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EV Battery Fires: What Consumers Should Know

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Sales of Chevrolet's Bolt EUV (left) and Bolt EV (right) have been halted while the company works to resolve problems related to battery fires. *Chevrolet*

Production of General Motors' two long-range battery-electric vehicles, the Chevrolet Bolt EV and Bolt EUV, have been put on hold, ostensibly because of the ongoing shortage of semiconductor chips.

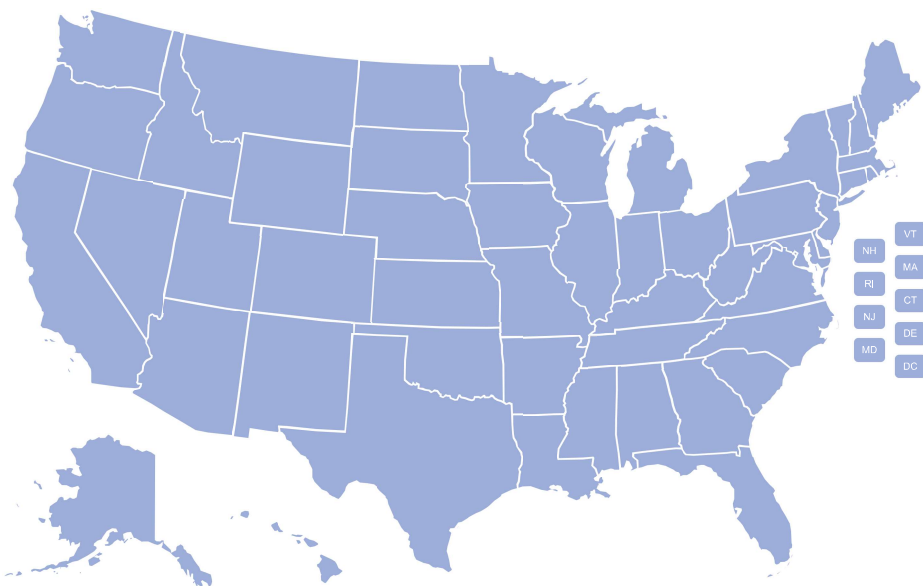
But, for the moment, dealers' hands are tied with the two electric vehicles because of recent recalls related to battery fires.

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GM's expanded recall now covers all 142,000 of the two Bolt models sold since 2017—including the 2022 models sitting on showroom lots—because the EVs could catch fire. It's now waiting for new battery packs that resolve a series of manufacturing defects.

Cross-Industry Battery Challenges

Chevy is the latest manufacturer to recall its battery-electric vehicles due to the risk of fire, but it's not alone. [Hyundai](#) earlier this year expanded a similar callback covering about 90,000 of its Kona EVs. [Ford](#) recalled more than 20,000 plug-in hybrids in Europe because they also could overheat and catch fire. And Tesla products also have been linked to several fires.

Such recalls have proved to be costly. The two service actions covering the Chevrolet Bolt alone will now run the manufacturer about \$1.8 billion. The Kona recall cost Hyundai about \$900 million. But the impact of such recalls—and the news coverage they generate—could have a far bigger impact, long-term, industry insiders fear.



are going to be the future.”

Battery fires are not unique to the auto industry. In 2019, the Federal Aviation Administration and the U.S. Department of Transportation jointly banned the shipment of lithium-ion batteries as cargo on passenger airplanes, and limited how they can be shipped on cargo aircraft. Several incidents, including the 2013 crash of a UPS 747, had been linked to battery fires. And concerns grew due to defects that caused a number of Samsung smartphones to burst into flames.

Battery manufacturers—and the automakers they serve—contend there have been significant improvements in the technology, with Tesla CEO Elon Musk repeatedly insisting that the risk of an EV battery pack catching fire has been way overblown.

Sam Abuelsamid, the principal auto analyst at Guidehouse Insight, agrees. All told there have been at least seven confirmed instances of battery fires involving the two Chevy Bolt lines, a tiny percentage of those sold to date, Abuelsamid told *Forbes Wheels*.

Two Types of Battery Fires

When battery fires do occur they appear to fall into two categories. Some are triggered by a crash that damages and shorts out the pack, setting individual cells ablaze. This happened with Tesla products early on, leading the automaker to add more protection around the packs on vehicles like the Models S and X.

What draws media attention, however, have been fires that appear to have occurred while vehicles were parked—in some cases while inside a garage. In some, but not all, cases involving the Chevy Bolt the vehicles were hooked up to chargers. One such fire heavily damaged a home in Port St. Lucie, Florida last October.

GM has traced the problem to manufacturing defects at the plant run by its battery supplier, a subsidiary of LG Chem. The automaker is pressing the South Korean automaker to cover much of the cost of the ongoing recall. Manufacturing issues with LG Chem batteries also were blamed for the Kona EV recall.

While the number of EV blazes are relatively minor, experts note that once a lithium-ion pack does catch fire they can be extremely difficult for authorities to deal with.

Broadcast Group's Spotlight on America. "It was something I had never seen."

One case documented by the National Highway Traffic Safety Administration is an example. According to the file, the Bolt caught fire at a home in Vienna, Virginia on July 4, 2021. Firefighters spent an hour trying to douse the flames but it restarted an hour later. The damaged vehicle reignited for a third time after it was towed to a Chevy dealership.

Resolving the Issues

A number of auto industry executives contacted by *Forbes Wheels* acknowledged they are concerned about battery fires—and the publicity they generate. The general consensus is that, as production volumes rise and the industry learns more about lithium-ion technology, problems like those involving the Chevrolet Bolt and Hyundai Kona are being resolved. GM officials assert they addressed such problems when developing the new Ultium batteries that will power future EVs like the [GMC Hummer](#) and [Cadillac Lyriq](#).

Manufacturers are also investing billions of dollars to develop next-generation batteries, most notably the solid-state cells that manufacturers including Mercedes-Benz, Honda and [Toyota](#) hope to start using around the middle of this decade. By replacing the chemical slurry found in current batteries with a solid alternative, solid-state batteries are expected to be essentially fireproof.

But there's no reason to wait until then. "The key is that EVs are not necessarily more prone to fire," says Abuelsamid. "The evidence suggests they may be less prone to catch fire."

Perhaps, but auto fires provide the dramatic footage TV news and other visual social media platforms like Instagram like to focus on. These dramatic images can have an outsized impact on public attitudes.

The Chevy EV has helped position GM as second in the emerging market behind only Tesla, with nearly a 10% share of battery-car segment this year. Dealers will have to wait until they can replace suspect packs with new ones before sales of the Bolt EV and EUV models can resume. Whether the two versions of the Bolt can regain their momentum likely will serve as a test of how concerned EV buyers are about the risk of battery-car fires.



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Paul A. Eisenstein is an award-winning publisher, photographer, editor and one of the world's most widely published automotive journalists whose work appears in a wide range of print, broadcast and electronic outlets, including Forbes Wheels, and his own automotive website, TheDetroitBureau.com. He's a North American Car and Truck of the Year juror, and board member and past president of the Automotive Press Association. J.D. Power also named him a "Pioneer of the Internet."

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