GMB

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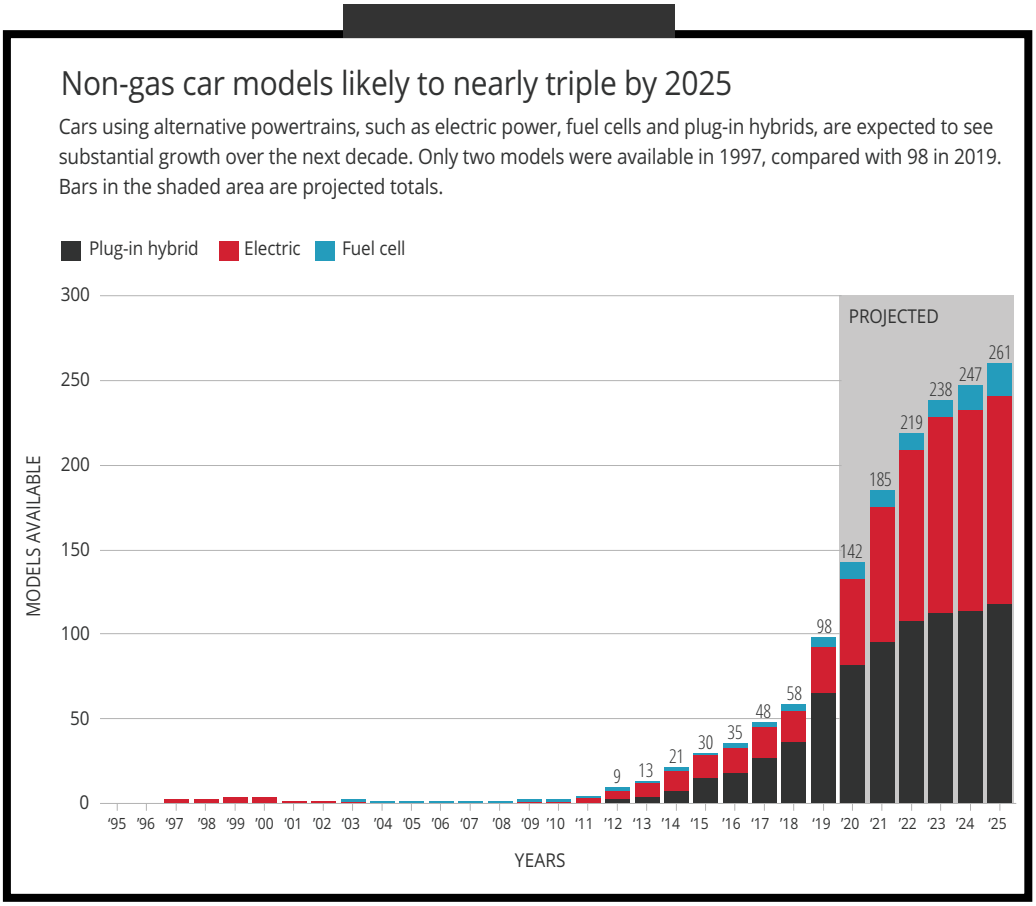
Why Independent Shops Should Not Fear Increasing Electric Vehicle Sales

The industry-wide shift to electric vehicles is underway. As electric vehicles continue to make up a growing portion of auto manufacturers' fleets, things will change for the auto parts and repair industries. As the move to electric vehicles takes place, what will be the impact on independent repair shops? What changes can independent shops expect?



