

# HYBRID AND ELECTRIC VEHICLE COMPONENTS

1

Over 7,900 parts for hybrid vehicles are available from Standard® and Four Seasons®

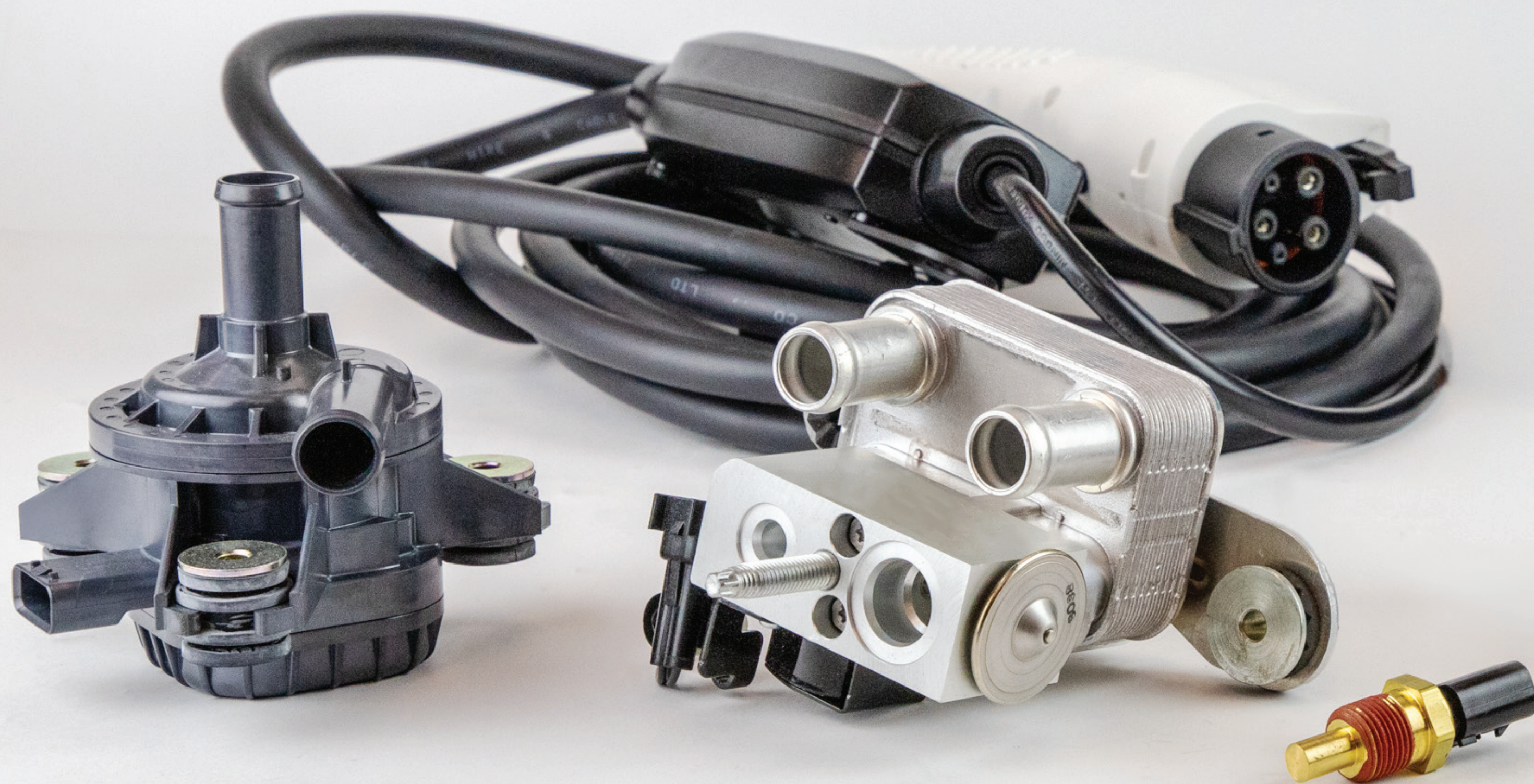
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More than 2,300 parts for electric vehicles are offered by Standard® and Four Seasons®

