### **COLLISION REPAIR PROGRAM**

## Highlights

NAPA® Echlin® offers more than 6,500 parts that may need to be replaced in the event of a collision

2

Collision categories available include ADAS, Active Grill Shutters, Connectors, Door/Body, Lighting, Sensors and more

3

NAPA® Echlin® parts are engineered to meet or exceed the damaged part they are replacing for fit, form and function



What's in your box?



NAPAEchlin.com

### **COLLISION REPAIR PROGRAM**

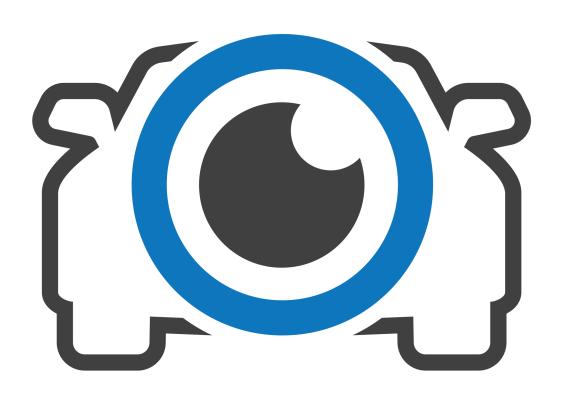
## Growing Market

The collision market is large, growing, and extends well beyond body work and paint.

NAPA® Echlin® offers numerous categories to serve this robust market — from door, trunk, and hood actuators to high-intensity discharge (HID) lighting modules to advanced driver assist systems (ADAS) components.

In 2020, there were 13.3M total vehicle crashes with

19.9 damaged vehicles



In Q4 2021, Nearly 16% Of All Repairs Included A Repair Or Replace Of Nearly Two Camera, Radar Or Sensor Parts

## 20% OF VEHICLE CLAIMS

In 2021 Were Vehicles With At Least One ADAS Feature,

The Rest Being On Older Vehicles
Without These Features

Source: Body Shop Business, State of Repair Industry, May 2022 Source: CCC Intelligent Solutions, May 2022

## ADAS Components

Advance Driver Assistance Systems (ADAS) in today's vehicles are already helping to save lives and prevent injuries.

Minimizing human error has been identified as a key factor in reducing the number of vehicle collisions resulting in serious injury and death.

Two of the more popular ADAS components are Park Assist Sensors and Park Assist Cameras.



### **Park Assist Sensors**

Vehicles use multiple Park Assist Sensors on front and rear bumpers to report distance to an object, utilizing an ultrasonic or electromagnetic signal. These sensors are often damaged in front or rear bumper collisions.

NAPA® Echlin® Park Assist Sensors are direct-fit replacements utilizing advanced technology to match the detection of the damaged OE units they are replacing.

80+ SKUs / VIO: 101.7M



### **Park Assist Cameras**

Easily damaged in a rear collision, Park Assist Cameras have been mandatory in U.S. since 2019. Most cameras are replaceable without additional programming or calibration.

Premium replacement for the failed OE unit, NAPA® Echlin® cameras are "plug & play" – no programming required. Rigorously tested to match the OEM vehicle-specific performance.

140+ SKUs VIO: 79.9M

#### **Did You Know**

Park Assist Cameras have become one of the hottest ADAS components. If damage is minor, many motorists may opt NOT to go through an insurance claim and replace only the damaged camera/sensor.



## ADAS Components

Sophisticated collision-avoidance components are ever-expanding in today's vehicles. NAPA® Echlin® continues to grow this important safety category.

### **Did You Know**

Blind Spot Detection Sensors are also prone to failure due to corrosion from salt spray entering the casing and destroying the circuit board inside.





### **Blind Spot Detection Sensors**

Located in the rear quarter area, typically just behind the bumper cover, Blind Spot Detection (BSD) Sensors are often damaged in rear-end collisions.

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

120+ SKUs / VIO: 47.9M

#### **Cruise Control Distance Sensors**

Located behind the front grille opening area, Cruise Control Distance (CCD) Sensors are often damaged in a frontal collision.

NAPA Echlin CCD Sensors are designed and manufactured to stringent quality standards to match the original for an easy install and precise system performance

65+ SKUs / VIO: 30.2M

### **Lane Departure System Cameras**

Located on the windshield behind the rearview mirror, Lane Departure System (LDS) Cameras are now also in side-view mirrors for additional protection.

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

35+ SKUs / VIO: 17.8M

# ADAS Coverage and Opportunities

NAPA® Echlin® offers an aftermarket-leading 450+ ADAS numbers in five key ADAS categories; and we're continually adding to this growing product line.

Since many of today's vehicles have multiple advanced ADAS sensors per vehicle, we're covering more than 500 million part replacement repair opportunities!



# NAPA® Echlin® "Plug and Play" Design

Many applications covered by Rear Facing Cameras & Park Assist Sensors do not require special tooling or calibration.