Source: Wards Intelligence and LMC Automotive Credit: Thomas Wilburn/NPR

In this paper, we project the impact that electric vehicles will have on independent repair shops over the next two decades. **While we anticipate big changes, we believe the future for independent repair shops is bright** because:

- EVs are cheaper to own and operate, which should lead to more driving and more maintenance
- While EVs will not need the same level of maintenance that gas and diesel powered vehicles need, they'll still require a fair amount of maintenance and repair
- The adoption rate of EVs will be slower than expected because of the popularity of pickup trucks and large SUVs

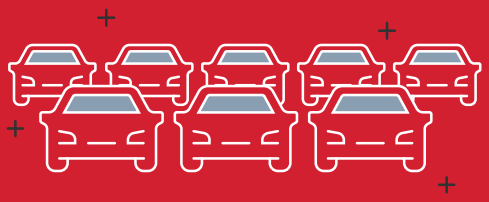
EVs BRING LOWER COST OF OWNERSHIP, WHICH SHOULD LEAD TO MORE DRIVING (AND MORE SERVICE)

It's predicted that as soon as 2022, owning an electric vehicle will be as cheap as owning one that runs on fossil fuels. We should expect costs to continue to drop beyond 2022, to the point where owning and operating an electric vehicle will be so low as to encourage more driving. Not to mention, as costs fall, the number of people who can afford to own an electric vehicle will increase.

