

## ADAS PROGRAM

# Highlights

1

Standard® offers more than 900 Advanced Driver Assistance System (ADAS) components

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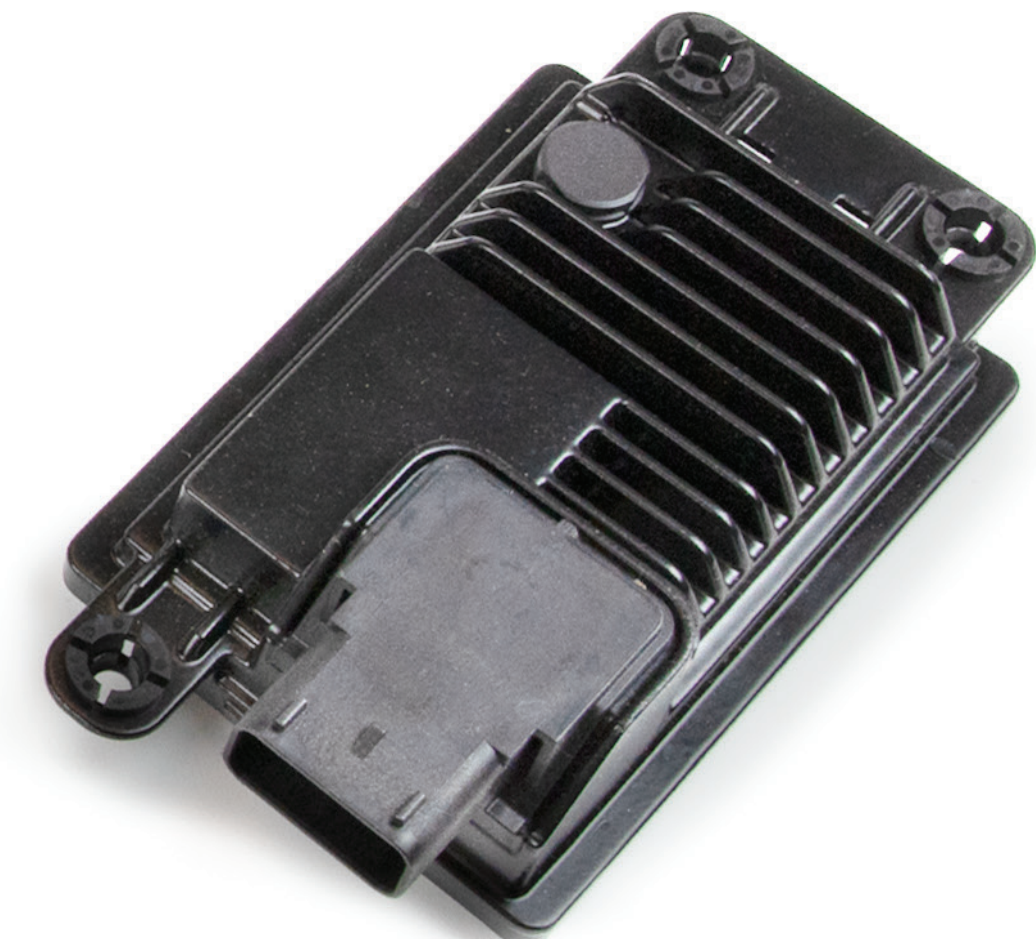
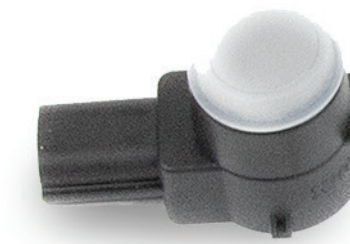
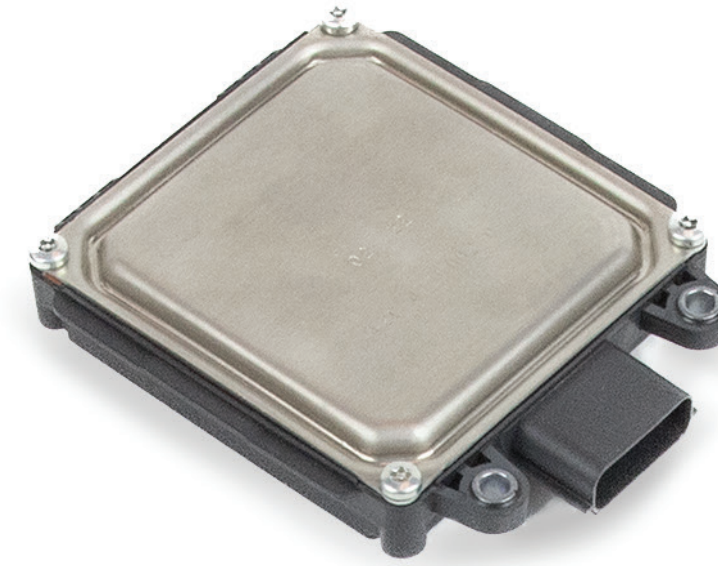
Standard® ADAS components are designed to integrate correctly with electronic crash avoidance systems

