



ALL ELECTRIFIED TRANSPORT LIB FIRE INCIDENTS

Global, 1st January to 30th June 2023

A comparison of passenger electric vehicles (EVs), battery electric buses (BEB), battery electric trucks (BET) & light electric vehicles (LEV) such as e-bikes, e-scooters etc

Why EV FireSafe?

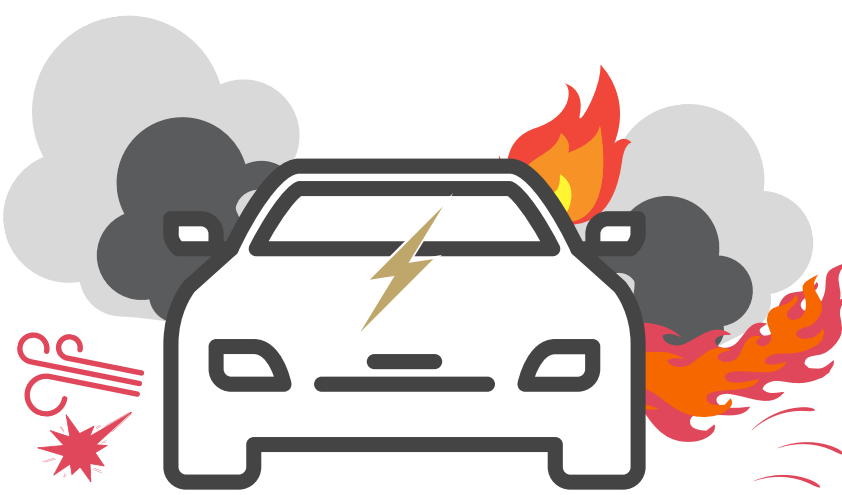
Transport emissions account for 25% of global greenhouse gas emissions, which has led to **rapid electrification**

EV battery fire incidents have led to concerns about emergency responder safety when attending **lithium-ion battery fires**

To enhance emergency responder safety, we researched electrified transport HV battery fires from **1st Jan to 30th June 2023**

EV, BEB, BET & LEV LiB fires

Passenger EVs



44

Battery fires

15

Injuries

4

Fatalities

Electric buses & trucks



3

Battery fires

0

Injuries

0

Fatalities

2

Battery fire

0

Injuries

0

Fatalities

Light electric vehicles



500+

Battery fires

138 (up from 62 in Q1)

Injuries

36 (up from 9 in Q1)

Fatalities

Why are LEV battery fires more prevalent & a higher risk to life & property?

Road-registered EVs:

LiB pack size:

10 - 300+ kWh

Avg incident duration for pack burn:

3-5 hours (depending on a range of factors, incl SoC)

Risk profile:

- Very high quality LiB cells & BMS
- Highly protective battery pack casing, low wear & tear in normal daily use
- Primarily charged & operated in open spaces, posing a lower risk to life & property safety

Light EVs:

LiB pack size:

1 - 2 kWh

Avg incident duration for pack burn:

5-15 minutes

Risk profile:

- Low quality LiB cells & BMS in some brands
- High wear & tear during normal daily use
- Commonly charged inside homes, posing a high risk to life & property safety

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

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