

# adasThink Report: 88% of ADAS calibrations missed by body shops

## Key Findings:

- We reviewed 100 estimates with known, required advanced driver-assistance systems (“**ADAS**”) calibrations.
- 85 of the 100 estimates did not contain a line item for an ADAS calibration.
- In total, 122 total ADAS calibrations were identified (some vehicles required multiple ADAS calibrations).
  - The 100 estimates identified only 15 ADAS calibrations – bringing the total ADAS calibration identification rate to 12% (15/122).
- Of the 15 estimates that did include an ADAS calibration, 9 of those 15 estimates included a replacement operation of the ADAS sensor itself – a virtually impossible-to-miss ADAS calibration.
  - Backing out the obvious calibrations, only 5% of all identified ADAS calibrations (9/113) find an ADAS calibrations where there is a non-obvious calibration requirement.
- Even though 85% of the estimates missed the ADAS calibration, 66% of estimates contained a line item for a post-scan, while 56% included both a pre-scan and a post-scan.

## Introduction

The auto body repair industry is in the midst of a technological upheaval, and is struggling to keep up. Body shops, as a group, are still failing to scan and diagnose the electronic systems on cars as a part of the repair process, even though these systems have been present on cars for over 20 years. A recent Mitchell report found that less

than half of vehicles repaired in Q2 2020 include an operation on the estimate for scanning.<sup>1</sup> Two years ago, that number was less than 10%.<sup>2</sup>

ADAS is a technological leap for the industry. While driver assistance systems have been around since at least the Chrysler Imperial introduced ABS in 1971, new advanced driver-assistance systems are of a fundamentally different nature. The difference is that *advanced* driver-assistance systems aid drivers by observing and adapting to the outside world beyond the car, and not internal, onboard vehicle systems.

It's trite now to say that the promise of ADAS (and driverless cars, the natural end state of ADAS) for society is potentially breathtaking. This includes saving over 350,000 lives in the United States annually<sup>3</sup>, and reshaping our cities, work, and our homes. Today, ADAS systems are a core part of how new vehicles are marketed by OEMs, how they're priced to consumers, and how they operate and are expected to operate on the road by their drivers.

Unfortunately, ADAS systems are not a core part of how vehicles are fixed in the collision industry as a whole. Yet.

As a general rule of thumb, ADAS calibrations will usually be required if an ADAS sensor has been removed or replaced, or if a sensor mounting part like a door, grille, or trunk lid has been removed or replaced. Many OEMs also require ADAS calibrations after a wheel alignment or structural repairs to the vehicle, where the geometry of the vehicle may have changed. But barring replacement of the ADAS sensor itself, these calibration requirements will almost never show up on a scan report or on a malfunction indicator light on the dash. This means that collision repairers or appraisers need to manually identify what ADAS is equipped on the vehicle and search the repair procedures for the sensor, mounting parts, or calibration procedure, in order to identify an ADAS calibration.

What does that mean? ADAS calibrations are non-obvious, and hunting down ADAS repair procedures is time-consuming and difficult, as each OEM puts their ADAS calibration requirements in different parts of their service information.

---

<sup>1</sup> Ryan Mandel, *Cracking the Code: What DTCs Tell Us About Vehicle Repair Trends* (Mitchell, September 11, 2020)

<sup>2</sup> *Ibid.*

<sup>3</sup> U.S. Department of Transportation, *Automated Driving Systems: A Vision for Safety* (NHTSA, September 2017).

The purpose of this study is to examine where the collision industry as a whole ranks with respect to properly repairing ADAS systems. Based on the results of this study, if the industry were to be given a grade, it would be an 'F'.

## Methodology

adasThink examined 100 publicly-available estimates of vehicles that we could conclusively determine that:

- (a) ADAS systems were onboard the particular vehicle, and
- (b) had required ADAS calibrations required by OEM repair procedures based on the labour operations present on the estimate.

We used the first 100 estimates that met both criteria above. If an estimate met both criteria, we included it, and we stopped when we reached 100.

We manually reviewed every estimate to verify that a calibration was required (that the software did not find something that didn't exist), and that the shop identified a calibration or not. Where a body shop included a pre- or post-scan, and there was an additional entry for resetting electrical components of 1.5 hours or greater (and it did not obviously relate to airbags or wiring repairs), we counted it as an identified ADAS calibration.

None of the data came from adasThink customers. All of the estimates were from Canada, and the data included estimates from all major provinces including BC, Alberta, Manitoba and Saskatchewan, Ontario, and Nova Scotia. Our data encompasses results from both public insurance and private insurance regions.