3

ADAS components are powertrain neutral — they are the same whether the powertrain is gas, diesel, hybrid or electric



## What's in your box?™



When OE Fails . . . Trust Standard®

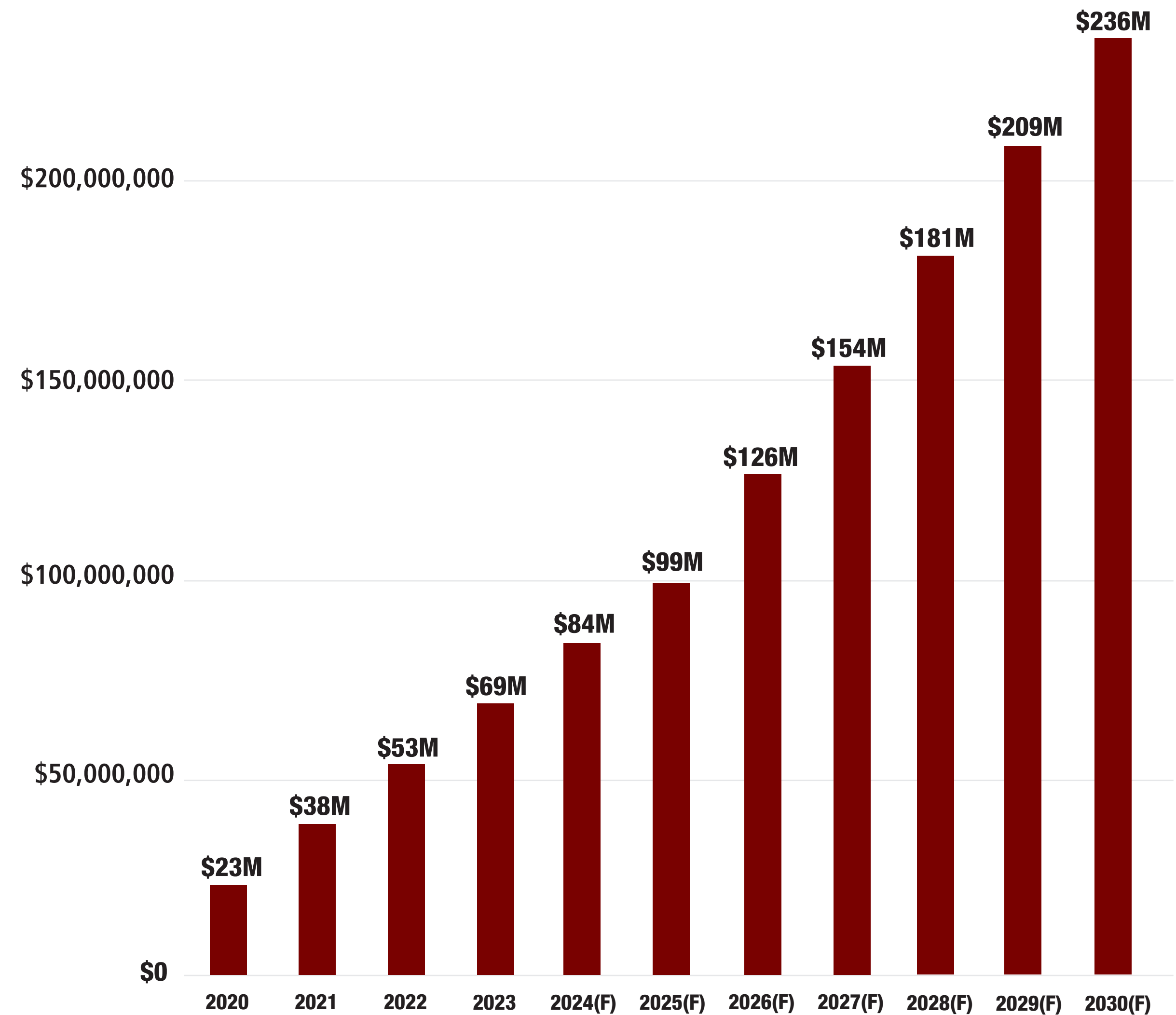
StandardBrand.com

# Growing Market

ADAS components are one of the fastest growing categories in our industry. These sophisticated cameras and sensors are entirely powertrain neutral, meaning whether a vehicle is gas, hybrid or electric, the components and systems are the same. ADAS is here to stay, and it is going to grow exponentially in the coming years.