NAPA® Echlin® offers a full line of Park Assist components to help our customers take advantage of this ADAS opportunity. No special tooling required... just plug and play.

Park Assist Sensors and Park Assist

Cameras are two of the most prevalent safety features on today's vehicles.

Due to their locations, these sensitive components are prone to damage, even from minor collisions.

NAPA® Echlin® Park Assist Sensors and Cameras are plug and play\* – easy to install with no special tooling or calibration needed.



<sup>\*</sup>Certain applications with more advanced systems may require additional relearn or calibration procedures

## Underhood Components

Active Grille Shutters offer the latest technology to improve fuel economy, but they are the first point of contact in a front-end collision and are damaged easily.

Charge Air Coolers are mounted in the front of the vehicle, while Ambient Air Temp Sensors are mounted inside or near the front bumper. Both are extremely vulnerable during a frontend collision.



### **Active Grille Shutters**

These are high OE-failure components due to motor burnout as well as crashes. NAPA® Echlin® AGS are direct-fit parts specifically engineered for the application they are replacing. Built from high-grade industrial plastic to resist corrosion and withstand extreme engine temperatures. All NAPA® Echlin® AGS undergo 100% end-of-line testing.

25+ SKUs / VIO: 20.2M



### **Charge Air Coolers**

Designed, manufactured and tested to stringent quality standards matching the original to deliver precise vehicle-specific performance. NAPA® Echlin® Charge Air Coolers are 100% new, not remanufactured, built from the highest quality materials to withstand harsh underhood conditions for a long service life. 100% factory tested for air/water leaks.

8 SKUs / VIO: 5.7M



### **Ambient Air Temp Sensors**

NAPA® Echlin® offers a full line of Ambient Air Temp Sensors covering import and domestic vehicles through model-year 2022. Each NAPA® Echlin® ATS is a direct-fit OE replacement, manufactured from the highest quality materials, and extensively tested to ensure proper fit, performance and durability.

90+ SKUs / VIO: 99.1M

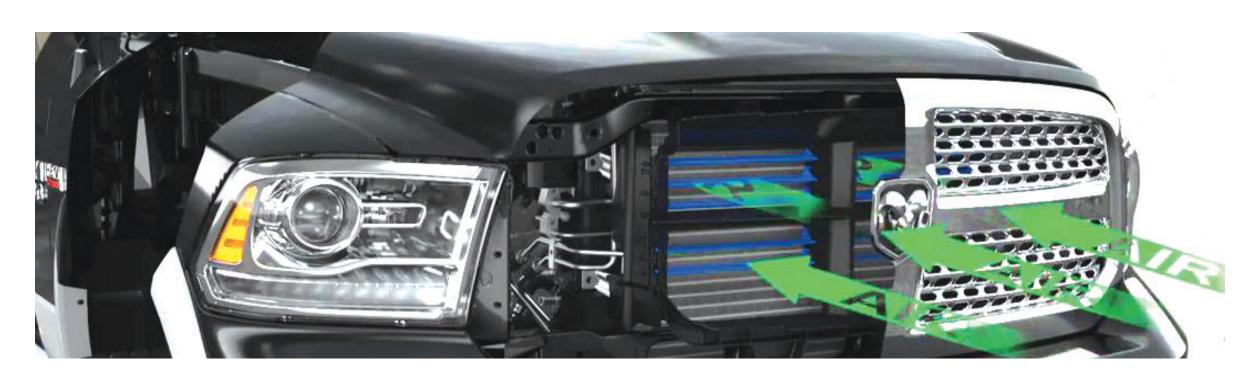
## NAPA® Echlin® Quality

The active aerodynamics market is rapidly growing as vehicle technology advances, creating new repair opportunities in these high OE failure lines. NAPA® Echlin® is staying ahead of the curve by continuing to expand our Active Grille Shutter (AGS) offering.

#### **Did You Know**

Designed to improve fuel efficiency, the AGS opens to promote engine cooling, and closes when engine cooling is not needed, reducing drag and the time needed for engine warm-up.

### **Tech Expert<sup>™</sup> Active Grille Shutters**



### The Active Aerodynamics Market Has Arrived







ADV7016 Honda CR-V (2019-17) 4 Cyl 2.4L



**ADV7002** Ford F-150 (2017-15)



ADV7023
Chevrolet Bolt EV (2019-17)
Chevrolet Malibu (2018-16)
Buick LaCrosse (2019-17)



**ADV7003**Dodge Ram 1500
(2017-13)



ADV7028 Nissan Versa Note (2018-17)

## Lighting Components

Most lighting components are located in or near the headlamp assembly where they can be easily damaged in a frontend collision.

HID Modules are prone to damage due to sensitive internal circuitry, and Headlight Level mechanisms often include actuator arms that are easily bent or damaged.

Center High Mount Stoplight Assemblies are unprotected, with lenses and interior components that often break on impact.



