

5/29/2025

FOR YOUR INFORMATION

2025-118/9-4

To: FAA (AFS-200, ASH-1)

2232835

Info: FAA (AVP-1, AVP-200, AFS-900, AFS-260, ANM-100, SEA-AEG), AFA, ATSG, ALPA, IFALPA, APA, ASAP, A4A, IATA, CAPA, ICASS, IPA, NTSB, RAA, SWAPA, TWU

From: Becky L. Hooey, Director
NASA Aviation Safety Reporting System

Re: Lithium Battery-Powered Cooler Procedures

We recently received ASRS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the enclosed deidentified report.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooey at (408) 541-2854 or email at becky.l.hooey@nasa.gov.



Aviation Safety Reporting System
P.O. Box 189 | Moffett Field, CA | 94035-0189



ACN 2232835**DATE / TIME**

Date of Occurrence	202504
Local Time Of Day	0601 to 1200

AIRCRAFT / EQUIPMENT X

Make Model Name	No Aircraft
Operating Under FAR Part	135

PERSON 1

ASRS Report Number	2232835
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EVENTS

Anomaly	Flight Deck / Cabin / Aircraft Event - Other / Unknown
Anomaly	Deviation / Discrepancy - Procedural - Hazardous Material Violation
Anomaly	Deviation / Discrepancy - Procedural - Published Material / Policy
Anomaly	No Specific Anomaly Occurred - Unwanted Situation

NARRATIVE 1

I would like to report a rapidly growing risk of use of portable lithium battery powered coolers on Part 135 aircraft. These are often occurring without the operator's knowledge, but pose a danger to entire teams aboard charter aircraft. These hazardous devices are being brought on aircraft daily across the US.

Organ transplant has historically relied on consumer picnic coolers filled with ice to store organs and used Part 135 aircraft to get from donor to recipient. Today, use of Part 135 aircraft for transplant has been growing and there are approximately 10,000 private charter flights in the US each year.

Recently, new portable lithium battery powered coolers with flammable refrigerants have been used by transplant teams to transport organs. These new lithium coolers look similar to old coolers and so may not be recognized by operators for their risks.

Portable lithium coolers employ lithium batteries that exceed 12V and/or 100Wh and are installed and operating during flights Brand A: Uses two 18V batteries that each come in sizes 72, 108, 216Wh (with two installed this equals 144, 216, or 432Wh of lithium batteries installed and running on the device). Brand B: Uses a single 299Wh battery. User manual includes warning "not permitted on aircraft." Brand C: Uses a single 512Wh battery (12.8V).

Portable lithium coolers can include flammable refrigerants. From user manual: "DANGER: Risk of fire or explosion. Flammable refrigerant used... Risk of fire or explosion due to puncture of refrigerant tubing."

Portable lithium coolers have warnings of explosion, fire and electrical shock. From user manual: "Never use a hose, water, or any liquids to clean or rinse off the cooler. Water, corrosive liquids, and chemicals can enter the cooler and/or battery compartment and damage electrical components which can result in a short circuit, increased risk of fire, and serious personal injury. Wipe the cooler clean with a dry cloth occasionally."

From user manual: "Do not expose cooler to rain or wet conditions. Water entering the circuitry of the appliance will increase the risk of electric shock." NOTE: Transplant occurs regardless of weather and organs frequently cross helipads and airport tarmacs in all weather conditions, including rain and other wet conditions before being loaded onto the aircraft.

These devices look like standard ice coolers, but they carry much more significant risks to aircraft. The passengers who bring the devices are unaware of the risks. The aircraft operators do not realize these portable lithium coolers are not the same as the historic systems because they look similar. Similar to dry ice or aerosol sprays these risks are going unrecognized due to their benign appearance.

SYNOPSIS

Reporter stated there is a growing risk with the new portable lithium battery powered coolers that are frequently being brought on board aircraft for medical organ transport even though the user manual states "Not permitted on aircraft".