**Between 2023 and 2030, sales of ADAS components will grow by 343%**

Aftermarket Sales of ADAS Components



Source: ADAS Aftermarket Study, AASA 2022



# Timeline

Driver Assist Safety Systems aren't new. In fact, they have been around in some form for over 50 years. Newer, more advanced electronic safety systems are built on the foundations of ABS and Electronic Stability Control.

## Did You Know

The gyro processor used in the prototype of the first ESC system came from a toy helicopter. It wasn't fast enough, so engineers sourced another from the warhead of a missile.



**1969**

Ford introduced "Sure Track," the first Anti-Lock Brake System, on the Thunderbird



**1971**

Buick introduced "MaxTrac," the first traction control system, on all full-size cars



**1995**

The first Electronic Stability Control system was available from Mercedes-Benz



**2005**

The Volvo S80 was equipped with Blind Spot Monitoring



**2012**

All new light-duty vehicles sold in the U.S. were required to have Electronic Stability Control



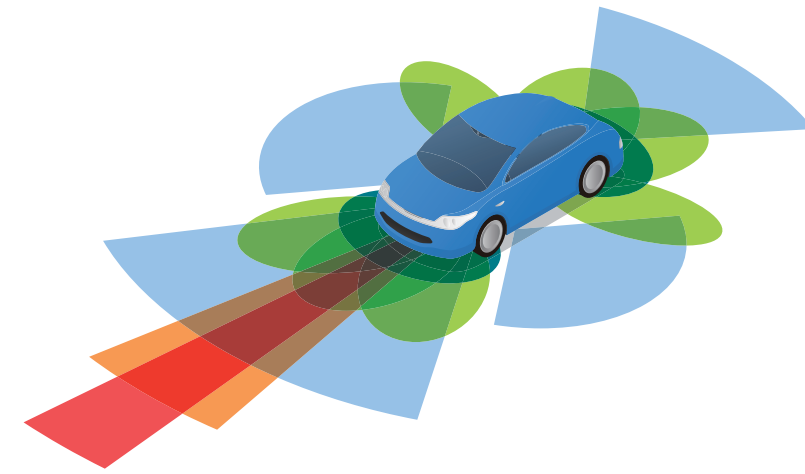
**2018**

New vehicles built after May of 2018 were required by law to have a back-up camera

# Sales Opportunities

Electronic Safety Systems like Electronic Stability Control and Automated Emergency Braking are programmed for brand-new components. Worn or low-quality replacement parts can reduce the effectiveness of all Electronic Safety Systems.

## Explaining ADAS to your customers will help you sell more premium parts



# 1

### How ADAS Works

Your customers' vehicles may have safety features they don't even know about. When they understand how these systems work, they can make better decisions about their vehicle



# 2

### Talk About "Systems," Not "Parts"

When we talk about parts, it is easy for customers to bring up price. Instead, talk about how a particular component is part of a complex Electronic Safety System. This helps your customer see more value in the quality parts you are recommending



# 3

### Recommend Premium Quality Replacement Parts

The ability of electronic safety systems to keep your customers safe depends on the performance of both electronic and mechanical components. Only using premium parts helps make sure your customers get the benefits and capabilities of their vehicles' crash avoidance systems



# Impact on Vehicle Systems



**Advanced Driver Assistance**  
Systems depend on  
real-time data from multiple  
components including ABS  
sensors and throttle  
position sensors



**Steering angle sensors**  
must be recalibrated after  
every wheel alignment



**ADAS can lower crash**  
rates by 20%, but only if  
the systems are properly  
maintained

# What's New

## Park Assist Sensors

Park assist sensors are of the most frequently replaced ADAS components. Standard® is regularly releasing new Park Assist Sensors to make sure you have the parts needed to service your customers' vehicles.

For the most current applications, be sure to check out our catalog at [StandardBrand.com](https://StandardBrand.com).