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Many of the same parts that fail on Internal Combustion Engine (ICE) vehicles also fail on hybrids and EVs

**What's in your box?™  
Here's what's in ours.**

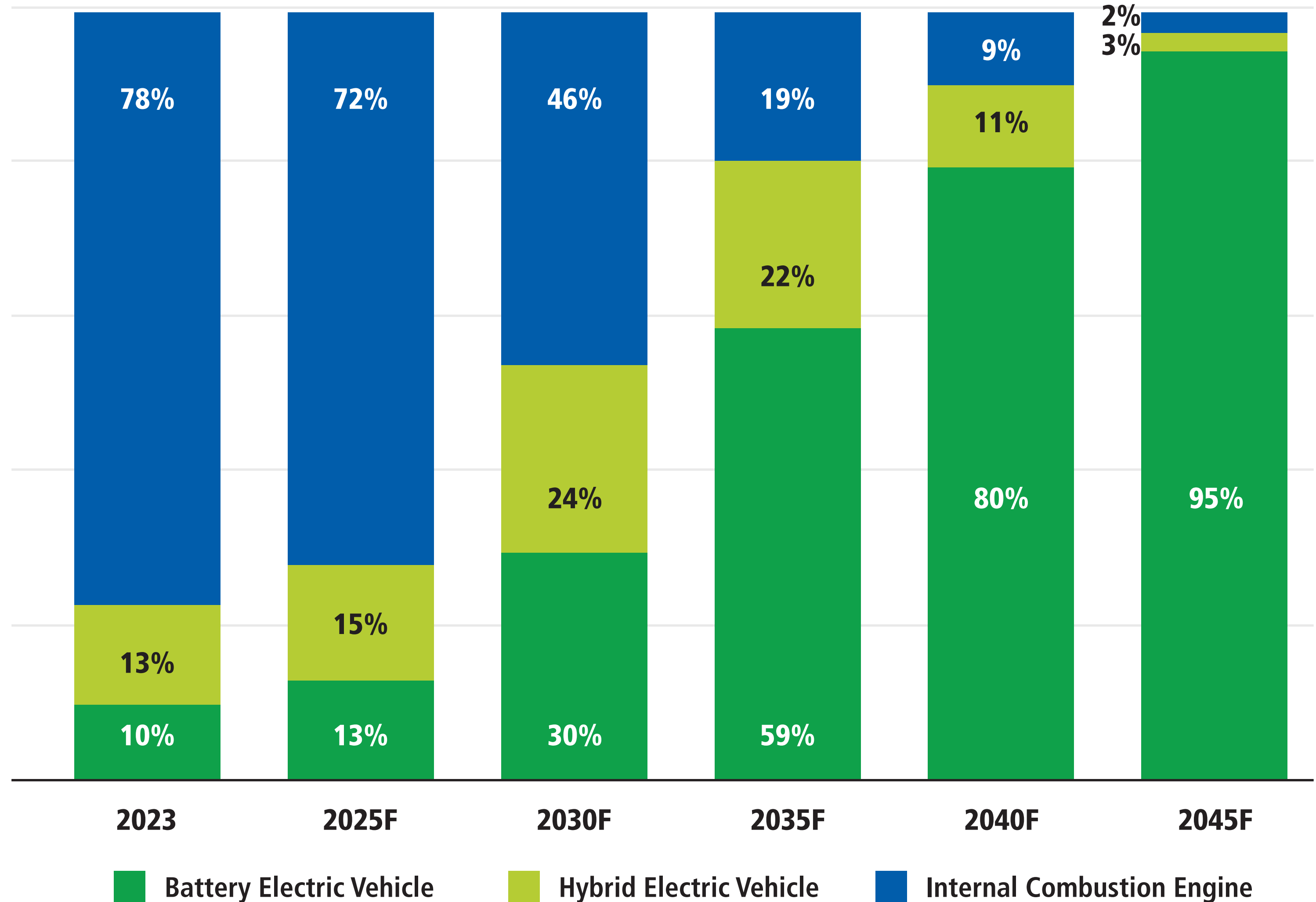


# Growing Market

Today, around 23% of all vehicles sold have an electric powertrain (this includes hybrids). This number is expected to grow in the coming years. By 2030, more than half of new vehicles will have some type of electric powertrain, with around 30% being full electric.

