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ELECTRIC VEHICLES: COMMON SAFETY PROBLEMS

Electric vehicles (EVs) have long been considered an important part of the climate crisis solution as they run on battery-powered electricity rather than gas. However, fundamental safety problems plague EVs, raising troubling questions about the future of EVs and who may be hurt getting there.*

VEHICLE WEIGHT

- Passenger EVs tend to be hundreds to thousands of pounds heavier than similarly sized gas vehicles due to their batteries, increasing the risk of life-threatening collisions for all road users.
- Even heavier are EV commercial trucks and buses.
- This extra weight contributes to different handling and braking dynamics, which can exacerbate accidents at high speeds or during rapid acceleration.
- Our nation's guardrail system isn't strong enough to keep EV cars and trucks from crashing through them.

ACCELERATION, BRAKING AND TIRE WEAR

- EVs pick up speed much faster than traditional vehicles, causing drivers used to gradual acceleration to accelerate rapidly – a phenomenon known as the "overtapping effect" – which can lead to accidents.
- EVs use regenerative braking, which can cause the vehicle to slow down more abruptly when the driver takes their foot off the accelerator compared to traditional friction brakes. This can catch drivers off guard and lead to rear-end collisions.
- Because these brakes have instant torque and are typically very heavy, tires wear faster, increasing the likelihood of braking or traction problems and subsequent accidents.

BATTERY FIRES AND ELECTROCUTION

- EVs use high-capacity lithium-ion batteries, which can be punctured in serious collisions, leading to fires or explosions.
- Fires can take thousands of gallons of water to put out, or fires may become self-sustaining or reignite days later.
- Spontaneous ignition, when battery cells overheat and catch fire unexpectedly, can also happen.
- Lithium-ion battery fires can emit toxic and flammable gases, which can be harmful to passengers and emergency responders and also contaminate the environment.

- EV batteries operate at very high voltages, presenting a risk of electrocution particularly for first responders and repair technicians following a crash or fire.

LOSS OF POWER AND SOFTWARE ISSUES

- A complete or abrupt power loss, which can be caused by a range of problems often related to the battery, can lead to stalling – an immediate threat, especially in hazardous high-speed or high-traffic conditions.
- Cold weather poses a particular danger since it can cause sudden drops in battery performance, resulting in power interruptions or even a complete shutdown.
- In emergencies where a vehicle loses power, occupants can be trapped if the electric doors, locks and windows become non-functional.
- EVs rely heavily on complex software systems that can result in malfunctioning touchscreens, unresponsive controls, charging errors, inaccurate alerts, disrupted vehicle operation due to faulty updates and other problems.

RECALLS AND DEFECTS

U.S. market leader Tesla

- In 2024, Tesla had more recalls than any other passenger auto company in the U.S. EV market, issuing 16 recalls impacting over 5.1 million vehicles.
- The Cybertruck accounted for nearly half the recalls. Problems included the electrical system (25% of the recalls) and loss of power incidents, airbag problems, defective tire pressure monitoring systems and detaching trunk bed trims.
- In 2025, power steering issues led to Model 3 sedan and Model Y SUV recalls, a problem Tesla owners had reported to the National Highway Traffic Safety Administration for more than a year.

Other companies

- In March 2025, over 60,000 Volkswagen and Audi EVs were recalled over concerns that some cars would not display the "N" gear position on the instrument panel.
- In March 2025, Volkswagen recalled nearly 14,000 vehicles due to a battery charging issue that can increase the risk of a crash.
- Loss-of-power incidents resulted in March and November 2024 Hyundai, Kia and Genesis recalls.
- A dangerous software glitch led GM to recall Cadillac Lyriq SUVs in August 2024.
- In December 2023, GM halted sales of its Chevrolet Blazer EV because of owner-reported software glitches affecting the functionality of its touch-screen interface and charging capabilities.

* Citations and support for each fact as well as more information can be found in the Center for Justice & Democracy study, *Highway to the Danger Zone; The Enduring Risks of Electric Vehicles* (May 2025). https://centerjd.org/content/study-highway-danger-zone-enduring-risks-electric-vehicles