

Appraiser Blog

Are EV Fires the Next Big Challenge for Auto Dealerships?



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The automotive world is buzzing with the shift towards electric vehicles (EVs), promising a new era of cleaner, more efficient transportation. However, for dealerships, this shift isn't just about selling the latest models. It's about tackling new, and often unforeseen, challenges.

One of the most significant issues now emerging is the risk of fires associated with EVs. As dealerships begin to incorporate these advanced vehicles into their daily operations, they're discovering that the path to an electric future is far more complex than it first appeared.

This new reality is pushing dealerships to reconsider everything from safety protocols to service bay layouts, underscoring the need for careful planning in this rapidly evolving industry.

The Hidden Risk: Why EV Fires Are a Growing Concern

Electric vehicles, despite their environmental benefits and cutting-edge technology, bring with them unique risks that traditional gasoline-powered cars do not.

One of the most significant concerns is the potential for thermal runaway—a scenario where the battery's temperature increases uncontrollably, leading to fires that are not only intense but also difficult to extinguish.



Firefighters tackle a Jaguar I-PACE fire

Zurich Insurance Group, a major player in property and casualty insurance for automotive retailers, has been at the forefront of studying these risks. Recently, the company issued a series of best practice guidelines for dealerships servicing EVs, with a strong emphasis on fire prevention and loss mitigation. These recommendations are more than just precautionary—they're a signal that the insurance industry is beginning to take the unique risks posed by EVs very seriously.

Zurich's Best Practices: What Dealerships Need to Implement

To mitigate the risk of EV fires, Zurich's guidelines suggest several measures that could dramatically alter how dealerships operate.

First, they recommend **isolated stalls** where technicians can work on EVs. These stalls should be separated by fire barriers and located near exterior doors. This setup minimizes damage in the event of a fire and ensures that emergency responders can access the area quickly.

Zurich also advises **immediate return of defective batteries**. Any defective or damaged EV batteries should be returned to the manufacturer immediately, ideally

the same day they are removed. This step prevents the potentially dangerous scenario of storing defective batteries on-site overnight.

Additionally, **isolated battery storage** is crucial. New and used batteries alike should be stored in areas that are physically separated from the main dealership buildings. These storage areas should also be equipped with specialized sprinkler systems capable of handling high-hazard materials, providing an additional layer of fire protection.

For dealerships located in **flood-prone regions**, Zurich strongly recommends taking additional safety measures. Specifically, they advise parking vehicles with damaged lithium-ion batteries at least 50 feet away from buildings and other cars. This distance helps minimize the risk of fires that could be triggered by water exposure.

These recommendations might seem extreme, but they underscore the seriousness with which insurers view the risk of EV fires. For dealerships, implementing these practices could be both logistically challenging and financially burdensome. Yet, failing to do so could result in even greater costs down the line.

How EV Fires Stack Up

Before diving deeper into the financial implications, let's take a quick look at the actual numbers.

There are about 170,000 vehicle fires in the U.S. every year, with EVs making up a small portion of that number. Here is the number of fires per 100,000 vehicles sold, according to data published in 2023:

Vehicle Type	Fires per 100,000 Sold
Electric	25
Gasoline	1,530
Hybrid	3,475

Clearly, while EVs account for fewer fires overall compared to gasoline and hybrid vehicles, the intensity and difficulty of extinguishing these fires make them a significant concern.

The Financial Implications: How EV Fires Could Impact Insurance Rates

Currently, insurers like Zurich haven't significantly adjusted their rates for dealerships that service or sell EVs. But that could change as more data becomes available on the risks associated with these vehicles. If claim histories start to show an increase in fires or other incidents involving EVs, dealerships could see their insurance premiums rise, potentially to the point where servicing EVs becomes less economically viable without significant operational changes.

In the insurance world, it's all about managing risk. Just as dealerships in hail-prone areas of Texas pay different rates based on their exposure to severe storms, dealerships with a higher percentage of EVs in their inventory or those located in flood-prone areas might soon see similar adjustments based on their exposure to fire risks.

But there's also a flip side. Dealerships that proactively adopt Zurich's recommended best practices might be able to negotiate lower insurance rates. By demonstrating that they are taking steps to mitigate risks—such as installing isolated work stalls, upgrading fire suppression systems, and ensuring rapid removal of defective batteries—dealerships could potentially offset some of the additional costs associated with servicing EVs.

Is the Industry Overreacting?

Not everyone agrees with Zurich's approach. Some experts argue that the guidelines are overly cautious and could place an unnecessary burden on dealerships. Quint Reed, an electrical engineer and vice president at Energy Security Agency, has voiced concerns that these recommendations might not be entirely practical.

Reed argues that isolating every EV and hybrid vehicle isn't always necessary and could be logistically challenging for dealerships. Instead, he suggests that a more tailored approach, focusing on individual vehicle risk assessments, could be more effective. According to Reed, not all EVs present the same level of risk, and many can be serviced safely without the need for extreme isolation measures.

This debate highlights the tension between caution and practicality. While it's clear that EVs present new challenges, how dealerships choose to address these challenges could vary widely depending on their size, location, and customer base.

The Road Ahead: Navigating the Challenges of the EV Era

The transition to electric vehicles is inevitable, but it's not without its challenges. For dealerships, the potential for EV fires is a hurdle that could reshape their operations, from the layout of their service bays to the way they handle insurance.

As the industry continues to evolve, dealerships will need to stay informed about the latest guidelines and best practices for EV safety. More importantly, they'll need to balance these new requirements with the realities of running a business. The decisions they make today could have lasting implications for their future in the ever-changing automotive landscape.

So, what steps is your dealership taking to prepare for the unique risks of servicing electric vehicles?