Electric vehicles are projected to represent 80% of all new vehicles sold in 2040. These projections could prove accurate, but we also know it is possible that consumers will still prefer to purchase ICE vehicles. Regardless of how the vehicles of the future are powered, Standard® is equipped to help technicians service them.

## U.S. New Vehicle Sales by Powertrain



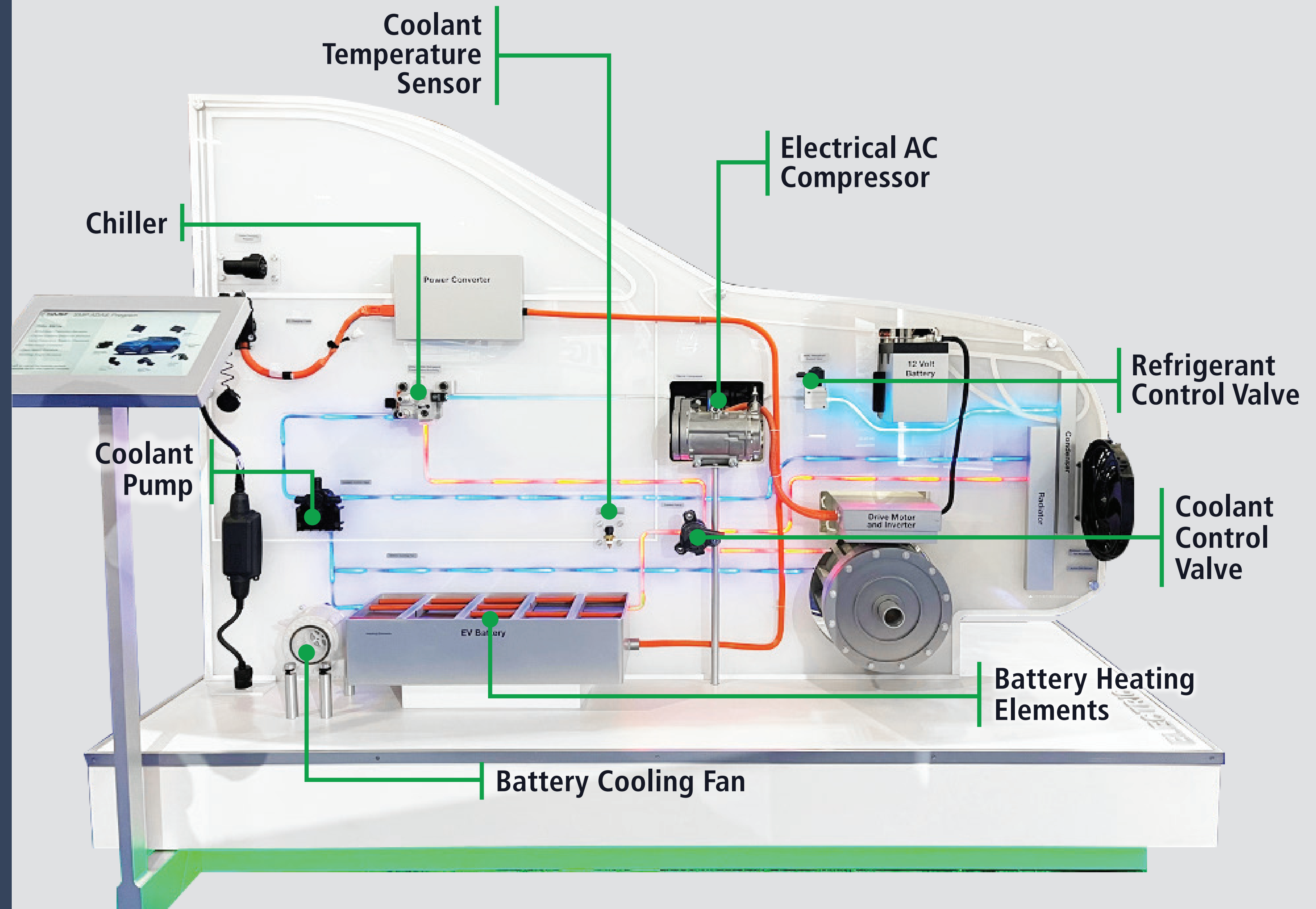
Source: 2024 Joint EV Trends and Outlook Forecast, Auto Care Association and MEMA Aftermarket