**PPS127**  
Ford SUVs  
(2019-15)  
VIO: 2M



**PPS142**  
Nissan / Infiniti Cars  
(2023-13)  
VIO: 2.3M



**PPS159**  
GM Cars, Trucks & SUVs  
(2024-20)  
VIO: 2.5M



# What's New

## ADAS Components

The industry's most complete ADAS program never rests. We are regularly introducing new parts across all of our ADAS categories, so you don't have to go back to the dealer.

For the most current applications, be sure to check out our catalog at [StandardBrand.com](http://StandardBrand.com).

### Tech Tip

After a collision, the mounting surface of blind spot detection sensors and cruise control distance sensors must be returned back to factory specifications or the component will not be able to be calibrated correctly.



**LDS51**  
Lane Departure System Camera  
Nissan SUVs  
(2019-14)  
VIO: 2.2M



**PAC493**  
Park Assist Camera Kit  
Ford Trucks & SUVs  
(2022-17)  
VIO: 2.7M



**BSD139**  
Blind Spot Detection Sensor  
GM Cars & SUVs  
(2022-18)  
VIO: 1.3M



# Advanced Sensor Program

Advanced Driver Assistance Systems rely on multiple sensors to provide real-time data to both the driver and the vehicle. Sensors that have failed or are not correctly calibrated may put the motorist and the occupants at risk.

## Standard® Pro Training Tip

Salt and corrosion can damage blind spot detection sensors and their connectors.



## Blind Spot Detection Sensors

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Standard® BSD Sensors are direct-fit replacements to ensure proper fit and performance. All BSD Sensors undergo extensive quality testing and product validation.

126 SKUs / 104M Repair Opportunities



## Cruise Control Distance Sensors

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Designed and manufactured to stringent quality standards to match the original for an easy install and to deliver precise performance.

75 SKUs / 37M VIO



## Steering Angle Sensors

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Standard® Steering Angle Sensors are rigorously tested for fit, form and precise performance to match the original application they are replacing.

284 SKUs / 224M VIO



## Park Assist Sensors

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Standard® Park Assist Sensors are direct-fit replacements utilizing advanced ultrasonic technology that exactly matches the detection capabilities of the original sensors.

126 SKUs / 500M Repair Opportunities



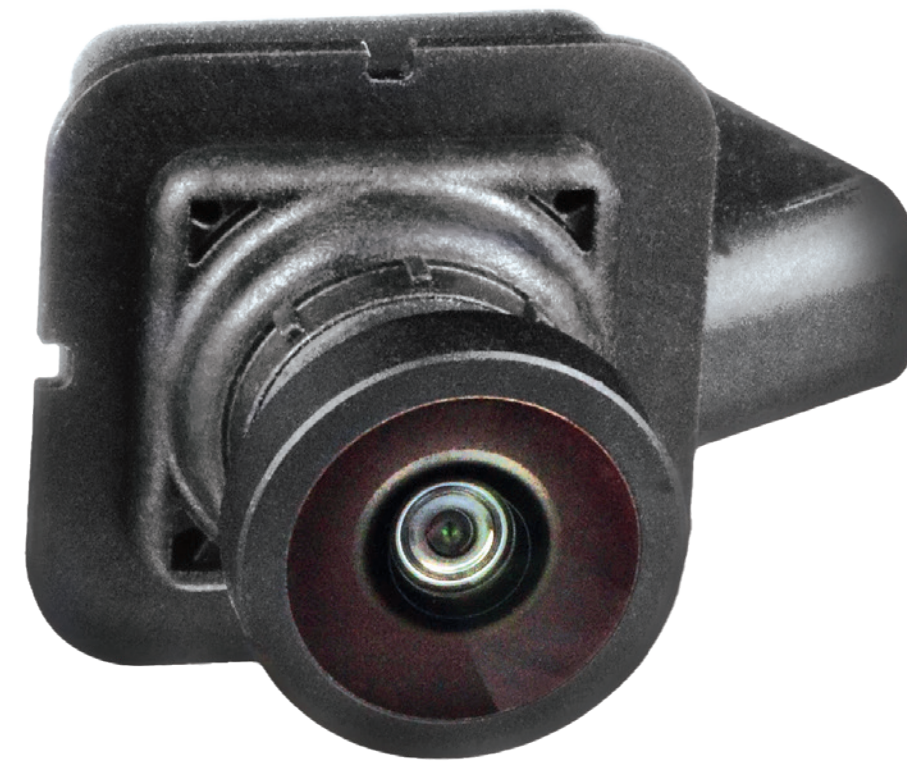


# ADAS Cameras

Park assist cameras have been mandatory on every new vehicle since 2018, and were fitted on many popular vehicles prior to being regulated by law. This is a growing category, and Standard® has over 230 different Park Assist (or back-up) Cameras to make sure you don't have to go back to the dealer.

