

LITHIUM BATTERIES & LITHIUM BATTERY-POWERED DEVICES

Aviation Cargo and Passenger Baggage Events Involving Smoke, Fire, Extreme Heat or Explosion Involving Lithium Batteries or Unknown Battery Types

In an effort to more closely focus on lithium battery events, this list has been revised to include events involving lithium or unknown battery types.

As of May 22, 2017, 160 air/airport incidents involving lithium batteries carried as cargo or baggage that have been recorded since March 20, 1991

Note: These are recent cargo and baggage incidents that the FAA is aware of. This should not be considered as a complete listing of all such incidents. The incident summaries included here are intended to be brief and objective. They do not represent all information the FAA has collected, nor do they include all investigative or enforcement actions taken. This list does not include three major aircraft accidents where lithium battery cargo shipments were implicated but not proven to be the source of the fire: An Asiana Airlines 747 near South Korea on July 28, 2011, a UPS 747 in Dubai, UAE on September 3, 2010 and a UPS DC-8 in Philadelphia, PA on February 7, 2006

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
5/14/2017	Airport Authority	Li-ion	E-cig	N/A	N/A	Information, including video footage, from the Seattle Airport Authority and witness statements show an individual's e-cig exploding, resulting in burning of his shirt and backpack. An investigation of this incident is ongoing.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
5/2/2017	Carrier	Li-Ion	Laptop Computer	FedEx	Cargo	A shipment of 13 boxes of laptops in a cargo facility was inadvertently bumped resulting in one box falling to the ground. Upon impact, the box began to smoke and apparently produced a dangerous evolution of heat. The box and the laptop inside were charred and partially melted. The box contained a laptop computer with a 94 watt-hour lithium-ion battery installed in it.
4/19/2017	Carrier	Li-Ion	E-cig	Southwest	Passenger	Passenger on Southwest flight number 4639 from Columbus, OH to Chicago, IL (MDW) reported to a flight attendant that there was smoke coming from her purse. Passenger was carrying an e-cigarette/vaping device. The flight attendant put the e-cigarette/vaping device and two spare lithium ion batteries into a fire safe bag to extinguish the smoke.
4/13/2017	Carrier	Li-Ion	Unknown	FedEx	Cargo	FEDEX reported that a shipment containing lithium batteries was inadvertently dragged by a dolly until its contents exploded. Investigation is ongoing.
4/11/2017	Carrier	Li-Ion	Camera	Frontier	Passenger	While transferring bags at Raleigh Durham, NC (RDU) a ramp employee noticed smoke coming from a bag. It was found to be lithium ion battery in a camera.
4/9/2017	Carrier	Li-Ion	Power pack	Southwest	Passenger	A passenger traveling on Southwest Airlines on Flight 1746 from Las Vegas, NV (LAS) to Pittsburgh, PA (PIT) presented a smoking battery charger to flight attendants (F/A). The F/A prepared a containment bag with cans of water and placed the device in the bag. The F/A continued to monitor the bag for the remainder of the flight. Captain and all crew were notified of the incident. Upon arrival in PIT, F/A notified an operations agent that a containment bag had been opened and used. F/A gave the bag with the battery charger to the agent. Southwest Airlines Headquarters confirmed that it is believed the passenger was utilizing the charger for their phone when it started smoking.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
						Photographs provided by SWAA indicate damage to the battery charger
4/9/2017	Media	Li-Ion	E-cig	N/A	N/A	A passenger was at Hudson News convenience store, near gate "D" in LAS airport prior to boarding a flight, Left front pocket exploded and fire erupted, Passenger was burned and hospitalized with burns to his left thigh and left hand.
4/4/2017	Carrier	Li-Ion	Spares for power tool	ExpressJet (UAL express)	Passenger	A gate checked bag containing two rechargeable drill batteries shorted or arced during the loading of ExpressJet (ASOA) flight number 4077 dba United Express (CLE-IAH). According to preliminary information, a gate checked carry-on suitcase contained the two rechargeable drill batteries which shorted or arched when they came in contact with a wire bound notebook, catching the notebook on fire. Towels close to the battery were smoldering inside the suitcase while loading the bag for the outbound flight. A ramp serviceman smelled the fire and saw smoke coming out of the bag and set it aside. The lithium ion batteries were identified as Ingersoll Rand 20V. United Airlines (CALA), who ground handles ASOA at CLE, notified the NRC (report number 1174969).
3/30/2017	Carrier	Li-Ion	Laptop	Southwest	Passenger	On Southwest flt 1761 from Columbus, OH (CMH)-Ft Lauderdale, FL (FLL), prior to landing at Ft. Lauderdale, a passenger informed a flight attendant that their computer was smoking, smelled like burning plastic and was extremely hot to the touch. The passenger stated that they spilled a drink on the laptop earlier in the flight. There were no visible flames, explosion, charring, or melting of the laptop. The Flight Attendant took the laptop to aft galley and utilized the halon extinguisher followed by cans of water for cooling.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
2/27/2017	Carrier	Li-Ion	iPhone	American Airlines	Passenger	On AA Flight 133 from JFK to LAX a passenger seated in the first class cabin was charging an iPhone and the battery overheated. The flight attendant placed the device in a coffee pot. No diversion required, no aircraft damage and the only injury was to the passengers hand.
2/19/2017	Media	Li-Ion	Noise Cancelling Headphones	Air China	Passenger	An Air China Airbus A330-200 (flight 165) on a flight from Beijing (China) to Melbourne, VI (Australia), was approximately 2 hours into the flight when the noise cancelling headphones of a sleeping passenger started to overheat. The passenger was awakened by the heat of the headphones on her face. The headphones slid down around her neck and caused minor burns to her face and neck. The headphones were getting hotter and when they began sparking and melting, she threw the headphones onto the cabin floor. Cabin crew poured water over the headset cooling the device down, The headset was subsequently put into a safe container. The aircraft continued the flight to Melbourne for a safe landing approximately 10 hours later.
2/18/2017	Media	Li-Ion	Cell phone and battery pack	Spring Airlines	Passenger	A Spring Airlines Airbus A320-200, flight 9C-8617 from Harbin (China) to Nagoya (Japan), was enroute at FL340 about 50nm east/northeast of Shenyang (China) when passengers observed a fire in one of the overhead bins. Cabin crew discharged fire extinguishers into the overhead bin and submerged a passenger's charger (power bank) and smartphone, which had caught fire, into a water container. The flight crew initiated a diversion into Shenyang, where the aircraft landed safely about 23 minutes later. Emergency services were not called as the cabin crew had brought the situation fully under control by cooling down the charger/batteries.
2/4/2017	Carrier	Li-Ion	Cell phones	American Airlines	Passenger	American Airlines Ground crew at Dallas Fort Worth, TX noticed smoke coming from a freight cart. DFW Fire Rescue called and extinguished the fire. US Postal Inspectors are investigating as it was contained in US Mail. Item has been reported as a Samsung phone (not confirmed, unknown model or version). No damage to the aircraft or injuries reported.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
1/22/2017	Carrier/TSA	Li-Ion	Battery pack / charger (Hyper Gear)	Southwest	Passenger	During flight a passenger gave a lithium-ion battery pack/charger to the flight attendant stating that it was smoking and very hot. The flight attendant submerged the unit in ice water to cool it down. The flight continued without any further incident.
1/16/2017	Carrier	Li-Ion	battery and charger	Delta	Passenger	During the flight a passenger brought a battery charger to the galley that had over heated and began to smoke. The charge continued smoking, even after a Halon fire extinguisher had been deployed and depleted. Water was then poured into a containment bag with the charger submerged in the bag.
1/15/2017	Carrier	Li-Ion	iPhone	Delta	Passenger	A passenger's iPhone 7 broke as it became wedged in the seat while he was attempting to bring the seat to an upright position, the phone began emitting white smoke. The passenger threw the phone in the aisle and the lead flight attendant poured water over it while a containment bag was retrieved.
1/14/2017	TSA	Li-Ion	Lithium Battery Charging unit	N/A	N/A	A portable rechargeable cell phone battery pack contained inside a carry-on bag (backpack) was observed emitting smoke at security checkpoint. Authorities reported the bag contained multiple cell phones and batteries packs. There was extensive smoke and heat damage to the backpack.
12/15/2016	Carrier	Li-Ion	E-cig	American Airlines	Passenger	American Airlines flight 1129, which was en route from Dallas-Fort Worth, TX to Indianapolis IN, diverted to Little Rock, AR, after a passenger observed that his e-cigarette had overheated and was emitting smoke. The cabin crew used fire extinguishers to extinguish the e-cigarette.