# New Opportunities

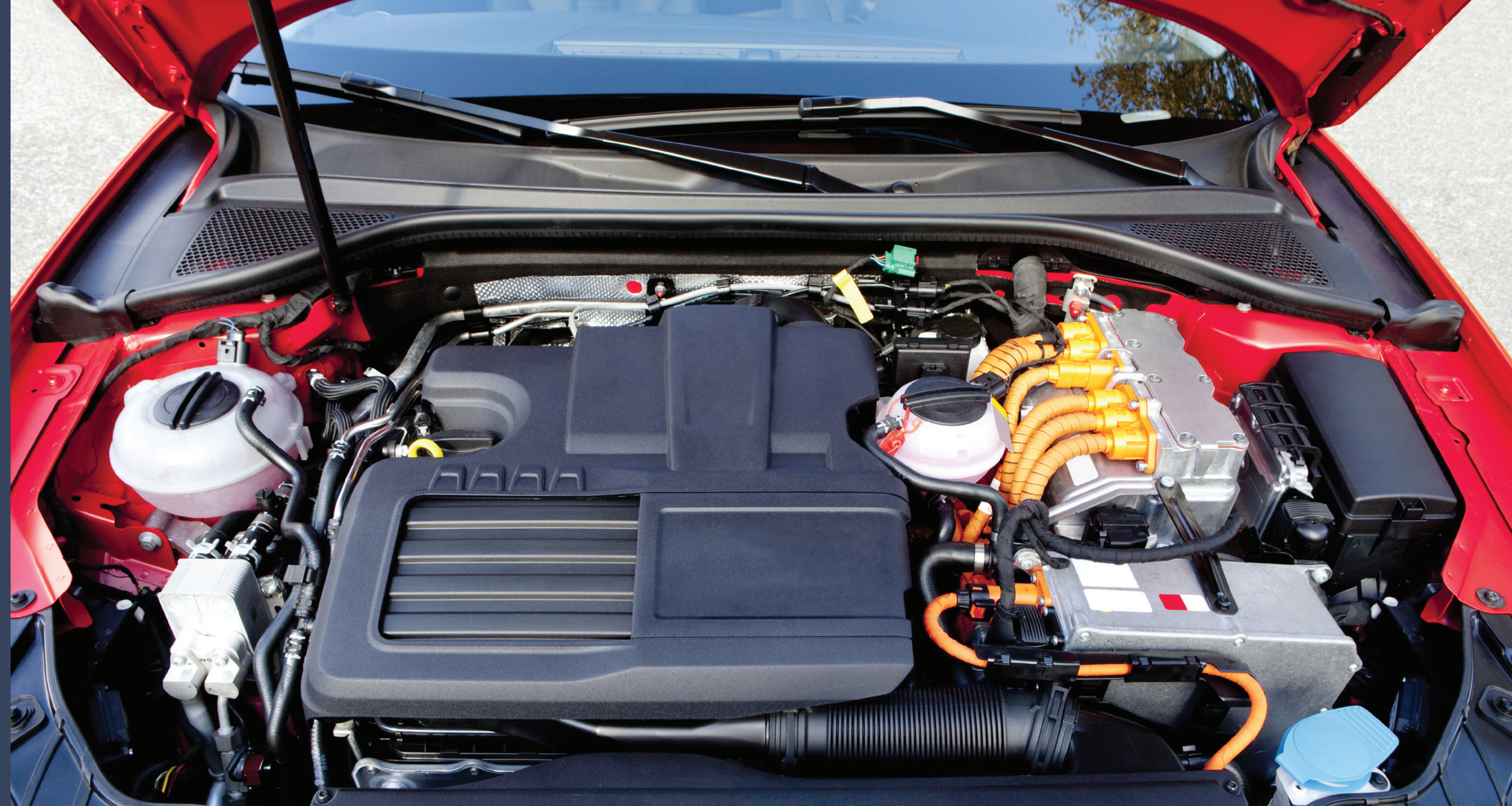
Hybrid and electric vehicles represent new and different service opportunities. AC compressors are becoming larger and electrical rather than belt driven, electric vacuum pumps are required for adequate braking assistance and multiple new components are used for heating and cooling the large drive batteries. Standard<sup>®</sup> and Four Seasons<sup>®</sup> are leading the way with aftermarket solutions for these new and growing categories.

