



GLOBAL ELECTRIC VEHICLE BATTERY FIRES

as of September 2022

EVs are less likely to catch fire than internal combustion vehicles...here's what we know

Why EV FireSafe?

Transport emissions account for:

25%

of global greenhouse gas emissions, which has led to the rapid electrification of vehicles

EV battery fire incidents have led to concerns about emergency responder safety when attending

EV lithium ion traction battery fires

To enhance emergency responder safety, we researched **plug-in (BEV & PHEV) passenger electric vehicle battery fires** from

2010 - 2022

breaking down our findings here & at evfiresafe.com

How many EV battery fires?

Since 2010, the EV FireSafe research team found:

261

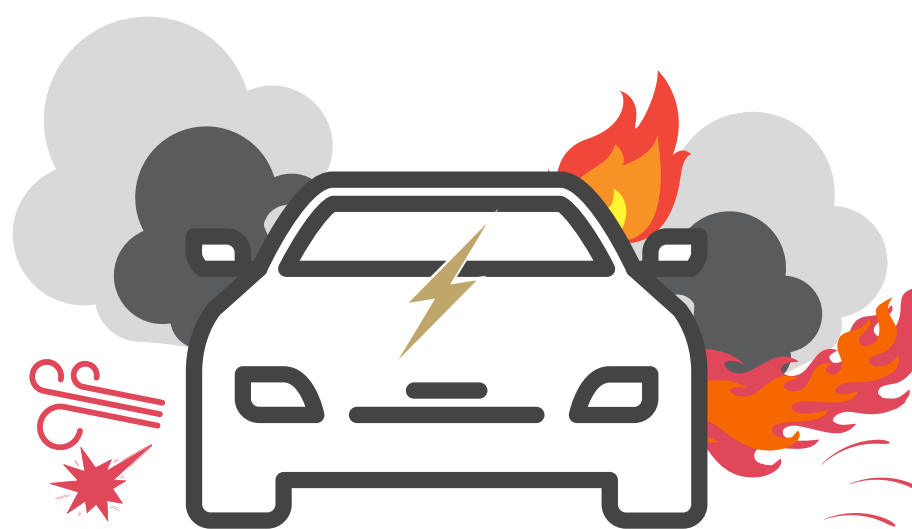
verified* EV traction battery fires globally