### **HID Modules (HID Headlight Ballasts)**

Tech Expert<sup>™</sup> HID Modules feature OE-match internal circuitry with heavy-duty casings around electronics for durability. DOT-certified to comply with Federal Motor Vehicle Safety Standards.

55+ SKUs / VIO: 20.9M



### **Hi-Temp Headlight Connectors**

"Plug and play" between the factory harness and new bulb for easy install including vehicles with HID headlights. Tech Expert™ Hi-temp connectors prevent melting caused by high-intensity bulbs.

8 SKUs / VIO: 100M+



### **Headlight Level Sensors**

Direct-fit replacement restores headlight self-leveling system function for improved visibility. These sensors undergo rigorous testing to ensure proper performance under all conditions.

50+ SKUs / VIO: 12.9M



### **Center High Mount Stoplight Assemblies**

Designed to prevent water intrusion, which can lead to brake light failure, these quality OE-matching replacements ensure proper fit, form, and function for an easy install.

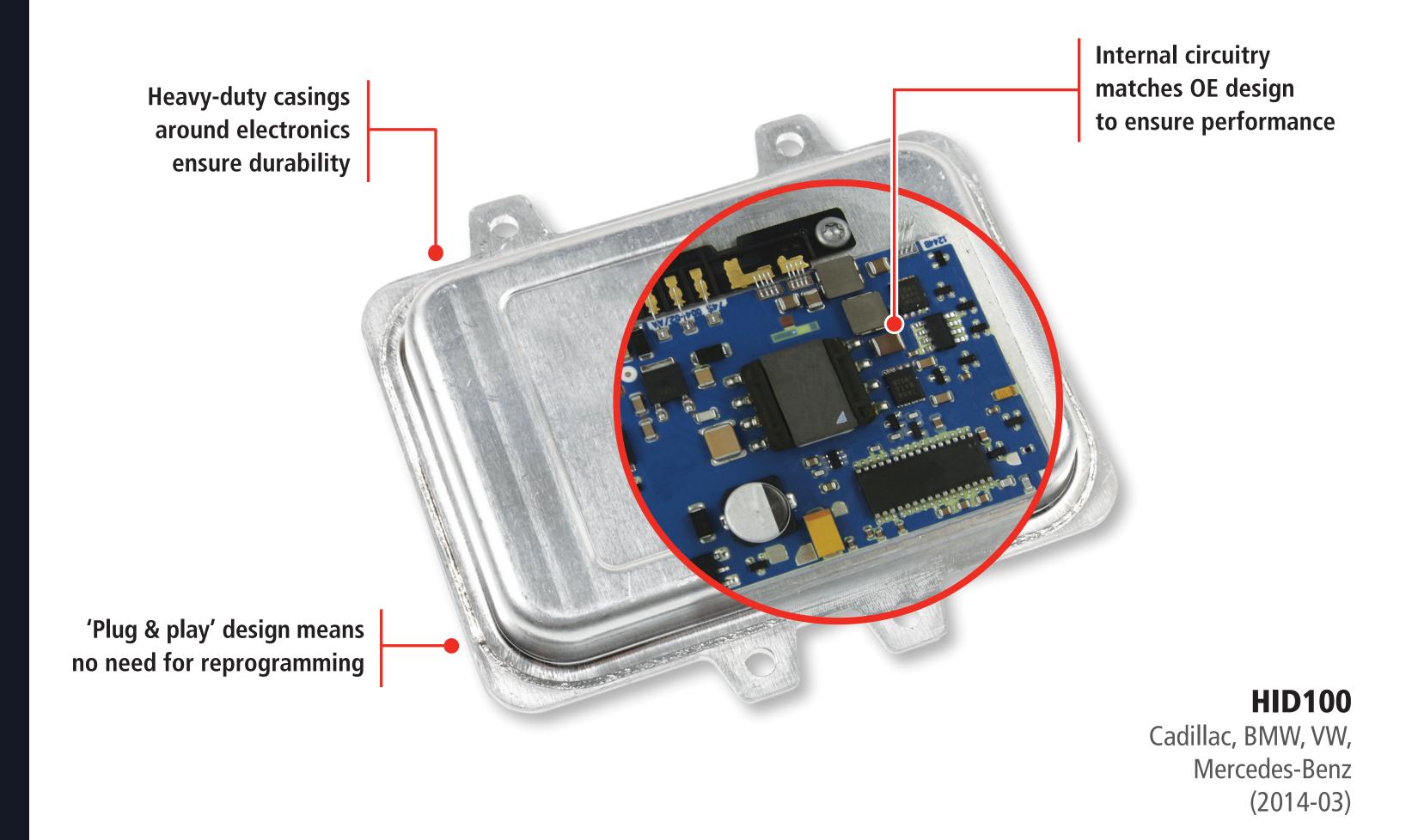
25+ SKUs / VIO: 32.5M

## NAPA® Echlin® Quality

OE high-intensity discharge (HID) components fail due to overheating, moisture intrusion or collision damage. We created direct replacement HID Headlight Ballasts - parts that match the fit, form, and function of the originals - to restore proper lighting function to these costly OE systems.