## Standard<sup>®</sup> and Four Seasons<sup>®</sup> Electric Vehicle Display



# Opportunities

Despite all of the news around EVs, hybrid vehicles continue to lead the way for alternative powertrains in both vehicle registrations and new vehicle sales. In fact, there are three hybrids on the road for every one full-electric vehicle, and hybrids are outselling EVs almost two to one. Aftermarket service opportunities for alternative powertrains will continue to be led by hybrid vehicles for the foreseeable future. This is great for the aftermarket, as these vehicles feature complex powertrain systems with more components compared to traditional ICE vehicles.



**ABS Speed Sensors**

**ADAS**

**Blower Motor Resistors**

**Cam & Crank Sensors**

**Electronic Throttle Bodies**

**EVAP**

**Fuel Injection**

**Ignition Coils**

**Switches**

**TPMS**

**Variable Valve Timing**

**Battery Cooling**

**Charging Cables**

**Climate Control**

**...and more**



**Hybrid & EV Components**

**StandardBrand.com | 4s.com**

# What's New

## Four Seasons® Electric Coolant Pumps

Hybrid and electric vehicles utilize electric coolant pumps to keep the battery and the drive motor operating at the optimum temperature. Four Seasons® now offers coverage for nearly 9 million hybrid and electric vehicles and is regularly adding new high-quality pumps.

For the very latest applications, please visit [4S.com](https://www.4s.com).



**89093**

Lexus RX450h (2022-16)  
Toyota Prius C (2019-18)



**89079**

Tesla Model 3 (2023-17)  
Tesla Model Y (2023-20)



**89087**

Audi A4 (2024-21)  
Audi SQ8 (2024-21)



**89075**

Honda Clarity (2021-17)  
Honda Insight (2022-19)



# What's New

## Standard® Hybrid and Electric Vehicle Components

As hybrid and electric vehicles grow in popularity, many of the components used on them are model-specific and do not fit other vehicles. Standard® has the resources and manufacturing expertise to introduce these components quickly so that you have a quality aftermarket solution, without having to go to the dealer.

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



### **PBA032**

Parking Brake Actuator  
Audi A3 Sportback e-tron (2018-16)  
VW e-Golf (2019-15)



### **PPS153**

Park Assist Sensor  
Ford Mustang Mach-E  
(2023, 2021)



### **ALS3286**

ABS Speed Sensor  
Chevrolet Bolt EV  
(2023-17)



### **LMS106**

Liftgate Motion Sensor  
Ford Mustang Mach-E  
(2023-21)



# Hybrid Vehicle Coverage

With an aging population and almost 10 million vehicles on the road, service opportunities for hybrids are on the rise. Standard® and Four Seasons® have thousands of replacement parts for import and domestic hybrid vehicles.

## Hybrid Coverage

**7,900**  
PARTS

**150**  
MODELS

### Standard® and Four Seasons® have 200+ parts for the 2014 Toyota Highlander Hybrid



Coverage

StandardBrand.com | 4s.com

# Electric Vehicle Coverage

Electric cars are still cars, and many of the same parts that fail on gas-powered cars fail on electric cars. Standard® offers more than 2,500 parts for electric vehicles and our coverage is continuing to expand.

