



# ***Airplane Lithium-ion Battery Events***

## **A Guide for Fire Fighters**

### **The Response Hazard**

Some Boeing airplanes are being equipped with lithium-ion batteries which are contained in a stainless steel enclosure with a vent tube leading overboard. These batteries store energy that can generate intense heat in the event of a short circuit or other failures. Lithium-ion batteries can short circuit if they are improperly packaged, dropped, damaged or have manufacturing defects.

Each lithium-ion cell contains a flammable electrolyte. If the cell has a short circuit or is exposed to high temperatures, it can swell and the electrolyte may begin to vaporize creating internal pressure which begins to vent overboard.

**The box containing the lithium-ion battery cells is secured inside a reinforced stainless steel enclosure capable of containing a lithium-ion battery event. Venting of vapor during a battery failure event may be visible from an exterior vent on the bottom of the airplane under the forward or aft Electrical and Electronic (E&E) bay. During active venting, there is no reason to make access to the E&E bay.**

### **Fire Fighting Tactics for E&E bay events containing Lithium-Ion Battery Packs**

1. A battery failure reaction should be fully contained within the stainless steel enclosure with any gasses vented overboard.
2. Passengers and crew are safe inside the airplane. Passenger evacuation is not required for airplane power failures. Shut down by communicating with the flight deck prior to making access.
6. Don all fire fighting Personal Protective Equipment including Self Contained Breathing Apparatus (SCBA) when entering the Hot Zone (9m/30 ft).



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