

FACT SHEET

ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS) REPAIR COSTS



Background

Today's vehicles, even base models, are equipped with increasingly sophisticated technology. This includes Advanced Driver Assistance Systems (ADAS), which use information from various sensors to "see" the world outside the vehicle. These sensors can be damaged in collisions, fail in normal operation or require recalibration to work effectively.

AAA conducted a study of three vehicles to better understand the costs of replacing and/or calibrating ADAS sensors in typical collision and repair scenarios.

To understand the impact of advanced driver assistance systems on vehicle repair costs, particularly following a minor collision, AAA pursued two lines of inquiry:

1. What additional repair costs are incurred when specific ADAS cameras and sensors are damaged and/or must be calibrated?
2. How much does it cost to replace a windshield on a vehicle with an ADAS camera sensor that must be calibrated?

Key Findings*

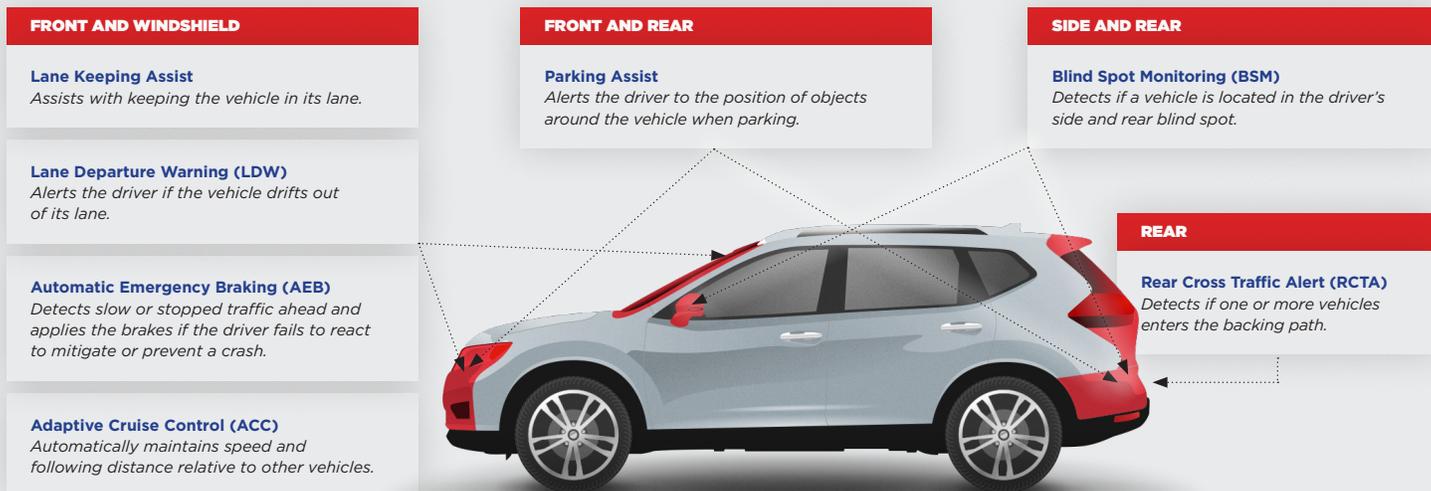
Repair costs for damaged cameras and sensors:

- Front radar sensors used with **automatic emergency braking and adaptive cruise control** systems: \$900 to \$1,300
- Rear radar sensors used with **blind spot monitoring and rear cross traffic alert** systems: \$850 to \$2,050
- Front camera sensors used with **automatic emergency braking, adaptive cruise control, lane departure warning and lane keeping** systems: \$850 to \$1,900
- Front, side mirror or rear camera sensors used with **around-view systems**: \$500 to \$1,100
- Front or rear ultrasonic sensors used with **parking assist** systems: \$500 to \$1,300
- Windshield replacement for vehicles equipped with **automatic emergency braking, adaptive cruise control and lane departure warning** systems:
 - Aftermarket glass: \$1,200 to \$1,600
 - Factory glass: \$1,300 to \$1,650

*Results only include the cost to repair ADAS and do not factor in body work or other collision-related repairs.

What is ADAS?

ADAS, or Advanced Driver Assistance Systems, are safety systems designed to alert a driver of a potential obstacle in the vehicle's path with the intent of avoiding a collision. These systems, located throughout the vehicle, use a combination of cameras and sensors to detect objects and then communicate to the driver.



Methodology

For this study, AAA evaluated three top-selling models in popular categories. The vehicle models were selected from AAA's 2018 Your Driving Costs study and include a small sport utility vehicle (2018 Nissan Rogue), a medium sedan (2018 Toyota Camry) and a full-size pickup truck (2018 Ford F-150). Each vehicle selected was equipped with the highest available level of ADAS functionality.

To establish repair part types and costs, all replacement parts discussed are original equipment manufacturer (OEM) components charged at their suggested list prices. To make accurate windshield replacement cost comparisons, and reflect how this work is normally carried out in the industry, the windshield replacement costs in this study are quoted with both aftermarket and OEM replacement glass. Windshield prices for OEM glass were obtained using CCC Estimating (Certified Collateral Corporation).

To establish mechanical labor costs, a national average customer-pay rate was determined based on data from National Auto Body Research as well as AAA Approved Auto Repair facilities and rounded to the nearest whole dollar amount. Labor rates used do not include state or local taxes, shop supplies fees or hazardous materials disposal charges. To establish repair times, data was obtained from CCC Estimating (Certified Collateral Corporation), Mitchell1 ProDemand, Safelite, Inc. and Nissan, Ford and Toyota dealer repair facilities.

There are a number of variables that come into play when calculating repair costs for ADAS systems. Factors determined to be baseline values include: vehicle year, make, model, trim and options; repair part types and costs; repair labor operation times; auto body facility labor rates; dealer service department labor rates; and third-party auto glass replacement and ADAS sensor calibration costs.

AAA Recommendations:

- Understand the type of technology your vehicle has, how it performs and how much it would cost to repair should a system become damaged or require re-calibration.
- Review insurance policies to ensure your vehicle is properly covered and out-of-pocket expenses minimized.
- Select a repair facility that is equipped to repair and calibrate advanced safety systems.
- Following a vehicle repair, request proof that safety systems were properly repaired and calibrated.