## EV Coverage

**2,500+**  
PARTS

**75**  
MODELS

### Standard® and Four Seasons® have 50+ parts for the 2019 Chevrolet Bolt EV



Coverage

StandardBrand.com | 4s.com



# Tesla Coverage

Teslas remain the most popular electric vehicles on the road. Standard® and Four Seasons® have multiple components for a variety of Tesla-specific systems.

## Standard® and Four Seasons® Tesla Coverage



Coverage

StandardBrand.com | 4s.com

# Charging Cables & Adapters

Quick, reliable charging is critical for the daily use of electric vehicles. Standard® offers both universal and vehicle-specific charging cables as well as an adapter that allows Tesla owners to charge their vehicles at any charging station.

For the most recent applications, check the online catalog at [StandardBrand.com](https://StandardBrand.com).

## Did You Know

Charging EVs and PHEVs generates a lot of heat in the battery. The battery cooling system must be operating properly for the vehicle to charge.



### **EVB004**

Charging Cable  
Toyota Cars & SUVs  
(2022-10) VIO: 822K



### **EVB002**

Universal Charging Cable  
Import & Domestic Cars & SUVs  
VIO: Universal



### **EVB001**

Charging Adapter  
Tesla Cars & SUVs  
(2024-08) VIO: 1.6M



# Four Seasons<sup>®</sup> Battery Cooling Fans

Batteries in hybrid and electric vehicles require constant cooling. A quality cooling fan helps extend both battery life and the range of the vehicle. Four Seasons<sup>®</sup> offers multiple Battery Cooling Fans for popular import and domestic hybrid vehicles. For a complete list of applications, visit [4s.com](http://4s.com).

## Did You Know

An excessive amount of debris can get ingested into battery cooling fans, causing premature failure. Ensure the inlet to the fan is clean to ensure proper airflow and prevent overheating.



### 76810

Toyota & Lexus Hybrid Cars  
(2017-10)  
VIO: 816K



### 76807

Toyota Hybrid Cars  
(2009-04)  
VIO: 387K



### 76809

Toyota & Lexus Hybrid Cars  
(2020-18)  
VIO: 58K



### 76803

Honda Hybrid Cars  
(2016-05)  
VIO: 116K



### 76802

GM Hybrid Cars  
(2018-11)  
VIO: 139K



### 76800

Ford & Lincoln Hybrid Cars  
(2018-13)  
VIO: 358K

# Powertrain-Neutral Components

Standard® and Four Seasons® have more than 50,000 parts that are powertrain neutral. That means the parts are the same whether the powertrain is gas, diesel, hybrid or electric.

Hybrids and EVs use the very same ADAS components, AC compressors and thousands of other switches, sensors, actuators and connectors as their ICE counterparts.