Our HID Headlight Ballasts are DOT Certified to comply with Federal Motor Vehicle Safety Standards.

### **Tech Expert<sup>™</sup> HID Headlight Ballasts**



## NAPA® Echlin® Quality

Failed headlight level sensors can create dangerous driving conditions.

As direct replacements for the failed OE sensors, our Headlight Level Sensors work with the vehicle's self-leveling headlight system to adjust the beams to the appropriate height. Once installed, the sensors can even compensate for headlights that have shifted because of a loaded trunk.

### NAPA® Echlin® Training Tip

To prevent broken linkage, check the mounting bracket for corrosion and rust. If you notice any, clean with rust penetrant.

### **Tech Expert<sup>™</sup> Headlight Level Sensors**



Functioning Sensor

Headlight beams remain level

despite vehicle height



**Malfunctioning Sensor** 

Headlight beams angle upwards, which reduces visability

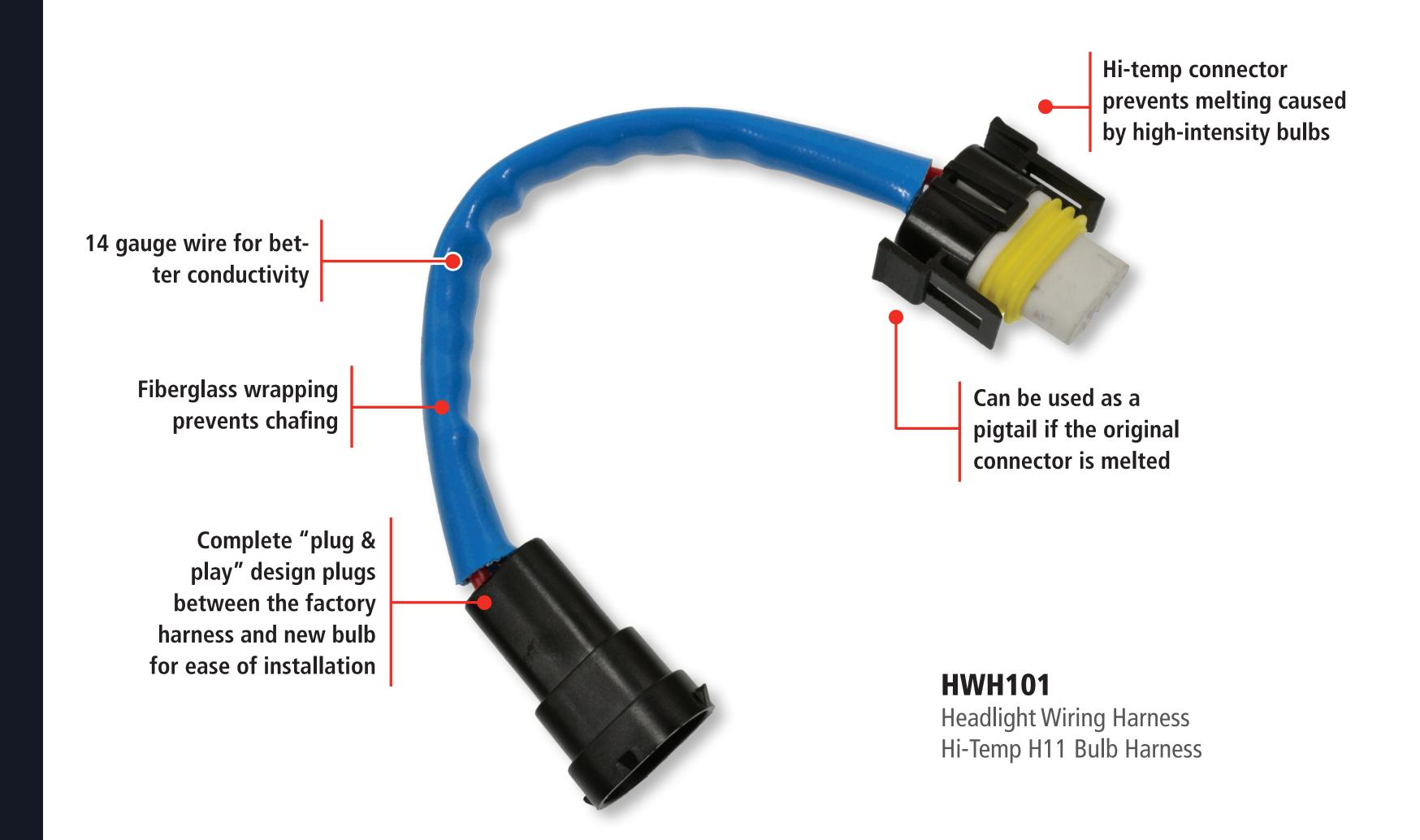


## NAPA® Echlin® Quality

The heat generated by today's OE automotive light bulbs can melt the bulb's connectors. To prevent this, Tech Expert™ Headlight Wiring Harnesses are built with hi-temp connectors that can withstand extreme heat.

