glass.com

When it comes to repairing or replacing glass on a vehicle equipped with Advanced Driver Assistance Systems (ADAS), what does an auto glass shop technician need to prepare for when performing a calibration? Repair University Live discussed this recently with a panel of experts in scanning and calibration to explore the tools needed, the proper environment and the overall process. As Kristen Felder with Collision Hub said, ADAS is changing the fundamentals of the repair process.

With ADAS, any minor change to a vehicle can completely disrupt the system. Steve Zack with Bosch AA-AS explained, “As cars go [toward ADAS], that camera’s going to have to be calibrated if you replace the windshield ... you’ve changed the structure of the car slightly, so now that camera’s got to be brought back to alignment. It’s all part of the system ... whatever I did to the car to repair it might need a calibration.”



Performing calibrations in-house require a lot of preparation, in addition to purchasing the necessary tools. The environment in which the calibration is being performed is one of the most important factors when working on a vehicle.

Zack explained, “You need a shop floor that’s not only level, but it’s clean, and it’s at least 30 feet. You need from rear bumper to the front of the target ... the floor cannot have checkerboard pattern or black and white and neither can that be on the walls. You can’t have posters on the wall either ... or it’s not going to calibrate.”

In addition, the technician should also be aware of his clothing, as anything black or white could disrupt the process. The reason for this is due to the design of the targets, which are various black and white designs based on the tools’ OEM manufacturer.

According to the panelists, having the proper lighting can make or break a calibration.

“[The other thing to consider is] ambient lighting issues, you know light from the outside. Sunlight can affect the camera. If I’ve got sunlight or bright light that’s going to the camera,” Zack said, “that bends the signal from the camera, so now the camera can’t see the target, and it’s shooting off into another corner, and I can’t calibrate.”

There are two types of calibrations: static and dynamic. According to Zack, most cars require static, but some models, such as certain Fords and Hondas, require dynamic. This means the technician has to take the vehicle on a road test at a constant speed of 25 mph (not all vehicles are the same), Mark Olson with Veco Experts, said.

“When you try to do [dynamic calibration] outside, it’s not only is the parking lot level, but what color is the parking lot? If I’ve got a black parking lot, it may not let us calibrate. And that sunlight? That’s the biggest issue—and rain,” Zack adds.

Jeffrey Poole with I-CAR said performing calibrations takes a certain kind of technician “that’s really detail-oriented, who has an aptitude for wanting to understand what they’re doing and follow through the procedures exactly.”