+ 27

unverified - from a reliable source, waiting on further info

+ 34

investigating - online rumour, tip off, clickbait

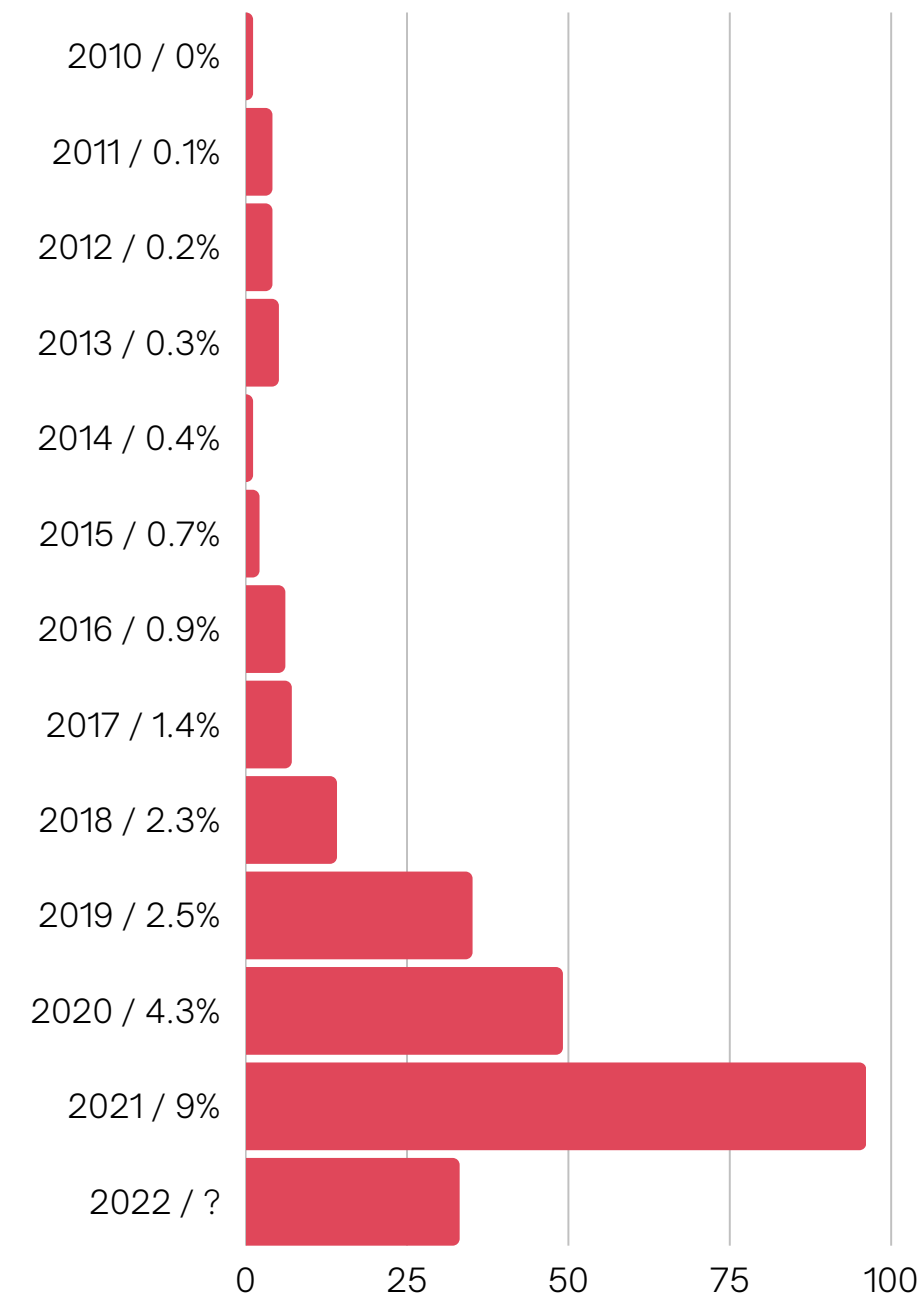


*'In the world of clean energy, few areas are as dynamic as the electric car market. We estimate there are now around **16 million electric cars on the road worldwide...**'*

International Energy Agency, January 2022

When did they occur?

By year & EV global market share:

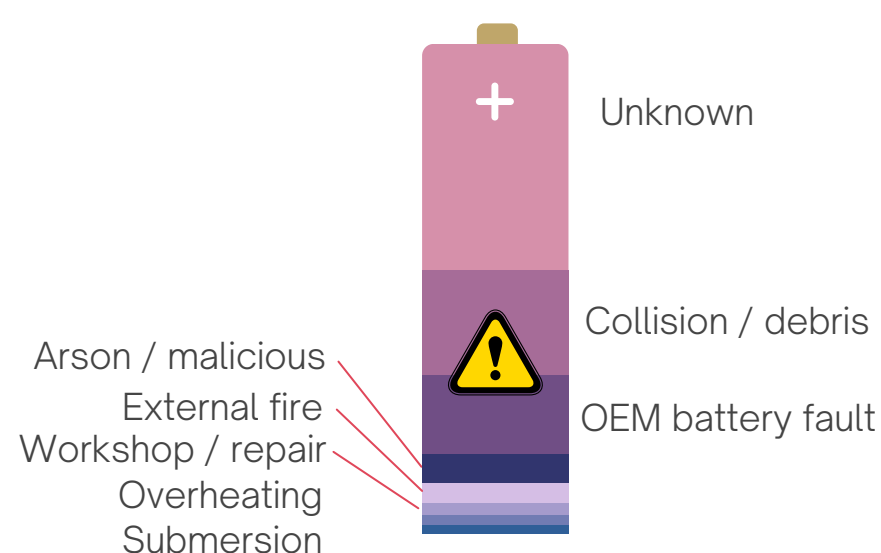


*Not exhaustive. From more than one online source, interviews, first hand accounts, videos, images, academic & fire agency reports & online training

EV battery fires are rare, but present new risks & challenges for emergency responders when they do occur. From these verified incidents, we found:

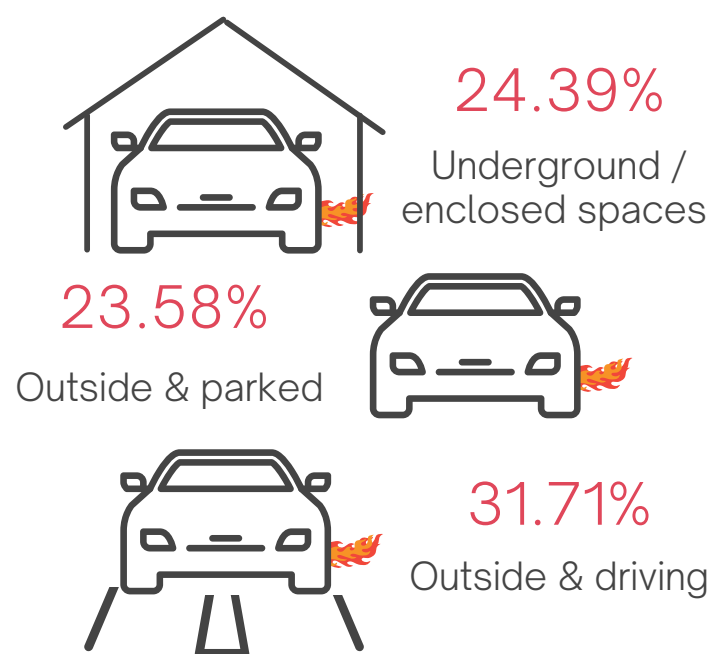
Cause

Battery cell abuse, leading to thermal runaway & ignition or explosion, caused by:

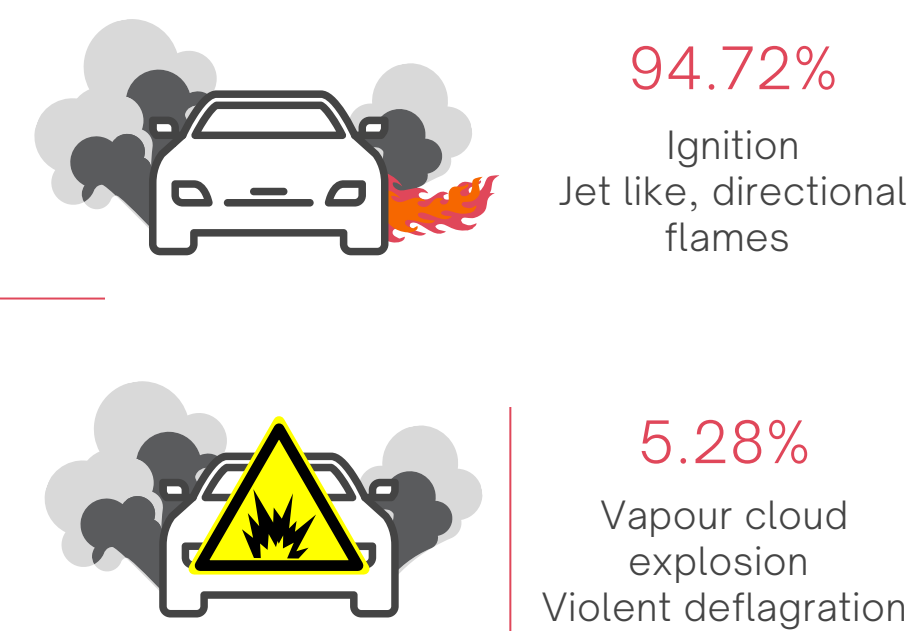


Location*

*20.32% unknown

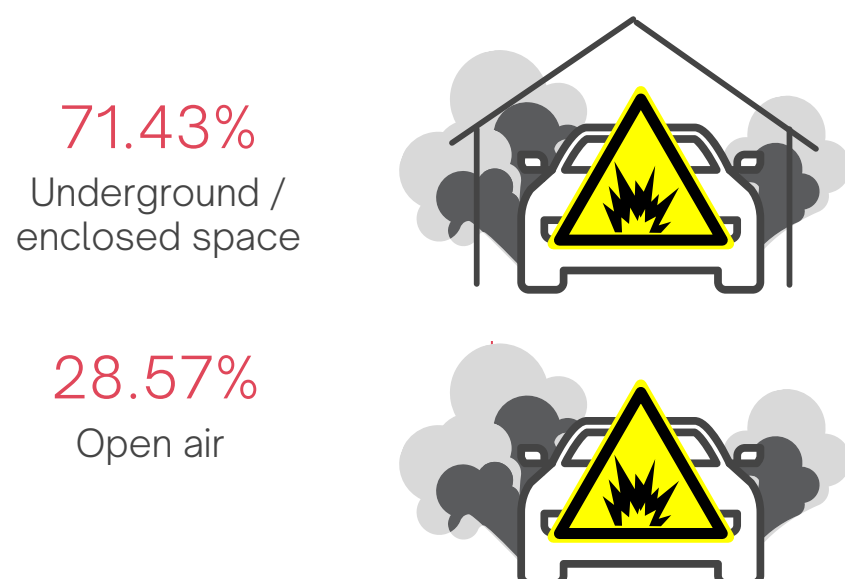


Ignition vs explosion



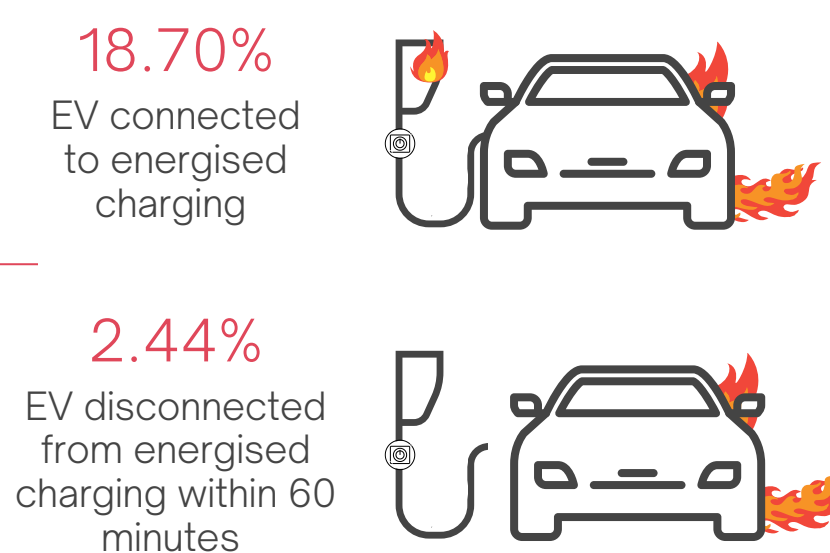
Vapour cloud explosion

Of total vapour cloud explosion incidents:



Charging

Of total incidents:



Electrocution

We found NO reports or evidence of electrocution or near miss of emergency responders from:

