



DOCUMENTING LITHIUM ION BATTERY-RELATED INCIDENTS IN NFIRS

Reports of incidents involving lithium ion batteries have raised questions about coding these incidents in NFIRS. Fire agencies may find this information helpful for planning, training and budgeting for specialized equipment.

BASIC MODULE

- Fires that occur as a result of lithium ion batteries should use incident type codes in the **100 series (Fire)**, such as 111 – Structure Fire, or 131 – Passenger Vehicle Fire
- For Injuries that occur as a result of a lithium ion battery, use appropriate incident types in the **300 series**, such as **311 – Medical Assist, assist EMS Crew**, **321 – EMS Call (excludes motor vehicle accident with injuries)**, or **322 – Motor vehicle accident with injuries**.
- Incidents involving lithium ion batteries that do not start a fire, but present a hazardous condition should be coded in the **400 series**, such as **422 – chemical spill or leak**, or **445 – arcing, shorted electrical equipment**.
- In the **Remarks/Narrative** field:
 - Indicate ***involvement of a lithium ion battery*** along with a complete narrative.
 - Whether or not battery was being charged at time of incident
 - Estimated percentage of battery charge at time of incident
 - Type of battery, if known (Examples include: Pouch Cell, Cylindrical Cell, Prismatic Cell)

STATEWIDE PLUS-ONE CODING

If agencies have the ability to add plus-one coding in their NFIRS reporting software, the following plus-one codes are being instituted in Washington State within the Fire Module to assist in deeper analysis on incidents involving lithium ion batteries. In addition to these plus one codes, the guidance below for further coding within the Fire Module (and/or other appropriate module(s)) should still be followed as applicable to what was found at the incident.

- **Equipment Involved in Ignition:**
 - 2291 – battery, ***lithium ion – personal mobility***
 - 2292 – battery, ***lithium ion – small electronics***
 - 2293 – battery, ***lithium ion – electric vehicles and vehicle charging***
 - 2294 – battery, ***lithium ion – battery/energy storage system***
- **Factors Contributing to Ignition:**
 - 501 – Operational deficiency, other – ***battery fails while/during charging***
 - 401 – Design, manufacturing, installation deficiency, other – ***battery fails any other time***

FIRE MODULE

- The Fire Module is always required for Incident Types: **111 – 112, 120 – 138, and 161 – 164.**
- This module is optional (but recommended) for incident types: **113 – 118.**
- If the **Wildland Module** is not completed *in place of* the Fire Module, then the Fire Module **must** be completed for incident types: **140 – 143, 160, and 170 – 173.**
- **Heat Source** – This will vary upon the incident. If the battery itself caused a fire, codes in the **10-series are recommended**, such as:
 - **12 – Radiated or conducted heat from operating equipment, or**
 - **13 – Electrical arcing**
- **Equipment Involved in Ignition – 229 – Battery, 228 – battery charger, rectifier**
- **Equipment Power Source – 12 – Batteries and low voltage (less than 50 volts)**
- **Equipment Portability - 1 – Portable, 2 – Stationary**
- **Mobile Property Involved** – If a mobile property was involved, the entire Mobile Property Involved section should be completed to the best of the AHJ's ability, including Mobile Property Type, Make, Model, Year, and (if applicable or possible) License Plate, State, and VIN.

First, select the code most applicable:

- **1 – Mobile property not involved in ignition, but burned in fire following ignition**
- **2 – Mobile property was involved in ignition, but did not burn**
- **3 – Mobile property involved in ignition, and it burned**
- **N – None**
- **Mobile Property Type** – Select the code most applicable. Examples include:
 - **11 – Automobile, passenger car, ambulance, limousine, race car, taxi**
 - **12 – Bus, school bus**
 - **10 – Passenger road vehicles, other (NOTE: Use this code for hover boards, motorized scooters, etc. Use the narrative/remarks field in the Basic module to detail the specific type of mobile property.)**

CIVILIAN FIRE CASUALTY MODULE & FIRE SERVICE CASUALTY MODULES

- Per NFIRS reporting rules, a Civilian Fire Casualty Module should be completed by the AHJ on an incident if a civilian casualty results from a fire. (One module per civilian fire casualty.) The Fire Service Casualty module should be completed when an injury, death, *or* exposure to your own Fire Service Personnel occurs as a result of an incident. One module should be completed for each person if there are multiple injuries, deaths, or exposures.

WILDLAND MODULE

- If the Fire Module is not used in place of the Wildland Module, then the Wildland Fire Module **must** be completed for incident types: **140 – 143, 160, and 170-173.**
- **Heat Source** – This will vary upon the incident. If the battery itself caused a fire, codes in the 10-series are recommended, such as:
 - **12 – Radiated or conducted heat from operating equipment, or**
 - **13 – Electrical arcing**

EMS MODULE

- For EMS calls (300-series code), complete one EMS module for each patient involved. Complete the following fields:
 - Date/Time
 - Provider Impression/Assessment
 - Age of Patient
 - Gender of Patient
 - Human Factors (if applicable)
 - Body Site & Injury Type (up to 5)
 - Cause of Illness/Injury – Use the code most applicable to the cause of injury.
 - If an electric vehicle, use **29 – Motor vehicle accident**.
 - If the injury is resultant from exposure to the gases or vapors released from the lithium ion battery, use **10 – Chemical Exposure**. This includes the accidental poisoning by solid or liquid substances, gases, and vapors that are not included under accidental drug poisoning.

More Coding Resources related to Lithium Ion batteries via USFA:

- [Coding Electric or Hybrid Vehicle Fires](#)
- [Coding Electronic Cigarette Fires](#) (This guidance includes “vape” pens or other tobacco vapor delivery systems.)
- [Coding a Hover Board Fire](#)

If you need assistance or have any questions, please contact the NFIRS administrator by email at NFIRS@wsp.wa.gov or by phone at 360-596-3924.