EV COST-TO-OWN EFFECT ON NUMBER OF DRIVERS

Cost to own decreases

Car owners increase



Cars on the road increase

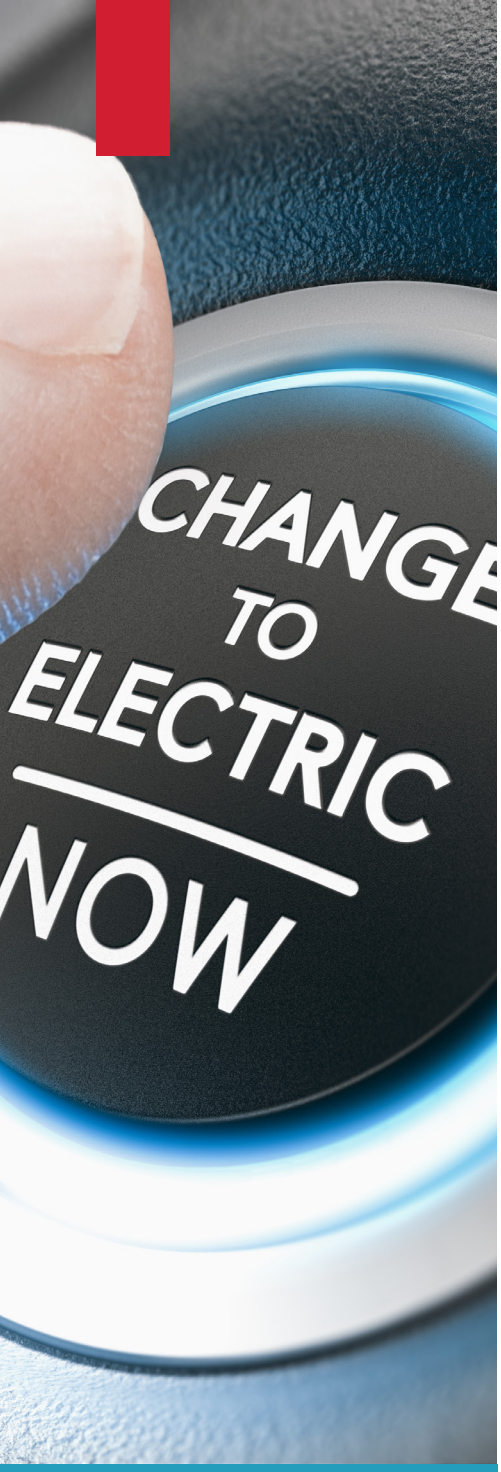
EV vs. GAS in the U.S.A

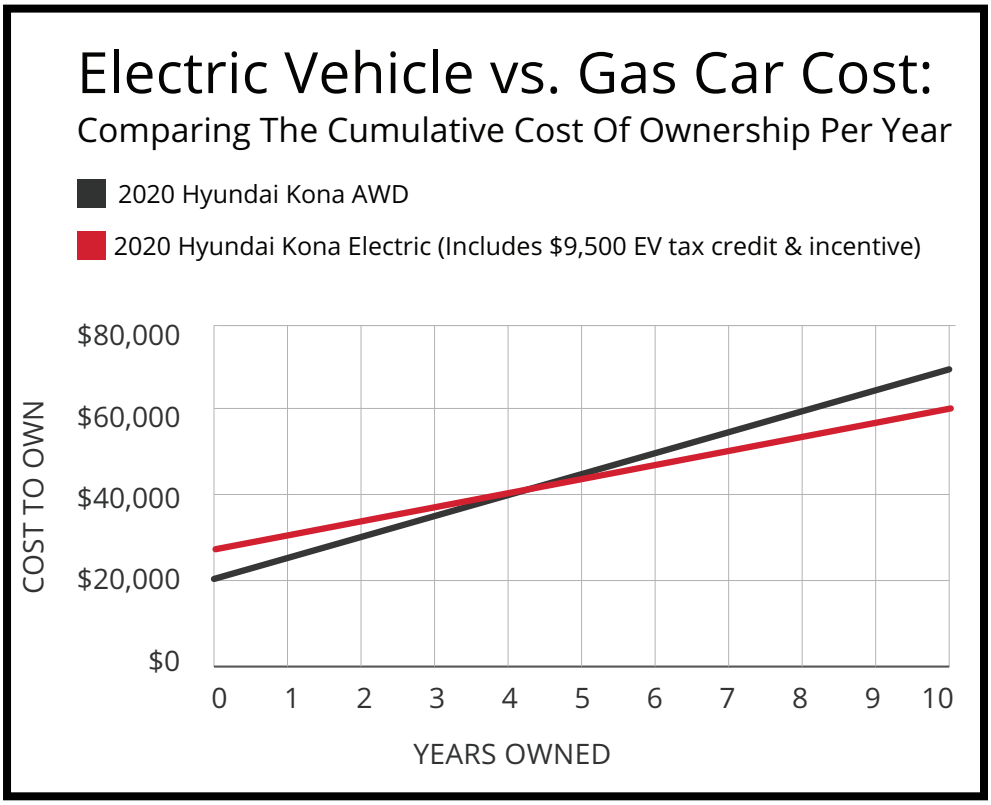
$485
avg cost-per-year to operate an EV

$1,117
avg cost-per-year to operate a gas-powered vehicle

According to a 2018 University of Michigan study on fuel costs, operating an EV costs less than half of what it does to operate an ICEV (ICEV stands for internal combustion engine vehicle). If the cost of a vehicle is cut in half, it's likely that more consumers will drive more often:

- As operating costs drop, consumers are more likely to travel in their vehicles - AAA has found in the past that reduced fuel costs lead to increased summer road trips
- As operating costs drop, low income consumers are more likely to purchase and own a vehicle - research has shown that reduced fuel costs lead to more people purchasing cars rather than riding public transit





Source: Vehicle Cost Calculator from the U.S. Department of Energy: https://afdc.energy.gov/calc/

At first glance, lower vehicle operating costs might make an independent repair shop owner plan for early retirement. However, with lower operating and ownership costs, EVs will make it easier for more people to buy cars and drive more often. **The combination of increasing vehicle ownership and increasing mileage will lead to more vehicles in need of essential repair and maintenance**. We expect that will be good for all repair shops.

Main Takeaways

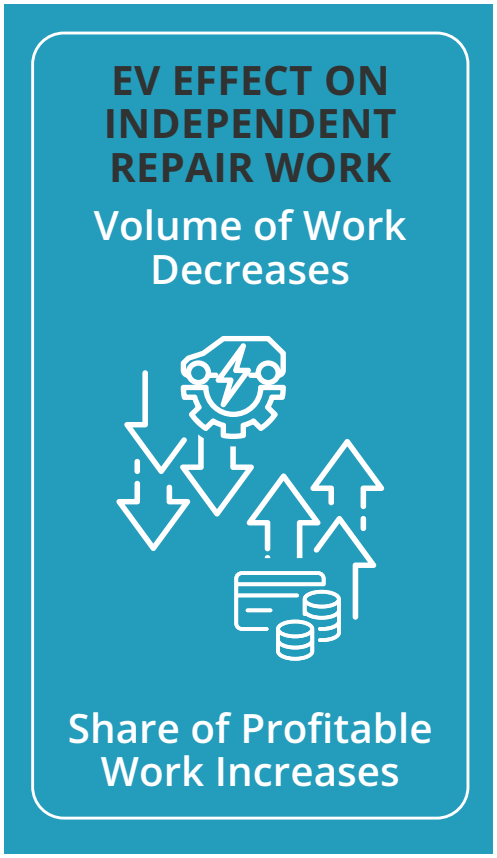
As electric vehicles become more affordable, more people will have the financial ability to own a car, and all vehicle owners will travel by vehicle more often. More vehicles on the road = more need for parts, repair, and maintenance.