The harnesses also have 14 gauge wire for better conductivity and a "plug and play" feature that lets you plug the harness right between the factory harness and new bulb.

### **Tech Expert™ Hi-Temp Headlight Wiring Harnesses**



## Door/Body Components

Door Lock Actuators are mounted in the doors and can be damaged any time a door is impacted.

Trunk Latches/Actuators and Liftgate
Actuators are easily damaged in a
rear-end collision, while Hood Latches
and Actuators are impacted by a frontend collision.



#### **Door Lock Actuators**

This growing line features integrated and nonintegrated actuators. All NAPA® Echlin® DLAs meet FMVSS requirements for door ejection safety.

1200+ SKUs / VIO: 180.5M



### **Hood Latches and Actuators**

Direct-fit OE replacement features "plug and play" design for easy install. Designed to meet Federal Motor Vehicle Safety Standards.

6 SKUs / VIO: 6.5M



#### **Trunk Lock Actuator**

Matches the original for application-specific performance and an easy install. Designed to meet Federal Safety Standards.

15+ SKUs / VIO: 10.0M



### **Liftgate Actuators**

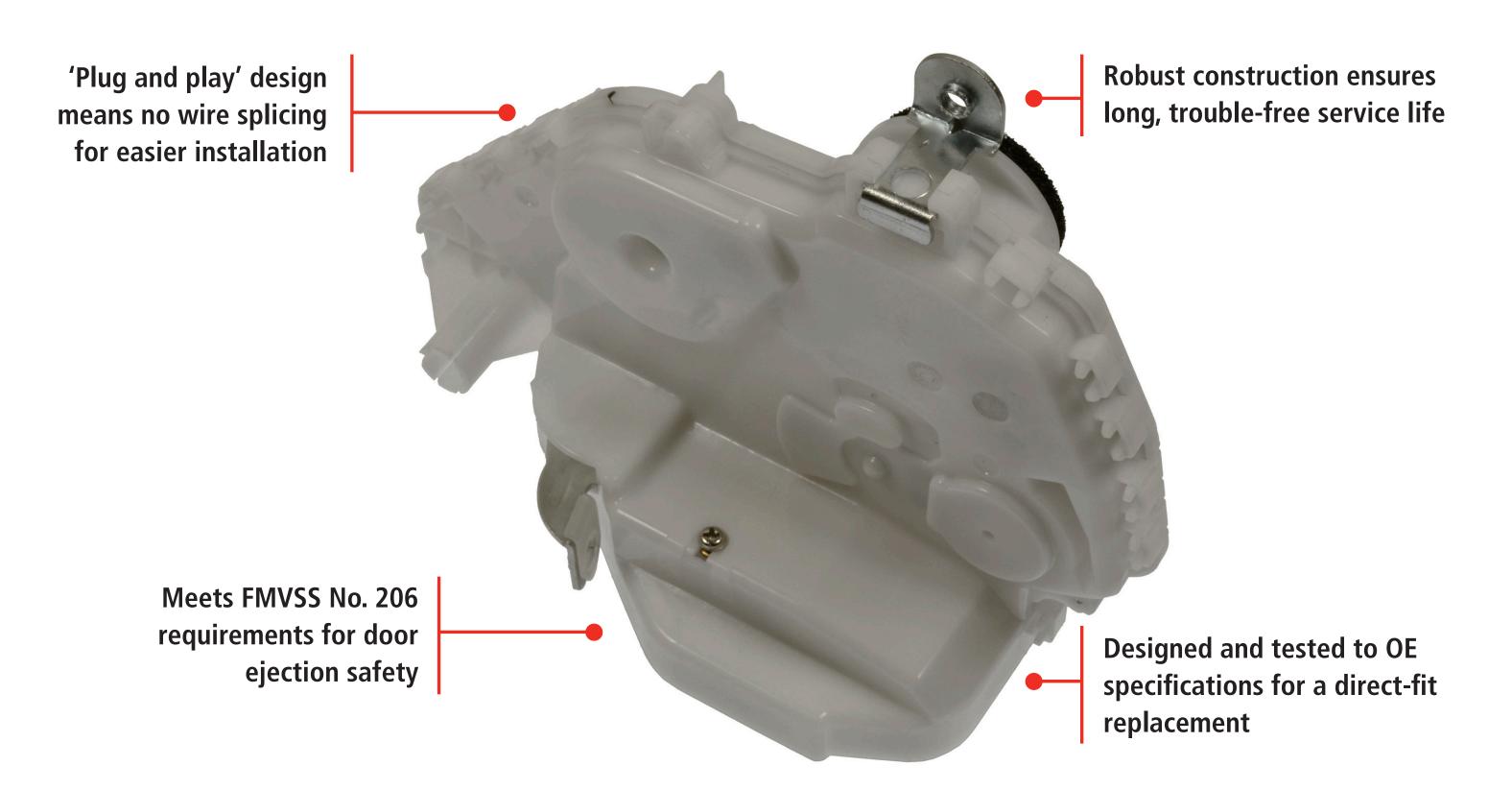
Direct-fit OE replacement ensures proper fit and form to precisely match the function and performance of the original unit.