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12/11/2016	Carrier	Li-Ion	Cell phone/charging unit	Southwest	Passenger	Southwest Airlines flight 3637 from Fort Lauderdale, FL (FLL) to Dallas, TX (DAL) diverted to New Orleans, LA (MSY) due to a lithium battery charging device melting and emitting a burning electrical odor. Flight attendant noticed a burning/electrical smell in the cabin. The passenger sitting in 1C advised that she believes it to be her battery charger. The flight attendant took the device to the forward galley to monitor. Once the aircraft landed in MSY the crew gave the device to local station personnel for quarantine.
12/3/2016	Carrier	Li-Ion	Laptop	Delta	Passenger	While en route from Honolulu, HI to Atlanta, GA a fire was discovered in an overhead bin near seat 3J. The crew extinguished the flames, which were coming from a laptop. Three halon type fire extinguishers and two water type fire extinguishers were used. The laptop then was placed in a containment bag in a cooler with ice and monitored for the remainder of the flight. The flight continued to Atlanta and landed without further incident. The aircraft was inspected where minor damage to the overhead bin was found. Airline maintenance replaced the overhead bin.
11/27/2016	Carrier	Li-Ion	iPhone 6+ inserted into a Guest Logix XPDA-IP6	Alaska	Passenger	ASAA flight 850, from Kona, HI to Seattle, WA diverted to Honolulu, HI as a precautionary measure due to a company issued battery powered mobile Point of Sale (POS) device and iPhone 6 that experienced excessive heating. The inflight mobile POS device was exposed to a liquid hand sanitizer in the galley compartment. The device would not turn on and the flight attendant (F/A) reported the device was hot and continued to get hotter. The F/A placed the device in a thermal battery containment bag. The flight did not declare an emergency but requested that the fire department meet the flight when it arrived and take possession of the containment bag. The iPhone and battery powered POS device showed no visible signs of excessive heating or thermal runaway.