



Fire App Incident Reporting for Li-Ion Battery Incidents



Vehicle Fires

To document any lithium-ion related Electric/Hybrid Vehicle fire or thermal runaway event OUTSIDE of a building where the battery was the cause, utilize the below:

Incident Type: *Select most appropriate*

- (121) Fire in mobile home used as fixed residence
- (122) Fire in motor home, camper, recreational vehicle
- (130) Mobile Property (vehicle) fire, Other: *Personal Mobility Device, Ebike, E-Scooter, etc.*
- **(131) Passenger vehicle fire**
- (132) Road freight or transport vehicle fire: *EV Tractor Trailer (includes batteries in a trailer), EV Bus, etc.*
- (138) Off-road vehicle or heavy equipment fire: *specialty vehicle powered by Li-Ion batteries*

Property Tab

- Complete as normal
 - On-Site Materials or Product Codes: *None (unless a significant amount was stored in vehicle)*
 - Acres Burned: *if brush involved enter appropriately*

Ignition Tab

- **Area of Fire Origin:** *Transportation, Vehicle Areas - Self-explanatory*
- **Heat Source:** *Select most appropriate:*
 - *Spark, ember, or flame from operating equipment (I.e. – battery emitted flame and scorched or ignited vehicle components)*
 - *Radiated, conducted heat from operating equipment (I.e. – battery shows signs of thermal runaway but did not scorch other equipment/materials or structure)*
 - *Electrical arcing – may be appropriate in certain situations that don't meet above*
- **Item First Ignited:** *Select most appropriate. Common EV items are below:*
 - *Furniture, Utensils, including built-in furniture:*
 - *Upholstered sofa, chair, **vehicle seats***
 - *General Materials*
 - *Tire*
 - *Electrical wire, cable, insulation*
 - *General Materials Continued*
 - ***Multiple items first ignited***
 - *Other Item*
 - ***Item first Ignited, Other***
 - *Undetermined*
- **Confined to Object:** *Self-explanatory*
- **Material First Ignited:** *Other Material: Multiple types of material*

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- **Cause of Ignition:** *Select most appropriate*
 - *Failure of equipment or heat source: Battery failure and includes mechanical problems*
 - *Intentional: In the event someone uses EV for nefarious purposes*
- **Ignition Factors:** *Select most appropriate:*
 - *Electrical Failure, Malfunction*
 - *Short-circuit arc from mechanical damage*
 - *Unspecified short-circuit arc.*
 - *Operational Deficiency*
 - ***Collision***, *knock down, run over, turn over*
 - *Equipment not operated properly*
 - *Operational deficiency, Other*
- **Human Factors:** *Self-explanatory and enter Age/Gender if applicable*
- **Fire Suppression Factors:** *Significant/unusual fuel load from contents*

Equip & Mobile Tab

- **Equipment Involved in Ignition**
 - **Equipment Involved:** *Electrical Distribution, Lighting & Power: Battery (Includes all battery types)*
 - **Brand:** *Enter if known*
 - **Model:** *Enter if known*
 - **Serial #:** *Enter if known*
 - **Year:** *Enter if known. If unknown, enter 0000*
 - **Equipment Power Source:** *Batteries and low voltage (less than 50 volts).*
 - **Equipment Portability:** *Select one*
 - *Portable: Includes equipment that can be carried or moved by one or two persons and designed to be used in a variety of locations. Tools are not needed to install or operate the equipment I.e. – phones, laptops, certain appliances*
 - *Stationary: Includes equipment that is mounted at a fixed site or location or designed to be operated in one location. I.e. – Battery Energy Storage Systems (BESS)*
- **Mobile Property Involved**
 - *Mobile Involved: Self-explanatory and below are most common*
 - **Passenger Road Vehicles**
 - *Automobile, passenger car*
 - *Bus, school bus, trackless trolley*
 - *Motorcycle, trail bike*
 - *Off-road recreational vehicle – I.e. – Ebike, E-scooter, etc.*
 - *Passenger road vehicle, Other*
 - **Freight Road Vehicles**
 - *Garbage, waste, refuse truck*
 - *General use truck, dump truck, fire apparatus*
 - *Hauling rig, pickup truck*