15+ SKUs / VIO: 20.1M

## NAPA® Echlin® Quality

NAPA® Echlin® Integrated Door Lock
Actuators combine electrical actuation
with latch mechanization. NAPA®
Echlin® offers a line of Integrated
Door Lock Actuators that are all direct
OE replacements to ensure proper fit,
form, and vehicle-specific function.

### NAPA® Echlin® Integrated Door Lock Actuators



**DLA1524** Honda Pilot (2015-09)

## Cabin Components

Driver-operated Combination Switches,
Steering Angle Sensors and Airbag Clock
Springs are all vulnerable in a collision.

NAPA® Echlin® offers a complete line of top-quality switches along with the supporting sensors.

#### **Did You Know**

Missing or bad Steering Angle Sensor data will deactivate nearly every active safety system.



### **Airbag Clock Springs**

When airbags are deployed, high heat is generated that melts the connector behind the airbag requiring the Clock Spring be replaced.

NAPA® Echlin® Clock Springs are direct-fit replacements featuring premium components to ensure superior application-specific performance.

200+ SKUs / VIO: 148.6M



### **Combination Switches**

These driver-operated switches are attached to steering columns which are designed to collapse upon impact, destroying the switch.

Designed, manufactured and tested to stringent quality standards matching the original to deliver precise vehicle-specific performance.

1,000+ SKUs / VIO: 264.9M



### **Steering Angle Sensors**

Post-collision alignments require steering angle sensor inspection. If this sensor can't be recalibrated, it needs to be replaced.

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

115+ SKUs / VIO: 102.3M

## Undercar Sensors

Any collision that impacts the wheels is likely to damage the TPMS and ABS sensors.

The vehicle speed sensor is located in the transmission, or on the rear of the transfer case for 4WD vehicles. Speed sensors are usually plastic and are subject to damage in a collision.

Ride height sensors are a highly sensitive suspension system component with fragile linkages that can also be easily damaged in a collision.



#### **TPMS Sensors**

The QWIK-SENSOR® Multi-Frequency TPMS sensor is available in rubber or metal stem. Combine with NAPA® Echlin® OE-Matching TPMS for 99% coverage. Also offering a full line of service kits and TPMS tools.

220+ SKUs / VIO: 283.0M



### **Vehicle Speed Sensors**

Features OE-exact connectors and terminals delivering the precise OE output signal to ensure accurate readings and performance. 100% tested.

420+ SKUs / VIO: 213.7M



#### **ABS Sensors**

Direct-fit replacements demonstrate flawless performance, matching the OE for form, fit, and critical function. Superior quality control with extensive laboratory and real-life product testing.

2,500+ SKUs / VIO: 264.9M



### **Ride Height Sensors**

Tech Expert<sup>™</sup> Ride Height Sensors come complete with sensor, linkage and mounting bracket for a complete assembly and easy install.

