Auto Physical Damage

ADAS Calibration: The New Profit Center

February 12, 2024
6 MIN READ
Author profile image

Jack Rozint

Senior Vice President, Repair Sales, Mitchell, An Enlyte Company

While the U.S. has made significant progress in improving motor vehicle safety since the fatality rate hit its peak nearly a hundred years ago, there's still work to do. Excessive speed continues to be a significant contributing factor in traffic deaths and injuries, along with the rise in distracted driving. To lessen the severity of accidents—including those caused by speeding—vehicle manufacturers are expanding the use of Advanced Driver Assistance Systems (ADAS).

Thanks to a voluntary pledge by 20 participating automakers working toward a common goal of eliminating as many crashes as possible, nearly all the light vehicles they produce for the U.S. market are now equipped with automatic emergency braking (AEB). According to the Insurance Institute for Highway Safety (IIHS), forward collision warning and automatic braking systems reduce rear-end crashes by 50%. Even in cases where the accident cannot be avoided, ADAS successfully lowered the impact speed and, in turn, the crash severity. Lane departure warning and blind spot detection have also led to a decrease in collisions. A study sponsored by the AAA Foundation for Traffic Safety found that equipping vehicles with ADAS technologies is anticipated to prevent nearly 250,000 deaths over the next 30 years.

While the benefits of these safety systems are undeniable, so too are the ADAS calibration challenges they create for collision repairers. But with any challenge comes opportunity.

Why All the Fuss?

Advanced Driver Assistance Systems rely on multiple data inputs to ensure the vehicle is functioning as designed. These inputs—provided by radar, ultrasonic, LIDAR and camera sensors—work together to support a wide array of applications ranging from pedestrian avoidance to driver drowsiness detection. Following a collision, ADAS sensors must be precisely calibrated to OEM specifications to ensure they continue operating properly. This is especially true any time a component containing a radar sensor or forward-facing camera is removed or replaced, such as a windshield or side mirror on vehicles equipped with lane departure or blind spot

warning systems. But even when the safety component isn't directly involved in the collision, a calibration may still be required during the repair process due to the sensitivity of the ADAS components involved. Even one degree off proper alignment could result in the sensor missing a target or object by feet. And as I-CAR notes, when "a single sensor or camera is not aligned and/or calibrated to its exact measurement, systems may not respond as designed or they may fail."

Added Repair Time and Complexity

Calibrating ADAS can be time-consuming and complex. Depending on the sensor and type of calibration required—static, dynamic or a combination of the two—technicians may spend 60 minutes to several hours on this critical step of the repair process. And that's if they don't sublet the work. Subletting, of course, can extend keys-to-keys cycle time and add to repair costs. Time spent researching repair procedures or completing a test drive may also impact the time it takes to complete ADAS calibrations. Since calibration requirements vary by manufacturer, vehicle make and model year, access to the latest OEM procedures, training and equipment is critical to helping technicians deliver a proper and safe repair. When it comes to added cost, AAA found that ADAS can add up to 37% to the total repair cost following a crash. "This is due to the high cost of replacing and calibrating the sensors that operate these systems." Even in a minor rear collision repair, 40.9% of the average total repair estimate is associated with replacing ADAS components.

New Diagnostic Scanning and ADAS Calibration Revenue Opportunities

In an industry presentation, Mike Anderson of Collision Advice highlighted the importance of developing new profit centers as a way to withstand economic downturns, stabilize cash flow and ensure profitability. First on his list: ADAS calibrations. Bringing calibration work in-house can reduce cycle time by up to two days, said Anderson. This decreases rental car expenses and gets consumers back in their vehicles more quickly, helping to improve both customer and carrier satisfaction. Anderson also emphasized that if repair facilities outsource their calibration work, they can still be held liable for procedures performed incorrectly.

Additionally, dynamic and static calibrations are often reimbursable. In the "Who Pays for What?" survey published by Collision Advice and CRASH Network, 87% of shops polled indicated they are always or almost always reimbursed for ADAS calibration charges. Depending on the type of recalibration required, that could range from $250 to over $600 in additional revenue.

Watch Live

Getting Started with Diagnostic Scanning

A recent CRASH Network survey of collision repair facilities found that the percentage of vehicle calibrations conducted in-house has been steadily increasing. While more shops are bringing calibrations onsite, those still sending their calibration work to dealerships or third-party vendors, will likely need to invest in technician training if they want to do the same. I-CAR, the Universal Technical Institute and the National Institute for Automotive Service Excellence have all developed ADAS curriculum. The Collision Industry Electronic Commerce Association (CIECA) has also introduced a 12-step calibration workflow to simplify and standardize the process. And with Mitchell TechAdvisor, repairers can access a comprehensive online database of OEM procedures and reference information.

Along with training, comes equipment. And the equipment needed depends on the type of calibration performed: dynamic, static or both. An all-in-one diagnostic scanning tool that accesses OEM procedures, resolves Diagnostic Trouble Codes (DTCs) and automatically uploads scan and calibration reports to the cloud can allow repairers to quickly and efficiently complete dynamic ADAS calibrations. Static calibrations, on the other hand, rely on the use of both a collision repair scanning tool and targets. Since precision is a must, static calibration systems that guide technicians through the setup process and exact placement of targets can help ensure accuracy while reducing labor time. When evaluating calibration equipment, consider whether it:

Dynamic Calibration

- Features OEM-licensed calibration routines
- Covers all major vehicle makes and models
- Requires extra per-transaction fees beyond the monthly subscription
- Integrates with other workflow solutions (estimating, parts ordering, repair procedures, etc.)
- Provides reporting that automatically attaches to the job file to be shared with customers or carriers
- Includes other time-saving features (fast scan times, internet access, built-in camera, etc.)

Static Calibration

- Supports ADAS calibration of radar, LIDAR and camera sensors
- Features a wide range of vehicle manufacturers and models
- Performs all main types of static calibration with targets, mats and mirrors
- Delivers step-by-step guidance to simplify the setup process
- Makes it easy to adjust targets without plumb bobs, tape measures or mirrors
- Delivers quick and precise digital measurements
- Provides reporting to properly document the repair
- Avoids additional, specialized training for new vehicle models via online updates

As more ADAS-equipped automobiles take to the road, challenges in the delivery of proper, safe repairs will continue to grow. However, with the right training, an auto diagnostic tool, the latest equipment and OEM procedures, collision repairers can safely return damaged vehicles to the road. And they can do it all while

developing a new profit center—one entirely focused on ADAS calibrations.

mitchell | genex | coventry