## Standard® Pro Training Tip

Low-quality glass or a poor installation of a replacement windshield can affect the performance of lane departure system cameras.



## Park Assist Cameras

Easily damaged in a rear collision, Park assist cameras have been mandatory in the U.S since 2018. A premium replacement for the failed OE unit, most Standard® cameras are 'plug & play' — no programming required.

Rigorously tested to match the OEM vehicle-specific performance.

233 Cameras / 122M VIO

## Lane Departure System Cameras

Located on the windshield behind the rearview mirror, lane departure system cameras are now also in side-view mirrors for additional protection.

Standard® LDS Cameras are rigorously tested for fit, form and precise performance to match the original application they are replacing.

46 SKUs / 36M VIO

**PARK ASSIST SENSORS**  
**Top Movers**

**DOMESTIC**



**PPS44**

GM Trucks & SUVs  
(2020-06)



**PPS46**

GM Cars, Trucks & SUVs  
(2020-13)



**PPS45**

Chrysler, Dodge, Jeep & RAM  
(2021-09)



**PPS64**

Ford Trucks  
(2019-15)



**PPS47**

Ford Trucks & SUVs  
(2022-00)

**IMPORT**



**PPS65**

Toyota Trucks & SUVs  
(2020-14)



**PPS37**

BMW / Volvo Cars & SUVs  
(2015-07)



**PPS15**

Volvo Cars & SUVs  
(2014-07)



**PPS34**

Audi, VW, Volvo Cars & SUVs  
(2021-06)



**PPS73**

Toyota RAV4  
(2018-16)



# OTHER ADAS COMPONENTS

## Top Movers

**DOMESTIC**



**PAC20**  
Park Assist Camera  
Ford Explorer  
(2015-13)



**PAC22**  
Park Assist Camera  
RAM Trucks  
(2018-13)



**BSD42**  
Blind Spot Detection Sensor  
Dodge & Chrysler Vans  
(2016-13)



**BSD107**  
Blind Spot Detection Sensor  
GM SUVs  
(2017-15)



**CCD18**  
Cruise Control Distance Sensor  
Ford Trucks  
(2020-15)

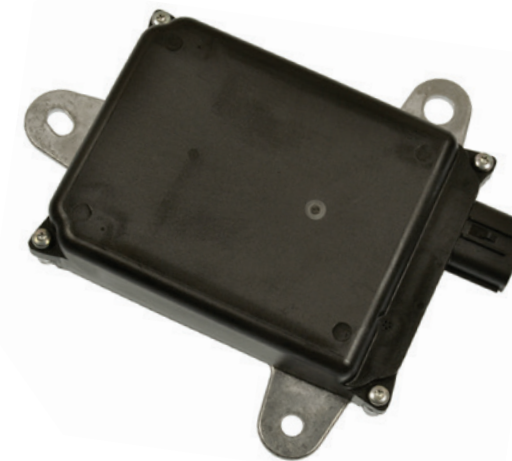
**IMPORT**



**PAC137**  
Park Assist Camera  
Toyota RAV4  
(2018-16)



**LDS21**  
Lane Departure System Camera  
Toyota RAV4  
(2018-17)



**BSD63**  
Blind Spot Detection Sensor  
Toyota Tacoma  
(2017-15)



**BSD86**  
Blind Spot Detection Sensor  
Mercedes Cars & SUVs  
(2016-12)



**CCD40**  
Cruise Control Distance Sensor  
Nissan SUVs  
(2018-16)



# Related Parts

Mechanical and electronic components must function as designed to keep electronic safety systems operating correctly. Sensors send information to electronic control modules hundreds of times per second, and the vehicle's computer sends commands back to help keep the motorist safe.

Standard® provides technicians with the additional Sensors and Connectors needed to keep electronic safety systems operating correctly.