AS EVs BECOME MORE POPULAR, REPAIR SHOPS WILL DO MORE PROFITABLE WORK

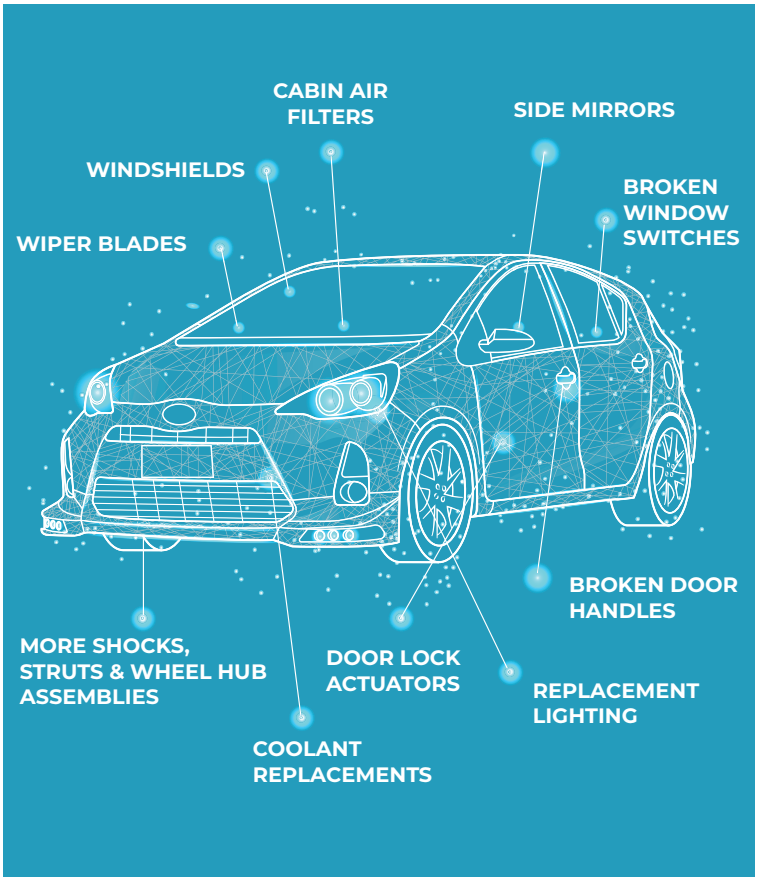
As EVs grow in popularity, auto repair and maintenance work will change:

- EVs do not need fuel filters, oil filters, mufflers, starters, alternators, spark plugs, and so on
- EVs use regenerative braking, reducing the need for replacement brake pads and rotors
- If and when EVs have a mechanical failure of some kind, it will likely lead to the replacement of a single component or module, as there are fewer moving parts to fail

While these changes will impact the volume of tasks that a repair shop is expected to perform, they'll also reduce the amount of time shops spend on complex repairs and maintenance. And reducing the complexity of maintenance and repairs will lead to fewer comebacks.