# 50,000+

POWERTRAIN-NEUTRAL PARTS

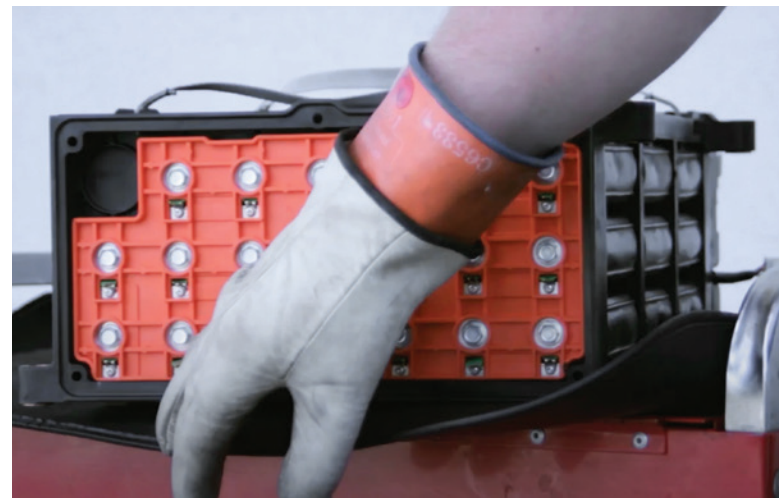
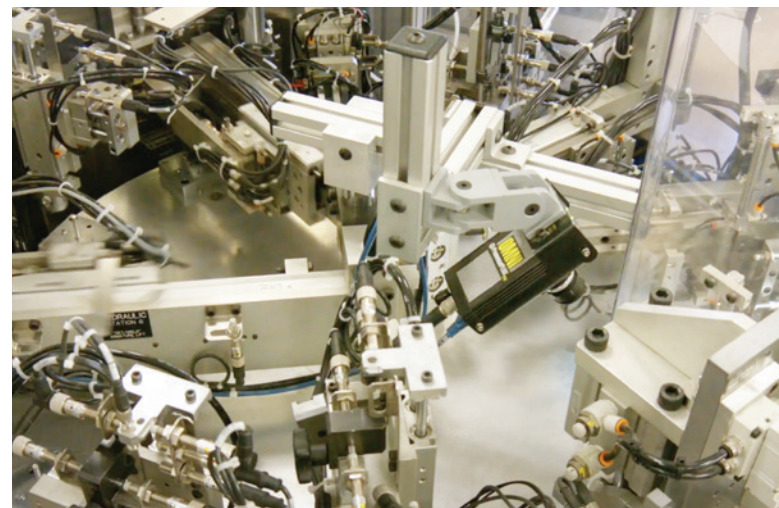
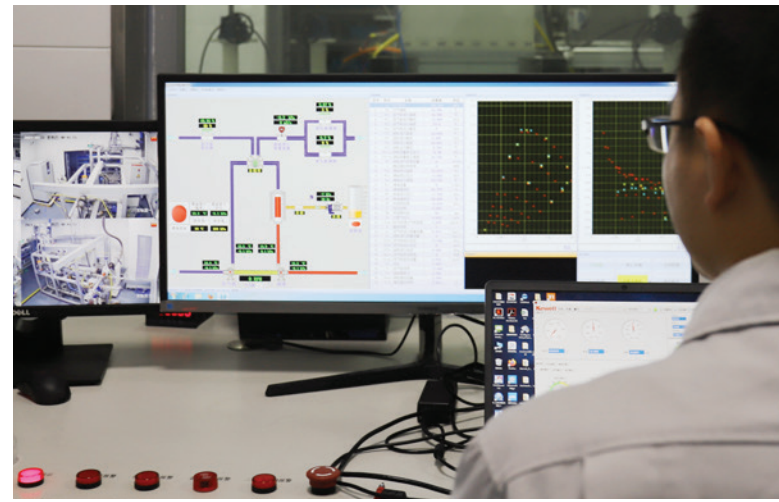


Hybrid & EV Components

StandardBrand.com | 4s.com

# Standard<sup>®</sup> Quality

Hybrid, EV, gasoline or diesel, our parts are engineered, manufactured and tested to function correctly in all driving conditions.



## Research and Development

We have 13 R&D Centers around the world including New York, South Carolina, Poland and Germany. We are committed to developing the best-performing aftermarket parts available.

## Precision Manufacturing

From start to finish, we are an expert manufacturer, validating all components, including raw materials. Our manufacturing facilities are IATF 16949, ISO 9001 and ISO 14001-certified.

## Testing and Performance Analysis

Thermal shock, vibration, salt spray and more, Standard<sup>®</sup> parts are subjected to a series of tests and undergo a detailed validation process.

## On-Vehicle Validation

Hybrids and EVs have complex electronic systems. Our parts are tested on vehicles to make sure they function correctly and integrate with all electronic systems



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

As experienced ASE-certified automotive technicians themselves, Standard<sup>®</sup> Pro Trainers are experts in hybrid and EV systems.

Here's what they say to look out for when servicing a hybrid or electric vehicle.