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- *Trailer-semi, designed for freight I.e. – EV tractor trailer and BESS trailer*
 - Mobile Property, Miscellaneous & Other
 - *Home, garden vehicle*
 - *Shipping container, mechanically moved I.e. – BESS container*
- Continued on next page....*
- Type: *Select most appropriate*
 - Make: *Select most appropriate. Select “Other Make” if not listed*
 - **Model:** *Enter the model name preceded by one of the following if applicable:*
 - **Electric** – all electric vehicle (I.e. Electric F150 Lightning, Electric Model 3, etc)
 - **Hybrid** – hybrid electric vehicle (I.e. – Hybrid S60, Hybrid Tribute, etc)
 - Year/License Plate/State/VIN: *Enter if known*

Structure Tab

- Complete all items as normal

Hazmat Tab – Consult with Hazmat Officer if necessary. Highlighted items are mandatory

- **Release From:** *Select appropriate*
- **Story of release:** *leave blank. Anything inside should be coded as a Building Fire*
- **Only fill out the following items if there was an evacuation.** I.e. – extended EV fire with smoke travel, etc.
 - Population Density: *Self-explanatory*
 - Area Affected Unit: *Self-explanatory*
 - Total Area Affected: *Self-explanatory*
 - Area Evacuated Unit: *Self-explanatory*
 - Total Area Evacuated: *Self-explanatory*
 - # of People Evacuated: *Self-explanatory*
 - # of Buildings Evacuated: *Self-Explanatory*
- **Hazmat Actions Taken:** *Select all appropriate. Below are common items for battery incidents:*
 - Hazardous Condition
 - *Identify, analyze hazardous materials*
 - *Hazmat detection, monitoring, sampling, analysis*
 - *Remove hazard or hazardous materials*
 - Information, Investigation & Enforcement
 - *Investigate*
 - *Notify other agencies (I.e. – MDE, Tow Company)*
 - Isolation and Evacuation
 - *Isolate area & establish hazard control zones*
 - *Protect-in-place operations*

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- **Fire or Explosion** – which occurred first:
 - Ignition – actual fire
 - Release – thermal runaway event with vapor and no fire
 - Undetermined – self-explanatory
- **Cause of Release:** Container or containment failure
- **Release Factors:** select most appropriate. Below are most common:
 - Operational Deficiency
 - Collision, overturn, knockdown
 - Equipment not being operated properly
 - Equipment overload
 - Mechanical Failure, Malfunction
 - Short circuit, ground fault
 - Other electrical failure
- **Mitigation Factors:** select most appropriate. Below are most common for EV fires:
 - Release Factors
 - Combination of release and fire impeded mitigation
 - Site Factors – Select ALL appropriate
 - Released in residential area
 - Released into sewer system – I.e. – fire water runoff into system
 - Released into water table – I.e. – fire water runoff onto ground or into body of water
 - Released on major roadway – Self-explanatory
- **Disposition:** Select most appropriate
 - Released to property owner or manager – vehicle left in place and responsible party advised of follow-up actions
 - Released to private agency – I.e. – tow truck takes vehicle away
 - Released to county agency. I.e. – MCPD handling scene
 - Released to state agency – I.e. – MDE remains on scene
- **Casualties:** complete as appropriate

Material Tab

- Select Add Chemical
- **Chemical Name** (Select one of the following)
 - Lithium-Ion Batteries (any cell, battery pack, appliance, mobility device small than an over the road vehicle)
 - Lithium-Ion Batteries contained in equipment (vehicles such as cars, trucks, etc. or other large equipment)
 - Lithium-Ion Batteries installed in cargo transport (box trailer, etc.)
- **Est Amount Released** – enter 1 as default or unknown (this is a NFIRS required field)
- **Released units** – enter ounces or grams as default.
- All other fields are optional. If you know something enter it.

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Equipment & Mobile Tab

- Same info as Ignition tab section if need be

Narrative Tab

- Enter any specifics to the battery- or battery-operated equipment if