EVs WILL STILL NEED STANDARD MAINTENANCE



- Battery and electrical systems still use coolant, which means EVs will need periodic coolant replacements.
- While EVs use regenerative braking and will need less brake work, they're also substantially heavier than gas and diesel powered vehicles. That extra weight means more need for shocks, struts, and wheel hub assemblies.
- Like all vehicles, EVs will still have consumable parts like windshield wiper blades, cabin air filters, and replacement lighting.
- Finally, so long as vehicles are driven by people, owners will still need help fixing broken window switches and door lock actuators, broken door handles and side mirrors, etc.

From electric air conditioning systems to leaky axle seals, EVs will still need repairs. And while it's true that EVs are simpler than ICEVs, "simpler" is a relative term—even a well designed EV will have nearly 10,000 unique parts.

Main Takeaways

While electric vehicles are less complex than vehicles with internal combustion engines, they will still require a considerable amount of maintenance and repair work. Yet because of the reduced complexity, maintaining and repairing an EV should be easier too. This will mean shops can spend more time doing profitable work and less time dealing with hard-to-diagnose problems and comebacks.

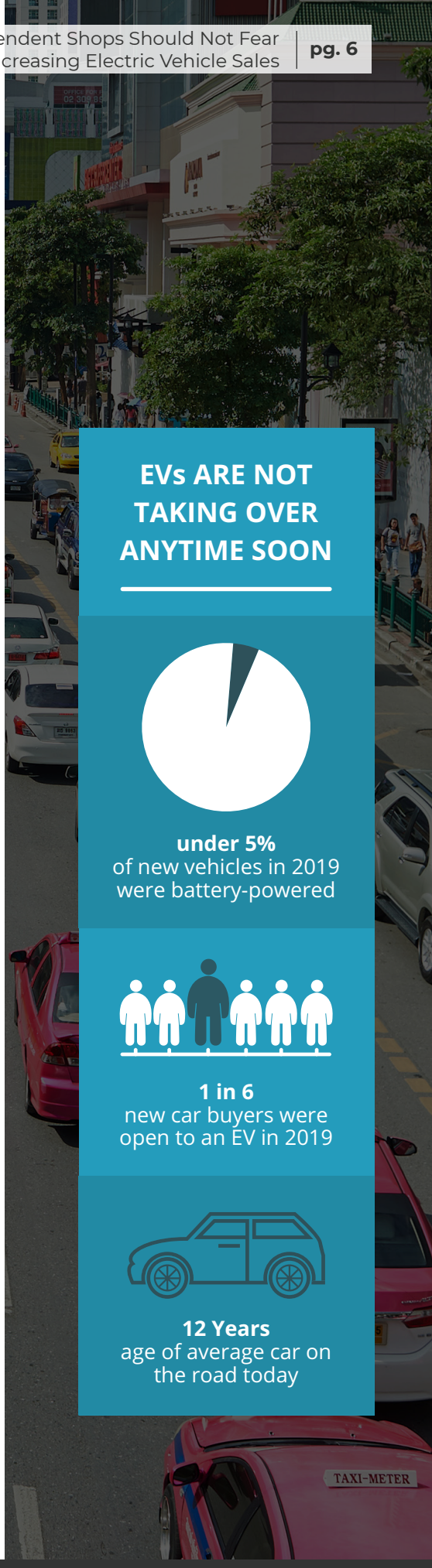
CONTRARY TO POPULAR BELIEF, EVs ARE NOT TAKING OVER ANYTIME SOON

Despite the overwhelming buzz about electric vehicles, the future of internal combustion engine powered vehicles is strong. The reasons are quite simple:

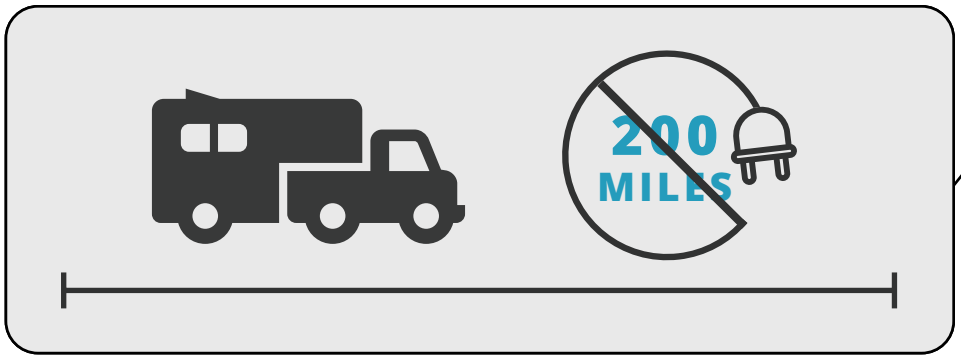
1. EV adoption is proceeding slowly
2. There's no reasonably capable electric truck or large SUV that's also affordable on the market, and there is no plan to offer this type of vehicle anytime soon.