20+ SKUs / VIO: 26.2M

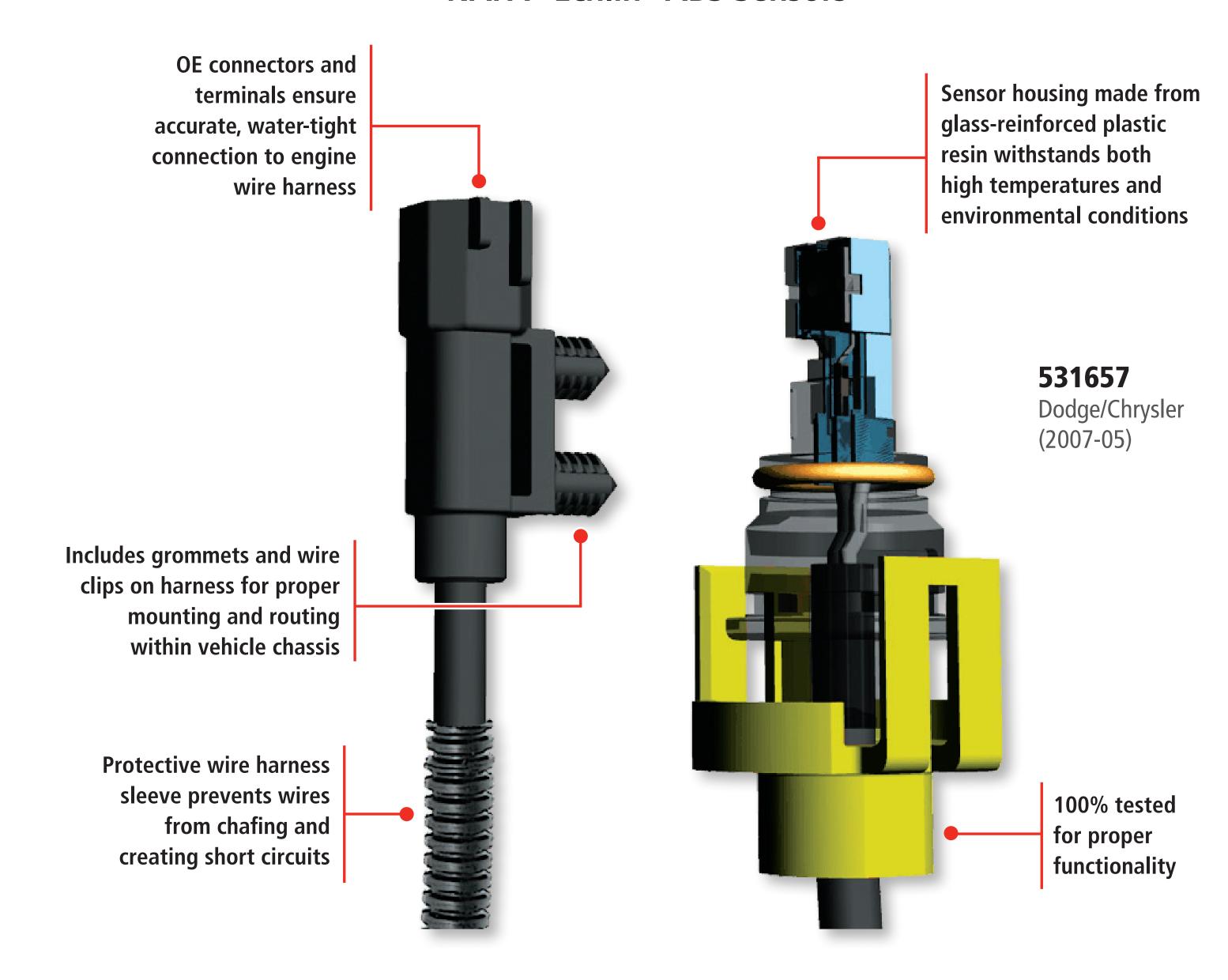
## NAPA® Echlin® Quality

NAPA® Echlin® ABS speed sensors are designed to provide consistent performance, matching the OE for form, fit, and precision function.

Features such as superior magnetic circuit materials are engineered into our sensors to deliver higher voltage output preventing ABS system failure.

Our rigorous ABS Sensor testing delivers a more reliable sensor.

### NAPA® Echlin® ABS Sensors



## NAPA® Echlin® Quality

As an expert manufacturer, we have complete control of the process to deliver a trouble-free sensor.

All NAPA® Echlin® VSS undergo environmental and endurance testing for signal amplitude and polarity to ensure consistent product reliability and application-specific performance.

### NAPA® Echlin® Pro Training Tip

To test for VSS malfunction, check for diagnostic codes ranging between P0500 and P0503. The VSS can also be checked with a scan tool or undergo a resistance check.

### NAPA® Echlin® Vehicle Speed Sensors



VSS333

Ford Truck (2004-97)

## NAPA® Echlin® Quality

QWIK-SENSOR® Multi-Frequency TPMS Sensor combines all frequencies into a single sensor, eliminating duplication of inventory. Available with a factory installed rubber or metal valve stem.

Faster programming times and longer battery life are enhancements engineered into the 92-4006R and 92-4006M.

#### **Did You Know**

The required sensor programming can be completed before or after installation, and while under pressure.

### One Single Sensor is All You Need.



LOCSYNC, PAL, POD, and

**WAL advanced TPMS** 

technologies

Application-Specific Integrated Circuit (ASIC) features an accelerometer that uses multi-axis positioning which allows the TPMS system to accurately display POD (Pressure on Demand)

Surface-mounted, dual band antenna enhances signal integrity and reliability without compromising battery life to ensure data is transmitted accurately

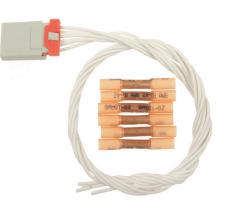
Available for both domestic and import applications with 314.9MHz - 434MHz TPMS systems

## Connectors and Pigtails

When sensors are damaged in a collision, the connectors need to be replaced too.

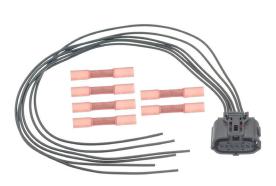
NAPA® Echlin® has a full offering of high-quality specialized connectors.