**Safety is the first priority when working on hybrids or EVs. Make sure you have an understanding of how the electric drive system works, and wear the appropriate protective equipment**



**Provide your customers with confidence in your ability to repair their EV by taking and passing the ASE xEV Level 1 and 2 exams. Standard<sup>®</sup> offers numerous training options to assist you in achieving this level of "Service Readiness"**



**EV and hybrid vehicles have electric compressors, which often run when the vehicle is parked. Always ensure that the AC system is free of leaks and operating properly to help maintain proper cooling of the high-voltage components**

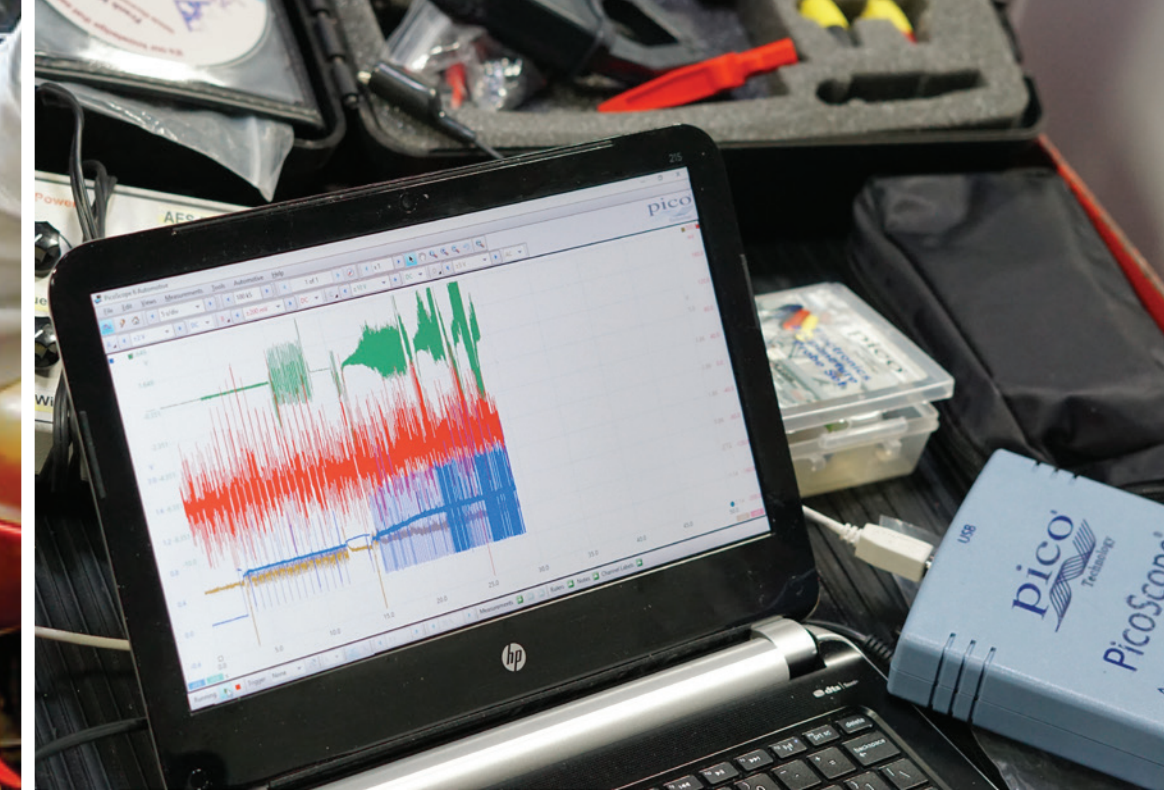


# Standard® Professional Training

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

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

An extension of Standard® training, our extensive YouTube video library has over 700 technical and installation videos.



### Available Classes

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**Chevrolet Volt Overview**

**Electric Vehicle HVAC Components  
and Operation**

**Electric Vehicle Safety Concerns**

**EV and Hybrid Service Tips**

**Honda Hybrid Tips**

**Hybrid Battery Diagnosis**

**Late Model Hybrid Systems**

**Toyota Hybrid Tips**



### Available Classes

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**Analytical Approach to Diagnostics**

**Demystifying Electrical Issues**

**Modern AC Diagnosis and Repair**

**Powertrain Electronics**

**Vehicle Electrification / Hybrid Tips**



**Hybrid & EV Components**

**StandardBrandTraining.com**