To the first point, even if you count gasoline hybrids as "battery powered," less than 5% of new vehicles were battery-powered vehicles in 2019. And a study by AAA found that only 1 in 6 new car buyers in 2019 were open to buying an EV. The vast majority of new car customers - nearly 85% - aren't open to buying an EV. And 95% of the new vehicles sold in the US in 2019 were powered exclusively by gasoline or diesel fuel.

While it's likely that more and more consumers will consider (and ultimately buy) a new electric vehicle, it's also important to note that the average car on the road is almost 12 years old. Which is to say that, **even if every single new vehicle was an EV, it would still take decades to replace all the ICEVs on the road today.**

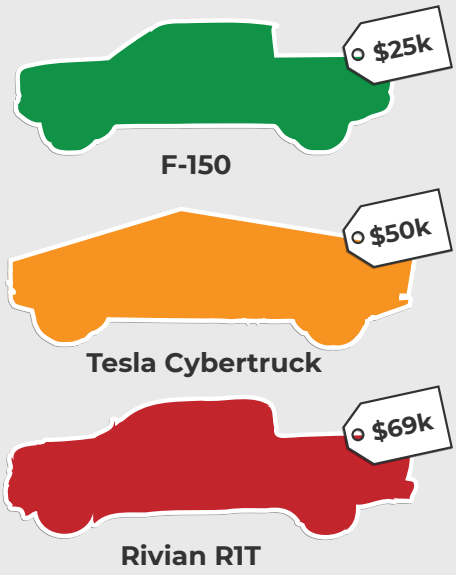


To the second point, consumer demand for pickup trucks and large SUVs is stronger than ever. As of mid 2020, there are no battery powered electric pickup trucks for sale, nor are there any battery powered electric large SUVs (like the Ford Expedition or Chevy Suburban) for sale. Of the electric pickups and SUVs that are planned, there are concerns about towing and hauling and range.



If an electric truck or large SUV can't pull a boat or RV more than a couple hundred miles before it needs a charge, it's not a viable option for most current truck and large SUV owners.

Furthermore, costs of a new electric truck or SUV are expected to be significantly higher than a similarly sized new gas powered vehicle. A new F-150, for example, can be had for less than half the cost of a $50,000 Tesla Cybertruck or a $69,000 Rivian R1T.



As recently as 2019, nearly 4 million of the new vehicles sold in the United States were pickup trucks or large SUVs. This is a large segment of the new vehicle market that's unlikely to become "electrified" anytime soon.

Main Takeaways

EV consumer adoption won't happen overnight, and two important segments of the new vehicle market - pickup trucks and large SUVS - will not be going electric anytime soon. Gas and diesel powered vehicles will still dominate North American roadways for years to come.

EVs WILL CAUSE A SHIFT IN THE PARTS INDUSTRY TOO

As electric vehicles (EVs) rise in popularity, the parts industry will have to pivot. The type and variety of replacement parts will change, with some parts becoming more popular while others are phased out. Here's a quick look:

PARTS THAT WILL STAY	PARTS THAT WILL BE PHASED OUT	NEW PARTS
EVs and gas-powered vehicles drastically differ in some ways, but there are parts they have in common.	An electric powertrain has about 20 moving parts. That means many ICEV parts will be phased out.	The rise of EVs will bring entirely new parts to the table.
Brake system components	Fuel system components	Electrically driven accessories (steering, HVAC, coolant pumps)
Suspension components	Multi-gear automatic transmissions, manual transmissions	Electric motors, electric vehicle gearboxes, and electric motor control systems
Interior trim & components	Gas & diesel engine components	Battery pack cooling systems
In-dash electronics and infotainment	Exhaust system components	Battery charging systems
Exterior trim & body parts		

Parts manufacturers will shift focus to new categories of parts, while also maintaining supplies of parts that will gradually fade away as EVs rise in popularity. At GMB, we anticipate a gradual transition from creating one type of part (say, gear or belt driven water pumps) to new yet functionally similar parts (like an electric coolant pump).

As one of the world's leading manufacturers of OE quality replacement parts for ICEVs, we anticipate offering a large number of replacement parts for gas and diesel powered vehicles for decades. Our plan is to become the go-to supplier for both "legacy" and EV parts - we'll offer parts like water pumps for older gas powered vehicles alongside electric cooling pumps for newer vehicles. We are committed to serving all our wholesale parts buyers, whatever type of vehicle they're working on.

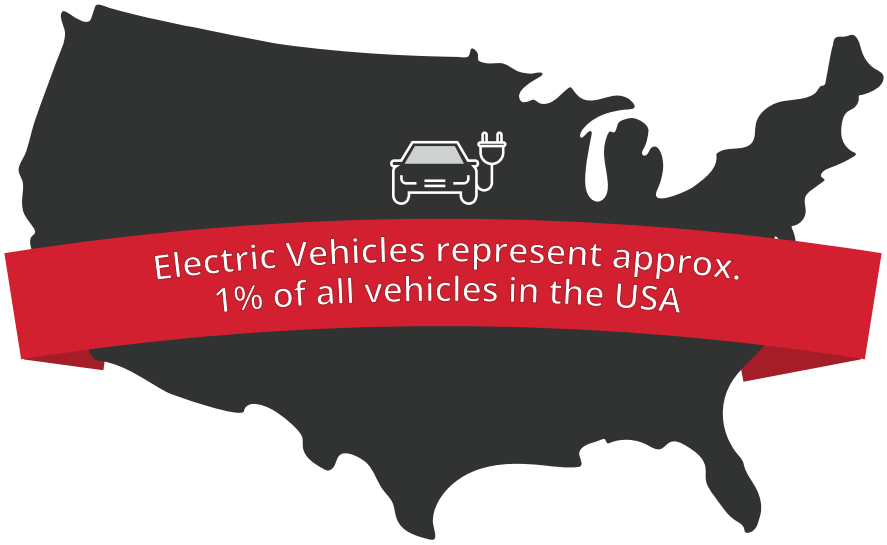
Main Takeaways

EVs are quite different from ICEVs, but as some types of parts become obsolete, all new types of parts will become commonplace. An independent muffler repair shop, for example, may shift from replacing mufflers to replacing electric drive motors.

CONCLUSION

It's no secret that electric vehicles need less regular maintenance and have fewer mechanical parts than gas and diesel powered vehicles. This fact - combined with consumer interest in new electric vehicles - has led to uncertainty and doubt in the parts, service, and repair industry. However, when you review the facts there is little cause for alarm.

We believe that, as a result of these factors, **independent repair shops, parts distributors, and even parts manufacturers should have ample time to adjust and adapt to changes brought on by EV adoption.**



Though certain areas, such as Los Angeles, have a huge number of EVs on the road, they represent only about ~1% of vehicles in operation at a national level. While that share will increase over time, it could very well be several decades before the transition to EVs is complete. In that time, we're confident that every sector of the automotive service, repair, and maintenance industry will easily be able to adapt.

RISE OF ELECTRIC VEHICLES: THE FACTS

Inexpensive EVs will lead to more vehicle ownership and use

Reduced EV repair complexity will boost repair shop profitability

EVs will be adopted very slowly, particularly in the truck and large SUV segments

While some types of parts will be phased out by EV adoption, EVs require new types of parts as well

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