## ABS Sensors

Standard® ABS Sensors always match the fit and performance of the OE, even when OE uses a complex multi-directional sensor

2,522 SKUs / 724M Repair Opportunities



## Accelerator Pedal Sensors

Standard® Accelerator Pedal Sensors are tested for output to make sure they perform on every vehicle in every situation

409 SKUs / 269M VIO



## Throttle Position Sensors

Standard® Throttle Position Sensors are tested and calibrated to electronically lock voltage output for accuracy

277 SKUs / 88M VIO



## Ride Height Sensors

Standard® Ride Height Sensors are engineered and tested to provide the ECU with timely and accurate data to make decisions about vehicle performance and safety

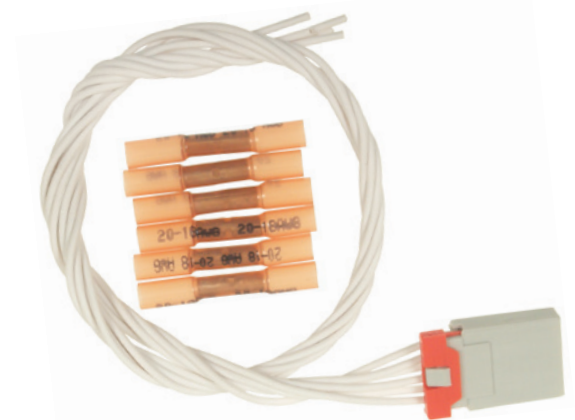
29 SKUs / 24M VIO



## Parking Brake Actuators

Standard® Parking Brake Actuators include the required hardware and an O-ring for proper installation

30 SKUs / 60M VIO



## Electrical Connectors

Standard® offers hundreds of electrical connectors to help keep ADAS systems operating correctly

Steering Angle Sensor Connectors  
Park Assist Sensor Connectors  
Lane Departure System Connectors  
ABS Sensor Connectors and more



# Standard<sup>®</sup> Quality

Park assist sensors help keep your customers safe. The quality and performance of the part matters, which is why Standard<sup>®</sup> tests each part to make sure it integrates correctly with safety systems, and functions in all conditions.

## Standard<sup>®</sup> Park Assist Sensors

Advanced ultrasonic technology matches the object detection range of OE ensuring the driver is alerted of objects within the vehicle's path

Engineered and manufactured in SMP's Poland facility

Designed to match the performance of the original and integrate with electronic safety systems

Includes a new seal to help keep moisture out for a long service life



### Standard<sup>®</sup> PPS45

Chrysler, Dodge, Jeep & RAM  
(2022-09)



# Standard<sup>®</sup> Pro Training Tech Tip

Standard<sup>®</sup> Pro Trainers have installed hundreds of ADAS components and trained thousands of technicians. Here's what they say to look out for during an install.



**Anytime an ADAS component is removed and reinstalled (even if it wasn't replaced or unplugged) it needs to be checked to see if a calibration is required per service information**

**Always read and follow service information exactly and completely when performing a calibration – no short cuts**



**Different manufacturers utilize different versions of calibrations — static is performed in the service bay and dynamic is performed while driving in specific conditions**

**Always check manufacturers' service information for the vehicle you're working on**



**Ensure that all prerequisites are met and correct (vehicle ride height, fuel tank level, tire pressure, etc.) prior to performing a calibration**

# Park Assist Connector Kit

Park assist sensor connectors are easily damaged in accidents, even minor ones. They are also prone to failure from salt and corrosion. Standard's Park Assist Connector Kit gives technicians a total of 64 of the most popular connectors to help get your customers back on the road quickly.



**PPS1K**

Includes the 5 most popular Connectors for a total of 64 pieces

Shop time-saver – Technicians have the parts they need at their fingertips

## PPS1K Contents

Part #	Qty	Vehicle Makes	VIO Coverage
S1497	16	Chrysler, Ford, GM	32.6 Million
S2269	16	Chrysler, Ford, GM	32.5 Million
S2393	16	BMW, Ford, GM	16.7 Million
S2316	8	Audi, Chrysler, Ford, Volkswagen, Volvo	11.3 Million
S1415	8	Toyota	2.0 Million



# Standard<sup>®</sup> Professional Training

**Award-Winning In-Person, Live  
Virtual, and Online Learning**

Standard<sup>®</sup> Pro Training delivers accredited classes that educate technicians in the latest automotive repair technologies, and techs can earn CEU credits.

An extension of Standard<sup>®</sup> training, our extensive YouTube video library has over 600 technical and installation videos.



## Available Classes

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**ADAS Calibration Tips From The Pro  
Driver Assist Systems Overview**



## Available Classes

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**Advanced Driver Assist Systems  
ADAS Calibration Techniques  
Body Electronics  
Vehicle Communication Diagnosis  
Unleash the Power of Your Scan Tool**



For information on replacing collision components, search “Collision” on the **StandardBrand** YouTube channel

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**ADAS Program**

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