For more info, check the online catalog at NAPAEchlin.com



### **Steering Angle Sensor Connectors**

10 SKUs / VIO: 29.1M



### Park Assist Sensor Connectors

15+ SKUs / VIO:106.6M



### Park Assist & Lane Departure Camera Connectors

1 SKU / VIO: 14.5M



### **Headlight Level Sensor Connectors**

4 SKUs / VIO: 6.5M



### **Blind Spot Detection Sensor Connectors**

4 SKUs / VIO: 24.1M



### Ride Height Sensor Connectors

2 SKUs / VIO: 8.1M



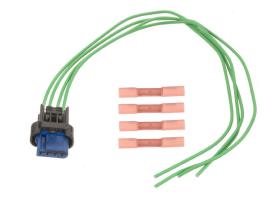
### **Combination Switch Connectors**

30+ SKUs / VIO: 48.5M



### **Cruise Control Distance Sensor Connectors**

3 SKUs / VIO: 25.6M



### **Active Grille Shutter Connectors**

2 SKUs / VIO: 9.2M

## Connectors and Pigtails

Connectors are vulnerable in front, rear, and side collisions. They are often damaged even if their corresponding sensor survives.

NAPA® Echlin® has a full offering of high-quality specialized connectors.

For more info, check the online catalog at NAPAEchlin.com



### **Ambient Air Temp Sensor Connectors**

30+ SKUs / VIO: 157.4M



### **Airbag Clock Spring Connectors**

30+ SKUs / VIO: 69.2M



### **Hood Latch & Actuator Connectors**

15+ SKUs / VIO: 28.8M



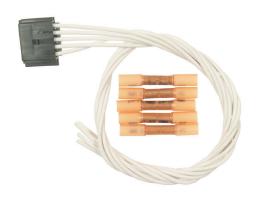
### **Door Lock Actuator Connectors**

35+ SKUs / VIO: 166.9M



#### **ABS Sensor Connectors**

50+ SKUs / VIO: 232.1M



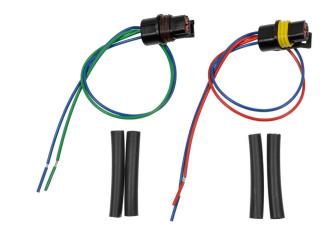
### Trunk Latch & Actuator Connectors

30+ SKUs / VIO: 36.0M



## **Center High Mount Stop Light Connectors**

40+ SKUs / VIO: 94.2M



**Vehicle Speed Sensor Connectors** 

50+ SKUs / VIO: 173.3M



#### **Liftgate Actuator Connectors**

35+ SKUs / VIO: 15.7M

# NAPA® Echlin® Training Tech Tip

As experienced ASE-certified automotive technicians themselves, NAPA® Echlin® Trainers are experts in engine and sensor technology.

Here's what they say to look out for when replacing a high-tech component after a collision.



During a collision repair, before replacing an ADAS component, always refer to specific service information and procedures required to restore proper safety functions



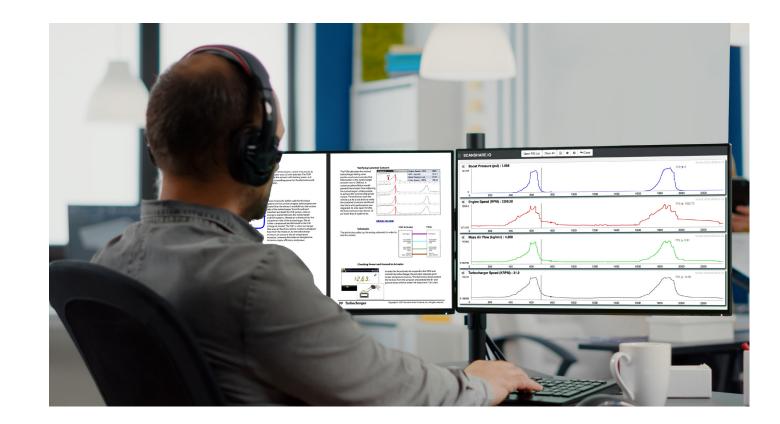
Before installing any replacement part after a collision, make certain that the mounting surface is true to the original location

# NAPA® Echlin® Professional Training

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

NAPA® Echlin® Training delivers accredited classes that educate technicians in the latest automotive repair technologies, and techs can earn CEU credits.

An extension of NAPA® Echlin® training, our extensive ADA-compliant YouTube professional video library features more than 500 installation and product videos.





NAPA® Echlin® offers an annual subscription to Pro Training On-Demand. This subscription grants access to more than 200 English, and over 50 Spanish 1-hour courses – and the NAPA® Echlin® on-demand library continues to grow. Topics range from fundamentals to advanced concepts, and include HVAC, diesel, hybrid, ignition, injection, electrical and communication diagnosis.





Whether in-person at your location or virtually via computer, all NAPA® Echlin® Training classes feature a live instructor and are fully interactive as students work through real-life scenarios. Virtual class "workbooks" include on-demand links to video content and student configurable scan data.

Visit NAPAEchlinTraining.com