The vehicles that contained ADAS calibrations ranged from model year 2014 to 2020.

The study includes estimates for the following OEMs:

- Acura
- Audi
- Buick
- Dodge
- Ford
- GMC
- Kia
- Lexus
- Mazda
- Mercedes-Benz
- Nissan
- Land Rover

- Honda
- Hyundai
- Infiniti
- Toyota
- Jaguar

As we did not attempt to create a representative study of region or OEM, and our sample is relatively small, statistically speaking, we do not venture into comparisons by region or OEM here. Rather we aim to provide a holistic picture of the industry's performance in this important area.

All estimates were for vehicles deemed total losses. They were written by both body shops and appraisal firms. The estimates we reviewed were, in general, extremely detailed and several pages long – encompassing a full repair (subject to our findings). We did not include any 'pro forma' total loss estimates that, for example, totalled a vehicle with a single line item for labour worth tens of thousands of dollars (in any case, we would not have found any calibrations on those estimates).

We do not see an issue with this methodology for several reasons. Our contention is that this study, if anything, is biased towards *overestimating* the incidence of ADAS calibrations that are caught by collision repair facilities, and that the true total could be much lower. This is for the simple fact that heavy hits are more likely to have damage that extends into the ADAS sensors specifically (as opposed to lighter collision that may only involve damage to the fascia or outer body panels), requiring a replacement of the sensor and an obvious calibration line item.

We do not think that our methodology understates the incidence of ADAS calibrations caught by collision repairers for several reasons. As a matter of first principles, ADAS calibrations are as much a part of the repair of the car as anything else. At least some of the estimates did contain entries for ADAS calibrations – showing that many repairers and appraisal firms did turn their mind to it. Second, two-thirds of the estimates contain an entry for a post-scan; by including post-scan entries for vehicles that were ultimately totalled, it indicates that the repairers or appraisers were still writing 'complete' estimates for the vehicles, even if they knew the vehicles would not be post-scanned by them. Finally, the implication that repairers and appraisers are knowingly writing incomplete estimates for vehicles that they know, or ought to know, will be sold to purchasers relying on the accuracy of that estimate, is disturbing.

## Results

Our study found 122 required ADAS calibrations across 100 estimates, indicating that for many vehicles, there will be multiple calibrations involved in a single accident.

---

The calibrations were distributed across the following sensors:

Sensor	Count
Front Radar	37
Windshield Camera(s)	29
Blind Spot	29
LaneWatch	8
Surround-View Monitor	13
Rear Camera	4
Park Assist Monitor	1
Active Parking Assist	1
<b>Total</b>	<b>122</b>

Only 15 estimates identified a calibration, for an estimate identification rate of 15%. However, the true total is lower, since only 15 total ADAS calibrations were identified. This brings the total ADAS calibration identification rate by body shops down to 12% - or 88% missed.

Of the 15 ADAS calibrations identified by body shops or appraisers, 9 of those ADAS calibrations also included a replacement operation for the ADAS sensor itself – a complete giveaway that a calibration is required. We do note that many ADAS calibrations that were missed did involve a replacement of the ADAS sensor, indicating that many body shops or appraisers were missing even those simple calibrations.

If we back the non-obvious calibrations out of our analysis, we get the result that only 6 non-obvious calibrations were identified out of 113 ADAS calibrations – **a miss rate of 95%**.

### Conclusion & Next Steps

The collision repair industry is not performing well at identifying ADAS calibrations. There are multiple possible explanations – lack of knowledge of ADAS (how many body shops will research a repair procedure for removing and installing a front bumper cover?); a lack of training and expertise for estimators and shop owners, the high turnover in those positions, and the time pressure that estimators are under; the pressure to deliver cars quickly to reduce cycle time and keep severity down.



adasThink  
1 (877) 410-ADAS (2327)  
20 Randolph Road  
Toronto, ON M4G 3R7

adasThink works by automatically identifying what ADAS is equipped on the vehicle using OEM vehicle data, identifying required ADAS calibrations based on OEM repair procedures, and providing a direct link to those repair procedures.

By identifying ADAS equipped on the car, required ADAS calibrations, and providing OEM documentation, adasThink enables a body shop to quickly and accurately diagnose the ADAS systems on their vehicle and get to a proper repair plan much faster.

**Media Contact**

Nick Dominato  
President, adasThink  
416.879.4523  
ndominato@adasthink.com